

CATALOG & TECHNICAL GUIDE 2023.1



HOLEMAKING

>30,000

STANDARD PRODUCTS



>75

COUNTRIES



>4,100

DEDICATED EMPLOYEES



Headquartered in Fagersta, Sweden and present in more than 75 countries, Seco Tools is a leading global provider of metal cutting solutions for milling, stationary tools, holmaking and tooling systems.

For more than 80 years, the company has provided the technologies, processes and support that manufacturers depend on for maximum productivity and profitability. For more information on how Seco's innovative products and expert services bring success to manufacturers across all industry segments, please visit www.secotools.com.

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Overcome any holemaking challenge

Holemaking can mean the difference between profit or scrapped parts and success requires the highest quality tooling for the greatest level of productivity enhancements and cost-reduction opportunities. To achieve that level of success, manufacturers need a partner who can help prove out processes and test new solutions. A partner with the ability to meet all your unique challenges with a truly comprehensive range of drilling, reaming, boring and threading tools.

Seco Tools is your single-source provider for comprehensive holemaking solutions. With years of experience developing holemaking solutions for customers' challenging applications, we have the R&D and metal cutting expertise to help manufacturers achieve fully optimal processes.

We are committed to our customers' holemaking productivity. That means you can purchase tools, receive technical support, consult with experts and develop solutions with just one provider and with access to the industry's most comprehensive range of indexable and solid drills, reamers, threaders and boring heads.



What are you looking for in making a hole?

	Drilling			Reaming				Boring		Threading			
	Seco Universal Seco Feedmax™	Crownloc® Crownloc® Plus	Perfomax®	Precimaster™ Plus	Nanofix™	Bifix®	Xfix™	Rough boring	Fine boring	Threadmaster™	Threadmaster™ Taps		Thread milling 396,18/,19/,20
Page(s)	25-168	169-222	223-318	323-362	363-397	398-424	425-466	561-583	584-630	See Threading catalog			
IT	7-9	9-10	12	6-8	6-8	6-7	6-7	9-10	5-6	-	-	-	-
	0,02 mm (0.0008")	0,05 mm (0.002")	-	Follow the pre-bore	Follow the pre-bore	Follow the pre-bore	Follow the pre-bore	0,005 mm (0.0002")	0,005 mm (0.0002")	-	Follow the pre-bore	Follow the pre-bore	-
	0,02 mm (0.0008")	0,05 mm (0.002")	-	0,007 mm (0.0003")	0,007 mm (0.0003")	0,005 mm (0.0002")	0,005 mm (0.0002")	0,02 mm (0.0008")	0,01 mm (0.0004")	-	-	-	-
	1,0 µm (39 µin)	1,6 µm (63 µin)	2,0 µm (79 µin)	0,6 µm (24 µin)	0,6 µm (24 µin)	0,25 µm (10 µin)	0,8 µm (31 µin)	1,0 µm (39 µin)	0,6 µm (24 µin)	-	-	-	-
TCTR	-	-	-	-	-	-	-	-	-	-	6H 6HX 6G 2B Normal	5HX 2BX Normal-X 6HX 6GX	-
Thread form	-	-	-	-	-	-	-	-	-	M MF UNC UNF NPT NPTF BSP	M MF UNC UNF G NPT NPTF	M MF UNC UNF G	ISO UN W NPT NPTF BSPT



Positioning accuracy

Seco Feedmax, A750 rough boring heads and the whole range of fine boring heads are the holemaking tools that offer the best positioning accuracy.



Hole geometry

For excellent hole geometry, such as roundness and straightness, all of Seco's drilling, boring and reaming tools offer the same high and consistent quality. Seco's boring heads will always guarantee the best results on straightness.



Surface finish

For a really smooth hole surface Bifix is your first choice, and Seco's fine boring heads offer a full range of machining capabilities.

TCTR

= Thread Tolerance Class

IT

= Hole tolerance

ISO attributes

ISO attribute	Explanation
ADJLN	Minimum adjustment limit
ADJLX	Maximum adjustment limit
ADJRG	Adjustment range
AN	Clearance angle major
APMX	Depth of cut maximum
AZ	Maximum plunge depth
B	Shank width
BD	Body diameter
BD1	Body diameter 1
BD2	Body diameter 2
BDX	Body diameter maximum
BHTA	Body half taper angle
BLQ	Balance quality code
BN	Face land width
CBDP	Connection bore depth
CDX	Cutting depth maximum
CEDC	Cutting edge count
CHA	Cross hole angle
CHW	Corner chamfer width
CNT	Coolant entry thread size
CW	Cutting width
CZC	Connection size code
D1	Fixing hole diameter
DC	Cutting diameter
DCB	Connection bore diameter
DCBN	Connection bore diameter minimum
DCBX	Connection bore diameter maximum
DCB1	Connection bore diameter 1
DCC	Design configuration style code
DCINN	Minimum cutting diameter internal
DCINX	Maximum cutting diameter internal
DCN	Minimum cutting diameter
DCON	Connection diameter
DCX	Maximum cutting diameter
DF	Flange diameter
DMM	Shank diameter
FLGW	Flange width
GAN	Insert rake angle
GB	Face land angle
HTB	Body height
IC	Inscribed circle diameter
INSD	Insert diameter
INSL	Insert length
KRINS	Major cutting edge angle
L	Cutting edge length
LB	Body length
LB1	Body length 1
LCF	Chip flute length
LE	Cutting edge effective length
LF	Functional length
LFS	Secondary functional length
LH	Head length
LPR	Protruding length
LS	Shank length
LSC	Clamping length
LU	Usable length
LUX	Maximum usable length
M	M-dimension
OAL	Overall length
RE	Corner radius
S	Insert thickness
TDZ	Thread diameter size
WB	Body width
WF	Functional width

Tool guide

Feedmax, Crownloc and Performax are used to drill holes 0.1-160 mm (0.004-6.299") in diameter, with tolerances from IT7 to IT12.

For already cast holes, rough boring or semi-finishing is often used, with Bridge Bars and Jumbo Bridge Bars used for the large diameters.

Finally, high quality holes are made with reaming and fine boring heads, reaching tolerances of IT5 or IT6.

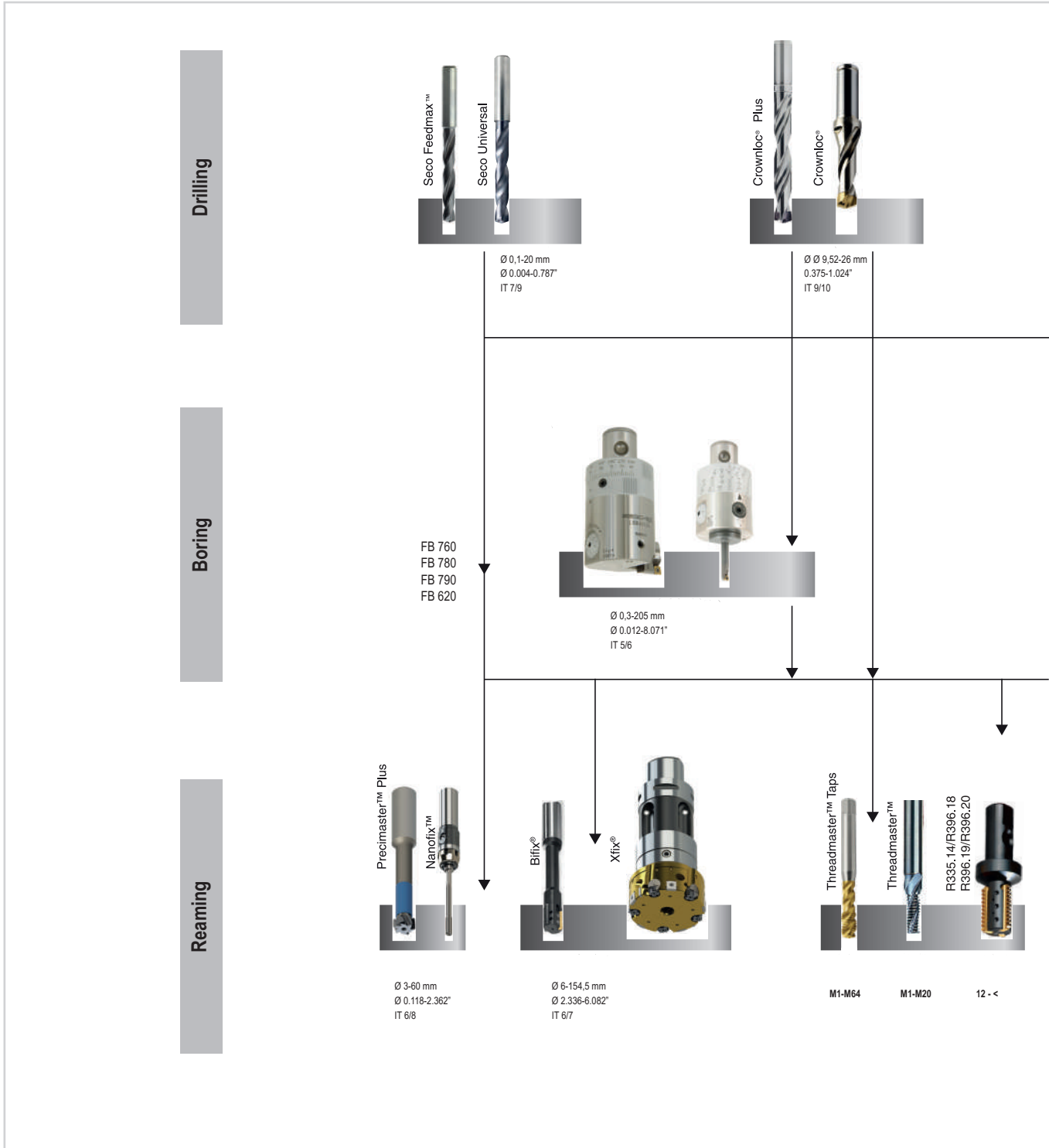
* Rough IT9/10, ** Fine IT 5/6

Threadmaster DTM, TM, TM2, 396.18 and 396.19;

The same cutter could be used for machining right and left hand threads. Metric and UN versions are only for internal threading. It's also possible to make all types of tolerances with the same cutter.

Threadmaster Tap:

Available in the most popular threads and tolerances in both cutting and forming taps.



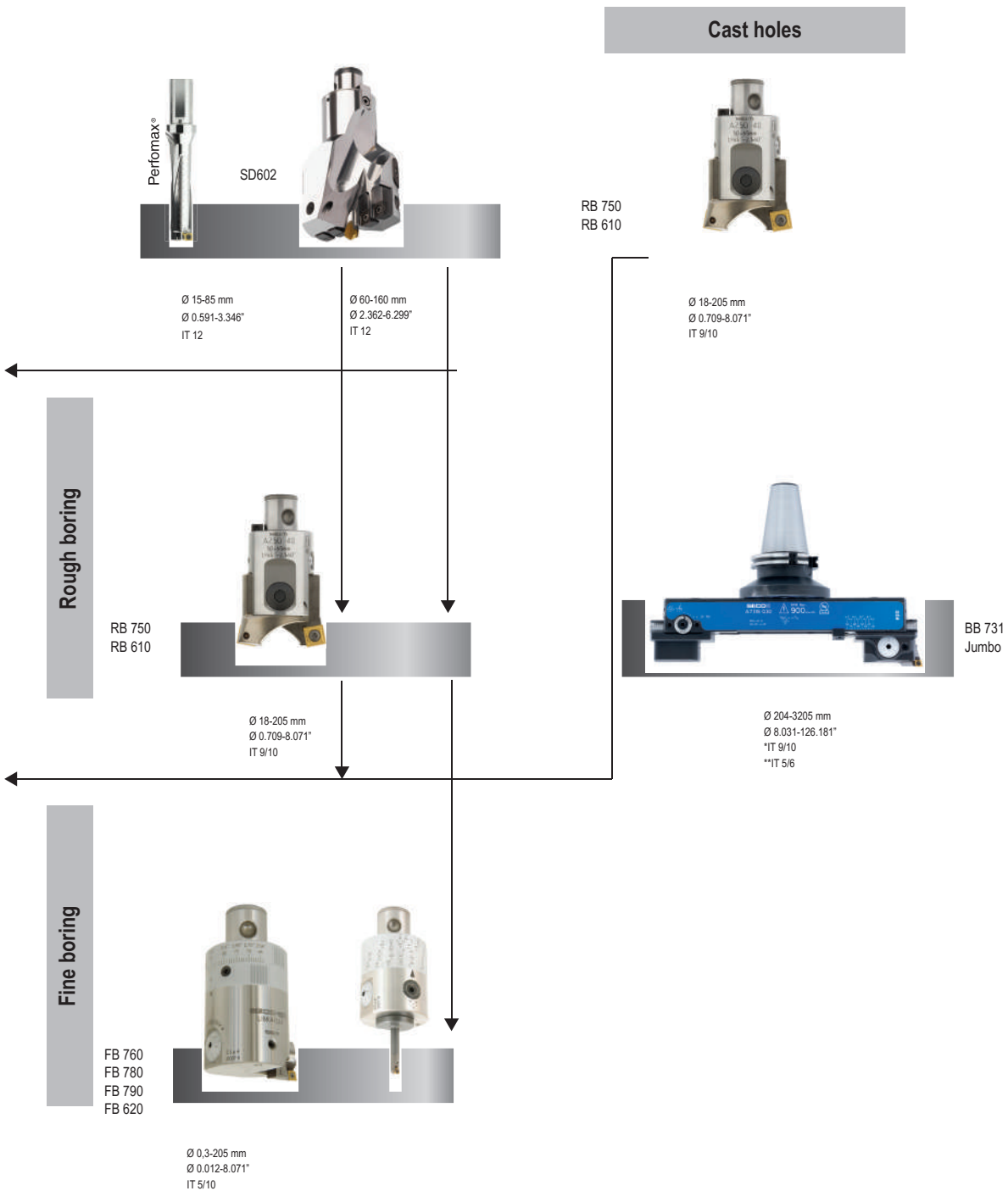
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Drilling range – Choice of drill

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Seco Feedmax™ Solid carbide drills



PRODUCTIVITY

- High feeds and cutting speeds
- Close tolerance holes
- For applications with high stability
- For all workpiece materials

Crownloc® & Crownloc® Plus Exchangeable crown drills



FLEXIBILITY

- Exchangeable carbide tips
- Geometries for different workpiece materials
- No regrinding
- Several tip diameters for each drill body

Perfomax® Indexable insert drills



COST EFFECTIVENESS

- Grades and geometries for all workpiece materials
- Square inserts for low cost/hole
- Drilling, plunging, crossing holes with angled entrance or exit, boring, etc.
- High application security

SMG - Introduction

As example the reference materials EN C45E for SMG P4 and EN 42 CrMo 4 for both SMG P5 and SMG H5 see further details in the following tables.

In SMG classification of workpiece materials involves a specific material standard in a specific condition assigned as reference for easy and unambiguous adjustment of cutting data for any actual material compared to any Seco reference material. As examples the reference materials EN C45E for SMG P4 and EN 42 CrMo 4 for both SMG P5 and SMG H5 shown below in table 1 where the reference level material property is indicated.

The foundation for SMG is a classification of workpiece materials based on their type rather than their relative machinability and consequently it contains workpiece materials like composites. It is comprehensive enough, but still easy to identify to which SMG a particular material belongs. Each SMG has a specific material standard in a specific condition assigned as reference to allow easy adjustment of cutting data for any actual material compared to any Seco reference material see pages 670-681.

SMG	Description	Properties	Reference
P4	Low-alloy general structural steels, 0.25% < C < 0.67%wt Low-alloy Quench & Temper steels	520 < R _m < 1200	C 45E R _m = 660 N/mm ²
P5	Structural steels, 0.25% < C < 0.67%wt Quench & Temper steels	550 < R _m < 1200	42 CrMo 4 R _m = 700 N/mm ²

SMG	Description	Properties	Reference
H5	Quenched & Tempered steels	38 < HRC < 56	42 CrMo 4 50 HRC

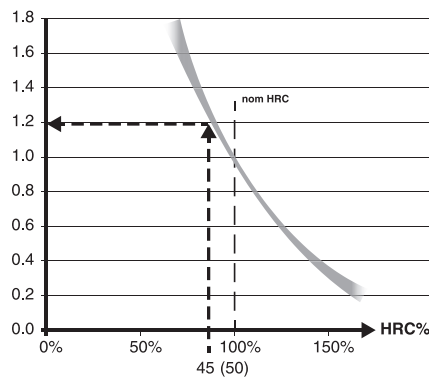
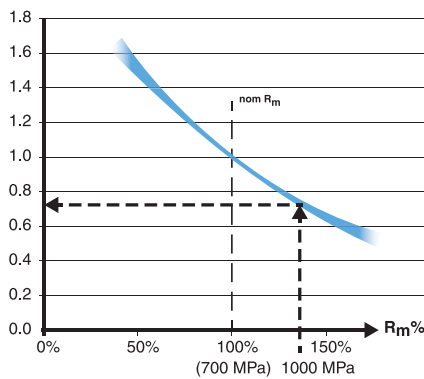
Focusing specifically on EN 42 CrMo 4 in annealed condition, the ultimate tensile strength R_m may typically vary between R_m = 630 N/mm² and R_m = 780 N/mm², which provide a reference level for SMG P5.

In Quenched & Tempered condition, the ultimate tensile strength R_m may typically be between R_m = 900 N/mm² and R_m = 1100 N/mm² thus still belongs to SMG P5. However, if hardened above R_m = 1200 N/mm² it now belongs to SMG H5.

SMG	EN	W.-Nr	AFNOR	BS	UNI	JIS	AISI / ASTM	GOST	Condition	R _{m,nom}	HRC _{nom}
P4	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Annealed	700	
	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered	1000	
H5	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered		45
	42 CrMo 4	1.1201	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	4142, 4140	38HM	Quenched & Tempered		50

The EN 42CrMo4 quench & tempered steel could be used to illustrate the machinability dependence of materials' condition.

The graphs below indicate how speed recommendations for a nominal material conditions may be adjusted for relative R_m (left diagram valid for ISO-P) and for relative HRC (valid for ISO-H).



To further illustrate how the SMG P5 nominal v_c can be adjusted to a more accurate recommended v_c we need ultimate tensile strength R_m data and in this case we use the EN 42 CrMo 4 quenched & tempered to R_m = 1000 N/mm² according to above table (bold blue arrows). Assume that we find that the SMG P5 nominal v_c = 280 m/min for a certain product and machining. Then, actual recommended v_c = 280 m/min x 0.75 = 210 m/min. Consequently in the SMG H5 the nominal v_c can be adjusted using the hardened EN 42 CrMo 4 at HRC 45 (smaller grey arrows).

Assume that the SMG H5 nominal v_c = 50 m/min for a certain product and machining using a coated cemented carbide tool then, actual recommended v_c = 50 m/min x 1.2 = 60 m/min. For further workpiece material details please see page(s) 670-681 and suggested cutting data at applicable pages. For more convenient cutting data handling we recommend applicable tools in My Pages – Suggest on www.secotools.com

High performance and Universal solutions

What are you looking for in your solid drill application?

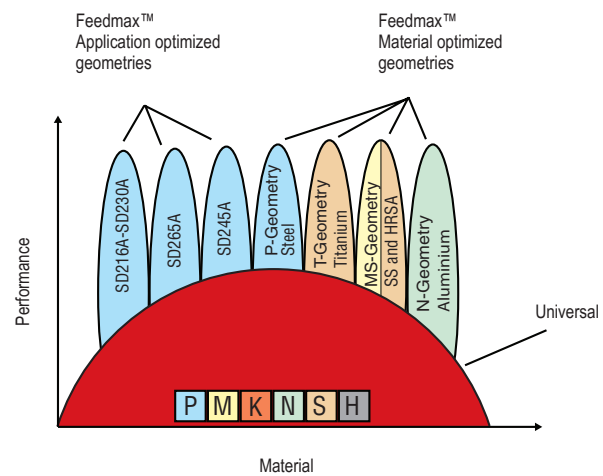
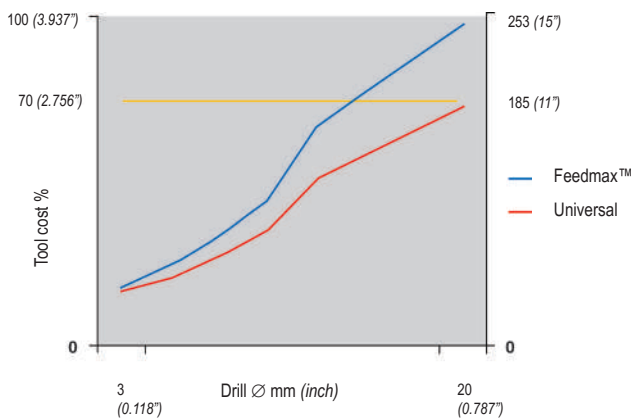
Universal – Versatile general performance solid carbide drill

Universal is a multi purpose general performance solid carbide drill, that can be used in a wide range of materials and applications in all industry segments. Thanks to the design with a strong self centering 140 degree drill point, polished chip flutes and the excellent quality of the drill - high capacity utilization, application security and versatility is provided at a very low cost. With Universal stock holding cost can be reduced and greater machining flexibility is offered, leading to reduced set-up time. Universal is an alternative to Feedmax™ in operations when versatility, flexibility and reduced stock holding cost are the main targets.

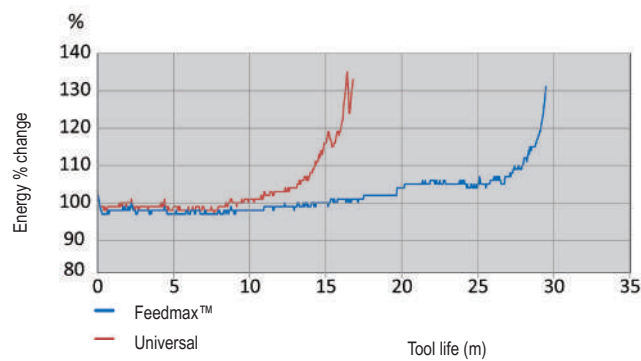
Feedmax™ – Productive high performance solid carbide drill

Feedmax™ offers a unique combination of state-of-the-art carbide, coating- and geometry technology. Feedmax™ is designed for high productivity and low cost per hole with high feeds up to 0,70 mm/rev (0.028 in/rev) and high cutting speeds up to 220 m/min (720 sf/min). With excellent centering capabilities - high hole quality is achieved with no need for center drilling operations. Thanks to the modern coating with high hot hardness, the strong cutting edges with protective corner chamfers, high strength carbide rod, excellent chip evacuation capabilities and a superb cutting edge quality - a long and predictable tool life is achieved. Feedmax™ has a wide range of optimized geometries for different materials and applications, to obtain a good quality hole at the lowest cost.

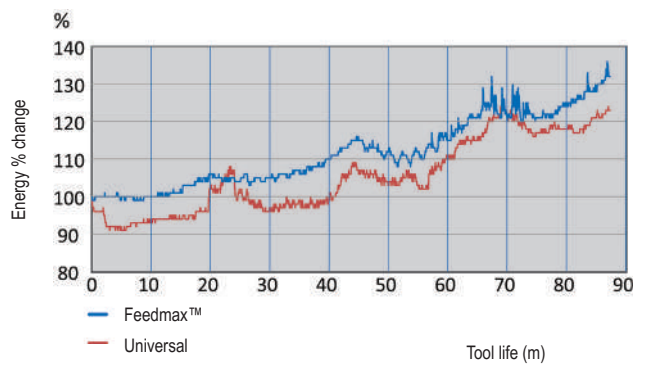
MRR, Metal removal rate (cm³ / min)



Tool life, lower cutting data



Tool life, high cutting data



First hole is set as reference, 100% based on the spindle power

Cutting data
 $v_c = 90 \text{ m/min}$
 $f = 0,15 \text{ mm/rev}$

$v_c = 295 \text{ sf/min}$
 $f = 0.006 \text{ in/rev}$

Material = SMG P5-P6, SS2244, DIN41CrMo4, AISI 4140




First hole is set as reference, 100% based on the spindle power

Cutting data
 $v_c = 160 \text{ m/min}$
 $f = 0,24 \text{ mm/rev}$

$v_c = 525 \text{ sf/min}$
 $f = 0.009 \text{ in/rev}$

Material =SMG P5-P6, SS2244, DIN41CrMo4, AISI 4140

Range overview

Universal	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
<p>SD1103</p>  <p>Page(s) 26, 27, 28, 29, 30, 31</p>	<p>3-20 mm (0.118-0.787")</p>	<p>~ 3 x D</p>	<p>m7</p>	<p>IT 8-9</p>	<p>Ra 1-2 μm (Ra 39-79 μin)</p>
<p>SD1103A</p>  <p>Page(s) 32, 33, 34, 35, 36, 37</p>	<p>3-20 mm (0.118-0.787")</p>	<p>~ 3 x D</p>	<p>m7</p>	<p>IT 8-9</p>	<p>Ra 1-2 μm (Ra 39-79 μin)</p>
<p>SD1105A</p>  <p>Page(s) 38, 39, 40, 41, 42, 43, 44, 45</p>	<p>3-20 mm (0.118-0.787")</p>	<p>~ 5 x D</p>	<p>m7</p>	<p>IT 8-9</p>	<p>Ra 1-3 μm (Ra 39-118 μin)</p>
<p>SD1108A</p>  <p>Page(s) 46, 47, 48, 49, 50</p>	<p>3-20 mm (0.118-0.787")</p>	<p>~ 8 x D</p>	<p>m7</p>	<p>IT 9</p>	<p>Ra 1-3 μm (Ra 39-118 μin)</p>
<p>SD1112A</p>  <p>Page(s) 51, 52, 53, 54</p>	<p>3-20 mm (0.118-0.787")</p>	<p>~ 12 x D</p>	<p>m7</p>	<p>IT 9</p>	<p>Ra 1-3 μm (Ra 39-118 μin)</p>







1) Variations can occur depending on the material and the cutting data used.
 2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Range overview

Feedmax™	Ø Range	Drill depth	Drill Ø tolerance	Hole tolerance (1)	Surface finish (2)
SD203A-P  Page(s) 56, 57, 58, 59, 60, 61	2-20 mm (0.078-0.787")	~ 3 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD205A-P  Page(s) 62, 63, 64, 65, 66, 67, 68, 69	2-20 mm (0.078-0.787")	~ 5 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD206, SD206A  Page(s) 70, 71	0.7-2.0 mm (0.027-0.078")	~ 6 x D	h6	IT 9	Ra 1-2 µm (Ra 39-79 µin)
SD207A-P  Page(s) 72, 73, 74	3-20 mm (0.118-0.787")	~ 7 x D	m7	IT 9	Ra 1-3 µm (Ra 39-118 µin)
SD216A  Page(s) 75	3-12 mm (0.118-0.472")	~ 16 x D	m7	IT 9	Ra 1-3 µm (Ra 39-118 µin)
SD230A  Page(s) 76	4-10 mm (0.157-0.393")	~ 30 x D	m7	IT 9	Ra 1-3 µm (Ra 39-118 µin)







1) Variations can occur depending on the material and the cutting data used.
 2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Range overview

Feedmax™	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD245A  Page(s) 78, 79	5-14 mm (0.196-0.551")	~ 5 x D	m7	IT 8	Ra 1-2 µm (Ra 39-79 µin)
SD265A  Page(s) 81	6-16 mm (0.236-0.630")	~ 5 x D	js6	IT 7	Ra 1-2 µm (Ra 39-79 µin)
SD203A-MS Superalloys  Page(s) 88, 89, 90, 91, 92	2-20 mm (0.079-0.551")	~ 3 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD205A-MS Superalloys  Page(s) 93, 94, 95, 96	2-20 mm (0.079-0.551")	~ 5 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD203A-M  Page(s) 97, 98, 99	3-20 mm (0.098-0.551")	~ 3 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD205A-M  Page(s) 100, 101, 102	3-20 mm (0.098-0.551")	~ 5 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)

1) Variations can occur depending on the material and the cutting data used.
 2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Range overview

Feedmax™	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD203A-T, SD205A-T  Page(s) 103, 104	3-20 mm (0.118-0.787")	~ 3 x D, ~ 5 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD203A-N  Page(s) 105, 106	3-20 mm (0.118-0.787")	~ 3 x D	m7	IT 8-9	Ra 1-2 µm (Ra 39-79 µin)
SD205A-C1, -C2  Page(s) 110-111	3,2-12,7 mm (0.125-0.500")	~ 5 x D	m7	IT 9	-
SD203-CX1  Page(s) 112	3,26-9,53 mm (0.128-0.375")	~ 5 x D	m7	IT 9	-
SD22  Page(s) 114, 115, 116, 117, 118, 119, 120	0,1-2,0 mm (0.004-0.079")	~ 2 x D	0,005/0 mm (+0.0002"/0)	-	-
SD26  Page(s) 121, 122, 123, 124, 125, 126, 127	0,1-2,0 mm (0.004-0.079")	~ 6 x D	0/-0,004 mm (0/-0.00016")	-	-

1) Variations can occur depending on the material and the cutting data used.

2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

Introduction

Drilling

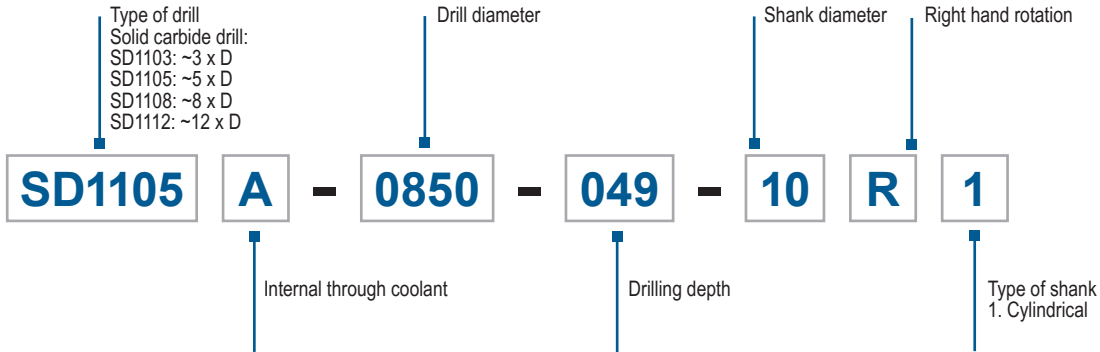
Reaming

Boring

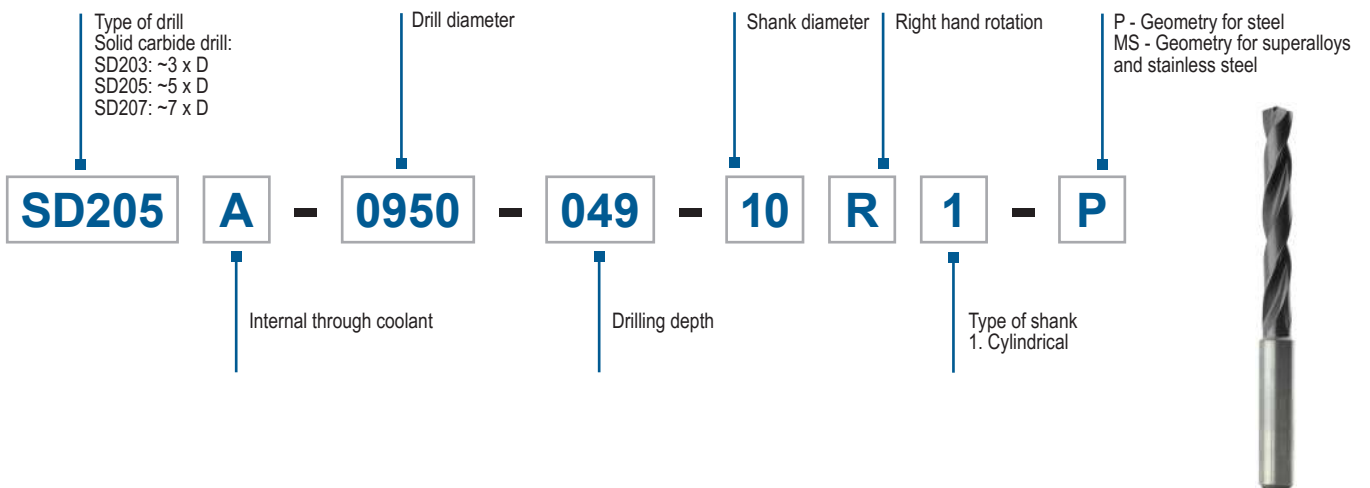
Annex

Code keys

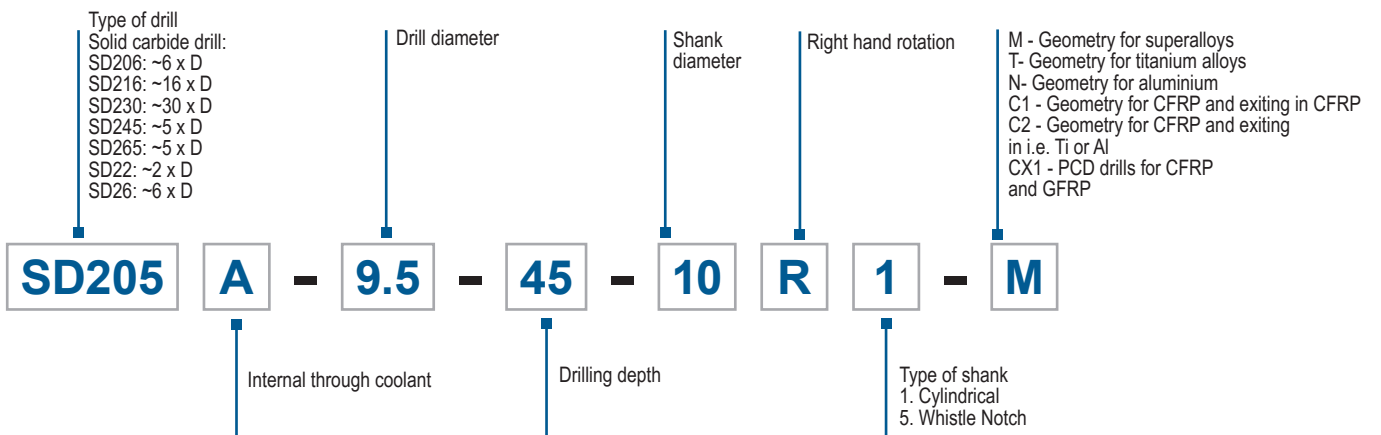
Universal



Feedmax™



Feedmax™



Set up

Holding/run-Out

Drills with cylindrical shanks can be used with Shrinkfit holder, hydraulic chucks or collet chucks. Keep the total indicated run-out of the drill within 0,04 mm (0.0016") measured in the spindle. For best result keep run-out 0,02 mm (0.0008").

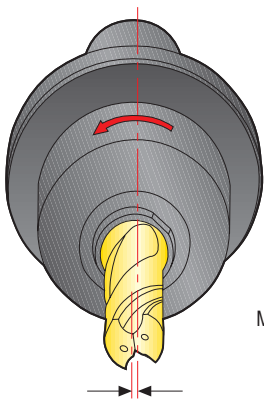
Stability

The stability of the application is important to obtain the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity. Unstable conditions can cause tool breakages.

Tool Life

Drills should not be used with flank wear exceeding 0,1-0,3 mm (0.004-0.012") measured at the largest point.

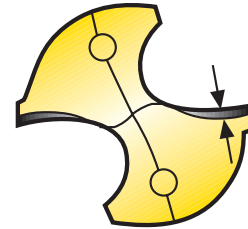
Recommended Tool Holders



Max. 0,04 mm (0.0016")

For best result use holders:
 Type 5603 - Shrinkfit holders, DIN type
 Type 5834 - Hydraulic chucks
 Type 5672 - High precision collet chucks
 For more information see Tooling Systems catalog

0,1-0,3 mm (0.004-0.012")



Shrinkfit holder

(For cylindrical, R1 shanks only)



Hydraulic chuck

(For cylindrical, R1 shanks only)

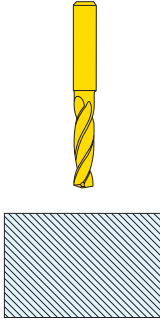
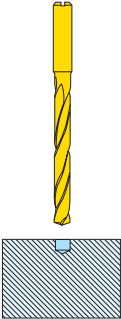
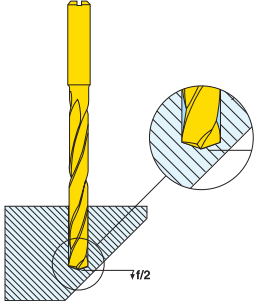
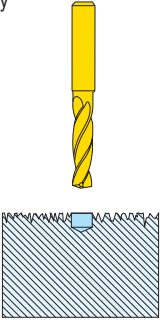
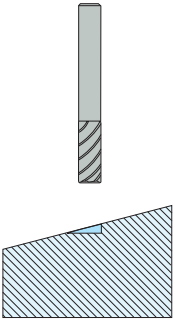
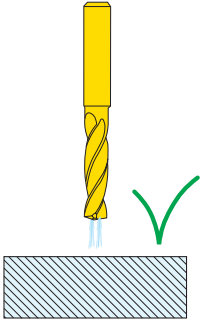
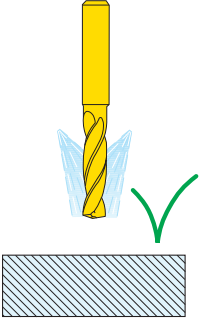


High precision collet chucks

(For cylindrical, R1 shanks only)



Machining methods

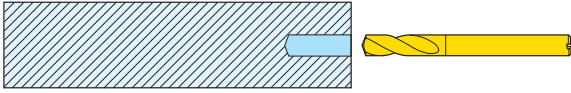
Hole entrance on a machined surface		Angled Hole Exits
<p>3-15 x D</p>  <p>No pre-drilling or entrance feed needed.</p>	<p>> 16 x D</p>  <p>When using a longer drill it's recommended to drill a pilot hole.</p>	<p>Before hole exit reduce the feed/rev by 50%.</p>  <p>Or use SD245A drills.</p>
Irregular/angled Hole entrance		
<p>If irregular or angle entrance use pre operations accordingly</p>  <p>Regular hole entrance</p> <p>Pre drill with a short standard Feedmax.</p>	<p>Pre-machining alternatives</p>  <p>Angle-hole entrance</p> <p>Machine a flat using an end mill from the Seco range.</p>	
Coolant Recommendations		
<p>1.</p>  <p>First choice</p>	<p>2.</p>  <p>≤ 5 x D</p>	<p>1. Coolant pressure*</p> <p>Minimum recommended coolant pressure 10 bar with ≤ 5 x D Minimum recommended coolant pressure 30 bar with > 5 x D Minimum recommended coolant pressure 40 bar with > 16 x D</p> <p>2. Coolant mix</p> <p>Recommended emulsion mix 6-8%. When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.</p>

*If lower coolant pressure is used, adjust by reducing cutting data accordingly.

Machining methods

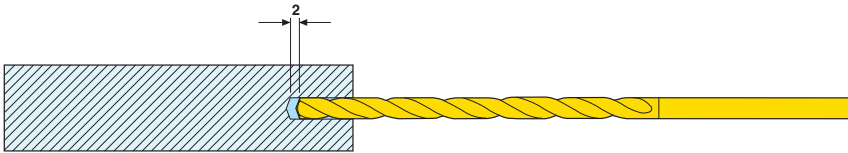
SD216A (16 x D) up to SD230A (30 x D) - STEP BY STEP

1.



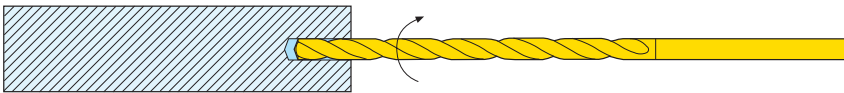
1. Drill a pilot hole 2-3 x D. Use a standard drill with the same diameter i.e. SD203A or SD1103 (with 140° point angle).

2.



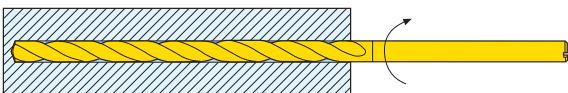
2. Enter the hole with the machine spindle stopped or use a low RPM (500). Stop 2 mm (0.080") above the pilot hole depth.

3.



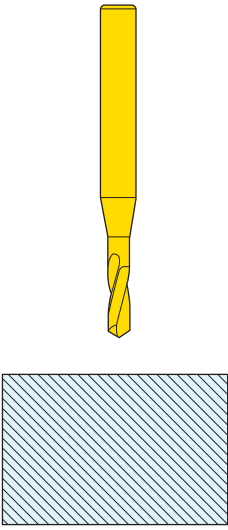
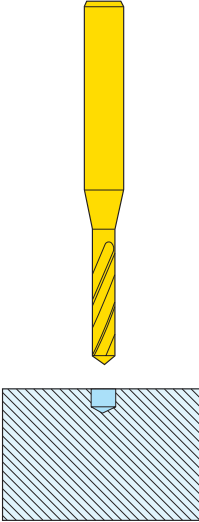
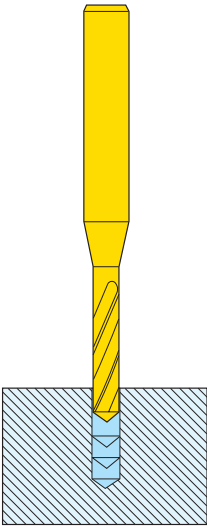
3. Start the machine spindle and the coolant, drill with the recommended cutting data. (No peck drilling.)

4.



4. When reaching full depth, reduce the RPM to 500 and then retract the drill with 4 times the work feed to avoid retraction marks.

Machining methods - Micro drills

Pilot Hole	
	<p>SD22</p> <p>For optimal hole tolerance and positioning accuracy use an SD22 pilot drill of the same diameter.</p>
	<p>SD26</p> <p>Below 1 mm (0.039") inch diameter drill we highly recommend to use a pilot drill.</p>
Pecking	
	<p>For long chipping materials a pecking cycle should be used. Generally peck every 1 x D drilling depth.</p>

Chamfer module mounting instructions

1.

2.

3.

4.

Maximum chamfer depth

Drill diameter DC		LU drilling depth (min-max)					
		SD1103 / SD203A		SD1105 / SD205A		SD207A	
mm	inch	mm	inch	mm	inch	mm	inch
4,00-4,75	.157-.187	4-17	.157-.669	10-27	.394-1.063	30-45	1.181-1.772
4,76-6,00	.187-.236	6-20	.236-.787	18-32	.709-1.260	30-45	1.181-1.772
6,01-8,00	.241-.315	15-27	.590-1.063	28-42	1.102-1.653	42-57	1.653-2.244
8,01-10,00	.315-.394	17-31	.669-1.220	34-48	1.338-1.890	47-62	1.850-2.441
10,01-12,00	.394-.472	21-36	.826-1.417	40-56	1.575-2.205	57-72	2.244-2.835
12,01-14,00	.473-.551	22-37	.866-1.457	43-59	1.693-2.323	68-83	2.677-3.268
14,01-16,00	.552-.630	23-39	.906-1.535	44-60	1.732-2.362	76-92	2.992-3.622

To be used with cylindrical shank only (R1).

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Drilling
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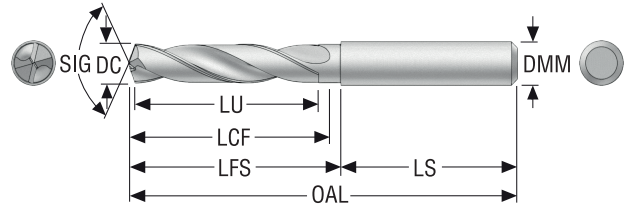
Seco Universal – Single diameter drills

Seco Universal solid carbide drills are a cost effective and versatile solution with a perfect fit for small and medium batch production. The Seco Universal drills are suitable for most applications across all industry segments.

- Multi-purpose, 4-facett point geometry that provides excellent centering capability
- Highly wear resistant TiAlN coating secures for long tool life
- Can be used in conjunction with Threadmaster™ Tap and in pre-bore operations with Nanofix™/ Precimaster™ Plus

SD1103

Drilling depth ~ 3 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- External coolant
- For cutting data see page(s) 139
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103-0300-014-06R1 SD_DRILL_3.0MM_3XD	02898974	3,0 0.118	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0310-014-06R1 SD_DRILL_3.1MM_3XD	02898975	3,1 0.122	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0318-014-06R1 SD_DRILL_1/8_3XD	02898976	3,175 0.125	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0320-014-06R1 SD_DRILL_3.2MM_3XD	02898977	3,2 0.126	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0325-014-06R1 SD_DRILL_3.25MM_3XD	02898978	3,25 0.128	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0330-014-06R1 SD_DRILL_3.3MM_3XD	02898979	3,3 0.130	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0340-014-06R1 SD_DRILL_3.4MM_3XD	02898980	3,4 0.134	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0350-014-06R1 SD_DRILL_3.5MM_3XD	02898981	3,5 0.138	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0357-014-06R1 SD_DRILL_9/64_3XD	02898982	3,572 0.141	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0360-014-06R1 SD_DRILL_3.6MM_3XD	02898983	3,6 0.142	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0365-014-06R1 SD_DRILL_3.65MM_3XD	02898984	3,65 0.144	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0370-014-06R1 SD_DRILL_3.7MM_3XD	02898985	3,7 0.146	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103-0380-017-06R1 SD_DRILL_3.8MM_3XD	02898986	3,8 0.150	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0390-017-06R1 SD_DRILL_3.9MM_3XD	02898987	3,9 0.154	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0397-017-06R1 SD_DRILL_5/32_3XD	02898988	3,969 0.156	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0400-017-06R1 SD_DRILL_4.0MM_3XD	02898989	4,0 0.157	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0410-017-06R1 SD_DRILL_4.1MM_3XD	02898990	4,1 0.161	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0420-017-06R1 SD_DRILL_4.2MM_3XD	02898991	4,2 0.165	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0430-017-06R1 SD_DRILL_4.3MM_3XD	02898992	4,3 0.169	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0437-017-06R1 SD_DRILL_11/64_3XD	02898993	4,366 0.172	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0440-017-06R1 SD_DRILL_4.4MM_3XD	02898994	4,4 0.173	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103-0450-017-06R1 SD_DRILL_4.5MM_3XD	02898995	4,5 0.177	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0460-017-06R1 SD_DRILL_4.6MM_3XD	02898996	4,6 0.181	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0465-017-06R1 SD_DRILL_4.65MM_3XD	02898997	4,65 0.183	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0470-017-06R1 SD_DRILL_4.7MM_3XD	02898998	4,7 0.185	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103-0476-020-06R1 SD_DRILL_3/16_3XD	02898999	4,763 0.188	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0480-020-06R1 SD_DRILL_4.8MM_3XD	02899000	4,8 0.189	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0490-020-06R1 SD_DRILL_4.9MM_3XD	02899001	4,9 0.193	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0500-020-06R1 SD_DRILL_5.0MM_3XD	02899002	5,0 0.197	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0510-020-06R1 SD_DRILL_5.1MM_3XD	02899003	5,1 0.201	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0516-020-06R1 SD_DRILL_13/64_3XD	02899004	5,159 0.203	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0520-020-06R1 SD_DRILL_5.2MM_3XD	02899005	5,2 0.205	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0530-020-06R1 SD_DRILL_5.3MM_3XD	02899006	5,3 0.209	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0540-020-06R1 SD_DRILL_5.4MM_3XD	02899007	5,4 0.213	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0550-020-06R1 SD_DRILL_5.5MM_3XD	02899008	5,5 0.217	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0555-020-06R1 SD_DRILL_5.55MM_3XD	02899009	5,55 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0556-020-06R1 SD_DRILL_7/32_3XD	02899010	5,556 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0560-020-06R1 SD_DRILL_5.6MM_3XD	02899011	5,6 0.220	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0570-020-06R1 SD_DRILL_5.7MM_3XD	02899012	5,7 0.224	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0580-020-06R1 SD_DRILL_5.8MM_3XD	02899013	5,8 0.228	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0590-020-06R1 SD_DRILL_5.9MM_3XD	02899014	5,9 0.232	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0595-020-06R1 SD_DRILL_15/64_3XD	02899015	5,953 0.234	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0600-020-06R1 SD_DRILL_6.0MM_3XD	02899016	6,0 0.236	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT9
SD1103-0610-024-08R1 SD_DRILL_6.1MM_3XD	02899017	6,1 0.240	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0620-024-08R1 SD_DRILL_6.2MM_3XD	02899018	6,2 0.244	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0630-024-08R1 SD_DRILL_6.3MM_3XD	02899019	6,3 0.248	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0635-024-08R1 SD_DRILL_1/4_3XD	02899020	6,35 0.250	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0640-024-08R1 SD_DRILL_6.4MM_3XD	02899021	6,4 0.252	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0650-024-08R1 SD_DRILL_6.5MM_3XD	02899022	6,5 0.256	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0660-024-08R1 SD_DRILL_6.6MM_3XD	02899024	6,6 0.260	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0675-024-08R1 SD_DRILL_17/64_3XD	02899025	6,747 0.266	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9
SD1103-0680-024-08R1 SD_DRILL_6.8MM_3XD	02899026	6,8 0.268	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103-0690-024-08R1 SD_DRILL_6.9MM_3XD	02899027	6,9 0.272	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN	IT9
SD1103-0700-024-08R1 SD_DRILL_7.0MM_3XD	02899028	7,0 0.276	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN	IT9
SD1103-0710-029-08R1 SD_DRILL_7.1MM_3XD	02899029	7,1 0.280	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0714-029-08R1 SD_DRILL_9/32_3XD	02899030	7,144 0.281	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0720-029-08R1 SD_DRILL_7.2MM_3XD	02899031	7,2 0.283	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0730-029-08R1 SD_DRILL_7.3MM_3XD	02899032	7,3 0.287	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0740-029-08R1 SD_DRILL_7.4MM_3XD	02899033	7,4 0.291	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0750-029-08R1 SD_DRILL_7.5MM_3XD	02899034	7,5 0.295	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0754-029-08R1 SD_DRILL_19/64_3XD	02899035	7,541 0.297	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0755-029-08R1 SD_DRILL_7.55MM_3XD	02899036	7,55 0.297	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0760-029-08R1 SD_DRILL_7.6MM_3XD	02899037	7,6 0.299	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0770-029-08R1 SD_DRILL_7.7MM_3XD	02899038	7,7 0.303	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0780-029-08R1 SD_DRILL_7.8MM_3XD	02899040	7,8 0.307	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0790-029-08R1 SD_DRILL_7.9MM_3XD	02899041	7,9 0.311	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0794-029-08R1 SD_DRILL_5/16_3XD	02899042	7,938 0.313	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0800-029-08R1 SD_DRILL_8.0MM_3XD	02899043	8,0 0.315	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAIN	IT9
SD1103-0810-035-10R1 SD_DRILL_8.1MM_3XD	02899044	8,1 0.319	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0820-035-10R1 SD_DRILL_8.2MM_3XD	02899045	8,2 0.323	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0830-035-10R1 SD_DRILL_8.3MM_3XD	02899046	8,3 0.327	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0833-035-10R1 SD_DRILL_21/64_3XD	02899047	8,334 0.328	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0840-035-10R1 SD_DRILL_8.4MM_3XD	02899048	8,4 0.331	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0850-035-10R1 SD_DRILL_8.5MM_3XD	02899049	8,5 0.335	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0860-035-10R1 SD_DRILL_8.6MM_3XD	02899050	8,6 0.339	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0870-035-10R1 SD_DRILL_8.7MM_3XD	02899051	8,7 0.343	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0873-035-10R1 SD_DRILL_11/32_3XD	02899052	8,731 0.344	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0880-035-10R1 SD_DRILL_8.8MM_3XD	02899053	8,8 0.346	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0890-035-10R1 SD_DRILL_8.9MM_3XD	02899054	8,9 0.350	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0900-035-10R1 SD_DRILL_9.0MM_3XD	02899055	9,0 0.354	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0910-035-10R1 SD_DRILL_9.1MM_3XD	02899056	9,1 0.358	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0913-035-10R1 SD_DRILL_23/64_3XD	02899058	9,128 0.359	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9
SD1103-0920-035-10R1 SD_DRILL_9.2MM_3XD	02899059	9,2 0.362	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAIN	IT9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103-0930-035-10R1 SD_DRILL_9.3MM_3XD	02899060	9,3 0.366	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0940-035-10R1 SD_DRILL_9.4MM_3XD	02899061	9,4 0.370	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0950-035-10R1 SD_DRILL_9.5MM_3XD	02899062	9,5 0.374	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0953-035-10R1 SD_DRILL_3/8_3XD	02899063	9,525 0.375	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0955-035-10R1 SD_DRILL_9.55MM_3XD	02899064	9,55 0.376	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0960-035-10R1 SD_DRILL_9.6MM_3XD	02899065	9,6 0.378	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0970-035-10R1 SD_DRILL_9.7MM_3XD	02899066	9,7 0.382	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0980-035-10R1 SD_DRILL_9.8MM_3XD	02899067	9,8 0.386	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0990-035-10R1 SD_DRILL_9.9MM_3XD	02899068	9,9 0.390	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-0992-035-10R1 SD_DRILL_25/64_3XD	02899069	9,922 0.391	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-1000-035-10R1 SD_DRILL_10.0MM_3XD	02899070	10,0 0.394	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT9
SD1103-1020-040-12R1 SD_DRILL_10.2MM_3XD	02899071	10,2 0.402	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1032-040-12R1 SD_DRILL_13/32_3XD	02899072	10,319 0.406	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1040-040-12R1 SD_DRILL_10.4MM_3XD	02899073	10,4 0.409	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1050-040-12R1 SD_DRILL_10.5MM_3XD	02899074	10,5 0.413	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1060-040-12R1 SD_DRILL_10.6MM_3XD	02899075	10,6 0.417	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1072-040-12R1 SD_DRILL_27/64_3XD	02899076	10,716 0.422	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1080-040-12R1 SD_DRILL_10.8MM_3XD	02899077	10,8 0.425	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1090-040-12R1 SD_DRILL_10.9MM_3XD	02899078	10,9 0.429	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1100-040-12R1 SD_DRILL_11.0MM_3XD	02899079	11,0 0.433	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1110-040-12R1 SD_DRILL_11.1MM_3XD	02899080	11,1 0.437	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1111-040-12R1 SD_DRILL_7/16_3XD	02899081	11,113 0.438	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1120-040-12R1 SD_DRILL_11.2MM_3XD	02899082	11,2 0.441	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1130-040-12R1 SD_DRILL_11.3MM_3XD	02899083	11,3 0.445	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1140-040-12R1 SD_DRILL_11.4MM_3XD	02899084	11,4 0.449	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1150-040-12R1 SD_DRILL_11.5MM_3XD	02899085	11,5 0.453	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1151-040-12R1 SD_DRILL_29/64_3XD	02899086	11,509 0.453	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1155-040-12R1 SD_DRILL_11.55MM_3XD	02899087	11,55 0.455	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1160-040-12R1 SD_DRILL_11.6MM_3XD	02899088	11,6 0.457	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1170-040-12R1 SD_DRILL_11.7MM_3XD	02899089	11,7 0.461	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9
SD1103-1180-040-12R1 SD_DRILL_11.8MM_3XD	02899090	11,8 0.465	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103-1190-040-12R1 SD_DRILL_11.9MM_3XD	02899091	11,9 0.469	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN	IT9
SD1103-1191-040-12R1 SD_DRILL_15/32_3XD	02899092	11,906 0.469	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN	IT9
SD1103-1200-040-12R1 SD_DRILL_12.0MM_3XD	02899093	12,0 0.472	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN	IT9
SD1103-1210-043-14R1 SD_DRILL_12.1MM_3XD	02899094	12,1 0.476	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1220-043-14R1 SD_DRILL_12.2MM_3XD	02899095	12,2 0.480	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1230-043-14R1 SD_DRILL_31/64_3XD	02899096	12,303 0.484	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1240-043-14R1 SD_DRILL_12.4MM_3XD	02899097	12,4 0.488	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1250-043-14R1 SD_DRILL_12.5MM_3XD	02899098	12,5 0.492	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1260-043-14R1 SD_DRILL_12.6MM_3XD	02899099	12,6 0.496	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1270-043-14R1 SD_DRILL_1/2_3XD	02899100	12,7 0.500	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1275-043-14R1 SD_DRILL_12.75MM_3XD	02899101	12,75 0.502	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1280-043-14R1 SD_DRILL_12.8MM_3XD	02899102	12,8 0.504	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1290-043-14R1 SD_DRILL_12.9MM_3XD	02899103	12,9 0.508	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1300-043-14R1 SD_DRILL_13.0MM_3XD	02899104	13,0 0.512	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1310-043-14R1 SD_DRILL_33/64_3XD	02899105	13,1 0.516	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1320-043-14R1 SD_DRILL_13.2MM_3XD	02899106	13,2 0.520	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1330-043-14R1 SD_DRILL_13.3MM_3XD	02899107	13,3 0.524	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1340-043-14R1 SD_DRILL_13.4MM_3XD	02899108	13,4 0.528	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1349-043-14R1 SD_DRILL_17/32_3XD	02899109	13,494 0.531	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1350-043-14R1 SD_DRILL_13.5MM_3XD	02899110	13,5 0.531	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1360-043-14R1 SD_DRILL_13.6MM_3XD	02899111	13,6 0.535	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1370-043-14R1 SD_DRILL_13.7MM_3XD	02899112	13,7 0.539	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1380-043-14R1 SD_DRILL_13.8MM_3XD	02899113	13,8 0.543	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1390-043-14R1 SD_DRILL_35/64_3XD	02899114	13,9 0.547	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1400-043-14R1 SD_DRILL_14.0MM_3XD	02899115	14,0 0.551	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN	IT9
SD1103-1420-045-16R1 SD_DRILL_14.2MM_3XD	02899116	14,2 0.559	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9
SD1103-1429-045-16R1 SD_DRILL_9/16_3XD	02899117	14,288 0.563	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9
SD1103-1450-045-16R1 SD_DRILL_14.5MM_3XD	02899119	14,5 0.571	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9
SD1103-1470-045-16R1 SD_DRILL_14.7MM_3XD	02899120	14,7 0.579	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9
SD1103-1475-045-16R1 SD_DRILL_14.75MM_3XD	02899121	14,75 0.581	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9
SD1103-1480-045-16R1 SD_DRILL_14.8MM_3XD	02899122	14,8 0.583	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN	IT9

Introduction

Drilling

Reaming

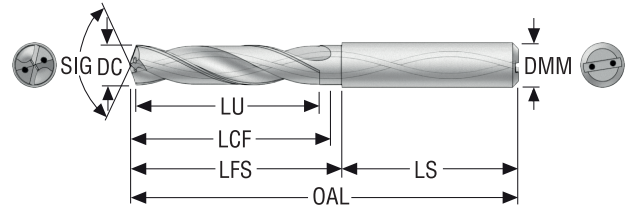
Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD1103-1500-045-16R1 <i>SD_DRILL_15.0MM_3XD</i>	02899123	15,0 <i>0.591</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1510-045-16R1 <i>SD_DRILL_15.1MM_3XD</i>	02899124	15,1 <i>0.594</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1530-045-16R1 <i>SD_DRILL_15.3MM_3XD</i>	02899125	15,3 <i>0.602</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1550-045-16R1 <i>SD_DRILL_15.5MM_3XD</i>	02899126	15,5 <i>0.610</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1570-045-16R1 <i>SD_DRILL_15.7MM_3XD</i>	02899127	15,7 <i>0.618</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1580-045-16R1 <i>SD_DRILL_15.8MM_3XD</i>	02899128	15,8 <i>0.622</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1588-045-16R1 <i>SD_DRILL_5/8_3XD</i>	02899129	15,875 <i>0.625</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1600-045-16R1 <i>SD_DRILL_16.0MM_3XD</i>	02899130	16,0 <i>0.630</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103-1650-051-18R1 <i>SD_DRILL_16.5MM_3XD</i>	02899131	16,5 <i>0.650</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103-1700-051-18R1 <i>SD_DRILL_17.0MM_3XD</i>	02899132	17,0 <i>0.669</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103-1750-051-18R1 <i>SD_DRILL_17.5MM_3XD</i>	02899133	17,5 <i>0.689</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103-1800-051-18R1 <i>SD_DRILL_18.0MM_3XD</i>	02899134	18,0 <i>0.709</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103-1850-055-20R1 <i>SD_DRILL_18.5MM_3XD</i>	02899135	18,5 <i>0.728</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103-1900-055-20R1 <i>SD_DRILL_19.0MM_3XD</i>	02899136	19,0 <i>0.748</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103-1905-055-20R1 <i>SD_DRILL_3/4_3XD</i>	02899137	19,05 <i>0.750</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103-1950-055-20R1 <i>SD_DRILL_19.5MM_3XD</i>	02899138	19,5 <i>0.768</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103-2000-055-20R1 <i>SD_DRILL_20.0MM_3XD</i>	02899139	20,0 <i>0.787</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9

SD1103A

Drilling depth ~ 3 x D – Metric/Inch



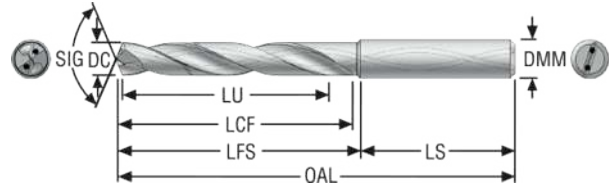
- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 140
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1103A-0300-014-06R1 SD_DRILL_3.0MM_3XD_A	02898244	3,0 0.118	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0310-014-06R1 SD_DRILL_3.1MM_3XD_A	02898245	3,1 0.122	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0318-014-06R1 SD_DRILL_1/8_3XD_A	02898246	3,175 0.125	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0320-014-06R1 SD_DRILL_3.2MM_3XD_A	02898247	3,2 0.126	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0325-014-06R1 SD_DRILL_3.25MM_3XD_A	02898248	3,25 0.128	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0330-014-06R1 SD_DRILL_3.3MM_3XD_A	02898249	3,3 0.130	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0340-014-06R1 SD_DRILL_3.4MM_3XD_A	02898250	3,4 0.134	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0350-014-06R1 SD_DRILL_3.5MM_3XD_A	02898251	3,5 0.138	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0357-014-06R1 SD_DRILL_9/64_3XD_A	02898252	3,572 0.141	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0360-014-06R1 SD_DRILL_3.6MM_3XD_A	02898253	3,6 0.142	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0365-014-06R1 SD_DRILL_3.65MM_3XD_A	02898254	3,65 0.144	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0370-014-06R1 SD_DRILL_3.7MM_3XD_A	02898255	3,7 0.146	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT9
SD1103A-0380-017-06R1 SD_DRILL_3.8MM_3XD_A	02898256	3,8 0.150	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0390-017-06R1 SD_DRILL_3.9MM_3XD_A	02898257	3,9 0.154	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0397-017-06R1 SD_DRILL_5/32_3XD_A	02898258	3,969 0.156	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0400-017-06R1 SD_DRILL_4.0MM_3XD_A	02898259	4,0 0.157	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0410-017-06R1 SD_DRILL_4.1MM_3XD_A	02898260	4,1 0.161	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0420-017-06R1 SD_DRILL_4.2MM_3XD_A	02898261	4,2 0.165	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0430-017-06R1 SD_DRILL_4.3MM_3XD_A	02898262	4,3 0.169	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0437-017-06R1 SD_DRILL_11/64_3XD_A	02898263	4,366 0.172	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9
SD1103A-0450-017-06R1 SD_DRILL_4.5MM_3XD_A	02898264	4,5 0.177	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD1103A-1500-045-16R1 <i>SD_DRILL_15.0MM_3XD_A</i>	02898390	15,0 <i>0.591</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1510-045-16R1 <i>SD_DRILL_15.1MM_3XD_A</i>	02898391	15,1 <i>0.594</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1530-045-16R1 <i>SD_DRILL_15.3MM_3XD_A</i>	02898392	15,3 <i>0.602</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1550-045-16R1 <i>SD_DRILL_15.5MM_3XD_A</i>	02898393	15,5 <i>0.610</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1570-045-16R1 <i>SD_DRILL_15.7MM_3XD_A</i>	02898394	15,7 <i>0.618</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1580-045-16R1 <i>SD_DRILL_15.8MM_3XD_A</i>	02898395	15,8 <i>0.622</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1588-045-16R1 <i>SD_DRILL_5/8_3XD_A</i>	02898396	15,875 <i>0.625</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1600-045-16R1 <i>SD_DRILL_16.0MM_3XD_A</i>	02898397	16,0 <i>0.630</i>	45,0 <i>1.772</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAIN	IT9
SD1103A-1650-051-18R1 <i>SD_DRILL_16.5MM_3XD_A</i>	02898398	16,5 <i>0.650</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103A-1700-051-18R1 <i>SD_DRILL_17.0MM_3XD_A</i>	02898399	17,0 <i>0.669</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103A-1750-051-18R1 <i>SD_DRILL_17.5MM_3XD_A</i>	02898400	17,5 <i>0.689</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103A-1800-051-18R1 <i>SD_DRILL_18.0MM_3XD_A</i>	02898401	18,0 <i>0.709</i>	51,0 <i>2.008</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD1103A-1850-055-20R1 <i>SD_DRILL_18.5MM_3XD_A</i>	02898402	18,5 <i>0.728</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103A-1900-055-20R1 <i>SD_DRILL_19.0MM_3XD_A</i>	02898403	19,0 <i>0.748</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103A-1905-055-20R1 <i>SD_DRILL_3/4_3XD_A</i>	02898404	19,05 <i>0.750</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103A-1950-055-20R1 <i>SD_DRILL_19.5MM_3XD_A</i>	02898405	19,5 <i>0.768</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD1103A-2000-055-20R1 <i>SD_DRILL_20.0MM_3XD_A</i>	02898406	20,0 <i>0.787</i>	55,0 <i>2.165</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9

SD1105A

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 141
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
SD1105A-0300-023-06R1 <i>SD_DRILL_3.0MM_5XD_A</i>	02897845	3,0 0.118	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0310-023-06R1 <i>SD_DRILL_3.1MM_5XD_A</i>	02897846	3,1 0.122	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0318-023-06R1 <i>SD_DRILL_1/8_5XD_A</i>	02897847	3,175 0.125	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0320-023-06R1 <i>SD_DRILL_3.2MM_5XD_A</i>	02897848	3,2 0.126	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0325-023-06R1 <i>SD_DRILL_3.25MM_5XD_A</i>	02897849	3,25 0.128	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0330-023-06R1 <i>SD_DRILL_3.3MM_5XD_A</i>	02897850	3,3 0.130	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0340-023-06R1 <i>SD_DRILL_3.4MM_5XD_A</i>	02897851	3,4 0.134	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0350-023-06R1 <i>SD_DRILL_3.5MM_5XD_A</i>	02897852	3,5 0.138	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0357-023-06R1 <i>SD_DRILL_9/64_5XD_A</i>	02897853	3,572 0.141	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0360-023-06R1 <i>SD_DRILL_3.6MM_5XD_A</i>	02897854	3,6 0.142	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0365-023-06R1 <i>SD_DRILL_3.65MM_5XD_A</i>	02897855	3,65 0.144	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0370-023-06R1 <i>SD_DRILL_3.7MM_5XD_A</i>	02897856	3,7 0.146	23,0 0.906	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN	IT9
SD1105A-0380-029-06R1 <i>SD_DRILL_3.8MM_5XD_A</i>	02897857	3,8 0.150	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0390-029-06R1 <i>SD_DRILL_3.9MM_5XD_A</i>	02897858	3,9 0.154	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0397-029-06R1 <i>SD_DRILL_5/32_5XD_A</i>	02897859	3,969 0.156	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0400-029-06R1 <i>SD_DRILL_4.0MM_5XD_A</i>	02897860	4,0 0.157	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0410-029-06R1 <i>SD_DRILL_4.1MM_5XD_A</i>	02897861	4,1 0.161	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0420-029-06R1 <i>SD_DRILL_4.2MM_5XD_A</i>	02897862	4,2 0.165	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0430-029-06R1 <i>SD_DRILL_4.3MM_5XD_A</i>	02897863	4,3 0.169	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0437-029-06R1 <i>SD_DRILL_11/64_5XD_A</i>	02897864	4,366 0.172	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0440-029-06R1 <i>SD_DRILL_4.4MM_5XD_A</i>	02897865	4,4 0.173	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9
SD1105A-0450-029-06R1 <i>SD_DRILL_4.5MM_5XD_A</i>	02897866	4,5 0.177	29,0 1.142	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAIN	IT9

Introduction

Drilling

Reaming

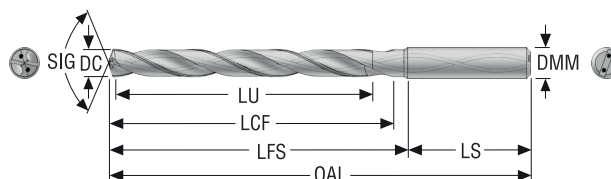
Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD1105A-1990-077-20R1 <i>SD_DRILL_19.9MM_5XD_A</i>	02898054	19,9 <i>0.783</i>	77,0 <i>3.031</i>	153,0 <i>6.024</i>	103,0 <i>4.055</i>	50,0 <i>1.969</i>	101,0 <i>3.976</i>	20,0 <i>0.787</i>	140°	TiAlN	IT9
SD1105A-2000-077-20R1 <i>SD_DRILL_20.0MM_5XD_A</i>	02898055	20,0 <i>0.787</i>	77,0 <i>3.031</i>	153,0 <i>6.024</i>	103,0 <i>4.055</i>	50,0 <i>1.969</i>	101,0 <i>3.976</i>	20,0 <i>0.787</i>	140°	TiAlN	IT9

SD1108A

Drilling depth ~ 8 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 142
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1108A-0300-028-06R1 SD_DRILL_3.0MM_8XD_A	03295178	3,0 0.118	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0310-028-06R1 SD_DRILL_3.1MM_8XD_A	03295179	3,1 0.122	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0318-028-06R1 SD_DRILL_1/8_8XD_A	03323680	3,175 0.125	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0320-028-06R1 SD_DRILL_3.2MM_8XD_A	03295180	3,2 0.126	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0330-028-06R1 SD_DRILL_3.3MM_8XD_A	03295181	3,3 0.130	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0340-028-06R1 SD_DRILL_3.4MM_8XD_A	03295182	3,4 0.134	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0350-028-06R1 SD_DRILL_3.5MM_8XD_A	03295183	3,5 0.138	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0357-028-06R1 SD_DRILL_9/64_8XD_A	03323681	3,572 0.141	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0360-028-06R1 SD_DRILL_3.6MM_8XD_A	03295184	3,6 0.142	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0370-028-06R1 SD_DRILL_3.7MM_8XD_A	03295185	3,7 0.146	28,0 1.102	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT9
SD1108A-0380-037-06R1 SD_DRILL_3.8MM_8XD_A	03295186	3,8 0.150	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0390-037-06R1 SD_DRILL_3.9MM_8XD_A	03295187	3,9 0.154	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0397-037-06R1 SD_DRILL_5/32_8XD_A	03323682	3,969 0.156	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0400-037-06R1 SD_DRILL_4.0MM_8XD_A	03295188	4,0 0.157	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0410-037-06R1 SD_DRILL_4.1MM_8XD_A	03295189	4,1 0.161	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0420-037-06R1 SD_DRILL_4.2MM_8XD_A	03295190	4,2 0.165	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0430-037-06R1 SD_DRILL_4.3MM_8XD_A	03295191	4,3 0.169	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0437-037-06R1 SD_DRILL_11/64_8XD_A	03323683	4,366 0.172	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0440-037-06R1 SD_DRILL_4.4MM_8XD_A	03295192	4,4 0.173	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0450-037-06R1 SD_DRILL_4.5MM_8XD_A	03295193	4,5 0.177	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0460-037-06R1 SD_DRILL_4.6MM_8XD_A	03295194	4,6 0.181	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1108A-0470-037-06R1 SD_DRILL_4.7MM_8XD_A	03295195	4,7 0.185	37,0 1.457	85,0 3.346	49,0 1.929	36,0 1.417	45,0 1.772	6,0 0.236	140°	TiAlN	IT9
SD1108A-0476-048-06R1 SD_DRILL_3/16_8XD_A	03323684	4,763 0.188	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0480-048-06R1 SD_DRILL_4.8MM_8XD_A	03295197	4,8 0.189	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0490-048-06R1 SD_DRILL_4.9MM_8XD_A	03295198	4,9 0.193	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0500-048-06R1 SD_DRILL_5.0MM_8XD_A	03295199	5,0 0.197	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0510-048-06R1 SD_DRILL_5.1MM_8XD_A	03295200	5,1 0.201	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0516-048-06R1 SD_DRILL_13/64_8XD_A	03323685	5,159 0.203	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0520-048-06R1 SD_DRILL_5.2MM_8XD_A	03295201	5,2 0.205	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0530-048-06R1 SD_DRILL_5.3MM_8XD_A	03295202	5,3 0.209	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0540-048-06R1 SD_DRILL_5.4MM_8XD_A	03295203	5,4 0.213	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0550-048-06R1 SD_DRILL_5.5MM_8XD_A	03295204	5,5 0.217	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0556-048-06R1 SD_DRILL_7/32_8XD_A	03295206	5,556 0.219	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0560-048-06R1 SD_DRILL_5.6MM_8XD_A	03295207	5,6 0.220	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0570-048-06R1 SD_DRILL_5.7MM_8XD_A	03295208	5,7 0.224	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0580-048-06R1 SD_DRILL_5.8MM_8XD_A	03295012	5,8 0.228	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0590-048-06R1 SD_DRILL_5.9MM_8XD_A	03295013	5,9 0.232	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0595-048-06R1 SD_DRILL_15/64_8XD_A	03323686	5,953 0.234	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0600-048-06R1 SD_DRILL_6.0MM_8XD_A	03295014	6,0 0.236	48,0 1.890	97,0 3.819	61,0 2.402	36,0 1.417	57,0 2.244	6,0 0.236	140°	TiAlN	IT9
SD1108A-0610-055-08R1 SD_DRILL_6.1MM_8XD_A	03295015	6,1 0.240	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0620-055-08R1 SD_DRILL_6.2MM_8XD_A	03295016	6,2 0.244	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0630-055-08R1 SD_DRILL_6.3MM_8XD_A	03295017	6,3 0.248	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0635-055-08R1 SD_DRILL_1/4_8XD_A	03295018	6,35 0.250	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0640-055-08R1 SD_DRILL_6.4MM_8XD_A	03295019	6,4 0.252	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0650-055-08R1 SD_DRILL_6.5MM_8XD_A	03295020	6,5 0.256	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0660-055-08R1 SD_DRILL_6.6MM_8XD_A	03295021	6,6 0.260	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0670-055-08R1 SD_DRILL_6.7MM_8XD_A	03295022	6,7 0.264	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0675-055-08R1 SD_DRILL_17/64_8XD_A	03323687	6,747 0.266	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0680-055-08R1 SD_DRILL_6.8MM_8XD_A	03295023	6,8 0.268	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0690-055-08R1 SD_DRILL_6.9MM_8XD_A	03295024	6,9 0.272	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0700-055-08R1 SD_DRILL_7.0MM_8XD_A	03295025	7,0 0.276	55,0 2.165	106,0 4.173	70,0 2.756	36,0 1.417	66,0 2.598	8,0 0.315	140°	TiAlN	IT9
SD1108A-0710-064-08R1 SD_DRILL_7.1MM_8XD_A	03295026	7,1 0.280	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1108A-0714-064-08R1 SD_DRILL_9/32_8XD_A	03323688	7,144 0.281	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0730-064-08R1 SD_DRILL_7.3MM_8XD_A	03323689	7,3 0.287	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0740-064-08R1 SD_DRILL_7.4MM_8XD_A	03295027	7,4 0.291	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0750-064-08R1 SD_DRILL_7.5MM_8XD_A	03295028	7,5 0.295	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0754-064-08R1 SD_DRILL_19/64_8XD_A	03323690	7,541 0.297	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0760-064-08R1 SD_DRILL_7.6MM_8XD_A	03323691	7,6 0.299	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0770-064-08R1 SD_DRILL_7.7MM_8XD_A	03295029	7,7 0.303	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0780-064-08R1 SD_DRILL_7.8MM_8XD_A	03295030	7,8 0.307	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0790-064-08R1 SD_DRILL_7.9MM_8XD_A	03295031	7,9 0.311	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0794-064-08R1 SD_DRILL_5/16_8XD_A	03323692	7,938 0.313	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0800-064-08R1 SD_DRILL_8.0MM_8XD_A	03295032	8,0 0.315	64,0 2.520	116,0 4.567	80,0 3.150	36,0 1.417	76,0 2.992	8,0 0.315	140°	TiAIN	IT9
SD1108A-0810-080-10R1 SD_DRILL_8.1MM_8XD_A	03295033	8,1 0.319	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0820-080-10R1 SD_DRILL_8.2MM_8XD_A	03295034	8,2 0.323	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0830-080-10R1 SD_DRILL_8.3MM_8XD_A	03295035	8,3 0.327	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0833-080-10R1 SD_DRILL_21/64_8XD_A	03323693	8,334 0.328	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0840-080-10R1 SD_DRILL_8.4MM_8XD_A	03295036	8,4 0.331	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0850-080-10R1 SD_DRILL_8.5MM_8XD_A	03295037	8,5 0.335	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0860-080-10R1 SD_DRILL_8.6MM_8XD_A	03295038	8,6 0.339	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0870-080-10R1 SD_DRILL_8.7MM_8XD_A	03295039	8,7 0.343	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0873-080-10R1 SD_DRILL_11/32_8XD_A	03323694	8,731 0.344	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0880-080-10R1 SD_DRILL_8.8MM_8XD_A	03295040	8,8 0.346	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0900-080-10R1 SD_DRILL_9.0MM_8XD_A	03295041	9,0 0.354	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0910-080-10R1 SD_DRILL_9.1MM_8XD_A	03295042	9,1 0.358	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0913-080-10R1 SD_DRILL_23/64_8XD_A	03323695	9,128 0.359	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0930-080-10R1 SD_DRILL_9.3MM_8XD_A	03295043	9,3 0.366	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0940-080-10R1 SD_DRILL_9.4MM_8XD_A	03295044	9,4 0.370	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0950-080-10R1 SD_DRILL_9.5MM_8XD_A	03295045	9,5 0.374	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0953-080-10R1 SD_DRILL_3/8_8XD_A	03323696	9,525 0.375	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0970-080-10R1 SD_DRILL_9.7MM_8XD_A	03295046	9,7 0.382	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0980-080-10R1 SD_DRILL_9.8MM_8XD_A	03295047	9,8 0.386	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9
SD1108A-0990-080-10R1 SD_DRILL_9.9MM_8XD_A	03295048	9,9 0.390	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAIN	IT9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1108A-0992-080-10R1 SD_DRILL_25/64_8XD_A	03323697	9,922 0.391	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAlN	IT9
SD1108A-1000-080-10R1 SD_DRILL_10.0MM_8XD_A	03295049	10,0 0.394	80,0 3.150	139,0 5.472	99,0 3.898	40,0 1.575	95,0 3.740	10,0 0.394	140°	TiAlN	IT9
SD1108A-1020-096-12R1 SD_DRILL_10.2MM_8XD_A	03295050	10,2 0.402	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1030-096-12R1 SD_DRILL_10.3MM_8XD_A	03295051	10,3 0.406	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1032-096-12R1 SD_DRILL_13/32_8XD_A	03323698	10,319 0.406	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1040-096-12R1 SD_DRILL_10.4MM_8XD_A	03295053	10,4 0.409	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1050-096-12R1 SD_DRILL_10.5MM_8XD_A	03295054	10,5 0.413	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1070-096-12R1 SD_DRILL_10.7MM_8XD_A	03295055	10,7 0.421	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1072-096-12R1 SD_DRILL_27/64_8XD_A	03323699	10,716 0.422	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1080-096-12R1 SD_DRILL_10.8MM_8XD_A	03295056	10,8 0.425	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1100-096-12R1 SD_DRILL_11.0MM_8XD_A	03295057	11,0 0.433	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1111-096-12R1 SD_DRILL_7/16_8XD_A	03323700	11,113 0.438	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1120-096-12R1 SD_DRILL_11.2MM_8XD_A	03295058	11,2 0.441	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1130-096-12R1 SD_DRILL_11.3MM_8XD_A	03295059	11,3 0.445	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1150-096-12R1 SD_DRILL_11.5MM_8XD_A	03295060	11,5 0.453	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1170-096-12R1 SD_DRILL_11.7MM_8XD_A	03295061	11,7 0.461	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1180-096-12R1 SD_DRILL_11.8MM_8XD_A	03295062	11,8 0.465	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1190-096-12R1 SD_DRILL_11.9MM_8XD_A	03295063	11,9 0.469	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1191-096-12R1 SD_DRILL_15/32_8XD_A	03323701	11,906 0.469	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1200-096-12R1 SD_DRILL_12.0MM_8XD_A	03295064	12,0 0.472	96,0 3.780	163,0 6.417	118,0 4.646	45,0 1.772	114,0 4.488	12,0 0.472	140°	TiAlN	IT9
SD1108A-1230-119-14R1 SD_DRILL_31/64_8XD_A	03295065	12,3 0.484	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1250-119-14R1 SD_DRILL_12.5MM_8XD_A	03295066	12,5 0.492	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1270-119-14R1 SD_DRILL_1/2_8XD_A	03295067	12,7 0.500	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1300-119-14R1 SD_DRILL_13.0MM_8XD_A	03295068	13,0 0.512	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1349-119-14R1 SD_DRILL_17/32_8XD_A	03323702	13,494 0.531	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1350-119-14R1 SD_DRILL_13.5MM_8XD_A	03295069	13,5 0.531	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1400-119-14R1 SD_DRILL_14.0MM_8XD_A	03295070	14,0 0.551	119,0 4.685	182,0 7.165	137,0 5.394	45,0 1.772	133,0 5.236	14,0 0.551	140°	TiAlN	IT9
SD1108A-1429-136-16R1 SD_DRILL_9/16_8XD_A	03295071	14,288 0.563	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAlN	IT9
SD1108A-1450-136-16R1 SD_DRILL_14.5MM_8XD_A	03295072	14,5 0.571	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAlN	IT9
SD1108A-1500-136-16R1 SD_DRILL_15.0MM_8XD_A	03295073	15,0 0.591	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAlN	IT9
SD1108A-1550-136-16R1 SD_DRILL_15.5MM_8XD_A	03295074	15,5 0.610	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1108A-1588-136-16R1 SD_DRILL_5/8_8XD_A	03295075	15,875 0.625	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAIN	IT9
SD1108A-1600-136-16R1 SD_DRILL_16.0MM_8XD_A	03295076	16,0 0.630	136,0 5.354	204,0 8.031	156,0 6.142	48,0 1.890	152,0 5.984	16,0 0.630	140°	TiAIN	IT9
SD1108A-1650-153-18R1 SD_DRILL_16.5MM_8XD_A	03295077	16,5 0.650	153,0 6.024	223,0 8.780	175,0 6.890	48,0 1.890	171,0 6.732	18,0 0.709	140°	TiAIN	IT9
SD1108A-1700-153-18R1 SD_DRILL_17.0MM_8XD_A	03295078	17,0 0.669	153,0 6.024	223,0 8.780	175,0 6.890	48,0 1.890	171,0 6.732	18,0 0.709	140°	TiAIN	IT9
SD1108A-1750-153-18R1 SD_DRILL_17.5MM_8XD_A	03295079	17,5 0.689	153,0 6.024	223,0 8.780	175,0 6.890	48,0 1.890	171,0 6.732	18,0 0.709	140°	TiAIN	IT9
SD1108A-1800-153-18R1 SD_DRILL_18.0MM_8XD_A	03295080	18,0 0.709	153,0 6.024	223,0 8.780	175,0 6.890	48,0 1.890	171,0 6.732	18,0 0.709	140°	TiAIN	IT9
SD1108A-1850-170-20R1 SD_DRILL_18.5MM_8XD_A	03295081	18,5 0.728	170,0 6.693	244,0 9.606	194,0 7.638	50,0 1.969	190,0 7.480	20,0 0.787	140°	TiAIN	IT9
SD1108A-1900-170-20R1 SD_DRILL_19.0MM_8XD_A	03295082	19,0 0.748	170,0 6.693	244,0 9.606	194,0 7.638	50,0 1.969	190,0 7.480	20,0 0.787	140°	TiAIN	IT9
SD1108A-1905-170-20R1 SD_DRILL_3/4_8XD_A	03323703	19,05 0.750	170,0 6.693	244,0 9.606	194,0 7.638	50,0 1.969	190,0 7.480	20,0 0.787	140°	TiAIN	IT9
SD1108A-1950-170-20R1 SD_DRILL_19.5MM_8XD_A	03295083	19,5 0.768	170,0 6.693	244,0 9.606	194,0 7.638	50,0 1.969	190,0 7.480	20,0 0.787	140°	TiAIN	IT9
SD1108A-2000-170-20R1 SD_DRILL_20.0MM_8XD_A	03295084	20,0 0.787	170,0 6.693	244,0 9.606	194,0 7.638	50,0 1.969	190,0 7.480	20,0 0.787	140°	TiAIN	IT9

Introduction

Drilling

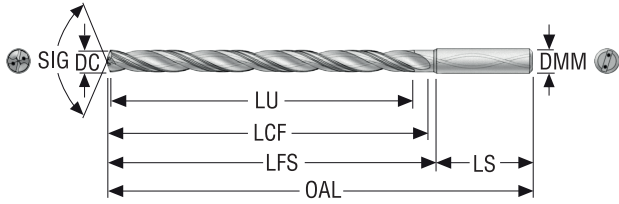
Reaming

Boring

Annex

SD1112A

Drilling depth ~ 12 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 143
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1112A-0300-048-06R1 SD_DRILL_3.0MM_12XD_A	03295085	3,0 0.118	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0310-048-06R1 SD_DRILL_3.1MM_12XD_A	03295086	3,1 0.122	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0318-048-06R1 SD_DRILL_1/8_12XD_A	03323704	3,175 0.125	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0320-048-06R1 SD_DRILL_3.2MM_12XD_A	03295087	3,2 0.126	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0330-048-06R1 SD_DRILL_3.3MM_12XD_A	03295088	3,3 0.130	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0340-048-06R1 SD_DRILL_3.4MM_12XD_A	03295089	3,4 0.134	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0350-048-06R1 SD_DRILL_3.5MM_12XD_A	03295090	3,5 0.138	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0357-048-06R1 SD_DRILL_9/64_12XD_A	03323705	3,572 0.141	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0360-048-06R1 SD_DRILL_3.6MM_12XD_A	03295091	3,6 0.142	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0370-048-06R1 SD_DRILL_3.7MM_12XD_A	03295092	3,7 0.146	48,0 1.890	92,0 3.622	56,0 2.205	36,0 1.417	54,0 2.126	6,0 0.236	140°	TiAlN	IT9
SD1112A-0380-056-06R1 SD_DRILL_3.8MM_12XD_A	03295093	3,8 0.150	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0390-056-06R1 SD_DRILL_3.9MM_12XD_A	03295094	3,9 0.154	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0397-056-06R1 SD_DRILL_5/32_12XD_A	03323706	3,969 0.156	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0400-056-06R1 SD_DRILL_4.0MM_12XD_A	03295095	4,0 0.157	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0410-056-06R1 SD_DRILL_4.1MM_12XD_A	03295096	4,1 0.161	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0420-056-06R1 SD_DRILL_4.2MM_12XD_A	03295097	4,2 0.165	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0430-056-06R1 SD_DRILL_4.3MM_12XD_A	03295098	4,3 0.169	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0437-056-06R1 SD_DRILL_11/64_12XD_A	03323707	4,366 0.172	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0440-056-06R1 SD_DRILL_4.4MM_12XD_A	03295099	4,4 0.173	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0450-056-06R1 SD_DRILL_4.5MM_12XD_A	03295100	4,5 0.177	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9
SD1112A-0460-056-06R1 SD_DRILL_4.6MM_12XD_A	03295101	4,6 0.181	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1112A-0470-056-06R1 SD_DRILL_4.7MM_12XD_A	03295102	4,7 0.185	56,0 2.205	102,0 4.016	66,0 2.598	36,0 1.417	64,0 2.520	6,0 0.236	140°	TiAIN	IT9
SD1112A-0476-074-06R1 SD_DRILL_3/16_12XD_A	03323708	4,763 0.188	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0480-074-06R1 SD_DRILL_4.8MM_12XD_A	03295103	4,8 0.189	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0490-074-06R1 SD_DRILL_4.9MM_12XD_A	03295104	4,9 0.193	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0500-074-06R1 SD_DRILL_5.0MM_12XD_A	03295105	5,0 0.197	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0510-074-06R1 SD_DRILL_5.1MM_12XD_A	03295106	5,1 0.201	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0516-074-06R1 SD_DRILL_13/64_12XD_A	03323709	5,159 0.203	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0520-074-06R1 SD_DRILL_5.2MM_12XD_A	03295107	5,2 0.205	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0530-074-06R1 SD_DRILL_5.3MM_12XD_A	03295108	5,3 0.209	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0540-074-06R1 SD_DRILL_5.4MM_12XD_A	03295109	5,4 0.213	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0550-074-06R1 SD_DRILL_5.5MM_12XD_A	03295110	5,5 0.217	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0556-074-06R1 SD_DRILL_7/32_12XD_A	03295111	5,556 0.219	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0560-074-06R1 SD_DRILL_5.6MM_12XD_A	03295112	5,6 0.220	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0570-074-06R1 SD_DRILL_5.7MM_12XD_A	03295113	5,7 0.224	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0580-074-06R1 SD_DRILL_5.8MM_12XD_A	03295114	5,8 0.228	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0590-074-06R1 SD_DRILL_5.9MM_12XD_A	03295115	5,9 0.232	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0600-074-06R1 SD_DRILL_6.0MM_12XD_A	03295116	6,0 0.236	74,0 2.913	121,0 4.764	85,0 3.346	36,0 1.417	83,0 3.268	6,0 0.236	140°	TiAIN	IT9
SD1112A-0610-098-08R1 SD_DRILL_6.1MM_12XD_A	03295117	6,1 0.240	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0620-098-08R1 SD_DRILL_6.2MM_12XD_A	03295118	6,2 0.244	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0630-098-08R1 SD_DRILL_6.3MM_12XD_A	03295119	6,3 0.248	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0635-098-08R1 SD_DRILL_1/4_12XD_A	03295120	6,35 0.250	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0640-098-08R1 SD_DRILL_6.4MM_12XD_A	03295121	6,4 0.252	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0650-098-08R1 SD_DRILL_6.5MM_12XD_A	03295122	6,5 0.256	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0660-098-08R1 SD_DRILL_6.6MM_12XD_A	03295123	6,6 0.260	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0670-098-08R1 SD_DRILL_6.7MM_12XD_A	03295124	6,7 0.264	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0675-098-08R1 SD_DRILL_17/64_12XD_A	03323710	6,747 0.266	98,0 3.858	148,0 5.827	128,0 5.039	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0680-098-08R1 SD_DRILL_6.8MM_12XD_A	03295125	6,8 0.268	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0690-098-08R1 SD_DRILL_6.9MM_12XD_A	03295126	6,9 0.272	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0700-098-08R1 SD_DRILL_7.0MM_12XD_A	03295127	7,0 0.276	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0710-098-08R1 SD_DRILL_7.1MM_12XD_A	03295128	7,1 0.280	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9
SD1112A-0714-098-08R1 SD_DRILL_9/32_12XD_A	03323711	7,144 0.281	98,0 3.858	148,0 5.827	128,0 5.039	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAIN	IT9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1112A-0730-098-08R1 SD_DRILL_7.3MM_12XD_A	03323712	7,3 0.287	98,0 3.858	148,0 5.827	128,0 5.039	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0740-098-08R1 SD_DRILL_7.4MM_12XD_A	03295129	7,4 0.291	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0750-098-08R1 SD_DRILL_7.5MM_12XD_A	03295130	7,5 0.295	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0754-098-08R1 SD_DRILL_19/64_12XD_A	03323713	7,541 0.297	98,0 3.858	148,0 5.827	128,0 5.039	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0780-098-08R1 SD_DRILL_7.8MM_12XD_A	03295131	7,8 0.307	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0790-098-08R1 SD_DRILL_7.9MM_12XD_A	03295132	7,9 0.311	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0794-098-08R1 SD_DRILL_5/16_12XD_A	03323714	7,938 0.313	98,0 3.858	148,0 5.827	128,0 5.039	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0800-098-08R1 SD_DRILL_8.0MM_12XD_A	03295133	8,0 0.315	98,0 3.858	148,0 5.827	112,0 4.409	36,0 1.417	110,0 4.331	8,0 0.315	140°	TiAlN	IT9
SD1112A-0810-123-10R1 SD_DRILL_8.1MM_12XD_A	03295135	8,1 0.319	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0820-123-10R1 SD_DRILL_8.2MM_12XD_A	03295136	8,2 0.323	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0830-123-10R1 SD_DRILL_8.3MM_12XD_A	03295137	8,3 0.327	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0840-123-10R1 SD_DRILL_8.4MM_12XD_A	03295138	8,4 0.331	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0850-123-10R1 SD_DRILL_8.5MM_12XD_A	03295139	8,5 0.335	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0860-123-10R1 SD_DRILL_8.6MM_12XD_A	03295140	8,6 0.339	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0870-123-10R1 SD_DRILL_8.7MM_12XD_A	03295141	8,7 0.343	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0873-123-10R1 SD_DRILL_11/32_12XD_A	03323715	8,731 0.344	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0880-123-10R1 SD_DRILL_8.8MM_12XD_A	03295142	8,8 0.346	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0900-123-10R1 SD_DRILL_9.0MM_12XD_A	03295143	9,0 0.354	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0913-123-10R1 SD_DRILL_23/64_12XD_A	03323716	9,128 0.359	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0930-123-10R1 SD_DRILL_9.3MM_12XD_A	03295144	9,3 0.366	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0950-123-10R1 SD_DRILL_9.5MM_12XD_A	03295145	9,5 0.374	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0953-123-10R1 SD_DRILL_3/8_12XD_A	03323717	9,525 0.375	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0970-123-10R1 SD_DRILL_9.7MM_12XD_A	03295146	9,7 0.382	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0980-123-10R1 SD_DRILL_9.8MM_12XD_A	03295147	9,8 0.386	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-0992-123-10R1 SD_DRILL_25/64_12XD_A	03323718	9,922 0.391	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-1000-123-10R1 SD_DRILL_10.0MM_12XD_A	03295148	10,0 0.394	123,0 4.843	180,0 7.087	140,0 5.512	40,0 1.575	138,0 5.433	10,0 0.394	140°	TiAlN	IT9
SD1112A-1020-140-12R1 SD_DRILL_10.2MM_12XD_A	03295149	10,2 0.402	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAlN	IT9
SD1112A-1030-140-12R1 SD_DRILL_10.3MM_12XD_A	03295150	10,3 0.406	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAlN	IT9
SD1112A-1032-140-12R1 SD_DRILL_13/32_12XD_A	03323719	10,319 0.406	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAlN	IT9
SD1112A-1050-140-12R1 SD_DRILL_10.5MM_12XD_A	03295151	10,5 0.413	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAlN	IT9
SD1112A-1072-140-12R1 SD_DRILL_27/64_12XD_A	03323720	10,716 0.422	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD1112A-1080-140-12R1 SD_DRILL_10.8MM_12XD_A	03295152	10,8 0.425	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1100-140-12R1 SD_DRILL_11.0MM_12XD_A	03295153	11,0 0.433	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1111-140-12R1 SD_DRILL_7/16_12XD_A	03323722	11,113 0.438	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1120-140-12R1 SD_DRILL_11.2MM_12XD_A	03295154	11,2 0.441	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1150-140-12R1 SD_DRILL_11.5MM_12XD_A	03295155	11,5 0.453	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1170-140-12R1 SD_DRILL_11.7MM_12XD_A	03295156	11,7 0.461	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1180-140-12R1 SD_DRILL_11.8MM_12XD_A	03295157	11,8 0.465	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1191-140-12R1 SD_DRILL_15/32_12XD_A	03323723	11,906 0.469	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1200-140-12R1 SD_DRILL_12.0MM_12XD_A	03295158	12,0 0.472	140,0 5.512	206,0 8.110	161,0 6.339	45,0 1.772	158,0 6.220	12,0 0.472	140°	TiAIN	IT9
SD1112A-1220-168-14R1 SD_DRILL_12.2MM_12XD_A	03295159	12,2 0.480	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1230-168-14R1 SD_DRILL_31/64_12XD_A	03295160	12,3 0.484	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1250-168-14R1 SD_DRILL_12.5MM_12XD_A	03295161	12,5 0.492	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1270-168-14R1 SD_DRILL_1/2_12XD_A	03295162	12,7 0.500	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1300-168-14R1 SD_DRILL_13.0MM_12XD_A	03295163	13,0 0.512	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1349-168-14R1 SD_DRILL_17/32_12XD_A	03323724	13,494 0.531	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1350-168-14R1 SD_DRILL_13.5MM_12XD_A	03295164	13,5 0.531	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1400-168-14R1 SD_DRILL_14.0MM_12XD_A	03295165	14,0 0.551	168,0 6.614	230,0 9.055	185,0 7.283	45,0 1.772	182,0 7.165	14,0 0.551	140°	TiAIN	IT9
SD1112A-1429-192-16R1 SD_DRILL_9/16_12XD_A	03295166	14,288 0.563	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1450-192-16R1 SD_DRILL_14.5MM_12XD_A	03295167	14,5 0.571	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1500-192-16R1 SD_DRILL_15.0MM_12XD_A	03295168	15,0 0.591	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1550-192-16R1 SD_DRILL_15.5MM_12XD_A	03295169	15,5 0.610	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1588-192-16R1 SD_DRILL_5/8_12XD_A	03295170	15,875 0.625	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1600-192-16R1 SD_DRILL_16.0MM_12XD_A	03295171	16,0 0.630	192,0 7.559	260,0 10.236	212,0 8.346	48,0 1.890	208,0 8.189	16,0 0.630	140°	TiAIN	IT9
SD1112A-1650-216-18R1 SD_DRILL_16.5MM_12XD_A	03295172	16,5 0.650	216,0 8.504	285,0 11.220	237,0 9.331	48,0 1.890	234,0 9.213	18,0 0.709	140°	TiAIN	IT9
SD1112A-1700-216-18R1 SD_DRILL_17.0MM_12XD_A	03295173	17,0 0.669	216,0 8.504	285,0 11.220	237,0 9.331	48,0 1.890	234,0 9.213	18,0 0.709	140°	TiAIN	IT9
SD1112A-1750-216-18R1 SD_DRILL_17.5MM_12XD_A	03295174	17,5 0.689	216,0 8.504	285,0 11.220	237,0 9.331	48,0 1.890	234,0 9.213	18,0 0.709	140°	TiAIN	IT9
SD1112A-1800-216-18R1 SD_DRILL_18.0MM_12XD_A	03295175	18,0 0.709	216,0 8.504	285,0 11.220	237,0 9.331	48,0 1.890	234,0 9.213	18,0 0.709	140°	TiAIN	IT9
SD1112A-1900-238-20R1 SD_DRILL_19.0MM_12XD_A	03295176	19,0 0.748	238,0 9.370	310,0 12.205	260,0 10.236	50,0 1.969	258,0 10.157	20,0 0.787	140°	TiAIN	IT9
SD1112A-2000-238-20R1 SD_DRILL_20.0MM_12XD_A	03295177	20,0 0.787	238,0 9.370	310,0 12.205	260,0 10.236	50,0 1.969	258,0 10.157	20,0 0.787	140°	TiAIN	IT9

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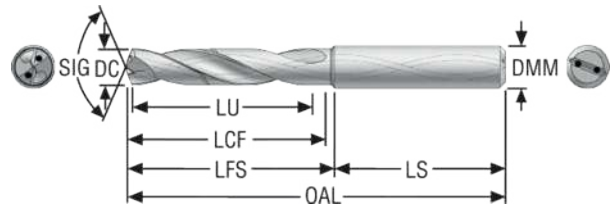
Feedmax -P – single diameter drills

Designed for high productivity and low cost per hole offering a unique combination of state-of-the-art carbide, coating and geometry technology.

- Self-centering geometry for high quality holes with no need for center-drilling operation.
- A special TiAlN coating gives Seco Feedmax drills high hot hardness that in combination with a strong cutting edge, ensures for long and predictable tool life

SD203A-P

Drilling depth ~ 3 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 144-145
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0200-007-04R1-P	03045918	2,0 0.079	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0210-007-04R1-P	03045919	2,1 0.083	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0220-007-04R1-P	03045920	2,2 0.087	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0230-008-04R1-P	03045921	2,3 0.091	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0235-008-04R1-P	03138154	2,35 0.093	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0238-008-04R1-P	03120476	2,381 0.094	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0240-008-04R1-P	03045922	2,4 0.094	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0250-008-04R1-P	03045923	2,5 0.098	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0260-008-04R1-P	03045924	2,6 0.102	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0270-009-04R1-P	03045925	2,7 0.106	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0278-009-04R1-P	03120495	2,778 0.109	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0280-009-04R1-P	03045926	2,8 0.110	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0290-009-04R1-P	03045927	2,9 0.114	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAlN	IT8-9
SD203A-0300-014-06R1-P	03045928	3,0 0.118	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0310-014-06R1-P	03045929	3,1 0.122	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0318-014-06R1-P	03046061	3,175 0.125	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0320-014-06R1-P	03045930	3,2 0.126	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0325-014-06R1-P	03045931	3,25 0.128	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0330-014-06R1-P	03045932	3,3 0.130	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0340-014-06R1-P	03045933	3,4 0.134	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0350-014-06R1-P	03045934	3,5 0.138	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0357-014-06R1-P	03046062	3,572 0.141	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0360-014-06R1-P	03045935	3,6 0.142	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0365-014-06R1-P	03045936	3,65 0.144	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0370-014-06R1-P	03045937	3,7 0.146	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0380-017-06R1-P	03045938	3,8 0.150	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0390-017-06R1-P	03045939	3,9 0.154	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0397-017-06R1-P	03046063	3,97 0.156	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0400-017-06R1-P	03045940	4,0 0.157	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0410-017-06R1-P	03045941	4,1 0.161	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0420-017-06R1-P	03045942	4,2 0.165	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0430-017-06R1-P	03045943	4,3 0.169	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0437-017-06R1-P	03046064	4,366 0.172	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0450-017-06R1-P	03045944	4,5 0.177	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0460-017-06R1-P	03045945	4,6 0.181	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0465-017-06R1-P	03045946	4,65 0.183	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0470-017-06R1-P	03045947	4,7 0.185	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0476-020-06R1-P	03046065	4,763 0.188	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0480-020-06R1-P	03045948	4,8 0.189	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0490-020-06R1-P	03045949	4,9 0.193	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0500-020-06R1-P	03045950	5,0 0.197	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0510-020-06R1-P	03045951	5,1 0.201	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0516-020-06R1-P	03046066	5,159 0.203	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0520-020-06R1-P	03045952	5,2 0.205	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0530-020-06R1-P	03045953	5,3 0.209	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0540-020-06R1-P	03045954	5,4 0.213	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0550-020-06R1-P	03045955	5,5 0.217	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0555-020-06R1-P	03045956	5,55 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0556-020-06R1-P	03046067	5,556 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0560-020-06R1-P	03045957	5,6 0.220	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0570-020-06R1-P	03045958	5,7 0.224	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0580-020-06R1-P	03045959	5,8 0.228	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0590-020-06R1-P	03045960	5,9 0.232	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0595-020-06R1-P	03046068	5,953 0.234	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0600-020-06R1-P	03045961	6,0 0.236	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAlN	IT8-9
SD203A-0610-024-08R1-P	03045962	6,1 0.240	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0620-024-08R1-P	03045963	6,2 0.244	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0630-024-08R1-P	03045964	6,3 0.248	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0635-024-08R1-P	03046069	6,35 0.250	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0640-024-08R1-P	03045965	6,4 0.252	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0650-024-08R1-P	03045966	6,5 0.256	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0660-024-08R1-P	03045967	6,6 0.260	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0670-024-08R1-P	03045968	6,7 0.264	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0675-024-08R1-P	03046070	6,747 0.266	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0680-024-08R1-P	03045969	6,8 0.268	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0690-024-08R1-P	03045970	6,9 0.272	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0700-024-08R1-P	03045971	7,0 0.276	24,0 0.945	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0710-029-08R1-P	03045972	7,1 0.280	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0714-029-08R1-P	03046071	7,144 0.281	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0720-029-08R1-P	03045973	7,2 0.283	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0730-029-08R1-P	03045974	7,3 0.287	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0740-029-08R1-P	03045975	7,4 0.291	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0750-029-08R1-P	03045976	7,5 0.295	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0754-029-08R1-P	03046072	7,541 0.297	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0755-029-08R1-P	03045977	7,55 0.297	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0760-029-08R1-P	03045978	7,6 0.299	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0770-029-08R1-P	03045979	7,7 0.303	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0780-029-08R1-P	03045980	7,8 0.307	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0790-029-08R1-P	03045981	7,9 0.311	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0794-029-08R1-P	03046073	7,938 0.313	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0800-029-08R1-P	03045982	8,0 0.315	29,0 1.142	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	TiAlN	IT8-9
SD203A-0810-035-10R1-P	03045983	8,1 0.319	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0820-035-10R1-P	03045984	8,2 0.323	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0830-035-10R1-P	03045985	8,3 0.327	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0833-035-10R1-P	03046074	8,334 0.328	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0840-035-10R1-P	03045986	8,4 0.331	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0850-035-10R1-P	03045987	8,5 0.335	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0860-035-10R1-P	03045988	8,6 0.339	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0870-035-10R1-P	03045989	8,7 0.343	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0873-035-10R1-P	03046075	8,731 0.344	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0880-035-10R1-P	03045990	8,8 0.346	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0890-035-10R1-P	03045991	8,9 0.350	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0900-035-10R1-P	03045992	9,0 0.354	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0910-035-10R1-P	03045993	9,1 0.358	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0913-035-10R1-P	03046076	9,128 0.359	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0920-035-10R1-P	03045994	9,2 0.362	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0930-035-10R1-P	03045995	9,3 0.366	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0940-035-10R1-P	03045996	9,4 0.370	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0950-035-10R1-P	03045997	9,5 0.374	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0953-035-10R1-P	03046077	9,525 0.375	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0955-035-10R1-P	03045998	9,55 0.376	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0960-035-10R1-P	03045999	9,6 0.378	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0970-035-10R1-P	03046000	9,7 0.382	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0980-035-10R1-P	03046001	9,8 0.386	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0990-035-10R1-P	03046002	9,9 0.390	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-0992-035-10R1-P	03046078	9,922 0.391	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-1000-035-10R1-P	03046003	10,0 0.394	35,0 1.378	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	TiAlN	IT8-9
SD203A-1020-040-12R1-P	03046004	10,2 0.402	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1032-040-12R1-P	03046079	10,319 0.406	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1040-040-12R1-P	03046005	10,4 0.409	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1050-040-12R1-P	03046006	10,5 0.413	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1060-040-12R1-P	03046007	10,6 0.417	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1072-040-12R1-P	03046080	10,716 0.422	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1080-040-12R1-P	03046008	10,8 0.425	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1090-040-12R1-P	03046009	10,9 0.429	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-1100-040-12R1-P	03046010	11,0 0.433	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1110-040-12R1-P	03046011	11,1 0.437	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1111-040-12R1-P	03046081	11,113 0.438	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1120-040-12R1-P	03046012	11,2 0.441	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1130-040-12R1-P	03046013	11,3 0.445	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1140-040-12R1-P	03046014	11,4 0.449	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1150-040-12R1-P	03046015	11,5 0.453	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1151-040-12R1-P	03046082	11,509 0.453	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1155-040-12R1-P	03046016	11,55 0.455	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1160-040-12R1-P	03046017	11,6 0.457	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1170-040-12R1-P	03046018	11,7 0.461	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1180-040-12R1-P	03046019	11,8 0.465	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1190-040-12R1-P	03046020	11,9 0.469	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1191-040-12R1-P	03046083	11,906 0.469	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1200-040-12R1-P	03046021	12,0 0.472	40,0 1.575	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAlN	IT8-9
SD203A-1210-043-14R1-P	03046022	12,1 0.476	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1220-043-14R1-P	03046023	12,2 0.480	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1230-043-14R1-P	03046084	12,303 0.484	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1240-043-14R1-P	03046024	12,4 0.488	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1250-043-14R1-P	03046025	12,5 0.492	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1260-043-14R1-P	03046026	12,6 0.496	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1270-043-14R1-P	03046085	12,7 0.500	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1275-043-14R1-P	03046027	12,75 0.502	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1280-043-14R1-P	03046028	12,8 0.504	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1290-043-14R1-P	03046029	12,9 0.508	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1300-043-14R1-P	03046030	13,0 0.512	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1310-043-14R1-P	03046031	13,1 0.516	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1320-043-14R1-P	03046032	13,2 0.520	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1330-043-14R1-P	03046033	13,3 0.524	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1340-043-14R1-P	03046034	13,4 0.528	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1349-043-14R1-P	03046086	13,494 0.531	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9

Introduction

Drilling

Reaming

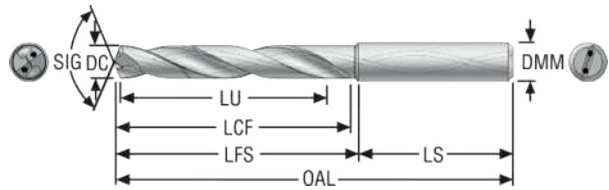
Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-1350-043-14R1-P	03046035	13,5 0.531	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1360-043-14R1-P	03046036	13,6 0.535	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1370-043-14R1-P	03046037	13,7 0.539	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1380-043-14R1-P	03046038	13,8 0.543	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1390-043-14R1-P	03046039	13,9 0.547	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1400-043-14R1-P	03046040	14,0 0.551	43,0 1.693	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAlN	IT8-9
SD203A-1420-045-16R1-P	03046041	14,2 0.559	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1425-045-16R1-P	03138155	14,25 0.561	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1429-045-16R1-P	03046087	14,288 0.563	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1450-045-16R1-P	03046042	14,5 0.571	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1470-045-16R1-P	03046043	14,7 0.579	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1475-045-16R1-P	03046044	14,75 0.581	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1480-045-16R1-P	03046045	14,8 0.583	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1500-045-16R1-P	03046046	15,0 0.591	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1510-045-16R1-P	03046047	15,1 0.594	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1530-045-16R1-P	03046048	15,3 0.602	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1550-045-16R1-P	03046049	15,5 0.610	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1570-045-16R1-P	03046050	15,7 0.618	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1580-045-16R1-P	03046051	15,8 0.622	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1588-045-16R1-P	03046088	15,875 0.625	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1600-045-16R1-P	03046052	16,0 0.630	45,0 1.772	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAlN	IT8-9
SD203A-1650-051-18R1-P	03046053	16,5 0.650	51,0 2.008	123,0 4.843	75,0 2.953	48,0 1.890	73,0 2.874	18,0 0.709	140°	TiAlN	IT8-9
SD203A-1700-051-18R1-P	03046054	17,0 0.669	51,0 2.008	123,0 4.843	75,0 2.953	48,0 1.890	73,0 2.874	18,0 0.709	140°	TiAlN	IT8-9
SD203A-1750-051-18R1-P	03046055	17,5 0.689	51,0 2.008	123,0 4.843	75,0 2.953	48,0 1.890	73,0 2.874	18,0 0.709	140°	TiAlN	IT8-9
SD203A-1800-051-18R1-P	03046056	18,0 0.709	51,0 2.008	123,0 4.843	75,0 2.953	48,0 1.890	73,0 2.874	18,0 0.709	140°	TiAlN	IT8-9
SD203A-1850-055-20R1-P	03046057	18,5 0.728	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9
SD203A-1900-055-20R1-P	03046058	19,0 0.748	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9
SD203A-1905-055-20R1-P	03046089	19,05 0.750	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9
SD203A-1950-055-20R1-P	03046059	19,5 0.768	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9
SD203A-1980-055-20R1-P	03138156	19,8 0.780	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9
SD203A-2000-055-20R1-P	03046060	20,0 0.787	55,0 2.165	131,0 5.157	81,0 3.189	50,0 1.969	79,0 3.110	20,0 0.787	140°	TiAlN	IT8-9

SD205A-P

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 146-147
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-0200-012-04R1-P	03046131	2,0 0.079	12,0 0.472	46,0 1.811	19,0 mm 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0210-012-04R1-P	03046132	2,1 0.083	12,0 0.472	46,0 1.811	19,0 mm 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0220-012-04R1-P	03046133	2,2 0.087	12,0 0.472	46,0 1.811	19,0 mm 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0230-012-04R1-P	03046134	2,3 0.091	12,0 0.472	46,0 1.811	19,0 mm 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0238-013-04R1-P	03120477	2,381 0.094	13,0 0.512	50,0 1.969	23,0 mm 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0240-013-04R1-P	03046135	2,4 0.094	13,0 0.512	50,0 1.969	23,0 mm 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0250-013-04R1-P	03046136	2,5 0.098	13,0 0.512	50,0 1.969	23,0 mm 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0260-013-04R1-P	03046137	2,6 0.102	13,0 0.512	50,0 1.969	23,0 mm 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0270-015-04R1-P	03046138	2,7 0.106	15,0 0.591	50,0 1.969	23,0 mm 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0278-015-04R1-P	03120496	2,778 0.109	15,0 0.591	50,0 1.969	23,0 mm 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0280-015-04R1-P	03046139	2,8 0.110	15,0 0.591	50,0 1.969	23,0 mm 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0290-015-04R1-P	03046141	2,9 0.114	15,0 0.591	50,0 1.969	23,0 mm 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAIN	IT8-9
SD205A-0300-023-06R1-P	03046142	3,0 0.118	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0310-023-06R1-P	03046143	3,1 0.122	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0318-023-06R1-P	03046327	3,175 0.125	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0320-023-06R1-P	03046144	3,2 0.126	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0325-023-06R1-P	03046145	3,25 0.128	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0330-023-06R1-P	03046146	3,3 0.130	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0340-023-06R1-P	03046147	3,4 0.134	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0350-023-06R1-P	03046148	3,5 0.138	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0357-023-06R1-P	03046328	3,572 0.141	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9
SD205A-0360-023-06R1-P	03046149	3,6 0.142	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN	IT8-9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-0365-023-06R1-P	03046150	3,65 0.144	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0370-023-06R1-P	03046151	3,7 0.146	23,0 0.906	66,0 2.598	30,0 mm 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0380-029-06R1-P	03046152	3,8 0.150	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0390-029-06R1-P	03046153	3,9 0.154	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0397-029-06R1-P	03046329	3,97 0.156	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0400-029-06R1-P	03046154	4,0 0.157	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0410-029-06R1-P	03046155	4,1 0.161	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0420-029-06R1-P	03046157	4,2 0.165	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0430-029-06R1-P	03046158	4,3 0.169	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0437-029-06R1-P	03046330	4,366 0.172	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0440-029-06R1-P	03046159	4,4 0.173	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0450-029-06R1-P	03046160	4,5 0.177	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0460-029-06R1-P	03046161	4,6 0.181	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0465-029-06R1-P	03046162	4,65 0.183	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0470-029-06R1-P	03046163	4,7 0.185	29,0 1.142	74,0 2.913	38,0 mm 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0476-035-06R1-P	03046331	4,763 0.188	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0480-035-06R1-P	03046164	4,8 0.189	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0490-035-06R1-P	03046165	4,9 0.193	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0500-035-06R1-P	03046166	5,0 0.197	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0510-035-06R1-P	03046167	5,1 0.201	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0516-035-06R1-P	03046332	5,159 0.203	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0520-035-06R1-P	03046168	5,2 0.205	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0530-035-06R1-P	03046169	5,3 0.209	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0540-035-06R1-P	03046170	5,4 0.213	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0550-035-06R1-P	03046171	5,5 0.217	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0555-035-06R1-P	03046172	5,55 0.219	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0556-035-06R1-P	03046333	5,556 0.219	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0560-035-06R1-P	03046173	5,6 0.220	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0570-035-06R1-P	03046174	5,7 0.224	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0580-035-06R1-P	03046175	5,8 0.228	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0590-035-06R1-P	03046176	5,9 0.232	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-0595-035-06R1-P	03046334	5,953 0.234	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0600-035-06R1-P	03046177	6,0 0.236	35,0 1.378	82,0 3.228	46,0 mm 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN	IT8-9
SD205A-0610-043-08R1-P	03046179	6,1 0.240	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0620-043-08R1-P	03046180	6,2 0.244	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0630-043-08R1-P	03046181	6,3 0.248	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0635-043-08R1-P	03046335	6,35 0.250	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0640-043-08R1-P	03046182	6,4 0.252	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0650-043-08R1-P	03046183	6,5 0.256	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0660-043-08R1-P	03046184	6,6 0.260	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0670-043-08R1-P	03046185	6,7 0.264	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0675-043-08R1-P	03046336	6,747 0.266	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0680-043-08R1-P	03046186	6,8 0.268	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0690-043-08R1-P	03046187	6,9 0.272	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0700-043-08R1-P	03046188	7,0 0.276	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0710-043-08R1-P	03046190	7,1 0.280	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0714-043-08R1-P	03046337	7,144 0.281	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0720-043-08R1-P	03046191	7,2 0.283	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0730-043-08R1-P	03046192	7,3 0.287	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0740-043-08R1-P	03046193	7,4 0.291	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0750-043-08R1-P	03046194	7,5 0.295	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0754-043-08R1-P	03046338	7,541 0.297	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0755-043-08R1-P	03046195	7,55 0.297	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0760-043-08R1-P	03046196	7,6 0.299	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0770-043-08R1-P	03046197	7,7 0.303	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0780-043-08R1-P	03046198	7,8 0.307	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0790-043-08R1-P	03046199	7,9 0.311	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0794-043-08R1-P	03046339	7,938 0.313	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0800-043-08R1-P	03046200	8,0 0.315	43,0 1.693	91,0 3.583	55,0 mm 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN	IT8-9
SD205A-0810-049-10R1-P	03046201	8,1 0.319	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0820-049-10R1-P	03046202	8,2 0.323	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0830-049-10R1-P	03046203	8,3 0.327	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-0833-049-10R1-P	03046340	8,334 0.328	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0840-049-10R1-P	03046204	8,4 0.331	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0850-049-10R1-P	03046205	8,5 0.335	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0860-049-10R1-P	03046206	8,6 0.339	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0870-049-10R1-P	03046207	8,7 0.343	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0873-049-10R1-P	03046341	8,731 0.344	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0880-049-10R1-P	03046208	8,8 0.346	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0890-049-10R1-P	03046209	8,9 0.350	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0900-049-10R1-P	03046210	9,0 0.354	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0910-049-10R1-P	03046211	9,1 0.358	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0913-049-10R1-P	03046342	9,128 0.359	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0920-049-10R1-P	03046212	9,2 0.362	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0930-049-10R1-P	03046213	9,3 0.366	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0940-049-10R1-P	03046214	9,4 0.370	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0950-049-10R1-P	03046215	9,5 0.374	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0953-049-10R1-P	03046343	9,525 0.375	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0955-049-10R1-P	03046216	9,55 0.376	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0960-049-10R1-P	03046217	9,6 0.378	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0970-049-10R1-P	03046218	9,7 0.382	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0980-049-10R1-P	03046219	9,8 0.386	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0990-049-10R1-P	03046220	9,9 0.390	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-0992-049-10R1-P	03046344	9,922 0.391	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-1000-049-10R1-P	03046221	10,0 0.394	49,0 1.929	103,0 4.055	63,0 mm 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN	IT8-9
SD205A-1010-056-12R1-P	03046222	10,1 0.398	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1020-056-12R1-P	03046223	10,2 0.402	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1030-056-12R1-P	03046224	10,3 0.406	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1032-056-12R1-P	03046345	10,319 0.406	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1040-056-12R1-P	03046225	10,4 0.409	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1050-056-12R1-P	03046226	10,5 0.413	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1060-056-12R1-P	03046227	10,6 0.417	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1070-056-12R1-P	03046228	10,7 0.421	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-1072-056-12R1-P	03046346	10,716 0.422	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1080-056-12R1-P	03046229	10,8 0.425	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1090-056-12R1-P	03046230	10,9 0.429	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1100-056-12R1-P	03046231	11,0 0.433	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1110-056-12R1-P	03046232	11,1 0.437	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1111-056-12R1-P	03046347	11,113 0.438	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1120-056-12R1-P	03046233	11,2 0.441	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1130-056-12R1-P	03046234	11,3 0.445	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1140-056-12R1-P	03046235	11,4 0.449	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1150-056-12R1-P	03046236	11,5 0.453	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1151-056-12R1-P	03046348	11,509 0.453	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1155-056-12R1-P	03046237	11,55 0.455	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1160-056-12R1-P	03046238	11,6 0.457	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1170-056-12R1-P	03046239	11,7 0.461	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1180-056-12R1-P	03046240	11,8 0.465	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1190-056-12R1-P	03046241	11,9 0.469	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1191-056-12R1-P	03046349	11,906 0.469	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1200-056-12R1-P	03046242	12,0 0.472	56,0 2.205	118,0 4.646	73,0 mm 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN	IT8-9
SD205A-1210-060-14R1-P	03046243	12,1 0.476	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1220-060-14R1-P	03046244	12,2 0.480	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1225-060-14R1-P	03046245	12,25 0.482	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1230-060-14R1-P	03138157	12,3 0.484	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1240-060-14R1-P	03046246	12,4 0.488	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1250-060-14R1-P	03046247	12,5 0.492	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1260-060-14R1-P	03046248	12,6 0.496	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1270-060-14R1-P	03120497	12,7 0.500	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1275-060-14R1-P	03046249	12,75 0.502	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1280-060-14R1-P	03046250	12,8 0.504	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1290-060-14R1-P	03046251	12,9 0.508	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1300-060-14R1-P	03046252	13,0 0.512	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1310-060-14R1-P	03046253	13,1 0.516	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-1320-060-14R1-P	03046254	13,2 0.520	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1330-060-14R1-P	03046255	13,3 0.524	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1340-060-14R1-P	03046256	13,4 0.528	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1349-060-14R1-P	03046350	13,494 0.531	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1350-060-14R1-P	03046257	13,5 0.531	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1355-060-14R1-P	03138158	13,55 0.533	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1360-060-14R1-P	03046258	13,6 0.535	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1370-060-14R1-P	03046259	13,7 0.539	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1380-060-14R1-P	03046260	13,8 0.543	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1389-060-14R1-P	03120498	13,891 0.547	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1390-060-14R1-P	03046261	13,9 0.547	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1400-060-14R1-P	03046262	14,0 0.551	60,0 2.362	124,0 4.882	79,0 mm 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN	IT8-9
SD205A-1410-063-16R1-P	03046263	14,1 0.555	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1420-063-16R1-P	03046264	14,2 0.559	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1425-063-16R1-P	03138159	14,25 0.561	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1429-063-16R1-P	03046351	14,288 0.563	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1430-063-16R1-P	03046265	14,3 0.563	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1440-063-16R1-P	03046266	14,4 0.567	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1450-063-16R1-P	03046267	14,5 0.571	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1460-063-16R1-P	03046268	14,6 0.575	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1470-063-16R1-P	03046269	14,7 0.579	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1475-063-16R1-P	03046270	14,75 0.581	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1480-063-16R1-P	03046271	14,8 0.583	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1490-063-16R1-P	03046272	14,9 0.587	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1500-063-16R1-P	03046273	15,0 0.591	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1510-063-16R1-P	03046274	15,1 0.594	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1520-063-16R1-P	03046275	15,2 0.598	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1525-063-16R1-P	03138160	15,25 0.600	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1530-063-16R1-P	03046276	15,3 0.602	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1540-063-16R1-P	03046277	15,4 0.606	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1550-063-16R1-P	03046278	15,5 0.610	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-1560-063-16R1-P	03046280	15,6 0.614	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1570-063-16R1-P	03046281	15,7 0.618	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1580-063-16R1-P	03046282	15,8 0.622	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1588-063-16R1-P	03046352	15,875 0.625	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1590-063-16R1-P	03046283	15,9 0.626	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1600-063-16R1-P	03046284	16,0 0.630	63,0 2.480	133,0 5.236	85,0 mm 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN	IT8-9
SD205A-1610-071-18R1-P	03046285	16,1 0.634	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1620-071-18R1-P	03046286	16,2 0.638	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1625-071-18R1-P	03138161	16,25 0.640	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1630-071-18R1-P	03046287	16,3 0.642	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1640-071-18R1-P	03046288	16,4 0.646	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1650-071-18R1-P	03046289	16,5 0.650	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1660-071-18R1-P	03046290	16,6 0.654	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1667-071-18R1-P	03120499	16,669 0.656	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1670-071-18R1-P	03046291	16,7 0.657	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1675-071-18R1-P	03046292	16,75 0.659	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1680-071-18R1-P	03046293	16,8 0.661	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1690-071-18R1-P	03046294	16,9 0.665	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1700-071-18R1-P	03046296	17,0 0.669	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1710-071-18R1-P	03046297	17,1 0.673	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1720-071-18R1-P	03046298	17,2 0.677	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1730-071-18R1-P	03046299	17,3 0.681	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1740-071-18R1-P	03046300	17,4 0.685	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1746-071-18R1-P	03120500	17,463 0.688	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1750-071-18R1-P	03046301	17,5 0.689	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1760-071-18R1-P	03046302	17,6 0.693	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1770-071-18R1-P	03046303	17,7 0.697	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1780-071-18R1-P	03046304	17,8 0.701	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1790-071-18R1-P	03046305	17,9 0.705	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1800-071-18R1-P	03046306	18,0 0.709	71,0 2.795	143,0 5.630	95,0 mm 3.740	48,0 1.890	93,0 3.661	18,0 0.709	140°	TiAlN	IT8-9
SD205A-1810-077-20R1-P	03046307	18,1 0.713	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9

Introduction

Drilling

Reaming

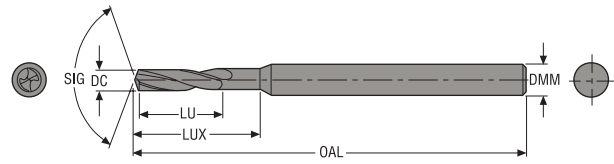
Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-1820-077-20R1-P	03046308	18,2 0.717	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1830-077-20R1-P	03046309	18,3 0.720	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1840-077-20R1-P	03046310	18,4 0.724	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1850-077-20R1-P	03046311	18,5 0.728	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1860-077-20R1-P	03046312	18,6 0.732	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1870-077-20R1-P	03046313	18,7 0.736	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1880-077-20R1-P	03046314	18,8 0.740	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1890-077-20R1-P	03046315	18,9 0.744	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1900-077-20R1-P	03046316	19,0 0.748	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1905-077-20R1-P	03046353	19,05 0.750	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1910-077-20R1-P	03046317	19,1 0.752	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1920-077-20R1-P	03046318	19,2 0.756	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1930-077-20R1-P	03046319	19,3 0.760	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1940-077-20R1-P	03046320	19,4 0.764	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1950-077-20R1-P	03046321	19,5 0.768	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1960-077-20R1-P	03046322	19,6 0.772	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1970-077-20R1-P	03046323	19,7 0.776	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1980-077-20R1-P	03046324	19,8 0.780	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-1990-077-20R1-P	03046325	19,9 0.783	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9
SD205A-2000-077-20R1-P	03046326	20,0 0.787	77,0 3.031	153,0 6.024	103,0 mm 4.055	50,0 1.969	101,0 3.976	20,0 0.787	140°	TiAlN	IT8-9

SD206

Drilling depth ~ 6 x D – Metric/Inch

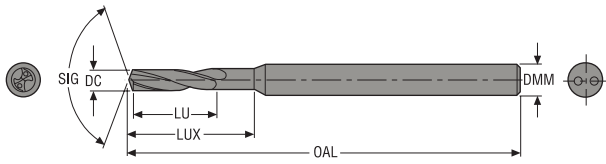


- Cylindrical shank
- External coolant
- For cutting data see page(s) 148

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD206-0.70-4.2-3R1	02731644	0,7 0.028	4,2 0.165	38,0 1.496	6,0 0.236	3,0 0.118	140°	TiAIN	IT9
SD206-0.80-4.8-3R1	02731645	0,8 0.031	4,8 0.189	38,0 1.496	6,7 0.264	3,0 0.118	140°	TiAIN	IT9
SD206-0.90-5.4-3R1	02731646	0,9 0.035	5,4 0.213	38,0 1.496	7,8 0.307	3,0 0.118	140°	TiAIN	IT9
SD206-1.00-6.0-3R1	02731647	1,0 0.039	6,0 0.236	38,0 1.496	8,0 0.315	3,0 0.118	140°	TiAIN	IT9
SD206-1.10-6.6-3R1	02731648	1,1 0.043	6,6 0.260	38,0 1.496	8,6 0.339	3,0 0.118	140°	TiAIN	IT9
SD206-1.20-7.2-3R1	02731649	1,2 0.047	7,2 0.283	38,0 1.496	9,2 0.362	3,0 0.118	140°	TiAIN	IT9
SD206-1.30-7.8-3R1	02731650	1,3 0.051	7,8 0.307	38,0 1.496	9,8 0.386	3,0 0.118	140°	TiAIN	IT9
SD206-1.40-8.4-3R1	02731651	1,4 0.055	8,4 0.331	38,0 1.496	10,4 0.409	3,0 0.118	140°	TiAIN	IT9
SD206-1.50-9.0-3R1	02731652	1,5 0.059	9,0 0.354	38,0 1.496	11,0 0.433	3,0 0.118	140°	TiAIN	IT9
SD206-1.60-9.6-3R1	02731653	1,6 0.063	9,6 0.378	38,0 1.496	11,6 0.457	3,0 0.118	140°	TiAIN	IT9
SD206-1.70-10.2-3R1	02731654	1,7 0.067	10,2 0.402	38,0 1.496	12,2 0.480	3,0 0.118	140°	TiAIN	IT9
SD206-1.80-10.8-3R1	02731655	1,8 0.071	10,8 0.425	38,0 1.496	12,8 0.504	3,0 0.118	140°	TiAIN	IT9
SD206-1.90-11.4-3R1	02731656	1,9 0.075	11,4 0.449	38,0 1.496	13,4 0.528	3,0 0.118	140°	TiAIN	IT9
SD206-2.00-12.0-3R1	02731657	2,0 0.079	12,0 0.472	50,0 1.969	14,0 0.551	3,0 0.118	140°	TiAIN	IT9

SD206A

Drilling depth ~ 6 x D – Metric/Inch

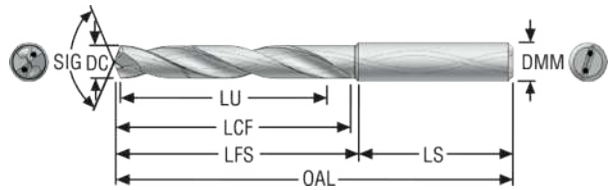


- Cylindrical shank
- Internal coolant
- For cutting data see page(s) 149

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD206A-1.00-6.0-3R1	02731658	1,0 0.039	6,0 0.236	38,0 1.496	8,0 0.315	3,0 0.118	140°	TiAIN	IT9
SD206A-1.10-6.6-3R1	02731659	1,1 0.043	6,6 0.260	38,0 1.496	8,6 0.339	3,0 0.118	140°	TiAIN	IT9
SD206A-1.20-7.2-3R1	02731660	1,2 0.047	7,2 0.283	38,0 1.496	9,2 0.362	3,0 0.118	140°	TiAIN	IT9
SD206A-1.30-7.8-3R1	02731661	1,3 0.051	7,8 0.307	38,0 1.496	9,8 0.386	3,0 0.118	140°	TiAIN	IT9
SD206A-1.40-8.4-3R1	02731662	1,4 0.055	8,4 0.331	38,0 1.496	10,4 0.409	3,0 0.118	140°	TiAIN	IT9
SD206A-1.50-9.0-3R1	02731663	1,5 0.059	9,0 0.354	38,0 1.496	11,0 0.433	3,0 0.118	140°	TiAIN	IT9
SD206A-1.60-9.6-3R1	02731664	1,6 0.063	9,6 0.378	38,0 1.496	11,6 0.457	3,0 0.118	140°	TiAIN	IT9
SD206A-1.70-10.2-3R1	02731665	1,7 0.067	10,2 0.402	38,0 1.496	12,2 0.480	3,0 0.118	140°	TiAIN	IT9
SD206A-1.80-10.8-3R1	02731666	1,8 0.071	10,8 0.425	38,0 1.496	12,8 0.504	3,0 0.118	140°	TiAIN	IT9
SD206A-1.90-11.4-3R1	02731667	1,9 0.075	11,4 0.449	38,0 1.496	13,4 0.528	3,0 0.118	140°	TiAIN	IT9
SD206A-2.00-12.0-3R1	02731668	2,0 0.079	12,0 0.472	50,0 1.969	14,0 0.551	3,0 0.118	140°	TiAIN	IT9

SD207A-P

Drilling depth ~ 7 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 150
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD207A-0300-030-06R1-P	03046358	3,0 0.118	30,0 1.181	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAlN	IT9
SD207A-0330-030-06R1-P	03046359	3,3 0.130	30,0 1.181	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAlN	IT9
SD207A-0350-030-06R1-P	03046360	3,5 0.138	30,0 1.181	74,0 2.913	38,0 1.496	36,0 1.417	36,0 1.417	6,0 0.236	140°	TiAlN	IT9
SD207A-0400-037-06R1-P	03046361	4,0 0.157	37,0 1.457	82,0 3.228	46,0 1.811	36,0 1.417	43,0 1.693	6,0 0.236	140°	TiAlN	IT9
SD207A-0450-037-06R1-P	03046412	4,5 0.177	37,0 1.457	82,0 3.228	46,0 1.811	36,0 1.417	43,0 1.693	6,0 0.236	140°	TiAlN	IT9
SD207A-0480-045-06R1-P	03046413	4,8 0.189	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0500-045-06R1-P	03046414	5,0 0.197	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0520-045-06R1-P	03046362	5,2 0.205	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0550-045-06R1-P	03046363	5,5 0.217	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0580-045-06R1-P	03046407	5,8 0.228	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0600-045-06R1-P	03046364	6,0 0.236	45,0 1.772	94,0 3.701	58,0 2.283	36,0 1.417	56,0 2.205	6,0 0.236	140°	TiAlN	IT9
SD207A-0635-057-08R1-P	03046365	6,35 0.250	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	67,0 2.638	8,0 0.315	140°	TiAlN	IT9
SD207A-0650-057-08R1-P	03046366	6,5 0.256	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	67,0 2.638	8,0 0.315	140°	TiAlN	IT9
SD207A-0680-057-08R1-P	03046367	6,8 0.268	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	67,0 2.638	8,0 0.315	140°	TiAlN	IT9
SD207A-0690-057-08R1-P	03046368	6,9 0.272	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	67,0 2.638	8,0 0.315	140°	TiAlN	IT9
SD207A-0700-057-08R1-P	03046369	7,0 0.276	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	67,0 2.638	8,0 0.315	140°	TiAlN	IT9
SD207A-0750-057-08R1-P	03046370	7,5 0.295	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	72,0 2.835	8,0 0.315	140°	TiAlN	IT9
SD207A-0780-057-08R1-P	03046371	7,8 0.307	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	72,0 2.835	8,0 0.315	140°	TiAlN	IT9
SD207A-0800-057-08R1-P	03046372	8,0 0.315	57,0 2.244	110,0 4.331	74,0 2.913	36,0 1.417	72,0 2.835	8,0 0.315	140°	TiAlN	IT9
SD207A-0850-062-10R1-P	03046373	8,5 0.335	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0860-062-10R1-P	03046374	8,6 0.339	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0870-062-10R1-P	03046411	8,7 0.343	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD207A-0880-062-10R1-P	03046408	8,8 0.346	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0900-062-10R1-P	03046375	9,0 0.354	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0950-062-10R1-P	03046376	9,5 0.374	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0953-062-10R1-P	03046377	9,525 0.375	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0975-062-10R1-P	03046402	9,75 0.384	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-0980-062-10R1-P	03046403	9,8 0.386	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-1000-062-10R1-P	03046378	10,0 0.394	62,0 2.441	122,0 4.803	82,0 3.228	40,0 1.575	80,0 3.150	10,0 0.394	140°	TiAlN	IT9
SD207A-1020-072-12R1-P	03046379	10,2 0.402	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1040-072-12R1-P	03046401	10,4 0.409	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1050-072-12R1-P	03046380	10,5 0.413	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1080-072-12R1-P	03046404	10,8 0.425	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1100-072-12R1-P	03046381	11,0 0.433	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1150-072-12R1-P	03046382	11,5 0.453	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1180-072-12R1-P	03046405	11,8 0.465	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1200-072-12R1-P	03046383	12,0 0.472	72,0 2.835	141,0 5.551	96,0 3.780	45,0 1.772	94,0 3.701	12,0 0.472	140°	TiAlN	IT9
SD207A-1225-083-14R1-P	03046415	12,25 0.482	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1250-083-14R1-P	03046384	12,5 0.492	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1270-083-14R1-P	03046385	12,7 0.500	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1280-083-14R1-P	03046416	12,8 0.504	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1300-083-14R1-P	03046386	13,0 0.512	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1350-083-14R1-P	03046387	13,5 0.531	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1380-083-14R1-P	03046409	13,8 0.543	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1400-083-14R1-P	03046388	14,0 0.551	83,0 3.268	155,0 6.102	110,0 4.331	45,0 1.772	108,0 4.252	14,0 0.551	140°	TiAlN	IT9
SD207A-1425-092-16R1-P	03046417	14,25 0.561	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1450-092-16R1-P	03046389	14,5 0.571	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1480-092-16R1-P	03046418	14,8 0.583	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1500-092-16R1-P	03046390	15,0 0.591	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1550-092-16R1-P	03046391	15,5 0.610	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1580-092-16R1-P	03046410	15,8 0.622	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1600-092-16R1-P	03046392	16,0 0.630	92,0 3.622	171,0 6.732	123,0 4.843	48,0 1.890	121,0 4.764	16,0 0.630	140°	TiAlN	IT9
SD207A-1650-103-18R1-P	03046393	16,5 0.650	103,0 4.055	185,0 7.283	137,0 5.394	48,0 1.890	135,0 5.315	18,0 0.709	140°	TiAlN	IT9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD207A-1680-103-18R1-P	03046419	16,8 <i>0.661</i>	103,0 <i>4.055</i>	185,0 <i>7.283</i>	137,0 <i>5.394</i>	48,0 <i>1.890</i>	135,0 <i>5.315</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD207A-1700-103-18R1-P	03046394	17,0 <i>0.669</i>	103,0 <i>4.055</i>	185,0 <i>7.283</i>	137,0 <i>5.394</i>	48,0 <i>1.890</i>	135,0 <i>5.315</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD207A-1750-103-18R1-P	03046395	17,5 <i>0.689</i>	103,0 <i>4.055</i>	185,0 <i>7.283</i>	137,0 <i>5.394</i>	48,0 <i>1.890</i>	135,0 <i>5.315</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD207A-1780-103-18R1-P	03046420	17,8 <i>0.701</i>	103,0 <i>4.055</i>	185,0 <i>7.283</i>	137,0 <i>5.394</i>	48,0 <i>1.890</i>	135,0 <i>5.315</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD207A-1800-103-18R1-P	03046396	18,0 <i>0.709</i>	103,0 <i>4.055</i>	185,0 <i>7.283</i>	137,0 <i>5.394</i>	48,0 <i>1.890</i>	135,0 <i>5.315</i>	18,0 <i>0.709</i>	140°	TiAIN	IT9
SD207A-1850-112-20R1-P	03046397	18,5 <i>0.728</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD207A-1880-112-20R1-P	03046421	18,8 <i>0.740</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD207A-1900-112-20R1-P	03046398	19,0 <i>0.748</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD207A-1905-112-20R1-P	03046399	19,05 <i>0.750</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD207A-1980-112-20R1-P	03046406	19,8 <i>0.780</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9
SD207A-2000-112-20R1-P	03046400	20,0 <i>0.787</i>	112,0 <i>4.409</i>	200,0 <i>7.874</i>	150,0 <i>5.906</i>	50,0 <i>1.969</i>	148,0 <i>5.827</i>	20,0 <i>0.787</i>	140°	TiAIN	IT9

Introduction

Drilling

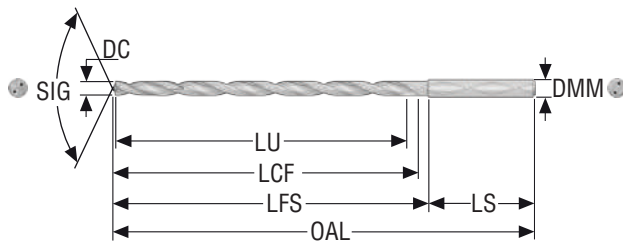
Reaming

Boring

Annex

SD216A

Drilling depth ~ 16 x D – Metric/Inch

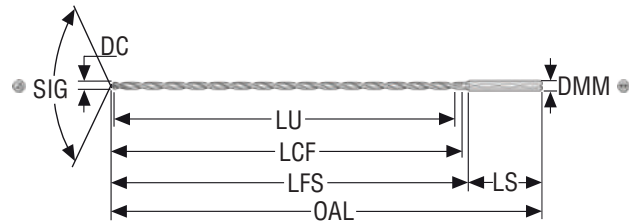


- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 151
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD216A-3.0-50-4R1	02712383	3,0 0.118	50,0 1.969	88,0 3.465	61,0 2.402	27,0 1.063	56,0 2.205	4,0 0.157	136°	TiAIN + TiN	IT9
SD216A-3.5-60-4R1	02712384	3,5 0.138	60,0 2.362	99,0 3.898	72,0 2.835	27,0 1.063	67,0 2.638	4,0 0.157	136°	TiAIN + TiN	IT9
SD216A-4.0-60-4R1	02712385	4,0 0.157	60,0 2.362	99,0 3.898	72,0 2.835	27,0 1.063	67,0 2.638	4,0 0.157	136°	TiAIN + TiN	IT9
SD216A-4.5-70-6R1	02712386	4,5 0.177	70,0 2.756	117,0 4.606	81,0 3.189	36,0 1.417	79,0 3.110	6,0 0.236	136°	TiAIN + TiN	IT9
SD216A-5.0-90-6R1	02637529	5,0 0.197	90,0 3.543	142,0 5.591	106,0 4.173	36,0 1.417	103,0 4.055	6,0 0.236	136°	TiAIN + TiN	IT9
SD216A-5.5-90-6R1	02637530	5,5 0.217	90,0 3.543	142,0 5.591	106,0 4.173	36,0 1.417	103,0 4.055	6,0 0.236	136°	TiAIN + TiN	IT9
SD216A-6.0-90-6R1	02637531	6,0 0.236	90,0 3.543	142,0 5.591	106,0 4.173	36,0 1.417	103,0 4.055	6,0 0.236	136°	TiAIN + TiN	IT9
SD216A-6.35-120-8R1	02656536	6,35 0.250	120,0 4.724	177,0 6.969	141,0 5.551	36,0 1.417	137,0 5.394	8,0 0.315	136°	TiAIN + TiN	IT9
SD216A-6.5-120-8R1	02637532	6,5 0.256	120,0 4.724	177,0 6.969	141,0 5.551	36,0 1.417	137,0 5.394	8,0 0.315	136°	TiAIN + TiN	IT9
SD216A-7.0-120-8R1	02637533	7,0 0.276	120,0 4.724	177,0 6.969	141,0 5.551	36,0 1.417	137,0 5.394	8,0 0.315	136°	TiAIN + TiN	IT9
SD216A-7.5-120-8R1	02637534	7,5 0.295	120,0 4.724	177,0 6.969	141,0 5.551	36,0 1.417	137,0 5.394	8,0 0.315	136°	TiAIN + TiN	IT9
SD216A-8.0-120-8R1	02637536	8,0 0.315	120,0 4.724	177,0 6.969	141,0 5.551	36,0 1.417	137,0 5.394	8,0 0.315	136°	TiAIN + TiN	IT9
SD216A-8.5-150-10R1	02637539	8,5 0.335	150,0 5.906	216,0 8.504	176,0 6.929	40,0 1.575	172,0 6.772	10,0 0.394	136°	TiAIN + TiN	IT9
SD216A-9.0-150-10R1	02637540	9,0 0.354	150,0 5.906	216,0 8.504	176,0 6.929	40,0 1.575	172,0 6.772	10,0 0.394	136°	TiAIN + TiN	IT9
SD216A-9.5-150-10R1	02637541	9,5 0.374	150,0 5.906	216,0 8.504	176,0 6.929	40,0 1.575	172,0 6.772	10,0 0.394	136°	TiAIN + TiN	IT9
SD216A-9.52-150-10R1	02656537	9,52 0.375	150,0 5.906	216,0 8.504	176,0 6.929	40,0 1.575	172,0 6.772	10,0 0.394	136°	TiAIN + TiN	IT9
SD216A-10.0-150-10R1	02637542	10,0 0.394	150,0 5.906	216,0 8.504	176,0 6.929	40,0 1.575	172,0 6.772	10,0 0.394	136°	TiAIN + TiN	IT9
SD216A-10.5-180-12R1	02637543	10,5 0.413	180,0 7.087	256,0 10.079	211,0 8.307	45,0 1.772	207,0 8.150	12,0 0.472	136°	TiAIN + TiN	IT9
SD216A-11.0-180-12R1	02637544	11,0 0.433	180,0 7.087	256,0 10.079	211,0 8.307	45,0 1.772	207,0 8.150	12,0 0.472	136°	TiAIN + TiN	IT9
SD216A-11.5-180-12R1	02637545	11,5 0.453	180,0 7.087	256,0 10.079	211,0 8.307	45,0 1.772	207,0 8.150	12,0 0.472	136°	TiAIN + TiN	IT9
SD216A-12.0-180-12R1	02637546	12,0 0.472	180,0 7.087	256,0 10.079	211,0 8.307	45,0 1.772	207,0 8.150	12,0 0.472	136°	TiAIN + TiN	IT9

SD230A

Drilling depth ~ 30 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 152
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD230A-4.0-112-4R1	02712361	4,0 0.157	112,0 4.409	151,0 5.945	124,0 4.882	27,0 1.063	119,0 4.685	4,0 0.157	136°	TiAIN + TiN	IT9
SD230A-4.5-135-6R1	02712362	4,5 0.177	135,0 5.315	185,0 7.283	149,0 5.866	36,0 1.417	145,0 5.709	6,0 0.236	136°	TiAIN + TiN	IT9
SD230A-5.0-170-6R1	02712363	5,0 0.197	170,0 6.693	220,0 8.661	184,0 7.244	36,0 1.417	180,0 7.087	6,0 0.236	136°	TiAIN + TiN	IT9
SD230A-5.5-170-6R1	02712364	5,5 0.217	170,0 6.693	220,0 8.661	184,0 7.244	36,0 1.417	180,0 7.087	6,0 0.236	136°	TiAIN + TiN	IT9
SD230A-6.0-170-6R1	02712365	6,0 0.236	170,0 6.693	220,0 8.661	184,0 7.244	36,0 1.417	180,0 7.087	6,0 0.236	136°	TiAIN + TiN	IT9
SD230A-02500-886-0315R1	02712366	6,35 0.250	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-6.5-225-8R1	02712367	6,5 0.256	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-7.0-225-8R1	02712370	7,0 0.276	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-7.5-225-8R1	02712371	7,5 0.295	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-03125-886-0315R1	02712374	7,938 0.313	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-8.0-225-8R1	02712376	8,0 0.315	225,0 8.858	279,0 10.984	243,0 9.567	36,0 1.417	239,0 9.409	8,0 0.315	136°	TiAIN + TiN	IT9
SD230A-8.5-285-10R1	02712378	8,5 0.335	285,0 11.220	346,0 13.622	306,0 12.047	40,0 1.575	302,0 11.890	10,0 0.394	136°	TiAIN + TiN	IT9
SD230A-9.0-285-10R1	02712379	9,0 0.354	285,0 11.220	346,0 13.622	306,0 12.047	40,0 1.575	302,0 11.890	10,0 0.394	136°	TiAIN + TiN	IT9
SD230A-9.5-285-10R1	02712380	9,5 0.374	285,0 11.220	346,0 13.622	306,0 12.047	40,0 1.575	302,0 11.890	10,0 0.394	136°	TiAIN + TiN	IT9
SD230A-03750-1122-0394R1	02712381	9,525 0.375	285,0 11.220	346,0 13.622	306,0 12.047	40,0 1.575	302,0 11.890	10,0 0.394	136°	TiAIN + TiN	IT9
SD230A-10.0-285-10R1	02712382	10,0 0.394	285,0 11.220	346,0 13.622	306,0 12.047	40,0 1.575	302,0 11.890	10,0 0.394	136°	TiAIN + TiN	IT9



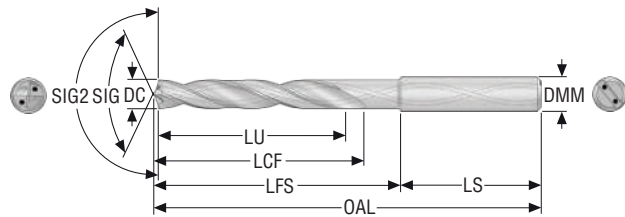
Feedmax™ SD245A

Seco Feedmax SD245A solid carbide drills bring high levels of stability and overall improved machining performance to holemaking applications with irregular exits and cross-hole interruptions. The following features enable the user to achieve good hole geometry:

- Four land margins
- An optimized self-centering point
- Highly wear-resistant TiAlN+TiN coating
- Enhanced edge preparation

SD245A

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 153
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD245A-5.0-32-6R1	02691683	5,0 0.197	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°/180°	TiAIN + TiN	IT8
SD245A-6.0-32-6R1	02691684	6,0 0.236	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°/180°	TiAIN + TiN	IT8
SD245A-02500-138-0315R1	02691686	6,35 0.2500	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-6.5-35-8R1	02691687	6,5 0.256	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-02656-157-0315R1	02691688	6,747 0.2656	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-6.8-40-8R1	02691689	6,8 0.268	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-7.0-40-8R1	02691690	7,0 0.276	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-02813-157-0315R1	02691691	7,144 0.2813	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-7.5-40-8R1	02691692	7,5 0.295	40,0 1.575	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-03125-165-0315R1	02691693	7,938 0.3125	42,0 1.654	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-8.0-42-8R1	02691694	8,0 0.315	42,0 1.654	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°/180°	TiAIN + TiN	IT8
SD245A-8.5-42-10R1	02691695	8,5 0.335	42,0 1.654	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	TiAIN + TiN	IT8
SD245A-9.0-45-10R1	02546059	9,0 0.354	45,0 1.772	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	TiAIN + TiN	IT8
SD245A-9.5-45-10R1	02691696	9,5 0.374	45,0 1.772	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	TiAIN + TiN	IT8
SD245A-03750-189-0394R1	02691697	9,525 0.3750	48,0 1.890	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	TiAIN + TiN	IT8
SD245A-10.0-48-10R1	02536888	10,0 0.394	48,0 1.890	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	TiAIN + TiN	IT8
SD245A-10.2-48-12R1	02691699	10,2 0.402	48,0 1.890	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8
SD245A-04063-189-0472R1	02691700	10,319 0.4063	48,0 1.890	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8
SD245A-10.5-48-12R1	02691701	10,5 0.413	48,0 1.890	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8
SD245A-11.0-56-12R1	02561860	11,0 0.433	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8
SD245A-04375-221-0472R1	02691702	11,113 0.4375	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8
SD245A-11.5-56-12R1	02691704	11,5 0.453	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°/180°	TiAIN + TiN	IT8

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD245A-12.0-56-12R1	02691705	12,0 <i>0.472</i>	56,0 <i>2.205</i>	118,0 <i>4.646</i>	73,0 <i>2.874</i>	45,0 <i>1.772</i>	71,0 <i>2.795</i>	12,0 <i>0.472</i>	140°/180°	TiAIN + TiN	IT8
SD245A-12.5-56-14R1	02691706	12,5 <i>0.492</i>	56,0 <i>2.205</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8
SD245A-0500-221-0551R1	02691707	12,7 <i>0.500</i>	56,0 <i>2.205</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8
SD245A-13.0-56-14R1	02691708	13,0 <i>0.512</i>	56,0 <i>2.205</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8
SD245A-05312-232-0551R1	02691709	13,494 <i>0.5312</i>	59,0 <i>2.323</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8
SD245A-13.5-59-14R1	02691710	13,5 <i>0.5312</i>	59,0 <i>2.323</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8
SD245A-14.0-59-14R1	02691711	14,0 <i>0.551</i>	59,0 <i>2.323</i>	124,0 <i>4.882</i>	79,0 <i>3.110</i>	45,0 <i>1.772</i>	77,0 <i>3.031</i>	14,0 <i>0.551</i>	140°/180°	TiAIN + TiN	IT8



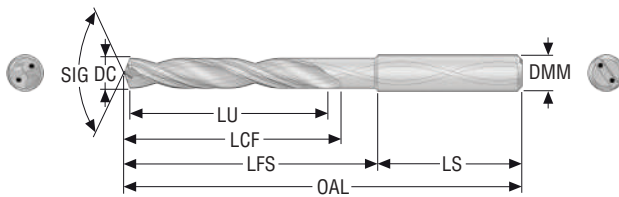
Feedmax™ SD265A

Seco Feedmax SD265A IT 7 high precision drills offer impeccable accuracy. Additionally, one SD265A drill can take the place of multiple tools and simplify complex drilling tasks. The following features enable the user to drill holes in a single pass:

- Optimized drill geometry and self-centering point
- Total of 6 land margins
- Tight manufacturing tolerances ($\pm 3\mu$)
- TiAlN coating for low friction and great wear resistance

SD265A

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 154
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD265A-6.006-32-6R1	02691714	6,006 0.236	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°	TiAlN + TiN	IT7
SD265A-02497-138-0315R1	02722876	6,35 0.250	35,0 1.378	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN + TiN	IT7
SD265A-03122-165-0315R1	02722877	7,938 0.313	42,0 1.654	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN + TiN	IT7
SD265A-8.008-42-8R1	02691715	8,008 0.315	42,0 1.654	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	TiAlN + TiN	IT7
SD265A-03747-189-0394R1	02722878	9,525 0.375	48,0 1.890	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN + TiN	IT7
SD265A-10.008-48-10R1	02691716	10,008 0.394	48,0 1.890	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°	TiAlN + TiN	IT7
SD265A-12.009-56-12R1	02691717	12,009 0.473	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAlN + TiN	IT7
SD265A-04997-221-0551R1	02722879	12,7 0.500	56,0 2.205	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN + TiN	IT7
SD265A-14.009-59-14R1	02691718	14,009 0.552	59,0 2.323	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAlN + TiN	IT7
SD265A-16.009-62-16R1	02691719	16,009 0.630	62,0 2.441	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAlN + TiN	IT7



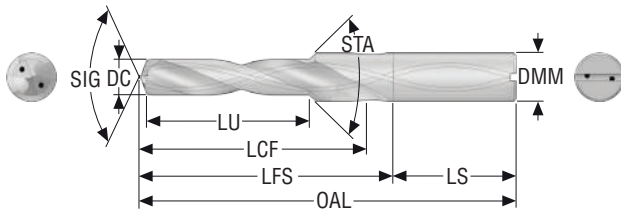
Feedmax™ – Chamfer drills

Seco Feedmax™ chamfer drills combine drilling and chamfering into a single process to maximize efficiency. The standard stocked range covers pre-drilling applications for common standard metric threads from M4 to M16.

- Special design minimizes cost per hole and increases productivity
- Special low friction coating provides high hot hardness and excellent chip evacuation
- The self-centering geometry provides high hole quality using a 45-degree (90-degree included angle) chamfer angle

Chamfer drills – M4 - M16 Thread

Metric/Inch

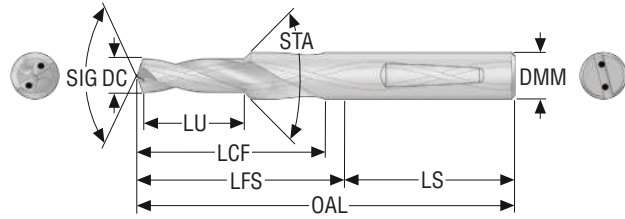


- Cylindrical shank DIN 6537A
- Internal coolant
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- Included chamfer angle = 90°
- For cutting data see page(s) 144, 145

Designation	Item number	Tap thread type	Tap thread size	DC	LU	OAL	LFS	LS	LCF	DMM
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD203A-C45-3.3-11.4-6R1	02500320	Normal pitch Metric thread	M4	3,3 0.130	11,4 0.449	66,0 2.598	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236
SD203A-C45-3.4-11.4-6R1	02500323	Normal pitch Metric thread	M4	3,4 0.134	11,4 0.449	66,0 2.598	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236
SD203A-C45-4.2-13.6-6R1	02500324	Normal pitch Metric thread	M5	4,2 0.165	13,6 0.535	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236
SD203A-C45-4.3-13.6-6R1	02500325	Normal pitch Metric thread	M5	4,3 0.169	13,6 0.535	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236
SD203A-C45-5.0-16.5-8R1	02500326	Normal pitch Metric thread	M6	5,0 0.197	16,5 0.650	79,0 3.110	43,0 1.693	36,0 1.417	28,0 1.102	8,0 0.315
SD203A-C45-5.1-16.5-8R1	02500327	Normal pitch Metric thread	M6	5,1 0.201	16,5 0.650	79,0 3.110	43,0 1.693	36,0 1.417	28,0 1.102	8,0 0.315
SD203A-C45-6.8-21-10R1	02500328	Normal pitch Metric thread	M8	6,8 0.268	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-6.9-21-10R1	02500330	Normal pitch Metric thread	M8	6,9 0.272	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-7.0-21-10R1	02500331	Fine pitch Metric thread	M8x1.0	7,0 0.276	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-8.5-25.5-12R1	02500333	Normal pitch Metric thread	M10	8,5 0.335	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-8.7-25.5-12R1	02500334	Normal pitch Metric thread	M10	8,7 0.343	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-9.0-25.5-12R1	02500340	Fine pitch Metric thread	M10x1.0	9,0 0.354	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-10.2-30.0-14R1	02500342	Normal pitch Metric thread	M12	10,2 0.402	30,0 1.181	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-10.4-30.0-14R1	02500343	Normal pitch Metric thread	M12	10,4 0.409	30,0 1.181	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-10.5-30.0-14R1	02500344	Fine pitch Metric thread	M12x1.5	10,5 0.413	34,5 1.358	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-12.0-34.5-16R1	02500346	Normal pitch Metric thread	M14	12,0 0.472	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-12.25-34.5-16R1	02500348	Normal pitch Metric thread	M14	12,25 0.482	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-12.5-34.5-16R1	02500349	Fine pitch Metric thread	M14x1.5	12,5 0.492	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-14.0-38.5-18R1	02500350	Normal pitch Metric thread	M16	14,0 0.551	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709
SD203A-C45-14.25-38.5-18R1	02500354	Normal pitch Metric thread	M16	14,25 0.561	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709
SD203A-C45-14.5-38.5-18R1	02500356	Fine pitch Metric thread	M16x1.5	14,5 0.571	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709

Chamfer drills – M4 - M16 Thread

Metric/Inch

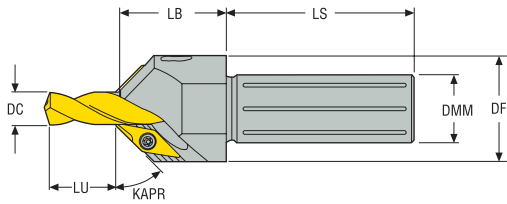


- Whistle Notch shank DIN6537B
- Internal coolant
- Coating: TiAlN + TiN
- Hole tolerance: IT8-9
- Included chamfer angle = 90°
- For cutting data see page(s) 144, 145

Designation	Item number	Tap thread type	Tap thread size	DC	LU	OAL	LFS	LS	LCF	DMM
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
SD203A-C45-3.3-11.4-6R5	02500382	Normal pitch Metric thread	M4	3,3 0.130	11,4 0.449	66,0 2.598	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236
SD203A-C45-3.4-11.4-6R5	02500383	Normal pitch Metric thread	M4	3,4 0.134	11,4 0.449	66,0 2.598	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236
SD203A-C45-4.2-13.6-6R5	02500391	Normal pitch Metric thread	M5	4,2 0.165	13,6 0.535	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236
SD203A-C45-4.3-13.6-6R5	02500392	Normal pitch Metric thread	M5	4,3 0.169	13,6 0.535	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236
SD203A-C45-5.0-16.5-8R5	02500393	Normal pitch Metric thread	M6	5,0 0.197	16,5 0.650	79,0 3.110	43,0 1.693	36,0 1.417	28,0 1.102	8,0 0.315
SD203A-C45-5.1-16.5-8R5	02500394	Normal pitch Metric thread	M6	5,1 0.201	16,5 0.650	79,0 3.110	43,0 1.693	36,0 1.417	28,0 1.102	8,0 0.315
SD203A-C45-6.8-21.0-10R5	02500395	Normal pitch Metric thread	M8	6,8 0.268	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-6.9-21.0-10R5	02500396	Normal pitch Metric thread	M8	6,9 0.272	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-7.0-21.0-10R5	02500398	Fine pitch Metric thread	M8x1.0	7,0 0.276	21,0 0.827	89,0 3.504	49,0 1.929	40,0 1.575	34,0 1.339	10,0 0.394
SD203A-C45-8.5-25.5-12R5	02500401	Normal pitch Metric thread	M10	8,5 0.335	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-8.7-25.5-12R5	02500403	Normal pitch Metric thread	M10	8,7 0.343	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-9.0-25.5-12R5	02500410	Fine pitch Metric thread	M10x1.0	9,0 0.354	25,5 1.004	102,0 4.016	57,0 2.244	45,0 1.772	47,0 1.850	12,0 0.472
SD203A-C45-10.2-30.0-14R5	02500412	Normal pitch Metric thread	M12	10,2 0.402	30,0 1.181	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-10.4-30.0-14R5	02500414	Normal pitch Metric thread	M12	10,4 0.409	30,0 1.181	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-10.5-30.0-14R5	02500416	Fine pitch Metric thread	M12x1.5	10,5 0.413	34,5 1.358	107,0 4.213	62,0 2.441	45,0 1.772	55,0 2.165	14,0 0.551
SD203A-C45-12.0-34.5-16R5	02500417	Normal pitch Metric thread	M14	12,0 0.472	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-12.25-34.5-16R5	02500418	Normal pitch Metric thread	M14	12,25 0.482	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-12.5-34.5-16R5	02500420	Fine pitch Metric thread	M14x1.5	12,5 0.492	34,5 1.358	115,0 4.528	70,0 2.756	45,0 1.772	60,0 2.362	16,0 0.630
SD203A-C45-14.0-38.5-18R5	02500423	Normal pitch Metric thread	M16	14,0 0.551	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709
SD203A-C45-14.25-38.5-18R5	02500424	Normal pitch Metric thread	M16	14,25 0.561	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709
SD203A-C45-14.5-38.5-18R5	02500425	Fine pitch Metric thread	M16x1.5	14,5 0.571	38,5 1.516	123,0 4.843	75,0 2.953	48,0 1.890	65,0 2.559	18,0 0.709

Chamfer module for Universal and Feedmax drills

Metric



Designation	Item number	DC	Drill depth LU			Max chamfer depth	LB	DF	LS	DMM	KAPR°
			3 x D LU (min-max)	5 x D LU (min-max)	7 x D LU (min-max)						
		mm	mm	mm	mm	mm	mm	mm	mm	mm	
SD200-C45-6R1	02510275	4,01-6,1	4,0-17,0	10,0-27,0	30,0-45,0	2,8	25,0	21,0	41,0	12,0	45,0
SD200-C45-8R1	02510278	6,01-8,0	15,0-27,0	24,0-35,0	42,0-57,0	2,8	25,0	25,0	44,5	16,0	45,0
SD200-C45-10R1	02510280	8,01-10,0	17,0-31,0	34,0-48,0	47,0-62,0	2,8	25,0	25,0	44,5	16,0	45,0
SD200-C45-12R1	02510281	10,01-12,0	21,0-36,0	40,0-56,0	57,0-72,0	2,8	25,0	28,0	46,5	20,0	45,0
SD200-C45-14R1	02510283	12,01-14,0	22,0-37,0	43,0-59,0	68,0-83,0	2,8	25,0	30,0	46,5	20,0	45,0
SD200-C45-16R1	02510285	14,01-16,0	23,0-39,0	44,0-60,0	76,0-92,0	2,8	34,0	32,0	53,0	25,0	45,0

Spare Parts, included in delivery

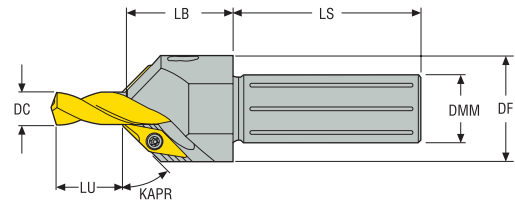
For drill dia. (mm)	Insert key	Insert screw	Locking key	Locking screw	Cassette
	Insert	Insert	Module	Module	Module
4,00 - 16,00	T07P-2	C02205-T07P	H1.5-2D	SH3040	SD200-3x7.3

Insert

Tolerances: mm	Size	L	EPSR	RE	IC	D1	AN	S
		mm		mm	mm	mm		mm
 IC = ±0,025 S = ±0,07 RE = ±0,10	C45	9,000	45°	0,200	5,556	2,900	7°	2,500
	Grade: T400D							
	Designation: SD200-C45							
	Item number: 02510325							

Chamfer module for Universal and Feedmax drills

Inch



Designation	Item number	DC	Drill depth LU			Max chamfer depth	DF	LB	LS	DMM	KAPR°
			3 x D LU (min-max)	5 x D LU (min-max)	7 x D LU (min-max)						
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	
SD200-C45-6-500R1	02510287	0.158-0.240	0.157-0.669	0.394-1.063	1.181-1.772	0.110	0.827	0.984	1.614	0.500	45
SD200-C45-8-625R1	02510289	0.237-0.315	0.591-1.063	0.945-1.378	1.654-2.244	0.110	0.984	0.984	1.752	0.625	45
SD200-C45-10-625R1	02510291	0.315-0.394	0.669-1.220	1.339-1.890	1.850-2.441	0.110	0.984	0.984	1.752	0.625	45
SD200-C45-12-750R1	02510292	0.394-0.472	0.827-1.417	1.575-2.205	2.244-2.835	0.110	1.102	0.984	1.831	0.750	45
SD200-C45-14-750R1	02510293	0.473-0.551	0.866-1.457	1.693-2.323	2.677-3.268	0.110	1.181	0.984	1.831	0.750	45
SD200-C45-16-1000R1	02510295	0.552-0.630	0.906-1.535	1.732-2.362	2.992-3.622	0.110	1.260	1.339	2.087	1.000	45

Spare Parts, included in delivery

For drill dia. (inch)	Insert key	Insert screw	Locking key	Cassette
	Insert	Insert	Module	Module
0.1574 - 0.6299	T07P-2	C02205-T07P	H1.5-2D	SD200-3x7.3

Insert

Tolerances: inch	Size	L	EPSR	RE	IC	D1	AN	S
		inch		inch	inch	inch		inch
<p>IC = ±0.001 S = ±0.0027 RE = ±0.004</p>	C45	0.3543	45°	0.0078	0.2187	0.1141	7°	0.0984
	Grade: T400D							
	Designation: SD200-C45							
	Item number: 02510325							

Chamfer module mounting instructions

1. Insert the drill bit into the chamfer module.

2. Rotate the drill bit.

3. Push the drill bit into the chamfer module.

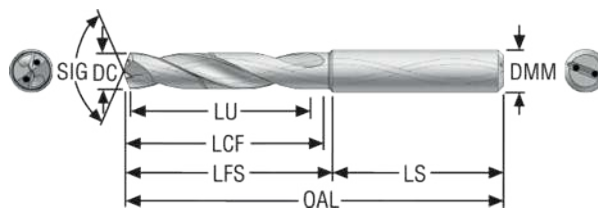
4. Final assembly. Dimensions shown: DC (Drill diameter), LU (LU drilling depth). Maximum chamfer depth: max 2.8 mm (0.110").

Drill diameter DC		LU drilling depth (min-max)					
		SD1103 / SD203A		SD1105 / SD205A		SD207A	
mm	inch	mm	inch	mm	inch	mm	inch
4,00-4,75	.157-.187	4-17	.157-.669	10-27	.394-1.063	30-45	1.181-1.772
4,76-6,00	.187-.236	6-20	.236-.787	18-32	.709-1.260	30-45	1.181-1.772
6,01-8,00	.241-.315	15-27	.590-1.063	28-42	1.102-1.653	42-57	1.653-2.244
8,01-10,00	.315-.394	17-31	.669-1.220	34-48	1.338-1.890	47-62	1.850-2.441
10,01-12,00	.394-.472	21-36	.826-1.417	40-56	1.575-2.205	57-72	2.244-2.835
12,01-14,00	.473-.551	22-37	.866-1.457	43-59	1.693-2.323	68-83	2.677-3.268
14,01-16,00	.552-.630	23-39	.906-1.535	44-60	1.732-2.362	76-92	2.992-3.622

To be used with cylindrical shank only (R1).

SD203A, -MS

Drilling depth ~ 3 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 155-156
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0200-007-04R1-MS	10004064	2,0 0.079	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0210-007-04R1-MS	10004065	2,1 0.083	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0220-007-04R1-MS	10004066	2,2 0.087	7,0 0.276	41,0 1.614	14,0 0.551	27,0 1.063	11,0 0.433	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0230-008-04R1-MS	10004067	2,3 0.091	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0240-008-04R1-MS	10004068	2,4 0.094	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0250-008-04R1-MS	10004072	2,5 0.098	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0260-008-04R1-MS	10004073	2,6 0.102	8,0 0.315	44,0 1.732	17,0 0.669	27,0 1.063	12,5 0.492	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0270-009-04R1-MS	10004074	2,7 0.106	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0278-009-04R1-MS	10004075	2,78 0.109	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0290-009-04R1-MS	10004076	2,9 0.114	9,0 0.354	44,0 1.732	17,0 0.669	27,0 1.063	14,5 0.571	4,0 0.157	140°	TiAIN + NbN	IT8-9
SD203A-0300-014-06R1-MS	10004077	3,0 0.118	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0310-014-06R1-MS	10004078	3,1 0.122	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0320-014-06R1-MS	10004079	3,2 0.126	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0330-014-06R1-MS	10004080	3,3 0.130	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0340-014-06R1-MS	10004081	3,4 0.134	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0350-015-06R1-MS	10004083	3,5 0.138	15,0 0.591	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0357-015-06R1-MS	10004084	3,57 0.141	15,0 0.591	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0370-015-06R1-MS	10004085	3,7 0.146	15,0 0.591	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0380-017-06R1-MS	10004086	3,8 0.150	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0390-017-06R1-MS	10004087	3,9 0.154	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0397-017-06R1-MS	10004088	3,97 0.156	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0400-017-06R1-MS	10004089	4,0 0.157	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-0410-017-06R1-MS	10004090	4,1 0.161	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0420-017-06R1-MS	10004091	4,2 0.165	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0430-018-06R1-MS	10004092	4,3 0.169	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0450-018-06R1-MS	10004093	4,5 0.177	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0460-018-06R1-MS	10004094	4,6 0.181	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0465-018-06R1-MS	10004095	4,65 0.183	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0470-018-06R1-MS	10004096	4,7 0.185	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0476-020-06R1-MS	10004097	4,76 0.187	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0480-020-06R1-MS	10004098	4,8 0.189	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0490-020-06R1-MS	10004099	4,9 0.193	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0500-020-06R1-MS	10004101	5,0 0.197	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0510-020-06R1-MS	10004102	5,1 0.201	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0516-020-06R1-MS	10004103	5,16 0.203	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0520-020-06R1-MS	10004104	5,2 0.205	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0530-020-06R1-MS	10004105	5,3 0.209	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0540-020-06R1-MS	10004106	5,4 0.213	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0550-020-06R1-MS	10004107	5,5 0.217	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0556-020-06R1-MS	10004108	5,56 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0560-021-06R1-MS	10004109	5,6 0.220	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0570-021-06R1-MS	10004110	5,7 0.224	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0580-021-06R1-MS	10004111	5,8 0.228	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0590-021-06R1-MS	10004112	5,9 0.232	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0595-021-06R1-MS	10004113	5,95 0.234	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0600-021-06R1-MS	10004114	6,0 0.236	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	TiAIN + NbN	IT8-9
SD203A-0610-021-08R1-MS	10004115	6,1 0.240	21,0 0.827	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0620-021-08R1-MS	10004116	6,2 0.244	21,0 0.827	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0630-021-08R1-MS	10004117	6,3 0.248	21,0 0.827	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0635-023-08R1-MS	10004121	6,35 0.250	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0650-023-08R1-MS	10004122	6,5 0.256	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0660-023-08R1-MS	10004123	6,6 0.260	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9
SD203A-0675-025-08R1-MS	10004124	6,75 0.266	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	TiAIN + NbN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			
SD203A-1600-040-16R1-MS	10004340	16,0 <i>0.630</i>	40,0 <i>1.575</i>	115,0 <i>4.528</i>	67,0 <i>2.638</i>	48,0 <i>1.890</i>	65,0 <i>2.559</i>	16,0 <i>0.630</i>	140°	TiAlN + NbN	IT8-9
SD203A-1650-045-18R1-MS	10004341	16,5 <i>0.650</i>	45,0 <i>1.772</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAlN + NbN	IT8-9
SD203A-1700-045-18R1-MS	10004342	17,0 <i>0.669</i>	45,0 <i>1.772</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAlN + NbN	IT8-9
SD203A-1750-045-18R1-MS	10004343	17,5 <i>0.689</i>	45,0 <i>1.772</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAlN + NbN	IT8-9
SD203A-1800-045-18R1-MS	10004344	18,0 <i>0.709</i>	45,0 <i>1.772</i>	123,0 <i>4.843</i>	75,0 <i>2.953</i>	48,0 <i>1.890</i>	73,0 <i>2.874</i>	18,0 <i>0.709</i>	140°	TiAlN + NbN	IT8-9
SD203A-1850-050-20R1-MS	10004345	18,5 <i>0.728</i>	50,0 <i>1.969</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAlN + NbN	IT8-9
SD203A-1900-050-20R1-MS	10004346	19,0 <i>0.748</i>	50,0 <i>1.969</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAlN + NbN	IT8-9
SD203A-1905-050-20R1-MS	10004347	19,05 <i>0.750</i>	50,0 <i>1.969</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAlN + NbN	IT8-9
SD203A-1950-050-20R1-MS	10004348	19,5 <i>0.768</i>	50,0 <i>1.969</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAlN + NbN	IT8-9
SD203A-2000-050-20R1-MS	10004349	20,0 <i>0.787</i>	50,0 <i>1.969</i>	131,0 <i>5.157</i>	81,0 <i>3.189</i>	50,0 <i>1.969</i>	79,0 <i>3.110</i>	20,0 <i>0.787</i>	140°	TiAlN + NbN	IT8-9

Introduction

Drilling

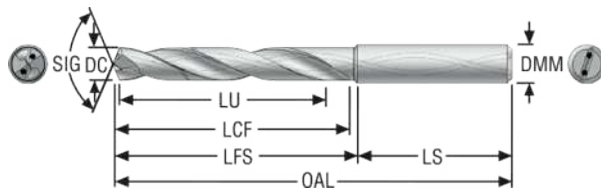
Reaming

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Annex

SD205A, -MS

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 157-158
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-0200-012-04R1-MS	10004179	2,0 0.079	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0210-012-04R1-MS	10004180	2,1 0.083	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0220-012-04R1-MS	10004181	2,2 0.087	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0230-012-04R1-MS	10004182	2,3 0.091	12,0 0.472	46,0 1.811	19,0 0.748	27,0 1.063	15,0 0.591	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0240-013-04R1-MS	10004183	2,4 0.094	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0250-013-04R1-MS	10004184	2,5 0.098	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0260-013-04R1-MS	10004185	2,6 0.102	13,0 0.512	50,0 1.969	23,0 0.906	27,0 1.063	17,5 0.689	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0270-013-04R1-MS	10004186	2,7 0.106	15,0 0.591	50,0 1.969	23,0 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0280-013-04R1-MS	10004187	2,8 0.110	15,0 0.591	50,0 1.969	23,0 0.906	27,0 1.063	20,5 0.807	4,0 0.157	140°	TiAlN + NbN	IT8-9
SD205A-0300-021-06R1-MS	10004188	3,0 0.118	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0310-021-06R1-MS	10004189	3,1 0.122	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0318-021-06R1-MS	10004191	3,18 0.125	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0330-021-06R1-MS	10004192	3,3 0.130	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0340-021-06R1-MS	10004193	3,4 0.134	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0350-021-06R1-MS	10004194	3,5 0.138	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0360-027-06R1-MS	10004195	3,6 0.142	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	26,0 1.024	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0380-027-06R1-MS	10004196	3,8 0.150	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0390-027-06R1-MS	10004197	3,9 0.154	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0400-027-06R1-MS	10004198	4,0 0.157	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0410-027-06R1-MS	10004199	4,1 0.161	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN + NbN	IT8-9
SD205A-0420-027-06R1-MS	10004200	4,2 0.165	27,0 1.063	74,0 2.913	38,0 1.496	36,0 1.417	34,0 1.339	6,0 0.236	140°	TiAlN + NbN	IT8-9

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Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-11.0-33-12R1-M	02450094	11,0 0.433	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-04375-130-0472R1-M	02450114	11,113 0.438	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-11.5-33-12R1-M	02450095	11,5 0.453	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-11.8-33-12R1-M	02450096	11,8 0.465	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-04688-142-0472R1-M	02592711	11,908 0.469	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-12.0-36-12R1-M	02450097	12,0 0.472	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD203A-12.25-36-14R1-M	02592712	12,25 0.482	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-12.3-36-14R1-M	02450098	12,3 0.484	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-12.5-36-14R1-M	02450099	12,5 0.492	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-05000-142-0551R1-M	02450115	12,7 0.500	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-12.9-36-14R1-M	02538263	12,9 0.508	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-13.0-36-14R1-M	02450100	13,0 0.512	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-13.5-37-14R1-M	02450101	13,5 0.531	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-14.0-37-14R1-M	02450102	14,0 0.551	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD203A-14.25-38-16R1-M	02592715	14,25 0.561	38,0 1.496	115,0 4.528	67,0 2.638	48,0 1.890	65,0 2.559	16,0 0.630	140°	TiAIN + TiN	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-12.0-56-12R1-M	02450056	12,0 0.472	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	TiAIN + TiN	IT8-9
SD205A-12.5-56-14R1-M	02450058	12,5 0.492	56,0 2.205	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-05000-221-0551R1-M	02450074	12,7 0.500	56,0 2.205	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-12.9-56-14R1-M	02592729	12,9 0.508	56,0 2.205	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-13.0-56-14R1-M	02450059	13,0 0.512	56,0 2.205	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-13.5-59-14R1-M	02450060	13,5 0.531	59,0 2.323	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-14.0-59-14R1-M	02450061	14,0 0.551	59,0 2.323	124,0 4.882	79,0 3.110	45,0 1.772	77,0 3.031	14,0 0.551	140°	TiAIN + TiN	IT8-9
SD205A-14.25-60-16R1-M	02592732	14,25 0.561	60,0 2.362	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAIN + TiN	IT8-9
SD205A-14.5-60-16R1-M	03117534	14,5 0.571	60,0 2.362	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAIN + TiN	IT8-9
SD205A-15.0-60-16R1-M	02570652	15,0 0.591	60,0 2.362	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAIN + TiN	IT8-9
SD205A-15.5-62-16R1-M	02543076	15,5 0.610	62,0 2.441	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAIN + TiN	IT8-9
SD205A-16.0-62-16R1-M	02555961	16,0 0.630	62,0 2.441	133,0 5.236	85,0 3.346	48,0 1.890	83,0 3.268	16,0 0.630	140°	TiAIN + TiN	IT8-9

Introduction

Drilling

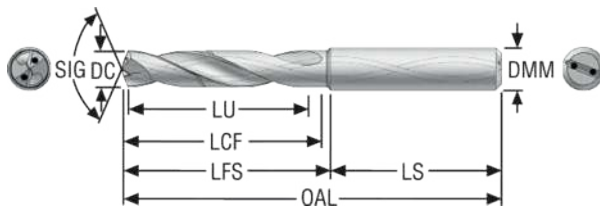
Reaming

Boring

Annex

SD203A, -T

Drilling depth ~ 3 x D – Metric/Inch

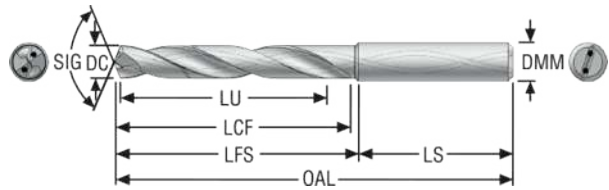


- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Cutting data - www.secotools.com
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-01875-079-0236R1-T	02569147	4,763 0.188	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	Uncoated	IT8-9
SD203A-5.0-20-6R1-T	02523021	5,0 0.197	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	Uncoated	IT8-9
SD203A-02188-083-0236R1-T	02569156	5,558 0.219	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	Uncoated	IT8-9
SD203A-6.0-21-6R1-T	02542682	6,0 0.236	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	Uncoated	IT8-9
SD203A-02500-091-0315R1-T	02569149	6,35 0.250	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	Uncoated	IT8-9
SD203A-6.5-23-8R1-T	02545316	6,5 0.256	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	Uncoated	IT8-9
SD203A-6.9-25-8R1-T	02537280	6,9 0.272	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	Uncoated	IT8-9
SD203A-7.0-25-8R1-T	02525985	7,0 0.276	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	Uncoated	IT8-9
SD203A-02813-098-0315R1-T	02569151	7,145 0.281	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	Uncoated	IT8-9
SD203A-7.5-25-8R1-T	02527667	7,5 0.295	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	Uncoated	IT8-9
SD203A-03125-106-0315R1-T	02569152	7,938 0.313	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	Uncoated	IT8-9
SD203A-8.0-27-8R1-T	02513679	8,0 0.315	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	Uncoated	IT8-9
SD203A-8.5-27-10R1-T	02548250	8,5 0.335	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	Uncoated	IT8-9
SD203A-8.8-29-10R1-T	02569153	8,8 0.346	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	Uncoated	IT8-9
SD203A-9.0-29-10R1-T	02524440	9,0 0.354	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	Uncoated	IT8-9
SD203A-9.5-29-10R1-T	02545386	9,5 0.374	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	Uncoated	IT8-9
SD203A-10.0-31-10R1-T	02525984	10,0 0.394	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	Uncoated	IT8-9
SD203A-10.5-31-12R1-T	02545387	10,5 0.413	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	Uncoated	IT8-9
SD203A-11.0-33-12R1-T	02569155	11,0 0.433	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	Uncoated	IT8-9
SD203A-11.5-33-12R1-T	02567385	11,5 0.453	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	Uncoated	IT8-9
SD203A-12.0-36-12R1-T	02562784	12,0 0.472	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	Uncoated	IT8-9

SD205A, -T

Drilling depth ~ 5 x D – Metric/Inch

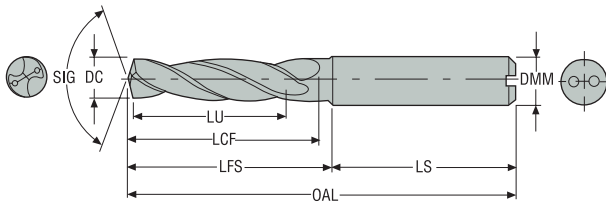


- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- Cutting data - www.secotools.com
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD205A-8.0-42-8R1-T	02569164	8,0 0.315	42,0 1.654	91,0 3.583	55,0 2.165	36,0 1.417	53,0 2.087	8,0 0.315	140°	Uncoated	IT8-9
SD205A-12.0-56-12R1-T	02527621	12,0 0.472	56,0 2.205	118,0 4.646	73,0 2.874	45,0 1.772	71,0 2.795	12,0 0.472	140°	Uncoated	IT8-9

SD203A, -N

Drilling depth ~ 3 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- DC tolerance m7
- Internal coolant
- For cutting data see page(s) 144- 145
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-2.5-8-4R1-N	02691548	2,5 0.098	8,0 0.315	44,0 1.732	16,0 0.630	28,0 1.102	13,0 0.512	4,0 0.157	140°	DLC Coated	IT8-9
SD203A-3.0-14-6R1-N	02691549	3,0 0.118	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-3.3-14-6R1-N	02691551	3,3 0.130	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-3.5-15-6R1-N	02691552	3,5 0.138	15,0 0.591	62,0 2.441	26,0 1.024	36,0 1.417	20,0 0.787	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-4.0-17-6R1-N	02691553	4,0 0.157	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-4.1-17-6R1-N	02691554	4,1 0.161	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-4.5-18-6R1-N	02691555	4,5 0.177	18,0 0.709	66,0 2.598	30,0 1.181	36,0 1.417	24,0 0.945	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-5.0-20-6R1-N	02691556	5,0 0.197	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-5.2-20-6R1-N	02691557	5,2 0.205	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-5.5-20-6R1-N	02691558	5,5 0.217	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-6.0-21-6R1-N	02691559	6,0 0.236	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	140°	DLC Coated	IT8-9
SD203A-02500-091-0315R1-N	02691560	6,35 0.250	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-6.5-23-8R1-N	02691562	6,5 0.256	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-02656-098-0315R1-N	02691564	6,746 0.266	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-6.8-25-8R1-N	02691565	6,8 0.268	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-7.0-25-8R1-N	02643590	7,0 0.276	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-7.1-25-8R1-N	02691567	7,1 0.280	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-02813-098-0315R1-N	02691568	7,145 0.281	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-7.5-25-8R1-N	02691569	7,5 0.295	25,0 0.984	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-03125-106-0315R1-N	02691570	7,938 0.313	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	DLC Coated	IT8-9
SD203A-8.0-27-8R1-N	02691571	8,0 0.315	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	140°	DLC Coated	IT8-9

Designation	Item number	DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating	Hole tolerance
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD203A-8.5-27-10R1-N	02643592	8,5 0.335	27,0 1.063	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	DLC Coated	IT8-9
SD203A-9.0-29-10R1-N	02691574	9,0 0.354	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	DLC Coated	IT8-9
SD203A-9.5-29-10R1-N	02691575	9,5 0.374	29,0 1.142	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	DLC Coated	IT8-9
SD203A-03750-122-0394R1-N	02691576	9,525 0.375	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	DLC Coated	IT8-9
SD203A-10.0-31-10R1-N	02691577	10,0 0.394	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	140°	DLC Coated	IT8-9
SD203A-10.2-31-12R1-N	02691578	10,2 0.402	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-04063-122-0472R1-N	02691579	10,32 0.406	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-10.5-31-12R1-N	02691580	10,5 0.413	31,0 1.220	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-11.0-33-12R1-N	02691582	11,0 0.433	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-04375-130-0472R1-N	02691585	11,113 0.438	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-11.5-33-12R1-N	02691588	11,5 0.453	33,0 1.299	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-12.0-36-12R1-N	02691589	12,0 0.472	36,0 1.417	102,0 4.016	57,0 2.244	45,0 1.772	55,0 2.165	12,0 0.472	140°	DLC Coated	IT8-9
SD203A-12.5-36-14R1-N	02691591	12,5 0.492	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9
SD203A-05000-142-0551R1-N	02691592	12,7 0.500	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9
SD203A-13.0-36-14R1-N	02691594	13,0 0.512	36,0 1.417	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9
SD203A-05312-146-0551R1-N	02691596	13,492 0.531	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9
SD203A-13.5-37-14R1-N	02691597	13,5 0.531	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9
SD203A-14.0-37-14R1-N	02691598	14,0 0.551	37,0 1.457	107,0 4.213	62,0 2.441	45,0 1.772	60,0 2.362	14,0 0.551	140°	DLC Coated	IT8-9

Introduction

Drilling

Reaming

Boring

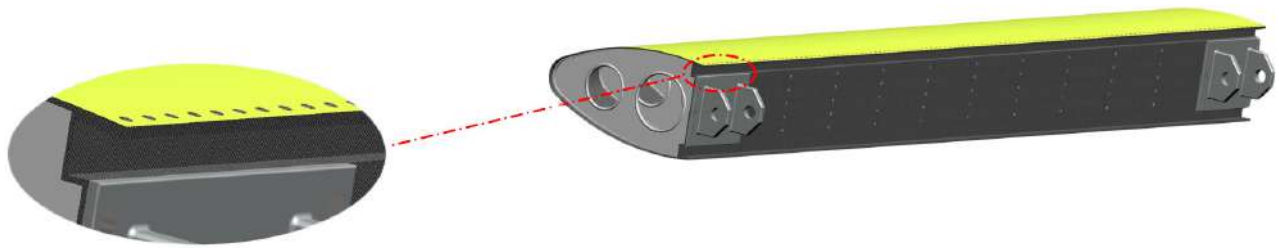
Annex



Seco offers two distinct solutions for composite drilling: diamond-coated drills and polycrystalline diamond (PCD) drills. These tools feature geometries that are optimized specifically for regular composites or stacked materials.

- C1 and CX1 point geometry optimized for applications existing in CFRP material
- The C2:s flat geometry drill point machines stacked composite materials that incorporate layers of aluminum
- CX1 are polycrystalline diamond (PCD) drills that offer enhanced productivity and long tool life over conventional drills when machining composite materials
- Both C1 and C2 are diamond-coated carbide drills featuring a Dura diamond coating that provides very good toughness and abrasive resistance

Composite machining



When hole quality is in focus

With issues like entrance and exit delamination and splintering, the focus has been clear; design tools specifically optimized for composite applications, and tools specifically optimized for sandwich materials. In both cases particular consideration was given to achieving excellent performance in both entering and exiting. (In sandwich material this usually involves exiting in either Al or Ti).

- No push-up delamination (entrance)
- No pull-down delamination (exit)

The Dura diamond coating secures good dimensional tolerance throughout the long tool life.



Application sample

Plain CFRP/GFRP
(exit in composite material)



C1 geometry
CX1 geometry



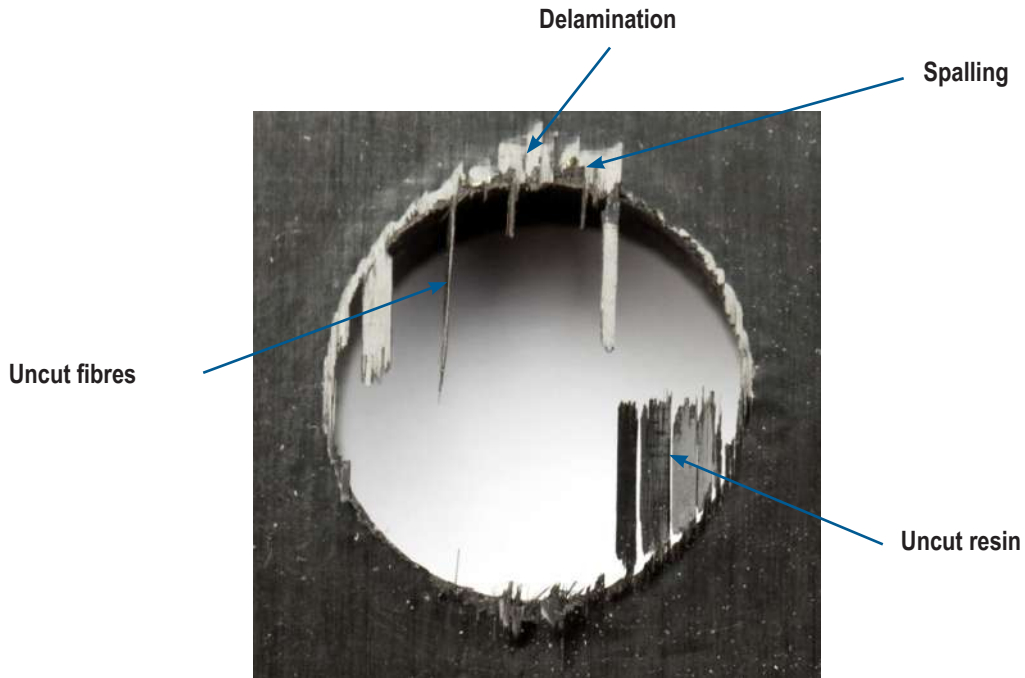
Sandwich material
(exit in Al/Ti)



C2 geometry



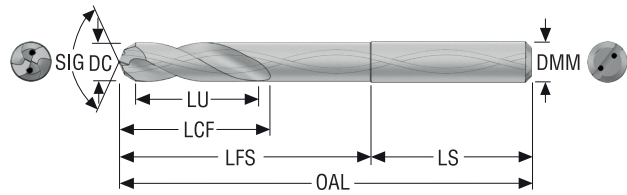
Troubleshooting – Hole exit



Problem:	Delamination (peel up / push down)	Spalling	Uncut fibres	Uncut resin
Solution:	Peel up <ul style="list-style-type: none"> ▪ Use tool with more negative geometry ▪ Reduce feed/rev Push down <ul style="list-style-type: none"> ▪ Reduce feed/rev 	<ul style="list-style-type: none"> ▪ Use tool with more positive geometry ▪ Reduce feed/rev 	<ul style="list-style-type: none"> ▪ Use tool with a sharper geometry ▪ Reduce feed/rev 	<ul style="list-style-type: none"> ▪ Use tool with a sharper geometry ▪ Reduce feed/rev ▪ Reduce cutting speed
Problem:	Melted resin (too much heat)	Poor tool life		
Solution:	<ul style="list-style-type: none"> ▪ Reduce cutting speed 	<ul style="list-style-type: none"> ▪ Reduce cutting speed 		

SD205A-C1

Drilling depth ~ 5 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 163

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating
		mm	Inch									
SD205A-6.0-31-6R1-C1	02740089	5,975/6,025	0.2352/0.2372	6,0 0.236	31,0 1.220	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236	60°/130°	Dura diamond
SD205A-9.55-46-10R1-C1	02740092	9,525/9,576	0.3750/0.3770	9,55 0.376	46,0 1.811	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	60°/130°	Dura diamond

Introduction

Drilling

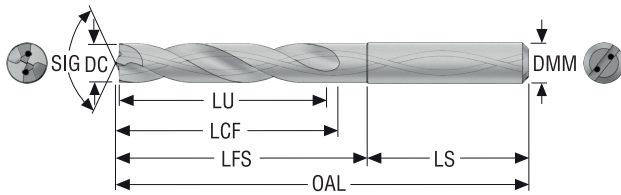
Reaming

Boring

Annex

SD205A-C2

Drilling depth ~ 5 x D – Metric/Inch

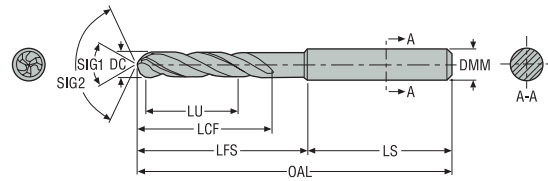


- Cylindrical shank DIN 6537A
- Internal coolant
- For cutting data see page(s) 163

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM	Point angle	Coating
		mm	Inch									
SD205A-6.0-32-6R1-C2	02740099	5,975/6,025	0.2352/0.2372	6,0 0.236	32,0 1.260	82,0 3.228	46,0 1.811	36,0 1.417	44,0 1.732	6,0 0.236	140°/180°	Dura diamond
SD205A-9.55-48-10R1-C2	02740103	9,525/9,576	0.3750/0.3770	9,55 0.376	48,0 1.890	103,0 4.055	63,0 2.480	40,0 1.575	61,0 2.402	10,0 0.394	140°/180°	Dura diamond

SD203-CX1

Drilling depth ~ 3 x D – Metric/Inch



- Cylindrical shank DIN 6537A
- PCD cutting edges
- For cutting data see page(s) 163

Designation	Item number	Expected hole tolerance		DC	LU	OAL	LFS	LS	LCF	DMM	Point angle
		mm	Inch								
SD203-3.26-14-6R1-CX1	02827923	3,235/3,285	0.1273/0.1293	3,26 0.128	14,0 0.551	62,0 2.441	26,0 1.024	36,0 1.417	21,0 0.827	6,0 0.236	60°/130°
SD203-4.17-17-6R1-CX1	02827924	4,142/4,192	0.1630/0.1650	4,17 0.164	17,0 0.669	66,0 2.598	30,0 1.181	36,0 1.417	25,0 0.984	6,0 0.236	60°/130°
SD203-4.83-20-6R1-CX1	02827925	4,805/4,855	0.1891/0.1911	4,83 0.190	20,0 0.787	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	60°/130°
SD203-6.06-21-6R1-CX1	02827926	6,035/6,085	0.2375/0.2395	6,06 0.239	21,0 0.827	66,0 2.598	30,0 1.181	36,0 1.417	28,0 1.102	6,0 0.236	60°/130°
SD203-6.36-23-8R1-CX1	02827927	6,33/6,38	0.2492/0.2511	6,36 0.250	23,0 0.906	79,0 3.110	43,0 1.693	36,0 1.417	34,0 1.339	8,0 0.315	60°/130°
SD203-7.94-27-8R1-CX1	02827928	7,913/7,963	0.3115/0.3135	7,94 0.313	27,0 1.063	79,0 3.110	43,0 1.693	36,0 1.417	41,0 1.614	8,0 0.315	60°/130°
SD203-9.53-31-10R1-CX1	02827929	9,504/9,554	0.3741/0.3761	9,53 0.375	31,0 1.220	89,0 3.504	49,0 1.929	40,0 1.575	47,0 1.850	10,0 0.394	60°/130°



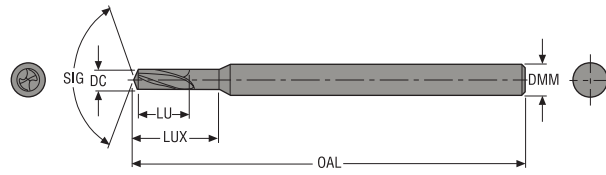
Micro drilling

Seco addresses micro drilling applications with a portfolio of dedicated products that includes the SD22 and SD26 ranges of small solid carbide micro drills.

- Capable of delivering dramatic performance increases compared to traditional HSS drills
- Suitable for applications in the automotive and medical industries, as well as for small part production in the general engineering industry

SD22

Drilling depth ~ 2 x D (Pilot drill) – Metric/Inch



- Cylindrical shank
- External coolant
- For cutting data see page(s) 164-168

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-0.10-0.20-3R1	02731574	0,1 0.004	0,2 0.008	38,0 1.496	0,55 0.022	3,0 0.118	130°	Uncoated
SD22-0.11-0.22-3R1	02730362	0,11 0.004	0,22 0.009	38,0 1.496	0,55 0.022	3,0 0.118	130°	Uncoated
SD22-0.12-0.24-3R1	02730460	0,12 0.005	0,24 0.009	38,0 1.496	0,55 0.022	3,0 0.118	130°	Uncoated
SD22-0.13-0.26-3R1	02730461	0,13 0.005	0,26 0.010	38,0 1.496	0,6 0.024	3,0 0.118	130°	Uncoated
SD22-0.14-0.28-3R1	02730462	0,14 0.006	0,28 0.011	38,0 1.496	0,6 0.024	3,0 0.118	130°	Uncoated
SD22-0.15-0.30-3R1	02731575	0,15 0.006	0,3 0.012	38,0 1.496	0,6 0.024	3,0 0.118	130°	Uncoated
SD22-0.16-0.32-3R1	02730464	0,16 0.006	0,32 0.013	38,0 1.496	0,6 0.024	3,0 0.118	130°	Uncoated
SD22-0.17-0.34-3R1	02730465	0,17 0.007	0,34 0.013	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD22-0.18-0.36-3R1	02730466	0,18 0.007	0,36 0.014	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD22-0.19-0.38-3R1	02730467	0,19 0.007	0,38 0.015	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD22-0.20-0.40-3R1	02731576	0,2 0.008	0,4 0.016	38,0 1.496	0,75 0.030	3,0 0.118	130°	Uncoated
SD22-0.21-0.42-3R1	02730468	0,21 0.008	0,42 0.017	38,0 1.496	0,75 0.030	3,0 0.118	130°	Uncoated
SD22-0.22-0.44-3R1	02730469	0,22 0.009	0,44 0.017	38,0 1.496	0,8 0.031	3,0 0.118	130°	Uncoated
SD22-0.23-0.46-3R1	02730470	0,23 0.009	0,46 0.018	38,0 1.496	0,8 0.031	3,0 0.118	130°	Uncoated
SD22-0.24-0.48-3R1	02730471	0,24 0.009	0,48 0.019	38,0 1.496	0,8 0.031	3,0 0.118	130°	Uncoated
SD22-0.25-0.50-3R1	02731577	0,25 0.010	0,5 0.020	38,0 1.496	0,9 0.035	3,0 0.118	130°	Uncoated
SD22-0.26-0.52-3R1	02730472	0,26 0.010	0,52 0.020	38,0 1.496	0,9 0.035	3,0 0.118	130°	Uncoated
SD22-0.27-0.54-3R1	02730473	0,27 0.011	0,54 0.021	38,0 1.496	0,9 0.035	3,0 0.118	130°	Uncoated
SD22-0.28-0.56-3R1	02730474	0,28 0.011	0,56 0.022	38,0 1.496	1,0 0.039	3,0 0.118	130°	Uncoated
SD22-0.29-0.58-3R1	02730475	0,29 0.011	0,58 0.023	38,0 1.496	1,0 0.039	3,0 0.118	130°	Uncoated
SD22-0.30-0.60-3R1	02731579	0,3 0.012	0,6 0.024	38,0 1.496	1,2 0.047	3,0 0.118	130°	Uncoated
SD22-0.31-0.62-3R1	02730476	0,31 0.012	0,62 0.024	38,0 1.496	1,2 0.047	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-0.32-0.64-3R1	02730477	0,32 0.013	0,64 0.025	38,0 1.496	1,2 0.047	3,0 0.118	130°	Uncoated
SD22-0.33-0.66-3R1	02730478	0,33 0.013	0,66 0.026	38,0 1.496	1,2 0.047	3,0 0.118	130°	Uncoated
SD22-0.34-0.68-3R1	02730479	0,34 0.013	0,68 0.027	38,0 1.496	1,35 0.053	3,0 0.118	130°	Uncoated
SD22-0.35-0.70-3R1	02731580	0,35 0.014	0,7 0.028	38,0 1.496	1,35 0.053	3,0 0.118	130°	Uncoated
SD22-0.36-0.72-3R1	02730480	0,36 0.014	0,72 0.028	38,0 1.496	1,35 0.053	3,0 0.118	130°	Uncoated
SD22-0.37-0.74-3R1	02730481	0,37 0.015	0,74 0.029	38,0 1.496	1,35 0.053	3,0 0.118	130°	Uncoated
SD22-0.38-0.76-3R1	02730482	0,38 0.015	0,76 0.030	38,0 1.496	1,5 0.059	3,0 0.118	130°	Uncoated
SD22-0.39-0.78-3R1	02730483	0,39 0.015	0,78 0.031	38,0 1.496	1,5 0.059	3,0 0.118	130°	Uncoated
SD22-0.40-0.80-3R1	02731581	0,4 0.016	0,8 0.031	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.41-0.82-3R1	02730484	0,41 0.016	0,82 0.032	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.42-0.84-3R1	02730485	0,42 0.017	0,84 0.033	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.43-0.86-3R1	02730486	0,43 0.017	0,86 0.034	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.44-0.88-3R1	02730487	0,44 0.017	0,88 0.035	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.45-0.90-3R1	02731582	0,45 0.018	0,9 0.035	38,0 1.496	1,6 0.063	3,0 0.118	130°	Uncoated
SD22-0.46-0.92-3R1	02730488	0,46 0.018	0,92 0.036	38,0 1.496	1,7 0.067	3,0 0.118	130°	Uncoated
SD22-0.47-0.94-3R1	02730489	0,47 0.019	0,94 0.037	38,0 1.496	1,7 0.067	3,0 0.118	130°	Uncoated
SD22-0.48-0.96-3R1	02730490	0,48 0.019	0,96 0.038	38,0 1.496	1,7 0.067	3,0 0.118	130°	Uncoated
SD22-0.49-0.98-3R1	02730491	0,49 0.019	0,98 0.039	38,0 1.496	1,7 0.067	3,0 0.118	130°	Uncoated
SD22-0.50-1.00-3R1	02731584	0,5 0.020	1,0 0.039	38,0 1.496	1,7 0.067	3,0 0.118	130°	Uncoated
SD22-0.51-1.02-3R1	02730492	0,51 0.020	1,02 0.040	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD22-0.52-1.04-3R1	02730493	0,52 0.020	1,04 0.041	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD22-0.53-1.06-3R1	02730494	0,53 0.021	1,06 0.042	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD22-0.54-1.08-3R1	02730495	0,54 0.021	1,08 0.043	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD22-0.55-1.10-3R1	02731585	0,55 0.022	1,1 0.043	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD22-0.56-1.12-3R1	02730496	0,56 0.022	1,12 0.044	38,0 1.496	1,9 0.075	3,0 0.118	130°	Uncoated
SD22-0.57-1.14-3R1	02730497	0,57 0.022	1,14 0.045	38,0 1.496	1,9 0.075	3,0 0.118	130°	Uncoated
SD22-0.58-1.16-3R1	02730498	0,58 0.023	1,16 0.046	38,0 1.496	1,9 0.075	3,0 0.118	130°	Uncoated
SD22-0.59-1.18-3R1	02730499	0,59 0.023	1,18 0.046	38,0 1.496	1,9 0.075	3,0 0.118	130°	Uncoated
SD22-0.60-1.20-3R1	02731586	0,6 0.024	1,2 0.047	38,0 1.496	1,9 0.075	3,0 0.118	130°	Uncoated
SD22-0.61-1.22-3R1	02730500	0,61 0.024	1,22 0.048	38,0 1.496	2,0 0.079	3,0 0.118	130°	Uncoated
SD22-0.62-1.24-3R1	02730501	0,62 0.024	1,24 0.049	38,0 1.496	2,0 0.079	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-0.63-1.26-3R1	02730502	0,63 0.025	1,26 0.050	38,0 1.496	2,0 0.079	3,0 0.118	130°	Uncoated
SD22-0.64-1.28-3R1	02730503	0,64 0.025	1,28 0.050	38,0 1.496	2,0 0.079	3,0 0.118	130°	Uncoated
SD22-0.65-1.30-3R1	02731587	0,65 0.026	1,3 0.051	38,0 1.496	2,0 0.079	3,0 0.118	130°	Uncoated
SD22-0.66-1.32-3R1	02730504	0,66 0.026	1,32 0.052	38,0 1.496	2,1 0.083	3,0 0.118	130°	Uncoated
SD22-0.67-1.34-3R1	02730505	0,67 0.026	1,34 0.053	38,0 1.496	2,1 0.083	3,0 0.118	130°	Uncoated
SD22-0.68-1.36-3R1	02730506	0,68 0.027	1,36 0.054	38,0 1.496	2,1 0.083	3,0 0.118	130°	Uncoated
SD22-0.69-1.38-3R1	02730507	0,69 0.027	1,38 0.054	38,0 1.496	2,1 0.083	3,0 0.118	130°	Uncoated
SD22-0.70-1.40-3R1	02731589	0,7 0.028	1,4 0.055	38,0 1.496	2,1 0.083	3,0 0.118	130°	Uncoated
SD22-0.71-1.42-3R1	02730508	0,71 0.028	1,42 0.056	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD22-0.72-1.44-3R1	02730509	0,72 0.028	1,44 0.057	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD22-0.73-1.46-3R1	02730510	0,73 0.029	1,46 0.057	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD22-0.74-1.48-3R1	02730511	0,74 0.029	1,48 0.058	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD22-0.75-1.50-3R1	02731590	0,75 0.030	1,5 0.059	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD22-0.76-1.52-3R1	02730512	0,76 0.030	1,52 0.060	38,0 1.496	2,3 0.091	3,0 0.118	130°	Uncoated
SD22-0.77-1.54-3R1	02730513	0,77 0.030	1,54 0.061	38,0 1.496	2,3 0.091	3,0 0.118	130°	Uncoated
SD22-0.78-1.56-3R1	02730514	0,78 0.031	1,56 0.061	38,0 1.496	2,3 0.091	3,0 0.118	130°	Uncoated
SD22-0.79-1.58-3R1	02730515	0,79 0.031	1,58 0.062	38,0 1.496	2,3 0.091	3,0 0.118	130°	Uncoated
SD22-0.80-1.60-3R1	02731592	0,8 0.031	1,6 0.063	38,0 1.496	2,3 0.091	3,0 0.118	130°	Uncoated
SD22-0.81-1.62-3R1	02730516	0,81 0.032	1,62 0.064	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD22-0.82-1.64-3R1	02730517	0,82 0.032	1,64 0.065	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD22-0.83-1.66-3R1	02730518	0,83 0.033	1,66 0.065	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD22-0.84-1.68-3R1	02730519	0,84 0.033	1,68 0.066	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD22-0.85-1.70-3R1	02731593	0,85 0.033	1,7 0.067	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD22-0.86-1.72-3R1	02730520	0,86 0.034	1,72 0.068	38,0 1.496	2,5 0.098	3,0 0.118	130°	Uncoated
SD22-0.87-1.74-3R1	02730521	0,87 0.034	1,74 0.069	38,0 1.496	2,5 0.098	3,0 0.118	130°	Uncoated
SD22-0.88-1.76-3R1	02730522	0,88 0.035	1,76 0.069	38,0 1.496	2,5 0.098	3,0 0.118	130°	Uncoated
SD22-0.89-1.78-3R1	02730523	0,89 0.035	1,78 0.070	38,0 1.496	2,5 0.098	3,0 0.118	130°	Uncoated
SD22-0.90-1.80-3R1	02731594	0,9 0.035	1,8 0.071	38,0 1.496	2,5 0.098	3,0 0.118	130°	Uncoated
SD22-0.91-1.82-3R1	02730524	0,91 0.036	1,82 0.072	38,0 1.496	2,6 0.102	3,0 0.118	130°	Uncoated
SD22-0.92-1.84-3R1	02730525	0,92 0.036	1,84 0.072	38,0 1.496	2,6 0.102	3,0 0.118	130°	Uncoated
SD22-0.93-1.86-3R1	02730526	0,93 0.037	1,86 0.073	38,0 1.496	2,6 0.102	3,0 0.118	130°	Uncoated

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-0.94-1.88-3R1	02730527	0,94 0.037	1,88 0.074	38,0 1.496	2,6 0.102	3,0 0.118	130°	Uncoated
SD22-0.95-1.90-3R1	02731595	0,95 0.037	1,9 0.075	38,0 1.496	2,6 0.102	3,0 0.118	130°	Uncoated
SD22-0.96-1.92-3R1	02730528	0,96 0.038	1,92 0.076	38,0 1.496	2,7 0.106	3,0 0.118	130°	Uncoated
SD22-0.97-1.94-3R1	02730529	0,97 0.038	1,94 0.076	38,0 1.496	2,7 0.106	3,0 0.118	130°	Uncoated
SD22-0.98-1.96-3R1	02730530	0,98 0.039	1,96 0.077	38,0 1.496	2,7 0.106	3,0 0.118	130°	Uncoated
SD22-0.99-1.98-3R1	02730531	0,99 0.039	1,98 0.078	38,0 1.496	2,7 0.106	3,0 0.118	130°	Uncoated
SD22-1.00-2.00-3R1	02731596	1,0 0.039	2,0 0.079	38,0 1.496	2,7 0.106	3,0 0.118	130°	Uncoated
SD22-1.01-2.02-3R1	02730532	1,01 0.040	2,02 0.080	38,0 1.496	3,5 0.138	3,0 0.118	130°	Uncoated
SD22-1.02-2.04-3R1	02730533	1,02 0.040	2,04 0.080	38,0 1.496	3,5 0.138	3,0 0.118	130°	Uncoated
SD22-1.03-2.06-3R1	02730534	1,03 0.041	2,06 0.081	38,0 1.496	3,5 0.138	3,0 0.118	130°	Uncoated
SD22-1.04-2.08-3R1	02730535	1,04 0.041	2,08 0.082	38,0 1.496	3,5 0.138	3,0 0.118	130°	Uncoated
SD22-1.05-2.10-3R1	02730536	1,05 0.041	2,1 0.083	38,0 1.496	3,5 0.138	3,0 0.118	130°	Uncoated
SD22-1.06-2.12-3R1	02730537	1,06 0.042	2,12 0.083	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD22-1.07-2.14-3R1	02730538	1,07 0.042	2,14 0.084	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD22-1.08-2.16-3R1	02730539	1,08 0.043	2,16 0.085	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD22-1.09-2.18-3R1	02730540	1,09 0.043	2,18 0.086	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD22-1.10-2.20-3R1	02731598	1,1 0.043	2,2 0.087	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD22-1.11-2.22-3R1	02730541	1,11 0.044	2,22 0.087	38,0 1.496	3,7 0.146	3,0 0.118	130°	Uncoated
SD22-1.12-2.24-3R1	02730542	1,12 0.044	2,24 0.088	38,0 1.496	3,7 0.146	3,0 0.118	130°	Uncoated
SD22-1.13-2.26-3R1	02730543	1,13 0.044	2,26 0.089	38,0 1.496	3,7 0.146	3,0 0.118	130°	Uncoated
SD22-1.14-2.28-3R1	02730544	1,14 0.045	2,28 0.090	38,0 1.496	3,7 0.146	3,0 0.118	130°	Uncoated
SD22-1.15-2.30-3R1	02730545	1,15 0.045	2,3 0.091	38,0 1.496	3,7 0.146	3,0 0.118	130°	Uncoated
SD22-1.16-2.32-3R1	02730546	1,16 0.046	2,32 0.091	38,0 1.496	3,8 0.150	3,0 0.118	130°	Uncoated
SD22-1.17-2.34-3R1	02730547	1,17 0.046	2,34 0.092	38,0 1.496	3,8 0.150	3,0 0.118	130°	Uncoated
SD22-1.18-2.36-3R1	02730548	1,18 0.046	2,36 0.093	38,0 1.496	3,8 0.150	3,0 0.118	130°	Uncoated
SD22-1.19-2.38-3R1	02730549	1,19 0.047	2,38 0.094	38,0 1.496	3,8 0.150	3,0 0.118	130°	Uncoated
SD22-1.20-2.40-3R1	02731599	1,2 0.047	2,4 0.094	38,0 1.496	3,8 0.150	3,0 0.118	130°	Uncoated
SD22-1.21-2.42-3R1	02730550	1,21 0.048	2,42 0.095	38,0 1.496	4,2 0.165	3,0 0.118	130°	Uncoated
SD22-1.22-2.44-3R1	02730551	1,22 0.048	2,44 0.096	38,0 1.496	4,2 0.165	3,0 0.118	130°	Uncoated
SD22-1.23-2.46-3R1	02730552	1,23 0.048	2,46 0.097	38,0 1.496	4,2 0.165	3,0 0.118	130°	Uncoated
SD22-1.24-2.48-3R1	02730553	1,24 0.049	2,48 0.098	38,0 1.496	4,2 0.165	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-1.25-2.50-3R1	02730554	1,25 0.049	2,5 0.098	38,0 1.496	4,2 0.165	3,0 0.118	130°	Uncoated
SD22-1.26-2.52-3R1	02730555	1,26 0.050	2,52 0.099	38,0 1.496	4,3 0.169	3,0 0.118	130°	Uncoated
SD22-1.27-2.54-3R1	02730556	1,27 0.050	2,54 0.100	38,0 1.496	4,3 0.169	3,0 0.118	130°	Uncoated
SD22-1.28-2.56-3R1	02730557	1,28 0.050	2,56 0.101	38,0 1.496	4,3 0.169	3,0 0.118	130°	Uncoated
SD22-1.29-2.58-3R1	02730558	1,29 0.051	2,58 0.102	38,0 1.496	4,3 0.169	3,0 0.118	130°	Uncoated
SD22-1.30-2.60-3R1	02731600	1,3 0.051	2,6 0.102	38,0 1.496	4,3 0.169	3,0 0.118	130°	Uncoated
SD22-1.31-2.62-3R1	02730559	1,31 0.052	2,62 0.103	38,0 1.496	4,4 0.173	3,0 0.118	130°	Uncoated
SD22-1.32-2.64-3R1	02730560	1,32 0.052	2,64 0.104	38,0 1.496	4,4 0.173	3,0 0.118	130°	Uncoated
SD22-1.33-2.66-3R1	02730561	1,33 0.052	2,66 0.105	38,0 1.496	4,4 0.173	3,0 0.118	130°	Uncoated
SD22-1.34-2.68-3R1	02730562	1,34 0.053	2,68 0.106	38,0 1.496	4,4 0.173	3,0 0.118	130°	Uncoated
SD22-1.35-2.70-3R1	02730563	1,35 0.053	2,7 0.106	38,0 1.496	4,4 0.173	3,0 0.118	130°	Uncoated
SD22-1.36-2.72-3R1	02730564	1,36 0.054	2,72 0.107	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD22-1.37-2.74-3R1	02730565	1,37 0.054	2,74 0.108	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD22-1.38-2.76-3R1	02730566	1,38 0.054	2,76 0.109	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD22-1.39-2.78-3R1	02730567	1,39 0.055	2,78 0.109	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD22-1.40-2.80-3R1	02731602	1,4 0.055	2,8 0.110	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD22-1.41-2.82-3R1	02730568	1,41 0.056	2,82 0.111	38,0 1.496	4,6 0.181	3,0 0.118	130°	Uncoated
SD22-1.42-2.84-3R1	02730569	1,42 0.056	2,84 0.112	38,0 1.496	4,6 0.181	3,0 0.118	130°	Uncoated
SD22-1.43-2.86-3R1	02730570	1,43 0.056	2,86 0.113	38,0 1.496	4,6 0.181	3,0 0.118	130°	Uncoated
SD22-1.44-2.88-3R1	02730571	1,44 0.057	2,88 0.113	38,0 1.496	4,6 0.181	3,0 0.118	130°	Uncoated
SD22-1.45-2.90-3R1	02730572	1,45 0.057	2,9 0.114	38,0 1.496	4,6 0.181	3,0 0.118	130°	Uncoated
SD22-1.46-2.92-3R1	02730573	1,46 0.057	2,92 0.115	38,0 1.496	4,7 0.185	3,0 0.118	130°	Uncoated
SD22-1.47-2.94-3R1	02730574	1,47 0.058	2,94 0.116	38,0 1.496	4,7 0.185	3,0 0.118	130°	Uncoated
SD22-1.48-2.96-3R1	02730575	1,48 0.058	2,96 0.117	38,0 1.496	4,7 0.185	3,0 0.118	130°	Uncoated
SD22-1.49-2.98-3R1	02730576	1,49 0.059	2,98 0.117	38,0 1.496	4,7 0.185	3,0 0.118	130°	Uncoated
SD22-1.50-3.00-3R1	02731603	1,5 0.059	3,0 0.118	38,0 1.496	4,7 0.185	3,0 0.118	130°	Uncoated
SD22-1.51-3.02-3R1	02730577	1,51 0.059	3,02 0.119	38,0 1.496	5,1 0.201	3,0 0.118	130°	Uncoated
SD22-1.52-3.04-3R1	02730578	1,52 0.060	3,04 0.120	38,0 1.496	5,1 0.201	3,0 0.118	130°	Uncoated
SD22-1.53-3.06-3R1	02730579	1,53 0.060	3,06 0.120	38,0 1.496	5,1 0.201	3,0 0.118	130°	Uncoated
SD22-1.54-3.08-3R1	02730580	1,54 0.061	3,08 0.121	38,0 1.496	5,1 0.201	3,0 0.118	130°	Uncoated
SD22-1.55-3.10-3R1	02730581	1,55 0.061	3,1 0.122	38,0 1.496	5,1 0.201	3,0 0.118	130°	Uncoated

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Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD22-1.56-3.12-3R1	02730582	1,56 0.061	3,12 0.123	38,0 1.496	5,2 0.205	3,0 0.118	130°	Uncoated
SD22-1.57-3.14-3R1	02730583	1,57 0.062	3,14 0.124	38,0 1.496	5,2 0.205	3,0 0.118	130°	Uncoated
SD22-1.58-3.16-3R1	02730584	1,58 0.062	3,16 0.124	38,0 1.496	5,2 0.205	3,0 0.118	130°	Uncoated
SD22-1.59-3.18-3R1	02730585	1,59 0.063	3,18 0.125	38,0 1.496	5,2 0.205	3,0 0.118	130°	Uncoated
SD22-1.60-3.20-3R1	02731605	1,6 0.063	3,2 0.126	38,0 1.496	5,2 0.205	3,0 0.118	130°	Uncoated
SD22-1.61-3.22-3R1	02730586	1,61 0.063	3,22 0.127	38,0 1.496	5,3 0.209	3,0 0.118	130°	Uncoated
SD22-1.62-3.24-3R1	02730587	1,62 0.064	3,24 0.128	38,0 1.496	5,3 0.209	3,0 0.118	130°	Uncoated
SD22-1.63-3.26-3R1	02730588	1,63 0.064	3,26 0.128	38,0 1.496	5,3 0.209	3,0 0.118	130°	Uncoated
SD22-1.64-3.28-3R1	02730589	1,64 0.065	3,28 0.129	38,0 1.496	5,3 0.209	3,0 0.118	130°	Uncoated
SD22-1.65-3.30-3R1	02730590	1,65 0.065	3,3 0.130	38,0 1.496	5,3 0.209	3,0 0.118	130°	Uncoated
SD22-1.66-3.32-3R1	02730592	1,66 0.065	3,32 0.131	38,0 1.496	5,4 0.213	3,0 0.118	130°	Uncoated
SD22-1.67-3.34-3R1	02730593	1,67 0.066	3,34 0.131	38,0 1.496	5,4 0.213	3,0 0.118	130°	Uncoated
SD22-1.68-3.36-3R1	02730594	1,68 0.066	3,36 0.132	38,0 1.496	5,4 0.213	3,0 0.118	130°	Uncoated
SD22-1.69-3.38-3R1	02730595	1,69 0.067	3,38 0.133	38,0 1.496	5,4 0.213	3,0 0.118	130°	Uncoated
SD22-1.70-3.40-3R1	02731606	1,7 0.067	3,4 0.134	38,0 1.496	5,4 0.213	3,0 0.118	130°	Uncoated
SD22-1.71-3.42-3R1	02730596	1,71 0.067	3,42 0.135	38,0 1.496	5,5 0.217	3,0 0.118	130°	Uncoated
SD22-1.72-3.44-3R1	02730597	1,72 0.068	3,44 0.135	38,0 1.496	5,5 0.217	3,0 0.118	130°	Uncoated
SD22-1.73-3.46-3R1	02730598	1,73 0.068	3,46 0.136	38,0 1.496	5,5 0.217	3,0 0.118	130°	Uncoated
SD22-1.74-3.48-3R1	02730599	1,74 0.069	3,48 0.137	38,0 1.496	5,5 0.217	3,0 0.118	130°	Uncoated
SD22-1.75-3.50-3R1	02730601	1,75 0.069	3,5 0.138	38,0 1.496	5,5 0.217	3,0 0.118	130°	Uncoated
SD22-1.76-3.52-3R1	02730602	1,76 0.069	3,52 0.139	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD22-1.77-3.54-3R1	02730603	1,77 0.070	3,54 0.139	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD22-1.78-3.56-3R1	02730604	1,78 0.070	3,56 0.140	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD22-1.79-3.58-3R1	02730605	1,79 0.070	3,58 0.141	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD22-1.80-3.60-3R1	02731607	1,8 0.071	3,6 0.142	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD22-1.81-3.62-3R1	02730606	1,81 0.071	3,62 0.143	38,0 1.496	5,7 0.224	3,0 0.118	130°	Uncoated
SD22-1.82-3.64-3R1	02730607	1,82 0.072	3,64 0.143	38,0 1.496	5,7 0.224	3,0 0.118	130°	Uncoated
SD22-1.83-3.66-3R1	02730608	1,83 0.072	3,66 0.144	38,0 1.496	5,7 0.224	3,0 0.118	130°	Uncoated
SD22-1.84-3.68-3R1	02730609	1,84 0.072	3,68 0.145	38,0 1.496	5,7 0.224	3,0 0.118	130°	Uncoated
SD22-1.85-3.70-3R1	02730610	1,85 0.073	3,7 0.146	38,0 1.496	5,7 0.224	3,0 0.118	130°	Uncoated
SD22-1.86-3.72-3R1	02730611	1,86 0.073	3,72 0.146	38,0 1.496	5,8 0.228	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>		
SD22-1.87-3.74-3R1	02730612	1,87 0.074	3,74 0.147	38,0 1.496	5,8 0.228	3,0 0.118	130°	Uncoated
SD22-1.88-3.76-3R1	02730613	1,88 0.074	3,76 0.148	38,0 1.496	5,8 0.228	3,0 0.118	130°	Uncoated
SD22-1.89-3.78-3R1	02730614	1,89 0.074	3,78 0.149	38,0 1.496	5,8 0.228	3,0 0.118	130°	Uncoated
SD22-1.90-3.80-3R1	02731609	1,9 0.075	3,8 0.150	38,0 1.496	5,8 0.228	3,0 0.118	130°	Uncoated
SD22-1.91-3.82-3R1	02730615	1,91 0.075	3,82 0.150	38,0 1.496	5,9 0.232	3,0 0.118	130°	Uncoated
SD22-1.92-3.84-3R1	02730616	1,92 0.076	3,84 0.151	38,0 1.496	5,9 0.232	3,0 0.118	130°	Uncoated
SD22-1.93-3.86-3R1	02730617	1,93 0.076	3,86 0.152	38,0 1.496	5,9 0.232	3,0 0.118	130°	Uncoated
SD22-1.94-3.88-3R1	02730618	1,94 0.076	3,88 0.153	38,0 1.496	5,9 0.232	3,0 0.118	130°	Uncoated
SD22-1.95-3.90-3R1	02730619	1,95 0.077	3,9 0.154	38,0 1.496	5,9 0.232	3,0 0.118	130°	Uncoated
SD22-1.96-3.92-3R1	02730620	1,96 0.077	3,92 0.154	38,0 1.496	6,0 0.236	3,0 0.118	130°	Uncoated
SD22-1.97-3.94-3R1	02730621	1,97 0.078	3,94 0.155	38,0 1.496	6,0 0.236	3,0 0.118	130°	Uncoated
SD22-1.98-3.96-3R1	02730622	1,98 0.078	3,96 0.156	38,0 1.496	6,0 0.236	3,0 0.118	130°	Uncoated
SD22-1.99-3.98-3R1	02730623	1,99 0.078	3,98 0.157	38,0 1.496	6,0 0.236	3,0 0.118	130°	Uncoated
SD22-2.00-4.00-3R1	02731610	2,0 0.079	4,0 0.157	38,0 1.496	6,0 0.236	3,0 0.118	130°	Uncoated

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Drilling

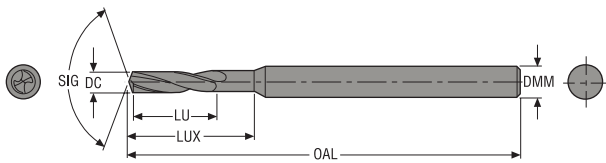
Reaming

Boring

Annex

SD26

Drilling depth ~ 6 x D – Metric/Inch



- Cylindrical shank
- External coolant
- For cutting data see page(s) 164-168

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD26-0.10-0.40-3R1	02731612	0,1 0.004	0,4 0.016	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD26-0.11-0.40-3R1	02730624	0,11 0.004	0,4 0.016	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD26-0.12-0.40-3R1	02730625	0,12 0.005	0,4 0.016	38,0 1.496	0,7 0.028	3,0 0.118	130°	Uncoated
SD26-0.13-0.65-3R1	02730626	0,13 0.005	0,65 0.026	38,0 1.496	1,0 0.039	3,0 0.118	130°	Uncoated
SD26-0.14-0.65-3R1	02730627	0,14 0.006	0,65 0.026	38,0 1.496	1,0 0.039	3,0 0.118	130°	Uncoated
SD26-0.15-0.65-3R1	02731613	0,15 0.006	0,9 0.035	38,0 1.496	1,4 0.055	3,0 0.118	130°	Uncoated
SD26-0.16-0.90-3R1	02730628	0,16 0.006	0,9 0.035	38,0 1.496	1,4 0.055	3,0 0.118	130°	Uncoated
SD26-0.17-0.90-3R1	02730629	0,17 0.007	0,9 0.035	38,0 1.496	1,4 0.055	3,0 0.118	130°	Uncoated
SD26-0.18-0.90-3R1	02730630	0,18 0.007	0,9 0.035	38,0 1.496	1,4 0.055	3,0 0.118	130°	Uncoated
SD26-0.19-0.90-3R1	02730631	0,19 0.007	0,9 0.035	38,0 1.496	1,4 0.055	3,0 0.118	130°	Uncoated
SD26-0.20-1.25-3R1	02731615	0,2 0.008	1,25 0.049	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD26-0.21-1.25-3R1	02730632	0,21 0.008	1,25 0.049	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD26-0.22-1.25-3R1	02730633	0,22 0.009	1,25 0.049	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD26-0.23-1.25-3R1	02730634	0,23 0.009	1,25 0.049	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD26-0.24-1.25-3R1	02730635	0,24 0.009	1,25 0.049	38,0 1.496	1,8 0.071	3,0 0.118	130°	Uncoated
SD26-0.25-1.55-3R1	02731617	0,25 0.010	1,55 0.061	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD26-0.26-1.55-3R1	02730636	0,26 0.010	1,55 0.061	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD26-0.27-1.55-3R1	02730637	0,27 0.011	1,55 0.061	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD26-0.28-1.55-3R1	02730638	0,28 0.011	1,55 0.061	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD26-0.29-1.55-3R1	02730639	0,29 0.011	1,55 0.061	38,0 1.496	2,2 0.087	3,0 0.118	130°	Uncoated
SD26-0.30-1.80-3R1	02731618	0,3 0.012	1,8 0.071	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD26-0.31-1.80-3R1	02730640	0,31 0.012	1,8 0.071	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD26-0.32-1.80-3R1	02730641	0,32 0.013	1,8 0.071	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD26-0.33-1.80-3R1	02730642	0,33 0.013	1,8 0.071	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD26-0.34-1.80-3R1	02730643	0,34 0.013	1,8 0.071	38,0 1.496	2,4 0.094	3,0 0.118	130°	Uncoated
SD26-0.35-2.20-3R1	02731619	0,35 0.014	2,2 0.087	38,0 1.496	2,8 0.110	3,0 0.118	130°	Uncoated
SD26-0.36-2.20-3R1	02730644	0,36 0.014	2,2 0.087	38,0 1.496	2,8 0.110	3,0 0.118	130°	Uncoated
SD26-0.37-2.20-3R1	02730645	0,37 0.015	2,2 0.087	38,0 1.496	2,8 0.110	3,0 0.118	130°	Uncoated
SD26-0.38-2.20-3R1	02730646	0,38 0.015	2,2 0.087	38,0 1.496	2,8 0.110	3,0 0.118	130°	Uncoated
SD26-0.39-2.70-3R1	02730647	0,39 0.015	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.40-2.70-3R1	02731620	0,4 0.016	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.41-2.70-3R1	02730648	0,41 0.016	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.42-2.70-3R1	02730649	0,42 0.017	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.43-2.70-3R1	02730650	0,43 0.017	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.44-2.70-3R1	02730651	0,44 0.017	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.45-2.70-3R1	02731621	0,45 0.018	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.46-2.70-3R1	02730652	0,46 0.018	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.47-2.70-3R1	02730653	0,47 0.019	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.48-2.70-3R1	02730654	0,48 0.019	2,7 0.106	38,0 1.496	3,6 0.142	3,0 0.118	130°	Uncoated
SD26-0.49-3.20-3R1	02730655	0,49 0.019	3,2 0.126	38,0 1.496	4,0 0.157	3,0 0.118	130°	Uncoated
SD26-0.50-3.20-3R1	02731622	0,5 0.020	3,2 0.126	38,0 1.496	4,0 0.157	3,0 0.118	130°	Uncoated
SD26-0.51-3.20-3R1	02730656	0,51 0.020	3,2 0.126	38,0 1.496	4,0 0.157	3,0 0.118	130°	Uncoated
SD26-0.52-3.20-3R1	02730657	0,52 0.020	3,2 0.126	38,0 1.496	4,0 0.157	3,0 0.118	130°	Uncoated
SD26-0.53-3.20-3R1	02730658	0,53 0.021	3,2 0.126	38,0 1.496	4,0 0.157	3,0 0.118	130°	Uncoated
SD26-0.54-3.60-3R1	02730659	0,54 0.021	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.55-3.60-3R1	02731623	0,55 0.022	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.56-3.60-3R1	02730660	0,56 0.022	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.57-3.60-3R1	02730661	0,57 0.022	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.58-3.60-3R1	02730662	0,58 0.023	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.59-3.60-3R1	02730663	0,59 0.023	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.60-3.60-3R1	02731624	0,6 0.024	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.61-3.90-3R1	02730664	0,61 0.024	3,6 0.142	38,0 1.496	4,5 0.177	3,0 0.118	130°	Uncoated
SD26-0.62-3.90-3R1	02730665	0,62 0.024	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated

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Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD26-0.63-3.90-3R1	02730666	0,63 0.025	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated
SD26-0.64-3.90-3R1	02730667	0,64 0.025	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated
SD26-0.65-3.90-3R1	02731625	0,65 0.026	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated
SD26-0.66-3.90-3R1	02730668	0,66 0.026	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated
SD26-0.67-3.90-3R1	02730669	0,67 0.026	3,9 0.154	38,0 1.496	5,0 0.197	3,0 0.118	130°	Uncoated
SD26-0.68-4.50-3R1	02730670	0,68 0.027	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.69-4.50-3R1	02730671	0,69 0.027	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.70-4.50-3R1	02731626	0,7 0.028	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.71-4.50-3R1	02730672	0,71 0.028	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.72-4.50-3R1	02730673	0,72 0.028	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.73-4.50-3R1	02730674	0,73 0.029	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.74-4.50-3R1	02730675	0,74 0.029	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.75-4.50-3R1	02731627	0,75 0.030	4,5 0.177	38,0 1.496	5,6 0.220	3,0 0.118	130°	Uncoated
SD26-0.76-5.00-3R1	02730676	0,76 0.030	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.77-5.00-3R1	02730677	0,77 0.030	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.78-5.00-3R1	02730678	0,78 0.031	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.79-5.00-3R1	02730679	0,79 0.031	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.80-5.00-3R1	02731628	0,8 0.031	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.81-5.00-3R1	02730680	0,81 0.032	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.82-5.00-3R1	02730681	0,82 0.032	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.83-5.00-3R1	02730682	0,83 0.033	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.84-5.00-3R1	02730683	0,84 0.033	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.85-5.00-3R1	02731629	0,85 0.033	5,0 0.197	38,0 1.496	6,3 0.248	3,0 0.118	130°	Uncoated
SD26-0.86-5.70-3R1	02730684	0,86 0.034	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.87-5.70-3R1	02730685	0,87 0.034	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.88-5.70-3R1	02730686	0,88 0.035	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.89-5.70-3R1	02730687	0,89 0.035	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.90-5.70-3R1	02731630	0,9 0.035	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.91-5.70-3R1	02730688	0,91 0.036	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.92-5.70-3R1	02730689	0,92 0.036	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated
SD26-0.93-5.70-3R1	02730690	0,93 0.037	5,7 0.224	38,0 1.496	7,1 0.280	3,0 0.118	130°	Uncoated

Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>		
SD26-0.94-5.70-3R1	02730691	0,94 <i>0.037</i>	5,7 <i>0.224</i>	38,0 <i>1.496</i>	7,1 <i>0.280</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-0.95-5.70-3R1	02731631	0,95 <i>0.037</i>	5,7 <i>0.224</i>	38,0 <i>1.496</i>	7,1 <i>0.280</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-0.96-6.50-3R1	02730692	0,96 <i>0.038</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-0.97-6.50-3R1	02730693	0,97 <i>0.038</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-0.98-6.50-3R1	02730694	0,98 <i>0.039</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-0.99-6.50-3R1	02730695	0,99 <i>0.039</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.00-6.50-3R1	02731632	1,0 <i>0.039</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.01-6.50-3R1	02730696	1,01 <i>0.040</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.02-6.50-3R1	02730697	1,02 <i>0.040</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.03-6.50-3R1	02730698	1,03 <i>0.041</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.04-6.50-3R1	02730699	1,04 <i>0.041</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.05-6.50-3R1	02730700	1,05 <i>0.041</i>	6,5 <i>0.256</i>	38,0 <i>1.496</i>	8,0 <i>0.315</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.06-7.30-3R1	02730701	1,06 <i>0.042</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.07-7.30-3R1	02730702	1,07 <i>0.042</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.08-7.30-3R1	02730703	1,08 <i>0.043</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.09-7.30-3R1	02730704	1,09 <i>0.043</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.10-7.30-3R1	02731633	1,1 <i>0.043</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.11-7.30-3R1	02730705	1,11 <i>0.044</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.12-7.30-3R1	02730706	1,12 <i>0.044</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.13-7.30-3R1	02730707	1,13 <i>0.044</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.14-7.30-3R1	02730708	1,14 <i>0.045</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.15-7.30-3R1	02730709	1,15 <i>0.045</i>	7,3 <i>0.287</i>	38,0 <i>1.496</i>	9,0 <i>0.354</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.16-8.20-3R1	02730710	1,16 <i>0.046</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.17-8.20-3R1	02730711	1,17 <i>0.046</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.18-8.20-3R1	02730712	1,18 <i>0.046</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.19-8.20-3R1	02730713	1,19 <i>0.047</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.20-8.20-3R1	02731634	1,2 <i>0.047</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.21-8.20-3R1	02730714	1,21 <i>0.048</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.22-8.20-3R1	02730715	1,22 <i>0.048</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.23-8.20-3R1	02730716	1,23 <i>0.048</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.24-8.20-3R1	02730717	1,24 <i>0.049</i>	8,2 <i>0.323</i>	38,0 <i>1.496</i>	10,0 <i>0.394</i>	3,0 <i>0.118</i>	130°	Uncoated

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Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD26-1.25-8.20-3R1	02730718	1,25 0.049	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.26-8.20-3R1	02730719	1,26 0.050	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.27-8.20-3R1	02730720	1,27 0.050	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.28-8.20-3R1	02730721	1,28 0.050	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.29-8.20-3R1	02730722	1,29 0.051	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.30-8.20-3R1	02731635	1,3 0.051	8,2 0.323	38,0 1.496	10,0 0.394	3,0 0.118	130°	Uncoated
SD26-1.31-9.20-3R1	02730723	1,31 0.052	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.32-9.20-3R1	02730724	1,32 0.052	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.33-9.20-3R1	02730725	1,33 0.052	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.34-9.20-3R1	02730726	1,34 0.053	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.35-9.20-3R1	02730727	1,35 0.053	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.36-9.20-3R1	02730728	1,36 0.054	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.37-9.20-3R1	02730729	1,37 0.054	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.38-9.20-3R1	02730730	1,38 0.054	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.39-9.20-3R1	02730731	1,39 0.055	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.40-9.20-3R1	02731637	1,4 0.055	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.41-9.20-3R1	02730732	1,41 0.056	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.42-9.20-3R1	02730733	1,42 0.056	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.43-9.20-3R1	02730734	1,43 0.056	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.44-9.20-3R1	02730735	1,44 0.057	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.45-9.20-3R1	02730736	1,45 0.057	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.46-9.20-3R1	02730737	1,46 0.057	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.47-9.20-3R1	02730738	1,47 0.058	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.48-9.20-3R1	02730739	1,48 0.058	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.49-9.20-3R1	02730740	1,49 0.059	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.50-9.20-3R1	02731638	1,5 0.059	9,2 0.362	38,0 1.496	11,2 0.441	3,0 0.118	130°	Uncoated
SD26-1.51-11.20-3R1	02730741	1,51 0.059	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.52-11.20-3R1	02730742	1,52 0.060	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.53-11.20-3R1	02730743	1,53 0.060	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.54-11.20-3R1	02730744	1,54 0.061	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.55-11.20-3R1	02730745	1,55 0.061	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated

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Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
SD26-1.56-11.20-3R1	02730746	1,56 0.061	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.57-11.20-3R1	02730747	1,57 0.062	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.58-11.20-3R1	02730748	1,58 0.062	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.59-11.20-3R1	02730749	1,59 0.063	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.60-11.20-3R1	02731639	1,6 0.063	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.61-11.20-3R1	02730750	1,61 0.063	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.62-11.20-3R1	02730751	1,62 0.064	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.63-11.20-3R1	02730752	1,63 0.064	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.64-11.20-3R1	02730753	1,64 0.065	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.65-11.20-3R1	02730754	1,65 0.065	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.66-11.20-3R1	02730755	1,66 0.065	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.67-11.20-3R1	02730756	1,67 0.066	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.68-11.20-3R1	02730757	1,68 0.066	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.69-11.20-3R1	02730758	1,69 0.067	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.70-11.20-3R1	02731640	1,7 0.067	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.71-11.20-3R1	02730759	1,71 0.067	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.72-11.20-3R1	02730760	1,72 0.068	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.73-11.20-3R1	02730761	1,73 0.068	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.74-11.20-3R1	02730762	1,74 0.069	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.75-11.20-3R1	02730763	1,75 0.069	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.76-11.20-3R1	02730764	1,76 0.069	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.77-11.20-3R1	02730765	1,77 0.070	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.78-11.20-3R1	02730766	1,78 0.070	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.79-11.20-3R1	02730767	1,79 0.070	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.80-11.20-3R1	02731641	1,8 0.071	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.81-11.20-3R1	02730768	1,81 0.071	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.82-11.20-3R1	02730769	1,82 0.072	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.83-11.20-3R1	02730770	1,83 0.072	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.84-11.20-3R1	02730771	1,84 0.072	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.85-11.20-3R1	02730772	1,85 0.073	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated
SD26-1.86-11.20-3R1	02730773	1,86 0.073	11,2 0.441	38,0 1.496	13,4 0.528	3,0 0.118	130°	Uncoated

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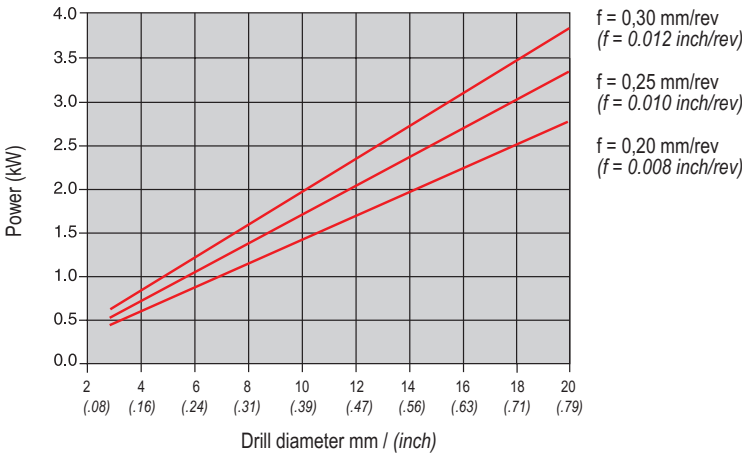
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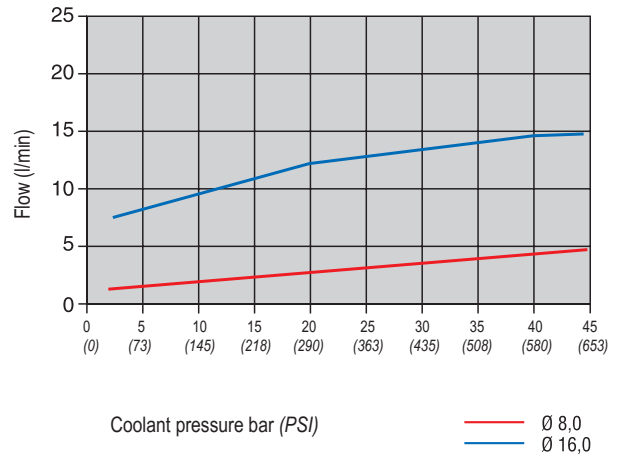
Designation	Item number	DC	LU	OAL	LUX	DMM	Point angle	Coating
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>		
SD26-1.87-11.20-3R1	02730774	1,87 <i>0.074</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.88-11.20-3R1	02730775	1,88 <i>0.074</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.89-11.20-3R1	02730776	1,89 <i>0.074</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.90-11.20-3R1	02731642	1,9 <i>0.075</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.91-11.20-3R1	02730777	1,91 <i>0.075</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.92-11.20-3R1	02730778	1,92 <i>0.076</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.93-11.20-3R1	02730779	1,93 <i>0.076</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.94-11.20-3R1	02730780	1,94 <i>0.076</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.95-11.20-3R1	02730781	1,95 <i>0.077</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.96-11.20-3R1	02730782	1,96 <i>0.077</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.97-11.20-3R1	02730783	1,97 <i>0.078</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.98-11.20-3R1	02730784	1,98 <i>0.078</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-1.99-11.20-3R1	02730785	1,99 <i>0.078</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated
SD26-2.00-11.20-3R1	02731643	2,0 <i>0.079</i>	11,2 <i>0.441</i>	38,0 <i>1.496</i>	13,4 <i>0.528</i>	3,0 <i>0.118</i>	130°	Uncoated

Machining data

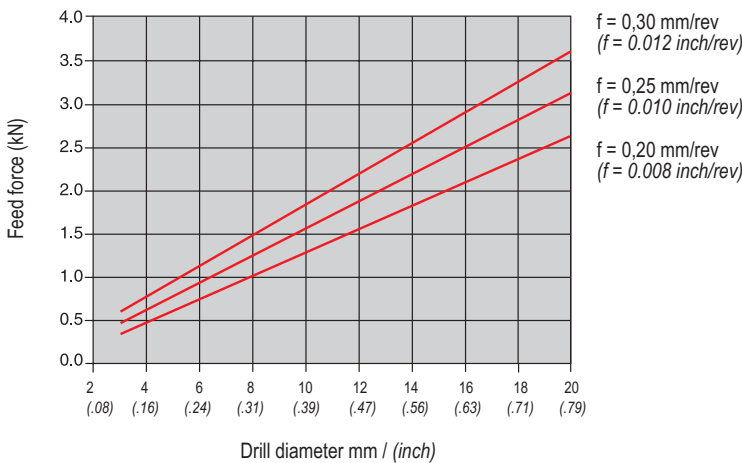
Net power consumption



Coolant flow at different pressures



Feed force



Method:
Adjust feed up or down to obtain as good chip formation as possible.
Increased feed/rev gives shorter chips.

The values showing feed force and net power consumption above are basic values and vary with type of cutting data, material and tool wear.

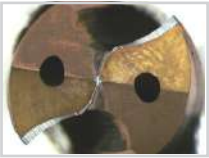
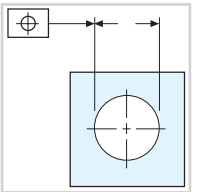
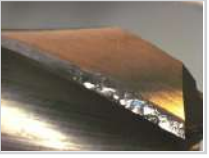
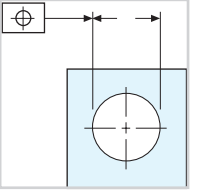

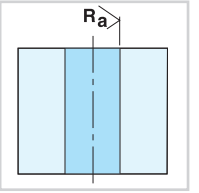

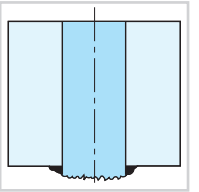
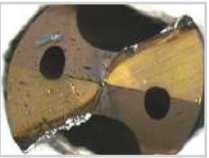
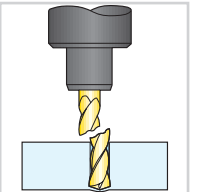
Machining data

SD1103, SD1103A, SD1105A, SD203A, SD205A, SD206, SD206A, SD207A, SD216A, SD230A IT8-9/R _a 1-3*					
Drill Ø DC (mm)	IT9 tolerance (µm)	IT10 tolerance (µm)	Drill Ø DC (inch)	IT9 tolerance (inch)	IT10 tolerance (inch)
< 3	14	25	-0.118	0.0006	0.0010
3-6	18	30	> 0.118-0.236	0.0007	0.0012
6-10	22	36	> 0.236-0.394	0.0009	0.0014
10-18	27	43	> 0.394-0.709	0.0011	0.0017
> 18	33	52	> 0.709	0.0013	0.0020

*Deterioration of surface finish can occur when drilling in low carbon steel or stainless steel.

Troubleshooting – Initial check points

- Fixturing stability
- Machine spindle condition
- Tool holder condition
- Clamping of tool:
 - Run-out within 0,04 TIR
 - If using pre drilling within 0,04 TIR
- Chip evacuation:
 - Cutting data
- Coolant:
 - Pressure
 - Flow
 - Concentration

<p>Rapid flank wear</p> <ul style="list-style-type: none"> • Reduce the cutting speed • Increase coolant concentration 		<p>Unsatisfactory diameter tolerance</p> <ul style="list-style-type: none"> • Increase the feed/rev • Use a reaming operation, see page(s) 322 • Use a boring operation, see page(s) 492-493 	
<p>Wear/Periphery land</p> <ul style="list-style-type: none"> • Reduce the cutting speed • Increase coolant concentration 		<p>Unsatisfactory positioning of the hole</p> <ul style="list-style-type: none"> • Reduce feed/rev on entrance • Reduce feed/rev • Use a boring operation, see page(s) 492-493 • If drilling through rough, hard and angled surfaces - reduce the feed by 30-50% during entrance and exit • Centre drill with a 140° point angle 	
<p>Chipping/Centre</p> <ul style="list-style-type: none"> • Reduce feed/rev on entrance • Reduce feed/rev • Use a boring operation, see page(s) 492-493 		<p>Unsatisfactory surface finish</p> <ul style="list-style-type: none"> • Reduce the feed/rev • Increase the cutting speed • Use a reaming operation, see page(s) 322 	
<p>Chipping/Outer corner, cutting edge</p> <ul style="list-style-type: none"> • Reduce feed during entrance/exit • Reduce the cutting speed • Increase coolant concentration • Regrind the drill 		<p>Burrs on exit</p> <ul style="list-style-type: none"> • Reduce the feed/rev on exit • Reduce the width of edge preparation (BN) 	
<p>Built-up edge</p> <ul style="list-style-type: none"> • If closer to the periphery increase the cutting speed • If closer to centre increase feed/rev • If the drill is worn, regrind it 		<p>Breakage on contact/at hole bottom</p> <ul style="list-style-type: none"> • Reduce the feed/rev during entrance/exit • Adjust cutting data for improved chip evacuation 	

Regrinding instructions for SD1103, SD1103A, SD1105A, SD1108A and SD1112A

Specifications:

Proposed specification of diamond wheels:

Point relief: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

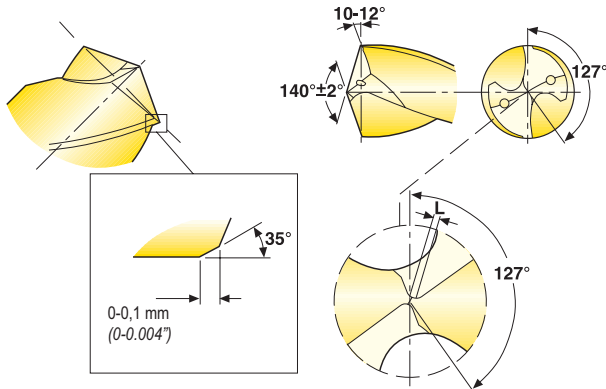
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

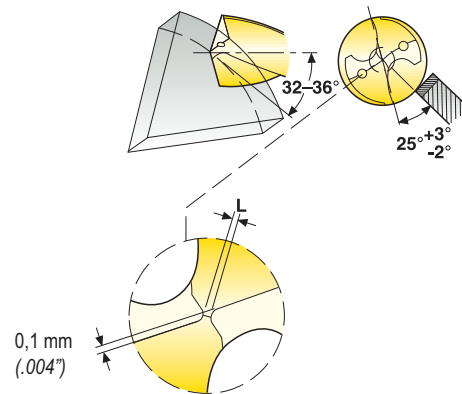
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Four facet point



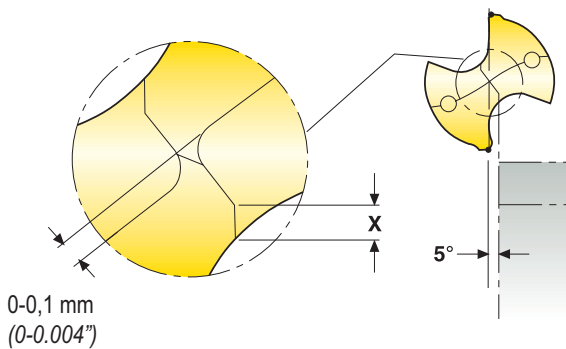
Lip height distance (axial run-out) to be within 0,02 mm (0.008")

2. Web thinning



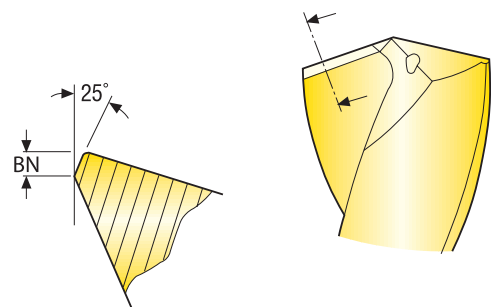
Drill Ø DC mm	L mm	Drill Ø DC inch	L inch
2-10	0,1-0,3	0.079-0.394	0.004-0.012
10-20	0,2-0,4	0.394-0.787	0.008-0.016

3. Grinding of flat X



$$X = 0,08 \times (0.003) \times \text{drill diameter DC}$$

4. Edge preparation



Workpiece material	BN			
	Drill Ø ≤ 10 mm	Drill Ø > 10 mm	Drill Ø ≤ 0.394 inch	Drill Ø > 0.394 inch
Steel	0,05	0,10	0.002	0.004
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,10	0.002	0.004

Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.

Regrinding instructions for SD203A, SD205A and SD207A -P geometry

Specifications:

Proposed specification of diamond wheels:

Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Conical flank

Lip height distance (axial run-out) to be within 0,02 mm (0.008")

2. Web thinning

Drill Ø DC mm	L mm	Drill Ø DC inch	L inch
2-10	0,1-0,3	0.079-0.394	0.004-0.012
10-20	0,2-0,4	0.394-0.787	0.008-0.016

3. Grinding of flat X

$X = 0,08 \times (0.003) \times \text{drill diameter DC}$

4. Edge preparation

Workpiece material	BN			
	Drill Ø ≤ 10 mm	Drill Ø > 10 mm	Drill Ø ≤ 0.394 inch	Drill Ø > 0.394 inch
Steel	0,05	0,10	0.002	0.004
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,10	0.002	0.004

Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.

Regrinding instructions for chamfer drills

The regrinding instructions are the same as for SD203, SD203A, SD205A and SD207A except for the chamfer.

Introduction

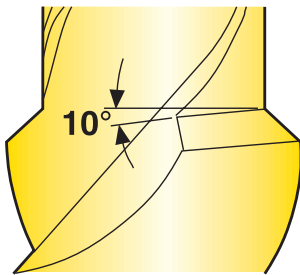
Drilling

Reaming

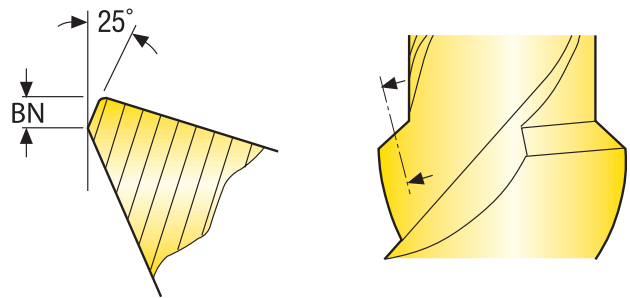
Boring

Annex

1. Chamfer relief



2. Edge preparation, chamfer



Workpiece material	BN			
	Drill $\varnothing \leq 10$ mm	Drill $\varnothing > 10$ mm	Drill $\varnothing \leq 0.394$ inch	Drill $\varnothing > 0.394$ inch
Steel	0,05	0,05	0.002	0.002
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,05	0.002	0.002

Regrinding instructions for SD212A, SD216A, SD220A, SD225A and SD230A geometry

Specifications:

Proposed specification of diamond wheels:

Point relief: Wheel shape 11V9 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

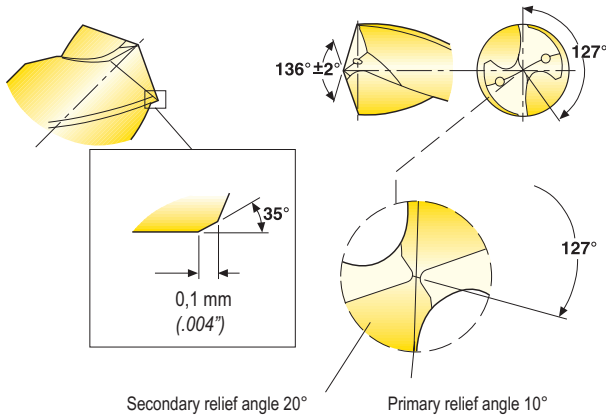
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

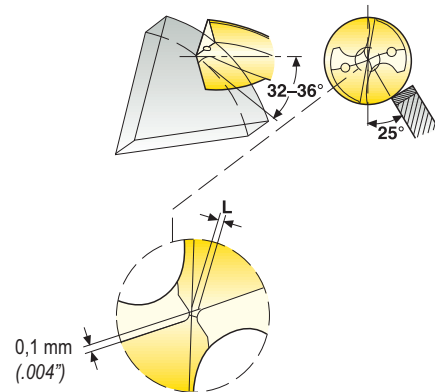
1. Conical flank



Secondary relief angle 20° Primary relief angle 10°

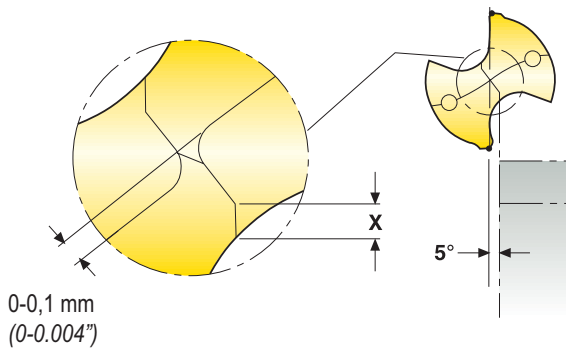
Lip height distance (axial run-out) to be within 0,02 mm (0.008")

2. Web thinning



Drill Ø DC mm	L mm	Drill Ø DC inch	L inch
2-10	0,2	0.079-0.394	0.008
10-20	0,4	0.394-0.787	0.016

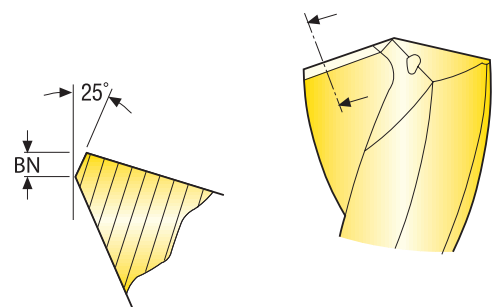
3. Grinding of flat X



0-0,1 mm (0-0.004")

$X = 0,08 \times (0.003) \times \text{drill diameter DC}$

4. Edge preparation



Workpiece material	BN			
	Drill Ø ≤ 10 mm	Drill Ø > 10 mm	Drill Ø ≤ 0.394 inch	Drill Ø > 0.394 inch
Steel	0,05	0,10	0.002	0.004
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,10	0.002	0.004

Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.

Regrinding instructions for SD243, SD243A, SD245A and SD247A

Introduction

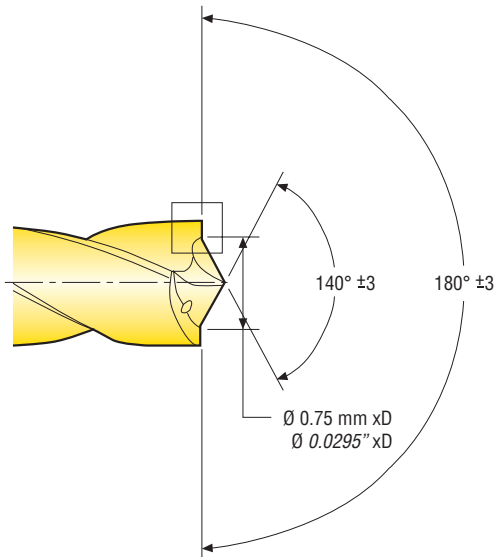
Drilling

Reaming

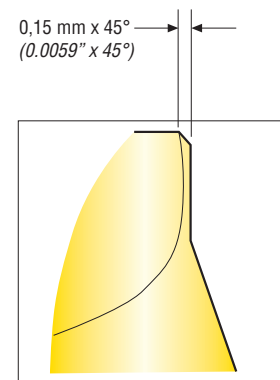
Boring

Annex

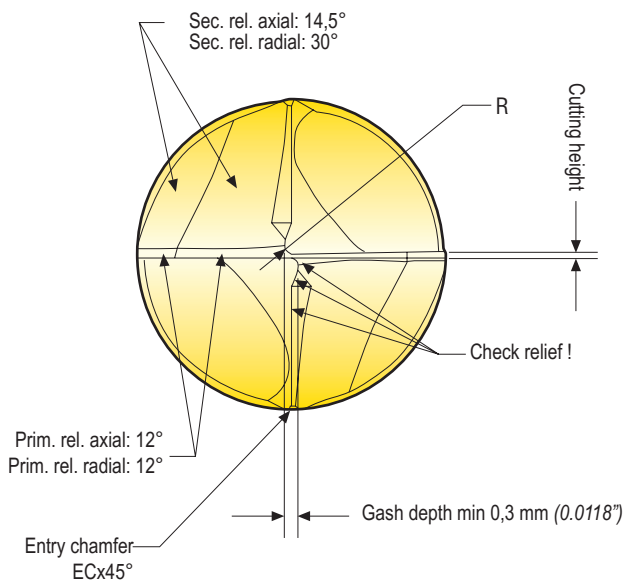
1. Point angles



2. Corner chamfer

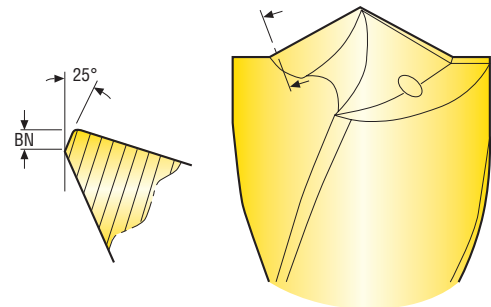


3.



Dimensions in mm (inch)	Cutting height mm (inch)	R mm (inch)	EC mm (inch)
- 10 (0.3937)	0,2 (0.0079)	0,2 (0.0079)	0,3 (0.0118)
10,01 (0.3941) –	0,3 (0.0118)	0,4 (0.0157)	0,5 (0.0197)

4. Edge preparation



Workpiece material	BN			
	Drill $\varnothing \leq 10 \text{ mm}$	Drill $\varnothing > 10 \text{ mm}$	Drill $\varnothing \leq 0.394$ inch	Drill $\varnothing > 0.394$ inch
Steel	0,05	0,10	0.002	0.004
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,10	0.002	0.004

Regrinding instructions for SD265A

Specifications:

Proposed specification of diamond wheels:

Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

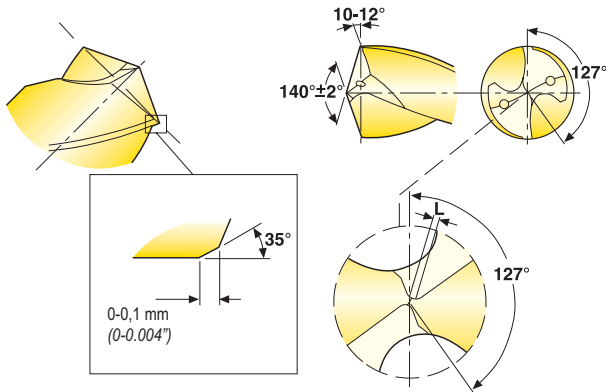
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

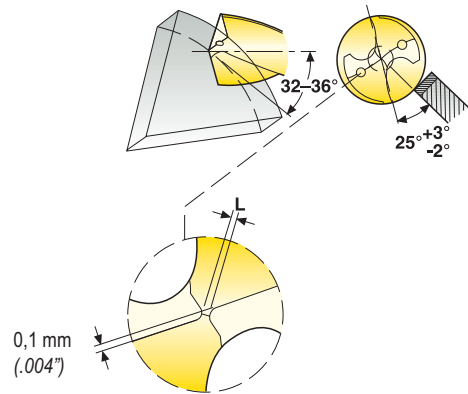
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Conical flank



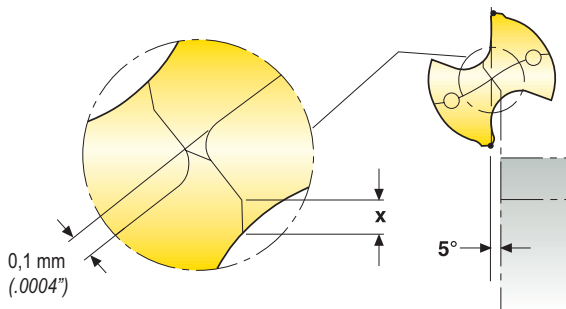
Lip height distance (axial run-out) to be within 0,02 mm (0.008")

2. Web thinning



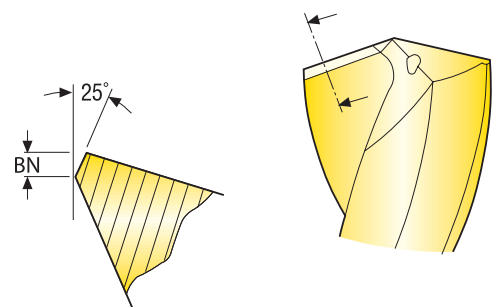
Drill Ø DC mm	L mm	Drill Ø DC inch	L inch
2-10	0,2	0.079-0.394	0.008
10-20	0,4	0.394-0.787	0.016

3. Grinding of flat X



$X = 0,08 \times (0.003) \times \text{drill diameter DC}$

4. Edge preparation



Workpiece material	BN			
	Drill Ø ≤ 10 mm	Drill Ø > 10 mm	Drill Ø ≤ 0.394 inch	Drill Ø > 0.394 inch
Steel	0,05	0,10	0.002	0.004
Stainless steel	0,05	0,05	0.002	0.002
Cast iron	0,05	0,10	0.002	0.004

Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.

Regrinding instructions for -MS geometry

Specifications:

Proposed specification of diamond wheels:

Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

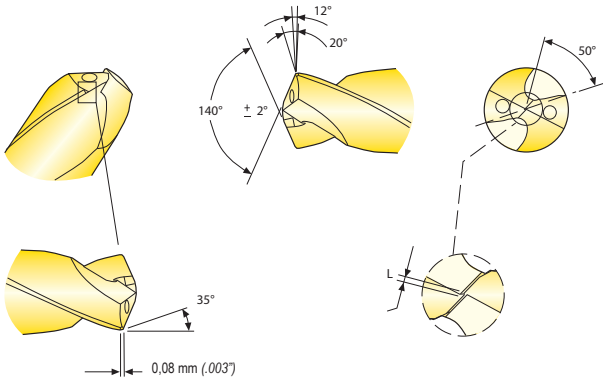
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

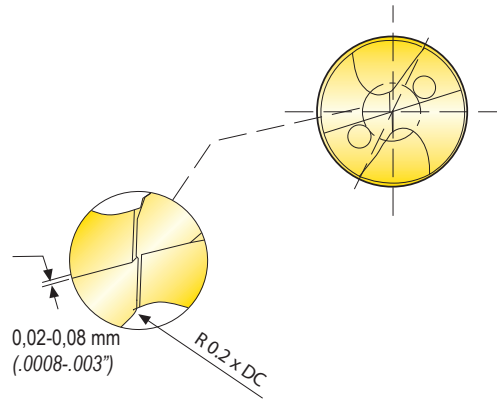
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Four facet

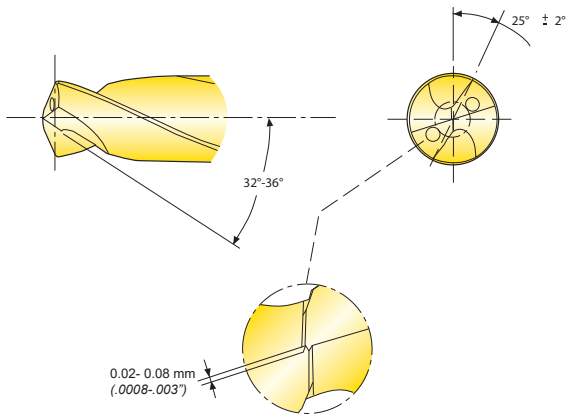


Lip height distance (axial run-out) to be within 0,02 mm (0.008")

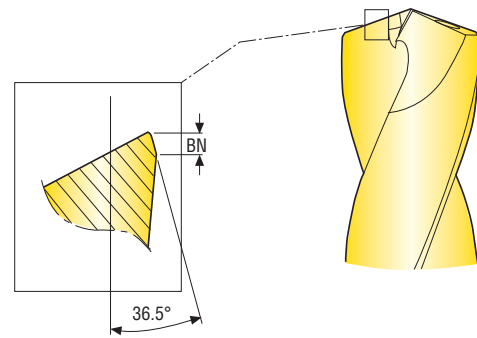
2. Grinding of radius R



3. Web thinning



4. Edge preparation



Drill Ø DC mm	BN mm	Drill Ø DC inch	BN inch
2-3	0,2	0.079-0.118	0.00787
3-6	0,025	0.118-0.236	0.00098
6-10	0,04	0.236-0.394	0.00157
10-20	0,055	0.394-0.787	0.00216
20-	0,07	0.787-	0.00275

Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.

Regrinding instructions for -M and -T geometry

Specifications:

Proposed specification of diamond wheels:

Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

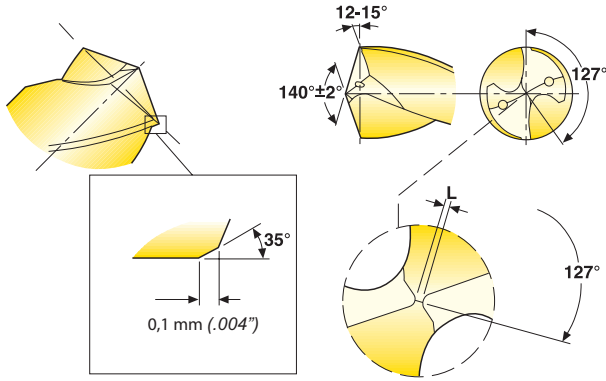
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 4).

Important:

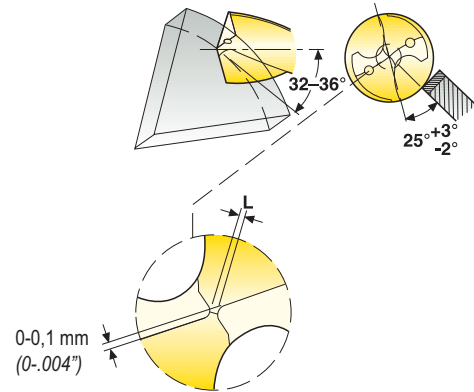
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Conical flank



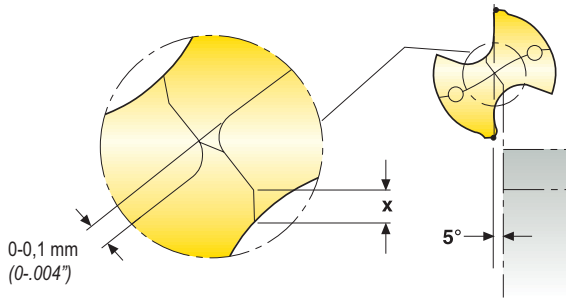
Lip height distance (axial run-out) to be within 0,01 mm (0.0004")

2. Web thinning

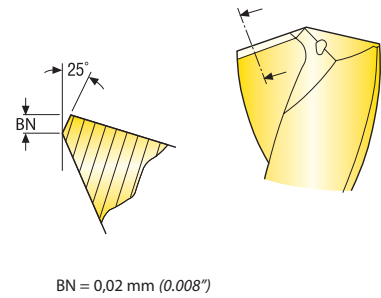


Drill Ø DC mm	L mm	Drill Ø DC inch	L inch
3-6	0,1-0,2	0.118-0.236	0.004-0.008
6-10	0,13-0,27	0.236-0.394	0.005-0.011
10-20	0,2-0,4	0.394-0.787	0.008-0.016

3. Grinding of flat X



4. Edge preparation



Max. allowed flank wear before regrinding is 0,1-0,3 mm (0.004-0.012") measured at the largest point.



SD1103 – Ø 3-20 mm / 0.118-0.787 inch

SMG	f										v _c
	Ø 3,00 Ø 0.118	Ø 4,00 Ø 0.157	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787	
P1	0,12	0,14	0,18	0,22	0,25	0,28	0,30	0,32	0,34	0,36	105
	0.0048	0.0055	0.0070	0.0085	0.010	0.011	0.012	0.013	0.013	0.014	345
P2	0,12	0,14	0,18	0,22	0,26	0,28	0,32	0,34	0,36	0,36	105
	0.0048	0.0055	0.0070	0.0085	0.010	0.011	0.013	0.013	0.014	0.014	345
P3	0,11	0,13	0,17	0,20	0,24	0,28	0,30	0,32	0,34	0,34	90
	0.0044	0.0050	0.0065	0.0080	0.0095	0.011	0.012	0.013	0.013	0.013	295
P4	0,11	0,13	0,17	0,20	0,24	0,26	0,28	0,30	0,32	0,34	80
	0.0044	0.0050	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	260
P5	0,11	0,13	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	75
	0.0044	0.0050	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	245
P6	0,11	0,12	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	85
	0.0044	0.0048	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	280
P7	0,11	0,12	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	80
	0.0044	0.0048	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	260
P8	0,11	0,13	0,17	0,20	0,24	0,28	0,30	0,32	0,34	0,34	75
	0.0044	0.0050	0.0065	0.0080	0.0095	0.011	0.012	0.013	0.013	0.013	245
P11	0,11	0,12	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	75
	0.0044	0.0048	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	245
P12	0,075	0,085	0,11	0,14	0,16	0,18	0,19	0,20	0,22	0,22	46
	0.0030	0.0034	0.0044	0.0055	0.0065	0.0070	0.0075	0.0080	0.0085	0.0085	150
M1	0,080	0,095	0,13	0,17	0,20	0,22	0,24	0,26	0,28	0,30	55
	0.0032	0.0038	0.0050	0.0065	0.0080	0.0085	0.0095	0.010	0.011	0.012	180
M2	0,070	0,085	0,12	0,15	0,18	0,20	0,22	0,24	0,25	0,26	45
	0.0028	0.0034	0.0048	0.0060	0.0070	0.0080	0.0085	0.0095	0.010	0.010	150
K1	0,12	0,14	0,18	0,22	0,26	0,28	0,30	0,34	0,34	0,36	70
	0.0048	0.0055	0.0070	0.0085	0.010	0.011	0.012	0.013	0.013	0.014	230
K2	0,11	0,13	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	60
	0.0044	0.0050	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	195
K3	0,11	0,13	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	50
	0.0044	0.0050	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	165
K4	0,11	0,13	0,16	0,20	0,24	0,26	0,28	0,30	0,32	0,34	49
	0.0044	0.0050	0.0065	0.0080	0.0095	0.010	0.011	0.012	0.013	0.013	160
K5	0,10	0,11	0,15	0,18	0,20	0,24	0,25	0,28	0,28	0,30	29
	0.0040	0.0044	0.0060	0.0070	0.0080	0.0095	0.010	0.011	0.011	0.012	95
H3	0,048	0,055	0,075	0,090	0,10	0,12	0,13	0,14	0,14	0,15	24
	0.0019	0.0022	0.0030	0.0036	0.0040	0.0048	0.0050	0.0055	0.0055	0.0060	80
H5	0,075	0,085	0,11	0,14	0,16	0,18	0,19	0,20	0,22	0,22	45
	0.0030	0.0034	0.0044	0.0055	0.0065	0.0070	0.0075	0.0080	0.0085	0.0085	150
H7	0,048	0,055	0,075	0,090	0,10	0,12	0,13	0,14	0,14	0,15	24
	0.0019	0.0022	0.0030	0.0036	0.0040	0.0048	0.0050	0.0055	0.0055	0.0060	80
H8	0,055	0,065	0,085	0,10	0,12	0,14	0,15	0,16	0,17	0,17	45
	0.0022	0.0026	0.0034	0.0040	0.0048	0.0055	0.0060	0.0065	0.0065	0.0065	150
H11	0,075	0,085	0,11	0,14	0,16	0,18	0,19	0,20	0,22	0,22	60
	0.0030	0.0034	0.0044	0.0055	0.0065	0.0070	0.0075	0.0080	0.0085	0.0085	195
H12	0,055	0,065	0,085	0,10	0,12	0,14	0,15	0,16	0,17	0,17	27
	0.0022	0.0026	0.0034	0.0040	0.0048	0.0055	0.0060	0.0065	0.0065	0.0065	90

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD203A – Ø 10-20 mm / 0.394-0.787 inch

SMG		f						v _c
		Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787	
P1	P	0,38	0,44	0,48	0,50	0,55	0,55	185
	P	0,015	0,017	0,019	0,020	0,022	0,022	610
P2	P	0,38	0,44	0,48	0,50	0,55	0,60	180
	P	0,015	0,017	0,019	0,020	0,022	0,024	590
P3	P	0,36	0,42	0,46	0,50	0,50	0,55	155
	P	0,014	0,017	0,018	0,020	0,020	0,022	510
P4	P	0,28	0,30	0,34	0,36	0,38	0,40	210
	P	0,011	0,012	0,013	0,014	0,015	0,016	690
P5	P	0,26	0,30	0,32	0,34	0,36	0,38	205
	P	0,010	0,012	0,013	0,013	0,014	0,015	670
P6	P	0,26	0,30	0,32	0,34	0,36	0,38	230
	P	0,010	0,012	0,013	0,013	0,014	0,015	750
P7	P	0,26	0,30	0,32	0,34	0,36	0,38	215
	P	0,010	0,012	0,013	0,013	0,014	0,015	710
P8	P	0,28	0,32	0,34	0,36	0,38	0,40	200
	P	0,011	0,013	0,013	0,014	0,015	0,016	660
P11	P	0,16	0,18	0,20	0,22	0,24	0,24	105
	P	0,0065	0,0070	0,0080	0,0085	0,0095	0,0095	345
P12	P	0,16	0,18	0,20	0,22	0,24	0,24	75
	P	0,0065	0,0070	0,0080	0,0085	0,0095	0,0095	245
M1	MS	0,22	0,25	0,28	0,30	0,30	0,32	110
	MS	0,0085	0,010	0,011	0,012	0,012	0,013	360
M2	MS	0,20	0,22	0,25	0,26	0,28	0,30	90
	MS	0,0080	0,0085	0,010	0,010	0,011	0,012	295
M3	MS	0,24	0,26	0,28	0,30	0,32	0,34	45
	MS	0,0095	0,010	0,011	0,012	0,013	0,013	150
M4	MS	0,14	0,16	0,17	0,19	0,20	0,20	50
	MS	0,0055	0,0065	0,0065	0,0075	0,0080	0,0080	165
M5	MS	0,14	0,16	0,17	0,19	0,20	0,20	42
	MS	0,0055	0,0065	0,0065	0,0075	0,0080	0,0080	140
K1	P	0,42	0,48	0,50	0,55	0,60	0,65	175
	P	0,017	0,019	0,020	0,022	0,024	0,026	570
K2	P	0,38	0,42	0,48	0,50	0,55	0,55	150
	P	0,015	0,017	0,019	0,020	0,022	0,022	490
K3	P	0,38	0,42	0,48	0,50	0,55	0,55	125
	P	0,015	0,017	0,019	0,020	0,022	0,022	410
K4	P	0,38	0,42	0,48	0,50	0,55	0,55	120
	P	0,015	0,017	0,019	0,020	0,022	0,022	395
K5	P	0,34	0,38	0,42	0,46	0,48	0,50	70
	P	0,013	0,015	0,017	0,018	0,019	0,020	230
N1	N	0,38	0,42	0,46	0,50	0,55	0,55	350
	N	0,015	0,017	0,018	0,020	0,022	0,022	1150
N2	MS	0,38	0,42	0,46	0,50	0,55	0,55	225
	MS	0,015	0,017	0,018	0,020	0,022	0,022	740
N3	MS	0,38	0,42	0,46	0,50	0,55	0,55	150
	MS	0,015	0,017	0,018	0,020	0,022	0,022	490
N11	MS	0,38	0,42	0,46	0,50	0,55	0,55	285
	MS	0,015	0,017	0,018	0,020	0,022	0,022	940
S1	MS	0,11	0,13	0,15	0,16	0,17	0,19	39
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	130
S2	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	90
S3	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	90
S11	MS	0,17	0,19	0,22	0,24	0,25	0,26	70
	MS	0,0065	0,0075	0,0085	0,0095	0,010	0,010	230
S12	MS	0,17	0,19	0,22	0,24	0,25	0,26	55
	MS	0,0065	0,0075	0,0085	0,0095	0,010	0,010	180
S13	MS	0,15	0,17	0,19	0,20	0,22	0,22	43
	MS	0,0060	0,0065	0,0075	0,0080	0,0085	0,0085	140
H3	P	0,14	0,16	0,18	0,19	0,20	0,20	28
	P	0,0055	0,0065	0,0070	0,0075	0,0080	0,0080	90
H5	P	0,22	0,24	0,26	0,28	0,30	0,32	55
	P	0,0085	0,0095	0,010	0,011	0,012	0,013	180
H7	P	0,14	0,16	0,18	0,19	0,20	0,20	28
	P	0,0055	0,0065	0,0070	0,0075	0,0080	0,0080	90
H8	P	0,16	0,19	0,20	0,22	0,24	0,24	55
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	180
H11	P	0,22	0,24	0,26	0,28	0,30	0,32	65
	P	0,0085	0,0095	0,010	0,011	0,012	0,013	215
H12	P	0,16	0,19	0,20	0,22	0,24	0,24	80
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	260
H21	P	0,16	0,19	0,20	0,22	0,24	0,24	55
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	180

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

SD205A – Ø 2-8 mm / 0.079-0.315 inch

SMG		f						V _c
		Ø 2,00 Ø 0.079	Ø 3,00 Ø 0.118	Ø 4,00 Ø 0.157	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	
P1	P	0,14	0,17	0,20	0,24	0,26	0,32	170
	P	0.0055	0.0065	0.0080	0.0095	0.010	0.013	560
P2	P	0,14	0,17	0,20	0,24	0,26	0,32	165
	P	0.0055	0.0065	0.0080	0.0095	0.010	0.013	540
P3	P	0,14	0,16	0,19	0,22	0,25	0,32	140
	P	0.0055	0.0065	0.0075	0.0085	0.010	0.013	460
P4	P	0,10	0,13	0,15	0,17	0,19	0,24	195
	P	0.0040	0.0050	0.0060	0.0065	0.0075	0.0095	640
P5	P	0,10	0,12	0,14	0,17	0,19	0,22	185
	P	0.0040	0.0048	0.0055	0.0065	0.0075	0.0085	610
P6	P	0,10	0,12	0,14	0,16	0,19	0,22	210
	P	0.0040	0.0048	0.0055	0.0065	0.0075	0.0085	690
P7	P	0,10	0,12	0,14	0,16	0,19	0,22	200
	P	0.0040	0.0048	0.0055	0.0065	0.0075	0.0085	660
P8	P	0,11	0,13	0,15	0,17	0,19	0,24	185
	P	0.0044	0.0050	0.0060	0.0065	0.0075	0.0095	610
P11	P	0,060	0,075	0,085	0,10	0,11	0,14	95
	P	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	310
P12	P	0,060	0,075	0,085	0,10	0,11	0,14	65
	P	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	215
M1	MS	0,075	0,095	0,11	0,13	0,15	0,19	110
	MS	0.0030	0.0038	0.0044	0.0050	0.0060	0.0075	360
M2	MS	0,065	0,085	0,10	0,12	0,14	0,17	90
	MS	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	295
M3	MS	0,095	0,11	0,13	0,15	0,17	0,20	45
	MS	0.0038	0.0044	0.0050	0.0060	0.0065	0.0080	150
M4	MS	0,048	0,060	0,070	0,085	0,095	0,12	50
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	165
M5	MS	0,048	0,060	0,070	0,085	0,095	0,12	42
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	140
K1	P	0,15	0,18	0,22	0,25	0,28	0,36	160
	P	0.0060	0.0070	0.0085	0.010	0.011	0.014	520
K2	P	0,14	0,17	0,20	0,22	0,26	0,32	135
	P	0.0055	0.0065	0.0080	0.0085	0.010	0.013	445
K3	P	0,14	0,17	0,20	0,22	0,26	0,32	115
	P	0.0055	0.0065	0.0080	0.0085	0.010	0.013	375
K4	P	0,14	0,17	0,20	0,22	0,26	0,32	110
	P	0.0055	0.0065	0.0080	0.0085	0.010	0.013	360
K5	P	0,12	0,15	0,18	0,20	0,24	0,28	65
	P	0.0048	0.0060	0.0070	0.0080	0.0095	0.011	215
N1	N	0,13	0,16	0,19	0,22	0,26	0,32	350
	N	0.0050	0.0065	0.0075	0.0085	0.010	0.013	1150
N2	MS	0,13	0,16	0,19	0,22	0,26	0,32	225
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	740
N3	MS	0,13	0,16	0,19	0,22	0,26	0,32	150
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	490
N11	MS	0,13	0,16	0,19	0,22	0,26	0,32	285
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	940
S1	MS	0,040	0,048	0,055	0,065	0,075	0,095	39
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	130
S2	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S3	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S11	MS	0,070	0,085	0,095	0,11	0,12	0,14	70
	MS	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	230
S12	MS	0,070	0,085	0,095	0,11	0,12	0,14	55
	MS	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	180
S13	MS	0,065	0,075	0,085	0,095	0,10	0,12	43
	MS	0.0026	0.0030	0.0034	0.0038	0.0040	0.0048	140
H3	P	0,055	0,070	0,080	0,090	0,10	0,12	26
	P	0.0022	0.0028	0.0032	0.0036	0.0040	0.0048	85
H5	P	0,085	0,10	0,12	0,13	0,15	0,18	48
	P	0.0034	0.0040	0.0048	0.0050	0.0060	0.0070	155
H7	P	0,055	0,070	0,080	0,090	0,10	0,12	26
	P	0.0022	0.0028	0.0032	0.0036	0.0040	0.0048	85
H8	P	0,065	0,080	0,090	0,10	0,12	0,14	48
	P	0.0026	0.0032	0.0036	0.0040	0.0048	0.0055	155
H11	P	0,085	0,10	0,12	0,13	0,15	0,18	60
	P	0.0034	0.0040	0.0048	0.0050	0.0060	0.0070	195
H12	P	0,065	0,080	0,090	0,10	0,12	0,14	70
	P	0.0026	0.0032	0.0036	0.0040	0.0048	0.0055	230
H21	P	0,065	0,080	0,090	0,10	0,12	0,14	48
	P	0.0026	0.0032	0.0036	0.0040	0.0048	0.0055	155

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD205A – Ø 10-20 mm / 0.394-0.787 inch

SMG		f						v _c
		Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787	
P1	P	0,38	0,44	0,48	0,50	0,55	0,55	170
	P	0,015	0,017	0,019	0,020	0,022	0,022	560
P2	P	0,38	0,44	0,48	0,50	0,55	0,60	165
	P	0,015	0,017	0,019	0,020	0,022	0,024	540
P3	P	0,36	0,42	0,46	0,50	0,50	0,55	140
	P	0,014	0,017	0,018	0,020	0,020	0,022	460
P4	P	0,28	0,30	0,34	0,36	0,38	0,40	195
	P	0,011	0,012	0,013	0,014	0,015	0,016	640
P5	P	0,26	0,30	0,32	0,34	0,36	0,38	185
	P	0,010	0,012	0,013	0,013	0,014	0,015	610
P6	P	0,26	0,30	0,32	0,34	0,36	0,38	210
	P	0,010	0,012	0,013	0,013	0,014	0,015	690
P7	P	0,26	0,30	0,32	0,34	0,36	0,38	200
	P	0,010	0,012	0,013	0,013	0,014	0,015	660
P8	P	0,28	0,32	0,34	0,36	0,38	0,40	185
	P	0,011	0,013	0,013	0,014	0,015	0,016	610
P11	P	0,16	0,18	0,20	0,22	0,24	0,24	95
	P	0,0065	0,0070	0,0080	0,0085	0,0095	0,0095	310
M1	MS	0,22	0,25	0,28	0,30	0,30	0,32	110
	MS	0,0085	0,010	0,011	0,012	0,012	0,013	360
M2	MS	0,20	0,22	0,25	0,26	0,28	0,30	90
	MS	0,0080	0,0085	0,010	0,010	0,011	0,012	295
M3	MS	0,24	0,26	0,28	0,30	0,32	0,34	45
	MS	0,0095	0,010	0,011	0,012	0,013	0,013	150
M4	MS	0,14	0,16	0,17	0,19	0,20	0,20	50
	MS	0,0055	0,0065	0,0065	0,0075	0,0080	0,0080	165
M5	MS	0,14	0,16	0,17	0,19	0,20	0,20	42
	MS	0,0055	0,0065	0,0065	0,0075	0,0080	0,0080	140
K1	P	0,42	0,48	0,50	0,55	0,60	0,65	160
	P	0,017	0,019	0,020	0,022	0,024	0,026	520
K2	P	0,38	0,42	0,48	0,50	0,55	0,55	135
	P	0,015	0,017	0,019	0,020	0,022	0,022	445
K3	P	0,38	0,42	0,48	0,50	0,55	0,55	115
	P	0,015	0,017	0,019	0,020	0,022	0,022	375
K4	P	0,38	0,42	0,48	0,50	0,55	0,55	110
	P	0,015	0,017	0,019	0,020	0,022	0,022	360
K5	P	0,34	0,38	0,42	0,46	0,48	0,50	65
	P	0,013	0,015	0,017	0,018	0,019	0,020	215
N1	N	0,38	0,42	0,46	0,50	0,55	0,55	350
	N	0,015	0,017	0,018	0,020	0,022	0,022	1150
N2	MS	0,38	0,42	0,46	0,50	0,55	0,55	225
	MS	0,015	0,017	0,018	0,020	0,022	0,022	740
N3	MS	0,38	0,42	0,46	0,50	0,55	0,55	150
	MS	0,015	0,017	0,018	0,020	0,022	0,022	490
N11	MS	0,38	0,42	0,46	0,50	0,55	0,55	285
	MS	0,015	0,017	0,018	0,020	0,022	0,022	940
S1	MS	0,11	0,13	0,15	0,16	0,17	0,19	39
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	130
S2	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	90
S3	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0,0044	0,0050	0,0060	0,0065	0,0065	0,0075	90
S11	MS	0,17	0,19	0,22	0,24	0,25	0,26	70
	MS	0,0065	0,0075	0,0085	0,0095	0,010	0,010	230
S12	MS	0,17	0,19	0,22	0,24	0,25	0,26	55
	MS	0,0065	0,0075	0,0085	0,0095	0,010	0,010	180
S13	MS	0,15	0,17	0,19	0,20	0,22	0,22	43
	MS	0,0060	0,0065	0,0075	0,0080	0,0085	0,0085	140
H3	P	0,14	0,16	0,18	0,19	0,20	0,20	26
	P	0,0055	0,0065	0,0070	0,0075	0,0080	0,0080	85
H5	P	0,22	0,24	0,26	0,28	0,30	0,32	48
	P	0,0085	0,0095	0,010	0,011	0,012	0,013	155
H7	P	0,14	0,16	0,18	0,19	0,20	0,20	26
	P	0,0055	0,0065	0,0070	0,0075	0,0080	0,0080	85
H8	P	0,16	0,19	0,20	0,22	0,24	0,24	48
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	155
H11	P	0,22	0,24	0,26	0,28	0,30	0,32	60
	P	0,0085	0,0095	0,010	0,011	0,012	0,013	195
H12	P	0,16	0,19	0,20	0,22	0,24	0,24	70
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	230
H21	P	0,16	0,19	0,20	0,22	0,24	0,24	48
	P	0,0065	0,0075	0,0080	0,0085	0,0095	0,0095	155

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD206 – Ø 0,7-2 mm / 0.0276-0.0787 inch

SMG		f			v _c
		Ø 0,70 Ø 0,0276	Ø 1,00 Ø 0,0394	Ø 2,00 Ø 0,0787	
P1	P	0,080	0,090	0,11	140
	P	0,0032	0,0036	0,0044	460
P2	P	0,085	0,090	0,12	140
	P	0,0034	0,0036	0,0048	460
P3	P	0,080	0,085	0,11	120
	P	0,0032	0,0034	0,0044	395
P4	P	0,080	0,085	0,11	105
	P	0,0032	0,0034	0,0044	345
P5	P	0,075	0,085	0,11	100
	P	0,0030	0,0034	0,0044	330
P6	P	0,075	0,080	0,10	110
	P	0,0030	0,0032	0,0040	360
P7	P	0,075	0,080	0,10	105
	P	0,0030	0,0032	0,0040	345
P8	P	0,080	0,085	0,11	100
	P	0,0032	0,0034	0,0044	330
P11	P	0,075	0,080	0,10	105
	P	0,0030	0,0032	0,0040	345
P12	P	0,050	0,055	0,070	60
	P	0,0020	0,0022	0,0028	195
K1	P	0,085	0,090	0,12	100
	P	0,0034	0,0036	0,0048	330
K2	P	0,075	0,085	0,11	85
	P	0,0030	0,0034	0,0044	280
K3	P	0,075	0,085	0,11	75
	P	0,0030	0,0034	0,0044	245
K4	P	0,075	0,085	0,11	70
	P	0,0030	0,0034	0,0044	230
K5	P	0,070	0,075	0,095	42
	P	0,0028	0,0030	0,0038	140

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

SD206A – Ø 1-2 mm / 0.0394-0.0787 inch

SMG		f			v _c
		Ø 1,00 Ø 0.0394	Ø 1,50 Ø 0.0591	Ø 2,00 Ø 0.0787	
P1	P	0,090	0,10	0,11	175
	P	0.0036	0.0040	0.0044	570
P2	P	0,090	0,10	0,12	170
	P	0.0036	0.0040	0.0048	560
P3	P	0,085	0,10	0,11	145
	P	0.0034	0.0040	0.0044	475
P4	P	0,085	0,095	0,11	130
	P	0.0034	0.0038	0.0044	425
P5	P	0,085	0,095	0,11	125
	P	0.0034	0.0038	0.0044	410
P6	P	0,080	0,095	0,10	140
	P	0.0032	0.0038	0.0040	460
P7	P	0,080	0,095	0,10	130
	P	0.0032	0.0038	0.0040	425
P8	P	0,085	0,10	0,11	125
	P	0.0034	0.0040	0.0044	410
P11	P	0,080	0,095	0,10	125
	P	0.0032	0.0038	0.0040	410
P12	P	0,055	0,065	0,070	75
	P	0.0022	0.0026	0.0028	245
M1	P	0,055	0,065	0,075	95
	P	0.0022	0.0026	0.0030	310
M2	P	0,050	0,060	0,070	75
	P	0.0020	0.0024	0.0028	245
M3	P	0,042	0,048	0,055	60
	P	0.0017	0.0019	0.0022	195
M4	P	0,036	0,042	0,048	43
	P	0.0014	0.0017	0.0019	140
M5	P	0,036	0,042	0,048	36
	P	0.0014	0.0017	0.0019	120
K1	P	0,095	0,11	0,12	115
	P	0.0038	0.0044	0.0048	375
K2	P	0,085	0,10	0,11	100
	P	0.0034	0.0040	0.0044	330
K3	P	0,085	0,10	0,11	85
	P	0.0034	0.0040	0.0044	280
K4	P	0,085	0,10	0,11	80
	P	0.0034	0.0040	0.0044	260
K5	P	0,075	0,090	0,10	47
	P	0.0030	0.0036	0.0040	155
N2	P	0,10	0,12	0,13	190
	P	0.0040	0.0048	0.0050	620
N3	P	0,10	0,12	0,13	125
	P	0.0040	0.0048	0.0050	410

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD207A – Ø 3-20 mm / 0.118-0.787 inch

SMG	f											v _c
	Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787		
P1	P	0,17	0,24	0,26	0,32	0,38	0,44	0,48	0,50	0,55	0,55	155
	P	0.0065	0.0095	0.010	0.013	0.015	0.017	0.019	0.020	0.022	0.022	510
P2	P	0,17	0,24	0,26	0,32	0,38	0,44	0,48	0,50	0,55	0,60	155
	P	0.0065	0.0095	0.010	0.013	0.015	0.017	0.019	0.020	0.022	0.024	510
P3	P	0,16	0,22	0,25	0,32	0,36	0,42	0,46	0,50	0,50	0,55	130
	P	0.0065	0.0085	0.010	0.013	0.014	0.017	0.018	0.020	0.020	0.022	425
P4	P	0,13	0,17	0,19	0,24	0,28	0,30	0,34	0,36	0,38	0,40	180
	P	0.0050	0.0065	0.0075	0.0095	0.011	0.012	0.013	0.014	0.015	0.016	590
P5	P	0,12	0,17	0,19	0,22	0,26	0,30	0,32	0,34	0,36	0,38	175
	P	0.0048	0.0065	0.0075	0.0085	0.010	0.012	0.013	0.013	0.014	0.015	570
P6	P	0,12	0,16	0,19	0,22	0,26	0,30	0,32	0,34	0,36	0,38	195
	P	0.0048	0.0065	0.0075	0.0085	0.010	0.012	0.013	0.013	0.014	0.015	640
P7	P	0,12	0,16	0,19	0,22	0,26	0,30	0,32	0,34	0,36	0,38	185
	P	0.0048	0.0065	0.0075	0.0085	0.010	0.012	0.013	0.013	0.014	0.015	610
P8	P	0,13	0,17	0,19	0,24	0,28	0,32	0,34	0,36	0,38	0,40	175
	P	0.0050	0.0065	0.0075	0.0095	0.011	0.013	0.013	0.014	0.015	0.016	570
P11	P	0,075	0,10	0,11	0,14	0,16	0,18	0,20	0,22	0,24	0,24	90
	P	0.0030	0.0040	0.0044	0.0055	0.0065	0.0070	0.0080	0.0085	0.0095	0.0095	295
M1	P	0,095	0,13	0,15	0,19	0,22	0,25	0,28	0,30	0,30	0,32	50
	P	0.0038	0.0050	0.0060	0.0075	0.0085	0.010	0.011	0.012	0.012	0.013	165
M2	P	0,085	0,12	0,14	0,17	0,20	0,22	0,25	0,26	0,28	0,30	41
	P	0.0034	0.0048	0.0055	0.0065	0.0080	0.0085	0.010	0.010	0.011	0.012	135
M3	P	0,065	0,095	0,11	0,14	0,16	0,18	0,20	0,22	0,22	0,24	31
	P	0.0026	0.0038	0.0044	0.0055	0.0065	0.0070	0.0080	0.0085	0.0085	0.0095	100
M4	P	0,060	0,085	0,095	0,12	0,14	0,16	0,17	0,19	0,20	0,20	24
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	80
M5	P	0,060	0,085	0,095	0,12	0,14	0,16	0,17	0,19	0,20	0,20	20
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	65
K1	P	0,18	0,25	0,28	0,36	0,42	0,48	0,50	0,55	0,60	0,65	150
	P	0.0070	0.010	0.011	0.014	0.017	0.019	0.020	0.022	0.024	0.026	490
K2	P	0,17	0,22	0,26	0,32	0,38	0,42	0,48	0,50	0,55	0,55	130
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	0.019	0.020	0.022	0.022	425
K3	P	0,17	0,22	0,26	0,32	0,38	0,42	0,48	0,50	0,55	0,55	110
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	0.019	0.020	0.022	0.022	360
K4	P	0,17	0,22	0,26	0,32	0,38	0,42	0,48	0,50	0,55	0,55	105
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	0.019	0.020	0.022	0.022	345
K5	P	0,15	0,20	0,24	0,28	0,34	0,38	0,42	0,46	0,48	0,50	60
	P	0.0060	0.0080	0.0095	0.011	0.013	0.015	0.017	0.018	0.019	0.020	195
H3	P	0,070	0,090	0,10	0,12	0,14	0,16	0,18	0,19	0,20	0,20	24
	P	0.0028	0.0036	0.0040	0.0048	0.0055	0.0065	0.0070	0.0075	0.0080	0.0080	80
H5	P	0,10	0,13	0,15	0,18	0,22	0,24	0,26	0,28	0,30	0,32	45
	P	0.0040	0.0050	0.0060	0.0070	0.0085	0.0095	0.010	0.011	0.012	0.013	150
H7	P	0,070	0,090	0,10	0,12	0,14	0,16	0,18	0,19	0,20	0,20	24
	P	0.0028	0.0036	0.0040	0.0048	0.0055	0.0065	0.0070	0.0075	0.0080	0.0080	80
H8	P	0,080	0,10	0,12	0,14	0,16	0,19	0,20	0,22	0,24	0,24	45
	P	0.0032	0.0040	0.0048	0.0055	0.0065	0.0075	0.0080	0.0085	0.0095	0.0095	150
H11	P	0,10	0,13	0,15	0,18	0,22	0,24	0,26	0,28	0,30	0,32	60
	P	0.0040	0.0050	0.0060	0.0070	0.0085	0.0095	0.010	0.011	0.012	0.013	195
H12	P	0,080	0,10	0,12	0,14	0,16	0,19	0,20	0,22	0,24	0,24	65
	P	0.0032	0.0040	0.0048	0.0055	0.0065	0.0075	0.0080	0.0085	0.0095	0.0095	215
H21	P	0,080	0,10	0,12	0,14	0,16	0,19	0,20	0,22	0,24	0,24	45
	P	0.0032	0.0040	0.0048	0.0055	0.0065	0.0075	0.0080	0.0085	0.0095	0.0095	150

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD216A – Ø 3-14 mm / 0.118-0.551 inch

SMG		f							v _c
		Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	
P1	P	0,13	0,18	0,20	0,25	0,30	0,32	0,36	125
	P	0.0050	0.0070	0.0080	0.010	0.012	0.013	0.014	410
P2	P	0,14	0,18	0,20	0,26	0,30	0,34	0,36	120
	P	0.0055	0.0070	0.0080	0.010	0.012	0.013	0.014	395
P3	P	0,13	0,17	0,20	0,24	0,28	0,32	0,34	105
	P	0.0050	0.0065	0.0080	0.0095	0.011	0.013	0.013	345
P4	P	0,13	0,17	0,19	0,24	0,28	0,30	0,34	90
	P	0.0050	0.0065	0.0075	0.0095	0.011	0.012	0.013	295
P5	P	0,12	0,17	0,19	0,24	0,28	0,30	0,34	85
	P	0.0048	0.0065	0.0075	0.0095	0.011	0.012	0.013	280
P6	P	0,12	0,17	0,19	0,24	0,26	0,30	0,32	95
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	0.013	310
P7	P	0,12	0,17	0,19	0,24	0,26	0,30	0,32	90
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	0.013	295
P8	P	0,13	0,17	0,20	0,24	0,28	0,32	0,34	85
	P	0.0050	0.0065	0.0080	0.0095	0.011	0.013	0.013	280
P11	P	0,12	0,17	0,19	0,24	0,26	0,30	0,32	90
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	0.013	295
P12	P	0,085	0,11	0,13	0,16	0,18	0,20	0,22	55
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	0.0085	180
M1	P	0,095	0,13	0,15	0,19	0,22	0,25	0,28	65
	P	0.0038	0.0050	0.0060	0.0075	0.0085	0.010	0.011	215
M2	P	0,085	0,12	0,14	0,17	0,20	0,22	0,25	55
	P	0.0034	0.0048	0.0055	0.0065	0.0080	0.0085	0.010	180
M3	P	0,070	0,095	0,11	0,14	0,16	0,18	0,20	41
	P	0.0028	0.0038	0.0044	0.0055	0.0065	0.0070	0.0080	135
M4	P	0,060	0,085	0,095	0,12	0,14	0,16	0,18	31
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	0.0070	100
M5	P	0,060	0,085	0,095	0,12	0,14	0,16	0,18	25
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	0.0070	80
K1	P	0,15	0,22	0,24	0,30	0,36	0,40	0,44	80
	P	0.0060	0.0085	0.0095	0.012	0.014	0.016	0.017	260
K2	P	0,14	0,19	0,22	0,28	0,32	0,36	0,40	70
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	0.016	230
K3	P	0,14	0,19	0,22	0,28	0,32	0,36	0,40	60
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	0.016	195
K4	P	0,14	0,19	0,22	0,28	0,32	0,36	0,40	55
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	0.016	180
K5	P	0,12	0,17	0,20	0,25	0,30	0,32	0,36	33
	P	0.0048	0.0065	0.0080	0.010	0.012	0.013	0.014	110
N2	P	0,16	0,22	0,26	0,32	0,38	0,42	0,46	135
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	0.018	445
N3	P	0,16	0,22	0,26	0,32	0,38	0,42	0,46	90
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	0.018	295
H3	P	0,055	0,075	0,085	0,10	0,12	0,14	0,15	22
	P	0.0022	0.0030	0.0034	0.0040	0.0048	0.0055	0.0060	70
H5	P	0,085	0,11	0,13	0,16	0,18	0,20	0,22	40
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	0.0085	130
H7	P	0,055	0,075	0,085	0,10	0,12	0,14	0,15	22
	P	0.0022	0.0030	0.0034	0.0040	0.0048	0.0055	0.0060	70
H8	P	0,065	0,085	0,10	0,12	0,14	0,16	0,17	40
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	0.0065	130
H11	P	0,085	0,11	0,13	0,16	0,18	0,20	0,22	50
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	0.0085	165
H12	P	0,065	0,085	0,10	0,12	0,14	0,16	0,17	31
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	0.0065	100
H21	P	0,065	0,085	0,10	0,12	0,14	0,16	0,17	40
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	0.0065	130

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD230A – Ø 3-12 mm / 0.118-0.472 inch

SMG		f						V _c
		Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	
P1	P	0,13	0,18	0,20	0,25	0,30	0,32	90
	P	0.0050	0.0070	0.0080	0.010	0.012	0.013	295
P2	P	0,14	0,18	0,20	0,26	0,30	0,34	90
	P	0.0055	0.0070	0.0080	0.010	0.012	0.013	295
P3	P	0,13	0,17	0,20	0,24	0,28	0,32	75
	P	0.0050	0.0065	0.0080	0.0095	0.011	0.013	245
P4	P	0,13	0,17	0,19	0,24	0,28	0,30	70
	P	0.0050	0.0065	0.0075	0.0095	0.011	0.012	230
P5	P	0,12	0,17	0,19	0,24	0,28	0,30	65
	P	0.0048	0.0065	0.0075	0.0095	0.011	0.012	215
P6	P	0,12	0,17	0,19	0,24	0,26	0,30	75
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	245
P7	P	0,12	0,17	0,19	0,24	0,26	0,30	70
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	230
P8	P	0,13	0,17	0,20	0,24	0,28	0,32	65
	P	0.0050	0.0065	0.0080	0.0095	0.011	0.013	215
P11	P	0,12	0,17	0,19	0,24	0,26	0,30	65
	P	0.0048	0.0065	0.0075	0.0095	0.010	0.012	215
P12	P	0,085	0,11	0,13	0,16	0,18	0,20	39
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	130
M1	P	0,095	0,13	0,15	0,19	0,22	0,25	50
	P	0.0038	0.0050	0.0060	0.0075	0.0085	0.010	165
M2	P	0,085	0,12	0,14	0,17	0,20	0,22	40
	P	0.0034	0.0048	0.0055	0.0065	0.0080	0.0085	130
M3	P	0,070	0,095	0,11	0,14	0,16	0,18	30
	P	0.0028	0.0038	0.0044	0.0055	0.0065	0.0070	100
M4	P	0,060	0,085	0,095	0,12	0,14	0,16	23
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	75
M5	P	0,060	0,085	0,095	0,12	0,14	0,16	19
	P	0.0024	0.0034	0.0038	0.0048	0.0055	0.0065	60
K1	P	0,15	0,22	0,24	0,30	0,36	0,40	60
	P	0.0060	0.0085	0.0095	0.012	0.014	0.016	195
K2	P	0,14	0,19	0,22	0,28	0,32	0,36	50
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	165
K3	P	0,14	0,19	0,22	0,28	0,32	0,36	44
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	145
K4	P	0,14	0,19	0,22	0,28	0,32	0,36	42
	P	0.0055	0.0075	0.0085	0.011	0.013	0.014	140
K5	P	0,12	0,17	0,20	0,25	0,30	0,32	25
	P	0.0048	0.0065	0.0080	0.010	0.012	0.013	80
N2	P	0,16	0,22	0,26	0,32	0,38	0,42	100
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	330
N3	P	0,16	0,22	0,26	0,32	0,38	0,42	65
	P	0.0065	0.0085	0.010	0.013	0.015	0.017	215
H3	P	0,055	0,075	0,085	0,10	0,12	0,14	16
	P	0.0022	0.0030	0.0034	0.0040	0.0048	0.0055	50
H5	P	0,085	0,11	0,13	0,16	0,18	0,20	30
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	100
H7	P	0,055	0,075	0,085	0,10	0,12	0,14	16
	P	0.0022	0.0030	0.0034	0.0040	0.0048	0.0055	50
H8	P	0,065	0,085	0,10	0,12	0,14	0,16	30
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	100
H11	P	0,085	0,11	0,13	0,16	0,18	0,20	39
	P	0.0034	0.0044	0.0050	0.0065	0.0070	0.0080	130
H12	P	0,065	0,085	0,10	0,12	0,14	0,16	24
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	80
H21	P	0,065	0,085	0,10	0,12	0,14	0,16	30
	P	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	100

SMG = Seco material group f = mm/rev (IPR) V_c = m/min (sf/min) All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

SD245A – Ø 4-16 mm / 0.157-0.630 inch

SMG		f							v _c
		Ø 4,00 Ø 0.157	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	
P1	P	0,11	0,15	0,19	0,22	0,26	0,28	0,32	185
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.011	0.013	610
P2	P	0,11	0,15	0,19	0,22	0,26	0,30	0,32	180
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.012	0.013	590
P3	P	0,11	0,14	0,18	0,22	0,25	0,28	0,30	155
	P	0.0044	0.0055	0.0070	0.0085	0.010	0.011	0.012	510
P4	P	0,11	0,14	0,18	0,22	0,24	0,26	0,30	135
	P	0.0044	0.0055	0.0070	0.0085	0.0095	0.010	0.012	445
P5	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	130
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	425
P6	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	145
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	475
P7	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	140
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	460
P8	P	0,11	0,14	0,18	0,22	0,25	0,28	0,30	130
	P	0.0044	0.0055	0.0070	0.0085	0.010	0.011	0.012	425
P11	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	135
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	445
P12	P	0,070	0,095	0,12	0,14	0,16	0,18	0,20	80
	P	0.0028	0.0038	0.0048	0.0055	0.0065	0.0070	0.0080	260
M1	P	0,11	0,15	0,19	0,22	0,26	0,30	0,32	100
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.012	0.013	330
M2	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	80
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	260
K1	P	0,11	0,15	0,19	0,22	0,26	0,30	0,32	120
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.012	0.013	395
K2	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	105
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	345
K3	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	90
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	295
K4	P	0,10	0,14	0,17	0,20	0,24	0,26	0,28	85
	P	0.0040	0.0055	0.0065	0.0080	0.0095	0.010	0.011	280
K5	P	0,095	0,12	0,16	0,19	0,22	0,24	0,26	50
	P	0.0038	0.0048	0.0065	0.0075	0.0085	0.0095	0.010	165
N2	P	0,14	0,19	0,24	0,28	0,34	0,38	0,40	200
	P	0.0055	0.0075	0.0095	0.011	0.013	0.015	0.016	660
N3	P	0,14	0,19	0,24	0,28	0,34	0,38	0,40	135
	P	0.0055	0.0075	0.0095	0.011	0.013	0.015	0.016	445
N11	P	0,14	0,19	0,24	0,28	0,34	0,38	0,40	255
	P	0.0055	0.0075	0.0095	0.011	0.013	0.015	0.016	840

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD265A – Ø 4-16 mm / 0.157-0.630 inch

SMG		f							v _c
		Ø 4,00 Ø 0.157	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	
P1	P	0,12	0,16	0,20	0,24	0,28	0,30	0,34	180
	P	0.0048	0.0065	0.0080	0.0095	0.011	0.012	0.013	590
P2	P	0,12	0,16	0,20	0,24	0,28	0,30	0,34	175
	P	0.0048	0.0065	0.0080	0.0095	0.011	0.012	0.013	570
P3	P	0,11	0,15	0,19	0,22	0,26	0,30	0,32	150
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.012	0.013	490
P4	P	0,11	0,15	0,19	0,22	0,26	0,28	0,32	135
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.011	0.013	445
P5	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	130
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	425
P6	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	145
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	475
P7	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	135
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	445
P8	P	0,11	0,15	0,19	0,22	0,26	0,30	0,32	130
	P	0.0044	0.0060	0.0075	0.0085	0.010	0.012	0.013	425
P11	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	130
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	425
P12	P	0,075	0,10	0,12	0,15	0,17	0,19	0,20	80
	P	0.0030	0.0040	0.0048	0.0060	0.0065	0.0075	0.0080	260
M1	P	0,12	0,16	0,20	0,24	0,28	0,30	0,34	100
	P	0.0048	0.0065	0.0080	0.0095	0.011	0.012	0.013	330
M2	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	80
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	260
K1	P	0,12	0,16	0,20	0,24	0,28	0,30	0,34	120
	P	0.0048	0.0065	0.0080	0.0095	0.011	0.012	0.013	395
K2	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	100
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	330
K3	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	85
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	280
K4	P	0,11	0,15	0,18	0,22	0,25	0,28	0,30	85
	P	0.0044	0.0060	0.0070	0.0085	0.010	0.011	0.012	280
K5	P	0,10	0,13	0,17	0,20	0,22	0,25	0,28	49
	P	0.0040	0.0050	0.0065	0.0080	0.0085	0.010	0.011	160
N2	P	0,15	0,20	0,26	0,30	0,36	0,40	0,42	195
	P	0.0060	0.0080	0.010	0.012	0.014	0.016	0.017	640
N3	P	0,15	0,20	0,26	0,30	0,36	0,40	0,42	130
	P	0.0060	0.0080	0.010	0.012	0.014	0.016	0.017	425
N11	P	0,15	0,20	0,26	0,30	0,36	0,40	0,42	250
	P	0.0060	0.0080	0.010	0.012	0.014	0.016	0.017	820

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD203A -MS Ø 2-8 mm / 0.079-0.315 inch

SMG		f						v _c
		Ø 2,00 Ø 0.079	Ø 3,00 Ø 0.118	Ø 4,00 Ø 0.157	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	
P11	MS	0,060	0,080	0,10	0,12	0,14	0,18	90
	MS	0.0024	0.0032	0.0040	0.0048	0.0055	0.0070	295
P12	MS	0,060	0,070	0,080	0,090	0,10	0,12	65
	MS	0.0024	0.0028	0.0032	0.0036	0.0040	0.0048	215
M1	MS	0,075	0,095	0,11	0,13	0,15	0,19	110
	MS	0.0030	0.0038	0.0044	0.0050	0.0060	0.0075	360
M2	MS	0,065	0,085	0,10	0,12	0,14	0,17	90
	MS	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	295
M3	MS	0,095	0,11	0,13	0,15	0,17	0,20	45
	MS	0.0038	0.0044	0.0050	0.0060	0.0065	0.0080	150
M4	MS	0,048	0,060	0,070	0,085	0,095	0,12	50
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	165
M5	MS	0,048	0,060	0,070	0,085	0,095	0,12	42
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	140
N1	MS	0,13	0,16	0,19	0,22	0,26	0,32	345
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	1125
N2	MS	0,13	0,16	0,19	0,22	0,26	0,32	225
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	740
N3	MS	0,13	0,16	0,19	0,22	0,26	0,32	150
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	490
N11	MS	0,13	0,16	0,19	0,22	0,26	0,32	285
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	940
S1	MS	0,040	0,048	0,055	0,065	0,075	0,095	39
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	130
S2	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S3	MS	0,040	0,048	0,055	0,065	0,075	0,095	28
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S11	MS	0,070	0,085	0,095	0,11	0,12	0,14	70
	MS	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	230
S12	MS	0,070	0,085	0,095	0,11	0,12	0,14	55
	MS	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	180
S13	MS	0,065	0,075	0,085	0,095	0,10	0,12	43
	MS	0.0026	0.0030	0.0034	0.0038	0.0040	0.0048	140
H3	MS	0,046	0,055	0,065	0,075	0,085	0,10	36
	MS	0.0018	0.0022	0.0026	0.0030	0.0034	0.0040	120
H5	MS	0,070	0,085	0,10	0,11	0,13	0,16	65
	MS	0.0028	0.0034	0.0040	0.0044	0.0050	0.0065	215
H7	MS	0,046	0,055	0,065	0,075	0,085	0,10	36
	MS	0.0018	0.0022	0.0026	0.0030	0.0034	0.0040	120
H8	MS	0,055	0,065	0,075	0,085	0,095	0,12	65
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	215
H11	MS	0,070	0,085	0,10	0,11	0,13	0,16	85
	MS	0.0028	0.0034	0.0040	0.0044	0.0050	0.0065	280
H12	MS	0,055	0,065	0,075	0,085	0,095	0,12	80
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	260
H21	MS	0,055	0,065	0,075	0,085	0,095	0,12	65
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	215

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

SD203A -MS Ø 10-20 mm / 0.394-0.787 inch

SMG		f						V _c
		Ø 10,00	Ø 12,00	Ø 14,00	Ø 16,00	Ø 18,00	Ø 20,00	
		Ø 0.394	Ø 0.472	Ø 0.551	Ø 0.630	Ø 0.709	Ø 0.787	
P11	MS	0,22	0,24	0,26	0,30	0,30	0,32	90
	MS	0.0085	0.0095	0.010	0.012	0.012	0.013	295
P12	MS	0,14	0,15	0,16	0,18	0,18	0,19	65
	MS	0.0055	0.0060	0.0065	0.0070	0.0070	0.0075	215
M1	MS	0,22	0,25	0,28	0,30	0,30	0,32	110
	MS	0.0085	0.010	0.011	0.012	0.012	0.013	360
M2	MS	0,20	0,22	0,25	0,26	0,28	0,30	90
	MS	0.0080	0.0085	0.010	0.010	0.011	0.012	295
M3	MS	0,24	0,26	0,28	0,30	0,32	0,34	45
	MS	0.0095	0.010	0.011	0.012	0.013	0.013	150
M4	MS	0,14	0,16	0,17	0,19	0,20	0,20	50
	MS	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	165
M5	MS	0,14	0,16	0,17	0,19	0,20	0,20	42
	MS	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	140
N1	MS	0,38	0,42	0,46	0,50	0,55	0,55	345
	MS	0.015	0.017	0.018	0.020	0.022	0.022	1125
N2	MS	0,38	0,42	0,46	0,50	0,55	0,55	225
	MS	0.015	0.017	0.018	0.020	0.022	0.022	740
N3	MS	0,38	0,42	0,46	0,50	0,55	0,55	150
	MS	0.015	0.017	0.018	0.020	0.022	0.022	490
N11	MS	0,38	0,42	0,46	0,50	0,55	0,55	285
	MS	0.015	0.017	0.018	0.020	0.022	0.022	940
S1	MS	0,11	0,13	0,15	0,16	0,17	0,19	39
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	130
S2	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	90
S3	MS	0,11	0,13	0,15	0,16	0,17	0,19	28
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	90
S11	MS	0,17	0,19	0,22	0,24	0,25	0,26	70
	MS	0.0065	0.0075	0.0085	0.0095	0.010	0.010	230
S12	MS	0,17	0,19	0,22	0,24	0,25	0,26	55
	MS	0.0065	0.0075	0.0085	0.0095	0.010	0.010	180
S13	MS	0,15	0,17	0,19	0,20	0,22	0,22	43
	MS	0.0060	0.0065	0.0075	0.0080	0.0085	0.0085	140
H3	MS	0,12	0,13	0,15	0,16	0,17	0,17	36
	MS	0.0048	0.0050	0.0060	0.0065	0.0065	0.0065	120
H5	MS	0,18	0,20	0,22	0,24	0,25	0,26	65
	MS	0.0070	0.0080	0.0085	0.0095	0.010	0.010	215
H7	MS	0,12	0,13	0,15	0,16	0,17	0,17	36
	MS	0.0048	0.0050	0.0060	0.0065	0.0065	0.0065	120
H8	MS	0,14	0,16	0,17	0,18	0,19	0,20	65
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	215
H11	MS	0,18	0,20	0,22	0,24	0,25	0,26	85
	MS	0.0070	0.0080	0.0085	0.0095	0.010	0.010	280
H12	MS	0,14	0,16	0,17	0,18	0,19	0,20	80
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	260
H21	MS	0,14	0,16	0,17	0,18	0,19	0,20	65
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	215

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD205A -MS Ø 2-8 mm / 0.079-0.315 inch

SMG		f						v _c
		Ø 2,00 Ø 0.079	Ø 3,00 Ø 0.118	Ø 4,00 Ø 0.157	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	
P11	MS	0,060	0,080	0,10	0,12	0,14	0,18	80
	MS	0.0024	0.0032	0.0040	0.0048	0.0055	0.0070	260
P12	MS	0,060	0,070	0,080	0,090	0,10	0,12	60
	MS	0.0024	0.0028	0.0032	0.0036	0.0040	0.0048	195
M1	MS	0,075	0,095	0,11	0,13	0,15	0,19	100
	MS	0.0030	0.0038	0.0044	0.0050	0.0060	0.0075	330
M2	MS	0,065	0,085	0,10	0,12	0,14	0,17	80
	MS	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	260
M3	MS	0,095	0,11	0,13	0,15	0,17	0,20	40
	MS	0.0038	0.0044	0.0050	0.0060	0.0065	0.0080	130
M4	MS	0,048	0,060	0,070	0,085	0,095	0,12	46
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	150
M5	MS	0,048	0,060	0,070	0,085	0,095	0,12	38
	MS	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	125
N1	MS	0,13	0,16	0,19	0,22	0,26	0,32	310
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	1025
N2	MS	0,13	0,16	0,19	0,22	0,26	0,32	200
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	660
N3	MS	0,13	0,16	0,19	0,22	0,26	0,32	135
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	445
N11	MS	0,13	0,16	0,19	0,22	0,26	0,32	255
	MS	0.0050	0.0065	0.0075	0.0085	0.010	0.013	840
S1	MS	0,040	0,048	0,055	0,065	0,075	0,095	35
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	115
S2	MS	0,040	0,048	0,055	0,065	0,075	0,095	25
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	80
S3	MS	0,040	0,048	0,055	0,065	0,075	0,095	25
	MS	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	80
S11	MS	0,020	0,030	0,040	0,050	0,060	0,080	45
	MS	0.00080	0.0012	0.0016	0.0020	0.0024	0.0032	150
S12	MS	0,020	0,030	0,040	0,050	0,060	0,080	35
	MS	0.00080	0.0012	0.0016	0.0020	0.0024	0.0032	115
S13	MS	0,017	0,026	0,035	0,044	0,050	0,070	27
	MS	0.00068	0.0010	0.0014	0.0018	0.0020	0.0028	90
H3	MS	0,046	0,055	0,065	0,075	0,085	0,10	33
	MS	0.0018	0.0022	0.0026	0.0030	0.0034	0.0040	110
H5	MS	0,070	0,085	0,10	0,11	0,13	0,16	60
	MS	0.0028	0.0034	0.0040	0.0044	0.0050	0.0065	195
H7	MS	0,046	0,055	0,065	0,075	0,085	0,10	33
	MS	0.0018	0.0022	0.0026	0.0030	0.0034	0.0040	110
H8	MS	0,055	0,065	0,075	0,085	0,095	0,12	60
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	195
H11	MS	0,070	0,085	0,10	0,11	0,13	0,16	75
	MS	0.0028	0.0034	0.0040	0.0044	0.0050	0.0065	245
H12	MS	0,055	0,065	0,075	0,085	0,095	0,12	70
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	230
H21	MS	0,055	0,065	0,075	0,085	0,095	0,12	60
	MS	0.0022	0.0026	0.0030	0.0034	0.0038	0.0048	195

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD205A -MS ∅ 10-20 mm / 0.394-0.787 inch

SMG		f						V _c
		∅ 10,00 ∅ 0.394	∅ 12,00 ∅ 0.472	∅ 14,00 ∅ 0.551	∅ 16,00 ∅ 0.630	∅ 18,00 ∅ 0.709	∅ 20,00 ∅ 0.787	
P11	MS	0,22	0,24	0,26	0,30	0,30	0,32	80
	MS	0.0085	0.0095	0.010	0.012	0.012	0.013	260
P12	MS	0,14	0,15	0,16	0,18	0,18	0,19	60
	MS	0.0055	0.0060	0.0065	0.0070	0.0070	0.0075	195
M1	MS	0,22	0,25	0,28	0,30	0,30	0,32	100
	MS	0.0085	0.010	0.011	0.012	0.012	0.013	330
M2	MS	0,20	0,22	0,25	0,26	0,28	0,30	80
	MS	0.0080	0.0085	0.010	0.010	0.011	0.012	260
M3	MS	0,24	0,26	0,28	0,30	0,32	0,34	40
	MS	0.0095	0.010	0.011	0.012	0.013	0.013	130
M4	MS	0,14	0,16	0,17	0,19	0,20	0,20	46
	MS	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	150
M5	MS	0,14	0,16	0,17	0,19	0,20	0,20	38
	MS	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	125
N1	MS	0,38	0,42	0,46	0,50	0,55	0,55	310
	MS	0.015	0.017	0.018	0.020	0.022	0.022	1025
N2	MS	0,38	0,42	0,46	0,50	0,55	0,55	200
	MS	0.015	0.017	0.018	0.020	0.022	0.022	660
N3	MS	0,38	0,42	0,46	0,50	0,55	0,55	135
	MS	0.015	0.017	0.018	0.020	0.022	0.022	445
N11	MS	0,38	0,42	0,46	0,50	0,55	0,55	255
	MS	0.015	0.017	0.018	0.020	0.022	0.022	840
S1	MS	0,11	0,13	0,15	0,16	0,17	0,19	35
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	115
S2	MS	0,11	0,13	0,15	0,16	0,17	0,19	25
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	80
S3	MS	0,11	0,13	0,15	0,16	0,17	0,19	25
	MS	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	80
S11	MS	0,10	0,12	0,14	0,16	0,18	0,20	45
	MS	0.0040	0.0048	0.0055	0.0065	0.0070	0.0080	150
S12	MS	0,10	0,12	0,14	0,16	0,18	0,20	35
	MS	0.0040	0.0048	0.0055	0.0065	0.0070	0.0080	115
S13	MS	0,085	0,11	0,12	0,14	0,16	0,17	27
	MS	0.0034	0.0044	0.0048	0.0055	0.0065	0.0070	90
H3	MS	0,12	0,13	0,15	0,16	0,17	0,17	33
	MS	0.0048	0.0050	0.0060	0.0065	0.0065	0.0065	110
H5	MS	0,18	0,20	0,22	0,24	0,25	0,26	60
	MS	0.0070	0.0080	0.0085	0.0095	0.010	0.010	195
H7	MS	0,12	0,13	0,15	0,16	0,17	0,17	33
	MS	0.0048	0.0050	0.0060	0.0065	0.0065	0.0065	110
H8	MS	0,14	0,16	0,17	0,18	0,19	0,20	60
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	195
H11	MS	0,18	0,20	0,22	0,24	0,25	0,26	75
	MS	0.0070	0.0080	0.0085	0.0095	0.010	0.010	245
H12	MS	0,14	0,16	0,17	0,18	0,19	0,20	70
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	230
H21	MS	0,14	0,16	0,17	0,18	0,19	0,20	60
	MS	0.0055	0.0065	0.0065	0.0070	0.0075	0.0080	195

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD203A – Ø 2-8 mm / 0.079-0.315 inch

SMG		f						v _c
		Ø 2,00 Ø 0.079	Ø 3,00 Ø 0.118	Ø 4,00 Ø 0.157	Ø 5,00 Ø 0.197	Ø 6,00 Ø 0.236	Ø 8,00 Ø 0.315	
P11	M	0,060	0,075	0,085	0,10	0,11	0,14	150
	M	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	490
P12	M	0,060	0,075	0,085	0,10	0,11	0,14	90
	M	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	295
M1	M	0,075	0,095	0,11	0,13	0,15	0,19	110
	M	0.0030	0.0038	0.0044	0.0050	0.0060	0.0075	360
M2	M	0,065	0,085	0,10	0,12	0,14	0,17	90
	M	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	295
M3	M	0,055	0,065	0,080	0,095	0,11	0,14	70
	M	0.0022	0.0026	0.0032	0.0038	0.0044	0.0055	230
M4	M	0,048	0,060	0,070	0,085	0,095	0,12	50
	M	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	165
M5	M	0,048	0,060	0,070	0,085	0,095	0,12	42
	M	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	140
N1	M	0,13	0,16	0,19	0,22	0,26	0,32	345
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	1125
N2	M	0,13	0,16	0,19	0,22	0,26	0,32	225
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	740
N3	M	0,13	0,16	0,19	0,22	0,26	0,32	150
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	490
N11	M	0,13	0,16	0,19	0,22	0,26	0,32	285
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	940
S1	M	0,040	0,048	0,055	0,065	0,075	0,095	39
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	130
S2	M	0,040	0,048	0,055	0,065	0,075	0,095	28
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S3	M	0,040	0,048	0,055	0,065	0,075	0,095	28
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	90
S11	M	0,070	0,085	0,095	0,11	0,12	0,14	70
	M	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	230
S12	M	0,070	0,085	0,095	0,11	0,12	0,14	55
	M	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	180
S13	M	0,065	0,075	0,085	0,095	0,10	0,12	43
	M	0.0026	0.0030	0.0034	0.0038	0.0040	0.0048	140

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD203A – Ø 10-20 mm / 0.394-0.787 inch

SMG		f						V _c
		Ø 10,00 Ø 0.394	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787	
P11	M	0,16	0,18	0,20	0,22	0,24	0,24	150
	M	0.0065	0.0070	0.0080	0.0085	0.0095	0.0095	490
P12	M	0,16	0,18	0,20	0,22	0,24	0,24	90
	M	0.0065	0.0070	0.0080	0.0085	0.0095	0.0095	295
M1	M	0,22	0,25	0,28	0,30	0,30	0,32	110
	M	0.0085	0.010	0.011	0.012	0.012	0.013	360
M2	M	0,20	0,22	0,25	0,26	0,28	0,30	90
	M	0.0080	0.0085	0.010	0.010	0.011	0.012	295
M3	M	0,16	0,18	0,20	0,22	0,22	0,24	70
	M	0.0065	0.0070	0.0080	0.0085	0.0085	0.0095	230
M4	M	0,14	0,16	0,17	0,19	0,20	0,20	50
	M	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	165
M5	M	0,14	0,16	0,17	0,19	0,20	0,20	42
	M	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	140
N1	M	0,38	0,42	0,46	0,50	0,55	0,55	345
	M	0.015	0.017	0.018	0.020	0.022	0.022	1125
N2	M	0,38	0,42	0,46	0,50	0,55	0,55	225
	M	0.015	0.017	0.018	0.020	0.022	0.022	740
N3	M	0,38	0,42	0,46	0,50	0,55	0,55	150
	M	0.015	0.017	0.018	0.020	0.022	0.022	490
N11	M	0,38	0,42	0,46	0,50	0,55	0,55	285
	M	0.015	0.017	0.018	0.020	0.022	0.022	940
S1	M	0,11	0,13	0,15	0,16	0,17	0,19	39
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	130
S2	M	0,11	0,13	0,15	0,16	0,17	0,19	28
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	90
S3	M	0,11	0,13	0,15	0,16	0,17	0,19	28
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	90
S11	M	0,17	0,19	0,22	0,24	0,25	0,26	70
	M	0.0065	0.0075	0.0085	0.0095	0.010	0.010	230
S12	M	0,17	0,19	0,22	0,24	0,25	0,26	55
	M	0.0065	0.0075	0.0085	0.0095	0.010	0.010	180
S13	M	0,15	0,17	0,19	0,20	0,22	0,22	43
	M	0.0060	0.0065	0.0075	0.0080	0.0085	0.0085	140

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD205A-M – Ø 2-8 mm / 0.079-0.315 inch

SMG		f						v _c
		Ø2,00 Ø 0.079	Ø3,00 Ø 0.118	Ø4,00 Ø 0.157	Ø5,00 Ø 0.197	Ø6,00 Ø 0.236	Ø8,00 Ø 0.315	
P11	M	0,060	0,075	0,085	0,10	0,11	0,14	135
	M	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	445
P12	M	0,060	0,075	0,085	0,10	0,11	0,14	80
	M	0.0024	0.0030	0.0034	0.0040	0.0044	0.0055	260
M1	M	0,075	0,095	0,11	0,13	0,15	0,19	100
	M	0.0030	0.0038	0.0044	0.0050	0.0060	0.0075	330
M2	M	0,065	0,085	0,10	0,12	0,14	0,17	80
	M	0.0026	0.0034	0.0040	0.0048	0.0055	0.0065	260
M3	M	0,055	0,065	0,080	0,095	0,11	0,14	60
	M	0.0022	0.0026	0.0032	0.0038	0.0044	0.0055	195
M4	M	0,048	0,060	0,070	0,085	0,095	0,12	46
	M	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	150
M5	M	0,048	0,060	0,070	0,085	0,095	0,12	38
	M	0.0019	0.0024	0.0028	0.0034	0.0038	0.0048	125
N1	M	0,13	0,16	0,19	0,22	0,26	0,32	310
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	1025
N2	M	0,13	0,16	0,19	0,22	0,26	0,32	200
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	660
N3	M	0,13	0,16	0,19	0,22	0,26	0,32	135
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	445
N11	M	0,13	0,16	0,19	0,22	0,26	0,32	255
	M	0.0050	0.0065	0.0075	0.0085	0.010	0.013	840
S1	M	0,040	0,048	0,055	0,065	0,075	0,095	35
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	115
S2	M	0,040	0,048	0,055	0,065	0,075	0,095	25
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	80
S3	M	0,040	0,048	0,055	0,065	0,075	0,095	25
	M	0.0016	0.0019	0.0022	0.0026	0.0030	0.0038	80
S11	M	0,070	0,085	0,095	0,11	0,12	0,14	65
	M	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	215
S12	M	0,070	0,085	0,095	0,11	0,12	0,14	50
	M	0.0028	0.0034	0.0038	0.0044	0.0048	0.0055	165
S13	M	0,065	0,075	0,085	0,095	0,10	0,12	39
	M	0.0026	0.0030	0.0034	0.0038	0.0040	0.0048	130

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD205A-M – Ø 10-20 mm / 0.394-0.787 inch

SMG		f						v _c
		Ø10,00 Ø 0.394	Ø12,00 Ø 0.472	Ø14,00 Ø 0.551	Ø16,00 Ø 0.630	Ø18,00 Ø 0.709	Ø20,00 Ø 0.787	
P11	M	0,16	0,18	0,20	0,22	0,24	0,24	135
	M	0.0065	0.0070	0.0080	0.0085	0.0095	0.0095	445
P12	M	0,16	0,18	0,20	0,22	0,24	0,24	80
	M	0.0065	0.0070	0.0080	0.0085	0.0095	0.0095	260
M1	M	0,22	0,25	0,28	0,30	0,30	0,32	100
	M	0.0085	0.010	0.011	0.012	0.012	0.013	330
M2	M	0,20	0,22	0,25	0,26	0,28	0,30	80
	M	0.0080	0.0085	0.010	0.010	0.011	0.012	260
M3	M	0,16	0,18	0,20	0,22	0,22	0,24	60
	M	0.0065	0.0070	0.0080	0.0085	0.0085	0.0095	195
M4	M	0,14	0,16	0,17	0,19	0,20	0,20	45
	M	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	150
M5	M	0,14	0,16	0,17	0,19	0,20	0,20	37
	M	0.0055	0.0065	0.0065	0.0075	0.0080	0.0080	120
N1	M	0,38	0,42	0,46	0,50	0,55	0,55	305
	M	0.015	0.017	0.018	0.020	0.022	0.022	1000
N2	M	0,38	0,42	0,46	0,50	0,55	0,55	195
	M	0.015	0.017	0.018	0.020	0.022	0.022	640
N3	M	0,38	0,42	0,46	0,50	0,55	0,55	130
	M	0.015	0.017	0.018	0.020	0.022	0.022	425
N11	M	0,38	0,42	0,46	0,50	0,55	0,55	250
	M	0.015	0.017	0.018	0.020	0.022	0.022	820
S1	M	0,11	0,13	0,15	0,16	0,17	0,19	34
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	110
S2	M	0,11	0,13	0,15	0,16	0,17	0,19	25
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	80
S3	M	0,11	0,13	0,15	0,16	0,17	0,19	25
	M	0.0044	0.0050	0.0060	0.0065	0.0065	0.0075	80
S11	M	0,17	0,19	0,22	0,24	0,25	0,26	65
	M	0.0065	0.0075	0.0085	0.0095	0.010	0.010	215
S12	M	0,17	0,19	0,22	0,24	0,25	0,26	49
	M	0.0065	0.0075	0.0085	0.0095	0.010	0.010	160
S13	M	0,15	0,17	0,19	0,20	0,22	0,22	38
	M	0.0060	0.0065	0.0075	0.0080	0.0085	0.0085	125

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD205A-C1 – Ø 3-13 mm / 0.118-0.512 inch

SMG		f						v _c
		Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 7,00 Ø 0.276	Ø 9,00 Ø 0.354	Ø 11,00 Ø 0.433	Ø 13,00 Ø 0.512	
TS2	C1	0,060	0,060	0,065	0,070	0,075	0,080	65
	C1	0.0024	0.0024	0.0026	0.0028	0.0030	0.0032	215
TS3	C1	0,060	0,060	0,065	0,070	0,075	0,080	50
	C1	0.0024	0.0024	0.0026	0.0028	0.0030	0.0032	165
TP2	C1	0,060	0,060	0,065	0,070	0,075	0,080	65
	C1	0.0024	0.0024	0.0026	0.0028	0.0030	0.0032	215
TP3	C1	0,060	0,060	0,065	0,070	0,075	0,080	50
	C1	0.0024	0.0024	0.0026	0.0028	0.0030	0.0032	165

SD205A-C2 – Ø 3-13 mm / 0.118-0.512 inch

SMG		f						v _c
		Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 7,00 Ø 0.276	Ø 9,00 Ø 0.354	Ø 11,00 Ø 0.433	Ø 13,00 Ø 0.512	
N1	C2	0,095	0,10	0,11	0,12	0,13	0,14	80
	C2	0.0038	0.0040	0.0044	0.0048	0.0050	0.0055	260
N2	C2	0,095	0,10	0,11	0,12	0,13	0,14	50
	C2	0.0038	0.0040	0.0044	0.0048	0.0050	0.0055	165
N3	C2	0,095	0,10	0,11	0,12	0,13	0,14	33
	C2	0.0038	0.0040	0.0044	0.0048	0.0050	0.0055	110
S11	C2	0,055	0,065	0,080	0,090	0,10	0,11	50
	C2	0.0022	0.0026	0.0032	0.0036	0.0040	0.0044	165
S12	C2	0,055	0,065	0,080	0,090	0,10	0,11	40
	C2	0.0022	0.0026	0.0032	0.0036	0.0040	0.0044	130
S13	C2	0,048	0,060	0,070	0,080	0,090	0,10	31
	C2	0.0019	0.0024	0.0028	0.0032	0.0036	0.0040	100

SD203-CX1 – Ø 3-9 mm / 0.118-0.354 inch

SMG		f				v _c
		Ø 3,00 Ø 0.118	Ø 5,00 Ø 0.197	Ø 7,00 Ø 0.276	Ø 9,00 Ø 0.354	
TS2	CX1	0,075	0,085	0,090	0,10	150
	CX1	0.0030	0.0034	0.0036	0.0040	490
TS3	CX1	0,075	0,085	0,090	0,10	120
	CX1	0.0030	0.0034	0.0036	0.0040	395
TP2	CX1	0,075	0,085	0,090	0,10	150
	CX1	0.0030	0.0034	0.0036	0.0040	490
TP3	CX1	0,075	0,085	0,090	0,10	120
	CX1	0.0030	0.0034	0.0036	0.0040	395

SD22 & SD26 – Ø 0,1-0,3 mm / 0.0039-0.0118 inch

SMG	f			v _c
	Ø 0,10 Ø 0.0039	Ø 0,20 Ø 0.0079	Ø 0,30 Ø 0.0118	
P1	0,0011	0,0017	0,0024	11
	0.000044	0.000065	0.000095	36
P2	0,0011	0,0017	0,0024	11
	0.000044	0.000065	0.000095	36
P3	0,0010	0,0016	0,0022	10
	0.000040	0.000065	0.000085	33
P4	0,0010	0,0016	0,0022	8
	0.000040	0.000065	0.000085	26
P5	0,0010	0,0016	0,0022	8
	0.000040	0.000065	0.000085	26
P6	0,0010	0,0016	0,0022	9
	0.000040	0.000065	0.000085	30
P7	0,0010	0,0016	0,0022	8
	0.000040	0.000065	0.000085	26
P8	0,0010	0,0016	0,0022	8
	0.000040	0.000065	0.000085	26
P11	0,0010	0,0016	0,0022	8
	0.000040	0.000065	0.000085	26
P12	0,00070	0,0011	0,0015	5
	0.000028	0.000044	0.000060	16
M1	0,0011	0,0017	0,0024	2
	0.000044	0.000065	0.000095	7
M2	0,0010	0,0016	0,0022	2
	0.000040	0.000065	0.000085	7
K1	0,0011	0,0017	0,0024	6
	0.000044	0.000065	0.000095	20
K2	0,0010	0,0016	0,0022	5
	0.000040	0.000065	0.000085	16
K3	0,0010	0,0016	0,0022	4
	0.000040	0.000065	0.000085	13
K4	0,0010	0,0016	0,0022	4
	0.000040	0.000065	0.000085	13
K5	0,00090	0,0014	0,0019	3
	0.000036	0.000055	0.000075	10
N2	0,0014	0,0022	0,0030	15
	0.000055	0.000085	0.00012	49
N3	0,0014	0,0022	0,0030	10
	0.000055	0.000085	0.00012	33
S11	0,00080	0,0013	0,0017	4
	0.000032	0.000050	0.000065	13
S12	0,00080	0,0013	0,0017	3
	0.000032	0.000050	0.000065	10

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD22 & SD26 – Ø 0,4-0,5 mm / 0.0157-0.0197 inch

SMG	f		v _c
	Ø 0,40 Ø 0.0157	Ø 0,50 Ø 0.0197	
P1	0,0030	0,0036	14
	0,00012	0,00014	46
P2	0,0030	0,0036	14
	0,00012	0,00014	46
P3	0,0028	0,0034	12
	0,00011	0,00013	39
P4	0,0028	0,0034	10
	0,00011	0,00013	33
P5	0,0028	0,0034	10
	0,00011	0,00013	33
P6	0,0028	0,0032	11
	0,00011	0,00013	36
P7	0,0028	0,0032	11
	0,00011	0,00013	36
P8	0,0028	0,0034	10
	0,00011	0,00013	33
P11	0,0028	0,0032	10
	0,00011	0,00013	33
P12	0,0019	0,0022	6
	0,000075	0,000085	20
M1	0,0030	0,0036	5
	0,00012	0,00014	16
M2	0,0028	0,0034	4
	0,00011	0,00013	13
K1	0,0030	0,0036	10
	0,00012	0,00014	33
K2	0,0028	0,0034	9
	0,00011	0,00013	30
K3	0,0028	0,0034	7
	0,00011	0,00013	23
K4	0,0028	0,0034	7
	0,00011	0,00013	23
K5	0,0025	0,0030	4
	0,00010	0,00012	13
N2	0,0038	0,0046	30
	0,00015	0,00018	100
N3	0,0038	0,0046	20
	0,00015	0,00018	65
S11	0,0022	0,0026	8
	0,000085	0,00010	26
S12	0,0022	0,0026	6
	0,000085	0,00010	20

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD22 & SD26 – Ø 0,6-0,8 mm / 0.0236-0.0315 inch

SMG	f			v _c
	Ø 0,60 Ø 0.0236	Ø 0,70 Ø 0.0276	Ø 0,80 Ø 0.0315	
P1	0,0042	0,0048	0,0055	28
	0.00017	0.00019	0.00022	90
P2	0,0042	0,0050	0,0055	28
	0.00017	0.00020	0.00022	90
P3	0,0040	0,0046	0,0055	24
	0.00016	0.00018	0.00022	80
P4	0,0040	0,0046	0,0050	21
	0.00016	0.00018	0.00020	70
P5	0,0038	0,0044	0,0050	20
	0.00015	0.00017	0.00020	65
P6	0,0038	0,0044	0,0050	22
	0.00015	0.00017	0.00020	70
P7	0,0038	0,0044	0,0050	21
	0.00015	0.00017	0.00020	70
P8	0,0040	0,0046	0,0055	20
	0.00016	0.00018	0.00022	65
P11	0,0038	0,0044	0,0050	21
	0.00015	0.00017	0.00020	70
P12	0,0026	0,0030	0,0034	12
	0.00010	0.00012	0.00013	39
M1	0,0042	0,0050	0,0055	9
	0.00017	0.00020	0.00022	30
M2	0,0038	0,0044	0,0050	7
	0.00015	0.00017	0.00020	23
K1	0,0042	0,0050	0,0055	15
	0.00017	0.00020	0.00022	49
K2	0,0038	0,0044	0,0050	13
	0.00015	0.00017	0.00020	43
K3	0,0038	0,0044	0,0050	11
	0.00015	0.00017	0.00020	36
K4	0,0038	0,0044	0,0050	10
	0.00015	0.00017	0.00020	33
K5	0,0036	0,0040	0,0046	6
	0.00014	0.00016	0.00018	20
N2	0,0055	0,0065	0,0070	60
	0.00022	0.00026	0.00028	195
N3	0,0055	0,0065	0,0070	40
	0.00022	0.00026	0.00028	130
S11	0,0032	0,0036	0,0040	13
	0.00013	0.00014	0.00016	43
S12	0,0032	0,0036	0,0040	10
	0.00013	0.00014	0.00016	33

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD22 & SD26 – Ø 0,9-1,1 mm / 0.0354-0.0433 inch

SMG	f			v _c
	Ø 0,90 Ø 0.0354	Ø 1,00 Ø 0.0394	Ø 1,10 Ø 0.0433	
P1	0,0060	0,0065	0,0075	50
	0.00024	0.00026	0.00030	165
P2	0,0060	0,0070	0,0075	48
	0.00024	0.00028	0.00030	155
P3	0,0060	0,0065	0,0070	42
	0.00024	0.00026	0.00028	140
P4	0,0055	0,0065	0,0070	37
	0.00022	0.00026	0.00028	120
P5	0,0055	0,0060	0,0070	35
	0.00022	0.00024	0.00028	115
P6	0,0055	0,0060	0,0065	39
	0.00022	0.00024	0.00026	130
P7	0,0055	0,0060	0,0065	37
	0.00022	0.00024	0.00026	120
P8	0,0060	0,0065	0,0070	35
	0.00024	0.00026	0.00028	115
P11	0,0055	0,0060	0,0065	36
	0.00022	0.00024	0.00026	120
P12	0,0038	0,0042	0,0046	21
	0.00015	0.00017	0.00018	70
M1	0,0060	0,0070	0,0075	12
	0.00024	0.00028	0.00030	39
M2	0,0055	0,0060	0,0070	10
	0.00022	0.00024	0.00028	33
K1	0,0060	0,0070	0,0075	20
	0.00024	0.00028	0.00030	65
K2	0,0055	0,0060	0,0070	17
	0.00022	0.00024	0.00028	55
K3	0,0055	0,0060	0,0070	15
	0.00022	0.00024	0.00028	49
K4	0,0055	0,0060	0,0070	14
	0.00022	0.00024	0.00028	46
K5	0,0050	0,0055	0,0060	8
	0.00020	0.00022	0.00024	26
N2	0,0080	0,0085	0,0095	80
	0.00032	0.00034	0.00038	260
N3	0,0080	0,0085	0,0095	55
	0.00032	0.00034	0.00038	180
S11	0,0046	0,0050	0,0055	19
	0.00018	0.00020	0.00022	60
S12	0,0046	0,0050	0,0055	15
	0.00018	0.00020	0.00022	49

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD22 & SD26 – Ø 1,2-2,0 mm / 0.0472-0.0787 inch

SMG	f					v _c
	Ø 1,20 Ø 0.0472	Ø 1,40 Ø 0.0551	Ø 1,60 Ø 0.0630	Ø 1,80 Ø 0.0709	Ø 2,00 Ø 0.0787	
P1	0,0080	0,0090	0,010	0,012	0,013	70
	0.00032	0.00036	0.00040	0.00048	0.00050	230
P2	0,0080	0,0095	0,011	0,012	0,013	70
	0.00032	0.00038	0.00044	0.00048	0.00050	230
P3	0,0075	0,0090	0,010	0,011	0,012	60
	0.00030	0.00036	0.00040	0.00044	0.00048	195
P4	0,0075	0,0085	0,010	0,011	0,012	50
	0.00030	0.00034	0.00040	0.00044	0.00048	165
P5	0,0075	0,0085	0,0095	0,011	0,012	50
	0.00030	0.00034	0.00038	0.00044	0.00048	165
P6	0,0075	0,0085	0,0095	0,011	0,012	55
	0.00030	0.00034	0.00038	0.00044	0.00048	180
P7	0,0075	0,0085	0,0095	0,011	0,012	55
	0.00030	0.00034	0.00038	0.00044	0.00048	180
P8	0,0075	0,0090	0,010	0,011	0,012	50
	0.00030	0.00036	0.00040	0.00044	0.00048	165
P11	0,0075	0,0085	0,0095	0,011	0,012	50
	0.00030	0.00034	0.00038	0.00044	0.00048	165
P12	0,0050	0,0060	0,0065	0,0075	0,0080	30
	0.00020	0.00024	0.00026	0.00030	0.00032	100
M1	0,0080	0,0095	0,011	0,012	0,013	15
	0.00032	0.00038	0.00044	0.00048	0.00050	49
M2	0,0075	0,0085	0,0095	0,011	0,012	12
	0.00030	0.00034	0.00038	0.00044	0.00048	39
K1	0,0080	0,0095	0,011	0,012	0,013	35
	0.00032	0.00038	0.00044	0.00048	0.00050	115
K2	0,0075	0,0085	0,0095	0,011	0,012	30
	0.00030	0.00034	0.00038	0.00044	0.00048	100
K3	0,0075	0,0085	0,0095	0,011	0,012	26
	0.00030	0.00034	0.00038	0.00044	0.00048	85
K4	0,0075	0,0085	0,0095	0,011	0,012	25
	0.00030	0.00034	0.00038	0.00044	0.00048	80
K5	0,0065	0,0075	0,0085	0,010	0,011	15
	0.00026	0.00030	0.00034	0.00040	0.00044	49
N2	0,010	0,012	0,014	0,015	0,017	100
	0.00040	0.00048	0.00055	0.00060	0.00065	330
N3	0,010	0,012	0,014	0,015	0,017	65
	0.00040	0.00048	0.00055	0.00060	0.00065	215
S11	0,0060	0,0070	0,0075	0,0085	0,0095	26
	0.00024	0.00028	0.00030	0.00034	0.00038	85
S12	0,0060	0,0070	0,0075	0,0085	0,0095	20
	0.00024	0.00028	0.00030	0.00034	0.00038	65

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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Seco Crownloc®

Seco Crownloc® is a range of exchangeable tip drills designed to offer high quality holes at a lower cost. Matching the quality of high precision drills, Crownloc uses replaceable crowns to eliminate the need for and cost of regrinding.

- Double coolant holes through the crown permit a high volume of coolant to reach the cutting edges.
- Crownloc® is available in a large range of optimized tip geometries for different applications and workpiece materials.

Range overview

Crownloc®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD101  Page(s) 173-174	12,00-25,99 mm (0.472-1.023")	1,5 x D	k7	IT 10	Ra 1-3 µm (Ra 39-118 µin)
SD103  Page(s) 175-176	9,52-25,99 mm (0.375-1.023")	3 x D	k7	IT 10	Ra 1-3 µm (Ra 39-118 µin)
SD105  Page(s) 177-178	10,00-25,99 mm (0.394-1.023")	5 x D	k7	IT 10	Ra 1-3 µm (Ra 39-118 µin)
SD107  Page(s) 179-180	12,00-25,99 mm (0.472-1.023")	7 x D	k7	IT 10	Ra 1-4 µm (Ra 39-157 µin)
Chamfer module  Page(s) 188	12,00-19,99 mm (0.472-0.787")	-	-	-	-

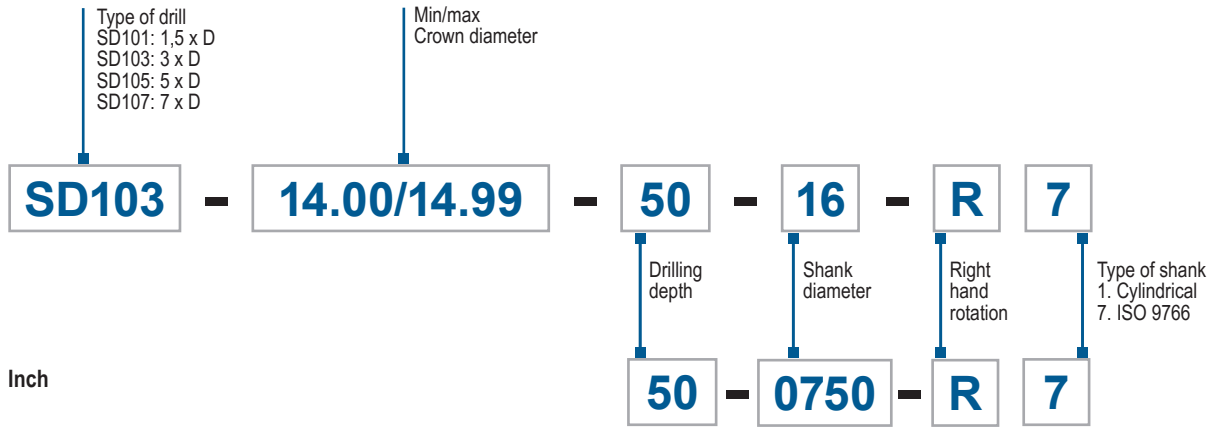
1) Variations can occur depending on the material and the cutting data used.

2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

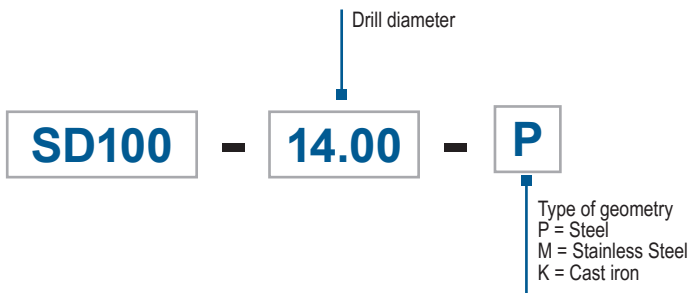
Code keys

Code key drill bodies

Metric



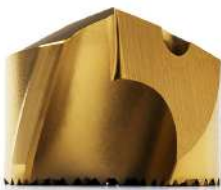
Code key crowns



Geometries

P-geometry

- Universal geometry, first choice for drilling in steel



M-geometry

- For stainless steels and high temp alloys



K-geometry

- First choice for drilling in cast iron



Spare part kits

Drill diameter mm (Inch)	SD101	SD103	SD105	SD107
10,00-11,99	-	SD103-SP-4.0	SD105-SP-4.0	-
12,00-13,99	SD101-SP-5.0	SD103-SP-5.0	SD105-SP-5.0	SD107-SP-5.0
14,00-16,99	SD101-SP-6.0	SD103-SP-6.0	SD105-SP-6.0	SD107-SP-6.0
17,00-19,99	SD101-SP-7.0	SD103-SP-7.0	SD105-SP-7.0	SD107-SP-7.0
20,00-25,99	SD101-SP-8.0	SD103-SP-8.0	SD105-SP-8.0	SD107-SP-8.0

Mounting instructions

1. Clean the locking interface of the drill body carefully to remove any chips or debris.
2. Make sure that the pull rod is fully extended.
3. Mount new crown onto the pull rod and turn it until it reaches the bottom of the thread.

Turn the crown slightly counterclockwise (backwards) until the locking interfaces fit. Push the crown towards the body into the right position while turning the clamping screw.

Make sure the interfaces fit.

Tighten the clamping screw firmly using the torque key.

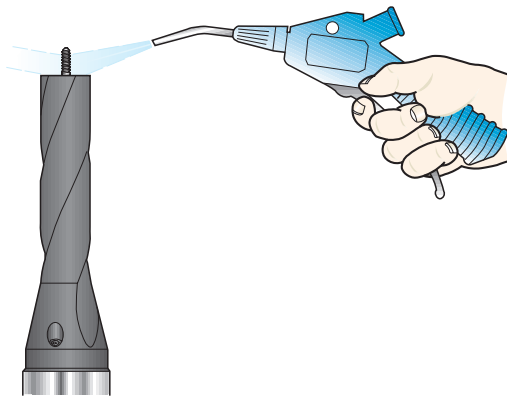
Stability

The stability of the application is important in obtaining the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity. Unstable conditions can cause tool breakages.

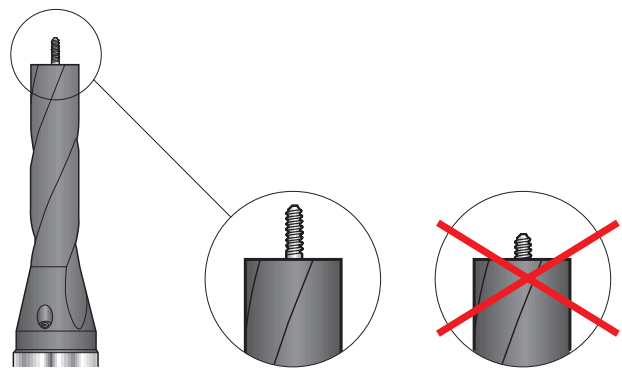
Rotating

Total Indicated Run-out (TIR) should not exceed 0,06 mm (0.002") in a rotating application. Measure the run-out when the drill is mounted in the spindle.

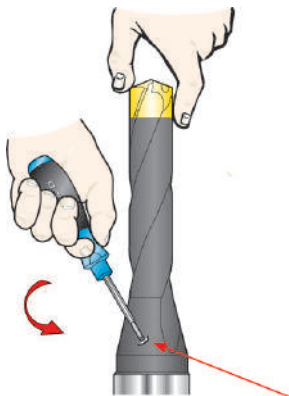
1.



2.

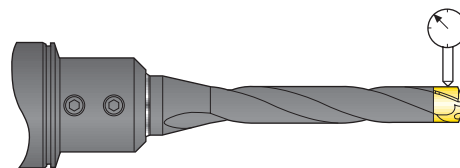


3.



Stationary

The distance between the drill point and the rotating center of the workpiece should not exceed 0.03 mm (0.001") radially in a stationary application.



Recommended tool holders

For best results, use holders type DIN 1835 B/DIN 6535 HB (Weldon). For further information see Tooling catalog.

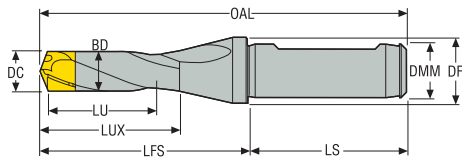


Weldon

Drill Ø DC mm	M _c Nm	Drill Ø DC inch	M _c in/lbs
10,00-13,99	0,8-1,0	0.394-0.551	7-9
14,00-16,99	1,8-2,2	0.551-0.669	16-19.5
17,00-25,99	2,5-3,0	0.669-1.023	22-26

SD101 – R7

Drilling depth ~ 1,5 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 191

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD101-12.00/12.49-20-16R7	02445790	12,0-12,49	20,0	96,0	32,0	11,5	48,0	48,0	16,0	20,0
SD101-12.50/12.99-20-16R7	02445791	12,5-12,99	20,0	96,4	32,4	12,0	48,4	48,0	16,0	20,0
SD101-13.00/13.99-20-16R7	02445792	13,0-13,99	20,0	96,8	32,8	12,5	48,8	48,0	16,0	20,0
SD101-14.00/14.99-25-16R7	02445793	14,0-14,99	25,0	102,4	38,4	13,5	54,4	48,0	16,0	20,0
SD101-15.00/15.99-25-16R7	02445794	15,0-15,99	25,0	103,3	39,3	14,5	55,3	48,0	16,0	20,0
SD101-16.00/16.99-25-16R7	02445795	16,0-16,99	25,0	104,0	40,0	15,5	56,0	48,0	16,0	20,0
SD101-17.00/17.99-30-20R7	02445796	17,0-17,99	30,0	110,7	44,7	16,5	60,7	50,0	20,0	25,0
SD101-18.00/18.99-30-20R7	02445797	18,0-18,99	30,0	111,7	45,7	17,5	61,7	50,0	20,0	25,0
SD101-19.00/19.99-30-20R7	02445798	19,0-19,99	30,0	112,5	46,5	18,5	62,5	50,0	20,0	25,0
SD101-20.00/21.99-40-25R7	02462832	20,0-21,99	40,0	129,5	53,5	19,5	73,5	56,0	25,0	31,0
SD101-22.00/23.99-40-25R7	02462833	22,0-23,99	40,0	129,5	53,5	21,5	73,5	56,0	25,0	31,0
SD101-24.00/25.99-40-25R7	02462834	24,0-25,99	40,0	129,5	53,5	23,5	73,5	56,0	25,0	31,0

Spare Parts, included in delivery

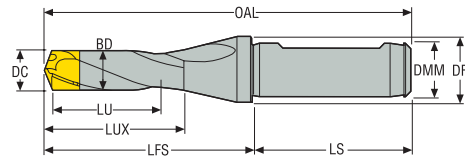
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
12,00-13,99	H1.5-2D	MP6SS3X12	SD101-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD101-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD101-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD101-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD101 – R7

Drilling depth ~ 1,5 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 191

Designation	Item number	DC	LU	BD	DF	OAL	LS	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD101-12.00/12.49-20-0625R7	02445817	0.472-0.492	0.787	0.453	0.787	3.780	1.890	1.890	1.260	0.625
SD101-12.50/12.99-20-0625R7	02445818	0.492-0.511	0.787	0.472	0.787	3.795	1.890	1.906	1.276	0.625
SD101-13.00/13.99-20-0625R7	02445819	0.512-0.551	0.787	0.492	0.787	3.811	1.890	1.921	1.291	0.625
SD101-14.00/14.99-25-0625R7	02445820	0.551-0.590	0.984	0.531	0.787	4.031	1.890	2.142	1.512	0.625
SD101-15.00/15.99-25-0625R7	02445821	0.591-0.630	0.984	0.571	0.787	4.067	1.890	2.177	1.547	0.625
SD101-16.00/16.99-25-0625R7	02445822	0.630-0.669	0.984	0.610	0.787	4.094	1.890	2.205	1.575	0.625
SD101-17.00/17.99-30-0750R7	02445823	0.669-0.708	1.181	0.650	0.984	4.358	1.969	2.390	1.760	0.750
SD101-18.00/18.99-30-0750R7	02445824	0.709-0.748	1.181	0.689	0.984	4.398	1.969	2.429	1.799	0.750
SD101-19.00/19.99-30-0750R7	02445825	0.748-0.787	1.181	0.728	0.984	4.429	1.969	2.461	1.831	0.750
SD101-20.00/21.99-40-1000R7	02466044	0.787-0.866	1.575	0.768	1.220	5.098	2.205	2.894	2.106	1.000
SD101-22.00/23.99-40-1000R7	02466045	0.866-0.944	1.575	0.846	1.220	5.098	2.205	2.894	2.106	1.000
SD101-24.00/25.99-40-1000R7	02466046	0.945-1.023	1.575	0.925	1.220	5.098	2.205	2.894	2.106	1.000

Spare Parts, included in delivery

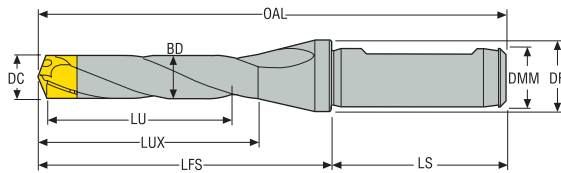
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
0.472-0.551	H1.5-2D	MP6SS3X12	SD101-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD101-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD101-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD101-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD103 – R7

Drilling depth ~ 3 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 192

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD103-10.00/10.49-30-16R7	02462815	10,0-10,49	30,0	101,0	38,0	9,5	53,0	48,0	16,0	20,0
SD103-10.50/10.99-30-16R7	02462818	10,5-10,99	30,0	101,0	38,0	10,0	53,0	48,0	16,0	20,0
SD103-11.00/11.49-30-16R7	02462819	11,0-11,49	30,0	101,0	38,0	10,5	53,0	48,0	16,0	20,0
SD103-11.50/11.99-30-16R7	02462820	11,5-11,99	30,0	101,0	38,0	11,0	53,0	48,0	16,0	20,0
SD103-12.00/12.49-40-16R7	02445799	12,0-12,49	40,0	116,0	48,0	11,5	68,0	48,0	16,0	20,0
SD103-12.50/12.99-40-16R7	02445800	12,5-12,99	40,0	116,4	48,4	12,0	68,4	48,0	16,0	20,0
SD103-13.00/13.99-40-16R7	02445801	13,0-13,99	40,0	116,8	48,8	12,5	68,8	48,0	16,0	20,0
SD103-14.00/14.99-50-16R7	02445802	14,0-14,99	50,0	127,4	59,4	13,5	79,4	48,0	16,0	20,0
SD103-15.00/15.99-50-16R7	02445803	15,0-15,99	50,0	128,3	60,3	14,5	80,3	48,0	16,0	20,0
SD103-16.00/16.99-50-16R7	02445804	16,0-16,99	50,0	129,0	61,0	15,5	81,0	48,0	16,0	20,0
SD103-17.00/17.99-60-20R7	02445805	17,0-17,99	60,0	140,7	67,7	16,5	90,7	50,0	20,0	25,0
SD103-18.00/18.99-60-20R7	02445806	18,0-18,99	60,0	141,7	68,7	17,5	91,7	50,0	20,0	25,0
SD103-19.00/19.99-60-20R7	02445807	19,0-19,99	60,0	142,5	69,5	18,5	92,7	50,0	20,0	25,0
SD103-20.00/21.99-75-25R7	02462836	20,0-21,99	75,0	164,5	88,5	19,5	108,5	56,0	25,0	31,0
SD103-22.00/23.99-75-25R7	02462838	22,0-23,99	75,0	164,5	88,5	21,5	108,5	56,0	25,0	31,0
SD103-24.00/25.99-75-25R7	02462841	24,0-25,99	75,0	164,5	88,5	23,5	108,5	56,0	25,0	31,0

Spare Parts, included in delivery

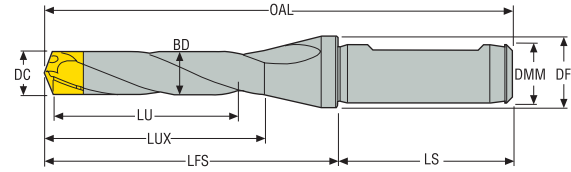
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
10,00-11,99	H1.5-2D	MP6SS3X12	SD103-SP-4.0
12,00-13,99	H1.5-2D	MP6SS3X12	SD103-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD103-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD103-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD103-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD103 – R7

Drilling depth ~ 3 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 192

Designation	Item number	DC	LU	BD	DF	OAL	LS	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD103-09.50/09.99-30-0625R7	02673828	0.374-0.393	1.181	0.354	0.787	4.252	1.969	2.323	1.835	0.625
SD103-10.00/10.49-30-0625R7	02466011	0.394-0.413	1.181	0.374	0.787	3.976	1.890	2.087	1.496	0.625
SD103-10.50/10.99-30-0625R7	02466012	0.413-0.433	1.181	0.394	0.787	3.976	1.890	2.087	1.496	0.625
SD103-11.00/11.49-30-0625R7	02466013	0.433-0.452	1.181	0.413	0.787	3.976	1.890	2.087	1.496	0.625
SD103-11.50/11.99-30-0625R7	02466014	0.453-0.472	1.181	0.433	0.787	3.976	1.890	2.087	1.496	0.625
SD103-12.00/12.49-40-0625R7	02445826	0.472-0.492	1.575	0.453	0.787	4.567	1.890	2.677	1.890	0.625
SD103-12.50/12.99-40-0625R7	02445827	0.492-0.511	1.575	0.472	0.787	4.583	1.890	2.693	1.906	0.625
SD103-13.00/13.99-40-0625R7	02445828	0.512-0.551	1.575	0.492	0.787	4.598	1.890	2.709	1.921	0.625
SD103-14.00/14.99-50-0625R7	02445829	0.551-0.590	1.969	0.531	0.787	5.016	1.890	3.126	2.339	0.625
SD103-15.00/15.99-50-0625R7	02445830	0.591-0.630	1.969	0.571	0.787	5.051	1.890	3.161	2.374	0.625
SD103-16.00/16.99-50-0625R7	02445831	0.630-0.669	1.969	0.610	0.787	5.079	1.890	3.189	2.402	0.625
SD103-17.00/17.99-60-0750R7	02445832	0.669-0.708	2.362	0.650	0.984	5.539	1.969	3.571	2.665	0.750
SD103-18.00/18.99-60-0750R7	02445833	0.709-0.748	2.362	0.689	0.984	5.579	1.969	3.610	2.705	0.750
SD103-19.00/19.99-60-0750R7	02445834	0.748-0.787	2.362	0.728	0.984	5.610	1.969	3.650	2.736	0.750
SD103-20.00/21.99-75-1000R7	02466049	0.787-0.866	2.953	0.768	1.220	6.476	2.205	4.272	3.484	1.000
SD103-22.00/23.99-75-1000R7	02466050	0.866-0.944	2.953	0.846	1.220	6.476	2.205	4.272	3.484	1.000
SD103-24.00/25.99-75-1000R7	02466051	0.945-1.023	2.953	0.925	1.220	6.476	2.205	4.272	3.484	1.000

Spare Parts, included in delivery

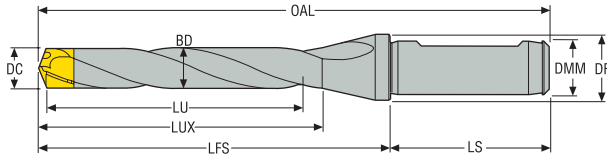
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
0.374-0.393	H1.5-2D	MP6SS3X12	–
0.394-0.472	H1.5-2D	MP6SS3X12	SD103-SP-4.0
0.472-0.551	H1.5-2D	MP6SS3X12	SD103-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD103-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD103-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD103-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD105 – R7

Drilling depth ~ 5 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 193

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD105-10.00/10.49-50-16R7	02462822	10,0-10,49	50,0	120,1	57,3	9,5	72,1	48,0	16,0	20,0
SD105-10.50/10.99-50-16R7	02462824	10,5-10,99	50,0	120,6	57,3	10,0	72,6	48,0	16,0	20,0
SD105-11.00/11.49-50-16R7	02462828	11,0-11,49	50,0	120,9	57,3	10,5	72,9	48,0	16,0	20,0
SD105-11.50/11.99-50-16R7	02462830	11,5-11,99	50,0	121,3	58,3	11,0	73,3	48,0	16,0	20,0
SD105-12.00/12.49-65-16R7	02445808	12,0-12,49	65,0	141,0	73,0	11,5	93,0	48,0	16,0	20,0
SD105-12.50/12.99-65-16R7	02445809	12,5-12,99	65,0	141,4	73,4	12,0	93,4	48,0	16,0	20,0
SD105-13.00/13.99-65-16R7	02445810	13,0-13,99	65,0	141,8	73,8	12,5	93,8	48,0	16,0	20,0
SD105-14.00/14.99-80-16R7	02445811	14,0-14,99	80,0	157,4	89,4	13,5	109,4	48,0	16,0	20,0
SD105-15.00/15.99-80-16R7	02445812	15,0-15,99	80,0	158,3	90,3	14,5	110,3	48,0	16,0	20,0
SD105-16.00/16.99-80-16R7	02445813	16,0-16,99	80,0	159,0	91,0	15,5	111,0	48,0	16,0	20,0
SD105-17.00/17.99-95-20R7	02445814	17,0-17,99	95,0	176,7	107,7	16,5	126,7	50,0	20,0	25,0
SD105-18.00/18.99-95-20R7	02445815	18,0-18,99	95,0	177,7	108,7	17,5	127,7	50,0	20,0	25,0
SD105-19.00/19.99-95-20R7	02445816	19,0-19,99	95,0	178,5	109,5	18,5	128,5	50,0	20,0	25,0
SD105-20.00/21.99-125-25R7	02462843	20,0-21,99	125,0	214,5	138,5	19,5	158,5	56,0	25,0	31,0
SD105-22.00/23.99-125-25R7	02462848	22,0-23,99	125,0	214,5	138,5	21,5	158,5	56,0	25,0	31,0
SD105-24.00/25.99-125-25R7	02462850	24,0-25,99	125,0	214,5	138,5	23,5	158,5	56,0	25,0	31,0

Spare Parts, included in delivery

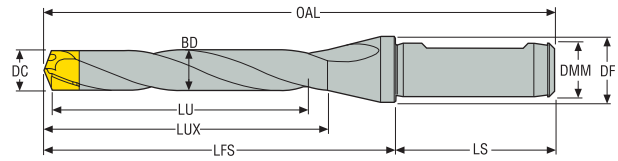
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
10,00-11,99	H1.5-2D	MP6SS3X12	SD105-SP-4.0
12,00-13,99	H1.5-2D	MP6SS3X12	SD105-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD105-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD105-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD105-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD105 – R7

Drilling depth ~ 5 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 193

Designation	Item number	DC	LU	BD	DF	OAL	LS	LFS	LUX	DMM
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
SD105-10.00/10.49-50-0625R7	02466034	0.394-0.413	1.969	0.374	0.787	4.728	1.890	2.839	2.256	0.625
SD105-10.50/10.99-50-0625R7	02466037	0.413-0.433	1.969	0.394	0.787	4.748	1.890	2.858	2.256	0.625
SD105-11.00/11.49-50-0625R7	02466041	0.433-0.452	1.969	0.413	0.787	4.760	1.890	2.870	2.256	0.625
SD105-11.50/11.99-50-0625R7	02466042	0.453-0.472	1.969	0.433	0.787	4.776	1.890	2.886	2.295	0.625
SD105-12.00/12.49-65-0625R7	02445835	0.472-0.492	2.559	0.453	0.787	5.551	1.890	3.661	2.874	0.625
SD105-12.50/12.99-65-0625R7	02445836	0.492-0.511	2.559	0.472	0.787	5.567	1.890	3.677	2.890	0.625
SD105-13.00/13.99-65-0625R7	02445837	0.512-0.551	2.559	0.492	0.787	5.583	1.890	3.693	2.906	0.625
SD105-14.00/14.99-80-0625R7	02445838	0.551-0.590	3.150	0.531	0.787	6.197	1.890	4.307	3.520	0.625
SD105-15.00/15.99-80-0625R7	02445839	0.591-0.630	3.150	0.571	0.787	6.232	1.890	4.343	3.555	0.625
SD105-16.00/16.99-80-0625R7	02445840	0.630-0.669	3.150	0.610	0.787	6.260	1.890	4.370	3.583	0.625
SD105-17.00/17.99-95-0750R7	02445841	0.669-0.708	3.740	0.650	0.984	6.957	1.969	4.988	4.240	0.750
SD105-18.00/18.99-95-0750R7	02445842	0.709-0.748	3.740	0.689	0.984	6.996	1.969	5.028	4.280	0.750
SD105-19.00/19.99-95-0750R7	02445843	0.748-0.787	3.740	0.728	0.984	7.028	1.969	5.059	4.311	0.750
SD105-20.00/21.99-125-1000R7	02466052	0.787-0.866	4.921	0.768	1.220	8.445	2.205	6.240	5.453	1.000
SD105-22.00/23.99-125-1000R7	02466053	0.866-0.944	4.921	0.846	1.220	8.445	2.205	6.240	5.453	1.000
SD105-24.00/25.99-125-1000R7	02466054	0.945-1.023	4.921	0.925	1.220	8.445	2.205	6.240	5.453	1.000

Spare Parts, included in delivery

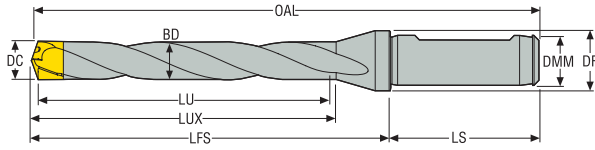
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
0.394-0.472	H1.5-2D	MP6SS3X12	SD105-SP-4.0
0.472-0.551	H1.5-2D	MP6SS3X12	SD105-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD105-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD105-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD105-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD107 – R7

Drilling depth ~ 7 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 194

Designation	Item number	DC	LU	OAL	LUX	BD	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm	mm
SD107-12.00/12.49-90-16R7	02427470	12,0-12,49	90,0	166,5	100,5	11,5	118,5	48,0	16,0	20,0
SD107-12.50/12.99-90-16R7	02427472	12,5-12,99	90,0	167,0	101,0	12,0	119,0	48,0	16,0	20,0
SD107-13.00/13.99-90-16R7	02427473	13,0-13,99	90,0	167,5	101,5	12,5	119,5	48,0	16,0	20,0
SD107-14.00/14.99-110-16R7	02427474	14,0-14,99	110,0	188,0	122,0	13,5	140,0	48,0	16,0	20,0
SD107-15.00/15.99-110-16R7	02427476	15,0-15,99	110,0	189,0	123,0	14,5	141,0	48,0	16,0	20,0
SD107-16.00/16.99-110-16R7	02427443	16,0-16,99	110,0	189,5	123,5	15,5	141,5	48,0	16,0	20,0
SD107-17.00/17.99-130-20R7	02427478	17,0-17,99	130,0	212,5	144,5	16,5	162,5	50,0	20,0	25,0
SD107-18.00/18.99-130-20R7	02427479	18,0-18,99	130,0	213,5	145,5	17,5	163,5	50,0	20,0	25,0
SD107-19.00/19.99-130-20R7	02427480	19,0-19,99	130,0	214,5	146,5	18,5	164,5	50,0	20,0	25,0
SD107-20.00/21.99-175-25R7	02530422	20,0-21,99	175,0	264,5	188,5	19,5	208,5	56,0	25,0	31,0
SD107-22.00/23.99-175-25R7	02530423	22,0-23,99	175,0	264,5	188,5	21,5	208,5	56,0	25,0	31,0
SD107-24.00/25.99-175-25R7	02517867	24,0-25,99	175,0	264,5	188,5	23,5	208,5	56,0	25,0	31,0

Spare Parts, included in delivery

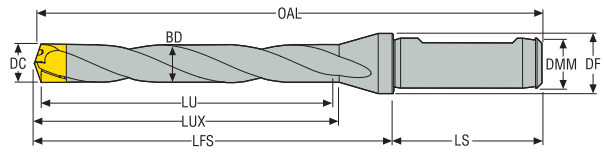
For drill dia. (mm)	Locking key	Locking screw	Spare parts set
12,00-13,99	H1.5-2D	MP6SS3X12	SD107-SP-5.0
14,00-16,99	H2.0-2D	MP6SS4X12	SD107-SP-6.0
17,00-19,99	H2.5-2D	MP6SS5X16	SD107-SP-7.0
20,00-25,99	H2.5-2D	MP6SS5X16	SD107-SP-8.0

Accessories

Replacement blade	Torque key
H00-1.5	H00-1509
H00-2.0	H00-2020
H00-2.5	H00-2530
H00-2.5	H00-2535

SD107 – R7

Drilling depth ~ 7 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 194

Designation	Item number	DC	LU	BD	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD107-12.00/12.49-90-0625R7	00040003	0.472-0.492	3.543	0.453	0.787	6.555	1.890	4.665	3.957	0.625
SD107-12.50/12.99-90-0625R7	00040004	0.492-0.511	3.543	0.472	0.787	6.575	1.890	4.685	3.976	0.625
SD107-13.00/13.99-90-0625R7	00040005	0.512-0.551	3.543	0.492	0.787	6.594	1.890	4.705	3.996	0.625
SD107-14.00/14.99-110-0625R7	00040006	0.551-0.590	4.331	0.531	0.787	7.402	1.890	5.512	4.803	0.625
SD107-15.00/15.99-110-0625R7	00040007	0.591-0.630	4.331	0.571	0.787	7.441	1.890	5.551	4.843	0.625
SD107-16.00/16.99-110-0625R7	00040008	0.630-0.669	4.331	0.610	0.787	7.461	1.890	5.571	4.862	0.625
SD107-17.00/17.99-130-0750R7	00040009	0.669-0.708	5.118	0.650	0.984	8.366	1.969	6.398	5.689	0.750
SD107-18.00/18.99-130-0750R7	00040010	0.709-0.748	5.118	0.689	0.984	8.406	1.969	6.437	5.728	0.750
SD107-19.00/19.99-130-0750R7	00040011	0.748-0.787	5.118	0.728	0.984	8.445	1.969	6.476	5.768	0.750
SD107-20.00/21.99-175-1000R7	02529095	0.787-0.866	6.890	0.768	1.220	10.413	2.205	8.209	7.421	1.000
SD107-22.00/23.99-175-1000R7	02530424	0.866-0.944	6.890	0.846	1.220	10.413	2.205	8.209	7.421	1.000
SD107-24.00/25.99-175-1000R7	02530425	0.945-1.023	6.890	0.925	1.220	10.413	2.205	8.209	7.421	1.000

Spare Parts, included in delivery

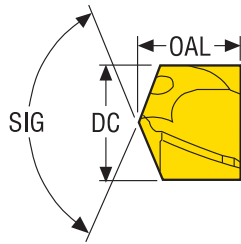
For drill dia. (inch)	Locking key	Locking screw	Spare parts set
0.472-0.551	H1.5-2D	MP6SS3X12	SD107-SP-5.0
0.551-0.669	H2.0-2D	MP6SS4X12	SD107-SP-6.0
0.669-0.787	H2.5-2D	MP6SS5X16	SD107-SP-7.0
0.787-1.023	H2.5-2D	MP6SS5X16	SD107-SP-8.0

Accessories

For drill dia. (inch)	Replacement blade	Torque key
0.472-0.551	H00-1.5	H00-1509
0.551-0.669	H00-2.0	H00-2020
0.669-0.787	H00-2.5	H00-2530
0.787-1.023	H00-2.5	H00-2535

Crowns – Geometry -P, -M and -K

Point angle 140°



Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-9.52-M	02700334	-	■	-	9,52	0.375	8,08	0.318
SD100-9.52-P	02673829	■	-	-	9,52	0.375	8,08	0.318
SD100-10.00-M	02469072	-	■	-	10,0	0.394	8,1	0.319
SD100-10.00-P	02469022	■	-	-	10,0	0.394	8,1	0.319
SD100-10.10-P	02469024	■	-	-	10,1	0.398	8,1	0.319
SD100-10.20-K	02544440	-	-	■	10,2	0.402	8,1	0.319
SD100-10.20-M	02469074	-	■	-	10,2	0.402	8,1	0.319
SD100-10.20-P	02469025	■	-	-	10,2	0.402	8,1	0.319
SD100-10.30-P	02469026	■	-	-	10,3	0.406	8,1	0.319
SD100-10.319-M	02469075	-	■	-	10,319	0.406	8,1	0.319
SD100-10.319-P	02469027	■	-	-	10,319	0.406	8,1	0.319
SD100-10.40-P	02592734	■	-	-	10,4	0.409	8,1	0.319
SD100-10.50-K	02556726	-	-	■	10,5	0.413	8,5	0.335
SD100-10.50-M	02469076	-	■	-	10,5	0.413	8,5	0.335
SD100-10.50-P	02469034	■	-	-	10,5	0.413	8,5	0.335
SD100-10.70-P	02469036	■	-	-	10,7	0.421	8,5	0.335
SD100-10.716-P	02469037	■	-	-	10,716	0.422	8,5	0.335
SD100-10.80-M	02469078	-	■	-	10,8	0.425	8,5	0.335
SD100-10.80-P	02469038	■	-	-	10,8	0.425	8,5	0.335
SD100-10.90-P	02469041	■	-	-	10,9	0.429	8,5	0.335
SD100-11.00-M	02469079	-	■	-	11,0	0.433	8,8	0.346
SD100-11.00-P	02469052	■	-	-	11,0	0.433	8,8	0.346
SD100-11.113-M	02469080	-	■	-	11,113	0.438	8,8	0.346
SD100-11.113-P	02469056	■	-	-	11,113	0.438	8,8	0.346
SD100-11.20-M	02469082	-	■	-	11,2	0.441	8,8	0.346
SD100-11.20-P	02469058	■	-	-	11,2	0.441	8,8	0.346
SD100-11.30-P	02469063	■	-	-	11,3	0.445	8,8	0.346
SD100-11.50-P	02469065	■	-	-	11,5	0.453	9,4	0.370
SD100-11.509-M	02469083	-	■	-	11,509	0.453	9,4	0.370
SD100-11.509-P	02469067	■	-	-	11,509	0.453	9,4	0.370
SD100-11.70-P	02469068	■	-	-	11,7	0.461	9,4	0.370
SD100-11.80-K	02542583	-	-	■	11,8	0.465	9,4	0.370
SD100-11.80-M	02469085	-	■	-	11,8	0.465	9,4	0.370
SD100-11.80-P	02469069	■	-	-	11,8	0.465	9,4	0.370
SD100-11.907-M	02592744	-	■	-	11,907	0.469	9,4	0.370
SD100-11.907-P	02469070	■	-	-	11,907	0.469	9,4	0.370
SD100-12.00-K	00090316	-	-	■	12,0	0.472	9,6	0.378
SD100-12.00-M	00090315	-	■	-	12,0	0.472	9,6	0.378

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Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-12.00-P	00090314	■	-	-	12,0	0.472	9,6	0.378
SD100-12.10-P	00039002	■	-	-	12,1	0.476	9,6	0.378
SD100-12.20-P	00048248	■	-	-	12,2	0.480	9,6	0.378
SD100-12.30-M	00071559	-	■	-	12,3	0.484	9,6	0.378
SD100-12.30-P	00071546	■	-	-	12,3	0.484	9,6	0.378
SD100-12.41-M	00059768	-	■	-	12,41	0.489	9,6	0.378
SD100-12.41-P	00059767	■	-	-	12,41	0.489	9,6	0.378
SD100-12.50-K	00090319	-	-	■	12,5	0.492	10,0	0.394
SD100-12.50-M	00090318	-	■	-	12,5	0.492	10,0	0.394
SD100-12.50-P	00090317	■	-	-	12,5	0.492	10,0	0.394
SD100-12.60-P	02207212	■	-	-	12,6	0.496	10,0	0.394
SD100-12.70-K	00059633	-	-	■	12,7	0.500	10,0	0.394
SD100-12.70-M	00059632	-	■	-	12,7	0.500	10,0	0.394
SD100-12.70-P	00059631	■	-	-	12,7	0.500	10,0	0.394
SD100-12.80-K	00059636	-	-	■	12,8	0.504	10,0	0.394
SD100-12.80-M	00059635	-	■	-	12,8	0.504	10,0	0.394
SD100-12.80-P	00059634	■	-	-	12,8	0.504	10,0	0.394
SD100-12.90-M	02503935	-	■	-	12,9	0.508	10,0	0.394
SD100-12.90-P	00030891	■	-	-	12,9	0.508	10,0	0.394
SD100-13.00-K	00098529	-	-	■	13,0	0.512	10,4	0.409
SD100-13.00-M	00098528	-	■	-	13,0	0.512	10,4	0.409
SD100-13.00-P	00098527	■	-	-	13,0	0.512	10,4	0.409
SD100-13.10-K	00059639	-	-	■	13,1	0.516	10,4	0.409
SD100-13.10-M	00059638	-	■	-	13,1	0.516	10,4	0.409
SD100-13.10-P	00059637	■	-	-	13,1	0.516	10,4	0.409
SD100-13.20-P	00030894	■	-	-	13,2	0.520	10,4	0.409
SD100-13.30-M	00059641	-	■	-	13,3	0.524	10,4	0.409
SD100-13.30-P	00059640	■	-	-	13,3	0.524	10,4	0.409
SD100-13.50-K	00098532	-	-	■	13,5	0.531	10,4	0.409
SD100-13.50-M	00098531	-	■	-	13,5	0.531	10,4	0.409
SD100-13.50-P	00098530	■	-	-	13,5	0.531	10,4	0.409
SD100-13.70-M	00059644	-	■	-	13,7	0.539	10,4	0.409
SD100-13.70-P	00059643	■	-	-	13,7	0.539	10,4	0.409
SD100-13.80-K	00059648	-	-	■	13,8	0.543	10,4	0.409
SD100-13.80-M	00059647	-	■	-	13,8	0.543	10,4	0.409
SD100-13.80-P	00059646	■	-	-	13,8	0.543	10,4	0.409
SD100-13.89-M	00059771	-	■	-	13,89	0.547	10,4	0.409
SD100-13.89-P	00059770	■	-	-	13,89	0.547	10,4	0.409
SD100-14.00-K	00090322	-	-	■	14,0	0.551	11,0	0.433
SD100-14.00-M	00090321	-	■	-	14,0	0.551	11,0	0.433
SD100-14.00-P	00090320	■	-	-	14,0	0.551	11,0	0.433
SD100-14.10-P	00082712	■	-	-	14,1	0.555	11,0	0.433
SD100-14.20-K	00071549	-	-	■	14,2	0.559	11,0	0.433
SD100-14.20-M	00071561	-	■	-	14,2	0.559	11,0	0.433
SD100-14.20-P	00071548	■	-	-	14,2	0.559	11,0	0.433
SD100-14.29-K	00059675	-	-	■	14,29	0.563	11,0	0.433
SD100-14.29-M	00059674	-	■	-	14,29	0.563	11,0	0.433
SD100-14.29-P	00059673	■	-	-	14,29	0.563	11,0	0.433
SD100-14.40-P	02207869	■	-	-	14,4	0.567	11,0	0.433
SD100-14.50-K	00090325	-	-	■	14,5	0.571	11,0	0.433
SD100-14.50-M	00090324	-	■	-	14,5	0.571	11,0	0.433

Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-14.50-P	00090323	■	-	-	14,5	0.571	11,0	0.433
SD100-14.68-K	00059775	-	-	■	14,68	0.578	11,0	0.433
SD100-14.68-M	00059774	-	■	-	14,68	0.578	11,0	0.433
SD100-14.68-P	00059773	■	-	-	14,68	0.578	11,0	0.433
SD100-14.70-M	00059650	-	■	-	14,7	0.579	11,0	0.433
SD100-14.70-P	00059649	■	-	-	14,7	0.579	11,0	0.433
SD100-14.80-M	00059653	-	■	-	14,8	0.583	11,0	0.433
SD100-14.80-P	00059652	■	-	-	14,8	0.583	11,0	0.433
SD100-14.90-M	02592745	-	■	-	14,9	0.587	11,0	0.433
SD100-14.90-P	00030895	■	-	-	14,9	0.587	11,0	0.433
SD100-15.00-K	00090328	-	-	■	15,0	0.591	11,9	0.469
SD100-15.00-M	00090327	-	■	-	15,0	0.591	11,9	0.469
SD100-15.00-P	00090326	■	-	-	15,0	0.591	11,9	0.469
SD100-15.08-M	00059777	-	■	-	15,08	0.594	11,9	0.469
SD100-15.08-P	00059776	■	-	-	15,08	0.594	11,9	0.469
SD100-15.10-P	00079342	■	-	-	15,1	0.594	11,9	0.469
SD100-15.20-P	00030896	■	-	-	15,2	0.598	11,9	0.469
SD100-15.25-K	00071551	-	-	■	15,25	0.600	11,9	0.469
SD100-15.25-M	00071562	-	■	-	15,25	0.600	11,9	0.469
SD100-15.25-P	00071550	■	-	-	15,25	0.600	11,9	0.469
SD100-15.48-K	00022926	-	-	■	15,48	0.609	11,9	0.469
SD100-15.48-M	00059780	-	■	-	15,48	0.609	11,9	0.469
SD100-15.48-P	00059779	■	-	-	15,48	0.609	11,9	0.469
SD100-15.50-K	00098535	-	-	■	15,5	0.610	11,9	0.469
SD100-15.50-M	00098534	-	■	-	15,5	0.610	11,9	0.469
SD100-15.50-P	00098533	■	-	-	15,5	0.610	11,9	0.469
SD100-15.70-M	00059656	-	■	-	15,7	0.618	11,9	0.469
SD100-15.70-P	00059655	■	-	-	15,7	0.618	11,9	0.469
SD100-15.80-K	00059660	-	-	■	15,8	0.622	11,9	0.469
SD100-15.80-M	00059659	-	■	-	15,8	0.622	11,9	0.469
SD100-15.80-P	00059658	■	-	-	15,8	0.622	11,9	0.469
SD100-15.88-K	00059678	-	-	■	15,88	0.625	11,9	0.469
SD100-15.88-M	00059677	-	■	-	15,88	0.625	11,9	0.469
SD100-15.88-P	00059676	■	-	-	15,88	0.625	11,9	0.469
SD100-16.00-K	00098538	-	-	■	16,0	0.630	12,6	0.496
SD100-16.00-M	00098537	-	■	-	16,0	0.630	12,6	0.496
SD100-16.00-P	00098536	■	-	-	16,0	0.630	12,6	0.496
SD100-16.10-P	00077964	■	-	-	16,1	0.634	12,6	0.496
SD100-16.20-P	00047365	■	-	-	16,2	0.638	12,6	0.496
SD100-16.25-P	00034081	■	-	-	16,25	0.640	12,6	0.496
SD100-16.27-K	00022929	-	-	■	16,27	0.641	12,6	0.496
SD100-16.27-M	00022928	-	■	-	16,27	0.641	12,6	0.496
SD100-16.27-P	00022927	■	-	-	16,27	0.641	12,6	0.496
SD100-16.40-P	02301114	■	-	-	16,4	0.646	12,6	0.496
SD100-16.50-K	00098541	-	-	■	16,5	0.650	12,6	0.496
SD100-16.50-M	00098540	-	■	-	16,5	0.650	12,6	0.496
SD100-16.50-P	00098539	■	-	-	16,5	0.650	12,6	0.496
SD100-16.67-K	00059681	-	-	■	16,67	0.656	12,6	0.496
SD100-16.67-M	00059680	-	■	-	16,67	0.656	12,6	0.496
SD100-16.67-P	00059679	■	-	-	16,67	0.656	12,6	0.496
SD100-16.70-K	00059663	-	-	■	16,7	0.657	12,6	0.496

Introduction

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Introduction

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Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-16.70-M	00059662	-	■	-	16,7	0.657	12,6	0.496
SD100-16.70-P	00059661	■	-	-	16,7	0.657	12,6	0.496
SD100-16.80-K	00059666	-	-	■	16,8	0.661	12,6	0.496
SD100-16.80-M	00059665	-	■	-	16,8	0.661	12,6	0.496
SD100-16.80-P	00059664	■	-	-	16,8	0.661	12,6	0.496
SD100-16.90-M	02593463	-	■	-	16,9	0.665	12,6	0.496
SD100-16.90-P	00030898	■	-	-	16,9	0.665	12,6	0.496
SD100-17.00-K	00090331	-	-	■	17,0	0.669	13,3	0.524
SD100-17.00-M	00090330	-	■	-	17,0	0.669	13,3	0.524
SD100-17.00-P	00090329	■	-	-	17,0	0.669	13,3	0.524
SD100-17.07-K	00022933	-	-	■	17,07	0.672	13,3	0.524
SD100-17.07-M	00022932	-	■	-	17,07	0.672	13,3	0.524
SD100-17.07-P	00022931	■	-	-	17,07	0.672	13,3	0.524
SD100-17.10-P	00034083	■	-	-	17,1	0.673	13,3	0.524
SD100-17.20-K	02515762	-	-	■	17,2	0.677	13,3	0.524
SD100-17.20-P	00047714	■	-	-	17,2	0.677	13,3	0.524
SD100-17.30-K	02203711	-	-	■	17,3	0.681	13,3	0.524
SD100-17.46-M	00059683	-	■	-	17,46	0.687	13,3	0.524
SD100-17.46-P	00059682	■	-	-	17,46	0.687	13,3	0.524
SD100-17.50-K	00090334	-	-	■	17,5	0.689	13,3	0.524
SD100-17.50-M	00090333	-	■	-	17,5	0.689	13,3	0.524
SD100-17.50-P	00090332	■	-	-	17,5	0.689	13,3	0.524
SD100-17.70-K	00059669	-	-	■	17,7	0.697	13,3	0.524
SD100-17.70-M	00059668	-	■	-	17,7	0.697	13,3	0.524
SD100-17.70-P	00059667	■	-	-	17,7	0.697	13,3	0.524
SD100-17.80-K	00059672	-	-	■	17,8	0.701	13,3	0.524
SD100-17.80-M	00059671	-	■	-	17,8	0.701	13,3	0.524
SD100-17.80-P	00059670	■	-	-	17,8	0.701	13,3	0.524
SD100-17.86-K	00022936	-	-	■	17,86	0.703	13,3	0.524
SD100-17.86-M	00022935	-	■	-	17,86	0.703	13,3	0.524
SD100-17.86-P	00022934	■	-	-	17,86	0.703	13,3	0.524
SD100-17.90-M	02442098	-	■	-	17,9	0.705	13,3	0.524
SD100-17.90-P	00047693	■	-	-	17,9	0.705	13,3	0.524
SD100-18.00-K	00090337	-	-	■	18,0	0.709	14,4	0.567
SD100-18.00-M	00090336	-	■	-	18,0	0.709	14,4	0.567
SD100-18.00-P	00090335	■	-	-	18,0	0.709	14,4	0.567
SD100-18.10-P	00030900	■	-	-	18,1	0.713	14,4	0.567
SD100-18.20-P	00038469	■	-	-	18,2	0.717	14,4	0.567
SD100-18.26-K	00035196	-	-	■	18,26	0.719	14,4	0.567
SD100-18.26-M	00022938	-	■	-	18,26	0.719	14,4	0.567
SD100-18.26-P	00022937	■	-	-	18,26	0.719	14,4	0.567
SD100-18.50-K	00059687	-	-	■	18,5	0.728	14,4	0.567
SD100-18.50-M	00059686	-	■	-	18,5	0.728	14,4	0.567
SD100-18.50-P	00059685	■	-	-	18,5	0.728	14,4	0.567
SD100-18.65-M	00035198	-	■	-	18,65	0.734	14,4	0.567
SD100-18.65-P	00035197	■	-	-	18,65	0.734	14,4	0.567
SD100-18.70-M	00059689	-	■	-	18,7	0.736	14,4	0.567
SD100-18.70-P	00059688	■	-	-	18,7	0.736	14,4	0.567
SD100-18.80-K	00059693	-	-	■	18,8	0.740	14,4	0.567
SD100-18.80-M	00059692	-	■	-	18,8	0.740	14,4	0.567
SD100-18.80-P	00059691	■	-	-	18,0	0.709	14,4	0.567

Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-18.90-M	02592746	-	■	-	18,9	0.744	14,4	0.567
SD100-18.90-P	00030901	■	-	-	18,9	0.744	14,4	0.567
SD100-19.00-K	00059696	-	-	■	19,0	0.748	15,2	0.598
SD100-19.00-M	00059695	-	■	-	19,0	0.748	15,2	0.598
SD100-19.00-P	00059694	■	-	-	19,0	0.748	15,2	0.598
SD100-19.05-K	00059699	-	-	■	19,05	0.750	15,2	0.598
SD100-19.05-M	00059698	-	■	-	19,05	0.750	15,2	0.598
SD100-19.05-P	00059697	■	-	-	19,05	0.750	15,2	0.598
SD100-19.10-P	00030902	■	-	-	19,1	0.752	15,2	0.598
SD100-19.20-K	00071566	-	-	■	19,2	0.756	15,2	0.598
SD100-19.20-M	00071564	-	■	-	19,2	0.756	15,2	0.598
SD100-19.20-P	00071563	■	-	-	19,2	0.756	15,2	0.598
SD100-19.25-P	00048318	■	-	-	19,25	0.758	15,2	0.598
SD100-19.45-K	00035202	-	-	■	19,45	0.766	15,2	0.598
SD100-19.45-M	00035201	-	■	-	19,45	0.766	15,2	0.598
SD100-19.45-P	00035200	■	-	-	19,45	0.766	15,2	0.598
SD100-19.50-K	00059702	-	-	■	19,5	0.768	15,2	0.598
SD100-19.50-M	00059701	-	■	-	19,5	0.768	15,2	0.598
SD100-19.50-P	00059700	■	-	-	19,5	0.768	15,2	0.598
SD100-19.70-K	00059705	-	-	■	19,7	0.776	15,2	0.598
SD100-19.70-M	00059704	-	■	-	19,7	0.776	15,2	0.598
SD100-19.70-P	00059703	■	-	-	19,7	0.776	15,2	0.598
SD100-19.80-K	00059708	-	-	■	19,8	0.780	15,2	0.598
SD100-19.80-M	00059707	-	■	-	19,8	0.780	15,2	0.598
SD100-19.80-P	00059706	■	-	-	19,8	0.780	15,2	0.598
SD100-19.84-M	00035204	-	■	-	19,84	0.781	15,2	0.598
SD100-19.84-P	00035203	■	-	-	19,84	0.781	15,2	0.598
SD100-19.90-M	02592747	-	■	-	19,9	0.783	15,2	0.598
SD100-19.90-P	00010065	■	-	-	19,9	0.783	15,2	0.598
SD100-19.99-P	00081744	■	-	-	19,99	0.787	15,2	0.598
SD100-20.00-K	02433368	-	-	■	20,0	0.787	15,2	0.598
SD100-20.00-M	02469176	-	■	-	20,0	0.787	15,2	0.598
SD100-20.00-P	02469095	■	-	-	20,0	0.787	15,2	0.598
SD100-20.241-P	02469096	■	-	-	20,241	0.797	15,2	0.598
SD100-20.50-K	02569177	-	-	■	20,5	0.807	15,2	0.598
SD100-20.50-M	02469178	-	■	-	20,5	0.807	15,2	0.598
SD100-20.50-P	02469098	■	-	-	20,5	0.807	15,2	0.598
SD100-20.638-M	02469179	-	■	-	20,638	0.813	15,2	0.598
SD100-20.638-P	02469100	■	-	-	20,638	0.813	15,2	0.598
SD100-20.80-P	02508750	■	-	-	20,8	0.819	15,2	0.598
SD100-20.90-P	02586615	■	-	-	20,9	0.823	15,2	0.598
SD100-21.00-K	02523183	-	-	■	21,0	0.827	15,2	0.598
SD100-21.00-M	02469180	-	■	-	21,0	0.827	15,2	0.598
SD100-21.00-P	02469118	■	-	-	21,0	0.827	15,2	0.598
SD100-21.034-P	02469120	■	-	-	21,034	0.828	15,2	0.598
SD100-21.20-P	02469121	■	-	-	21,2	0.835	15,2	0.598
SD100-21.30-P	02521624	■	-	-	21,3	0.839	15,2	0.598
SD100-21.430-M	02469182	-	■	-	21,43	0.844	15,2	0.598
SD100-21.430-P	02469122	■	-	-	21,43	0.844	15,2	0.598
SD100-21.50-K	02521338	-	-	■	21,5	0.846	15,2	0.598
SD100-21.50-M	02469183	-	■	-	21,5	0.846	15,2	0.598

Introduction

Drilling

Reaming

Boring

Annex

Introduction

Drilling

Reaming

Boring

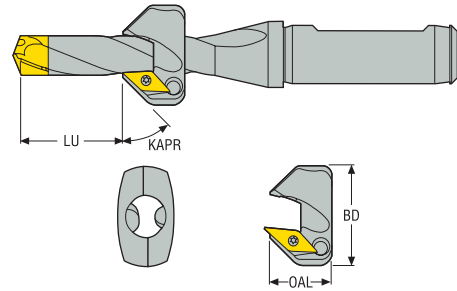
Annex

Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-21.50-P	02469124	■	-	-	21,5	0.846	15,2	0.598
SD100-21.80-K	02592763	-	-	■	21,8	0.858	15,2	0.598
SD100-21.80-M	02555978	-	■	-	21,8	0.858	15,2	0.598
SD100-21.80-P	02592735	■	-	-	21,8	0.858	15,2	0.598
SD100-21.829-P	02469125	■	-	-	21,829	0.859	15,2	0.598
SD100-21.90-M	02592752	-	■	-	21,9	0.862	15,2	0.598
SD100-21.90-P	02592736	■	-	-	21,9	0.862	15,2	0.598
SD100-22.00-K	02511599	-	-	■	22,0	0.866	15,2	0.598
SD100-22.00-M	02469185	-	■	-	22,0	0.866	15,2	0.598
SD100-22.00-P	02469128	■	-	-	22,0	0.866	15,2	0.598
SD100-22.225-M	02469186	-	■	-	22,225	0.875	15,2	0.598
SD100-22.225-P	02469129	■	-	-	22,225	0.875	15,2	0.598
SD100-22.50-K	02569178	-	-	■	22,5	0.886	15,2	0.598
SD100-22.50-M	02469188	-	■	-	22,5	0.886	15,2	0.598
SD100-22.50-P	02469132	■	-	-	22,5	0.886	15,2	0.598
SD100-22.621-P	02469133	■	-	-	22,621	0.891	15,2	0.598
SD100-22.80-M	02592754	-	■	-	22,8	0.898	15,2	0.598
SD100-22.80-P	02539323	■	-	-	22,8	0.898	15,2	0.598
SD100-22.90-P	02592738	■	-	-	22,9	0.902	15,2	0.598
SD100-23.00-K	02515181	-	-	■	23,0	0.906	15,2	0.598
SD100-23.00-M	02469189	-	■	-	23,0	0.906	15,2	0.598
SD100-23.00-P	02469134	■	-	-	23,0	0.906	15,2	0.598
SD100-23.416-P	02469136	■	-	-	23,416	0.922	15,2	0.598
SD100-23.50-K	02551252	-	-	■	23,5	0.925	15,2	0.598
SD100-23.50-M	02469190	-	■	-	23,5	0.925	15,2	0.598
SD100-23.50-P	02469138	■	-	-	23,5	0.925	15,2	0.598
SD100-23.813-K	02592766	-	-	■	23,813	0.938	15,2	0.598
SD100-23.813-M	02554971	-	■	-	23,813	0.938	15,2	0.598
SD100-23.813-P	02469140	■	-	-	23,813	0.938	15,2	0.598
SD100-23.90-M	02592756	-	■	-	23,9	0.941	15,2	0.598
SD100-23.90-P	02592739	■	-	-	23,9	0.941	15,2	0.598
SD100-24.00-K	02569179	-	-	■	24,0	0.945	15,2	0.598
SD100-24.00-M	02469191	-	■	-	24,0	0.945	15,2	0.598
SD100-24.00-P	02469141	■	-	-	24,0	0.945	15,2	0.598
SD100-24.209-P	02469142	■	-	-	24,209	0.953	15,2	0.598
SD100-24.50-K	02569180	-	-	■	24,5	0.965	15,2	0.598
SD100-24.50-M	02469192	-	■	-	24,5	0.965	15,2	0.598
SD100-24.50-P	02469144	■	-	-	24,5	0.965	15,2	0.598
SD100-24.605-P	02469145	■	-	-	24,605	0.969	15,2	0.598
SD100-24.80-K	02592767	-	-	■	24,8	0.976	15,2	0.598
SD100-24.80-M	02508165	-	■	-	24,8	0.976	15,2	0.598
SD100-24.80-P	02529665	■	-	-	24,8	0.976	15,2	0.598
SD100-24.90-M	02592757	-	■	-	24,9	0.980	15,2	0.598
SD100-24.90-P	02592740	■	-	-	24,9	0.980	15,2	0.598
SD100-25.00-K	02524629	-	-	■	25,0	0.984	15,2	0.598
SD100-25.00-M	02469193	-	■	-	25,0	0.984	15,2	0.598
SD100-25.00-P	02469146	■	-	-	25,0	0.984	15,2	0.598
SD100-25.40-K	02569181	-	-	■	25,4	1.000	15,2	0.598
SD100-25.400-M	02469194	-	■	-	25,4	1.000	15,2	0.598
SD100-25.400-P	02469147	■	-	-	25,4	1.000	15,2	0.598
SD100-25.50-P	02536609	■	-	-	25,5	1.004	15,2	0.598

Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	K-geometry for cast iron	DC		OAL	
					mm	inch	mm	inch
SD100-25.60-P	02519477	■	–	–	25,6	1.008	15,2	0.598
SD100-25.80-M	02592758	–	■	–	25,8	1.016	15,2	0.598
SD100-25.80-P	02581593	■	–	–	25,8	1.016	15,2	0.598
SD100-25.90-M	02592759	–	■	–	25,9	1.020	15,2	0.598
SD100-25.90-P	02592741	■	–	–	25,9	1.020	15,2	0.598
SD100-25.99-K	02516403	–	–	■	25,99	1.023	15,2	0.598
SD100-25.99-P	02516402	■	–	–	25,99	1.023	15,2	0.598

■ Stock standard.

Chamfer module



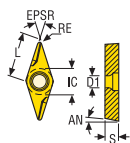
Drill depth LU													
Designation	Item number	For drill body	SD101 (min-max)		SD103 (min-max)		SD105 (min-max)		SD107 (min-max)		Max chamfer depth	OAL	BD
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
SD100-C45-12.00/12.49	00014922	SD10x-12.00/12.49	12,0 0.472	13,0 0.512	12,0 0.472	28,0 1.102	28,0 1.102	53,0 2.087	53,0 2.087	78,0 3.071	1,5 0.059	19,0 0.748	28,0 1.102
SD100-C45-12.50/12.99	00014923	SD10x-12.50/12.99	12,0 0.472	14,0 0.551	12,0 0.472	29,0 1.142	29,0 1.142	54,0 2.126	54,0 2.126	79,0 3.110	1,5 0.059	19,0 0.748	28,0 1.102
SD100-C45-13.00/13.99	00014924	SD10x-13.00/13.99	13,0 0.512	14,0 0.551	13,0 0.512	29,0 1.142	29,0 1.142	54,0 2.126	54,0 2.126	79,0 3.110	1,5 0.059	19,0 0.748	28,0 1.102
SD100-C45-14.00/14.99	00014928	SD10x-14.00/14.99	14,0 0.551	20,0 0.787	14,0 0.551	40,0 1.575	40,0 1.575	70,0 2.756	70,0 2.756	100,0 3.937	2,0 0.079	19,0 0.748	31,0 1.220
SD100-C45-15.00/15.99	00014931	SD10x-15.00/15.99	14,0 0.551	21,0 0.827	14,0 0.551	41,0 1.614	41,0 1.614	71,0 2.795	71,0 2.795	101,0 3.976	2,0 0.079	19,0 0.748	31,0 1.220
SD100-C45-16.00/16.99	00014932	SD10x-16.00/16.99	15,0 0.591	22,0 0.866	15,0 0.591	42,0 1.654	42,0 1.654	72,0 2.835	72,0 2.835	102,0 4.016	2,0 0.079	19,0 0.748	31,0 1.220
SD100-C45-17.00/17.99	00014933	SD10x-17.00/17.99	16,0 0.630	25,0 0.984	16,0 0.630	51,0 2.008	51,0 2.008	87,0 3.425	87,0 3.425	123,0 4.843	2,0 0.079	19,0 0.748	36,0 1.417
SD100-C45-18.00/18.99	00014935	SD10x-18.00/18.99	17,0 0.669	26,0 1.024	17,0 0.669	52,0 2.047	52,0 2.047	88,0 3.465	88,0 3.465	124,0 4.882	2,0 0.079	19,0 0.748	36,0 1.417
SD100-C45-19.00/19.99	00014936	SD10x-19.00/19.99	18,0 0.709	27,0 1.063	18,0 0.709	53,0 2.087	53,0 2.087	89,0 3.504	89,0 3.504	125,0 4.921	2,0 0.079	19,0 0.748	36,0 1.417

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key		Locking key	
	Insert	Module	Insert		Module	
SD100-12.00-16.99	C02205-T07P	C04011-T15P	T07P-2		T15P-2	
SD100-17.00-19.99	C02205-T07P	C05012-T15P	T07P-2		T15P-2	

Insert

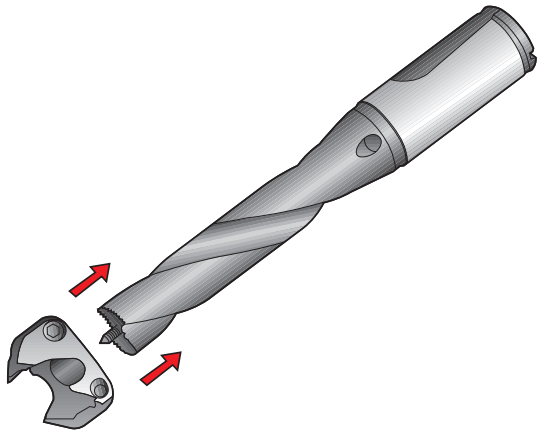
Tolerances: mm/inch	Size	L	RE	IC	D1	S		
		mm/inch	EPSR	mm/inch	mm/inch	AN	mm/inch	
	09	9,0/ 2.187	35°	0,2/ 0.0078	5,556/ 2.187	2,9/ 1.141	7°	2,5/ 0.984
		Grade: T400D						
		Designation: VCGX090202-D1						
		Item number: 00014948						



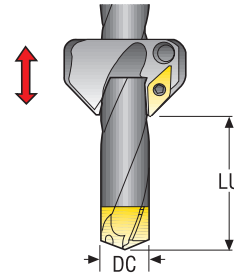
IC = ±0,025/ 0.009842
S = ±0,07/ 0.027559
RE = ±0,10/ 0.039370

Chamfer module – Mounting instruction/placement of module

1. Fit the module on the drill without chamfer insert or crown mounted.

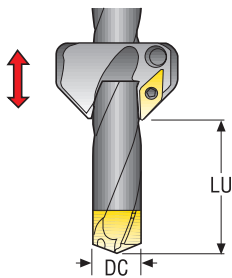


2.1 If possible, place the module as close to the shank as possible.



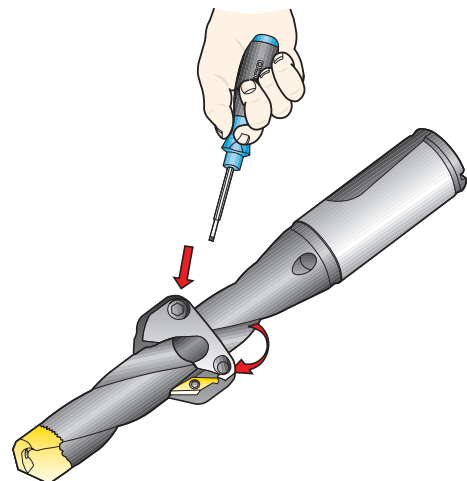
DC		LU drilling depth (min-max)			
mm	inch	SD101		SD103	
mm	inch	mm	inch	mm	inch
12	.472	12-13	.472-.512	12-28	.472-1.102
12,5	.492	12-14	.472-.551	12-29	.472-1.142
13	.512	13-14	.512-.551	13-29	.512-1.142
14	.551	14-20	.551-.787	14-40	.551-1.575
15	.591	14-21	.551-.827	14-41	.551-1.614
16	.630	15-22	.591-.866	15-42	.591-1.654
17	.669	16-25	.630-.984	16-51	.630-2.008
18	.709	17-26	.669-1.024	17-52	.669-2.047
19	.748	18-27	.709-1.063	18-53	.709-2.087

2.2 If possible, place the module as close to the shank as possible.



DC		LU drilling depth (min-max)			
mm	inch	SD105		SD107	
mm	inch	mm	inch	mm	inch
12	.472	28-53	1.102-2.087	53-78	2.087-3.071
12,5	.492	29-54	1.142-2.126	54-79	2.126-3.110
13	.512	29-54	1.142-2.126	54-79	2.126-3.110
14	.551	40-70	1.575-2.756	70-100	2.756-3.937
15	.591	41-71	1.614-2.785	71-101	2.795-3.976
16	.630	42-72	1.654-2.835	72-102	2.835-4.016
17	.669	51-87	2.008-3.425	87-123	3.425-4.843
18	.709	52-88	2.047-3.465	88-124	3.465-4.882
19	.748	53-89	2.087-3.504	89-125	3.504-4.921

4. Tighten both screws according to the table below.



DC		M	
mm	inch	Nm	in-lbs
12-19	.472-.748	3-4	26-35

Chamfer module

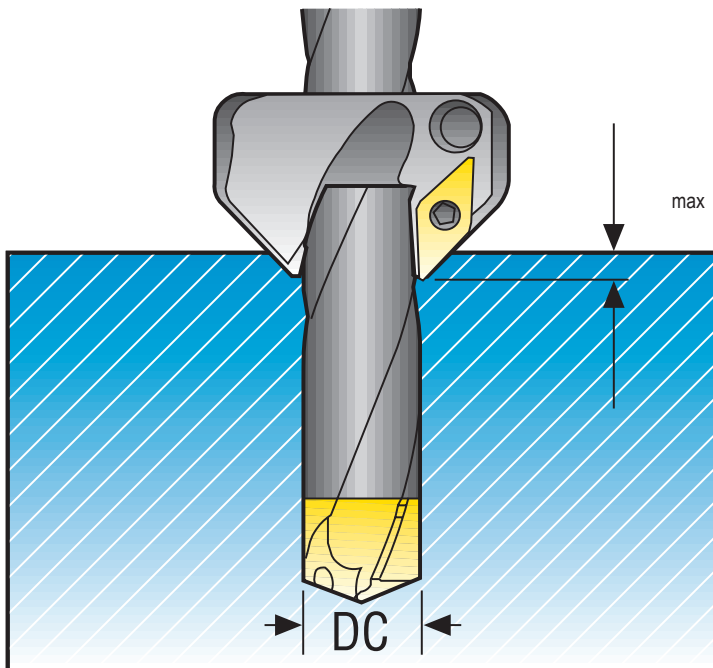
The recommended cutting speeds and feeds for Crownloc® on pages 191-194 should also be used during the chamfering operation.

Troubleshooting

Vibrations during chamfering

- Reduce cutting speed
- If possible, move the module closer to the shank of the drill
- If possible, use a shorter drill

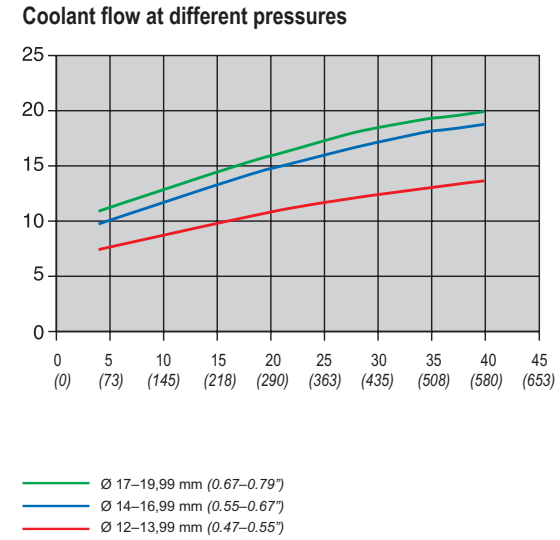
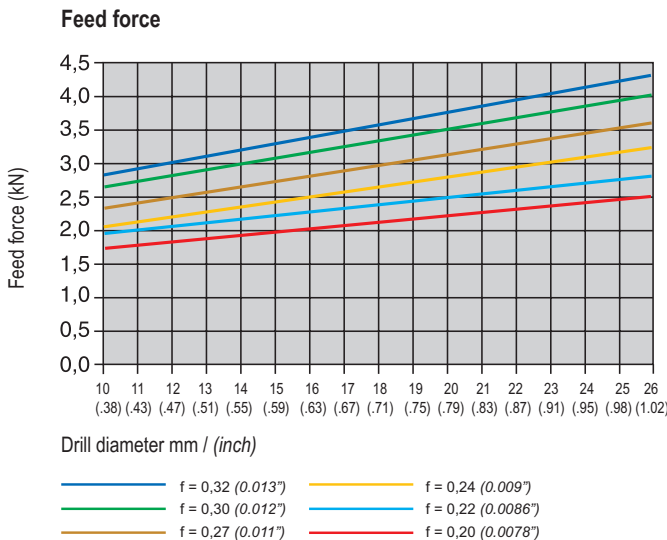
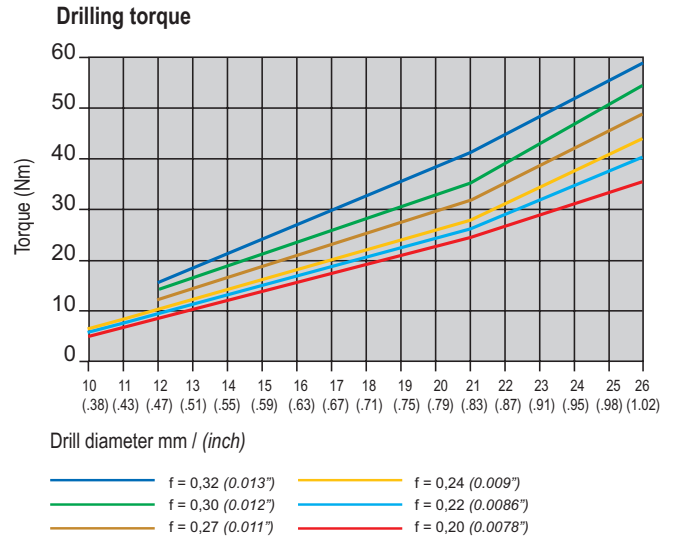
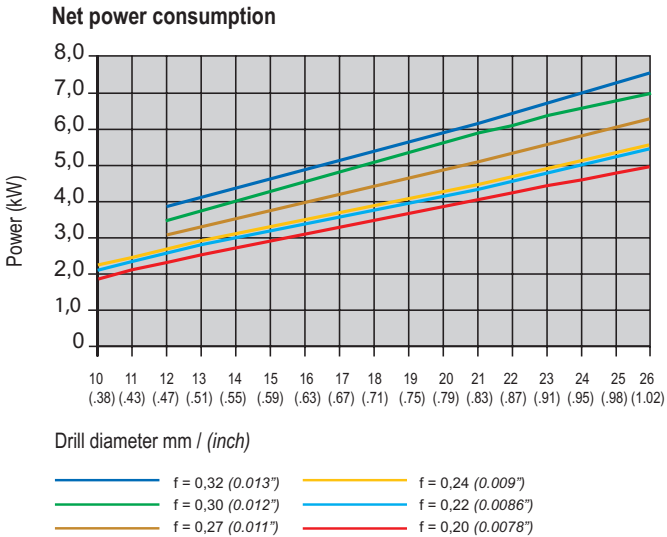
Maximum chamfer depth



DC		Max	
mm	inch	Nm	in-lbs
12-13	.472-512	1,5	.059
14-19	.551-.748	2	.079

Machining data

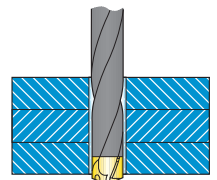
The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.
The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 90 m/min (295 sf/min).



Recommended coolant flow $D \times 1 \text{ l/min}$
 Minimum coolant flow $D/2 \text{ l/min}$
 D = Drill diameter
 Minimum recommended coolant pressure 10 bar (145 PSI) with $< 3 \times D$
 Minimum recommended coolant pressure 20 bar (290 PSI) with $> 3 \times D$
 Minimum recommended coolant pressure 40 bar (580 PSI) with $> 5 \times D$

Coolant mix
 Recommended emulsion mix is 6–8%.
 When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.

Machining recommendations
 It is possible to drill stacked material as long as the pieces are securely clamped together, so that there are no air gaps between the parts. Air gaps can affect chip evacuation, and thereby damage the drill.



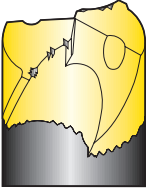
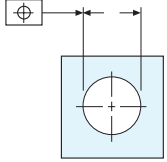
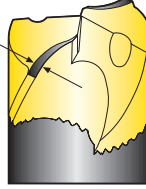
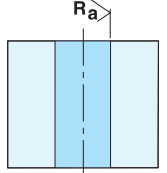

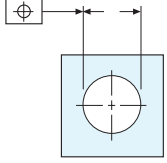

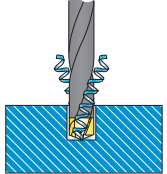
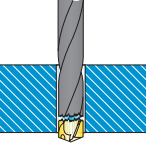
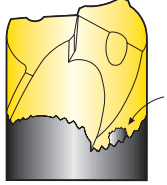
Hole tolerances/Surface finish

SD101, SD103, SD105 and SD107 IT9-10 / $R_a 1-4^*$, $Ra 39-157 \mu\text{in}^*$					
Drill \varnothing DC (mm)	IT9 tolerance (μm)	IT10 tolerance (μm)	Drill \varnothing DC (inch)	IT9 tolerance (inch)	IT10 tolerance (inch)
0 – +10-18	0 – +43	0 – +70	0 – +0.394-0.709	0 – +0.0017	0 – +0.0028
0 – +18-30	0 – +52	0 – +84	0 – +0.709-1.181	0 – +0.0020	0 – +0.0033

*Deterioration of surface finish and hole tolerance can occur when drilling in low carbon steel or stainless steel. Use the shortest drill possible for best hole quality.

Troubleshooting – Initial check points:

- Fixturing stability
- Machine spindle condition
- Tool holder condition
- Clamping of tool:
 - Run-out within 0,06 TIR
- Chip evacuation:
 - Cutting data
- Coolant:
 - Pressure
 - Flow
 - Concentration

<p>Cutting edges get chipped</p> <ul style="list-style-type: none"> • Reduce the feed/rev • If the drill vibrates, reduce the cutting speed and increase the feed rate • When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit 		<p>Unsatisfactory diameter tolerance</p> <ul style="list-style-type: none"> • Increase the feed/rev • Use a Seco Feedmax solid carbide drill, see page(s) 15-18 • Use a reaming operation, see page(s) 322 • Use a boring operation, see pages(s) 492-493 	
<p>Too fast flank wear</p> <ul style="list-style-type: none"> • Check that correct geometry is used • Reduce the cutting speed 		<p>Unsatisfactory surface finish</p> <ul style="list-style-type: none"> • Reduce the feed/rev • Increase the cutting speed • Check that the correct geometry is used • Use a Seco Feedmax solid carbide drill, see page(s) 15-18 • Use a reaming operation, see page(s) 322 	
<p>Groove wear</p> <ul style="list-style-type: none"> • Reduce the feed /rev • Reduce the cutting speed • Increase the coolant concentration 		<p>Unsatisfactory positioning of the hole</p> <ul style="list-style-type: none"> • Reduce the feed/rev • If drilling through rough, hard and angled surface - reduce the feed by 30%-50% during entrance and exit • Pre drill with a 140° point angle • Use a Seco Feedmax solid carbide drill see Feedmax page(s) 15-18 • Use a boring operation, see page(s) 492-493 	
<p>Wear of peripheral land margins</p> <ul style="list-style-type: none"> • Check that the correct geometry is used • Reduce the cutting speed • Increase the coolant concentration • When drilling through rough, hard or angled surfaces, reduce the feed rate by 30-50% during entrance and exit 		<p>Chip jamming due to long chips</p> <ul style="list-style-type: none"> • Increase the feed • In long chipping materials SMG P1-P4, SMG M1-M2: <ul style="list-style-type: none"> - Increase cutting speed and reduce feed/rev - Use the L geometry (Custom Design) 	
<p>Breakage at hole exit</p> <ul style="list-style-type: none"> • If the crown connection breaks when the crown is just about to break through the material. The failure is caused by: <ul style="list-style-type: none"> - The interface has not been cleaned thoroughly and there is still dirt or chips left between crown and drill body - The crown has not been clamped securely. Use the torque key - Too few threads are holding the crown 		<p>Chipping of the locking interface</p> <ul style="list-style-type: none"> • Minor chipping is not hazardous to the locking system. It will not affect the drilling result • If major chipping occurs when using a high feed rate or when drilling through angled surfaces - reduce the feed rate 	



Crownloc® Plus

Seco Crownloc® Plus is a new generation of Seco drills with exchangeable crowns. Featuring a new locking interface, Crownloc Plus improves chip evacuation and wear resistance in a variety of materials.

- Strong drill body design, high-strength locking interface with deep and wide flutes and polished body.
- The first choice for general applications, the P geometry is a strong and versatile solution.
- The M geometry provides excellent performance in high temperature alloys, titanium, titanium alloys and stainless steel

Range overview

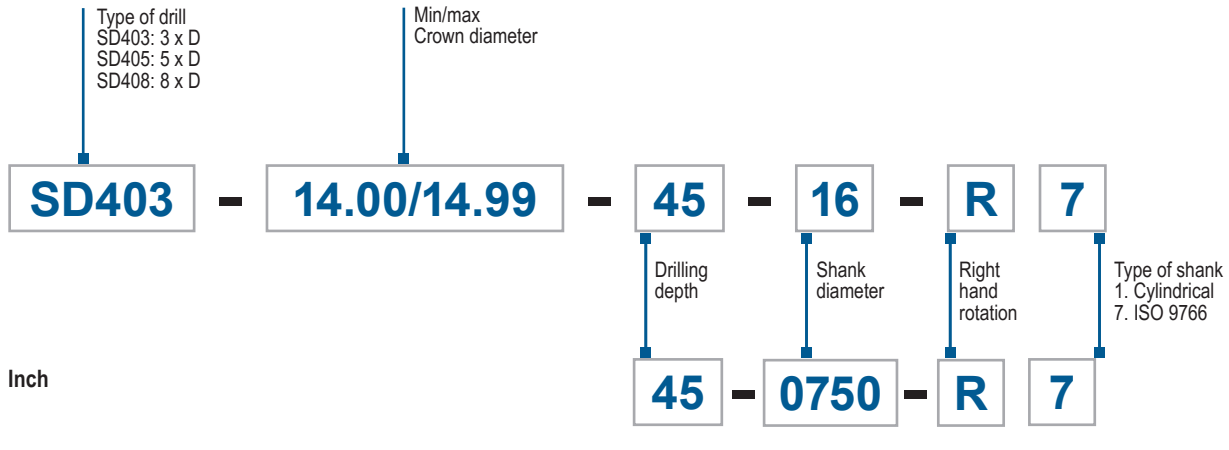
Crownloc® Plus	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance (1)	Surface finish (2)
SD403  Page(s) 201-204	12,00-19,99 mm (0.472-0.787")	~ 3 x D	k7	IT 9-10	Ra 1-3 µm (Ra 39-118 µin)
SD405  Page(s) 205-208	12,00-19,99 mm (0.472-0.787")	~ 5 x D	k7	IT 10	Ra 1-3 µm (Ra 39-118 µin)
SD408  Page(s) 209-212	12,00-19,99 mm (0.472-0.787")	~ 8 x D	k7	IT 10	Ra 1-3 µm (Ra 39-118 µin)

1) Variations can occur depending on the material and the cutting data used.
 2) Drill depth, cutting data, coolant pressure and material can cause deterioration of the surface finish.

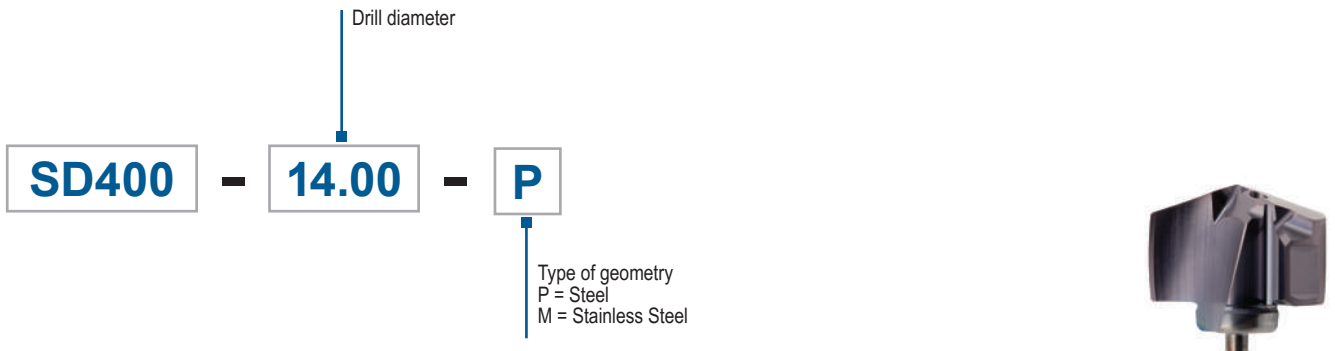
Code keys

Crownloc® Plus drill bodies

Metric



Code key crowns



Geometries

P-geometry
- Universal geometry, first choice for drilling in steel



M-geometry
- For stainless steels and high temp alloys



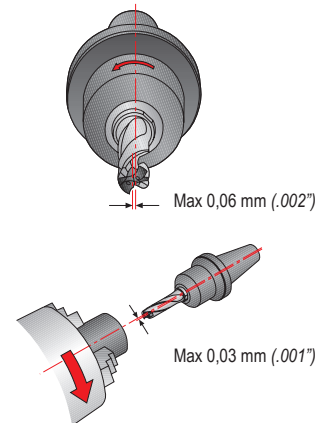
Mounting instructions

1. Stability

The stability of the application is important to obtain the best tool life and hole accuracy. Check the condition of the machine spindle, fixture and fixturing of the component to secure maximum stability and rigidity. Unstable conditions can cause tool breakages.

2. Rotating

Total Indicated Run-out (TIR) should not exceed 0.06 mm (0.002") in a rotating application. Measure the run-out when turning the drill 360° in the spindle.



3. Stationary

The distance between the drill point and the rotating center of the workpiece should not exceed 0.03 mm (0.001") radially in a stationary application.

4. Recommended tool holders

Seco Tools offers a wide range of tools holders (Collet chucks, Shrinkfit holders, Weldon Hydraulic chucks...), available for a variety of machine spindle types. For best results, use holders type ERHP 5672, High precision chuck. For further information see Tooling Systems catalog.



High precision collet chuck
(For cylindrical, -R1 shanks only)



Hydraulic chuck
(For cylindrical, -R1 shanks only)



Weldon

1.

To unclamp the crown, find the two flats on the Crown for the key.



2.

Turn the key counterclockwise to unclamp it with a quarter of a turn.



3.

Clean the connection, before mounting the crown.



4.

Pre-clamp the crown with your fingers for easier clamping, before using the key.



5.

Simultaneously press down the crown when clamping on a quarter of a turn clockwise using the key and keep it perpendicular to the drill body.



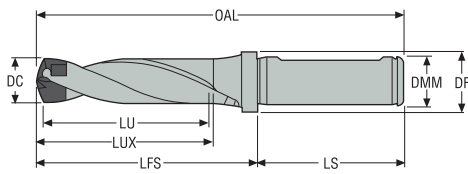
6.

When the crown is mounted in the drill body, full contact should be achieved in the connection between the supporting surfaces of the drill body and the Crown, see picture.



SD403 – R7


Drilling depth ~ 3 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 217

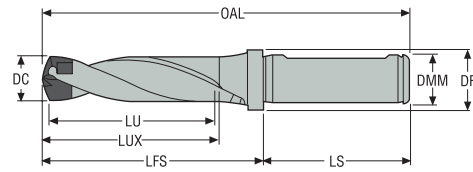
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD403-12.00/12.49-38-16R7	02622894	12,0-12,49	38,0	106,2	46,2	58,2	48,0	16,0	20,0
SD403-12.50/12.99-39-16R7	02622895	12,5-12,99	39,0	108,0	47,5	60,0	48,0	16,0	20,0
SD403-13.00/13.99-42-16R7	02622896	13,0-13,99	42,0	111,9	50,9	63,9	48,0	16,0	20,0
SD403-14.00/14.99-45-16R7	02622898	14,0-14,99	45,0	116,5	54,5	68,5	48,0	16,0	20,0
SD403-15.00/15.99-48-16R7	02622899	15,0-15,99	48,0	121,2	58,2	73,2	48,0	16,0	20,0
SD403-16.00/16.99-51-20R7	02622900	16,0-16,99	51,0	127,9	61,9	77,9	50,0	20,0	24,0
SD403-17.00/17.99-54-20R7	02622902	17,0-17,99	54,0	132,6	65,6	82,6	50,0	20,0	24,0
SD403-18.00/18.99-57-20R7	02622903	18,0-18,99	57,0	137,3	69,3	87,3	50,0	20,0	24,0
SD403-19.00/19.99-60-20R7	02622905	19,0-19,99	60,0	142,0	73,0	92,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD403 – R7

Drilling depth ~ 3 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 217

Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD403-12.00/12.49-38-0625R7	02622942	0.472-0.492	1.496	0.787	4.181	1.890	2.291	1.819	0.625
SD403-12.50/12.99-39-0625R7	02622943	0.492-0.511	1.535	0.787	4.252	1.890	2.362	1.870	0.625
SD403-13.00/13.99-42-0625R7	02622944	0.512-0.551	1.654	0.787	4.406	1.890	2.516	2.004	0.625
SD403-14.00/14.99-45-0625R7	02622945	0.551-0.590	1.772	0.787	4.587	1.890	2.697	2.146	0.625
SD403-15.00/15.99-48-0625R7	02622946	0.591-0.630	1.890	0.787	4.772	1.890	2.882	2.291	0.625
SD403-16.00/16.99-51-0750R7	02622947	0.630-0.669	2.008	0.945	5.035	1.969	3.067	2.437	0.750
SD403-17.00/17.99-54-0750R7	02622948	0.669-0.708	2.126	0.945	5.220	1.969	3.252	2.583	0.750
SD403-18.00/18.99-57-0750R7	02622949	0.709-0.748	2.244	0.945	5.406	1.969	3.437	2.728	0.750
SD403-19.00/19.99-60-0750R7	02622950	0.748-0.787	2.362	0.945	5.591	1.969	3.622	2.874	0.750

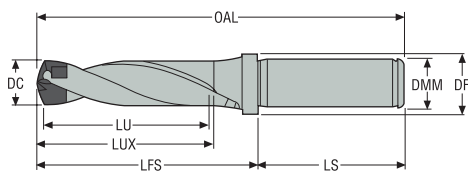
Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



SD403 – R1


Drilling depth ~ 3 x D – Metric shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 217

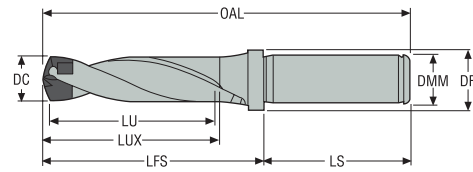
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD403-12.00/12.49-38-16R1	02622920	12,0-12,49	38,0	106,2	46,2	58,2	48,0	16,0	20,0
SD403-12.50/12.99-39-16R1	02622921	12,5-12,99	39,0	108,0	47,5	60,0	48,0	16,0	20,0
SD403-13.00/13.99-42-16R1	02622922	13,0-13,99	42,0	111,9	50,9	63,9	48,0	16,0	20,0
SD403-14.00/14.99-45-16R1	02622923	14,0-14,99	45,0	116,5	54,5	68,5	48,0	16,0	20,0
SD403-15.00/15.99-48-16R1	02622924	15,0-15,99	48,0	121,2	58,2	73,2	48,0	16,0	20,0
SD403-16.00/16.99-51-20R1	02622927	16,0-16,99	51,0	127,9	61,9	77,9	50,0	20,0	24,0
SD403-17.00/17.99-54-20R1	02622928	17,0-17,99	54,0	132,6	65,6	82,6	50,0	20,0	24,0
SD403-18.00/18.99-57-20R1	02622930	18,0-18,99	57,0	137,3	69,3	87,3	50,0	20,0	24,0
SD403-19.00/19.99-60-20R1	02622931	19,0-19,99	60,0	142,0	73,0	92,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD403 – R1

Drilling depth ~ 3 x D – Inch shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 217

Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD403-12.00/12.49-38-0625R1	02623538	0.472-0.492	1.496	0.787	4.181	1.890	2.291	1.819	0.625
SD403-12.50/12.99-39-0625R1	02623539	0.492-0.511	1.535	0.787	4.252	1.890	2.362	1.870	0.625
SD403-13.00/13.99-42-0625R1	02623540	0.512-0.551	1.654	0.787	4.406	1.890	2.516	2.004	0.625
SD403-14.00/14.99-45-0625R1	02623541	0.551-0.590	1.772	0.787	4.587	1.890	2.697	2.146	0.625
SD403-15.00/15.99-48-0625R1	02623542	0.591-0.630	1.890	0.787	4.772	1.890	2.882	2.291	0.625
SD403-16.00/16.99-51-0750R1	02623543	0.630-0.669	2.008	0.945	5.035	1.969	3.067	2.437	0.750
SD403-17.00/17.99-54-0750R1	02623544	0.669-0.708	2.126	0.945	5.220	1.969	3.252	2.583	0.750
SD403-18.00/18.99-57-0750R1	02623545	0.709-0.748	2.244	0.945	5.406	1.969	3.437	2.728	0.750
SD403-19.00/19.99-60-0750R1	02623546	0.748-0.787	2.362	0.945	5.591	1.969	3.622	2.874	0.750

Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



Introduction

Drilling

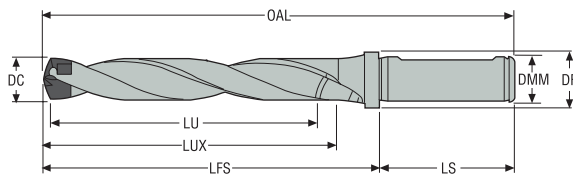
Reaming

Boring

Annex

SD405 – R7


Drilling depth ~ 5 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 218

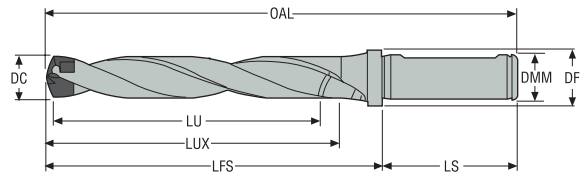
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD405-12.00/12.49-63-16R7	02623554	12,0-12,49	63,0	131,2	71,2	83,2	48,0	16,0	20,0
SD405-12.50/12.99-65-16R7	02623555	12,5-12,99	65,0	134,0	73,5	86,0	48,0	16,0	20,0
SD405-13.00/13.99-70-16R7	02623556	13,0-13,99	70,0	139,9	78,9	91,9	48,0	16,0	20,0
SD405-14.00/14.99-75-16R7	02623557	14,0-14,99	75,0	146,5	84,5	98,5	48,0	16,0	20,0
SD405-15.00/15.99-80-16R7	02623558	15,0-15,99	80,0	153,2	90,2	105,2	48,0	16,0	20,0
SD405-16.00/16.99-85-20R7	02623559	16,0-16,99	85,0	161,9	95,9	111,9	50,0	20,0	24,0
SD405-17.00/17.99-90-20R7	02623560	17,0-17,99	90,0	168,6	101,6	118,6	50,0	20,0	24,0
SD405-18.00/18.99-95-20R7	02623561	18,0-18,99	95,0	175,3	107,3	125,3	50,0	20,0	24,0
SD405-19.00/19.99-100-20R7	02623562	19,0-19,99	100,0	182,0	113,0	132,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD405 – R7

Drilling depth ~ 5 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 218

Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD405-12.00/12.49-63-0625R7	02623586	0.472-0.492	2.480	0.787	5.165	1.890	3.276	2.803	0.625
SD405-12.50/12.99-65-0625R7	02623587	0.492-0.511	2.559	0.787	5.276	1.890	3.386	2.894	0.625
SD405-13.00/13.99-70-0625R7	02623588	0.512-0.551	2.756	0.787	5.508	1.890	3.618	3.106	0.625
SD405-14.00/14.99-75-0625R7	02623589	0.551-0.590	2.953	0.787	5.768	1.890	3.878	3.327	0.625
SD405-15.00/15.99-80-0625R7	02623590	0.591-0.630	3.150	0.787	6.031	1.890	4.142	3.551	0.625
SD405-16.00/16.99-85-0750R7	02623591	0.630-0.669	3.346	0.945	6.374	1.969	4.406	3.776	0.750
SD405-17.00/17.99-90-0750R7	02623592	0.669-0.708	3.543	0.945	6.638	1.969	4.669	4.000	0.750
SD405-18.00/18.99-95-0750R7	02623593	0.709-0.748	3.740	0.945	6.902	1.969	4.933	4.224	0.750
SD405-19.00/19.99-100-0750R7	02623594	0.748-0.787	3.937	0.945	7.165	1.969	5.197	4.449	0.750

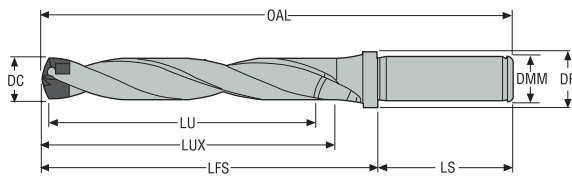
Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



SD405 – R1


Drilling depth ~ 5 x D – Metric shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 218

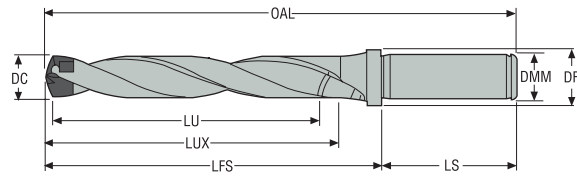
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD405-12.00/12.49-63-16R1	02623570	12,0-12,49	63,0	131,2	71,2	83,2	48,0	16,0	20,0
SD405-12.50/12.99-65-16R1	02623571	12,5-12,99	65,0	134,0	73,5	86,0	48,0	16,0	20,0
SD405-13.00/13.99-70-16R1	02623572	13,0-13,99	70,0	139,9	78,9	91,9	48,0	16,0	20,0
SD405-14.00/14.99-75-16R1	02623573	14,0-14,99	75,0	146,5	84,5	98,5	48,0	16,0	20,0
SD405-15.00/15.99-80-16R1	02623574	15,0-15,99	80,0	153,2	90,2	105,2	48,0	16,0	20,0
SD405-16.00/16.99-85-20R1	02623575	16,0-16,99	85,0	161,9	95,9	111,9	50,0	20,0	24,0
SD405-17.00/17.99-90-20R1	02623576	17,0-17,99	90,0	168,6	101,6	118,6	50,0	20,0	24,0
SD405-18.00/18.99-95-20R1	02623577	18,0-18,99	95,0	175,3	107,3	125,3	50,0	20,0	24,0
SD405-19.00/19.99-100-20R1	02623578	19,0-19,99	100,0	182,0	113,0	132,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD405 – R1

Drilling depth ~ 5 x D – Inch shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 218

Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD405-12.00/12.49-63-0625R1	02623603	0.472-0.492	2.480	0.787	5.165	1.890	3.276	2.803	0.625
SD405-12.50/12.99-65-0625R1	02623604	0.492-0.511	2.559	0.787	5.276	1.890	3.386	2.894	0.625
SD405-13.00/13.99-70-0625R1	02623605	0.512-0.551	2.756	0.787	5.508	1.890	3.618	3.106	0.625
SD405-14.00/14.99-75-0625R1	02623606	0.551-0.590	2.953	0.787	5.768	1.890	3.878	3.327	0.625
SD405-15.00/15.99-80-0625R1	02623607	0.591-0.630	3.150	0.787	6.031	1.890	4.142	3.551	0.625
SD405-16.00/16.99-85-0750R1	02623608	0.630-0.669	3.346	0.945	6.374	1.969	4.406	3.776	0.750
SD405-17.00/17.99-90-0750R1	02623609	0.669-0.708	3.543	0.945	6.638	1.969	4.669	4.000	0.750
SD405-18.00/18.99-95-0750R1	02623610	0.709-0.748	3.740	0.945	6.902	1.969	4.933	4.224	0.750
SD405-19.00/19.99-100-0750R1	02623611	0.748-0.787	3.937	0.945	7.165	1.969	5.197	4.449	0.750

Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



Introduction

Drilling

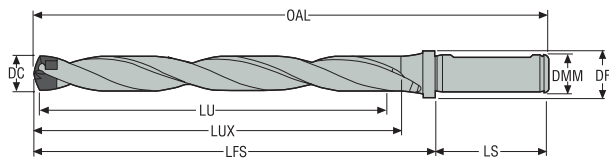
Reaming

Boring

Annex

SD408 – R7


Drilling depth ~ 8 x D – Metric shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 219

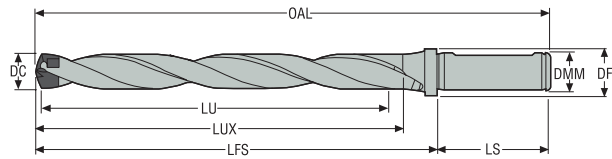
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD408-12.00/12.49-100-16R7	02623615	12,0-12,49	100,0	168,2	108,2	120,2	48,0	16,0	20,0
SD408-12.50/12.99-104-16R7	02623616	12,5-12,99	104,0	173,0	112,5	125,0	48,0	16,0	20,0
SD408-13.00/13.99-112-16R7	02623617	13,0-13,99	112,0	181,9	120,9	133,9	48,0	16,0	20,0
SD408-14.00/14.99-120-16R7	02623618	14,0-14,99	120,0	191,5	129,5	143,5	48,0	16,0	20,0
SD408-15.00/15.99-128-16R7	02623619	15,0-15,99	128,0	201,2	138,2	153,2	48,0	16,0	20,0
SD408-16.00/16.99-136-20R7	02623620	16,0-16,99	136,0	212,9	146,9	162,9	50,0	20,0	24,0
SD408-17.00/17.99-144-20R7	02623621	17,0-17,99	144,0	222,6	155,6	172,6	50,0	20,0	24,0
SD408-18.00/18.99-152-20R7	02623622	18,0-18,99	152,0	232,3	164,3	182,3	50,0	20,0	24,0
SD408-19.00/19.99-160-20R7	02623623	19,0-19,99	160,0	242,0	173,0	192,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD408 – R7

Drilling depth ~ 8 x D – Inch shank



- Internal coolant
- ISO9766 fits holders: Weldon 1835B, ISO 5414, DIN 60880
- For cutting data see page(s) 219

Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD408-12.00/12.49-100-0625R7	02623639	0.472-0.492	3.937	0.787	6.622	1.890	4.732	4.260	0.625
SD408-12.50/12.99-104-0625R7	02623640	0.492-0.511	4.094	0.787	6.811	1.890	4.921	4.429	0.625
SD408-13.00/13.99-112-0625R7	02623641	0.512-0.551	4.409	0.787	7.161	1.890	5.272	4.760	0.625
SD408-14.00/14.99-120-0625R7	02623642	0.551-0.590	4.724	0.787	7.539	1.890	5.650	5.098	0.625
SD408-15.00/15.99-128-0625R7	02623643	0.591-0.630	5.039	0.787	7.921	1.890	6.031	5.441	0.625
SD408-16.00/16.99-136-0750R7	02623644	0.630-0.669	5.354	0.945	8.382	1.969	6.413	5.783	0.750
SD408-17.00/17.99-144-0750R7	02623645	0.669-0.708	5.669	0.945	8.764	1.969	6.795	6.126	0.750
SD408-18.00/18.99-152-0750R7	02623646	0.709-0.748	5.984	0.945	9.146	1.969	7.177	6.469	0.750
SD408-19.00/19.99-160-0750R7	02623647	0.748-0.787	6.299	0.945	9.528	1.969	7.559	6.811	0.750

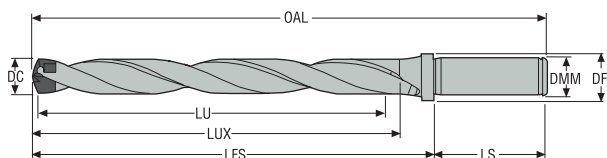
Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



SD408 – R1


Drilling depth ~ 8 x D – Metric shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 219

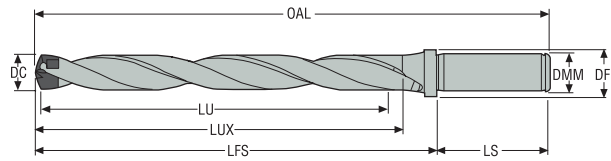
Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF
		mm	mm	mm	mm	mm	mm	mm	mm
SD408-12.00/12.49-100-16R1	02623627	12,0-12,49	100,0	168,2	108,2	120,2	48,0	16,0	20,0
SD408-12.50/12.99-104-16R1	02623628	12,5-12,99	104,0	173,0	112,5	125,0	48,0	16,0	20,0
SD408-13.00/13.99-112-16R1	02623629	13,0-13,99	112,0	181,9	120,9	133,9	48,0	16,0	20,0
SD408-14.00/14.99-120-16R1	02623630	14,0-14,99	120,0	191,5	129,5	143,5	48,0	16,0	20,0
SD408-15.00/15.99-128-16R1	02623631	15,0-15,99	128,0	201,2	138,2	153,2	48,0	16,0	20,0
SD408-16.00/16.99-136-20R1	02623632	16,0-16,99	136,0	212,9	146,9	162,9	50,0	20,0	24,0
SD408-17.00/17.99-144-20R1	02623633	17,0-17,99	144,0	222,6	155,6	172,6	50,0	20,0	24,0
SD408-18.00/18.99-152-20R1	02623634	18,0-18,99	152,0	232,3	164,3	182,3	50,0	20,0	24,0
SD408-19.00/19.99-160-20R1	02623635	19,0-19,99	160,0	242,0	173,0	192,0	50,0	20,0	24,0

Accessories

For drill dia. (mm)	Key
	
12,00-12,99	SD400-K05
13,00-14,99	SD400-K06
15,00-16,99	SD400-K07
17,00-18,99	SD400-K08
19,00-19,99	SD400-K09

SD408 – R1

Drilling depth ~ 8 x D – Inch shank



- Internal coolant
- Cylindrical shank (R1) fits holders: 5834 and 5672
- For cutting data see page(s) 219

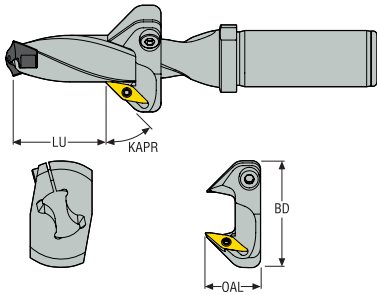
Designation	Item number	DC	LU	DF	OAL	LS	LFS	LUX	DMM
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>
SD408-12.00/12.49-100-0625R1	02623651	0.472-0.492	3.937	0.787	6.622	1.890	4.732	4.260	0.625
SD408-12.50/12.99-104-0625R1	02623652	0.492-0.511	4.094	0.787	6.811	1.890	4.921	4.429	0.625
SD408-13.00/13.99-112-0625R1	02623653	0.512-0.551	4.409	0.787	7.161	1.890	5.272	4.760	0.625
SD408-14.00/14.99-120-0625R1	02623654	0.551-0.590	4.724	0.787	7.539	1.890	5.650	5.098	0.625
SD408-15.00/15.99-128-0625R1	02623655	0.591-0.630	5.039	0.787	7.921	1.890	6.031	5.441	0.625
SD408-16.00/16.99-136-0750R1	02623656	0.630-0.669	5.354	0.945	8.382	1.969	6.413	5.783	0.750
SD408-17.00/17.99-144-0750R1	02623657	0.669-0.708	5.669	0.945	8.764	1.969	6.795	6.126	0.750
SD408-18.00/18.99-152-0750R1	02623658	0.709-0.748	5.984	0.945	9.146	1.969	7.177	6.469	0.750
SD408-19.00/19.99-160-0750R1	02623659	0.748-0.787	6.299	0.945	9.528	1.969	7.559	6.811	0.750

Accessories

For drill dia. (inch)	Key
0.472-0.511	SD400-K05
0.512-0.590	SD400-K06
0.591-0.669	SD400-K07
0.669-0.748	SD400-K08
0.748-0.787	SD400-K09



Chamfer module



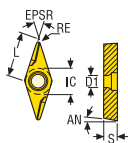
Designation	Item number	For drill body	Drill depth LU						Max chamfer depth	OAL	BD	KAPR°
			SD403 (min-max)		SD405 (min-max)		SD408 (min-max)					
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				
SD400-C45-12.00/12.49	02846075	SD40x-12.00/12.49	6,0 0.236	22,0 0.866	6,0 0.236	47,0 1.850	47,0 1.850	84,0 3.307	1,5 0.059	20,0 0.787	34,0 1.339	45
SD400-C45-12.50/12.99	02846076	SD40x-12.50/12.99	7,0 0.276	23,0 0.906	7,0 0.276	48,0 1.890	48,0 1.890	88,0 3.465	1,5 0.059	20,0 0.787	34,0 1.339	45
SD400-C45-13.00/13.99	02846077	SD40x-13.00/13.99	7,0 0.276	27,0 1.063	7,0 0.276	55,0 2.165	55,0 2.165	97,0 3.819	1,5 0.059	20,0 0.787	34,0 1.339	45
SD400-C45-14.00/14.99	02846078	SD40x-14.00/14.99	7,0 0.276	33,0 1.299	7,0 0.276	60,0 2.362	60,0 2.362	105,0 4.134	1,5 0.059	20,0 0.787	36,0 1.417	45
SD400-C45-15.00/15.99	02846079	SD40x-15.00/15.99	8,0 0.315	35,0 1.378	8,0 0.315	67,0 2.638	67,0 2.638	114,0 4.488	1,5 0.059	20,0 0.787	36,0 1.417	45
SD400-C45-16.00/16.99	02846080	SD40x-16.00/16.99	8,0 0.315	38,0 1.496	8,0 0.315	72,0 2.835	72,0 2.835	123,0 4.843	1,5 0.059	20,0 0.787	38,0 1.496	45
SD400-C45-17.00/17.99	02846117	SD40x-17.00/17.99	9,0 0.354	43,0 1.693	9,0 0.354	79,0 3.110	79,0 3.110	132,0 5.197	1,5 0.059	20,0 0.787	38,0 1.496	45
SD400-C45-18.00/18.99	02846082	SD40x-18.00/18.99	9,0 0.354	45,0 1.772	9,0 0.354	83,0 3.268	83,0 3.268	140,0 5.512	1,5 0.059	20,0 0.787	40,0 1.575	45
SD400-C45-19.00/19.99	02846083	SD40x-19.00/19.99	10,0 0.394	49,0 1.929	10,0 0.394	89,0 3.504	89,0 3.504	149,0 5.866	1,5 0.059	20,0 0.787	40,0 1.575	45

Spare Parts, included in delivery

For drill dia. (mm)	Insert key	Insert screw	Locking key	Locking key	Locking screw 1	Locking screw 2
SD400-C45...	T07P-2	C02505-T07P	2SMS795	3SMS795	MC6S4X8	P6SS4X8

Insert

Tolerances: mm/inch	Size	L		RE	IC	D1	S
		mm/inch	EPSR				
IC = ±0,025/0.0009842 S = ±0,07/0.0027559 RE = ±0,10/0.0039370	09	9,0/ 0.2187	35°	0,2/ 0.0078	5,556/ 0.2187	2,9/ 0.1141	7° 2,5/ 0.0984
		Grade: T400D					
		Designation: VCGX090202-D1					
		Item number: 00014948					



Crowns – Geometry -P and -M

Point angle 140°



Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	DC	
				mm	inch
SD400-12.00-M	02826210	-	■	12,0	0.472
SD400-12.00-P	02630908	■	-	12,0	0.472
SD400-12.10-P	02630910	■	-	12,1	0.476
SD400-12.20-P	02630911	■	-	12,2	0.480
SD400-12.30-M	02826211	-	■	12,3	0.484
SD400-12.30-P	02630912	■	-	12,3	0.484
SD400-12.41-M	02826212	-	■	12,41	0.489
SD400-12.41-P	02630913	■	-	12,41	0.489
SD400-12.50-M	02826213	-	■	12,5	0.492
SD400-12.50-P	02630915	■	-	12,5	0.492
SD400-12.60-P	02630916	■	-	12,6	0.496
SD400-12.70-M	02826214	-	■	12,7	0.500
SD400-12.70-P	02630917	■	-	12,7	0.500
SD400-12.80-M	02826215	-	■	12,8	0.504
SD400-12.80-P	02630918	■	-	12,8	0.504
SD400-12.90-M	02826216	-	■	12,9	0.508
SD400-12.90-P	02630919	■	-	12,9	0.508
SD400-13.00-M	02826217	-	■	13,0	0.512
SD400-13.00-P	02634577	■	-	13,0	0.512
SD400-13.10-M	02826218	-	■	13,1	0.516
SD400-13.10-P	02634578	■	-	13,1	0.516
SD400-13.20-P	02634579	■	-	13,2	0.520
SD400-13.30-M	02826219	-	■	13,3	0.524
SD400-13.30-P	02634580	■	-	13,3	0.524
SD400-13.50-M	02826220	-	■	13,5	0.531
SD400-13.50-P	02634581	■	-	13,5	0.531
SD400-13.70-M	02826221	-	■	13,7	0.539
SD400-13.70-P	02634582	■	-	13,7	0.539
SD400-13.80-M	02826222	-	■	13,8	0.543
SD400-13.80-P	02634583	■	-	13,8	0.543
SD400-13.89-M	02826223	-	■	13,89	0.547
SD400-13.89-P	02634584	■	-	13,89	0.547
SD400-14.00-M	02826224	-	■	14,0	0.551
SD400-14.00-P	02634589	■	-	14,0	0.551
SD400-14.10-P	02634590	■	-	14,1	0.555
SD400-14.20-M	02826225	-	■	14,2	0.559
SD400-14.20-P	02634591	■	-	14,2	0.559
SD400-14.288-M	02826226	-	■	14,29	0.563
SD400-14.288-P	02634592	■	-	14,288	0.563

Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	DC	
				mm	inch
SD400-14.40-P	02634593	■	–	14,4	0.567
SD400-14.50-M	02826227	–	■	14,5	0.571
SD400-14.50-P	02634594	■	–	14,5	0.571
SD400-14.68-M	02826228	–	■	14,68	0.578
SD400-14.68-P	02634595	■	–	14,68	0.578
SD400-14.70-M	02826229	–	■	14,7	0.579
SD400-14.70-P	02634596	■	–	14,7	0.579
SD400-14.80-M	02826230	–	■	14,8	0.583
SD400-14.80-P	02634597	■	–	14,8	0.583
SD400-14.90-M	02826231	–	■	14,9	0.587
SD400-14.90-P	02634598	■	–	14,9	0.587
SD400-15.00-M	02826232	–	■	15,0	0.591
SD400-15.00-P	02634599	■	–	15,0	0.591
SD400-15.08-M	02826233	–	■	15,08	0.594
SD400-15.08-P	02634600	■	–	15,08	0.594
SD400-15.10-P	02634601	■	–	15,1	0.594
SD400-15.20-P	02634602	■	–	15,2	0.598
SD400-15.25-M	02826234	–	■	15,25	0.600
SD400-15.25-P	02634603	■	–	15,25	0.600
SD400-15.478-M	02826235	–	■	15,48	0.609
SD400-15.478-P	02634604	■	–	15,478	0.609
SD400-15.50-M	02826236	–	■	15,5	0.610
SD400-15.50-P	02634605	■	–	15,5	0.610
SD400-15.70-M	02826237	–	■	15,7	0.618
SD400-15.70-P	02634607	■	–	15,7	0.618
SD400-15.80-M	02826238	–	■	15,8	0.622
SD400-15.80-P	02634608	■	–	15,8	0.622
SD400-15.875-M	02826239	–	■	15,88	0.625
SD400-15.875-P	02634609	■	–	15,875	0.625
SD400-16.00-M	02826240	–	■	16,0	0.630
SD400-16.00-P	02635956	■	–	16,0	0.630
SD400-16.10-P	02635957	■	–	16,1	0.634
SD400-16.20-P	02635958	■	–	16,2	0.638
SD400-16.25-P	02635959	■	–	16,25	0.640
SD400-16.27-M	02826241	–	■	16,27	0.641
SD400-16.27-P	02635960	■	–	16,27	0.641
SD400-16.40-P	02635962	■	–	16,4	0.646
SD400-16.50-M	02826242	–	■	16,5	0.650
SD400-16.50-P	02635963	■	–	16,5	0.650
SD400-16.669-M	02826243	–	■	16,67	0.656
SD400-16.669-P	02635964	■	–	16,669	0.656
SD400-16.70-M	02826244	–	■	16,7	0.657
SD400-16.70-P	02635966	■	–	16,7	0.657
SD400-16.80-M	02826245	–	■	16,8	0.661
SD400-16.80-P	02635968	■	–	16,8	0.661
SD400-16.90-P	02635969	■	–	16,9	0.665
SD400-17.00-M	02826246	–	■	17,0	0.669
SD400-17.00-P	02635970	■	–	17,0	0.669
SD400-17.065-M	02826247	–	■	17,07	0.672
SD400-17.065-P	02635972	■	–	17,065	0.672
SD400-17.10-P	02635973	■	–	17,1	0.673

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Designation	Item number	P-geometry for steel	M-geometry for stainless steels and high temp alloys	DC	
				mm	inch
SD400-17.20-P	02635974	■	-	17,2	0.677
SD400-17.35-P	02888828	■	-	17,35	0.683
SD400-17.463-M	02826248	-	■	17,46	0.687
SD400-17.463-P	02635975	■	-	17,463	0.688
SD400-17.50-M	02826249	-	■	17,5	0.689
SD400-17.50-P	02635976	■	-	17,5	0.689
SD400-17.70-M	02826250	-	■	17,7	0.697
SD400-17.70-P	02635977	■	-	17,7	0.697
SD400-17.80-M	02826251	-	■	17,8	0.701
SD400-17.80-P	02635978	■	-	17,8	0.701
SD400-17.859-M	02826252	-	■	17,86	0.703
SD400-17.859-P	02635979	■	-	17,859	0.703
SD400-17.90-M	02826253	-	■	17,9	0.705
SD400-17.90-P	02635980	■	-	17,9	0.705
SD400-18.00-M	02826254	-	■	18,0	0.709
SD400-18.00-P	02635981	■	-	18,0	0.709
SD400-18.10-P	02635982	■	-	18,1	0.713
SD400-18.20-P	02635983	■	-	18,2	0.717
SD400-18.256-M	02826255	-	■	18,26	0.719
SD400-18.256-P	02635984	■	-	18,256	0.719
SD400-18.50-M	02826256	-	■	18,5	0.728
SD400-18.50-P	02635985	■	-	18,5	0.728
SD400-18.653-M	02826257	-	■	18,65	0.734
SD400-18.653-P	02635986	■	-	18,653	0.734
SD400-18.70-M	02826258	-	■	18,7	0.736
SD400-18.70-P	02635987	■	-	18,7	0.736
SD400-18.80-M	02826259	-	■	18,8	0.740
SD400-18.80-P	02635988	■	-	18,8	0.740
SD400-18.90-M	02826260	-	■	18,9	0.744
SD400-18.90-P	02635989	■	-	18,9	0.744
SD400-19.00-M	02826261	-	■	19,0	0.748
SD400-19.00-P	02635991	■	-	19,0	0.748
SD400-19.05-M	02826262	-	■	19,05	0.750
SD400-19.05-P	02635992	■	-	19,05	0.750
SD400-19.10-P	02635993	■	-	19,1	0.752
SD400-19.20-M	02826263	-	■	19,2	0.756
SD400-19.20-P	02635995	■	-	19,2	0.756
SD400-19.25-M	02925410	-	■	19,25	0.758
SD400-19.447-M	02826264	-	■	19,45	0.766
SD400-19.447-P	02635997	■	-	19,447	0.766
SD400-19.50-M	02826265	-	■	19,5	0.768
SD400-19.50-P	02635998	■	-	19,5	0.768
SD400-19.70-M	02826266	-	■	19,7	0.776
SD400-19.70-P	02635999	■	-	19,7	0.776
SD400-19.80-M	02826267	-	■	19,8	0.780
SD400-19.80-P	02636000	■	-	19,8	0.780
SD400-19.844-M	02826268	-	■	19,84	0.781
SD400-19.844-P	02636001	■	-	19,844	0.781
SD400-19.90-M	02826269	-	■	19,9	0.783
SD400-19.90-P	02636002	■	-	19,9	0.783

■ Stock standard.

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SD403 – Ø 12-20 mm / 0.472-0.787 inch

SMG		f					v _c
		Ø12,00 Ø 0.472	Ø14,00 Ø 0.551	Ø16,00 Ø 0.630	Ø18,00 Ø 0.709	Ø20,00 Ø 0.787	
P1	P	0,30	0,32	0,34	0,36	0,36	155
	P	0.012	0.013	0.013	0.014	0.014	510
P2	P	0,30	0,32	0,34	0,36	0,38	150
	P	0.012	0.013	0.013	0.014	0.015	490
P3	P	0,28	0,30	0,32	0,34	0,36	130
	P	0.011	0.012	0.013	0.013	0.014	425
P4	P	0,28	0,30	0,32	0,34	0,34	115
	P	0.011	0.012	0.013	0.013	0.013	375
P5	P	0,28	0,30	0,32	0,32	0,34	110
	P	0.011	0.012	0.013	0.013	0.013	360
P6	P	0,28	0,30	0,30	0,32	0,34	120
	P	0.011	0.012	0.012	0.013	0.013	395
P7	P	0,28	0,30	0,30	0,32	0,34	115
	P	0.011	0.012	0.012	0.013	0.013	375
P8	P	0,28	0,30	0,32	0,34	0,36	110
	P	0.011	0.012	0.013	0.013	0.014	360
P11	P	0,28	0,30	0,30	0,32	0,34	110
	P	0.011	0.012	0.012	0.013	0.013	360
P12	P	0,19	0,20	0,22	0,22	0,24	65
	P	0.0075	0.0080	0.0085	0.0085	0.0095	215
M1	M	0,17	0,19	0,20	0,22	0,22	95
	M	0.0065	0.0075	0.0080	0.0085	0.0085	310
M2	M	0,16	0,17	0,18	0,19	0,20	80
	M	0.0065	0.0065	0.0070	0.0075	0.0080	260
M3	M	0,13	0,14	0,14	0,15	0,16	60
	M	0.0050	0.0055	0.0055	0.0060	0.0065	195
M4	M	0,11	0,12	0,13	0,13	0,14	45
	M	0.0044	0.0048	0.0050	0.0050	0.0055	150
M5	M	0,11	0,12	0,13	0,13	0,14	37
	M	0.0044	0.0048	0.0050	0.0050	0.0055	120
K1	P	0,28	0,30	0,32	0,34	0,36	110
	P	0.011	0.012	0.013	0.013	0.014	360
K2	P	0,26	0,28	0,30	0,32	0,32	95
	P	0.010	0.011	0.012	0.013	0.013	310
K3	P	0,26	0,28	0,30	0,32	0,32	80
	P	0.010	0.011	0.012	0.013	0.013	260
K4	P	0,26	0,28	0,30	0,32	0,32	75
	P	0.010	0.011	0.012	0.013	0.013	245
K5	P	0,24	0,25	0,26	0,28	0,30	45
	P	0.0095	0.010	0.010	0.011	0.012	150
N2	M	0,26	0,28	0,30	0,32	0,34	215
	M	0.010	0.011	0.012	0.013	0.013	710
N3	M	0,26	0,28	0,30	0,32	0,34	145
	M	0.010	0.011	0.012	0.013	0.013	475
N11	M	0,26	0,28	0,30	0,32	0,34	170
	M	0.010	0.011	0.012	0.013	0.013	560
S1	M	0,095	0,11	0,12	0,13	0,13	34
	M	0.0038	0.0044	0.0048	0.0050	0.0050	110
S2	M	0,095	0,11	0,12	0,13	0,13	24
	M	0.0038	0.0044	0.0048	0.0050	0.0050	80
S3	M	0,095	0,11	0,12	0,13	0,13	24
	M	0.0038	0.0044	0.0048	0.0050	0.0050	80
S11	M	0,16	0,17	0,19	0,20	0,22	65
	M	0.0065	0.0065	0.0075	0.0080	0.0085	215
S12	M	0,16	0,17	0,19	0,20	0,22	49
	M	0.0065	0.0065	0.0075	0.0080	0.0085	160
S13	M	0,14	0,15	0,17	0,18	0,19	38
	M	0.0055	0.0060	0.0065	0.0070	0.0075	125
H3	P	0,12	0,13	0,14	0,15	0,15	32
	P	0.0048	0.0050	0.0055	0.0060	0.0060	105
H5	P	0,19	0,20	0,22	0,22	0,24	60
	P	0.0075	0.0080	0.0085	0.0085	0.0095	195
H7	P	0,12	0,13	0,14	0,15	0,15	32
	P	0.0048	0.0050	0.0055	0.0060	0.0060	105
H8	P	0,14	0,15	0,16	0,17	0,18	60
	P	0.0055	0.0060	0.0065	0.0065	0.0070	195
H11	P	0,19	0,20	0,22	0,22	0,24	75
	P	0.0075	0.0080	0.0085	0.0085	0.0095	245
H12	P	0,14	0,15	0,16	0,17	0,18	39
	P	0.0055	0.0060	0.0065	0.0065	0.0070	130
H21	P	0,14	0,15	0,16	0,17	0,18	60
	P	0.0055	0.0060	0.0065	0.0065	0.0070	195

 SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD405 – Ø 12-20 mm / 0.472-0.787 inch

SMG	f						V _c
	Ø 12,00 Ø 0.472		Ø 14,00 Ø 0.551		Ø 16,00 Ø 0.630		
	Ø 18,00 Ø 0.709		Ø 20,00 Ø 0.787				
P1	P	0,30	0,32	0,34	0,36	0,36	125
	P	0.012	0.013	0.013	0.014	0.014	410
P2	P	0,30	0,32	0,34	0,36	0,38	120
	P	0.012	0.013	0.013	0.014	0.015	395
P3	P	0,28	0,30	0,32	0,34	0,36	105
	P	0.011	0.012	0.013	0.013	0.014	345
P4	P	0,28	0,30	0,32	0,34	0,34	95
	P	0.011	0.012	0.013	0.013	0.013	310
P5	P	0,28	0,30	0,32	0,32	0,34	90
	P	0.011	0.012	0.013	0.013	0.013	295
P6	P	0,28	0,30	0,30	0,32	0,34	100
	P	0.011	0.012	0.012	0.013	0.013	330
P7	P	0,28	0,30	0,30	0,32	0,34	95
	P	0.011	0.012	0.012	0.013	0.013	310
P8	P	0,28	0,30	0,32	0,34	0,36	90
	P	0.011	0.012	0.013	0.013	0.014	295
P11	P	0,28	0,30	0,30	0,32	0,34	90
	P	0.011	0.012	0.012	0.013	0.013	295
P12	P	0,19	0,20	0,22	0,22	0,24	55
	P	0.0075	0.0080	0.0085	0.0085	0.0095	180
M1	M	0,17	0,19	0,20	0,22	0,22	80
	M	0.0065	0.0075	0.0080	0.0085	0.0085	260
M2	M	0,16	0,17	0,18	0,19	0,20	65
	M	0.0065	0.0065	0.0070	0.0075	0.0080	215
M3	M	0,13	0,14	0,14	0,15	0,16	49
	M	0.0050	0.0055	0.0055	0.0060	0.0065	160
M4	M	0,11	0,12	0,13	0,13	0,14	37
	M	0.0044	0.0048	0.0050	0.0050	0.0055	120
M5	M	0,11	0,12	0,13	0,13	0,14	31
	M	0.0044	0.0048	0.0050	0.0050	0.0055	100
K1	P	0,28	0,30	0,32	0,34	0,36	90
	P	0.011	0.012	0.013	0.013	0.014	295
K2	P	0,26	0,28	0,30	0,32	0,32	75
	P	0.010	0.011	0.012	0.013	0.013	245
K3	P	0,26	0,28	0,30	0,32	0,32	65
	P	0.010	0.011	0.012	0.013	0.013	215
K4	P	0,26	0,28	0,30	0,32	0,32	60
	P	0.010	0.011	0.012	0.013	0.013	195
K5	P	0,24	0,25	0,26	0,28	0,30	37
	P	0.0095	0.010	0.010	0.011	0.012	120
N2	M	0,26	0,28	0,30	0,32	0,34	175
	M	0.010	0.011	0.012	0.013	0.013	570
N3	M	0,26	0,28	0,30	0,32	0,34	120
	M	0.010	0.011	0.012	0.013	0.013	395
N11	M	0,26	0,28	0,30	0,32	0,34	140
	M	0.010	0.011	0.012	0.013	0.013	460
S1	M	0,095	0,11	0,12	0,13	0,13	28
	M	0.0038	0.0044	0.0048	0.0050	0.0050	90
S2	M	0,095	0,11	0,12	0,13	0,13	20
	M	0.0038	0.0044	0.0048	0.0050	0.0050	65
S3	M	0,095	0,11	0,12	0,13	0,13	20
	M	0.0038	0.0044	0.0048	0.0050	0.0050	65
S11	M	0,16	0,17	0,19	0,20	0,22	50
	M	0.0065	0.0065	0.0075	0.0080	0.0085	165
S12	M	0,16	0,17	0,19	0,20	0,22	40
	M	0.0065	0.0065	0.0075	0.0080	0.0085	130
S13	M	0,14	0,15	0,17	0,18	0,19	31
	M	0.0055	0.0060	0.0065	0.0070	0.0075	100
H3	P	0,12	0,13	0,14	0,15	0,15	26
	P	0.0048	0.0050	0.0055	0.0060	0.0060	85
H5	P	0,19	0,20	0,22	0,22	0,24	49
	P	0.0075	0.0080	0.0085	0.0085	0.0095	160
H7	P	0,12	0,13	0,14	0,15	0,15	26
	P	0.0048	0.0050	0.0055	0.0060	0.0060	85
H8	P	0,14	0,15	0,16	0,17	0,18	49
	P	0.0055	0.0060	0.0065	0.0065	0.0070	160
H11	P	0,19	0,20	0,22	0,22	0,24	60
	P	0.0075	0.0080	0.0085	0.0085	0.0095	195
H12	P	0,14	0,15	0,16	0,17	0,18	32
	P	0.0055	0.0060	0.0065	0.0065	0.0070	105
H21	P	0,14	0,15	0,16	0,17	0,18	49
	P	0.0055	0.0060	0.0065	0.0065	0.0070	160

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD408 – Ø 12-20 mm / 0.472-0.787 inch

SMG	f						v _c
	Ø 12,00 Ø 0.472	Ø 14,00 Ø 0.551	Ø 16,00 Ø 0.630	Ø 18,00 Ø 0.709	Ø 20,00 Ø 0.787		
P1	P	0,30	0,32	0,34	0,36	0,36	100
	P	0.012	0.013	0.013	0.014	0.014	330
P2	P	0,30	0,32	0,34	0,36	0,38	100
	P	0.012	0.013	0.013	0.014	0.015	330
P3	P	0,28	0,30	0,32	0,34	0,36	85
	P	0.011	0.012	0.013	0.013	0.014	280
P4	P	0,28	0,30	0,32	0,34	0,34	75
	P	0.011	0.012	0.013	0.013	0.013	245
P5	P	0,28	0,30	0,32	0,32	0,34	70
	P	0.011	0.012	0.013	0.013	0.013	230
P6	P	0,28	0,30	0,30	0,32	0,34	80
	P	0.011	0.012	0.012	0.013	0.013	260
P7	P	0,28	0,30	0,30	0,32	0,34	75
	P	0.011	0.012	0.012	0.013	0.013	245
P8	P	0,28	0,30	0,32	0,34	0,36	70
	P	0.011	0.012	0.013	0.013	0.014	230
P11	P	0,28	0,30	0,30	0,32	0,34	75
	P	0.011	0.012	0.012	0.013	0.013	245
P12	P	0,19	0,20	0,22	0,22	0,24	43
	P	0.0075	0.0080	0.0085	0.0085	0.0095	140
M1	M	0,17	0,19	0,20	0,22	0,22	65
	M	0.0065	0.0075	0.0080	0.0085	0.0085	215
M2	M	0,16	0,17	0,18	0,19	0,20	50
	M	0.0065	0.0065	0.0070	0.0075	0.0080	165
M3	M	0,13	0,14	0,14	0,15	0,16	39
	M	0.0050	0.0055	0.0055	0.0060	0.0065	130
M4	M	0,11	0,12	0,13	0,13	0,14	29
	M	0.0044	0.0048	0.0050	0.0050	0.0055	95
M5	M	0,11	0,12	0,13	0,13	0,14	24
	M	0.0044	0.0048	0.0050	0.0050	0.0055	80
K1	P	0,28	0,30	0,32	0,34	0,36	70
	P	0.011	0.012	0.013	0.013	0.014	230
K2	P	0,26	0,28	0,30	0,32	0,32	60
	P	0.010	0.011	0.012	0.013	0.013	195
K3	P	0,26	0,28	0,30	0,32	0,32	50
	P	0.010	0.011	0.012	0.013	0.013	165
K4	P	0,26	0,28	0,30	0,32	0,32	49
	P	0.010	0.011	0.012	0.013	0.013	160
K5	P	0,24	0,25	0,26	0,28	0,30	29
	P	0.0095	0.010	0.010	0.011	0.012	95
N2	M	0,26	0,28	0,30	0,32	0,34	140
	M	0.010	0.011	0.012	0.013	0.013	460
N3	M	0,26	0,28	0,30	0,32	0,34	95
	M	0.010	0.011	0.012	0.013	0.013	310
N11	M	0,26	0,28	0,30	0,32	0,34	110
	M	0.010	0.011	0.012	0.013	0.013	360
S1	M	0,095	0,11	0,12	0,13	0,13	22
	M	0.0038	0.0044	0.0048	0.0050	0.0050	70
S2	M	0,095	0,11	0,12	0,13	0,13	16
	M	0.0038	0.0044	0.0048	0.0050	0.0050	50
S3	M	0,095	0,11	0,12	0,13	0,13	16
	M	0.0038	0.0044	0.0048	0.0050	0.0050	50
S11	M	0,16	0,17	0,19	0,20	0,22	42
	M	0.0065	0.0065	0.0075	0.0080	0.0085	140
S12	M	0,16	0,17	0,19	0,20	0,22	32
	M	0.0065	0.0065	0.0075	0.0080	0.0085	105
S13	M	0,14	0,15	0,17	0,18	0,19	25
	M	0.0055	0.0060	0.0065	0.0070	0.0075	80
H3	P	0,12	0,13	0,14	0,15	0,15	21
	P	0.0048	0.0050	0.0055	0.0060	0.0060	70
H5	P	0,19	0,20	0,22	0,22	0,24	39
	P	0.0075	0.0080	0.0085	0.0085	0.0095	130
H7	P	0,12	0,13	0,14	0,15	0,15	21
	P	0.0048	0.0050	0.0055	0.0060	0.0060	70
H8	P	0,14	0,15	0,16	0,17	0,18	39
	P	0.0055	0.0060	0.0065	0.0065	0.0070	130
H11	P	0,19	0,20	0,22	0,22	0,24	49
	P	0.0075	0.0080	0.0085	0.0085	0.0095	160
H12	P	0,14	0,15	0,16	0,17	0,18	26
	P	0.0055	0.0060	0.0065	0.0065	0.0070	85
H21	P	0,14	0,15	0,16	0,17	0,18	39
	P	0.0055	0.0060	0.0065	0.0065	0.0070	130

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

Introduction

Drilling

Reaming

Boring

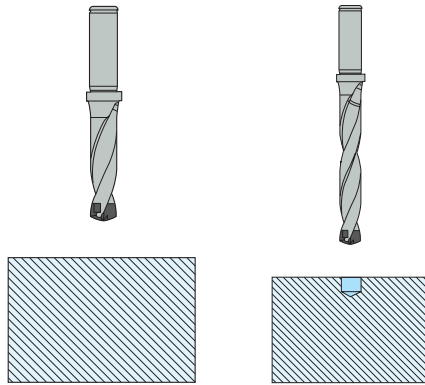
Annex

Application information

Application information

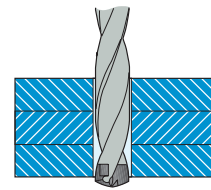
Machined surface

No pre-drilling or entrance feed needed when using SD403 and SD405. When using a SD408 drill body pre-drilling is always recommended. (When using SD405 in stainless steel a pre-drilling operation might be needed.)



Stacked material

It is possible to drill stacked material as long as the pieces are securely clamped together, so that there are no air gaps between the parts. Air gaps can affect chip evacuation, and thereby damage the drill.

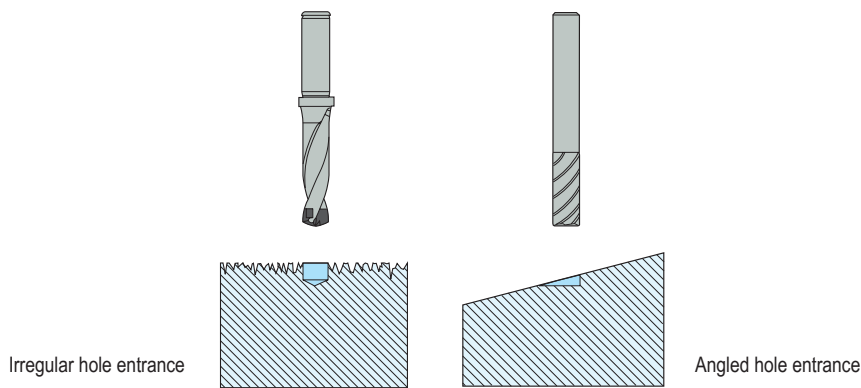


Irregular/Angled hole entrance

If irregular or angle entrance use pre operations accordingly. When using drills > 3 x D pre-drilling with a standard tool e.g. SD403 is recommended

Pre-drilling operation alternatives

Machine a flat using an end mill from the Seco range.



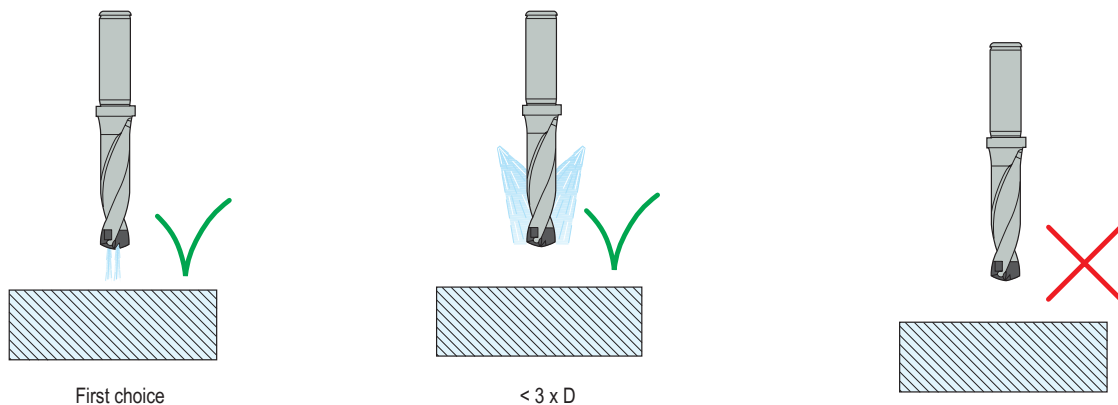
Coolant recommendations

Coolant pressure

Minimum recommended coolant pressure 10 bar (145 PSI) with $\leq 3 \times D$
Minimum recommended coolant pressure 30 bar (435 PSI) with $> 3 \times D$

Coolant mix

Recommended emulsion mix 6-8%. When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended

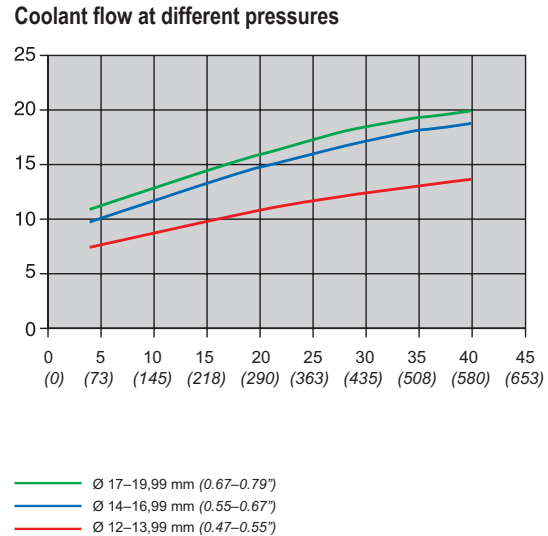
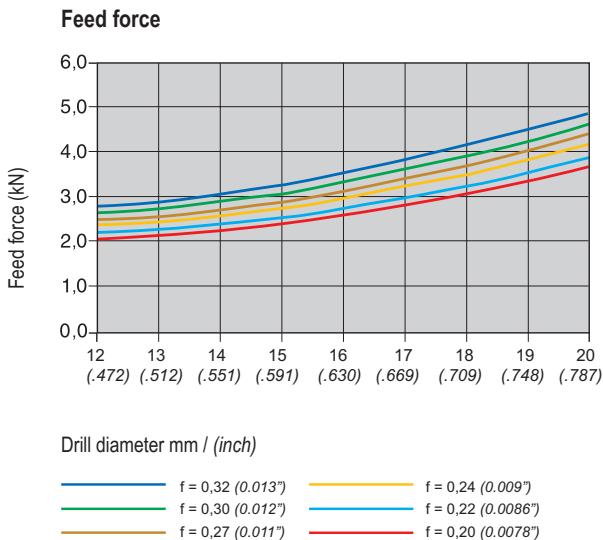
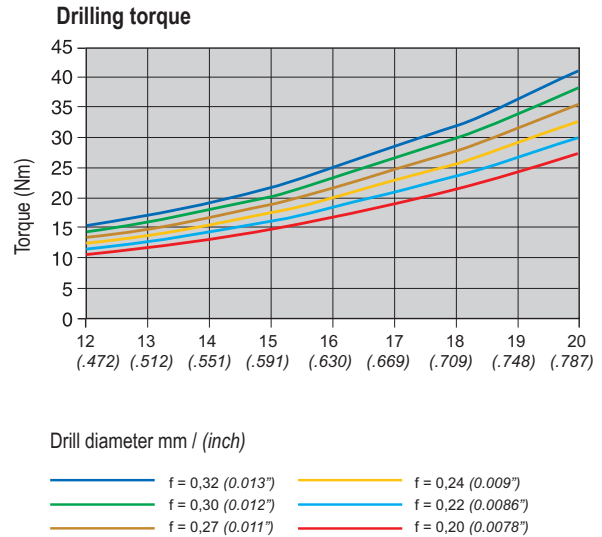
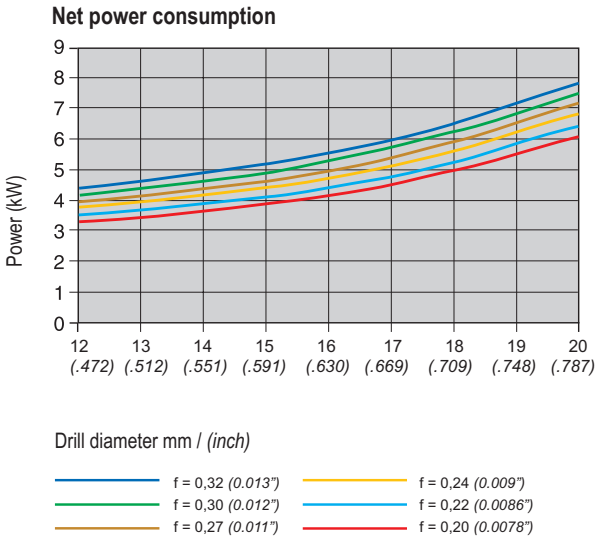


First choice

< 3 x D

Machining data

The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.
The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 90 m/min (295 sf/min).



Recommended coolant flow $D \times 1$ l/min
Minimum coolant flow $D/2$ l/min
D = Drill diameter
Minimum recommended coolant pressure 10 bar (145 PSI) with $\leq 3 \times D$
Minimum recommended coolant pressure 20 bar (290 PSI) with $\leq 5 \times D$
Minimum recommended coolant pressure 40 bar (580 PSI) with $> 5 \times D$

Coolant mix
Recommended emulsion mix is 6–8%.
When drilling in stainless steels, superalloys and high strength steels a mix of 10% is recommended.

Hole tolerances/Surface finish

SD403, SD405 and SD408 IT9-10 / R_a 1-4*, R_a 39-157 μm *					
Drill Ø DC (mm)	IT9 tolerance (μm)	IT10 tolerance (μm)	Drill Ø DC (inch)	IT9 tolerance (inch)	IT10 tolerance (inch)
10-18	0 – +43	0 – +70	0 – +0.394-0.709	0 – +0.0017	0 – +0.0028
18-30	0 – +52	0 – +84	0 – +0.709-1.181	0 – +0.0020	0 – +0.0033

*Deterioration of surface finish and hole tolerance can occur when drilling in low carbon steel or stainless steel. Use the shortest drill possible for best hole quality.

Troubleshooting – Initial check points:

- Fixturing stability
- Machine spindle condition
- Tool holder condition
- Clamping of tool:
 - Run-out within 0,06 TIR
- Chip evacuation:
 - Cutting data
- Coolant:
 - Pressure
 - Flow
 - Concentration

<p>Cutting edges get chipped</p> <ul style="list-style-type: none"> • Reduce the feed/rev • If the drill vibrates, reduce the cutting speed and increase the feed rate • When drilling through rough, hard or angled surfaces, reduce the feed rate by 30%-50% during entrance and exit 		<p>Unsatisfactory diameter tolerance</p> <ul style="list-style-type: none"> • Increase the feed/rev • Use a Seco Feedmax solid carbide drill, see page(s) 15-18 • Use a reaming operation, see page(s) 322 • Use a boring operation, see pages(s) 492-493 	
<p>Too fast flank wear</p> <ul style="list-style-type: none"> • Check that correct geometry is used • Reduce the cutting speed 		<p>Unsatisfactory surface finish</p> <ul style="list-style-type: none"> • Reduce the feed/rev • Increase the cutting speed • Check that the correct geometry is used • Use a Seco Feedmax solid carbide drill, see page(s) 15-18 • Use a reaming operation, see page(s) 322 	
<p>Groove wear</p> <ul style="list-style-type: none"> • Reduce the feed /rev • Reduce the cutting speed • Increase the coolant concentration 		<p>Unsatisfactory positioning of the hole</p> <ul style="list-style-type: none"> • Reduce the feed/rev • If drilling through rough, hard and angled surface - reduce the feed by 30%-50% during entrance and exit • Pre drill with a 140° point angle • Use a Seco Feedmax solid carbide drill see Feedmax page(s) 15-18 • Use a boring operation, see page(s) 492-493 	
<p>Wear of peripheral land margins</p> <ul style="list-style-type: none"> • Check that the correct geometry is used • Reduce the cutting speed • Increase the coolant concentration • When drilling through rough, hard or angled surfaces, reduce the feed rate by 30-50% during entrance and exit 		<p>Chip jamming due to long chips</p> <ul style="list-style-type: none"> • Increase the feed • In long chipping materials SMG P1-P4, SMG M1-M2: <ul style="list-style-type: none"> - Increase cutting speed and reduce feed/rev - Use the L geometry 	



Perfomax®



Perfomax® is a long-standing, proven range of indexable insert drills that offers an economical solution when it comes to productively drilling holes.

- Reliable and trustworthy, square inserts each offer four cutting edges.
- Most modern inserts grades and geometries for different workpiece materials
- The drill body design features a unique chip flute design and through coolant holes on all sizes to optimize chip evacuation.

Range overview

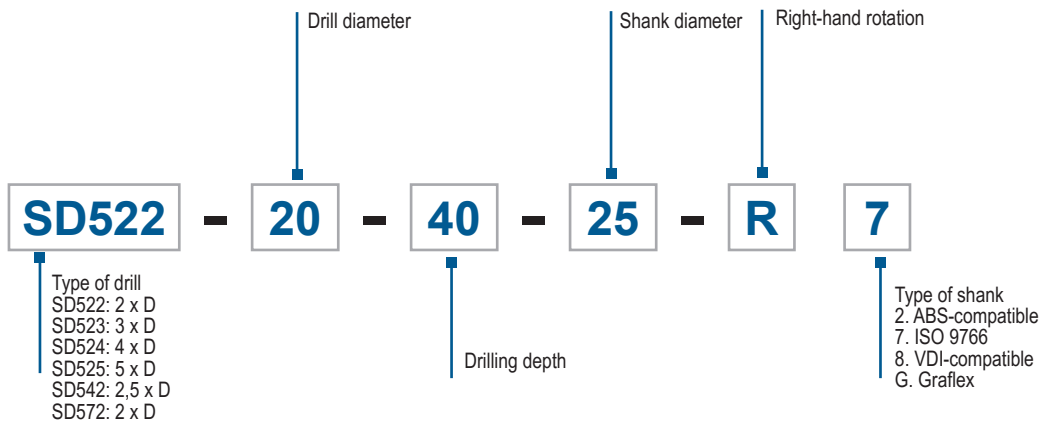
Perfomax®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance
<p>SD522</p>  <p>Page(s) 230, 231, 232, 233-237, 238, 239</p>	<p>15-59 mm (0.594-2.375")</p>	<p>~ 2 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+0/+ 0,2 mm (+ 0/+ 0.008")</p>
<p>SD523</p>  <p>Page(s) 240, 241, 242, 243-256, 257, 258</p>	<p>15-59 mm (0.594-2.375")</p>	<p>~ 3 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+0/+ 0,3 mm (+ 0/+ 0.012")</p>
<p>SD524</p>  <p>Page(s) 259, 260, 261-271, 272</p>	<p>17-59 mm (0.594-2.375")</p>	<p>~ 4 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+ 0,4 mm (+ 0/+ 0.016")</p>
<p>SD525</p>  <p>Page(s) 273, 274-275</p>	<p>19-45 mm (0.750-2.000")</p>	<p>~ 5 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+0/+ 0,5 mm (+ 0/+ 0.020")</p>
<p>SD542</p>  <p>Page(s) 276-277</p>	<p>60-85 mm (2.250-3.500")</p>	<p>~ 2.5 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+0/+ 0,2 mm (+ 0/+ 0.008")</p>

Range overview

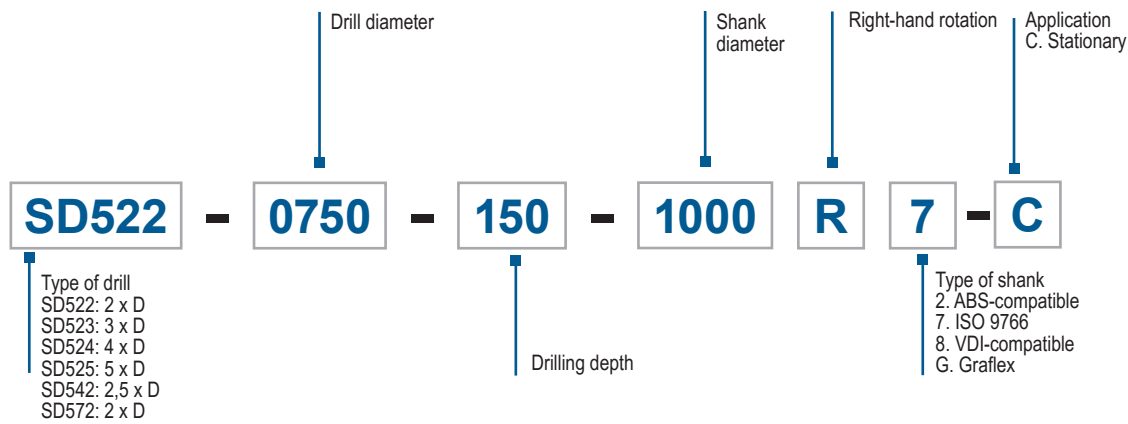
Perfomax®	∅ Range	Drill depth	Drill ∅ tolerance	Hole tolerance
<p>SD572</p>  <p>Page(s) 278, 279</p>	<p>15-47 mm (0.591"-1.850")</p>	<p>~ 2 x D</p>	<p>+/- 0,1 mm (+/- 0.004")</p>	<p>+0/+ 0,2 mm (+ 0/+ 0.008")</p>
<p>SD602</p>  <p>Page(s) 282-286</p>	<p>60-160 mm (2.5"-4.000")</p>	<p>~ 1-10 x D</p>	<p>+/- 0,2 mm (+/- 0.008")</p>	<p>-</p>

Code keys- Indexable insert drill

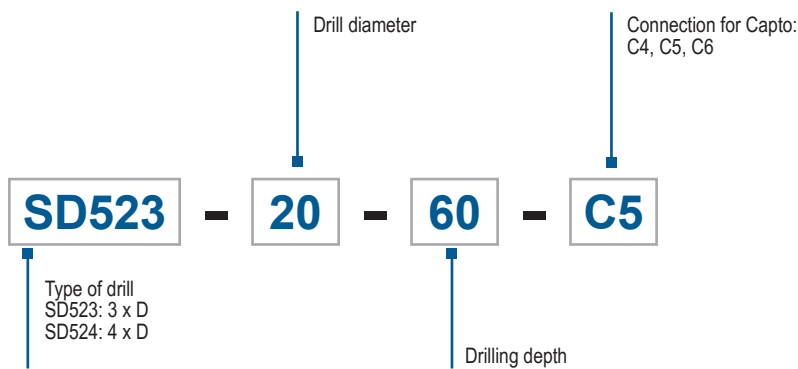
Metric



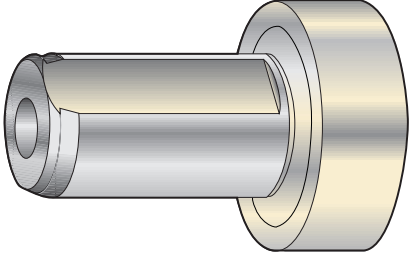
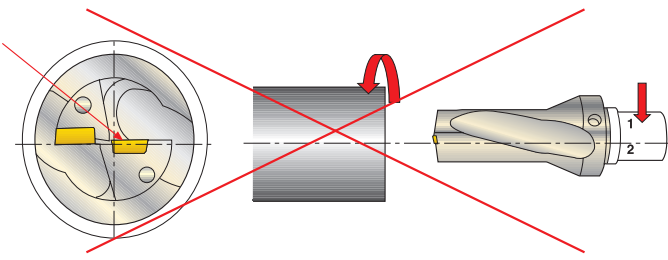
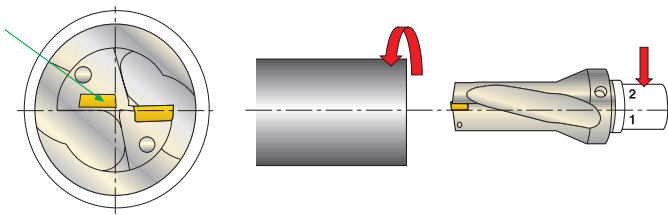
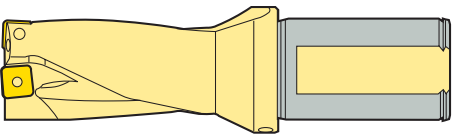
Inch



Capto™



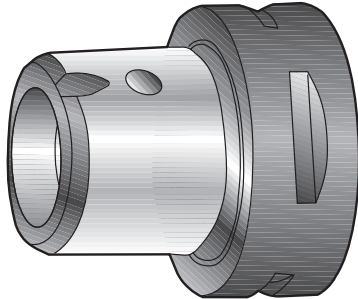
Shanks

Shanks	
<p>-R7</p> 	<p>ISO 9766 Universal choice fits into most holders on the market such as:</p> <ul style="list-style-type: none"> • Weldon 1835B • ISO 5414 • DIN 69880 <p>Coolant inlet at the back end of the drill.</p>
<p>R7 and R7-C</p> 	<p>Shanks with two or four flats Center insert cutting edge above workpiece center line.</p> <p>For non rotating applications:</p> <ul style="list-style-type: none"> • An additional flat is added to the shank for increased flexibility in lathe applications. • In such applications the workpiece center line and the drill center line must align. • If they don't the center insert could be located above the workpiece center line resulting in poor performance of the drill.
 <p>By turning the drill 180 degrees the second flat gives the possibility to compensate for this misalignment in a fast and simple way.</p>	<p>Shanks with four flats Center insert cutting edge above workpiece center line.</p>
	<p>NOTE!</p> <ul style="list-style-type: none"> • If a drill with -7 shank is used in a rotating application together with our adjustable holder, the flat located on the same side as the center insert must be used. • Otherwise the drill diameter will be positioned in the wrong way.

Shanks

Introduction

Seco-Capto

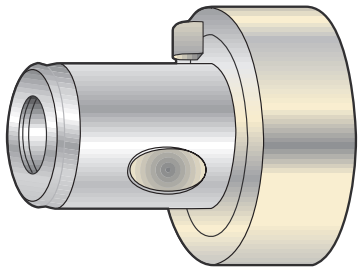


Seco-Capto C4, C5, C6

- Flexible - Same tool holder can easily be used in different machines.
- Modular - Possibility to build tools with extension adapters.
- High torque transmission - Torque load is spread symmetrically.
- High rigidity - Tight press fit guarantees that there is no play in the coupling.
- Accurate - Tapered polygon coupling produces a strong, self centering joint within 2 microns.

Drilling

Graflex

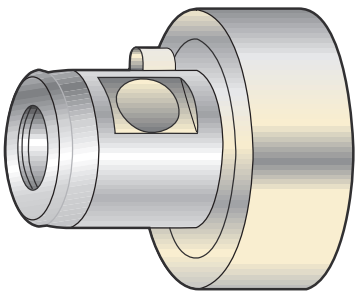


- G

- Fits directly into Graflex holders and locked with two ball headed locking screws placed at 120°.
- Modular assemblies delivering rigidity and good run-out.
- Cylinder/face connection - great accuracy.
- Quick and easy assembling/disassembling of the modules for high flexibility.
- Coolant inlet at the back end of the drill.

Reaming

ABS 50 (compatible)

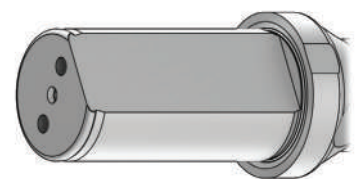


- 2

- An ABS 50 Compatible shank.
- Fits directly into ABS 50 holder with one locking screw.
- Coolant inlet at the back end of the drill.

Boring

VDI 30 and VDI 40 (compatible)



- 8

- VDI compatible shank.
- Fits directly into holders for:
 - VDI 3425 bl.2
 - DIN 69880

NOTE!

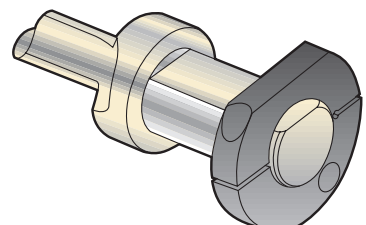
The coolant ring must be ordered separately.

Annex

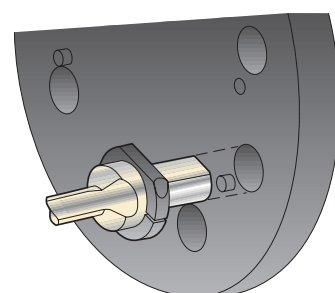
Shanks – Coolant ring

VDI 30				VDI 40					
Drill depth	Drill diameter		Accessories Coolant ring	Drill depth	Drill diameter		Plug	Locking screw	Accessories Coolant ring
	mm	inch			mm	inch			
2 x D	15-31	0.591-1.220	SDA5-30R8	2 x D	15-31	0.591-1.220			SDA5-40R8
3 x D	15-31	0.591-1.220	SDA5-30R8	3 x D	15-31	0.591-1.220			SDA5-40R8
4 x D	17-31	0.669-1.220	SDA5-30R8	4 x D	17-31	0.669-1.220			SDA5-40R8
5 x D	19-31	0.748-1.220	SDA5-30R8	5 x D	19-31	0.748-1.220			SDA5-40R8
				2 x D	41-59	1.614-2.323	R1/4"	P6SS8x8	SDA5-40R8
				3 x D	41-59	1.614-2.323	R1/4"	P6SS8x8	SDA5-40R8

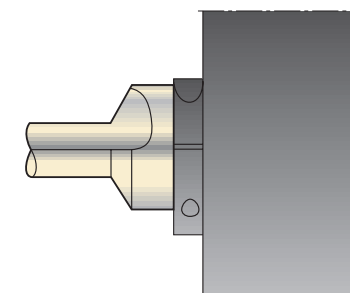
1. Fit the ring around the drill but do not tighten the locking screw.



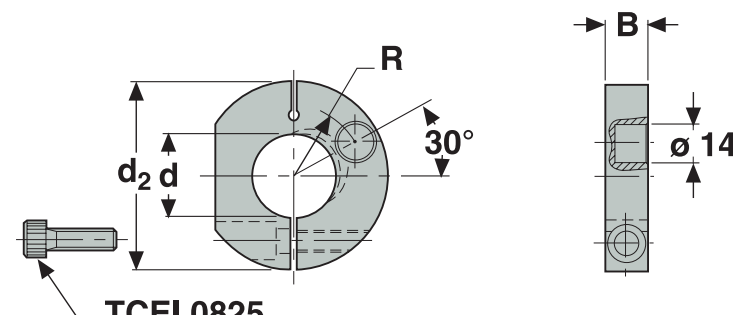
2. Lock the drill in the collet.



3. Tighten the locking screw in the coolant ring.



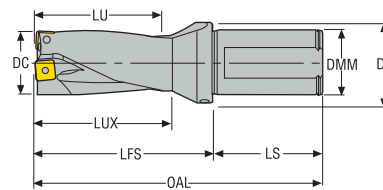
Coolant ring



TCEI 0825

SD522

Drilling depth ~ 2 X D – Metric/Inch



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 299, 300
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-15-30-20R7	03080744	15,0 0.591	30,0 1.181	110,0 4.331	35,0 1.378	60,0 2.362	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD522-15-30-25R7	03080745	15,0 0.591	30,0 1.181	116,0 4.567	35,0 1.378	60,0 2.362	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD522-15.5-31-20R7	03080740	15,5 0.610	31,0 1.220	111,0 4.370	36,0 1.417	61,0 2.402	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD522-15.5-31-25R7	03080741	15,5 0.610	31,0 1.220	117,0 4.606	36,0 1.417	61,0 2.402	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD522-16-32-20R7	03080749	16,0 0.630	32,0 1.260	112,0 4.409	37,0 1.457	62,0 2.441	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD522-16-32-25R7	03080750	16,0 0.630	32,0 1.260	118,0 4.646	37,0 1.457	62,0 2.441	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD522-16.5-33-20R7	03080746	16,5 0.650	33,0 1.299	113,0 4.449	38,0 1.496	63,0 2.480	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD522-16.5-33-25R7	03080747	16,5 0.650	33,0 1.299	119,0 4.685	38,0 1.496	63,0 2.480	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD522-17-34-20R7	03080754	17,0 0.669	34,0 1.339	114,0 4.488	39,0 1.535	64,0 2.520	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD522-17-34-25R7	03080755	17,0 0.669	34,0 1.339	120,0 4.724	39,0 1.535	64,0 2.520	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD522-17.5-35-20R7	03080752	17,5 0.689	35,0 1.378	115,0 4.528	40,0 1.575	65,0 2.559	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD522-17.5-35-25R7	03080753	17,5 0.689	35,0 1.378	121,0 4.764	40,0 1.575	65,0 2.559	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD522-18-36-20R7	03080760	18,0 0.709	36,0 1.417	116,0 4.567	41,0 1.614	66,0 2.598	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD522-18-36-25R7	03080761	18,0 0.709	36,0 1.417	122,0 4.803	41,0 1.614	66,0 2.598	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD522-18.5-37-20R7	03080758	18,5 0.728	37,0 1.457	117,0 4.606	42,0 1.654	67,0 2.638	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD522-18.5-37-25R7	03080759	18,5 0.728	37,0 1.457	123,0 4.843	42,0 1.654	67,0 2.638	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD522-19-38-20R7	03080765	19,0 0.748	38,0 1.496	118,0 4.646	43,0 1.693	68,0 2.677	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD522-19-38-25R7	03080766	19,0 0.748	38,0 1.496	124,0 4.882	43,0 1.693	68,0 2.677	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD522-19.5-39-20R7	03080764	19,5 0.768	39,0 1.535	119,0 4.685	44,0 1.732	69,0 2.717	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX060204	0,11 0.004	0,42 0.017
SD522-20-40-25R7	03080771	20,0 0.787	40,0 1.575	126,0 4.961	45,0 1.772	70,0 2.756	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD522-21-42-25R7	03080775	21,0 0.827	42,0 1.654	128,0 5.039	47,0 1.850	72,0 2.835	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD522-22-44-25R7	03080777	22,0 0.866	44,0 1.732	130,0 5.118	49,0 1.929	74,0 2.913	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -
SD522-23-46-25R7	03080781	23,0 0.906	46,0 1.811	132,0 5.197	51,0 2.008	76,0 2.992	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD522-23.5-47-25R7	03192517	23,5 0.925	47,0 1.850	133,0 5.236	52,0 2.047	77,0 3.031	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,23 0.009	0,5 0.020
SD522-24-48-25R7	03080785	24,0 0.945	48,0 1.890	134,0 5.276	53,0 2.087	78,0 3.071	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-25-50-32R7	03080788	25,0 0.984	50,0 1.969	140,0 5.512	55,0 2.165	80,0 3.150	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-26-52-32R7	03080790	26,0 1.024	52,0 2.047	142,0 5.591	57,0 2.244	82,0 3.228	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD522-27-54-32R7	03080792	27,0 1.063	54,0 2.126	144,0 5.669	59,0 2.323	84,0 3.307	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD522-28-56-32R7	03080795	28,0 1.102	56,0 2.205	146,0 5.748	61,0 2.402	86,0 3.386	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD522-29-58-32R7	03080796	29,0 1.142	58,0 2.283	148,0 5.827	63,0 2.480	88,0 3.465	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD522-30-60-32R7	03080798	30,0 1.181	60,0 2.362	150,0 5.906	65,0 2.559	90,0 3.543	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-31-62-32R7	03080801	31,0 1.220	62,0 2.441	152,0 5.984	67,0 2.638	92,0 3.622	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-32-64-32R7	03080802	32,0 1.260	64,0 2.520	154,0 6.063	69,0 2.717	94,0 3.701	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD522-32-64-40R7	03080803	32,0 1.260	64,0 2.520	162,0 6.378	69,0 2.717	94,0 3.701	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD522-33-66-32R7	03080805	33,0 1.299	66,0 2.598	156,0 6.142	71,0 2.795	96,0 3.780	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD522-33-66-40R7	03080806	33,0 1.299	66,0 2.598	164,0 6.457	71,0 2.795	96,0 3.780	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD522-34-68-32R7	03080808	34,0 1.339	68,0 2.677	158,0 6.220	73,0 2.874	98,0 3.858	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD522-34-68-40R7	03080809	34,0 1.339	68,0 2.677	166,0 6.535	73,0 2.874	98,0 3.858	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD522-35-70-32R7	03080810	35,0 1.378	70,0 2.756	160,0 6.299	75,0 2.953	100,0 3.937	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD522-35-70-40R7	03080811	35,0 1.378	70,0 2.756	168,0 6.614	75,0 2.953	100,0 3.937	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD522-36-72-32R7	03080813	36,0 1.417	72,0 2.835	162,0 6.378	77,0 3.031	102,0 4.016	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-36-72-40R7	03080814	36,0 1.417	72,0 2.835	170,0 6.693	77,0 3.031	102,0 4.016	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-37-74-32R7	03080816	37,0 1.457	74,0 2.913	164,0 6.457	79,0 3.110	104,0 4.094	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-37-74-40R7	03080817	37,0 1.457	74,0 2.913	172,0 6.772	79,0 3.110	104,0 4.094	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-38-76-32R7	03080818	38,0 1.496	76,0 2.992	166,0 6.535	81,0 3.189	106,0 4.173	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD522-38-76-40R7	03080819	38,0 1.496	76,0 2.992	174,0 6.850	81,0 3.189	106,0 4.173	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD522-39-78-32R7	03080821	39,0 1.535	78,0 3.071	168,0 6.614	83,0 3.268	108,0 4.252	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD522-39-78-40R7	03080822	39,0 1.535	78,0 3.071	176,0 6.929	83,0 3.268	108,0 4.252	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD522-40-80-32R7	03080823	40,0 1.575	80,0 3.150	170,0 6.693	85,0 3.346	110,0 4.331	60,0 2.362	32,0 1.260	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD522-40-80-40R7	03080824	40,0 1.575	80,0 3.150	178,0 7.008	85,0 3.346	110,0 4.331	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD522-41-82-40R7	03080826	41,0 1.614	82,0 3.228	180,0 7.087	87,0 3.425	112,0 4.409	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD522-42-84-40R7	03080828	42,0 1.654	84,0 3.307	182,0 7.165	89,0 3.504	114,0 4.488	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD522-43-86-40R7	03080830	43,0 1.693	86,0 3.386	184,0 7.244	91,0 3.583	116,0 4.567	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,05 0.002	0,5 0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-44-88-40R7	03080832	44,0 1.732	88,0 3.465	186,0 7.323	93,0 3.661	118,0 4.646	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX120408	0,5 0.020	0,41 0.016
SD522-45-90-40R7	03080834	45,0 1.772	90,0 3.543	188,0 7.402	95,0 3.740	120,0 4.724	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,41 0.016
SD522-46-92-40R7	03080835	46,0 1.811	92,0 3.622	190,0 7.480	97,0 3.819	122,0 4.803	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,5 0.020
SD522-47-94-40R7	03080836	47,0 1.850	94,0 3.701	192,0 7.559	99,0 3.898	124,0 4.882	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,5 0.020
SD522-48-96-40R7	03080837	48,0 1.890	96,0 3.780	194,0 7.638	101,0 3.976	126,0 4.961	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,45 0.018	0,5 0.020
SD522-49-98-40R7	03080838	49,0 1.929	98,0 3.858	196,0 7.717	103,0 4.055	128,0 5.039	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD522-50-100-40R7	03080839	50,0 1.969	100,0 3.937	198,0 7.795	105,0 4.134	130,0 5.118	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD522-51-102-40R7	03080840	51,0 2.008	102,0 4.016	200,0 7.874	107,0 4.213	132,0 5.197	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD522-52-104-40R7	03080841	52,0 2.047	104,0 4.094	202,0 7.953	109,0 4.291	134,0 5.276	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,42 0.017
SD522-53-106-40R7	03080842	53,0 2.087	106,0 4.173	204,0 8.031	111,0 4.370	136,0 5.354	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,42 0.017
SD522-54-108-40R7	03080843	54,0 2.126	108,0 4.252	206,0 8.110	113,0 4.449	138,0 5.433	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD522-55-110-40R7	03080844	55,0 2.165	110,0 4.331	208,0 8.189	115,0 4.528	140,0 5.512	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD522-56-112-40R7	03080845	56,0 2.205	112,0 4.409	210,0 8.268	117,0 4.606	142,0 5.591	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD522-57-114-40R7	03080846	57,0 2.244	114,0 4.488	212,0 8.346	119,0 4.685	144,0 5.669	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,39 0.015	0,5 0.020
SD522-58-116-40R7	03080847	58,0 2.283	116,0 4.567	214,0 8.425	121,0 4.764	146,0 5.748	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512	0,09 0.004	0,5 0.020
SD522-59-118-40R7	03080848	59,0 2.323	118,0 4.646	216,0 8.504	123,0 4.843	148,0 5.827	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512	0,09 0.004	0,5 0.020

Spare Parts, included in delivery

For drill dia. (mm)	Center insert	Periph insert	Insert key
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D



Insert screw



Insert key



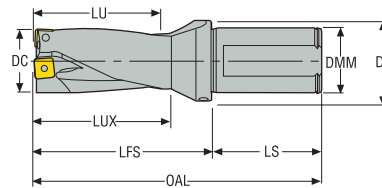
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD522



Drilling depth ~ 2 X D – Inch





- ISO 9766 shank, R7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 299, 300
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	Inch -	Inch +
SD522-0594-119-1000R7	03080704	0.594	1.190	4.621	1.387	2.371	2.250	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD522-0625-125-1000R7	03080705	0.625	1.250	4.681	1.447	2.431	2.250	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD522-0656-131-1000R7	03080707	0.656	1.310	4.741	1.507	2.491	2.250	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD522-0687-137-1000R7	03080709	0.687	1.370	4.801	1.567	2.551	2.250	1.000	1.378	SPGX0502	SCGX050204	0	0.020
SD522-0709-142-1000R7	03080710	0.709	1.420	4.851	1.617	2.601	2.250	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD522-0750-150-1000R7	03080712	0.750	1.500	4.931	1.697	2.681	2.250	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD522-0766-153-1000R7	03080713	0.766	1.530	4.961	1.727	2.711	2.250	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD522-0787-157-1000R7	03080714	0.787	1.570	5.001	1.767	2.751	2.250	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD522-0812-162-1000R7	03080715	0.812	1.620	5.051	1.817	2.801	2.250	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD522-0827-165-1000R7	03080717	0.827	1.650	5.081	1.847	2.831	2.250	1.000	1.378	SPGX0602	SCGX060204	0	0.020
SD522-0875-175-1000R7	03080718	0.875	1.750	5.181	1.947	2.931	2.250	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD522-0906-181-1000R7	03080720	0.906	1.810	5.241	2.007	2.991	2.250	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD522-0922-184-1000R7	03080721	0.922	1.840	5.271	2.037	3.021	2.250	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD522-0937-187-1000R7	03080722	0.937	1.870	5.301	2.067	3.051	2.250	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD522-0984-197-1250R7	03080724	0.984	1.970	5.526	2.167	3.151	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1000-200-1250R7	03080725	1.000	2.000	5.556	2.197	3.181	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1032-206-1250R7	03080727	1.032	2.060	5.616	2.257	3.241	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD522-1062-212-1250R7	03080728	1.062	2.120	5.676	2.317	3.301	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD522-1125-225-1250R7	03080730	1.125	2.250	5.806	2.447	3.431	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD522-1187-237-1250R7	03080732	1.187	2.370	5.926	2.567	3.551	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD522-1250-250-1500R7	03080735	1.250	2.500	6.306	2.697	3.681	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD522-1312-262-1500R7	03080736	1.312	2.620	6.426	2.817	3.801	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD522-1375-275-1500R7	03080737	1.375	2.750	6.556	2.947	3.931	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD522-1437-287-1500R7	03080739	1.437	2.870	6.676	3.067	4.051	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD522-1500-300-1500R7	03080743	1.500	3.000	6.806	3.197	4.181	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD522-1625-325-1500R7	03080748	1.625	3.250	7.056	3.447	4.431	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD522-1750-350-1500R7	03080756	1.750	3.500	7.306	3.697	4.681	2.625	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD522-1875-375-1500R7	03080763	1.875	3.750	7.556	3.947	4.931	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD522-2000-400-1500R7	03080769	2.000	4.000	7.806	4.197	5.181	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD522-2125-425-1500R7	03080773	2.125	4.250	8.056	4.447	5.431	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD522-2250-450-1500R7	03080779	2.250	4.500	8.306	4.697	5.681	2.625	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD522-2375-475-1500R7	03080783	2.375	4.750	8.556	4.947	5.931	2.625	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

Spare Parts, included in delivery

For drill dia. (inch)	Insert screw		Insert key
			
	Center insert	Periph insert	
0.594-0.687	C02245-T07P	C02245-T07P	T07P-2
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2
0.787	C02205-T07P	C02205-T07P	T07P-2
0.812-0.827	C02205-T07P	C02205-T07P	T07P-2
0.875	C02506-T08P	C02506-T08P	T08P-2
0.906-1.000	C02507-T08P	C03007-T08P	T08P-2
1.032-1.062	C03007-T09P	C03007-T09P	T09P-2
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2
1.250-1.500	C03508-T15P	C03508-T15P	T15P-2D
1.625	C03508-T15P	C05012-T15P	T15P-2D
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D

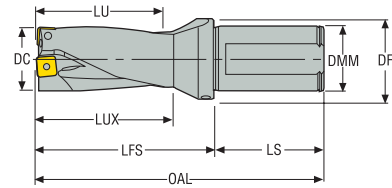
Accessories

For drill dia. (inch)	Torque wrench*	Replacement blade	Torque value
			
0.594-0.687	T00-07P09	T00-07P	8 in/lbs
0.709-0.766	T00-07P09	T00-07P	8 in/lbs
0.787	T00-07P09	T00-07P	8 in/lbs
0.812-0.827	T00-07P09	T00-07P	8 in/lbs
0.875	T00-08P12	T00-08P	10.6 in/lbs
0.906-1.000	T00-08P12	T00-08P	10.6 in/lbs
1.032-1.062	T00-09P20	T00-09P	17.7 in/lbs
1.125-1.187	T00-09P20	T00-09P	17.7 in/lbs
1.250-1.500	T00-15P30	T00-15P	26.6 in/lbs
1.625	T00-15P30	T00-15P	26.6 in/lbs
1.750-2.375	T00-15P30	T00-15P	26.6 in/lbs

*Including blade.

SD522

Drilling depth ~ 2 X D – Inch



- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 299-300
- For intermediate diameters see the MyDesign software.
- For stationary applications

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	Inch -	Inch +
SD522-0625-125-1000R7-C	03080706	0.625	1.250	5.378	1.447	2.628	2.750	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD522-0687-137-1000R7-C	03080708	0.687	1.370	5.498	1.567	2.748	2.750	1.000	1.378	SPGX0502	SCGX050204	0	0.020
SD522-0750-150-1000R7-C	03080711	0.750	1.500	5.628	1.697	2.878	2.750	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD522-0812-162-1000R7-C	03080716	0.812	1.620	5.748	1.817	2.998	2.750	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD522-0875-175-1000R7-C	03080719	0.875	1.750	5.878	1.947	3.128	2.750	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD522-0937-187-1000R7-C	03080723	0.937	1.870	5.998	2.067	3.248	2.750	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD522-1000-200-1250R7-C	03080726	1.000	2.000	6.128	2.197	3.378	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD522-1062-212-1250R7-C	03080729	1.062	2.120	6.248	2.317	3.498	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD522-1125-225-1250R7-C	03080731	1.125	2.250	6.378	2.447	3.628	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD522-1187-237-1250R7-C	03080733	1.187	2.370	6.498	2.567	3.748	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD522-1250-250-1500R7-C	03080734	1.250	2.500	6.628	2.697	3.878	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD522-1375-275-1500R7-C	03080738	1.375	2.750	6.878	2.947	4.128	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD522-1500-300-1500R7-C	03080742	1.500	3.000	7.128	3.197	4.378	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD522-1750-350-1500R7-C	03080757	1.750	3.500	7.628	3.697	4.878	2.750	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD522-2000-400-1500R7-C	03080770	2.000	4.000	8.128	4.197	5.378	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD522-2125-425-1500R7-C	03080774	2.125	4.250	8.378	4.447	5.628	2.750	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD522-2250-450-1500R7-C	03080780	2.250	4.500	8.628	4.697	5.878	2.750	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD522-2375-475-1500R7-C	03080784	2.375	4.750	8.878	4.947	6.128	2.750	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

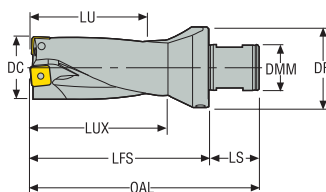
Spare Parts, included in delivery

Accessories

For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug	Torque wrench
0.625	1310	C02245-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.687	1310	C02245-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.750	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.812	1310	C02205-T07P	C02205-T07P	T07P-2	R1/4	T00-07P09
0.875	1310	C02506-T08P	C02506-T08P	T08P-2	R1/4	T00-08P12
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
1.062	1310	C03007-T09P	C03007-T09P	T09P-2	R1/4	T00-09P20
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4	T00-09P20
1.250-1.500	1310	C03508-T15P	C03508-T15P	T15P-2D	R1/4	T00-15P30
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P35

SD522

Drilling depth ~ 2 X D – Metric/Inch



- ABS 50 compatible shank, R2
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 299, 300
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-15-30-50R2	03081056	15,0 0.591	30,0 1.181	91,0 3.583	35,0 1.378	60,0 2.362	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD522-15.5-31-50R2	03081057	15,5 0.610	31,0 1.220	92,0 3.622	36,0 1.417	61,0 2.402	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD522-16-32-50R2	03080751	16,0 0.630	32,0 1.260	93,0 3.661	37,0 1.457	62,0 2.441	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD522-16.5-33-50R2	03081058	16,5 0.650	33,0 1.299	94,0 3.701	38,0 1.496	63,0 2.480	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD522-17-34-50R2	03081059	17,0 0.669	34,0 1.339	95,0 3.740	39,0 1.535	64,0 2.520	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD522-17.5-35-50R2	03081060	17,5 0.689	35,0 1.378	96,0 3.780	40,0 1.575	65,0 2.559	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD522-18-36-50R2	03080762	18,0 0.709	36,0 1.417	97,0 3.819	41,0 1.614	66,0 2.598	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD522-18.5-37-50R2	03081061	18,5 0.728	37,0 1.457	98,0 3.858	42,0 1.654	67,0 2.638	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD522-19-38-50R2	03080767	19,0 0.748	38,0 1.496	99,0 3.898	43,0 1.693	68,0 2.677	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD522-20-40-50R2	03080772	20,0 0.787	40,0 1.575	101,0 3.976	45,0 1.772	70,0 2.756	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD522-20.62-42-50R2	03080768	20,62 0.812	42,0 1.654	103,0 4.055	47,0 1.850	72,0 2.835	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD522-21-42-50R2	03081062	21,0 0.827	42,0 1.654	103,0 4.055	47,0 1.850	72,0 2.835	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD522-22-44-50R2	03080778	22,0 0.866	44,0 1.732	105,0 4.134	49,0 1.929	74,0 2.913	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD522-22.23-45-50R2	03080776	22,23 0.875	45,0 1.772	106,0 4.173	50,0 1.969	75,0 2.953	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD522-23-46-50R2	03080782	23,0 0.906	46,0 1.811	107,0 4.213	51,0 2.008	76,0 2.992	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD522-24-48-50R2	03080786	24,0 0.945	48,0 1.890	109,0 4.291	53,0 2.087	78,0 3.071	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-25-50-50R2	03080789	25,0 0.984	50,0 1.969	111,0 4.370	55,0 2.165	80,0 3.150	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-25.40-51-50R2	03080787	25,4 1.000	51,0 2.008	112,0 4.409	56,0 2.205	81,0 3.189	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD522-26-52-50R2	03080791	26,0 1.024	52,0 2.047	113,0 4.449	57,0 2.244	82,0 3.228	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD522-27-54-50R2	03080793	27,0 1.063	54,0 2.126	115,0 4.528	59,0 2.323	84,0 3.307	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD522-28-56-50R2	03081087	28,0 1.102	56,0 2.205	117,0 4.606	61,0 2.402	86,0 3.386	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020

Introduction

Drilling

Reaming

Boring



Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD522-28.59-58-50R2	03080794	28,59 1.126	58,0 2.283	119,0 4.685	63,0 2.480	88,0 3.465	31,0	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020
SD522-29-58-50R2	03080797	29,0 1.142	58,0 2.283	119,0 4.685	63,0 2.480	88,0 3.465	31,0	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD522-30-60-50R2	03080799	30,0 1.181	60,0 2.362	121,0 4.764	65,0 2.559	90,0 3.543	31,0	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-31-62-50R2	03081063	31,0 1.220	62,0 2.441	123,0 4.843	67,0 2.638	92,0 3.622	31,0	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD522-31.75-64-50R2	03080800	31,75 1.250	64,0 2.520	125,0 4.921	69,0 2.717	94,0 3.701	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,28 0.011
SD522-32-64-50R2	03080804	32,0 1.260	64,0 2.520	125,0 4.921	69,0 2.717	94,0 3.701	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD522-33-66-50R2	03080807	33,0 1.299	66,0 2.598	127,0 5.000	71,0 2.795	96,0 3.780	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD522-34-68-50R2	03081064	34,0 1.339	68,0 2.677	129,0 5.079	73,0 2.874	98,0 3.858	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD522-35-70-50R2	03080812	35,0 1.378	70,0 2.756	131,0 5.157	75,0 2.953	100,0 3.937	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD522-36-72-50R2	03080815	36,0 1.417	72,0 2.835	133,0 5.236	77,0 3.031	102,0 4.016	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-37-74-50R2	03081065	37,0 1.457	74,0 2.913	135,0 5.315	79,0 3.110	104,0 4.094	31,0	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD522-38-76-50R2	03080820	38,0 1.496	76,0 2.992	137,0 5.394	81,0 3.189	106,0 4.173	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD522-39-78-50R2	03081066	39,0 1.535	78,0 3.071	139,0 5.472	83,0 3.268	108,0 4.252	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD522-40-80-50R2	03080825	40,0 1.575	80,0 3.150	141,0 5.551	85,0 3.346	110,0 4.331	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD522-41-82-50R2	03080827	41,0 1.614	82,0 3.228	143,0 5.630	87,0 3.425	112,0 4.409	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD522-42-84-50R2	03080829	42,0 1.654	84,0 3.307	145,0 5.709	89,0 3.504	114,0 4.488	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD522-43-86-50R2	03081067	43,0 1.693	86,0 3.386	147,0 5.787	91,0 3.583	116,0 4.567	31,0	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,05 0.002	0,5 0.020
SD522-44.45-89-50R2	03080831	44,45 1.750	89,0 3.504	150,0 5.906	94,0 3.701	119,0 4.685	31,0	50,0 1.969	50,0 1.969	SPGX1504	SCGX120408	0,5 0.020	0,41 0.016

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	
	Center insert	Periph insert		
15,00-17,45	C02245-T07P	C02245-T07P		T07P-2
17,46-19,49	C02205-T07P	C02245-T07P		T07P-2
19,50-21,24	C02205-T07P	C02205-T07P		T07P-2
21,25-22,49	C02506-T08P	C02506-T08P		T08P-2
22,50-25,49	C02507-T08P	C03007-T08P		T08P-2
25,50-28,49	C03007-T09P	C03007-T09P		T09P-2
28,50-31,49	C03007-T09P	C03009-T09P		T09P-2
31,50-40,49	C03508-T15P	C03508-T15P		T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P		T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P		T15P-2D

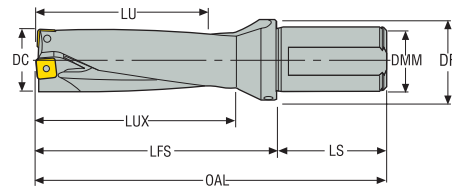
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric/Inch



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-20R7	03080548	15,0 0.591	45,0 1.772	125,0 4.921	50,0 1.969	75,0 2.953	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15-45-25R7	03080549	15,0 0.591	45,0 1.772	131,0 5.157	50,0 1.969	75,0 2.953	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-20R7	03080544	15,5 0.610	47,0 1.850	127,0 5.000	52,0 2.047	77,0 3.031	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-15.5-47-25R7	03080545	15,5 0.610	47,0 1.850	133,0 5.236	52,0 2.047	77,0 3.031	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-20R7	03080557	16,0 0.630	48,0 1.890	128,0 5.039	53,0 2.087	78,0 3.071	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16-48-25R7	03080558	16,0 0.630	48,0 1.890	134,0 5.276	53,0 2.087	78,0 3.071	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-20R7	03080552	16,5 0.650	50,0 1.969	130,0 5.118	55,0 2.165	80,0 3.150	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-16.5-50-25R7	03080554	16,5 0.650	50,0 1.969	136,0 5.354	55,0 2.165	80,0 3.150	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-20R7	03080568	17,0 0.669	51,0 2.008	131,0 5.157	56,0 2.205	81,0 3.189	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17-51-25R7	03080569	17,0 0.669	51,0 2.008	137,0 5.394	56,0 2.205	81,0 3.189	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-20R7	03080562	17,5 0.689	53,0 2.087	133,0 5.236	58,0 2.283	83,0 3.268	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-17.5-53-25R7	03080563	17,5 0.689	53,0 2.087	139,0 5.472	58,0 2.283	83,0 3.268	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-20R7	03080574	18,0 0.709	54,0 2.126	134,0 5.276	59,0 2.323	84,0 3.307	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18-54-25R7	03080575	18,0 0.709	54,0 2.126	140,0 5.512	59,0 2.323	84,0 3.307	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-20R7	03080570	18,5 0.728	56,0 2.205	136,0 5.354	61,0 2.402	86,0 3.386	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-18.5-56-25R7	03080571	18,5 0.728	56,0 2.205	142,0 5.591	61,0 2.402	86,0 3.386	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-20R7	03080583	19,0 0.748	57,0 2.244	137,0 5.394	62,0 2.441	87,0 3.425	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-19-57-25R7	03080584	19,0 0.748	57,0 2.244	143,0 5.630	62,0 2.441	87,0 3.425	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-19.5-59-20R7	03080579	19,5 0.768	59,0 2.323	139,0 5.472	64,0 2.520	89,0 3.504	50,0 1.969	20,0 0.787	30,0 1.181	SPGX0602	SCGX060204	0,11 0.004	0,42 0.017
SD523-19.5-59-25R7	03080580	19,5 0.768	59,0 2.323	145,0 5.709	64,0 2.520	89,0 3.504	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,11 0.004	0,42 0.017
SD523-20-60-25R7	03080590	20,0 0.787	60,0 2.362	146,0 5.748	65,0 2.559	90,0 3.543	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.5-62-25R7	03080586	20,5 0.807	62,0 2.441	148,0 5.827	67,0 2.638	92,0 3.622	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,04 0.002	0,49 0.019

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -
SD523-21-63-25R7	03080599	21,0 0.827	63,0 2.480	149,0 5.866	68,0 2.677	93,0 3.661	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD523-21.5-65-25R7	03080595	21,5 0.846	65,0 2.559	151,0 5.945	70,0 2.756	95,0 3.740	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,5 0.020	0,36 0.014
SD523-22-66-25R7	03080605	22,0 0.866	66,0 2.598	152,0 5.984	71,0 2.795	96,0 3.780	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.5-68-25R7	03080602	22,5 0.886	68,0 2.677	154,0 6.063	73,0 2.874	98,0 3.858	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,42 0.017	0,47 0.019
SD523-23-69-25R7	03080608	23,0 0.906	69,0 2.717	155,0 6.102	74,0 2.913	99,0 3.898	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-23.5-71-25R7	03080607	23,5 0.925	71,0 2.795	157,0 6.181	76,0 2.992	101,0 3.976	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,23 0.009	0,5 0.020
SD523-24-72-25R7	03080612	24,0 0.945	72,0 2.835	158,0 6.220	77,0 3.031	102,0 4.016	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-24.5-74-25R7	03080611	24,5 0.965	74,0 2.913	160,0 6.299	79,0 3.110	104,0 4.094	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-32R7	03080616	25,0 0.984	75,0 2.953	165,0 6.496	80,0 3.150	105,0 4.134	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.5-77-32R7	03080615	25,5 1.004	77,0 3.031	167,0 6.575	82,0 3.228	107,0 4.213	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-26-78-32R7	03080619	26,0 1.024	78,0 3.071	168,0 6.614	83,0 3.268	108,0 4.252	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-26.5-80-32R7	03080618	26,5 1.043	80,0 3.150	170,0 6.693	85,0 3.346	110,0 4.331	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,19 0.007
SD523-27-81-32R7	03080622	27,0 1.063	81,0 3.189	171,0 6.732	86,0 3.386	111,0 4.370	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-27.5-83-32R7	03080621	27,5 1.083	83,0 3.268	173,0 6.811	88,0 3.465	113,0 4.449	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,46 0.018	0,44 0.017
SD523-28-84-32R7	03080626	28,0 1.102	84,0 3.307	174,0 6.850	89,0 3.504	114,0 4.488	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD523-28.5-86-32R7	03080624	28,5 1.122	86,0 3.386	176,0 6.929	91,0 3.583	116,0 4.567	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020
SD523-29-87-32R7	03080629	29,0 1.142	87,0 3.425	177,0 6.969	92,0 3.622	117,0 4.606	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-29.5-89-32R7	03080628	29,5 1.161	89,0 3.504	179,0 7.047	94,0 3.701	119,0 4.685	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,15 0.006	0,5 0.020
SD523-30-90-32R7	03080632	30,0 1.181	90,0 3.543	180,0 7.087	95,0 3.740	120,0 4.724	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-30.5-92-32R7	03080631	30,5 1.201	92,0 3.622	182,0 7.165	97,0 3.819	122,0 4.803	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31-93-32R7	03080636	31,0 1.220	93,0 3.661	183,0 7.205	98,0 3.858	123,0 4.843	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.5-95-32R7	03080634	31,5 1.240	95,0 3.740	185,0 7.283	100,0 3.937	125,0 4.921	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,24 0.009
SD523-32-96-32R7	03080638	32,0 1.260	96,0 3.780	186,0 7.323	101,0 3.976	126,0 4.961	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-32-96-40R7	03080639	32,0 1.260	96,0 3.780	194,0 7.638	101,0 3.976	126,0 4.961	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-33-99-32R7	03080641	33,0 1.299	99,0 3.898	189,0 7.441	104,0 4.094	129,0 5.079	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-33-99-40R7	03080642	33,0 1.299	99,0 3.898	197,0 7.756	104,0 4.094	129,0 5.079	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-34-102-32R7	03080644	34,0 1.339	102,0 4.016	192,0 7.559	107,0 4.213	132,0 5.197	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-34-102-40R7	03080645	34,0 1.339	102,0 4.016	200,0 7.874	107,0 4.213	132,0 5.197	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-35-105-32R7	03080648	35,0 1.378	105,0 4.134	195,0 7.677	110,0 4.331	135,0 5.315	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-35-105-40R7	03080649	35,0 1.378	105,0 4.134	203,0 7.992	110,0 4.331	135,0 5.315	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-35.5-107-40R7	03080647	35,5 1.398	107,0 4.213	205,0 8.071	112,0 4.409	137,0 5.394	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-36-108-32R7	03080651	36,0 1.417	108,0 4.252	198,0 7.795	113,0 4.449	138,0 5.433	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-36-108-40R7	03080652	36,0 1.417	108,0 4.252	206,0 8.110	113,0 4.449	138,0 5.433	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-37-111-32R7	03080653	37,0 1.457	111,0 4.370	201,0 7.913	116,0 4.567	141,0 5.551	60,0 2.362	32,0 1.260	42,0 1.654	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-37-111-40R7	03080654	37,0 1.457	111,0 4.370	209,0 8.228	116,0 4.567	141,0 5.551	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-38-114-32R7	03080655	38,0 1.496	114,0 4.488	204,0 8.031	119,0 4.685	144,0 5.669	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD523-38-114-40R7	03080656	38,0 1.496	114,0 4.488	212,0 8.346	119,0 4.685	144,0 5.669	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD523-39-117-32R7	03080658	39,0 1.535	117,0 4.606	207,0 8.150	122,0 4.803	147,0 5.787	60,0 2.362	32,0 1.260	42,0 1.654	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD523-39-117-40R7	03080659	39,0 1.535	117,0 4.606	215,0 8.465	122,0 4.803	147,0 5.787	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD523-40-120-32R7	03080661	40,0 1.575	120,0 4.724	210,0 8.268	125,0 4.921	150,0 5.906	60,0 2.362	32,0 1.260	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD523-40-120-40R7	03080662	40,0 1.575	120,0 4.724	218,0 8.583	125,0 4.921	150,0 5.906	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD523-41-123-40R7	03080665	41,0 1.614	123,0 4.843	221,0 8.701	128,0 5.039	153,0 6.024	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD523-41.5-125-40R7	03080663	41,5 1.634	125,0 4.921	223,0 8.780	130,0 5.118	155,0 6.102	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD523-42-126-40R7	03080666	42,0 1.654	126,0 4.961	224,0 8.819	131,0 5.157	156,0 6.142	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD523-43-129-40R7	03080667	43,0 1.693	129,0 5.079	227,0 8.937	134,0 5.276	159,0 6.260	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408	0,05 0.002	0,5 0.020
SD523-44-132-40R7	03080670	44,0 1.732	132,0 5.197	230,0 9.055	137,0 5.394	162,0 6.378	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX120408	0,5 0.020	0,41 0.016
SD523-44.5-134-40R7	03080669	44,5 1.752	134,0 5.276	232,0 9.134	139,0 5.472	164,0 6.457	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,41 0.016
SD523-45-135-40R7	03080672	45,0 1.772	135,0 5.315	233,0 9.173	140,0 5.512	165,0 6.496	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,41 0.016
SD523-46-138-40R7	03080673	46,0 1.811	138,0 5.433	236,0 9.291	143,0 5.630	168,0 6.614	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,5 0.020
SD523-47-141-40R7	03080675	47,0 1.850	141,0 5.551	239,0 9.409	146,0 5.748	171,0 6.732	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,5 0.020
SD523-47.5-143-40R7	03080674	47,5 1.870	143,0 5.630	241,0 9.488	148,0 5.827	173,0 6.811	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512	0,5 0.020	0,5 0.020
SD523-48-144-40R7	03080676	48,0 1.890	144,0 5.669	242,0 9.528	149,0 5.866	174,0 6.850	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,45 0.018	0,5 0.020
SD523-49-147-40R7	03080677	49,0 1.929	147,0 5.787	245,0 9.646	152,0 5.984	177,0 6.969	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD523-50-150-40R7	03080678	50,0 1.969	150,0 5.906	248,0 9.764	155,0 6.102	180,0 7.087	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD523-51-153-40R7	03080679	51,0 2.008	153,0 6.024	251,0 9.882	158,0 6.220	183,0 7.205	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512	0,2 0.008	0,5 0.020
SD523-52-156-40R7	03080680	52,0 2.047	156,0 6.142	254,0 10.000	161,0 6.339	186,0 7.323	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,42 0.017
SD523-53-159-40R7	03080681	53,0 2.087	159,0 6.260	257,0 10.118	164,0 6.457	189,0 7.441	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,42 0.017
SD523-54-162-40R7	03080682	54,0 2.126	162,0 6.378	260,0 10.236	167,0 6.575	192,0 7.559	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD523-55-165-40R7	03080683	55,0 2.165	165,0 6.496	263,0 10.354	170,0 6.693	195,0 7.677	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD523-56-168-40R7	03080684	56,0 2.205	168,0 6.614	266,0 10.472	173,0 6.811	198,0 7.795	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,5 0.020	0,5 0.020
SD523-57-171-40R7	03080685	57,0 2.244	171,0 6.732	269,0 10.591	176,0 6.929	201,0 7.913	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512	0,39 0.015	0,5 0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-58-174-40R7	03080686	58,0 2.283	174,0 6.850	272,0 10.709	179,0 7.047	204,0 8.031	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512	0,09 0.004	0,5 0.020
SD523-59-177-40R7	03080687	59,0 2.323	177,0 6.969	275,0 10.827	182,0 7.165	207,0 8.150	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512	0,09 0.004	0,5 0.020

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

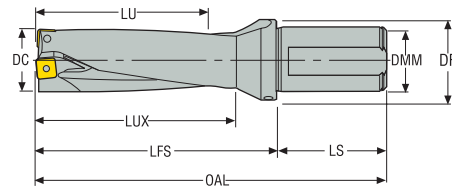
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Inch






- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.

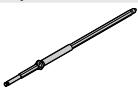

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert	Inch -	Inch +
SD523-0562-169-1000R7	03080485	0.562	1.686	5.117	1.883	2.867	2.250	1.000	1.378	SPGX0502	SCGX050204	0.011	0.009
SD523-0594-178-1000R7	03080486	0.594	1.780	5.211	1.977	2.961	2.250	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD523-0625-188-1000R7	03080488	0.625	1.880	5.311	2.077	3.061	2.250	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD523-0656-197-1000R7	03080490	0.656	1.970	5.401	2.167	3.151	2.250	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD523-0687-206-1000R7	03080493	0.687	2.030	5.461	2.227	3.211	2.250	1.000	1.378	SPGX0502	SCGX050204	0	0.020
SD523-0709-213-1000R7	03080494	0.709	2.130	5.561	2.327	3.311	2.250	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD523-0750-225-1000R7	03080497	0.750	2.250	5.681	2.447	3.431	2.250	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD523-0766-230-1000R7	03080499	0.766	2.300	5.731	2.497	3.481	2.250	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD523-0787-236-1000R7	03080501	0.787	2.360	5.791	2.557	3.541	2.250	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD523-0812-244-1000R7	03080503	0.812	2.440	5.871	2.637	3.621	2.250	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD523-0827-248-1000R7	03080505	0.827	2.480	5.911	2.677	3.661	2.250	1.000	1.378	SPGX0602	SCGX060204	0	0.020
SD523-0875-263-1000R7	03080507	0.875	2.630	6.061	2.827	3.811	2.250	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD523-0906-272-1000R7	03080509	0.906	2.720	6.151	2.917	3.901	2.250	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD523-0922-276-1000R7	03080512	0.922	2.760	6.191	2.957	3.941	2.250	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD523-0937-281-1000R7	03080514	0.937	2.810	6.241	3.007	3.991	2.250	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD523-0984-295-1250R7	03080516	0.984	2.950	6.506	3.147	4.131	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1000-300-1250R7	03080518	1.000	3.000	6.556	3.197	4.181	2.375	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1032-310-1250R7	03080521	1.032	3.100	6.656	3.297	4.281	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD523-1062-319-1250R7	03080522	1.062	3.190	6.746	3.387	4.371	2.375	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD523-1109-332-1250R7	03080525	1.109	3.320	6.876	3.517	4.501	2.375	1.250	1.654	SPGX0903	SCGX070308	0.009	0.020
SD523-1125-338-1250R7	03080526	1.125	3.380	6.936	3.577	4.561	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD523-1172-351-1250R7	03080528	1.172	3.510	7.066	3.707	4.691	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1187-356-1250R7	03080530	1.187	3.560	7.116	3.757	4.741	2.375	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1250-375-1500R7	03080533	1.250	3.750	7.556	3.947	4.931	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD523-1312-394-1500R7	03080535	1.312	3.940	7.746	4.137	5.121	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD523-1344-403-1500R7	03080537	1.344	4.030	7.836	4.227	5.211	2.625	1.500	1.969	SPGX11T3	SCGX09T308	0.006	0.020
SD523-1375-413-1500R7	03080539	1.375	4.130	7.936	4.327	5.311	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD523-1422-426-1500R7	03080541	1.422	4.260	8.066	4.457	5.441	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1437-431-1500R7	03080542	1.437	4.310	8.116	4.507	5.491	2.625	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1500-450-1500R7	03080547	1.500	4.500	8.306	4.697	5.681	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD523-1562-469-1500R7	03080550	1.562	4.690	8.496	4.887	5.871	2.625	1.500	1.969	SPGX12T3	SCGX11T308	0.010	0.020
SD523-1625-488-1500R7	03080555	1.625	4.880	8.686	5.077	6.061	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD523-1687-506-1500R7	03080560	1.687	5.060	8.866	5.257	6.241	2.625	1.500	1.969	SPGX12T3	SCGX120408	0.004	0.020
SD523-1750-525-1500R7	03080565	1.750	5.250	9.056	5.447	6.431	2.625	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD523-1812-544-1500R7	03080572	1.812	5.440	9.246	5.637	6.621	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD523-1875-563-1500R7	03080577	1.875	5.630	9.436	5.827	6.811	2.625	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert	Inch -	Inch +
SD523-1937-581-1500R7	03080581	1.937	5.810	9.616	6.007	6.991	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2000-600-1500R7	03080588	2.000	6.000	9.806	6.197	7.181	2.625	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2062-619-1500R7	03080593	2.062	6.190	9.996	6.387	7.371	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.017
SD523-2125-638-1500R7	03080596	2.125	6.380	10.186	6.577	7.561	2.625	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD523-2250-675-1500R7	03080603	2.250	6.750	10.556	6.947	7.931	2.625	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD523-2375-713-1500R7	03080609	2.375	7.130	10.936	7.327	8.311	2.625	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

Spare Parts, included in delivery

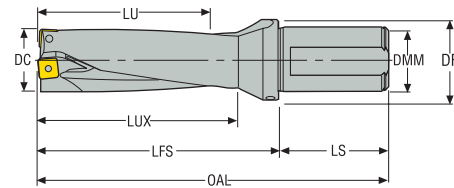
For drill dia. (inch)	Insert screw centre	Insert screw periph	Key
			
0.562-0.687	C02245-T07P	C02245-T07P	T07P-2
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2
0.787-0.827	C02205-T07P	C02205-T07P	T07P-2
0.875	C02506-T08P	C02506-T08P	T08P-2
0.906	C02507-T08P	C03007-T08P	T08P-2
0.922	C02506-T08P	C03007-T08P	T08P-2
0.937-1.000	C02507-T08P	C03007-T08P	T08P-2
1.032-1.109	C03007-T09P	C03007-T09P	T09P-2
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2
1.250-1.562	C03508-T15P	C03508-T15P	T15P-2D
1.625-1.687	C03508-T15P	C05012-T15P	T15P-2D
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D

Accessories

For drill dia. (inch)	Replacement blade	Torque wrench
		
0.562-0.687	T00-07P	T00-07P09
0.709-0.766	-	T00-07P09
0.787-0.827	-	T00-07P09
0.875	-	T00-08P12
0.906	-	T00-08P12
0.922	-	T00-08P12
0.937-1.000	-	T00-08P12
1.032-1.109	-	T00-09P20
1.125-1.187	-	T00-09P20
1.250-1.562	-	T00-15P30
1.625-1.687	-	T00-15P30
1.750-2.375	-	T00-15P35

SD523

Drilling depth ~ 3 x D – Inch








- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.
- For stationary applications


Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert	Inch -	Inch +
SD523-0594-178-1000R7-C	03080487	0.594	1.780	5.908	1.977	3.158	2.750	1.000	1.378	SPGX0502	SCGX050204	0.008	0.013
SD523-0625-188-1000R7-C	03080489	0.625	1.880	6.008	2.077	3.258	2.750	1.000	1.378	SPGX0502	SCGX050204	0.005	0.015
SD523-0656-197-1000R7-C	03080491	0.656	1.970	6.098	2.167	3.348	2.750	1.000	1.378	SPGX0502	SCGX050204	0.002	0.019
SD523-0687-206-1000R7-C	03080492	0.687	2.060	6.188	2.257	3.438	2.750	1.000	1.378	SPGX0502	SCGX050204	0	0.020
SD523-0709-213-1000R7-C	03080495	0.709	2.130	6.258	2.327	3.508	2.750	1.000	1.378	SPGX0602	SCGX050204	0.013	0.008
SD523-0750-225-1000R7-C	03080496	0.750	2.250	6.378	2.447	3.628	2.750	1.000	1.378	SPGX0602	SCGX050204	0.004	0.017
SD523-0766-230-1000R7-C	03080500	0.766	2.300	6.428	2.497	3.678	2.750	1.000	1.378	SPGX0602	SCGX050204	0.001	0.020
SD523-0787-236-1000R7-C	03080502	0.787	2.360	6.488	2.557	3.738	2.750	1.000	1.378	SPGX0602	SCGX060204	0.003	0.018
SD523-0812-244-1000R7-C	03080504	0.812	2.440	6.568	2.637	3.818	2.750	1.000	1.378	SPGX0602	SCGX060204	0.001	0.020
SD523-0827-248-1000R7-C	03080506	0.827	2.480	6.608	2.677	3.858	2.750	1.000	1.378	SPGX0602	SCGX060204	0	0.020
SD523-0875-263-1000R7-C	03080508	0.875	2.630	6.758	2.827	4.008	2.750	1.000	1.378	SPGX0703	SCGX060204	0.015	0.020
SD523-0906-272-1000R7-C	03080511	0.906	2.720	6.848	2.917	4.098	2.750	1.000	1.378	SPGX0703	SCGX070308	0.013	0.020
SD523-0922-276-1000R7-C	03080513	0.922	2.760	6.888	2.957	4.138	2.750	1.000	1.378	SPGX0703	SCGX070308	0.010	0.020
SD523-0937-281-1000R7-C	03080515	0.937	2.810	6.938	3.007	4.188	2.750	1.000	1.378	SPGX0703	SCGX070308	0.004	0.020
SD523-0984-295-1250R7-C	03080517	0.984	2.950	7.078	3.147	4.328	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1000-300-1250R7-C	03080519	1.000	3.000	7.128	3.197	4.378	2.750	1.250	1.654	SPGX0703	SCGX070308	0.004	0.020
SD523-1032-310-1250R7-C	03080520	1.032	3.100	7.228	3.297	4.478	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.004
SD523-1062-319-1250R7-C	03080523	1.062	3.190	7.318	3.387	4.568	2.750	1.250	1.654	SPGX0903	SCGX070308	0.020	0.010
SD523-1109-332-1250R7-C	03080524	1.109	3.320	7.448	3.517	4.698	2.750	1.250	1.654	SPGX0903	SCGX070308	0.009	0.020
SD523-1125-338-1250R7-C	03080527	1.125	3.380	7.508	3.577	4.758	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.008	0.020
SD523-1172-351-1250R7-C	03080529	1.172	3.510	7.638	3.707	4.888	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1187-356-1250R7-C	03080531	1.187	3.560	7.688	3.757	4.938	2.750	1.250	1.654	SPGX0903	SCGX09T308	0.005	0.020
SD523-1250-375-1500R7-C	03080532	1.250	3.750	7.878	3.947	5.128	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.011
SD523-1312-394-1500R7-C	03080536	1.312	3.940	8.068	4.137	5.318	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.020	0.020
SD523-1344-403-1500R7-C	03080538	1.344	4.030	8.158	4.227	5.408	2.750	1.500	1.969	SPGX11T3	SCGX09T308	0.006	0.020
SD523-1375-413-1500R7-C	03080540	1.375	4.130	8.258	4.327	5.508	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.009	0.020
SD523-1422-426-1500R7-C	03080900	1.422	4.260	8.388	4.457	5.638	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1437-431-1500R7-C	03080543	1.437	4.310	8.438	4.507	5.688	2.750	1.500	1.969	SPGX11T3	SCGX11T308	0.004	0.020
SD523-1500-450-1500R7-C	03080546	1.500	4.500	8.628	4.697	5.878	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.020	0.020
SD523-1562-469-1500R7-C	03080551	1.562	4.690	8.818	4.887	6.068	2.750	1.500	1.969	SPGX12T3	SCGX11T308	0.010	0.020
SD523-1625-488-1500R7-C	03080556	1.625	4.880	9.008	5.077	6.258	2.750	1.500	1.969	SPGX12T3	SCGX120408	0.007	0.020
SD523-1687-506-1500R7-C	03080561	1.687	5.060	9.188	5.257	6.438	2.750	1.500	1.969	SPGX12T3	SCGX120408	0.004	0.020
SD523-1750-525-1500R7-C	03080566	1.750	5.250	9.378	5.447	6.628	2.750	1.500	1.969	SPGX1504	SCGX120408	0.020	0.016
SD523-1812-544-1500R7-C	03080573	1.812	5.440	9.568	5.637	6.818	2.750	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020
SD523-1875-563-1500R7-C	03080578	1.875	5.630	9.758	5.827	7.008	2.750	1.500	1.969	SPGX1504	SCGX150512	0.020	0.020

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert	Inch -	Inch +
SD523-1937-581-1500R7-C	03080582	1.937	5.810	9.938	6.007	7.188	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2000-600-1500R7-C	03080589	2.000	6.000	10.128	6.197	7.378	2.750	1.500	2.337	SPGX1504	SCGX150512	0.008	0.020
SD523-2125-638-1500R7-C	03080598	2.125	6.380	10.508	6.577	7.758	2.750	1.500	2.337	SPGX1904	SCGX150512	0.020	0.020
SD523-2250-675-1500R7-C	03080604	2.250	6.750	10.878	6.947	8.128	2.750	1.500	2.337	SPGX1904	SCGX150512	0.013	0.020
SD523-2375-713-1500R7-C	03080610	2.375	7.130	11.258	7.327	8.508	2.750	1.500	2.480	SPGX1904	SCGX150512	0.004	0.020

Spare Parts, included in delivery

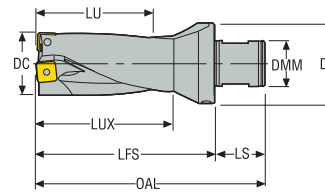
For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug
					
0.594-0.687	1310	C02245-T07P	C02245-T07P	T07P-2	R1/4
0.709-0.766	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4
0.787-0.827	1310	C02205-T07P	C02205-T07P	T07P-2	R1/4
0.875	1310	C02506-T08P	C02506-T08P	T08P-2	R1/4
0.906-0.922	1310	C02506-T08P	C03007-T08P	T08P-2	R1/4
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4
1.032-1.109	1310	C03007-T09P	C03007-T09P	T09P-2	R1/4
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4
1.250-1.562	1310	C03508-T15P	C03508-T15P	T15P-2D	R1/4
1.625-1.687	1310	C03508-T15P	C05012-T15P	T15P-2D	R1/4
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4

Accessories

For drill dia. (inch)	Torque wrench
	
0.594-0.687	T00-07P09
0.709-0.766	T00-07P09
0.787-0.827	T00-07P09
0.875	T00-08P12
0.906-0.922	T00-08P12
0.937-1.000	T00-08P12
1.032-1.109	T00-09P20
1.125-1.187	T00-09P20
1.250-1.562	T00-15P30
1.625-1.687	T00-15P30
1.750-2.375	T00-15P35

SD523

Drilling depth ~ 3 x D – Metric/Inch



- ABS 50 compatible shank, -2
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
										Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-50R2	03080864	15,0 0.591	45,0 1.772	106,0 4.173	50,0 1.969	75,0 2.953	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-50R2	03080865	15,5 0.610	47,0 1.850	108,0 4.252	52,0 2.047	77,0 3.031	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-50R2	03080559	16,0 0.630	48,0 1.890	109,0 4.291	53,0 2.087	78,0 3.071	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-50R2	03080866	16,5 0.650	50,0 1.969	111,0 4.370	55,0 2.165	80,0 3.150	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-50R2	03080867	17,0 0.669	51,0 2.008	112,0 4.409	56,0 2.205	81,0 3.189	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-50R2	03080564	17,5 0.689	53,0 2.087	114,0 4.488	58,0 2.283	83,0 3.268	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-50R2	03080576	18,0 0.709	54,0 2.126	115,0 4.528	59,0 2.323	84,0 3.307	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-50R2	03080868	18,5 0.728	56,0 2.205	117,0 4.606	61,0 2.402	86,0 3.386	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-50R2	03080585	19,0 0.748	57,0 2.244	118,0 4.646	62,0 2.441	87,0 3.425	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-50R2	03080591	20,0 0.787	60,0 2.362	121,0 4.764	65,0 2.559	90,0 3.543	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-50R2	03080587	20,62 0.812	62,0 2.441	123,0 4.843	67,0 2.638	92,0 3.622	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-50R2	03080600	21,0 0.827	63,0 2.480	124,0 4.882	68,0 2.677	93,0 3.661	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD523-22-66-50R2	03080606	22,0 0.866	66,0 2.598	127,0 5.000	71,0 2.795	96,0 3.780	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-50R2	03080601	22,23 0.875	67,0 2.638	128,0 5.039	72,0 2.835	97,0 3.819	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-50R2	03080869	23,0 0.906	69,0 2.717	130,0 5.118	74,0 2.913	99,0 3.898	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-50R2	03080613	24,0 0.945	72,0 2.835	133,0 5.236	77,0 3.031	102,0 4.016	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-50R2	03080617	25,0 0.984	75,0 2.953	136,0 5.354	80,0 3.150	105,0 4.134	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.40-77-50R2	03080614	25,4 1.000	77,0 3.031	138,0 5.433	82,0 3.228	107,0 4.213	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-50R2	03080620	26,0 1.024	78,0 3.071	139,0 5.472	83,0 3.268	108,0 4.252	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-50R2	03080623	27,0 1.063	81,0 3.189	142,0 5.591	86,0 3.386	111,0 4.370	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-50R2	03080627	28,0 1.102	84,0 3.307	145,0 5.709	89,0 3.504	114,0 4.488	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD523-28.59-86-50R2	03080625	28,59 1.126	86,0 3.386	147,0 5.787	91,0 3.583	116,0 4.567	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020

Introduction

Drilling



Reaming

Boring



Annex

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-29-87-50R2	03080630	29,0 1.142	87,0 3.425	148,0 5.827	92,0 3.622	117,0 4.606	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-30-90-50R2	03080633	30,0 1.181	90,0 3.543	151,0 5.945	95,0 3.740	120,0 4.724	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31-93-50R2	03080637	31,0 1.220	93,0 3.661	154,0 6.063	98,0 3.858	123,0 4.843	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.75-96-50R2	03080635	31,75 1.250	96,0 3.780	157,0 6.181	101,0 3.976	126,0 4.961	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,28 0.011
SD523-32-96-50R2	03080640	32,0 1.260	96,0 3.780	157,0 6.181	101,0 3.976	126,0 4.961	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-33-99-50R2	03080643	33,0 1.299	99,0 3.898	160,0 6.299	104,0 4.094	129,0 5.079	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-34-102-50R2	03080646	34,0 1.339	102,0 4.016	163,0 6.417	107,0 4.213	132,0 5.197	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-35-105-50R2	03080650	35,0 1.378	105,0 4.134	166,0 6.535	110,0 4.331	135,0 5.315	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-36-108-50R2	03080870	36,0 1.417	108,0 4.252	169,0 6.654	113,0 4.449	138,0 5.433	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-37-111-50R2	03080871	37,0 1.457	111,0 4.370	172,0 6.772	116,0 4.567	141,0 5.551	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-38-114-50R2	03080657	38,0 1.496	114,0 4.488	175,0 6.890	119,0 4.685	144,0 5.669	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD523-39-117-50R2	03080660	39,0 1.535	117,0 4.606	178,0 7.008	122,0 4.803	147,0 5.787	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD523-40-120-50R2	03080872	40,0 1.575	120,0 4.724	181,0 7.126	125,0 4.921	150,0 5.906	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020
SD523-41-123-50R2	03080873	41,0 1.614	123,0 4.843	184,0 7.244	128,0 5.039	153,0 6.024	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD523-42-126-50R2	03080874	42,0 1.654	126,0 4.961	187,0 7.362	131,0 5.157	156,0 6.142	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,19 0.007	0,5 0.020
SD523-43-129-50R2	03080875	43,0 1.693	129,0 5.079	190,0 7.480	134,0 5.276	159,0 6.260	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX120408	0,05 0.002	0,5 0.020
SD523-44-132-50R2	03080671	44,0 1.732	132,0 5.197	193,0 7.598	137,0 5.394	162,0 6.378	31,0 1.220	28,0 1.102	50,0 1.969	SPGX1504	SCGX120408	0,5 0.020	0,41 0.016
SD523-44.45-134-50R2	03080668	44,45 1.750	134,0 5.276	195,0 7.677	139,0 5.472	164,0 6.457	31,0 1.220	28,0 1.102	50,0 1.969	SPGX1504	SCGX120408	0,5 0.020	0,41 0.016

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	
				
	Center insert		Periph insert	
15,00-17,45	C02245-T07P		C02245-T07P	T07P-2
17,46-19,49	C02205-T07P		C02245-T07P	T07P-2
19,50-21,24	C02205-T07P		C02205-T07P	T07P-2
21,25-22,49	C02506-T08P		C02506-T08P	T08P-2
22,50-25,49	C02507-T08P		C03007-T08P	T08P-2
25,50-28,49	C03007-T09P		C03007-T09P	T09P-2
28,50-31,49	C03007-T09P		C03009-T09P	T09P-2
31,50-40,49	C03508-T15P		C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P		C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P		C05012-T15P	T15P-2D

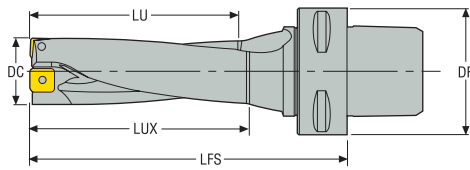
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric/Inch



- Seco-Capto™ C4 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC		LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch				Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-C4	03080920	15,0 0.591	45,0 1.772	50,0 1.969	82,0 3.228	40,0 1.575	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-C4	03080921	15,5 0.610	47,0 1.850	52,0 2.047	84,0 3.307	40,0 1.575	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-C4	03080922	16,0 0.630	48,0 1.890	53,0 2.087	86,0 3.386	40,0 1.575	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-C4	03080923	16,5 0.650	50,0 1.969	55,0 2.165	88,0 3.465	40,0 1.575	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-C4	03080925	17,0 0.669	51,0 2.008	56,0 2.205	89,0 3.504	40,0 1.575	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-C4	03080926	17,5 0.689	53,0 2.087	58,0 2.283	92,0 3.622	40,0 1.575	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-C4	03080927	18,0 0.709	54,0 2.126	59,0 2.323	93,0 3.661	40,0 1.575	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-C4	03080928	18,5 0.728	56,0 2.205	61,0 2.402	95,0 3.740	40,0 1.575	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-C4	03080929	19,0 0.748	57,0 2.244	62,0 2.441	96,0 3.780	40,0 1.575	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-C4	03080930	20,0 0.787	60,0 2.362	65,0 2.559	101,0 3.976	40,0 1.575	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-C4	03081006	20,62 0.812	62,0 2.441	67,0 2.638	103,0 4.055	40,0 1.575	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-C4	03080931	21,0 0.827	63,0 2.480	68,0 2.677	104,0 4.094	40,0 1.575	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD523-22-66-C4	03080932	22,0 0.866	66,0 2.598	71,0 2.795	107,0 4.213	40,0 1.575	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-C4	03081008	22,23 0.875	67,0 2.638	72,0 2.835	108,0 4.252	40,0 1.575	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-C4	03080933	23,0 0.906	69,0 2.717	74,0 2.913	111,0 4.370	40,0 1.575	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-C4	03080934	24,0 0.945	72,0 2.835	77,0 3.031	115,0 4.528	40,0 1.575	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-C4	03080935	25,0 0.984	75,0 2.953	80,0 3.150	119,0 4.685	40,0 1.575	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.4-77-C4	03081009	25,4 1.000	77,0 3.031	82,0 3.228	121,0 4.764	40,0 1.575	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-C4	03080936	26,0 1.024	78,0 3.071	83,0 3.268	122,0 4.803	40,0 1.575	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-C4	03080937	27,0 1.063	81,0 3.189	86,0 3.386	125,0 4.921	40,0 1.575	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-C4	03080938	28,0 1.102	84,0 3.307	89,0 3.504	129,0 5.079	40,0 1.575	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020

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Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-28.59-86-C4	03081010	28,59 1.126	86,0 3.386	91,0 3.583	131,0 5.157	40,0 1.575	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020
SD523-29-87-C4	03080939	29,0 1.142	87,0 3.425	92,0 3.622	132,0 5.197	40,0 1.575	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-30-90-C4	03080940	30,0 1.181	90,0 3.543	95,0 3.740	135,0 5.315	40,0 1.575	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

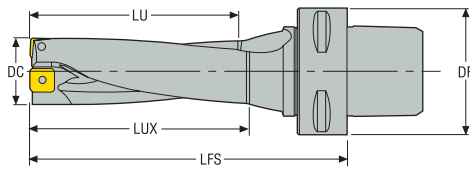
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric/Inch



- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC		LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch				Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-C5	03080941	15,0 0.591	45,0 1.772	50,0 1.969	82,0 3.228	50,0 1.969	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-C5	03080942	15,5 0.610	47,0 1.850	52,0 2.047	84,0 3.307	50,0 1.969	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-C5	03080943	16,0 0.630	48,0 1.890	53,0 2.087	86,0 3.386	50,0 1.969	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-C5	03080944	16,5 0.650	50,0 1.969	55,0 2.165	88,0 3.465	50,0 1.969	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-C5	03080945	17,0 0.669	51,0 2.008	56,0 2.205	89,0 3.504	50,0 1.969	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-C5	03080946	17,5 0.689	53,0 2.087	58,0 2.283	92,0 3.622	50,0 1.969	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-C5	03080947	18,0 0.709	54,0 2.126	59,0 2.323	93,0 3.661	50,0 1.969	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-C5	03080948	18,5 0.728	56,0 2.205	61,0 2.402	95,0 3.740	50,0 1.969	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-C5	03080949	19,0 0.748	57,0 2.244	62,0 2.441	96,0 3.780	50,0 1.969	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-C5	03080950	20,0 0.787	60,0 2.362	65,0 2.559	101,0 3.976	50,0 1.969	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-C5	03081001	20,62 0.812	62,0 2.441	67,0 2.638	103,0 4.055	50,0 1.969	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-C5	03080951	21,0 0.827	63,0 2.480	68,0 2.677	104,0 4.094	50,0 1.969	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD523-22-66-C5	03080952	22,0 0.866	66,0 2.598	71,0 2.795	107,0 4.213	50,0 1.969	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-C5	03081002	22,23 0.875	67,0 2.638	72,0 2.835	108,0 4.252	50,0 1.969	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-C5	03080953	23,0 0.906	69,0 2.717	74,0 2.913	111,0 4.370	50,0 1.969	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-C5	03080954	24,0 0.945	72,0 2.835	77,0 3.031	115,0 4.528	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-C5	03080955	25,0 0.984	75,0 2.953	80,0 3.150	119,0 4.685	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.4-77-C5	03081003	25,4 1.000	77,0 3.031	82,0 3.228	121,0 4.764	50,0 1.969	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-C5	03080956	26,0 1.024	78,0 3.071	83,0 3.268	122,0 4.803	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-C5	03080957	27,0 1.063	81,0 3.189	86,0 3.386	125,0 4.921	50,0 1.969	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-C5	03080958	28,0 1.102	84,0 3.307	89,0 3.504	129,0 5.079	50,0 1.969	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020

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Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-28.59-86-C5	03081004	28,59 1.126	86,0 3.386	91,0 3.583	131,0 5.157	50,0 1.969	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020
SD523-29.87-C5	03080959	29,0 1.142	87,0 3.425	92,0 3.622	132,0 5.197	50,0 1.969	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-30.90-C5	03080960	30,0 1.181	90,0 3.543	95,0 3.740	135,0 5.315	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.93-C5	03080961	31,0 1.220	93,0 3.661	98,0 3.858	138,0 5.433	50,0 1.969	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.75-96-C5	03081005	31,75 1.250	96,0 3.780	101,0 3.976	142,0 5.591	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,28 0.011
SD523-32.96-C5	03080962	32,0 1.260	96,0 3.780	101,0 3.976	142,0 5.591	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-33.99-C5	03080963	33,0 1.299	99,0 3.898	104,0 4.094	145,0 5.709	50,0 1.969	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-34.102-C5	03080964	34,0 1.339	102,0 4.016	107,0 4.213	148,0 5.827	50,0 1.969	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-35.105-C5	03080965	35,0 1.378	105,0 4.134	110,0 4.331	151,0 5.945	50,0 1.969	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-36.108-C5	03080966	36,0 1.417	108,0 4.252	113,0 4.449	154,0 6.063	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-37.111-C5	03080967	37,0 1.457	111,0 4.370	116,0 4.567	157,0 6.181	50,0 1.969	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-38.114-C5	03080968	38,0 1.496	114,0 4.488	119,0 4.685	160,0 6.299	50,0 1.969	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD523-39.117-C5	03080969	39,0 1.535	117,0 4.606	122,0 4.803	163,0 6.417	50,0 1.969	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD523-40.120-C5	03080970	40,0 1.575	120,0 4.724	125,0 4.921	166,0 6.535	50,0 1.969	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

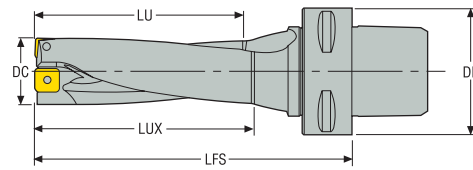
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD523

Drilling depth ~ 3 x D – Metric/Inch





- Seco-Capto™ C6 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 301-302
- For intermediate diameters see the MyDesign software.



Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
							Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-15-45-C6	03080971	15,0 0.591	45,0 1.772	50,0 1.969	84,0 3.307	63,0 2.480	SPGX0502	SCGX050204	0,22 0.009	0,31 0.012
SD523-15.5-47-C6	03080972	15,5 0.610	47,0 1.850	52,0 2.047	86,0 3.386	63,0 2.480	SPGX0502	SCGX050204	0,17 0.007	0,36 0.014
SD523-16-48-C6	03080973	16,0 0.630	48,0 1.890	53,0 2.087	88,0 3.465	63,0 2.480	SPGX0502	SCGX050204	0,12 0.005	0,41 0.016
SD523-16.5-50-C6	03080974	16,5 0.650	50,0 1.969	55,0 2.165	90,0 3.543	63,0 2.480	SPGX0502	SCGX050204	0,07 0.003	0,46 0.018
SD523-17-51-C6	03080975	17,0 0.669	51,0 2.008	56,0 2.205	91,0 3.583	63,0 2.480	SPGX0502	SCGX050204	0,02 0.001	0,5 0.020
SD523-17.5-53-C6	03080976	17,5 0.689	53,0 2.087	58,0 2.283	94,0 3.701	63,0 2.480	SPGX0602	SCGX050204	0,43 0.017	0,1 0.004
SD523-18-54-C6	03080977	18,0 0.709	54,0 2.126	59,0 2.323	95,0 3.740	63,0 2.480	SPGX0602	SCGX050204	0,32 0.013	0,21 0.008
SD523-18.5-56-C6	03080978	18,5 0.728	56,0 2.205	61,0 2.402	97,0 3.819	63,0 2.480	SPGX0602	SCGX050204	0,22 0.009	0,31 0.012
SD523-19-57-C6	03080979	19,0 0.748	57,0 2.244	62,0 2.441	98,0 3.858	63,0 2.480	SPGX0602	SCGX050204	0,11 0.004	0,42 0.017
SD523-20-60-C6	03080980	20,0 0.787	60,0 2.362	65,0 2.559	103,0 4.055	63,0 2.480	SPGX0602	SCGX060204	0,07 0.003	0,46 0.018
SD523-20.62-62-C6	03081011	20,62 0.812	62,0 2.441	67,0 2.638	105,0 4.134	63,0 2.480	SPGX0602	SCGX060204	0,03 0.001	0,5 0.020
SD523-21-63-C6	03080981	21,0 0.827	63,0 2.480	68,0 2.677	106,0 4.173	63,0 2.480	SPGX0602	SCGX060204	0,01 0	0,5 0.020
SD523-22-66-C6	03080982	22,0 0.866	66,0 2.598	71,0 2.795	109,0 4.291	63,0 2.480	SPGX0703	SCGX060204	0,44 0.017	0,46 0.018
SD523-22.23-67-C6	03081012	22,23 0.875	67,0 2.638	72,0 2.835	110,0 4.331	63,0 2.480	SPGX0703	SCGX060204	0,39 0.015	0,5 0.020
SD523-23-69-C6	03080983	23,0 0.906	69,0 2.717	74,0 2.913	113,0 4.449	63,0 2.480	SPGX0703	SCGX070308	0,33 0.013	0,5 0.020
SD523-24-72-C6	03080984	24,0 0.945	72,0 2.835	77,0 3.031	117,0 4.606	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25-75-C6	03080985	25,0 0.984	75,0 2.953	80,0 3.150	121,0 4.764	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-25.4-77-C6	03081013	25,4 1.000	77,0 3.031	82,0 3.228	123,0 4.843	63,0 2.480	SPGX0703	SCGX070308	0,11 0.004	0,5 0.020
SD523-26-78-C6	03080986	26,0 1.024	78,0 3.071	83,0 3.268	124,0 4.882	63,0 2.480	SPGX0903	SCGX070308	0,5 0.020	0,11 0.004
SD523-27-81-C6	03080987	27,0 1.063	81,0 3.189	86,0 3.386	127,0 5.000	63,0 2.480	SPGX0903	SCGX070308	0,5 0.020	0,26 0.010
SD523-28-84-C6	03080988	28,0 1.102	84,0 3.307	89,0 3.504	131,0 5.157	63,0 2.480	SPGX0903	SCGX070308	0,28 0.011	0,5 0.020
SD523-28.59-86-C6	03081014	28,59 1.126	86,0 3.386	91,0 3.583	133,0 5.236	63,0 2.480	SPGX0903	SCGX09T308	0,21 0.008	0,5 0.020

Designation	Item number	DC	LU	LUX	LFS	DF	Insert		Radial adjustment	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert	mm - Inch -	mm + Inch +
SD523-29-87-C6	03080989	29,0 1.142	87,0 3.425	92,0 3.622	134,0 5.276	63,0 2.480	SPGX0903	SCGX09T308	0,18 0.007	0,5 0.020
SD523-30-90-C6	03080990	30,0 1.181	90,0 3.543	95,0 3.740	137,0 5.394	63,0 2.480	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31-93-C6	03080991	31,0 1.220	93,0 3.661	98,0 3.858	140,0 5.512	63,0 2.480	SPGX0903	SCGX09T308	0,12 0.005	0,5 0.020
SD523-31.75-96-C6	03081015	31,75 1.250	96,0 3.780	101,0 3.976	144,0 5.669	63,0 2.480	SPGX11T3	SCGX09T308	0,5 0.020	0,28 0.011
SD523-32-96-C6	03080992	32,0 1.260	96,0 3.780	101,0 3.976	144,0 5.669	63,0 2.480	SPGX11T3	SCGX09T308	0,5 0.020	0,31 0.012
SD523-33-99-C6	03080993	33,0 1.299	99,0 3.898	104,0 4.094	147,0 5.787	63,0 2.480	SPGX11T3	SCGX09T308	0,5 0.020	0,46 0.018
SD523-34-102-C6	03080994	34,0 1.339	102,0 4.016	107,0 4.213	150,0 5.906	63,0 2.480	SPGX11T3	SCGX09T308	0,22 0.009	0,5 0.020
SD523-35-105-C6	03080995	35,0 1.378	105,0 4.134	110,0 4.331	153,0 6.024	63,0 2.480	SPGX11T3	SCGX11T308	0,22 0.009	0,5 0.020
SD523-36-108-C6	03080996	36,0 1.417	108,0 4.252	113,0 4.449	156,0 6.142	63,0 2.480	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-37-111-C6	03080997	37,0 1.457	111,0 4.370	116,0 4.567	159,0 6.260	63,0 2.480	SPGX11T3	SCGX11T308	0,09 0.004	0,5 0.020
SD523-38-114-C6	03080998	38,0 1.496	114,0 4.488	119,0 4.685	162,0 6.378	63,0 2.480	SPGX12T3	SCGX11T308	0,5 0.020	0,5 0.020
SD523-39-117-C6	03080999	39,0 1.535	117,0 4.606	122,0 4.803	165,0 6.496	63,0 2.480	SPGX12T3	SCGX11T308	0,39 0.015	0,5 0.020
SD523-40-120-C6	03081000	40,0 1.575	120,0 4.724	125,0 4.921	168,0 6.614	63,0 2.480	SPGX12T3	SCGX11T308	0,19 0.007	0,5 0.020

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

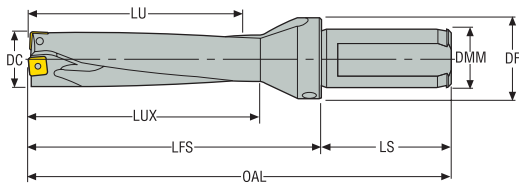
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric/Inch



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-17-68-25R7	03080330	17,0 0.669	68,0 2.677	154,0 6.063	73,0 2.874	98,0 3.858	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0502	SCGX050204
SD524-17.5-70-25R7	03080326	17,5 0.689	70,0 2.756	156,0 6.142	75,0 2.953	100,0 3.937	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204
SD524-18-72-25R7	03080333	18,0 0.709	72,0 2.835	158,0 6.220	77,0 3.031	102,0 4.016	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204
SD524-18.5-74-25R7	03080331	18,5 0.728	74,0 2.913	160,0 6.299	79,0 3.110	104,0 4.094	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204
SD524-19-76-25R7	03080336	19,0 0.748	76,0 2.992	162,0 6.378	81,0 3.189	106,0 4.173	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204
SD524-20-80-25R7	03080340	20,0 0.787	80,0 3.150	166,0 6.535	85,0 3.346	110,0 4.331	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204
SD524-21-84-25R7	03080344	21,0 0.827	84,0 3.307	170,0 6.693	89,0 3.504	114,0 4.488	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204
SD524-22-88-25R7	03080348	22,0 0.866	88,0 3.465	174,0 6.850	93,0 3.661	118,0 4.646	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204
SD524-23-92-25R7	03080351	23,0 0.906	92,0 3.622	178,0 7.008	97,0 3.819	122,0 4.803	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308
SD524-24-96-25R7	03080352	24,0 0.945	96,0 3.780	182,0 7.165	101,0 3.976	126,0 4.961	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308
SD524-25-100-32R7	03080353	25,0 0.984	100,0 3.937	190,0 7.480	105,0 4.134	130,0 5.118	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308
SD524-26-104-32R7	03080354	26,0 1.024	104,0 4.094	194,0 7.638	109,0 4.291	134,0 5.276	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD524-27-108-32R7	03080355	27,0 1.063	108,0 4.252	198,0 7.795	113,0 4.449	138,0 5.433	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD524-28-112-32R7	03080356	28,0 1.102	112,0 4.409	202,0 7.953	117,0 4.606	142,0 5.591	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD524-29-116-32R7	03080357	29,0 1.142	116,0 4.567	206,0 8.110	121,0 4.764	146,0 5.748	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD524-30-120-32R7	03080358	30,0 1.181	120,0 4.724	210,0 8.268	125,0 4.921	150,0 5.906	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD524-31-124-32R7	03080360	31,0 1.220	124,0 4.882	214,0 8.425	129,0 5.079	154,0 6.063	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD524-32-128-40R7	03080361	32,0 1.260	128,0 5.039	226,0 8.898	133,0 5.236	158,0 6.220	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD524-33-132-40R7	03080362	33,0 1.299	132,0 5.197	230,0 9.055	137,0 5.394	162,0 6.378	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD524-34-136-40R7	03080363	34,0 1.339	136,0 5.354	234,0 9.213	141,0 5.551	166,0 6.535	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD524-35-140-40R7	03080364	35,0 1.378	140,0 5.512	238,0 9.370	145,0 5.709	170,0 6.693	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert
SD524-36-144-40R7	03080365	36,0 1.417	144,0 5.669	242,0 9.528	149,0 5.866	174,0 6.850	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308
SD524-37-148-40R7	03080366	37,0 1.457	148,0 5.827	246,0 9.685	153,0 6.024	178,0 7.008	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308
SD524-38-152-40R7	03080367	38,0 1.496	152,0 5.984	250,0 9.843	157,0 6.181	182,0 7.165	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308
SD524-39-156-40R7	03080368	39,0 1.535	156,0 6.142	254,0 10.000	161,0 6.339	186,0 7.323	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308
SD524-40-160-40R7	03080369	40,0 1.575	160,0 6.299	258,0 10.157	165,0 6.496	190,0 7.480	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308
SD524-41-164-40R7	03080370	41,0 1.614	164,0 6.457	262,0 10.315	169,0 6.654	194,0 7.638	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD524-42-168-40R7	03080371	42,0 1.654	168,0 6.614	266,0 10.472	173,0 6.811	198,0 7.795	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD524-43-172-40R7	03080372	43,0 1.693	172,0 6.772	270,0 10.630	177,0 6.969	202,0 7.953	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD524-44-176-40R7	03080373	44,0 1.732	176,0 6.929	274,0 10.787	181,0 7.126	206,0 8.110	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX120408
SD524-45-180-40R7	03080374	45,0 1.772	180,0 7.087	278,0 10.945	185,0 7.283	210,0 8.268	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512
SD524-46-184-40R7	03080375	46,0 1.811	184,0 7.244	282,0 11.102	189,0 7.441	214,0 8.425	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512
SD524-47-188-40R7	03080376	47,0 1.850	188,0 7.402	286,0 11.260	193,0 7.598	218,0 8.583	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512
SD524-48-192-40R7	03080377	48,0 1.890	192,0 7.559	290,0 11.417	197,0 7.756	222,0 8.740	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512
SD524-49-196-40R7	03080378	49,0 1.929	196,0 7.717	294,0 11.575	201,0 7.913	226,0 8.898	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512
SD524-50-200-40R7	03080379	50,0 1.969	200,0 7.874	298,0 11.732	205,0 8.071	230,0 9.055	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512
SD524-51-204-40R7	03080380	51,0 2.008	204,0 8.031	302,0 11.890	209,0 8.228	234,0 9.213	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1504	SCGX150512
SD524-52-208-40R7	03080381	52,0 2.047	208,0 8.189	306,0 12.047	213,0 8.386	238,0 9.370	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-53-212-40R7	03080382	53,0 2.087	212,0 8.346	310,0 12.205	217,0 8.543	242,0 9.528	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-54-216-40R7	03080383	54,0 2.126	216,0 8.504	314,0 12.362	221,0 8.701	246,0 9.685	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-55-220-40R7	03080384	55,0 2.165	220,0 8.661	318,0 12.520	225,0 8.858	250,0 9.843	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-56-224-40R7	03080385	56,0 2.205	224,0 8.819	322,0 12.677	229,0 9.016	254,0 10.000	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-57-228-40R7	03080386	57,0 2.244	228,0 8.976	326,0 12.835	233,0 9.173	258,0 10.157	68,0 2.677	40,0 1.575	59,35 2.337	SPGX1904	SCGX150512
SD524-58-232-40R7	03080387	58,0 2.283	232,0 9.134	330,0 12.992	237,0 9.331	262,0 10.315	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512
SD524-59-236-40R7	03080388	59,0 2.323	236,0 9.291	334,0 13.150	241,0 9.488	266,0 10.472	68,0 2.677	40,0 1.575	63,0 2.480	SPGX1904	SCGX150512

Introduction



Drilling

Reaming



Boring

Annex

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

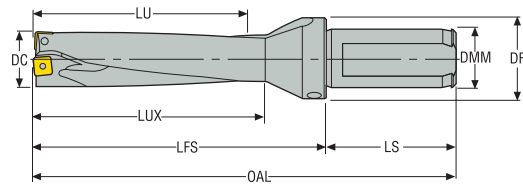
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Inch






- ISO 9766 shank, R7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.


Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD524-0594-238-1000R7	03080280	0.594	2.380	5.811	2.577	3.561	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0625-250-1000R7	03080281	0.625	2.500	5.931	2.697	3.681	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0656-262-1000R7	03080283	0.656	2.620	6.051	2.817	3.801	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0687-275-1000R7	03080285	0.687	2.750	6.181	2.947	3.931	2.250	1.000	1.378	SPGX0502	SCGX050204
SD524-0709-284-1000R7	03080286	0.709	2.840	6.271	3.037	4.021	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0750-300-1000R7	03080288	0.750	3.000	6.431	3.197	4.181	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0766-306-1000R7	03080289	0.766	3.060	6.491	3.257	4.241	2.250	1.000	1.378	SPGX0602	SCGX050204
SD524-0787-315-1000R7	03080290	0.787	3.150	6.581	3.347	4.331	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0812-325-1000R7	03080292	0.812	3.250	6.681	3.447	4.431	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0827-331-1000R7	03080294	0.827	3.310	6.741	3.507	4.491	2.250	1.000	1.378	SPGX0602	SCGX060204
SD524-0875-350-1000R7	03080295	0.875	3.500	6.931	3.697	4.681	2.250	1.000	1.378	SPGX0703	SCGX060204
SD524-0906-362-1000R7	03080297	0.906	3.620	7.051	3.817	4.801	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0922-369-1000R7	03080298	0.922	3.690	7.121	3.887	4.871	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0937-375-1000R7	03080299	0.937	3.750	7.181	3.947	4.931	2.250	1.000	1.378	SPGX0703	SCGX070308
SD524-0984-394-1250R7	03080301	0.984	3.940	7.496	4.137	5.121	2.375	1.250	1.654	SPGX0703	SCGX070308
SD524-1000-400-1250R7	03080302	1.000	4.000	7.556	4.197	5.181	2.375	1.250	1.654	SPGX0703	SCGX070308
SD524-1032-413-1250R7	03080304	1.032	4.130	7.686	4.327	5.311	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1062-425-1250R7	03080305	1.062	4.250	7.806	4.447	5.431	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1109-443-1250R7	03080307	1.109	4.430	7.986	4.627	5.611	2.375	1.250	1.654	SPGX0903	SCGX070308
SD524-1125-450-1250R7	03080308	1.125	4.500	8.056	4.697	5.681	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1172-469-1250R7	03080310	1.172	4.690	8.246	4.887	5.871	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1187-475-1250R7	03080311	1.187	4.750	8.306	4.947	5.931	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD524-1250-500-1500R7	03080314	1.250	5.000	8.806	5.197	6.181	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1312-525-1500R7	03080315	1.312	5.250	9.056	5.447	6.431	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1344-538-1500R7	03080317	1.344	5.380	9.186	5.577	6.561	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1375-550-1500R7	03080318	1.375	5.500	9.306	5.697	6.681	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1437-575-1500R7	03080320	1.437	5.750	9.556	5.947	6.931	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1500-600-1500R7	03080322	1.500	6.000	9.806	6.197	7.181	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1562-625-1500R7	03080323	1.562	6.250	10.056	6.447	7.431	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1625-650-1500R7	03080324	1.625	6.500	10.306	6.697	7.681	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD524-1687-675-1500R7	03080325	1.687	6.750	10.556	6.947	7.931	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD524-1750-700-1500R7	03080328	1.750	7.000	10.806	7.197	8.181	2.625	1.500	1.969	SPGX1504	SCGX120408
SD524-1812-725-1500R7	03080332	1.812	7.250	11.056	7.447	8.431	2.625	1.500	1.969	SPGX1504	SCGX150512
SD524-1875-750-1500R7	03080334	1.875	7.500	11.306	7.697	8.681	2.625	1.500	1.969	SPGX1504	SCGX150512
SD524-1937-775-1500R7	03080335	1.937	7.750	11.556	7.947	8.931	2.625	1.500	2.337	SPGX1504	SCGX150512
SD524-2000-800-1500R7	03080337	2.000	8.000	11.806	8.197	9.181	2.625	1.500	2.337	SPGX1504	SCGX150512

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	Center insert	Periph insert
SD524-2062-825-1500R7	03080339	2.062	8.250	12.056	8.447	9.431	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2125-850-1500R7	03080342	2.125	8.500	12.306	8.697	9.681	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2250-900-1500R7	03080346	2.250	9.000	12.806	9.197	10.181	2.625	1.500	2.337	SPGX1904	SCGX150512
SD524-2375-950-1500R7	03080349	2.375	9.500	13.306	9.697	10.681	2.625	1.500	2.480	SPGX1904	SCGX150512

Spare Parts, included in delivery

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key
			
0.594-0.687	C02245-T07P	C02245-T07P	T07P-2
0.709-0.766	C02205-T07P	C02245-T07P	T07P-2
0.787-0.827	C02205-T07P	C02205-T07P	T07P-2
0.875-0.905	C02506-T08P	C02506-T08P	T08P-2
0.906-1.000	C02507-T08P	C03007-T08P	T08P-2
1.032-1.109	C03007-T09P	C03007-T09P	T09P-2
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2
1.250-1.562	C03508-T15P	C03508-T15P	T15P-2D
1.625-1.687	C03508-T15P	C05012-T15P	T15P-2D
1.750-2.375	C04011-T15P	C05012-T15P	T15P-2D

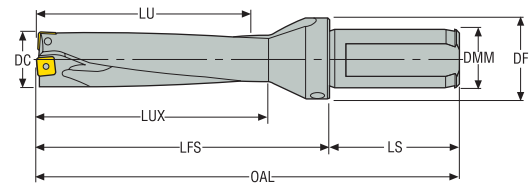
Accessories

For drill dia. (inch)	Torque wrench
	
0.594-0.687	T00-07P09
0.709-0.766	T00-07P09
0.787-0.827	T00-07P09
0.875-0.905	T00-08P12
0.906-1.000	T00-08P12
1.032-1.109	T00-09P20
1.125-1.187	T00-09P20
1.250-1.562	T00-15P30
1.625-1.687	T00-15P30
1.750-2.375	T00-15P35

Torque wrench including blade.

SD524

Drilling depth ~ 4 x D – Inch



- ISO 9766 shank, R7-C
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.
- For stationary applications

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD524-0625-250-1000R7-C	03080282	0.625	2.500	6.628	2.697	3.878	2.750	1.000	1.378	SPGX0502	SCGX050204
SD524-0687-275-1000R7-C	03080284	0.687	2.750	6.878	2.947	4.128	2.750	1.000	1.378	SCGX0502	SCGX050204
SD524-0750-300-1000R7-C	03080287	0.750	3.000	7.128	3.197	4.378	2.750	1.000	1.378	SPGX0602	SCGX050204
SD524-0812-325-1000R7-C	03080293	0.812	3.250	7.378	3.447	4.628	2.750	1.000	1.378	SPGX0602	SCGX060204
SD524-0875-350-1000R7-C	03080296	0.875	3.500	7.628	3.697	4.878	2.750	1.000	1.378	SPGX0703	SCGX060204
SD524-0937-375-1000R7-C	03080300	0.937	3.750	7.878	3.947	5.128	2.750	1.000	1.378	SPGX0703	SCGX070308
SD524-1000-400-1250R7-C	03080303	1.000	4.000	8.128	4.197	5.378	2.750	1.250	1.654	SPGX0703	SCGX070308
SD524-1062-425-1250R7-C	03080306	1.062	4.250	8.378	4.447	5.628	2.750	1.250	1.654	SPGX0903	SCGX070308
SD524-1125-450-1250R7-C	03080309	1.125	4.500	8.628	4.697	5.878	2.750	1.250	1.654	SPGX0903	SCGX09T308
SD524-1187-475-1250R7-C	03080312	1.187	4.750	8.878	4.947	6.128	2.750	1.250	1.654	SPGX0903	SCGX09T308
SD524-1250-500-1500R7-C	03080313	1.250	5.000	9.128	5.197	6.378	2.750	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1312-525-1500R7-C	03080316	1.312	5.250	9.378	5.447	6.628	2.750	1.500	1.969	SPGX11T3	SCGX09T308
SD524-1375-550-1500R7-C	03080319	1.375	5.500	9.628	5.697	6.878	2.750	1.500	1.969	SPGX11T3	SCGX11T308
SD524-1500-600-1500R7-C	03080321	1.500	6.000	10.128	6.197	7.378	2.750	1.500	1.969	SPGX12T3	SCGX11T308
SD524-1750-700-1500R7-C	03080329	1.750	7.000	11.128	7.197	8.378	2.750	1.500	1.969	SPGX1504	SCGX120408
SD524-2000-800-1500R7-C	03080338	2.000	8.000	12.128	8.197	9.378	2.750	1.500	2.337	SPGX1504	SCGX150512
SD524-2125-850-1500R7-C	03080343	2.125	8.500	12.628	8.697	9.878	2.750	1.500	2.337	SPGX1904	SCGX150512
SD524-2250-900-1500R7-C	03080347	2.250	9.000	13.128	9.197	10.378	2.750	1.500	2.337	SPGX1904	SCGX150512
SD524-2375-950-1500R7-C	03080350	2.375	9.500	13.628	9.697	10.878	2.750	1.500	2.480	SPGX1904	SCGX150512

Spare Parts, included in delivery

Accessories

For drill dia. (inch)	Hose adapter	Insert screw centre	Insert screw periph	Key	Plug	Torque wrench
0.625-0.687						
0.625-0.687	1310	C02245-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.750	1310	C02205-T07P	C02245-T07P	T07P-2	R1/4	T00-07P09
0.812	1310	C02205-T07P	C02205-T07P	T07P-2	R1/4	T00-07P09
0.875	1310	C02506-T08P	C02506-T08P	T08P-2	R1/4	T00-08P12
0.937-1.000	1310	C02507-T08P	C03007-T08P	T08P-2	R1/4	T00-08P12
1.062	1310	C03007-T09P	C03007-T09P	T09P-2	R1/4	T00-09P20
1.125-1.187	1310	C03007-T09P	C03009-T09P	T09P-2	R1/4	T00-09P20
1.250-1.375	1310	C03508-T15P	C03508-T15P	T15P-2D	R1/4	T00-15P30
1.750-2.375	1310	C04011-T15P	C05012-T15P	T15P-2D	R1/4	T00-15P35

Introduction

Drilling

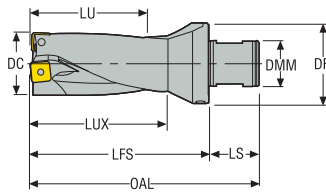
Reaming

Boring

Annex

SD524

Drilling depth ~ 4 x D – Metric/Inch





- ABS 50 compatible shank, -2
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.



Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-17-68-50R2	03080208	17,0 0.669	68,0 2.677	129,0 5.079	73,0 2.874	98,0 3.858	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0502	SCGX050204
SD524-17.5-70-50R2	03080327	17,5 0.689	70,0 2.756	131,0 5.157	75,0 2.953	100,0 3.937	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204
SD524-18-72-50R2	03080209	18,0 0.709	72,0 2.835	133,0 5.236	77,0 3.031	102,0 4.016	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204
SD524-18.5-74-50R2	03080210	18,5 0.728	74,0 2.913	135,0 5.315	79,0 3.110	104,0 4.094	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204
SD524-19-76-50R2	03080422	19,0 0.748	76,0 2.992	137,0 5.394	81,0 3.189	106,0 4.173	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX050204
SD524-20-80-50R2	03080341	20,0 0.787	80,0 3.150	141,0 5.551	85,0 3.346	110,0 4.331	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204
SD524-20.62-83-50R2	03080215	20,62 0.812	83,0 3.268	144,0 5.669	88,0 3.465	113,0 4.449	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204
SD524-21-84-50R2	03080345	21,0 0.827	84,0 3.307	145,0 5.709	89,0 3.504	114,0 4.488	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0602	SCGX060204
SD524-22-88-50R2	03080193	22,0 0.866	88,0 3.465	149,0 5.866	93,0 3.661	118,0 4.646	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204
SD524-22.23-89-50R2	03080216	22,23 0.875	89,0 3.504	150,0 5.906	94,0 3.701	119,0 4.685	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX060204
SD524-23-92-50R2	03080194	23,0 0.906	92,0 3.622	153,0 6.024	97,0 3.819	122,0 4.803	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308
SD524-24-96-50R2	03080195	24,0 0.945	96,0 3.780	157,0 6.181	101,0 3.976	126,0 4.961	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308
SD524-25-100-50R2	03080196	25,0 0.984	100,0 3.937	161,0 6.339	105,0 4.134	130,0 5.118	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308
SD524-25.4-102-50R2	03080217	25,4 1.000	102,0 4.016	163,0 6.417	107,0 4.213	132,0 5.197	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0703	SCGX070308
SD524-26-104-50R2	03080423	26,0 1.024	104,0 4.094	165,0 6.496	109,0 4.291	134,0 5.276	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308
SD524-27-108-50R2	03080197	27,0 1.063	108,0 4.252	169,0 6.654	113,0 4.449	138,0 5.433	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308
SD524-28-112-50R2	03080424	28,0 1.102	112,0 4.409	173,0 6.811	117,0 4.606	142,0 5.591	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308
SD524-28.59-115-50R2	03080218	28,59 1.126	115,0 4.528	176,0 6.929	120,0 4.724	145,0 5.709	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX070308
SD524-29-116-50R2	03080198	29,0 1.142	116,0 4.567	177,0 6.969	121,0 4.764	146,0 5.748	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308
SD524-30-120-50R2	03080199	30,0 1.181	120,0 4.724	181,0 7.126	125,0 4.921	150,0 5.906	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308
SD524-31-124-50R2	03080200	31,0 1.220	124,0 4.882	185,0 7.283	129,0 5.079	154,0 6.063	31,0 1.220	28,0 1.102	50,0 1.969	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert
SD524-31.75-127-50R2	03080359	31,75 1.250	127,0 5.000	188,0 7.402	132,0 5.197	157,0 6.181	31,0 1.220	50,0 1.969	50,0 1.969	SPGX11T3	SCGX09T308
SD524-32-128-50R2	03080425	32,0 1.260	128,0 5.039	189,0 7.441	133,0 5.236	158,0 6.220	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308
SD524-33-132-50R2	03080201	33,0 1.299	132,0 5.197	193,0 7.598	137,0 5.394	162,0 6.378	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308
SD524-34-136-50R2	03080207	34,0 1.339	136,0 5.354	197,0 7.756	141,0 5.551	166,0 6.535	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX09T308
SD524-35-140-50R2	03080202	35,0 1.378	140,0 5.512	201,0 7.913	145,0 5.709	170,0 6.693	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308
SD524-36-144-50R2	03080203	36,0 1.417	144,0 5.669	205,0 8.071	149,0 5.866	174,0 6.850	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308
SD524-37-148-50R2	03080204	37,0 1.457	148,0 5.827	209,0 8.228	153,0 6.024	178,0 7.008	31,0 1.220	28,0 1.102	50,0 1.969	SPGX11T3	SCGX11T308
SD524-38-152-50R2	03080426	38,0 1.496	152,0 5.984	213,0 8.386	157,0 6.181	182,0 7.165	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308
SD524-39-156-50R2	03080205	39,0 1.535	156,0 6.142	217,0 8.543	161,0 6.339	186,0 7.323	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308
SD524-40-160-50R2	03080206	40,0 1.575	160,0 6.299	221,0 8.701	165,0 6.496	190,0 7.480	31,0 1.220	28,0 1.102	50,0 1.969	SPGX12T3	SCGX11T308

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw	Insert key
		
	Center insert	Periph insert
15,00-17,45	C02245-T07P	C02245-T07P
17,46-19,49	C02205-T07P	C02245-T07P
19,50-21,24	C02205-T07P	C02205-T07P
21,25-22,49	C02506-T08P	C02506-T08P
22,50-25,49	C02507-T08P	C03007-T08P
25,50-28,49	C03007-T09P	C03007-T09P
28,50-31,49	C03007-T09P	C03009-T09P
31,50-40,49	C03508-T15P	C03508-T15P
40,50-43,24	C03508-T15P	C05012-T15P
43,25-59,00	C04011-T15P	C05012-T15P

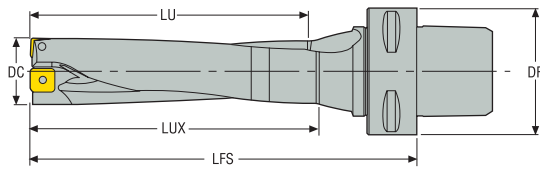
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric/Inch



- Seco-Capto™ C4 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-17-68-C4	03080219	17,0 0.669	68,0 2.677	73,0 2.874	106,0 4.173	40,0 1.575	SPGX0502	SCGX050204
SD524-17.5-70-C4	03080220	17,5 0.689	70,0 2.756	75,0 2.953	109,0 4.291	40,0 1.575	SPGX0602	SCGX050204
SD524-18-72-C4	03080221	18,0 0.709	72,0 2.835	77,0 3.031	111,0 4.370	40,0 1.575	SPGX0602	SCGX050204
SD524-18.5-74-C4	03080222	18,5 0.728	74,0 2.913	79,0 3.110	113,0 4.449	40,0 1.575	SPGX0602	SCGX050204
SD524-19-76-C4	03080223	19,0 0.748	76,0 2.992	81,0 3.189	115,0 4.528	40,0 1.575	SPGX0602	SCGX050204
SD524-20-80-C4	03080224	20,0 0.787	80,0 3.150	85,0 3.346	121,0 4.764	40,0 1.575	SPGX0602	SCGX060204
SD524-20.62-83-C4	03080413	20,62 0.812	83,0 3.268	88,0 3.465	124,0 4.882	40,0 1.575	SPGX0602	SCGX060204
SD524-21-84-C4	03080225	21,0 0.827	84,0 3.307	89,0 3.504	125,0 4.921	40,0 1.575	SPGX0602	SCGX060204
SD524-22-88-C4	03080226	22,0 0.866	88,0 3.465	93,0 3.661	129,0 5.079	40,0 1.575	SPGX0703	SCGX060204
SD524-22.23-89-C4	03080414	22,23 0.875	89,0 3.504	94,0 3.701	130,0 5.118	40,0 1.575	SPGX0703	SCGX060204
SD524-23-92-C4	03080227	23,0 0.906	92,0 3.622	97,0 3.819	134,0 5.276	40,0 1.575	SPGX0703	SCGX070308
SD524-24-96-C4	03080228	24,0 0.945	96,0 3.780	101,0 3.976	139,0 5.472	40,0 1.575	SPGX0703	SCGX070308
SD524-25-100-C4	03080229	25,0 0.984	100,0 3.937	105,0 4.134	144,0 5.669	40,0 1.575	SPGX0703	SCGX070308
SD524-25.4-102-C4	03080415	25,4 1.000	102,0 4.016	107,0 4.213	146,0 5.748	40,0 1.575	SPGX0703	SCGX070308
SD524-26-104-C4	03080230	26,0 1.024	104,0 4.094	109,0 4.291	148,0 5.827	40,0 1.575	SPGX0903	SCGX070308
SD524-27-108-C4	03080231	27,0 1.063	108,0 4.252	113,0 4.449	152,0 5.984	40,0 1.575	SPGX0903	SCGX070308
SD524-28-112-C4	03080232	28,0 1.102	112,0 4.409	117,0 4.606	157,0 6.181	40,0 1.575	SPGX0903	SCGX070308
SD524-28.59-115-C4	03080416	28,59 1.126	115,0 4.528	120,0 4.724	160,0 6.299	40,0 1.575	SPGX0903	SCGX070308
SD524-29-116-C4	03080233	29,0 1.142	116,0 4.567	121,0 4.764	161,0 6.339	40,0 1.575	SPGX0903	SCGX09T308
SD524-30-120-C4	03080234	30,0 1.181	120,0 4.724	125,0 4.921	165,0 6.496	40,0 1.575	SPGX0903	SCGX09T308

Introduction



Drilling

Reaming



Boring

Annex

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
			
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

Introduction

Drilling

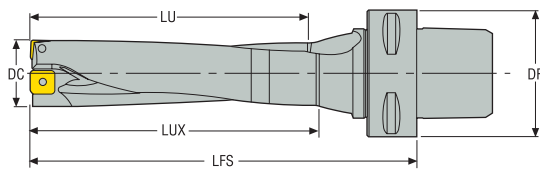
Reaming

Boring

Annex

SD524

Drilling depth ~ 4 x D – Metric/Inch



- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-17-68-C5	03080235	17,0 0.669	68,0 2.677	73,0 2.874	106,0 4.173	50,0 1.969	SPGX0502	SCGX050204
SD524-17.5-70-C5	03080237	17,5 0.689	70,0 2.756	75,0 2.953	109,0 4.291	50,0 1.969	SPGX0602	SCGX050204
SD524-18-72-C5	03080238	18,0 0.709	72,0 2.835	77,0 3.031	111,0 4.370	50,0 1.969	SPGX0602	SCGX050204
SD524-18.5-74-C5	03080239	18,5 0.728	74,0 2.913	79,0 3.110	113,0 4.449	50,0 1.969	SPGX0602	SCGX050204
SD524-19-76-C5	03080240	19,0 0.748	76,0 2.992	81,0 3.189	115,0 4.528	50,0 1.969	SPGX0602	SCGX050204
SD524-20-80-C5	03080241	20,0 0.787	80,0 3.150	85,0 3.346	121,0 4.764	50,0 1.969	SPGX0602	SCGX060204
SD524-20.62-83-C5	03080408	20,62 0.812	83,0 3.268	88,0 3.465	124,0 4.882	50,0 1.969	SPGX0602	SCGX060204
SD524-21-84-C5	03080242	21,0 0.827	84,0 3.307	89,0 3.504	125,0 4.921	50,0 1.969	SPGX0602	SCGX060204
SD524-22-88-C5	03080243	22,0 0.866	88,0 3.465	93,0 3.661	129,0 5.079	50,0 1.969	SPGX0703	SCGX060204
SD524-22.23-89-C5	03080409	22,23 0.875	89,0 3.504	94,0 3.701	130,0 5.118	50,0 1.969	SPGX0703	SCGX060204
SD524-23-92-C5	03080244	23,0 0.906	92,0 3.622	97,0 3.819	134,0 5.276	50,0 1.969	SPGX0703	SCGX070308
SD524-24-96-C5	03080245	24,0 0.945	96,0 3.780	101,0 3.976	139,0 5.472	50,0 1.969	SPGX0703	SCGX070308
SD524-25-100-C5	03080246	25,0 0.984	100,0 3.937	105,0 4.134	144,0 5.669	50,0 1.969	SPGX0703	SCGX070308
SD524-25.4-102-C5	03080410	25,4 1.000	102,0 4.016	107,0 4.213	146,0 5.748	50,0 1.969	SPGX0703	SCGX070308
SD524-26-104-C5	03080247	26,0 1.024	104,0 4.094	109,0 4.291	148,0 5.827	50,0 1.969	SPGX0903	SCGX070308
SD524-27-108-C5	03080248	27,0 1.063	108,0 4.252	113,0 4.449	152,0 5.984	50,0 1.969	SPGX0903	SCGX070308
SD524-28-112-C5	03080249	28,0 1.102	112,0 4.409	117,0 4.606	157,0 6.181	50,0 1.969	SPGX0903	SCGX070308
SD524-28.59-115-C5	03080411	28,59 1.126	115,0 4.528	120,0 4.724	160,0 6.299	50,0 1.969	SPGX0903	SCGX070308
SD524-29-116-C5	03080250	29,0 1.142	116,0 4.567	121,0 4.764	161,0 6.339	50,0 1.969	SPGX0903	SCGX09T308
SD524-30-120-C5	03080251	30,0 1.181	120,0 4.724	125,0 4.921	165,0 6.496	50,0 1.969	SPGX0903	SCGX09T308
SD524-31-124-C5	03080252	31,0 1.220	124,0 4.882	129,0 5.079	169,0 6.654	50,0 1.969	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-31.75-127-C5	03080412	31,75 1.250	127,0 5.000	132,0 5.197	173,0 6.811	50,0 1.969	SPGX11T3	SCGX09T308
SD524-32-128-C5	03080253	32,0 1.260	128,0 5.039	133,0 5.236	174,0 6.850	50,0 1.969	SPGX11T3	SCGX09T308
SD524-33-132-C5	03080254	33,0 1.299	132,0 5.197	137,0 5.394	178,0 7.008	50,0 1.969	SPGX11T3	SCGX09T308
SD524-34-136-C5	03080255	34,0 1.339	136,0 5.354	141,0 5.551	182,0 7.165	50,0 1.969	SPGX11T3	SCGX09T308
SD524-35-140-C5	03080256	35,0 1.378	140,0 5.512	145,0 5.709	186,0 7.323	50,0 1.969	SPGX11T3	SCGX11T308
SD524-36-144-C5	03080257	36,0 1.417	144,0 5.669	149,0 5.866	190,0 7.480	50,0 1.969	SPGX11T3	SCGX11T308
SD524-37-148-C5	03080258	37,0 1.457	148,0 5.827	153,0 6.024	194,0 7.638	50,0 1.969	SPGX11T3	SCGX11T308
SD524-38-152-C5	03080259	38,0 1.496	152,0 5.984	157,0 6.181	198,0 7.795	50,0 1.969	SPGX12T3	SCGX11T308
SD524-39-156-C5	03080260	39,0 1.535	156,0 6.142	161,0 6.339	202,0 7.953	50,0 1.969	SPGX12T3	SCGX11T308
SD524-40-160-C5	03080261	40,0 1.575	160,0 6.299	165,0 6.496	206,0 8.110	50,0 1.969	SPGX12T3	SCGX11T308

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

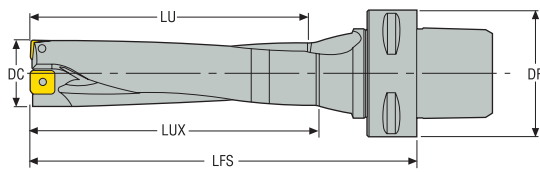
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD524

Drilling depth ~ 4 x D – Metric/Inch



- Seco-Capto™ C6 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 303, 304
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-17-68-C6	03080262	17,0 0.669	68,0 2.677	73,0 2.874	108,0 4.252	63,0 2.480	SPGX0502	SCGX050204
SD524-17.5-70-C6	03080263	17,5 0.689	70,0 2.756	75,0 2.953	111,0 4.370	63,0 2.480	SPGX0602	SCGX050204
SD524-18-72-C6	03080265	18,0 0.709	72,0 2.835	77,0 3.031	113,0 4.449	63,0 2.480	SPGX0602	SCGX050204
SD524-18.5-74-C6	03080266	18,5 0.728	74,0 2.913	79,0 3.110	115,0 4.528	63,0 2.480	SPGX0602	SCGX050204
SD524-19-76-C6	03080267	19,0 0.748	76,0 2.992	81,0 3.189	117,0 4.606	63,0 2.480	SPGX0602	SCGX050204
SD524-20-80-C6	03080268	20,0 0.787	80,0 3.150	85,0 3.346	123,0 4.843	63,0 2.480	SPGX0602	SCGX060204
SD524-20.62-83-C6	03080417	20,62 0.812	83,0 3.268	88,0 3.465	126,0 4.961	63,0 2.480	SPGX0602	SCGX060204
SD524-21-84-C6	03080269	21,0 0.827	84,0 3.307	89,0 3.504	127,0 5.000	63,0 2.480	SPGX0602	SCGX060204
SD524-22-88-C6	03080270	22,0 0.866	88,0 3.465	93,0 3.661	131,0 5.157	63,0 2.480	SPGX0703	SCGX060204
SD524-22.23-89-C6	03080418	22,23 0.875	89,0 3.504	94,0 3.701	132,0 5.197	63,0 2.480	SPGX0703	SCGX060204
SD524-23-92-C6	03080271	23,0 0.906	92,0 3.622	97,0 3.819	136,0 5.354	63,0 2.480	SPGX0703	SCGX070308
SD524-24-96-C6	03080272	24,0 0.945	96,0 3.780	101,0 3.976	141,0 5.551	63,0 2.480	SPGX0703	SCGX070308
SD524-25-100-C6	03080392	25,0 0.984	100,0 3.937	105,0 4.134	146,0 5.748	63,0 2.480	SPGX0703	SCGX070308
SD524-25.4-102-C6	03080419	25,4 1.000	102,0 4.016	107,0 4.213	148,0 5.827	63,0 2.480	SPGX0703	SCGX070308
SD524-26-104-C6	03080393	26,0 1.024	104,0 4.094	109,0 4.291	150,0 5.906	63,0 2.480	SPGX0903	SCGX070308
SD524-27-108-C6	03080394	27,0 1.063	108,0 4.252	113,0 4.449	154,0 6.063	63,0 2.480	SPGX0903	SCGX070308
SD524-28-112-C6	03080395	28,0 1.102	112,0 4.409	117,0 4.606	159,0 6.260	63,0 2.480	SPGX0903	SCGX070308
SD524-28.59-115-C6	03080420	28,59 1.126	115,0 4.528	120,0 4.724	162,0 6.378	63,0 2.480	SPGX0903	SCGX070308
SD524-29-116-C6	03080396	29,0 1.142	116,0 4.567	121,0 4.764	163,0 6.417	63,0 2.480	SPGX0903	SCGX09T308
SD524-30-120-C6	03080397	30,0 1.181	120,0 4.724	125,0 4.921	167,0 6.575	63,0 2.480	SPGX0903	SCGX09T308
SD524-31-124-C6	03080398	31,0 1.220	124,0 4.882	129,0 5.079	171,0 6.732	63,0 2.480	SPGX0903	SCGX09T308

Designation	Item number	DC	LU	LUX	LFS	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD524-31.75-127-C6	03080421	31,75 1.250	127,0 5.000	132,0 5.197	175,0 6.890	63,0 2.480	SPGX0903	SCGX09T308
SD524-32-128-C6	03080399	32,0 1.260	128,0 5.039	133,0 5.236	176,0 6.929	63,0 2.480	SPGX11T3	SCGX09T308
SD524-33-132-C6	03080400	33,0 1.299	132,0 5.197	137,0 5.394	180,0 7.087	63,0 2.480	SPGX11T3	SCGX09T308
SD524-34-136-C6	03080401	34,0 1.339	136,0 5.354	141,0 5.551	184,0 7.244	63,0 2.480	SPGX11T3	SCGX09T308
SD524-35-140-C6	03080402	35,0 1.378	140,0 5.512	145,0 5.709	188,0 7.402	63,0 2.480	SPGX11T3	SCGX11T308
SD524-36-144-C6	03080403	36,0 1.417	144,0 5.669	149,0 5.866	192,0 7.559	63,0 2.480	SPGX11T3	SCGX11T308
SD524-37-148-C6	03080404	37,0 1.457	148,0 5.827	153,0 6.024	196,0 7.717	63,0 2.480	SPGX11T3	SCGX11T308
SD524-38-152-C6	03080405	38,0 1.496	152,0 5.984	157,0 6.181	200,0 7.874	63,0 2.480	SPGX12T3	SCGX11T308
SD524-39-156-C6	03080406	39,0 1.535	156,0 6.142	161,0 6.339	204,0 8.031	63,0 2.480	SPGX12T3	SCGX11T308
SD524-40-160-C6	03080407	40,0 1.575	160,0 6.299	165,0 6.496	208,0 8.189	63,0 2.480	SPGX12T3	SCGX11T308

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key
	Center insert	Periph insert	
15,00-17,45	C02245-T07P	C02245-T07P	T07P-2
17,46-19,49	C02205-T07P	C02245-T07P	T07P-2
19,50-21,24	C02205-T07P	C02205-T07P	T07P-2
21,25-22,49	C02506-T08P	C02506-T08P	T08P-2
22,50-25,49	C02507-T08P	C03007-T08P	T08P-2
25,50-28,49	C03007-T09P	C03007-T09P	T09P-2
28,50-31,49	C03007-T09P	C03009-T09P	T09P-2
31,50-40,49	C03508-T15P	C03508-T15P	T15P-2D
40,50-43,24	C03508-T15P	C05012-T15P	T15P-2D
43,25-59,00	C04011-T15P	C05012-T15P	T15P-2D

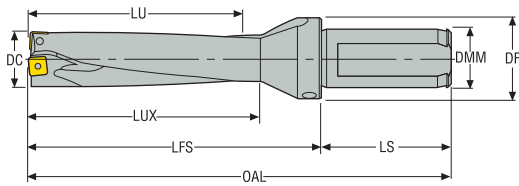
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD525

Drilling depth ~ 5 x D – Metric/Inch





- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 305, 306
- For intermediate diameters see the MyDesign software.



Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD525-19-95-25R7	03079580	19,0 0.748	95,0 3.740	181,0 7.126	100,0 3.937	125,0 4.921	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX050204
SD525-20-100-25R7	03079582	20,0 0.787	100,0 3.937	186,0 7.323	105,0 4.134	130,0 5.118	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204
SD525-21-105-25R7	03079583	21,0 0.827	105,0 4.134	191,0 7.520	110,0 4.331	135,0 5.315	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0602	SCGX060204
SD525-22-110-25R7	03079584	22,0 0.866	110,0 4.331	196,0 7.717	115,0 4.528	140,0 5.512	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX060204
SD525-23-115-25R7	03079585	23,0 0.906	115,0 4.528	201,0 7.913	120,0 4.724	145,0 5.709	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308
SD525-24-120-25R7	03079586	24,0 0.945	120,0 4.724	206,0 8.110	125,0 4.921	150,0 5.906	56,0 2.205	25,0 0.984	35,0 1.378	SPGX0703	SCGX070308
SD525-25-125-32R7	03079587	25,0 0.984	125,0 4.921	215,0 8.465	130,0 5.118	155,0 6.102	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0703	SCGX070308
SD525-26-130-32R7	03079588	26,0 1.024	130,0 5.118	220,0 8.661	135,0 5.315	160,0 6.299	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD525-27-135-32R7	03079589	27,0 1.063	135,0 5.315	225,0 8.858	140,0 5.512	165,0 6.496	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD525-28-140-32R7	03079590	28,0 1.102	140,0 5.512	230,0 9.055	145,0 5.709	170,0 6.693	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX070308
SD525-29-145-32R7	03079591	29,0 1.142	145,0 5.709	235,0 9.252	150,0 5.906	175,0 6.890	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD525-30-150-32R7	03079592	30,0 1.181	150,0 5.906	240,0 9.449	155,0 6.102	180,0 7.087	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD525-31-155-32R7	03079593	31,0 1.220	155,0 6.102	245,0 9.646	160,0 6.299	185,0 7.283	60,0 2.362	32,0 1.260	42,0 1.654	SPGX0903	SCGX09T308
SD525-32-160-40R7	03079595	32,0 1.260	160,0 6.299	258,0 10.157	165,0 6.496	190,0 7.480	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD525-33-165-40R7	03079596	33,0 1.299	165,0 6.496	263,0 10.354	170,0 6.693	195,0 7.677	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD525-34-170-40R7	03079597	34,0 1.339	170,0 6.693	268,0 10.551	175,0 6.890	200,0 7.874	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX09T308
SD525-35-175-40R7	03079598	35,0 1.378	175,0 6.890	273,0 10.748	180,0 7.087	205,0 8.071	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308
SD525-36-180-40R7	03079599	36,0 1.417	180,0 7.087	278,0 10.945	185,0 7.283	210,0 8.268	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308
SD525-37-185-40R7	03079600	37,0 1.457	185,0 7.283	283,0 11.142	190,0 7.480	215,0 8.465	68,0 2.677	40,0 1.575	50,0 1.969	SPGX11T3	SCGX11T308
SD525-38-190-40R7	03079601	38,0 1.496	190,0 7.480	288,0 11.339	195,0 7.677	220,0 8.661	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308
SD525-39-195-40R7	03079602	39,0 1.535	195,0 7.677	293,0 11.535	200,0 7.874	225,0 8.858	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	Center insert	Periph insert
SD525-40-200-40R7	03079603	40,0 1.575	200,0 7.874	298,0 11.732	205,0 8.071	230,0 9.055	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX11T308
SD525-41-205-40R7	03079604	41,0 1.614	205,0 8.071	303,0 11.929	210,0 8.268	235,0 9.252	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD525-42-210-40R7	03079605	42,0 1.654	210,0 8.268	308,0 12.126	215,0 8.465	240,0 9.449	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD525-43-215-40R7	03079606	43,0 1.693	215,0 8.465	313,0 12.323	220,0 8.661	245,0 9.646	68,0 2.677	40,0 1.575	50,0 1.969	SPGX12T3	SCGX120408
SD525-44-220-40R7	03079607	44,0 1.732	220,0 8.661	318,0 12.520	225,0 8.858	250,0 9.843	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX120408
SD525-45-225-40R7	03079608	45,0 1.772	225,0 8.858	323,0 12.717	230,0 9.055	255,0 10.039	68,0 2.677	40,0 1.575	50,0 1.969	SPGX1504	SCGX150512

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw	Insert key
		
	Center insert	Periph insert
15,00-17,45	C02245-T07P	C02245-T07P
17,46-19,49	C02205-T07P	C02245-T07P
19,50-21,24	C02205-T07P	C02205-T07P
21,25-22,49	C02506-T08P	C02506-T08P
22,50-25,49	C02507-T08P	C03007-T08P
25,50-28,49	C03007-T09P	C03007-T09P
28,50-31,49	C03007-T09P	C03009-T09P
31,50-40,49	C03508-T15P	C03508-T15P
40,50-43,24	C03508-T15P	C05012-T15P
43,25-59,00	C04011-T15P	C05012-T15P

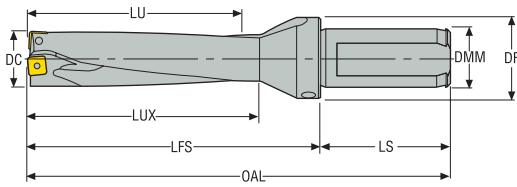
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-17,45	T00-07P09	T00-07P	0,9 Nm
17,46-19,49	T00-07P09	T00-07P	0,9 Nm
19,50-21,24	T00-07P09	T00-07P	0,9 Nm
21,25-22,49	T00-08P12	T00-08P	1,2 Nm
22,50-25,49	T00-08P12	T00-08P	1,2 Nm
25,50-28,49	T00-09P20	T00-09P	2,0 Nm
28,50-31,49	T00-09P20	T00-09P	2,0 Nm
31,50-40,49	T00-15P30	T00-15P	3,0 Nm
40,50-43,24	T00-15P30	T00-15P	3,0 Nm
43,25-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD525

Drilling depth ~ 5 x D – Inch







- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 305, 306
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	OAL	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD525-0750-375-1000R7	03079565	0.750	3.750	7.181	3.947	4.931	2.250	1.000	1.378	SPGX0602	SCGX050204
SD525-0812-406-1000R7	03079566	0.812	4.060	7.491	4.257	5.241	2.250	1.000	1.378	SPGX0602	SCGX060204
SD525-0875-438-1000R7	03079567	0.875	4.380	7.811	4.577	5.561	2.250	1.000	1.378	SPGX0703	SCGX060204
SD525-0937-469-1000R7	03079568	0.937	4.690	8.121	4.887	5.871	2.250	1.000	1.378	SPGX0703	SCGX070308
SD525-1000-500-1250R7	03079569	1.000	5.000	8.556	5.197	6.181	2.375	1.250	1.654	SPGX0703	SCGX070308
SD525-1062-531-1250R7	03079570	1.062	5.310	8.866	5.507	6.491	2.375	1.250	1.654	SPGX0903	SCGX070308
SD525-1125-563-1250R7	03079571	1.125	5.630	9.186	5.827	6.811	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD525-1187-594-1250R7	03079572	1.187	5.940	9.496	6.137	7.121	2.375	1.250	1.654	SPGX0903	SCGX09T308
SD525-1250-625-1500R7	03079573	1.250	6.250	10.056	6.447	7.431	2.625	1.500	1.969	SPGX11T3	SCGX09T308
SD525-1375-687-1500R7	03079574	1.375	6.870	10.676	7.067	8.051	2.625	1.500	1.969	SPGX11T3	SCGX11T308
SD525-1500-750-1500R7	03079575	1.500	7.500	11.306	7.697	8.681	2.625	1.500	1.969	SPGX12T3	SCGX11T308
SD525-1625-812-1500R7	03079576	1.625	8.120	11.926	8.317	9.301	2.625	1.500	1.969	SPGX12T3	SCGX120408
SD525-1750-875-1500R7	03079577	1.750	8.750	12.556	8.947	9.931	2.625	1.500	1.969	SPGX1504	SCGX120408
SD525-1875-937-1500R7	03079578	1.875	9.370	13.176	9.567	10.551	2.625	1.500	1.969	SPGX1504	SCGX150512
SD525-1937-968-1500R7	03079579	1.937	9.680	13.486	9.877	10.861	2.625	1.500	2.337	SPGX1504	SCGX150512
SD525-2000-1000-1500R7	03079581	2.000	10.000	13.806	10.197	11.181	2.625	1.500	2.337	SPGX1504	SCGX150512

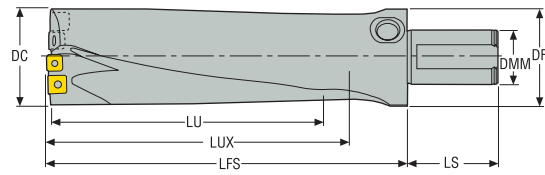
Spare Parts, included in delivery

Accessories

For drill dia. (inch)	Insert screw centre	Insert screw periph	Key	Torque wrench
0.750	 C02205-T07P	 C02245-T07P	 T07P-2	 T00-07P09
0.812	C02205-T07P	C02205-T07P	T07P-2	T00-07P09
0.875	C02506-T08P	C02506-T08P	T08P-2	T00-08P12
0.937-1.000	C02507-T08P	C03007-T08P	T08P-2	T00-08P12
1.062	C03007-T09P	C03007-T09P	T09P-2	T00-09P20
1.125-1.187	C03007-T09P	C03009-T09P	T09P-2	T00-09P20
1.250-1.500	C03508-T15P	C03508-T15P	T15P-2D	T00-15P30
1.625	C03508-T15P	C05012-T15P	T15P-2D	T00-15P30
1.750-2.000	C04011-T15P	C05012-T15P	T15P-2D	T00-15P35

SD542

Drilling depth ~ 2,5 X D – Metric



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 307, 308
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	LS	DMM	DF	Insert	
									Center insert	Periph insert
SD542-60-150-40R7	02590456	60,0	150,0	156,0	201,5	68,0	40,0	79,0	SPGX0903-C1	SCGX09T308..
SD542-65-162.5-40R7	02590457	65,0	162,5	169,5	214,0	68,0	40,0	79,0	SPGX11T3-C1	SCGX09T308..
SD542-70-175-40R7	02590458	70,0	175,0	182,5	226,5	68,0	40,0	79,0	SPGX11T3-C1	SCGX120408..
SD542-75-187.5-50R7	02590459	75,0	187,5	196,0	239,0	78,0	50,0	79,0	SPGX11T3-C1	SCGX120408..
SD542-80-200-50R7	02590460	80,0	200,0	210,0	251,5	78,0	50,0	79,0	SPGX12T3-C1	SCGX120408..
SD542-85-212.5-50R7	02590461	85,0	212,5	221,0	264,0	78,0	50,0	89,0	SPGX12T3-C1	SCGX120408..

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
	Center insert	Periph insert			
60,00-64,99	C03007-T09P	C03009-T09P	T09P-2	R3/8	R3/8-HA
65,00-68,99	C03508-T15P	C03508-T15P	T15P-2D	R3/8	R3/8-HA
69,00-86,99	C03508-T15P	C05012-T15P	T15P-2D	R3/8	R3/8-HA

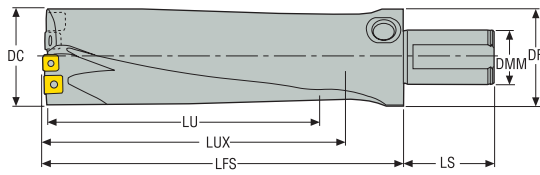
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-09P20	T00-09P	3,0 Nm
17,46-19,49	T00-15P30	T00-15P	3,0 Nm
19,50-21,24	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD542

Drilling depth ~ 2.5 X D – Inch



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 307, 308
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	LS	DMM	DF	Insert	
		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Center insert	Periph insert
SD542-2250-563-1500R7	02602085	2.250	5.630	5.800	7.000	4.500	1.500	3.110	SPGX 0903-C1	SCGX 09T308..
SD542-2500-625-1500R7	02602087	2.500	6.250	6.520	8.280	4.500	1.500	3.110	SPGX 0903-C1	SCGX 09T308..
SD542-2750-688-1500R7	02602088	2.750	6.880	7.190	8.900	4.500	1.500	3.110	SPGX 11T3-C1	SCGX 120408..
SD542-3000-750-2000R7	02602089	3.000	7.500	7.860	9.530	4.500	2.000	3.110	SPGX 11T3-C1	SCGX 120408..
SD542-3250-813-2500R7	02602090	3.250	8.130	8.460	10.150	4.500	2.500	3.500	SPGX 12T3-C1	SCGX 120408..
SD542-3500-875-2500R7	02602091	3.500	8.750	9.140	10.780	4.500	2.500	3.500	SPGX 1504-C1	SCGX 120408..

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
	Center insert	Periph insert			
60,00-64,99	C03007-T09P	C03009-T09P	T09P-2	R3/8	R3/8-HA
65,00-68,99	C03508-T15P	C03508-T15P	T15P-2D	R3/8	R3/8-HA
69,00-86,99	C03508-T15P	C05012-T15P	T15P-2D	R3/8	R3/8-HA

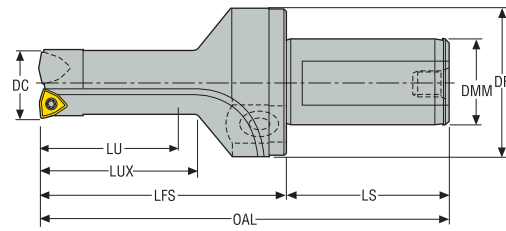
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-17,45	T00-09P20	T00-09P	3,0 Nm
17,46-19,49	T00-15P30	T00-15P	3,0 Nm
19,50-21,24	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD572






Drilling depth ~ 2 X D – Metric





- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 309-310
- For intermediate diameters see the MyDesign software.

Designation	Item number	DC	LU	LUX	LFS	LS	DMM	DF	Insert	
									Center insert	Periph insert
SD572-15-30-25R7	02595777	15,0	30,0	35,0	65,0	56,0	25,0	42,0	WCMX030208-86	WCMX030208..
SD572-16-32-25R7	02595778	16,0	32,0	37,0	67,0	56,0	25,0	42,0	WCMX030208-86	WCMX030208..
SD572-17-34-25R7	02595779	17,0	34,0	39,0	69,0	56,0	25,0	42,0	WCMX030208-86	WCMX030208..
SD572-19-38-25R7	02595780	19,0	38,0	43,0	73,0	56,0	25,0	42,0	WCMX040208-86	WCMX030208..
SD572-22-44-25R7	02595781	22,0	44,0	49,0	79,0	56,0	25,0	42,0	WCMX050308-86	WCMX040208..
SD572-27-54-32R7	02595783	27,0	54,0	59,0	89,0	60,0	32,0	50,0	WCMX06T308-86	WCMX050308..
SD572-33-66-40R7	02595784	33,0	66,0	71,0	101,0	68,0	40,0	59,0	WCMX080412-86	WCMX06T308..
SD572-41-82-40R7	02595785	41,0	82,0	87,0	117,0	68,0	40,0	59,0	WCMX080412-86	WCMX080412..
SD572-47-94-40R7	02595786	47,0	94,0	99,0	129,0	68,0	40,0	59,0	WCMX080412-86	WCMX080412..

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
					
	Center insert	Periph insert			
15,00-20,50	C02205-T07P	C02205-T07P	T07P-2	R1/4	1310
20,51-24,50	C03007-T08P	C02506-T08P	T08P-2	R1/4	1310
24,51-32,50	C03508-T15P	C03007-T08P	T08P-2, T15P-2D	R1/4	1310
32,51-36,50	C03508-T15P	C03508-T15P	T15P-2D	R1/4	1310
36,51-59,00	C04011-T15P	C04011-T15P	T15P-2D	R1/4	1310

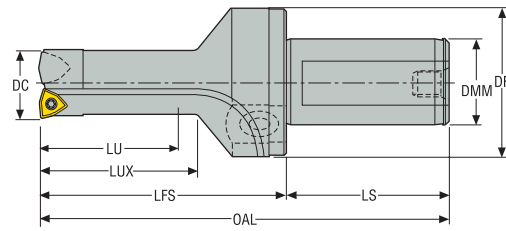
Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
			
15,00-20,50	T00-07P09	T00-07P	0,9 Nm
20,51-24,50	T00-08P12	T00-08P	1,2 Nm
24,51-32,50	T00-08P12	T00-08P	1,2 Nm
32,51-36,50	T00-15P30	T00-15P	3,0 Nm
36,51-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.

SD572

Drilling depth ~ 2 X D – Inch



- ISO 9766 shank, -7
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 309-310
- For intermediate diameters see the MyDesign software.

Designation	Item number	Hole dia.		DC	LU	LUX	LFS	DF	Insert	
		min-max (inch)	Inch						Center insert	Periph insert
SD572-0591-118-1000R7	02602128	0.591-0.709	0.591	1.182	1.379	2.56	1.775	WCMX030208-86	WCMX 030208..	
SD572-0669-134-1000R7	02602129	0.669-0.748	0.669	1.338	1.535	2.716	1.775	WCMX030208-86	WCMX 030208..	
SD572-0748-150-1000R7	02602131	0.748-0.866	0.748	1.496	1.69	2.874	1.775	WCMX040208-86	WCMX 030208..	
SD572-0866-173-1000R7	02602132	0.866-1.062	0.866	1.732	1.929	3.11	1.775	WCMX050308-86	WCMX 040208..	
SD572-1062-212-1250R7	02602133	1.062-1.299	1.062	2.124	2.321	3.502	2.165	WCMX06T308-86	WCMX 050308..	
SD572-1299-260-1500R7	02602134	1.299-1.614	1.299	2.598	2.795	3.976	2.303	WCMX080412-86	WCMX 06T308..	
SD572-1614-322-1500R7	02602135	1.614-1.850	1.614	3.228	3.425	4.606	2.303	WCMX080412-86	WCMX 080412..	
SD572-1850-370-1500R7	02602136	1.850-2.047	1.85	3.7	3.7	5.078	2.303	WCMX080412-86	WCMX 080412..	

Spare Parts, included in delivery

For drill dia. (inch)	Hose adapter	Insert key	Insert screw centre	Insert screw periph	Key (Flag)	Screw
0.591-0.748		T07P-2	C02205-T07P	C02245-T07P	C02245-T07P	R1/4
0.866	1310	T08P-2	C02506-T08P	C03007-T08P	-	R1/4
1.062	1310	T08P-2	C03508-T15P	C03007-T08P	T15P-2D	R1/4
1.299	1310	T15P-2D	C03508-T15P	C02506-T08P	C02506-T08P	R1/4
1.614-1.850	1310	T15P-2D	C04011-T15P	C04011-T15P	-	R1/4

Accessories

For drill dia. (inch)	Replacement blade	Torque key
0.591-0.748	-	T00-07P09
0.866	-	T00-08P12
1.062	T00-15P	T00-15P30
1.299	-	T00-15P30
1.614-1.850	-	T00-15P30

Introduction

Drilling

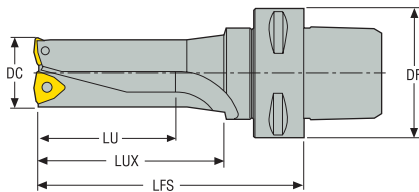
Reaming

Boring

Annex

SD572

Drilling depth ~ 2 X D – Metric



- Seco-Capto™ C5 shank
- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 309-310
- For intermediate diameters see the MyDesign software.

Designation	Item number	Hole dia	DC	LU	LUX	LFS	DF	Insert	
		min-max (mm)						Center insert	Periph insert
		mm	mm	mm	mm	mm	mm		
SD572-15-30-C5	02595831	14,8-18,0	15,0	30,0	35,0	85,0	50,0	WCMX030208-86	WCMX030208..
SD572-16-32-C5	02595832	15,8-18,0	16,0	32,0	37,0	87,0	50,0	WCMX030208-86	WCMX030208..
SD572-17-34-C5	02595833	16,8-19,0	17,0	34,0	39,0	89,0	50,0	WCMX030208-86	WCMX030208..
SD572-19-38-C5	02595834	18,8-22,0	19,0	38,0	43,0	93,0	50,0	WCMX040208-86	WCMX030208..
SD572-22-44-C5	02595835	21,8-27,0	22,0	44,0	49,0	99,0	50,0	WCMX050308-86	WCMX040208..
SD572-27-54-C5	02595836	26,8-33,0	27,0	54,0	59,0	109,0	50,0	WCMX06T308-86	WCMX050308..
SD572-33-66-C5	02595837	32,8-41,0	33,0	66,0	71,0	121,0	50,0	WCMX080412-86	WCMX06T308..
SD572-41-82-C5	02595838	40,8-47,0	41,0	82,0	87,0	157,0	50,0	WCMX080412-86	WCMX080412..
SD572-47-94-C5	02595839	46,8-52,0	47,0	94,0	99,0	169,0	50,0	WCMX080412-86	WCMX080412..

Spare Parts, included in delivery

For drill dia. (mm)	Insert screw		Insert key	Plug	Hose adapter
	Center insert	Periph insert			
15,00-20,50	C02205-T07P	C02205-T07P	T07P-2	R1/4	1310
20,51-24,50	C03007-T08P	C02506-T08P	T08P-2	R1/4	1310
24,51-32,50	C03508-T15P	C03007-T08P	T08P-2, T15P-2D	R1/4	1310
32,51-36,50	C03508-T15P	C03508-T15P	T15P-2D	R1/4	1310
36,51-59,00	C04011-T15P	C04011-T15P	T15P-2D	R1/4	1310

Accessories

For drill dia. (mm)	Torque wrench*	Replacement blade	Torque value
15,00-20,50	T00-07P09	T00-07P	0,9 Nm
20,51-24,50	T00-08P12	T00-08P	1,2 Nm
24,51-32,50	T00-08P12	T00-08P	1,2 Nm
32,51-36,50	T00-15P30	T00-15P	3,0 Nm
36,51-59,00	T00-15P30	T00-15P	3,0 Nm

*Including blade.



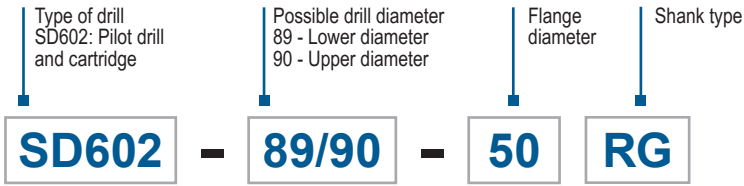
Perfomax® SD602

Seco's Perfomax® SD602 is a modular drill head system specifically designed for deep hole applications that require large diameters drilled safely and efficiently.

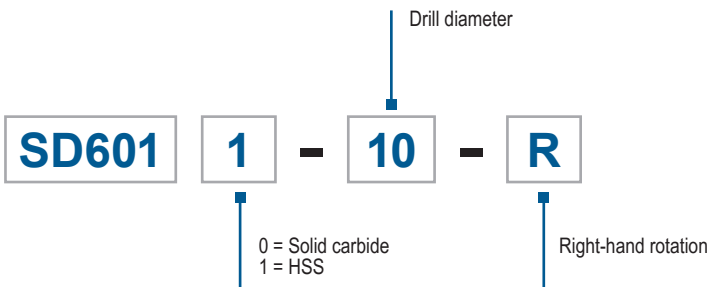
- DP3000 grade inserts provide the toughness needed to optimize Perfomax® SD602
- The grade allows for high feeds and speeds
- High flexibility by using extensions to reach the required drilling depth

Code keys

Drilling bodies

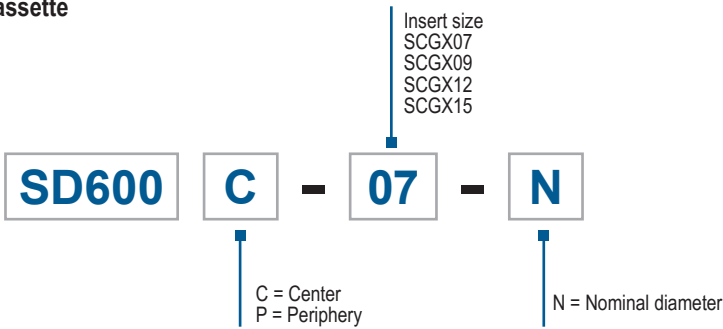


Pilot drill



(Pilot drill has to be purchased separately)

Cassette

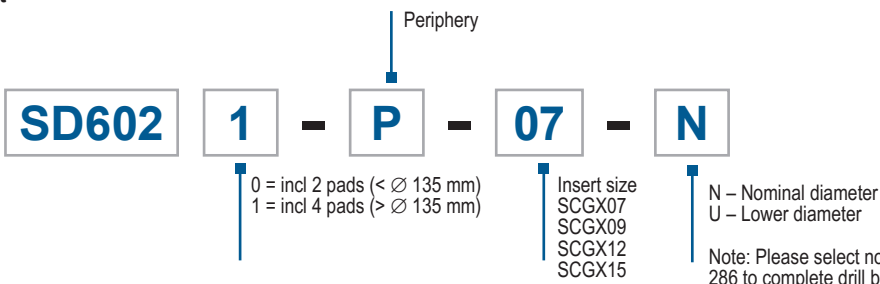


-N



-U

Kit



-N

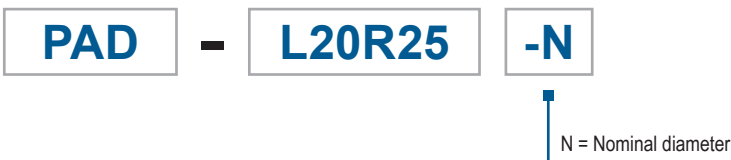


-U

Inch

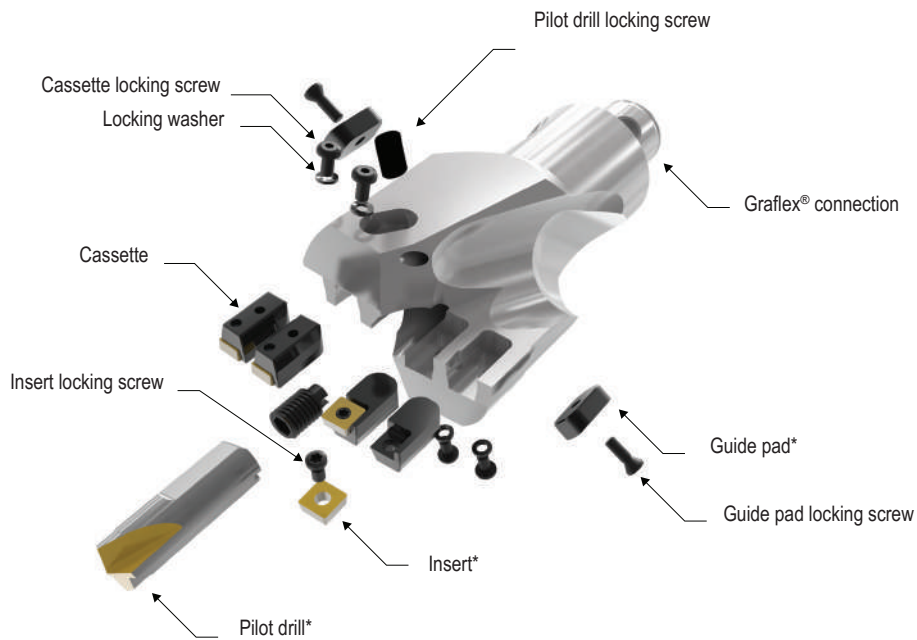


Pad



Modular drill head assembly

SD602-59/60-40RG



Example: Diameter 59; SD602-59-40RG
Use kit: SD6020-P07*



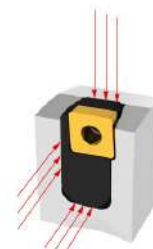
Example: Diameter 60; SD602-60-40RG
Use kit: SD6020-P07-N*

Mounting instruction

Mounting of cartridge and guide pad

- Tighten the cassette locking screw
- Mount the inserts
- Mount the pilot drill and fix it to the bottom of the hole if you need to extend the pilot drill use the adjusting screw
- Mount the extensions

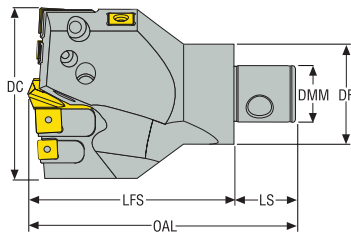
- Mount the cassette
- Make sure that there are no air gaps between the cassette and the walls
- Tighten the cassette locking screw with the torque key:
SD600-x-07: 3 Nm
SD600-x-09: 3 Nm
SD600-x-12: 8 Nm
SD600-x-15: 8 Nm
- Mount the guide pad
- Tighten the pad locking screw



* Not included in delivery. Periph kit, pilot drill and inserts needs to be ordered separately.

SD602

Modular drill head – Metric/Inch



- Internal coolant
- For insert information see page(s) 292-298
- For cutting data see page(s) 311-312
- Adjustable length pilot drill

Item number	Designation	Graflex size	Capacity		OAL	LFS	LS	DF	DMM	Weight	Insert
			DCN	DCX							
			mm	mm	mm	mm	mm	mm	mm	kg	
			Inch	Inch	Inch	Inch	Inch	Inch	Inch	lbs	
02846688	SD602-59/60-40RG	G4	59,0 2.323	60,0 2.362	129,0 5.079	105,0 4.134	24,0 0.945	40,0 1.575	22,0 0.866	0,9 1.980	SCGX07
02846689	SD602-69/70-40RG	G4	69,0 2.717	70,0 2.756	129,0 5.079	105,0 4.134	24,0 0.945	40,0 1.575	22,0 0.866	1,1 2.430	SCGX09
02846690	SD602-79/80-50RG	G5	79,0 3.110	80,0 3.150	160,0 6.299	130,0 5.118	30,0 1.181	50,0 1.969	28,0 1.102	1,8 3.970	SCGX09
02846691	SD602-89/90-50RG	G5	89,0 3.504	90,0 3.543	160,0 6.299	130,0 5.118	30,0 1.181	50,0 1.969	28,0 1.102	2,0 4.410	SCGX09/12
02846692	SD602-99/100-63RG	G6	99,0 3.898	100,0 3.937	185,0 7.283	145,0 5.709	40,0 1.575	63,0 2.480	36,0 1.417	3,1 6.830	SCGX12
02846693	SD602-119/120-63RG	G6	119,0 4.685	120,0 4.724	185,0 7.283	145,0 5.709	40,0 1.575	63,0 2.480	36,0 1.417	3,5 7.720	SCGX15
02846694	SD602-139/140-90RG	G7	139,0 5.472	140,0 5.512	210,0 8.268	160,0 6.299	50,0 1.969	90,0 3.543	46,0 1.811	6,1 13.450	SCGX12
02846695	SD602-159/160-90RG	G7	159,0 6.260	160,0 6.299	210,0 8.268	160,0 6.299	50,0 1.969	90,0 3.543	46,0 1.811	6,6 14.550	SCGX12/15
02846698	SD602-2500-40RG	G4	62,5 2.461	63,5 2.500	129,0 5.079	105,0 4.134	24,0 0.945	40,0 1.575	22,0 0.866	1,0 2.200	SCGX07
02846699	SD602-2750-40RG	G4	68,85 2.711	69,85 2.750	129,0 5.079	105,0 4.134	24,0 0.945	40,0 1.575	22,0 0.866	1,1 2.430	SCGX07/09
02846700	SD602-3000-40RG	G4	75,2 2.961	76,2 3.000	129,0 5.079	105,0 4.134	24,0 0.945	40,0 1.575	22,0 0.866	1,1 2.430	SCGX09
02846701	SD602-3250-50RG	G5	81,55 3.211	82,55 3.250	160,0 6.299	130,0 5.118	30,0 1.181	50,0 1.969	28,0 1.102	1,8 3.970	SCGX09/12
02846702	SD602-3500-50RG	G5	87,9 3.461	88,9 3.500	160,0 6.299	130,0 5.118	30,0 1.181	50,0 1.969	28,0 1.102	1,9 4.190	SCGX09/12
02846703	SD602-4000-63RG	G6	100,6 3.961	101,6 4.000	185,0 7.283	145,0 5.709	40,0 1.575	63,0 2.480	36,0 1.417	3,2 7.050	SCGX12

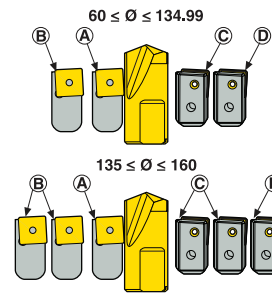
Spare Parts, included in delivery

Cassette	Cassette	Cassette screw	Washer	Insert screw	Insert key	Guide pad*	Guide pad*	Pad screw
SD600-C-07	SD600-P-07-N	K6S4x8	LW0408	C03007-T09P	T09P-2, T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-09	SD600-P-09-N	K6S4x8	LW0408	C03508-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-12	SD600-P-12-N	K6S6x10	LW0611	C05012-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P
SD600-C-15	SD600-P-15-N	K6S6x12	LW0611	C05012-T15P	T15P-2D	PAD-L20R25	PAD-L20R25-N	C04014-T15P

*Not included in delivery

SD602

Modular drill head



Spare Parts, included in delivery

Designation	For drill dia. (mm)	For drill dia. (inch)	Pilot screw	Adjusting screw	Cassette (A)	Cassette (B)	Cassette (C)	Periph kit* (D)	Pilot drill* x=0 Solid carbide x=1 HSS
SD602-59/60-40RG	59	2.323	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-59/60-40RG	60	2.362	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-2500-40RG	62,5	2.461	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-2500-40RG	63,5	2.500	P6SS 8X8	19TLR0816	SD600-C-07	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-2750-40RG	68,85	2.711	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-07	SD600-P-07	SD6020-P-07-U	SD601x-10-R
SD602-2750-40RG	69,85	2.750	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-07	SD600-P-07	SD6020-P-07-N	SD601x-10-R
SD602-69/70-40RG	69	2.717	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-10-R
SD602-69/70-40RG	70	2.756	P6SS 8X8	19TLR0816	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-10-R
SD602-3000-40RG	75,2	2.961	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-3000-40RG	76,2	3.000	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-79/80-50RG	79	3.110	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-79/80-50RG	80	3.150	P6SS 10X10	19TLR1016	SD600-C-09	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-3250-50RG	81,55	3.211	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-09-U	SD601x-15-R
SD602-3250-50RG	82,55	3.250	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-09-N	SD601x-15-R
SD602-3500-50RG	87,9	3.461	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-U	SD601x-15-R
SD602-3500-50RG	88,9	3.500	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-N	SD601x-15-R
SD602-89/90-50RG	89	3.504	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-U	SD601x-15-R
SD602-89/90-50RG	90	3.543	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-09	SD600-P-09	SD6020-P-12-N	SD601x-15-R
SD602-99/100-63RG	99	3.898	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-U	SD601x-15-R
SD602-99/100-63RG	100	3.937	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-N	SD601x-15-R
SD602-4000-63RG	100,6	3.961	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-U	SD601x-15-R
SD602-4000-63RG	101,6	4.000	P6SS 10X10	19TLR1016	SD600-C-12	SD600-C-12	SD600-P-12	SD6020-P-12-N	SD601x-15-R
SD602-119/120-63RG	119	4.685	P6SS 10X10	19TLR1016	SD600-C-15	SD600-C-15	SD600-P-15	SD6020-P-15-U	SD601x-15-R
SD602-119/120-63RG	120	4.724	P6SS 10X10	19TLR1016	SD600-C-15	SD600-C-15	SD600-P-15	SD6020-P-15-N	SD601x-15-R
SD602-139/140-90RG	139	5.472	P6SS 12X12	19TLR1216	SD600-C-12	SD600-C-12	SD600-P-12	SD6021-P-12-U	SD601x-25-R
SD602-139/140-90RG	140	5.512	P6SS 12X12	19TLR1216	SD600-C-12	SD600-C-12	SD600-P-12	SD6021-P-12-N	SD601x-25-R
SD602-159/160-90RG	159	6.260	P6SS 12X12	19TLR1216	SD600-C-15	SD600-C-12	SD600-P-12	SD6021-P-15-U	SD601x-25-R
SD602-159/160-90RG	160	6.299	P6SS 12X12	19TLR1216	SD600-C-15	SD600-C-12	SD600-P-12	SD6021-P-15-N	SD601x-25-R

*Not included in delivery. Periph kit, U-undersize, N-nominal.
For insert size see page 292-298

Regrinding instructions for SD602

Specifications:

Proposed specification of diamond wheels:

Conical clearance: Wheel shape 12A2 Grit size D54 (picture 1).

Gashing: Wheel shape 1A1 or 1V1 Grit size D64-D46 (picture 2-3).

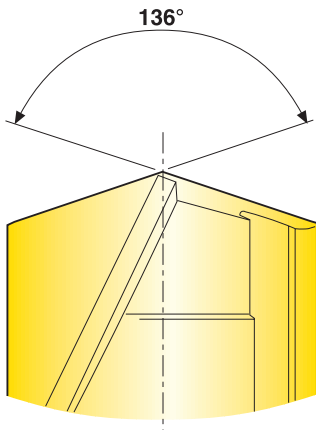
Corner chamfer: Wheel shape 1A1 or 12A2 (picture 1).

Edge treatment: grinding K-land or brushing (picture 2).

Important:

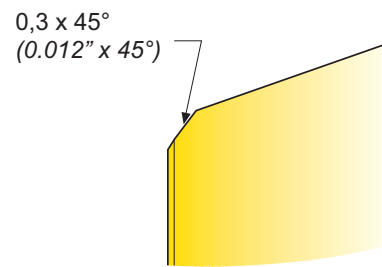
- The cutting edges must be uniform and have the same size of edge preparation.
- The edge preparation must be applied on the whole length of the cutting edges.

1. Point angle

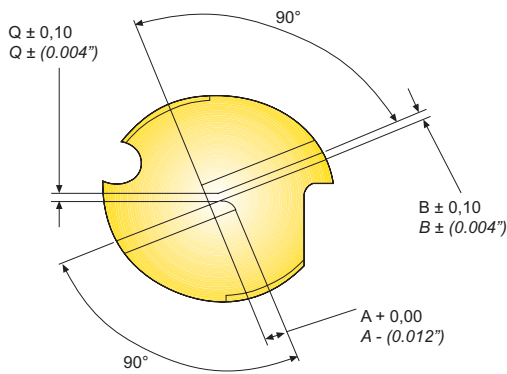


Edge preparation 0-0,1 mm (0-.004") x 20°. Drill point conical relief 10°.

2. Corner chamfer



3.



4.

Dimensions in mm (inch)				
Diameter	A	B	C	Minimum length
10 mm	1,5 (0.059)	0,5 (0.020)	0,57 (0.022)	38 (1.496)
15 mm	1,5 (0.059)	0,6 (0.024)	0,68 (0.027)	45 (1.772)
25 mm	1,5 (0.059)	1,4 (0.055)	1,6 (0.063)	57 (2.244)

Modular drill head assembly

Introduction

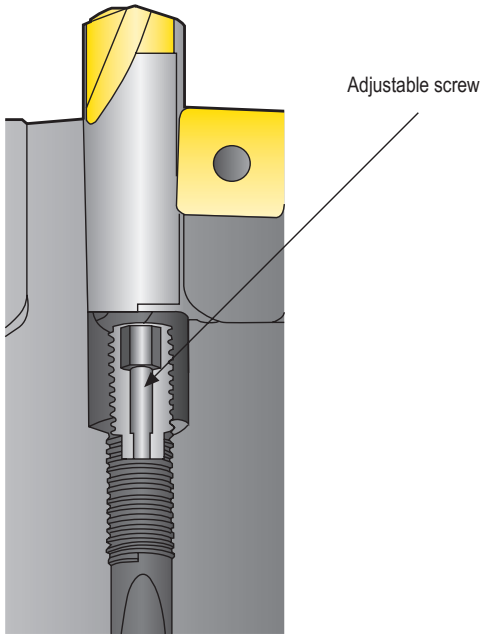
Drilling

Reaming

Boring

Annex

Feature: Adjustable pilot drill

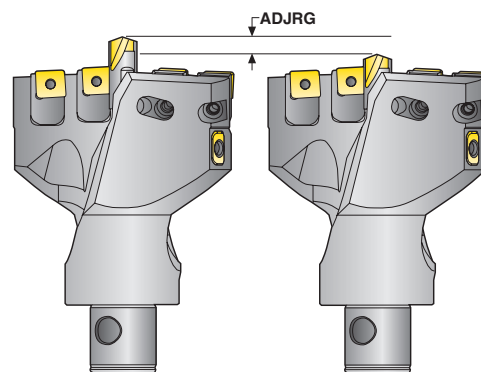


Adjustable length distance ADJRG

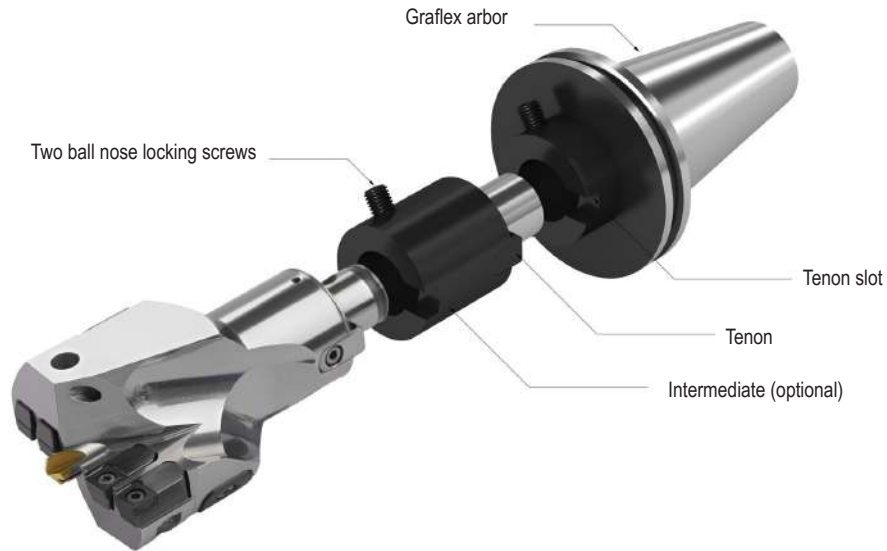
Drill	mm	inch
SD602-59/60-40RG	3,0	0.118
SD602-69/70-40RG	3,0	0.118
SD602-79/80-50RG	5,0	0.197
SD602-89/90-50RG	5,0	0.197
SD602-99/100-63RG	5,0	0.197
SD602-119/120-63RG	5,0	0.197
SD602-139/140-90RG	5,0	0.197
SD602-159/160-90RG	5,0	0.197
SD602-2500-40RG	3,0	0.118
SD602-2750-40RG	3,0	0.118
SD602-3000-40RG	5,0	0.197
SD602-3250-50RG	5,0	0.197
SD602-3500-50RG	5,0	0.197
SD602-4000-63RG	5,0	0.197

Feature: Adjustable length distance

Benefits: Same setting length after regrinding of pilot drill.
Possibility to adjust the pilot drill overhang.
With drill depths $> 5 \times D$ it is recommended to adjust it 5 mm (0.197") further out.
Recommendation: In case of re-entering the hole the pilot drill should be adjusted 3 mm (0.118") further out from its original position to ensure a better centering.

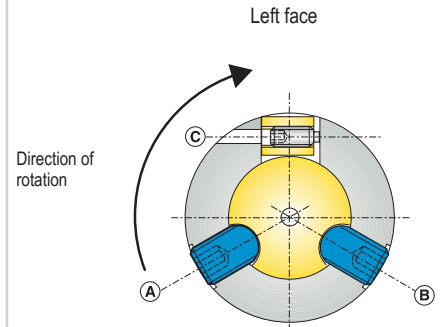
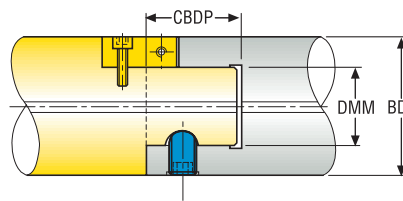


Modular drill head assembly



Mounting instruction

1. Clean the parts to be assembled and apply thin oxidation protection film.
2. Assemble the parts ensuring that the left face of the tenon contacts the left face of the tenon slot.
3. Lightly tighten screw A (drill heads needs to be moved back and forth to find the lowest point for screw A).
4. Lightly tighten screw B.
5. 'Torque' the blocking screw C.
6. 'Torque' screw A.
7. 'Torque' screw B.
8. Double check the blocking screw tightening.



Recommended Graflex connection locking torques

Graflex size	DMM mm (inch)	BD mm (inch)	CBDP mm (inch)	Ball nose screws (A) & (B)	Tenon blocking screw (C)
4	22 (0.866)	40 (1.575)	24 (0.945)	20 Nm (14.7 ft/lbs)	0.7 Nm (0.5 ft/lbs)
5	28 (1.102)	50 (1.969)	30 (1.181)	25 Nm (18.4 ft/lbs)	2 Nm (1.5 ft/lbs)
6	36 (1.417)	63 (2.480)	40 (1.575)	35 Nm (25.8 ft/lbs)	4 Nm (2.9 ft/lbs)
7	46 (1.811)	90 (3.543)	50 (1.969)	60 Nm (44.2 ft/lbs)	8 Nm (5.9 ft/lbs)

Insert grade

Features:

- 4 cutting edges per insert
- Strong square inserts

Benefits:

- Economy
- Reliability
- Performance
- Low cost per hole

Peripheral insert

<p>DP2000</p>		<p>DURATOMIC® coating technology Optimized grade for steel and cast iron machining For machining with very high cutting speeds A unique combination of superior edge toughness and a thick wear resistant coating Ti(C,N) + Al₂O₃ DURATOMIC®</p>
<p>DP3000</p>		<p>DURATOMIC® coating technology Universal grade Superior wear resistance and edge toughness Tough grade for maximum application security Ti(C,N) + Al₂O₃ DURATOMIC® Gradient substrate</p>
<p>DS2050</p>		<p>Optimized grade for Titanium, super alloys and difficult stainless steel PVD coated TiAlN + NbN</p>
<p>T250D</p>		<p>First choice in hardened steel and in high Si content aluminum Sharp cutting edge through micrograin substrate and pvd coating (TiAl)N + TiN</p>

Center insert

<p>T400D</p>		<p>First choice Tough center insert grade for maximum application security PVD coated (Ti, Al)N + TiN</p>
<p>DP3000</p>		<p>DURATOMIC® coating technology Universal grade Superior wear resistance and edge toughness Tough grade for maximum application security Ti(C,N) + Al₂O₃ DURATOMIC® Gradient substrate</p>
<p>DS4050</p>		<p>Optimized grade for Titanium, super alloys and difficult stainless steel PVD coated TiAlN + NbN</p>

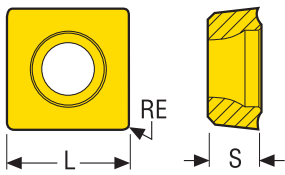
Geometries



1. Insert shape				2. Insert side clearance angle				4. Type								
								X=Special								
3. Tolerances				5. Cutting edge length												
Tolerance +/- mm (inch)			For IC dimension in mm (inch)													
Tol. class				5,566 (0.2187)	6,35 (0.2500)	7,937 (0.3125)	7,94 (0.3126)	9,525 (0.3750)	11,509 (0.4531)	12,7 (0.5000)	15,875 (0.6250)	19,05 (0.7500)				
	m	S	IC										L	L		
G	0,025 (0.001)	0,13 (0.005)	0,025 (0.001)	•	•	•		•	•	•	•	•				
M	0,013 (0.005)	0,13 (0.005)	0,05 (0.002)	•	•		•	•	•	•	•	•				
M	0,013 (0.005)	0,13 (0.005)	0,08 (0.003)								•					
6. Thickness				7. Insert with corner chamfers/nose radius				10. Internal designation								
<p>02 = 2,38 mm (0.094") 03 = 3,18 mm (0.125") T3 = 3,97 mm (0.156")</p> <p>04 = 4,76 mm (0.187") 05 = 5,56 mm (0.219")</p>				<p>nose radius</p> <p>04 = 0,4 mm (0.016") 08 = 0,8 mm (0.031") 12 = 1,2 mm (0.047") etc.</p>				e.g. chipbreaker designation P1 = xx P2 = xx 85 = xx 86 = xx								

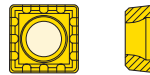
Indexable inserts – Peripheral insert, type P1*

for SD522, SD523, SD524, SD525, SD542, SD602



Tolerances:
L = ±0,025 (0.001")
S = ±0,13 (0.005")
RE = ±0,1 (0.004")

SCGX-P1



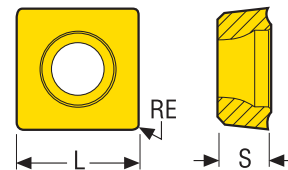
Designation	Inserts	L		S		RE		Grades		
		mm	Inch	mm	Inch	mm	Inch	T250D	DP2000	DP3000
SCGX060204-P1	SCGX-P1	6,35	0,25	2,381	0,094	0,4	0,016	00059712	02590849	02807362
SCGX070308-P1	SCGX-P1	7,938	0,313	3,18	0,125	0,8	0,031	00059713	02590850	02807363
SCGX09T308-P1	SCGX-P1	9,525	0,375	3,969	0,156	0,8	0,031	00059714	02590851	02807364
SCGX11T308-P1	SCGX-P1	11,509	0,453	3,97	0,156	0,8	0,031	03136962	03136963	03136964
SCGX120408-P1	SCGX-P1	12,7	0,5	4,762	0,187	0,8	0,031	00059715	02590852	02807365
SCGX150512-P1	SCGX-P1	15,875	0,625	5,556	0,219	1,2	0,047	00059716	02590853	02807366

*Chipbreaker for low feed rates and for good surface finish in all materials

Indexable inserts – Peripheral insert, type P2**

for SD522, SD523, SD524, SD525, SD542, SD602

Tolerances:
L = ±0,025 (0.001")
S = ±0,13 (0.005")
RE = ±0,1 (0.004")



SCGX-P2

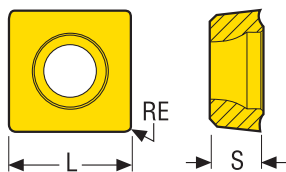


Designation	Inserts	L		S		RE		Grades		
		mm	Inch	mm	Inch	mm	Inch	T250D	DP2000	DP3000
SCGX050204-P2	SCGX-P2	5,556	0,219	2,38	0,094	0,4	0,016	00059711	02590854	02807356
SCGX060204-P2	SCGX-P2	6,35	0,25	2,38	0,094	0,4	0,016	02526803	02590855	02807357
SCGX070308-P2	SCGX-P2	7,937	0,312	3,18	0,125	0,8	0,031	02526787	02590856	02807358
SCGX09T308-P2	SCGX-P2	9,525	0,375	3,97	0,156	0,8	0,031	02794476	02590857	02807359
SCGX11T308-P2	SCGX-P2	11,509	0,453	3,97	0,156	0,8	0,031	03097760	03097761	03097762
SCGX120408-P2	SCGX-P2	12,7	0,5	4,76	0,187	0,8	0,031	02794477	02590858	02807360
SCGX150512-P2	SCGX-P2	15,875	0,625	5,56	0,219	1,2	0,047	02794478	02590859	02807361

**Chipbreaker for high feed rates in steel, stainless steel and cast iron

Indexable inserts – Peripheral insert, for type MP

for SD522, SD523, SD524, SD525, SD542, SD602



Tolerances:
L = ±0,025 (0.001")
S = ±0,13 (0.005")
RE = ±0,1 (0.004")

SCGX-MP

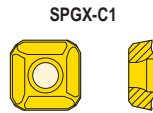
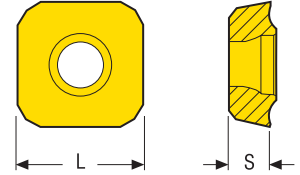


Designation	Inserts	L		S		RE		Grades
		mm	Inch	mm	Inch	mm	Inch	
								DS2050
SCGX050204-MP	SCGX-MP	5,56	0,219	2,38	0,094	0,4	0,016	03134312
SCGX060204-MP	SCGX-MP	6,35	0,25	6,35	0,25	0,4	0,016	03134313
SCGX070308-MP	SCGX-MP	7,94	0,313	3,18	0,125	0,8	0,031	03134314
SCGX09T308-MP	SCGX-MP	9,525	0,375	3,97	0,156	0,8	0,031	03134315
SCGX11T308-MP	SCGX-MP	11,509	0,453	3,97	0,156	0,8	0,031	03134316
SCGX120408-MP	SCGX-MP	12,7	0,5	4,76	0,187	0,8	0,031	03134317
SCGX150512-MP	SCGX-MP	15,875	0,625	5,56	0,219	1,2	0,047	03134318

Indexable inserts – Centre insert, type C1

for SD522, SD523, SD524, SD525, SD542

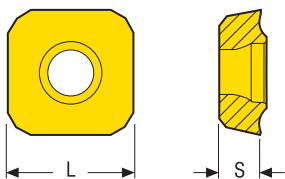
Tolerances:
L = ±0,025 (0.001")
S = ±0,13 (0.005")



Designation	Inserts	L		S		Grades	
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	T400D	DP3000
SPGX0502-C1	SPGX-C1	5,556 0,219	2,38 0,094	74077370	02807367		
SPGX0602-C1	SPGX-C1	6,35 0,25	2,38 0,094	74077371	02807368		
SPGX0703-C1	SPGX-C1	7,937 0,312	3,18 0,125	74077372	02807369		
SPGX0903-C1	SPGX-C1	9,525 0,375	3,18 0,125	74077373	02807370		
SPGX11T3-C1	SPGX-C1	11,509 0,453	3,97 0,156	74077374	02807371		
SPGX12T3-C1	SPGX-C1	12,7 0,5	3,97 0,156	74077375	02807372		
SPGX1504-C1	SPGX-C1	15,875 0,625	4,76 0,187	74077376	02807373		
SPGX1904-C1	SPGX-C1	19,05 0,75	4,76 0,187	74077377	02807374		

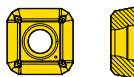
Indexable inserts – Centre insert, type MC

for SD522, SD523, SD524, SD525, SD542



Tolerances:
L = $\pm 0,025$ (0.001")
S = $\pm 0,13$ (0.005")

SPGX-MC

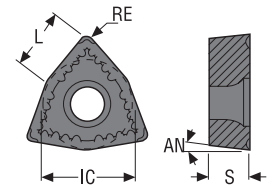


Designation	Inserts	L		S		Grades
		mm	Inch	mm	Inch	
						DS4050
SPGX0502-MC	SPGX-MC	5,56	0,219	2,38	0,094	03134319
SPGX0602-MC	SPGX-MC	6,35	0,25	2,38	0,094	03134320
SPGX0703-MC	SPGX-MC	7,94	0,313	3,18	0,125	03134321
SPGX0903-MC	SPGX-MC	9,525	0,375	3,18	0,125	03134322
SPGX11T3-MC	SPGX-MC	11,509	0,453	3,97	0,156	03134323
SPGX12T3-MC	SPGX-MC	12,7	0,5	3,97	0,156	03134324
SPGX1504-MC	SPGX-MC	15,875	0,625	4,76	0,187	03134325
SPGX1904-MC	SPGX-MC	19,05	0,75	4,76	0,187	03134326

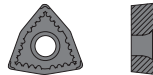
Indexable inserts – Peripheral insert, type 85*

for SD572

Tolerances:
S = ±0,13 (0.005")
RE = ±0,1 (0.004")



WCMX-85

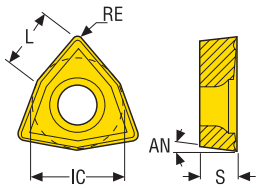


Designation	Inserts	IC	L	S	RE	Grades
		mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	
						DP3000
WCMX040208-85	WCMX-85	6,35 <i>0,25</i>	3,99 <i>0,157</i>	2,38 <i>0,094</i>	0,8 <i>0,031</i>	02807375
WCMX050308-85	WCMX-85	7,94 <i>0,313</i>	5,07 <i>0,2</i>	3,18 <i>0,125</i>	0,8 <i>0,031</i>	02807376
WCMX06T308-85	WCMX-85	9,525 <i>0,375</i>	6,14 <i>0,242</i>	3,97 <i>0,156</i>	0,8 <i>0,031</i>	02807377
WCMX080412-85	WCMX-85	12,7 <i>0,5</i>	8,14 <i>0,32</i>	4,76 <i>0,187</i>	1,2 <i>0,047</i>	02807378

**Chipbreaker for high feed rates in steel, stainless steel and cast iron

Indexable inserts – Center insert & Peripheral insert, type 86**

for SD572



Tolerances:
S = $\pm 0,13$ (0.005")
RE = $\pm 0,1$ (0.004")

WCMX-86



Designation	Inserts	IC		L		S		RE		Grades		
		mm	Inch	mm	Inch	mm	Inch	mm	Inch	T400D	DP2000	DP3000
WCMX030208-86	WCMX-86	5,556	0,219	3,46	0,136	2,38	0,094	0,8	0,031	02506629	02899808	02807379
WCMX040208-86	WCMX-86	6,35	0,25	3,99	0,157	2,38	0,094	0,8	0,031	02506638	02899809	02807380
WCMX050308-86	WCMX-86	7,94	0,313	5,07	0,2	3,18	0,125	0,8	0,031	02506640	02899810	02807381
WCMX06T308-86	WCMX-86	9,525	0,375	6,14	0,242	3,97	0,156	0,8	0,031	02506645	02899811	02807382
WCMX080412-86	WCMX-86	12,7	0,5	8,14	0,32	4,76	0,187	1,2	0,047	02506646	02899812	02807383

**Chipbreaker for high feed rates in steel, stainless steel and cast iron

SD522 Cutting speed

SMG	V _c			
	DP2000	DP3000	T250D	DS2050
P1	460	415	315	415
	1500	1350	1025	1350
P2	450	405	305	405
	1475	1325	1000	1325
P3	385	345	265	345
	1275	1125	870	1125
P4	285	220	140	—
	940	720	460	—
P5	270	210	135	—
	890	690	445	—
P6	305	235	150	—
	1000	770	490	—
P7	285	225	140	—
	940	740	460	—
P8	270	210	135	—
	890	690	445	—
P11	280	215	140	—
	920	710	460	—
P12	165	130	80	—
	540	425	260	—
M1	—	260	160	—
	—	850	520	—
M2	—	210	130	—
	—	690	425	—
M3	—	160	100	160
	—	520	330	520
M4	—	120	75	140
	—	395	245	460
M5	—	100	60	115
	—	330	195	375
K1	250	235	—	—
	820	770	—	—
K2	215	205	—	—
	710	670	—	—
K3	185	175	—	—
	610	570	—	—
K4	175	165	—	—
	570	540	—	—
K5	105	100	—	—
	345	330	—	—
N1	—	420	365	365
	—	1375	1200	1200
N2	—	270	235	235
	—	890	770	770
N3	—	180	155	155
	—	590	510	510
N11	—	350	310	310
	—	1150	1025	1025
S1	—	—	40	60
	—	—	130	195
S2	—	—	30	48
	—	—	100	155
S3	—	—	30	41
	—	—	100	135
S11	—	—	80	85
	—	—	260	280
S12	—	—	60	65
	—	—	195	215
S13	—	—	46	50
	—	—	150	165
H3	—	70	70	—
	—	230	230	—
H5	—	130	130	—
	—	425	425	—
H7	—	70	70	—
	—	230	230	—
H8	—	130	130	—
	—	425	425	—
H11	—	165	165	—
	—	540	540	—
H12	—	75	150	—
	—	245	490	—
H21	—	130	130	—
	—	425	425	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

SD523 Cutting speed

SMG	V _c			
	DP2000	DP3000	T250D	DS2050
P1	415	370	265	370
	1350	1225	870	1225
P2	405	360	260	360
	1325	1175	850	1175
P3	345	310	225	310
	1125	1025	740	1025
P4	230	190	120	—
	750	620	395	—
P5	220	180	115	—
	720	590	375	—
P6	250	200	130	—
	820	660	425	—
P7	235	190	120	—
	770	620	395	—
P8	220	180	115	—
	720	590	375	—
P11	225	185	115	—
	740	610	375	—
P12	135	110	70	—
	445	360	230	—
M1	—	245	135	—
	—	800	445	—
M2	—	195	110	—
	—	640	360	—
M3	—	150	85	150
	—	490	280	490
M4	—	115	65	120
	—	375	215	395
M5	—	95	55	100
	—	310	180	330
K1	225	215	—	—
	740	710	—	—
K2	195	185	—	—
	640	610	—	—
K3	165	160	—	—
	540	520	—	—
K4	160	150	—	—
	520	490	—	—
K5	95	90	—	—
	310	295	—	—
N1	—	360	310	310
	—	1175	1025	1025
N2	—	230	200	200
	—	750	660	660
N3	—	155	135	135
	—	510	445	445
N11	—	300	260	260
	—	980	850	850
S1	—	—	34	55
	—	—	110	180
S2	—	—	25	43
	—	—	80	140
S3	—	—	25	37
	—	—	80	120
S11	—	—	65	75
	—	—	215	245
S12	—	—	50	60
	—	—	165	195
S13	—	—	39	45
	—	—	130	150
H3	—	60	60	—
	—	195	195	—
H5	—	115	110	—
	—	375	360	—
H7	—	60	60	—
	—	195	195	—
H8	—	115	110	—
	—	375	360	—
H11	—	145	140	—
	—	475	460	—
H12	—	65	130	—
	—	215	425	—
H21	—	115	110	—
	—	375	360	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

SD524 Cutting speed

SMG	V _c			
	DP2000	DP3000	T250D	DS2050
P1	380	340	230	340
	1250	1125	750	1125
P2	370	330	225	330
	1225	1075	740	1075
P3	320	285	195	285
	1050	940	640	940
P4	195	165	105	—
	640	540	345	—
P5	185	160	100	—
	610	520	330	—
P6	210	180	110	—
	690	590	360	—
P7	195	170	105	—
	640	560	345	—
P8	185	160	100	—
	610	520	330	—
P11	190	165	100	—
	620	540	330	—
P12	110	95	60	—
	360	310	195	—
M1	—	235	120	—
	—	770	395	—
M2	—	190	95	—
	—	620	310	—
M3	—	145	75	145
	—	475	245	475
M4	—	110	55	105
	—	360	180	345
M5	—	90	46	90
	—	295	150	295
K1	210	200	—	—
	690	660	—	—
K2	180	170	—	—
	590	560	—	—
K3	155	145	—	—
	510	475	—	—
K4	145	140	—	—
	475	460	—	—
K5	85	85	—	—
	280	280	—	—
N1	—	315	270	270
	—	1025	890	890
N2	—	205	175	175
	—	670	570	570
N3	—	135	115	115
	—	445	375	375
N11	—	265	230	230
	—	870	750	750
S1	—	—	29	48
	—	—	95	155
S2	—	—	22	39
	—	—	70	130
S3	—	—	22	33
	—	—	70	110
S11	—	—	55	70
	—	—	180	230
S12	—	—	44	55
	—	—	145	180
S13	—	—	34	41
	—	—	110	135
H3	—	55	50	—
	—	180	165	—
H5	—	100	95	—
	—	330	310	—
H7	—	55	50	—
	—	180	165	—
H8	—	100	95	—
	—	330	310	—
H11	—	125	125	—
	—	410	410	—
H12	—	55	110	—
	—	180	360	—
H21	—	100	95	—
	—	330	310	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

SD525 Cutting speed

SMG	V _c			
	DP2000	DP3000	T250D	DS2050
P1	355	320	205	320
	1175	1050	670	1050
P2	345	310	200	310
	1125	1025	660	1025
P3	295	265	170	265
	970	870	560	870
P4	165	150	90	—
	540	490	295	—
P5	155	140	90	—
	510	460	295	—
P6	175	160	100	—
	570	520	330	—
P7	165	150	95	—
	540	490	310	—
P8	155	140	90	—
	510	460	295	—
P11	160	145	90	—
	520	475	295	—
P12	95	85	55	—
	310	280	180	—
M1	—	225	105	—
	—	740	345	—
M2	—	180	85	—
	—	590	280	—
M3	—	140	65	140
	—	460	215	460
M4	—	105	49	95
	—	345	160	310
M5	—	85	41	80
	—	280	135	260
K1	195	185	—	—
	640	610	—	—
K2	170	160	—	—
	560	520	—	—
K3	145	135	—	—
	475	445	—	—
K4	140	130	—	—
	460	425	—	—
K5	80	80	—	—
	260	260	—	—
N1	—	285	240	240
	—	940	790	790
N2	—	185	155	155
	—	610	510	510
N3	—	120	100	100
	—	395	330	330
N11	—	235	200	200
	—	770	660	660
S1	—	—	26	44
	—	—	85	145
S2	—	—	20	36
	—	—	65	120
S3	—	—	20	31
	—	—	65	100
S11	—	—	50	65
	—	—	165	215
S12	—	—	39	49
	—	—	130	160
S13	—	—	30	38
	—	—	100	125
H3	—	48	46	—
	—	155	150	—
H5	—	90	85	—
	—	295	280	—
H7	—	48	46	—
	—	155	150	—
H8	—	90	85	—
	—	295	280	—
H11	—	115	110	—
	—	375	360	—
H12	—	50	100	—
	—	165	330	—
H21	—	90	85	—
	—	295	280	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

SD542 Ø 60-85 mm / 2.250-3.500 inch

SMG		f		v _c		
		Ø 60,00-65,00 Ø 2.250-2.559			Ø 70,00-85,00 Ø 2.750-3.500	
P1	P2 DP3000	0,095	0,12	390		
	P2 DP3000	0.0038	0.0048	1275		
P2	P2 DP3000	0,10	0,12	380		
	P2 DP3000	0.0040	0.0048	1250		
P3	P2 DP3000	0,19	0,22	325		
	P2 DP3000	0.0075	0.0085	1075		
P4	P2 DP3000	0,19	0,22	205		
	P2 DP3000	0.0075	0.0085	670		
P5	P2 DP3000	0,18	0,22	195		
	P2 DP3000	0.0070	0.0085	640		
P6	P2 DP3000	0,18	0,22	220		
	P2 DP3000	0.0070	0.0085	720		
P7	P2 DP3000	0,18	0,22	205		
	P2 DP3000	0.0070	0.0085	670		
P8	P2 DP3000	0,19	0,22	195		
	P2 DP3000	0.0075	0.0085	640		
P11	P2 DP3000	0,18	0,22	200		
	P2 DP3000	0.0070	0.0085	660		
P12	P2 DP3000	0,12	0,15	120		
	P2 DP3000	0.0048	0.0060	395		
M1	P2 DP3000	0,14	0,17	250		
	P2 DP3000	0.0055	0.0065	820		
M2	P2 DP3000	0,13	0,15	205		
	P2 DP3000	0.0050	0.0060	670		
M3	P1 T250D	0,10	0,12	90		
	P1 T250D	0.0040	0.0048	295		
M4	P1 T250D	0,090	0,11	70		
	P1 T250D	0.0036	0.0044	230		
M5	P1 T250D	0,090	0,11	55		
	P1 T250D	0.0036	0.0044	180		
K1	P2 DP3000	0,20	0,24	225		
	P2 DP3000	0.0080	0.0095	740		
K2	P2 DP3000	0,18	0,22	195		
	P2 DP3000	0.0070	0.0085	640		
K3	P2 DP3000	0,18	0,22	165		
	P2 DP3000	0.0070	0.0085	540		
K4	P2 DP3000	0,18	0,22	160		
	P2 DP3000	0.0070	0.0085	520		
K5	P2 DP3000	0,16	0,19	95		
	P2 DP3000	0.0065	0.0075	310		
N1	P1 T250D	0,20	0,24	335		
	P1 T250D	0.0080	0.0095	1100		
N2	P1 T250D	0,20	0,24	215		
	P1 T250D	0.0080	0.0095	710		
N3	P1 T250D	0,20	0,24	145		
	P1 T250D	0.0080	0.0095	475		
N11	P1 T250D	0,20	0,24	285		
	P1 T250D	0.0080	0.0095	940		
S1	MP DS2050	0,15	0,18	55		
	MP DS2050	0.0060	0.0070	180		
S2	MP DS2050	0,15	0,18	45		
	MP DS2050	0.0060	0.0070	150		
S3	MP DS2050	0,14	0,17	39		
	MP DS2050	0.0055	0.0065	130		
S11	MP DS2050	0,17	0,20	80		
	MP DS2050	0.0065	0.0080	260		
S12	MP DS2050	0,17	0,20	60		
	MP DS2050	0.0065	0.0080	195		
S13	MP DS2050	0,15	0,18	48		
	MP DS2050	0.0060	0.0070	155		
H3	P1 T250D	0,080	0,10	65		
	P1 T250D	0.0032	0.0040	215		
H5	P1 T250D	0,12	0,15	120		
	P1 T250D	0.0048	0.0060	395		
H7	P1 T250D	0,080	0,10	65		
	P1 T250D	0.0032	0.0040	215		
H8	P1 T250D	0,095	0,11	120		
	P1 T250D	0.0038	0.0044	395		
H11	P1 T250D	0,12	0,15	155		
	P1 T250D	0.0048	0.0060	510		
H12	P1 T250D	0,095	0,11	140		
	P1 T250D	0.0038	0.0044	460		
H21	P1 T250D	0,095	0,11	120		
	P1 T250D	0.0038	0.0044	395		

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

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SD542 Cutting speed

SMG	V _c			
	DP2000	DP3000	T250D	DS2050
P1	435	390	290	390
	1425	1275	950	1275
P2	425	380	280	380
	1400	1250	920	1250
P3	365	325	240	325
	1200	1075	790	1075
P4	255	205	130	—
	840	670	425	—
P5	245	195	125	—
	800	640	410	—
P6	275	220	140	—
	900	720	460	—
P7	260	205	130	—
	850	670	425	—
P8	245	195	125	—
	800	640	410	—
P11	250	200	125	—
	820	660	410	—
P12	150	120	75	—
	490	395	245	—
M1	—	250	150	—
	—	820	490	—
M2	—	205	120	—
	—	670	395	—
M3	—	155	90	155
	—	510	295	510
M4	—	115	70	130
	—	375	230	425
M5	—	95	55	105
	—	310	180	345
K1	235	225	—	—
	770	740	—	—
K2	205	195	—	—
	670	640	—	—
K3	175	165	—	—
	570	540	—	—
K4	165	160	—	—
	540	520	—	—
K5	100	95	—	—
	330	310	—	—
N1	—	390	335	335
	—	1275	1100	1100
N2	—	250	215	215
	—	820	710	710
N3	—	165	145	145
	—	540	475	475
N11	—	325	285	285
	—	1075	940	940
S1	—	—	37	55
	—	—	120	180
S2	—	—	27	45
	—	—	90	150
S3	—	—	27	39
	—	—	90	130
S11	—	—	70	80
	—	—	230	260
S12	—	—	55	60
	—	—	180	195
S13	—	—	43	48
	—	—	140	155
H3	—	65	65	—
	—	215	215	—
H5	—	120	120	—
	—	395	395	—
H7	—	65	65	—
	—	215	215	—
H8	—	120	120	—
	—	395	395	—
H11	—	155	155	—
	—	510	510	—
H12	—	70	140	—
	—	230	460	—
H21	—	120	120	—
	—	395	395	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

SD572 Cutting speed

SMG	V _c	
	DP2000	
P1	375	
	1225	
P2	365	
	1200	
P3	315	
	1025	
P4	280	
	920	
P5	265	
	870	
P6	300	
	980	
P7	280	
	920	
P8	265	
	870	
P11	275	
	900	
P12	160	
	520	
M1	285	
	940	
M2	230	
	750	
M3	175	
	570	
M4	130	
	425	
M5	110	
	360	
K1	215	
	710	
K2	185	
	610	
K3	160	
	520	
K4	150	
	490	
K5	90	
	295	
S1	—	
	—	
S2	—	
	—	
S3	—	
	—	
S11	—	
	—	
S12	—	
	—	
S13	—	
	—	
H3	80	
	260	
H5	150	
	490	
H7	80	
	260	
H8	150	
	490	
H11	195	
	640	
H12	95	
	310	
H21	150	
	490	

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

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SD602 Ø 60-160 mm / 2.362-6.300 inch

SMG		f					v _c
		Ø 60,00-69,99 Ø 2.362-2.755	Ø 70,00-91,99 Ø 2.756-3.621	Ø 92,00-110,99 Ø 3.622-4.369	Ø 111,00-134,99 Ø 4.370-4.314	Ø 135,00-160,00 Ø 4.315-6.300	
P1	P2 DP3000	0,085	0,095	0,12	0,13	0,12	295
	P2 DP3000	0.0034	0.0038	0.0048	0.0050	0.0048	970
P2	P2 DP3000	0,085	0,10	0,12	0,13	0,12	285
	P2 DP3000	0.0034	0.0040	0.0048	0.0050	0.0048	940
P3	P2 DP3000	0,17	0,19	0,22	0,26	0,22	245
	P2 DP3000	0.0065	0.0075	0.0085	0.010	0.0085	800
P4	P2 DP3000	0,16	0,19	0,22	0,25	0,22	130
	P2 DP3000	0.0065	0.0075	0.0085	0.010	0.0085	425
P5	P2 DP3000	0,16	0,18	0,22	0,25	0,22	125
	P2 DP3000	0.0065	0.0070	0.0085	0.010	0.0085	410
P6	P2 DP3000	0,16	0,18	0,22	0,25	0,22	140
	P2 DP3000	0.0065	0.0070	0.0085	0.010	0.0085	460
P7	P2 DP3000	0,16	0,18	0,22	0,25	0,22	135
	P2 DP3000	0.0065	0.0070	0.0085	0.010	0.0085	445
P8	P2 DP3000	0,17	0,19	0,22	0,26	0,22	125
	P2 DP3000	0.0065	0.0075	0.0085	0.010	0.0085	410
P11	P2 DP3000	0,16	0,18	0,22	0,25	0,22	130
	P2 DP3000	0.0065	0.0070	0.0085	0.010	0.0085	425
P12	P2 DP3000	0,11	0,12	0,15	0,17	0,15	75
	P2 DP3000	0.0044	0.0048	0.0060	0.0065	0.0060	245
M1	P2 DP3000	0,12	0,14	0,17	0,19	0,17	215
	P2 DP3000	0.0048	0.0055	0.0065	0.0075	0.0065	710
M2	P2 DP3000	0,11	0,13	0,15	0,17	0,15	175
	P2 DP3000	0.0044	0.0050	0.0060	0.0065	0.0060	570
M3	P1 DP3000	0,090	0,10	0,12	0,14	0,12	135
	P1 DP3000	0.0036	0.0040	0.0048	0.0055	0.0048	445
M4	P1 DP3000	0,075	0,090	0,11	0,12	0,11	100
	P1 DP3000	0.0030	0.0036	0.0044	0.0048	0.0044	330
M5	P1 DP3000	0,075	0,090	0,11	0,12	0,11	85
	P1 DP3000	0.0030	0.0036	0.0044	0.0048	0.0044	280
K1	P2 DP3000	0,17	0,20	0,24	0,26	0,24	175
	P2 DP3000	0.0065	0.0080	0.0095	0.010	0.0095	570
K2	P2 DP3000	0,16	0,18	0,22	0,24	0,22	150
	P2 DP3000	0.0065	0.0070	0.0085	0.0095	0.0085	490
K3	P2 DP3000	0,16	0,18	0,22	0,24	0,22	130
	P2 DP3000	0.0065	0.0070	0.0085	0.0095	0.0085	425
K4	P2 DP3000	0,16	0,18	0,22	0,24	0,22	120
	P2 DP3000	0.0065	0.0070	0.0085	0.0095	0.0085	395
K5	P2 DP3000	0,14	0,16	0,19	0,22	0,19	75
	P2 DP3000	0.0055	0.0065	0.0075	0.0085	0.0075	245
H3	P2 DP3000	0,070	0,080	0,10	0,11	0,10	42
	P2 DP3000	0.0028	0.0032	0.0040	0.0044	0.0040	140
H5	P2 DP3000	0,11	0,12	0,15	0,17	0,15	80
	P2 DP3000	0.0044	0.0048	0.0060	0.0065	0.0060	260
H7	P2 DP3000	0,070	0,080	0,10	0,11	0,10	42
	P2 DP3000	0.0028	0.0032	0.0040	0.0044	0.0040	140
H8	P2 DP3000	0,085	0,095	0,11	0,13	0,11	80
	P2 DP3000	0.0034	0.0038	0.0044	0.0050	0.0044	260
H11	P2 DP3000	0,11	0,12	0,15	0,17	0,15	100
	P2 DP3000	0.0044	0.0048	0.0060	0.0065	0.0060	330
H12	P2 DP3000	0,085	0,095	0,11	0,13	0,11	45
	P2 DP3000	0.0034	0.0038	0.0044	0.0050	0.0044	150
H21	P2 DP3000	0,085	0,095	0,11	0,13	0,11	80
	P2 DP3000	0.0034	0.0038	0.0044	0.0050	0.0044	260

SMG = Seco material group f = mm/rev (IPR) v_c = m/min (sf/min) All cutting data are start values

SD602 Cutting speed

SMG	V _c	
	T250D	DS2050
P1	180	295
	590	970
P2	175	285
	570	940
P3	150	245
	490	800
P4	80	—
	260	—
P5	75	—
	245	—
P6	85	—
	280	—
P7	80	—
	260	—
P8	75	—
	245	—
P11	80	—
	260	—
P12	46	—
	150	—
M1	90	—
	295	—
M2	75	—
	245	—
M3	55	135
	180	445
M4	43	85
	140	280
M5	36	70
	120	230
K1	—	—
	—	—
K2	—	—
	—	—
K3	—	—
	—	—
K4	—	—
	—	—
K5	—	—
	—	—
H3	40	—
	130	—
H5	75	—
	245	—
H7	40	—
	130	—
H8	75	—
	245	—
H11	95	—
	310	—
H12	85	—
	280	—
H21	75	—
	245	—

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

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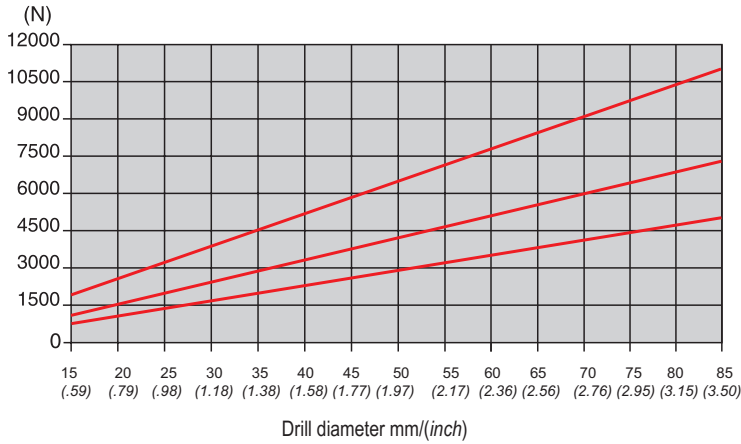
Annex

Machining data SD522, SD523, SD524, SD525, SD542 and SD572 - Power consumption, coolant volume requirement and force graphs

The values in the graphs vary with e.g. cutting data, material, efficiency of the machine and tool wear.

The graphs below are valid for Seco Material Group (SMG) P5-P6 and cutting speed 200 m/min (655 sf/min).

Feed force

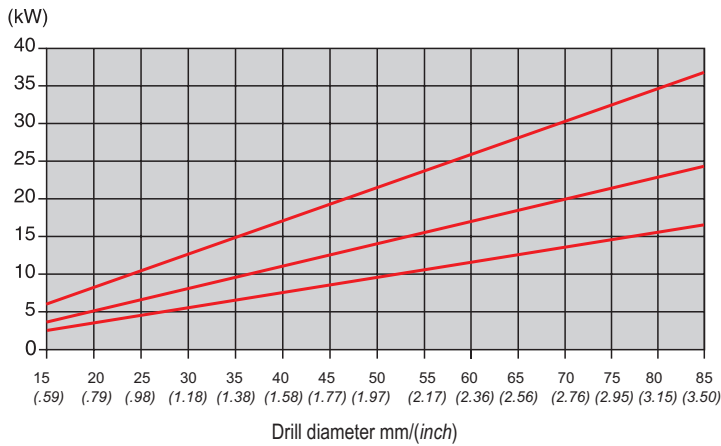


f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Net power consumption

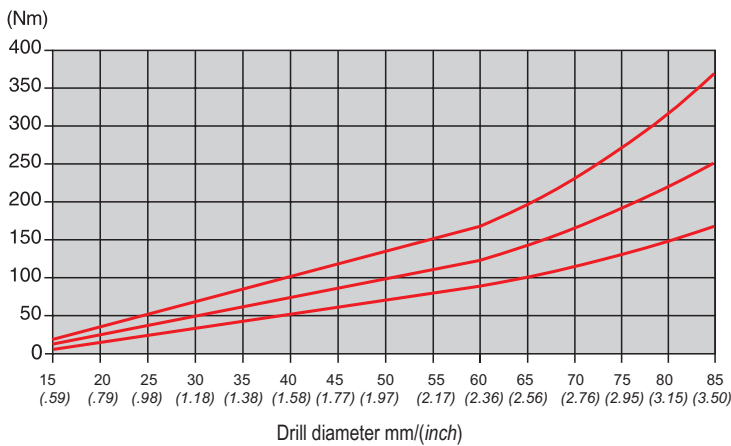


f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Drilling torque



f = 0,18 mm/rev
(f = 0.007 inch/rev)

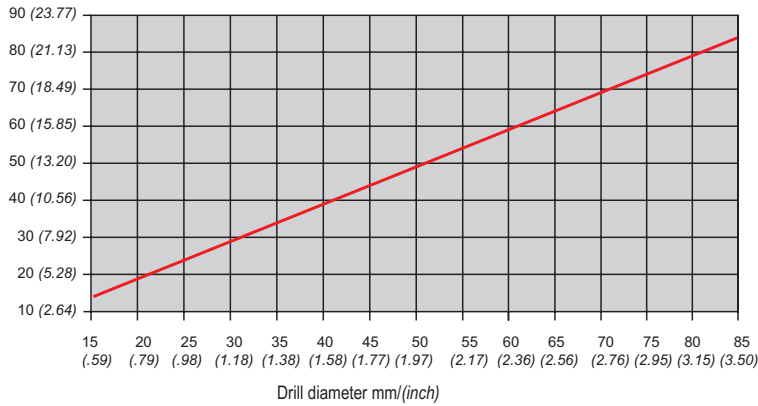
f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Machining data

Coolant volume requirement

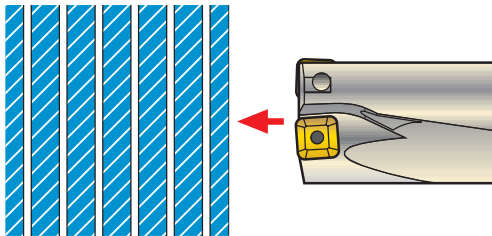
Litres/minute (Gallons/minute)



Coolant pressure requirement

Recommended pressure bar (PSI)			
Drill diameter mm (inch)			
Drilling depth	15-25 (0.591-0.984)	> 25-40 > 0.984-1.575	> 40 > 1.575
< 3 x D	6 (87)	4.5 (65)	3 (44)
≥ 3 x D	12 (174)	9 (130)	6 (87)

Drilling of stacked materials



Drilling of stacked materials with no air gaps between the layers, max 0,2 mm (0.008"), can be done with SD522 2 x D, SD523 3 x D and the SD542 2.5 x D and the SD542 2.5 x D drill. The component must be securely fixed so no flexing occurs when breaking through each layer.

Cutting data and insert recommendations for drilling of stacked materials

	Insert geometry	Carbide grade
Center insert	SPGX-C1	T400D
Periph insert	SCGX-P2	DP3000

Cutting speed: See recommendations for DP3000 carbide grade

Feed / rev: See recommendations for P2 geometry

If a problem occurs when breaking through each layer, reduce the fed / rev by 30-50 %.

Caution!

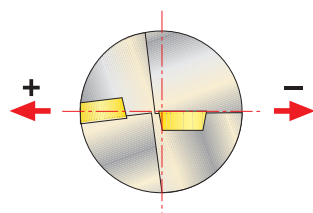
The disc produced when the drill breaks through can be ejected at high speed when using the drill as a stationary tool, (rotating workpiece). It is most important to ensure that the machine is adequately guarded to ensure operator safety.

Set up

Hole diameter adjustment and set-up recommendation

The insert drills can be displaced off-center to achieve a smaller or larger hole diameter than the actual drill.

For measurement see 'Radial adjustment' in the tool data table in the catalogue pages.



Rotating

Seco's adjustable holder is recommended for precision hole diameter IT10 setting when using SD522 and SD523, 3 x D as rotating drills.

Stationary

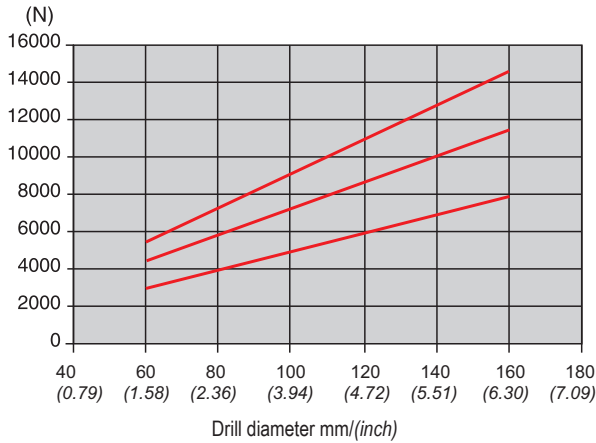
When mounting the drill make sure the cutting edges are parallel with the guide ways of the cross slide and that the drill center line and workpiece center line align. To achieve a larger hole diameter, displace the drill so that the periphery insert moves away from the workpiece center line.

Machining data SD602 - Power consumption, coolant volume requirement and force graphs

The values in the graphs vary with e.g., cutting data, material, with a machine efficiency of 80%.

The graphs below are valid for SMG P5-P6 and cutting speed 200 m/min (655 sf/min).

Feed force

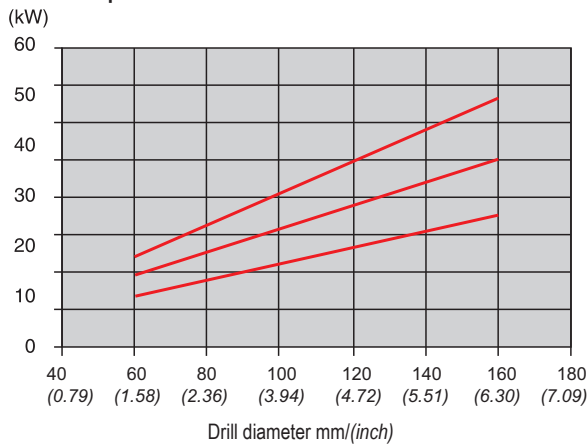


f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Net power consumption

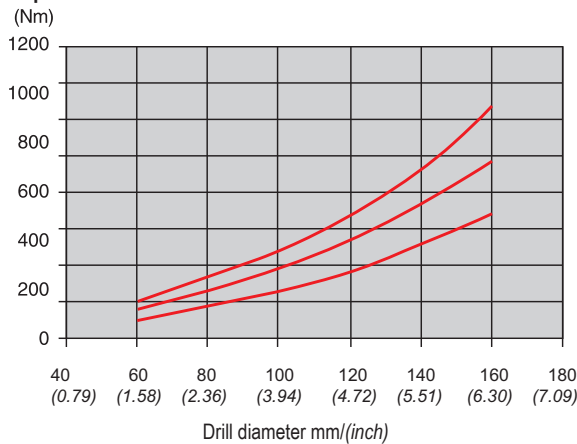


f = 0,18 mm/rev
(f = 0.007 inch/rev)

f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Drilling torque



f = 0,18 mm/rev
(f = 0.007 inch/rev)

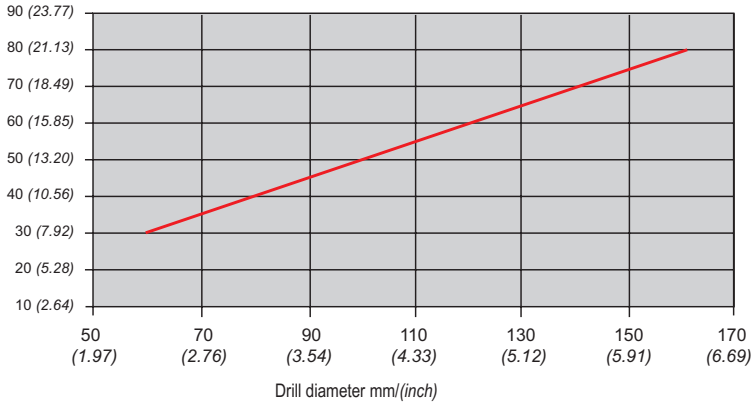
f = 0,12 mm/rev
(f = 0.005 inch/rev)

f = 0,08 mm/rev
(f = 0.003 inch/rev)

Machining data SD602

Coolant volume requirement

Litres/minute (Gallons/minute)



Methods

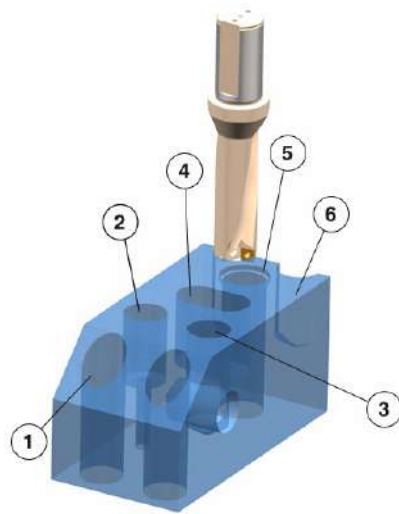
Not recommended	Solution
	<ol style="list-style-type: none">
	<ol style="list-style-type: none">
	<ol style="list-style-type: none"> <p>> 5xD</p>

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Annex

Versatility

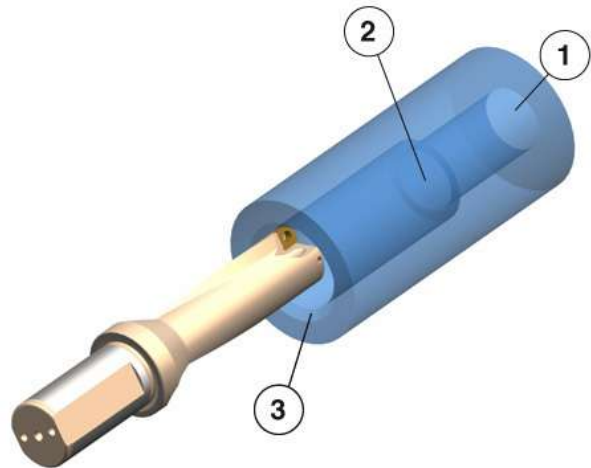
Applications

1. Hole with angled entrance
2. Boring
3. Drilling across an existing hole
4. Drilling and plunging
5. Drilling and milling countersink by circular interpolation
6. Plunging



Multiple choice in non rotating operations

1. Drilling
2. Boring / Conical hole
3. Chamfering



Recommendations

- 2 x D and 3 x D drills (SD522, SD523)
- Reduce the feed ~ 50% when the drill is not fully engaged
- Use grade DP3000
- Use -P2 chipbreaker

Troubleshooting

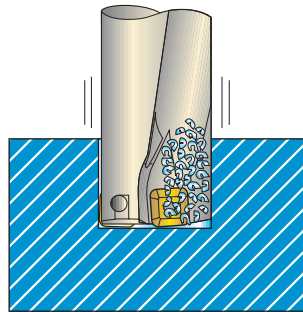
Introduction

Drilling

Vibrations

Applications

- Check mounting of drill
- Check mounting of workpiece
- Increase feed. If a very soft material, reduce feed and increase speed
- Reduce the cutting speed



Insufficient torque

- Reduce feed
- Choose a geometry with harder chipbreaking for lower feeds

Insufficient power

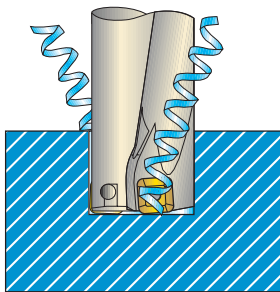
- Reduce cutting speed
- Reduce feed
- Choose a geometry with harder chipbreaking for lower feeds (SCGX-P1)

Reaming

Chip jamming problems

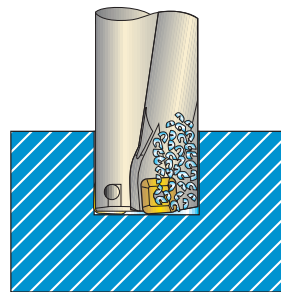
Chip jamming problems due to long chips

- Increase feed. If a very soft material, reduce feed and increase speed
- Choose a geometry with harder chipbreaking for lower feeds (SCGX-P1)



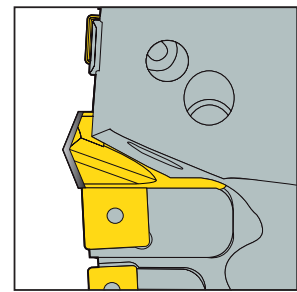
Chip jamming problems despite short chips

- Increase coolant pressure / volume
- Reduce cutting speed



Rapid flank wear on pilot drill

- Reduce the cutting speed
- Increase coolant concentration



Boring

Tool life problems

Chipping of periphery insert

- Reduce entrance feed
- Choose a tougher grade
- Choose a geometry with softer chipbreaking for higher feeds (SCGX-P2)
- Reduce feed
- Reduce cutting speed



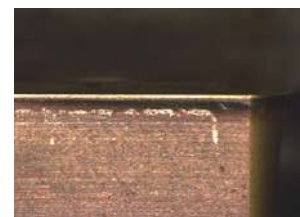
Chipping of center insert

- Check mounting of drill
- Check mounting of workpiece
- Reduce entrance feed
- Increase feed
- Reduce cutting speed



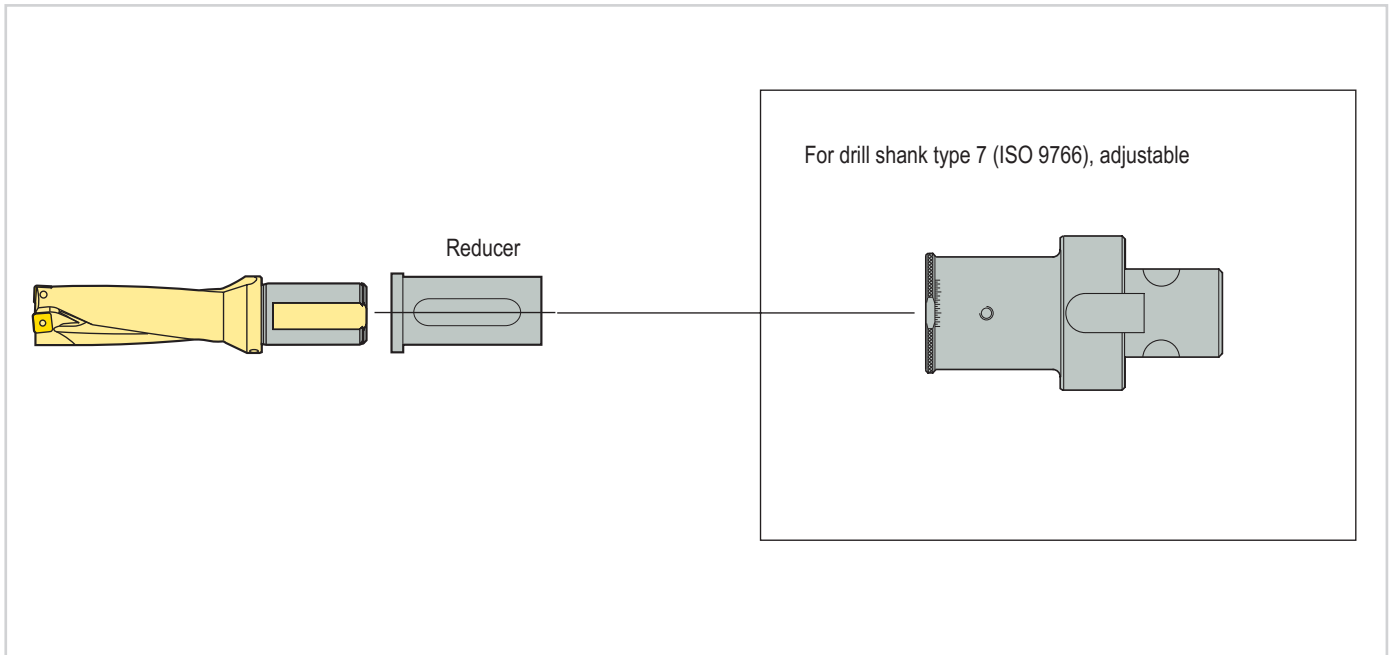
Rapid flank wear on periphery insert

- Reduce cutting speed
- Increase coolant pressure volume
- Choose a more wear resistant grade



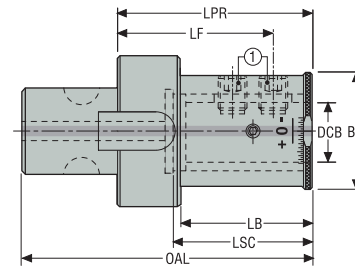
Annex

Adjustable holders for drills



ADH 6101 – Adjustable drill holders, for type 7 drill shanks

Graflex®



- For Performax® drills
- Adjustable from -0,3 mm to +0,8

1. Locking screw

Item number	Designation	Machine side Graflex shank size	Workpiece side For drill shank type	DCB	OAL	LPR	BD	LF	LB	LSC	Weight	Balancing
					mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		
02422113	BM061610025	G6	R7	25,0 0.984	110,0 4.331	70,0 2.756	49,0 1.929	55,0 2.165	54,0 2.126	54,0 2.126	1,12 2.470	PB
02422114	BM061610032	G6	R7	32,0 1.260	125,0 4.921	85,0 3.346	71,0 2.795	70,0 2.756	66,0 2.598	60,5 2.382	2,09 4.610	PB
02422115	BM061610040	G6	R7	40,0 1.575	125,0 4.921	85,0 3.346	81,0 3.189	70,0 2.756	66,0 2.598	60,5 2.382	2,38 5.250	PB
02422116	BM061610125	G6	R7	25,4 1.000	110,0 4.331	70,0 2.756	49,0 1.929	55,0 2.165	54,0 2.126	54,5 2.146	1,11 2.450	PB
02422118	BM061610138	G6	R7	38,1 1.500	125,0 4.921	85,0 3.346	81,0 3.189	70,0 2.756	66,0 2.598	60,5 2.382	2,45 5.400	PB

Spare Parts, included in delivery

For DCB	Locking screw	Tenon
25/0.984	950AF1210014	90M61
32/1.260	-	90M61
40/1.575	-	90M61
25,4/1.000	950AF1210014	90M61
38,1/1.500	-	90M61

Accessories

For DCB	Key	Key (T-handle)
25/0.984	H6B-H6.0L	DOUBLE-T
32/1.260	H6B-H6.0L	DOUBLE-T
40/1.575	H6B-H6.0L	DOUBLE-T
25,4/1.000	H6B-H6.0L	DOUBLE-T
38,1/1.500	H06-4	-

PB=Pre-balanced by design (see Balancing Guide page in Tooling Systems catalogue for more details)

Introduction

Drilling

Reaming

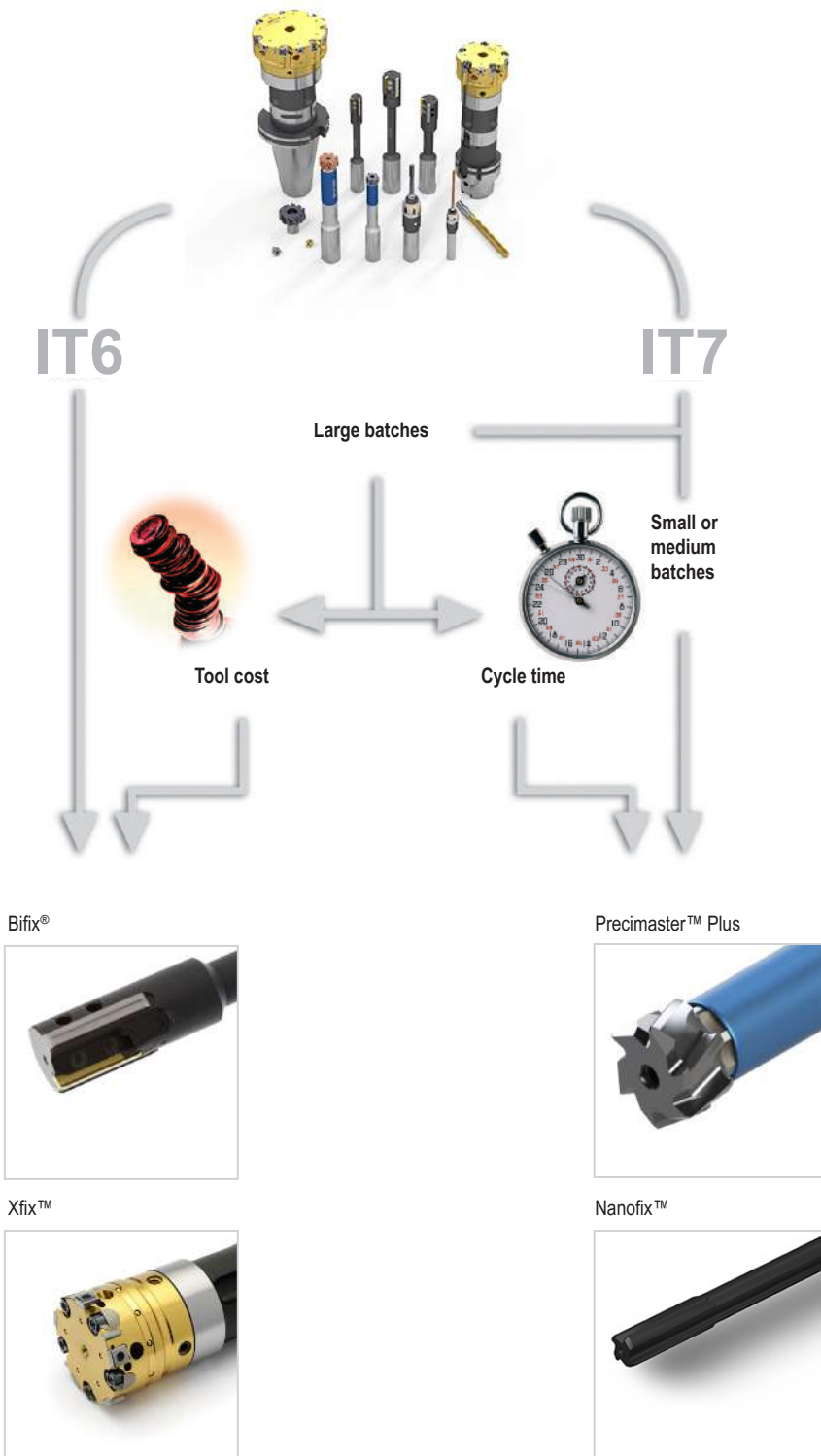
Boring

Annex

Multi-cut or indexable insert – Choosing the best solution

Quality, performance and tool cost, all these objectives can be met. The choice of a reaming tool depends on hole tolerance, production quantity and cycle time. Seco Holemaking systems can meet these demands. With Precimaster, Bifix, Xfix and Nanofix reamers Seco can solve all problems related to reaming operations.

The chart below helps you to choose the ideal reaming tool



Range overview

	∅ Range	Reaming depth	Hole ∅ tolerance	Intermediate diameter	Surface finish
<p>Precimaster™ Plus</p>  <p>Page(s) 323-362</p>	<p>7,75-60,500 mm (0.3051-2.3818")</p>	<p>~ 2-10 x D</p>	<p>IT 6-7-8</p>	<p>Yes, available through Custom design</p>	<p>R_a 0,2-1,2 μm (R_a 7.87-47.2 μin)</p>
<p>Nanofix™</p>  <p>Page(s) 363-397</p>	<p>2,970-12,050 mm (0.1169-0.4744")</p>	<p>~ 5-12 x D</p>	<p>IT 7</p>	<p>Yes, available through Custom design</p>	<p>R_a 0,2-1,2 μm (R_a 7.87-47.2 μin)</p>
<p>Bifix®</p>  <p>Page(s) 398-424</p>	<p>5,900-60,500 mm (0.2323-2.3819")</p>	<p>~ 2-7 x D</p>	<p>IT 6-7</p>	<p>Yes, available through Custom design</p>	<p>R_a 0,2-0,8 μm (R_a 7.87-31.5 μin)</p>
<p>Xfix™</p>  <p>Page(s) 425-466</p>	<p>39,500-154,500 mm (1.5551-6.0827")</p>	<p>~ 2,5-6,5 x D</p>	<p>IT 6</p>	<p>Yes, available through Custom design</p>	<p>R_a 0,8-1,6 μm (R_a 31-63 μin)</p>

Introduction

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Precimaster™ Plus

Precimaster™ Plus is a modular reamer system that boosts reaming speed, stability and versatility for more precise, cost-effective hole production.

- The system features an innovative high-precision connection, solid-carbide disposable heads as well as common holders for blind and through-hole applications
- Enables tolerances held between 15 and 25 microns and surface finishes of R_a 0.4 to R_a 0.8 μm (RMS 15 to 35 micro/inch)

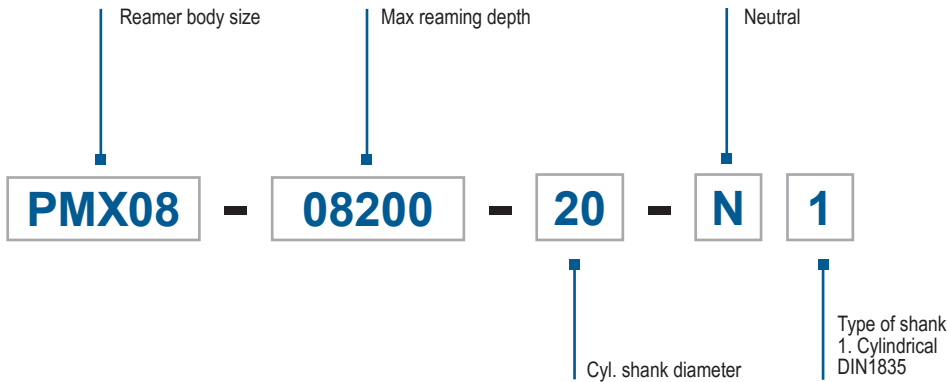
Precimaster™ Plus – Range overview

	∅ Range	Reaming depth	Hole ∅ tolerance	Intermediate diameter	Surface finish
Introduction 	7,75-60 mm (0.3051-2.3622")	~ 2-3 x D	IT 6-7-8	Yes, available through Custom design	R _a 0,4-0,8 μm (R _a 15.7-31.5 μin)
Drilling 	7,75-60 mm (0.3051-2.3622")	~ 4-5 x D	IT 6-7-8	Yes, available through Custom design	R _a 0,4-0,8 μm (R _a 15.7-31.5 μin)
Reaming 	7,75-60 mm (0.3051-2.3622")	~ 8-10 x D	IT 6-7-8	Yes, available through Custom design	R _a 0,4-0,8 μm (R _a 15.7-31.5 μin)

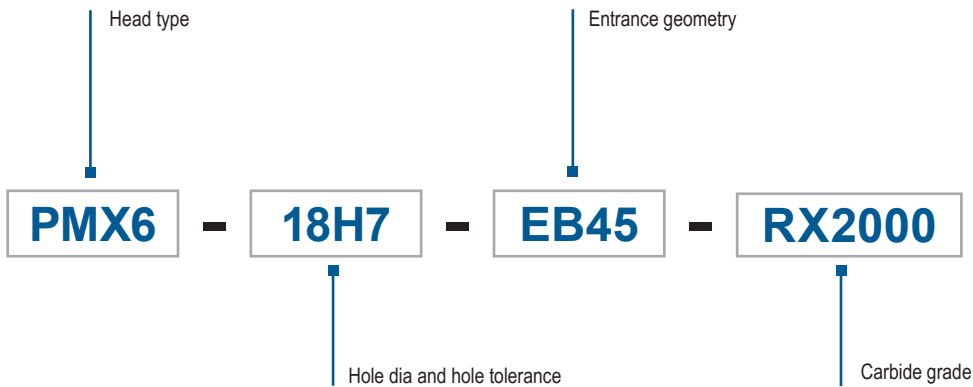
Code keys

Precimaster Plus toolholders are suitable for both blind and through holes.

Tool shank

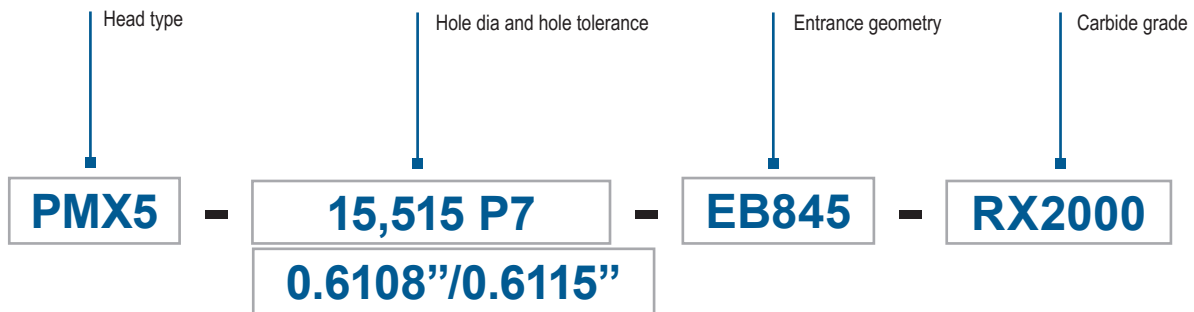


Head



PMX6

Head intermediate diameter



PMX4



PMX5



PMX8

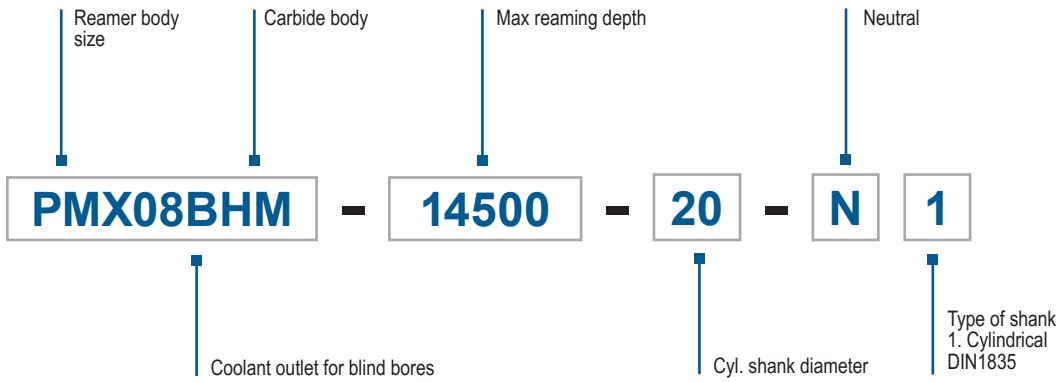
PMX4: RH helical flutes design, suitable for blind bores only.
 PMX5: Straight flutes design, suitable for blind and through bores.
 PMX6: LH helical flutes design, suitable for through bores only.
 PMX8: Straight flutes expandable, suitable for blind and through bores
 Left hand flute design improves the action of pushing the chips forward.
 Right hand flute design improves the action of evacuating the chips forward.
 See Precimaster Plus head choice page 332.

Code keys

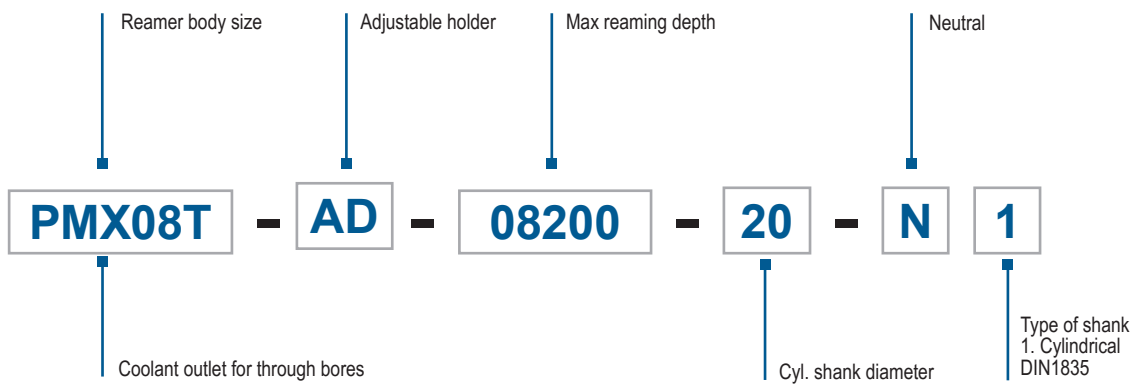
Precimaster Plus toolholders are suitable for both blind and through holes.

Introduction

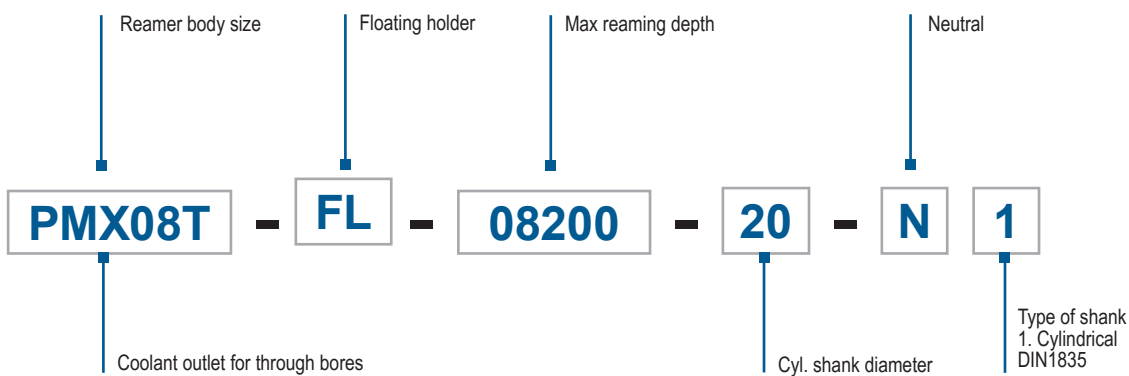
Drilling



Reaming



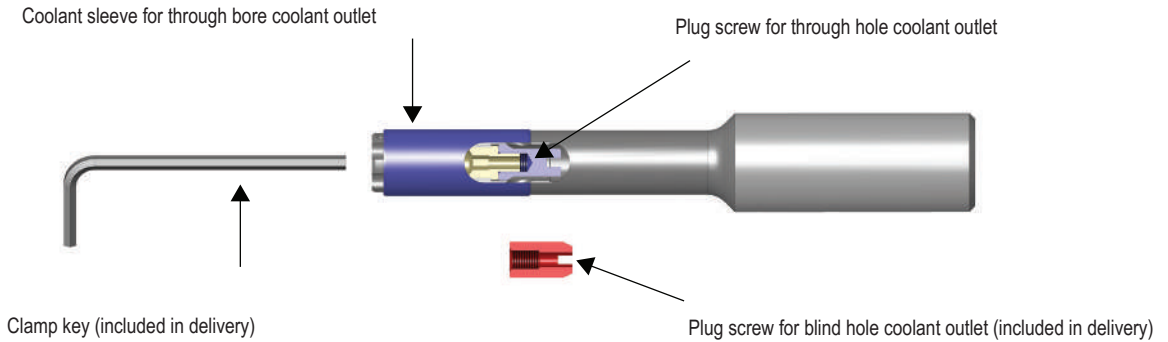
Boring



Annex

Coolant set-up

Coolant outlet set-up procedure: Spare parts description

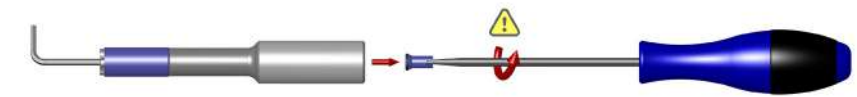


Coolant outlet set-up procedure: Blind bores coolant outlet set-up

1.

Remove plug screw for through bore (blue)
Note: plug screws are LH screw

Use flat screw driver OR allen key,
recommended hand-tool sizes as per table



Body size	Flat blade screw driver size mm	Flat blade screw driver size inch	Allen Key size mm	Allen Key size inch
PMX05	1,2 x 4 x 120	0.05 x 0.16 x 4.72	2 x 120	0.08 x 4.72
PMX06	1,0 x 5,5 x 150	0.04 x 0.22 x 5.9	2,5 x 150	0.10 x 5.9
PMX08	1,2 x 6,5 x 200	0.05 x 0.26 x 7.87	3 x 200	0.12 x 7.87
PMX12	1,2 x 8 x 200	0.05 x 0.31 x 6.89	5 x 200	0.2 x 6.89

2.

Remove coolant sleeve



3.

Mount plug screw for blind bores (red)
Note: plug screws are LH screw



Head mounting

<p>1. Make sure head geometry is suitable with coolant style</p>	<p>PMX5/PMX8 PMX6</p> <p>Through bores</p> <p>PMX5/PMX8</p> <p>Blind bores</p>												
<p>2. Position clamp before head mounting</p>													
<p>3. Align index groove with red dot on body</p>	<p>Small Groove</p> <p>Large Grooves</p>												
<p>4. Place head into body</p>													
<p>5. Push head inside body until "click" is achieved</p>	<p>Click</p>												
<p>6. Clamp head using allen key</p>	<table border="1"> <thead> <tr> <th>PMX Shank Size</th> <th>Recommended clamping torque</th> </tr> </thead> <tbody> <tr> <td>PMX05</td> <td>0,5 Nm</td> </tr> <tr> <td>PMX06</td> <td>0,9 Nm</td> </tr> <tr> <td>PMX08</td> <td>1,2 Nm</td> </tr> <tr> <td>PMX12</td> <td>2,0 Nm</td> </tr> <tr> <td>PMX16</td> <td>5,0 Nm</td> </tr> </tbody> </table>	PMX Shank Size	Recommended clamping torque	PMX05	0,5 Nm	PMX06	0,9 Nm	PMX08	1,2 Nm	PMX12	2,0 Nm	PMX16	5,0 Nm
PMX Shank Size	Recommended clamping torque												
PMX05	0,5 Nm												
PMX06	0,9 Nm												
PMX08	1,2 Nm												
PMX12	2,0 Nm												
PMX16	5,0 Nm												

Introduction

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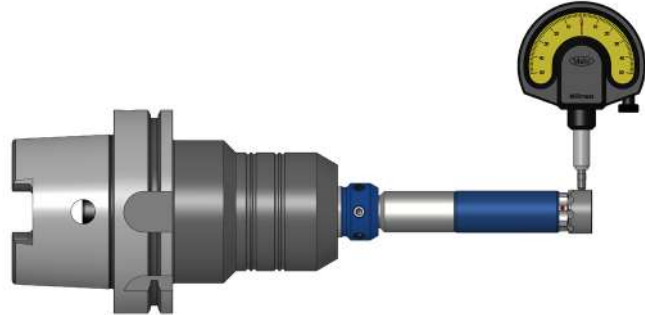
Boring

Annex

Set up – Run-out

Rotating tool

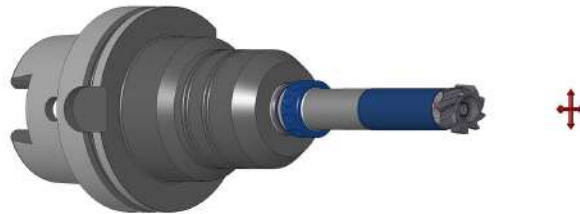
Max recommended run-out: 10-15 μm (393.7008-590.5512 μin).
Hydraulic chuck, Shrinkfit, holder or precision collet holder is recommended.
For best run-out control, we recommend to use Precimaster Plus PMX-AD adjustable adapters, see page(s) 345-346.



Static tool

Use Precimaster Plus floating holders PMX - FL, see page(s) 347-348.

Floating holders allow reamer self-centering in pre-bore.



Coolant requirements

To reach maximum tool life and hole quality, the following coolant requirements should be observed.
Coolant through the tool is recommended.
External coolant supply can be used if reaming depth <math> < 2 \times D </math>.
Quality soluble oil with 40 % minimum mineral oil.
Neat oil recommended for stainless steel.
Concentration minimum 6–8 %.
Filtration 30–50 μm (1200-2000 μin).
Volume min 0,5 l/min/mm (3.35 gal/min/inch) in tool diameter.
(Ex: Reamer \varnothing 10, min volume is 5 l/min (1.3 gal/min).



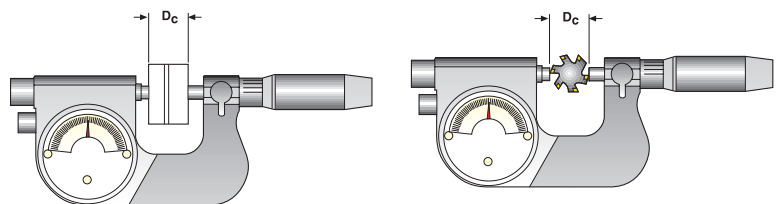
Diameter measurement

Gauge clock micrometer prior to \varnothing measurement.









Important

Precimaster reamers have differential pitch between the teeth.
When measuring the diameter, make sure that you have 2 teeth 180° opposite.




Use clock micrometer and measuring blocks for gauging.



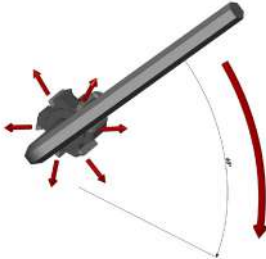
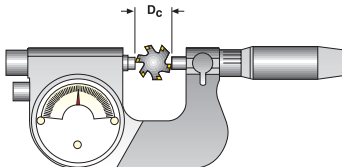
Adjusting shanks set-up:

<p>1. Mount setting master (supplied with adjustable holder). Mount tool in the spindle.</p> <p>2. Set-up clock as shown.</p>	 
<p>3. Rotate tool manually till lowest point is reached.</p>	 
<p>4. Proceed to run-out compensation using adjusting screws. Direction as shown with arrows.</p> <p>5. Check run-out and repeat compensation if necessary.</p>	 
<p>6. When maximum run-out is less than 5 μm (197 μin), secure adjusting screws clamping to avoid losing adjustment</p>	 

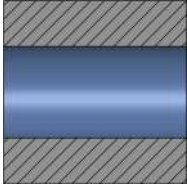


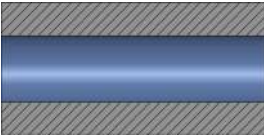

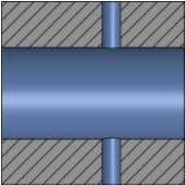
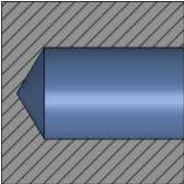


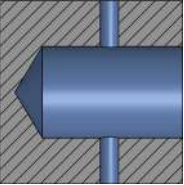
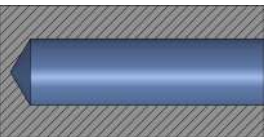

Floating shanks set-up:

<p>1. Completely lock floating shank turning adjusting ring clockwise.</p>	
<p>2. Open floating shank 2 or 3 clicks turning adjusting ring anti-clockwise.</p>	
<p>3. Proceed to further floating value adjustment if necessary. Too much floating value can create unstable conditions at bore entry. Too few floating value can create vibrations and tapered bore.</p>	

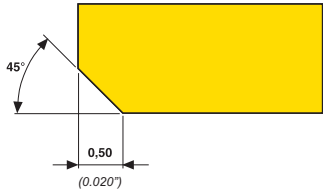
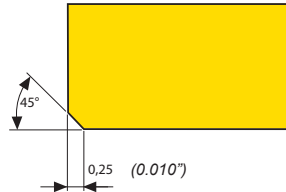
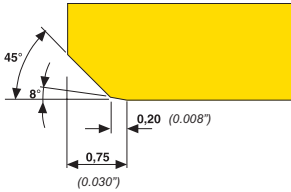
Expandable reamer wear compensation

<p>1. Use hexagonal allen key to compensate tool Ø wearing (60° increments = approximately 0.005 µm (0.197 µin) compensation on Ø)</p>	
<p>2. Check Ø dimension after expansion using clock micrometer</p>	

Head choice

Workpiece		Diameter to ream \varnothing 8-60 mm (0.3150-2.3622")	
Introduction	<p>Short through hole < 3 x D</p> 	<p>PMX5 / PMX8</p> 	
Drilling	<p>Long through hole > 3 x D</p> 	<p>PMX6 For through bore application, toolholder coolant outlet must be set for through holes: see coolant set-up pages.</p> 	
Reaming	<p>Crossing hole</p> 		
Boring	<p>Blind hole</p> 	<p>PMX5 / PMX8 For blind bore application, toolholder coolant outlet must be set for blind holes: see coolant set-up pages</p> 	
	<p>Blind and crossing hole</p> 		
Annex	<p>Blind hole > 3x D</p> 	<p>PMX4 For blind bore difficult application, toolholder coolant outlet must be set for blind holes: see coolant set-up pages.</p> 	

Geometry choice – Applications

Lead geometry - EB45	
<p>Chip control ++ Surface finish+++ R_a 0,8 - 1,2 μm (Surface finish+++ R_a 31 - 47 μin) Versatile</p>	
Lead geometry - EBS45	
<p>Chip control +++ Surface Finish + R_a 0,8- 1,2 (Surface Finish + R_a 31- 47 μin) Short EB45</p>	
Lead geometry - EB845	
<p>Chip control ++ Surface finish+++ R_a 0,2 - 0,8 μm (Surface finish+++ R_a 8 - 31 μin)</p>	

Geometry choice – Applications

<p>Lead geometry - EB25</p> <p>Feed performance +++ Surface finish ++ R_a 0,4 - 0,8 μm (Surface Finish ++ R_a 16 - 31 μin) Chip control +</p>	
<p>Lead geometry - EB30</p> <p>Feed performance +++ Surface Finish ++ R_a 0,4 - 0,8 μm (Surface Finish ++ R_a 16 - 31 μin) Chip control +</p>	
<p>Lead geometry - EBS30</p> <p>Feed performance +++ Surface finish ++ R_a 0,4 - 0,8 μm (Surface Finish ++ R_a 16 - 31 μin) Chip control + Short EB30</p>	

Introduction

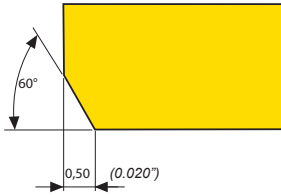
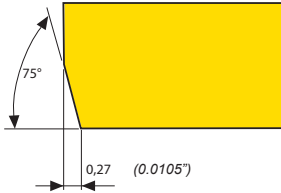
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Geometry choice – Applications

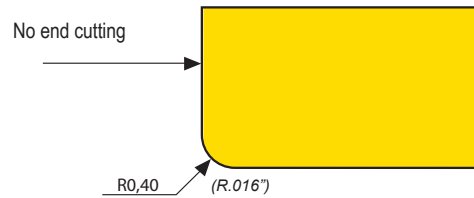
Lead geometry - EB60	
<p>Feed performance + Surface Finish ++ R_a 0,8 - 1,2 μm (Surface Finish ++ R_a 31-47 μin) Chip control ++</p>	 <p>The diagram shows a yellow rectangular tool tip with a 60-degree lead angle. A dimension line indicates a lead of 0.50, which is equivalent to 0.020 inches.</p>
Lead geometry - EB75	
<p>Feed performance + Surface Finish ++ R_a 0,8 - 1,2 μm (Surface Finish ++ R_a 31-47 μin) Chip control ++</p>	 <p>The diagram shows a yellow rectangular tool tip with a 75-degree lead angle. A dimension line indicates a lead of 0.27, which is equivalent to 0.0105 inches.</p>

Geometry choice – Applications

Introduction

Lead geometry - RE040

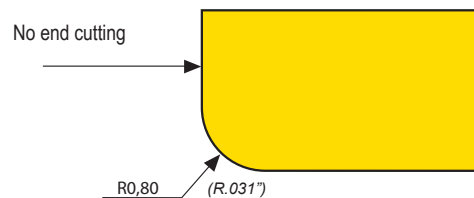
Feed performance ++
Surface Finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +



Drilling

Lead geometry - RE080

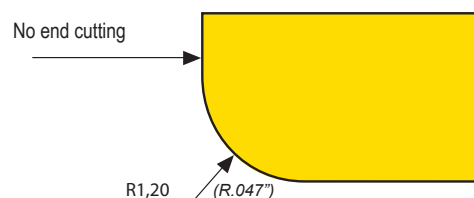
Feed performance ++
Surface Finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +



Reaming




Lead geometry - RE120

Feed performance ++
Surface Finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +
Available from \varnothing 14 mm (0.551")



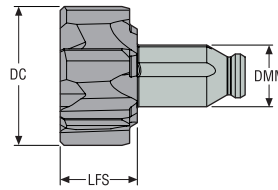
Boring

Annex

Grades		
	RX2000	Coated High performance coated grade suitable for all materials.
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.
	CF	Cermet A wear resistant grade for performance optimization in steel.
	RX1500	Coated Cermet A resistant coated grade for performance optimization in steel and cast iron.
	RN2010	Uncoated A sub-micrograin uncoated grade with optimized geometries for N-materials (non ferrous).
	RM2020	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for M materials.
	RM2090	Coated A wear resistant coated grade with specific geometries for M materials. Optimization in M materials.
	RK2050	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for K materials.
	RK1550	Coated Cermet A wear resistant coated grade with specific geometries for K materials. Optimization in K materials.
	RS2090	Coated A wear resistant coated grade with specific geometries for S materials. Optimization in S materials.

Heads for through and blind holes

Ø 8-32 mm / 0.315-1.260"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	Item number	DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
			mm	mm					mm	mm	EB45	EB845	EB30	H15	CP20
PMX5-8H7-EB45	03123158	8,0	7,8/7,9	6	6,0	4,5	PMX05-xx	■	□	□	□	□	■	-	-
PMX5-9H7-EB45	03123159	9,0	8,8/8,9	6	6,0	4,5	PMX05-xx	■	□	□	□	□	■	-	-
PMX5-10H7-EB30	10020602	10,0	9,8/9,9	6	7,0	6,0	PMX06-xx	□	□	■	□	□	■	□	□
PMX6-10H7-EB45	02965863	10,0	9,8/9,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX5-11H7-EB45	02925754	11,0	10,8/10,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX5-12H7-EB30	10019482	12,0	11,8/11,908	6	7,0	6,0	PMX06-xx	□	□	■	□	□	■	□	□
PMX5-12H7-EB45	02925755	12,0	11,8/11,908	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX5-13H7-EB30	10019483	13,0	12,8/12,9	6	7,0	6,0	PMX06-xx	□	□	■	□	□	■	□	□
PMX5-13H7-EB45	02925756	13,0	12,8/12,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX5-14H7-EB30	10019484	14,0	13,8/13,891	6	7,0	6,0	PMX06-xx	□	□	■	□	□	■	□	□
PMX5-14H7-EB45	02925757	14,0	13,8/13,891	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX5-15H7-EB30	10019485	15,0	14,8/14,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-15H7-EB45	02925758	15,0	14,8/14,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-16H7-EB30	10019486	16,0	15,8/15,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-16H7-EB45	02925759	16,0	15,8/15,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-17H7-EB30	10019487	17,0	16,8/16,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-17H7-EB45	02925760	17,0	16,8/16,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-18H7-EB30	10019488	18,0	17,8/17,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-18H7-EB45	02925761	18,0	17,8/17,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-19H7-EB30	10019489	19,0	18,8/18,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-19H7-EB45	02925762	19,0	18,8/18,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-20H7-EB30	10020603	20,0	19,8/19,9	6	10,0	8,0	PMX08-xx	□	□	■	□	□	■	□	□
PMX5-20H7-EB45	02925763	20,0	19,8/19,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-21H7-EB45	02925764	21,0	20,8/20,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX5-22H7-EB30	10020604	22,0	21,8/21,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□
PMX5-22H7-EB45	02925765	22,0	21,8/21,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-23H7-EB30	10019490	23,0	22,8/22,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□
PMX5-23H7-EB45	02925766	23,0	22,8/22,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-24H7-EB30	10019491	24,0	23,813/23,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□
PMX5-24H7-EB45	02925767	24,0	23,813/23,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-25H7-EB30	10019492	25,0	24,8/24,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□
PMX5-25H7-EB45	02925768	25,0	24,8/24,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-26H7-EB30	10019493	26,0	25,8/25,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□
PMX5-26H7-EB45	02925769	26,0	25,8/25,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-27H7-EB45	02925770	27,0	26,8/26,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX5-28H7-EB30	10019494	28,0	26,8/26,9	8	12,0	12,0	PMX12-xx	□	□	■	□	□	■	□	□


Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
			mm	mm					mm	mm	EB45	EB845	EB30	H15	CP20
PMX5-28H7-EB45	02925771	28,0	27,8/27,9	8	12,0	12,0	PMX12-xx	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-29H7-EB45	02925772	29,0	28,8/28,9	8	12,0	12,0	PMX12-xx	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-30H7-EB30	10019495	30,0	29,8/29,9	8	12,0	12,0	PMX12-xx	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-30H7-EB45	02925773	30,0	29,8/29,9	8	12,0	12,0	PMX12-xx	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-32H7-EB30	10019496	32,0	31,8/31,9	8	12,0	12,0	PMX12-xx	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-32H7-EB45	02925775	32,0	31,8/31,9	8	12,0	12,0	PMX12-xx	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

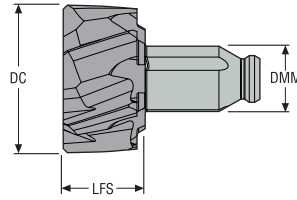
= Non stock standard.

Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: PMX5-16.515 P7-EB45 RM2020. PMX6-16.515 P7-EB45 RM2020.

Heads for through holes

∅ 8-32 mm / 0.315-1.260"



- For choice of geometry, please see page(s) 336-339
- For cutting data see page(s) 358-365

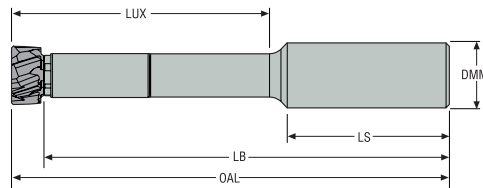
		DC	Drill size*		LFS	DMM	Body size	Geometries			Grades				
			mm	mm					mm	mm	EB45	EB845	EB30	H15	CP20
PMX6-8H7-EB45	03123161	8,0	7,8/7,9	6	6,0	4,5	PMX05-xx	■	□	□	□	□	■	-	-
PMX6-9H7-EB45	03123162	9,0	8,8/8,9	6	6,0	4,5	PMX05-xx	■	□	□	□	□	■	-	-
PMX6-10H7-EB45	02965863	10,0	9,8/9,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX6-11H7-EB45	02925776	11,0	10,8/10,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX6-12H7-EB45	02925777	12,0	11,8/11,908	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX6-13H7-EB45	02925778	13,0	12,8/12,9	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX6-14H7-EB45	02925779	14,0	13,8/13,891	6	7,0	6,0	PMX06-xx	■	□	□	□	□	■	□	□
PMX6-15H7-EB45	02925780	15,0	14,8/14,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-16H7-EB45	02925781	16,0	15,8/15,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-17H7-EB45	02925782	17,0	16,8/16,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-18H7-EB45	02925783	18,0	17,8/17,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-19H7-EB45	02925784	19,0	18,8/18,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-20H7-EB45	02925785	20,0	19,8/19,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-21H7-EB45	02925786	21,0	20,8/20,9	6	10,0	8,0	PMX08-xx	■	□	□	□	□	■	□	□
PMX6-22H7-EB45	02925030	22,0	21,8/21,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-23H7-EB45	02925031	23,0	22,8/22,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-24H7-EB45	02925032	24,0	23,813/23,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-25H7-EB45	02925033	25,0	24,8/24,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-26H7-EB45	02925034	26,0	25,8/25,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-27H7-EB45	02925035	27,0	26,8/26,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-28H7-EB45	02925036	28,0	27,8/27,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-29H7-EB45	02925037	29,0	28,8/28,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-30H7-EB45	02925038	30,0	29,8/29,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-31H7-EB45	02925039	31,0	30,8/30,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□
PMX6-32H7-EB45	02925040	32,0	31,8/31,9	8	12,0	12,0	PMX12-xx	■	□	□	□	□	■	□	□

*For further information on which drill to use and how to use it see page(s) 8

■ Stock standard. □ Non stock standard.

Shanks for through and blind holes

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362



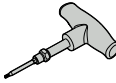
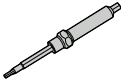
Designation	Item number	Tool holder material	DC	OAL	LB	LS	LUX	DMM
			mm	mm	mm	mm	mm	mm
PMX05-02800-10N1	03123012	Steel	7,75 - 9,9	69,0	63,0	40,0	28,0	10,0
PMX05-04100-10N1	02929923	Steel	7,75 - 9,9	84,0	78,0	40,0	41,0	10,0
PMX05-10000-10N1	03123013	Steel	7,75 - 9,9	143,0	137,0	40,0	100,0	10,0
PMX06-03700-12N1	02925828	Steel	9,901 - 14,499	84,0	77,0	45,0	37,0	12,0
PMX06-05700-12N1	02925829	Steel	9,901 - 14,499	104,0	97,0	45,0	57,0	12,0
PMX06-12000-12N1	02925830	Steel	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX06HM-12000-12N1	02925831	Carbide	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX08-04600-20N1	02925832	Steel	14,5 - 21,499	99,0	89,0	50,0	46,0	20,0
PMX08-08200-20N1	02925833	Steel	14,5 - 21,499	135,0	125,0	50,0	82,0	20,0
PMX08-14500-20N1	02925834	Steel	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX08HM-14500-20N1	02925835	Carbide	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX12-06800-25N1	02925836	Steel	21,5 - 32,499	127,0	115,0	56,0	68,0	25,0
PMX12-10400-25N1	02925837	Steel	21,5 - 32,499	163,0	151,0	56,0	104,0	25,0
PMX12-17000-25N1	02925838	Steel	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX12HM-17000-25N1	02925839	Carbide	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX16-06300-32N1	02925840	Steel	32,5 - 60,5	124,0	110,0	60,0	63,0	32,0
PMX16-12700-32N1	02925841	Steel	32,5 - 60,5	188,0	174,0	60,0	127,0	32,0
PMX16-17000-32N1	02925842	Steel	32,5 - 60,5	231,0	217,0	60,0	170,0	32,0
PMX16HM-17000-32N1	02925843	Carbide	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0

Spare Parts, included in delivery

For shank	For ∅ (mm)	Clamp key	Clamp kit	Coolant kit	Plug screw, blind bore	Plug screw, through bore
PMX05	7,75-9,900	1.5SMS795	PMX05-CLKI	RT05-KI	SB05	ST05
PMX06	9,901-14,499	2SMS795	PMX06-CLKI	RT06-KI	SB06	ST06
PMX08	14,5-21,499	2.5SMS795	PMX08-CLKI	RT08-KI	SB08	ST08
PMX12	21,5-32,499	4SMS795	PMX12-CLKI	RT12-KI	SB12	ST12
PMX16	32,5-60	5SMS795	PMX16-CLKI	-	SB16	ST16

* Spare parts for PMX16 bodies only. For PMX16, plug screws are also used for clamping.

Accessories

For Ø (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
										
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Introduction

Drilling

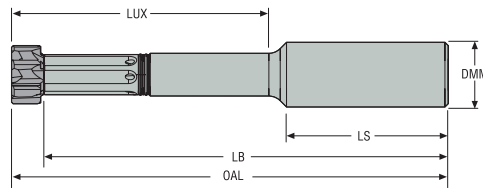
Reaming

Boring

Annex

Shanks for blind holes

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362



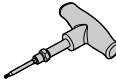
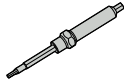
Designation	Item number	Tool holder material	DC	OAL	LB	LS	LUX	DMM
			mm	mm	mm	mm	mm	mm
PMX05B-02800-10N1	03144322	Steel	7,75 - 9,9	69,0	63,0	40,0	28,0	10,0
PMX05B-04100-10N1	03144323	Steel	7,75 - 9,9	84,0	78,0	40,0	41,0	10,0
PMX05B-10000-10N1	03144324	Steel	7,75 - 9,9	143,0	137,0	40,0	100,0	10,0
PMX06B-03700-12N1	03075433	Steel	9,901 - 14,499	84,0	77,0	45,0	37,0	12,0
PMX06B-05700-12N1	03075434	Steel	9,901 - 14,499	104,0	97,0	45,0	57,0	12,0
PMX06B-12000-12N1	03075435	Steel	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX06BHM-12000-12N1	03075436	Carbide	9,901 - 14,499	167,0	160,0	45,0	120,0	12,0
PMX08B-04600-20N1	03075437	Steel	14,5 - 21,499	99,0	89,0	50,0	46,0	20,0
PMX08B-08200-20N1	03075438	Steel	14,5 - 21,499	135,0	125,0	50,0	82,0	20,0
PMX08B-14500-20N1	03075439	Steel	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX08BHM-14500-20N1	03075440	Carbide	14,5 - 21,499	198,0	188,0	50,0	145,0	20,0
PMX12B-06800-25N1	03075441	Steel	21,5 - 32,499	127,0	115,0	56,0	68,0	25,0
PMX12B-10400-25N1	03075442	Steel	21,5 - 32,499	163,0	151,0	56,0	104,0	25,0
PMX12B-17000-25N1	03075443	Steel	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX12BHM-17000-25N1	03075444	Carbide	21,5 - 32,499	229,0	217,0	56,0	170,0	25,0
PMX16B-06300-32N1	03075445	Steel	32,5 - 60,5	124,0	110,0	61,0	63,0	32,0
PMX16B-12700-32N1	03075446	Steel	32,5 - 60,5	188,0	174,0	61,0	127,0	32,0
PMX16B-17000-32N1	03075447	Steel	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0
PMX16BHM-17000-32N1	03075448	Carbide	32,5 - 60,5	231,0	217,0	61,0	170,0	32,0

Spare Parts, included in delivery

For shank	For ∅ (mm)	Clamp key	Clamp kit	Plug screw, blind bore
PMX05B	7,75-9,900	1.5SMS795	PMX05-CLKI	SB05
PMX06B	9,901-14,499	2SMS795	PMX06-CLKI	SB06
PMX08B	14,500-21,499	2.5SMS795	PMX08-CLKI	SB08
PMX12B	21,500-32,499	4SMS795	PMX12-CLKI	SB12
PMX16B	32,500-60,000	5SMS795	PMX16-CLKI	SB16

* Spare parts for PMX16 bodies only. For PMX16, plug screws are also used for clamping.

Accessories

For Ø (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
										
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Introduction

Drilling

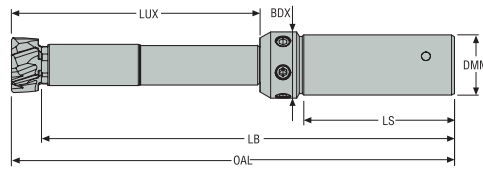
Reaming

Boring

Annex

Adjustable shanks for through holes

Ø 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05T-AD-04100-16N1	03271918	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06T-AD-05700-16N1	03002833	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08T-AD-08200-20N1	03002835	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12T-AD-10400-25N1	03002837	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16T-AD-12700-32N1	03002839	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare Parts, included in delivery

For shank	For Ø (mm)	Clamp key	Coolant ring	Setting key	Setting Master	Setting screw
PMX05T	7,750-9,900	1.5SMS795	RT05-KI	2SMS795	PMX05-MSTR	HCM4X4X0.5/ISO4026
PMX06T	9,901-14,499	2SMS795	RT06-KI	-	PMX06-MSTR	HCM4X4X0.5/ISO4026
PMX08T	14,50-21,499	2.5SMS795	RT08-KI	-	PMX08-MSTR	HCM5X5X0.5/ISO4026
PMX12T	21,50-32,499	4SMS795	RT12-KI	3SMS795	PMX12-MSTR	HCM6X6X0.75/ISO4026
PMX16T	32,50-60,000	5SMS795	-	3SMS795	-	HCM6X6X0.75/ISO4026

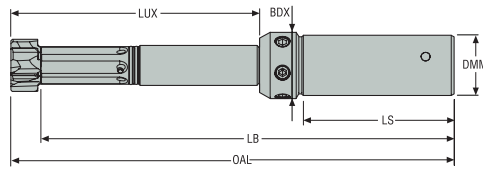
Accessories

For Ø (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Adjustable shanks for blind holes

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05B-AD-04100-16N1	03271919	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06B-AD-05700-16N1	03002834	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08B-AD-08200-20N1	03002836	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12B-AD-10400-25N1	03002838	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16B-AD-12700-32N1	03002840	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare Parts, included in delivery

For shank	For ∅ (mm)	Clamp key	Setting key	Setting Master	Setting screw
PMX05B	7,750-9,900	1.5SMS795	2SMS795	PMX05-MSTR	HCM4X4X0.5/ISO4026
PMX06B	9,901-14,499	2SMS795	-	PMX06-MSTR	HCM4X4X0.5/ISO4026
PMX08B	14,50-21,499	2.5SMS795	-	PMX08-MSTR	HCM5X5X0.5/ISO4026
PMX12B	21,50-32,499	4SMS795	3SMS795	PMX12-MSTR	HCM6X6X0.75/ISO4026
PMX16B	32,50-60,000	5SMS795	3SMS795	-	HCM6X6X0.75/ISO4026

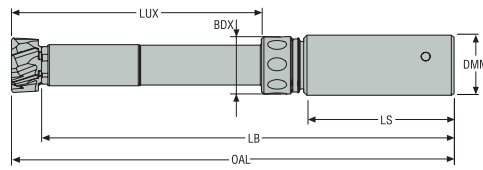
Accessories

For ∅ (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Floating shanks for through holes


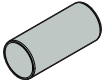
Ø 7,75-60,500 mm / 0.305-2.381"





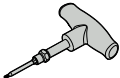
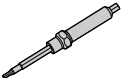
- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05T-FL-04100-16N1	03197751	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06T-FL-05700-16N1	03002825	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08T-FL-08200-20N1	03002827	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12T-FL-10400-25N1	03002829	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16T-FL-12700-32N1	03002831	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare Parts, included in delivery

For shank	For Ø (mm)	Clamp key	Coolant ring
			
PMX05T	7,750-9,900	1.5SMS795	RT05-KI
PMX06T	9,901-14,499	2SMS795	RT06-KI
PMX08T	14,50-21,499	2.5SMS795	RT08-KI
PMX12T	21,50-32,499	4SMS795	RT12-KI
PMX16T	32,50-60,000	5SMS795	-

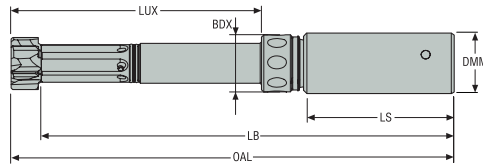
Accessories

For Ø (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
										
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Floating shanks for blind holes

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	Item number	DC	OAL	LB	LS	LUX	DMM
		mm	mm	mm	mm	mm	mm
PMX05B-FL-04100-16N1	03271916	7,75 - 9,9	102,0	96,0	48,0	41,0	16,0
PMX06B-FL-05700-16N1	03002826	9,901 - 14,499	117,0	110,0	48,0	57,0	16,0
PMX08B-FL-08200-20N1	03002828	14,5 - 21,499	147,0	137,0	50,0	82,0	20,0
PMX12B-FL-10400-25N1	03002830	21,5 - 32,499	179,0	167,0	56,0	104,0	25,0
PMX16B-FL-12700-32N1	03002832	32,5 - 60,5	214,0	200,0	60,0	127,0	32,0

Spare Parts, included in delivery

For shank	For ∅ (mm)	Clamp key
PMX05B	7,750-9,900	1.5SMS795
PMX06B	9,901-14,499	2SMS795
PMX08B	14,50-21,499	2.5SMS795
PMX12B	21,50-32,499	4SMS795
PMX16B	32,50-60,500	5SMS795

Accessories

For ∅ (mm)	Shank Size	Item number	Torque key	Item number	Replacement blade	Item number	Torque key	Item number	Replacement blade	Torque value
7,750-9,900	PMX05	03178196	H00-1505-24	03178237	H00-1.5-27	-	-	-	-	0,5 Nm
9,901-14,499	PMX06	03178197	H00-2009-33	03178238	H00-2.0-33	-	-	-	-	0,9 Nm
14,500-21,499	PMX08	03178199	H00-2512-40	03178240	H00-2.5-40	-	-	-	-	1,2 Nm
21,500-32,499	PMX12	03178201	H00-4020-60	03178242	H00-4.0-60	-	-	-	-	2,0 Nm
32,500-60,500	PMX16	-	-	-	-	03271887	H00T-5050	02506761	H00T-5,0	5,0 Nm

Note: Repair clamp kit PMxx-CLKI are not suitable for PMX FL & AD type

Introduction

Drilling

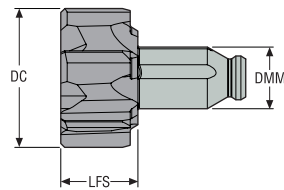
Reaming

Boring

Annex

Heads for through and blind holes, Custom design

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	DCN	DCX	LFS	DMM	Body size	Geometries	Grades												
	mm Inch	mm Inch	mm Inch	mm Inch				H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090	
PMX5-7.75-XX-XXXX	7,75 0.305	9,9 0.390	6,0 0.236	4,5 0.177	6	PMX05-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-10.0-XX-XXXX	9,901 0.390	14,499 0.571	7,0 0.276	6,0 0.236	6	PMX06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-14.5-XX-XXXX	14,5 0.571	21,499 0.846	10,0 0.394	8,0 0.315	6	PMX08-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-21.5-XX-XXXX	21,5 0.846	32,499 1.279	12,0 0.472	12,0 0.472	8	PMX12-XX	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX5-32.5-XX-XXXX	32,5 1.280	60,5 2.382	14,0 0.551	16,0 0.630	10	PMX16-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

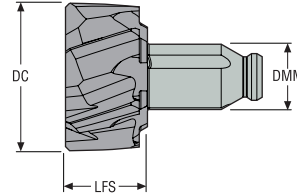
= Non stock standard.

Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: PMX5-16.515 P7-EB45 RM2020. PMX6-16.515 P7-EB45 RM2020.

Heads for through holes, Custom design

∅ 7,75-60,500 mm / 0.305-2.381"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

Designation	DCN	DCX	LFS	DMM	Body size	Geometries	Grades												
	mm Inch	mm Inch	mm Inch	mm Inch				H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090	
PMX6-7.75-XX-XXXX	7,75 0.305	9,9 0.390	6,0 0.236	4,5 0.177	6	PMX05-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX6-10.0-XX-XXXX	9,901 0.390	14,499 0.571	7,0 0.276	6,0 0.236	6	PMX06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX6-14.5-XX-XXXX	14,5 0.571	21,499 0.846	10,0 0.394	8,0 0.315	6	PMX08-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX6-21.5-XX-XXXX	21,5 0.846	32,499 1.279	12,0 0.472	12,0 0.472	8	PMX12-XX	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX6-32.5-XX-XXXX	32,5 1.280	60,5 2.382	14,0 0.551	16,0 0.630	10	PMX16-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

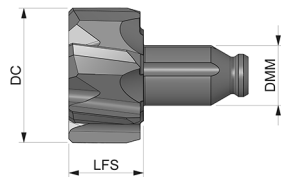
= Non stock standard.

Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: PMX6-16.515 P7-EB45 RM2020.

Heads for blind holes, Custom design

∅ 7,75-60,500 mm / 0.305-2.381"



- For cutting data see page(s) 355-362
- For choice of lead geometry EB45, EB845 or EB30 see page(s) 333

Designation	DCN	DCX	LFS	DMM	Body size	Geometries	Grades												
							H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090		
PMX4-7.75-XX-XXXX	7,75 0.305	9,9 0.390	6,0 0.236	4,5 0.177	6	PMX05-xx	EB45 EB84 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX4-10.0-XX-XXXX	9,901 0.390	14,499 0.571	7,0 0.276	6,0 0.236	6	PMX06-xx	EB45 EB84 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX4-14.5-XX-XXXX	14,5 0.571	21,499 0.846	10,0 0.394	8,0 0.315	6	PMX08-xx	EB45 EB84 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX4-21.5-XX-XXXX	21,5 0.846	32,499 1.279	12,0 0.472	12,0 0.472	8	PMX12-xx	EB45 EB84 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX4-32.5-XX-XXXX	32,5 1.280	60,5 2.382	14,0 0.551	16,0 0.630	10	PMX16-xx	EB45 EB84 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

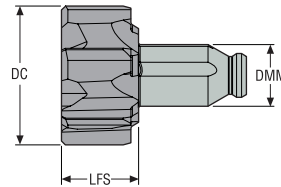
= Non stock standard.

Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: PMX4-16.515 P7-EB45 RM2020.

Expandable heads for through and blind holes

∅ 10,00-32,500 mm / 0.393-1.279"



- For choice of geometry, please see page(s) 333-336
- For cutting data see page(s) 355-362

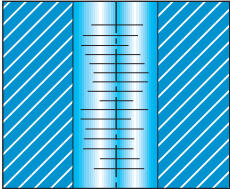
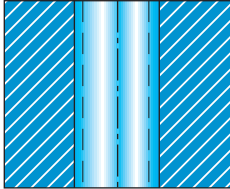
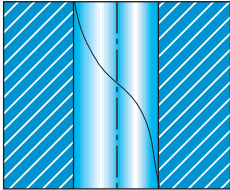
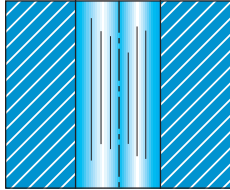
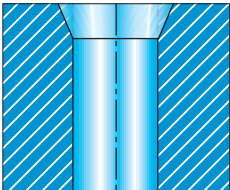
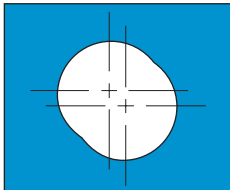
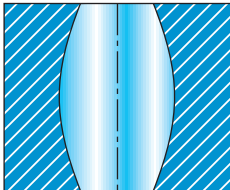
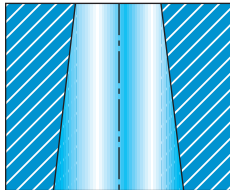
Designation	DCN mm Inch	DCX mm Inch	LFS mm Inch	DMM mm Inch		Body size	Geometries	Grades												
								H15	CP20	RX2000	RK2050	RK1550	CF	RX1500	RN2010	RM2020	RM2090	RS2090		
PMX8-10.0-XX-XXXX	10,0 0.394	14,499 0.571	7,0 0.276	6,0 0.236	6	PMX06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX8-14.5-XX-XXXX	14,5 0.571	21,499 0.846	10,0 0.394	8,0 0.315	6	PMX08-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PMX8-21.5-XX-XXXX	21,5 0.846	32,499 1.279	12,0 0.472	12,0 0.472	8	PMX12-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

= Non stock standard.

Note: When ordering Precimaster Plus reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: PMX8-16.515 P7-EB45 RM2020.

Troubleshooting

<p>Poor surface finish</p> <ul style="list-style-type: none"> • Check material allowance • Improve coolant conditions (outlet type, pressure, quality) • Reduce feed rate 	<p>Too large diameter</p> <ul style="list-style-type: none"> • Improve centering (part/tool) 
<p>Retraction marks</p> <ul style="list-style-type: none"> • Improve coolant conditions (outlet type, pressure, quality) • Improve centering (part/tool) • Reduce feed-out speed 	<p>Facets</p> <ul style="list-style-type: none"> • Improve centering (part/tool) • Check material allowance 
<p>Tapered entry</p> <ul style="list-style-type: none"> • Reduce feed rate • Improve centering (part/tool) • Reduce radial run-out 	<p>Off center/Ovality</p> <ul style="list-style-type: none"> • Improve clamping (workpiece deformation) • Check material allowance • Improve centering (part/tool) 
<p>Deformed hole</p> <ul style="list-style-type: none"> • Improve clamping (workpiece deformation) 	<p>Tapered hole</p> <ul style="list-style-type: none"> • Improve centering (part/tool) 

Regrinding instructions

Specifications

Diamond grinding wheel

Grain size:

D6 – For first clearance angle (β_1 - β_3)

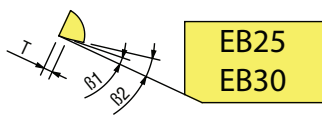
D64 – For second clearance angle (β_2)

Important:

Regrinding reduces reamer diameter

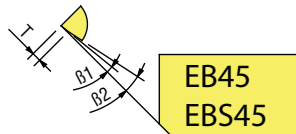
Recoating may produce oversized diameter

Max run-out on lead chamfers 10 μm (394 μin)



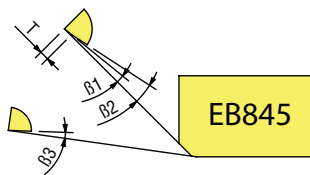
EB25

EB30

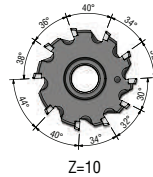


EB45

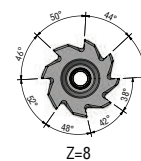
EBS45



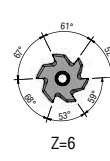
EB845



Z=10



Z=8



Z=6

\varnothing Precimaster Plus mm (inch)	β_1	β_2	β_3	T mm (inch)
7,75–9,999 (0.3151–0.3937)	8°	18°	8°	0,20 (0.008)
10,00–14,499 (0.3937–0.5708)	8°	18°	8°	0,20 (0.008)
14,500–21,499 (0.5709–0.8464)	8°	18°	8°	0,20 (0.008)
21,500–32,499 (0.8465–1.2795)	8°	18°	8°	0,25 (0.010)
32,500–60,499 (1.2795–2.3819)	8°	15°	8°	0,30 (0.012)

Cutting data – PM Plus... -EB45 metric

SMG		a _p (∅)		f			v _c										
		z=6	z=8 z=10	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550	RN2010	RM2020	RM2090	RS2090
H3	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H5	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H7	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H8	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H11	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H12	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H21	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
H31	PMXxx .6 .8 -EB45	0,08 -0,15	0,10 -0,15	0,20 -0,40	0,30 -0,60	0,40 -0,75	-	-	10 (8-15)	-	-	-	-	-	-	-	-
PM1	PMXxx .6 .8 -EB45	0,10- 0,20	0,10 -0,30	0,30 -0,90	0,40 -1,20	0,50 -1,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-	-	-	-
PM2	PMXxx .6 .8 -EB45	0,10- 0,20	0,10 -0,30	0,30 -0,90	0,40 -1,20	0,50 -1,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-	-	-	-
PM3	PMXxx .6 .8 -EB45	0,10- 0,20	0,10 -0,30	0,30 -0,90	0,40 -1,20	0,50 -1,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-	-	-	-
TS1	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TS2	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TS3	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TS4	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TP1	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TP2	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TP3	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
TP4	PMXxx .6 .8 -EB45	0,10 -0,15	0,10 -0,20	0,30 -0,90	0,40 -1,20	0,50 -1,50	20 (15-25)	-	40 (20-60)	-	-	-	-	-	-	-	-
GR1	PMXxx .6 .8 -EB45	0,10 -0,30	0,10 -0,40	0,30 -0,90	0,40 -1,20	0,50 -1,50	40 (80-20)	-	60 (30-120)	-	-	-	-	-	-	-	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

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Cutting data – PM Plus...-EB45 inch

SMG		a _p (°)		f			v _c										
		z=6	z=8 z=10	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550	RN2010	RM2020	RM2090	RS2090
H5	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H7	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H8	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H11	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H12	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H21	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
H31	PMXxx .6..8 -EB45	.003 -.006	.004 -.006	.008 -.016	.012 -.024	.016 -.030	-	-	35 (25-50)	-	-	-	-	-	-	-	-
PM1	PMXxx .6..8 -EB45	.004 -.008	.004 -.012	.012 -.035	.016 -.047	.020 -.059	-	165 (100-260)	230 (130-330)	-	-	-	-	-	-	-	-
PM2	PMXxx .6..8 -EB45	.004 -.008	.004 -.012	.012 -.035	.016 -.047	.020 -.059	-	165 (100-260)	230 (130-330)	-	-	-	-	-	-	-	-
PM3	PMXxx .6..8 -EB45	.004 -.008	.004 -.012	.012 -.035	.016 -.047	.020 -.059	-	165 (100-260)	230 (130-330)	-	-	-	-	-	-	-	-
TS1	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TS2	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TS3	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TS4	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TP1	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TP2	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TP3	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
TP4	PMXxx .6..8 -EB45	.004 -.006	.004 -.008	.012 -.035	.016 -.047	.020 -.059	65 (50-80)	-	130 (65-195)	-	-	-	-	-	-	-	-
GR1	PMXxx .6..8 -EB45	.004 -.012	.004 -.016	.012 -.035	.016 -.047	.020 -.059	130 (260-65)	-	195 (100-395)	-	-	-	-	-	-	-	-

SMG = Seco material group
a_p = inch
f = in/rev
v_c = sf/min
All cutting data are start values

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Cutting data – Plus... -EB25/EB30 metric

SMG		a_p (°)		f			v_c						
		z=6	z=8 z=10	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	–	180 (90-200)	220 (120-300)	–
P2	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	–	180 (90-200)	220 (120-300)	–
P3	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	25 (15-30)	60 (30-100)	80 (30-150)	–	180 (90-200)	220 (120-300)	–
P4	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	–	120 (80-150)	180 (90-200)	–
P5	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	–	120 (80-150)	180 (90-200)	–
P6	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	–	120 (80-150)	180 (90-200)	–
P7	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-1,80	1,00-2,40	1,20-3,00	20 (10-25)	50 (30-80)	60 (30-120)	–	120 (80-150)	180 (90-200)	–
M1	PMXxx ..6 ..8 -EB25/EB30	0,08-0,15	0,10-0,20	0,80-1,20	1,00-2,00	1,20-2,50	–	25 (15-40)	35 (20-70)	–	–	–	–
K1	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	–	220 (120-300)	245 (135-335)
K2	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	–	25 (20-40)	40 (30-70)	45 (35-80)	–	80 (50-100)	90 (55-110)
K3	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	–	220 (120-300)	245 (135-335)
K4	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K5	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-2,20	1,00-2,80	1,20-3,50	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	100 (70-150)	150 (80-200)	170 (90-225)
K6	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	–	60 (40-100)	80 (30-150)	90 (35-170)	–	220 (120-300)	245 (135-335)
K7	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,25	0,80-1,80	1,00-2,40	1,20-3,00	–	60 (40-100)	80 (30-150)	90 (35-170)	–	220 (120-300)	245 (135-335)
N1	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	–	–	–	–	–	–
N2	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	–	–	–	–	–	–
N3	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	–	–	–	–	–	–
N11	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,80-2,20	1,00-2,80	1,20-3,50	50 (30-100)	–	–	–	–	–	–
PM1	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	–	50 (30-80)	70 (40-100)	–	–	–	–
PM2	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	–	50 (30-80)	70 (40-100)	–	–	–	–
PM3	PMXxx ..6 ..8 -EB25/EB30	0,10-0,20	0,10-0,30	0,50-1,80	0,80-2,00	1,00-2,50	–	50 (30-80)	70 (40-100)	–	–	–	–

SMG = Seco material group

a_p = mm

f = mm/rev

v_c = m/min

All cutting data are start values

Cutting data – PM Plus... -EB25/EB30 inch

SMG		a _p (∅)		f			v _c						
		z=6	z=8 z=10	z=6	z=8	z=10	H15	CP20	RX2000	RK2050	CF	RX1500	RK1550
P1	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	80 (50-100)	195 (100-330)	260 (100-490)	-	590 (295-655)	720 (395-985)	-
P2	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	80 (50-100)	195 (100-330)	260 (100-490)	-	590 (295-655)	720 (395-985)	-
P3	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	80 (50-100)	195 (100-330)	260 (100-490)	-	590 (295-655)	720 (395-985)	-
P4	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	65 (35-80)	165 (100-260)	195 (100-395)	-	395 (260-490)	590 (295-655)	-
P5	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	65 (35-80)	165 (100-260)	195 (100-395)	-	395 (260-490)	590 (295-655)	-
P6	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	65 (35-80)	165 (100-260)	195 (100-395)	-	395 (260-490)	590 (295-655)	-
P7	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.071	.039-.094	.047-.118	65 (35-80)	165 (100-260)	195 (100-395)	-	395 (260-490)	590 (295-655)	-
M1	PMXxx..6..8-EB25/EB30	.003-.006	.004-.008	.031-.047	.039-.079	.039-.098	-	80 (50-130)	115 (65-230)	-	-	-	-
K1	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.087	.039-.110	.047-.138	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	720 (395-985)	805 (440-1105)
K2	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.071	.039-.094	.047-.118	-	80 (65-130)	130 (100-230)	145 (110-260)	-	260 (165-330)	290 (185-370)
K3	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.087	.039-.110	.047-.138	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	720 (395-985)	805 (440-1105)
K4	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.087	.039-.110	.047-.138	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K5	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.087	.039-.110	.047-.138	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	330 (230-490)	490 (260-655)	550 (290-735)
K6	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.071	.039-.094	.047-.118	-	195 (130-330)	260 (100-490)	290 (110-550)	-	720 (395-985)	805 (440-1105)
K7	PMXxx..6..8-EB25/EB30	.004-.008	.004-.010	.031-.071	.039-.094	.047-.118	-	195 (130-330)	260 (100-490)	290 (110-550)	-	720 (395-985)	805 (440-1105)
N1	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.087	.039-.110	.047-.138	165 (100-330)	-	-	-	-	-	-
N2	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.087	.039-.110	.047-.138	165 (100-330)	-	-	-	-	-	-
N3	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.087	.039-.110	.047-.138	165 (100-330)	-	-	-	-	-	-
N11	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.031-.087	.039-.110	.047-.138	165 (100-330)	-	-	-	-	-	-
PM1	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.020-.071	.031-.079	.039-.098	-	165 (100-260)	230 (130-330)	-	-	-	-
PM2	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.020-.071	.031-.079	.039-.098	-	165 (100-260)	230 (130-330)	-	-	-	-
PM3	PMXxx..6..8-EB25/EB30	.004-.008	.004-.012	.020-.071	.031-.079	.039-.098	-	165 (100-260)	230 (130-330)	-	-	-	-

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

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Nanofix™

Nanofix™ Solid Carbide Reamers are designed for small diameters from 2.97 to 12.05 mm (.117" - .474").

- Internal coolant with simple adjustable system so the outlet style can be set for either through or blind bore, depending on application
- Enables tolerances held between 10 and 15 μ m (.0004-.0006')
- Eight available geometries: EB45, EBS45, EB845, EB25, EB30, EBS30, EB60 and EB75

Range overview

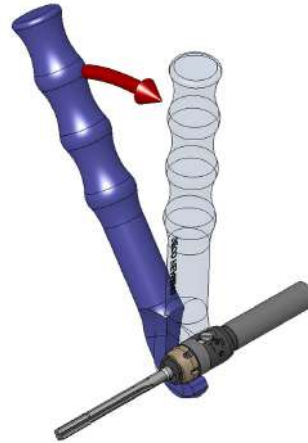
	∅ Range	Reaming depth	Drill ∅ tolerance	Intermediate diameter	Surface finish
<p>Nanofix™</p> 	<p>2,97-12,05 mm (0.1169-0.4744")</p>	<p>5-12 x D</p>	<p>IT 7</p>	<p>Yes, available through Custom design</p>	<p>R_a 0,8-1,2 µm (R_a 31-47 µin)</p>

Nanofix™ is a Seco solid carbide reamer programme dedicated for small ∅ from 2,97 to 12,05 mm (0.1169 to 0.4744"). Design includes a unique patented Quick-fit clamping system that will allow it to hold the entire diameter range with only 2 tool holders . Tool holders have internal coolant with a simple adjustable system so the outlet style can be set for either through or blind bore, depending on application.

Quick-fit

Quick-fit

Quick and easy tool change.
Accurate repositioning in run-out and length.



2 Quick-fit sizes to cover the complete diameter range



Quick-fit Ø 10 mm for
Ø 6,051-12,050 mm
(Ø 0.2382-0.4744")



Quick-fit Ø 6 mm for
Ø 2,97 -6,050 mm
(Ø 0.1169-0.2382")

Same tool for blind or through hole application



through

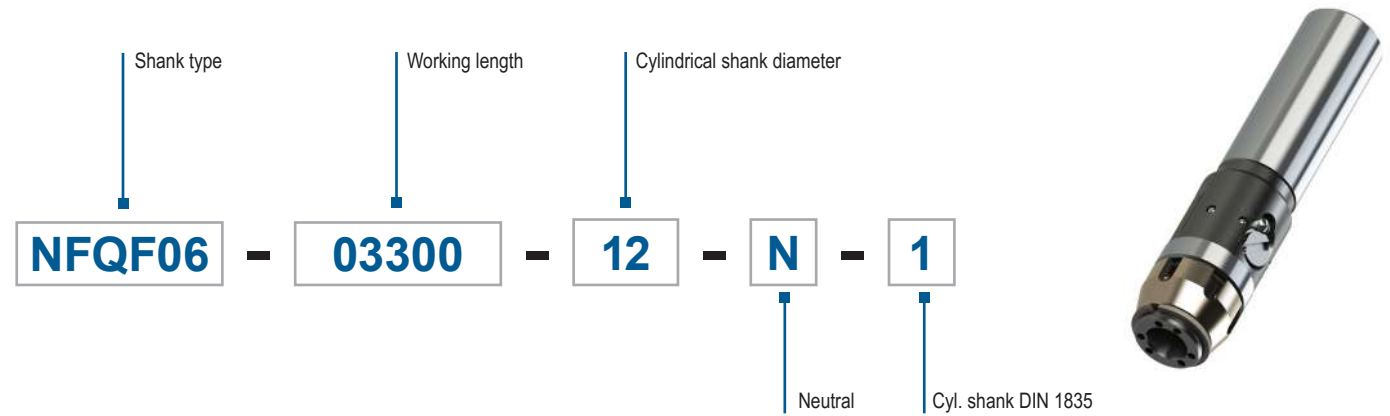
Turn coolant style adjusting screw by 1/4 of a revolution to change coolant outlet from through to blind and vice-versa.



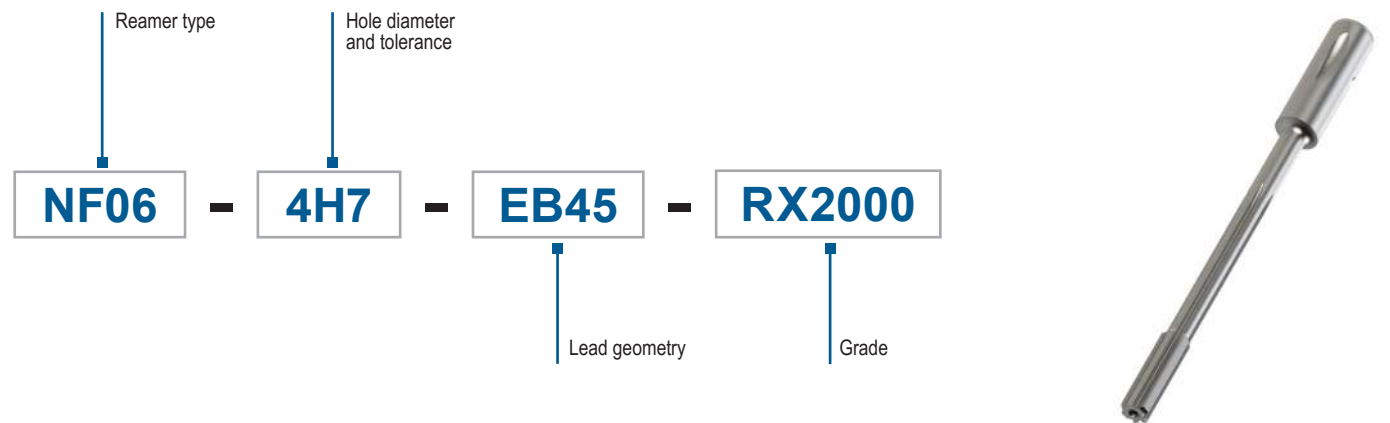
blind

Code keys

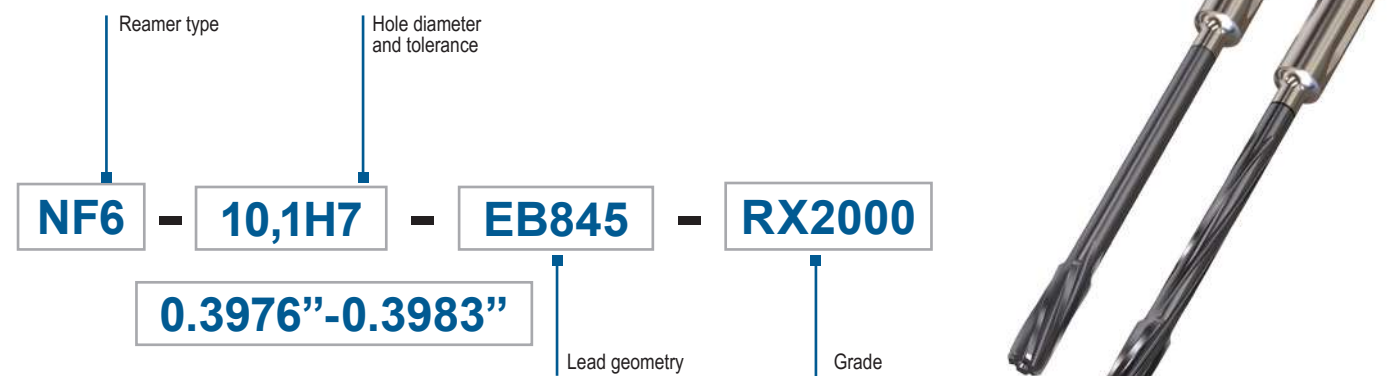
Shanks



Reamers



Intermediate diameter reamers



NF06/NF10/NS06/NS10: straight flutes design, suitable for through and blind holes.
 NF4/NS4: RH helical flutes design, suitable for blind bores only.
 NF6/NS6: LH helical flutes design, suitable for through bores only.
 Left hand flute design improves the action of pushing the chips forward.
 Right hand flute design improves the action of evacuating the chips backward.
 See Nanofix flutes geometries choice on page(s) 369.

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Run-out

Rotating tool

Max. run-out recommended: 5 μm (197 μin).
Precision holder is recommended : Hydraulic chuck, D-type collet chuck or 5672 collet chuck.

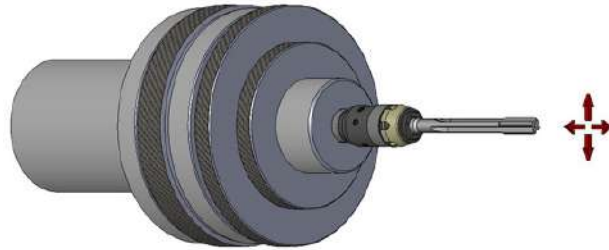
Note: due to coolant outlet adjustment sealing o-ring, the use of a Shrinkfit holder is not recommended.



Static tool

Use a Seco floating holder, see page 481-485.

Floating holders allow reamer self-centering in pre-bore.



Coolant requirements

To reach maximum tool life and hole quality, the following coolant requirements should be observed.

Coolant through the tool is recommended.
External coolant supply can be used with cutting condition reduced by 75%.

Soluble oil with 40% minimum mineral oil.
Neat oil recommended for stainless steel.

Concentration minimum 6–8%.
Filtration 30–50 μm (1181-1969 μin).
Volume min 0,5 l/min/mm (0.13 gal/min/inch) in tool diameter (Ex: Reamer \varnothing 10, min volume is 5 l/min (1.3 gal/min)).

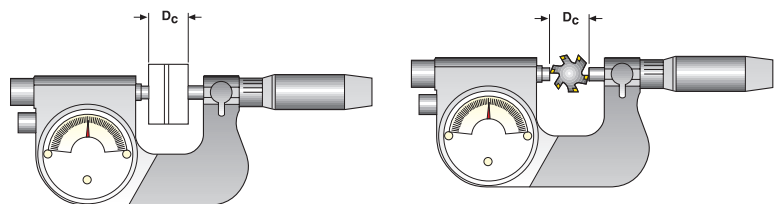


Diameter measurement

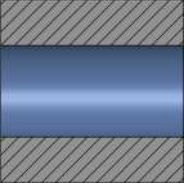

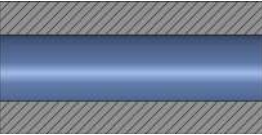

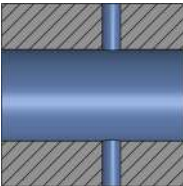
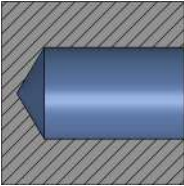

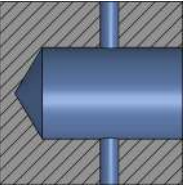
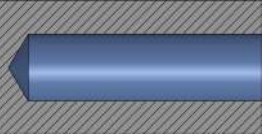

Gauge clock micrometer prior to \varnothing measurement.

Important!
Nanofix reamers have differential pitch on teeth.
When measuring the diameter, make sure that you have 2 teeth 180° opposite.

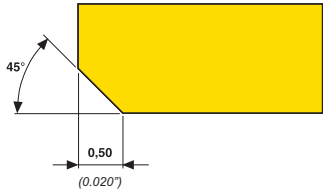
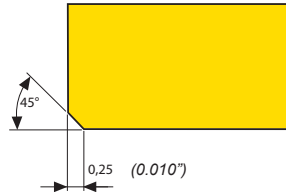
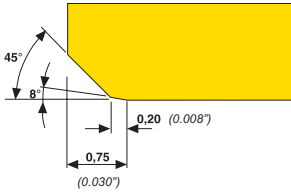
Use clock micrometer and measuring blocks for gauging.



Flute geometry choice

Workpiece	Diameter to ream \varnothing 2,97-12,50 mm (0.1169-0.4744")	
<p>Short through hole < 3 x D</p> 	<p>Straight flutes</p> <p>NF06 NS06 NF10 NS10</p>	
<p>Long through hole > 3 x D</p> 	<p>LH helical flutes</p> <p>NF6 NS6</p>	
<p>Crossing hole</p> 		
<p>Blind hole</p> 	<p>Straight flutes</p> <p>NF06 NS06 NF10 NS10</p>	
<p>Blind and crossing hole</p> 		
<p>Blind hole > 3x D</p> 	<p>RH helical flutes</p> <p>NF4 NS4</p>	

Geometry choice – Applications

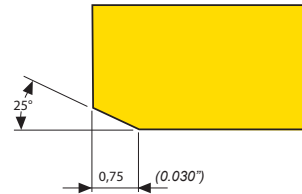
Lead geometry - EB45	
<p>Chip control ++ Surface finish+++ R_a 0,8 - 1,2 μm (Surface finish+++ R_a 31 - 47 μin) Versatile</p>	
Lead geometry - EBS45	
<p>Chip control +++ Surface Finish + R_a 0,8- 1,2 (Surface Finish + R_a 31- 47 μin) Short EB45</p>	
Lead geometry - EB845	
<p>Chip control ++ Surface finish+++ R_a 0,2 - 0,8 μm (Surface finish+++ R_a 8 - 31 μin)</p>	

Geometry choice – Applications

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Lead geometry - EB25

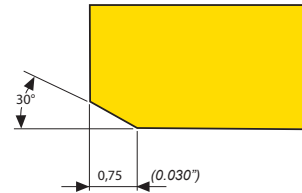
Feed performance +++
Surface finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +



Drilling

Lead geometry - EB30

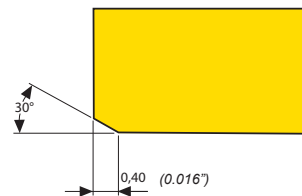
Feed performance +++
Surface Finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +



Reaming

Lead geometry - EBS30

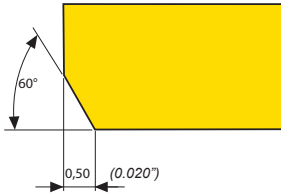
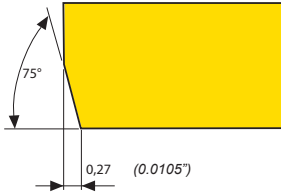
Feed performance +++
Surface finish ++ R_a 0,4 - 0,8 μm
(Surface Finish ++ R_a 16 - 31 μin)
Chip control +
Short EB30



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Geometry choice – Applications

Lead geometry - EB60	
<p>Feed performance + Surface Finish ++ R_a 0,8 - 1,2 μm (Surface Finish ++ R_a 31 - 47 μin) Chip control ++</p>	
Lead geometry - EB75	
<p>Feed performance + Surface Finish ++ R_a 0,8 - 1,2 μm (Surface Finish ++ R_a 31-47 μin) Chip control ++</p>	

Grades		
	RX2000	Coated High performance coated grade suitable for all materials.
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.
	RN2010	Uncoated A sub-micrograin uncoated grade with optimized geometries for N-materials (non ferrous).
	RM2020	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for M materials.
	RM2090	Coated A wear resistant coated grade with specific geometries for M materials. Optimization in M materials.
	RK2050	Coated A tough coated grade suitable for fine reaming operation with optimized geometries for K materials.
	RS2090	Coated A wear resistant coated grade with specific geometries for S materials. Optimization in S materials.

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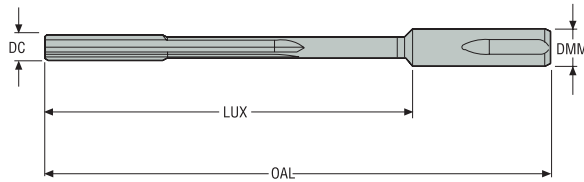
Reaming

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Reamer for blind and through holes

Ø 2,97-12,05 mm / 0.116-0.474"



Designation	Item number	DC	Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
			mm Inch	mm Inch	mm Inch					EB45	EB845	EB30	RX2000	RK2050	H15
NF06-2.98H7-EB45	02728853	2,98 0.1173	2,98 0.1173	2,99 0.1177	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-2.99H7-EB45	02728854	2,99 0.1177	2,99 0.1177	3,0 0.1181	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3H7-EB45	02728858	3,0 0.1181	3,0 0.1181	3,01 0.1185	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.01H7-EB45	02728860	3,01 0.1185	3,01 0.1185	3,022 0.1190	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.02H7-EB45	02728862	3,02 0.1189	3,02 0.1189	3,032 0.1194	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.03H7-EB45	02728864	3,03 0.1193	3,03 0.1193	3,042 0.1198	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.04H7-EB45	02728865	3,04 0.1197	3,04 0.1197	3,052 0.1202	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.05H7-EB45	02728866	3,05 0.1201	3,05 0.1201	3,062 0.1206	40,0 1.5750	6,0 0.2360	60,0 2.3620	4	■	□	□	■	□	□	
NF06-3.167H7-EB45	02761485	3,167 0.1247	3,167 0.1247	3,179 0.1252	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.175H7-EB45	02761489	3,175 0.1250	3,175 0.1250	3,187 0.1255	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.5H7-EB45	02728868	3,5 0.1378	3,5 0.1378	3,512 0.1383	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.51H7-EB45	02728869	3,51 0.1382	3,51 0.1382	3,522 0.1387	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.97H7-EB45	02728871	3,97 0.1563	3,97 0.1563	3,982 0.1568	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.98H7-EB45	02728872	3,98 0.1567	3,98 0.1567	3,992 0.1572	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-3.99H7-EB45	02728873	3,99 0.1571	3,99 0.1571	4,002 0.1576	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4H7-EB45	02728874	4,0 0.1575	4,0 0.1575	4,012 0.1580	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.01H7-EB45	02728875	4,01 0.1579	4,01 0.1579	4,022 0.1583	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.02H7-EB45	02728876	4,02 0.1583	4,02 0.1583	4,032 0.1587	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.04H7-EB45	02728879	4,04 0.1591	4,04 0.1591	4,052 0.1595	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.05H7-EB45	02728880	4,05 0.1594	4,05 0.1594	4,062 0.1599	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.5H7-EB45	02728881	4,5 0.1772	4,5 0.1772	4,512 0.1776	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.750H7-EB45	02761490	4,75 0.1870	4,75 0.1870	4,762 0.1875	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	
NF06-4.762H7-EB45	02761494	4,762 0.1875	4,762 0.1875	4,774 0.1880	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□	

Designation	Item number	DC			Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch					mm Inch	EB45	EB45	EB30	RX2000	RK2050
NF06-4.97H7-EB45	02728882	4,97 0.1957	4,97 0.1957	4,982 0.1961	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-4.98H7-EB45	02728883	4,98 0.1961	4,98 0.1961	4,992 0.1965	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-4.99H7-EB45	02728884	4,99 0.1965	4,99 0.1965	5,002 0.1969	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5H7-EB45	02728927	5,0 0.1969	5,0 0.1969	5,012 0.1973	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.01H7-EB45	02728928	5,01 0.1972	5,01 0.1972	5,022 0.1977	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.02H7-EB45	02728929	5,02 0.1976	5,02 0.1976	5,032 0.1981	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.03H7-EB45	02728930	5,03 0.1980	5,03 0.1980	5,042 0.1985	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.05H7-EB45	02728932	5,05 0.1988	5,05 0.1988	5,062 0.1993	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.5H7-EB45	02728933	5,5 0.2165	5,5 0.2165	5,512 0.2170	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.97H7-EB45	02728934	5,97 0.2350	5,97 0.2350	5,982 0.2355	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.98H7-EB45	02728935	5,98 0.2354	5,98 0.2354	5,992 0.2359	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-5.99H7-EB45	02728936	5,99 0.2358	5,99 0.2358	6,002 0.2363	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6H7-EB45	02728937	6,0 0.2362	6,0 0.2362	6,015 0.2368	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6.01H7-EB45	02728938	6,01 0.2366	6,01 0.2366	6,025 0.2372	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6.02H7-EB45	02728939	6,02 0.2370	6,02 0.2370	6,035 0.2376	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6.03H7-EB45	02728940	6,03 0.2374	6,03 0.2374	6,045 0.2380	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6.04H7-EB45	02728941	6,04 0.2378	6,04 0.2378	6,055 0.2384	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF06-6.05H7-EB45	02728942	6,05 0.2382	6,05 0.2382	6,065 0.2388	60,0 2.3620	6,0 0.2360	80,0 3.1500	4	■	□	□	■	□	□			
NF10-6.334H7-EB45	02761987	6,334 0.2494	6,33 0.2492	6,345 0.2498	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-6.350H7-EB45	02762016	6,35 0.2500	6,35 0.2500	6,365 0.2506	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-6.3754H7-EB45	02762017	6,375 0.2510	6,375 0.2510	6,39 0.2516	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-6.5H7-EB45	02728943	6,5 0.2559	6,5 0.2559	6,515 0.2565	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-6.98H7-EB45	02728947	6,98 0.2748	6,98 0.2748	6,995 0.2754	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7H7-EB45	02728949	7,0 0.2756	7,0 0.2756	7,015 0.2762	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.01H7-EB45	02728950	7,01 0.2760	7,01 0.2760	7,025 0.2766	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.02H7-EB45	02728951	7,02 0.2764	7,02 0.2764	7,035 0.2770	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.05H7-EB45	02728954	7,05 0.2776	7,05 0.2776	7,065 0.2781	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.5H7-EB45	02728955	7,5 0.2953	7,5 0.2953	7,515 0.2959	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.9375H7-EB45	02762018	7,9375 0.3125	7,937 0.3125	7,952 0.3131	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			
NF10-7.97H7-EB45	02728956	7,97 0.3138	7,97 0.3138	7,985 0.3144	83,0 3.2680	10,0 0.3940	115,0 4.5280	6	■	□	□	■	□	□			

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Designation	Item number	DC			Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch					mm Inch	EB45	EB845	EB30	RX2000	RK2050
NF10-7.98H7-EB45	02728957	7,98 0.3142	7,98 0.3142	7,995 0.3148	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-7.99H7-EB45	02728958	7,99 0.3146	7,99 0.3146	8,005 0.3152	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8H7-EB45	02728959	8,0 0.3150	8,0 0.3150	8,015 0.3156	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.01H7-EB45	02728960	8,01 0.3154	8,01 0.3154	8,025 0.3159	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.02H7-EB45	02728961	8,02 0.3157	8,02 0.3157	8,035 0.3163	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.03H7-EB45	02728962	8,03 0.3161	8,03 0.3161	8,045 0.3167	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.04H7-EB45	02728963	8,04 0.3165	8,04 0.3165	8,055 0.3171	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.05H7-EB45	02728964	8,05 0.3169	8,05 0.3169	8,065 0.3175	83,0 3.2680	10,0 0.3940	115,0 4.5280	6				■	□	□	■	□	□
NF10-8.5H7-EB45	02728965	8,5 0.3346	8,5 0.3346	8,515 0.3352	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9H7-EB45	02728974	9,0 0.3543	9,0 0.3543	9,015 0.3549	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.01H7-EB45	02728975	9,01 0.3547	9,01 0.3547	9,025 0.3553	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.05H7-EB45	02728979	9,05 0.3563	9,05 0.3563	9,065 0.3569	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.5H7-EB45	02728980	9,5 0.3740	9,5 0.3740	9,515 0.3746	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.5250H7-EB45	02762020	9,525 0.3750	9,525 0.3750	9,54 0.3756	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.97H7-EB45	02728981	9,97 0.3925	9,97 0.3925	9,985 0.3931	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.98H7-EB45	02728982	9,98 0.3929	9,98 0.3929	9,995 0.3935	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-9.99H7-EB45	02728983	9,99 0.3933	9,99 0.3933	10,005 0.3939	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-10H7-EB45	02728986	10,0 0.3937	10,0 0.3937	10,015 0.3943	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-10.01H7-EB45	02728987	10,01 0.3941	10,01 0.3941	10,028 0.3948	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-10.02H7-EB45	02728988	10,02 0.3945	10,02 0.3945	10,038 0.3952	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-10.04H7-EB45	02728990	10,04 0.3953	10,04 0.3953	10,058 0.3960	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-10.05H7-EB45	02728991	10,05 0.3957	10,05 0.3957	10,068 0.3964	93,0 3.6610	10,0 0.3940	125,0 4.9210	6				■	□	□	■	□	□
NF10-11H7-EB45	02728997	11,0 0.4331	11,0 0.4331	11,018 0.4338	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.04H7-EB45	02729004	11,04 0.4346	11,04 0.4346	11,058 0.4354	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.05H7-EB45	02729005	11,05 0.4350	11,05 0.4350	11,068 0.4357	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.112H7-EB45	02762021	11,112 0.4375	11,112 0.4375	11,13 0.4382	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.97H7-EB45	02729008	11,97 0.4713	11,97 0.4713	11,988 0.4720	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.98H7-EB45	02729009	11,98 0.4717	11,98 0.4717	11,998 0.4724	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-11.99H7-EB45	02729010	11,99 0.4720	11,99 0.4720	12,008 0.4728	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□
NF10-12H7-EB45	02729011	12,0 0.4724	12,0 0.4724	12,018 0.4731	114,0 4.4880	10,0 0.3940	145,0 5.7090	6				■	□	□	■	□	□

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Designation	Item number	DC	Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch		EB45	EB845	EB30	RX2000	RK2050	H15
NF10-12.01H7-EB45	02729012	12,01 0.4728	12,01 0.4728	12,028 0.4735	114,0 4.4880	10,0 0.3940	145,0 5.7090	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NF10-12.02H7-EB45	02729013	12,02 0.4732	12,02 0.4732	12,038 0.4739	114,0 4.4880	10,0 0.3940	145,0 5.7090	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NF10-12.03H7-EB45	02729014	12,03 0.4736	12,03 0.4736	12,048 0.4743	114,0 4.4880	10,0 0.3940	145,0 5.7090	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NF10-12.04H7-EB45	02729015	12,04 0.4740	12,04 0.4740	12,058 0.4747	114,0 4.4880	10,0 0.3940	145,0 5.7090	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NF10-12.05H7-EB45	02729016	12,05 0.4744	12,05 0.4744	12,068 0.4751	114,0 4.4880	10,0 0.3940	145,0 5.7090	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

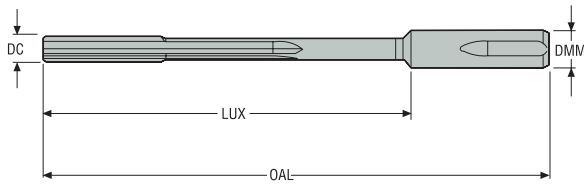
Stock standard. Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NF10-10,187/10,213-EB845, RX2000.

Intermediate diameter

Straight flutes, long version, for through & blind bores



- For choice of geometry, please see page(s) 369-371
- For cutting data see page(s) 389-396

Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades							
	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NF06-2.970-XX-XXXX	2,97 <i>0.117</i>	3,05 <i>0.120</i>	40,0 <i>0.120</i>	6,0 <i>0.236</i>	60,0 <i>2.362</i>	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF06-3.051-XX-XXXX	3,051 <i>0.120</i>	6,05 <i>0.238</i>	60,0 <i>0.238</i>	6,0 <i>0.236</i>	80,0 <i>3.150</i>	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF10-6.051-XX-XXXX	6,051 <i>0.238</i>	8,05 <i>0.317</i>	83,0 <i>0.317</i>	10,0 <i>0.394</i>	115,0 <i>4.528</i>	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF10-8.051-XX-XXXX	8,051 <i>0.317</i>	10,05 <i>0.396</i>	93,0 <i>0.396</i>	10,0 <i>0.394</i>	125,0 <i>4.921</i>	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF10-10.051-XX-XXXX	10,051 <i>0.396</i>	12,05 <i>0.474</i>	114,0 <i>0.474</i>	10,0 <i>0.394</i>	145,0 <i>5.709</i>	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

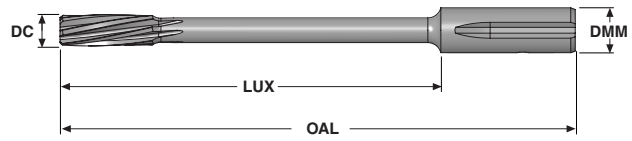
= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NF06-5,187/5,213-EB845, RX2000.

Intermediate diameter

LH helical flutes, long version, for through bores



- For choice of geometry, please see page(s) 369-371
- For cutting data see page(s) 389-396

Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades							
	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NF6-2.970-XX-XXXX	2,97 0.117	3,05 0.120	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF6-3.051-XX-XXXX	3,051 0.120	6,05 0.238	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF6-6.051-XX-XXXX	6,051 0.238	8,05 0.317	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF6-8.051-XX-XXXX	8,051 0.317	10,05 0.396	93,0 3.661	10,0 0.394	125,0 4.921	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF6-10.051-XX-XXXX	10,051 0.396	12,05 0.474	114,0 4.488	10,0 0.394	145,0 5.709	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

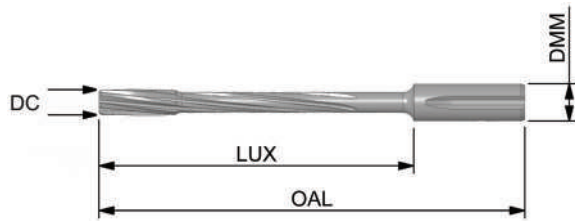
= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NF6-10,187/10,213-EB845, RX2000.

Intermediate diameter

RH helical flutes, long version, for blind bores



- For choice of geometry, please see page(s) 369-371
- For cutting data see page(s) 389-396

Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades								
	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090		
NF4-2.970-XX-XXXX	2,97 0.117	3,05 0.120	40,0 1.575	6,0 0.236	60,0 2.362	4	NFQF06-xx	EB45	EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF4-3.051-XX-XXXX	3,051 0.120	6,05 0.238	60,0 2.362	6,0 0.236	80,0 3.150	4	NFQF06-xx	EB45	EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF4-4.051-XX-XXXX	6,051 0.238	8,05 0.317	83,0 3.268	10,0 0.394	115,0 4.528	6	NFQF10-xx	EB45	EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF4-8.051-XX-XXXX	8,051 0.317	10,05 0.396	93,0 3.661	10,0 0.394	125,0 4.921	6	NFQF10-xx	EB45	EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NF4-10.051-XX-XXXX	10,051 0.396	12,05 0.474	114,0 4.488	10,0 0.394	145,0 5.709	6	NFQF10-xx	EB45	EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

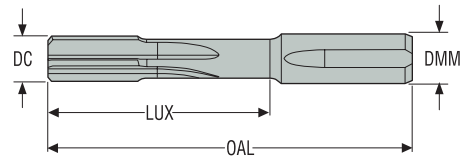
= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NF4-10,187/10,213-EB845, RX2000.

Reamer for blind and through holes – short version

∅ 2,97-12,05 mm / 0.116-0.474"



Designation	Item number	DC	Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
			mm Inch	mm Inch	mm Inch					mm Inch	mm Inch	mm Inch	EB45	EB845	EB30
NS06-2.97H7-EB...	-	2,97 0.1169	2,97 0.1169	2,98 0.1173	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-2.98H7-EB...	-	2,98 0.1173	2,98 0.1173	2,99 0.1177	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-2.99H7-EB...	-	2,99 0.1177	2,99 0.1177	3,00 0.1181	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.00H7-EB...	-	3,0 0.1181	3,00 0.1181	3,01 0.1185	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3H7-EB30	10019456	3,0 0.1181	3,01 0.1185	3,00 0.1181	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.01H7-EB...	-	3,01 0.1185	3,01 0.1185	3,02 0.1190	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.02H7-EB...	-	3,02 0.1189	3,02 0.1189	3,03 0.1194	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.03H7-EB...	-	3,03 0.1193	3,03 0.1193	3,04 0.1198	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.04H7-EB...	-	3,04 0.1197	3,04 0.1197	3,05 0.1202	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.05H7-EB...	-	3,05 0.1201	3,05 0.1201	3,06 0.1206	25,0 0.9840	6,0 0.2360	45,0 1.7720	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.167H7-EB...	-	3,167 0.1247	3,18 0.1252	3,17 0.1247	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.175H7-EB...	-	3,175 0.1250	3,18 0.1250	3,19 0.1255	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.49H7-EB...	-	3,49 0.1374	3,49 0.1374	3,50 0.1379	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.50H7-EB...	-	3,5 0.1378	3,50 0.1378	3,51 0.1383	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.51H7-EB...	-	3,51 0.1382	3,51 0.1382	3,52 0.1387	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.52H7-EB...	-	3,52 0.1386	3,52 0.1386	3,53 0.1391	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.97H7-EB...	-	3,97 0.1563	3,97 0.1563	3,98 0.1568	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.98H7-EB...	-	3,98 0.1567	3,98 0.1567	3,99 0.1572	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-3.99H7-EB...	-	3,99 0.1571	3,99 0.1571	4,00 0.1576	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.00H7-EB...	-	4,0 0.1575	4,00 0.1575	4,01 0.1580	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4H7-EB30	10019457	4,0 0.1575	4,01 0.1580	4,00 0.1575	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.01H7-EB...	-	4,01 0.1579	4,01 0.1579	4,02 0.1583	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.02H7-EB...	-	4,02 0.1583	4,02 0.1583	4,03 0.1587	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Designation	Item number	DC	Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
			mm Inch	mm Inch	mm Inch					mm Inch	mm Inch	mm Inch	mm Inch	EB45	EB45
NS06-4.03H7-EB...	-	4,03 0.1587	4,03 0.1587	4,04 0.1591	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.04H7-EB...	-	4,04 0.1591	4,04 0.1591	4,05 0.1595	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.05H7-EB...	-	4,05 0.1594	4,05 0.1594	4,06 0.1599	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.50H7-EB...	-	4,5 0.1772	4,50 0.1772	4,51 0.1776	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.750H7-EB...	-	4,75 0.1870	4,75 0.1870	4,76 0.1875	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.750H7-EB30	10019458	4,75 0.1870	4,76 0.1875	4,75 0.1870	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.762H7-EB...	-	4,762 0.1875	4,76 0.1875	4,77 0.1880	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.97H7-EB...	-	4,97 0.1957	4,97 0.1957	4,98 0.1961	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.98H7-EB...	-	4,98 0.1961	4,98 0.1961	4,99 0.1965	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-4.99H7-EB...	-	4,99 0.1965	4,99 0.1965	5,00 0.1969	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.00H7-EB...	-	5,0 0.1969	5,00 0.1969	5,01 0.1973	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5H7-EB30	10019459	5,0 0.1969	5,01 0.1973	5,00 0.1969	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.01H7-EB...	-	5,01 0.1972	5,01 0.1972	5,02 0.1977	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.02H7-EB...	-	5,02 0.1976	5,02 0.1976	5,03 0.1981	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.03H7-EB...	-	5,03 0.1980	5,03 0.1980	5,04 0.1985	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.04H7-EB...	-	5,04 0.1984	5,04 0.1984	5,05 0.1989	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.05H7-EB...	-	5,05 0.1988	5,05 0.1988	5,06 0.1993	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.50H7-EB...	-	5,5 0.2165	5,50 0.2165	5,51 0.2170	30,0 1.1810	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.97H7-EB...	-	5,97 0.2350	5,97 0.2350	5,98 0.2355	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.98H7-EB...	-	5,98 0.2354	5,98 0.2354	5,99 0.2359	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-5.99H7-EB...	-	5,99 0.2358	5,99 0.2358	6,00 0.2363	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.00H7-EB...	-	6,0 0.2362	6,00 0.2362	6,01 0.2367	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6H7-EB30	10019460	6,0 0.2362	6,01 0.2367	6,00 0.2362	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.01H7-EB...	-	6,01 0.2366	6,01 0.2366	6,03 0.2372	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.02H7-EB...	-	6,02 0.2370	6,02 0.2370	6,04 0.2376	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.03H7-EB...	-	6,03 0.2374	6,03 0.2374	6,05 0.2380	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.04H7-EB...	-	6,04 0.2378	6,04 0.2378	6,06 0.2384	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS06-6.05H7-EB...	-	6,05 0.2382	6,05 0.2382	6,07 0.2388	31,0 1.2200	6,0 0.2360	50,0 1.9690	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-6.334H7-EB...	-	6,334 0.2494	6,33 0.2494	6,35 0.2500	46,0 1.8110	10,0 0.3940	78,0 3.0710	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-6.334H7-EB30	10019461	6,334 0.2494	6,35 0.2500	6,33 0.2494	46,0 1.8110	10,0 0.3940	78,0 3.0710	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Introduction

Drilling

Reaming

Boring

Annex

Designation	Item number	DC			Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch					mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
NS10-6.350H7-EB...	-	6,35 0.2500	6,35 0.2500	6,37 0.2506	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.375H7-EB...	-	6,375 0.2510	6,38 0.2510	6,39 0.2516	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.3754H7-EB30	10019462	6,375 0.2510	6,39 0.2516	6,38 0.2510	46,0 1.8110	10,0 0.3940	78,0 3.0710	4				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.5H7-EB...	-	6,5 0.2559	6,50 0.2559	6,52 0.2565	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.97H7-EB...	-	6,97 0.2744	6,97 0.2744	6,99 0.2750	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.98H7-EB...	-	6,98 0.2748	6,98 0.2748	7,00 0.2754	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.99H7-EB...	-	6,99 0.2752	6,99 0.2752	7,01 0.2758	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.00H7-EB...	-	7,0 0.2756	7,00 0.2756	7,02 0.2762	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7H7-EB30	10019463	7,0 0.2756	7,02 0.2762	7,00 0.2756	46,0 1.8110	10,0 0.3940	78,0 3.0710	4				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.01H7-EB...	-	7,01 0.2760	7,01 0.2760	7,03 0.2766	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.02H7-EB...	-	7,02 0.2764	7,02 0.2764	7,04 0.2770	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.03H7-EB...	-	7,03 0.2768	7,03 0.2768	7,05 0.2774	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.04H7-EB...	-	7,04 0.2772	7,04 0.2772	7,06 0.2778	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.05H7-EB...	-	7,05 0.2776	7,05 0.2776	7,07 0.2781	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.50H7-EB...	-	7,5 0.2953	7,50 0.2953	7,52 0.2959	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.9375H7-EB...	-	7,9375 0.3125	7,94 0.3125	7,95 0.3131	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.97H7-EB...	-	7,97 0.3138	7,97 0.3138	7,99 0.3144	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.98H7-EB...	-	7,98 0.3142	7,98 0.3142	8,00 0.3148	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-7.99H7-EB...	-	7,99 0.3146	7,99 0.3146	8,01 0.3152	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.00H7-EB...	-	8,0 0.3150	8,00 0.3150	8,02 0.3156	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8H7-EB30	10019464	8,0 0.3150	8,02 0.3156	8,00 0.3150	46,0 1.8110	10,0 0.3940	78,0 3.0710	4				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.01H7-EB...	-	8,01 0.3154	8,01 0.3154	8,03 0.3159	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.02H7-EB...	-	8,02 0.3157	8,02 0.3157	8,04 0.3163	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.03H7-EB...	-	8,03 0.3161	8,03 0.3161	8,05 0.3167	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.04H7-EB...	-	8,04 0.3165	8,04 0.3165	8,06 0.3171	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.05H7-EB...	-	8,05 0.3169	8,05 0.3169	8,07 0.3175	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.50H7-EB...	-	8,5 0.3346	8,50 0.3346	8,52 0.3352	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.97H7-EB...	-	8,97 0.3531	8,97 0.3531	8,99 0.3537	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.98H7-EB...	-	8,98 0.3535	8,98 0.3535	9,00 0.3541	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-8.99H7-EB...	-	8,99 0.3539	8,99 0.3539	9,01 0.3545	46,0 1.8110	10,0 0.3940	78,0 3.0710	6				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Designation	Item number	DC	Hole dia min-max			LUX	DMM	OAL		Geometries			Grades		
			mm Inch	mm Inch	mm Inch					mm Inch	mm Inch	mm Inch	mm Inch	EB45	EB45
NS10-9.00H7-EB...	-	9,0 0.3543	9,00 0.3543	9,02 0.3549	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9H7-EB30	10019465	9,0 0.3543	9,02 0.3549	9,00 0.3543	46,0 1.8110	10,0 0.3940	78,0 3.0710	4			■	■			
NS10-9.01H7-EB...	-	9,01 0.3547	9,01 0.3547	9,03 0.3553	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.02H7-EB...	-	9,02 0.3551	9,02 0.3551	9,04 0.3557	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.03H7-EB...	-	9,03 0.3555	9,03 0.3555	9,05 0.3561	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.04H7-EB...	-	9,04 0.3559	9,04 0.3559	9,06 0.3565	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.05H7-EB...	-	9,05 0.3563	9,05 0.3563	9,07 0.3569	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.50H7-EB...	-	9,5 0.3740	9,50 0.3740	9,52 0.3746	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.5123H7-EB...	-	9,5123 0.3745	9,51 0.3745	9,53 0.3751	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.5250H7-EB...	-	9,525 0.3750	9,53 0.3750	9,54 0.3756	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.525H7-EB30	10019466	9,525 0.3750	9,54 0.3756	9,53 0.3750	46,0 1.8110	10,0 0.3940	78,0 3.0710	4			■	■			
NS10-9.97H7-EB...	-	9,97 0.3925	9,97 0.3925	9,99 0.3931	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.98H7-EB...	-	9,98 0.3929	9,98 0.3929	10,00 0.3935	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-9.99H7-EB...	-	9,99 0.3933	9,99 0.3933	10,01 0.3939	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.00H7-EB...	-	10,0 0.3937	10,00 0.3937	10,02 0.3943	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10H7-EB30	10019467	10,0 0.3937	10,02 0.3943	10,00 0.3937	46,0 1.8110	10,0 0.3940	78,0 3.0710	4			■	■			
NS10-10.01H7-EB...	-	10,01 0.3941	10,01 0.3941	10,03 0.3948	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.02H7-EB...	-	10,02 0.3945	10,02 0.3945	10,04 0.3952	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.03H7-EB...	-	10,03 0.3949	10,03 0.3949	10,05 0.3956	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.04H7-EB...	-	10,04 0.3953	10,04 0.3953	10,06 0.3960	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.05H7-EB...	-	10,05 0.3957	10,05 0.3957	10,07 0.3964	46,0 1.8110	10,0 0.3940	78,0 3.0710	6							
NS10-10.50H7-EB...	-	10,5 0.4134	10,50 0.4134	10,52 0.4141	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-10.97H7-EB...	-	10,97 0.4319	10,97 0.4319	10,99 0.4326	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-10.98H7-EB...	-	10,98 0.4323	10,98 0.4323	11,00 0.4330	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-10.99H7-EB...	-	10,99 0.4327	10,99 0.4327	11,01 0.4334	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-11.00H7-EB...	-	11,0 0.4331	11,00 0.4331	11,02 0.4338	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-11.01H7-EB...	-	11,01 0.4335	11,01 0.4335	11,03 0.4342	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-11.02H7-EB...	-	11,02 0.4339	11,02 0.4339	11,04 0.4346	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-11.03H7-EB...	-	11,03 0.4343	11,03 0.4343	11,05 0.4350	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							
NS10-11.04H7-EB...	-	11,04 0.4346	11,04 0.4346	11,06 0.4354	57,0 2.2440	10,0 0.3940	88,0 3.4650	6							

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Designation	Item number	DC		Hole dia min-max			LUX	DMM	OAL	Geometries			Grades		
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
NS10-11.05H7-EB...	-	11,05 0.4350	11,05 0.4350	11,07 0.4357	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-11.112H7-EB...	-	11,112 0.4375	11,11 0.4375	11,13 0.4382	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-11.50H7-EB...	-	11,5 0.4528	11,50 0.4528	11,52 0.4535	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-11.97H7-EB...	-	11,97 0.4713	11,97 0.4713	11,99 0.4720	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-11.98H7-EB...	-	11,98 0.4717	11,98 0.4717	12,00 0.4724	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-11.99H7-EB...	-	11,99 0.4720	11,99 0.4720	12,01 0.4728	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.00H7-EB...	-	12,0 0.4724	12,00 0.4724	12,02 0.4731	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12H7-EB30	10019468	12,0 0.4724	12,02 0.4731	12,00 0.4724	57,0 2.2440	10,0 0.3940	88,0 3.4650	4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.01H7-EB...	-	12,01 0.4728	12,01 0.4728	12,03 0.4735	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.02H7-EB...	-	12,02 0.4732	12,02 0.4732	12,04 0.4739	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.03H7-EB...	-	12,03 0.4736	12,03 0.4736	12,05 0.4743	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.04H7-EB...	-	12,04 0.4740	12,04 0.4740	12,06 0.4747	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NS10-12.05H7-EB...	-	12,05 0.4744	12,05 0.4744	12,07 0.4751	57,0 2.2440	10,0 0.3940	88,0 3.4650	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

■ Stock standard. □ Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NS10-10,187/10,213-EB845, RX2000.

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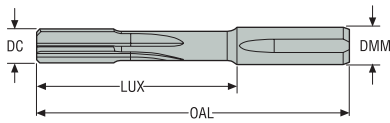
Reaming

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Intermediate diameter

Straight flutes, short version, for through & blind bores



- For choice of geometry, please see page(s) 369-371
- For cutting data see page(s) 389-396

Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades							
	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NS06-2.970-XX-XXXX	2,97 <i>0.117</i>	3,05 <i>0.120</i>	25,0 <i>0.120</i>	6,0 <i>0.236</i>	45,0 <i>1.772</i>	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS06-3.051-XX-XXXX	3,051 <i>0.120</i>	6,05 <i>0.238</i>	30,0 <i>0.238</i>	6,0 <i>0.236</i>	50,0 <i>1.969</i>	4	NFQF06-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-6.051-XX-XXXX	6,051 <i>0.238</i>	10,05 <i>0.396</i>	46,0 <i>0.396</i>	10,0 <i>0.394</i>	78,0 <i>3.071</i>	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS10-10.051-XX-XXXX	10,051 <i>0.396</i>	12,05 <i>0.474</i>	57,0 <i>0.474</i>	10,0 <i>0.394</i>	88,0 <i>3.465</i>	6	NFQF10-xx	EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

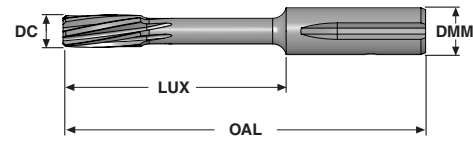
= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NS06-5,187/5,213-EB845, RX2000.

Intermediate diameter

LH helical flutes, short version, for through bores



- For cutting data see page(s) 391-396
- For choice of geometry, please see page(s) 369-371

Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades						
	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NS6-2.970-XX-XXXX	2,97 0.117	3,05 0.120	25,0 0.984	6,0 0.236	45,0 1.772	4	NFQF06-xx EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS6-3.051-XX-XXXX	3,051 0.120	6,05 0.238	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06-xx EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS6-6.051-XX-XXXX	6,051 0.238	8,05 0.317	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10-xx EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS6-10.051-XX-XXXX	10,051 0.396	12,05 0.474	57,0 2.244	10,0 0.394	88,0 3.465	6	NFQF10-xx EB45 EB845 EB30	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

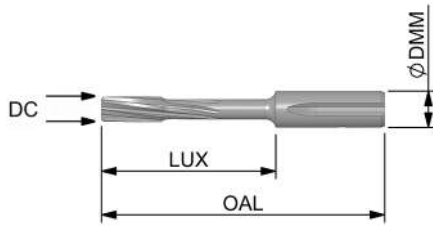
= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NS6-10,187/10,213-EB845, RX2000.

Intermediate diameter

RH helical flutes, short version, for blind bores



- For choice of geometry, please see page(s) 369-371
- For cutting data see page(s) 389-396

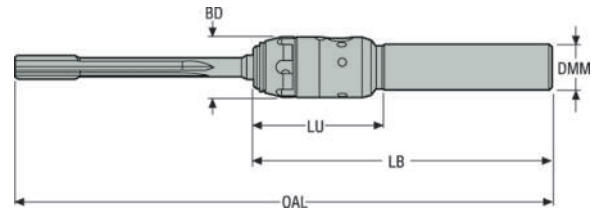
Designation	DCN	DCX	LUX	DMM	OAL	Body size	Geometries	Grades							
	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>				H15	RK2050	RX2000	RN2010	RM2020	RM2090	RS2090
NS4-2.970-XX-XXXX	2,97 0.117	3,05 0.120	25,0 0.984	6,0 0.236	45,0 1.772	4	NFQF06-xx	EB45 EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS4-3.051-XX-XXXX	3,051 0.120	6,05 0.238	30,0 1.181	6,0 0.236	50,0 1.969	4	NFQF06-xx	EB45 EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS4-4.051-XX-XXXX	6,051 0.238	8,05 0.317	46,0 1.811	10,0 0.394	78,0 3.071	6	NFQF10-xx	EB45 EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NS4-10.051-XX-XXXX	10,051 0.396	12,05 0.474	57,0 2.244	10,0 0.394	88,0 3.465	6	NFQF10-xx	EB45 EB845	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

= Non stock standard.

Note: When ordering Nanofix reamers for intermediate diameters, please state diameter and tolerance of hole to be reamed.

Ordering example: NS4-10,187/10,213-EB845, RX2000.

Nanofix tool holder



Item number	Designation	DC	DMM	BD	LU	LB
		mm	mm	mm	mm	mm
02729036	NFQF06-03700-10N1	2,97-6,05	10,0	16,0	37,0	80,0
02729037	NFQF06-03300-12N1	2,97-6,05	12,0	16,0	35,0	80,0
02729041	NFQF06-03000-16N1	2,97-6,05	16,0	16,0	30,0	80,0
02729044	NFQF10-05200-12N1	6,051-12,05	12,0	23,0	52,0	100,0
02729045	NFQF10-04900-16N1	6,051-12,05	16,0	23,0	49,0	100,0
02729046	NFQF10-04700-20N1	6,051-12,05	20,0	23,0	47,0	100,0

	Standard length	Short length
DC	OAL	OAL
2,970-3,050 mm (0.1169-0.1200")	124,5 mm (4.902")	109,5 mm (4.311")
3,051-6,050 mm (0.1201-0.2382")	144,5 mm (5.689")	113,5 mm (4.469")
6,051-8,050 mm (0.2383-0.3169")	189,5 mm (7.461")	149,5 mm (5.886")
8,051-10,050 mm (0.3170-0.3956")	199,5 mm (7.854")	152,5 mm (6.004")
10,051-12,050 mm (0.3957-0.4744")	219,5 mm (8.642")	162,5 mm (6.398")

Spare Parts, included in delivery

DC	Spare Clamping Kit	Key
2,97-6,050	NF06-CLKI	CLC06KEY
6,051-12,050	NF10-CLKI	CLC10KEY

Spare clamping kit for Nanofix holders includes:

- 1 clamping nut
- 1 axial stop spring ring
- 3 clamping balls (dia 3,5 mm for size NF06 & dia 5 mm for size NF10)
- 1 fool-proof ball (dia 3 mm for size NF06 & dia 4 mm for size NF10)
- 1 o-ring

Note: fool-proof ball not shown on above view.

Cutting data – NF/NS...-EB45 metric

SMG		a _p (∅)		f		v _c							
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RN2010	RM2020	RM2090	RS2090
P1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-	-	-	-	-
P2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-	-	-	-	-
P3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	25 (15-30)	60 (30-100)	80 (30-150)	-	-	-	-	-
P4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-	-
P5	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-	-
P6	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-	-
P7	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-	-
P8	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-	-	-	-	-
P11	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	15 (10-20)	35 (20-60)	40 (20-80)	-	-	-	-	-
P12	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	12 (8-15)	25 (15-45)	30 (15-65)	-	-	-	-	-
M1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	12 (9-15)	25 (15-40)	35 (20-60)	-	-	25 (15-40)	40 (20-60)	-
M2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-	-	25 (15-40)	40 (20-60)	-
M3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	25 (15-40)	35 (20-60)	-	-	25 (15-40)	40 (20-60)	-
M4	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-	-	25 (10-30)	30 (15-40)	-
M5	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,50	-	20 (10-30)	25 (15-40)	-	-	25 (10-30)	30 (15-40)	-
K1	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-	-
K2	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	25 (20-40)	40 (30-70)	45 (35-80)	-	-	-	-
K3	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-	-
K4	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	-	-	-	-
K5	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	-	-	-	-
K6	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-	-
K7	NF/NS-EB45	0,10-0,20	0,10-0,25	0,10-0,30	0,20-0,60	-	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-	-
N1	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-	50 (20-80)	-	-	-
N2	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-	50 (20-80)	-	-	-
N3	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-	50 (20-80)	-	-	-
N4	NF/NS-EB45	0,10-0,20	0,10-0,30	0,10-0,30	0,20-0,60	50 (20-80)	-	80 (30-150)	-	50 (20-80)	-	-	-
S1	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-	-	-	-	20 (10-25)
S2	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-	-	-	-	20 (10-25)
S3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	15 (8-20)	20 (10-25)	-	-	-	-	25 (10-25)
S11	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-	30 (20-50)
S12	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-	30 (20-50)
S13	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	-	30 (20-50)

The table continues on next page.

Cutting data – NF/NS...-EB45 metric

SMG		a _p (∅)		f		v _c							
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RN2010	RM2020	RM2090	RS2090
H3	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H5	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H7	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H8	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H11	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H12	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H21	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
H31	NF/NS-EB45	0,08-0,15	0,10-0,15	0,10-0,20	0,20-0,30	-	-	10 (8-15)	-	-	-	-	-
PM1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-
PM2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-
PM3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,20	0,20-0,50	-	50 (30-80)	70 (40-100)	-	-	-	-	-
TS1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TS2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TS3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TS4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TP1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TP2	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TP3	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
TP4	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	20 (15-25)	-	40 (20-60)	-	-	-	-	-
GR1	NF/NS-EB45	0,10-0,15	0,1-0,20	0,10-0,30	0,20-0,60	40 (80-20)	-	60 (30-120)	-	-	-	-	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

Cutting data – NF/NS...-EB45 inch

SMG		a _p (∅)		f		v _c							
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RN2010	RM2020	RM2090	RS2090
P1	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	80 (50-100)	195 (100-330)	260 (100-490)	-	-	-	-	-
P2	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	80 (50-100)	195 (100-330)	260 (100-490)	-	-	-	-	-
P3	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	80 (50-100)	195 (100-330)	260 (100-490)	-	-	-	-	-
P4	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-	-
P5	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-	-
P6	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-	-
P7	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-	-
P8	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	50 (35-65)	115 (65-195)	130 (65-260)	-	-	-	-	-
P11	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	50 (35-65)	115 (65-195)	130 (65-260)	-	-	-	-	-
P12	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	40 (25-50)	80 (50-150)	100 (50-215)	-	-	-	-	-
M1	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.020	40 (30-50)	80 (50-130)	115 (65-195)	-	-	80 (50-130)	130 (65-195)	-
M2	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.020	-	80 (50-130)	115 (65-195)	-	-	80 (50-130)	130 (65-195)	-
M3	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.020	-	80 (50-130)	115 (65-195)	-	-	80 (50-130)	130 (65-195)	-
M4	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.020	-	65 (35-100)	80 (50-130)	-	-	65 (35-100)	100 (50-130)	-
M5	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.020	-	65 (35-100)	80 (50-130)	-	-	65 (35-100)	100 (50-130)	-
K1	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-	-
K2	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	-	80 (65-130)	130 (100-230)	145 (110-260)	-	-	-	-
K3	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-	-
K4	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	-	-	-	-
K5	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)	-	-	-	-
K6	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	-	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-	-
K7	NF/NS-EB45	0.004-0.008	0.004-0.010	0.004-0.012	0.008-0.024	-	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-	-
N1	NF/NS-EB45	0.004-0.787	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	260 (100-490)	-	165 (65-260)	-	-	-
N2	NF/NS-EB45	0.004-0.787	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	260 (100-490)	-	165 (65-260)	-	-	-
N3	NF/NS-EB45	0.004-0.787	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	260 (100-490)	-	165 (65-260)	-	-	-
N4	NF/NS-EB45	0.004-0.787	0.004-0.012	0.004-0.012	0.008-0.024	165 (65-260)	-	260 (100-490)	-	165 (65-260)	-	-	-
S1	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	50 (25-65)	65 (35-80)	-	-	-	-	65 (35-80)
S2	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	50 (25-65)	65 (35-80)	-	-	-	-	65 (35-80)
S3	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	50 (25-65)	65 (35-80)	-	-	-	-	80 (35-80)
S11	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	-	100 (65-165)
S12	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	-	100 (65-165)
S13	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	-	100 (65-165)

The table continues on next page.

Cutting data – NF/NS...-EB45 inch

SMG		a_p (∅)		f		v_c							
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RN2010	RM2020	RM2090	RS2090
H3	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H5	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H7	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H8	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H11	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H12	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H21	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
H31	NF/NS-EB45	0.003-0.006	0.004-0.006	0.004-0.008	0.008-0.012	-	-	35 (25-50)	-	-	-	-	-
PM1	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	-	165 (100-260)	230 (130-350)	-	-	-	-	-
PM2	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	-	165 (100-260)	230 (130-350)	-	-	-	-	-
PM3	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.008	0.008-0.020	-	165 (100-260)	230 (130-350)	-	-	-	-	-
TS1	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TS2	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TS3	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TS4	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TP1	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TP2	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TP3	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
TP4	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	65 (50-80)	-	130 (65-195)	-	-	-	-	-
GR1	NF/NS-EB45	0.004-0.006	0.004-0.008	0.004-0.012	0.008-0.024	130 (65-260)	-	195 (100-395)	-	-	-	-	-

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

Cutting data – NF/NS...-EB845 metric

SMG		a _p (Z)		f		v _c						
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RM2020	RM2090	RS2090
P3	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,30	0,20 -0,60	-	60 (30-100)	80 (30-150)	-	-	-	-
P4	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	-	50 (30-80)	60 (30-120)	-	-	-	-
P5	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-
P6	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-
P7	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	20 (10-25)	50 (30-80)	60 (30-120)	-	-	-	-
P8	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	15 (10-20)	35 (20-60)	40 (20-80)	-	-	-	-
P11	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	15 (10-20)	35 (20-60)	40 (20-80)	-	-	-	-
P12	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	12 (8-15)	25 (15-45)	30 (15-65)	-	-	-	-
M1	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20 -0,50	12 (9-15)	25 (15-45)	35 (20-60)	-	25 (15-40)	40 (20-60)	-
M2	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20 -0,50	-	25 (15-45)	35 (20-60)	-	25 (15-40)	40 (20-60)	-
M3	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20 -0,50	-	25 (15-45)	35 (20-60)	-	25 (15-40)	40 (20-60)	-
M4	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20 -0,50	-	20 (10-30)	25 (15-40)	-	25 (10-30)	30 (15-40)	-
M5	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20 -0,50	-	20 (10-30)	25 (15-40)	-	25 (10-30)	30 (15-40)	-
K1	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-
K2	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	-	25 (20-40)	40 (30-70)	45 (35-80)	-	-	-
K3	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-
K4	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (30-150)	-	-	-
K5	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)	-	-	-
K6	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	-	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-
K7	NF/NS-EB845	0,10 -0,20	0,10 -0,25	0,10 -0,30	0,20 -0,60	-	60 (40-100)	80 (30-150)	90 (35-170)	-	-	-
S1	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	15 (8-20)	20 (10-25)	-	-	-	20 (10-25)
S2	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	15 (8-20)	20 (10-25)	-	-	-	20 (10-25)
S3	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	15 (8-20)	20 (10-25)	-	-	-	25 (10-25)
S11	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	30 (20-50)
S12	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	30 (20-50)
S13	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	20 (15-30)	30 (15-40)	40 (20-50)	-	-	-	30 (20-50)
H3	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H5	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H7	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H8	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H11	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H12	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H21	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
H31	NF/NS-EB845	0,08 -0,15	0,10 -0,15	0,10 -0,20	0,20- 0,30	-	-	10 (8-15)	-	-	-	-
PM1	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM2	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	-	50 (30-80)	70 (40-100)	-	-	-	-
PM3	NF/NS-EB845	0,10 -0,15	0,1 -0,20	0,10 -0,20	0,20 -0,50	-	50 (30-80)	70 (40-100)	-	-	-	-

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Cutting data – NF/NS...-EB845 inch

SMG		a_p (°)		f		v_c							
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050	RM2020	RM2090	RS2090	
Introduction	P3	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.012	0.008 -0.024	-	195 (100-330)	260 (100-490)	-	-	-	-
	P4	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	-	165 (100-260)	195 (100-395)	-	-	-	-
	P5	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-
	P6	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-
	P7	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	65 (35-80)	165 (100-260)	195 (100-395)	-	-	-	-
	P8	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	50 (35-65)	115 (65-195)	130 (65-260)	-	-	-	-
	P11	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	50 (35-65)	115 (65-195)	130 (65-260)	-	-	-	-
	P12	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	40 (25-50)	80 (50-150)	100 (50-125)	-	-	-	-
Drilling	M1	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.02	40 (30-50)	80 (50-150)	115 (65-200)	-	80 (50-130)	130 (65-195)	-
	M2	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.02	-	80 (50-150)	115 (65-200)	-	80 (50-130)	130 (65-195)	-
	M3	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.02	-	80 (50-150)	115 (65-200)	-	80 (50-130)	130 (65-195)	-
	M4	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.02	-	65 (30-100)	80 (50-135)	-	80 (35-100)	100 (50-130)	-
	M5	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.02	-	65 (30-100)	80 (50-135)	-	80 (35-100)	100 (50-130)	-
Reaming	K1	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-
	K2	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	-	80 (65-130)	130 (100-230)	145 (110-260)	-	-	-
	K3	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-
	K4	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	80 (50-100)	150 (100-330)	230 (130-395)	260 (145-440)	-	-	-
	K5	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	80 (50-100)	150 (100-330)	230 (130-395)	260 (145-440)	-	-	-
	K6	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	-	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-
	K7	NF/NS-EB845	0.004 -0.008	0.004 -0.010	0.004 -0.012	0.008 -0.024	-	195 (130-330)	260 (100-490)	290 (110-550)	-	-	-
Boring	S1	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	50 (25-65)	65 (35-80)	-	-	-	65 (35-80)
	S2	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	50 (25-65)	65 (35-80)	-	-	-	65 (35-80)
	S3	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	50 (25-65)	65 (35-80)	-	-	-	65 (35-80)
	S11	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	100 (65-165)
	S12	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	100 (65-165)
	S13	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	65 (50-100)	100 (50-130)	130 (65-165)	-	-	-	100 (65-165)
	H3	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H5	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H7	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H8	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H11	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H12	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
	H21	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-
H31	NF/NS-EB845	0.003 -0.006	0.004 -0.006	0.004 -0.008	0.008 -0.012	-	-	35 (25-50)	-	-	-	-	
Annex	PM1	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	-	165 (100-260)	230 (130-350)	-	-	-	-
	PM2	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	-	165 (100-260)	230 (130-350)	-	-	-	-
	PM3	NF/NS-EB845	0.004 -0.006	0.004 -0.008	0.004 -0.008	0.008 -0.020	-	165 (100-260)	230 (130-350)	-	-	-	-

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Cutting data – NF/NS...-EB25/EB30 metric

SMG		a_p (∅)		f		v_c			
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P1	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P2	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P3	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	25 (15-30)	60 (30-100)	80 (30-150)	-
P4	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P5	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P6	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
P7	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,7	0,5-1	20 (10-25)	50 (30-80)	60 (30-120)	-
M1	NF/NS-EB25/EB30	0,08-0,15	0,10-0,15	0,3-0,7	0,5-1	-	25 (15-40)	35 (20-60)	-
K1	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K2	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	-	25 (20-40)	40 (30-70)	45 (35-80)
K3	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	60 (40-100)	80 (30-150)	90 (35-170)
K4	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K5	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	25 (15-30)	45 (30-70)	70 (40-120)	80 (45-135)
K6	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	-	60 (40-100)	80 (30-150)	90 (35-170)
K7	NF/NS-EB25/EB30	0,10-0,20	0,10-0,25	0,3-0,9	0,5-1,2	-	60 (40-100)	80 (30-150)	90 (35-170)
N1	NF/NS-EB25/EB30	0,10-0,20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N2	NF/NS-EB25/EB30	0,10-0,20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N3	NF/NS-EB25/EB30	0,10-0,20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
N11	NF/NS-EB25/EB30	0,10-0,20	0,10-0,30	0,3-0,9	0,5-1,2	50 (20-80)	-	-	-
PM1	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-
PM2	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-
PM3	NF/NS-EB25/EB30	0,10-0,15	0,1-0,20	0,3-0,9	0,5-1,2	-	50 (30-80)	70 (40-100)	-

SMG = Seco material group

a_p = mm

f = mm/rev

v_c = m/min

All cutting data are start values

Cutting data – EB25/EB30 inch

SMG		a_p (Z)		f		v_c			
		z=4	z=6	z=4	z=6	H15	CP20	RX2000	RK2050
P1	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P2	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P3	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	80 (50-100)	195 (100-330)	260 (100-490)	–
P4	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P5	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P6	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
P7	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.028	0.020–0.039	65 (35-80)	165 (100-265)	195 (100-395)	–
M1	NF/NS-EB25/EB30	0.003–0.006	0.004–0.006	0.012–0.028	0.020–0.039	–	80 (50-130)	115 (65-195)	–
K1	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K2	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	80 (65-130)	130 (100-230)	145 (110-260)
K3	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	195 (130-330)	260 (100-490)	290 (110-550)
K4	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K5	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	80 (50-100)	150 (100-230)	230 (130-395)	260 (145-440)
K6	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	195 (130-330)	260 (100-490)	290 (110-550)
K7	NF/NS-EB25/EB30	0.004–0.008	0.004–0.010	0.012–0.035	0.020–0.047	–	195 (130-330)	260 (100-490)	290 (110-550)
N1	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N2	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N3	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
N11	NF/NS-EB25/EB30	0.004–0.787	0.004–0.012	0.012–0.035	0.020–0.047	165 (65-265)	–	–	–
PM1	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–
PM2	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–
PM3	NF/NS-EB25/EB30	0.004–0.006	0.004–0.008	0.012–0.035	0.020–0.047	–	165 (100-265)	230 (130-330)	–

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

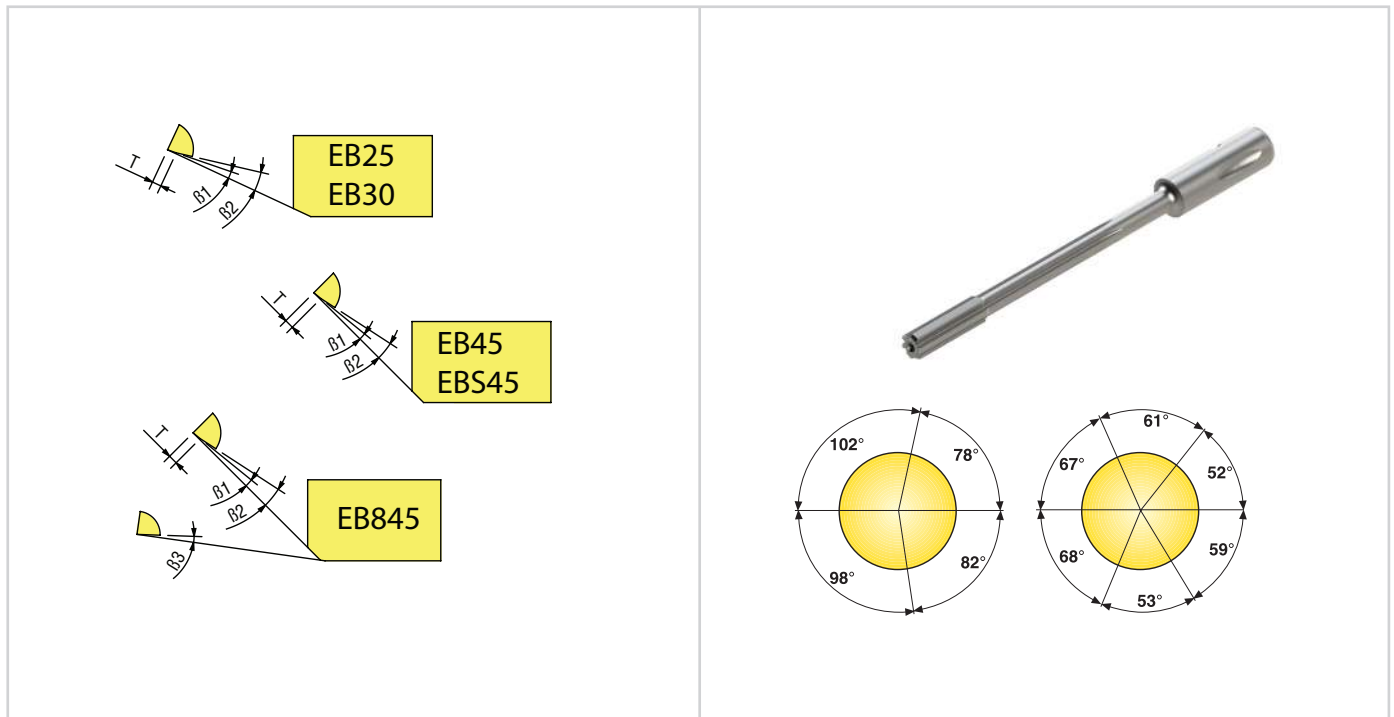
Regrinding instructions

Specifications

Diamond grinding wheel
Grain size:
D6 for 1st clearance angle ($\beta_1 - \beta_3$)
D64 for 2nd clearance angle (β_2)

Important

Regrinding reduces reamer diameter.
Recoating may produce oversized diameter.
Max run-out on lead chamfers $10 \mu\text{m}$ ($394 \mu\text{in}$).



Nanofix \varnothing	β_1	β_2	β_3	T
2,97-9,99 mm	8°	18°	8°	0,15 mm
10,00-12,050 mm				0,20 mm



Bifix®

Bifix® indexable blade reamers bring high-precision performance to all workpiece material groups

- Enables tolerances held between 8 and 16µm and a surface finish of Ra 0.25 (RMS 12 micro/inch)
- Indexable blades feature two cutting edges per blade
- Three cermet guide pads and an accurate adjusting system

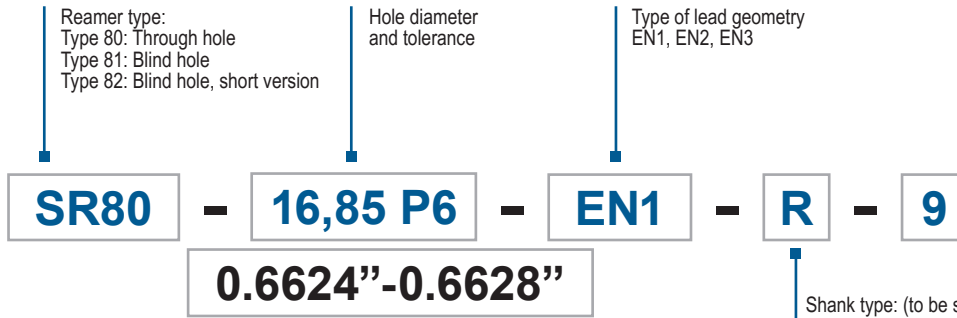
Range overview

	∅ Range	Reaming depth	Drill ∅ tolerance	Intermediate diameter	Surface finish
SR80 For through holes 	6,875-60,500 mm (0.2707-2.3819")	5-7 x D	IT 6	Yes, available through Custom design	R _a 0,2-0,8 μm (R _a 8-31 μin)
SR81 For blind holes 	7,875-60,500 mm (0.3100-2.3819")	5-7 x D	IT 6-7	Yes, available through Custom design	R _a 0,2-0,8 μm (R _a 8-31 μin)
SR82 For blind holes short version 	7,875-60,500 mm (0.3100-2.3819")	3-5 x D	IT 6-7	Yes, available through Custom design	R _a 0,2-0,8 μm (R _a 8-31 μin)

Code keys

Reamers

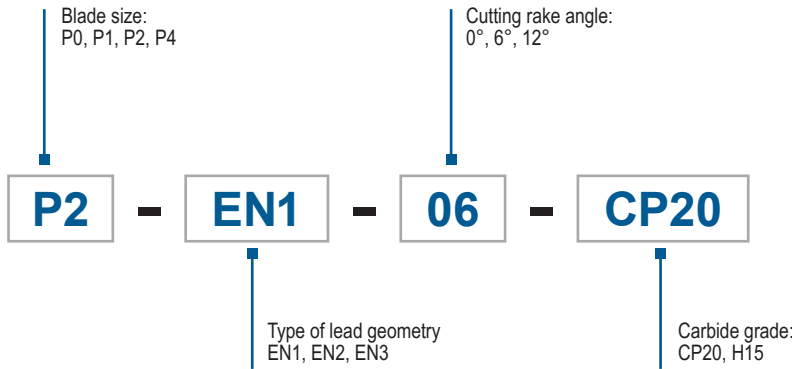
Reamer type:
Type 80: Through hole
Type 81: Blind hole
Type 82: Blind hole, short version



Shank type: (to be stated when requested style is not standard)
SR80 and SR81: R1 without flat is standard
SR82: R9 with flat is standard

Blades

Important:
The reamer and the blade must have the same lead geometry.



Introduction

Drilling

Reaming

Boring

Annex

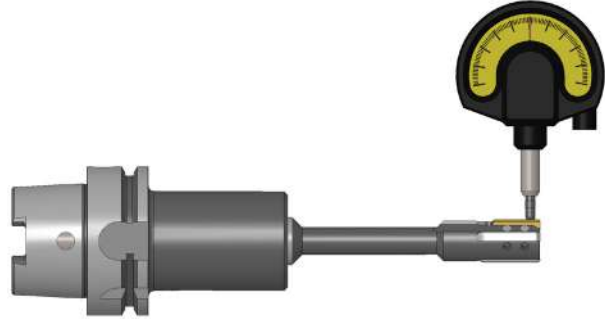
Set up and machining data

Rotating tool

Max. run-out recommended: 0,02 mm (0.0008").
Precision holder is recommended : Hydraulic chuck, D-type collet chuck, 5672 collet chuck or shrink-fit.

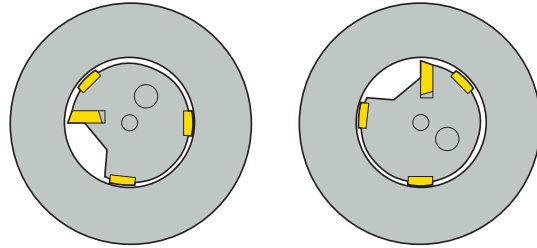
Stationary tool

Use a Seco floating holder, see page 481-485.



For optimal chip evacuation

Recommended blade orientation for static tools (see drawing, view from front of tools).



Coolant requirements

To reach maximum tool life and hole quality, the following coolant requirements should be observed.
Coolant through the tool is recommended. External coolant supply can be used if reaming depth < 2 x D.
Quality soluble oil with 40% minimum mineral oil. Neat oil recommended for stainless steel.
Filtration 30–50 µm (1200-2000 µin).
Volume min 0,5 l/min/mm (3.35 gal/min/inch) in tool diameter.
Ex: Reamer Ø 10, min volume is 5 l/min (1.3 gal/min).



Setting fixture

SF-60200-C160C190: Part No. 02885396

- Horizontal stand
- First choice for Ø smaller than 60 mm (2.362")
- 2 clocks
- Maximum tool Ø: 60,5 mm (2.382")
- Maximum tool length: 200 mm (7.784")



Geometry choice – Blades

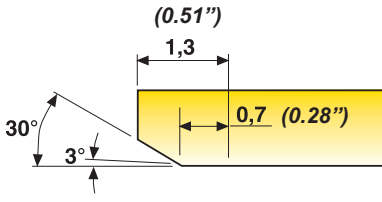
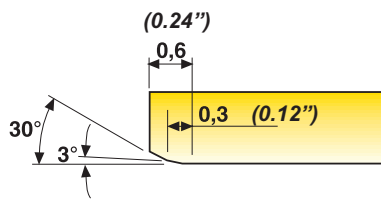
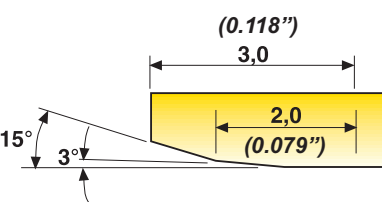
Note that reamer and blade must have the same lead geometry.

Use the cutting data recommendation table on page 413-421 to choose grade and rake angle.

Grade and rake angle

Use the tables on page(s) 674-680 to classify the workpiece material into SMG.

The blade programme is on page(s) 411, 412.

EN1 – Application	
<p>Maximum machining allowance on $\varnothing 0,5$ mm (0.020") Surface Finish + R_a 0,3 - 0,8 μm (Surface Finish + R_a 12 - 31 μin)</p>	
EN2 – Short lead	
<p>Maximum machining allowance on $\varnothing 0,3$ mm (0.012") Surface Finish + R_a 0,4 - 1,2 μm (Surface Finish + R_a 16 - 47 μin) Maximum feed rate 0,2 mm/rev (0.008" in/rev). Only to be used when a short lead is required Designed with end cutting</p>	
EN3 – Extreme surface finish	
<p>Maximum machining allowance on $\varnothing 0,5$ mm (0.020") Surface Finish + R_a 0,2 - 0,6 μm (Surface Finish + R_a 8 - 24 μin) Suitable for all materials except aluminium To be used when R_a should be < 0,3–0,4 μm (12-16 μin)</p>	

Optimization / Grades

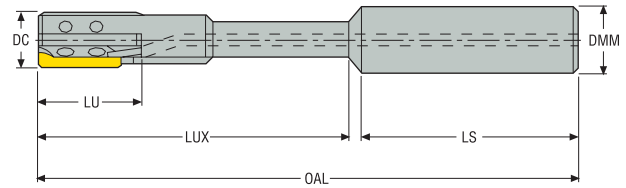
Use the blade selection table to choose alternative blades for higher productivity or better security

Blade selection										
Blade size	Steel	Stainless steel	Cast iron	Non-ferrous	Aluminium	Wear resistance ↔ Toughness			Designation	
						Productivity	Versatility	Security	Blade	Grade
P0, P1, P2, P4										
	•		•	•				X	Pxx-ENx-00	H15
	•		•	•	•			X	Pxx-ENx-06	H15
	•	•		•	•			X	Pxx-ENx-12	H15
	•					X			Pxx-ENx-00	CP20
	•		•				X		Pxx-ENx-06	CP20
	•	•					X		Pxx-ENx-12	CP20
	•		•			X			Pxx-ENx-00	CP15
	•	•	•			X			Pxx-ENx-06	CP15
•	•		•	•	X			Pxx-ENx-12	CP15	

Grades		
	CP15	Coated A wear-resistant coated grade alternative to CP20. For optimization in cast iron and steels. Also suitable for non-ferrous. Ti(C, N)
	CP20	Coated A versatile coated grade suitable for most materials, except aluminum. TiN
	H15	Uncoated A tough micrograin grade for all materials. Suitable for fine-reaming operations due to edge sharpness.

For through holes \varnothing 7H6-26H6

Shank type R1, cylindrical without flat, SR80



- Blade information on page(s) 411, 412
- Internal through coolant
- For cutting data see page(s) 413-421

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR80-7H6-EN1	7	105	40	63	25	10	P0-EN1-xx
SR80-8H6-EN1	8	115	40	73	25	10	P0-EN1-xx
SR80-9H6-EN1	9	115	40	73	25	10	P1-EN1-xx
SR80-10H6-EN1	10	115	40	74	25	10	P1-EN1-xx
SR80-11H6-EN1	11	133	48	81	25	16	P1-EN1-xx
SR80-12H6-EN1	12	133	48	81	25	16	P1-EN1-xx
SR80-13H6-EN1	13	133	48	81	25	16	P2-EN1-xx
SR80-14H6-EN1	14	133	48	81	25	16	P2-EN1-xx
SR80-15H6-EN1	15	133	48	82	25	16	P2-EN1-xx
SR80-16H6-EN1	16	133	48	82	25	16	P2-EN1-xx
SR80-17H6-EN1	17	155	50	100	25	20	P2-EN1-xx
SR80-18H6-EN1	18	155	50	100	25	20	P2-EN1-xx
SR80-19H6-EN1	19	155	50	100	25	20	P2-EN1-xx
SR80-20H6-EN1	20	155	50	100	30	20	P4-EN1-xx
SR80-21H6-EN1	21	191	56	128	30	25	P4-EN1-xx
SR80-22H6-EN1	22	191	56	129	30	25	P4-EN1-xx
SR80-23H6-EN1	23	191	56	129	30	25	P4-EN1-xx
SR80-24H6-EN1	24	191	56	129	30	25	P4-EN1-xx
SR80-25H6-EN1	25	191	56	129	30	25	P4-EN1-xx
SR80-26H6-EN1	26	191	56	129	30	25	P4-EN1-xx

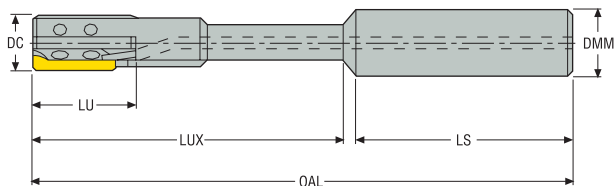
Spare Parts

For \varnothing (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key	Torque value
7-8	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-	-
9	SH2025	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
10-12	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
13-19	SH2540	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509	0,9 Nm
20-60	SH3060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

Torque key is delivered with driving blade

For through holes \varnothing 27H6–60H6

Shank type R1, cylindrical without flat, SR80



- Blade information on page(s) 411, 412
- Internal through coolant
- For cutting data see page(s) 413-421

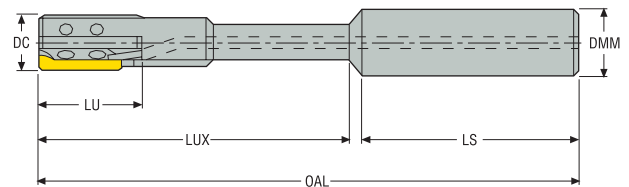
Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR80-27H6-EN1	27	221	56	159	30	25	P4-EN1-xx
SR80-28H6-EN1	28	221	56	159	30	25	P4-EN1-xx
SR80-29H6-EN1	29	221	56	159	30	25	P4-EN1-xx
SR80-30H6-EN1	30	221	56	159	30	25	P4-EN1-xx
SR80-31H6-EN1	31	221	56	160	30	25	P4-EN1-xx
SR80-32H6-EN1	32	221	56	160	30	25	P4-EN1-xx
SR80-34H6-EN1	34	226	56	165	30	25	P4-EN1-xx
SR80-35H6-EN1	35	226	56	165	30	25	P4-EN1-xx
SR80-36H6-EN1	36	226	56	166	30	25	P4-EN1-xx
SR80-38H6-EN1	38	226	56	166	30	25	P4-EN1-xx
SR80-40H6-EN1	40	226	56	166	30	25	P4-EN1-xx
SR80-42H6-EN1	42	226	56	167	30	25	P4-EN1-xx
SR80-44H6-EN1	44	226	56	167	30	25	P4-EN1-xx
SR80-48H6-EN1	48	226	56	168	30	25	P4-EN1-xx
SR80-50H6-EN1	50	226	56	168	30	25	P4-EN1-xx
SR80-52H6-EN1	52	226	56	169	30	25	P4-EN1-xx
SR80-54H6-EN1	54	226	56	169	30	25	P4-EN1-xx
SR80-58H6-EN1	58	226	56	169	30	25	P4-EN1-xx
SR80-60H6-EN1	60	226	56	169	30	25	P4-EN1-xx

Spare Parts

For \varnothing (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key	Torque value
20-60	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

For through holes – Intermediate diameter

Shank type R1, cylindrical without flat, SR80



- Blade information on page(s) 411, 412
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 402
- For cutting data see page(s) 413-421

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR80-6.875-XX-XXXX-EN	6,875 - 7,874	105,0	40,0	63,0	15,0	10,0	P0-EN-xx
SR80-7.875-XX-XXXX-EN	7,875 - 8,749	115,0	40,0	73,0	25,0	10,0	P0-EN-xx
SR80-8.750-XX-XXXX-EN	8,75 - 9,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR80-9.750-XX-XXXX-EN	9,75 - 10,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR80-10.750-XX-XXXX-EN	10,75 - 12,749	133,0	48,0	81,0	25,0	16,0	P1-EN-xx
SR80-12.750-XX-XXXX-EN	12,75 - 16,749	133,0	48,0	81,0	25,0	16,0	P2-EN-xx
SR80-16.750-XX-XXXX-EN	16,75 - 19,499	155,0	50,0	100,0	25,0	20,0	P2-EN-xx
SR80-19.500-XX-XXXX-EN	19,5 - 20,499	155,0	50,0	100,0	30,0	20,0	P4-EN-xx
SR80-20.500-XX-XXXX-EN	20,5 - 26,499	191,0	56,0	129,0	30,0	25,0	P4-EN-xx
SR80-26.500-XX-XXXX-EN	26,5 - 32,499	221,0	56,0	160,0	30,0	25,0	P4-EN-xx
SR80-32.500-XX-XXXX-EN	32,5 - 38,499	226,0	56,0	165,0	30,0	25,0	P4-EN-xx
SR80-38.500-XX-XXXX-EN	38,5 - 40,499	226,0	56,0	166,0	30,0	25,0	P4-EN-xx
SR80-40.500-XX-XXXX-EN	40,5 - 44,499	226,0	56,0	167,0	30,0	25,0	P4-EN-xx
SR80-44.500-XX-XXXX-EN	44,5 - 50,499	226,0	56,0	168,0	30,0	25,0	P4-EN-xx
SR80-50.500-XX-XXXX-EN	50,5 - 60,5	226,0	56,0	169,0	30,0	25,0	P4-EN-xx

Spare Parts, included in delivery

Accessories

For \varnothing (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
6,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-
8,750-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305
9,750-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,750-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.0	H00-1509
19,500-60,500	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020

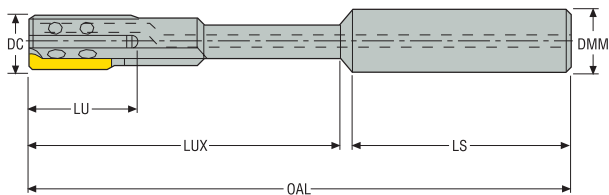
Torque key is delivered with driving blade

Note! When ordering reamers for intermediate diameter, please state: \varnothing and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3).

Ordering example: SR80-11.50 H7-EN2, P1-EN2-06, CP20.

For blind holes \varnothing 8H6-26H6

Shank type R1, cylindrical without flat, SR81



- Blade information on page(s) 411, 412
- Internal through coolant
- For cutting data see page(s) 413-421

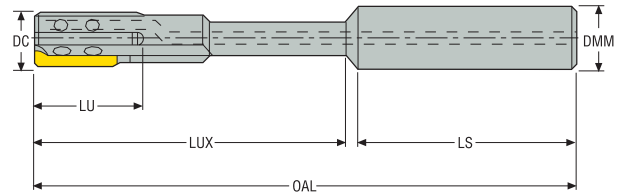
Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR81-8H6-EN1	8	115	40	73	25	10	P0-EN1-xx
SR81-9H6-EN1	9	115	40	73	25	10	P1-EN1-xx
SR81-11H6-EN1	11	133	48	81	25	16	P1-EN1-xx
SR81-13H6-EN1	13	133	48	81	25	16	P2-EN1-xx
SR81-14H6-EN1	14	133	48	81	25	16	P2-EN1-xx
SR81-15H6-EN1	15	133	48	82	25	16	P2-EN1-xx
SR81-16H6-EN1	16	133	48	82	25	16	P2-EN1-xx
SR81-17H6-EN1	17	155	50	100	25	20	P2-EN1-xx
SR81-18H6-EN1	18	155	50	100	25	20	P2-EN1-xx
SR81-19H6-EN1	19	155	50	100	25	20	P2-EN1-xx
SR81-20H6-EN1	20	155	50	100	30	20	P4-EN1-xx
SR81-21H6-EN1	21	191	56	128	30	25	P4-EN1-xx
SR81-22H6-EN1	22	191	56	129	30	25	P4-EN1-xx
SR81-23H6-EN1	23	191	56	129	30	25	P4-EN1-xx
SR81-25H6-EN1	25	191	56	129	30	25	P4-EN1-xx
SR81-26H6-EN1	26	191	56	129	30	25	P4-EN1-xx

Spare Parts

For \varnothing (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key	Torque value
8	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-	-
9	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
10-12	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305	0,5 Nm
13-19	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509	0,9 Nm
20-60	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020	2,0 Nm

For blind holes \varnothing 27H6–60H6







Shank type R1, cylindrical without flat, SR81



- Blade information on page(s) 411, 412
- Internal through coolant
- For cutting data see page(s) 413-421

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR81-27H6-EN1	27	221	56	159	30	25	P4-EN1-xx
SR81-28H6-EN1	28	221	56	159	30	25	P4-EN1-xx
SR81-29H6-EN1	29	221	56	159	30	25	P4-EN1-xx
SR81-30H6-EN1	30	221	56	159	30	25	P4-EN1-xx
SR81-31H6-EN1	31	221	56	160	30	25	P4-EN1-xx
SR81-32H6-EN1	32	221	56	160	30	25	P4-EN1-xx
SR81-34H6-EN1	34	226	56	165	30	25	P4-EN1-xx
SR81-35H6-EN1	35	226	56	165	30	25	P4-EN1-xx
SR81-36H6-EN1	36	226	56	166	30	25	P4-EN1-xx
SR81-38H6-EN1	38	226	56	166	30	25	P4-EN1-xx
SR81-40H6-EN1	40	226	56	166	30	25	P4-EN1-xx
SR81-42H6-EN1	42	226	56	167	30	25	P4-EN1-xx
SR81-44H6-EN1	44	226	56	167	30	25	P4-EN1-xx
SR81-48H6-EN1	48	226	56	168	30	25	P4-EN1-xx
SR81-50H6-EN1	50	226	56	168	30	25	P4-EN1-xx
SR81-52H6-EN1	52	226	56	169	30	25	P4-EN1-xx
SR81-54H6-EN1	54	226	56	169	30	25	P4-EN1-xx
SR81-58H6-EN1	58	226	56	169	30	25	P4-EN1-xx
SR81-60H6-EN1	60	226	56	169	30	25	P4-EN1-xx

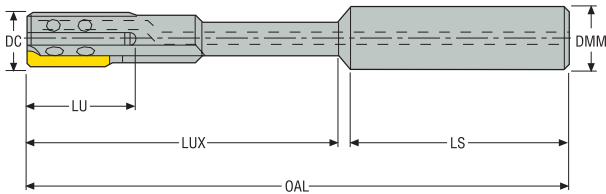
Spare Parts

For \varnothing (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key	Torque value
20-60	 SH4060	 SR-B5	 LH4010	 2SMS795	 BB3.0	 H00-2020	2,0 Nm

Torque key is delivered with driving blade

For blind holes – Intermediate diameter

Shank type R1, cylindrical without flat, SR81



- Blade information on page(s) 411, 412
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 402
- For cutting data see page(s) 413-421

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR81-7.875-XX-XXXX-EN	7,875 - 8,749	115,0	40,0	73,0	25,0	10,0	P0-EN-xx
SR81-8.750-XX-XXXX-EN	8,75 - 9,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR81-9.750-XX-XXXX-EN	9,75 - 10,749	115,0	40,0	73,0	25,0	10,0	P1-EN-xx
SR81-10.750-XX-XXXX-EN	10,75 - 12,749	133,0	48,0	81,0	25,0	16,0	P1-EN-xx
SR81-12.750-XX-XXXX-EN	12,75 - 16,749	133,0	48,0	81,0	25,0	16,0	P2-EN-xx
SR81-16.750-XX-XXXX-EN	16,75 - 19,499	155,0	50,0	100,0	25,0	20,0	P2-EN-xx
SR81-19.500-XX-XXXX-EN	19,5 - 20,499	155,0	50,0	100,0	30,0	20,0	P4-EN-xx
SR81-20.500-XX-XXXX-EN	20,5 - 26,499	191,0	56,0	129,0	30,0	25,0	P4-EN-xx
SR81-26.500-XX-XXXX-EN	26,5 - 32,499	221,0	56,0	160,0	30,0	25,0	P4-EN-xx
SR81-32.500-XX-XXXX-EN	32,5 - 38,499	226,0	56,0	165,0	30,0	25,0	P4-EN-xx
SR81-38.500-XX-XXXX-EN	38,5 - 40,499	226,0	56,0	166,0	30,0	25,0	P4-EN-xx
SR81-40.500-XX-XXXX-EN	40,5 - 44,499	226,0	56,0	167,0	30,0	25,0	P4-EN-xx
SR81-44.500-XX-XXXX-EN	44,5 - 50,499	226,0	56,0	168,0	30,0	25,0	P4-EN-xx
SR81-50.500-XX-XXXX-EN	50,5 - 60,5	226,0	56,0	169,0	30,0	25,0	P4-EN-xx

Spare Parts, included in delivery

Accessories

For Ø (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
9,75-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,75-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509
19,5-60,5	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020
7,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-
8,75-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305

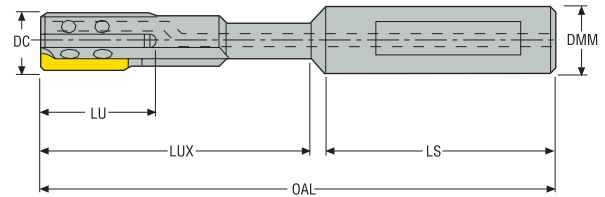
Torque key is delivered with driving blade

Note! When ordering reamers for intermediate diameter, please state: Ø and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3).

Ordering example: SR81-11.50 H7-EN2, P1-EN2-06, CP20.

For blind holes – Short range for turning applications

Shank type R9, cylindrical with flat, SR82



- Blade information on page(s) 411, 412
- Important! Reamer and blade must have the same lead geometry
- For choice of lead geometry EN1, EN2 or EN3 see page(s) 402
- For cutting data see page(s) 413-421

Designation	DC	OAL	LS	LUX	LU	DMM	Blade size
	mm	mm	mm	mm	mm	mm	
SR82-7.875-XX-XXXX-EN	7,875 - 8,749	95,0	40,0	53,0	25,0	10,0	P0-EN-xx
SR82-8.750-XX-XXXX-EN	8,75 - 9,749	95,0	40,0	53,0	25,0	10,0	P1-EN-xx
SR82-9.750-XX-XXXX-EN	9,75 - 10,749	95,0	40,0	53,0	25,0	10,0	P1-EN-xx
SR82-10.750-XX-XXXX-EN	10,75 - 12,749	113,0	40,0	61,0	25,0	16,0	P1-EN-xx
SR82-12.750-XX-XXXX-EN	12,75 - 16,749	113,0	48,0	61,0	25,0	16,0	P2-EN-xx
SR82-16.750-XX-XXXX-EN	16,75 - 19,499	113,0	48,0	60,0	25,0	20,0	P2-EN-xx
SR82-19.500-XX-XXXX-EN	19,5 - 20,499	115,0	50,0	60,0	30,0	20,0	P4-EN-xx
SR82-20.500-XX-XXXX-EN	20,5 - 32,499	115,0	50,0	89,0	30,0	25,0	P4-EN-xx
SR82-32.500-XX-XXXX-EN	32,5 - 36,499	151,0	56,0	105,0	30,0	25,0	P4-EN-xx
SR82-36.500-XX-XXXX-EN	36,5 - 40,499	166,0	56,0	106,0	30,0	25,0	P4-EN-xx
SR82-40.500-XX-XXXX-EN	40,5 - 44,499	166,0	56,0	107,0	30,0	25,0	P4-EN-xx
SR82-44.500-XX-XXXX-EN	44,5 - 50,499	166,0	56,0	108,0	30,0	25,0	P4-EN-xx
SR82-50.500-XX-XXXX-EN	50,5 - 60,5	166,0	56,0	109,0	30,0	25,0	P4-EN-xx

Spare Parts, included in delivery

Accessories

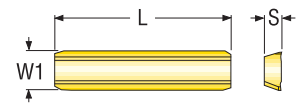
For Ø (mm)	Adjusting screw	Clamp	Clamp screw	Setting key	Support ball	Torque key
9,75-12,749	SH2525	SR-B2	LH2540	1.3SMS795	BB2.0	H00-1305
12,75-19,499	SH3040	SR-B3	LH3050	1.5SMS795	BB2.5	H00-1509
19,5-60,5	SH4060	SR-B5	LH4010	2SMS795	BB3.0	H00-2020
7,875-8,749	SH2020	SR-B0	LH2040	0.9SMS795	BB1.5	-
8,75-9,749	SH2525	SR-B1	LH2540	1.3SMS795	BB2.0	H00-1305

Torque key is delivered with driving blade

Note! When ordering reamers for intermediate diameter, please state: Ø and tolerance of bore to be reamed, lead geometry (EN1, EN2 or EN3).

Ordering example: SR82-11.50 H7EN2, P1-EN2-06, CP20.

P0-P4 Blades



Designation	Insert	L		S		W1		Grades	
		mm	Inch	mm	Inch	mm	Inch	H15	CP20
P0-EN1-0	P0	20	0.787	1,2	0.047	2,5	0.098	00098229	00098244
P0-EN1-06	P0	20	0.787	1,2	0.047	2,5	0.098	00091786	00091762
P0-EN1-12	P0	20	0.787	1,2	0.047	2,5	0.098	00097299	00091971
P0-EN2-0	P0	20	0.787	1,2	0.047	2,5	0.098	00098234	00098249
P0-EN2-06	P0	20	0.787	1,2	0.047	2,5	0.098	00098160	00098170
P0-EN2-12	P0	20	0.787	1,2	0.047	2,5	0.098	00098165	00098175
P0-EN3-0	P0	20	0.787	1,2	0.047	2,5	0.098	00098239	00098254
P0-EN3-06	P0	20	0.787	1,2	0.047	2,5	0.098	00098185	00098195
P0-EN3-12	P0	20	0.787	1,2	0.047	2,5	0.098	00098190	00098200
P1-EN1-0	P1	20	0.787	1,5	0.059	3,0	0.118	00098230	00098245
P1-EN1-06	P1	20	0.787	1,5	0.059	3,0	0.118	00091787	00091764
P1-EN1-12	P1	20	0.787	1,5	0.059	3,0	0.118	00097300	00091972
P1-EN2-0	P1	20	0.787	1,5	0.059	3,0	0.118	00098235	00098250
P1-EN2-06	P1	20	0.787	1,5	0.059	3,0	0.118	00098161	00098171
P1-EN2-12	P1	20	0.787	1,5	0.059	3,0	0.118	00098166	00098176
P1-EN3-0	P1	20	0.787	1,5	0.059	3,0	0.118	00098240	00098255
P1-EN3-06	P1	20	0.787	1,5	0.059	3,0	0.118	00098186	00094702
P1-EN3-12	P1	20	0.787	1,5	0.059	3,0	0.118	00098191	00098201
P2-EN1-0	P2	20	0.787	2,0	0.079	4,5	0.177	00098231	00098246
P2-EN1-06	P2	20	0.787	2,0	0.079	4,5	0.177	00091788	00091765
P2-EN1-12	P2	20	0.787	2,0	0.079	4,5	0.177	00097301	00091973
P2-EN2-0	P2	20	0.787	2,0	0.079	4,5	0.177	00098236	00098251
P2-EN2-06	P2	20	0.787	2,0	0.079	4,5	0.177	00098162	00098172
P2-EN2-12	P2	20	0.787	2,0	0.079	4,5	0.177	00098167	00098177
P2-EN3-0	P2	20	0.787	2,0	0.079	4,5	0.177	00098241	00098256

Designation	Insert	L		S		W1		Grades	
		mm <i>Inch</i>		mm <i>Inch</i>		mm <i>Inch</i>		H15	CP20
P2_EN3-06	P2	20 <i>0.787</i>		2,0 <i>0.079</i>		4,5 <i>0.177</i>		00098187	00098197
P2_EN3-12	P2	20 <i>0.787</i>		2,0 <i>0.079</i>		4,5 <i>0.177</i>		00098192	00098202
P4_EN1-0	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098232	00098247
P4_EN1-06	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00091789	00091766
P4_EN1-12	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098128	00091974
P4_EN2-0	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098237	00098252
P4_EN2-06	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098163	00098173
P4_EN2-12	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098168	00098178
P4_EN3-0	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098242	00098257
P4_EN3-06	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098188	00098198
P4_EN3-12	P4	25,0 <i>0.984</i>		2,3 <i>0.091</i>		7,0 <i>0.276</i>		00098193	00098203

Introduction

Drilling

Reaming

Boring

Annex

Cutting data – Pxx-EN1/EN2-00 metric

SMG		a_p (∅)		f	v_c	
		∅ < 9	∅ ≥ 9		CP20	CP15
P5	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	–
P6	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	–
P7	Pxx-EN1/EN2-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	–
K1	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K2	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	35 (25-50)	50 (25-70)
K3	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K4	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K5	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K6	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K7	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
PM1	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	–
PM2	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	–
PM3	Pxx-EN1/EN2-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	–

SMG = Seco material group

 a_p = mm

f = mm/rev

 v_c = m/min

All cutting data are start values

Cutting data – Pxx-EN1/EN2-00 inch

SMG		a_p (∅)		f	v_c	
		∅ < 9	∅ ≥ 9		CP20	CP15
P5	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P6	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
P7	Pxx-EN1/EN2-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	–
K1	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K2	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	115 (80-165)	165 (80-230)
K3	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K4	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K5	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K6	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K7	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
PM1	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM2	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–
PM3	Pxx-EN1/EN2-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	–

SMG = Seco material group

 a_p = inch

f = in/rev

 v_c = sf/min

All cutting data are start values

Cutting data – Pxx-EN1/EN2-06 metric

SMG		$a_p (\varnothing)$		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M4	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
M5	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
K1	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K2	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	35 (25-50)	50 (25-70)
K3	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K4	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K5	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K6	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K7	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
N11	Pxx-EN1/EN2-06	0,10-0,30	0,20-0,50	0,10-0,30	65 (50-150)	90 (70-150)	-
S1	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S2	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
S3	Pxx-EN1/EN2-06	0,10-0,15	0,10-0,20	0,10-0,30	-	25 (15-30)	-
PM1	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN1/EN2-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

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Cutting data – Pxx-EN1/EN2-06 inch

SMG		a_p (°)		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P12	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	130 (80-150)	150 (100-180)
M1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M4	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
M5	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
K1	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K2	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	115 (80-165)	165 (80-230)
K3	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K4	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K5	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K6	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
K7	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
N11	Pxx-EN1/EN2-06	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-150)	295 (230-490)	–
S1	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S2	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S3	Pxx-EN1/EN2-06	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
PM1	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN1/EN2-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

SMG = Seco material group

 a_p = inch

f = in/rev

 v_c = sf/min

All cutting data are start values

Cutting data – Pxx-EN1/EN2-12 metric

SMG		$a_p (\varnothing)$		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	35 (25-40)	35 (25-40)
M4	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
M5	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	20 (15-30)	30 (25-40)	30 (25-40)
K1	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	90 (80-100)	–
K3	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	90 (80-100)	–
K4	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	70 (60-80)	–
K5	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	70 (60-80)	–
N11	Pxx-EN1/EN2-12	0,10-0,30	0,20-0,50	0,10-0,30	65 (50-150)	90 (70-150)	–
S1	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	–	25 (15-30)	–
S2	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	–	25 (15-30)	–
S3	Pxx-EN1/EN2-12	0,10-0,15	0,10-0,20	0,10-0,30	–	25 (15-30)	–
PM1	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	50 (25-70)	–
PM2	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	50 (25-70)	–
PM3	Pxx-EN1/EN2-12	0,10-0,20	0,10-0,30	0,10-0,30	–	50 (25-70)	–

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

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Cutting data – Pxx-EN1/EN2-12 inch

SMG		a_p (°)		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P12	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	130 (80-150)	150 (100-180)
M1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	115 (80-130)	115 (80-130)
M4	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
M5	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	65 (50-100)	100 (80-130)	100 (80-130)
K1	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K3	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	–
K4	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
K5	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	–
N11	Pxx-EN1/EN2-12	0.004–0.012	0.008–0.020	0.004–0.012	215 (165-490)	295 (230-490)	–
S1	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S2	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
S3	Pxx-EN1/EN2-12	0.004–0.006	0.004–0.008	0.004–0.012	–	80 (50-100)	–
PM1	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN1/EN2-12	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

SMG = Seco material group

 a_p = inch

f = in/rev

 v_c = sf/min

All cutting data are start values

Cutting data – Pxx-EN3-00 metric

SMG		a_p (°)		f	v_c	
		$\varnothing < 9$	$\varnothing \geq 9$		CP20	CP15
P5	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P6	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
P7	Pxx-EN3-00	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-50)	-
K1	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K2	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	35 (25-50)	50 (25-70)
K3	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K4	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K5	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	70 (60-80)	90 (80-100)
K6	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
K7	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	90 (80-100)	120 (80-150)
PM1	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM2	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-
PM3	Pxx-EN3-00	0,10-0,20	0,10-0,30	0,10-0,30	50 (25-70)	-

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

Cutting data – Pxx-EN3-00 inch

SMG		a_p (°)		f	v_c	
		$\varnothing < 9$	$\varnothing \geq 9$		CP20	CP15
P5	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	-
P6	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	-
P7	Pxx-EN3-00	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-165)	-
K1	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K2	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	115 (80-165)	165 (80-230)
K3	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K4	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K5	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	230 (195-260)	295 (260-330)
K6	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
K7	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	295 (260-330)	395 (260-490)
PM1	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	-
PM2	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	-
PM3	Pxx-EN3-00	0.004–0.008	0.004–0.012	0.004–0.012	165 (80-230)	-

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

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Cutting data – Pxx-EN3-06 metric

SMG		a_p (°)		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
M1	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M2	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M3	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	35 (25-40)
M4	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	30 (25-40)
M5	Pxx-EN3-06	0,10-0,15	0,10-0,20	0,10-0,30	-	-	30 (25-40)
K1	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K2	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	35 (25-50)	50 (25-70)
K3	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K4	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K5	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	90 (80-100)
K6	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
K7	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	120 (80-150)
PM1	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN3-06	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

SMG = Seco material group

 a_p = mm

f = mm/rev

 v_c = m/min

All cutting data are start values

Cutting data – Pxx-E3-06 inch

SMG		$a_p (\varnothing)$		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	100 (80-130)	165 (100-195)	195 (130-230)
P12	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	80 (65-100)	130 (80-150)	150 (100-180)
M1	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M2	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M3	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	115 (80-130)
M4	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	100 (80-130)
M5	Pxx-EN3-06	0.004–0.006	0.004–0.008	0.004–0.012	–	–	100 (80-130)
K1	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K2	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	115 (80-165)	165 (80-230)
K3	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K4	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K5	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	230 (195-260)	295 (260-330)
K6	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
K7	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	295 (260-330)	395 (260-490)
PM1	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM2	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–
PM3	Pxx-EN3-06	0.004–0.008	0.004–0.012	0.004–0.012	–	165 (80-230)	–

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

Cutting data – Pxx-EN3-12 metric

SMG		a_p (°)		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P2	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P3	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	40 (30-60)	105 (90-120)	120 (90-150)
P4	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P5	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P6	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P7	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	35 (25-40)	60 (40-70)	80 (60-100)
P8	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P11	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	30 (25-40)	50 (30-60)	60 (40-70)
P12	Pxx-EN3-12	0,10-0,15	0,10-0,20	0,10-0,30	25 (20-30)	40 (25-45)	45 (30-55)
K1	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K3	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	90 (80-100)	-
K4	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
K5	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	70 (60-80)	-
PM1	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM2	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-
PM3	Pxx-EN3-12	0,10-0,20	0,10-0,30	0,10-0,30	-	50 (25-70)	-

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

Cutting data – Pxx-EN3-12 inch

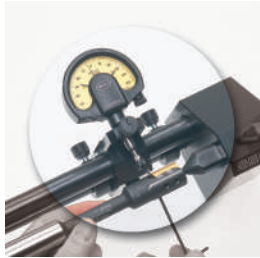


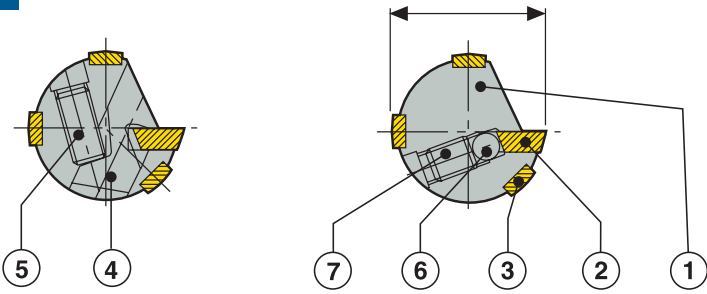
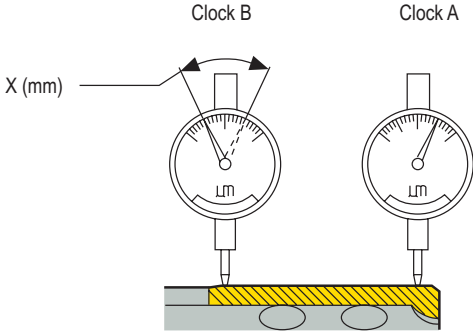
SMG		a_p (°)		f	v_c		
		$\varnothing < 9$	$\varnothing \geq 9$		H15	CP20	CP15
P1	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	130 (100-195)	345 (295-395)	395 (295-490)
P2	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	130 (100-195)	345 (295-395)	395 (295-490)
P3	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	130 (100-195)	345 (295-395)	395 (295-490)
P4	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	115 (80-130)	195 (130-230)	260 (195-330)
P5	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	115 (80-130)	195 (130-230)	260 (195-330)
P6	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	115 (80-130)	195 (130-230)	260 (195-330)
P7	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	115 (80-130)	195 (130-230)	260 (195-330)
P8	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	100 (80-130)	165 (100-195)	195 (130-230)
P11	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	100 (80-130)	165 (100-195)	195 (130-230)
P12	Pxx-EN3-12	0,004-0,006	0,004-0,008	0,004-0,012	80 (65-100)	130 (80-150)	150 (100-180)
K1	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	295 (260-330)	-
K3	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	295 (260-330)	-
K4	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	230 (195-260)	-
K5	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	230 (195-260)	-
PM1	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	165 (80-230)	-
PM2	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	165 (80-230)	-
PM3	Pxx-EN3-12	0,004-0,008	0,004-0,012	0,004-0,012	-	165 (80-230)	-

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Adjustment instructions

Introduction	<p>1. </p>	<p>Loosen the two adjustment screws (7) by a 1/4 turn.</p>
Drilling	<p>2. </p>	<p>Loosen the two clamping screws (5).</p>
Reaming	<p>3. </p>	<p>Clean the blade seat thoroughly then, index the used blade (2) edge or replace it.</p>
Boring	<p>4. </p>	<p>Firmly push the blade against the axial end stop and the adjustment balls (6).</p>
Annex	<p>5. </p>	<p>Tighten the clamping screws carefully. (Hold the key at its shortest end for correct torque).</p>
Annex	<p>6. </p>	<p>Set the µm clock to zero using the cylindrical rear end of guiding pads (3).</p>

Adjustment instructions

<p>7.</p> 	<p>Set the rear end of the blade to a diameter so that a back taper of 0,01 mm/10 mm (0.0004" per every 0.394") blade length is achieved (see figure 2).</p>																												
<p>8.</p> 	<p>Set the μm clock to zero using the cylindrical front end of guiding pads (3).</p>																												
<p>9.</p> 	<p>Set the front end of the blade to 0,02 mm or 0,015 mm (0.0008" or 0.0006") above the guide pads (3) clock A, see figure 1. Check again back taper value (steps 6 and 7) clock B.</p>																												
<p>10.</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Note: If the required diameter is exceeded during adjustment, start again from the beginning to eliminate backlash on adjustment screws.</p> <div style="text-align: right;"> <p>figure 1</p> <p>0,015 mm ($\varnothing \leq 10$ mm) 0,020 mm ($\varnothing > 10$ mm) Clock A value for \varnothing setting</p> <p>0,0006" ($\varnothing \leq 0.394$") 0,0008" ($\varnothing > 0.394$") Clock A value for \varnothing setting</p> </div> <div style="text-align: center; margin-top: 20px;"> <p>figure 2</p> </div> <div style="margin-top: 20px;"> <ul style="list-style-type: none"> • Clock unit = 1 μm (39 μin) • Front and rear clock values valid when set zero on adjacent pad • Rear clock values calculated on back taper of 1 μm/mm (0.00004") of blade </div> <table border="1" style="width: 100%; margin-top: 20px;"> <thead> <tr style="background-color: #0056b3; color: white;"> <th colspan="4">Setting chart</th> </tr> <tr style="background-color: #0056b3; color: white;"> <th>Diameter range mm (inch)</th> <th>Blade size</th> <th>Front Clock A</th> <th>Rear Clock B</th> </tr> </thead> <tbody> <tr> <td>6,875-8,749 (0.271-0.344")</td> <td>P0</td> <td>+15</td> <td>-5</td> </tr> <tr> <td>8,750-10,000 (0.344-0.394")</td> <td>P1</td> <td>+15</td> <td>-5</td> </tr> <tr> <td>10,001-12,749 (0.394-0.502")</td> <td>P1</td> <td>+20</td> <td>0</td> </tr> <tr> <td>12,750-19,499 (0.502-0.768")</td> <td>P2</td> <td>+20</td> <td>0</td> </tr> <tr> <td>19,500-60,500 (0.768-2.382")</td> <td>P4</td> <td>+20</td> <td>0</td> </tr> </tbody> </table>		Setting chart				Diameter range mm (inch)	Blade size	Front Clock A	Rear Clock B	6,875-8,749 (0.271-0.344")	P0	+15	-5	8,750-10,000 (0.344-0.394")	P1	+15	-5	10,001-12,749 (0.394-0.502")	P1	+20	0	12,750-19,499 (0.502-0.768")	P2	+20	0	19,500-60,500 (0.768-2.382")	P4	+20	0
Setting chart																													
Diameter range mm (inch)	Blade size	Front Clock A	Rear Clock B																										
6,875-8,749 (0.271-0.344")	P0	+15	-5																										
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10,001-12,749 (0.394-0.502")	P1	+20	0																										
12,750-19,499 (0.502-0.768")	P2	+20	0																										
19,500-60,500 (0.768-2.382")	P4	+20	0																										

Troubleshooting

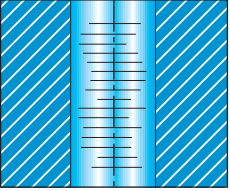
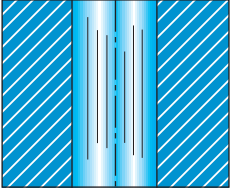
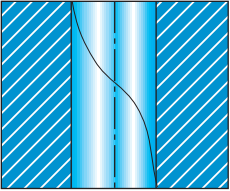
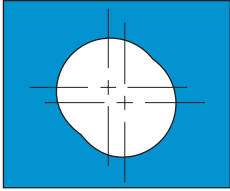
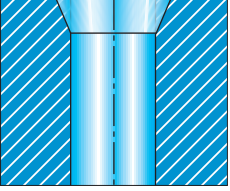
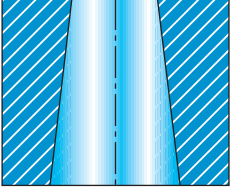
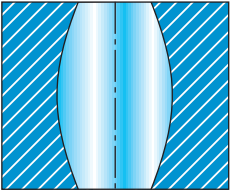
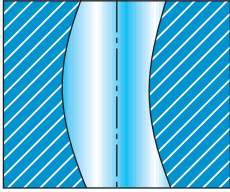
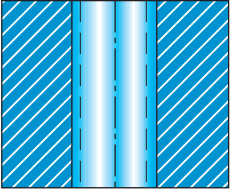
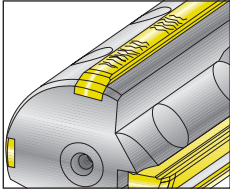
Introduction

Drilling

Reaming

Boring

Annex

<p>Poor surface finish</p>	<p>Facets</p>
<ul style="list-style-type: none"> • Check material allowances • Improve coolant conditions (outlet type, pressure, quality) • Reduce feed rate • Change blade (wrong lead geometry or wrong rake angle) • Check axial position of blade 	<ul style="list-style-type: none"> • Improve centering (part/tool) • Increase back taper 
<p>Retraction marks</p>	<p>Off center/Ovality</p>
<ul style="list-style-type: none"> • Improve coolant conditions (outlet type, pressure, quality) • Improve centering (part/tool) • Increase back taper 	<ul style="list-style-type: none"> • Improve clamping (workpiece deformation) • Check material allowance • Improve centering (part/tool) • Check axial position of blade 
<p>Tapered entry</p>	<p>Tapered hole</p>
<ul style="list-style-type: none"> • Reduce feed rate • Improve centering (part/tool) • Check back taper • Reduce radial run-out 	<ul style="list-style-type: none"> • Improve centering (part/tool) • Check back taper 
<p>Deformed hole</p>	<p>Curved hole</p>
<ul style="list-style-type: none"> • Improve clamping (workpiece deformation) 	<ul style="list-style-type: none"> • Change blade (wrong lead geometry) • Check axial position of blade 
<p>Too large diameter</p>	
<ul style="list-style-type: none"> • Improve centering (part/tool) • Adjust diameter (too large) 	<p>Adhesion to pads</p> <ul style="list-style-type: none"> • Improve coolant conditions (outlet type, pressure, quality) • Adjust diameter (too small) 




Xfix™

Xfix™ large-diameter, multi-tooth reamers are all about bringing the highest possible performance and precision to hole production.

- Hole depths up to 6,5xD within a diameter of 9.5 – 154.5 mm (2.03" - 6.083")
- Quick and easy to adjust, only one screw per tooth is required to set diameter
- Accurate adjusting system to achieve tight tolerances between 16 to 25 μm (.0006"-.0010")
- Inserts that have either four or eight numbered edges

Range overview

	Ø Range	Reaming depth	Drill Ø tolerance	Intermediate diameter	Surface finish
<p>Xfix™</p> 	39,500-154,500 mm (1.5551-6.0827")	2,5-6,5 x D	IT 6	Yes, available through Custom design	R _a 0,8-1,2 µm (R _a 31-47 µin)

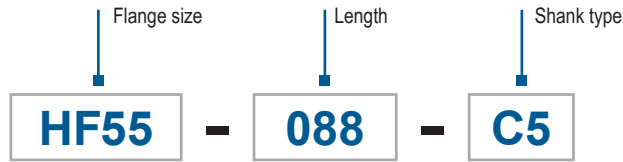
Xfix™ is a specially developed Seco Reaming programme, dedicated for large Ø 39,5 – 154,5 mm (1.555" – 6.083"). Design includes adjustable and indexable inserts to achieve IT 6 accurate tolerance, as well as a built in adjustable run-out adapter to guarantee component quality. Multi-teeth construction and patented pre-loaded guiding pads offering maximum stability and productivity for large Ø reaming operations.

Feature details

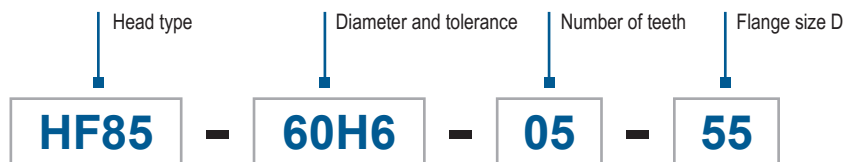
<ul style="list-style-type: none"> • 4 or 8 cutting edges for optimisation in all materials • Stable clamping system • Easy adjustment with 1 adjusting screw for easy setting • Grade and geometry choice for different applications <ul style="list-style-type: none"> • Patented pre-loaded guiding pads system for application stability • Pads lubrication for performance and safety 	<p>The image shows an exploded view of the reamer's clamping system, including a black clamping ring and a smaller black component. Below this is a 3D perspective view of the reamer head with yellow guiding pads. A close-up inset on the right shows a single guiding pad being adjusted with a red screwdriver, with red arrows indicating the adjustment direction.</p>	<p>Introduction</p>
<ul style="list-style-type: none"> • Integrated adjustable adapter for perfect run-out control 	<p>The diagram shows a side view of the reamer assembly. A dial indicator is positioned to measure the run-out of the reamer's shank. The reamer is mounted on a shaft, and a large grey flange is visible at the end of the shaft.</p>	<p>Drilling</p>
<ul style="list-style-type: none"> • Shanks and extension program from Seco Tooling Systems catalog offer maximum modularity 	<p>The image displays a variety of reamer shanks and extensions. There are several different lengths and diameters, some with different cutting edge geometries. The components are arranged in a grid-like fashion, showing the modularity of the system.</p>	<p>Reaming</p>
		<p>Boring</p>
		<p>Annex</p>

Code keys

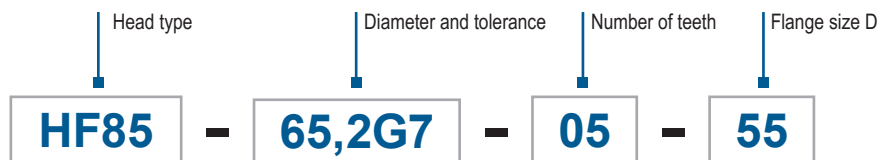
Adapters



Standard heads



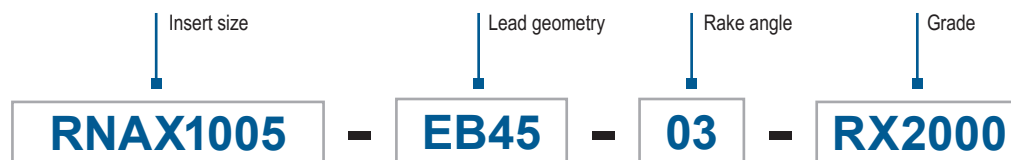
Heads Intermediate



Head type information:

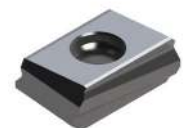
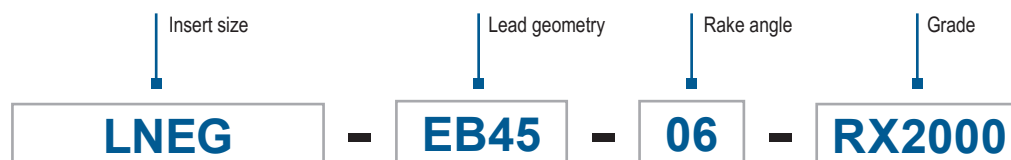
- HF85 , through bore, short chipping material
- HF85B, blind bore, short chipping material
- HF86, through bore, all material
- HF86B, blind bore, all material

Inserts



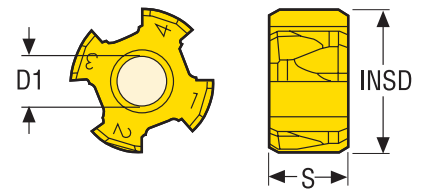
RNAX insert for HF85 and HF 85B Xfix heads

Inserts



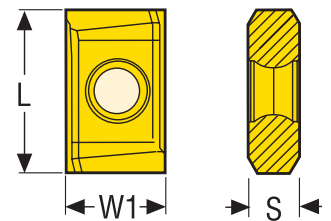
LNEG inserts for HF86 and HF86B Xfix heads

RNAX



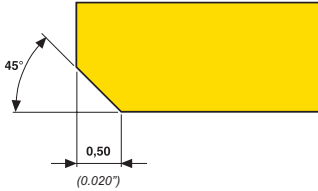
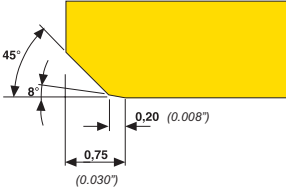
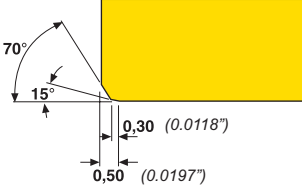
Designation	Inserts	INSD		S		D1		Grades		rake angle
		mm	Inch	mm	Inch	mm	Inch	RX1500	RX2000	
RNAX1005-EB1570-03	RNAX	10,0	0,394	5,5	0,217	3,5	0,138	02687601	02687603	3°
RNAX1005-EB45-03	RNAX	10,0	0,394	5,5	0,217	3,5	0,138	02687600	02688608	3°
RNAX1005-EB845-03	RNAX	10,0	0,394	5,5	0,217	3,5	0,138	02687593	02688606	3°

LNEG



Designation	Inserts	L		S		W1		Grades			rake angle
		mm	Inch	mm	Inch	mm	Inch	RX1500	RX2000	CF	
LNEG1003-EB45-03	LNEG	10,0	0,394	3,5	0,138	6,35	0,25		02781311		3°
LNEG1003-EB45-06	LNEG	10,0	0,394	3,5	0,138	6,35	0,25	02904277	02781313	02904276	6°
LNEG1003-EB845-03	LNEG	10,0	0,394	3,5	0,138	6,35	0,25		02781314		3°
LNEG1003-EB845-06	LNEG	10,0	0,394	3,5	0,138	6,35	0,25		02781315		6°

Lead geometry

<p>Lead Geometry EB45 – Application</p> <p>Chip control +++ Surface Finish + R_a 1,2 - 2 μm (Surface Finish + R_a 0.047 - 0.0787 μin) First choice geometry</p>	
<p>Lead Geometry EB845 – Application</p> <p>Chip control ++ Surface Finish +++ R_a 0,4 - 1,2 μm (Surface Finish +++ R_a 0.0157 - 0,047 μin)</p>	
<p>Lead Geometry EB1570 – Application</p> <p>Chip control ++ Surface Finish ++ R_a 0,8 - 1,6 μm (Surface Finish ++ R_a 0.031 - 0.0630 μin) Stability for long reach application +++</p>	

Introduction




Drilling

Reaming

Boring

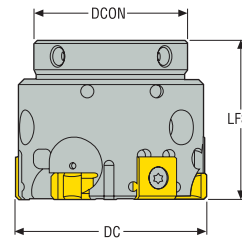
Annex

Grades

Grades		
	RX1500	Coated Cermet A resistant coated grade for performance optimization in steel and cast iron.
	RX2000	Coated High performance coated grade suitable for all materials.
	CF	Cermet A wear resistant grade for performance optimization in steel.

HF85

Heads for RNAX inserts, through bore \varnothing 39,5-59,499 mm / 1.555-2.342"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85-39.5/44.499-03-32	39,5 1.555	44,499 1.752	33,0 1.299	32,0 1.260	0,41 0.900	3
HF85-44.5/49.499-03-32	44,5 1.752	49,499 1.949	33,0 1.299	32,0 1.260	0,51 1.120	3
HF85-49.5/54.499-03-32	49,5 1.949	54,499 2.146	33,0 1.299	32,0 1.260	0,62 1.370	3
HF85-54.5/59.499-03-32	54,5 2.146	59,499 2.342	33,0 1.299	32,0 1.260	0,74 1.630	3

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF85 03-32	SH4075S	CARTCYHF16	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF85 03-32	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

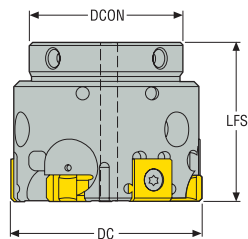
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.


Torque value H00-2020: 2 Nm.

HF85B








Heads for RNAX inserts, blind bore \varnothing 39,5-59,499 mm / 1.555-2.342"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85B-39.5/44.499-03-32	39,5 1.555	44,499 1.752	33,0 1.299	32,0 1.260	0,41 0.900	3 RNAX1005...
HF85B-44.5/49.499-03-32	44,5 1.752	49,499 1.949	33,0 1.299	32,0 1.260	0,51 1.120	3 RNAX1005...
HF85B-49.5/54.499-03-32	49,5 1.949	54,499 2.146	33,0 1.299	32,0 1.260	0,62 1.370	3 RNAX1005...
HF85B-54.5/59.499-03-32	54,5 2.146	59,499 2.342	33,0 1.299	32,0 1.260	0,74 1.630	3 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 03-32	SH4075S	CARTCYHF16B	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 03-32	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

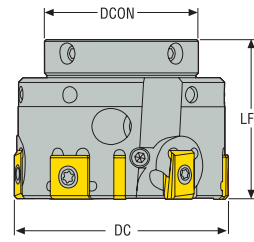
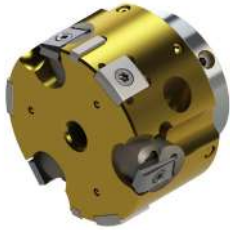
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.


Torque value H00-2020: 2 Nm.

HF86








Heads for LNEG inserts, through bore \varnothing 39,5-59,499 mm / 1.555-2.342"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86-39.5/44.499-03-32	39,5 1.555	44,499 1.752	33,0 1.299	32,0 1.260	0,41 0.900	3 LNEG1003...
HF86-44.5/49.499-03-32	44,5 1.752	49,499 1.949	33,0 1.299	32,0 1.260	0,51 1.120	3 LNEG1003...
HF86-49.5/54.499-03-32	49,5 1.949	54,499 2.146	33,0 1.299	32,0 1.260	0,62 1.370	3 LNEG1003...
HF86-54.5/59.499-03-32	54,5 2.146	59,499 2.342	33,0 1.299	32,0 1.260	0,74 1.630	3 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86 03-32	SH4075S	CARTCYLN16	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86 03-32	H00-2020	T00-07P09

Note

Torque driver H00-2020 for clamp screws

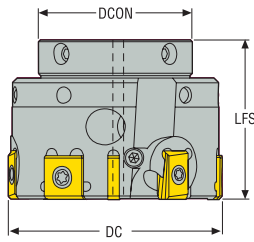
Torque driver T00-07P09 for insert screws

Torque value T00-07P09: 0,9 Nm.


Torque value H00-2020: 2 Nm.

HF86B








Heads for LNEG inserts, blind bore \varnothing 39,5-59,499 mm / 1.555-2.342"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86B-39.5/44.499-03-32	39,5 1.555	44,499 1.752	33,0 1.299	32,0 1.260	0,41 0.900	3 LNEG1003...
HF86B-44.5/49.499-03-32	44,5 1.752	49,499 1.949	33,0 1.299	32,0 1.260	0,51 1.120	3 LNEG1003...
HF86B-49.5/54.499-03-32	49,5 1.949	54,499 2.146	33,0 1.299	32,0 1.260	0,62 1.370	3 LNEG1003...
HF86B-54.5/59.499-03-32	54,5 2.146	59,499 2.342	33,0 1.299	32,0 1.260	0,74 1.630	3 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 03-32	SH4075S	CARTCYLN16B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 03-32	H00-2020	T00-07P09

Note

Torque driver H00-2020 for clamp screws

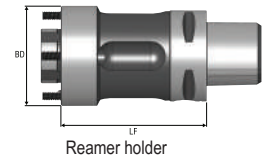
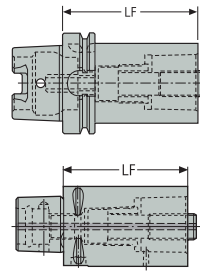
Torque driver T00-07P09 for insert screws

Torque value T00-07P09: 0,9 Nm.

Torque value H00-2020: 2 Nm.

HF32

Seco-Capto™ shank for \varnothing 39,5-59,499 mm



Extension

Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm	mm	mm	kg
HF32-050-C3	02688610	–	50	C3	32	0,3
HF32...HSKA63	–	65	245	HSK-A63	32	0,0
HF32...HSKA80	–	100	209	HSK-A80	32	0,0
HF32...HSKA100	–	70	245	HSK-A100	32	0,0
HF32...DIN40ADB	–	60	252	DIN40ADB	32	0,0
HF32...DIN50ADB	–	60	317	DIN50ADB	32	0,0
HF32...BT40ADB	–	65	252	BT40ADB	32	0,0
HF32...BT50ADB	–	75	317	BT50ADB	32	0,0

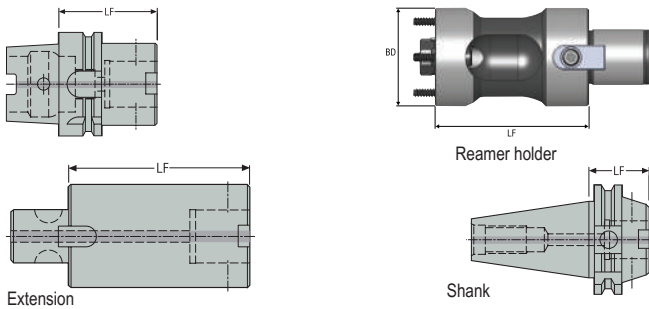
Shanks and extensions for HF32-050-C3 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
HA10-C3-032-080	10197961	80	HSK-A100	C3	2,3
HA06-C4-040-080	10197964	80	HSK-A63	C4	1,2
C3-390B.140-40030	02924104	30	DIN40	C3	0,8
C3-390B.55-40030	02925959	30	BT40	C3	0,9
C3-390B.55-40060	02925960	60	BT40	C3	1,1
C3-390B.140-50030	02924106	30	DIN50	C3	2,6
C3-390B.140-50060	02924107	60	DIN50	C3	2,7
C3-390B.58-50040	02925961	40	BT50	C3	3,5
C3-390B.58-50070	02925962	70	BT50	C3	3,7

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
C3-391.01-32060A	75039884	–	C3	C3	0,34
C3-391.01-32080A	00090847	–	C3	C3	0,5
C4-391.02-32055A	75039889	–	C4	C3	0,42
C4-391.02-32070A	02535687	–	C4	C3	0,56
C5-391.02-32060A	75039890	–	C5	C3	0,64
C6-391.02-32070A	75039892	–	C6	C3	1,06

HF32

Graflex® shank for Ø 39,5-59,499 mm



Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF32-050-G3	02698870	-	50	G3	32	0,4
HF32...HSKA63	-	65	245	HSK-A63	32	0,0
HF32...HSKA80	-	100	209	HSK-A80	32	0,0
HF32...HSKA100	-	70	245	HSK-A100	32	0,0
HF32...DIN40ADB	-	60	252	DIN40ADB	32	0,0
HF32...DIN50ADB	-	60	317	DIN50ADB	32	0,0
HF32...BT40ADB	-	65	252	BT40ADB	32	0,0
HF32...BT50ADB	-	75	317	BT50ADB	32	0,0

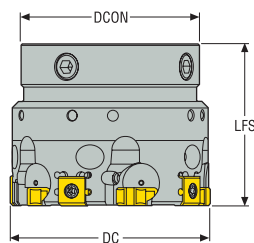
Shanks and extensions for HF32-050-G3 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Graflex size	Weight
		mm			kg
EM93044011850	00086918	50	HSK-A63	G3	0,73
EM93064011855	00086925	55	HSK-A100	G3	2,1
EM34694011835	02420097	35	DIN40	G3	0,91
EM346940118100	02503298	100	DIN40	G3	1,22
EM34144011840	02503366	40	BT40	G3	1,07
EM341440118100	02503367	100	BT40	G3	1,31
EM34714011835	02503307	35	DIN50	G3	2,67
EM34164011845	02503376	45	BT50	G3	3,58
EM341640118120	02503377	120	BT50	G3	3,9


Designation Extension	Item number	LF	Taper	Graflex size	Weight
		mm			kg
M402330	00056758	-	G3	G3	0,24
M402331	75056759	-	G3	G3	0,36

HF85








Heads for RNAX inserts, through bore \varnothing 59,5-84,499 mm / 2.343-3.327"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85-59.5/64.499-05-55	59,5 2.343	64,499 2.539	50,0 1.969	55,0 2.165	1,3 2.870	5 RNAX1005...
HF85-64.5/69.499-05-55	64,5 2.539	69,499 2.736	50,0 1.969	55,0 2.165	1,5 3.310	5 RNAX1005...
HF85-69.5/74.499-05-55	69,5 2.736	74,499 2.933	50,0 1.969	55,0 2.165	1,75 3.860	5 RNAX1005...
HF85-74.5/79.499-05-55	74,5 2.933	79,499 3.130	50,0 1.969	55,0 2.165	2,0 4.410	5 RNAX1005...
HF85-79.5/84.499-05-55	79,5 3.130	84,499 3.327	50,0 1.969	55,0 2.165	2,2 4.850	5 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85 05-55	SH4075S	CARTCYHF20	LDH4012	C03010-T09P	H2.0-2D	4SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85 05-55	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

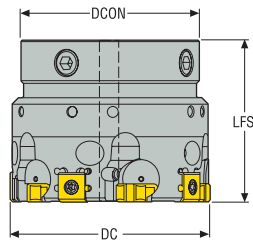
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.


Torque value H00-2020: 2 Nm.

HF85B








Heads for RNAX inserts, blind bore \varnothing 59,5-84,499 mm / 2.343-3.327"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85B-59.5/64.499-05-55	59,5 2.343	64,499 2.539	50,0 1.969	55,0 2.165	1,3 2.870	5 RNAX1005...
HF85B-64.5/69.499-05-55	64,5 2.539	69,499 2.736	50,0 1.969	55,0 2.165	1,5 3.310	5 RNAX1005...
HF85B-69.5/74.499-05-55	69,5 2.736	74,499 2.933	50,0 1.969	55,0 2.165	1,75 3.860	5 RNAX1005...
HF85B-74.5/79.499-05-55	74,5 2.933	79,499 3.130	50,0 1.969	55,0 2.165	2,0 4.410	5 RNAX1005...
HF85B-79.5/84.499-05-55	79,5 3.130	84,499 3.327	50,0 1.969	55,0 2.165	2,2 4.850	5 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 05-55	SH4075S	CARTCYHF20B	LDH4012	C03010-T09P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 05-55	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

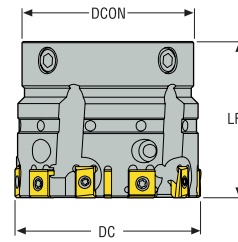
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.

Torque value H00-2020: 2 Nm.

HF86

Heads for LNEG inserts, through bore \varnothing 59,5-84,499 mm / 2.343-3.327"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight		Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs		
HF86-59.5-64.499-05-55	59,5 2.343	64,499 2.539	50,0 1.969	55,0 2.165	1,3 2.870	5	LNEG1003...
HF86-64.5-69.499-05-55	64,5 2.539	69,499 2.736	50,0 1.969	55,0 2.165	1,5 3.310	5	LNEG1003...
HF86-69.5-74.499-05-55	69,5 2.736	74,499 2.933	50,0 1.969	55,0 2.165	1,75 3.860	5	LNEG1003...
HF86-74.5-79.499-05-55	74,5 2.933	79,499 3.130	50,0 1.969	55,0 2.165	2,0 4.410	5	LNEG1003...
HF86-79.5-84.499-05-55	79,5 3.130	84,499 3.327	50,0 1.969	55,0 2.165	2,2 4.850	5	LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF86 05-55	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF86 05-55	H00-2020	T00-07P09

Note

Torque driver H00-2020 for clamp screws

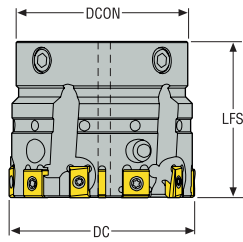
Torque driver T00-07P09 for insert screws

Torque value T00-07P09: 0,9 Nm.


Torque value H00-2020: 2 Nm.

HF86B








Heads for LNEG inserts, blind bore \varnothing 59,5-84,499 mm / 2.343-3.327"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86B-59.5/64.499-05-55	59,5 2.343	64,499 2.539	50,0 1.969	55,0 2.165	1,3 2.870	5 LNEG1003...
HF86B-64.5/69.499-05-55	64,5 2.539	69,499 2.736	50,0 1.969	55,0 2.165	1,5 3.310	5 LNEG1003...
HF86B-69.5/74.499-05-55	69,5 2.736	74,499 2.933	50,0 1.969	55,0 2.165	1,75 3.860	5 LNEG1003...
HF86B-74.5/79.499-05-55	74,5 2.933	79,499 3.130	50,0 1.969	55,0 2.165	2,0 4.410	5 LNEG1003...
HF86B-79.5/84.499-05-55	79,5 3.130	84,499 3.327	50,0 1.969	55,0 2.165	2,2 4.850	5 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 05-55	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 05-55	H00-2020	T00-07P09

Note

Torque driver H00-2020 for clamp screws

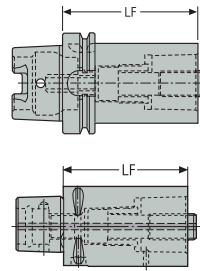
Torque driver T00-07P09 for insert screws

Torque value T00-07P09: 0,9 Nm.

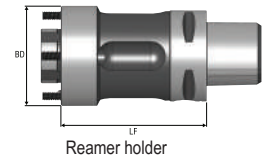
Torque value H00-2020: 2 Nm.

HF55

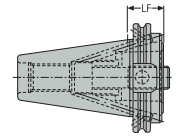
Seco-Capto™ shank for \varnothing 59,5-84,499 mm



Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF55-080-C5	02688647	-	80	C5	55	1,5
HF55...HSKA63	-	80	239	HSK-A63	55	0,0
HF55...HSKA80	-	100	239	HSK-A80	55	0,0
HF55...HSKA100	-	100	239	HSK-A100	55	0,0
HF55...DIN40ADB	-	80	239	DIN40ADB	55	0,0
HF55...DIN50ADB	-	80	304	DIN50ADB	55	0,0
HF55...BT40ADB	-	80	239	BT40ADB	55	0,0
HF55...BT50ADB	-	80	304	BT50ADB	55	0,0

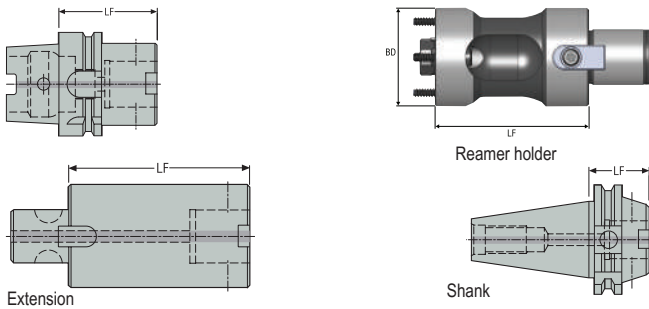
Shanks and extensions for HF55-080-C5 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
HA10-C4-040-090	10197963	90	HSK-A100	C4	2,5
HA06-C5-050-090	10197966	90	HSK-A63	C5	1,4
C5-390B.140-40040	02924112	40	DIN40	C5	0,9
C5-390B.140-40080	02924113	80	DIN40	C5	1,5
C5-390B.55-40050	02925967	50	BT40	C5	1,1
C5-390B.55-40090	02925968	90	BT40	C5	1,7
C5-390B.140-50030	02924114	30	DIN50	C5	2,6
C5-390B.140-50070	02924115	70	DIN50	C5	3,1
C5-390B.58-50040	02925969	40	BT50	C5	3,4
C5-390B.58-50080	02925970	80	BT50	C5	4,0

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
C5-391.01-50080A	75039886	-	C5	C5	1,12
C5-391.01-50100A	00004773	-	C5	C5	1,39
C6-391.02-50080A	75039894	-	C6	C5	1,45
C6-391.02-50110A	02207400	-	C6	C5	2,15
C8-391.02-50080B	03080011	-	C8	C5	2,4

HF55

Graflex® shank for \varnothing 59,5-84,499 mm



Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF55-080-G5	02698871	-	80	G5	55	1,3
HF55...HSKA63	-	80	239	HSK-A63	55	0,0
HF55...HSKA80	-	100	239	HSK-A80	55	0,0
HF55...HSKA100	-	100	239	HSK-A100	55	0,0
HF55...DIN40ADB	-	80	239	DIN40ADB	55	0,0
HF55...DIN50ADB	-	80	304	DIN50ADB	55	0,0
HF55...BT40ADB	-	80	239	BT40ADB	55	0,0
HF55...BT50ADB	-	80	304	BT50ADB	55	0,0

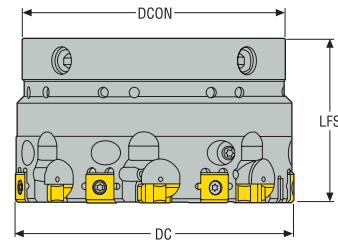
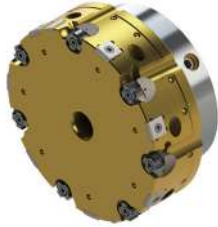
Shanks and extensions for HF55-080-G5 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Graflex size	Weight
		mm			kg
EM93044012860	00086920	60	HSK-A63	G5	0,98
EM930440128100	00086921	100	HSK-A63	G5	1,58
EM930440128140	00086922	140	HSK-A63	G5	2,18
EM93064012865	00086927	65	HSK-A100	G5	2,37
EM930640128110	00086928	110	HSK-A100	G5	3,02
EM930640128150	00086929	150	HSK-A100	G5	3,7
EM34694012840	02458421	40	DIN40	G5	0,93
EM34694012880	02503301	80	DIN40	G5	1,5
EM346940128120	02503302	120	DIN40	G5	2,08
EM34144012845	02457989	45	BT40	G5	1,12
EM34144012880	02503371	80	BT40	G5	1,54
EM341440128120	02503372	120	BT40	G5	2,12
EM34714012840	02503312	40	DIN50	G5	2,75
EM341640128100	02503381	100	BT50	G5	4,22
EM34164012855	02503380	55	BT50	G5	4,0
EM341640128140	02503382	140	BT50	G5	4,8

Designation Extension	Item number	LF	Taper	Graflex size	Weight
		mm			kg
M402550	00056762	-	G5	G5	0,72
M402551	00056763	-	G5	G5	1,12
M402552	00056764	-	G5	G5	1,48

HF85

Heads for RNAX inserts, through bore \varnothing 84,5-119,499 mm / 3.327-4.705"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85-84.5/89.499-07-80	84,5 3.327	89,499 3.524	50,0 1.969	80,0 3.150	1,68 3.700	7 RNAX1005...
HF85-89.5/94.499-07-80	89,5 3.524	94,499 3.720	50,0 1.969	80,0 3.150	1,85 4.080	7 RNAX1005...
HF85-94.5/99.499-07-80	94,5 3.720	99,499 3.917	50,0 1.969	80,0 3.150	2,02 4.450	7 RNAX1005...
HF85-99.5/104.499-07-80	99,5 3.917	104,499 4.114	50,0 1.969	80,0 3.150	2,2 4.850	7 RNAX1005...
HF85-104.5/109.499-07-80	104,5 4.114	109,499 4.311	50,0 1.969	80,0 3.150	2,4 5.290	7 RNAX1005...
HF85-109.5/114.499-07-80	109,5 4.311	114,499 4.508	50,0 1.969	80,0 3.150	2,61 5.750	7 RNAX1005...
HF85-114.5/119.499-07-80	114,5 4.508	119,499 4.705	50,0 1.969	80,0 3.150	2,82 6.220	7 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF85 07-80	SH4075S	CARTCYHF20	LDH4012	C03010-T09P	H2.0-2D	4SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF85 07-80	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

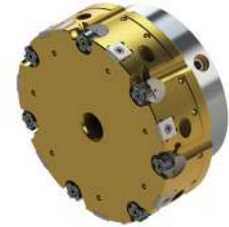
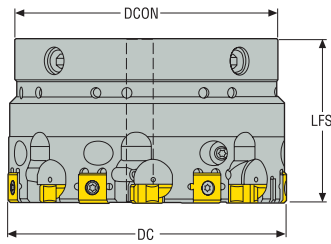
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.

Torque value H00-2020: 2 Nm.

HF85B

Heads for RNAX inserts, blind bore \varnothing 84,5-119,499 mm / 3.327-4.705"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85B-84.5/89.499-07-80	84,5 3.327	89,499 3.524	50,0 1.969	80,0 3.150	1,68 3.700	7 RNAX1005...
HF85B-89.5/94.499-07-80	89,5 3.524	94,499 3.720	50,0 1.969	80,0 3.150	1,85 4.080	7 RNAX1005...
HF85B-94.5/99.499-07-80	94,5 3.720	99,499 3.917	50,0 1.969	80,0 3.150	2,02 4.450	7 RNAX1005...
HF85B-99.5/104.499-07-80	99,5 3.917	104,499 4.114	50,0 1.969	80,0 3.150	2,2 4.850	7 RNAX1005...
HF85B-104.5/109.499-07-80	104,5 4.114	109,499 4.311	50,0 1.969	80,0 3.150	2,4 5.290	7 RNAX1005...
HF85B-109.5/114.499-07-80	109,5 4.311	114,499 4.508	50,0 1.969	80,0 3.150	2,61 5.750	7 RNAX1005...
HF85B-114.5/119.499-07-80	114,5 4.508	119,499 4.705	50,0 1.969	80,0 3.150	2,82 6.220	7 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF85B 07-80	SH4075S	CARTCYHF20B	LDH4010	C03010-T09P	H2.0-2D	2SMS795	B6027

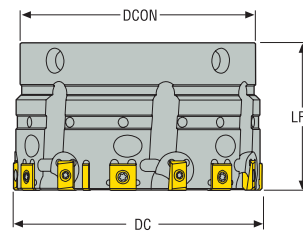
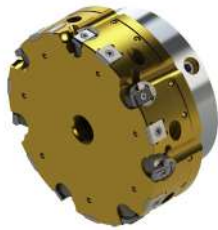
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF85B 07-80	H00-2020	T00-09P20

Note
Torque driver H00-2020 for clamp screws
Torque driver T00-09P20 for insert screws
Torque value T00-09P20: 2 Nm.
Torque value H00-2020: 2 Nm.

HF86

Heads for LNEG inserts, through bore \varnothing 84,5-119,499 mm / 3.327-4.705"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86-84.5/89.499-07-80	84,5 3.327	89,499 3.524	50,0 1.969	80,0 3.150	1,68 3.700	7 LNEG1003...
HF86-89.5/94.499-07-80	89,5 3.524	94,499 3.720	50,0 1.969	80,0 3.150	1,85 4.080	7 LNEG1003...
HF86-94.5/99.499-07-80	94,5 3.720	99,499 3.917	50,0 1.969	80,0 3.150	2,02 4.450	7 LNEG1003...
HF86-99.5/104.499-07-80	99,5 3.917	104,499 4.114	50,0 1.969	80,0 3.150	2,2 4.850	7 LNEG1003...
HF86-104.5/109.499-07-80	104,5 4.114	109,499 4.311	50,0 1.969	80,0 3.150	2,4 5.290	7 LNEG1003...
HF86-109.5/114.499-07-80	109,5 4.311	114,499 4.508	50,0 1.969	80,0 3.150	2,61 5.750	7 LNEG1003...
HF86-114.5/119.499-07-80	114,5 4.508	119,499 4.705	50,0 1.969	80,0 3.150	2,82 6.220	7 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF86 07-80	SH4075S	CARTCYLN20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF86 07-80	H00-2020	T00-07P09

Note

Torque driver H00-2020 for clamp screws

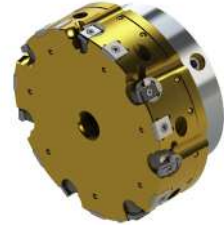
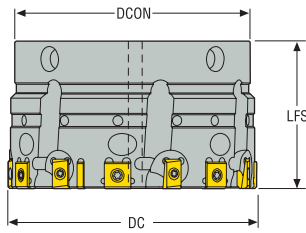
Torque driver T00-07P09 for insert screws

Torque value T00-07P09: 0,9 Nm.

Torque value H00-2020: 2 Nm.

HF86B

Heads for LNEG inserts, blind bore \varnothing 84,5-119,499 mm / 3.327-4.705"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch		
HF86B-84.5/89.499-07-80	84,5 3.327	89,499 3.524	50,0 1.969	80,0 3.150	1,68 3.700	LNEG1003...
HF86B-89.5/94.499-07-80	89,5 3.524	94,499 3.720	50,0 1.969	80,0 3.150	1,85 4.080	LNEG1003...
HF86B-94.5/99.499-07-80	94,5 3.720	99,499 3.917	50,0 1.969	80,0 3.150	2,02 4.450	LNEG1003...
HF86B-99.5/104.499-07-80	99,5 3.917	104,499 4.114	50,0 1.969	80,0 3.150	2,2 4.850	LNEG1003...
HF86B-104.5/109.499-07-80	104,5 4.114	109,499 4.311	50,0 1.969	80,0 3.150	2,4 5.290	LNEG1003...
HF86B-109.5/114.499-07-80	109,5 4.311	114,499 4.508	50,0 1.969	80,0 3.150	2,61 5.750	LNEG1003...
HF86B-114.5/119.499-07-80	114,5 4.508	119,499 4.705	50,0 1.969	80,0 3.150	2,82 6.220	LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF86B	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

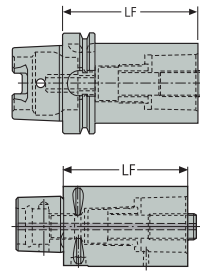
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
HF86B	H00-2020	T00-07P09

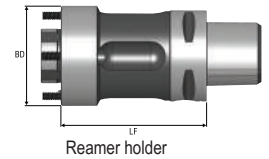
Note
Torque driver H00-2020 for clamp screws
Torque driver T00-07P09 for insert screws
Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF80

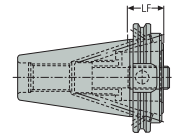
Seco-Capto™ shank for \varnothing 84,5-119,499 mm



Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF80-080-C6	02688648	–	80	C6	80	2,5
HF80...HSKA80	–	100	239	HSK-A80	80	0,0
HF80...HSKA100	–	100	239	HSK-A100	80	0,0
HF80...DIN50ADB	–	80	304	DIN50ADB	80	0,0
HF80...BT50ADB	–	80	304	BT50ADB	80	0,0

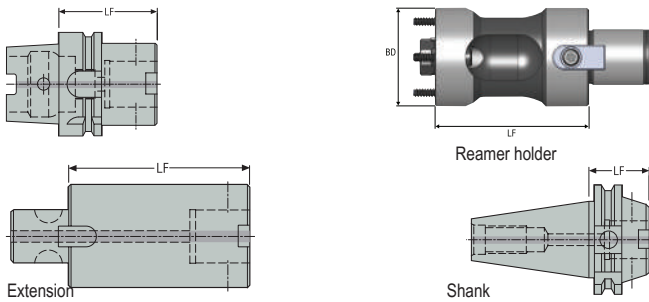
Shanks and extensions for HF80-080-C6 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
HA10-C6-063-110	10197967	110	HSK-A100	C6	3,7
C6-390B.140-40085	02924116	85	DIN40	C6	1,8
C6-390B.140-50030	02924117	30	DIN50	C6	2,5
C6-390B.140-50080	02924118	80	DIN50	C6	3,6
C6-390B.55-40075	02925971	75	BT40	C6	1,7
C6-390B.58-50100	02925973	100	BT50	C6	4,6
C6-390B.58-50050	02925972	50	BT50	C6	3,5

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
C6-391.01-63100A	75039887	–	C6	C6	2,2
C6-391.01-63140A	00004840	–	C6	C6	3,1
C6-391.01-63060	02300834	–	C6	C6	1,31

HF80

Graflex® shank for Ø 84,5-119,499 mm



Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF80-080-G6	02698873	-	80	G6	80	3,0
HF80...HSKA80	-	100	239	HSK-A80	80	0,0
HF80...HSKA100	-	100	239	HSK-A100	80	0,0
HF80...DIN50ADB	-	80	304	DIN50ADB	80	0,0
HF80...BT50ADB	-	80	304	BT50ADB	80	0,0

Shanks and extensions for HF80-080-G6 (see Seco Tooling Systems for more details).

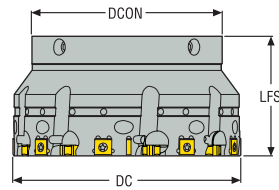
Designation Shank	Item number	LF	Taper	Graflex size	Weight
		mm			kg
EM93044013670	00086923	70	HSK-A63	G6	1,21
EM930440136120	00086924	120	HSK-A63	G6	2,38
EM930640136120	00086931	120	HSK-A100	G6	3,82
EM930640136160	00086932	160	HSK-A100	G6	4,72
EM34694013660	02503303	60	DIN40	G6	1,24
EM346940136120	02503304	120	DIN40	G6	2,65
EM34144013650	02503373	50	BT40	G6	1,13
EM341440136120	02503374	120	BT40	G6	2,78
EM34714013645	02503317	45	DIN50	G6	2,88
EM347140136100	02503318	100	DIN50	G6	4,1
EM347140136140	02503319	140	DIN50	G6	4,99
EM34164013663	02503383	63	BT50	G6	4,2
EM341640136100	02503384	100	BT50	G6	4,6
EM341640136140	02503385	140	BT50	G6	5,54

Shanks and extensions for HF32-050-G3 (see Seco Tooling Systems for more details).


Designation Extension	Item number	LF	Taper	Graflex size	Weight
		mm			kg
M402660	00056765	-	G6	G6	1,38
M402661	00056766	-	G6	G6	2,1
M402662	00056767	-	G6	G6	2,82

HF85








Heads for RNAX inserts, through bore \varnothing 119,5-154,499 mm / 4.705-6.083"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85-119.5/124.499-09-100	119,5 4.705	124,499 4.902	63,0 2.480	100,0 3.937	3,89 8.580	9 RNAX1005...
HF85-124.5/129.499-09-100	124,5 4.902	129,499 5.098	63,0 2.480	100,0 3.937	4,15 9.150	9 RNAX1005...
HF85-129.5/134.499-09-100	129,5 5.098	134,499 5.295	63,0 2.480	100,0 3.937	4,42 9.740	9 RNAX1005...
HF85-134.5/139.499-09-100	134,5 5.295	139,499 5.492	63,0 2.480	100,0 3.937	4,7 10.360	9 RNAX1005...
HF85-139.5/144.499-09-100	139,5 5.492	144,499 5.689	63,0 2.480	100,0 3.937	4,99 11.000	9 RNAX1005...
HF85-144.5/149.499-09-100	144,5 5.689	149,499 5.886	63,0 2.480	100,0 3.937	5,29 11.660	9 RNAX1005...
HF85-149.5/154.499-09-100	149,5 5.886	154,499 6.083	63,0 2.480	100,0 3.937	5,6 12.350	9 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85 09-100	SH4075S	CARTCYHF20	LDH4012	C03010-T09P	H2.0-2D	4SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85 09-100	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

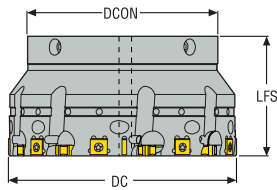
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.


Torque value H00-2020: 2 Nm.

HF85B








Heads for RNAX inserts, blind bore \varnothing 119,5-154,499 mm / 4.705-6.083"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF85B-119.5/124.499-09-100	119,5 4.705	124,499 4.902	63,0 2.480	100,0 3.937	3,89 8.580	9 RNAX1005...
HF85B-124.5/129.499-09-100	124,5 4.902	129,499 5.098	63,0 2.480	100,0 3.937	4,15 9.150	9 RNAX1005...
HF85B-134.5/139.499-09-100	134,5 5.295	139,499 5.492	63,0 2.480	100,0 3.937	4,7 10.360	9 RNAX1005...
HF85B-139.5/144.499-09-100	139,5 5.492	144,499 5.689	63,0 2.480	100,0 3.937	4,99 11.000	9 RNAX1005...
HF85B-144.5/149.499-09-100	144,5 5.689	149,499 5.886	63,0 2.480	100,0 3.937	5,29 11.660	9 RNAX1005...
HF85B-149.5/154.499-09-100	149,5 5.886	154,499 6.083	63,0 2.480	100,0 3.937	5,6 12.350	9 RNAX1005...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF85B 09-100	SH4075S	CARTCYHF20B	LDH4012	C03010-T09P	H2.0-2D	2SMS795	B6027

Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF85B 09-100	H00-2020	T00-09P20

Note

Torque driver H00-2020 for clamp screws

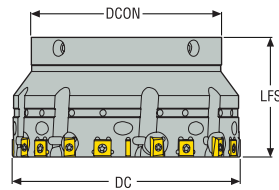
Torque driver T00-09P20 for insert screws

Torque value T00-09P20: 2 Nm.

Torque value H00-2020: 2 Nm.

HF86

Heads for LNEG inserts, through bore \varnothing 119,5-154,499 mm / 4.705-6.083"



- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCN	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86-119.5/124.499-09-100	119,5 4.705	124,499 4.902	63,0 2.480	100,0 3.937	3,89 8.580	9 LNEG1003...
HF86-124.5/129.499-09-100	124,5 4.902	129,499 5.098	63,0 2.480	100,0 3.937	4,15 9.150	9 LNEG1003...
HF86-129.5/134.499-09-100	129,5 5.098	134,499 5.295	63,0 2.480	100,0 3.937	4,42 9.740	9 LNEG1003...
HF86-134.5/139.499-09-100	134,5 5.295	139,499 5.492	63,0 2.480	100,0 3.937	4,7 10.360	9 LNEG1003...
HF86-139.5/144.499-09-100	139,5 5.492	144,499 5.689	63,0 2.480	100,0 3.937	4,99 11.000	9 LNEG1003...
HF86-144.5/149.499-09-100	144,5 5.689	149,499 5.886	63,0 2.480	100,0 3.937	5,29 11.660	9 LNEG1003...
HF86-149.5/154.499-09-100	149,5 5.886	154,499 6.083	63,0 2.480	100,0 3.937	5,6 12.350	9 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
HF86 09-100	SH4075S	CARTCYHF20	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

Accessories

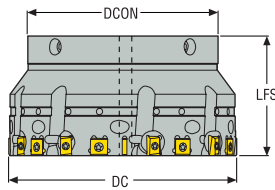
For head	Torque key	Torx driver for insert/holder locking screw
HF86 09-100	H00-2020	T00-07P09

Note
Torque driver H00-2020 for clamp screws
Torque driver T00-07P09 for insert screws


Torque value
T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF86B








Heads for LNEG inserts, blind bore \varnothing 119,5-154,499 mm / 4.705-6.083"





- For inserts, grades and geometries see page(s) 429-431
- For cutting data see page(s) 456-463

Designation	DCN	DCX	LFS	DCON	Weight	Insert
	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
HF86B-119.5/124.499-09-100	119,5 4.705	124,499 4.902	63,0 2.480	100,0 3.937	3,89 8.580	9 LNEG1003...
HF86B-124.5/129.499-09-100	124,5 4.902	129,499 5.098	63,0 2.480	100,0 3.937	4,15 9.150	9 LNEG1003...
HF86B-129.5/134.499-09-100	129,5 5.098	134,499 5.295	63,0 2.480	100,0 3.937	4,42 9.740	9 LNEG1003...
HF86B-134.5/139.499-09-100	134,5 5.295	139,499 5.492	63,0 2.480	100,0 3.937	4,7 10.360	9 LNEG1003...
HF86B-139.5/144.499-09-100	139,5 5.492	144,499 5.689	63,0 2.480	100,0 3.937	4,99 11.000	9 LNEG1003...
HF86B-144.5/149.499-09-100	144,5 5.689	149,499 5.886	63,0 2.480	100,0 3.937	5,29 11.660	9 LNEG1003...
HF86B-149.5/154.499-09-100	149,5 5.886	154,499 6.083	63,0 2.480	100,0 3.937	5,6 12.350	9 LNEG1003...

Spare Parts, included in delivery

For head	Adjusting screw	Cartridge	Clamp screw	Insert screw	Key (Flag)	Setting key	Wedge clamp
							
HF86B 09-100	SH4075S	CARTCYLN20B	LDH4010	C02506-T07P	H2.0-2D	2SMS795	B6027

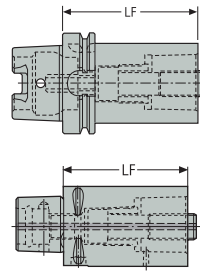
Accessories

For head	Torque key	Torx driver for insert/holder locking screw
		
HF86B 09-100	H00-2020	T00-07P09

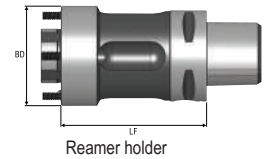
Note
Torque driver H00-2020 for clamp screws
Torque driver T00-07P09 for insert screws
Torque value T00-07P09: 0,9 Nm.
Torque value H00-2020: 2 Nm.

HF100

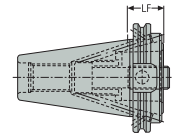
Seco-Capto™ shank for Ø 119,5-154,499 mm



Extension



Reamer holder



Shank

Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF100-100-C8	02688649	–	100	C8	100	4,9
HF100...HSKA80	–	100	238	HSK-A80	100	0,0
HF100...HSKA100	–	100	238	HSK-A100	100	0,0
HF100...DIN50ADB	–	100	238	DIN50ADB	100	0,0
HF100...BT50ADB	–	100	238	BT50ADB	100	0,0

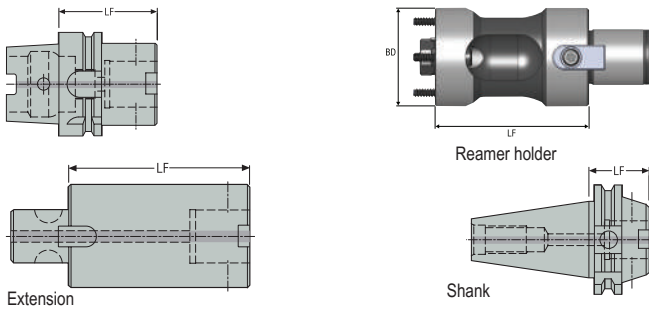
Shanks and extensions for HF100-100-C8 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
HA10-C8-080-120	10197968	120	HSK-A100	C8	4,8
C8-390B.140-50070	02924119	70	DIN50	C8	3,7
C8-390B.140-50120	02924120	120	DIN50	C8	5,6
C8-390B.58-50070	02925974	70	BT50	C8	4,0
C8-390B.58-50120	02925975	120	BT50	C8	5,9

Designation Extension	Item number	LF	Taper	Seco-Capto size	Weight
		mm			kg
C8-391.01-80100A	75039888	–	C8	C8	3,62
C8-391.01-80125A	00004841	–	C8	C8	4,54

HF100

Graflex® shank for Ø 119,5-154,499 mm



Designation Reamer holders	Item number	LF min	LF max	Taper	BD	Weight
		mm	mm		mm	kg
HF100-100-G7	02698874	-	100	G7	100	5,2
HF100...HSKA80	-	100	238	HSK-A80	100	0,0
HF100...HSKA100	-	100	238	HSK-A100	100	0,0
HF100...DIN50ADB	-	100	238	DIN50ADB	100	0,0
HF100...BT50ADB	-	100	238	BT50ADB	100	0,0

Shanks and extensions for HF100-100-G7 (see Seco Tooling Systems for more details).

Designation Shank	Item number	LF	Taper	Graflex size	Weight
		mm			kg
EM93064014685	00074385	85	HSK-A100	G7	3,99
EM930640146160	00086933	160	HSK-A100	G7	7,67
EM34714014650	02503320	50	DIN50	G7	3,23
EM347140146120	02503321	120	DIN50	G7	6,48
EM347140146200	02503324	200	DIN50	G7	10,4
EM34164014665	02503386	65	BT50	G7	4,4
EM341640146120	02503387	120	BT50	G7	6,8
EM341640146200	02503388	200	BT50	G7	10,7

Designation Extension	Item number	LF	Taper	Graflex size	Weight
		mm			kg
M402770	00056768	-	G7	G7	2,9
M402771	00056769	-	G7	G7	4,03
M402772	00056770	-	G7	G7	5,8

Cutting data – LNEG...-EB45 metric

SMG		$a_p (\varnothing)$	f				v_c		
			z=3	z=5	z=7	z=9	RX2000	CF	RX1500
P1	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P2	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P3	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	120 (80-200)	180 (120-250)	220 (120-300)
P4	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P5	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P6	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P7	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)	80 (60-150)	100 (80-200)
P8	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)	60 (50-100)	80 (60-120)
P11	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)	60 (50-100)	80 (60-120)
P12	LNEG1003-EB45	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	30 (25-55)	45 (40-80)	65 (45-95)
M1	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M2	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M3	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	35 (25-60)	-	-
M4	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	25 (20-50)	-	-
M5	LNEG1003-EB45	0,10-0,20	0,15-0,30	0,25-0,50	0,35-0,70	0,45-0,90	25 (20-50)	-	-
K1	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K2	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)	-	70 (50-120)
K3	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K4	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	100 (60-120)	150 (110-200)
K5	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)	100 (60-120)	150 (110-200)
K6	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
K7	LNEG1003-EB45	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)	-	220 (150-300)
H3	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H5	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H7	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H8	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H11	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H12	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H21	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-
H31	LNEG1003-EB45	0,10-0,20	0,1-0,25	0,15-0,40	0,25-0,5	0,30-0,7	20 (10-30)	-	-

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

Introduction

Drilling

Reaming

Boring

Annex

Cutting data – LNEG...-EB45 inch

SMG		a _p (∅)	f				V _c		
			z=3	z=5	z=7	z=9	RX2000	CF	RX1500
P1	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P2	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P3	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	395 (260-655)	590 (395-820)	720 (395-985)
P4	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P5	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P6	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P7	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130-395)	260 (195-490)	330 (260-655)
P8	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100-230)	195 (165-330)	260 (195-395)
P11	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100-230)	195 (165-330)	260 (195-395)
P12	LNEG1003-EB45	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.010–0.053	100 (85-185)	150 (135-265)	215 (150-315)
M1	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M2	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M3	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	115 (80-195)	–	–
M4	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	80 (65-165)	–	–
M5	LNEG1003-EB45	0.004–0.008	0.006–0.012	0.010–0.020	0.014–0.028	0.018–0.035	80 (65-165)	–	–
K1	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K2	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	165 (115-260)	–	230 (165-395)
K3	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K4	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165-395)	330 (195-395)	490 (360-655)
K5	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165-395)	330 (195-395)	490 (360-655)
K6	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
K7	LNEG1003-EB45	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195-655)	–	720 (490-985)
H3	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H5	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H7	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H8	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H11	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H12	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H21	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–
H31	LNEG1003-EB45	0.004–0.008	0.004–0.010	0.006–0.016	0.010–0.020	0.012–0.028	65 (35-100)	–	–

SMG = Seco material group
a_p = inch
f = in/rev
V_c = sf/min
All cutting data are start values

Cutting data – LNEG...-EB845 metric

SMG		$a_p (\varnothing)$	f				v_c RX2000
			z=3	z=5	z=7	z=9	
P1	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P2	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P3	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	120 (80-200)
P4	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P5	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P6	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P7	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	60 (40-120)
P8	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	40 (30-70)
P11	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	40 (30-70)
P12	LNEG1003-EB845	0,15-0,25	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	30 (25-55)
M1	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M2	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M3	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	35 (25-60)
M4	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	25 (20-50)
M5	LNEG1003-EB845	0,10-0,20	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	25 (20-50)
K1	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K2	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	50 (35-80)
K3	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K4	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)
K5	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)
K6	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)
K7	LNEG1003-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)

SMG = Seco material group
 a_p = mm
 f = mm/rev
 v_c = m/min
 All cutting data are start values

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Cutting data – LNEG...-EB845 inch

SMG		a_p (∅)	f				v_c RX2000
			z=3	z=5	z=7	z=9	
P1	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P2	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P3	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	395 (260-655)
P4	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P5	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P6	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P7	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	195 (130-395)
P8	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	130 (100-230)
P11	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	130 (100-230)
P12	LNEG1003-EB845	0.006–0.010	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	100 (85-185)
M1	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M2	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M3	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	115 (80-195)
M4	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	80 (65-165)
M5	LNEG1003-EB845	0.004–0.008	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	80 (65-165)
K1	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K2	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	165 (115-260)
K3	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K4	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)
K5	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)
K6	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)
K7	LNEG1003-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)

SMG = Seco material group
 a_p = inch
 f = in/rev
 v_c = sf/min
 All cutting data are start values

Cutting data – LNEG...-EB1570 metric

SMG		a _p (∅)	f				v _c RX2000
			z=3	z=5	z=7	z=9	
P4	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P5	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P6	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P7	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	60 (40-120)
P8	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)
P11	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	40 (30-70)
P12	LNEG1005-EB1570	0,15-0,25	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	30 (25-55)
K1	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K2	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	50 (35-80)
K3	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K4	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)
K5	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	70 (50-120)
K6	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)
K7	LNEG1005-EB1570	0,20-0,50	0,15-0,45	0,25-0,75	0,25-1,05	0,45-1,35	100 (60-200)

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Cutting data – LNEG...-EB1570 inch

SMG		a _p (∅)	f				v _c RX2000
			z=3	z=5	z=7	z=9	
P4	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130–395)
P5	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130–395)
P6	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130–395)
P7	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	195 (130–395)
P8	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100–230)
P11	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	130 (100–230)
P12	LNEG1005-EB1570	0.006–0.010	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	100 (85–185)
K1	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195–655)
K2	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	165 (115–260)
K3	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195–655)
K4	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165–395)
K5	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	230 (165–395)
K6	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195–655)
K7	LNEG1005-EB1570	0.008–0.020	0.006–0.018	0.010–0.030	0.010–0.041	0.018–0.053	330 (195–655)

SMG = Seco material group
a_p = inch
f = in/rev
v_c = sf/min
All cutting data are start values

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Cutting data – RNAX...-EB45 metric

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K2	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	50 (35-80)	70 (50-120)
K3	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K4	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	70 (50-120)	150 (110-200)
K5	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	70 (50-120)	150 (110-200)
K6	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K7	RNAX1005-EB45	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Cutting data – RNAX...-EB45 inch

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K2	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	165 (115-260)	230 (165-395)
K3	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K4	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	230 (165-395)	490 (360-655)
K5	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	230 (165-395)	490 (360-655)
K6	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K7	RNAX1005-EB45	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)

SMG = Seco material group
a_p = inch
f = in/rev
v_c = sf/min
All cutting data are start values

Cutting data – RNAX...-EB845 metric

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K2	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	50 (35-80)	70 (50-120)
K3	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K4	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)	150 (110-200)
K5	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	70 (50-120)	150 (110-200)
K6	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)
K7	RNAX1005-EB845	0,20-0,50	0,15-0,60	0,25-1	0,35-1,4	0,45-1,80	100 (60-200)	220 (150-300)

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Cutting data – RNAX...-EB845 inch

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)	720 (490-985)
K2	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	165 (115-260)	230 (165-395)
K3	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)	720 (490-985)
K4	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)	490 (360-655)
K5	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	230 (165-395)	490 (360-655)
K6	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)	720 (490-985)
K7	RNAX1005-EB845	0.008–0.020	0.006–0.024	0.010–0.039	0.014–0.055	0.018–0.071	330 (195-655)	720 (490-985)

SMG = Seco material group
a_p = inch
f = in/rev
v_c = sf/min
All cutting data are start values

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Cutting data – RNAX...-EB1570 metric

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K2	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	50 (35-80)	70 (50-120)
K3	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K4	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	70 (50-120)	150 (110-200)
K5	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	70 (50-120)	150 (110-200)
K6	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)
K7	RNAX1005-EB1570	0.20-0.50	0.15-0.45	0.25-0.75	0.25-1.05	0.45-1.35	100 (60-200)	220 (150-300)

SMG = Seco material group
a_p = mm
f = mm/rev
v_c = m/min
All cutting data are start values

Cutting data – RNAX...-EB1570 inch

SMG		a _p (∅)	f				v _c	
			z=3	z=5	z=6	z=9	RX2000	RX1500
K1	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K2	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	165 (115-260)	230 (165-395)
K3	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K4	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	230 (165-395)	490 (360-655)
K5	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	230 (165-395)	490 (360-655)
K6	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)
K7	RNAX1005-EB1570	0.008-0.020	0.006-0.018	0.010-0.030	0.010-0.041	0.018-0.053	330 (195-655)	720 (490-985)

SMG = Seco material group
a_p = inch
f = in/rev
v_c = sf/min
All cutting data are start values

Adjusting instructions

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<p>1.</p> <ul style="list-style-type: none"> Loosen cartridge clamping screw. Index or replace insert. Unclamp adjusting screw by 1/4 of a turn and push cartridge back. Gently re-clamp cartridge clamping screw 0,5 Nm approx (4.4 in/lbs). 	
<p>2.</p> <ul style="list-style-type: none"> Set clock to "zero" on reference pad. Make sure measuring point is positioned after the lead angle. 	
<p>3.</p> <ul style="list-style-type: none"> Set insert 0,025 mm (0.001") above reference pad using adjusting screw. Repeat adjusting process for all inserts. 	
<p>4.</p> <ul style="list-style-type: none"> Final clamp cartridge clamping screw 2 Nm (17.7 in/lbs). 	

Note: If the required diameter is exceeded during adjustment, start again from the beginning to eliminate backlash on adjustment screws.

Adjusting instructions, adapter

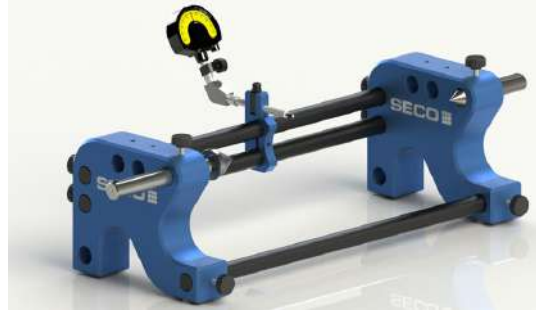
<p>1.</p> <p>Assembly</p> <ul style="list-style-type: none"> • Thoroughly clean flange contact surface. • Loosen 4 radial adjusting screws so they do not interfere for assembly. • Put reaming head onto adapter (indexing pin) and tighten the 4 clamping screws. 	<p>Assembly (drawing 1)</p> <p>Radial adjustment screws</p> <p>Indexing pin</p> <p>Clamping screws (4)</p>																														
<p>2.</p> <p>Setting</p> <ul style="list-style-type: none"> • Mount tool in the machine spindle. • Place μm clock as shown in (drawing 2). • Unlock spindle so it can rotate freely by hand. • Start run-out correction using 4 adjusting screws (drawing 3). • Max run-out $5\ \mu\text{m}$ ($197\ \mu\text{in}$). • When run-out values get lower than $10\ \mu\text{m}$ ($394\ \mu\text{in}$), proceed to final clamping (drawing 1) see clamping torque table for torque recommended values. 	<p>Setting operation in the machine spindle (drawing 2)</p> <p>Max $3\text{-}5\ \mu\text{m}$ ($118\text{-}197\ \mu\text{in}$)</p> <p>TIR control ring</p> <p>Clamping screws (drawing 3)</p>																														
<p>3.</p> <ul style="list-style-type: none"> • Finalize run-out adjustment, max $5\ \mu\text{m}$ ($max\ 197\ \mu\text{in}$). 	<p>Radial adjusting screws (drawing 4)</p> <p style="text-align: center;">Clamping torque table</p> <table border="1"> <thead> <tr> <th>Diameter mm</th> <th>Diameter inch</th> <th>Adapter size</th> <th>Clamping screw</th> <th>Clamping torque Nm</th> <th>Clamping torque in/lbs</th> </tr> </thead> <tbody> <tr> <td>39,5-59,499</td> <td>1.555-2.342</td> <td>HF32</td> <td>CHC M3 x 16</td> <td>2,7</td> <td>24</td> </tr> <tr> <td>59,5-84,499</td> <td>2.342-3.372</td> <td>HF55</td> <td>CHC M5 x 25</td> <td>5,7</td> <td>50</td> </tr> <tr> <td>84,5-119,499</td> <td>3.372-4.705</td> <td>HF80</td> <td>CHC M6 x 25</td> <td>9,8</td> <td>87</td> </tr> <tr> <td>119,5-154,499</td> <td>4.705-6.083</td> <td>HF100</td> <td>CHC M8 x 30</td> <td>24</td> <td>212</td> </tr> </tbody> </table>	Diameter mm	Diameter inch	Adapter size	Clamping screw	Clamping torque Nm	Clamping torque in/lbs	39,5-59,499	1.555-2.342	HF32	CHC M3 x 16	2,7	24	59,5-84,499	2.342-3.372	HF55	CHC M5 x 25	5,7	50	84,5-119,499	3.372-4.705	HF80	CHC M6 x 25	9,8	87	119,5-154,499	4.705-6.083	HF100	CHC M8 x 30	24	212
Diameter mm	Diameter inch	Adapter size	Clamping screw	Clamping torque Nm	Clamping torque in/lbs																										
39,5-59,499	1.555-2.342	HF32	CHC M3 x 16	2,7	24																										
59,5-84,499	2.342-3.372	HF55	CHC M5 x 25	5,7	50																										
84,5-119,499	3.372-4.705	HF80	CHC M6 x 25	9,8	87																										
119,5-154,499	4.705-6.083	HF100	CHC M8 x 30	24	212																										

Setting fixture – Single clock

Introduction

SF-210340-C160: Ordering and Part No. 02885391

- Horizontal stand
- First choice for Xfix reamers
- 1 clock
- Maximum tool Ø: 210 mm (8.268")
- Maximum tool length: 340 mm (13.386")
- Included in delivery: additional Ø 57 mm (2.244") spring center for HSK 63/80/100 and Capto C8 SSC5700 Part No. 02208620



Drilling

SF-210290V-C160: Ordering and Part No. 02885392

- Vertical stand
- First choice for Xfix reamers
- Maximum tool Ø: 210 mm (8.268")
- Maximum tool length: 290 mm (11.417")
- Included in delivery: additional Ø 57 mm (2.244") spring center for HSK 63/80/100 and Capto C8 SSC5700 Part No. 02208620



Reaming

Setting fixture – Multiple clocks

Boring

Possibilities for multi-clock set up, refer to setting fixture chapter page 486-491 for more details



Annex

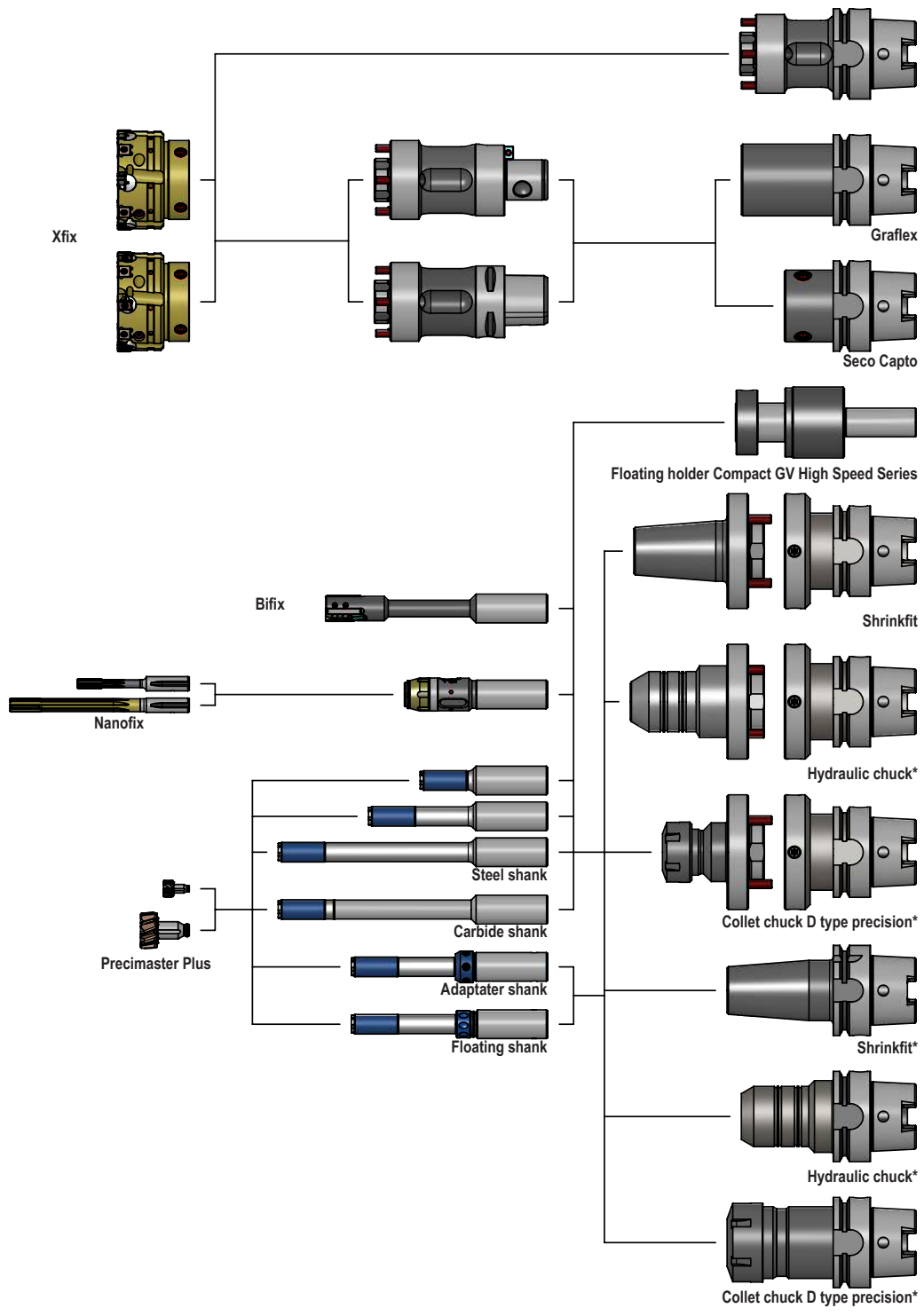
Tooling overview



Diameter mm	Diameter inch	Max dial length ratio
39,5-59,499	1.555-2.342	6,5 x D
59,5-84,499	2.342-3.372	4,5 x D
84,5-119,499	3.372-4.705	3,3 x D
119,5-154,499	4.705-6.083	2,5 x D

Note: For diameters > 100 mm (3.937") or L > 3 x D check max tool weight acceptable in the machine.

Rotating applications

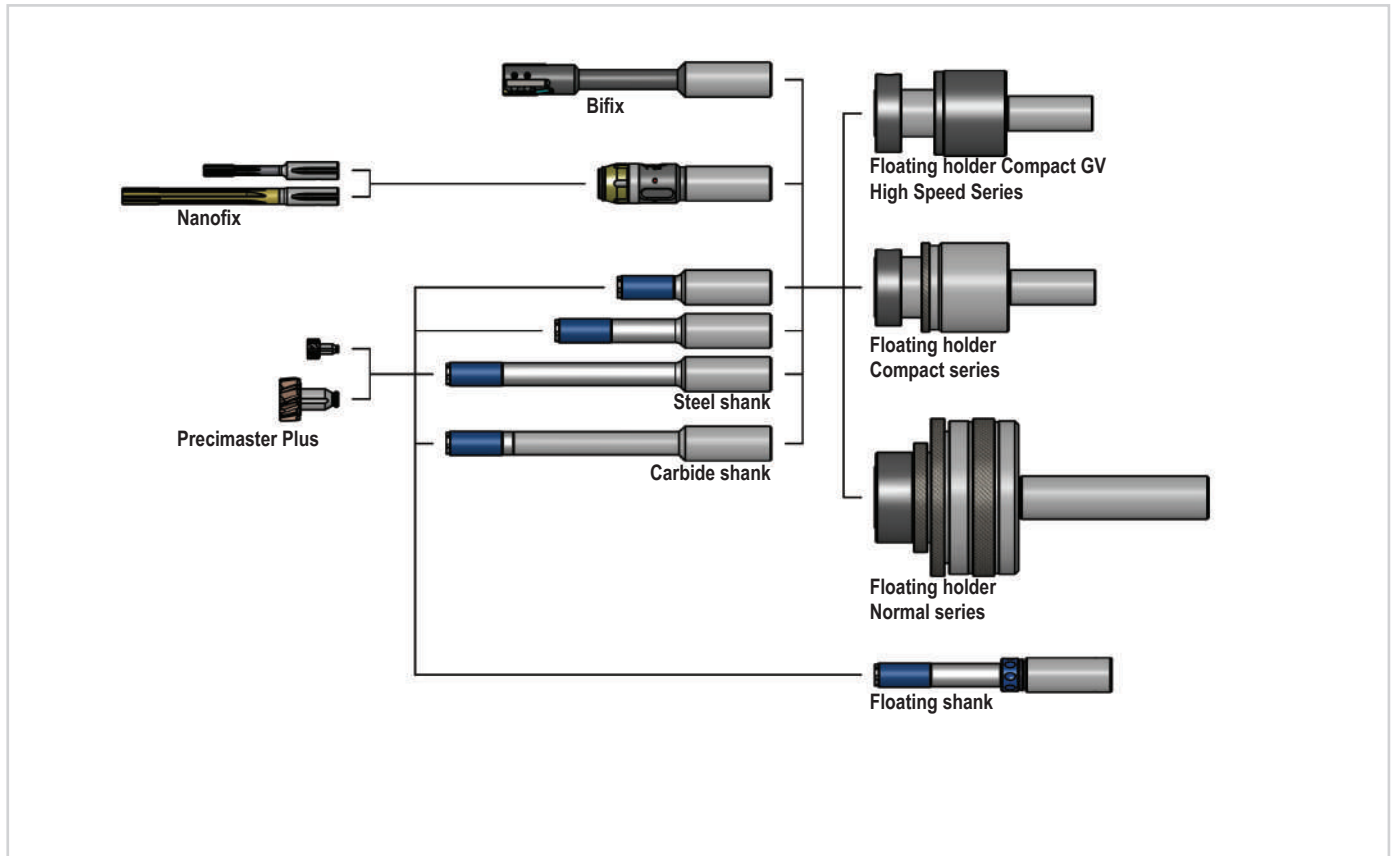


*See catalog TOOLING SYSTEMS

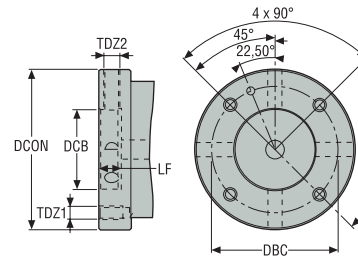
Best performance achieved with rigid mounting (Hydraulic chuck, D type or Shrinkfit)

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Static applications

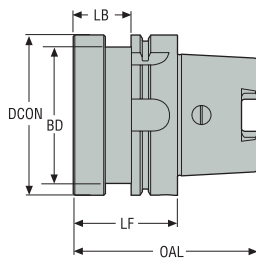


Flange dimension



DCON	DBC +/- 0,1	DCB F8	LF	TDZ1	TDZ2
60	44	30	12	M5	M8x1
70	53	35	12	M6	M8x1
80	63	40	12	M6	M8x1
100	79	50	14	M8	M10x1
117	96	60	14	M8	M10x1
140	119	80	14	M10	M10x1

Back end HSK-A



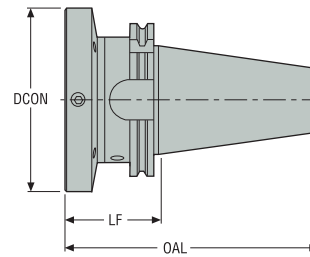
• Note: Coolant tube and screws included in delivery

Designation	Item number	Taper	DCON	BD	LB	LF	OAL	Weight
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs
SAH-23405100001	02836663	HSK-A 100	60,0 2.362	60,0 2.362	26,0 1.024	55,0 2.165	105,0 4.134	2,5 5.510
SAH-23405100002	02836665	HSK-A 100	80,0 3.150	80,0 3.150	26,0 1.024	55,0 2.165	105,0 4.134	2,9 6.390
SAH-23405100003	02836666	HSK-A 100	100,0 3.937	85,0 3.346	36,0 1.417	65,0 2.559	115,0 4.528	3,5 7.720
SAH-23405100007	02836664	HSK-A 100	70,0 2.756	70,0 2.756	26,0 1.024	55,0 2.165	105,0 4.134	2,8 6.170
SAH-2340540001	02836564	HSK-A 40	60,0 2.362	34,0 1.339	35,0 1.378	55,0 2.165	75,0 2.953	0,8 1.760
SAH-2340550001	02836566	HSK-A 50	60,0 2.362	42,0 1.654	34,0 1.339	60,0 2.362	85,0 3.346	0,95 2.090
SAH-2340550002	02836573	HSK-A 50	80,0 3.150	42,0 1.654	34,0 1.339	60,0 2.362	85,0 3.346	1,2 2.650
SAH-2340550003	02836567	HSK-A 50	70,0 2.756	42,0 1.654	34,0 1.339	60,0 2.362	85,0 3.346	1,0 2.200
SAH-2340563001	02836574	HSK-A 63	60,0 2.362	53,0 2.087	34,0 1.339	60,0 2.362	92,0 3.622	1,2 2.650
SAH-2340563002	02836576	HSK-A 63	80,0 3.150	53,0 2.087	34,0 1.339	60,0 2.362	92,0 3.622	1,4 3.090
SAH-2340563003	02836575	HSK-A 63	70,0 2.756	53,0 2.087	34,0 1.339	60,0 2.362	92,0 3.622	1,3 2.870
SAH-2340563004	02836577	HSK-A 63	100,0 3.937	53,0 2.087	39,0 1.535	65,0 2.559	97,0 3.819	1,95 4.300
SAH-2340580001	02836655	HSK-A 80	60,0 2.362	60,0 2.362	24,0 0.945	50,0 1.969	90,0 3.543	1,4 3.090
SAH-2340580002	02836658	HSK-A 80	80,0 3.150	67,0 2.638	34,0 1.339	60,0 2.362	100,0 3.937	1,6 3.530
SAH-2340580003	02836657	HSK-A 80	70,0 2.756	67,0 2.638	34,0 1.339	60,0 2.362	100,0 3.937	1,5 3.310
SAH-2340580004	02836660	HSK-A 80	100,0 3.937	67,0 2.638	39,0 1.535	65,0 2.559	105,0 4.134	2,2 4.850

Spare Parts, included in delivery

For DCON	Clamp screw	Adjusting screw
60	CHCM5X20/ISO4762	HCM8X12X1/ISO4028
70	CHCM6X20/ISO4762	HCM8X16X1/ISO4028
80	CHCM6X25/ISO4762	HCM8X16X1/ISO4028
100	CHCM8X25/ISO4762	HCM10X20X1/ISO4028

Back end DIN 69871



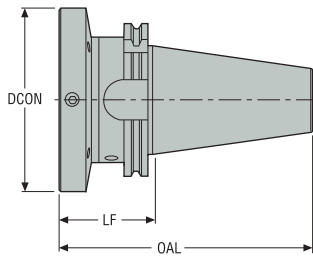
- Note: Screws included in delivery

Designation	Item number	Taper	DCON		LF		OAL		Weight	
			mm	Inch	mm	Inch	mm	Inch	kg	lbs
SAH-2340640201	02836683	DIN40 ADB	60,0	2.362	50,0	1.969	118,4	4.661	1,1	2.430
SAH-2340640202	02836685	DIN40 ADB	80,0	3.150	55,0	2.165	123,4	4.858	1,7	3.750
SAH-2340640203	02836686	DIN40 ADB	100,0	3.937	60,0	2.362	128,4	5.055	2,3	5.070
SAH-2340640204	02836684	DIN40 ADB	70,0	2.756	50,0	1.969	118,4	4.661	1,2	2.650
SAH-2340650201	02836687	DIN50 ADB	60,0	2.362	50,0	1.969	151,8	5.976	3,1	6.830
SAH-2340650202	02836690	DIN50 ADB	80,0	3.150	50,0	1.969	151,8	5.976	3,5	7.720
SAH-2340650203	02836691	DIN50 ADB	100,0	3.937	60,0	2.362	161,8	6.370	4,3	9.480
SAH-2340650206	02836688	DIN50 ADB	70,0	2.756	50,0	1.969	151,8	5.976	3,3	7.280

Spare Parts, included in delivery

For DCON	Clamp screw	Adjusting screw
60	CHCM5X20/ISO4762	HCM8X12X1/ISO4028
70	CHCM6X20/ISO4762	HCM8X16X1/ISO4028
80	CHCM6X25/ISO4762	HCM8X16X1/ISO4028
100	CHCM8X25/ISO4762	HCM10X20X1/ISO4028

Back end ANSI CAT



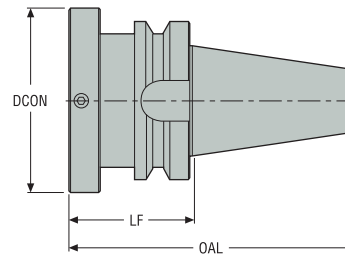
- Note: Screws included in delivery
- Pull-stud thread imperial

Designation	Item number	Taper	DCON		LF		OAL		Weight	
			mm	Inch	mm	Inch	mm	Inch	kg	lbs
SAH-2784940201	02836698	CAT 40	60,0	2.362	50,0	1.969	118,4	4.661	1,1	2.430
SAH-2784940202	02836702	CAT 40	80,0	3.150	55,0	2.165	123,4	4.858	1,5	3.310
SAH-2784940203	02836704	CAT 40	100,0	3.937	60,0	2.362	128,4	5.055	2,3	5.070
SAH-2784950201	02836707	CAT 50	60,0	2.362	50,0	1.969	151,8	5.976	3,1	6.830
SAH-2784950202	02836709	CAT 50	80,0	3.150	50,0	1.969	151,8	5.976	3,4	7.500
SAH-2784950203	02836710	CAT 50	100,0	3.937	60,0	2.362	161,8	6.370	5,5	12.130
SAH-2784950206	02836708	CAT 50	70,0	2.756	50,0	1.969	151,8	5.976	3,3	7.280

Spare Parts, included in delivery

For DCON	Clamp screw	Adjusting screw
60	CHCM5X20/ISO4762	HCM8X12X1/ISO4028
70	CHCM6X20/ISO4762	HCM8X16X1/ISO4028
80	CHCM6X25/ISO4762	HCM8X16X1/ISO4028
100	CHCM8X25/ISO4762	HCM10X20X1/ISO4028

Back end BT



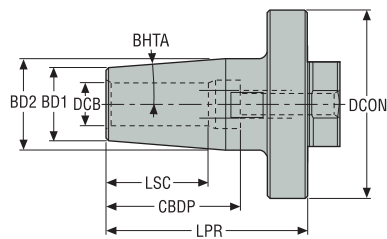
- Note: Screws included in delivery

Designation	Item number	Taper	DCON		LF		OAL		Weight	
			mm	Inch	mm	Inch	mm	Inch	kg	lbs
SAH-2340740001	02836717	BT40 ADB	60,0	2.362	55,0	2.165	120,4	4.740	1,4	3.090
SAH-2340740002	02836719	BT40 ADB	80,0	3.150	65,0	2.559	130,4	5.134	2,0	4.410
SAH-2340740003	02836721	BT40 ADB	100,0	3.937	60,0	2.362	125,4	4.937	2,7	5.950
SAH-2340740004	02836718	BT40 ADB	70,0	2.756	55,0	2.165	120,4	4.740	1,5	3.310
SAH-2340750001	02836724	BT50 ADB	60,0	2.362	70,0	2.756	171,8	6.764	4,2	9.260
SAH-2340750002	02836725	BT50 ADB	70,0	2.756	70,0	2.756	171,8	6.764	4,4	9.700
SAH-2340750003	02836726	BT50 ADB	80,0	3.150	70,0	2.756	171,8	6.764	4,6	10.140
SAH-2340750004	02836727	BT50 ADB	100,0	3.937	70,0	2.756	171,8	6.764	4,9	10.800

Spare Parts, included in delivery

For DCON	Clamp screw	Adjusting screw
60	CHCM5X20/ISO4762	HCM8X12X1/ISO4028
70	CHCM6X20/ISO4762	HCM8X16X1/ISO4028
80	CHCM6X25/ISO4762	HCM8X16X1/ISO4028
100	CHCM8X25/ISO4762	HCM10X20X1/ISO4028

Front end Shrinkfit



• Note: Adjusting screws included in delivery

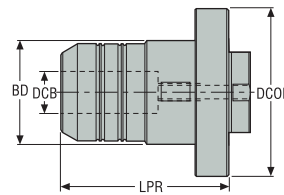
Designation	Item number	DCON		BD2		BD1		DCB		LSC		CBDP		LPR		Weight	BHTA°	
		mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch			kg
SAH-2341006235	02836735	60,0	2.362	27,0	1.063	21,0	0.827	6,0	0.236	22,0	0.866	37,5	1.476	70,0	2.756	0,5	1.100	4.5
SAH-2341010237	02836736	60,0	2.362	32,0	1.260	24,0	0.945	10,0	0.394	31,0	1.220	42,5	1.673	70,0	2.756	0,5	1.100	4.5
SAH-2341012238	02836737	60,0	2.362	32,0	1.260	24,0	0.945	12,0	0.472	34,0	1.339	47,5	1.870	70,0	2.756	0,52	1.150	4.5
SAH-2341016241	02836741	70,0	2.756	34,0	1.339	27,0	1.063	16,0	0.630	39,0	1.535	50,5	1.988	75,0	2.953	0,7	1.540	4.5
SAH-2341020251	02836742	80,0	3.150	42,0	1.654	33,0	1.299	20,0	0.787	41,0	1.614	52,5	2.067	80,0	3.150	1,0	2.200	4.5
SAH-2341025260	02836743	100,0	3.937	53,0	2.087	44,0	1.732	25,0	0.984	47,0	1.850	58,5	2.303	80,0	3.150	2,2	4.850	4.5
SAH-2341032261	02836744	100,0	3.937	53,0	2.087	44,0	1.732	32,0	1.260	51,0	2.008	62,5	2.461	80,0	3.150	2,5	5.510	4.5

Spare Parts, included in delivery

For DCON	Adjusting screw
60	HCM6X12/ISO4028
70	HCM6X16/ISO4028
80	HCM6X16/ISO4028
100	HCM8X12X1/ISO4028



Front end hydraulic chuck



- Note: Adjusting screws included in delivery

Designation	Item number	DCON		BD		DCB		LPR		Weight	
		mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lbs
SAH-2341112255	02836752	80,0	3.150	32,0	1.260	12,0	0.472	77,5	3.051	1,1	2.430
SAH-2341112259	02836757	100,0	3.937	32,0	1.260	12,0	0.472	90,0	3.543	1,9	4.190
SAH-2341116253	02836749	70,0	2.756	38,0	1.496	16,0	0.630	50,0	1.969	0,75	1.650
SAH-2341116256	02836754	80,0	3.150	38,0	1.496	16,0	0.630	82,5	3.248	1,2	2.650
SAH-2341120257	02836755	80,0	3.150	42,0	1.654	20,0	0.787	82,5	3.248	1,3	2.870
SAH-2341125258	02836756	80,0	3.150	50,0	1.969	25,0	0.984	90,0	3.543	1,7	3.750
SAH-2341125260	02836758	100,0	3.937	50,0	1.969	25,0	0.984	100,0	3.937	2,8	6.170
SAH-2341132261	02836759	100,0	3.937	60,0	2.362	32,0	1.260	103,0	4.055	2,9	6.390

Spare Parts, included in delivery

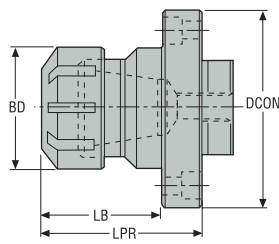
For DCON

Adjusting screw



70	HCM6X16//ISO4028
80	HCM6X16//ISO4028
100	HCM8X12X1//ISO4028

Front end ER collet chuck



• Note: Adjusting screws included in delivery

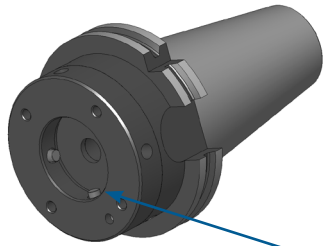
Designation	Item number	Size	DCON		BD		LB		LPR		Weight	
			mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lbs
SAH-23412ER25254	02836762	ER25	80,0	3.150	42,0	1.654	45,0	1.772	60,0	2.362	1,0	2.200
SAH-23412ER32255	02836763	ER32	80,0	3.150	50,0	1.969	45,0	1.772	60,0	2.362	1,2	2.650
SAH-23412ER40256	02836764	ER40	100,0	3.937	63,0	2.480	50,0	1.969	70,0	2.756	1,6	3.530

Spare Parts, included in delivery

For DCON	Adjusting screw
80	HCM6X16/ISO4028
100	HCM8X12X1/ISO4028

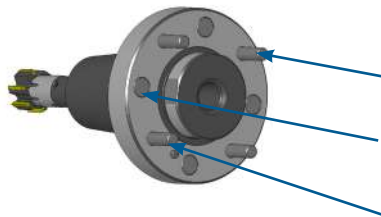


Assembly instructions



Radial adjusting screws

- Clean contact surface
- Make sure radial adjusting screws are not interfering with the assembly

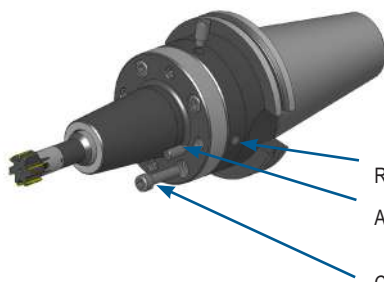


Clamping screws

Angular adjusting screws

Foolproof pin (optional)

- Make sure angular adjusting screws are not interfering with the assembly



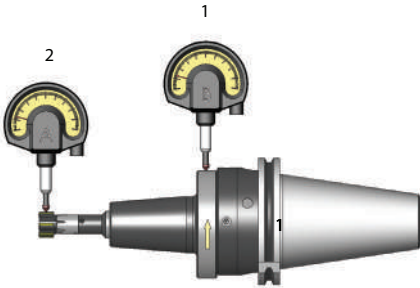
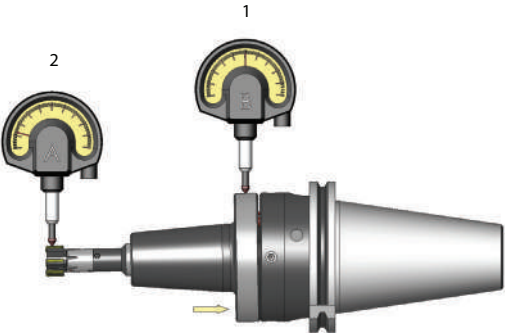
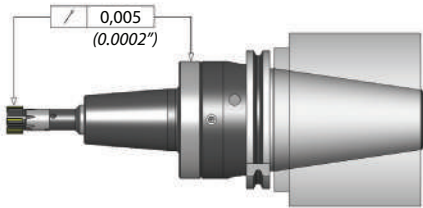
Radial adjusting screws (4 pieces)

Angular adjusting screws (4 pieces)

Clamping screws (4 pieces)

- Proceed to assembly and gently pre-clip clamping screws (x4)

Adjusting instructions

<ul style="list-style-type: none"> • Mount tool in the machine spindle • Set up clock 1 as shown (clock 2 not needed at this stage) • Rotate tool manually until lowest point is reached • Proceed to radial run-out compensation as shown with arrow • Check and repeat compensation if necessary 	
<ul style="list-style-type: none"> • Set up clock 2 as shown • Rotate tool manually until lowest point is reached • Proceed to radial run-out compensation as shown with arrow • Check and repeat compensation if necessary 	
<ul style="list-style-type: none"> • When finished with adjustment, run-out <math>< 5 \mu\text{m}</math> (197 $\mu\text{in}</math>), finalize clamping to secure assembly$ • Adjustable adapter can be pre-set away from the machine using any tool pre-setting device available in the workshop • Final adjusting must always be made in the machine spindle • Micron clock must be used. It is acceptable to use one clock for both operations 	

Range overview

The use of a Seco floating holder is recommended

- When run-out exceeds 0.02 mm (0.0008")
- For stationary tools

Compact GV high speed series

- First choice for rotating tools
- No adjustment required (factory preset)
- Rotation up to 3000 RPM depending on application
- Suitable for static applications



Compact series

- First choice for stationary tools
- Radial adjustment only
- Suitable for rotating applications – 800 RPM max



Normal series

- When both angular and radial correction is required
- Suitable for rotating applications – 800 RPM max

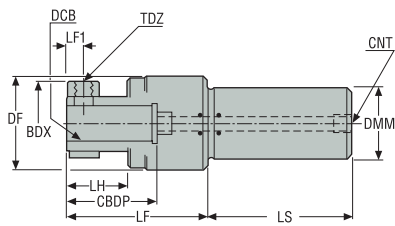


All floating holders for through coolant.
2 types of coolant induction available.

JJL: side inlet
JJ: through shank

Users manual included in delivery.

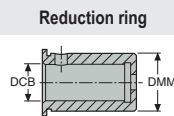
Compact GV high speed series



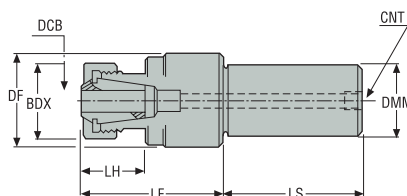
Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	Weight
		mm	mm	mm	mm	mm	mm	mm	mm		mm		mm	kg
00088959	SFH-GV11019JJ	10,0	19,05	47,5	40,0	33,0	30,0	11,5	25,0	1/8	5,5	M6	0,2	0,7
00088945	SFH-GV11020JJ	10,0	20,0	47,5	40,0	33,0	30,0	11,5	25,0	1/8	5,5	M6	0,2	0,8
00076815	SFH-GV21619JJ	16,0	19,05	66,0	50,0	49,5	39,0	24,5	40,0	1/8	8,0	M8	0,2	0,8
00072133	SFH-GV21620JJ	16,0	20,0	66,0	50,0	49,5	39,0	24,5	40,0	1/8	8,0	M8	0,2	0,8
00076827	SFH-GV22019JJ	20,0	19,05	76,0	50,0	49,5	45,0	34,5	50,0	1/8	8,0	M8	0,2	0,8
00072134	SFH-GV22020JJ	20,0	20,0	76,0	50,0	49,5	45,0	34,5	50,0	1/8	8,0	M8	0,2	0,8
00076828	SFH-GV32525JJ	25,0	25,4	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	1,4
00072135	SFH-GV32525MJJ	25,0	25,0	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	1,4
00088960	SFH-GV325425JJ	25,4	25,4	89,0	60,0	62,0	52,0	43,5	60,0	1/4	11,0	M10	0,3	1,4
02602671	SFH-GV43232JJ	32,0	32,0	90,0	80,0	72,0	60,0	34,0	60,0	3/8	9,0	M10	0,3	2,2

Accessories

Designation	Reduction ring	
	DCB	DMM
SRR-BR11016	10	16
SRR-BR11216	12	16
SRR-BR11220	12	20
SRR-BR21620	16	20
SRR-BR31625	16	25
SRR-BR32025	20	25
SRR-GV42532	25	32




Compact GV high speed series with collet chuck



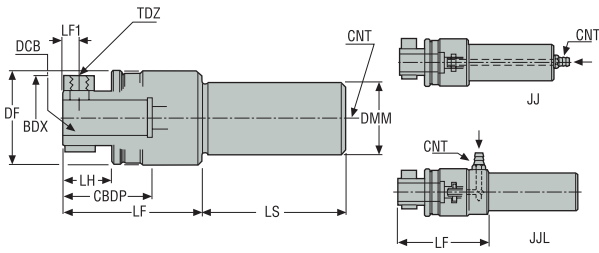
Item number	Designation	CZC	DMM	LF	LS	DF	BDX	LH	CNT	ADJRG	Weight
			mm	mm	mm	mm	mm	mm		mm	kg
00088946	SFH-GV3BC25MJJ	ER32	25,0	80,0	60,0	62,0	50,0	35,0	-	0,3	1,3
00088961	SFH-GV3BC25JJ	ER32	25,4	80,0	60,0	62,0	50,0	35,0	-	0,3	1,3
00088962	SFH-GV4BC31JJ	ER40	31,75	94,0	80,0	72,0	63,0	39,0	-	0,3	0,7
00088947	SFH-GV4BC32JJ	ER40	32,0	94,0	80,0	72,0	63,0	39,0	-	0,3	2,4

Accessories

Designation	Size	Collet*			Size	Spanner*
		DCB	BD	OAL		
58803210	ER32	10	33	40	ER32	03B587532
58803212	ER32	12	33	40	-	-
58803213	ER32	13	33	40	-	-
58803216	ER32	16	33	40	-	-
58803220	ER32	20	33	40	-	-
58804016	ER40	16	41	46	ER40	03B537540
58804020	ER40	20	41	46	-	-
58804025	ER40	25	41	46	-	-
58804026	ER40	26	41	46	-	-

*Collet and wrenches are not delivered with chucks.

Compact series

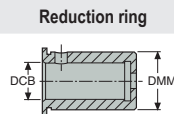


Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	Weight
		mm	mm	mm	mm	mm	mm	mm	mm		mm		mm	kg
00088963	SFH-C01019JJ	10,0	19,05	44,5	40,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,575
00088964	SFH-C01019JJL	10,0	19,05	62,0	60,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,575
00088965	SFH-C21619JJL	16,0	19,05	87,0	60,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	1,1
00076829	SFH-C21619CJJ	16,0	19,05	67,5	50,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	0,97
00088966	SFH-C22019JJL	20,0	19,05	97,0	70,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,1
00076830	SFH-C22019CJJ	20,0	19,05	77,5	50,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	0,97
00088948	SFH-C01020JJ	10,0	20,0	44,5	40,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,59
00088949	SFH-C01020JJL	10,0	20,0	62,0	60,0	38,5	30,0	11,0	25,0	1/8	6,0	M6	1,0	0,59
00088950	SFH-C21620JJL	16,0	20,0	87,0	60,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	1,1
00072142	SFH-C21620CJJ	16,0	20,0	67,5	50,0	51,5	34,0	17,0	40,0	1/4	8,0	M6	1,5	0,97
00072145	SFH-C22020CJJ	20,0	20,0	77,5	50,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,0
00088951	SFH-C22020JJL	20,0	20,0	97,0	60,0	51,5	44,0	27,0	50,0	1/4	8,0	M8	1,5	1,1
00076846	SFH-C32525JJ	25,0	25,4	90,0	110,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,7
00088967	SFH-C32525JJL	25,0	25,4	125,0	70,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,98
00072149	SFH-C32525MJJ	25,0	25,0	90,0	110,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,7
00088952	SFH-C32525MJL	25,0	25,0	125,0	70,0	59,5	50,0	31,0	60,0	3/8	11,0	M8	1,5	1,98

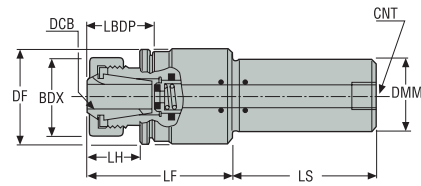
Accessories

Designation	Reduction ring	
	DCB	DMM
SRR-BR11016	10	16
SRR-BR11216	12	16
SRR-BR11220	12	20
SRR-BR21620	16	20
SRR-BR31625	16	25
SRR-BR32025	20	25

Hose adapter is not included in delivery.

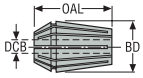



Compact series with collet chuck



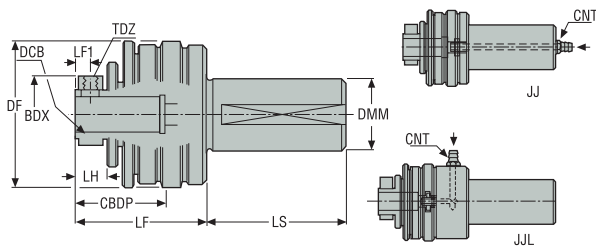
Item number	Designation	CZC	DMM	LF	LS	DF	BDX	CBDP	LH	CNT	ADJRG	Weight
			mm	mm	mm	mm	mm	mm	mm		mm	kg
00088953	SFH-C65BC25MCJJ	ER32	25,0	94,0	50,0	64,5	50,0	42,0	33,0	3/8	1,5	1,7
00088968	SFH-C65BC25CJJ	ER32	25,4	94,0	50,0	64,5	50,0	42,0	33,0	3/8	1,5	1,7

Accessories

Designation	Size	Collet*			Size	Spanner*
						
		DCB	BD	OAL		
58803210	ER32	10	33	40	ER32	03B587532
58803212	ER32	12	33	40	-	-
58803213	ER32	13	33	40	-	-
58803216	ER32	16	33	40	-	-
58803220	ER32	20	33	40	-	-
58804016	ER40	16	41	46	ER40	03B537540
58804020	ER40	20	41	46	-	-
58804025	ER40	25	41	46	-	-
58804026	ER40	26	41	46	-	-

*Collets and wrenches are not delivered with chucks.

Normal series




Item number	Designation	DCB	DMM	LF	LS	DF	BDX	LH	CBDP	CNT	LF1	TDZ	ADJRG	ANADJ	Weight
		mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	kg
00088969	SFH-11619JJ	16,0	19,05	64,0	50,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1,0 °	0,9
00088970	SFH-11619JJL	16,0	19,05	81,0	40,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1,0 °	1,32
00088954	SFH-11620JJ	16,0	20,0	64,0	50,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1,0 °	0,95
00088955	SFH-11620JJL	16,0	20,0	81,0	40,0	62,0	34,0	16,0	40,0	1/4	8,0	M6	1,5	1,0 °	1,34
00088971	SFH-22025JJ	20,0	25,4	74,0	65,0	82,0	44,0	16,0	50,0	3/8	8,0	M8	1,5	1,0 °	1,9
00088972	SFH-22025JJL	20,0	25,4	98,0	70,0	82,0	44,0	16,0	50,0	1/4	8,0	M8	1,5	1,0 °	2,2
00088956	SFH-22025MJJ	20,0	25,0	74,0	65,0	82,0	44,0	16,0	50,0	3/8	8,0	M8	1,5	1,0 °	1,9
00088957	SFH-22025MJJL	20,0	25,0	98,0	70,0	82,0	44,0	16,0	50,0	1/4	8,0	M8	1,5	1,0 °	2,2
00088973	SFH-32525JJ	25,0	25,4	82,5	110,0	91,0	52,0	22,0	60,0	3/8	11,0	M8	2,0	1,0 °	2,5
00088958	SFH-32525MJJ	25,0	25,0	82,5	110,0	91,0	52,0	22,0	60,0	3/8	11,0	M8	2,0	1,0 °	2,5

Accessories


Designation	Reduction ring																				
	<table border="1"> <thead> <tr> <th>DCB</th> <th>DMM</th> </tr> </thead> <tbody> <tr> <td>SRR-BR11016</td> <td>10</td> <td>16</td> </tr> <tr> <td>SRR-BR11216</td> <td>12</td> <td>16</td> </tr> <tr> <td>SRR-BR11220</td> <td>12</td> <td>20</td> </tr> <tr> <td>SRR-BR21620</td> <td>16</td> <td>20</td> </tr> <tr> <td>SRR-BR31625</td> <td>16</td> <td>25</td> </tr> <tr> <td>SRR-BR32025</td> <td>20</td> <td>25</td> </tr> </tbody> </table>	DCB	DMM	SRR-BR11016	10	16	SRR-BR11216	12	16	SRR-BR11220	12	20	SRR-BR21620	16	20	SRR-BR31625	16	25	SRR-BR32025	20	25
DCB	DMM																				
SRR-BR11016	10	16																			
SRR-BR11216	12	16																			
SRR-BR11220	12	20																			
SRR-BR21620	16	20																			
SRR-BR31625	16	25																			
SRR-BR32025	20	25																			

Hose adapter is not included in delivery.

Setting fixture – Single clock



<p>SF-210340-C160: Ordering and Part No. 02885391</p> <ul style="list-style-type: none"> • Horizontal stand • First choice for Xfix reamers • 1 clock • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 340 mm (13.386") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	
<p>SF-210290V-C160: Ordering and Part No. 02885392</p> <ul style="list-style-type: none"> • Vertical stand • First choice for Xfix reamers • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 290 mm (11.417") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	

Setting fixture – Dual clock



<p>SF-210340-C160C190: Ordering and Part No. 02885393</p> <ul style="list-style-type: none"> • Horizontal stand • First choice for Bifix reamers • 2 clocks • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 340 mm (13.386") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 delivery 	
<p>SF-210290V-C160C190: Ordering and Part No. 02885394</p> <ul style="list-style-type: none"> • Vertical stand • First choice for Bifix reamers • 2 clocks • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 290 mm (11.417") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	

For ordering information, contact your local Seco Tools representative.

Setting fixture – Single clock large capacity

<p>SF-210740-C160: Ordering and Part No. 02885385</p> <ul style="list-style-type: none"> • Horizontal stand • First choice for Xfix reamers • 1 clock • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 740 mm (29.134") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	
<p>SF-210690V-C160: Ordering and Part No. 02885387</p> <ul style="list-style-type: none"> • Vertical stand • First choice for Xfix reamers • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 690 mm (27.165") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	

Setting fixture – Dual clock large capacity

<p>SF-210740-C160C190: Ordering and Part No. 02885388</p> <ul style="list-style-type: none"> • Horizontal stand • First choice for Bifix reamers • 2 clocks • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 740 mm (29.134") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	
<p>SF-210690V-C160C190: Ordering and Part No. 02885390</p> <ul style="list-style-type: none"> • Vertical stand • First choice for Bifix reamers • 2 clocks • Maximum tool Ø: 210 mm (8.268") • Maximum tool length: 690 mm (27.165") • Included in delivery: additional Ø 57 mm (2.224") spring center for HSK 63/80/100 & Capto C8 SSC5700 Part No. 02208620 	

For ordering information, contact your local Seco Tools representative.

Setting fixture – Compact

Introduction

SF-60200-C160: Ordering and Part No. 02885395

- Horizontal stand
- First choice for \varnothing smaller than 60 mm (2.362")
- 1 clock
- Maximum tool \varnothing : 60,5 mm (2.382")
- Maximum tool length: 200 mm (7.874")



Drilling

SF-60200-C160C190: Ordering and Part No. 02885396

- Horizontal stand
- First choice for \varnothing smaller than 60 mm (2.362")
- 2 clocks
- Maximum tool \varnothing : 60,5 mm (2.382")
- Maximum tool length: 200 mm (7.874")



Reaming

For ordering information, contact your local Seco Tools representative.

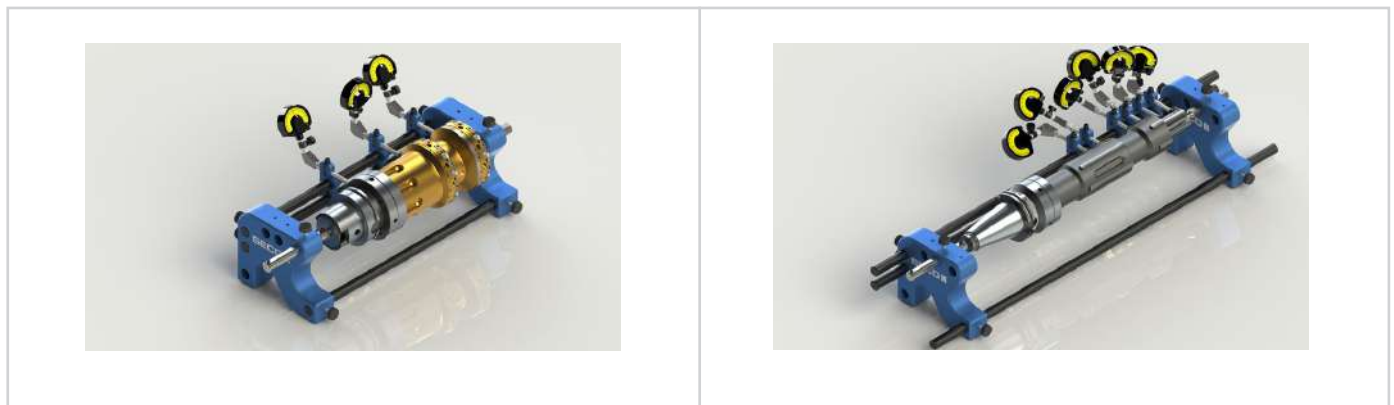
Boring

Annex


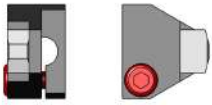
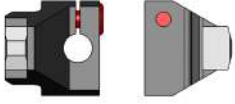
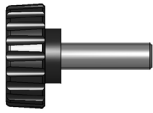
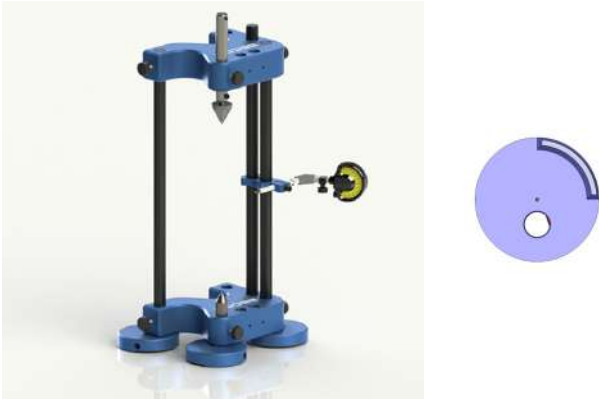
Additional measuring arms

	<p>SFB-60: Ordering and Part No. 02208619</p> <ul style="list-style-type: none"> • Measuring arm 60° • Dial gauge included in delivery • Measuring point not included, see page 490
	<p>SFB-60 WC: Ordering and Part No. 02885754</p> <ul style="list-style-type: none"> • Measuring arm 60° • Dial gauge not included in delivery • Measuring point not included, see page 490
	<p>SFB-90: Ordering and Part No. 02208622</p> <ul style="list-style-type: none"> • Measuring arm 90° • Dial gauge included in delivery • Measuring point not included, see page 490
	<p>SFB-90 WC: Ordering and Part No. 02885755</p> <ul style="list-style-type: none"> • Measuring arm 90° • Dial gauge not included in delivery • Measuring point not included, see page 490
	<p>DG-1: Ordering and Part No. 75079579</p> <ul style="list-style-type: none"> • Dial gauge, 1 μm (39 μin)

Examples of multi clocks setting fixture assembly



Accessories

	<p>SMES-406: Ordering and Part No. 02819156</p> <ul style="list-style-type: none"> • Measuring point for Xfix reamers • Ø 4mm (0.157") • Carbide tipped
	<p>SMES-900: Ordering and Part No. 02208610</p> <ul style="list-style-type: none"> • Measuring point for Bifix reamers • Carbide tipped
	<p>SMES-909: Ordering and Part No. 02980090</p> <ul style="list-style-type: none"> • Measuring point for Bifix reamers • Carbide tipped • 9 mm (0.354") offset
	<p>SFHS-20: Ordering and Part No. 02884025</p> <ul style="list-style-type: none"> • Hand-screw • Suitable for the entire setting fixture range
	<p>SFVST- 100: Ordering and Part No. 02884026</p> <ul style="list-style-type: none"> • Steel stand (set of 3) • Ø 100 mm (3.937") • Suitable to convert horizontal setting fixture to vertical position

Introduction

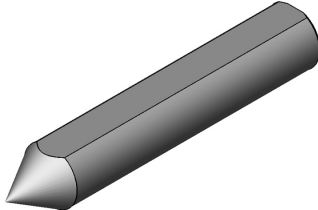
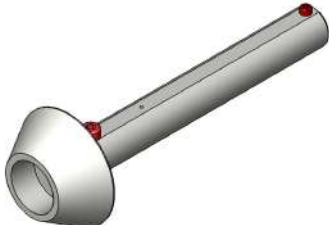
Drilling

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Centre points

<p>SFC-2000HM: Ordering and Part No. 02884023</p> <ul style="list-style-type: none"> • Solid carbide fixed center point • Ø 20 mm (0.787") • Suitable for Xfix and Bifix range standard and special • To be used at front end of the tool 	
<p>SSC-3400: Ordering and Part No. 02208617</p> <ul style="list-style-type: none"> • Spring center point • Ø 34 mm (1.339") • Suitable for Xfix and Bifix range standard and special • To be used at back end of the tool • Not suitable for HSK63/80/100 and capto C8 	
<p>SSC5700: Ordering and Part No. 02208620</p> <ul style="list-style-type: none"> • Spring center point • Truncated Ø 57 mm (2.244") • Suitable for Xfix and Bifix range standard and special • To be used at back end of the tool • Suitable for HSK63/80/100 and capto C8 	

Overview

Graflex® and Seco-Capto™

Graflex® and Seco-Capto™ arbors, extensions and reducers to build boring bars



Page(s) 494-553, 554

- Boring bars assemblies can be rapidly built together to the closest required needs, either by using the Graflex or the Seco-Capto modular systems including a wide range of arbors and intermediaries.
- Both systems offer a rigid and precise connection to be used for roughing applications or finishing holes.
- The modules can also receive a large number of tool holders like collet chucks, hydro chucks etc. (see Tooling systems catalog).

RB750 boring heads, rough boring

Twin cutting heads, with insert holders coupling mechanism



Page(s) 566, 567-573

- High metal removal, precise hole geometry and hole position
- Both symmetrical and staggered settings
- Simultaneous adjustment by an insert holders coupling mechanism
- With Graflex® or Seco-Capto™ connections

Ø range 18 to 205 mm
(0.709 to 8.071")

IT 9/10

RB 610 boring heads, rough boring

Twin cutting heads



Page(s) 579-582

- High metal removal, precise hole geometry and hole position
- Both symmetrical and staggered settings
- With Graflex® connection for Graflex® modular system
- With GL or BA connection for Steadyline® vibration damping bars

Ø range 28 mm to 116 mm
(1.102 to 4.567")

IT 9/10

FB 760 boring heads, Axiabore™ type, fine boring

Fine boring heads, with axial tools



Page(s) 590-601

- Micrometer adjustment for hole precision up to IT5
- High tool rigidity for precise hole geometry and position
- Nanobore™ head for smaller diameters
- Axialibrabore™ and - Axialibrabore™ Plus - are fine balanceable, HSM suitable
- Multi-purpose adapter (MPA) for larger boring diameters, OD-overturning and grooving
- With Graflex® or Seco-Capto™ connections

Ø range 0,3 to 108 mm
(0.012 to 4.252")

+ OD-overturning and face grooving

IT 5/6

Overview

FB 620, FB 780 and FB 790 boring heads, radial type

Fine boring heads, with radial insert holder



Page(s) 620, 621-629

- Micrometer adjustment for hole precision up to IT5
- Precise hole geometry and position
- A790 Libraflex® heads are fine balanceable, HSM suitable insert holder clamping for highest reliability
- Long bores achievable, using carbide extensions (up to 7xD) or Steadyline® bars (up to 10xD)
- Also for chamfering and back-boring
- With Graflex® or Seco-Capto™ connections for modular systems
- With GL or BA connection for Steadyline® vibration damping bars

Ø range 15 to 205 mm
(0.591 to 8.071")
IT 5/6

Bridge bars and Jumbo boring heads

For rough and fine boring large diameters



Page(s) 631-648

- Boring blocks available for rough and fine boring, OD-overturning and back-boring
- Strong design for high metal removal in rough boring
- Micrometric adjustment for fine boring
- Optimized boring block design and Jumbo Bridge bars made from high tensile aluminum for high speeds
- To be fitted onto milling cutter holders, flange mounting type

Ø range 204 to 3205 mm
(8.031-126.181")
IT 5/6 (fine boring) or 9/10
(rough boring)
+ OD-overturning
IT6

Inserts for boring



Page(s) 650-662

- For boring applications in all materials
- High toughness for rough boring
- Positive geometries for fine boring
- Grades selected for long life

Graflex® or Seco-Capto™ modular holding system



Page(s) 663-665

- The boring heads have a Graflex® or a Seco-Capto™ machine side connection shank enabling a full range of boring depths and diameters
- Select the required Graflex® or Seco-Capto™ arbors and intermediates from the TOOLING SYSTEMS catalog (HSK, DIN, BT, ANSI-CAT, Seco-Capto™)
- Graflex® connections spare parts for boring heads are shown in that chapter

Introduction

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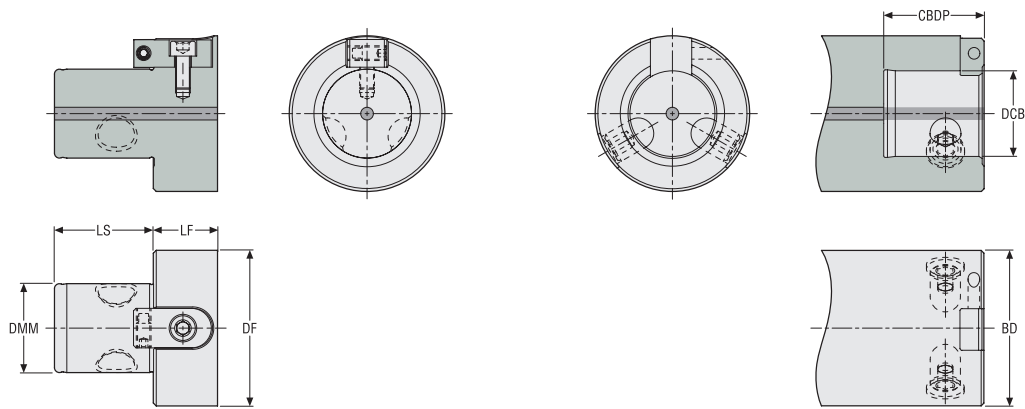


Graflex®

Graflex® assemblies include arbors, intermediates, tool holders and boring heads that can be rapidly built together when they are needed. Suitable for milling, drilling, tapping, reaming and boring, Graflex® modules offer tooling of variable lengths and diameters and can be fitted on all types of machines simply by substituting the Graflex® basic arbor.

- Excellent connection rigidity
- Wide range of modules offer high flexibility
- Through coolant possibilities

Graflex®, norm dimensions



Machine side catalogue designation	Hole for RFID carrier*	DF	DMM	LS	LF
		mm Inch	mm Inch	mm Inch	mm Inch
G0	No	16 0.630	8 0.315	12 0.472	8 0.315
G1	No	20 0.787	11 0.433	13 0.512	9,5 0.374
G2	No	25 0.984	14 0.551	16 0.630	11 0.433
G3	No	32 1.260	18 0.709	20 0.787	14 0.551
G4	No	40 1.575	22 0.866	24 0.945	17 0.669
G5	No	50 1.969	28 1.102	30 1.181	20 0.787
G6	No	63 2.480	36 1.417	40 1.575	26 1.024
G7	No	90 3.543	46 1.811	50 1.969	26 1.024

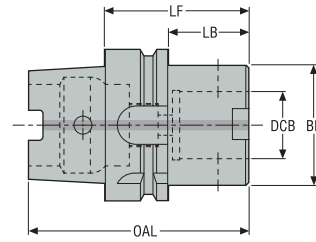
Workpiece side catalogue designation	Hole for RFID carrier*	CBDP	DCB	BD
		mm Inch	mm Inch	mm Inch
G0	No	16 0.630	8 0.315	12 0.472
G1	No	20 0.787	11 0.433	13 0.512
G2	No	25 0.984	14 0.551	16 0.630
G3	No	32 1.260	18 0.709	20 0.787
G4	No	40 1.575	22 0.866	24 0.945
G5	No	50 1.969	28 1.102	30 1.181
G6	No	63 2.480	36 1.417	40 1.575
G7	No	90 3.543	46 1.811	50 1.969

Note: These machine side and workpiece side dimensions are applied to all the holders shown in the product pages.

* No hole for RFID carriers

G 401 – Graflex® arbors

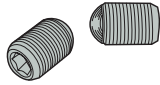
HSK-A/ ISO12164-1-HSK-A




- For HSK sealing plugs, coolant tubes and tube spanners, see page(s)523

Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
EM93034012870	00086917	HSK-A50	G5	28,0 1.102	70,0 2.756	44,0 1.732	50,0 1.969	95,0 3.740	1	PB	0,79 1.740
EM93044011445	02469722	HSK-A63	G2	14,0 0.551	45,0 1.772	19,0 0.748	25,0 0.984	77,0 3.031	1	G6.3	0,69 1.520
EM93044011850	00086918	HSK-A63	G3	18,0 0.709	50,0 1.969	24,0 0.945	32,0 1.260	82,0 3.228	1	G6.3	0,73 1.610
EM93044012255	00088217	HSK-A63	G4	22,0 0.866	55,0 2.165	29,0 1.142	40,0 1.575	87,0 3.425	1	G6.3	0,83 1.830
EM93044012860	00086920	HSK-A63	G5	28,0 1.102	60,0 2.362	34,0 1.339	50,0 1.969	92,0 3.622	1	PB	0,98 2.160
EM930440128100	00086921	HSK-A63	G5	28,0 1.102	100,0 3.937	74,0 2.913	50,0 1.969	132,0 5.197	1	PB	1,58 3.480
EM930440128140	00086922	HSK-A63	G5	28,0 1.102	140,0 5.512	114,0 4.488	50,0 1.969	172,0 6.772	1	PB	2,18 4.810
EM93044013670	00086923	HSK-A63	G6	36,0 1.417	70,0 2.756	44,0 1.732	63,0 2.480	102,0 4.016	1	PB	1,21 2.670
EM930440136120	00086924	HSK-A63	G6	36,0 1.417	120,0 4.724	94,0 3.701	63,0 2.480	152,0 5.984	1	PB	2,38 5.250
EM93064011855	00086925	HSK-A100	G3	18,0 0.709	55,0 2.165	26,0 1.024	32,0 1.260	105,0 4.134	1	G6.3	2,1 4.630
EM93064012260	00086926	HSK-A100	G4	22,0 0.866	60,0 2.362	31,0 1.220	40,0 1.575	110,0 4.331	1	G6.3	2,19 4.830
EM93064012865	00086927	HSK-A100	G5	28,0 1.102	65,0 2.559	36,0 1.417	50,0 1.969	115,0 4.528	1	PB	2,37 5.220
EM930640128110	00086928	HSK-A100	G5	28,0 1.102	110,0 4.331	81,0 3.189	50,0 1.969	160,0 6.299	1	PB	3,02 6.660
EM930640128150	00086929	HSK-A100	G5	28,0 1.102	150,0 5.906	121,0 4.764	50,0 1.969	200,0 7.874	1	PB	3,7 8.160
EM93064013675	00083432	HSK-A100	G6	36,0 1.417	75,0 2.953	46,0 1.811	63,0 2.480	125,0 4.921	1	PB	2,6 5.730
EM930640136120	00086931	HSK-A100	G6	36,0 1.417	120,0 4.724	91,0 3.583	63,0 2.480	170,0 6.693	1	PB	3,82 8.420
EM930640136160	00086932	HSK-A100	G6	36,0 1.417	160,0 6.299	131,0 5.157	63,0 2.480	210,0 8.268	1	PB	4,72 10.410
EM93064014685	00074385	HSK-A100	G7	46,0 1.811	85,0 3.346	56,0 2.205	90,0 3.543	135,0 5.315	1	PB	3,99 8.800
EM930640146160	00086933	HSK-A100	G7	46,0 1.811	160,0 6.299	131,0 5.157	90,0 3.543	210,0 8.268	1	PB	7,67 16.910
HSKA125-G6-120	03229653	HSK-A125	G6	36,0 1.417	120,0 4.724	91,0 3.583	63,0 2.480	183,0 7.205	1	PB	5,1 11.240
HSKA125-G7-120	03229654	HSK-A125	G7	46,0 1.811	120,0 4.724	91,0 3.583	90,0 3.543	183,0 7.205	1	PB	7,1 15.650

Spare Parts, included in delivery

For size	Assembly screw
	
G2	90F2
G3	90F3
G4	90F4
G5	90F5
G6	90F6
G7	90F7

Accessories

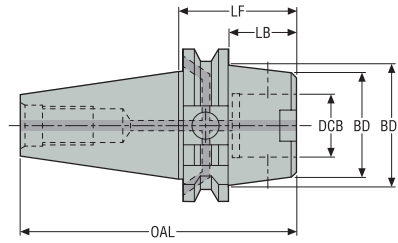
For size	Locking key
	
G2	03H025
G3	03H03
G4	03H04
G5	03H05
G6	03H06
G7	03H10

G 401 – Graflex® arbors

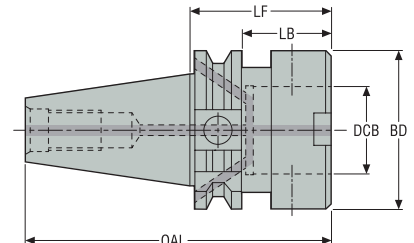
SA/SK/DIN 69871-ADB



Design 1




Design 2



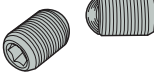

Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
EM34694011190	02503292	DIN40 ADB	G1	11,0 0.433	90,0 3.543	70,9 2.791	-	158,4 6.236	2	1	G6.3	0,94 2.070
EM34694011435	02469729	DIN40 ADB	G2	14,0 0.551	35,0 1.378	15,9 0.626	-	103,4 4.071	2	1	G6.3	0,83 1.830
EM34694011490	02503293	DIN40 ADB	G2	14,0 0.551	90,0 3.543	70,9 2.791	-	158,4 6.236	2	1	G6.3	1,02 2.250
EM34694011835	02420097	DIN40 ADB	G3	18,0 0.709	35,0 1.378	15,9 0.626	50,0 1.969	103,4 4.071	1	1	G6.3	0,91 2.010
EM346940118100	02503298	DIN40 ADB	G3	18,0 0.709	100,0 3.937	80,9 3.185	-	168,4 6.630	2	1	G6.3	1,22 2.690
EM34694012235	02503299	DIN40 ADB	G4	22,0 0.866	35,0 1.378	15,9 0.626	50,0 1.969	103,4 4.071	1	1	G6.3	0,92 2.030
EM346940122100	02503300	DIN40 ADB	G4	22,0 0.866	100,0 3.937	80,9 3.185	-	168,4 6.630	2	1	G6.3	1,44 3.170
EM34694012840	02458421	DIN40 ADB	G5	28,0 1.102	40,0 1.575	20,9 0.823	-	108,4 4.268	2	1	PB	0,93 2.050
EM34694012880	02503301	DIN40 ADB	G5	28,0 1.102	80,0 3.150	60,9 2.398	-	148,4 5.843	2	1	PB	1,5 3.310
EM346940128120	02503302	DIN40 ADB	G5	28,0 1.102	120,0 4.724	100,9 3.972	-	188,4 7.417	2	1	PB	2,08 4.590
EM34694013660	02503303	DIN40 ADB	G6	36,0 1.417	60,0 2.362	40,9 1.610	-	128,4 5.055	2	1	PB	1,24 2.730
EM346940136120	02503304	DIN40 ADB	G6	36,0 1.417	120,0 4.724	100,9 3.972	-	188,4 7.417	2	1	PB	2,65 5.840
EM347140114100	02503306	DIN50 ADB	G2	14,0 0.551	100,0 3.937	80,9 3.185	-	201,7 7.941	2	1	G6.3	2,8 6.170
EM34714011835	02503307	DIN50 ADB	G3	18,0 0.709	35,0 1.378	15,9 0.626	-	136,7 5.382	2	1	G6.3	2,67 5.890
EM347140118110	02503308	DIN50 ADB	G3	18,0 0.709	110,0 4.331	90,9 3.579	-	211,7 8.335	2	1	G6.3	3,0 6.610
EM34714012235	02503309	DIN50 ADB	G4	22,0 0.866	35,0 1.378	15,9 0.626	80,0 3.150	136,7 5.382	1	1	G6.3	2,88 6.350
EM347140122120	02503311	DIN50 ADB	G4	22,0 0.866	120,0 4.724	100,9 3.972	-	221,7 8.728	2	1	G6.3	3,5 7.720
EM34714012840	02503312	DIN50 ADB	G5	28,0 1.102	40,0 1.575	20,9 0.823	-	141,7 5.579	2	1	PB	2,75 6.060
EM347140128100	02503315	DIN50 ADB	G5	28,0 1.102	100,0 3.937	80,9 3.185	-	201,7 7.941	2	1	PB	3,56 7.850
EM347140128140	02503316	DIN50 ADB	G5	28,0 1.102	140,0 5.512	120,9 4.760	-	241,7 9.516	2	1	PB	4,08 8.990
EM34714013645	02503317	DIN50 ADB	G6	36,0 1.417	45,0 1.772	25,9 1.020	-	146,7 5.776	2	1	PB	2,88 6.350
EM347140136100	02503318	DIN50 ADB	G6	36,0 1.417	100,0 3.937	80,9 3.185	-	201,7 7.941	2	1	PB	4,1 9.040
EM347140136140	02503319	DIN50 ADB	G6	36,0 1.417	140,0 5.512	120,9 4.760	-	241,7 9.516	2	1	PB	4,99 11.000

Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
EM34714014650	02503320	DIN50 ADB	G7	46,0 1.811	50,0 1.969	30,9 1.217	–	151,7 5.972	2	1	PB	3,23 7.120
EM347140146120	02503321	DIN50 ADB	G7	46,0 1.811	120,0 4.724	100,9 3.972	–	221,7 8.728	2	1	PB	6,48 14.290
EM347140146200	02503324	DIN50 ADB	G7	46,0 1.811	200,0 7.874	180,9 7.122	–	301,7 11.878	2	1	PB	10,4 22.930

Accessories

For size	Locking key
	
DIN40/ G1	03H02
DIN40/ G2	03H025
DIN40/ G3	03H03
DIN40/ G4	03H04
DIN40/ G5	03H05
DIN40/ G6	03H06
DIN50/ G2	03H025
DIN50/ G3	03H03
DIN50/ G4	03H04
DIN50/ G5	03H05
DIN50/ G6	03H06
EM34714014650	03H10
DIN50/ G7	03H10

Spare Parts, included in delivery

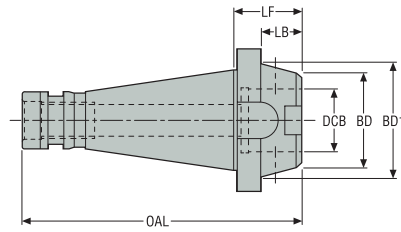
For size	Assembly screw	Sealing Screws
		
DIN40/ G1	90F1	950A0406
DIN40/ G2	90F2	950A0406
DIN40/ G3	90F3	950A0406
DIN40/ G4	90F4	950A0406
DIN40/ G5	90F5	950A0406
DIN40/ G6	90F6	950A0406
DIN50/ G2	90F2	950A0606
DIN50/ G3	90F3	950A0606
DIN50/ G4	90F4	950A0606
DIN50/ G5	90F5	950A0606
DIN50/ G6	90F6	950A0606
DIN50/ G7	90F7	950A0606
EM34714014650	90F71	950A0606

G 401 – Graflex® arbors

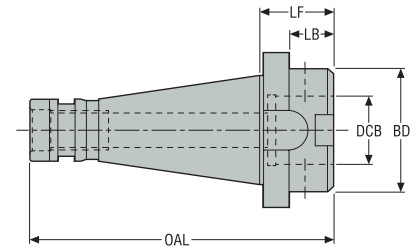
DIN 2080



Design 1



Design 2



Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	BD	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
EM00404013650	00076707	DIN(2080)40	G6	36,0 1.417	50,0 1.969	0,0 -	-	63,0 2.480	143,4 5.646	2	0	PB	1,27 2.800
EM00504012835	00076710	DIN(2080)50	G5	28,0 1.102	35,0 1.378	19,8 0.780	78,0 3.071	50,0 1.969	161,8 6.370	1	0	PB	2,94 6.480
EM00504013640	00076714	DIN(2080)50	G6	36,0 1.417	40,0 1.575	24,8 0.976	-	63,0 2.480	166,8 6.567	2	0	PB	2,82 6.220
EM00504014645	00076718	DIN(2080)50	G7	46,0 1.811	45,0 1.772	29,8 1.173	-	90,0 3.543	171,8 6.764	2	0	PB	3,34 7.360

Accessories

For size	Locking key
G6	03H06
G5	03H05
G7	03H10

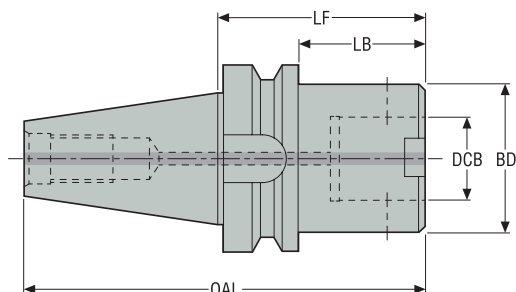
Spare Parts, included in delivery

For size	Assembly screw
G5	90F5
G6	90F6
G7	90F7

Introduction
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G 401 – Graflex® arbors

BT JIS B 6339-AD



Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD	OAL	RFID hole	Balan- cing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
EM40404011835	00056699	BT30 AD	G3	18,0 0.709	35,0 1.378	13,0 0.512	32,0 1.260	83,4 3.283	0	G6.3	0,41 0.900
EM40404012850	00056705	BT30 AD	G5	28,0 1.102	50,0 1.969	25,0 0.984	50,0 1.969	98,4 3.874	0	PB	0,62 1.370

Accessories

For size

Locking key



EM40404011835

03H03

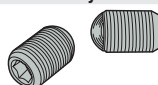
EM40404012850

03H05

Spare Parts, included in delivery

For size

Assembly screw



EM40404011835

90F3

EM40404012850

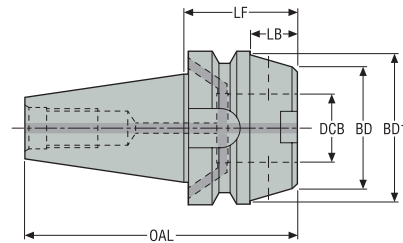
90F5

G 401 – Graflex® arbors

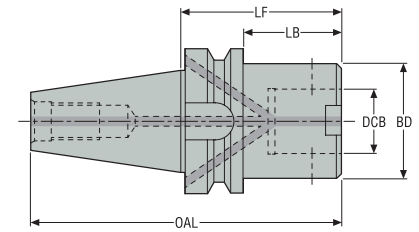
BT JIS B 6339-ADB



Design 1




Design 2



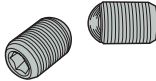

Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	BD	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				
EM34144011190	02503364	BT40 ADB	G1	11,0 0.433	90,0 3.543	63,0 2.480	–	20,0 0.787	155,4 6.118	2	1	G6.3	1,06 2.340
EM34144011440	02469725	BT40 ADB	G2	14,0 0.551	40,0 1.575	13,0 0.512	–	25,0 0.984	105,4 4.150	2	1	G6.3	0,98 2.160
EM34144011490	02503365	BT40 ADB	G2	14,0 0.551	90,0 3.543	63,0 2.480	–	25,0 0.984	155,4 6.118	2	1	G6.3	1,15 2.540
EM34144011840	02503366	BT40 ADB	G3	18,0 0.709	40,0 1.575	13,0 0.512	62,0 2.441	32,0 1.260	105,4 4.150	1	1	G6.3	1,07 2.360
EM341440118100	02503367	BT40 ADB	G3	18,0 0.709	100,0 3.937	73,0 2.874	–	32,0 1.260	165,4 6.512	2	1	G6.3	1,31 2.890
EM34144012245	02503368	BT40 ADB	G4	22,0 0.866	45,0 1.772	18,0 0.709	62,0 2.441	40,0 1.575	110,4 4.346	1	1	G6.3	1,14 2.510
EM341440122100	02503370	BT40 ADB	G4	22,0 0.866	100,0 3.937	73,0 2.874	–	40,0 1.575	165,4 6.512	2	1	G6.3	1,54 3.400
EM34144012845	02457989	BT40 ADB	G5	28,0 1.102	45,0 1.772	18,0 0.709	62,0 2.441	50,0 1.969	110,4 4.346	1	1	PB	1,12 2.470
EM34144012880	02503371	BT40 ADB	G5	28,0 1.102	80,0 3.150	53,0 2.087	–	50,0 1.969	145,4 5.724	2	1	PB	1,54 3.400
EM341440128120	02503372	BT40 ADB	G5	28,0 1.102	120,0 4.724	93,0 3.661	–	50,0 1.969	185,4 7.299	2	1	PB	2,12 4.670
EM34144013650	02503373	BT40 ADB	G6	36,0 1.417	50,0 1.969	0,0 –	–	63,0 2.480	115,4 4.543	2	0	PB	1,13 2.490
EM341440136120	02503374	BT40 ADB	G6	36,0 1.417	120,0 4.724	0,0 –	–	63,0 2.480	185,4 7.299	2	1	PB	2,78 6.130
EM341640114110	02503375	BT50 ADB	G2	14,0 0.551	110,0 4.331	72,0 2.835	–	25,0 0.984	211,8 8.339	2	1	G6.3	3,7 8.160
EM34164011845	02503376	BT50 ADB	G3	18,0 0.709	45,0 1.772	7,0 0.276	70,0 2.756	32,0 1.260	146,8 5.780	1	1	G6.3	3,58 7.890
EM341640118120	02503377	BT50 ADB	G3	18,0 0.709	120,0 4.724	82,0 3.228	–	32,0 1.260	221,8 8.732	2	1	G6.3	3,9 8.600
EM34164012250	02503378	BT50 ADB	G4	22,0 0.866	50,0 1.969	12,0 0.472	70,0 2.756	40,0 1.575	151,8 5.976	1	1	G6.3	3,66 8.070
EM341640122140	02503379	BT50 ADB	G4	22,0 0.866	140,0 5.512	102,0 4.016	–	40,0 1.575	241,8 9.520	2	1	G6.3	4,5 9.920
EM34164012855	02503380	BT50 ADB	G5	28,0 1.102	55,0 2.165	17,0 0.669	98,0 3.858	50,0 1.969	156,8 6.173	1	1	PB	4,0 8.820
EM341640128100	02503381	BT50 ADB	G5	28,0 1.102	100,0 3.937	62,0 2.441	–	50,0 1.969	201,8 7.945	2	1	PB	4,22 9.300
EM341640128140	02503382	BT50 ADB	G5	28,0 1.102	140,0 5.512	102,0 4.016	–	50,0 1.969	241,8 9.520	2	1	PB	4,8 10.580
EM34164013663	02503383	BT50 ADB	G6	36,0 1.417	63,0 2.480	25,0 0.984	98,0 3.858	63,0 2.480	164,8 6.488	1	1	PB	4,2 9.260
EM341640136100	02503384	BT50 ADB	G6	36,0 1.417	100,0 3.937	62,0 2.441	–	63,0 2.480	201,8 7.945	2	1	PB	4,6 10.140
EM341640136140	02503385	BT50 ADB	G6	36,0 1.417	140,0 5.512	102,0 4.016	–	63,0 2.480	241,8 9.520	2	1	PB	5,54 12.210

Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	BD	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
EM34164014665	02503386	BT50 ADB	G7	46,0 1.811	65,0 2.559	27,0 1.063	98,0 3.858	90,0 3.543	166,8 6.567	1	1	PB	4,4 9.700
EM341640146120	02503387	BT50 ADB	G7	46,0 1.811	120,0 4.724	82,0 3.228	-	90,0 3.543	221,8 8.732	2	1	PB	6,8 14.990
EM341640146200	02503388	BT50 ADB	G7	46,0 1.811	200,0 7.874	162,0 6.378	-	90,0 3.543	301,8 11.882	2	1	PB	10,7 23.590

Accessories

For size	Locking key
	
BT40/ G1	03H02
BT40/ G2	03H025
BT40/ G3	03H03
BT40/ G4	03H04
BT40/ G5	03H05
BT40/ G6	03H06
BT50/ G2	03H025
BT50/ G3	03H03
BT50/ G4	03H04
BT50/ G5	03H05
BT50/ G6	03H06
BT50/ G7	03H10

Spare Parts, included in delivery

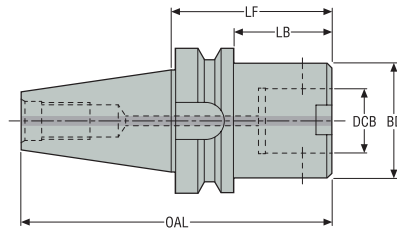
For size	Assembly screw	Sealing Screws
		
BT40/ G1	90F1	950A0406
BT40/ G2	90F2	950A0406
BT40/ G3	90F3	950A0406
BT40/ G4	90F4	950A0406
BT40/ G5	90F5	950A0406
BT40/ G6	90F6	950A0406
BT50/ G2	90F2	950A0606
BT50/ G3	90F3	950A0606
BT50/ G4	90F4	950A0606
BT50/ G5	90F5	950A0606
BT50/ G6	90F6	950A0606
BT50/ G7	90F7	950A0606

G 401 – Graflex® arbors

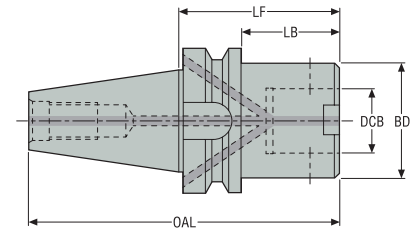
BT Taper-Face-AD/ADB



Design 1



Design 2



Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD	OAL	Design	RFID hole	Balan- cing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
EM40024011850	02998757	BT30 TF AD	G3	18,0 0.709	50,0 1.969	28,0 1.102	32,0 1.260	98,4 3.874	1	0	G6.3	0,5 1.100
EM40024012250	02998758	BT30 TF AD	G4	22,0 0.866	50,0 1.969	28,0 1.102	40,0 1.575	98,4 3.874	1	0	G6.3	0,6 1.320
EM321440122100	02998754	BT40 TF ADB	G4	22,0 0.866	100,0 3.937	73,0 2.874	40,0 1.575	165,4 6.512	2	1	G6.3	1,6 3.530
EM321440128120	02926006	BT40 TF ADB	G5	28,0 1.102	120,0 4.724	93,0 3.661	50,0 1.969	185,4 7.299	2	1	PB	2,1 4.630
EM321440136120	02998755	BT40 TF ADB	G6	36,0 1.417	120,0 4.724	93,0 3.661	63,0 2.480	185,4 7.299	2	1	PB	2,8 6.170
EM321640128140	02998756	BT50 TF ADB	G5	28,0 1.102	140,0 5.512	102,0 4.016	50,0 1.969	241,8 9.520	2	1	PB	4,9 10.800
EM321640136140	02926009	BT50 TF ADB	G6	36,0 1.417	140,0 5.512	102,0 4.016	63,0 2.480	241,8 9.520	2	1	PB	5,6 12.350
EM321640146200	02926010	BT50 TF ADB	G7	46,0 1.811	200,0 7.874	162,0 6.378	90,0 3.543	301,8 11.882	2	1	PB	10,7 23.590

Accessories

For	Locking key
EM40024011850	03H03
EM40024012250	03H04
EM321440122100	03H04
EM321440128120	03H05
EM321440136120	03H06
EM321640128140	03H05
EM321640136140	03H06
EM321640146200	03H10

Locking key



Introduction

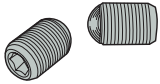

Drilling

Reaming

Boring

Annex

Spare Parts, included in delivery

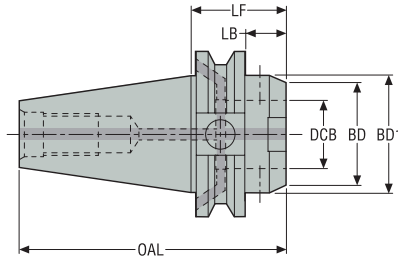
For	Assembly screw	Sealing Screws
		
EM40024011850	90F3	-
EM40024012250	90F4	-
EM321440122100	90F4	950A0406
EM321440128120	90F5	950A0406
EM321440136120	90F6	950A0406
EM321640128140	90F5	950A0606
EM321640136140	90F6	950A0606
EM321640146200	90F7	950A0606

G 401 – Graflex® arbors

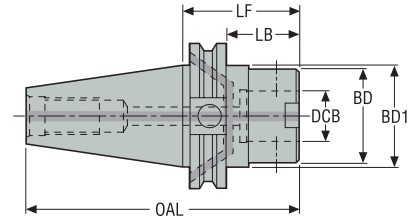
CAT / ASME B5.50-1994-ADB



Design 1



Design 2



Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD1	BD	OAL	Design	RFID hole	Balancing	Weight
				<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>				<i>lbs</i>
EM25024011435	02469734	CAT40 ADB	G2	0.551	1.380	0.630	1.750	0.984	4.070	1	1	G6.3	2.120
EM25024011835	00056660	CAT40 ADB	G3	0.709	1.380	0.630	1.750	1.260	4.070	1	1	G6.3	2.090
EM25024012235	00056661	CAT40 ADB	G4	0.866	1.380	0.630	1.750	1.575	4.070	1	1	G6.3	2.030
EM25024012840	00056663	CAT40 ADB	G5	1.102	1.570	0.820	1.750	1.969	4.270	2	1	PB	1.980
EM250240128100	00056662	CAT40 ADB	G5	1.102	3.940	3.190	1.750	1.969	7.420	2	1	PB	3.860
EM25024013660	00056665	CAT40 ADB	G6	1.417	2.360	1.610	1.750	2.480	5.060	2	1	PB	2.710
EM25044011835	00056666	CAT50 ADB	G3	0.709	1.380	0.630	2.750	1.260	5.380	1	1	G6.3	6.720
EM25044012235	00056667	CAT50 ADB	G4	0.866	1.380	0.630	2.750	1.575	5.380	1	1	G6.3	6.530
EM25044012840	00056669	CAT50 ADB	G5	1.102	1.570	0.820	2.750	1.969	5.580	2	1	PB	6.590
EM250440128100	00056668	CAT50 ADB	G5	1.102	3.940	3.190	2.750	1.969	7.940	2	1	PB	8.380
EM25044013645	00056671	CAT50 ADB	G6	1.417	1.770	1.020	2.750	2.480	5.780	1	1	PB	7.050
EM250440136120	00056670	CAT50 ADB	G6	1.417	4.720	3.970	2.750	2.480	9.520	1	1	PB	10.140
EM25044014665	00056675	CAT50 ADB	G7	1.811	2.560	1.810	2.750	3.543	5.970	2	1	PB	8.330
EM250440146120	00056673	CAT50 ADB	G7	1.811	4.720	3.970	2.750	3.543	8.730	2	1	PB	13.800
EM250440146200	00056674	CAT50 ADB	G7	1.811	7.870	7.120	2.750	3.543	11.880	2	1	PB	22.750

Accessories

For size	Locking key
CAT40/ G2	03H025
CAT40/ G3	03H03
CAT40/ G4	03H04
CAT40/ G5	03H05
CAT40/ G6	03H06
CAT50/ G3	03H03
CAT50/ G4	03H04
CAT50/ G5	03H05
CAT50/ G6	03H06
CAT50/ G7	03H10

Locking key



Introduction

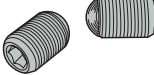

Drilling

Reaming

Boring

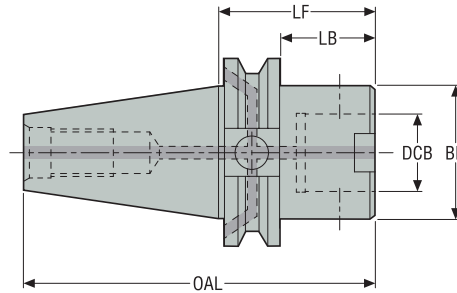
Annex

Spare Parts, included in delivery

For size	Assembly screw	Sealing Screws
		
CAT40/ G2	90F2	950A0406
CAT40/ G3	90F3	950A0406
CAT40/ G4	90F4	950A0406
CAT40/ G5	90F5	950A0406
CAT40/ G6	90F6	950A0406
CAT50/ G3	90F3	950A0606
CAT50/ G4	90F4	950A0606
CAT50/ G5	90F5	950A0606
CAT50/ G6	90F6	950A0606
CAT50/ G7	90F7	950A0606

G 401 – Graflex® arbors

CAT TF / ASME B5.50-2009-ADB



Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD	OAL	Design	RFID hole	Balan- cing	Weight
				<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>				<i>lbs</i>
EM26424011880	02998750	CAT40 TF ADB	G3	0.709	3.150	2.398	1.260	5.843	2	1	G6.3	2.650
EM26424012280	02998751	CAT40 TF ADB	G4	0.866	3.150	2.398	1.575	5.843	2	1	G6.3	3.090
EM264240128100	02998752	CAT40 TF ADB	G5	1.102	3.937	3.185	1.969	6.630	2	1	PB	4.190
EM264240136100	02998753	CAT40 TF ADB	G6	1.417	3.937	3.185	2.480	6.630	2	1	PB	5.070
EM264440122100	02964322	CAT50 TF ADB	G4	0.866	3.937	3.185	1.575	7.943	2	1	G6.3	7.280
EM264440128100	02964323	CAT50 TF ADB	G5	1.102	3.937	3.185	1.969	7.943	2	1	PB	7.940
EM264440136120	02926850	CAT50 TF ADB	G6	1.417	4.724	3.972	2.480	8.732	1	1	PB	10.140
EM264440146200	02926851	CAT50 TF ADB	G7	1.811	7.874	7.122	3.543	11.880	2	1	PB	22.710

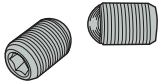

Accessories

For size	Locking key
EM26424011880	03H03
EM26424012280	03H04
EM264240128100	03H05
EM264240136100	03H06
EM264440122100	03H04
EM264440128100	03H05
EM264440136120	03H06
EM264440146200	03H10

Locking key

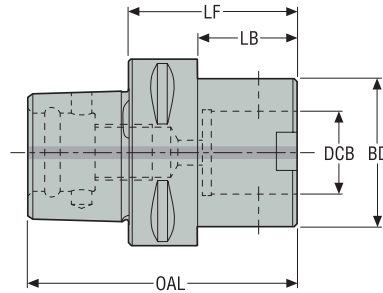


Spare Parts, included in delivery

For size	Assembly screw	Sealing Screws
		
EM26424011880	90F3	950A0406
EM26424012280	90F4	950A0406
EM264240128100	90F5	950A0406
EM264240136100	90F6	950A0406
EM264440122100	90F4	950A0606
EM264440128100	90F5	950A0606
EM264440136120	90F6	950A0606
EM264440146200	90F7	950A0606


G 401 – Graflex® adapters

Seco-Capto™

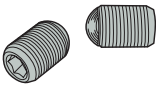


Designation	Item number	CTMS	CTWS	DCB	LF	LB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
C3-391.0401-08025	02532939	C3	G0	8,0 0.315	25,0 0.984	7,0 0.276	16,0 0.630	44,0 1.732	0	G6.3	0,14 0.310
C3-391.0401-11025	02532940	C3	G1	11,0 0.433	25,0 0.984	7,0 0.276	20,0 0.787	44,0 1.732	0	G6.3	0,14 0.310
C3-391.0401-14025	02532941	C3	G2	14,0 0.551	25,0 0.984	7,0 0.276	25,0 0.984	44,0 1.732	0	G6.3	0,15 0.330
C3-391.0401-18030	02532942	C3	G3	18,0 0.709	30,0 1.181	0,0 -	32,0 1.260	49,0 1.929	0	G6.3	0,16 0.350
C4-391.0401-18035	02532943	C4	G3	18,0 0.709	35,0 1.378	12,0 0.472	32,0 1.260	59,0 2.323	0	G6.3	0,31 0.680
C4-391.0401-22035	02532944	C4	G4	22,0 0.866	35,0 1.378	0,0 -	40,0 1.575	59,0 2.323	0	G6.3	0,31 0.680
C5-391.0401-14030	02532945	C5	G2	14,0 0.551	30,0 1.181	7,0 0.276	25,0 0.984	60,0 2.362	1	G6.3	0,47 1.040
C5-391.0401-18035	02532947	C5	G3	18,0 0.709	35,0 1.378	12,0 0.472	32,0 1.260	65,0 2.559	1	G6.3	0,47 1.040
C5-391.0401-22035	02532948	C5	G4	22,0 0.866	35,0 1.378	12,0 0.472	40,0 1.575	65,0 2.559	1	G6.3	0,51 1.120
C5-391.0401-28045	02532949	C5	G5	28,0 1.102	45,0 1.772	22,0 0.866	50,0 1.969	75,0 2.953	1	PB	0,64 1.410
C6-391.0401-18035	02532950	C6	G3	18,0 0.709	35,0 1.378	10,0 0.394	32,0 1.260	73,0 2.874	1	G6.3	0,84 1.850
C6-391.0401-22040	02532951	C6	G4	22,0 0.866	40,0 1.575	15,0 0.591	40,0 1.575	78,0 3.071	1	G6.3	0,89 1.960
C6-391.0401-28050	02532952	C6	G5	28,0 1.102	50,0 1.969	25,0 0.984	50,0 1.969	88,0 3.465	1	PB	1,04 2.290
C6-391.0401-36055	02532953	C6	G6	36,0 1.417	55,0 2.165	0,0 -	63,0 2.480	93,0 3.661	1	PB	1,19 2.620
C8-391.0401-28050	02532954	C8	G5	28,0 1.102	50,0 1.969	17,0 0.669	50,0 1.969	98,0 3.858	1	PB	1,92 4.230
C8-391.0401-36055	02532955	C8	G6	36,0 1.417	55,0 2.165	22,0 0.866	63,0 2.480	103,0 4.055	1	PB	2,02 4.450
C8-391.0401-46065	02532956	C8	G7	46,0 1.811	65,0 2.559	35,0 1.378	90,0 3.543	113,0 4.449	1	PB	2,71 5.970

Accessories

For size	Locking key
	
G0	03H02
G1	03H02
G2	03H025
G3	03H03
G4	03H04
G5	03H05
G6	03H06
G7	03H10

Spare Parts, included in delivery

For size	Assembly screw
	
G0	90F0
G1	90F1
G2	90F2
G3	90F3
G4	90F4
G5	90F5
G6	90F6
G7	90F7

Introduction

Drilling

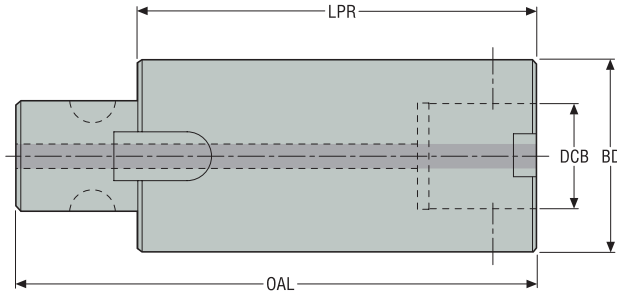
Reaming

Boring

Annex

G 402 – Graflex® extensions

Graflex®



Designation	Item number	CTMS	CTWS	LPR	DCB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch			
M402000	00056752	G0	G0	30,0 1.181	8,0 0.315	16,0 0.630	42,0 1.654	0	PB	0,05 0.110
M402001	00056753	G0	G0	50,0 1.969	8,0 0.315	16,0 0.630	62,0 2.441	0	PB	0,08 0.180
M402110	00056754	G1	G1	30,0 1.181	11,0 0.433	20,0 0.787	43,0 1.693	0	PB	0,07 0.150
M402111	00056755	G1	G1	50,0 1.969	11,0 0.433	20,0 0.787	63,0 2.480	0	PB	0,12 0.260
M402220	00056756	G2	G2	30,0 1.181	14,0 0.551	25,0 0.984	46,0 1.811	0	PB	0,11 0.240
M402221	00056757	G2	G2	50,0 1.969	14,0 0.551	25,0 0.984	66,0 2.598	0	PB	0,18 0.400
M402330	00056758	G3	G3	40,0 1.575	18,0 0.709	32,0 1.260	60,0 2.362	0	PB	0,24 0.530
M402331	75056759	G3	G3	60,0 2.362	18,0 0.709	32,0 1.260	80,0 3.150	0	PB	0,36 0.790
M402440	00056760	G4	G4	40,0 1.575	22,0 0.866	40,0 1.575	64,0 2.520	0	PB	0,37 0.820
M402441	00056761	G4	G4	60,0 2.362	22,0 0.866	40,0 1.575	84,0 3.307	0	PB	0,57 1.260
M402444	02786252	G4	G4	200,0 7.874	22,0 0.866	40,0 1.575	224,0 8.819	0	PB	1,95 4.300
M402550	00056762	G5	G5	50,0 1.969	28,0 1.102	50,0 1.969	80,0 3.150	0	PB	0,72 1.590
M402551	00056763	G5	G5	75,0 2.953	28,0 1.102	50,0 1.969	105,0 4.134	0	PB	1,12 2.470
M402552	00056764	G5	G5	100,0 3.937	28,0 1.102	50,0 1.969	130,0 5.118	0	PB	1,48 3.260
M402554	02786254	G5	G5	250,0 9.843	28,0 1.102	50,0 1.969	280,0 11.024	0	PB	3,9 8.600
M402660	00056765	G6	G6	60,0 2.362	36,0 1.417	63,0 2.480	100,0 3.937	0	PB	1,38 3.040
M402661	00056766	G6	G6	90,0 3.543	36,0 1.417	63,0 2.480	130,0 5.118	0	PB	2,1 4.630
M402662	00056767	G6	G6	120,0 4.724	36,0 1.417	63,0 2.480	160,0 6.299	0	PB	2,82 6.220
M402664	02786255	G6	G6	300,0 11.811	36,0 1.417	63,0 2.480	340,0 13.386	0	PB	7,2 15.870
M402770	00056768	G7	G7	60,0 2.362	46,0 1.811	90,0 3.543	110,0 4.331	0	-	2,9 6.390
M402771	00056769	G7	G7	90,0 3.543	46,0 1.811	90,0 3.543	140,0 5.512	0	-	4,03 8.880

Introduction

Drilling


Reaming

Boring

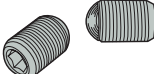

Annex

Designation	Item number	CTMS	CTWS	LPR	DCB	BD	OAL	RFID hole	Balan- cing	Weight
				mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			kg <i>lbs</i>
M402772	00056770	G7	G7	120,0 4.724	46,0 1.811	90,0 3.543	170,0 6.693	0	-	5,8 12.790
M402774	02786257	G7	G7	300,0 11.811	46,0 1.811	90,0 3.543	350,0 13.780	0	-	14,6 32.190

Accessories

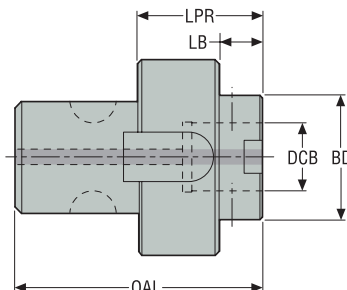
For size	Locking key
	
G0	03H02
G1	03H02
G2	03H025
G3	03H03
G4	03H04
G5	03H05
G6	03H06
G7	03H10

Spare Parts, included in delivery

For size	Assembly screw	Tenon
		
G0	90F0	90M0
G1	90F1	90M1
G2	90F2	90M2
G3	90F3	90M3
G4	90F4	90M4
G5	90F5	90M5
G6	90F6	90M6
G7	90F7	90M7


G 403 – Graflex® reducers

Graflex®

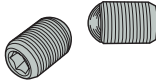



Designation	Item number	CTMS	CTWS	LPR	LB	DCB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
M40310	00056771	G1	G0	30,0 1.181	22,0 0.866	8,0 0.315	16,0 0.630	43,0 1.693	0	PB	0,06 0.130
M40320	00056772	G2	G0	30,0 1.181	19,0 0.748	8,0 0.315	16,0 0.630	46,0 1.811	0	PB	0,08 0.180
M40321	00056773	G2	G1	30,0 1.181	19,0 0.748	11,0 0.433	20,0 0.787	46,0 1.811	0	PB	0,1 0.220
M40330	00056774	G3	G0	30,0 1.181	16,0 0.630	8,0 0.315	16,0 0.630	50,0 1.969	0	PB	0,15 0.330
M40331	00056775	G3	G1	30,0 1.181	16,0 0.630	11,0 0.433	20,0 0.787	50,0 1.969	0	PB	0,15 0.330
M40332	00056776	G3	G2	30,0 1.181	16,0 0.630	14,0 0.551	25,0 0.984	50,0 1.969	0	PB	0,16 0.350
M40341	00056778	G4	G1	30,0 1.181	13,0 0.512	11,0 0.433	20,0 0.787	54,0 2.126	0	PB	0,25 0.550
M40342	00056779	G4	G2	30,0 1.181	13,0 0.512	14,0 0.551	25,0 0.984	54,0 2.126	0	PB	0,27 0.600
M40343	00056780	G4	G3	30,0 1.181	13,0 0.512	18,0 0.709	32,0 1.260	54,0 2.126	0	PB	0,27 0.600
M40350	00056781	G5	G0	40,0 1.575	20,0 0.787	8,0 0.315	16,0 0.630	70,0 2.756	0	PB	0,47 1.040
M40351	00056783	G5	G1	40,0 1.575	20,0 0.787	11,0 0.433	20,0 0.787	70,0 2.756	0	PB	0,49 1.080
M40352	00056785	G5	G2	40,0 1.575	20,0 0.787	14,0 0.551	25,0 0.984	70,0 2.756	0	PB	0,49 1.080
M40353	00056787	G5	G3	40,0 1.575	20,0 0.787	18,0 0.709	32,0 1.260	70,0 2.756	0	PB	0,52 1.150
M40354	00056789	G5	G4	40,0 1.575	20,0 0.787	22,0 0.866	40,0 1.575	70,0 2.756	0	PB	0,55 1.210
M40363	00056797	G6	G3	40,0 1.575	14,0 0.551	18,0 0.709	32,0 1.260	80,0 3.150	0	PB	0,98 2.160
M40364	00056799	G6	G4	40,0 1.575	14,0 0.551	22,0 0.866	40,0 1.575	80,0 3.150	0	PB	0,97 2.140
M40365	00056807	G6	G5	45,0 1.772	19,0 0.748	28,0 1.102	50,0 1.969	85,0 3.346	0	PB	1,04 2.290
M40375	00056811	G7	G5	50,0 1.969	24,0 0.945	28,0 1.102	50,0 1.969	100,0 3.937	0	-	2,08 4.590
M40376	00056812	G7	G6	55,0 2.165	29,0 1.142	36,0 1.417	63,0 2.480	105,0 4.134	0	-	2,23 4.920

Accessories

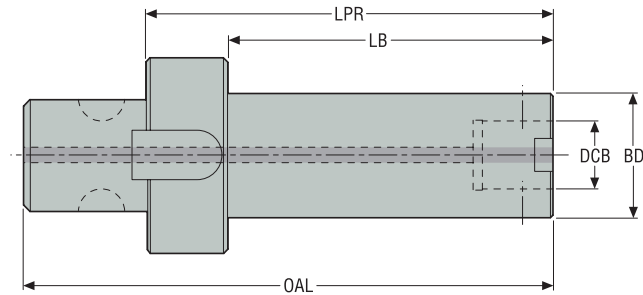
For size	Locking key
	
M40310	03H02
M40320	03H02
M40321	03H02
M40330	03H02
M40331	03H02
M40332	03H025
M40341	03H02
M40342	03H025
M40343	03H03
M40350	03H02
M40351	03H02
M40352	03H025
M40353	03H03
M40354	03H04
M40363	03H03
M40364	03H04
M40365	03H05
M40375	03H05
M40376	03H06

Spare Parts, included in delivery

For size	Assembly screw	Tenon
		
M40310	90F0	90M1
M40320	90F0	90M2
M40321	90F1	90M2
M40330	90F0	90M3
M40331	90F1	90M3
M40332	90F2	90M3
M40341	90F1	90M4
M40342	90F2	90M4
M40343	90F3	90M4
M40350	90F0	90M5
M40351	90F1	90M5
M40352	90F2	90M5
M40353	90F3	90M5
M40354	90F4	90M5
M40363	90F3	90M6
M40364	90F4	90M6
M40365	90F5	90M6
M40375	90F5	90M7
M40376	90F6	90M7

G 403 – Graflex® long reducers

Graflex®



Designation	Item number	CTMS	CTWS	LPR	LB	DCB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			
M40350070	00056782	G5	G0	70,0 2.756	50,0 1.969	8,0 0.315	16,0 0.630	100,0 3.937	0	PB	0,51 1.120
M40351080	00056784	G5	G1	80,0 3.150	60,0 2.362	11,0 0.433	20,0 0.787	110,0 4.331	0	PB	0,57 1.260
M40352100	00056786	G5	G2	100,0 3.937	80,0 3.150	14,0 0.551	25,0 0.984	130,0 5.118	0	PB	0,71 1.570
M40353120	00056788	G5	G3	120,0 4.724	100,0 3.937	18,0 0.709	32,0 1.260	150,0 5.906	0	PB	1,02 2.250
M40354150	00056790	G5	G4	150,0 5.906	130,0 5.118	22,0 0.866	40,0 1.575	180,0 7.087	0	PB	1,62 3.570
M40361090	00056794	G6	G1	90,0 3.543	64,0 2.520	11,0 0.433	20,0 0.787	130,0 5.118	0	PB	1,08 2.380
M40362110	00056796	G6	G2	110,0 4.331	84,0 3.307	14,0 0.551	25,0 0.984	150,0 5.906	0	PB	1,23 2.710
M40363120	00056798	G6	G3	120,0 4.724	94,0 3.701	18,0 0.709	32,0 1.260	160,0 6.299	0	PB	1,46 3.220
M40364150	00056800	G6	G4	150,0 5.906	124,0 4.882	22,0 0.866	40,0 1.575	190,0 7.480	0	PB	2,07 4.560
M40365190	00056808	G6	G5	190,0 7.480	164,0 6.457	28,0 1.102	50,0 1.969	230,0 9.055	0	PB	3,2 7.050

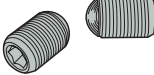

Accessories

For size	Locking key
M40350070	03H02
M40351080	03H02
M40352100	03H025
M40353120	03H03
M40354150	03H04
M40361090	03H02
M40362110	03H025
M40363120	03H03
M40364150	03H04
M40365190	03H05

Locking key

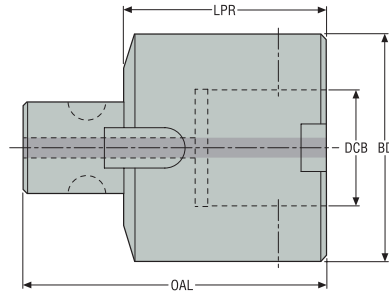


Spare Parts, included in delivery

For size	Assembly screw	Tenon
		
M40350070	90F0	90M5
M40351080	90F1	90M5
M40352100	90F2	90M5
M40353120	90F3	90M5
M40354150	90F4	90M5
M40361090	90F1	90M6
M40362110	90F2	90M6
M40363120	90F3	90M6
M40364150	90F4	90M6
M40365190	90F5	90M6

G 403 – Graflex® enlargers

Graflex®



Designation	Item number	CTMS	CTWS	LPR	DCB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch			
M40356	00056791	G5	G6	55,0 2.165	36,0 1.417	63,0 2.480	85,0 3.346	0	PB	1,08 2.380
M40367	00056810	G6	G7	80,0 3.150	46,0 1.811	90,0 3.543	120,0 4.724	0	PB	3,46 7.630

Accessories

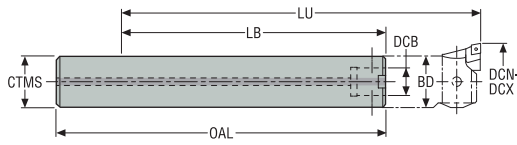
For	Locking key
M40356	03H06
M40367	03H10

Spare Parts, included in delivery

For	Assembly screw	Tenon
M40356	90F6	90M5
M40367	90F7	90M6

G 401 – Graflex® arbors, steel

Cylindrical



- Suitable for fine boring length up to LU with fitted boring head type A780 or A790
- Cylindrical machine side shank CTMS with tolerance h5, compatible with Shrinkfit holders

Designation	Item number	CTMS	CTWS	DCB	DCN	DCX	OAL	BD	LU	LB	RFID hole	Balan- cing	Weight
				mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			kg <i>lbs</i>
M4011408	00086938	14	G0	8,0 0.315	15,0 0.591	18,5 0.728	120,0 4.724	14,0 0.551	110,0 4.331	75,0 2.953	0	G6.3	0,12 0.260
M4011608	00086935	16	G0	8,0 0.315	18,0 0.709	23,5 0.925	150,0 5.906	16,0 0.630	137,0 5.394	102,0 4.016	0	G6.3	0,2 0.440
M4012011	00086936	20	G1	11,0 0.433	23,0 0.906	31,0 1.220	150,0 5.906	20,0 0.787	140,0 5.512	100,0 3.937	0	G6.3	0,33 0.730
M4012514	00086937	25	G2	14,0 0.551	30,0 1.181	40,0 1.575	150,0 5.906	25,0 0.984	139,0 5.472	93,0 3.661	0	G6.3	0,53 1.170
M4013218	00086939	32	G3	18,0 0.709	39,0 1.535	51,0 2.008	150,0 5.906	32,0 1.260	155,0 6.102	90,0 3.543	0	G6.3	0,87 1.920

Spare Parts, included in delivery

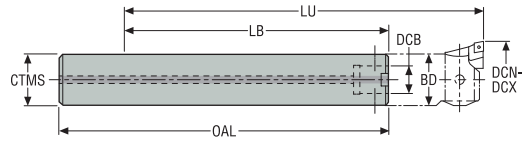
For	Assembly screw
M4011408	90F01
M4011608	90F0
M4012011	90F1
M4012514	90F2
M4013218	90F3

Accessories

For	Locking key
M4011408	03H025
M4011608	03H02
M4012011	03H02
M4012514	03H025
M4013218	03H03

G 401 – Graflex® arbors, steel


Cylindrical



- Suitable for fine boring length up to LU with fitted boring head type A780 or A790
- Cylindrical machine side shank CTMS with tolerance h5, compatible with Shrinkfit holders

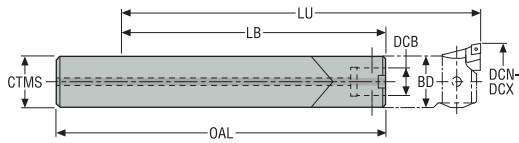
Designation	Item number	CTMS	CTWS	DCB	DCN	DCX	OAL	BD	LU	LB	RFID hole	Balan-cing	Weight
		<i>Inch</i>		<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>			<i>lbs</i>
M40107511	00056741	0.750	G1	0.433	0.906	1.220	5.906	0.827	5.510	3.906	0	G6.3	0.640

Spare Parts, included in delivery

For	Assembly screw	Locking key
M40107511	 90F1	 03H02

G 401 – Graflex® arbors, carbide

Cylindrical



- Suitable for fine boring length up to LU with fitted boring head type A780 or A790
- CTMS tolerance h5

Designation	Item number	CTMS	CTWS	DCB	DCN	DCX	OAL	BD	LU	LB	RFID hole	Balan- cing	Weight
				mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			kg <i>lbs</i>
M4011408C	00073004	14	G0	8,0 <i>0.315</i>	15,0 <i>0.591</i>	18,5 <i>0.728</i>	152,0 <i>5.984</i>	14,0 <i>0.551</i>	140,0 <i>5.512</i>	105,0 <i>4.134</i>	0	G6.3	0,31 <i>0.680</i>
M4011608C	00056747	16	G0	8,0 <i>0.315</i>	18,0 <i>0.709</i>	23,5 <i>0.925</i>	175,0 <i>6.890</i>	16,0 <i>0.630</i>	160,0 <i>6.299</i>	125,0 <i>4.921</i>	0	G6.3	0,5 <i>1.100</i>
M4012011C	00056749	20	G1	11,0 <i>0.433</i>	23,0 <i>0.906</i>	31,0 <i>1.220</i>	212,0 <i>8.346</i>	20,0 <i>0.787</i>	200,0 <i>7.874</i>	160,0 <i>6.299</i>	0	G6.3	0,89 <i>1.960</i>
M4012514C	00056750	25	G2	14,0 <i>0.551</i>	30,0 <i>1.181</i>	40,0 <i>1.575</i>	262,0 <i>10.315</i>	25,0 <i>0.984</i>	250,0 <i>9.843</i>	204,0 <i>8.031</i>	0	G6.3	1,71 <i>3.770</i>
M4013218C	00056751	32	G3	18,0 <i>0.709</i>	39,0 <i>1.535</i>	51,0 <i>2.008</i>	317,0 <i>12.480</i>	32,0 <i>1.260</i>	320,0 <i>12.598</i>	255,0 <i>10.039</i>	0	G6.3	3,44 <i>7.580</i>

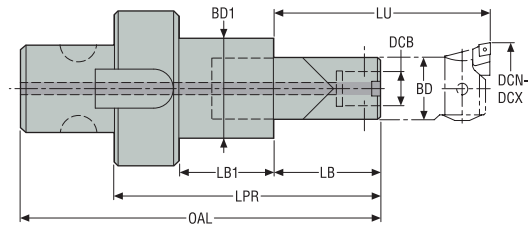
Spare Parts, included in delivery

For	Assembly screw
M4011408C	90F01
M4011608C	90F0
M4012011C	90F1
M4012514C	90F2
M4013218C	90F3

Accessories

For	Locking key
M4011408C	03H025
M4011608C	03H02
M4012011C	03H02
M4012514C	03H025
M4013218C	03H03

G 403 – Graflex® extra long reducers, carbide



- The extension section is manufactured from carbide
- Suitable for fine boring length up to LU with fitted boring head type A780 or A790

Designation	Item number	CTMS	CTWS	DCB	DCN	DCX	LPR	LU	BD	BD1	LB1	LB	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
M40350C150	00057604	G5	G0	8,0 0.315	18,0 0.709	23,5 0.925	150,0 5.906	130,0 5.118	16,0 0.630	32,0 0.630	35,0 1.378	95,0 3.740	180,0 7.087	0	PB	1,0 2.200
M40351C180	00056943	G5	G1	11,0 0.433	23,0 0.906	31,0 1.220	180,0 7.087	160,0 6.299	20,0 0.787	36,0 0.787	40,0 1.575	120,0 4.724	210,0 8.268	0	PB	1,33 2.930
M40352C220	00057605	G5	G2	14,0 0.551	30,0 1.181	40,0 1.575	220,0 8.661	200,0 7.874	25,0 0.984	41,0 0.984	45,0 1.772	155,0 6.102	250,0 9.843	0	PB	2,01 4.430

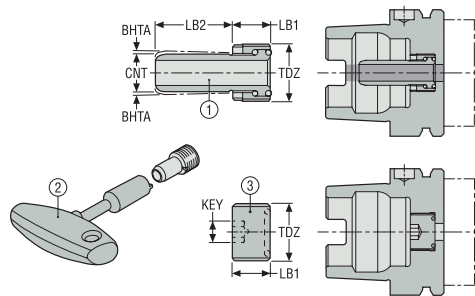
Spare Parts, included in delivery

For	Assembly screw	Tenon
M40350C150	90F0	90M5
M40351C180	90F1	90M5
M40352C220	90F2	90M5

Accessories

For	Locking key
M40350C150	03H02
M40351C180	03H02
M40352C220	03H025

HSK coolant tubes, tube spanners and sealing plugs



- HSK-A to Seco-Capto holders are delivered with a specific coolant tube available as spare parts and need a specific coolant tube spanner, see product page(s)530, 531-532, 533

Description	Designation	Item number	For holders HSK A and E	LB1	LB2	KEY	CNT	TDZ	BHTA°
				mm Inch	mm Inch	mm Inch	mm		
Coolant tubes (1)	20E9301	00088814	HSK-A32 & HSK-E32	5,5 0.217	20,5 0.807	-	6	M10x1	1,0
	20E9302	00088815	HSK-A40 & HSK-E40	7,5 0.295	22,0 0.866	-	8	M12x1	1,0
	20E9303	00086740	HSK-A50 & HSK-E50	9,5 0.374	23,5 0.925	-	6	M16x1	1,0
	20E9304	00086741	HSK-A63 & HSK-E63	11,5 0.453	25,0 0.984	-	8	M18x1	1,0
	20E9306	00086742	HSK-A100 & HSK-E100	15,5 0.610	28,5 1.122	-	6	M24x1,5	1,0
	20E9307	00088816	HSK-A125	17,5 0.689	30,5 1.201	-	18	M30x1.5	1,0
	Coolant tube spanners (2)	03E9301	00088811	HSK-A32 & HSK-E32	-	-	-	-	-
03E9302		00088812	HSK-A40 & HSK-E40	-	-	-	-	-	-
03E9303		00069969	HSK-A50 & HSK-E50	-	-	-	-	-	-
03E9304		00069970	HSK-A63 & HSK-E63	-	-	-	-	-	-
03E9305		00032296	HSK-A80 & HSK-E80	-	-	-	-	-	-
03E9306		00084012	HSK-A100 & HSK-E100	-	-	-	-	-	-
5680094-07		03248614	HSK-A125	-	-	-	-	-	-
Sealing plugs (3)	02E9301	00031588	HSK-A32 & HSK-E32	5,0 0.197	-	3,0 0.118	-	M10x1	-
	02E9302	00031593	HSK-A40 & HSK-E40	7,0 0.276	-	4,0 0.157	-	M12x1	-
	02E9303	00001002	HSK-A50 & HSK-E50	9,0 0.354	-	5,0 0.197	-	M16x1	-
	02E9304	00010101	HSK-A63 & HSK-E63	11,0 0.433	-	6,0 0.236	-	M18x1	-
	02E9306	00014002	HSK-A100 & HSK-E100	15,0 0.591	-	10,0 0.394	-	M24x1,5	-
	02E9307	00033649	HSK-A125	17,0 0.669	-	12,0 0.472	-	M30x1.5	-



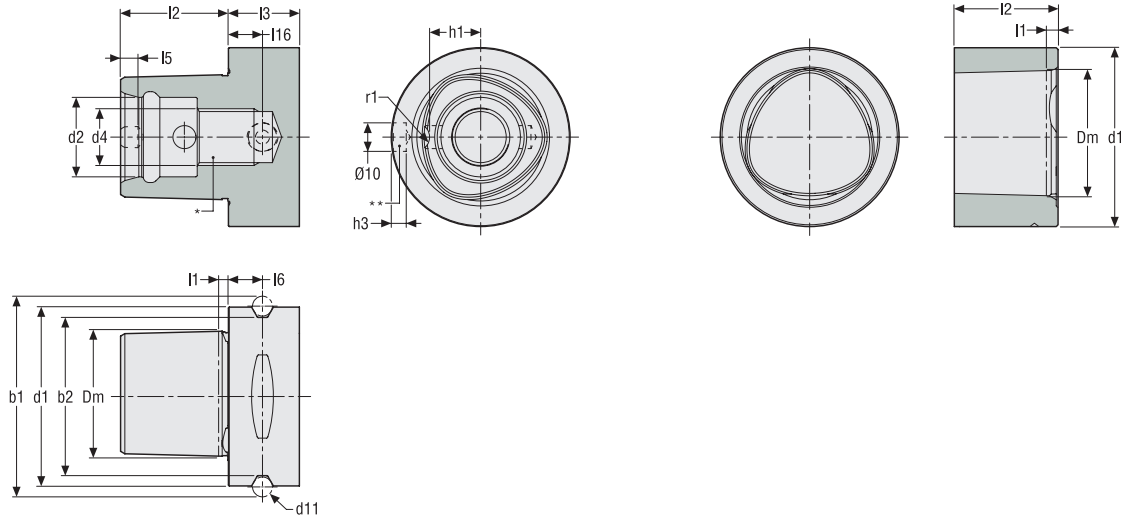
Seco-Capto™

Seco-Capto™ is a leading quick-change modular tooling system for quick setup and replacement of cutting edge holders. The Seco-Capto™ modular tooling range uses Polygonal Shank Coupling (PSC) in accordance with ISO 26623 and features a self-locking taper joint.

- Tool holders range, such as Shrinkfit, collet chuck and shell mill
- Seco-Capto™ basic arbors with HSK, DIN, BT connections
- Seco-Capto™ cassette for greater reliability and insert clamping

Seco-Capto™, norm dimensions

ISO 26623-1-PSC/ ISO 26623-2-PSC



Machine side catalogue designation	Hole for RFID carrier**	d ₁	d ₂	d ₄	d ₁₁	Dm	b ₁	b ₂	l ₁	l ₂	l _{3 min}	l ₅	l ₆	l ₁₆	h ₁	h ₃	r ₁
		mm Inch	mm Inch		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
C3	No**	32 1.260	15 0.591	M12	5 0.197	22 0.866	39 1.535	28,3 1.114	2,5 0.098	19 0.748	15 0.591	3,2 0.126	6 0.236	9 0.354	9 0.354	5,4 0.213	3 0.118
C4	No**	40 1.575	18 0.709	M14	5 0.197	28 1.102	46 1.811	35,3 1.390	2,5 0.098	24 0.945	20 0.787	4 0.157	8 0.315	12 0.472	11 0.433	5,2 0.205	3 0.118
C5	**	50 1.969	21 0.827	M16	7 0.276	35 1.378	59,3 2.335	44,4 1.748	3 0.118	30 1.181	20 0.787	5,3 0.209	10 0.394	12 0.472	14 0.551	5,1 0.201	4 0.157
C6	**	63 2.480	28 1.102	M20	7 0.276	44 1.732	70,7 2.783	55,8 2.197	3 0.118	38 1.496	22 0.866	6,2 0.244	12 0.472	12 0.472	18 0.709	5 0.197	5 0.197
C8	**	80 3.150	32 1.260	M20	7 0.276	55 2.165	86 3.386	71,1 2.799	3 0.118	48 1.890	30 1.181	8 0.315	12 0.472	12 0.472	22,2 0.874	4,9 0.193	6 0.236

Workpiece side catalogue designation	Hole for RFID carrier**	d _{1 min}	d ₃	Dm	l ₁	l ₂	l ₃	l ₄
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
C3	No	32 1.260	2 0.079	22 0.866	2,3 0.091	18,4 0.724	16,5 0.650	9,4 0.370
C4	No	40 1.575	2,5 0.098	28 1.102	2,3 0.091	23,4 0.921	21 0.827	11,5 0.453
C5	No	50 1.969	3 0.118	35 1.378	2,8 0.110	29,4 1.157	26 1.024	14,5 0.571
C6	**	63 2.480	4 0.157	44 1.732	2,8 0.110	37,4 1.472	33,5 1.319	18,5 0.728
C8	**	80 3.150	5 0.197	55 2.165	2,8 0.110	47,4 1.866	43 1.693	22,8 0.898

Note: These machine side and workpiece side dimensions are applied to all the holders shown in the product pages.

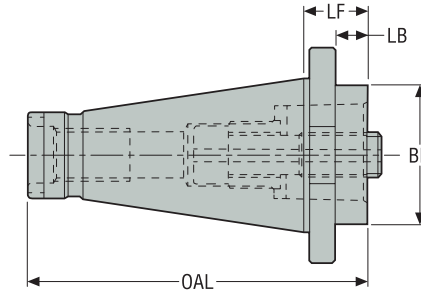
* The Seco-Capto™ machine side of short extensions can only be hold by spindles with segment clamping (not with center bolt clamping). The Seco-Capto™ machine side of short reducers can only be hold by spindles with segment clamping (not with center bolt clamping).

** In order to know if a hole for RFID carrier exists, see 'RFID hole' column in Product pages: 1= hole for RFID carrier available, if required a carrier can be fitted on request, please enquire.

0= hole for RFID carrier not available, if required hole can be machined and a carrier can be fitted on request, please enquire.

C 00 – DIN 2080 to Seco-Capto™ holders – ISO 26623-2

DIN 2080



Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch			
C3-390.00-40030	75039844	DIN(2080)40	C3	30,0 1.181	18,4 0.724	32,0 1.260	123,4 4.858	0	-	0,9 1.980
C4-390.00-40030	75039848	DIN(2080)40	C4	30,0 1.181	18,4 0.724	40,0 1.575	123,4 4.858	0	-	1,0 2.200
C4-390.00-40060	75039849	DIN(2080)40	C4	60,0 2.362	48,4 1.906	40,0 1.575	153,4 6.039	0	-	1,08 2.380
C5-390.00-40030	75039852	DIN(2080)40	C5	30,0 1.181	18,4 0.724	50,0 1.969	123,4 4.858	0	-	0,81 1.790
C6-390.00-40075	00048158	DIN(2080)40	C6	75,0 2.953	0,0 -	63,0 2.480	168,4 6.630	0	-	1,82 4.010
C3-390.00-50030	75039846	DIN(2080)50	C3	30,0 1.181	14,8 0.583	32,0 1.260	156,8 6.173	0	-	2,5 5.510
C3-390.00-50060	75039847	DIN(2080)50	C3	60,0 2.362	44,8 1.764	32,0 1.260	186,8 7.354	0	-	2,5 5.510
C4-390.00-50030	75039850	DIN(2080)50	C4	30,0 1.181	14,8 0.583	40,0 1.575	156,8 6.173	0	-	2,5 5.510
C4-390.00-50060	75039851	DIN(2080)50	C4	60,0 2.362	44,8 1.764	40,0 1.575	186,8 7.354	0	-	2,5 5.510
C5-390.00-50030	75039854	DIN(2080)50	C5	30,0 1.181	14,8 0.583	50,0 1.969	156,8 6.173	0	-	2,62 5.780
C5-390.00-50070	75039855	DIN(2080)50	C5	70,0 2.756	54,8 2.157	50,0 1.969	196,8 7.748	0	-	3,29 7.250
C6-390.00-50030	75039856	DIN(2080)50	C6	30,0 1.181	14,8 0.583	63,0 2.480	156,8 6.173	0	-	2,56 5.640
C6-390.00-50080	75039857	DIN(2080)50	C6	80,0 3.150	64,8 2.551	63,0 2.480	206,8 8.142	0	-	3,27 7.210
C8-390.00-50070	75039858	DIN(2080)50	C8	70,0 2.756	54,8 2.157	80,0 3.150	196,8 7.748	0	-	3,8 8.380
C8-390.00-50120	75039859	DIN(2080)50	C8	120,0 4.724	104,8 4.126	80,0 3.150	246,8 9.717	0	-	5,6 12.350

Introduction

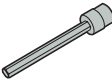
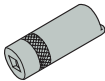
Drilling

Reaming

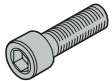

Boring

Annex

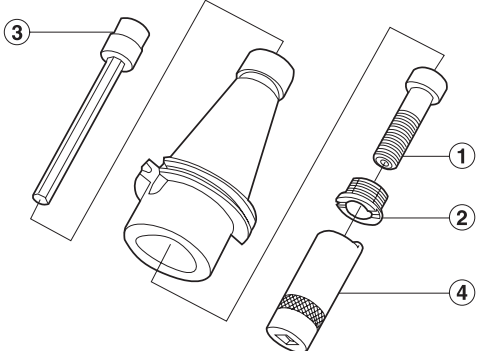
Accessories

For	Extension key	Spanner
		
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C6-400	5680015-01	5680065-12
C6-500	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts, included in delivery

For	Centre screw	Retaining nut
		
C3	5512063-10	5512091-04
C4	5512063-07	5512091-03
C5	5512063-08	5512091-01
C6-400	5512063-13	5512091-02
C6-500	5512063-09	5512091-02
C8	5512063-09	5512091-02

Accessories / Spare Parts



Accessories:
3 = Extension key
4 = Spanner

Spare parts:
1 = Center screw
2 = Retaining nut

Introduction

Drilling

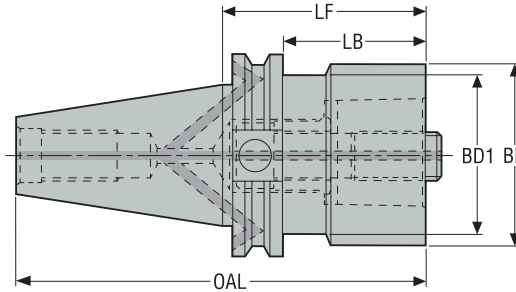
Reaming

Boring

Annex

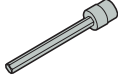
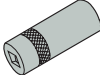
C 55/58 – CAT to Seco-Capto™ holders

CAT / ASME B5.50-2009-ADB

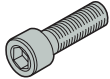




Designation	Item number	CTMS	CTWS	LF	LB	BD	BD1	OAL	Design	RFID hole	Balancing	Weight
				<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>				<i>lbs</i>
C3-A390B.45-40060	02925929	CAT40 ADB	C3	2.362	1.610	1.260	1.260	5.055	2	0	PB	2.200
C4-A390B.45-40030	02925932	CAT40 ADB	C4	1.181	0.429	1.575	1.575	3.874	2	0	PB	1.830
C4-A390B.45-40060	02925933	CAT40 ADB	C4	2.362	1.610	1.575	1.575	5.055	2	0	PB	2.430
C5-A390B.45-40040	02925935	CAT40 ADB	C5	1.575	0.823	1.969	1.969	4.268	2	0	PB	2.050
C5-A390B.45-40080	02925936	CAT40 ADB	C5	3.150	2.398	1.969	1.969	5.843	2	0	PB	3.310
C6-A390B.45-40085	02925939	CAT40 ADB	C6	3.346	1.378	2.480	2.480	6.039	2	0	PB	4.250
C3-A390B.45-50030	02925930	CAT50 ADB	C3	1.181	0.429	1.260	1.260	5.185	2	0	PB	5.730
C3-A390B.45-50060	02925931	CAT50 ADB	C3	2.362	1.610	1.260	1.260	6.366	2	0	PB	5.970
C4-A390B.45-50030	02925948	CAT50 ADB	C4	1.181	0.429	1.575	1.575	5.185	2	0	PB	5.780
C4-A390B.45-50060	02925934	CAT50 ADB	C4	2.362	1.610	1.969	1.575	6.366	2	0	PB	6.610
C5-A390B.45-50030	02925937	CAT50 ADB	C5	1.181	0.429	1.969	1.969	5.185	2	0	PB	5.730
C5-A390B.45-50070	02925938	CAT50 ADB	C5	2.756	2.004	1.969	1.969	6.760	2	0	PB	6.830
C6-A390B.45-50030	02925940	CAT50 ADB	C6	1.181	0.429	2.480	2.480	5.185	2	0	PB	5.530
C6-A390B.45-50080	02925941	CAT50 ADB	C6	3.150	2.398	2.480	2.480	7.154	2	0	PB	7.940
C8-A390B.45-50070	02925942	CAT50 ADB	C8	2.756	2.004	3.150	3.150	6.760	2	0	PB	8.220
C8-A390B.45-50120	02925943	CAT50 ADB	C8	4.724	3.972	3.150	3.150	8.728	2	0	PB	12.240

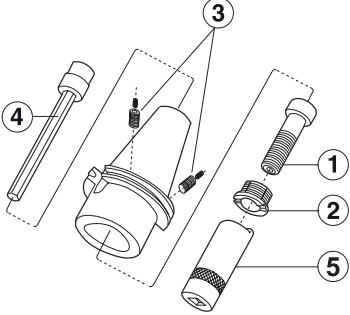
Accessories

For size	Extension key	Spanner
CAT40/ C3	 5680015-05	 5680065-13
CAT40/ C4	5680015-05	5680065-10
CAT40/ C5	5680015-01	5680065-11
CAT40/ C6	5680015-01	5680065-12
CAT50/ C3	5680015-05	5680065-13
CAT50/ C4-50030	5680015-05	5680065-10
CAT50/ C4-50060	5680015-05	5680065-10
CAT50/ C5	5680015-01	5680065-11
CAT50/ C6	5680015-02	5680065-12
CAT50/ C8	5680015-02	5680065-12

Spare Parts, included in delivery

For size	Centre screw	Plug	Retaining nut
			
CAT40/ C3	5512063-10	564301701	5512091-04
CAT40/ C4	5512063-07	564301701	5512091-03
CAT40/ C5	5512063-08	564301701	5512091-01
CAT40/ C6	5512063-13	564301701	5512091-02
CAT50/ C3	5512063-10	564301702	5512091-04
CAT50/ C4-50030	5512063-07	564301701	5512091-03
CAT50/ C4-50060	5512063-07	564301702	5512091-03
CAT50/ C5	5512063-08	564301702	5512091-01
CAT50/ C6	5512063-09	564301702	5512091-02
CAT50/ C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts

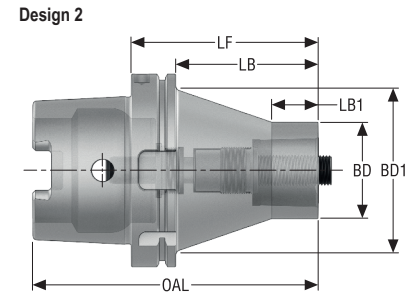
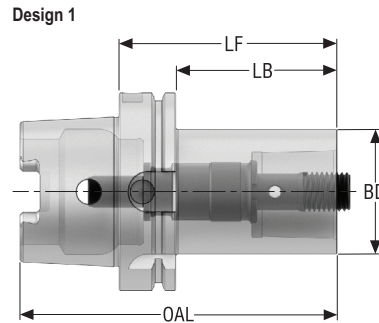


Accessories:
4 = Extension key
5 = Spanner

Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

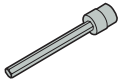
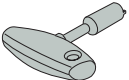
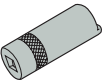
C 410 – HSK-A to Seco-Capto™ holders – ISO 26623-2

HSK-A/ ISO12164-1-HSK-A

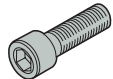
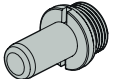



Designation	Item number	CTMS	CTWS	LF	LB	LB1	BD	BD1	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch				
HA10-C3-032-080	10197961	HSK-A100	C3	80,0 3.150	51,0 2.008	–	32,0 1.260	–	130,0 5.118	1	1	PB	2,3 5.070
HA06-C3-032-075	10197962	HSK-A63	C3	75,0 2.953	49,0 1.929	–	32,0 1.260	–	107,0 4.213	1	1	PB	1,0 2.200
HA10-C4-040-090	10197963	HSK-A100	C4	90,0 3.543	61,0 2.402	–	40,0 1.575	–	140,0 5.512	1	1	PB	2,5 5.510
HA06-C4-040-080	10197964	HSK-A63	C4	80,0 3.150	54,0 2.126	–	40,0 1.575	–	112,0 4.409	1	1	PB	1,2 2.650
HA10-C5-050-100	10197965	HSK-A100	C5	100,0 3.937	71,0 2.795	–	50,0 1.969	–	150,0 5.906	1	1	PB	2,9 6.390
HA06-C5-050-090	10197966	HSK-A63	C5	90,0 3.543	64,0 2.520	–	50,0 1.969	–	122,0 4.803	1	1	PB	1,4 3.090
HA10-C6-063-110	10197967	HSK-A100	C6	110,0 4.331	81,0 3.189	–	63,0 2.480	–	160,0 6.299	1	1	PB	3,7 8.160
HA10-C8-080-120	10197968	HSK-A100	C8	120,0 4.724	91,0 3.583	–	80,0 3.150	–	170,0 6.693	1	1	PB	4,8 10.580
HSKA125-C6-120	03229625	HSK-A125	C6	120,0 4.724	91,0 3.583	–	63,0 2.480	–	183,0 7.205	1	1	PB	5,2 11.460
HSKA125-C6-120-V	03229626	HSK-A125	C6	120,0 4.724	91,0 3.583	30,0 1.181	63,0 2.480	108,0 4.252	183,0 7.205	2	1	PB	6,4 14.110
HSKA125-C8-130	03229627	HSK-A125	C8	130,0 5.118	101,0 3.976	–	80,0 3.150	–	193,0 7.598	1	1	PB	6,5 14.330
HSKA125-C8-130-V	03229628	HSK-A125	C8	130,0 5.118	101,0 3.976	30,0 1.181	80,0 3.150	105,0 4.134	193,0 7.598	2	1	PB	7,8 17.200

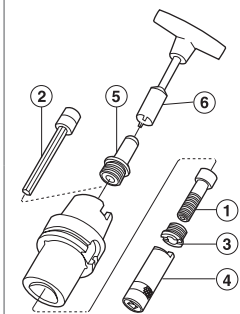
Accessories

For	Extension key	Key	Spanner
			
HA10-C3-032-080	5680015-05	5680094-06	5680065-13
HA06-C3-032-075	5680015-05	5680094-04	5680065-13
HA10-C4-040-090	5680015-05	5680094-06	5680065-10
HA06-C4-040-080	5680015-05	5680094-04	5680065-10
HA10-C5-050-100	5680015-01	5680094-06	5680065-11
HA06-C5-050-090	5680015-01	5680094-04	5680065-11
HA10-C6-063-110	5680015-02	5680094-06	5680065-12
HA10-C8-080-120	5680015-02	5680094-06	5680065-12
HSKA125-C6-120	5680015-02	5680094-07	5680065-12
HSKA125-C6-120-V	5680015-02	5680094-07	5680065-12
HSKA125-C8-130	5680015-02	5680094-07	5680065-12
HSKA125-C8-130-V	5680015-02	5680094-07	5680065-12

Spare Parts, included in delivery

For	Centre screw	Coolant tube	Retaining nut
			
HA06-C3-032-075	5512063-10	5692020-04	5512091-04
HA06-C4-040-080	5512063-07	5692020-04	5512091-03
HA06-C5-050-090	5512063-08	5692020-04	5512091-01
HA10-C3-032-080	5512063-10	5692020-06	5512091-04
HA10-C4-040-090	5512063-07	5692020-06	5512091-03
HA10-C5-050-100	5512063-08	5692020-06	5512091-01
HA10-C6-063-110	5512063-09	5692020-06	5512091-02
HA10-C8-080-120	5512063-09	5692020-06	5512091-02
HSKA125-C6-120	5512063-09	5692020-07	5512091-02
HSKA125-C6-120-V	5512063-09	5692020-07	5512091-02
HSKA125-C8-130	5512063-09	5692020-07	5512091-02
HSKA125-C8-130-V	5512063-09	5692020-07	5512091-02

Accessories / Spare Parts



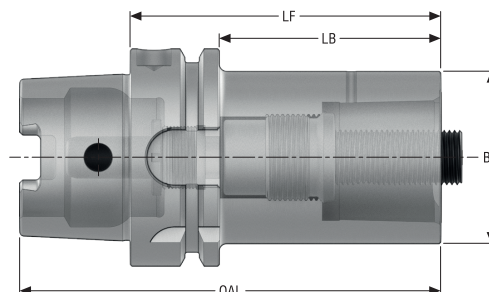
- Accessories:
 2 = Extension key
 4 = Spanner
 6 = Key for coolant tube

- Spare parts:
 1 = Center screw
 3 = Retaining nut
 5 = Coolant tube*

*A specific coolant tube is delivered together with each HSK-A to Seco-Capto™ holder

C 411 – HSK-T to Seco-Capto™ holders – ISO 26623-2

HSK-T/ ISO12164-3-HSK-T



Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
C4-390.411-63080	02786511	HSK-T63	C4	80,0 3.150	54,0 2.126	40,0 1.575	112,0 4.409	1	-	1,0 2.200
C5-390.411-63090	02786520	HSK-T63	C5	90,0 3.543	64,0 2.520	50,0 1.969	122,0 4.803	1	-	1,3 2.870
C4-390.411-100090	02786519	HSK-T100	C4	90,0 3.543	61,0 2.402	40,0 1.575	140,0 5.512	1	-	2,4 5.290
C5-390.411-100100	02786521	HSK-T100	C5	100,0 3.937	71,0 2.795	50,0 1.969	150,0 5.906	1	-	2,7 5.950
C6-390.411-100110	02786522	HSK-T100	C6	110,0 4.331	81,0 3.189	63,0 2.480	160,0 6.299	1	-	3,3 7.280
C8-390.411-100120	02786523	HSK-T100	C8	120,0 4.724	91,0 3.583	80,0 3.150	170,0 6.693	1	-	4,5 9.920

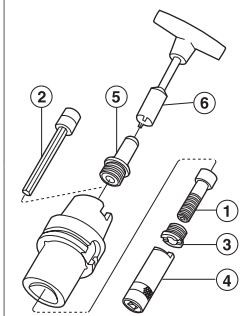
Accessories

For	Extension key	Key	Spanner
C4-390.411-63080	5680015-05	5680094-04	5680065-10
C5-390.411-63090	5680015-01	5680094-04	5680065-11
C4-390.411-100090	5680015-05	5680094-06	5680065-10
C5-390.411-100100	5680015-01	5680094-06	5680065-11
C6-390.411-100110	5680015-02	5680094-06	5680065-12
C8-390.411-100120	5680015-02	5680094-06	5680065-12

Spare Parts, included in delivery

For	Centre screw	Coolant tube	Retaining nut
C4-390.411-100090	5512063-07	20E9306	5512091-03
C4-390.411-63080	5512063-07	5692020-04	5512091-03
C5-390.411-100100	5512063-08	20E9306	5512091-01
C5-390.411-63090	5512063-08	5692020-04	5512091-01
C6-390.411-100110	5512063-09	5692020-06	5512091-02
C8-390.411-100120	5512063-09	5692020-06	5512091-02

Accessories / Spare Parts



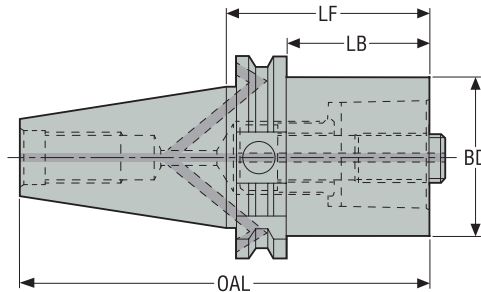
- Accessories:
 2 = Extension key
 4 = Spanner
 6 = Key for coolant tube

- Spare parts:
 1 = Center screw
 3 = Retaining nut
 5 = Coolant tube*

*A specific coolant tube is delivered together with each HSK-A to Seco-Capto™ holder

C 140 – DIN to Seco-Capto™ holders – ISO 26623-2

DIN 69871-ADB



Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch			kg lbs
C3-390B.140-40030	02924104	DIN40 ADB	C3	30,0 1.181	10,9 0.429	32,0 1.260	98,4 3.874	0	PB	0,8 1.760
C3-390B.140-40060	02924105	DIN40 ADB	C3	60,0 2.362	40,9 1.610	32,0 1.260	128,4 5.055	0	PB	0,9 1.980
C4-390B.140-40030	02924108	DIN40 ADB	C4	30,0 1.181	10,9 0.429	40,0 1.575	98,4 3.874	0	PB	0,8 1.760
C4-390B.140-40060	02924109	DIN40 ADB	C4	60,0 2.362	40,9 1.610	40,0 1.575	128,4 5.055	0	PB	1,1 2.430
C5-390B.140-40040	02924112	DIN40 ADB	C5	40,0 1.575	20,9 0.823	50,0 1.969	108,4 4.268	0	PB	0,9 1.980
C5-390B.140-40080	02924113	DIN40 ADB	C5	80,0 3.150	60,9 2.398	50,0 1.969	148,4 5.843	0	PB	1,5 3.310
C6-390B.140-40085	02924116	DIN40 ADB	C6	85,0 3.346	65,9 2.594	63,0 2.480	153,4 6.039	0	PB	1,8 3.970
C3-390B.140-50030	02924106	DIN50 ADB	C3	30,0 1.181	10,9 0.429	32,0 1.260	131,7 5.185	0	PB	2,6 5.730
C3-390B.140-50060	02924107	DIN50 ADB	C3	60,0 2.362	40,9 1.610	32,0 1.260	161,7 6.366	0	PB	2,7 5.950
C4-390B.140-50030	02924110	DIN50 ADB	C4	30,0 1.181	10,9 0.429	40,0 1.575	131,7 5.185	0	PB	2,6 5.730
C4-390B.140-50060	02924111	DIN50 ADB	C4	60,0 2.362	40,9 1.610	40,0 1.575	161,7 6.366	0	PB	2,8 6.170
C5-390B.140-50030	02924114	DIN50 ADB	C5	30,0 1.181	10,9 0.429	50,0 1.969	131,7 5.185	0	PB	2,6 5.730
C5-390B.140-50070	02924115	DIN50 ADB	C5	70,0 2.756	50,9 2.004	50,0 1.969	171,7 6.760	0	PB	3,1 6.830
C6-390B.140-50030	02924117	DIN50 ADB	C6	30,0 1.181	10,9 0.429	63,0 2.480	131,7 5.185	0	PB	2,5 5.510
C6-390B.140-50080	02924118	DIN50 ADB	C6	80,0 3.150	60,9 2.398	63,0 2.480	181,7 7.154	0	PB	3,6 7.940
C8-390B.140-50070	02924119	DIN50 ADB	C8	70,0 2.756	50,9 2.004	80,0 3.150	171,7 6.760	0	PB	3,7 8.160
C8-390B.140-50120	02924120	DIN50 ADB	C8	120,0 4.724	100,9 3.972	80,0 3.150	221,7 8.728	0	PB	5,6 12.350

Introduction

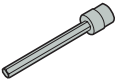
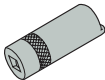
Drilling

Reaming

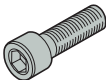


Boring

Annex

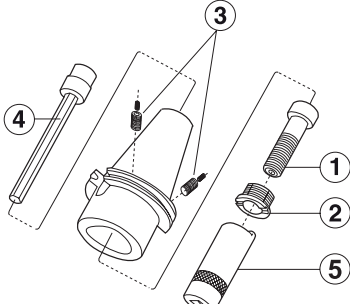
Accessories

For	Extension key	Spanner
		
C3-400	5680015-05	5680065-13
C4-400	5680015-05	5680065-10
C5-400	5680015-01	5680065-11
C6-400	5680015-01	5680065-12
C3-500	5680015-05	5680065-13
C4-500	5680015-05	5680065-10
C5-500	5680015-01	5680065-11
C6-500	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts, included in delivery

For	Centre screw	Plug	Retaining nut
			
C3-400	5512063-10	564301701	5512091-04
C3-500	5512063-10	564301702	5512091-04
C4-400	5512063-07	564301701	5512091-03
C4-500	5512063-07	564301702	5512091-03
C5-400	5512063-08	564301701	5512091-01
C5-500	5512063-08	564301702	5512091-01
C6-400	5512063-13	564301701	5512091-02
C6-500	5512063-09	564301702	5512091-02
C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts



Accessories:
4 = Extension key
5 = Spanner

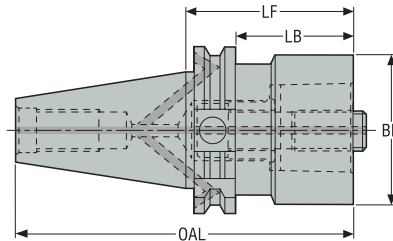
Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

C 5191 – Seco-Capto™, basic holders – ISO 26623-2

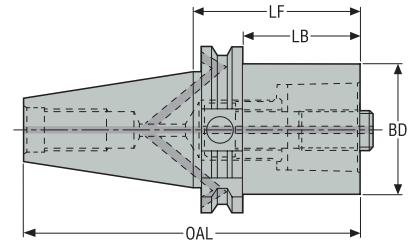
DIN Taper-Face-ADB



Design 1



Design 2



Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	Design	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
E316951915050	03030258	DIN40 TF ADB	C5	50,0 1.969	30,9 1.217	50,0 1.969	118,4 4.661	2	1	PB	1,1 2.430
E317151915070	03030264	DIN50 TF ADB	C5	70,0 2.756	50,9 2.004	50,0 1.969	171,7 6.760	2	1	PB	3,15 6.940
E317151916350	03030262	DIN50 TF ADB	C6	50,0 1.969	30,9 1.217	63,0 2.480	151,7 5.972	2	0	-	2,4 5.290
E3171519163100	03030265	DIN50 TF ADB	C6	100,0 3.937	80,9 3.185	63,0 2.480	201,7 7.941	2	1	PB	4,08 8.990
E317151918070	03030263	DIN50 TF ADB	C8	70,0 2.756	50,9 2.004	80,0 3.150	171,7 6.760	2	0	-	3,9 8.600
E3171519180120	03030266	DIN50 TF ADB	C8	120,0 4.724	100,9 3.972	80,0 3.150	221,7 8.728	2	0	-	5,62 12.390

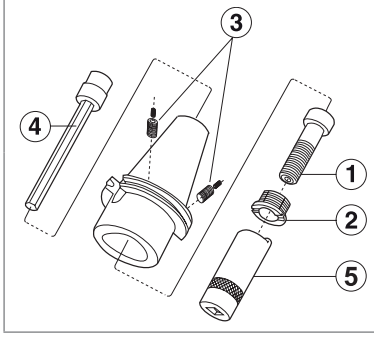
Accessories

For	Extension key	Spanner
DIN40 TF/ C5	5680015-01	5680065-11
DIN50 TF/ C5	5680015-01	5680065-11
DIN50 TF/ C6-C8	5680015-02	5680065-12

Spare Parts, included in delivery

For	Centre screw	Plug	Retaining nut
		1x	
DIN40 TF/ C5	5512063-08	564301701	5512091-01
DIN50 TF/ C5	5512063-08	564301702	5512091-01
DIN50 TF/ C6-C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts



Accessories:
4 = Extension key
5 = Spanner

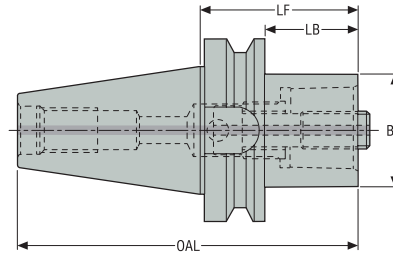
Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

C 55/58 – BT to Seco-Capto™ holders – ISO 26623-2

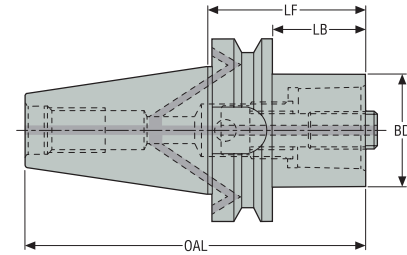
BT



Design 1



Design 2



Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	Design	RFID hole	Balan- cing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
C3-390.55-30030	75039807	BT30 AD	C3	30,0 1.181	8,0 0.315	32,0 1.260	78,4 3.087	1	0	PB	0,53 1.170
C3-390.55-30060	75039808	BT30 AD	C3	60,0 2.362	38,0 1.496	32,0 1.260	108,4 4.268	1	0	PB	0,73 1.610
C3-390B.55-40030	02925959	BT40 ADB	C3	30,0 1.181	3,0 0.118	32,0 1.260	95,4 3.756	2	0	PB	0,9 1.980
C3-390B.55-40060	02925960	BT40 ADB	C3	60,0 2.362	33,0 1.299	32,0 1.260	125,4 4.937	2	0	PB	1,1 2.430
C4-390B.55-40030	02925963	BT40 ADB	C4	30,0 1.181	3,0 0.118	40,0 1.575	95,4 3.756	2	0	PB	0,9 1.980
C4-390B.55-40060	02925964	BT40 ADB	C4	60,0 2.362	33,0 1.299	40,0 1.575	125,4 4.937	2	0	PB	1,2 2.650
C5-390B.55-40050	02925967	BT40 ADB	C5	50,0 1.969	23,0 0.906	50,0 1.969	115,4 4.543	2	0	PB	1,1 2.430
C5-390B.55-40090	02925968	BT40 ADB	C5	90,0 3.543	63,0 2.480	50,0 1.969	155,4 6.118	2	0	PB	1,7 3.750
C6-390B.55-40075	02925971	BT40 ADB	C6	75,0 2.953	54,6 2.150	63,0 2.480	140,4 5.528	2	0	PB	1,7 3.750
C3-390B.58-50040	02925961	BT50 ADB	C3	40,0 1.575	2,0 0.079	32,0 1.260	141,8 5.583	2	0	PB	3,5 7.720
C3-390B.58-50070	02925962	BT50 ADB	C3	70,0 2.756	32,0 1.260	32,0 1.260	171,8 6.764	2	0	PB	3,7 8.160
C4-390B.58-50040	02925965	BT50 ADB	C4	40,0 1.575	2,0 0.079	40,0 1.575	141,8 5.583	2	0	PB	3,5 7.720
C4-390B.58-50070	02925966	BT50 ADB	C4	70,0 2.756	32,0 1.260	40,0 1.575	171,8 6.764	2	0	PB	3,8 8.380
C5-390B.58-50040	02925969	BT50 ADB	C5	40,0 1.575	2,0 0.079	50,0 1.969	141,8 5.583	2	0	PB	3,4 7.500
C5-390B.58-50080	02925970	BT50 ADB	C5	80,0 3.150	42,0 1.654	50,0 1.969	181,8 7.157	2	0	PB	4,0 8.820
C6-390B.58-50050	02925972	BT50 ADB	C6	50,0 1.969	12,0 0.472	63,0 2.480	151,8 5.976	2	0	PB	3,5 7.720
C6-390B.58-50100	02925973	BT50 ADB	C6	100,0 3.937	62,0 2.441	63,0 2.480	201,8 7.945	2	0	PB	4,6 10.140
C8-390B.58-50070	02925974	BT50 ADB	C8	70,0 2.756	32,0 1.260	80,0 3.150	171,8 6.764	2	0	PB	4,0 8.820
C8-390B.58-50120	02925975	BT50 ADB	C8	120,0 4.724	82,0 3.228	80,0 3.150	221,8 8.732	2	0	PB	5,9 13.010

Introduction

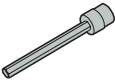
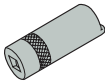
Drilling

Reaming

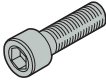


Boring

Annex

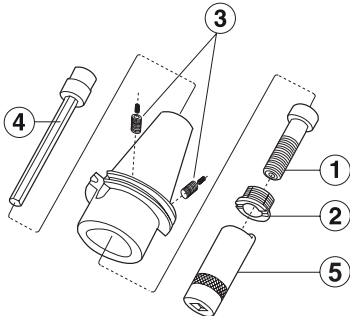
Accessories

For	Extension key	Spanner
		
C3-390.55	5680015-05	5680065-13
C3-390B.55	5680015-05	5680065-13
C4-390B.55	5680015-05	5680065-10
C5-390B.55	5680015-01	5680065-11
C6-390B.55	5680015-01	5680065-12
C3-390B.58	5680015-05	5680065-13
C4-390B.58	5680015-05	5680065-10
C5-390B.58	5680015-01	5680065-11
C6-390B.58	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts, included in delivery

For	Centre screw	Plug	Retaining nut
		 1x	
C3-390.55	5512063-10	-	5512091-04
C3-390B.55	5512063-10	564301701	5512091-04
C3-390B.58	5512063-10	564301702	5512091-04
C4-390B.55	5512063-07	564301701	5512091-03
C4-390B.58	5512063-07	564301702	5512091-03
C5-390B.55	5512063-08	564301701	5512091-01
C5-390B.58	5512063-08	564301702	5512091-01
C6-390B.55	5512063-13	564301701	5512091-02
C6-390B.58	5512063-09	564301702	5512091-02
C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts

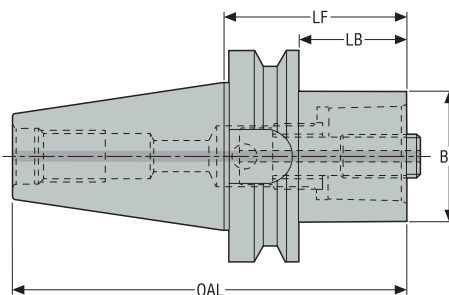


Accessories:
4 = Extension key
5 = Spanner

Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

C 605 – BT Mazak to Seco-Capto™ holders – ISO 26623-2

BT Mazak



- Mazak design means 90° rotated Seco-Capto™ polygon compared to classic BT basic holders
- For Mazak e-machines

Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	RFID hole	Balan- cing	Weight
				mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>			kg <i>lbs</i>
C5-390.605-40030	02606358	BT40 AD Mazak	C5	30,0 1.181	3,0 0.118	50,0 1.969	95,4 3.756	0	-	1,1 2.430
C6-390.605-50040	02606354	BT50 AD Mazak	C6	40,0 1.575	2,0 0.079	63,0 2.480	141,8 5.583	0	-	3,3 7.280
C8-390.605-50070	02646032	BT50 AD Mazak	C8	70,0 2.756	70,0 2.756	80,0 3.150	171,8 6.764	0	-	4,1 9.040

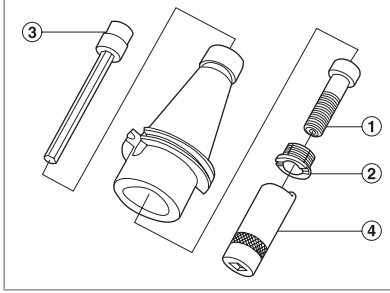
Accessories

For size	Extension key	Spanner
C5	5680015-01	5680065-11
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12

Spare Parts, included in delivery

For size	Centre screw	Retaining nut
C5	5512063-08	5512091-01
C6	5512063-09	5512091-02
C8	5512063-09	5512091-02

Accessories / Spare Parts



Accessories:
3 = Extension key
4 = Spanner

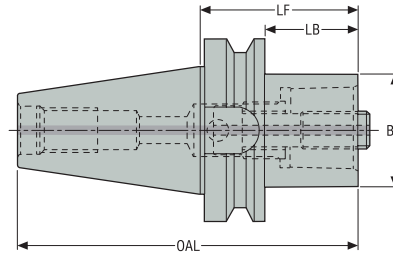
Spare parts:
1 = Center screw
2 = Retaining nut

C 5191 – Seco-Capto™, basic holders – ISO 26623-2

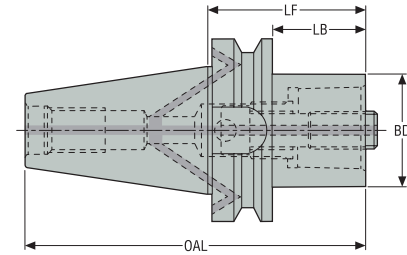
BT Taper-Face-AD/ADB



Design 1



Design 2

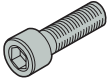




Designation	Item number	CTMS	CTWS	LF	LB	BD	OAL	Design	RFID hole	Balan- cing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
E400251913240	03030234	BT30 TF AD	C3	40,0 1.575	22,0 0.866	32,0 1.260	88,4 3.480	1	1	PB	0,454 1.000
E400251914060	03030235	BT30 TF AD	C4	60,0 2.362	22,0 0.866	40,0 1.575	108,4 4.268	1	1	PB	0,651 1.440
E311451914040	03030236	BT40 TF ADB	C4	40,0 1.575	13,0 0.512	40,0 1.575	105,4 4.150	2	0	PB	1,1 2.430
E311451915050	03030237	BT40 TF ADB	C5	50,0 1.969	23,0 0.906	50,0 1.969	115,4 4.543	2	0	PB	1,2 2.650
E311451916375	03030238	BT40 TF ADB	C6	75,0 2.953	48,0 1.890	63,0 2.480	140,4 5.528	2	0	PB	1,7 3.750
E311651914040	03030239	BT50 TF ADB	C4	40,0 1.575	2,0 0.079	50,0 1.969	141,8 5.583	2	1	PB	3,6 7.940
E311651915040	03030240	BT50 TF ADB	C5	40,0 1.575	2,0 0.079	50,0 1.969	141,8 5.583	2	0	PB	3,5 7.720
E311651916350	03030241	BT50 TF ADB	C6	50,0 1.969	12,0 0.472	63,0 2.480	151,8 5.976	2	0	PB	3,6 7.940
E3116519163100	03030242	BT50 TF ADB	C6	100,0 3.937	62,0 2.441	63,0 2.480	201,8 7.945	2	0	PB	4,63 10.210
E311651918070	03030243	BT50 TF ADB	C8	70,0 2.756	32,0 1.260	80,0 3.150	171,8 6.764	2	0	PB	4,2 9.260
E3116519180120	03030244	BT50 TF ADB	C8	120,0 4.724	82,0 3.228	80,0 3.150	121,8 4.795	2	1	PB	5,91 13.030

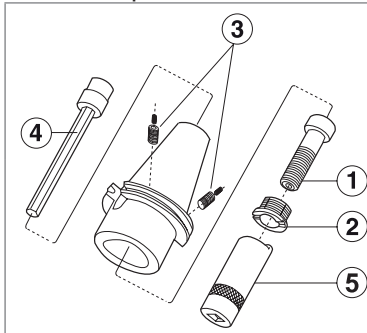
Accessories

For Taper/ size	Extension key	Spanner
BT30 TF/ C3	5680015-05	5680065-13
BT30 TF/ C4	5680015-05	5680065-10
BT40 TF/ C4	5680015-05	5680065-10
BT40 TF/ C5	5680015-01	5680065-11
BT40 TF/ C6	5680015-01	5680065-12
BT50 TF/ C4	5680015-05	5680065-10
BT50 TF/ C5	5680015-01	5680065-11
BT50 TF/ C6-C8	5680015-02	5680065-12

Spare Parts, included in delivery

For Taper/ size	Centre screw	Plug	Retaining nut
		 1x	
BT30 TF/ C3	5512063-10	-	5512091-04
BT30 TF/ C4	5512063-07	-	5512091-03
BT40 TF/ C4	5512063-07	564301701	5512091-03
BT40 TF/ C5	5512063-08	564301701	5512091-01
BT40 TF/ C6	5512063-13	564301701	5512091-02
BT50 TF/ C4	5512063-07	564301702	5512091-03
BT50 TF/ C5	5512063-08	564301702	5512091-01
BT50 TF/ C6-C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts



Accessories:
4 = Extension key
5 = Spanner

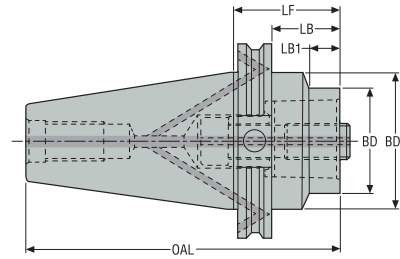
Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

C 5191 – Seco-Capto™, basic holders

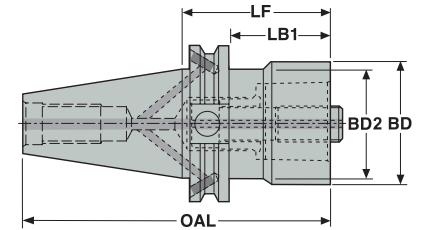
CAT TF / ASME B5.50-1994-ADB



Design 1



Design 2



Designation	Item number	CTMS	CTWS	LF	LB	LB1	BD	BD1	OAL	Design	RFID hole	Balan- cing	Weight
				<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>				<i>lbs</i>
E234251915050	03030247	CAT40 TF ADB	C5	1.969	1.220	1.220	1.969	1.750	4.660	2	1	PB	2.250
E234451914040	03030249	CAT50 TF ADB	C4	1.575	0.090	0.090	1.575	2.750	5.580	1	1	PB	6.830
E234451915040	03030250	CAT50 TF ADB	C5	1.575	0.090	0.090	1.969	2.750	5.580	1	0	-	6.390
E234451916340	03030251	CAT50 TF ADB	C6	1.575	0.120	0.120	2.480	2.750	5.580	1	0	-	6.390
E234451916390	03030252	CAT50 TF ADB	C6	3.543	2.085	2.085	2.480	2.750	7.543	1	0	-	8.660
E2344519180100	03030253	CAT50 TF ADB	C8	3.937	3.185	3.185	3.150	2.750	7.937	2	1	PB	9.040

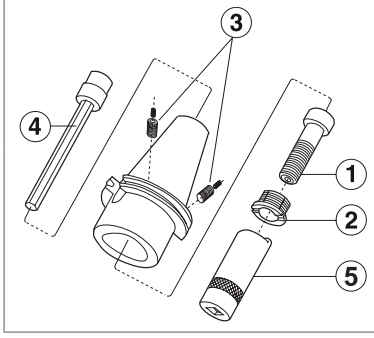
Accessories

For Taper/ size	Extension key	Spanner
CAT40/ C5	5680015-01	5680065-11
CAT50/ C4	5680015-05	5680065-10
CAT50/ C5	5680015-01	5680065-11
CAT50/ C6	5680015-02	5680065-12
CAT50/ C8	5680015-02	5680065-12

Spare Parts, included in delivery

For Taper/ size	Centre screw	Plug	Retaining nut
		1x	
CAT40/ C5	5512063-08	564301701	5512091-01
CAT50/ C4	5512063-07	564301702	5512091-03
CAT50/ C5	5512063-08	564301702	5512091-01
CAT50/ C6	5512063-09	564301702	5512091-02
CAT50/ C8	5512063-09	564301702	5512091-02

Accessories / Spare Parts

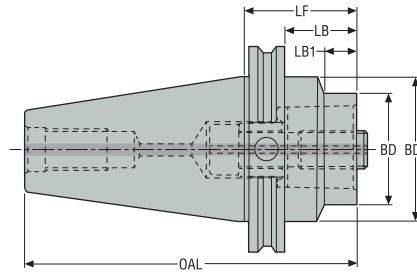


Accessories:
4 = Extension key
5 = Spanner

Spare parts:
1 = Center screw
2 = Retaining nut
3 = Plugs (dowels)

C 5191 – Seco-Capto™, basic holders

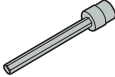
CAT TF Mazak™ e-machine and Mori Seiki NT™ -Series



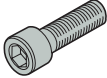

- 90° rotated polygon for precision tool tip control

Designation	Item number	CTMS	CTWS	LF	LB	LB1	BD	BD1	OAL	Design	RFID hole	Balan- cing	Weight
				<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>	<i>Inch</i>				<i>lbs</i>
E947451916350	03030255	CAT50 TF AD Mazak	C6	1.969	0.510	0.510	2.480	2.750	5.960	1	0	PB	6.830

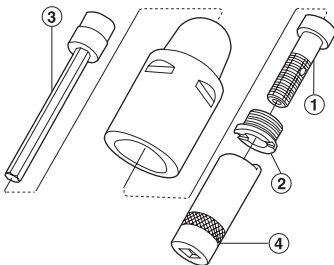
Accessories

For size	Extension key	Spanner
E947451916350	 5680015-02	 5680065-12

Spare Parts, included in delivery

For size	Centre screw	Retaining nut
E947451916350	 5512063-09	 5512091-02

Accessories / Spare Parts

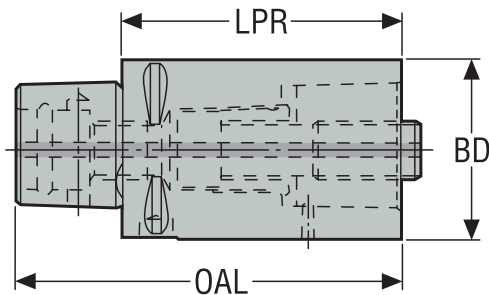


Accessories:
3 = Extension key
4 = Retaining nut spanner

Spare parts:
1 = Center screw
2 = Retaining nut

C 01 – Seco-Capto™, extensions

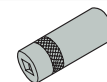
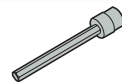
ISO 26623-1



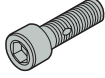

Designation	Item number	CTMS	CTWS	LPR	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch			
C3-391.01-32060A	75039884	C3	C3	60,0 2.362	32,0 1.260	79,0 3.110	0	-	0,34 0.750
C3-391.01-32080A	00090847	C3	C3	80,0 3.150	32,0 1.260	99,0 3.898	0	-	0,5 1.100
C4-391.01-40060A	75039885	C4	C4	60,0 2.362	40,0 1.575	84,0 3.307	0	-	0,54 1.190
C4-391.01-40080A	02207391	C4	C4	80,0 3.150	40,0 1.575	104,0 4.094	0	-	0,71 1.570
C5-391.01-50080A	75039886	C5	C5	80,0 3.150	50,0 1.969	110,0 4.331	0	-	1,12 2.470
C5-391.01-50100A	00004773	C5	C5	100,0 3.937	50,0 1.969	130,0 5.118	0	-	1,39 3.060
C6-391.01-63100A	75039887	C6	C6	100,0 3.937	63,0 2.480	138,0 5.433	0	-	2,2 4.850
C6-391.01-63140A	00004840	C6	C6	140,0 5.512	63,0 2.480	178,0 7.008	0	-	3,1 6.830
C8-391.01-80100A	75039888	C8	C8	100,0 3.937	80,0 3.150	148,0 5.827	0	-	3,62 7.980
C8-391.01-80125A	00004841	C8	C8	125,0 4.921	80,0 3.150	173,0 6.811	0	-	4,54 10.010

Accessories

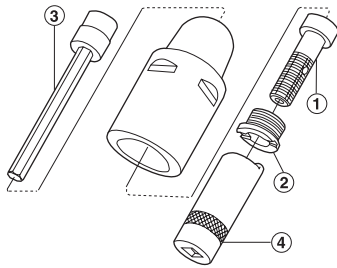
For size	Extension key	Spanner
C3	5680015-05	5680065-13
C4	5680015-05	5680065-10
C5	5680015-01	5680065-11
C6	5680015-02	5680065-12
C8	5680015-02	5680065-12



Spare Parts, included in delivery

For size	Centre screw	Retaining nut
		
C3	5512067-01	5512091-04
C4	5512067-02	5512091-03
C5	5512067-03	5512091-01
C6	5512067-04	5512091-02
C8	5512067-04	5512091-02

Accessories / Spare Parts



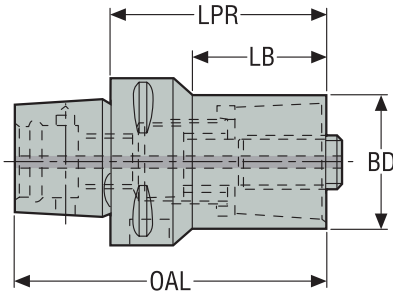
Accessories:
3 = Extension key
4 = Retaining nut spanner

Spare parts:
1 = Center screw
2 = Retaining nut

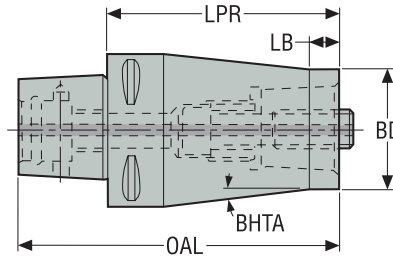
C 02 – Seco-Capto™, reducers

ISO 26623-1

Design 1



Design 2



Designation	Item number	CTMS	CTWS	LPR	LB	BD	OAL	Design	BHTA°	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch					
C4-391.02-32055A	75039889	C4	C3	55,0 2.165	31,0 1.220	32,0 1.260	79,0 3.110	1	-	0	-	0,42 0.930
C4-391.02-32070A	02535687	C4	C3	70,0 2.756	-	32,0 1.260	94,0 3.701	2	6,0	0	-	0,56 1.230
C5-391.02-32060A	75039890	C5	C3	60,0 2.362	34,8 1.370	32,0 1.260	90,0 3.543	1	-	0	-	0,64 1.410
C5-391.02-40065A	75039891	C5	C4	65,0 2.559	40,0 1.575	40,0 1.575	95,0 3.740	1	-	0	-	0,77 1.700
C6-391.02-32070A	75039892	C6	C3	70,0 2.756	39,0 1.535	32,0 1.260	108,0 4.252	1	-	0	-	1,06 2.340
C6-391.02-40080A	75039893	C6	C4	80,0 3.150	51,4 2.024	40,0 1.575	118,0 4.646	1	-	0	-	1,24 2.730
C6-391.02-50080A	75039894	C6	C5	80,0 3.150	51,5 2.028	50,0 1.969	118,0 4.646	1	-	0	-	1,45 3.200
C6-391.02-50110A	02207400	C6	C5	110,0 4.331	12,0 0.472	50,0 1.969	148,0 5.827	2	4,5	0	-	2,15 4.740
C8-391.02-32060B	03080008	C8	C3	60,0 2.362	20,7 0.815	32,0 1.260	108,0 4.252	1	-	0	-	2,0 4.410
C8-391.02-40070B	03080009	C8	C4	70,0 2.756	31,4 1.236	40,0 1.575	118,0 4.646	1	-	0	-	2,1 4.630
C8-391.02-50080B	03080011	C8	C5	80,0 3.150	42,8 1.685	50,0 1.969	128,0 5.039	1	-	0	-	2,4 5.290
C8-391.02-63080B	02527212	C8	C6	80,0 3.150	44,5 1.752	63,0 2.480	128,0 5.039	1	-	0	-	2,6 5.730
C8-391.02-63120A	02207176	C8	C6	120,0 4.724	12,0 0.472	63,0 2.480	168,0 6.614	2	6,0	0	-	3,96 8.730

Accessories

For size	Extension key	Spanner
C...-32	5680015-05	5680065-13
C...-40	5680015-05	5680065-10
C...-50	5680015-01	5680065-11
C...-63	5680015-02	5680065-12

Spare Parts, included in delivery

For size	Centre screw	Retaining nut
C...32	5512067-01	5512091-04
C...40	5512067-02	5512091-03
C...50	5512067-03	5512091-01
C...63	5512067-04	5512091-02

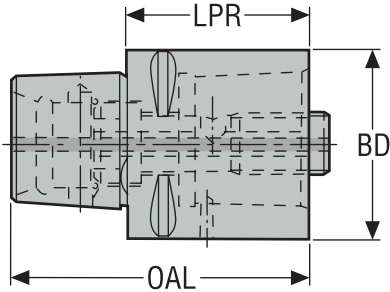
Accessories / Spare Parts

Accessories:
3 = Extension key
4 = Retaining nut spanner

Spare parts:
1 = Center screw
2 = Retaining nut

C01 Seco-Capto™ extensions, short version, for segment clamping only

ISO 26623-1



- The Seco-Capto™ machine side of short extensions can only be hold by spindles with segment clamping (not with center bolt clamping)

Designation	Item number	CTMS	CTWS	LPR	BD	OAL	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch			kg lbs
C3-391.01-32035	02535685	C3	C3	35,0 1.378	32,0 1.260	54,0 2.126	0	-	0,21 0.460
C4-391.01-40040	02535686	C4	C4	40,0 1.575	40,0 1.575	64,0 2.520	0	-	0,37 0.820
C5-391.01-50050	02484934	C5	C5	50,0 1.969	50,0 1.969	80,0 3.150	0	-	0,7 1.540
C6-391.01-63060	02300834	C6	C6	60,0 2.362	63,0 2.480	98,0 3.858	0	-	1,31 2.890
C8-391.01-80065	02417041	C8	C8	65,0 2.559	80,0 3.150	113,0 4.449	0	-	2,3 5.070

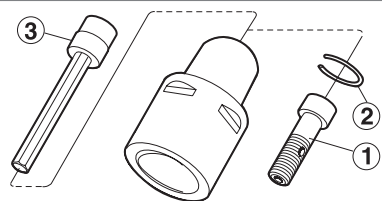
Accessories

For	Extension key
C3-391.01-32035	5680015-05
C4-391.01-40040	5680015-05
C5-391.01-50050	5680015-05
C6-391.01-63060	5680015-02
C8-391.01-80065	5680015-02

Spare Parts, included in delivery

For	Centre screw	Circlip
C3-391.01-32035	5512068-01	5545040-02
C4-391.01-40040	5512068-02	5545040-03
C5-391.01-50050	5512068-03	5545040-07
C6-391.01-63060	5512068-04	5545040-08
C8-391.01-80065	5512068-05	5545040-08

Accessories / Spare Parts

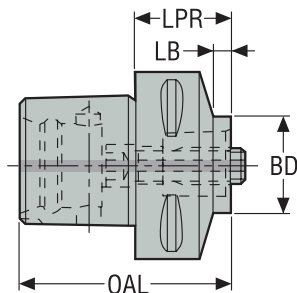


Accessories:
3 = Extension key

Spare parts:
1 = Center screw
2 = Circlip

C02 Seco-Capto™ reducers, short version, for segment clamping only

ISO 26623-1



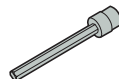
- The Seco-Capto™ machine side of short reducers can only be hold by spindles with segment clamping (not with center bolt clamping)
- * With 180° offset Machine side vs Workpiece side

Designation	Item number	CTMS	CTWS	LPR	LB	BD	OAL	*	RFID hole	Balancing	Weight
				mm Inch	mm Inch	mm Inch	mm Inch				kg lbs
C5-391.02-32033A	03080025	C5	C3	33,0 1.299	5,0 0.197	32,0 1.260	63,0 2.480	-	0	PB	0,6 1.320
C5-391.02-40040A	03079983	C5	C4	40,0 1.575	15,0 0.591	40,0 1.575	70,0 2.756	-	0	-	0,6 1.320
C6-391.02-32032	02535690	C6	C3	32,0 1.260	6,0 0.236	32,0 1.260	70,0 2.756	-	0	-	0,85 1.870
C6-391.02-40040	02459467	C6	C4	40,0 1.575	11,0 0.433	40,0 1.575	78,0 3.071	-	0	-	0,93 2.050
C6-391.02-50050A	03080019	C6	C5	50,0 1.969	20,0 0.787	50,0 1.969	88,0 3.465	-	0	-	1,1 2.430
C8-391.02-50045A	03080010	C8	C5	45,0 1.772	5,0 0.197	50,0 1.969	93,0 3.661	-	0	-	1,9 4.190
C8-391.02-63055A	03080012	C8	C6	55,0 2.165	15,0 0.591	63,0 2.480	103,0 4.055	-	0	-	2,1 4.630
C8-391.02R-63055A	03080030	C8	C6	55,0 2.165	15,0 0.591	63,0 2.480	103,0 4.055	*	0	-	1,9 4.190

Accessories

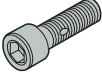

For

Extension key

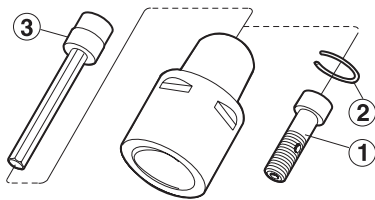


C5-391.02-32033A	5680015-05
C5-391.02-40040A	5680015-05
C6-391.02-32032	5680015-05
C6-391.02-40040	5680015-05
C6-391.02-50050A	5680015-01
C8-391.02-50045A	5680015-01
C8-391.02-63055A	5680015-02
C8-391.02R-63055A	5680015-02

Spare Parts, included in delivery

For	Centre screw	Circlip
		
C5-391.02-32033A	5512068-01	5545040-02
C5-391.02-40040A	5512068-06	5545040-07
C6-391.02-32032	5512068-01	5545040-02
C6-391.02-40040	5512068-02	5545040-03
C6-391.02-50050A	5512068-07	5545040-08
C8-391.02-50045A	5512068-08	5545040-08
C8-391.02-63055A	5512068-05	5545040-08
C8-391.02R-63055A	5512068-05	5545040-08

Accessories / Spare Parts

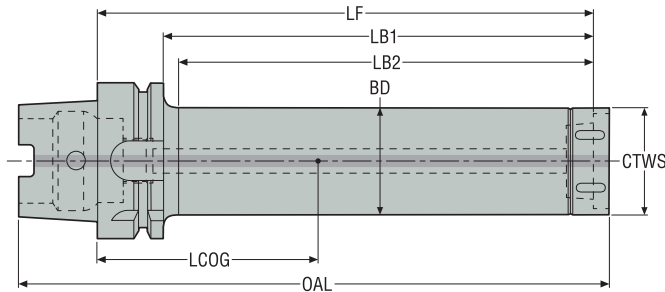


Accessories:
3 = Extension key

Spare parts:
1 = Center screw
2 = Circlip

GL – Steadyline®, HSK-T/A GL holders

Body diameters 25, 32, 40 and 50 mm / 0.984, 1.260, 1.575 and 1.969 inch



- With dynamic damping, ready to use
- With through coolant
- * Max. RPM only when used in rotating boring

Designation	Item number	CTMS HSK-T/A	CTWS GL size	BD	LF	LB1	LB2	OAL	LCOG	Max. RPM*	RFID hole	Balancing	Weight
				mm inch	mm inch	mm inch	mm inch	mm inch	mm inch				
HSKTA63-GL25-130-K	03214283	HSK-T/A63	GL25	25,0 0.984	130,0 5.118	104,0 4.094	101,0 3.976	166,5 6.555	37,0 1.457	0	1	PB	1,1 2.430
HSKTA63-GL25-180-K	03214284	HSK-T/A63	GL25	25,0 0.984	180,0 7.087	154,0 6.063	151,0 5.945	216,5 8.524	57,7 2.272	0	1	PB	1,3 2.870
HSKTA63-GL25-230-K	03214285	HSK-T/A63	GL25	25,0 0.984	230,0 9.055	204,0 8.031	201,0 7.913	266,5 10.492	80,3 3.161	0	1	PB	1,5 3.310
E9374-D32-160-GL32	03029521	HSK-T/A63	GL32	32,0 1.260	160,0 6.299	134,0 5.276	128,0 5.039	197,4 7.772	58,92 2.320	0	1	PB	1,6 3.530
E9374-D32-224-GL32	03029522	HSK-T/A63	GL32	32,0 1.260	224,0 8.819	198,0 7.795	192,0 7.559	261,4 10.291	90,22 3.552	0	1	PB	2,0 4.410
E9374-D40-208-GL40	03029523	HSK-T/A63	GL40	40,0 1.575	208,0 8.189	182,0 7.165	176,0 6.929	246,4 9.701	92,78 3.653	0	1	PB	2,7 5.950
E9374-D40-288-GL40	03029524	HSK-T/A63	GL40	40,0 1.575	288,0 11.339	262,0 10.315	256,0 10.079	326,4 12.850	134,37 5.290	0	1	PB	3,5 7.720
E9374-D50-268-GL50	03029525	HSK-T/A63	GL50	50,0 1.969	268,0 10.551	242,0 9.528	240,5 9.469	307,4 12.102	131,8 5.189	0	1	PB	4,8 10.580
E9374-D50-368-GL50	03029526	HSK-T/A63	GL50	50,0 1.969	368,0 14.488	342,0 13.465	340,5 13.406	407,4 16.039	184,79 7.275	0	1	PB	6,4 14.110
E9376-D32-160-GL32	03029527	HSK-T/A100	GL32	32,0 1.260	160,0 6.299	131,0 5.157	125,0 4.921	215,4 8.480	32,87 1.294	0	1	PB	3,0 6.610
E9376-D32-224-GL32	03029528	HSK-T/A100	GL32	32,0 1.260	224,0 8.819	195,0 7.677	189,0 7.441	279,4 11.000	54,97 2.164	0	1	PB	3,4 7.500
E9376-D32-288-GL32	03029529	HSK-T/A100	GL32	32,0 1.260	288,0 11.339	259,0 10.197	253,0 9.961	343,4 13.520	80,51 3.170	0	1	PB	3,8 8.380
E9376-D40-208-GL40	03029530	HSK-T/A100	GL40	40,0 1.575	208,0 8.189	179,0 7.047	173,0 6.811	264,4 10.409	62,83 2.474	0	1	PB	4,1 9.040
E9376-D40-288-GL40	03029531	HSK-T/A100	GL40	40,0 1.575	288,0 11.339	259,0 10.197	253,0 9.961	344,4 13.559	98,31 3.870	0	1	PB	4,9 10.800
E9376-D40-368-GL40	03029532	HSK-T/A100	GL40	40,0 1.575	368,0 14.488	339,0 13.346	333,0 13.110	424,4 16.709	139,77 5.503	0	1	PB	5,8 12.790
E9376-D50-268-GL50	03029533	HSK-T/A100	GL50	50,0 1.969	268,0 10.551	239,0 9.409	234,0 9.213	325,4 12.811	104,26 4.105	0	1	PB	6,2 13.670
E9376-D50-368-GL50	03029534	HSK-T/A100	GL50	50,0 1.969	368,0 14.488	339,0 13.346	334,0 13.150	425,4 16.748	154,26 6.073	0	1	PB	7,8 17.200
E9376-D50-468-GL50	03029535	HSK-T/A100	GL50	50,0 1.969	468,0 18.425	439,0 17.283	434,0 17.087	525,4 20.685	211,61 8.331	0	1	PB	9,7 21.380

Accessories

For size	Replaceable end	Torque key
GL25	–	–
GL32	SL00-32	SL00-32.250
GL40	SL00-40	SL00-40.350
GL50	SL00-50	SL00-50.550

Spare Parts, included in delivery

For size	Locking key
GL25	SL25
GL32	SL32
GL40	SL40
GL50	SL50

Introduction

Drilling

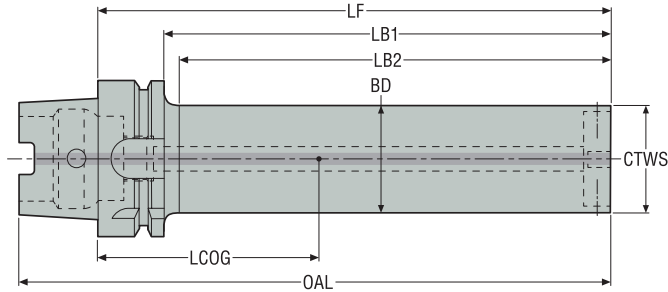
Reaming

Boring

Annex

BA – Steadyline®, HSK T/A-BA holders

Body diameters 60 and 80 mm / 2.362 and 3.150 inch



- With dynamic damping, ready to use
- To hold BA to GL adapters with GL turning heads
- With through coolant
- * Max. RPM only when used in rotating boring

Designation	Item number	CTMS HSK-T/A size	CTWS BA connection	BD	LF	LB1	LB2	OAL	LCOG	Max. RPM*	RFID hole	Balancing	Weight
				mm inch	mm inch	mm inch	mm inch	mm inch	mm inch				kg lbs
E9376-D60-301-BA060	03062828	HSK-T/A100	BA060	60,0 2.362	301,0 11.850	272,0 10.709	267,0 10.512	351,0 13.819	133,05 5.238	4000	1	PB	8,9 19.620
E9376-D60-421-BA060	03062829	HSK-T/A100	BA060	60,0 2.362	421,0 16.575	392,0 15.433	387,0 15.236	471,0 18.543	197,17 7.763	0	1	PB	11,8 26.010
E9376-D60-541-BA060	03062830	HSK-T/A100	BA060	60,0 2.362	541,0 21.299	512,0 20.157	507,0 19.961	591,0 23.268	260,56 10.258	0	1	PB	14,5 31.970
E9376-D80-421-BA080	03064109	HSK-T/A100	BA080	80,0 3.150	421,0 16.575	392,0 15.433	387,0 15.236	471,0 18.543	209,68 8.255	0	1	PB	19,4 42.770
E9376-D80-581-BA080	03064111	HSK-T/A100	BA080	80,0 3.150	581,0 22.874	552,0 21.732	547,0 21.535	631,0 24.843	295,45 11.632	0	1	PB	26,2 57.760

Accessories

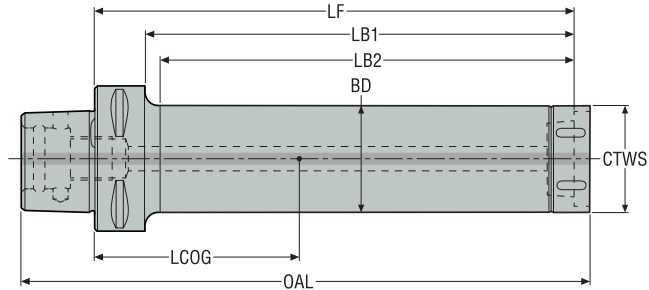
For size	Locking key
BA060	03H04
BA080	03H05

Spare Parts, included in delivery

For size	Locking screw
BA060	90FQ4
BA080	90FQ52

GL – Steadyline® , GL holders

Body diameters 25, 32, 40 and 50 mm / 0.984, 1.260, 1.575 and 1.969 inch



- With dynamic damping, ready to use
- With through coolant
- * Max. RPM only when used in rotating boring

Designation	Item number	CTMS Seco-Capto™ size	CTWS GL size	BD	LF	LB1	LB2	OAL	LCOG	Max. RPM*	RFID hole	Balancing	Weight
				mm inch	mm inch	mm inch	mm inch	mm inch	mm inch				kg lbs
C4-D25-130-GL25	03214272	C4	GL25	25,0 0.984	130,0 5.118	110,0 4.331	107,0 4.213	158,5 6.240	51,8 2.039	0	0	PB	0,8 1.760
C4-D25-180-GL25	03214273	C4	GL25	25,0 0.984	180,0 7.087	160,0 6.299	157,0 6.181	208,5 8.209	77,2 3.039	0	0	PB	1,0 2.200
C4-D32-160-GL32	02807837	C4	GL32	32,0 1.260	160,0 6.299	140,0 5.512	137,0 5.394	189,4 7.457	74,73 2.942	0	0	PB	1,2 2.650
C4-D32-224-GL32	02807838	C4	GL32	32,0 1.260	224,0 8.819	204,0 8.031	201,0 7.913	253,4 9.976	109,16 4.298	0	0	PB	1,7 3.750
C5-D25-130-GL25	03214274	C5	GL25	25,0 0.984	130,0 5.118	110,0 4.331	107,0 4.213	164,5 6.476	41,8 1.646	0	1	PB	0,9 1.980
C5-D25-180-GL25	03214275	C5	GL25	25,0 0.984	180,0 7.087	160,0 6.299	157,0 6.181	214,5 8.445	65,1 2.563	0	1	PB	1,1 2.430
C5-D25-230-GL25	03214276	C5	GL25	25,0 0.984	230,0 9.055	210,0 8.268	207,0 8.150	264,5 10.413	89,8 3.535	0	1	PB	1,3 2.870
C5-D32-160-GL32	02807840	C5	GL32	32,0 1.260	160,0 6.299	140,0 5.512	136,0 5.354	195,4 7.693	65,15 2.565	0	1	PB	1,4 3.090
C5-D32-224-GL32	02807841	C5	GL32	32,0 1.260	224,0 8.819	204,0 8.031	200,0 7.874	259,4 10.213	98,47 3.877	0	1	PB	1,8 3.970
C5-D32-288-GL32	02807842	C5	GL32	32,0 1.260	288,0 11.339	268,0 10.551	264,0 10.394	323,4 12.732	133,61 5.260	0	1	PB	2,2 4.850
C5-D40-208-GL40	02807843	C5	GL40	40,0 1.575	208,0 8.189	188,0 7.402	184,0 7.244	244,4 9.622	98,32 3.871	0	1	PB	2,5 5.510
C5-D40-288-GL40	02807844	C5	GL40	40,0 1.575	288,0 11.339	268,0 10.551	264,0 10.394	324,4 12.772	140,88 5.546	0	1	PB	3,3 7.280
C6-D25-130-GL25	03214277	C6	GL25	25,0 0.984	130,0 5.118	105,0 4.134	102,0 4.016	172,5 6.791	30,4 1.197	0	1	PB	1,3 2.870
C6-D25-180-GL25	03214278	C6	GL25	25,0 0.984	180,0 7.087	155,0 6.102	152,0 5.984	222,5 8.760	49,3 1.941	0	1	PB	1,5 3.310
C6-D25-230-GL25	03214279	C6	GL25	25,0 0.984	230,0 9.055	205,0 8.071	202,0 7.953	272,5 10.728	70,2 2.764	0	1	PB	1,7 3.750
C6-D32-160-GL32	02807846	C6	GL32	32,0 1.260	160,0 6.299	135,0 5.315	129,0 5.079	203,4 8.008	52,06 2.050	0	1	PB	1,8 3.970
C6-D32-224-GL32	02807847	C6	GL32	32,0 1.260	224,0 8.819	199,0 7.835	193,0 7.598	267,4 10.528	82,17 3.235	0	1	PB	2,2 4.850
C6-D32-288-GL32	02807848	C6	GL32	32,0 1.260	288,0 11.339	263,0 10.354	257,0 10.118	331,4 13.047	114,87 4.522	0	1	PB	2,6 5.730

Designation	Item number	CTMS Seco-Capto™ size	CTWS GL size	BD	LF	LB1	LB2	OAL	LCOG	Max. RPM*	RFID hole	Balancing	Weight
				mm inch	mm inch	mm inch	mm inch	mm inch	mm inch				
C6-D40-208-GL40	02807849	C6	GL40	40,0 1.575	208,0 8.189	183,0 7.205	177,0 6.969	252,4 9.937	86,42 3.402	0	1	PB	2,9 6.390
C6-D40-288-GL40	02807850	C6	GL40	40,0 1.575	288,0 11.339	263,0 10.354	257,0 10.118	332,4 13.087	127,5 5.020	0	1	PB	3,7 8.160
C6-D40-368-GL40	02807851	C6	GL40	40,0 1.575	368,0 14.488	343,0 13.504	337,0 13.268	412,4 16.236	173,14 6.817	0	1	PB	4,6 10.140
C6-D50-268-GL50	02807852	C6	GL50	50,0 1.969	268,0 10.551	243,0 9.567	238,0 9.370	313,4 12.339	126,6 4.984	0	1	PB	5,0 11.020
C6-D50-368-GL50	02807853	C6	GL50	50,0 1.969	368,0 14.488	343,0 13.504	338,0 13.307	413,4 16.276	179,44 7.065	0	1	PB	6,6 14.550
C6-D50-468-GL50	02807854	C6	GL50	50,0 1.969	468,0 18.425	443,0 17.441	438,0 17.244	513,4 20.213	238,49 9.389	0	1	PB	8,5 18.740
C8-D32-224-GL32	03029356	C8	GL32	32,0 1.260	224,0 8.819	191,0 7.520	181,0 7.126	277,5 10.925	58,17 2.290	0	1	PB	3,2 7.050
C8-D32-288-GL32	03029357	C8	GL32	32,0 1.260	288,0 11.339	255,0 10.039	245,0 9.646	341,5 13.445	84,7 3.335	0	1	PB	3,6 7.940
C8-D40-288-GL40	03029358	C8	GL40	40,0 1.575	288,0 11.339	255,0 10.039	245,0 9.646	341,5 13.445	102,14 4.021	0	1	PB	4,7 10.360
C8-D40-368-GL40	03029359	C8	GL40	40,0 1.575	368,0 14.488	335,0 13.189	325,0 12.795	422,5 16.634	144,04 5.671	0	1	PB	5,6 12.350
C8-D50-268-GL50	03029360	C8	GL50	50,0 1.969	268,0 10.551	235,0 9.252	225,0 8.858	323,4 12.732	107,59 4.236	0	1	PB	5,9 13.010
C8-D50-368-GL50	03029361	C8	GL50	50,0 1.969	368,0 14.488	335,0 13.189	325,0 12.795	423,4 16.669	158,08 6.224	0	1	PB	7,5 16.530
C8-D50-468-GL50	03029362	C8	GL50	50,0 1.969	468,0 18.425	435,0 17.126	425,0 16.732	523,4 20.606	215,6 8.488	0	1	PB	9,4 20.720

Accessories

For size	Replaceable end	Torque key
GL25	-	-
GL32	SL00-32	SL00-32.250
GL40	SL00-40	SL00-40.350
GL50	SL00-50	SL00-50.550

Spare Parts, included in delivery

For size	Locking key
GL25	SL25
GL32	SL32
GL40	SL40
GL50	SL50

Introduction

Drilling

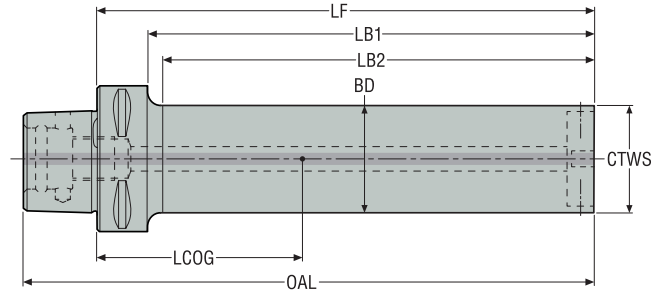
Reaming

Boring

Annex

BA – Steadyline®, BA holders

Body diameters 60 and 80 mm / 2.362 and 3.150 inch



- With dynamic damping, ready to use
- To hold BA to GL adapters with GL turning heads
- With through coolant
- * Max. RPM only when used in rotating boring

Designation	Item number	CTMS Seco-Capto™ size	CTWS BA size	BD	LF	LB1	LB2	OAL	LCOG	Max. RPM*	RFID hole	Balancing	Weight
				mm inch	mm inch	mm inch	mm inch	mm inch	mm inch				kg lbs
C6-D60-301-BA060	03062831	C6	BA060	60,0 2.362	301,0 11.850	276,0 10.866	273,0 10.748	339,0 13.346	151,74 5.974	4000	1	PB	7,8 17.200
C6-D60-421-BA060	03062832	C6	BA060	60,0 2.362	421,0 16.575	396,0 15.591	393,0 15.472	459,0 18.071	218,63 8.607	3000	1	PB	10,6 23.370
C8-D60-301-BA060	03062833	C8	BA060	60,0 2.362	301,0 11.850	268,0 10.551	263,0 10.354	349,0 13.740	137,04 5.395	4000	1	PB	8,6 18.960
C8-D60-421-BA060	03062834	C8	BA060	60,0 2.362	421,0 16.575	388,0 15.276	383,0 15.079	469,0 18.465	202,5 7.972	3000	1	PB	11,4 25.130
C8-D60-541-BA060	03062835	C8	BA060	60,0 2.362	541,0 21.299	508,0 20.000	503,0 19.803	589,0 23.189	266,78 10.503	2000	1	PB	14,0 30.860
C8-D80-421-BA080	03065829	C8	BA080	80,0 3.150	421,0 16.575	388,0 15.276	383,0 15.079	469,0 18.465	213,89 8.421	3000	1	PB	18,8 41.450
C8-D80-581-BA080	03065830	C8	BA080	80,0 3.150	581,0 22.874	548,0 21.575	543,0 21.378	629,0 24.764	300,38 11.826	2000	1	PB	25,1 55.340

Accessories

For size	Locking key
BA060	03H04
BA080	03H05

Spare Parts, included in delivery

For size	Locking screw
BA060	90FQ4
BA080	90FQ52

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Rough boring

Seco's range of rough boring products maximize material removal rates and accuracy through strong, highly rigid performance. Designed for symmetrical and staggered designs. Steadyliner™ vibration damping solutions complete the range to deliver even greater levels of stability for the machining of deep cavities, where long tool overhangs are needed.

- RB 750 rough boring heads offer the highest possible rough boring performance
- RB 610 rough boring heads are short, simple, robust boring heads for roughing operations

Overview Rough boring heads

Introduction

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Graflex®



Ø 18-24 (Ø 0.709"-0.945")



Ø 23-31 (Ø 0.906"-1.220")



Ø 30-40 (Ø 1.181"-1.575")



Ø 39-51 (Ø 1.535"-2.008")



Ø 50-65 (Ø 1.968"-2.559")



Ø 64-86 (Ø 2.520"-3.386")



Ø 85-144 (Ø 3.346"-5.669")



Ø 114-205 (Ø 4.488"-8.071")

Seco-Capto™



Ø 39-51 (Ø 1.535"-2.008")



Ø 50-65 (Ø 1.968"-2.559")



Ø 64-86 (Ø 2.520"-3.386")

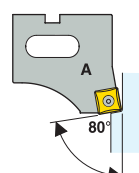
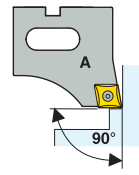
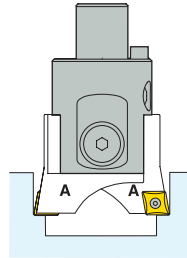


Ø 85-144 (Ø 3.346"-5.669")

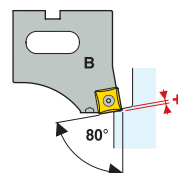
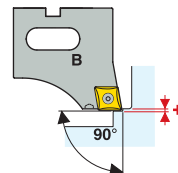
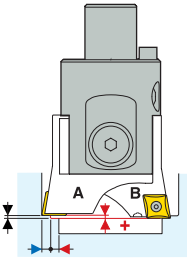


Ø 114-205 (Ø 4.488"-8.071")

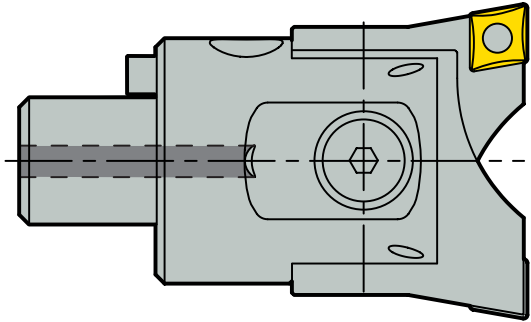
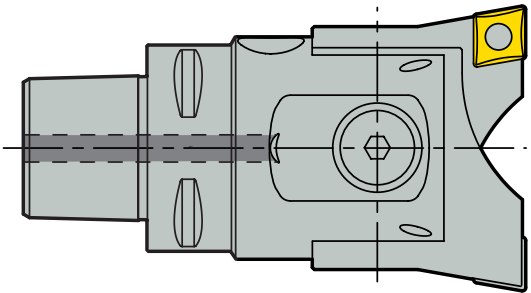
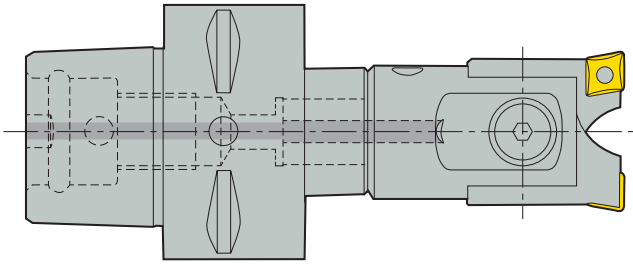
Symmetrical boring:
2 standard type A insert holders



Staggered boring:
1 extended type B and 1 standard type A insert holders



Features

<p>Graflex® rough boring heads</p> <ul style="list-style-type: none"> • Ø 18 to 205 mm (0.709-8.071") • 8 rough boring heads RB 750 with Graflex® connection for bores Ø 18 to 205 mm (0.709-8.071") 		Introduction
<p>Seco-Capto™ rough boring heads</p> <ul style="list-style-type: none"> • Note: The minimum bore size of the smallest Capto™ rough boring head is Ø 39 mm (1.535") with the smallest available Capto™ C3 connection. • For Ø 18 to 40 mm (0.709-1.575") use Graflex® boring heads with connection sizes G0 to G2 in conjunction with the appropriate Capto™/Graflex® adaptor. 		Drilling
<p>Seco-Capto™ rough boring heads</p> <ul style="list-style-type: none"> • Note: Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting, recommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are similar for both types of RB 750 rough boring heads of similar boring capacity size, regardless of connection type. • Modular assemblies and cutting conditions Seco-Capto™ and Graflex® adapters and modular extensions: please see the Tooling Systems catalog. 		Reaming
		Boring
		Annex

Features

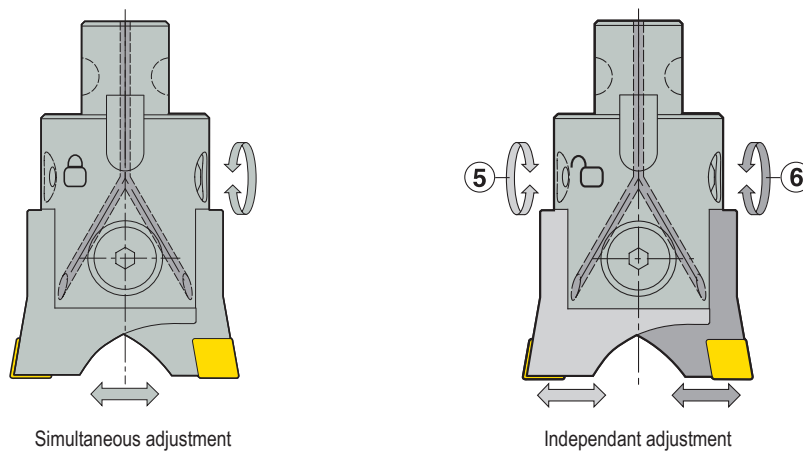
A rough boring head assembly is a combination of 1 body (head) and 2 insert holders.

Simultaneous or independent adjustments of the insert holders are possible:

Simultaneous adjustment by the insert holders coupling mechanism (no coupling mechanism in the smallest head \varnothing 18 to 24 mm (0.709-0.9445").

Each adjusting screw moves both insert holders simultaneously (they are gear coupled).

Diameter adjustment is possible without a presetter (1 increment = 0,1 mm (0.004") on the diameter).
Independent adjustment is also possible: disengage the coupling mechanism so that each adjusting screw acts only on its insert holder.



Symmetrical boring:

Symmetrical boring means both cutting edges are set on the same diameter.
It requires two identical type A standard insert holders (with identical lead angle).

Staggered boring:

Staggered boring means one cutting edge is offset as a leading cutting edge operating on a smaller diameter than the second edge set on the diameter to be realised: It requires one type A standard insert holder and one type B extended insert holder, achieving the required (+) axial offset.

90° or 80° lead angle insert holders

A75...CC... and A75...CP... insert holders have a 90° lead angle for rhombic inserts: mostly suitable for blind holes and requiring less spindle torque.

A75...SC... insert holders have an 80° lead angle for square inserts: mostly suitable for through holes and heavy duty.
Angular orientation of the cutting edges according to ISO.

Features

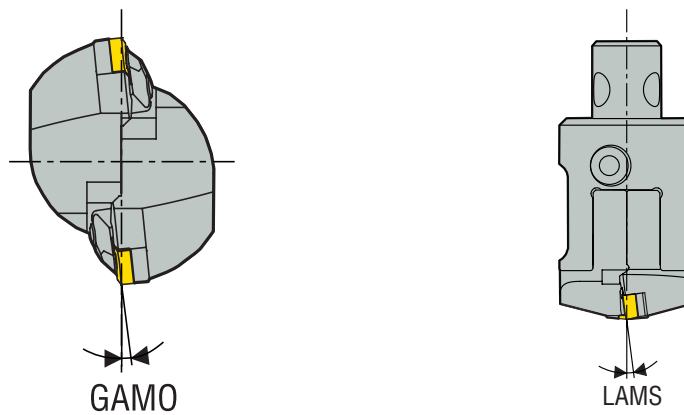
CC, CP, SC or CN type insert holders

A750...CC..., A750...CP... and A750...SC... insert holders are with 0° rake angle (GAMO) and 0° inclination angle (LAMS).

A750...CN... insert holders are with -6° rake angle (GAMO) and -6° inclination angle (LAMS), allowing use of 'negative' CNMM inserts and particularly multi-edges CNMG inserts with 4 cutting edges.

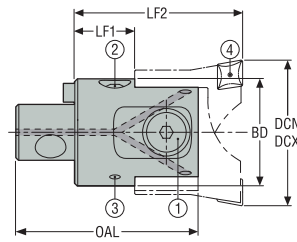
In this case, it is particularly important to select the recommended CN inserts and to respect the recommended cutting data (see page 654).

Using other inserts, e.g. with smaller effective cutting angle, and/or incorrect cutting data, could result in high cutting stresses and machine / workpiece damage.



RB750

Graflex®



- Symmetrical and staggered boring is possible
- Simultaneous adjustment by insert holders coupling mechanism

1. Assembly screw
2. Adjusting screw
3. Locking screw of coupling mechanism
4. Insert screw

Designation	Item number	Machine side Graflex size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Simultaneous adjustment mode		Independent adjustment mode		Max. RPM
			mm Inch	mm Inch						Yes	No	Yes	No	
A75000	00026687	G0	18,0 0.709	24,0 0.945	38,0 1.496	12,5 0.492	35,0 1.378	16,5 0.650	0,03 0.070		■	■		15000
A75010	00026688	G1	23,0 0.906	31,0 1.220	42,5 1.673	13,5 0.531	40,0 1.575	21,5 0.846	0,1 0.220	■		■		12000
A75020	00026689	G2	30,0 1.181	40,0 1.575	51,0 2.008	16,0 0.630	46,0 1.811	27,0 1.063	0,11 0.240	■		■		9500
A75030	00026690	G3	39,0 1.535	51,0 2.008	69,0 2.717	24,0 0.945	65,0 2.559	35,0 1.378	0,5 1.100	■		■		7500
A75040	00026691	G4	50,0 1.969	65,0 2.559	78,0 3.071	27,0 1.063	72,0 2.835	43,0 1.693	0,46 1.010	■		■		5700
A75050	00026692	G5	64,0 2.520	86,0 3.386	92,0 3.622	30,0 1.181	82,0 3.228	54,0 2.126	0,8 1.760	■		■		4500
A75060	00026693	G6	85,0 3.346	144,0 5.669	119,0 4.685	37,0 1.457	105,0 4.134	70,0 2.756	1,69 3.730	■		■		3500
A75070	00026694	G7	114,0 4.488	205,0 8.071	143,0 5.630	39,0 1.535	120,0 4.724	95,0 3.740	3,7 8.160	■		■		2500

Insert holders have to be ordered separately, see page(s) 569-573
Note, weight is without insert holder

Spare Parts, included in delivery

For head	Assembly screw	Tenon
A75000	90A75000	90M0
A75010	90A75010	90M11
A75020	90A75020	90M21
A75030	90A75030	90M31
A75040	90A75040	90M41
A75050	90A75050	90M51
A75060	90A75060	90M61
A75070	90A75070	90M71

Introduction


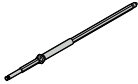



Drilling

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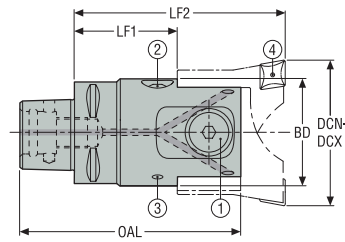
Accessories

For head	Clamp key	Driving key	Insert key	Key (T-handle)	Setting key
					
A75000	03HL03	-	H4B-T07P	DOUBLE-T	H1.5-2D
A75010	03HL03	H4B-T06P	H4B-T07P	DOUBLE-T	H1.5-2D
A75020	03HL04	H4B-T07P	-	DOUBLE-T	H2.0-2D
A75030	03HL05	H4B-T08P	-	DOUBLE-T	H2.0-2D
A75040	03HL05	H4B-T09P	-	DOUBLE-T	H2.5-2D
A75050	03HL06	-	-	DOUBLE-T	03M03C
A75060	03HL08	-	-	DOUBLE-T	H04-4
A75070	03HL10	H4B-T15P	H4B-T15PL	DOUBLE-T	H04-4

Accessories, to be ordered separately

RB750

Seco-Capto™



- Symmetrical and staggered boring is possible
- Simultaneous adjustment by insert holders coupling mechanism

1. Assembly screw
2. Adjusting screw
3. Locking screw of coupling mechanism
4. Insert screw

Designation	Item number	Machine side Capto size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Simultaneous adjustment mode		Independent adjustment mode		Max. RPM
			DCN-DCX Ø							Yes	No	Yes	No	
C3-391.0750-30	02809726	C3	39,0 1.535	51,0 2.008	73,0 2.874	29,0 1.142	70,0 2.756	35,0 1.378	0,28 0.620	■		■		7500
C4-391.0750-40	02809728	C4	50,0 1.969	65,0 2.559	88,0 3.465	37,0 1.457	82,0 3.228	43,0 1.693	0,52 1.150	■		■		5700
C5-391.0750-50	02809733	C5	64,0 2.520	86,0 3.386	102,0 4.016	40,0 1.575	92,0 3.622	54,0 2.126	0,94 2.070	■		■		4500
C6-391.0750-60	02809735	C6	85,0 3.346	144,0 5.669	129,0 5.079	49,0 1.929	117,0 4.606	70,0 2.756	1,88 4.140	■		■		3500
C8-391.0750-70	02809736	C8	114,0 4.488	205,0 8.071	159,0 6.260	57,0 2.244	138,0 5.433	95,0 3.740	4,14 9.130	■		■		2500

Insert holders have to be ordered separately, see page(s) 569-573
Note, weight is without insert holder

Spare Parts, included in delivery

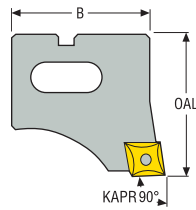
For head	Assembly screw
C3-...-30	90A75030
C4-...-40	90A75040
C5-...-50	90A75050
C6-...-60	90A75060
C8-...-70	90A75070

Accessories

For head	Clamp key	Driving key	Key (T-handle)	Setting key
C3-...-30	03HL05	H4B-T08P	DOUBLE-T	H2.0-2D
C4-...-40	03HL05	H4B-T09P	DOUBLE-T	H2.5-2D
C5-...-50	03HL06	-	DOUBLE-T	03M03C
C6-...-60	03HL08	-	DOUBLE-T	H04-4
C8-...-70	03HL10	-	DOUBLE-T	H04-4

Accessories, to be ordered separately

Insert holders 90° for CC.. and CP.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

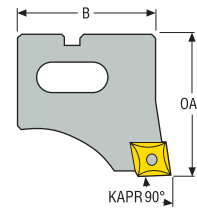
Designation	Item number	Insert holders type	For head	Capacity DCN-DCX Ø		OAL	B	Weight	KRINS°	Suitable insert size
				mm Inch	mm Inch	mm Inch	mm Inch			
A7500CP0590	00026695	Standard type A	RB 75000	18,0 0.709	24,0 0.945	22,5 0.886	16,5 0.650	0,01 0.020	90	CP...0502...
A75010CC0690	00026696	Standard type A	RB 75010	23,0 0.906	31,0 1.220	26,5 1.043	21,5 0.846	0,02 0.040	90	CC...0602...
A75020CC0690	00026697	Standard type A	RB 75020	30,0 1.181	40,0 1.575	30,0 1.181	27,0 1.063	0,04 0.090	90	CC...0602...
A75030CC0990	00026698	Standard type A	RB 75030	39,0 1.535	51,0 2.008	41,0 1.614	35,0 1.378	0,1 0.220	90	CC...09T3...
A75040CC1290	00026699	Standard type A	RB 75040	50,0 1.969	65,0 2.559	45,0 1.772	43,0 1.693	0,14 0.310	90	CC...1204...
A75050CC1290	00026700	Standard type A	RB 75050	64,0 2.520	86,0 3.386	52,0 2.047	54,0 2.126	0,25 0.550	90	CC...1204...
A75060CC1290	00026701	Standard type A	RB 75060	85,0 3.346	115,0 4.528	68,0 2.677	70,0 2.756	0,55 1.210	90	CC...1204...
A75060CC1690	00030763	Standard type A	RB 75060	85,0 3.346	115,0 4.528	68,0 2.677	70,0 2.756	0,55 1.210	90	CC...1605...
A75065CC1290	00026702	Standard type A	RB 75060	114,0 4.488	144,0 5.669	68,0 2.677	100,0 3.937	0,89 1.960	90	CC...1204...
A75065CC1690	00030765	Standard type A	RB 75060	114,0 4.488	144,0 5.669	68,0 2.677	100,0 3.937	0,9 1.980	90	CC...1605...
A75070CC1290	00026703	Standard type A	RB 75070	114,0 4.488	160,0 6.299	81,0 3.189	95,0 3.740	1,18 2.600	90	CC...1204...
A75070CC1690	00030766	Standard type A	RB 75070	114,0 4.488	160,0 6.299	81,0 3.189	95,0 3.740	1,18 2.600	90	CC...1605...
A75075CC1290	00026704	Standard type A	RB 75070	159,0 6.260	205,0 8.071	81,0 3.189	141,0 5.551	2,0 4.410	90	CC...1204...
A75075CC1690	00030771	Standard type A	RB 75070	159,0 6.260	205,0 8.071	81,0 3.189	141,0 5.551	2,0 4.410	90	CC...1605...

Spare Parts, included in delivery

For insert size	Insert key	Key (T-handle)	Screw
CP...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
CC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
CC...09T3...	H4B-T15P	DOUBLE-T	C04008-T15P
CC...1204...	H4B-T15P	DOUBLE-T	C05012-T15P
CC...1605...	H4B-T15P	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 654

Insert holders 90° for CC.. and CP.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

Designation	Item number	Insert holders type	For head	Capacity DCN-DCX Ø		OAL	B	Weight	KRINS°	Suitable insert size
				mm <i>Inch</i>	mm <i>Inch</i>					
A75001CP0590	00026705	Extended type B	RB 75000	18,0 <i>0.709</i>	24,0 <i>0.945</i>	22,8 <i>0.898</i>	16,5 <i>0.650</i>	0,01 <i>0.020</i>	90	CP...0502...
A75011CC0690	00026706	Extended type B	RB 75010	23,0 <i>0.906</i>	31,0 <i>1.220</i>	26,85 <i>1.057</i>	21,5 <i>0.846</i>	0,02 <i>0.040</i>	90	CC...0602...
A75021CC0690	00026707	Extended type B	RB 75020	30,0 <i>1.181</i>	40,0 <i>1.575</i>	30,35 <i>1.195</i>	27,0 <i>1.063</i>	0,1 <i>0.220</i>	90	CC...0602...
A75031CC0990	00026708	Extended type B	RB 75030	39,0 <i>1.535</i>	51,0 <i>2.008</i>	41,4 <i>1.630</i>	35,0 <i>1.378</i>	0,08 <i>0.180</i>	90	CC...09T3...
A75041CC1290	00026709	Extended type B	RB 75040	50,0 <i>1.969</i>	65,0 <i>2.559</i>	46,5 <i>1.831</i>	43,0 <i>1.693</i>	0,13 <i>0.290</i>	90	CC...1204...
A75051CC1290	00026710	Extended type B	RB 75050	64,0 <i>2.520</i>	86,0 <i>3.386</i>	52,6 <i>2.071</i>	54,0 <i>2.126</i>	0,25 <i>0.550</i>	90	CC...1204...
A75061CC1290	00026711	Extended type B	RB 75060	85,0 <i>3.346</i>	115,0 <i>4.528</i>	68,6 <i>2.701</i>	70,0 <i>2.756</i>	0,55 <i>1.210</i>	90	CC...1204...
A75061CC1690	00030774	Extended type B	RB 75060	85,0 <i>3.346</i>	115,0 <i>4.528</i>	68,6 <i>2.701</i>	70,0 <i>2.756</i>	0,55 <i>1.210</i>	90	CC...1605...
A75066CC1290	00026712	Extended type B	RB 75060	114,0 <i>4.488</i>	144,0 <i>5.669</i>	68,6 <i>2.701</i>	100,0 <i>3.937</i>	0,91 <i>2.010</i>	90	CC...1204...
A75066CC1690	00030775	Extended type B	RB 75060	114,0 <i>4.488</i>	144,0 <i>5.669</i>	68,6 <i>2.701</i>	100,0 <i>3.937</i>	0,91 <i>2.010</i>	90	CC...1605...
A75071CC1290	00026713	Extended type B	RB 75070	114,0 <i>4.488</i>	160,0 <i>6.299</i>	81,6 <i>3.213</i>	95,0 <i>3.740</i>	1,16 <i>2.560</i>	90	CC...1204...
A75071CC1690	00030776	Extended type B	RB 75070	114,0 <i>4.488</i>	160,0 <i>6.299</i>	81,6 <i>3.213</i>	95,0 <i>3.740</i>	1,16 <i>2.560</i>	90	CC...1605...
A75076CC1290	00026714	Extended type B	RB 75070	159,0 <i>6.260</i>	205,0 <i>8.071</i>	81,6 <i>3.213</i>	141,0 <i>5.551</i>	2,0 <i>4.410</i>	90	CC...1204...
A75076CC1690	00030778	Extended type B	RB 75070	159,0 <i>6.260</i>	205,0 <i>8.071</i>	81,6 <i>3.213</i>	141,0 <i>5.551</i>	2,0 <i>4.410</i>	90	CC...1605...

Spare Parts, included in delivery

For insert size	Key	Key (T-handle)	Screw
CP...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
CC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
CC...09T3...	-	DOUBLE-T	C04008-T15P
CC...1204...	-	DOUBLE-T	C05012-T15P
CC...1605...	-	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 654

Introduction

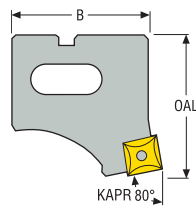
Drilling

Reaming

Boring

Annex

Insert holders 80° for SC.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders
- Staggered boring requires one standard type A and one extended type B insert holders

Designation	Item number	Insert holders type	For head	Capacity DCN-DCX Ø		OAL	B	Weight	KRINS°	Suitable insert size
				mm Inch	mm Inch					
A7500SC0580	00026715	Standard type A	RB 75000	18,0 0.709	24,0 0.945	22,5 0.886	16,5 0.650	0,01 0.020	80	SC...0502...
A75010SC0680	00026716	Standard type A	RB 75010	23,0 0.906	31,0 1.220	26,5 1.043	21,5 0.846	0,02 0.040	80	SC...0602...
A75020SC0680	00026717	Standard type A	RB 75020	30,0 1.181	40,0 1.575	30,0 1.181	27,0 1.063	0,1 0.220	80	SC...0602...
A75030SC0980	00026718	Standard type A	RB 75030	39,0 1.535	51,0 2.008	41,0 1.614	35,0 1.378	0,08 0.180	80	SC...09T3...
A75040SC1280	00026719	Standard type A	RB 75040	50,0 1.969	65,0 2.559	45,0 1.772	43,0 1.693	0,03 0.070	80	SC...1204...
A75050SC1280	00051986	Standard type A	RB 75050	64,0 2.520	86,0 3.386	52,0 2.047	54,0 2.126	0,25 0.550	80	SC...1204...
A75060SC1280	00052207	Standard type A	RB 75060	85,0 3.346	115,0 4.528	68,0 2.677	70,0 2.756	0,56 1.230	80	SC...1204...
A75060SC1580	00039863	Standard type A	RB 75060	85,0 3.346	115,0 4.528	68,0 2.677	70,0 2.756	0,56 1.230	80	SC...1505...
A75065SC1280	00051989	Standard type A	RB 75060	114,0 4.488	144,0 5.669	68,0 2.677	100,0 3.937	0,94 2.070	80	SC...1204...
A75065SC1580	00039865	Standard type A	RB 75060	114,0 4.488	144,0 5.669	68,0 2.677	100,0 3.937	1,0 2.200	80	SC...1505...
A75070SC1280	00026723	Standard type A	RB 75070	114,0 4.488	160,0 6.299	81,4 3.205	95,0 3.740	1,2 2.650	80	SC...1204...
A75070SC1580	00039867	Standard type A	RB 75070	114,0 4.488	160,0 6.299	81,4 3.205	95,0 3.740	1,18 2.600	80	SC...1505...
A75075SC1280	00026724	Standard type A	RB 75070	159,0 6.260	205,0 8.071	81,4 3.205	141,0 5.551	2,09 4.610	80	SC...1204...
A75075SC1580	00039869	Standard type A	RB 75070	159,0 6.260	205,0 8.071	81,4 3.205	141,0 5.551	2,1 4.630	80	SC...1505...
A75001SC0580	00092946	Extended type B	RB 75000	18,0 0.709	24,0 0.945	23,2 0.913	16,5 0.650	0,01 0.020	80	SC...0502...
A75011SC0680	00092947	Extended type B	RB 75010	23,0 0.906	31,0 1.220	27,3 1.075	21,5 0.846	0,02 0.040	80	SC...0602...
A75021SC0680	00092948	Extended type B	RB 75020	30,0 1.181	40,0 1.575	30,9 1.217	27,0 1.063	0,04 0.090	80	SC...0602...
A75031SC0980	00092949	Extended type B	RB 75030	39,0 1.535	51,0 2.008	42,2 1.661	35,0 1.378	0,08 0.180	80	SC...09T3...
A75041SC1280	00092961	Extended type B	RB 75040	50,0 1.969	65,0 2.559	46,4 1.827	43,0 1.693	0,14 0.310	80	SC...1204...
A75051SC1280	00092962	Extended type B	RB 75050	64,0 2.520	86,0 3.386	53,7 2.114	54,0 2.126	0,26 0.570	80	SC...1204...
A75061SC1580	00039864	Extended type B	RB 75060	85,0 3.346	115,0 4.528	70,3 2.768	70,0 2.756	0,57 1.260	80	SC...1505...
A75061SC1280	00092963	Extended type B	RB 75060	85,0 3.346	115,0 4.528	69,8 2.748	70,0 2.756	0,57 1.260	80	SC...1204...

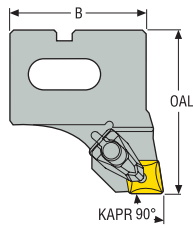
Designation	Item number	Insert holders type	For head	Capacity DCN-DCX Ø		OAL	B	Weight	KRINS°	Suitable insert size
				mm Inch	mm Inch	mm Inch	mm Inch	kg lbs		
A75066SC1280	00092964	Extended type B	RB 75060	114,0 4.488	144,0 5.669	69,8 2.748	100,0 3.937	0,96 2.120	80	SC...1204...
A75066SC1580	00039866	Extended type B	RB 75060	114,0 4.488	144,0 5.669	70,3 2.768	100,0 3.937	0,96 2.120	80	SC...1505...
A75071SC1280	00092965	Extended type B	RB 75070	114,0 4.488	160,0 6.299	82,8 3.260	95,0 3.740	1,21 2.670	80	SC...1204...
A75071SC1580	00039868	Extended type B	RB 75070	114,0 4.488	160,0 6.299	83,3 3.280	95,0 3.740	1,21 2.670	80	SC...1505...
A75076SC1280	00092968	Extended type B	RB 75070	159,0 6.260	205,0 8.071	82,8 3.260	141,0 5.551	2,16 4.760	80	SC...1204...
A75076SC1580	00039870	Extended type B	RB 75070	159,0 6.260	205,0 8.071	83,3 3.280	141,0 5.551	2,14 4.720	80	SC...1505...

Spare Parts, included in delivery

For insert size	Key	Key (T-handle)	Screw
SC...0502...	H4B-T07P	DOUBLE-T	C02245-T07P
SC...0602...	H4B-T07P	DOUBLE-T	C02504-T07P
SC...09T3...	-	DOUBLE-T	C04008-T15P
SC...1204...	-	DOUBLE-T	C05012-T15P
SC...1505...	-	DOUBLE-T	C05012-T15P
SC...09T3...	-	DOUBLE-T	C04008-T15P
SC...1204...	-	DOUBLE-T	C05012-T15P

For rough boring recommended inserts, see page(s) 654

Insert holders 90° for CN.. inserts



- For fitting onto heads RB 750
- Symmetrical boring requires two standard type A insert holders (Type B extended insert holders for CN.. inserts not available)
- GAMO = Rake angle = - 6°
- LAMS = Inclination angle = - 6°

Designation	Item number	Insert holders type	For head	Capacity DCN-DCX Ø		OAL	B	Weight	KRINS°	Suitable insert size
				mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	kg <i>lbs</i>		
A75050CN1290	02786307	Standard type A	RB 75050	64,0 2.520	86,0 3.386	63,0 2.480	55,0 2.165	0,28 0.620	90	CN...1204...
A75060CN1290	02786308	Standard type A	RB 75060	85,0 3.346	115,0 4.528	68,0 2.677	69,5 2.736	0,58 1.280	90	CN...1204...
A75065CN1290	02786309	Standard type A	RB 75060	114,0 4.488	144,0 5.669	68,0 2.677	99,5 3.917	0,98 2.160	90	CN...1204...
A75070CN1290	02786310	Standard type A	RB 75070	114,0 4.488	160,0 6.299	85,0 3.346	95,0 3.740	1,25 2.760	90	CN...1204...
A75075CN1290	02786311	Standard type A	RB 75070	159,0 6.260	205,0 8.071	85,0 3.346	140,0 5.512	2,03 4.480	90	CN...1204...

Spare Parts, included in delivery

For insert size	Anvil screw	Clamp kit	Insert shim	Key (T-handle)
CN...1204...	CSC6312-T15P	CD12-S12	UCN120612	DOUBLE-T

For rough boring recommended inserts, see page(s) 654

Instructions Recommended machining conditions

Spindle power:

As rough boring requires high machine power, we recommend to check that the machine is suitable. Staggered boring is a solution to reduce the power needs, as the feed is divided by two for the same total depth of cut, compared to symmetrical setting. Optimum performance is obtained with through coolant (higher machining data, better surface finish, better chip evacuation, longer insert life).

For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Maximum speeds for rough boring heads

Head	Capacity Ø mm	Capacity Ø inch	Max. RPM	Implied max cutting speed v_c at min. Cap. m/min (sf/min)	Implied max cutting speed v_c at max. Cap. m/min (sf/min)
Rough boring heads (with two identical insert holders set symmetrically), with Graflex® connection					
A75000	18-24	0.709-0.945	15000	848 (2782)	1131 (3711)
A75010	23-31	0.906-1.220	12000	867 (2844)	1169 (3835)
A75020	30-40	1.181-1.575	9500	895 (2936)	1194 (3917)
A75030	39-51	1.535-2.008	7500	919 (3015)	1202 (3944)
A75040	50-65	1.969-2.559	5700	895 (2936)	1164 (3819)
A75050	64-86	2.520-3.386	4500	905 (2969)	1216 (3990)
A75060	85-115	3.346-4.528	3500	935 (3068)	1264 (4147)
A75060	114-144	4.488-5.669	2700	967 (3173)	1221 (4006)
A75070	114-160	4.488-6.299	2500	895 (2936)	1257 (4124)
A75070	159-205	6.260-8.071	2000	999 (3278)	1288 (4226)
Rough boring heads (with two identical insert holders set symmetrically), with Seco-Capto™ connection					
C3-391.0750-30	39-51	1.535-2.008	7500	919 (3015)	1202 (3944)
C4-391.0750-40	50-65	1.969-2.559	5700	895 (2936)	1164 (3819)
C5-391.0750-50	64-86	2.520-3.386	4500	905 (2969)	1216 (3990)
C6-391.0750-60	85-115	3.346-4.528	3500	935 (3068)	1264 (4147)
C6-391.0750-60	114-144	4.488-5.669	2700	967 (3173)	1221 (4006)
C8-391.0750-70	114-160	4.488-6.299	2500	895 (2936)	1257 (4124)
C8-391.0750-70	159-205	6.260-8.071	2000	999 (3278)	1288 (4226)

Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the basic holders and the extensions/reducers should be fine balanced.

Troubleshooting instructions

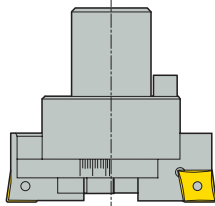
Problem	Possible cause	Solution
Poor chip control	Feed rate too low	Increase feed rate
	Excessive DOC	Use staggered method
Chatter & Vibrations	Excessive speed	Reduce cutting speed, not feed Shorten tool to increase stiffness
	Extreme L/D ratio	Increase holding arbor's and intermediate's OD
		Use Steadyline bar
		Use carbide or heavy metal extensions
	Too large insert radius	Use insert with smaller radius
	Unstable workpiece	Improve fixture and clamping support
	Lead angle κ is 80°	Change to $\kappa=90^\circ$, type CC insert
Insert chipping or breaking	Wrong insert	Change to tougher grade of insert Use larger radius if available
	Severe interrupted cut	Decrease speed, decrease feed
	Chips packing and re-cutting	Check for boring bar/bore diameter clearance Improve chip control, increase feed
Poor tool life	Wrong insert	Change to higher wear resistant grade
	Excessive cutting speed	Reduce speed
	Insert chipping	Check DOC and feed rate
	Too low coolant pressure	Increase coolant pressure
Chips not evacuating	Boring assembly too large	Reduce to a smaller head with extended insert holders when possible
	Excessive DOC	Use staggered method; prefer CC.. instead of CN.. inserts (particularly when using the boring head at its small diameters).
	Inadequate space below bore	Set the workpiece higher onto the table
	Poor chip control	See above
Insufficient machine power	Excessive feed rate	Reduce feed (not less than 25% of insert radius)
	Excessive DOC	Use staggered method
	Low machine power	RPM in area of low spindle torque: increase speed
		RPM in area of gear change: adjust RPM
		Change insert to higher rake angle (to HSS in extreme cases)
Reduce DOC		
Excessive hole exit burr	Excessive feed rate	Reduce feed
	CC type insert holders 90°	Use 80° square insert holder
	Cutting forces too high	Reduce DOC
Reduce insert radius		

RB 610 Rough boring heads – Overview

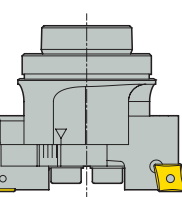
Graflex® connection

GL connection

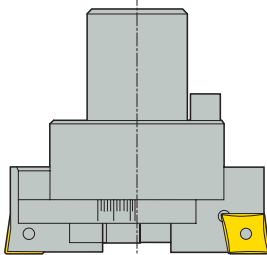
BA connection



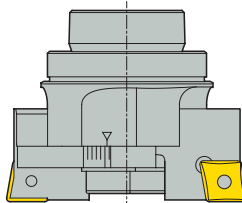
Ø 39–51 mm (Ø 1.535–2.008")



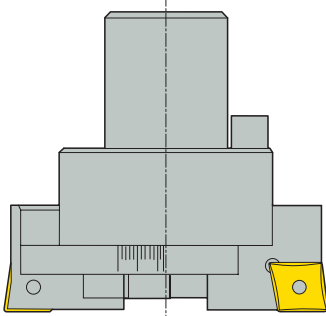
Ø 36–46 mm (Ø 1.417–1.811")



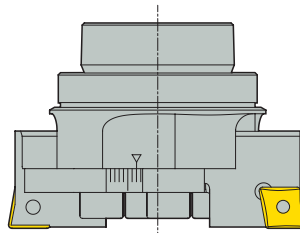
Ø 50–65 mm (Ø 1.969–2.559")



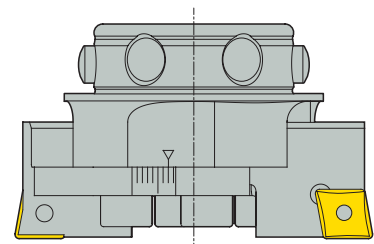
Ø 45–56 mm (Ø 1.772–2.205")



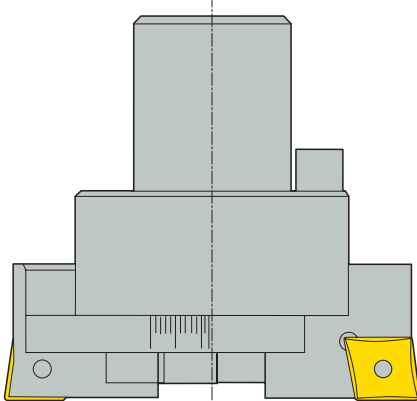
Ø 64–86 mm (Ø 2.520–3.386")



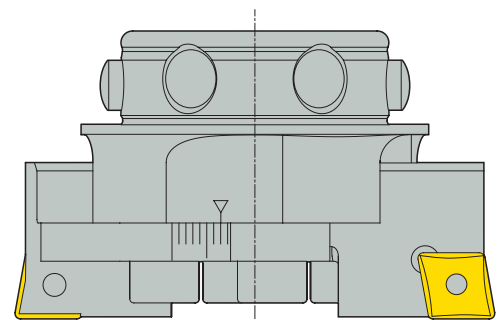
Ø 55–69 mm (Ø 2.165–2.717")



Ø 66–88 mm (Ø 2.598–3.465")



Ø 85–115 mm (Ø 3.346–4.528")



Ø 86–116 mm (Ø 3.386–4.567")

Introduction

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RB 610 Rough boring heads – Guide

Features

- A rough boring head assembly is a combination of 1 body (head) and 2 insert holders
- Achieving geometrical hole precision starting from cast, flame cut or drilled hole
- Minimised unbalance thanks to a symmetrical design

Compact

- Short body to maximise the rigidity of the boring assembly and to deliver the best damping performances when used on Steadyline® turning and boring bars
- Reduced weight for fast tool changing and spindle acceleration

Intuitive and fast setting

- Each insert holder features its push and pull setting mechanism allowing easy and fast setting of the diameter, using a pre-setter
- Diameter scales roughly visualise the insert holders positions

Insert holders

- A610...CC... insert holders achieve a 90° lead angle for rhombic inserts, 0° rake angle and 0° inclination angle
- The insert holders are suitable for both RB 610 Graflex® and RB 610 GL heads

Productivity

- High rigidity resulting from a tight fitting of the insert holders into the head's body, and large clamping screws
- Possibility to take a depth of cut up to half of the insert's width, maximising the chip removal rate and allowing a total exploitation of the inserts
- Staggered boring using a shim (part of heads delivery contents) to offset one insert holder in order to increase or to split the radial depth of cut
- Through coolant delivery directed towards the cutting edges

Product range

- RB 610 rough boring heads are available with Graflex® machine side connection, for conventional boring operations up to 6xD overhangs,
- RB 610 rough boring heads with GL and BA machine side connections are designed for longer overhangs with vibration damping Steadyline® assemblies.

RB 610 Graflex®



- Graflex®: 4 compact rough boring heads for Ø 39–115 mm (Ø 1.535–4.528")
- The flexible Graflex® modular System allows to build up optimal boring assemblies from Graflex® adapters, intermediate modules and boring heads

RB 610 GL and BA, for Steadyline® vibration damping bars



GL



BA

- GL: 4 short and compact rough boring heads, for Ø 28–69 mm (Ø 1.102–2.717")
- BA: 2 short and compact rough boring heads, for Ø 66–116 mm (Ø 2.598–4.567")
- Particularly adapted to the Steadyline® turning and boring bars. Boring performances, when used on long Steadyline® bars, are similar to non-damped shorter assemblies (<6xD).

RB 610 Rough boring heads – Guide

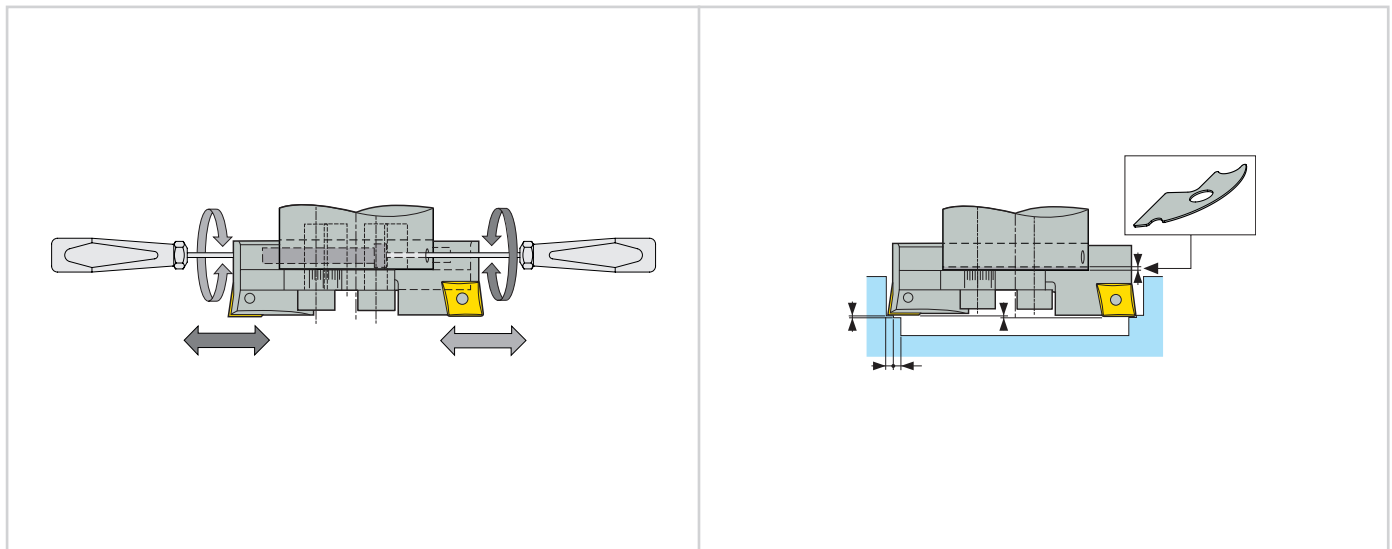
Setting symmetrical boring:

Symmetrical boring means both cutting edges are set on the same diameter and same height.

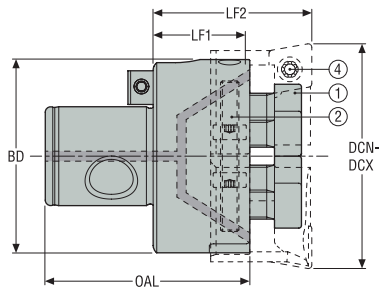
Setting staggered boring:

Staggered boring means one cutting edge is offset as a leading cutting edge (entering the bore first), operating on a smaller diameter than the second edge set on the diameter to be realised: It requires a shim (part of the head delivery content) to be fitted between the boring head's body and one insert holder to achieve the (+) axial offset, see table below.

Shim Part No.	Thickness (mm)	Thickness (inch)
AU6101003	0,2	0.008
AU6103003	0,4	0.016
AU6104003	0,5	0.020
AU6105003	0,6	0.024
AU6106003	0,6	0.024



RB610
Graflex®



- 1. Assembly screw and clamp key
- 2 & 4. Insert key for diameter setting and insert screw clamping

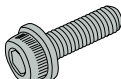


- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

Designation	Item number	Machine side Graflex size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Max. RPM*
			DCN	DCX Ø						
			mm	mm	mm	mm	mm	mm	kg	
			Inch	Inch	Inch	Inch	Inch	Inch	lbs	
A61030	02904453	G3	39,0 1.535	51,0 2.008	43,5 1.713	23,5 0.925	36,4 1.433	34,0 1.339	0,18 0.400	7500
A61040	02904454	G4	50,0 1.969	65,0 2.559	45,5 1.791	21,5 0.846	35,3 1.390	43,0 1.693	0,27 0.600	5700
A61050	02904455	G5	64,0 2.520	86,0 3.386	55,0 2.165	25,0 0.984	42,3 1.665	54,0 2.126	0,54 1.190	4500
A61060	02904457	G6	85,0 3.346	115,0 4.528	69,0 2.717	29,0 1.142	47,8 1.882	63,0 2.480	0,93 2.050	3500

Insert holders have to be ordered separately, see page(s) 582

* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

Spare Parts, included in delivery

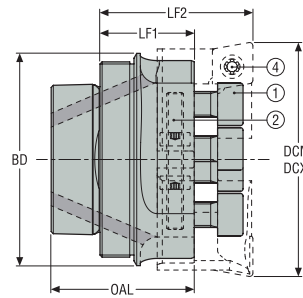
For head	Assembly screw	Shim, staggered boring	Tenon
			
A61030	950DC0616	AU6103003	90M31
A61040	950D0616	AU6104003	90M41
A61050	950D0820	AU6105003	90M51
A61060	950D0822	AU6106003	90M61

Accessories

For head	Clamp key	Key (T-handle)
		
A61030	03HL05	DOUBLE-T
A61040	03HL05	DOUBLE-T
A61050	03HL06	DOUBLE-T
A61060	03HL06	DOUBLE-T

RB610 Compact

GL



- Designed for GL25, GL32, GL40 and GL50 Steadyline® turning and boring bars
- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

1. Assembly screw and clamp key
- 2 & 4. Insert key for diameter setting and insert screw clamping

Designation	Item number	Machine side GL size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Max. RPM*
			DCN-DCX Ø							
			mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	kg <i>lbs</i>	
GL25-RB610-10	03307854	GL25	28,0 1.102	37,0 1.457	21,7 0.854	16,2 0.638	25,0 0.984	25,0 0.984	0,1 0.220	9500
GL32-0610-20	02904458	GL32	36,0 1.417	46,0 1.811	27,6 1.087	21,1 0.831	32,0 1.260	32,0 1.260	0,1 0.220	7500
GL40-0610-30	02904459	GL40	45,0 1.772	56,0 2.205	31,6 1.244	22,1 0.870	35,0 1.378	40,0 1.575	0,2 0.440	5700
GL50-0610-40	02904460	GL50	55,0 2.165	69,0 2.717	33,7 1.327	22,2 0.874	36,0 1.417	50,0 1.969	0,3 0.660	4500

Insert holders have to be ordered separately, see page(s) 582

* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

Spare Parts, included in delivery

For head	Assembly screw	Shim, staggered boring
GL25-0610-10	950D0410	AU6101003
GL32-0610-20	950DC0412	AU6102003
GL40-0610-30	950DC0616	AU6103003
GL50-0610-40	950D0616	AU6104003

Accessories

For head	Clamp key	Insert key	Key (T-handle)
GL25-0610-10	03HL03	T07P-3	-
GL32-0610-20	03HL03	H4B-T07P	DOUBLE-T
GL40-0610-30	03HL05	-	DOUBLE-T
GL50-0610-40	03HL05	-	DOUBLE-T

Introduction

Drilling

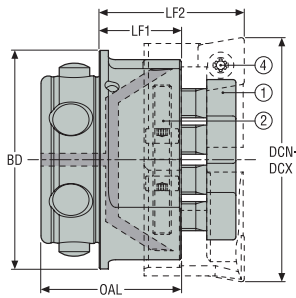
Reaming

Boring

Annex

RB610

BA



- 1. Assembly screw and clamp key
- 2 & 4. Insert key for diameter setting and insert screw clamping

- Designed for BA60 and BA80 Steadyline® turning and boring bars
- Symmetrical and staggered boring modes are possible
- Individual insert holder adjusting mechanism
- Internal coolant supply towards cutting edge

Designation	Item number	Machine side BA size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Max. RPM*
			DCN-DCX Ø	mm Inch						
BA060-RB610-50	03204092	BA060	66,0 2.598	88,0 3.465	38,5 1.516	22,5 0.886	39,8 1.567	60,0 2.362	0,8 1.760	4000
BA080-RB610-60	03204093	BA080	86,0 3.386	116,0 4.567	44,5 1.752	22,5 0.886	41,3 1.626	80,0 3.150	1,1 2.430	3000

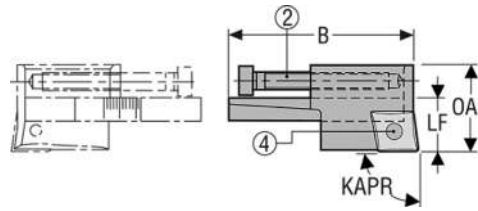
Insert holders have to be ordered separately, see page(s) 582

* Additional information about max RPM, see Instruction pages. Note, weight is without insert holder

Spare Parts, included in delivery

For head	Clamp key	Clamp screw	Key (T-handle)	Shim, staggered boring
BA060-RB610-50	03HL06	950D0820	DOUBLE-T	AU6105003
BA080-RB610-60	03HL06	950D0822	DOUBLE-T	AU6106003

Insert holders



- Suitable for boring heads RB 610 with Graflex®, GL or BA connection

- 2. Setting screw
- 4. Insert screw

Designation	Item number	For boring head	Workpiece side Capacity DCN-DCX Ø		OAL	LF	B	Weight
			mm Inch	mm Inch				
A61010CC0690	03307856	RB 61010	28,0 1.102	37,0 1.457	15,1 0.594	15,1 0.594	21,75 0.856	0,1 0.220
A61020CC0690	02971268	RB 61020	36,0 1.417	46,0 1.811	17,6 0.693	10,9 0.429	26,0 1.024	0,1 0.220
A61030CC0990	02904461	RB 61030	39,0 1.535	56,0 2.205	17,6 0.693	12,9 0.508	33,0 1.299	0,1 0.220
A61040CC0990	02904462	RB 61040	50,0 1.969	69,0 2.717	22,5 0.886	13,8 0.543	43,8 1.724	0,1 0.220
A61050CC1290	02904463	RB 61050	64,0 2.520	86,0 3.386	22,5 0.886	17,3 0.681	57,4 2.260	0,2 0.440
A61060CC1290	02904464	RB 61060	85,0 3.346	115,0 4.528	27,5 1.083	18,8 0.740	75,0 2.953	0,3 0.660

Spare Parts, included in delivery

For insert holder	Insert screw	Setting screw
A61010CC0690	C02504-T07P	—
A61020CC0690	C02504-T07P	19A61020
A61030CC0990	C04008-T15P	19A61030
A61040CC0990	C04008-T15P	19A61040
A61050CC1290	C05012-T15P	19A61050
A61060CC1290	C05012-T15P	19A61060

For rough boring recommended inserts, see page(s) 654

Note: A key for insert screw clamping is part of RB 610 heads delivery contents.

RB 610 Rough boring heads – Instructions

Recommended tightening torques. Maximum feed per rev. when staggered.

RB 610 boring heads size	30	40	50	60
Tightening torque of clamp screws for insert holders clamping (Nm)	2 x 25	4 x 25	4 x 40	4 x 40
f Max. feed rate when staggered boring mm/rev (<i>in/rev</i>)	0,4 (0.016 ")	0,5 (0.020 ")	0,6 (0.024 ")	0,6 (0.024 ")

Recommended machining conditions

Spindle power:

As rough boring requires high machine power, we recommend to check that the machine is suitable. Staggered boring is a solution to reduce the power needs, as the feed is divided by two for the same total depth of cut, compared to symmetrical setting. Optimum performance is obtained with through coolant (higher machining data, better surface finish, better chip evacuation, longer insert life).

For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Maximum speeds for RB 610 rough boring heads

NOTE! The maximum speeds shown in boring heads Product pages are related to the boring head's mechanical design and balancing quality.

Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.

By boring applications with Steadyline® bars, make sure not to overpass the max. RPM of the bars : See the Operating instructions supplied with the Steadyline® turning and boring bars.



Fine boring

Covering a wide range of hole sizes and materials, Seco's fine boring product families allow for precision adjustments within microns, achieve surface finishes of $Ra < 1$ (RMS 44 micro/inch) and deliver bores within IT6 tolerances. With a consistent focus on precision and rigidity, these products make it easy to maintain even the strictest of part specifications. Steadyline™ vibration damping solutions complete the range to deliver even greater levels of stability for the machining of deep cavities, where long tool overhangs are needed.

- FB 760 Axiabore type fine boring heads are designed for precision and surface finish on small diameters
- FB 620/780/790 radial fine boring heads are designed to deliver the best bore geometries on larger diameters (up to 205 mm)

Overview



OD-overturning



Grooving



Interrupted cut boring



Boring

Overview

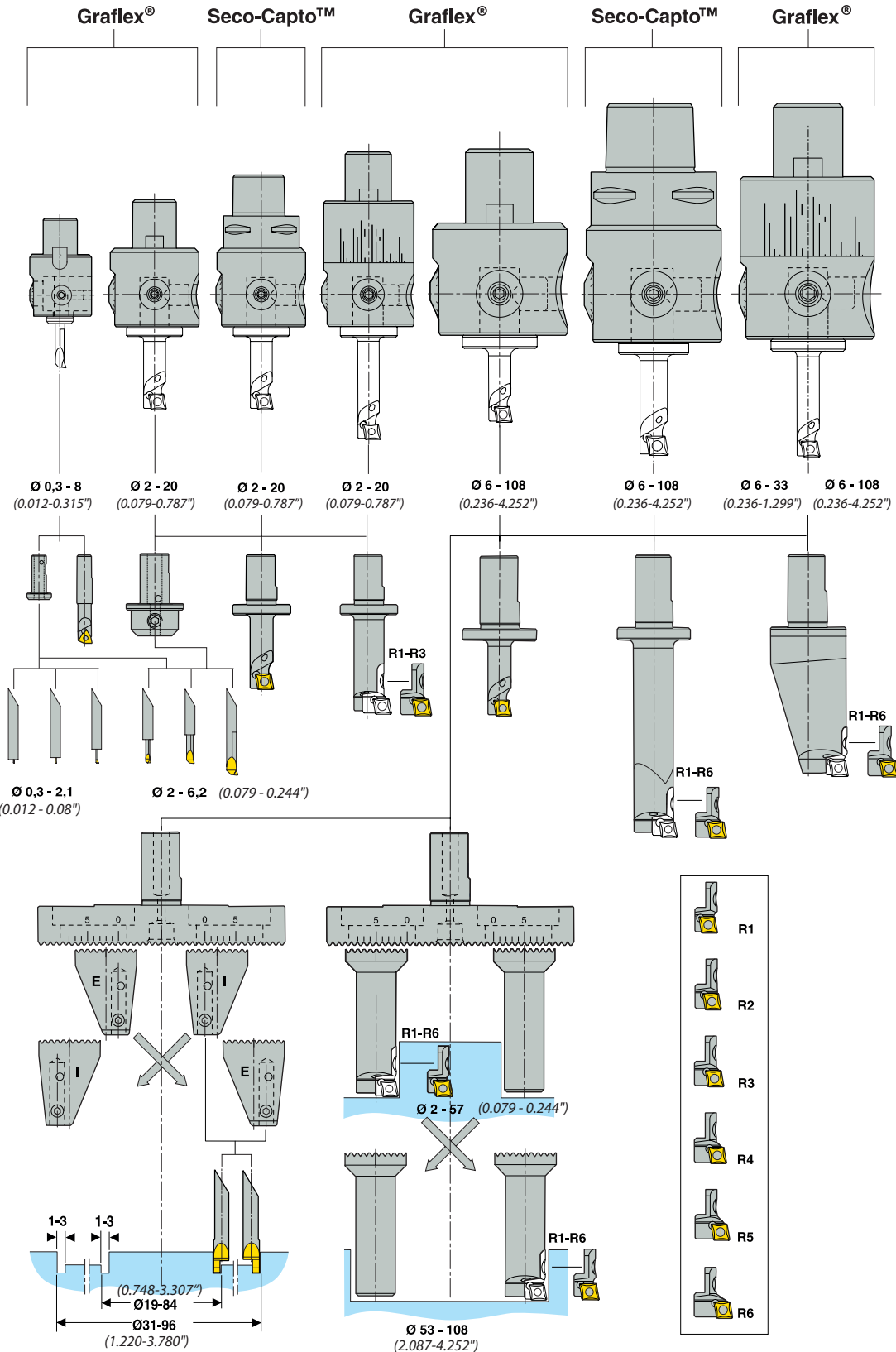
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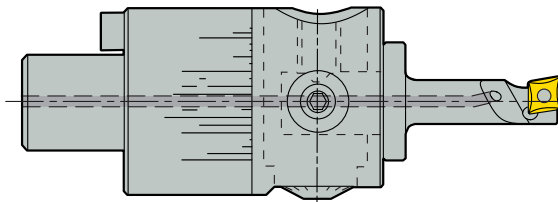


Axiabore™ type fine boring heads for bores Ø 0,3-108 mm (0.012-4.252")

An Axiabore™ type head is an assembly of a body (head) and a tool.

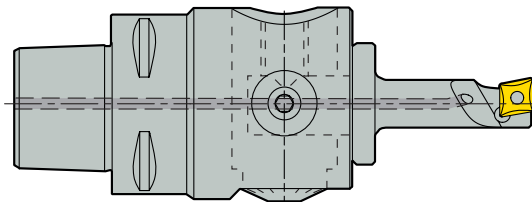
Axiabore™ type head selection	Capacity Ø mm	Capacity Ø inch	HSM/ Max speeds	Hole geometry	Cost effective	Multipurpose
Nanobore™ A760 01	0,3-8	0.012–0.315"	30000 RPM	■ ■	■ ■	
Axiabore™ A760 02	2-20	0.079–0.787"	12000 RPM	■	■ ■	
Axiabore™ Plus - A760 03	6-108	0.236–4.252"	8000* RPM or 1000 m/min	■	■ ■ ■	■ ■ ■
Axiabore™ Plus C5-391.0760-03	6-108	0.236–4.252"	8000* RPM	■	■ ■ ■	■ ■ ■
Axialibrabore™ Plus - A760 13	6-33	0.236–1.299"	20000 RPM or 1500 m/min	■ ■	■	

Axiabore™ type heads exists with Graflex® or Seco-Capto™ connection: 5 Axiabore™ fine boring heads FB 760 with Graflex® connection for bores Ø 0,3–108 mm (0.012–4.252")



Nanobore™ A760 01
Axiabore™ A760 02
Axialibrabore™ A760 12
Axiabore™ Plus - A760 03
Axialibrabore™ Plus - A760 13

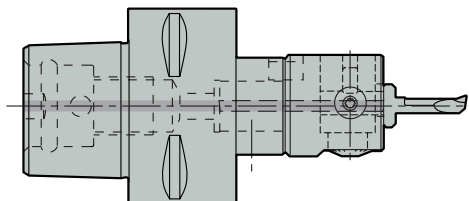
2 Axiabore™ fine boring heads FB 760 with Seco-Capto™ connection for bores: Ø 2–108 mm (0.079–4.252")



Axiabore™ C3-391.0760-02
Axiabore™ Plus- C5-391.0760-03

NOTE! The minimum bore size of the smallest Seco-Capto™ fine boring head is Ø 2 mm (0.079") with the smallest available Seco-Capto™ C3 connection. For Ø 0,3-8 mm (0.012-0.315") use Nanobore™ head with connection size G2 in conjunction with the appropriate Seco-Capto™/Graflex® adapter.

Seco-Capto™ adapter and Graflex® head: Ø 0,3–8 mm (0.012–0.315")



Graflex® and Seco-Capto™ adapters and modular extensions: please see the Tooling Systems catalog.

NOTE! Features, instructions (tool fitting procedure, diameter setting, MPA assembly procedure, maximum speeds, recommended cutting speeds, troubleshooting), suitable tools and insert holders are similar for both types of 760 fine boring heads of similar boring capacity size, regardless of connection type.

Boring tools

Note! In the Product pages, it is clearly mentioned which tools are suitable for which heads.

Boring tools, solid carbide shank Ø 4 mm ($\varnothing 0.1574$ ") for the smallest diameters Ø 0,3–6,2 mm ($\varnothing 0.012$ – 0.244 "), lead angle 98°. Require reduction bushes to fit into Nanobore™ and Axia(libra)bore™ heads. The tools have an angled machine side for cutting edge orientation according to ISO.

Boring bars, insert type shanks Ø 6, 12 or 16 mm ($\varnothing 0.236$, 0.472 , 0.630 ") for Ø 6–13 mm ($\varnothing 0.236$ – 0.512 "), 'steel' type for short tools, 'carbide' type for long tools. For WB..0301.. or CC..0602.. inserts and 90° lead angle. Direct fitting into the heads. The locking flat achieves a cutting edge orientation according to ISO.

Boring bars, modular composed of a 'shank' and an 'insert holder' for Ø 13–63 mm ($\varnothing 0.512$ – 2.480 "). Shanks Ø 12 or 16 mm ($\varnothing 0.472$, 0.630 ") in 'steel' for short, 'carbide' for long and 'Lightweight / aluminium' for the largest diameters. Direct fitting into the heads.

Six insert holders for CC..0602.. inserts and 90° lead angle, compatible with all shanks to build up a wide boring capacity on a common shank.

Multi-purpose adapter (MPA)

MPA for boring and OD-overturning, as well as face grooving on the - Axiabore™ Plus - head. The MPA and tools have a serrated interface, for precise orientation and positioning increments 2,5 mm on diameter (0.098 "). Directional through coolant nozzle included.

Select the components to build up an MPA type tool on the MPA tool selection charts. See assembly details in the Instructions chapter.

Set up a Boring or OD-overturning assembly.

Boring and OD-overturning assemblies use the same shank equipped with an insert holder, and a counterweight. Boring assembly: Select the appropriate insert holder to be assembled onto the boring/OD-overturning shank, using the selection chart 'Boring with MPA' (part of following Product pages).

OD-overturning assembly: Select the appropriate insert holder to be assembled onto the boring/OD-overturning shank, using the selection chart 'OD-overturning with MPA' (part of following Product pages). See assembly details in the Instructions chapter.

Building a grooving assembly

A grooving assembly requires:

- A pair of grooving tool holders (one E='External' and one I='Internal')
- One grooving tool 'against Spigot' or 'against Bore'. When the groove is not against a spigot wall nor against a bore wall, both tool types are suitable. See the selection charts 'Grooving tool for grooving with MPA'

Features

Nanobore™ head, Part No. A76001



Ultra small head for fine boring Ø 0,3–8 mm (Ø 0.012–0.315"): External diameter 25 mm (0.984"), length 25 mm (0.984"), with Graflex® connection size G2, tool fitting Ø 6 mm (Ø 0.236"). Operating speeds up to 30 000 RPM allows performance machining of very small diameters.

The reduction bush 6–4 mm (0.236–0.157") with orientation flat and pin for fitting the solid boring tools is part of the head delivery content.

Axiabore™ head, Part No. A76002



Small heads for fine boring Ø 2–20 mm (Ø 0.079–0.787"): External diameter 36,5 mm (1.401"), length 32 mm (1.260"), with Graflex® connection size G3 and Seco-Capto™ connection size C3, tool fitting Ø 12 mm (Ø 0.472"). These heads sizes are optimised for difficult-to-access bores.

The reduction bush 12-4 mm (0.472–0.157") with orientation flat and pin for fitting the solid boring tools is part of the head delivery content.

NOTE! Smaller tools from Nanobore™ 0,3–2,1 mm (0.012–0.083") can also be fitted, but the machining speed will be limited to 12000 RPM: Nanobore® head should be preferred.

Axiabore™ Plus - head, Part No. A76003 and C5-391.0760-03



Multi-purpose heads for fine boring Ø 6–108 mm (Ø 0.236–4.252"), OD-overturning Ø 2–57 mm (Ø 0.079–2.244") and grooving Ø 19–96 mm (Ø 0.748–3.780"): External diameter 54 mm (Ø 2.126"), length 45 mm (Ø 1.772"), with Graflex® connection size 5 and Seco-Capto™ connection size 5, tool fitting Ø 16 mm (Ø 0.630"). Suitable tools: all tools with shank Ø 16 mm (Ø 0.630"), for direct fitting into the heads.

This head has also been designed to be equipped with the MPA (multi-purpose adapter), to perform large diameter fine boring, OD-overturning and face grooving.

Axialibrabore™ Plus - head, Part No. A76013



Balanceable head for fine boring Ø 6–33 mm (Ø 0.236–1.299"): Same features as the - Axiabore™ Plus - head, but with fine balancing body length 65 mm (2.559"). With Graflex® connection size G5.

Fine balanceable heads allow higher speeds up to 20 000 RPM or 1500 m/min (whichever is reached first without exceeding either of them), improve the hole geometry and reduce the machine spindle stress.

'LibraOne' balancing is performed by setting the graduated balancing ring in line with the mark on the boring head (balancing code of the tool used, and the diameter to be bored). No chart needed.

Fine balancing is only possible for the smallest boring tools Ø 6–33 mm (Ø 0.236–1.299").

NOTE! If using a larger 'Alu', or a 'MPA' tool from the - Axiabore™ Plus - onto the - Axialibrabore™ Plus - head, fine balancing is not possible and the balancing ring should be set in the head's pre-balancing position (depending on the operation to be performed, see Instructions chapter).

The maximum speed becomes the same as for the - Axiabore™ Plus.

Introduction

Drilling

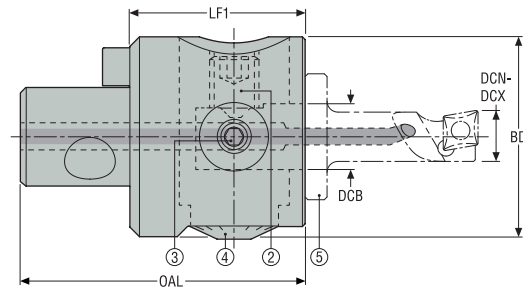
Reaming

Boring

Annex

FB 760 – Axiabore™ type heads, not balanceable

Graflex®



- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Axiabore™ Plus – allows boring, as well as OD-overturning and face grooving

3. Locking screw
4. Micrometric adjusting screw
2. Assembly screw
5. Tool

Designation	Item number	Machine side Graflex size	Workpiece side Capacity		*	OAL	LF1	BD	DCB	Weight	Max operating speed**		***
			DCN-DCX Ø	mm							mm	Max. RPM**	
			mm Inch	mm Inch		mm Inch	mm Inch	mm Inch	mm Inch	kg lbs			
A76001	02462575	G2	0,3 0.012	8,0 0.315	–	41,0 1.614	25,0 0.984	25,0 0.984	6,0 0.236	0,1 0.220	30000	1500,0	–
A76002	02594930	G3	2,0 0.079	20,0 0.787	–	52,0 2.047	32,0 1.260	36,5 1.437	12,0 0.472	0,29 0.640	12000	1500,0	–
A76003	02594935	G5	6,0 0.236	108,0 4.252	*	75,0 2.953	45,0 1.772	54,0 2.126	16,0 0.630	0,82 1.810	8000	1000,0	***

Note, weight is without insert holder

For tools, see page(s) 593-595

*Capacities - Axiabore™ Plus - head for boring 6-108 mm (0.236-4.252") , OD-overturning 2-57 mm (0.079-2.244") , face grooving 19-96 mm (0.748-3.780").

**Maximum speed, whichever is reached first without exceeding either of them.

***Max 5000 RPM when using MPA.

Spare Parts, included in delivery

For head	Assembly screw	Key	Key (T-handle)	Locking screw	Reduction bush	Sealing Screws	Tenon
A76001	–	H4B-H2.0	DOUBLE-T	19M4001A	05A7600604	950A0406	90M21
A76002	AU7601212	03M03C	–	19A71030	05A7601204	–	90M3A
A76003	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	–	–	90M5A

Accessories

For head	Magnifying glass	Storage case	Torque key for balancing ring locking screws	Torque key for locking and assembly screws
A76001	935L01	–	–	H00-2009
A76002	–	42M06	–	H00-3030
A76003	–	42M07	H00T-4060	–

Accessories, to be ordered separately

Introduction

Drilling

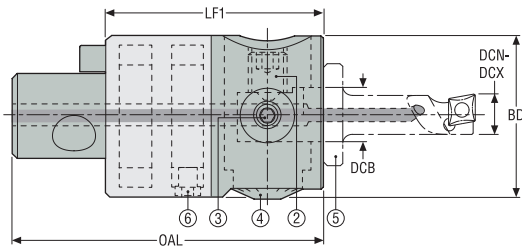
Reaming

Boring

Annex

FB 760 – Axiabore™ type heads, balanceable

Graflex®



- 6. Locking screw 2
- 3. Locking screw 1
- 4. Micrometric adjusting screw
- 2. Assembly screw
- 5. Tool



- LibraOne built-in balancing system based on a single balancing setting ring
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

Designation	Item number	Machine side Graflex size	Workpiece side Capacity		*	OAL	LF1	BD	DCB	Weight	Max operating speed**	
			DCN-DCX Ø	mm Inch							mm Inch	Max. RPM**
A76013	02594943	G5	6,0 0.236	33,0 1.299	*	95,0 3.740	65,0 2.559	54,0 2.126	16,0 0.630	1,16 2.560	20000	1500

Note, weight is without insert holder

For tools, see page(s) 593-595

*Capacities – Axiabore™ Plus - head, with balancing.

**Maximum speed, whichever is reached first without exceeding either of them.

Spare Parts, included in delivery

For head	Assembly screw	Key	Key (T-handle)	Locking screw 1	Locking screw 2	Tenon
A76013	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	AU7601318	90M5A1

Accessories

For head	Storage case	Torque key for balancing ring locking screws	Torque key for locking and assembly screws
A76013	42M07	H00-4020-60	H00T-4060

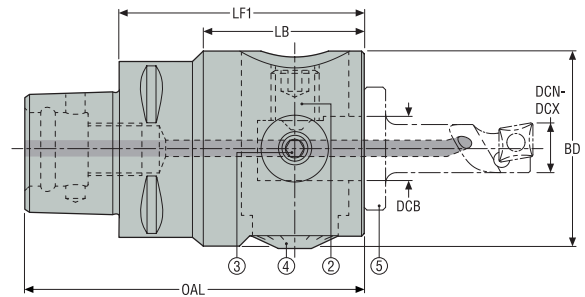
Accessories, to be ordered separately

FB 760 – Axiabore™ type heads

Seco-Capto™



- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Axiabore™ Plus – allows boring, as well as OD-overturning and face grooving



1. Clamp
2. Assembly screw
3. Micrometric adjusting screw
4. Tool
5. Tool

Designation	Item number	Machine side Capto size	Workpiece side Capacity		*	OAL	LF1	LB	BD	DCB	Weight	Max operating speed**	
			DCN-DCX Ø	DCN-DCX Ø								Max. RPM**	Max. m/min**
			mm Inch	mm Inch		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs		
C5-391.0760-03	02822777	C5	6,0 0.236	108,0 4.252	*	95,0 3.740	65,0 2.559	44,0 1.732	54,0 2.126	16,0 0.630	1,12 2.470	8000	1500,0

Note, weight is without insert holder
For tools, see page(s) 593-595

*Max 5000 RPM when using MPA.

**Capacities - Axiabore™ Plus - head for boring 6-108 mm (0.236-4.252"), OD-overturning 2-57 mm (0.079-2.244"), face grooving 19-96 mm (0.748-3.780").

Spare Parts, included in delivery

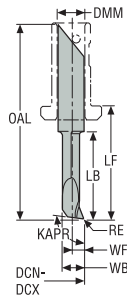
Accessories

For head	Assembly screw	Key	Key (T-handle)	Locking screw	Torque key for locking and assembly screws
C5-...-03	AU7601312	H6B-H4.0L	DOUBLE-T	19A71008125	H00-3030

Accessories, to be ordered separately

Boring tools, solid carbide

for FB 760 heads



- KAPR 98°
- Cutting edge orientation ISO
- Coolant along the tool
- Tool material: Solid carbide*

Designation	Item number	For head	Capacity DCN-DCX		OAL	LB	LF	DMM	WB	WF	RE	Recom- mended cutting data** a _p	Recom- mended cutting data** f	Weight	Bal- ancing code
			∅ mm***	mm											
A761402	02462579	FB 76001	0,3 0.012	0,6 0.024	30,7 1.209	1,2 0.047	15,5 0.610	4,0 0.157	0,25 0.010	0,1 0.004	0,0 0.0	0,02 0.001	0,01 0	0,01 0.020	-
A761412	02462581	FB 76001	0,5 0.020	1,1 0.043	30,7 1.209	2,0 0.079	15,5 0.610	4,0 0.157	0,45 0.018	0,2 0.008	0,0 0.0	0,02 0.001	0,01 0	0,01 0.020	-
A761422	02462583	FB 76001	1,0 0.039	2,1 0.083	30,7 1.209	5,0 0.197	15,5 0.610	4,0 0.157	0,95 0.037	0,45 0.018	0,1 0.004	0,03 0.001	0,02 0.001	0,01 0.020	-
A761432	02462584	FB 76001/02/12	2,0 0.079	3,2 0.126	30,7 1.209	8,0 0.315	15,5 0.610	4,0 0.157	1,8 0.071	0,88 0.035	0,1 0.004	0,05 0.002	0,02 0.001	0,1 0.220	E13
A761442	02462586	FB 76001/02/12	3,0 0.118	4,7 0.185	30,7 1.209	10,0 0.394	15,5 0.610	4,0 0.157	2,75 0.108	1,35 0.053	0,15 0.006	0,06 0.002	0,03 0.001	0,01 0.020	E14
A761452	02462587	FB 76001/02/12	4,5 0.177	6,2 0.244	35,7 1.406	15,0 0.591	20,5 0.807	4,0 0.157	3,95 0.156	1,95 0.077	0,15 0.006	0,08 0.003	0,03 0.001	0,1 0.220	E15

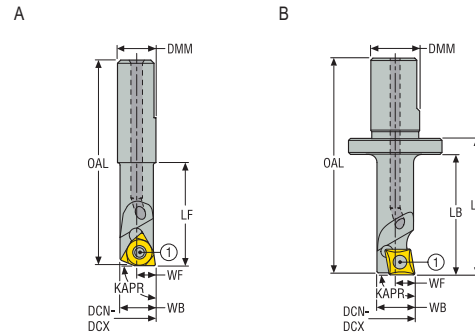
*These tools with shank dia 4 mm require the use of a reduction bush, delivered with the suitable heads and kits.

** For cutting speeds, see page(s) 658-661

***+0,1 mm complementary capacity achievable.

Boring bars, insert type

for FB 760 heads



1 = Insert screw

- Cutting edge orientation ISO
- Through coolant
- Only two insert sizes for all tools
- Tool material * = Steel, indexable insert type
- Tool material ** = Carbide, indexable insert type
- KAPR 90°

Designation	Item number	Tool material	For head	** Capacity DCN-DCX		OAL	LB	LF	DMM	WB	WF	Weight	Design	Suitable insert size	Balancing code
				∅											
				mm	mm	mm	mm	mm	mm	mm	mm	kg			
				Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	lbs			
A762001	02462590	*	FB 76001	6,0 0.236	8,0 0.315	31,7 1.248	0,0 -	16,0 0.630	6,0 0.236	5,5 0.217	2,9 0.114	0,1 0.220	A	WB...0301..	-
A762002	02594947	*	FB 76002/12	6,0 0.236	8,0 0.315	39,7 1.563	16,0 0.630	20,0 0.787	12,0 0.472	5,5 0.217	2,9 0.114	0,03 0.070	B	WB...0301..	S21
A762003	02594967	*	FB 76003/13	6,0 0.236	8,0 0.315	50,2 1.976	16,0 0.630	21,0 0.827	16,0 0.630	5,5 0.217	2,9 0.114	0,07 0.150	B	WB...0301..	S31
A763002	02594948	*	FB 76002/12	8,0 0.315	10,0 0.394	45,7 1.799	22,0 0.866	26,0 1.024	12,0 0.472	7,4 0.291	3,9 0.154	0,04 0.090	B	WB...0301..	S22
A763003	02594968	*	FB 76003/13	8,0 0.315	10,0 0.394	56,2 2.213	22,0 0.866	27,0 1.063	16,0 0.630	7,4 0.291	3,9 0.154	0,1 0.220	B	WB...0301..	S32
A765002	02594957	*	FB 76002/12	10,0 0.394	13,0 0.512	53,5 2.106	30,0 1.181	34,0 1.339	12,0 0.472	9,35 0.368	4,8 0.189	0,04 0.090	B	CC...0602..	S23
A765003	02594969	*	FB 76003/13	10,0 0.394	13,0 0.512	64,0 2.520	30,0 1.181	35,0 1.378	16,0 0.630	9,35 0.368	4,8 0.189	0,08 0.180	B	CC...0602..	S33
A762201	02462591	**	FB 76001	6,0 0.236	8,0 0.315	41,7 1.642	0,0 -	26,0 1.024	6,0 0.236	5,5 0.217	2,9 0.114	0,02 0.040	A	WB...0301..	-
A762202	02594958	**	FB 76002/12	6,0 0.236	8,0 0.315	50,7 1.996	27,0 1.063	31,0 1.220	12,0 0.472	5,5 0.217	2,9 0.114	0,06 0.130	B	WB...0301..	E21
A762203	02594970	**	FB 76003/13	6,0 0.236	8,0 0.315	61,2 2.409	27,0 1.063	32,0 1.260	16,0 0.630	5,5 0.217	2,9 0.114	0,13 0.290	B	WB...0301..	E31
A763202	02594961	**	FB 76002/12	8,0 0.315	10,0 0.394	60,7 2.390	37,0 1.457	41,0 1.614	12,0 0.472	7,4 0.291	3,9 0.154	0,07 0.150	B	WB...0301..	E22
A763203	02594971	**	FB 76003/13	8,0 0.315	10,0 0.394	71,2 2.803	37,0 1.457	42,0 1.654	16,0 0.630	7,4 0.291	3,9 0.154	0,14 0.310	B	WB...0301..	E32
A765202	02594962	**	FB 76002/12	10,0 0.394	13,0 0.512	78,5 3.091	55,0 2.165	59,0 2.323	12,0 0.472	9,35 0.368	4,8 0.189	0,09 0.200	B	CC...0602..	E23
A765203	02594972	**	FB 76003/13	10,0 0.394	13,0 0.512	89,0 3.504	55,0 2.165	60,0 2.362	16,0 0.630	9,35 0.368	4,8 0.189	0,2 0.440	B	CC...0602..	E33

Spare Parts, included in delivery

For insert size	Insert screw
WB...0301..	C02035-T06P
CC...0602..	C02504-T07P

Accessories

Insert key	Key (T-handle)
H4B-T06P	DOUBLE-T
H4B-T07P	DOUBLE-T

**+0,2 mm complementary capacity achievable.

Accessories, to be ordered separately

Introduction

Drilling

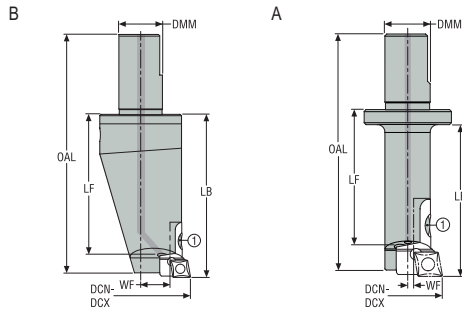
Reaming

Boring

Annex

Boring shanks, for modular fine boring bars

for FB 760 heads



1 = Locking screw



- Several capacities achievable by interchangeable insert holders
- Shank types 'steel' for short bars, 'carbide' for long bars, 'aluminium' for large bars
- Through coolant

Designation	Item number	Modular boring shank type	For head	** Capacity DCN-DCX Ø		OAL	LB	LF	DMM	WF	Weight	Design	***
				mm	mm								
A760S20	02594963	Steel	FB 76002/12	13,0 0.512	20,0 0.787	62,5 2.461	40,0 1.575	34,0 1.339	12,0 0.472	1,4 0.055	0,1 0.220	A	
A760S30	02594973	Steel	FB 76003/13	13,0 0.512	18,0 0.709	73,0 2.874	40,0 1.575	35,0 1.378	16,0 0.630	1,4 0.055	0,1 0.220	A	
A760S31	02594974	Steel	FB 76003/13	18,0 0.709	33,0 1.299	83,0 3.268	50,0 1.969	45,0 1.772	16,0 0.630	3,9 0.154	0,13 0.290	A	
A760E20	02594964	Carbide	FB 76002/12	13,0 0.512	20,0 0.787	82,5 3.248	60,0 2.362	54,0 2.126	12,0 0.472	1,4 0.055	0,2 0.440	A	
A760E30	02594965	Carbide	FB 76003/13	13,0 0.512	18,0 0.709	103,0 4.055	70,0 2.756	65,0 2.559	16,0 0.630	1,4 0.055	0,21 0.460	A	
A760E31	02594966	Carbide	FB 76003/13	18,0 0.709	33,0 1.299	113,0 4.449	80,0 3.150	75,0 2.953	16,0 0.630	3,9 0.154	0,3 0.660	A	
A760A32	02594977	Aluminium	FB 76003/13	33,0 1.299	48,0 1.890	88,0 3.465	60,0 2.362	50,0 1.969	16,0 0.630	11,5 0.453	0,14 0.310	B	***
A760A33	02594978	Aluminium	FB 76003/13	48,0 1.890	63,0 2.480	108,0 4.252	80,0 3.150	70,0 2.756	16,0 0.630	19,0 0.748	0,34 0.750	B	***

Spare Parts, included in delivery

For head	Locking screw
A76002/12	C04008-T15P
A76003/13	C04008-T15P
A76003	C04008-T15P

Accessories

Key (T-handle)
DOUBLE-T
DOUBLE-T
DOUBLE-T

**+0,2 mm complementary capacity achievable.

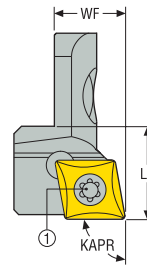
*** When used on A760 13, no fine balancing possible. Select the required shank and insert holder(s) combination(s) using the selection chart on page(s) 597.

Note, weight is without insert holder.

Accessories, to be ordered separately

Insert holders, for modular fine boring bars

for FB 760 heads



1 = Insert screw

- Single fitting size suitable for all boring (and OD-overturning) shanks
- One insert size for all insert holders

Designation	Item number	LF		WF*		Suitable insert size	KRINS°
		mm	Inch	mm	Inch		
A765R1	02594979	10,0	0.394	4,95	0.195	CC..0602..	90
A765R2	02594983	10,0	0.394	6,2	0.244	CC..0602..	90
A765R3	02594984	10,0	0.394	7,45	0.293	CC..0602..	90
A765R4	02594987	10,0	0.394	8,7	0.343	CC..0602..	90
A765R5	02594989	10,0	0.394	9,97	0.393	CC..0602..	90
A765R6	02594990	10,0	0.394	11,2	0.441	CC..0602..	90

Spare Parts, included in delivery

For insert size	Insert screw
CC..0602...	C02504-T07P



Accessories

Insert key	Key (T-handle)
H4B-T07P	DOUBLE-T



*WF when fitted with insert type CC..060204.

Select the required shank and insert holder(s) combination(s) using the selection chart on page(s) 597.

Accessories, to be ordered separately

Selection chart: Boring tools and insert holders suitable for FB 760 heads

For head	Boring capacity DCN-DCX		Boring length		Designation		DMM		Suitable insert size	Tool type	
	∅ mm	inch	LB mm	inch	Boring tool	Insert holder	mm	inch			
A760 01	0,3-0,6	0.012-0.024	1,2	0.047	A761402	–	4	0.157	–	Solid carbide	
	0,5-1,1	0.020-0.043	2	0.078	A761412	–	4	0.157	–	Solid carbide	
	1-2,1	0.039-0.083	–	–	A761422	–	4	0.157	–	Solid carbide	
	2-3,2	0.079-0.126	8	0.315	A761432	–	4	0.157	–	Solid carbide	
	3-4,7	0.118-0.185	10	0.394	A761442	–	4	0.157	–	Solid carbide	
	4,5-6,2	0.177-0.244	15	0.591	A761452	–	4	0.157	–	Solid carbide	
	6-8	0.236-0.315	16	0.630	A762001	–	6	0.236	WB..0301..	Steel, inserts type	
	6-8	0.236-0.315	26	1.024	A762201	–	6	0.236	WB..0301..	Carbide, inserts type	
A760 02/ A760 12	2-3,2	0.079-0.126	8	0.315	A761432	–	4	0.157	–	Solid carbide	
	3-4,7	0.118-0.185	10	0.394	A761442	–	4	0.157	–	Solid carbide	
	4,5-6,2	0.177-0.244	15	0.591	A761452	–	4	0.157	–	Solid carbide	
	6-8	0.236-0.315	16	0.630	A762002	–	12	0.472	WB..0301..	Steel, inserts type	
	6-8	0.236-0.315	27	1.063	A762202	–	12	0.472	WB..0301..	Carbide, inserts type	
	8-10	0.315-0.394	22	0.866	A763002	–	12	0.472	WB..0301..	Steel, inserts type	
	8-10	0.315-0.394	37	1.457	A763202	–	12	0.472	WB..0301..	Carbide, inserts type	
	10-13	0.394-0.512	30	1.181	A765002	–	12	0.472	CC..0602..	Steel, inserts type	
	10-13	0.394-0.512	55	2.165	A765202	–	12	0.472	CC..0602..	Carbide, inserts type	
	13-15,5	0.512-0.610	40	1.575	A760S20	A765R1	12	0.472	CC..0602..	Steel shank with insert holder	
	13-15,5	0.512-0.610	60	2.362	A760E20	A765R1	12	0.472	CC..0602..	Carbide shank with insert holder	
	15,5-18	0.610-0.709	40	1.575	A760S20	A765R2	12	0.472	CC..0602..	Steel shank with insert holder	
	15,5-18	0.610-0.709	60	2.362	A760E20	A765R2	12	0.472	CC..0602..	Carbide shank with insert holder	
	18-20	0.709-0.787	40	1.575	A760S20	A765R3	12	0.472	CC..0602..	Steel shank with insert holder	
	18-20	0.709-0.787	60	2.362	A760E20	A765R3	12	0.472	CC..0602..	Carbide shank with insert holder	
	A760 03/ A760 13	6-8	0.236-0.315	16	0.630	A762003	–	16	0.630	WB..0301..	Steel, inserts type
		6-8	0.236-0.315	32	1.260	A762203	–	16	0.630	WB..0301..	Carbide, inserts type
		8-10	0.315-0.394	22	0.866	A763003	–	16	0.630	WB..0301..	Steel, inserts type
8-10		0.315-0.394	37	1.457	A763203	–	16	0.630	WB..0301..	Carbide, inserts type	
10-13		0.394-0.512	30	1.181	A765003	–	16	0.630	CC..0602..	Steel, inserts type	
10-13		0.394-0.512	55	2.165	A765203	–	16	0.630	CC..0602..	Carbide, inserts type	
13-15,5		0.512-0.610	40	1.575	A760S30	A765R1	16	0.630	CC..0602..	Steel shank with insert holder	
13-15,5		0.512-0.610	70	2.756	A760E30	A765R1	16	0.630	CC..0602..	Carbide shank with insert holder	
15,5-18		0.610-0.709	40	1.575	A760S30	A765R2	16	0.630	CC..0602..	Steel shank with insert holder	
15,5-18		0.610-0.709	70	2.756	A760E30	A765R2	16	0.630	CC..0602..	Carbide shank with insert holder	
18-20,5		0.709-0.807	50	1.969	A760S31	A765R1	16	0.630	CC..0602..	Steel shank with insert holder	
18-20,5		0.709-0.807	80	3.150	A760E31	A765R1	16	0.630	CC..0602..	Carbide shank with insert holder	
20,5-23		0.807-0.906	50	1.969	A760S31	A765R2	16	0.630	CC..0602..	Steel shank with insert holder	
20,5-23		0.807-0.906	80	3.150	A760E31	A765R2	16	0.630	CC..0602..	Carbide shank with insert holder	
23-25,5		0.906-1.00	50	1.969	A760S31	A765R3	16	0.630	CC..0602..	Steel shank with insert holder	
23-25,5		0.906-1.00	80	3.150	A760E31	A765R3	16	0.630	CC..0602..	Carbide shank with insert holder	
25,5-28		1.004-1.102	50	1.969	A760S31	A765R4	16	0.630	CC..0602..	Steel shank with insert holder	
25,5-28		1.004-1.102	80	3.150	A760E31	A765R4	16	0.630	CC..0602..	Carbide shank with insert holder	
28-30,5		1.102-1.201	50	1.969	A760S31	A765R5	16	0.630	CC..0602..	Steel shank with insert holder	
28-30,5		1.102-1.201	80	3.150	A760E31	A765R5	16	0.630	CC..0602..	Carbide shank with insert holder	
30,5-33		1.201-1.299	50	1.969	A760S31	A765R6	16	0.630	CC..0602..	Steel shank with insert holder	
30,5-33		1.201-1.299	80	3.150	A760E31	A765R6	16	0.630	CC..0602..	Carbide shank with insert holder	
33-35,5*		1.299-1.398*	60	2.362	A760A32	A765R1	16	0.630	CC..0602..	Aluminium shank with insert holder	
35,5-38*		1.299-1.496*	60	2.362	A760A32	A765R2	16	0.630	CC..0602..	Aluminium shank with insert holder	
38-40,5*		1.496-1.594*	60	2.362	A760A32	A765R3	16	0.630	CC..0602..	Aluminium shank with insert holder	
40,5-43*		1.594-1.693*	60	2.362	A760A32	A765R4	16	0.630	CC..0602..	Aluminium shank with insert holder	
43-45,5*		1.693-1.791*	60	2.362	A760A32	A765R5	16	0.630	CC..0602..	Aluminium shank with insert holder	
45,5-48*		1.791-1.890*	60	2.362	A760A32	A765R6	16	0.630	CC..0602..	Aluminium shank with insert holder	
48-50,5*		1.890-1.988*	80	3.150	A760A33	A765R1	16	0.630	CC..0602..	Aluminium shank with insert holder	
50,5-53*		1.988-2.087*	80	3.150	A760A33	A765R2	16	0.630	CC..0602..	Aluminium shank with insert holder	
53-55,5*		2.087-2.185*	80	3.150	A760A33	A765R3	16	0.630	CC..0602..	Aluminium shank with insert holder	
55,5-58*		2.185-2.283*	80	3.150	A760A33	A765R4	16	0.630	CC..0602..	Aluminium shank with insert holder	
58-60,5*	2.283-2.382*	80	3.150	A760A33	A765R5	16	0.630	CC..0602..	Aluminium shank with insert holder		
60,5-63*	2.382-2.480*	80	3.150	A760A33	A765R6	16	0.630	CC..0602..	Aluminium shank with insert holder		

For larger diameters, see Multi-purpose adapter (MPA) section.

* When used on A760 13, no fine balancing possible.

Introduction

Drilling

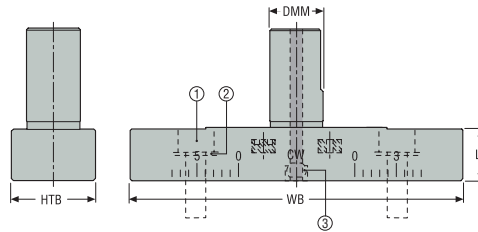
Reaming

Boring

Annex

Multi-purpose adapter (MPA)

for FB 760 heads



- Suitable for - Axiabore™ Plus - A760 03 head only*
- Designed to hold a shank and a counterweight (for boring or OD-overturning) or two grooving tool holders (for face grooving)
- Through coolant with an adjustable nozzle (3)

1. Assembly screw
2. Washer
3. Adjustable nozzle

Item number	Designation	Capacity DCN-DCX Ø						HTB	LF	DMM	WB	Weight
		For boring		For OD-overturning		For grooving						
		mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch					
02595014	BDA16BS25100	53,0 2.087	108,0 4.252	2,0 0.079	57,0 2.244	31,0 1.220	96,0 3.780	25,0 0.984	16,0 0.630	16,0 0.630	100,0 3.937	0,28 0.620

Spare Parts, included in delivery

For	Assembly screw	Washer
BDA16BS25100	950D0618	940ZC06

*When used on an - Axialibrabore™ Plus - A760 13 head, no fine balancing possible, see page(s) 589
Select the required components to realise boring, OD-overturning or grooving assemblies, using following page(s) 602-613

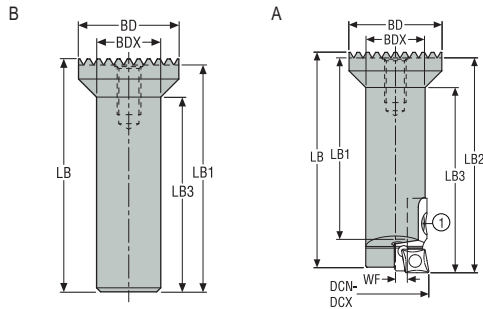
Accessories

For head	Clamp key
BDA16BS25100	03HL05

Accessories, to be ordered separately

Shank & counterweight, for boring or OD-overturning on a MPA

for FB 760 heads



1. Assembly screw



- For fitting on to the MPA
- Shank can be used for boring or OD-overturning
- Takes the same insert holders as the modular boring shanks

Item number	Designation	Type	** Capacity DCN-DCX \varnothing				LB	LB1	LB2	LB3	WF	BDX	BD	Weight	Design
			For boring		For OD-overturning										
			mm Inch	mm Inch	mm Inch	mm Inch									
02595019	BAS25MH1660	Shank*	53,0 2.087	108,0 4.252	2,0 0.079	57,0 2.244	58,5 2.303	48,5 1.909	58,5 2.303	50,0 1.969	4,0 0.157	16,0 0.630	25,0 0.984	0,1 0.220	A
02595016	BAS25CW1660	Counter-weight	53,0 2.087	108,0 4.252	2,0 0.079	57,0 2.244	58,0 2.283	56,6 2.228	-	48,5 1.909	-	16,0 0.630	25,0 0.984	0,2 0.440	B

Spare Parts, included in delivery

For	Assembly screw
BAS25MH1660	C04008-T15P
BAS25CW1660	-



Accessories

Key (T-handle)
DOUBLE-T
-



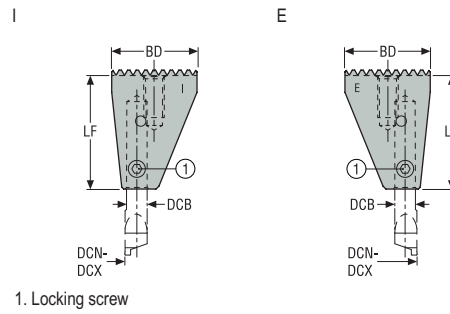
*Insert holders to be ordered separately, see page(s) 596

**Capacities in boring and OD-overturning are related to the selected insert holder and the setting position of the shanks using the 'Insert holders for boring or OD-overturning selection chart' on page(s) 602-613

Accessories, to be ordered separately

Grooving tool holders, for face grooving on a MPA

for FB 760 heads



- For fitting on to the MPA
- A grooving tool holder is used either to hold a grooving tool, or to act as a counterweight

Item number	Designation	Type	* Capacity DCN-DCX Ø		DCB	LF	BD	Weight	Design
			mm <i>Inch</i>	mm <i>Inch</i>					
02595021	BAS25FGI35	Grooving tool holder I (internal)*	19,0 <i>0.748</i>	76,0 <i>2.992</i>	6,0 <i>0.236</i>	35,0 <i>1.378</i>	25,0 <i>0.984</i>	0,1 <i>0.220</i>	I (Internal)
02595020	BAS25FGE35	Grooving tool holder E (external)*	39,0 <i>1.535</i>	96,0 <i>3.780</i>	6,0 <i>0.236</i>	35,0 <i>1.378</i>	25,0 <i>0.984</i>	0,1 <i>0.220</i>	E (External)

Spare Parts, included in delivery

Accessories

For	Locking screw	Key (T-handle)
BAS25FGI35	950L0607T15P	DOUBLE-T
BAS25FGE35	950L0607T15P	DOUBLE-T

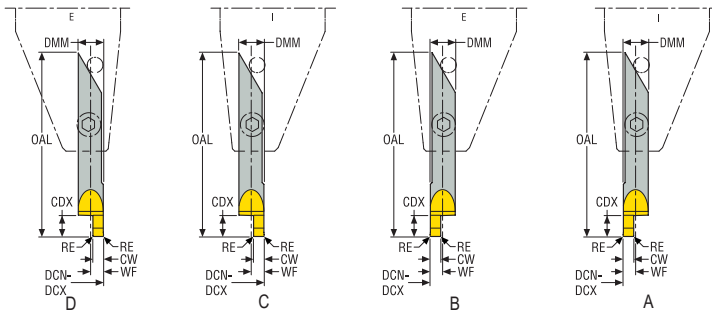
*Grooving tools to be ordered separately, see page(s) 601

* Capacity in grooving is related to the selected grooving tool, the setting position and orientation of the grooving tool holder, using the ' Grooving tool against spigot (or against bore) selection charts' see page(s) 602-613

Accessories, to be ordered separately

Grooving tools

for FB 760 heads



- Can be used for either 'external' or 'internal' grooving tool holders, depending on capacity

* Capacity DCN-DCX Ø																	
Item number	Designation	Type	Design A		Design B		Design C		Design D		OAL	CW	RE	DMM	WF	Groove max. **	Weight
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch							
02595028	AFG0629101582	Against spigot	19,0 0.748	64,0 2.520	39,0 1.535	84,0 3.307	-	-	-	-	42,0 1.654	1,0 0.039	0,15 0.006	6,0 0.236	2,95 0.116	2,0 0.079	0,07 0.150
02595029	AFG0629151582	Against spigot	19,0 0.748	64,0 2.520	39,0 1.535	84,0 3.307	-	-	-	-	42,0 1.654	1,5 0.059	0,15 0.006	6,0 0.236	2,95 0.116	3,0 0.118	0,07 0.150
02595031	AFG0629201582	Against spigot	19,0 0.748	64,0 2.520	39,0 1.535	84,0 3.307	-	-	-	-	42,0 1.654	2,0 0.079	0,15 0.006	6,0 0.236	2,95 0.116	5,0 0.197	0,07 0.150
02595032	AFG0629251582	Against spigot	19,0 0.748	64,0 2.520	39,0 1.535	84,0 3.307	-	-	-	-	42,0 1.654	2,5 0.098	0,15 0.006	6,0 0.236	2,95 0.116	5,0 0.197	0,07 0.150
02595033	AFG0629301582	Against spigot	19,0 0.748	64,0 2.520	39,0 1.535	84,0 3.307	-	-	-	-	42,0 1.654	3,0 0.118	0,15 0.006	6,0 0.236	2,95 0.116	6,0 0.236	0,07 0.150
02595022	AFG0629101581	Against bore	-	-	-	-	31,0 1.220	76,0 2.992	51,0 2.008	96,0 3.780	42,0 1.654	1,0 0.039	0,15 0.006	6,0 0.236	2,95 0.116	2,0 0.079	0,02 0.040
02595023	AFG0629151581	Against bore	-	-	-	-	31,0 1.220	76,0 2.992	51,0 2.008	96,0 3.780	42,0 1.654	1,5 0.059	0,15 0.006	6,0 0.236	2,95 0.116	3,0 0.118	0,07 0.150
02595024	AFG0629201581	Against bore	-	-	-	-	31,0 1.220	76,0 2.992	51,0 2.008	96,0 3.780	42,0 1.654	2,0 0.079	0,15 0.006	6,0 0.236	2,95 0.116	4,0 0.157	0,07 0.150
02595026	AFG0629251581	Against bore	-	-	-	-	31,0 1.220	76,0 2.992	51,0 2.008	96,0 3.780	42,0 1.654	2,5 0.098	0,15 0.006	6,0 0.236	2,95 0.116	5,0 0.197	0,07 0.150
02595027	AFG0629301581	Against bore	-	-	-	-	31,0 1.220	76,0 2.992	51,0 2.008	96,0 3.780	42,0 1.654	3,0 0.118	0,15 0.006	6,0 0.236	2,95 0.116	6,0 0.236	0,07 0.150

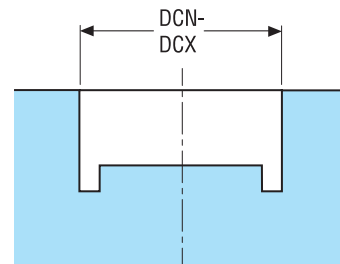
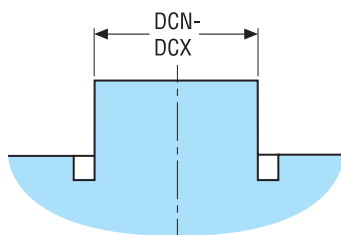
* Capacity in grooving is related to the selected grooving tool, the setting position and orientation of the grooving tool holder, using the 'Grooving tool against spigot (or against bore) selection charts' see page(s) 602-613

** Groove max. depth CDX

Spare Parts, included in delivery

Grooving tool -against spigot-

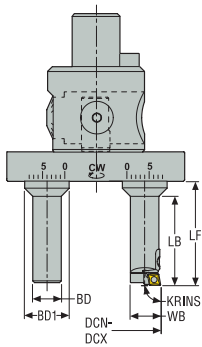
Grooving tool -against bore-



Metric Selection chart: Boring tools and insert holders suitable for FB 760 heads

	Capacity DCN-DCX ∅ mm*	Insert holder Designation	Shank position	Dimensions in mm					Lead angle KRINS°	Suitable insert size
				BD	BD1	LF	LB	WB		
	53-55,5	A765 R1	0	16	25	58,5	50	17	90°	CC..0602..
	55,5-58	A765 R2	0	16	25	58,5	50	18,2	90°	CC..0602..
	58-60,5	A765 R1	1	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	0	16	25	58,5	50	19,5	90°	CC..0602..
	60,5-63	A765 R2	1	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R4	0	16	25	58,5	50	20,7	90°	CC..0602..
	63-65,5	A765 R1	2	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	1	16	25	58,5	50	19,5	90°	CC..0602..
	65,5-68	A765 R5	0	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	2	16	25	58,5	50	18,2	90°	CC..0602..
	68-70,5	A765 R4	1	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	0	16	25	58,5	50	23,3	90°	CC..0602..
	70,5-73	A765 R1	3	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	2	16	25	58,5	50	19,5	90°	CC..0602..
	73-75,5	A765 R5	1	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	3	16	25	58,5	50	18,2	90°	CC..0602..
	75,5-78	A765 R4	3	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	2	16	25	58,5	50	23,2	90°	CC..0602..
	78-80,5	A765 R1	5	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	4	16	25	58,5	50	19,5	90°	CC..0602..
	80,5-83	A765 R5	3	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	5	16	25	58,5	50	18,2	90°	CC..0602..
	83-85,5	A765 R4	4	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	3	16	25	58,5	50	23,2	90°	CC..0602..
	85,5-88	A765 R1	6	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	5	16	25	58,5	50	19,5	90°	CC..0602..
	88-90,5	A765 R5	4	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	6	16	25	58,5	50	18,2	90°	CC..0602..
	90,5-93	A765 R4	7	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	4	16	25	58,5	50	23,2	90°	CC..0602..
	93-95,5	A765 R1	8	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	7	16	25	58,5	50	19,5	90°	CC..0602..
	95,5-98	A765 R5	6	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	8	16	25	58,5	50	18,2	90°	CC..0602..
	98-100,5	A765 R4	7	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	6	16	25	58,5	50	23,2	90°	CC..0602..
	100,5-103	A765 R1	8	16	25	58,5	50	17	90°	CC..0602..
		A765 R3	8	16	25	58,5	50	19,5	90°	CC..0602..
	103-105,5	A765 R5	7	16	25	58,5	50	22	90°	CC..0602..
		A765 R2	9	16	25	58,5	50	18,2	90°	CC..0602..
	105,5-108	A765 R4	8	16	25	58,5	50	20,7	90°	CC..0602..
		A765 R6	7	16	25	58,5	50	23,2	90°	CC..0602..

Select a suitable insert holder and note the shank position on the MPA to obtain the required bore capacity.
 Note: A boring assembly requires:
 - an - Axiabore™ Plus - head (A760 03)
 - a MPA (BDA16BS25100)
 - a shank (BAS25MH1660)
 - a counterweight (BAS25CW1660).
 - an insert holder (A765R.) to be selected in the chart
 - an insert

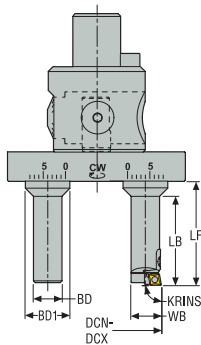


* +0,2 mm (0.008") complementary capacity achievable.
 Detailed description of insert holders, see page(s) 596

Inch Selection chart:
Boring tools and insert holders suitable for FB 760 heads

	Capacity DCN-DCX Ø inch*	Insert holder Designation	Shank position	Dimensions in inch					Lead angle KRINS°	Suitable insert size
				BD	BD1	LF	LB	WB		
	2.087-2.185	A765 R1	0	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	2.185-2.283	A765 R2	0	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	2.283-2.382	A765 R1	1	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
		A765 R3	0	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
	2.382-2.480	A765 R2	1	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
		A765 R4	0	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
	2.480-2.579	A765 R1	2	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
		A765 R3	1	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	0	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
	2.579-2.677	A765 R2	2	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
		A765 R4	1	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
	2.677-2.776	A765 R6	0	0.630	0.984	2.303	1.969	0.917	90°	CC..0602..
		A765 R1	3	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	2.776-2.874	A765 R3	2	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	1	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	3	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	2.874-2.972	A765 R4	2	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	1	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	4	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	2.972-3.071	A765 R3	3	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	2	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	4	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	3.071-3.169	A765 R4	3	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	2	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	5	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	3.169-3.268	A765 R3	4	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	3	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	5	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	3.268-3.366	A765 R4	4	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	3	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	6	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	3.366-3.465	A765 R3	5	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	4	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	6	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	3.465-3.563	A765 R4	5	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	4	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	7	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	3.563-3.661	A765 R3	6	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	5	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	7	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	3.661-3.760	A765 R4	6	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	5	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	8	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	3.760-3.858	A765 R3	7	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R5	6	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R2	8	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	3.858-3.957	A765 R4	7	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R6	6	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R1	9	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	3.957-4.055	A765 R3	8	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
	4.055-4.154	A765 R5	7	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
	4.154-4.252	A765 R6	8	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..

Select a suitable insert holder and note the shank position on the MPA to obtain the required bore capacity.
Note: A boring assembly requires:
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- a shank (BAS25MH1660)
- a counterweight (BAS25CW1660).
- an insert holder (A765R.) to be selected in the chart
- an insert

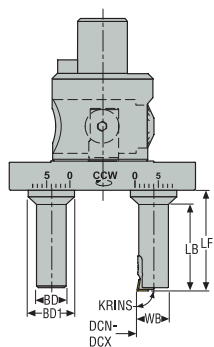


* +0.2 mm (0.008") complementary capacity achievable.
Detailed description of insert holders, see page(s) 596

Metric Selection chart: Insert holders for OD-overturning with MPA, for FB 760 heads

	Capacity DCN-DCX Ø mm*	Insert holder Designation	Shank position	Dimensions in mm					Lead angle KRINS°	Suitable insert size
				BD	BD1	LF	LB	WB		
	2-4,5	A765 R6	0	16	25	58,5	50	23,2	90°	CC..0602..
	4,5-7	A765 R5	0	16	25	58,5	50	22	90°	CC..0602..
	7-9,5	A765 R6	1	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	0	16	25	58,5	50	20,7	90°	CC..0602..
	9,5-12	A765 R5	1	16	25	58,5	50	22	90°	CC..0602..
		A765 R3	0	16	25	58,5	50	19,5	90°	CC..0602..
	12-14,5	A765 R6	2	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	1	16	25	58,5	50	20,7	90°	CC..0602..
	14,5-17	A765 R2	0	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	2	16	25	58,5	50	22	90°	CC..0602..
	17-19,5	A765 R3	1	16	25	58,5	50	19,5	90°	CC..0602..
		A765 R1	0	16	25	58,5	50	17	90°	CC..0602..
	19,5-22	A765 R6	3	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	2	16	25	58,5	50	20,7	90°	CC..0602..
	22-24,5	A765 R2	1	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	3	16	25	58,5	50	22	90°	CC..0602..
	24,5-27	A765 R3	2	16	25	58,5	50	19,5	90°	CC..0602..
		A765 R1	1	16	25	58,5	50	17	90°	CC..0602..
	27-29,5	A765 R6	4	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	3	16	25	58,5	50	20,7	90°	CC..0602..
	29,5-32	A765 R2	2	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	4	16	25	58,5	50	22	90°	CC..0602..
	32-34,5	A765 R3	3	16	25	58,5	50	19,5	90°	CC..0602..
		A765 R1	3	16	25	58,5	50	17	90°	CC..0602..
	34,5-37	A765 R6	6	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	5	16	25	58,5	50	20,7	90°	CC..0602..
	37-39,5	A765 R2	4	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	6	16	25	58,5	50	22	90°	CC..0602..
	39,5-42	A765 R3	5	16	25	58,5	50	19,5	90°	CC..0602..
		A765 R1	4	16	25	58,5	50	17	90°	CC..0602..
	42-44,5	A765 R6	7	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	6	16	25	58,5	50	20,7	90°	CC..0602..
	44,5-47	A765 R2	6	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	7	16	25	58,5	50	22	90°	CC..0602..
	47-49,5	A765 R3	7	16	25	58,5	50	19,5	90°	CC..0602..
		A765 R1	6	16	25	58,5	50	17	90°	CC..0602..
	49,5-52	A765 R6	8	16	25	58,5	50	23,2	90°	CC..0602..
		A765 R4	7	16	25	58,5	50	20,7	90°	CC..0602..
	52-54,5	A765 R2	7	16	25	58,5	50	18,2	90°	CC..0602..
		A765 R5	8	16	25	58,5	50	22	90°	CC..0602..
	54,5-57	A765 R1	8	16	25	58,5	50	17	90°	CC..0602..

Select a suitable insert holder and note the shank position on the MPA to obtain the required bore capacity.
Note: A OD-overturning assembly requires:
- an Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- a shank (BAS25MH1660)
- a counterweight (BAS25CW1660).
- an insert holder (A765R.) to be selected in the chart
- an insert

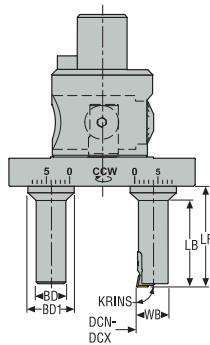


* +0,2 mm (0.008") complementary capacity achievable.
Detailed description of insert holders, see page(s) 596

Inch Selection chart:
Insert holders for OD-overturning with MPA, for FB 760 heads

	Capacity DCN-DCX Ø inch*	Insert holder Designation	Shank position	Dimensions in inch					Lead angle KRINS°	Suitable insert size
				BD	BD1	LF	LB	WB		
	0.079-0.177	A765 R6	0	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
	0.177-0.276	A765 R5	0	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
	0.276-0.374	A765 R6	1	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	0	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
	0.374-0.472	A765 R5	1	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	0	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
	0.472-0.571	A765 R6	2	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	1	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	0	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	0.571-0.669	A765 R5	2	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	1	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
	0.669-0.768	A765 R1	0	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
		A765 R6	3	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
	0.768-0.866	A765 R4	2	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	1	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
		A765 R5	3	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
	0.866-0.965	A765 R3	2	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	1	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
		A765 R6	4	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
	0.965-1.063	A765 R4	3	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	2	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	1.063-1.161	A765 R5	4	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	3	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	2	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	1.161-1.260	A765 R6	5	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	4	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	3	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	1.260-1.358	A765 R5	5	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	4	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	3	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	1.358-1.457	A765 R6	6	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	5	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	4	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	1.457-1.555	A765 R5	6	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	5	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	4	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	1.555-1.654	A765 R6	7	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	6	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	5	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	1.654-1.654	A765 R5	7	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	6	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	5	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	1.654-1.850	A765 R6	8	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..
		A765 R4	7	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	6	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	1.850-1.949	A765 R5	8	0.630	0.984	2.303	1.969	0.866	90°	CC..0602..
		A765 R3	7	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
		A765 R1	6	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	1.949-2.047	A765 R4	8	0.630	0.984	2.303	1.969	0.815	90°	CC..0602..
		A765 R2	7	0.630	0.984	2.303	1.969	0.717	90°	CC..0602..
	2.047-2.146	A765 R3	8	0.630	0.984	2.303	1.969	0.768	90°	CC..0602..
	2.146-2.244	A765 R1	7	0.630	0.984	2.303	1.969	0.669	90°	CC..0602..
	2.244-2.343	A765 R6	8	0.630	0.984	2.303	1.969	0.913	90°	CC..0602..

Select a suitable insert holder and note the shank position on the MPA to obtain the required bore capacity.
Note: A OD-overturning assembly requires:
- an - Axiabore™ Plus - head (A760 03)
- a MPA (BDA16BS25100)
- a shank (BAS25MH1660)
- a counterweight (BAS25CW1660).
- an insert holder (A765R.) to be selected in the chart
- an insert



* +0.2 mm (0.008") complementary capacity achievable.
Detailed description of insert holders, see page(s) 596

Metric Selection chart: Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Introduction

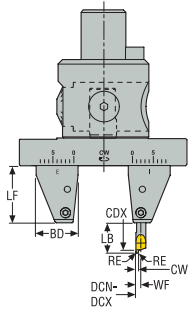
Drilling

Reaming

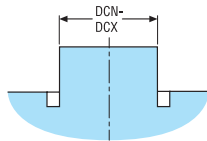
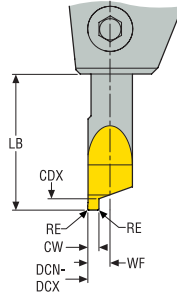
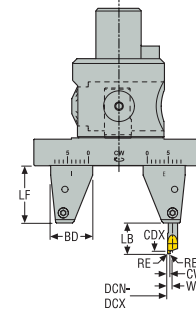
Boring

Annex

Assembly case 1



Assembly case 2



	Capacity DCN-DCX Ø mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm						Groove max. depth CDX		
					BD	CW	LF	LB	WF	RE			
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	19-24	AFG0629 10 1582	0-I	1	25	1	34	18	2,95	0,15	2,0		
	24-29		1-I	1	25	1	34	18	2,95	0,15	2,0		
	29-34		2-I	1	25	1	34	18	2,95	0,15	2,0		
	34-39		3-I	1	25	1	34	18	2,95	0,15	2,0		
	39-44		0-E / 4-I	1/2	25	1	34	18	2,95	0,15	2,0		
	44-49		1-E / 5-I	1/2	25	1	34	18	2,95	0,15	2,0		
	49-54		2-E / 6-I	1/2	25	1	34	18	2,95	0,15	2,0		
	54-59		3-E / 7-I	1/2	25	1	34	18	2,95	0,15	2,0		
	59-64		4-E / 8-I	1/2	25	1	34	18	2,95	0,15	2,0		
	64-69		5-E	2	25	1	34	18	2,95	0,15	2,0		
	69-74		6-E	2	25	1	34	18	2,95	0,15	2,0		
	74-79		7-E	2	25	1	34	18	2,95	0,15	2,0		
	79-84		8-E	2	25	1	34	18	2,95	0,15	2,0		
	Note: An -against spigot- grooving assembly requires:		19-24	AFG0629 15 1582	0-I	1	25	1,5	34	18	2,95	0,15	3,0
			24-29		1-I	1	25	1,5	34	18	2,95	0,15	3,0
29-34		2-I	1		25	1,5	34	18	2,95	0,15	3,0		
34-39		3-I	1		25	1,5	34	18	2,95	0,15	3,0		
39-44		0-E / 4-I	1/2		25	1,5	34	18	2,95	0,15	3,0		
44-49		1-E / 5-I	1/2		25	1,5	34	18	2,95	0,15	3,0		
49-54		2-E / 6-I	1/2		25	1,5	34	18	2,95	0,15	3,0		
54-59		3-E / 7-I	1/2		25	1,5	34	18	2,95	0,15	3,0		
59-64		4-E / 8-I	1/2		25	1,5	34	18	2,95	0,15	3,0		
64-69		5-E	2		25	1,5	34	18	2,95	0,15	3,0		
69-74		6-E	2		25	1,5	34	18	2,95	0,15	3,0		
74-79		7-E	2		25	1,5	34	18	2,95	0,15	3,0		
79-84		8-E	2		25	1,5	34	18	2,95	0,15	3,0		
		19-24	AFG0629 20 1582		0-I	1	25	2	34	18	2,95	0,15	4,0
		24-29			1-I	1	25	2	34	18	2,95	0,15	4,0
	29-34	2-I		1	25	2	34	18	2,95	0,15	4,0		
	34-39	3-I		1	25	2	34	18	2,95	0,15	4,0		
	39-44	0-E / 4-I		1/2	25	2	34	18	2,95	0,15	4,0		
	44-49	1-E / 5-I		1/2	25	2	34	18	2,95	0,15	4,0		
	49-54	2-E / 6-I		1/2	25	2	34	18	2,95	0,15	4,0		
	54-59	3-E / 7-I		1/2	25	2	34	18	2,95	0,15	4,0		
	59-64	4-E / 8-I		1/2	25	2	34	18	2,95	0,15	4,0		
	64-69	5-E		2	25	2	34	18	2,95	0,15	4,0		
69-74	6-E	2	25	2	34	18	2,95	0,15	4,0				
74-79	7-E	2	25	2	34	18	2,95	0,15	4,0				
79-84	8-E	2	25	2	34	18	2,95	0,15	4,0				

* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.

Detailed description of the grooving tools, see page(s) 601

Metric Selection chart:
Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Assembly case 1

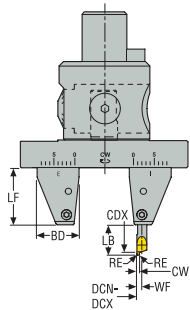
Assembly case 2

	Capacity DCN-DCX ∅ mm*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm						Groove max. depth CDX
					BD	CW	LF	LB	WF	RE	
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	19-24	AFG0629 25 1582	0-I	1	25	2,5	34	18	2,95	0,15	5,0
	24-29		1-I	1	25	2,5	34	18	2,95	0,15	5,0
	29-34		2-I	1	25	2,5	34	18	2,95	0,15	5,0
	34-39		3-I	1	25	2,5	34	18	2,95	0,15	5,0
	39-44		0-E / 4-I	1/2	25	2,5	34	18	2,95	0,15	5,0
	44-49		1-E / 5-I	1/2	25	2,5	34	18	2,95	0,15	5,0
	49-54		2-E / 6-I	1/2	25	2,5	34	18	2,95	0,15	5,0
	54-59		3-E / 7-I	1/2	25	2,5	34	18	2,95	0,15	5,0
	59-64		4-E / 8-I	1/2	25	2,5	34	18	2,95	0,15	5,0
	64-69		5-E	2	25	2,5	34	18	2,95	0,15	5,0
	69-74		6-E	2	25	2,5	34	18	2,95	0,15	5,0
	74-79		7-E	2	25	2,5	34	18	2,95	0,15	5,0
	79-84		8-E	2	25	2,5	34	18	2,95	0,15	5,0
Note: An -against spigot- grooving assembly requires: <ul style="list-style-type: none"> • an Axiabore™ Plus - head (A760 03) • a MPA (BDA16BS25100) • an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) • an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter. 	19-24	AFG0629 30 1582	0-I	1	25	3	34	18	2,95	0,15	6,0
	24-29		1-I	1	25	3	34	18	2,95	0,15	6,0
	29-34		2-I	1	25	3	34	18	2,95	0,15	6,0
	34-39		3-I	1	25	3	34	18	2,95	0,15	6,0
	39-44		0-E / 4-I	1/2	25	3	34	18	2,95	0,15	6,0
	44-49		1-E / 5-I	1/2	25	3	34	18	2,95	0,15	6,0
	49-54		2-E / 6-I	1/2	25	3	34	18	2,95	0,15	6,0
	54-59		3-E / 7-I	1/2	25	3	34	18	2,95	0,15	6,0
	59-64		4-E / 8-I	1/2	25	3	34	18	2,95	0,15	6,0
	64-69		5-E	2	25	3	34	18	2,95	0,15	6,0
	69-74		6-E	2	25	3	34	18	2,95	0,15	6,0
	74-79		7-E	2	25	3	34	18	2,95	0,15	6,0
	79-84		8-E	2	25	3	34	18	2,95	0,15	6,0

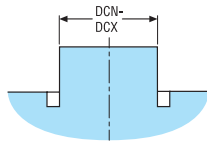
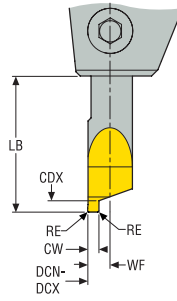
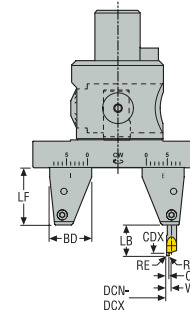
* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Inch Selection chart: Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Assembly case 1



Assembly case 2



	Capacity DCN-DCX inch*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in inch						Groove max. depth CDX
					BD	CW	LF	LB	WF	RE	
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	0.748-0.945	AFG0629 10 1582	0-I	1	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	0.945-1.142		1-I	1	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	1.142-1.339		2-I	1	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	1.339-1.535		3-I	1	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	1.535-1.732		0-E / 4-I	1/2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	1.732-1.929		1-E / 5-I	1/2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	1.929-2.126		2-E / 6-I	1/2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	2.126-2.323		3-E / 7-I	1/2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	2.323-2.520		4-E / 8-I	1/2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
	2.520-2.717		5-E	2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079
2.717-2.913	6-E	2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
2.913-3.110	7-E	2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
3.110-3.307	8-E	2	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
Note: An -against spigot- grooving assembly requires:	0.748-0.945	AFG0629 15 1582	0-I	1	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
• an - Axiabore™ Plus - head (A760 03)	0.945-1.142		1-I	1	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
• a MPA (BDA16BS25100)	1.142-1.339		2-I	1	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
• an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart)	1.339-1.535		3-I	1	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
• an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.	1.535-1.732		0-E / 4-I	1/2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	1.732-1.929		1-E / 5-I	1/2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	1.929-2.126		2-E / 6-I	1/2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	2.126-2.323		3-E / 7-I	1/2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	2.323-2.520		4-E / 8-I	1/2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	2.520-2.717		5-E	2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
	2.717-2.913	6-E	2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118	
	2.913-3.110	7-E	2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118	
	3.110-3.307	8-E	2	0.984	0.0591	1.339	0.709	0.116	0.006	0.118	
	0.748-0.945	AFG0629 20 1582	0-I	1	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	0.945-1.142		1-I	1	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.142-1.339		2-I	1	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.339-1.535		3-I	1	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.535-1.732		0-E / 4-I	1/2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.732-1.929		1-E / 5-I	1/2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.929-2.126		2-E / 6-I	1/2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	2.126-2.323		3-E / 7-I	1/2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	2.323-2.520		4-E / 8-I	1/2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	2.520-2.717		5-E	2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	2.717-2.913	6-E	2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157	
	2.913-3.110	7-E	2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157	
	3.110-3.307	8-E	2	0.984	0.0787	1.339	0.709	0.116	0.006	0.157	

* +0.2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Introduction

Drilling

Reaming

Boring

Annex

Inch Selection chart:
Grooving tool -against spigot- for grooving with MPA, for FB 760 heads

Assembly case 1		Assembly case 2								
Capacity DCN-DCX Ø inch*	Against spigot grooving tool Designation	Grooving toolholder position**	Design	Dimensions in inch						Groove max. depth CDX
0.748-0.945		0-I	1	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
0.945-1.142		1-I	1	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
1.142-1.339		2-I	1	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
1.339-1.535		3-I	1	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
1.535-1.732		0-E / 4-I	1/2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
1.732-1.929		1-E / 5-I	1/2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
1.929-2.126	AFG0629 25 1582	2-E / 6-I	1/2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
2.126-2.323		3-E / 7-I	1/2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
2.323-2.520		4-E / 8-I	1/2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
2.520-2.717		5-E	2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
2.717-2.913		6-E	2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
2.913-3.110		7-E	2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
3.110-3.307		8-E	2	0.984	0.0984	1.339	0.709	0.116	0.006	0.197
Note: An -against spigot- grooving assembly requires:		0-I	1	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
• an Axiabore™ Plus - head (A760 03)		1-I	1	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
• a MPA (BDA16BS25100)		2-I	1	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
• an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart)		3-I	1	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
• an -against spigot- grooving tool (AFG...82) to be selected from the chart, related to groove width and diameter.		0-E / 4-I	1/2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
	AFG0629 30 1582	1-E / 5-I	1/2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		2-E / 6-I	1/2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		3-E / 7-I	1/2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		4-E / 8-I	1/2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		5-E	2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		6-E	2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		7-E	2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
		8-E	2	0.984	0.1181	1.339	0.709	0.116	0.006	0.236

* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Metric Selection chart: Grooving tool -against bore- for grooving with MPA, for FB 760 heads

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	Capacity DCN-DCX Ø mm*	Against bore grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm						Groove max. depth CDX		
					BD	CW	LF	LB	WF	RE			
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	31-36	AFG0629 10 1581	0-I	3	25	1	34	18	2,95	0,15	2,0		
	36-41		1-I	3	25	1	34	18	2,95	0,15	2,0		
	41-46		2-I	3	25	1	34	18	2,95	0,15	2,0		
	46-51		3-I	3	25	1	34	18	2,95	0,15	2,0		
	51-56		0-E / 4-I	3/4	25	1	34	18	2,95	0,15	2,0		
	56-61		1-E / 5-I	3/4	25	1	34	18	2,95	0,15	2,0		
	61-66		2-E / 6-I	3/4	25	1	34	18	2,95	0,15	2,0		
	66-71		3-E / 7-I	3/4	25	1	34	18	2,95	0,15	2,0		
	71-76		4-E / 8-I	3/4	25	1	34	18	2,95	0,15	2,0		
	76-81		5-E	4	25	1	34	18	2,95	0,15	2,0		
	81-86		6-E	4	25	1	34	18	2,95	0,15	2,0		
	86-91		7-E	4	25	1	34	18	2,95	0,15	2,0		
	91-96		8-E	4	25	1	34	18	2,95	0,15	2,0		
	Note : An -against bore- grooving assembly requires: • an - Axiabore™ Plus - head (A760 03) • a MPA (BDA16BS25100) • an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) • an -against bore- grooving tool (AFG..81) to be selected from the chart, related to groove width and diameter.		31-36	AFG0629 15 1581	0-I	3	25	1,5	34	18	2,95	0,15	3,0
			39-41		1-I	3	25	1,5	34	18	2,95	0,15	3,0
41-46		2-I	3		25	1,5	34	18	2,95	0,15	3,0		
46-51		3-I	3		25	1,5	34	18	2,95	0,15	3,0		
51-56		0-E / 4-I	3/4		25	1,5	34	18	2,95	0,15	3,0		
56-61		1-E / 5-I	3/4		25	1,5	34	18	2,95	0,15	3,0		
61-66		2-E / 6-I	3/4		25	1,5	34	18	2,95	0,15	3,0		
66-71		3-E / 7-I	3/4		25	1,5	34	18	2,95	0,15	3,0		
71-76		4-E / 8-I	3/4		25	1,5	34	18	2,95	0,15	3,0		
76-81		5-E	4		25	1,5	34	18	2,95	0,15	3,0		
81-86		6-E	4		25	1,5	34	18	2,95	0,15	3,0		
86-91		7-E	4		25	1,5	34	18	2,95	0,15	3,0		
91-96		8-E	4		25	1,5	34	18	2,95	0,15	3,0		
		31-36	AFG0629 20 1581		0-I	3	25	2	34	18	2,95	0,15	4,0
		39-41			1-I	3	25	2	34	18	2,95	0,15	4,0
	41-46	2-I		3	25	2	34	18	2,95	0,15	4,0		
	46-51	3-I		3	25	2	34	18	2,95	0,15	4,0		
	51-56	0-E / 4-I		3/4	25	2	34	18	2,95	0,15	4,0		
	56-61	1-E / 5-I		3/4	25	2	34	18	2,95	0,15	4,0		
	61-66	2-E / 6-I		3/4	25	2	34	18	2,95	0,15	4,0		
	66-71	3-E / 7-I		3/4	25	2	34	18	2,95	0,15	4,0		
	71-76	4-E / 8-I		3/4	25	2	34	18	2,95	0,15	4,0		
	76-81	5-E		4	25	2	34	18	2,95	0,15	4,0		
	81-86	6-E		4	25	2	34	18	2,95	0,15	4,0		
	86-91	7-E		4	25	2	34	18	2,95	0,15	4,0		
	91-96	8-E		4	25	2	34	18	2,95	0,15	4,0		

* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Metric Selection chart:
Grooving tool -against bore- for grooving with MPA, for FB 760 heads

Assembly case 3

Assembly case 4

	Capacity DCN-DCX Ø mm*	Against bore grooving tool Designation	Grooving toolholder position**	Design	Dimensions in mm						Groove max. depth CDX		
					BD	CW	LF	LB	WF	RE			
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity. 	31-36	AFG0629 25 1581	0-I	3	25	2,5	34	18	2,95	0,15	5,0		
	36-41		1-I	3	25	2,5	34	18	2,95	0,15	5,0		
	41-46		2-I	3	25	2,5	34	18	2,95	0,15	5,0		
	46-51		3-I	3	25	2,5	34	18	2,95	0,15	5,0		
	51-56		0-E / 4-I	3/4	25	2,5	34	18	2,95	0,15	5,0		
	56-61		1-E / 5-I	3/4	25	2,5	34	18	2,95	0,15	5,0		
	61-66		2-E / 6-I	3/4	25	2,5	34	18	2,95	0,15	5,0		
	66-71		3-E / 7-I	3/4	25	2,5	34	18	2,95	0,15	5,0		
	71-76		4-E / 8-I	3/4	25	2,5	34	18	2,95	0,15	5,0		
	76-81		5-E	4	25	2,5	34	18	2,95	0,15	5,0		
	81-86		6-E	4	25	2,5	34	18	2,95	0,15	5,0		
	86-91		7-E	4	25	2,5	34	18	2,95	0,15	5,0		
	91-96		8-E	4	25	2,5	34	18	2,95	0,15	5,0		
	Note : An -against bore- grooving assembly requires: <ul style="list-style-type: none"> • an Axiabore™ Plus - head (A760 03) • a MPA (BDA16BS25100) • an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) • an -against bore- grooving tool (AFG...81) to be selected from the chart, related to groove width and diameter. 		31-36	AFG0629 30 1581	0-I	3	25	3	34	18	2,95	0,15	6,0
	39-41		1-I		3	25	3	34	18	2,95	0,15	6,0	
	41-46		2-I		3	25	3	34	18	2,95	0,15	6,0	
46-51	3-I	3	25		3	34	18	2,95	0,15	6,0			
51-56	0-E / 4-I	3/4	25		3	34	18	2,95	0,15	6,0			
56-61	1-E / 5-I	3/4	25		3	34	18	2,95	0,15	6,0			
61-66	2-E / 6-I	3/4	25		3	34	18	2,95	0,15	6,0			
66-71	3-E / 7-I	3/4	25		3	34	18	2,95	0,15	6,0			
71-76	4-E / 8-I	3/4	25		3	34	18	2,95	0,15	6,0			
76-81	5-E	4	25		3	34	18	2,95	0,15	6,0			
81-86	6-E	4	25		3	34	18	2,95	0,15	6,0			
86-91	7-E	4	25		3	34	18	2,95	0,15	6,0			
91-96	8-E	4	25		3	34	18	2,95	0,15	6,0			

* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Inch Selection chart: Grooving tool -against bore- for grooving with MPA, for FB 760 heads

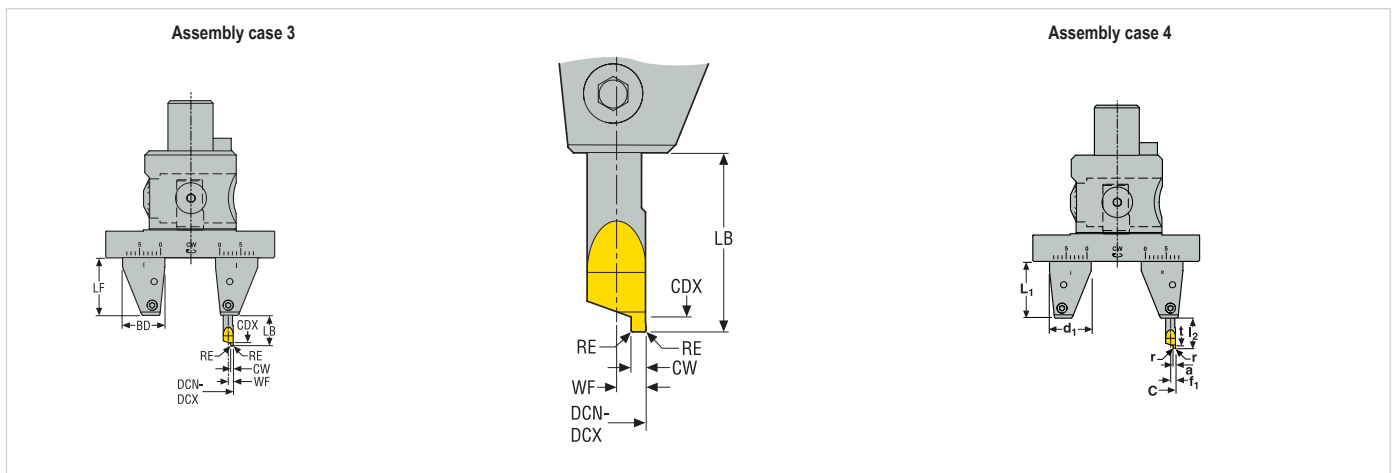
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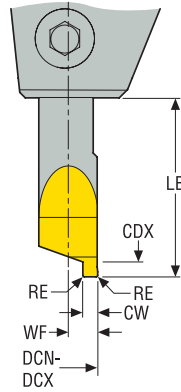
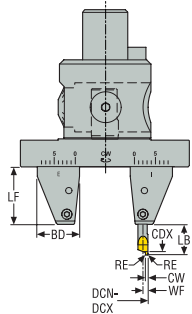


	Capacity DCN-DCX ∅ inch*	Against bore grooving tool Designation	Grooving toolholder position**	Design	Dimensions in inch						Groove max. depth CDX		
					BD	CW	LF	LB	WF	RE			
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity.	1.220-1.417	AFG0629 10 1581	0-I	3	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	1.417-1.614		1-I	3	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	1.614-1.811		2-I	3	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	1.811-2.008		3-I	3	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.008-2.205		0-E / 4-I	3/4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.205-2.402		1-E / 5-I	3/4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.402-2.598		2-E / 6-I	3/4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.598-2.795		3-E / 7-I	3/4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.795-2.992		4-E / 8-I	3/4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	2.992-3.189		5-E	4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	3.189-3.386		6-E	4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	3.386-3.583		7-E	4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	3.583-3.780		8-E	4	0.984	0.0394	1.339	0.709	0.116	0.006	0.079		
	Note : An -against bore- grooving assembly requires: • an - Axiabore™ Plus - head (A760 03) • a MPA (BDA16BS25100) • an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) • an -against bore- grooving tool (AFG...81) to be selected from the chart, related to groove width and diameter.		1.220-1.417	AFG0629 15 1581	0-I	3	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
			1.417-1.614		1-I	3	0.984	0.0591	1.339	0.709	0.116	0.006	0.118
1.614-1.811		2-I	3		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
1.811-2.008		3-I	3		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.008-2.205		0-E / 4-I	3/4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.205-2.402		1-E / 5-I	3/4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.402-2.598		2-E / 6-I	3/4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.598-2.795		3-E / 7-I	3/4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.795-2.992		4-E / 8-I	3/4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
2.992-3.189		5-E	4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
3.189-3.386		6-E	4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
3.386-3.583		7-E	4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
3.583-3.780		8-E	4		0.984	0.0591	1.339	0.709	0.116	0.006	0.118		
		1.220-1.417	AFG0629 20 1581		0-I	3	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
		1.417-1.614			1-I	3	0.984	0.0787	1.339	0.709	0.116	0.006	0.157
	1.614-1.811	2-I		3	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	1.811-2.008	3-I		3	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.008-2.205	0-E / 4-I		3/4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.205-2.402	1-E / 5-I		3/4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.402-2.598	2-E / 6-I		3/4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.598-2.795	3-E / 7-I		3/4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.795-2.992	4-E / 8-I		3/4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	2.992-3.189	5-E		4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	3.189-3.386	6-E		4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	3.386-3.583	7-E		4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		
	3.583-3.780	8-E		4	0.984	0.0787	1.339	0.709	0.116	0.006	0.157		

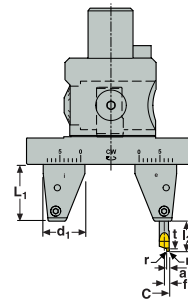
* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

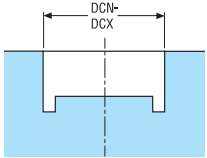
Inch Selection chart:
Grooving tool -against bore- for grooving with MPA, for FB 760 heads

Assembly case 3



Assembly case 4



	Capacity DCN-DCX Ø inch*	Against bore grooving tool Designation	Grooving toolholder position**	Design	Dimensions in inch						Groove max. depth CDX		
					BD	CW	LF	LB	WF	RE			
Select the suitable grooving tool, and note the grooving tool holder position on the MPA to obtain the required groove capacity. 	1.220-1.417	AFG0629 25 1581	0-I	3	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	1.417-1.614		1-I	3	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	1.614-1.811		2-I	3	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	1.811-2.008		3-I	3	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.008-2.205		0-E / 4-I	3/4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.205-2.402		1-E / 5-I	3/4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.402-2.598		2-E / 6-I	3/4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.598-2.795		3-E / 7-I	3/4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.795-2.992		4-E / 8-I	3/4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	2.992-3.189		5-E	4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	3.189-3.386		6-E	4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	3.386-3.583		7-E	4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	3.583-3.780		8-E	4	0.984	0.0984	1.339	0.709	0.116	0.006	0.197		
	Note : An -against bore- grooving assembly requires: • an Axiabore™ Plus - head (A760 03) • a MPA (BDA16BS25100) • an I (internal position) and an E (external position) grooving tool holder (BAS25FGI35 and BAS25FGE35) to either hold a grooving tool or act as a counterweight (see setting position in the chart) • an -against bore- grooving tool (AFG...81) to be selected from the chart, related to groove width and diameter.		1.220-1.417	AFG0629 30 1581	0-I	3	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
			1.417-1.614		1-I	3	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
			1.614-1.811		2-I	3	0.984	0.1181	1.339	0.709	0.116	0.006	0.236
1.811-2.008		3-I	3		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.008-2.205		0-E / 4-I	3/4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.205-2.402		1-E / 5-I	3/4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.402-2.598		2-E / 6-I	3/4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.598-2.795		3-E / 7-I	3/4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.795-2.992		4-E / 8-I	3/4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
2.992-3.189		5-E	4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
3.189-3.386		6-E	4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
3.386-3.583		7-E	4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		
3.583-3.780		8-E	4		0.984	0.1181	1.339	0.709	0.116	0.006	0.236		

* +0,2 mm (0.008") complementary capacity achievable. ** Recommended values in bold.
Detailed description of the grooving tools, see page(s) 601

Instructions

Maximum speeds for Axiabore™ type heads

For further application details refer to the operating instructions supplied with the boring heads and with the GL bars.

Head	Capacity \varnothing mm (inch)	Max. RPM with tool (RPM)	Max. RPM with MPA (RPM)	Max. cutting speed v_c at min. Cap. m/min (sf/min)	Max. cutting speed v_c at max. Cap. m/min (sf/min)
Axiabore™ type with Graflex® connection					
A76001	0,3-8 (0.0118-0.315)	30000	–	28* (92*)	754* (2474*)
A76002	2-20 (0.0787-0.787)	12000	–	75* (246*)	754* (2474*)
A76003	6-108 (0.236-4.25)	8000**	5000	151* (495*)	1000*** (3281***)
A76013	6-33 (0.236-1.30)	20000**	5000	377* (1237*)	1500*** (4921***)
Axiabore™ type with Seco-Capto™ connection					
C5-391.0760-03	6-108 (0.236-4.25)	8000*	5000	151* (495*)	1000** (3281**)

Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (tools and inserts), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the holding arbors and intermediates should be fine balanced. Using balanceable heads and fine balanced holders improves the tool life and the boring performances even at lower speeds.

* Implied max. cutting speed with max. RPM.

** Not reachable with all tools, see ***.

*** Max. cutting speed not to be exceeded

Troubleshooting instructions (also valid for Radial type fine boring heads)

Problem	Possible cause	Solution
Poor tool life	Wrong insert grade	Change to more wear resistant grade
	Excessive cutting speed	Reduce cutting speed
	Excessive DOC	Decrease DOC
Chatter & Vibrations	Excessive cutting speed	Reduce cutting speed
	High L/D ratio	Shorten tool to increase stiffness
		Use stronger boring tool
		Use Steadyline bar
	Wrong insert	Use carbide or heavy metal extensions
		Reduce nose radius of insert
Incorrect stock allowance	Use ground geometry inserts	
Poor hole diameter tolerance & repeatability	Inaccurate tool changes	Change pre-hole diameter
	Variation of stock allowance	Worn and damaged tool shank: replace
	Low spindle stability	Clean spindle and tool shank
Poor roundness	Excessive boring tool imbalance	Add semi-finishing boring step
		Use sharper ground geometry inserts
		Check the spindle runout
		Change to LIBRAFLEX® boring head
	Excessive cutting forces	Check balance ring setting
		Reduce speed
		Check stock allowance and feed rate
Insufficient workpiece clamping	Check for uniform workpiece clamping	
Workpiece non-symmetrical	Reduce cutting forces, change to ground insert	
	Increase cutting speed, reduce feed	
Poor positional tolerance	Original bore misaligned	Add a semi-finishing boring step
	Excessive DOC	Decrease DOC, make two passes
Poor surface finish	Wrong insert radius	Use larger insert radius
	Excessive feed rate	Reduce feed to be max. 30% of insert nose radius
	Poor chip evacuation	Apply through coolant
		Change insert to higher rake angle (HSS: please enquire)
Tapered bore	Premature tool wear	Check DOC
		Change to more wear resistant grade
		Modify cutting speed
		Increase coolant flow

Overview

Introduction

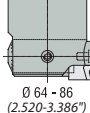
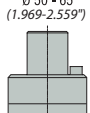
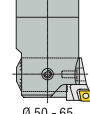
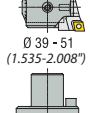
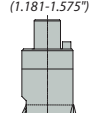
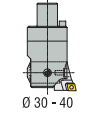
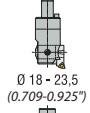
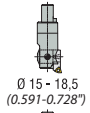
Drilling

Reaming

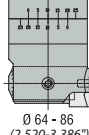
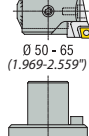
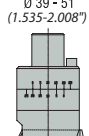
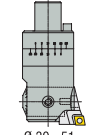
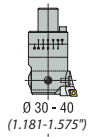
Boring

Annex

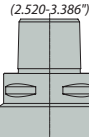
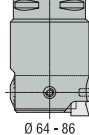
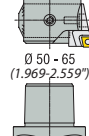
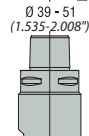
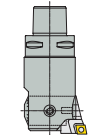
Graflex®



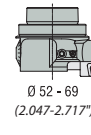
Graflex® balanceable



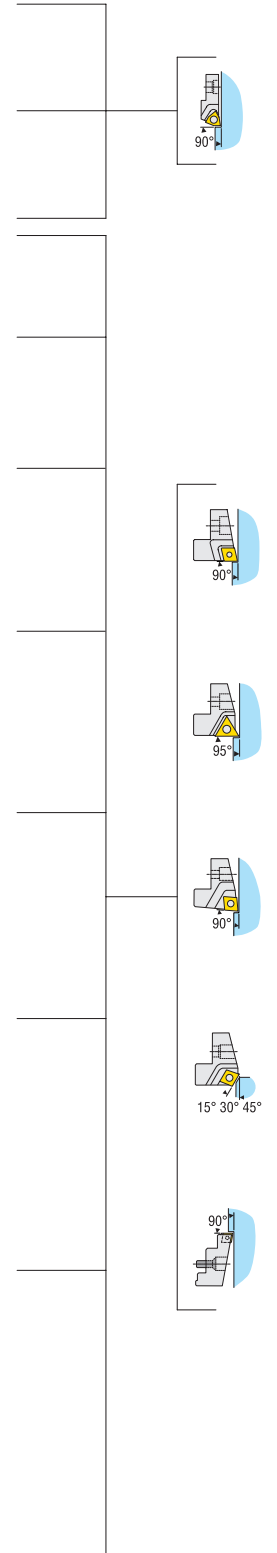
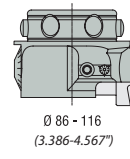
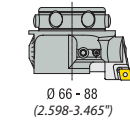
Seco-Capto™



GL connection



BA connection



Fine boring heads – Guide

Features

A radial type fine boring head is an assembly of a body (head) and an insert holder. FB 620, FB 780 and FB 790 radial, fine boring heads feature:

Product range

Seco offers a variety of radial fine boring heads to fulfill all your needs with the most suitable solution:

FB 620, FB 780 and FB 790 radial, fine boring heads



- Micrometric adjustment: Insert holder setting mechanism with a micrometric adjusting screw, 1 increment = 0,01 mm (0.0004") on the diameter and a vernier scale, resolution of 2,5 µm (98.4 µin) on the diameter
- The precision of the mechanism guarantees repeatable accuracy
- Angular orientation of the cutting edge according to DIN 69871/ISO 7388 for SA and ISO 12164 for HSK
- Coolant through the head directed towards the cutting edge
- FB 780 and FB 620 boring heads are pre-balanced on median diameter setting. FB 790 are balanceable, for optimized performance.

Note: Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting, recommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are identical for all types of FB 620, FB 780 and FB 790 fine boring heads of similar boring capacity size, regardless of their machine side connection types.

FB 620 Fine boring heads, radial types, for Steadyline® vibration damping bars



GL



BA

- 4 fine boring heads with GL machine side connection for fine boring Ø 27–69 mm (Ø 1.102–2.717")
- 2 fine boring heads with BA machine side connection for fine boring Ø 66–116 mm (Ø 2.598–4.567")

Their compact design achieves best damping performances when used on Steadyline® GL turning and boring bars.

FB 780 Fine boring heads, radial types

9 precision boring heads with Graflex® machine side connection for fine boring \varnothing 15-205 mm (\varnothing 0.591–8.071") using radially fitted insert holders.

5 precision boring heads with Seco-Capto™ machine side connection for fine boring \varnothing 39–205 mm (\varnothing 1.535–8.071").

Seco-Capto™ adapter and Graflex® head: \varnothing 15-40 mm (\varnothing 0.591– 1.575").

Note: The minimum bore size of the smallest Seco-Capto™ fine boring head is \varnothing 39 mm (\varnothing 1.535") with the smallest available Seco-Capto™ C3 connection. For \varnothing 15-40 mm (\varnothing 0.591–1.575") use Graflex® boring heads with connection sizes G0 to G2 in conjunction with the appropriate Seco-Capto™/Graflex® adaptor. This offers also boring length modularity when using additional Graflex® extensions.

Note: Features, Instructions (insert holder fitting, diameter setting, back boring instructions, troubleshooting, recommended machining conditions, maximum speeds), suitable insert holders and suitable inserts are similar for both types of FB 780 fine boring heads of similar boring capacity size, regardless of connection type.

FB 790 Balanceable fine boring heads, radial type

5 balanceable 'Libraflex®' boring heads with Graflex® machine side connection for fine boring \varnothing 30-115 mm (\varnothing 1.181–4.528"), at high speeds, up to 1500 m/min (4921 sf/min), using radially fitted insert holders.

Balancing reduces spindle stress, cutting parameters can be optimized, better machining qualities are achieved even at conventional speeds.

Balancing is performed by setting both graduated rings in accordance with the diameter to be bored (no chart needed).



Features

Insert holders

A radial type fine boring head is an assembly of a body (head) and an insert holder.

The wide range of fine boring, chamfering and back boring insert holders are suitable for FB 620, FB 780 and FB 790 fine boring heads, radial types.

Fine boring insert holders

FBIH 782: lead angle 90° for WB inserts
 FBIH 724: lead angle 90° for TC inserts
 FBIH 725: lead angle 90° for CC inserts
 FBIH 726: lead angle 95° for CC inserts

Note: 95° lead angle insert holders should be used to avoid face contact when boring up a shoulder.

Chamfering insert holders, \varnothing 23 to 160 mm (\varnothing 0.906–6.299")

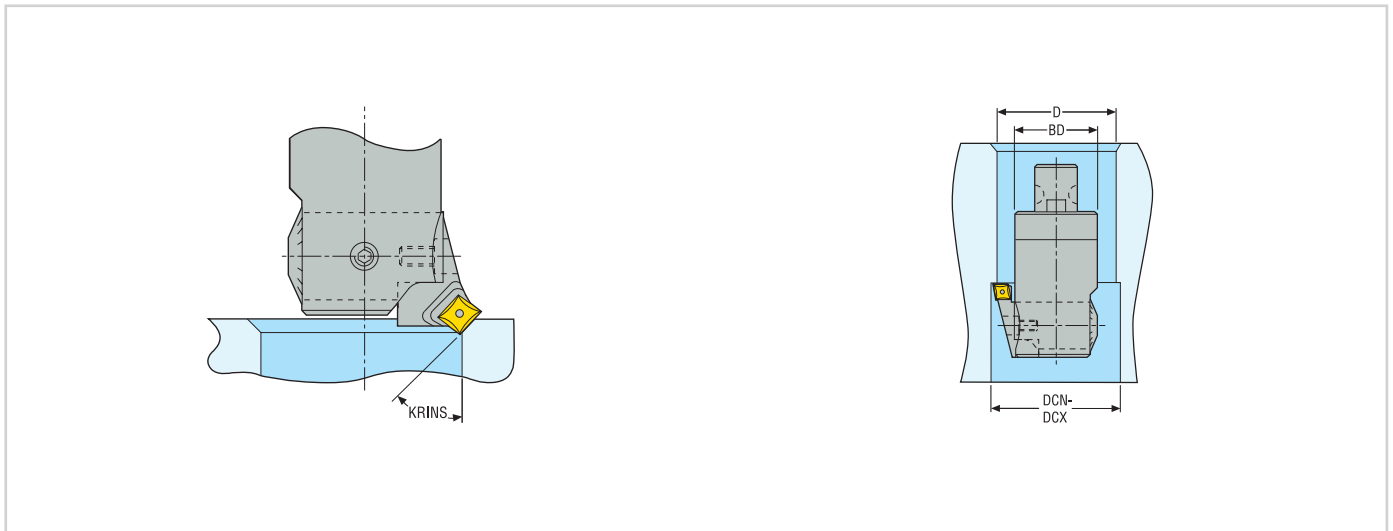
FBIH 729: available with a 15°, 30° or 45° lead angle for CC inserts.

Libraflex® balancing can also be achieved when using chamfering insert holders.

Back-boring insert holders, \varnothing 26,5 to 164 mm (\varnothing 1.043–6.457")

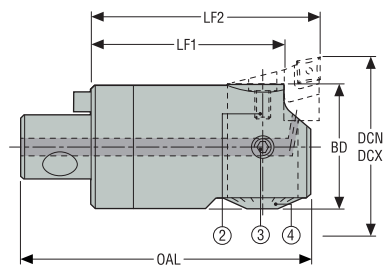
FBIH A789: lead angle 90° for WB and CC inserts.

Libraflex® balancing is not possible when using back-boring insert holders. In this case, the highest unbalance reduction is obtained when both balancing rings are set on their largest graduation.



FB780

Graflex®



- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

2. Assembly screw
3. Locking screw
4. Micrometric adjusting screw


Item number	Designation	Machine side Graflex size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Insert holder size
			DCN-DCX Ø	mm						
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
00056632	A78008	G0	15,0 0.591	18,5 0.728	44,0 1.732	27,5 1.083	35,0 1.378	14,0 0.551	0,1 0.220	09
00056633	A78009	G0	18,0 0.709	23,5 0.925	44,0 1.732	27,5 1.083	35,0 1.378	17,0 0.669	0,1 0.220	09
00072991	A78010	G1	23,0 0.906	31,0 1.220	51,5 2.028	32,5 1.280	40,0 1.575	21,5 0.846	0,11 0.240	10
00072992	A78020	G2	30,0 1.181	40,0 1.575	59,5 2.343	37,5 1.476	45,0 1.772	27,0 1.063	0,22 0.490	20
00072993	A78030	G3	39,0 1.535	51,0 2.008	82,0 3.228	54,5 2.146	65,0 2.559	35,0 1.378	0,5 1.100	30
00072995	A78040	G4	50,0 1.969	65,0 2.559	93,0 3.661	61,5 2.421	72,0 2.835	43,0 1.693	0,9 1.980	40
00072996	A78050	G5	64,0 2.520	86,0 3.386	109,0 4.291	71,5 2.815	82,0 3.228	54,0 2.126	1,49 3.280	50
00056551	A78060	G6	85,0 3.346	144,0 5.669	140,0 5.512	88,5 3.484	105,0 4.134	70,0 2.756	3,2 7.050	60/65
00056552	A78070	G7	114,0 4.488	205,0 8.071	160,0 6.299	98,5 3.878	115,0 4.528	95,0 3.740	6,3 13.890	70/75

Insert holders have to be ordered separately, see page(s) 626, 627-629
Note, weight is without insert holder

Spare Parts, included in delivery

For	Assembly screw	Key	Key (T-handle)	Locking screw	Tenon
A78008	960D30050S	H4B-H2.0	DOUBLE-T	19A7100403	–
A78009	–	H4B-H2.0	DOUBLE-T	19A71000	90M0
A78010	19TB0305	H4B-H2.0	DOUBLE-T	19A71000	90M1
A78020	19TB0305	–	H4B-H2.0	950L0406	90M2
A78030	19TB04075	03M03C	–	950L0608	90M3
A78040	19TB04075	03M03C	–	950L0612	90M4
A78050	950D0410	03M03C	–	950L0616	90M5
A78060	950D0612	H6B-H5.0L	DOUBLE-T	950L1016	90M6
A78070	950D0616	H6B-H5.0L	DOUBLE-T	950L1030	90M7

Accessories

For		Torque key for locking and assembly screws
		
A78008		H00-2009
A78009		H00-2009
A78010		H00-2009
A78020		H00-2009
A78030		H00-3030
A78040		H00-3030
A78050		H00-3030
A78060		H00T-50100
A78070		H00T-50100

Introduction

Drilling

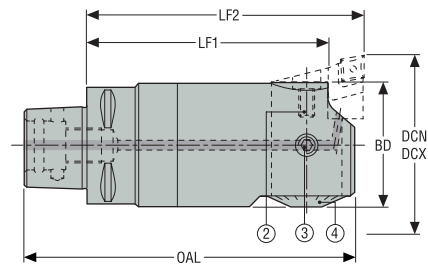
Reaming

Boring

Annex

FB780

Seco-Capto™



- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
2. Assembly screw
 3. Locking screw
 4. Micrometric adjusting screw

Designation	Item number	Machine side Capto size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Insert holder size
			DCN	DCX Ø						
			mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	kg <i>lbs</i>	
C3-391.0780-30	02809740	C3	39,0 1.535	51,0 2.008	86,0 3.386	59,5 2.343	70,0 2.756	35,0 1.378	0,48 1.060	30
C4-391.0780-40	02809742	C4	50,0 1.969	65,0 2.559	103,0 4.055	71,5 2.815	82,0 3.228	43,0 1.693	0,89 1.960	40
C5-391.0780-50	02809744	C5	64,0 2.520	86,0 3.386	119,0 4.685	81,5 3.209	92,0 3.622	54,0 2.126	1,62 3.570	50
C6-391.0780-60	02809745	C6	85,0 3.346	144,0 5.669	150,0 5.906	100,5 3.957	117,0 4.606	70,0 2.756	3,3 7.280	60
C8-391.0780-70	02809747	C8	114,0 4.488	205,0 8.071	181,0 7.126	121,5 4.783	138,0 5.433	95,0 3.740	7,15 15.760	70

Insert holders have to be ordered separately, see page(s) 626, 627-629
Note, weight is without insert holder

Spare Parts, included in delivery

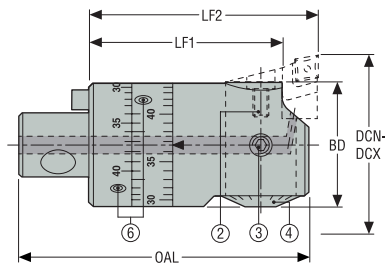
For	Assembly screw	Key	Key (Flag)	Key (T-handle)	Locking screw
C3-391.0780-30					
C4-391.0780-40	19TB04075	–	03M03C	–	950L0612
C5-391.0780-50	950D0410	–	03M03C	–	950L0616
C6-391.0780-60	950D0612	H6B-H5.0L	–	DOUBLE-T	950L0616
C8-391.0780-70	950D0616	H6B-H5.0L	–	DOUBLE-T	950L1030

Accessories

For	Torque key for locking and assembly screws
C3-391.0780-30	
C4-391.0780-40	H00-3030
C5-391.0780-50	H00-3030
C6-391.0780-60	H00T-50100
C8-391.0780-70	H00T-50100

FB790 Libraflex® balanceable

Graflex®



- 6. Locking screw 2
- 2. Assembly screw
- 3. Locking screw 1
- 4. Micrometric adjusting screw

- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
- Balancing by setting both rings in accordance with the diameter to be bored
- For speeds v_c up to 1 495 m/min and more, see page(s) 630

Item number	Designation	Machine side Graflex size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Insert holder size
			DCN-DCX Ø	DCN-DCX Ø						
			mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	kg lbs	
00055932	A79020	G2	30,0 1.181	40,0 1.575	59,5 2.343	37,5 1.476	45,0 1.772	27,0 1.063	0,19 0.420	20
00056005	A79030	G3	39,0 1.535	51,0 2.008	82,0 3.228	54,5 2.146	65,0 2.559	35,0 1.378	0,45 0.990	30
00056006	A79040	G4	50,0 1.969	65,0 2.559	93,0 3.661	61,5 2.421	72,0 2.835	43,0 1.693	0,78 1.720	40
00056007	A79050	G5	64,0 2.520	86,0 3.386	109,0 4.291	71,5 2.815	82,0 3.228	54,0 2.126	1,42 3.130	50
00001451	A79060	G6	85,0 3.346	115,0 4.528	140,0 5.512	88,5 3.484	105,0 4.134	70,0 2.756	2,87 6.330	60

Insert holders have to be ordered separately, see page(s) 626, 627-629
Note, weight is without insert holder

Spare Parts, included in delivery

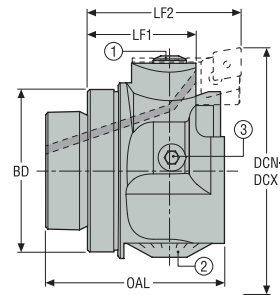
For head	Assembly screw	Key	Key (T-handle)	Locking screw 1	Locking screw 2	Tenon
A79020	19TB0305	H4B-H2.0	DOUBLE-T	950L0406	960D30045S	90M2
A79030	19TB04075	03M03C	-	950L0608	AU7901030	90M3
A79040	19TB04075	03M03C	-	950L0612	AU7901040	90M4
A79050	950D0410	03M03C	-	950L0616	AU7901050	90M51
A79060	950D0612	H6B-H5.0L	DOUBLE-T	950L1016	AU7901060	90M6

Accessories

For head	Torque key for balancing ring locking screws	Torque key for locking and assembly screws
A79020	-	H00-2009
A79030	H00-3020	H00-3030
A79040	H00-3020	H00-3030
A79050	H00-3020	H00-3030
A79060	H00T-5050	H00T-50100

FB 620 GL – Fine boring heads

compact, with GL connection



- Designed for GL25, GL32, GL40 and GL50 Steadyline® turning and boring bars
 - Internal coolant supply towards cutting edge
 - With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)
1. Assembly screw
 2. Micrometric adjusting screw
 3. Locking screw

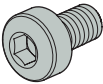



Designation	Item number	Machine side GL size	Workpiece side Capacity		OAL	LF1	LF2	BD	Weight	Max. RPM**
			DCN-DCX Ø							
			mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	mm <i>Inch</i>	kg <i>lbs</i>	
GL25-FB620-10	03307855	GL25	27,0 1.063	35,0 1.378	29,5 1.161	17,7 0.697	28,0 1.102	25,0 0.984	0,2 0.440	9000
GL32-0620-20	02904469	GL32	34,0 1.339	46,0 1.811	35,2 1.386	23,75 0.935	32,1 1.264	32,0 1.260	0,13 0.290	7000
GL40-0620-30	02904470	GL40	42,0 1.654	56,0 2.205	40,7 1.602	24,75 0.974	35,1 1.382	40,0 1.575	0,22 0.490	5600
GL50-0620-40	02904471	GL50	52,0 2.047	69,0 2.717	43,7 1.720	25,75 1.014	36,1 1.421	50,0 1.969	0,32 0.710	4800

Insert holders have to be ordered separately, see page(s) 626, 627-629


** Additional information about max RPM, see Instruction pages.

Note, weight is without insert holder

Spare Parts, included in delivery

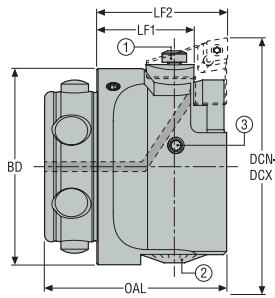
For head	Assembly screw	Clamp key	Key (T-handle)	Locking screw
GL25-FB620-10	 19TB0305	 H2.0-2D	 –	 19A71000
GL32-FB620-20	19TB0305	H4B-H2.0	DOUBLE-T	950L0406
GL40-FB620-30	19TB04075	03M03C	–	950L0608
GL50-FB620-40	19TB04075	03M03C	–	950L0608

Accessories

For head	Torque key for locking and assembly screws
GL25-FB620-10	 –
GL32-FB620-20	H00-2009
GL40-FB620-30	H00-3030
GL50-FB620-40	H00-3030

FB 620 BA – Fine boring heads

with BA connection



- 1. Assembly screw
- 2. Micrometric adjusting screw
- 3. Locking screw



- Designed for BA60 and BA80 Steadyline® turning and boring bars
- Internal coolant supply towards cutting edge
- With micrometric adjusting (increment 0,01 mm and vernier 2,5 µm, on the diameter)

Designation	Item number	Machine side BA size	Workpiece side Capacity DCN-DCX Ø		OAL	LF1	LF2	BD	Weight	Max. RPM**
			mm <i>Inch</i>	mm <i>Inch</i>						
BA060-FB620-50	03204094	BA060	65,0 2.559	87,0 3.425	55,7 2.193	29,7 1.169	40,0 1.575	60,0 2.362	0,7 1.540	4000
BA080-FB620-60	03204095	BA080	85,0 3.346	115,0 4.528	58,2 2.291	26,7 1.051	41,2 1.622	80,0 3.150	1,1 2.430	3000

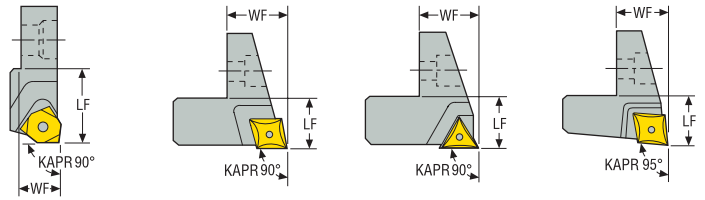
Insert holders have to be ordered separately, see page(s) 583
 ** Additional information about max RPM, see Instruction pages.
 Note, weight is without insert holder

Spare Parts, included in delivery

For head	Assembly screw	Key	Key (Flag)	Key (T-handle)	Locking screw
BA060-FB620-50	19TB04075	–	03M03C	–	950L0608
BA080-FB620-60	950D0514	H6B-H5.0L	–	DOUBLE-T	950L0608

Insert holder

for fine boring heads FB 620/ 780/ 790






- Suitable for radial boring heads FB 620/ 780/ 790
- **The precision balancing of FB A790 heads is not possible when using the large insert holders.

Designation	Item number	Insert holders type	Capacity DCN-DCX ∅		LF	WF	Weight	For boring head	KRINS°	**	Insert holder size	Suitable insert size	Design
			mm Inch	mm Inch									
A78209	00056634	90° for WB inserts	15,0 0.591	23,5 0.925	7,2 0.283	4,0 0.157	0,1 0.220	FB 78008 / FB 78009	90	-	09	WB...0301...	A
A72510	00056580	90° for CC inserts	23,0 0.906	31,0 1.220	10,3 0.406	4,5 0.177	0,1 0.220	FB 78010 / FB62010	90	-	10	CC...0602...	B
A72520	00056581	90° for CC inserts	30,0 1.181	46,0 1.811	8,3 0.327	5,0 0.197	0,1 0.220	FB 78020 / FB 79020 / FB 62020	90	-	20	CC...0602...	B
A72530	00056582	90° for CC inserts	39,0 1.535	56,0 2.205	10,3 0.406	8,0 0.315	0,1 0.220	FB 78030 / FB 79030 / FB 62030	90	-	30	CC...0602...	B
A72540	00056583	90° for CC inserts	50,0 1.969	69,0 2.717	10,3 0.406	9,5 0.374	0,1 0.220	FB 78040 / FB 79040 / FB 62040	90	-	40	CC...0602...	B
A72550	00056584	90° for CC inserts	64,0 2.520	86,0 3.386	10,3 0.406	12,5 0.492	0,1 0.220	FB 78050 / FB 79050 / FB 62050	90	-	50	CC...0602...	B
A7256A	02689978	90° for CC inserts	85,0 3.346	115,0 4.528	14,5 0.571	18,5 0.728	0,05 0.110	BA080-FB620-60	90	-	6A	CC...09T3...	B
A72560	00056585	90° for CC inserts	85,0 3.346	115,0 4.528	16,5 0.650	18,9 0.744	0,2 0.440	FB 78060 / FB 79060 / FB 731S500	90	-	60	CC...09T3...	B
A72565	00056587	90° for CC inserts	114,0 4.488	144,0 5.669	16,5 0.650	33,7 1.327	0,2 0.440	FB 78060 / FB 79060 / FB 731S500	90	**	65	CC...09T3...	B
A72570	00056588	90° for CC inserts	114,0 4.488	160,0 6.299	16,5 0.650	18,9 0.744	0,09 0.200	FB 78070	90	-	70	CC...09T3...	B
A72575	00056589	90° for CC inserts	159,0 6.260	205,0 8.071	16,5 0.650	41,7 1.642	0,2 0.440	FB 78070	90	-	75	CC...09T3...	B
A72430	00056572	90° for TC inserts	39,0 1.535	56,0 2.205	10,3 0.406	7,9 0.311	0,01 0.020	FB 78030 / FB 79030 / FB 62030	90	-	30	TC...1102...	C
A72440	00056573	90° for TC inserts	50,0 1.969	69,0 2.717	10,3 0.406	9,4 0.370	0,02 0.040	FB 78040 / FB 79040 / FB 62040	90	-	40	TC...1102...	C
A72450	00056574	90° for TC inserts	64,0 2.520	86,0 3.386	10,3 0.406	12,4 0.488	0,02 0.040	FB 78050 / FB 79050 / FB 62050	90	-	50	TC...1102...	C
A72460	00056575	90° for TC inserts	85,0 3.346	115,0 4.528	16,3 0.642	18,9 0.744	0,08 0.180	FB 78060 / FB 79060 / FB 731S500	90	-	60	TC...1102...	C
A72465	00056577	90° for TC inserts	114,0 4.488	144,0 5.669	16,5 0.650	33,7 1.327	0,09 0.200	FB 78060 / FB 79060 / FB 731S500	90	**	65	TC...1102...	C
A72470	00056578	90° for TC inserts	114,0 4.488	160,0 6.299	16,3 0.642	18,9 0.744	0,1 0.220	FB 78070	90	-	70	TC...1102...	C
A72475	00056579	90° for TC inserts	159,0 6.260	205,0 8.071	16,5 0.650	41,7 1.642	0,2 0.440	FB 78070	90	-	75	TC...1102...	C
A72610	00056590	95° for CC inserts	23,0 0.906	31,0 1.220	10,3 0.406	4,5 0.177	0,1 0.220	FB 78010	95	-	10	CC...0602...	D
A72620	00056591	95° for CC inserts	30,0 1.181	46,0 1.811	8,3 0.327	5,0 0.197	0,1 0.220	FB 78020 / FB 79020 / FB 62020	95	-	20	CC...0602...	D
A72630	00056592	95° for CC inserts	39,0 1.535	56,0 2.205	10,3 0.406	8,0 0.315	0,1 0.220	FB 78030 / FB 79030 / FB 62030	95	-	30	CC...0602...	D
A72640	00056593	95° for CC inserts	50,0 1.969	69,0 2.717	10,3 0.406	9,5 0.374	0,02 0.040	FB 78040 / FB 79040 / FB 62040	95	-	40	CC...0602...	D

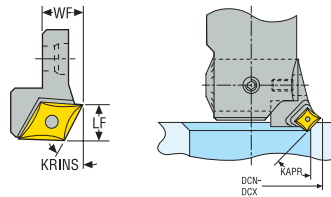
Designation	Item number	Insert holders type	Capacity DCN-DCX \varnothing		LF	WF	Weight	For boring head	KRINS°	**	Insert holder size	Suitable insert size	Design
			mm <i>Inch</i>	mm <i>Inch</i>									
A72650	00056594	95° for CC inserts	64,0 2.520	86,0 3.386	10,3 0.406	12,5 0.492	0,1 0.220	FB 78050 / FB 79050 / FB 62050	95	-	50	CC...0602...	D
A72660	00056595	95° for CC inserts	85,0 3.346	115,0 4.528	16,5 0.650	18,9 0.744	0,2 0.440	FB 78060 / FB 79060 / FB 731S500	95	-	60	CC...09T3...	D
A72665	00056597	95° for CC inserts	114,0 4.488	144,0 5.669	16,5 0.650	33,7 1.327	0,09 0.200	FB 78060 / FB 79060 / FB 731S500	95	**	65	CC...09T3...	D
A72670	00056598	95° for CC inserts	114,0 4.488	160,0 6.299	16,5 0.650	18,9 0.744	0,09 0.200	FB 78070	95	-	70	CC...09T3...	D
A72675	00056599	95° for CC inserts	159,0 6.260	205,0 8.071	16,5 0.650	41,7 1.642	0,12 0.260	FB 78070	95	-	75	CC...09T3...	D

Spare Parts, included in delivery

For insert size	Insert key	Insert screw	Key (T-handle)
			
WB...0301...	H4B-T06P	C02035-T06P	DOUBLE-T
CC...0602...	H4B-T07P	C02504-T07P	DOUBLE-T
CC...09T3...	H4B-T15P	C04008-T15P	DOUBLE-T
TC...1102...	H4B-T07P	C02504-T07P	DOUBLE-T

Chamfering insert holders

for fine boring heads FB 620/ 780/ 790






- Suitable for radial boring heads FB 620/ 780/ 790

Item number	Designation	For boring head	Insert holder size	Capacity DCN-DCX Ø		LF	WF	Weight	KRINS°	Suitable insert size
				mm Inch	mm Inch					
00086885	A72910CC0630	FB 78010	10	23,0 0.906	31,0 1.220	10,8 0.425	4,5 0.177	0,01 0.020	30	CC...0602...
00086888	A72920CC0630	FB 78020 / FB 79020/ GL32-0620-20	20	30,0 1.181	36,0 1.417	10,0 0.394	4,9 0.193	0,01 0.020	30	CC...0602...
00086891	A72930CC0630	FB 78030 / FB 79030 / FB 62030	30	39,0 1.535	56,0 2.205	10,5 0.413	8,1 0.319	0,01 0.020	30	CC...0602...
00086894	A72940CC0630	FB 78040 / FB 79040 / FB 62040	40	50,0 1.969	69,0 2.717	10,5 0.413	9,5 0.374	0,02 0.040	30	CC...0602...
00086897	A72950CC0630	FB 78050 / FB 79050	50	64,0 2.520	86,0 3.386	10,5 0.413	12,5 0.492	0,02 0.040	30	CC...0602...
00086900	A72960CC0930	FB 78060 / FB 79060 / A731S500	60	85,0 3.346	115,0 4.528	16,5 0.650	19,1 0.752	0,08 0.180	30	CC...09T3...
00086903	A72970CC0930	FB 78070	70	114,0 4.488	160,0 6.299	16,4 0.646	18,8 0.740	0,09 0.200	30	CC...09T3...
00086886	A72910CC0645	FB 78010	10	23,0 0.906	31,0 1.220	11,5 0.453	4,5 0.177	0,01 0.020	45	CC...0602...
00086889	A72920CC0645	FB 78020 / FB 79020 / FB 62020	20	30,0 1.181	46,0 1.811	10,0 0.394	5,0 0.197	0,01 0.020	45	CC...0602...
00086892	A72930CC0645	FB 78030 / FB 79030 / FB 62030	30	39,0 1.535	56,0 2.205	10,5 0.413	8,1 0.319	0,01 0.020	45	CC...0602...
00086895	A72940CC0645	FB 78040 / FB 79040 / FB 62040	40	50,0 1.969	69,0 2.717	10,5 0.413	9,5 0.374	0,02 0.040	45	CC...0602...
00086898	A72950CC0645	FB 78050 / FB 79050	50	64,0 2.520	86,0 3.386	10,3 0.406	12,4 0.488	0,02 0.040	45	CC...0602...
00086901	A72960CC0945	FB 78060 / FB 79060 / A731S500	60	85,0 3.346	115,0 4.528	16,5 0.650	19,1 0.752	0,07 0.150	45	CC...09T3...
00086904	A72970CC0945	FB 78070	70	114,0 4.488	160,0 6.299	16,4 0.646	18,8 0.740	0,09 0.200	45	CC...09T3...

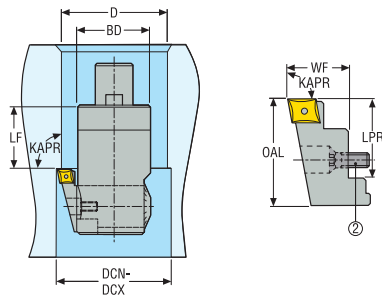
For spare insert screws and spare insert keys, see page(s) 662
 **For capacity DC with Bridge bars and Jumbo Bridge bars, see page 638

Spare Parts, included in delivery

For insert size	Insert key	Insert screw	Key (T-handle)
CC...0602...	 H4B-T07P	 C02504-T07P	 DOUBLE-T
CC...09T3...	H4B-T15P	C04008-T15P	DOUBLE-T

Fine back boring insert holders

for fine boring heads FB 620/ 780/ 790



- Suitable for radial boring heads FB 620/ 780/ 790
- The precision balancing of FB 790 heads is not possible when using back-boring insert holders
- KRINS 90°
- Suitable insert size: CC...0602...

		LF	BD	OAL	LPR	WF	Weight		
		mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)	mm (Inch)	kg (lbs)		
A789X10CC0690	00086907	A78010	39,5-47,5 (1.555-1.870)	16,5 (0.650)	21,5 (0.846)	30,5 (1.201)	12,8 (0.504)		
		A78020 & A79020	46-56 (1.811-2.205)	21,5 (0.846)	27 (1.063)				
		GL32-0620-20	49,7-61,7 (1.957-2.429)	7,75 (0.305)	32 (1.260)				
A789X30CC0690	00086910	A78030 & A79030	53-65 (2.087-2.559)	32 (1.260)	35 (1.378)	30,0 (1.181)	23,0 (0.906)		
		A78040 & A79040	61-76 (2.402-2.992)	39 (1.535)	43 (1.693)				
		A78050 & A79050	69-91 (2.717-3.583)	49 (1.929)	54 (2.126)				
		GL40-0620-30	57,6-70,2 (2.268-2.764)	1,75 (0.069)	40 (1.575)				
		GL50-0620-40	67,6-80,2 (2.661-3.157)	2,75 (0.108)	50 (1.969)				
A789X60CC0690	00086909	A78060 & A79060	89-119 * (3.504-4.685 *)	50 (1.969)	70 (1.969)	50,0 (1.969)	38,5 (1.516)	21,0 (0.827)	0,09 (0.200)
A789X70CC0690	00086911	A78070	118-164 (4.646-6.457)	60 (2.362)	95 (2.362)	50,0 (1.969)	38,5 (1.516)	21,0 (0.827)	0,1 (0.220)

*For Back-boring capacity DC with Bridge bars and Jumbo Bridge bars, see page 642

For spare insert screws and spare insert keys, see page(s) 662

The fine back boring insert holders delivery content includes a specific insert holder clamp screw, to be used instead the standard clamp screw delivered with the boring heads.

DCN/DCX mini = $D+BD / 2 + 0,5$ mm (0.02") from diameter 39,5 to 47,5 (1.555" to 1.870")

DCB/DCX mini = $D+BD / 2 + 1$ mm (0.039") from diameter 46 to 64 (1.811" to 2.520")

Spare Parts, included in delivery

For	Assembly screw	Insert screw	Key	Key (T-handle)
A789X10CC0690	950F0308	C02504-T07P	H4B-T07P	DOUBLE-T
A789X30CC0690	950F0410	C02504-T07P	H4B-T07P	DOUBLE-T
A789X60CC0690	-	C02504-T07P	H4B-T07P	DOUBLE-T
A789X70CC0690	-	C02504-T07P	H4B-T07P	DOUBLE-T

FB 780/ 790 Fine boring heads – Instructions

Recommended machining conditions

For further application details refer to the operating instructions supplied with the boring heads and with the GL bars.

Maximum speeds for fine boring heads, radial type

The maximum speeds shown in boring heads Product pages are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.

By boring applications with Steadyline® bars, make sure not to overpass the max. RPM of the bars: See the Operating instructions supplied with the Steadyline® bars.

Below max. RPM are for boring heads equipped with boring insert holders or chamfering insert holders. When using back boring insert holders on holders on FB 620, FB 790 or FB 780 heads type heads, use max. RPM for A780.. type, similar size.

Head	Capacity \varnothing mm (inch)	Max. RPM	Implied max cutting speed v_c at min. Cap. m/min (sf/min)	Implied max cutting speed v_c at max. Cap. m/min (sf/min)
FB 620 Fine boring heads, with GL and BA machine side connection, for Steadyline® vibration damping turning and boring bars				
GL25-FB620-10	27-35 (1.063-1.378)	9000	760 (2493)	1000 (3281)
GL32-FB620-20	34-46 (1.339-1.811)	7000	748 (2454)	1012 (3320)
GL32-FB620-30	42-56 (1.654-2.205)	5600	739 (2425)	985 (3232)
GL32-FB620-40	52-69 (2.047-2.717)	4800	784 (2572)	1040 (3412)
BA060-FB620-50	66-88 (2.598-3.465)	4000	830 (2723)	1105 (3625)
BA080-FB620-60	86-116 (3.386-4.567)	3000	810 (2657)	1093 (3586)
FB 790 Fine boring heads, balanceable, with Graflex® connection				
A79020	30-40 (1.181-1.575)	16000	1508 (4948)	2011 (6598)
A79030	39-51 (1.535-2.008)	12250	1501 (4925)	1963 (6440)
A79040	50-65 (1.969-2.559)	10000	1571 (5154)	2042 (6699)
A79050	64-86 (2.520-3.386)	7500	1508 (4948)	2026 (6647)
A79060	85-115 (3.346-4.528)	5600	1495 (4905)	2023 (6637)
FB 780 Fine boring heads, with Graflex® connection				
A78008	15-18,5 (0.591-0.728)	16000	754 (2474)	930 (3051)
A78009	18-23,5 (0.709-0.925)	13000	735 (2411)	960 (3150)
A78010	23-31 (0.906-1.220)	10000	723 (2372)	974 (3196)
A78020	30-40 (1.181-1.575)	8000	754 (2474)	1005 (3297)
A78030	39-51 (1.535-2.008)	6000	735 (2411)	961 (3153)
A78040	50-65 (1.969-2.559)	5000	785 (2575)	1021 (3350)
A78050	64-86 (2.520-3.386)	3700	744 (2441)	1000 (3281)
A78060	85-115 (3.346-4.528)	2700	721 (2365)	975 (3199)
	114-144 (4.488-5.669)	2200	788 (2585)	995 (3264)
A78070	114-160 (4.488-6.299)	2000	716 (2349)	1005 (3297)
	159-205 (6.260-8.071)	1600	799 (2621)	1030 (3379)
FB 780 Fine boring heads, with Seco-Capto™ connection				
C3-391.0780-30	39-51 (1.535-2.008)	6000	735 (2411)	961 (3153)
C4-391.0780-40	50-65 (1.969-2.559)	5000	785 (2575)	1021 (3350)
C5-391.0780-50	64-86 (2.520-3.386)	3700	744 (2441)	1000 (3281)
C6-391.0780-60	85-115 (3.346-4.528)	2700	721 (2365)	975 (3199)
	114-144 (4.488-5.669)	2200	788 (2585)	995 (3264)
C8-391.0780-70	114-160 (4.488-6.299)	2000	716 (2349)	1005 (3297)
	159-205 (6.260-8.071)	1600	799 (2621)	1030 (3379)

Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle. At speeds from approx. 8000 RPM and above, the basic holders and the extensions/reducers should be fine balanced.

Introduction

Drilling

Reaming

Boring

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Bridge bars

Seco offers a complete range of Bridge Bars and Jumbo Bridge Bars for large diameter boring and overturning operations.

- Designed for maximum flexibility, Bridge Bars are available in a large range of diameters as standard products, covering a diameter range of 204 - 655 mm (8.03 - 25.78 inch)
- Seco Jumbo Bridge Bars are made of high tensile aluminum with steel interfaces, and cover the 654 - 2155 mm (25.75 - 84.843 inch) diameter range

Overview

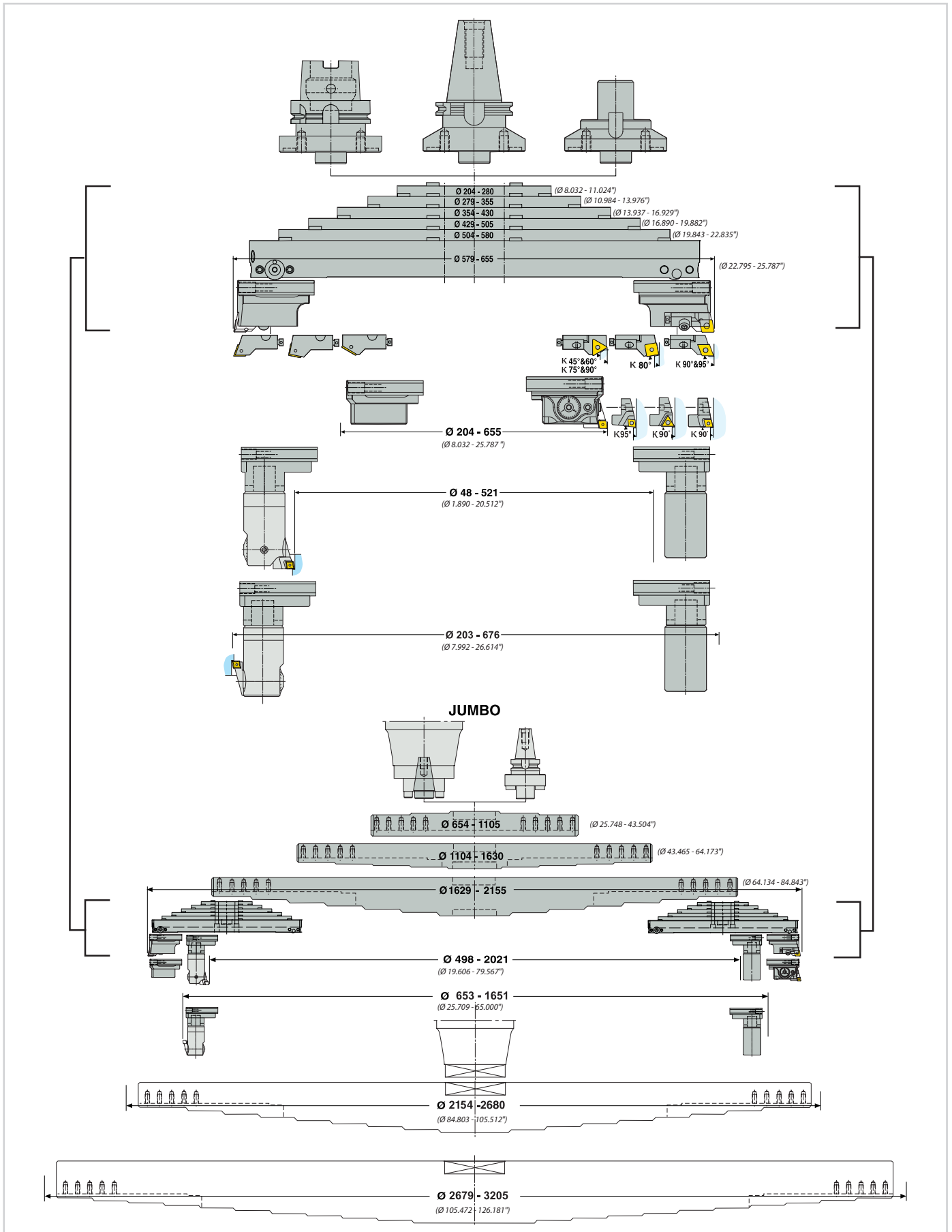
Introduction

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Features

5 Bridge bars for boring

Ø 654–3205 mm (Ø 25.748–126.181"), also OD-overturning Ø 498–3071 mm (Ø 19.606–120.906") and back-boring Ø 653–3226 mm (Ø 25.709–127.008").

Jumbo Bridge bars made of high tensile aluminium with spindle steel interfaces, are designed to hold two classic Bridge bars in several positions.

Sizes A731S001, 002, 003 are delivered with 4 locking screws to be fitted onto a milling cutter holder, flange mounting Type 569, spigot Ø 60 mm (Ø 2.362") - or to be fitted directly onto the machine spindle (DIN 2079/50 workpiece side), using the centering spigot shown in accessories. Jumbo Bridge bars are delivered with two lifting rings.

Sizes A731S004-...* and A731S005-...* are available on request, with standard or specific spindle fitting possibilities, according to the machine:

Capacity Ø mm (inch)	Designation	DCB	Dimensions in mm (inch), see drawing on Product page						Weight
			LF	HTB	LB	CBDP	WB	DCON	
2154-2680 (84.803-105.512")	A731S004-...*	*	70 (2.75591")	300 (11.811")	160 (6.29921")	*	2140 (84.25197")	*	*
2679-3205 (105.472-126.181")	A731S005-...*	*	110 (4.33071")	400 (15.748")	200 (7.87402")	*	2665 (104.9213")	*	*

* designation code and dimensions will be completed related to the spindle fitting type.

Main features Jumbo Bridge bars

The Jumbo Bridge bars 'S' feature through coolant channels to feed the coolant from the holder or the flange mount towards the two standard Bridge bars, and have a complementary locking screw of the standard Bridge bars.

Note! These new Jumbo Bridge bars 'S' can hold all classic Bridge bars (the new 'S', or the previous ones): when using the previous ones, the complementary clamping screw cannot be used. Through coolant to the cutting edge is only possible when using 'S' Jumbo Bridge bars and 'S' standard Bridge bars. In order to keep balance, do not mix new and previous standard Bridge Bars and blocks on the same Jumbo Bridge bar.

Features

6 Bridge bars for boring

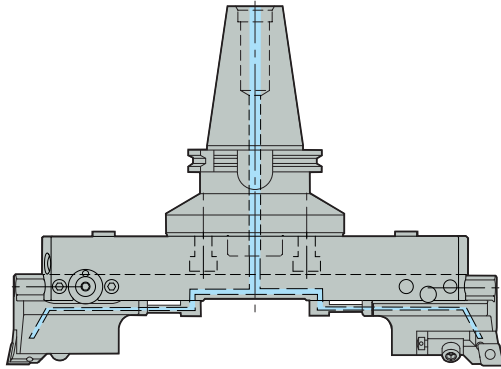
Ø 204–655 mm (Ø 8.032–25.787") also OD-overturning Ø 48–521 mm (Ø 1.890–20.512") and back-boring.

Bridge bars have a machine side connection Ø 130 mm (Ø 5.118") for direct fitting onto arbors for Bridge bars (SA and HSK) or onto the Graflex® adapter.

When using the Graflex® adapter, extensions are possible as well as spindle flange clamping, see Graflex® modular system. Angular position of the Bridge bar every 30° onto the arbors or Graflex® adapter, for optimized magazine storage.

Bridge bars can hold rough, fine, counterweight or Graflex® boring blocks. The boring blocks are locked onto the Bridge bar by means of two cylinders actuated by three clamping screws: One of the clamping screws has a stop disc, which limits the block's sliding stroke inside its setting capacity and stops the block from sliding out of the Bridge bar. Precise and step free block sliding for diameter adjustment 38 mm (Ø 1.496") stroke on radius, using the block's adjusting screw which is linked to the retaining pin of the Bridge bar.

Coolant through the Bridge bars and the boring blocks, towards the cutting edges.



For the Bridge bar and Jumbo Bridge bar selection, related to the boring, OD-overturning or back-boring diameter to be produced, see Bridge bar selection charts, page(s) 637-642.

Max RPM, see page(s) 648.

Note! These Bridge bars (Part No. A731S 0_0) cannot hold previous types of boring blocks (Part No. A731 _00 -without S-).

Features

Rough boring block

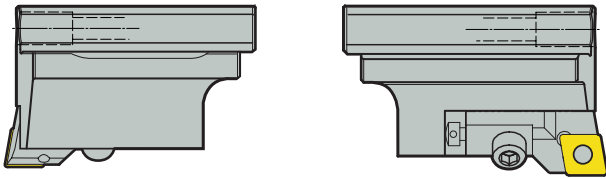
A large twin rough boring head requires two rough boring blocks, each equipped with a cartridge. Rough boring block through coolant, towards the cutting edge.

When using the Graflex® adapter, extensions are possible as well as spindle flange clamping, see Graflex® modular system.

Angular position of the Bridge bar every 30° onto the arbors or Graflex® adapter, for optimized magazine storage.

Bridge bars can hold rough, fine, counterweight or Graflex® boring blocks.

Cartridges



A large range of cartridges is available:

- Cartridges with 90° lead angle, recommended in most of the boring applications for a lower power consumption.
- Cartridges with 80° lead angle, recommended for through hole boring (and chamfering), particularly in cast iron to avoid exit failure. The power consumption is higher.
- Other cartridges with ISO5611/h1 = 16 mm (0.629") fitting interface are suitable.

NOTE! The two cartridges can be set on the same diameter (symmetrical boring) or in a staggered position (staggered boring). A cartridge raising corner shim is available as an accessory (Part No. 18LS0316). Assembling and setting procedures, see page(s) 637-642.

Fine boring block and counterweight block

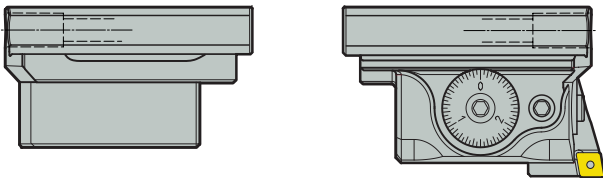
A large fine boring head requires one fine boring block equipped with an insert holder and one counterweight block.

Diameter setting mechanism of the fine boring block with a micrometric setting screw (1 increment = 5 μm (197 μin) on the diameter). The setting system is protected and lubricated for life.

The precision of the mechanism guarantees repeatable accuracy. The diameter adjusting screw is located on the side of the block to offer easy access.

Fine boring block through coolant, towards the cutting edge.

Suitable fine boring insert holders A72460, A72560 or A72660



Suitable fine boring insert holders A72460, A72560 or A72660 have to be ordered separately: they are the same as on radial type fine boring heads, see page(s) 626, 627.

Assembling and setting procedures, see page(s) 637-642.

Features

Graflex® boring blocks, for OD-overturning or back-boring

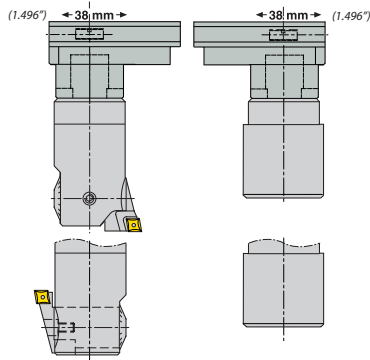
This block has a female Graflex® front connection size G5.

Any Graflex® boring head, special tool or standard Graflex® module size G5 can be mounted onto the Bridge bars, e.g. the drawing showing set-ups for OD-overturning or back-boring using two Graflex® boring blocks fitted with a Graflex® fine boring head A78050 with insert holder (e.g. A72550 for OD-turning) a OD-turning insert holder (e.g. A789X30CC0690) and a Graflex® counterweight (e.g. Part No. BM050W78050).

Two positions of the Graflex® module are possible on the block, as it has 2x2 ball nose screw positions, and two tenon notches placed at 180°. Block and boring head through coolant, towards the cutting edge.

Assembling and setting procedures, see page(s) 637-642.

Graflex® boring blocks, for OD-overturning or back-boring



These boring blocks (Part No. A731S 400, A731S 500, A731S 600, A731S 40128) can also be fitted onto the previous type of Bridge bars (Part No. A731 0_0 -without S-).

Assembling and max. RPM instructions of the previous type of Bridge bars being valid.

In order to keep balance, do not mix new and previous blocks on the same Bridge bar.

NOTE! These new boring blocks can also be fitted onto the previous type of Bridge bars

Advice for 'through coolant' accessories selection

Roughing (Bridge bar with 2 rough boring blocks):

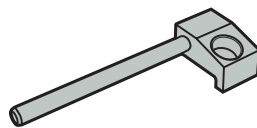
For directable coolant supply onto both cutting edges, use 2 coolant pipe connectors (Part No. AU731S00700), to be mounted onto the Bridge Bar, and 2 directable coolant supply nozzle sets (Part No. AU731S40700), to be mounted onto each rough boring block. For normal through coolant from the block's channel, use 2 coolant pipe connectors (Part No. AU731S00700), to be mounted onto the Bridge Bar.

Fine boring (Bridge bar with 1 fine boring block & 1 counterweight):

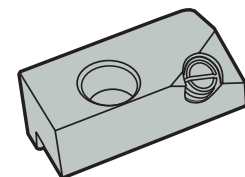
Use 1 coolant pipe connector (Part No. AU731S00700), to be mounted onto the Bridge Bar in order to connect the fine boring block. As the fine boring block originally features a coolant supply nozzles, directable coolant supply is directly obtained.
OD-overturning (e.g. Bridge bar with 2 Graflex® boring blocks equipped with one fine boring head and one counterweight): Use 1 coolant pipe connector (Part No. AU731S00700), to be mounted onto the Bridge bar in order to connect the Graflex® boring block with fitted boring head. Graflex® boring block's central coolant channel will feed coolant into the fitted boring head



Coolant pipe connector
(Part No. AU731S00700)



Directive coolant supply nozzle set
(Part No. AU731S40700)



NOTE! Allowable coolant pressure = 70 bars maximum.

Building Bridge bar boring assemblies

A rough boring assembly up to $\varnothing 655$ mm requires ($\varnothing 25.787$): 1 Bridge bar (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.

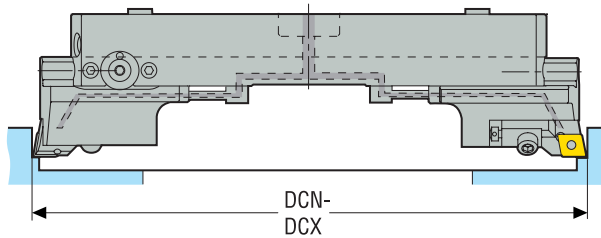


Fig. 1

A fine boring assembly up to $\varnothing 655$ mm requires ($\varnothing 25.787$): 1 Bridge bar (A731S 0_0) + 1 fine boring block (A731S 500) with 1 fine boring insert holder size 60** + 1 counterweight block (A731S 600).

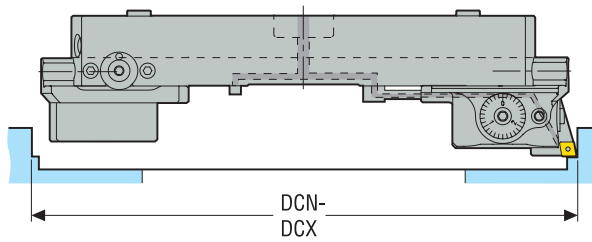


Fig. 2

A rough boring assembly up to $\varnothing 3205$ mm ($\varnothing 126.181$) requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.

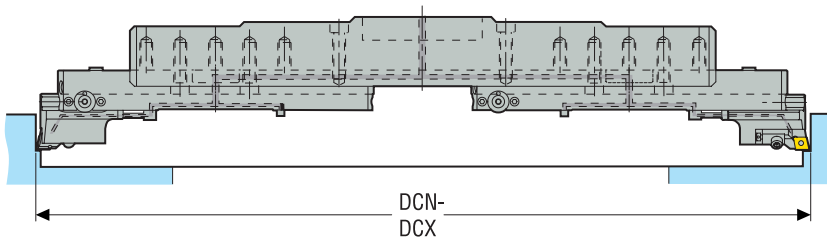


Fig. 3

A fine boring assembly up to $\varnothing 3205$ mm ($\varnothing 126.181$) requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 1 fine boring block (A731S 500) with 1 fine boring insert holder size 60** + 1 counterweight block (A731S 600).

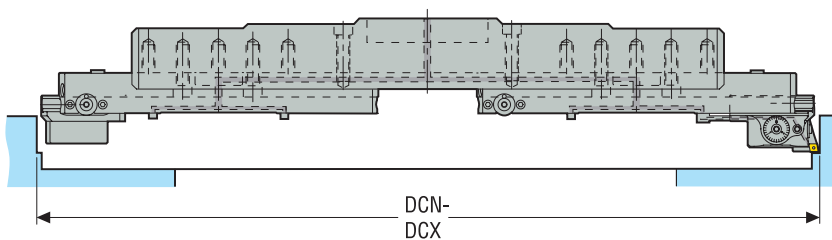


Fig. 4

* Cartridges to be ordered separately.

** Insert holders to be ordered separately.

Building Bridge bar boring assemblies: Bridge bar(s) selection chart to build a required BORING diameter

	For boring DCN-DCX Ø mm	For boring DCN-DCX Ø inch	Jumbo Bridge bar	Classic Bridge bar(s)	For rough boring		For fine boring	
						Fig.		Fig.
Introduction	204-280	8.031-11.024	–	A731S 010	2x A731S 400 + 2 cartridges	1	A731S 500 + 1 insert holder + A731S 600	2
	279-355	10.984-13.976	–	A731S 020				
	354-430	13.937-16.929	–	A731S 030				
	429-505	16.890-19.882	–	A731S 040				
	504-580	(19.843-22.835	–	A731S 050				
	579-655	22.795-25.787	–	A731S 060				
Drilling	654-805	25.748-31.693	A731S 001	2x A731S 010	2x A731S 400 + 2 cartridges	3	A731S 500 + 1 insert holder + A731S 600	4
	654-880	25.748-34.646		2x A731S 020				
	804-955	31.654-37.598		2x A731S 030				
	879-1030	34.606-40.551		2x A731S 040				
	1029-1105	40.512-43.504		2x A731S 050				
	1104-1255	43.465-49.409	A731S 002	2x A731S 010	2x A731S 400 + 2 cartridges	3	A731S 500 + 1 insert holder + A731S 600	4
	1104-1330	43.465-52.362		2x A731S 020				
	1179-1405	46.417-55.315		2x A731S 030				
	1254-1480	49.370-58.268		2x A731S 040				
	1329-1555	52.323-61.220		2x A731S 050				
	1404-1630	55.276-64.173		2x A731S 060				
	1629-1780	64.134-70.079	A731S 003	2x A731S 010	2x A731S 400 + 2 cartridges	3	A731S 500 + 1 insert holder + A731S 600	4
	1629-1855	64.134-73.031		2x A731S 020				
	1704-1930	67.087-75.984		2x A731S 030				
	1779-2005	70.039-78.937		2x A731S 040				
	1854-2080	72.992-81.890		2x A731S 050				
	1929-2155	75.945-84.843		2x A731S 060				
	Reaming	2154-2305	84.803-90.748	A731S 004	2x A731S 010	2x A731S 400 + 2 cartridges	3	A731S 500 + 1 insert holder + A731S 600
2154-2380		84.803-93.701	2x A731S 020					
2229-2455		87.756-96.654	2x A731S 030					
2304-2530		90.709-99.606	2x A731S 040					
2379-2605		93.661-105.512	2x A731S 050					
2454-2680		96.614-105.512	2x A731S 060					
2679-2830		105.472-111.417	A731S 005	2x A731S 010	2x A731S 400 + 2 cartridges	3	A731S 500 + 1 insert holder + A731S 600	4
2679-2905		105.472-114.370		2x A731S 020				
2754-2980		108.425-117.323		2x A731S 030				
2829-3055		111.378-120.276		2x A731S 040				
2904-3130	114.331-123.228		2x A731S 050					
2979-3205	117.283-126.181		2x A731S 060					

Building Bridge bar OD-overturning assemblies:

A fine OD-overturning assembly up to $\varnothing 521$ mm ($\varnothing 20.512$ ") requires: 1 Bridge bar (A731S 0_0) + 2 Graflex® blocks (2x A731S 40128) + e.g. 1 fine boring head (A780 50) with 1 fine boring insert holder size 60* + 1 counterweight (BM050W78050).

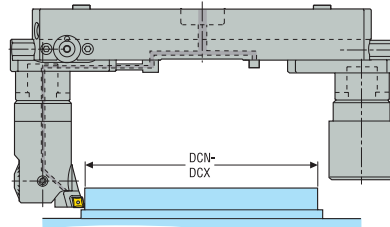


Fig. 1

A rough boring assembly up to $\varnothing 3205$ mm ($\varnothing 120.906$ ") requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + 2 rough boring blocks (2x A731S 400) with 2 cartridges*.

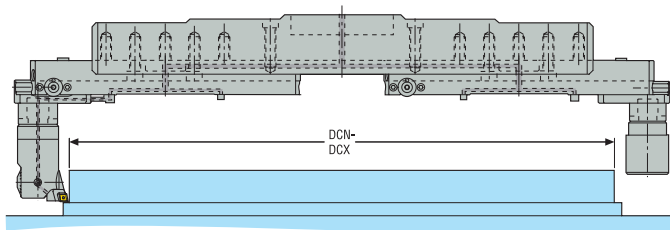


Fig. 2

* Insert holders to be ordered separately.

Building Bridge bar OD-overturning assemblies: Bridge bar(s) selection chart to build a required OD-overturning diameter

For OD-overturning DCN-DCX Ø mm	For OD-overturning DCN-DCX Ø inch	Jumbo Bridge bar	Classic Bridge bar(s)	For fine OD-overturning	Fig.
48-146	1.890-5.748	–	A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	1
123-221	4.843-8.701	–	A731S 020		
198-296	7.795-11.654	–	A731S 030		
273-371	10.748-14.606	–	A731S 040		
348-446	13.701-17.559	–	A731S 050		
423-521	16.654-20.512	–	A731S 060		
498-671	19.606-26.417	A731S 001	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
498-746	19.606-29.370		2x A731S 020		
648-821	25.512-32.323		2x A731S 030		
723-896	28.465-35.276		2x A731S 040		
873-971	34.370-38.228		2x A731S 050		
948-1121	37.323-44.134	A731S 002	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
948-1196	37.323-47.087		2x A731S 020		
1098-1271	43.228-50.039		2x A731S 030		
1173-1346	46.181-52.992		2x A731S 040		
1323-1421	52.087-55.945		2x A731S 050		
1398-1496	55.039-58.898		2x A731S 060		
1473-1646	57.992-64.803	A731S 003	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
1473-1721	57.992-67.756		2x A731S 020		
1623-1796	63.898-70.709		2x A731S 030		
1698-1871	66.850-73.661		2x A731S 040		
1848-1946	72.756-76.614		2x A731S 050		
1923-2021	75.709-79.567		2x A731S 060		
1998-2171	78.661-85.472	A731S 004	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
1998-2246	78.661-88.425		2x A731S 020		
2148-2321	84.567-91.378		2x A731S 030		
2223-2396	87.520-94.331		2x A731S 040		
2373-2471	93.425-97.283		2x A731S 050		
2448-2546	96.378-100.236		2x A731S 060		
2523-2696	99.331-106.142	A731S 005	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 insert holder + 1x BM050W78050	2
2523-2771	99.331-109.094		2x A731S 020		
2973-2846	117.047-112.047		2x A731S 030		
2748-2921	108.189-115.000		2x A731S 040		
2898-2996	114.094-117.953		2x A731S 050		
2973-3071	117.047-120.906		2x A731S 060		

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Building Bridge bar back-boring assemblies:

A fine back-boring assembly up to Ø 676 mm (Ø 26.614") requires: 1 Bridge bar (A731S 0_0) + 2 Graflex® blocks (2x A731S 40128) + e.g. 1 fine boring head (A780 50) with 1 back boring insert holder size 50* + 1 counterweight (BM050W78050).

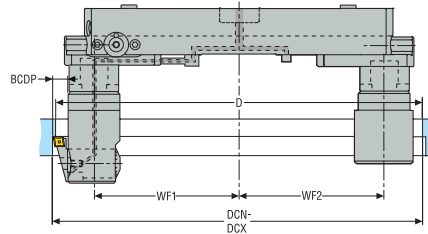


Fig. 1

A fine back-boring assembly up to Ø 3226 mm (Ø 127.008 ") requires: 1 Jumbo Bridge bar (A731S 00_) + 2 Bridge bars (A731S 0_0) + e.g. 1 fine boring head (A780 50) with 1 back boring insert holder size 50* + 1 counterweight (BM050W78050).

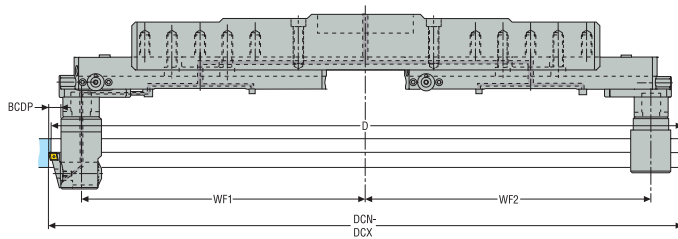


Fig. 2

* Insert holders to be ordered separately.

Determination of minimum access diameter (D min)

Balancing condition: $WF1 = WF2$

$$D_{min} = DC + 5 - BCDP$$

BCDP = distance between insert's cutting edge and fitted boring head's A78050 body (7,5 < BCDP < 18,5).

The two extreme cases:

Boring head A78050 set to capacity mini: $D_{min} = DCN - 2,5$
 Boring head A78050 set to capacity maxi: $D_{min} = DCX - 13,5$

Building Bridge bar back-boring assemblies: Bridge bar(s) selection chart to build a required BACK-BORING diameter

For back boring DCN-DCX \varnothing mm	For back boring DCN-DCX \varnothing inch	Jumbo Bridge bar	Classic Bridge bar(s)	For fine back-boring	Fig.
203-301	7.992-11.850	-	A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	1
278-376	10.945-14.803	-	A731S 020		
353-451	13.898-17.756	-	A731S 030		
428-526	16.850-20.709	-	A731S 040		
503-601	19.803-23.661	-	A731S 050		
578-676	22.756-26.614	-	A731S 060		
653-826	25.709-32.520	A731S 001	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
653-901	25.709-35.472		2x A731S 020		
803-976	31.614-38.425		2x A731S 030		
878-1051	34.567-41.378		2x A731S 040		
1028-1126	40.472-44.331		2x A731S 050		
1103-1276	43.425-50.236	A731S 002	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
1103-1351	43.425-53.189		2x A731S 020		
1253-1426	49.331-56.142		2x A731S 030		
1328-1501	52.283-59.094		2x A731S 040		
1478-1576	58.189-62.047		2x A731S 050		
1553-1651	61.142-65.000		2x A731S 060		
1628-1801	64.094-70.906	A731S 003	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
1628-1876	64.094-73.858		2x A731S 020		
1778-1951	70.000-76.811		2x A731S 030		
1853-2026	72.953-79.764		2x A731S 040		
2003-2101	78.858-82.717		2x A731S 050		
2078-2176	81.811-85.669		2x A731S 060		
2153-2326	84.764-91.575	A731S 004	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
2153-2401	84.764-94.528		2x A731S 020		
2303-2476	90.669-97.480		2x A731S 030		
2378-2551	93.622-100.433		2x A731S 040		
2528-2626	99.528-103.386		2x A731S 050		
2603-2701	102.480-106.339		2x A731S 060		
2678-2851	105.433-112.244	A731S 005	2x A731S 010	2x A731S 40128 + 1x A780 50 + 1 back boring insert holder + 1x BM050W78050	2
2678-2926	105.433-115.197		2x A731S 020		
2828-3001	111.339-118.150		2x A731S 030		
2903-3076	114.291-121.102		2x A731S 040		
3053-3151	120.197-124.055		2x A731S 050		
3128-3226	123.150-127.008		2x A731S 060		

Introduction

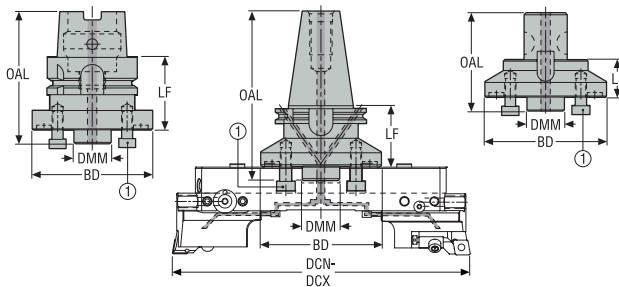
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ABB 731 200 – Holders and adapter for Bridge bars



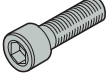



1. Adjusting screw

- HSK and SA holders for short assemblies
- Graflex® adapter for extended assemblies
- Angular position of the Bridge bar every 30°
- Delivered with a spigot sealing o-ring $\varnothing 58 \times 3$ mm

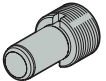

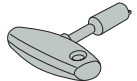


Designation	Item number	Machine side connection	Size	Workpiece side Capacity		OAL	LF	BD	DMM	Weight
				DCN-DCX \varnothing						
				mm	mm	mm	mm	mm	mm	kg
				Inch	Inch	Inch	Inch	Inch	Inch	lbs
E3471731200	02503392	DIN 69871-ADB	DIN50 ADB	204,0 8.031	655,0 25.787	166,75 6.565	65,0 2.559	130,0 5.118	40,0 1.575	5,74 12.650
E3416731200	02503393	BT JIS B 6339-ADB	BT50 ADB	204,0 8.031	655,0 25.787	166,75 6.565	65,0 2.559	130,0 5.118	40,0 1.575	5,64 12.430
E9306731200	02417268	ISO 12164-1/ DIN69893-A	HSK-A100	204,0 8.031	655,0 25.787	115,0 4.528	65,0 2.559	130,0 5.118	40,0 1.575	4,72 10.410
A731200	00056616	GRAFLEX	G7	204,0 8.031	655,0 25.787	90,0 3.543	40,0 1.575	130,0 5.118	40,0 1.575	3,78 8.330

Spare Parts, included in delivery

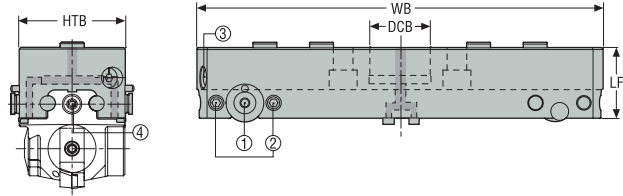
For	Assembly screw	Key	Sealing Screws	Tenon
				
E3471731200	950D1230	10SMS795	950A0606	-
E3416731200	950D1230	10SMS795	950A0606	-
E9306731200	950D1230	10SMS795	-	-
A731200	950D1230	10SMS795	-	90M7

Accessories

For	Coolant tube	Sealing plugs	Spanner
			
E3471731200	-	-	-
E3416731200	-	-	-
E9306731200	20E9306	02E9306	03E9306
A731200	-	-	-

Tightening torque 80 Nm. For application details, refer to the operating instructions supplied with the Bridge bars and Boring blocks.
Accessories, to be ordered separately

BB 731S0x0 – Bridge bars

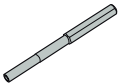





- Coolant through the Bridge bar

1. Locking screw with stop disc
2. Locking screw
3. Retaining pin
4. Diameter setting screw

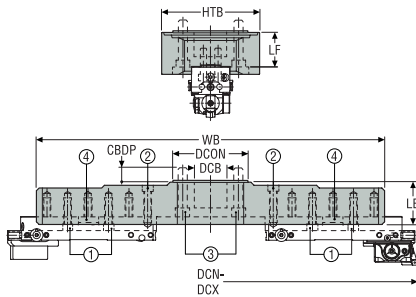
Designation	Item number	Workpiece side Capacity DCN-DCX Ø		HTB	WB	DCB	LF	Weight
		mm <i>Inch</i>	mm <i>Inch</i>					
A731S010	02753664	204,0 8.031	280,0 11.024	70,0 2.756	195,0 7.677	40,0 1.575	47,0 1.850	3,6 7.940
A731S020	02753668	279,0 10.984	355,0 13.976	70,0 2.756	269,0 10.591	40,0 1.575	47,0 1.850	4,92 10.850
A731S030	02753670	354,0 13.937	430,0 16.929	70,0 2.756	344,0 13.543	40,0 1.575	47,0 1.850	6,4 14.110
A731S040	02753673	429,0 16.890	505,0 19.882	70,0 2.756	419,0 16.496	40,0 1.575	47,0 1.850	7,9 17.420
A731S050	02753675	504,0 19.843	580,0 22.835	70,0 2.756	494,0 19.449	40,0 1.575	47,0 1.850	10,4 22.930
A731S060	02753677	579,0 22.795	655,0 25.787	70,0 2.756	569,0 22.402	40,0 1.575	47,0 1.850	12,3 27.120

Spare Parts, included in delivery

For DCN-DCX	Key	Key (T-handle)	Locking key	Locking screw
204-655	 H6B-H5.0L	 DOUBLE-T	 03HL05	 19A71060

Tightening torque 20 Nm of the locking screws (2) and locking screw with stop disc (1).
Before diameter setting, make sure retaining pin is engaged. For application details, refer to the operating instructions supplied with the Bridge bars and boring blocks.
Max RPM, see page(s) 648 *For OD-overturning capacities, see Guide page(s) 639-640
For larger diameters, see Jumbo Bridge bars on page(s) 645

JBB 731S00 – Jumbo Bridge bars



- Jumbo Bridge bars are designed to hold two classic Bridge bars in several positions
- Through coolant Jumbo Bridge bars

1. Assembly screw
2. Locking screw
3. Fixing screw
4. Sealing plug

Designation	Item number	Workpiece side Capacity		HTB	LF	WB	DCON	DCB	CBDP	LB	Weight	**										
		DCN-DCX Ø	mm										mm									
		mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lbs									
A731S001	02828506	654,0	25.748	1105,0	43.504	180,0	7.087	63,0	2.480	640,0	25.197	135,0	5.315	60,0	2.362	24,0	0.945	77,0	3.031	20,25	44.640	-
A731S002	02828516	1104,0	43.465	1630,0	64.173	200,0	7.874	50,0	1.969	1090,0	42.913	135,0	5.315	60,0	2.362	24,0	0.945	80,0	3.150	34,5	76.060	-
A731S003	02904383	1629,0	64.134	2155,0	84.843	200,0	7.874	50,0	1.969	1615,0	63.583	135,0	5.315	60,0	2.362	24,0	0.945	80,0	3.150	67,0	147.710	**

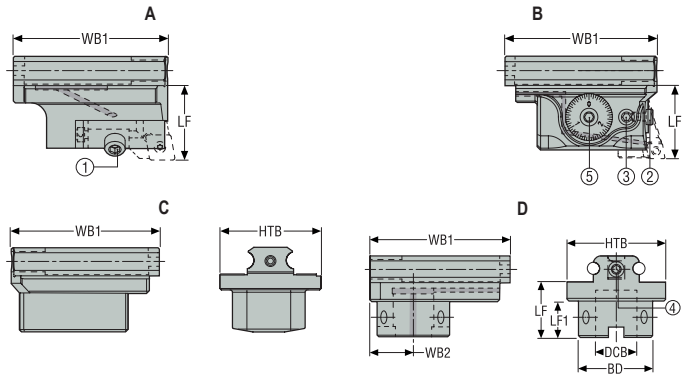
Boring, OD-overturning and back-boring capacities for Jumbo and Bridge bars combinations, see Guide page(s) 637-642
 **Larger sizes A731S004-... (∅ 2154-2680 mm) and A731S005-... (∅ 2679-3205 mm) available on request, see Guide page(s) 633
Accessories, to be ordered separately

Spare Parts, included in delivery

For DCN-DCX	Assembly screw	Fixing screw	Lever screw	Locking screw	O-ring	Sealing plugs	Centering spigot
654-1105	950D1240	950D1670	90AS03	950D1250	90JT02	AU731S01100	E447153960
1104-1630	950D1240	950D1680	90AS03	950D1250	90JT02	AU731S01100	E447153960
1629-2155	950D1240	950D16120	90AS03	950D1250	90JT02	AU731S01100	E447153960

Set of O-ring seals contains 6 O-ring seals ∅ 6 mm (0.236") for the coolant channels and 1 O-ring seal ∅ 60 mm (2.362") for the holding bore of Jumbo Bridge bars.

BBB 731S0xx – for boring blocks and Jumbo bridge bars



- For fitting onto Bridge bars
- Coolant through the rough, fine and Graflex boring blocks

1. Assembly screw
5. Micrometric adjusting screw
3. Locking screw

2. Assembly screw
4. Diameter setting screw

Item number	Designation	Type of boring block	Workpiece side Capacity DCN-DCX Ø		DCB	BD	WB1	WB2	LF	LF1	HTB	Weight	Design
			mm	mm									
02753679	A731S400	Rough boring block*	204,0 8.031	2155,0 84.843	-	-	97,0 3.819	-	47,0 1.850	-	70,0 2.756	1,33 2.930	A
02753680	A731S500	Fine boring block**	204,0 8.031	2155,0 84.843	-	-	97,0 3.819	-	47,0 1.850	-	70,0 2.756	1,5 3.310	B
02753682	A731S600	Counterweight	204,0 8.031	2155,0 84.843	-	-	97,0 3.819	-	-	-	70,0 2.756	1,49 3.280	C
02753687	A731S40128	Graflex size G5***	48,0 1.890	2021,0 79.567	28,0 1.102	50,0 1.969	97,0 3.819	30,0 1.181	36,0 1.417	25,0 0.984	70,0 2.756	0,98 2.160	D

Spare Parts, included in delivery

For	Assembly screw	Barrel locking screw	Key	Key (T-handle)	Locking key	O-ring
A731S400	950CB0830	-	H6B-H5.0L	DOUBLE-T	-	90JT01
A731S500	950D0612	950L1016	H6B-H5.0L	DOUBLE-T	-	90JT01
A731S600	-	-	H6B-H5.0L	DOUBLE-T	-	-
A731S40128	90F5	-	H6B-H5.0L	DOUBLE-T	03H05	90JT01

* Cartridges to be ordered separately, see page(s) 647

** Fine boring insert holders size 60 to be ordered separately, see page 626, 627

*** When using boring head A78050, use the counterweight mass BM050W78050, see Accessories below.

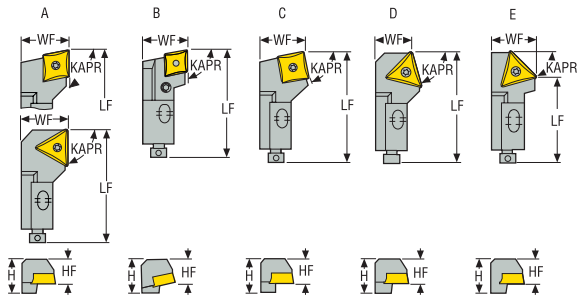
Set of O-ring seals contains 6 O-ring seals \varnothing 6 mm (0.236") for the coolant channels and 1 O-ring seal \varnothing 60 mm (2.362") for the holding bore of Jumbo Bridge bars.

Accessories, to be ordered separately

Accessories

For	Connection pipe	Coolant kit	Corner shim	Counterweight
A731S400	AU731S00700	AU731S40700	18LS0316	-
A731S500	AU731S00700	-	-	-
A731S600	-	-	-	-
A731S40128	AU731S00700	-	-	BM050W78050

Cartridges, for Bridge bars rough boring block A731S400



• For fitting onto the rough boring block

Designation	Item number	KAPR°	LF	WF	H	HF	Weight	Suitable insert size	Design
			mm Inch	mm Inch	mm Inch	mm Inch			
SCGCL16CA-16	00039871	90	55,0 2.165	25,0 0.984	20,0 0.787	16,0 0.630	0,2 0.440	CC..16..	A
STGCL16CA-16	00009197	90	63,0 2.480	24,96 0.983	25,0 0.984	16,0 0.630	0,2 0.440	TC..16T3..	A
STGCL16CA-22	02600181	90	55,0 2.165	25,0 0.984	20,0 0.787	16,0 0.630	0,2 0.440	TC..2204..	A
PCGNL16CA-12	02484356	90	63,0 2.480	25,0 0.984	25,0 0.984	16,0 0.630	0,2 0.440	CN..12..	B
SSRCL16CA-15	00039872	75	63,0 2.480	25,0 0.984	20,0 0.787	16,0 0.630	0,2 0.440	SC..15..	C
STRCL16CA-16	00008750	75	63,0 2.480	24,96 0.983	25,0 0.984	16,0 0.630	0,2 0.440	TC..16T3..	D
STRCL16CA-22	02585320	75	63,0 2.480	25,0 0.984	20,0 0.787	16,0 0.630	0,2 0.440	TC..2204..	D
STTCL16CA-16	00009194	60	63,0 2.480	14,96 0.589	25,0 0.984	16,0 0.630	0,2 0.440	TC..16T3..	D
STSCL16CA-16	00009193	45	53,0 2.087	24,96 0.983	25,0 0.984	16,0 0.630	0,2 0.440	TC..16T3..	E

Spare parts for cartridges; see catalog Turning

Recommended machining conditions

Best performances are obtained with through coolant (higher machining data, better surface finish, better chip evacuation).

Rough boring depends on the priorities: higher feed or larger chip removal use symmetrical setting of the cartridges (most common method, double feed compared to staggered setting), or staggered setting (double depth of cut).

In fine boring in steel, with good conditions, we recommend to use Cermet inserts, for high speeds and long life.

For detailed user instructions, please refer to the operating instructions supplied as part of the delivery content of the boring heads and with the Steadyline® bars. These operating instructions can also be downloaded from www.secotools.com.

Troubleshooting

Please refer to troubleshooting advice, in rough boring chapter page 575, or fine boring chapter page 615.

Maximum speeds for Bridge bars

Due to the large sizes of Bridge bar boring heads, unsuitable RPM programming could cause unpredictable damage.

Below max. RPM are for present Bridge bar boring assemblies using present Bridge bar types (Part No. A731S 0_0) rough boring, fine boring and counterweight boring blocks (Part No. A731S_00) and Jumbo Bridge bar (Part No. A731 00_). For other assemblies, please contact your local Seco representative.

NOTE! when using present boring blocks (Part No. A731S 400, A731S 500, A731S 600, A731S 40128) onto previous type Bridge bars (Part No. A731 0_0 -without S-), the max RPM to consider are the ones recommended for the previous type Bridge Bars. To maintain balance, do not mix new and previous blocks on the same Bridge bar.

Head based on	Capacity \varnothing mm (inch)	Max. RPM	Implied max cutting speed v_c at min. Cap. m/min (sf/min)	Implied max cutting speed v_c at max. Cap. m/min (sf/min)
Bridge bar boring heads (with two boring blocks set symmetrically)				
A731S010	204-280 (8.0315-11.0236")	1600	1025 (3363)	1407 (4616)
A731S020	279-355 (10.9843-13.9764")	1150	1007 (3304)	1282 (4206)
A731S030	354-430 (13.937-16.9291")	900	1000 (3281)	1215 (3986)
A731S040	429-505 (16.8898-19.8819")	750	1010 (3314)	1189 (3901)
A731S050	504-580 (19.8425-22.8346")	650	1029 (3376)	1184 (3885)
A731S060	579-655 (22.7953-25.7874")	550	1000 (3281)	1131 (3711)
Jumbo Bridge bars (with two identical Bridge bars and boring blocks set symmetrically)				
A731S001	654-1105 (25.748-43.50394")	170	349 (1145)	590 (1936)
A731S002	1104-1630 (43.46457-64.17323")	100	346 (1135)	512 (1680)
A731S003	1629-2155 (64.13386-84.84252")	70	358 (1175)	473 (1552)
A731S004	2154-2680 (84.80315-105.5118")	50	358 (1175)	420 (1378)
A731S005	2679-3205 (105.4724-126.1811")	40	336 (1102)	402 (1319)

Note: The maximum speeds are related to the boring head's mechanical design and balancing quality. Speeds inside these limits have to be chosen in regard to the other machining conditions, e.g. workpiece material, cutting edge (insert), tooling length, machine spindle.

Custom made boring solutions

Seco Tools Tooling Systems has a strong experience in the design of custom made solutions for boring operations:



- Steadyline® vibration damping rough and fine boring solutions,
- Multi-edge boring bars,
- Special extensions with guiding pads, for long overhang operations,
- Combined bars for drilling, boring, chamfering, reaming, threading operations...

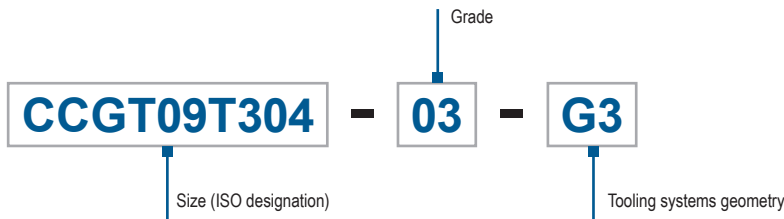
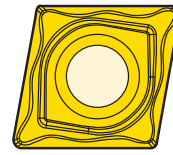
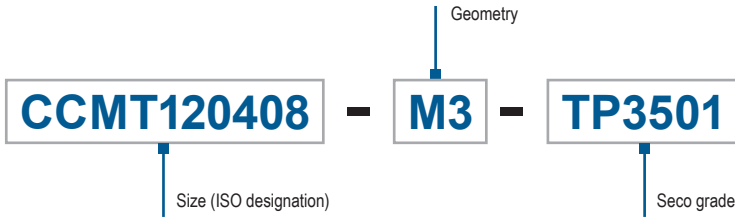
Please contact your local Seco representatives for more information.

A selection of inserts for boring

This is a selection of inserts from the total Seco range, which are particularly suitable for boring. The selected insert sizes are those suitable for the range of boring heads.
Inserts for rough boring have high toughness to guarantee high metal removal and positive geometries to minimise spindle torque requirement.

Inserts for fine boring have positive geometries and sharp edge wear resistant grades for accurate control of the bore tolerance, geometry and surface finish.

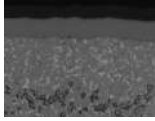
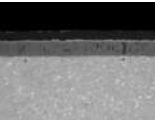
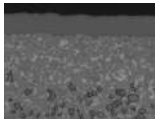

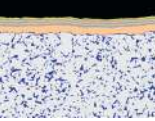


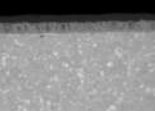

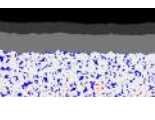
Code keys, examples



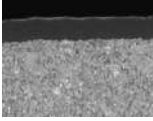
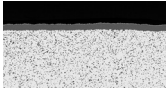
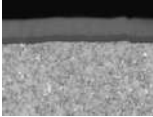
Insert grades for boring – ISO workpiece material classification

		P					M				K				N			S			H								
		P01	P10	P20	P30	P40	P50	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20	H30
CVD	TP1501																												
	TP2501																												
	TP3501																												
	TP25																												
	TP40																												
	TM2501																												
	TK1501																												
	TK0501																												
	TH1500																												
PVD	25																												
	TS2000																												
	TH1000																												
	CP500																												
PCBN	26																												
	KX																												
	HX																												
PCD	03																												
	TP1020																												
	TP1030																												
Uncoated	51																												
	CBN10																												
	CBN010																												
	CBN200																												
	81																												
Cermet	CBN060K																												
	PXD20																												
	91																												



CVD coated grades recommended for boring

TP1501		<p>Duratomic® technology coated grade. Highly heat and wear resistant grade extremely well suited for productive general turning of steels and a useful backup in other material groups.</p> <p>Ti(C,N) + Al₂O₃ + ...</p>
TP25		<p>Universal grade for high versatile performance over a wide range of applications in steels, stainless steels and cast irons. Trustworthy alternative at limited cutting speeds or high surface finish requirements.</p> <p>Ti(C,N) + Al₂O₃ + Used Edge Detection (Chrome)</p>
TP2501		<p>Duratomic® technology coated grade. Designed with high wear resistance and edge strength applicable in a wide range of turning applications in steels as well as many stainless steels and cast irons.</p> <p>Ti(C,N) + Al₂O₃ + ...</p>
TP3501		<p>TP3501 is intended for boring operations where the primary demand is toughness and reliability in machining steels and stainless steels.</p> <p>Ti(C,N) + Al₂O₃ DURATOMIC®</p>
TP40		<p>TP40 is the basic grade for turning in the P40 range. Very tough grade for demanding operations on steel castings and forging, and on all types of stainless steel.</p> <p>TiC/Ti(C,N) + TiN</p>
TK0501		<p>Duratomic® technology coated grade. A extremely wear resistant optimized grade choice for machining of grey cast iron and easier ductile cast irons.</p> <p>Ti(C,N) + Al₂O₃ + Used Edge Detection (Chrome)</p>
TK1501		<p>Duratomic® technology coated grade. A highly wear resistant grade for cast irons in general as well as in steels. The grade is particularly capable in machining of ductile (nodular) cast irons also in more demanding setups and interrupted cuts.</p> <p>Ti(C,N) + Al₂O₃ + Used Edge Detection (Chrome)</p>
TM2501		<p>Duratomic® grade. A highly capable grade for austenitic stainless steel turning with combinations of high resistance and superior edge toughness. First choice in austenitic stainless steel turning. Complements in steel turning with heavy intermittent cuts.</p> <p>Ti(C,N) + Al₂O₃ + Used Edge Detection (Chrome)</p>
TH1500		<p>DURATOMIC® technology coated grade. An extremely hard super micrograin grade intended for machining of partly hardened steels and provide an alternative for cast iron finishing.</p> <p>Ti(C,N) + Al₂O₃</p>
25		<p>Universal grade. The grade is intended for a wide range of boring applications in steel, stainless steel and cast iron. Good combination of wear resistance and toughness. Ti (C, N) + Al₂O₃.</p>

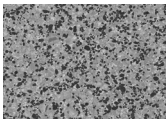
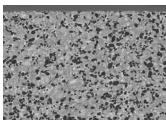

PVD coated grades recommended for boring

<p>TS2000</p>		<p>Hard micrograin principally intended for finishing operations in superalloys and titanium alloys. Also performs well in finishing operations on stainless steel. (Ti,Al)N + TiN</p>
<p>CP500 & 26G6</p>		<p>A very tough micrograin intended for finishing and medium roughing of stainless steel. Can handle intermittent cutting operations very well. CP500 is also an alternative for aluminium alloys. (Ti,Al)N + TiN</p>
<p>TH1000</p>		<p>Very hard supermicrograin grade intended for partly hardened steel components as well as generally workpiece materials such as superalloys and due to remarkable edge toughness it also provides high performance in interrupted cuts and hard-surface removal.</p>

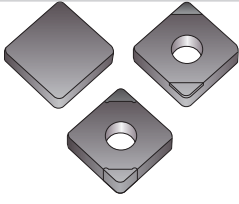
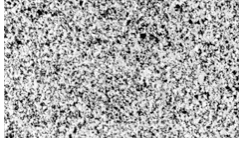
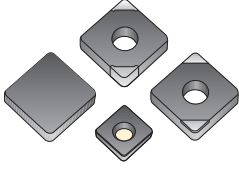
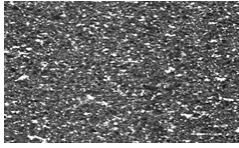
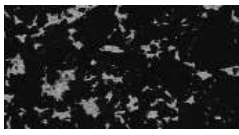
Uncoated grades recommended for boring

<p>KX & 03G3</p>		<p>Micrograin intended for machining aluminum and other non-ferrous materials.</p>
<p>HX</p>		<p>Universal uncoated grade intended for machining of cast iron and hardened steels useful also in non-ferrous materials.</p>

Cermet recommended for boring

<p>TP1020</p>		<p>Cermet with very high wear resistance intended for highest surface finish requirements with predictability and control in steel and stainless steel.</p>
<p>TP1030</p>		<p>PVD-coated Cermet with very high wear resistance intended for high surface finish and productivity requirements with predictability in steel and stainless steel mainly. Ti-Al-Si-N nanolaminate coating.</p>
<p>51G1</p>		<p>Cermet with very high wear resistance. Intended for finishing operations on steels, in which strict demands are made on surface finish.</p>

CBN and PCD grades recommended for boring

<p>CBN010</p>		<p>Format: Solid, full-face brazed layer and brazed tips (single and double sided). Composition: 50% CBN content grade with an average grain size of 2 µm and a TiC ceramic binder. Coating: No coating.</p>
<p>CBN10 & 81B1</p>		<p>CBN, Cubic boron nitride grade, for light continuous to moderate interrupted cuts. Intended for fine boring in hardened steel and in superalloys.</p>
<p>CBN060K</p>		<p>Solid, brazed tips (single and double sided) or sintered layer. First choice for continuous to moderate interrupted cuts in hardened steel ($a_p < 0,5$ mm). New (Ti,Si,Al)N PVD coating developed for high speed machining. New unique superalloy binder.</p>
<p>CBN200</p>		<p>CBN, Cubic boron nitride grade, for finishing of pearlitic cast iron, and sintered iron.</p>
<p>PCD20 & 91J3</p>		<p>PCD, polycrystalline diamond, for boring in aluminium and Al-alloys, copper, brass, bronze and synthetic materials.</p>

Inserts, recommended for rough boring, with cutting data

Designation	Uncoated Ground flank and pressed chipbreaker			Coated Pressed chipbreaker					Coated Ground flank direct chipbreaker, left hand cutting	Depth of cut a_p mm (inch)	Feed per tooth f mm (inch)
	KX	HX	03D3	TP2501	TP3501	TP40	25C4	TK1501	CP500		
CPGT050204			02434654							2 (0.079)	0,08-0,2 (0.0031-0.0079)
CCMT060204-F1				02960857	03095430	00008505		03062942	00096854	2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMT060204-F2		74011732				74018652				2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCGT060204L-UX									02497631	2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCGT060204F-AL	00015710									2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMT060204-M3				02960858	03095431			03062944		2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMT09T308-F1				02960861	03095443	00008518		03063857	00096858	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMT09T308-MF2				02956309	03095446				02754822	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCGT09T304L-UX									02497640	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCGT09T308F-AL	00015754									2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMT120408-F1				02960854	03095449			03062626		4 (0.157)	0,15-0,4 (0.0059-0.0157)
CCMT120408-MF2				02956311	03095452					4 (0.157)	0,15-0,4 (0.0059-0.0157)
CCGT120408L-UX									02610062	4 (0.157)	0,15-0,4 (0.0059-0.0157)
CCGT120408F-AL	00015790									5 (0.197)	0,15-0,4 (0.0059-0.0157)
SCMT060204-M3				02960423	03096621					2,5 (0.098)	0,1-0,22 (0.0039-0.0087)
SCMT09T308-F1				02960396	03096625			03062629	00099708	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
SCMT09T308-MF2				02956318	03096627				02755042	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
SCMT120408-F1				02960397	03096630				00099804	4 (0.157)	0,15-0,4 (0.0059-0.0055)
SCMT120408-M3				02960429	03096631			03063990		4 (0.157)	0,15-0,4 (0.0059-0.0055)
TCMT16T308-F1				02960408	03096643	74004572			00091357	5 (0.197)	0,15-0,4 (0.0059-0.0055)
TCMT16T308-MF2				02956323	03096645				02755046	5 (0.197)	0,15-0,4 (0.0059-0.0055)
TCGT16T308F-AL	00015875									4 (0.157)	0,15-0,4 (0.0059-0.0055)
SCMT150512-F2						74007348				7 (0.276)	0,2-0,5 (0.0079-0.0197)

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CN.. inserts, recommended for rough boring (double sided)

Designation	Coated Pressed chipbreaker				Depth of cut a_p mm (inch)	Feed per tooth f mm (inch)
	TP3500	TP40	TM2501	TP25		
CNMG120408-M3			03275990	03275989	4,5 (0.177)	0,25-0,35 (0.00984-0.01378)
CNMG120408-MF3		74030598	03275999	03275998	4,5 (0.177)	0,25-0,35 (0.00984-0.01378)
CNMG120408-MF4			03273904		4,5 (0.177)	0,25-0,35 (0.00984-0.01378)
CNMG120408-MF1			03275995		4,5 (0.177)	0,25-0,35 (0.00984-0.01378)
CNMG120408-MR7		74017309	03276001		4,5 (0.177)	0,25-0,35 (0.00984-0.01378)

For recommended cutting speeds, see pages 658-661

Inserts, recommended for fine boring, with cutting data

Designation	Coated							Cermet			Depth of cut a_p mm (inch)	Feed per tooth f mm (inch)
	TP1501	TS2000	TK1501	CP500	26G6	TH1000	TH1500	51G1	TP1020	TP1030		
CCGT060200								00083915			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT0602005-F1				02430287							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT060201-F1				02430307							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT060202					00039546			00096634			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT060204					00081826			00048334			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT060204L-UX				02497631							2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMT060202-F1	02960383	02614299		00096853					02754786	02754435	0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCMT060204-F1	02960856	02615873	03062942	00096854		02825858			02754791	02754792	2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMW060202F-L1											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCMW060204F-L1											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW060202S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW060204S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW060204E-L1-B											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT09T301-F1				02430311							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT09T302					00048337			00048339			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT09T304					00077338			00048344			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGT09T304L-UX				02497640							2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMT09T302-F1	02960837			00096856					02754805	02754806	0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCMT09T304-F1	02960844	02615874	03063856	00096857		02731806			02754811	02754812	0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCMT09T308-F1	02960853	02615876	03063857	00096858		02731807				02754821	2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMW09T304F-L1											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCMW09T308F-L1											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW09T304E-L1-B											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW09T308E-L1-B											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW09T304S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
CCGW09T308S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGT110204								00000721			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGT110201-F1				02430376							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCMT110202-F1				02430419							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCMT110204-F1	02960401			02430421							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCMT110208-F1	02960403			00098986							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGW110204E-L1-C											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGW110208E-L1-C											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGW110204S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCGW110208S-01020-LF											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
TCMW110204F-L1											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
WBG030100								00083089			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
WBG030102								00091845			0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
WBG030102L				02416632							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)
WBG030102											0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.0011811-0.0059055)

The table continues on next page.

For recommended cutting speeds, see pages 658-661

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Inserts, recommended for fine boring, with cutting data

Designation	CBN				PCD		Depth of cut a_p mm (inch)	Feed per tooth f mm (inch)
	CBN010	CBN060K	CBN200	81B1	PCD20	91J3		
CCGT060200							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT0602005-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT060201-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT060202							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT060204							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT060204L-UX							2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMT060202-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCMT060204-F1							2 (0.079)	0,1-0,22 (0.0039-0.0087)
CCMW060202F-L1					00089760		0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCMW060204F-L1					0005684		0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW060202S-01020-LF			02464698				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW060204S-01020-LF	02916281		02464699				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW060204E-L1-B	02843086	02776337	02649599				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT09T301-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT09T302							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT09T304							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGT09T304L-UX							2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMT09T302-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCMT09T304-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCMT09T308-F1							2,5 (0.098)	0,1-0,3 (0.0039-0.0118)
CCMW09T304F-L1					0005686		0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCMW09T308F-L1					00095357		0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW09T304E-L1-B	02843126	02776338	02649607				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW09T308E-L1-B	02937148		02649608				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW09T304S-01020-LF	02916282		02464702				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
CCGW09T308S-01020-LF			02464703				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGT110204							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGT110201-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCMT110202-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCMT110204-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCMT110208-F1							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGW110204E-L1-C	02848657	02776346					0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGW110208E-L1-C	02848792						0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGW110204S-01020-LF			02464742				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCGW110208S-01020-LF			02464744				0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
TCMW110204F-L1					0005689		0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
WBG030100							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
WBG030102							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
WBG030102L							0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)
WBG030102				00096761		00096763	0,01-0,3 (0.000394-0.01181)	0,03-0,15 (0.001181-0.0059055)

For recommended cutting speeds, see pages 658-661

Recommended cutting speeds for boring (related to workpiece material and insert grade) – metric

SMG	v_c (m/min)										
	KX & HX	03	TP40	TP1501	TP2501	TP3501	TK0501	TK1501	TH1000	TH1500	CP500
P1			60-180	60-350	60-250	60-230					80-200
P2			60-180	60-350	60-250	60-230					80-200
P3			60-180	60-350	60-250	60-230					80-200
P4			60-180	60-350	60-250	60-230					80-200
P5			60-150	60-300	60-250	60-230					80-200
P6			60-140	60-300	60-230	60-200					80-180
P7			60-140	60-300	60-230	60-200					80-160
P8			60-120	60-250	60-230	60-200					80-130
P11			60-120	60-300	60-250	60-200					80-180
M1			60-130	100-200	60-200	60-200					60-160
M2			60-130	100-200	60-200	60-200					60-160
M3			60-120	100-180	60-200	60-200					60-150
M4			60-110	100-180	60-190	60-190					60-150
M5			60-110	100-180	60-180	60-180					60-150
K1			60-140	100-250		60-180	60-230	60-230			60-160
K2			60-140	100-250		60-180	60-230	60-230			60-160
K3			60-140	100-250		60-180	60-230	60-230			60-160
K4			60-140	100-250		60-180	60-200	60-200			60-160
K5			60-140	100-250		60-180	60-200	60-200			60-160
K6			60-130	100-250		60-180	60-200	60-200			60-160
K7			60-130	100-250		60-180	60-200	60-200			60-160
N1	150-800	150-800									150-800
N2	150-800	150-800									150-800
N3	150-500	150-500									150-500
N11	150-400	150-400									150-400
S1	20-50	20-50									20-50
S2	20-50	20-50									20-50
S3	20-50	20-50									20-50
S11	20-50	20-50									20-50
S12	20-50	20-50									20-50
S13	20-50	20-50									20-50
H3									50-150	50-150	
H5									50-140	50-140	
H7									50-150	50-150	
H8									30-130	30-130	
H11									30-120	30-120	
H12									30-120	30-120	
H21											
H31											

SMG = Seco material group $V_c = \text{m/min}$ (sf/min) All cutting data are start values

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Recommended cutting speeds for boring (related to workpiece material and insert grade) – Inch

SMG	V _c (sf/min)										
	KX & HX	03	TP40	TP1501	TP2501	TP3501	TK0501	TK1501	TH1000	TH1500	CP500
P1			197-591	197-1148	197-820	197-755					262-656
P2			197-591	197-1148	197-820	197-755					262-656
P3			197-591	197-1148	197-820	197-755					262-656
P4			197-591	197-1148	197-820	197-755					262-656
P5			197-492	197-984	197-820	197-755					262-656
P6			197-459	197-984	197-755	197-656					262-591
P7			197-459	197-984	197-755	197-656					262-525
P8			197-394	197-820	197-755	197-656					262-427
P11			197-394	197-984	197-820	197-656					262-591
M1			197-427	328-656	197-656	197-656					197-525
M2			197-427	328-656	197-656	197-656					197-525
M3			197-394	328-591	197-656	197-656					197-492
M4			197-361	328-591	197-623	197-623					197-492
M5			197-361	328-591	197-591	197-591					197-492
K1			197-459	328-820		197-591	197-755	197-755			197-525
K2			197-459	328-820		197-591	197-755	197-755			197-525
K3			197-459	328-820		197-591	197-755	197-755			197-525
K4			197-459	328-820		197-591	197-656	197-656			197-525
K5			197-459	328-820		197-591	197-656	197-656			197-525
K6			197-427	328-820		197-591	197-656	197-656			197-525
K7			197-427	328-820		197-591	197-656	197-656			197-525
N1	492-2625	492-2625									492-2625
N2	492-2625	492-2625									492-2625
N3	492-1640	492-1640									492-1640
N11	492-1312	492-1312									492-1312
S1	66-164	66-164									66-164
S2	66-164	66-164									66-164
S3	66-164	66-164									66-164
S11	66-164	66-164									66-164
S12	66-164	66-164									66-164
S13	66-164	66-164									66-164
H3									164-492	164-492	
H5									164-459	164-459	
H7									164-492	164-492	
H8									98-427	98-427	
H11									98-394	98-394	
H12									98-394	98-394	
H21											
H31											

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

Recommended cutting speeds for boring (related to workpiece material and insert grade) – metric

SMG	v _c (m/min)													
	26	25	TS2000	TP1020	TP1030	51	CBN10/ CBN010	81	CBN200	82	PCD20	91	Axiabore	
P1	80-200	60-180		100-350	100-350	100-350							80-250	
P2	80-200	60-180		100-350	100-350	100-350							80-250	
P3	80-200	60-180		100-350	100-350	100-350							80-250	
P4	80-200	60-180		100-350	100-350	100-350							80-250	
P5	80-200	60-180		100-350	100-350	100-350							70-230	
P6	80-180	60-160		100-300	100-300	100-300							70-230	
P7	80-160	60-160		100-250	100-250	100-250							70-230	
P8	80-130	60-130		100-250	100-250	100-250							70-200	
P11	80-180	60-150		100-300	100-300	100-300							70-200	
M1	60-160	60-140	60-200	80-200	80-200	80-200							60-200	
M2	60-160	60-140	60-200	80-200	80-200	80-200							60-200	
M3	60-150	60-130	60-200	80-200	80-200	80-200							60-180	
M4	60-150	60-120	60-180	80-180	80-180	80-180							60-170	
M5	60-150	60-120	60-180	80-180	80-180	80-180							60-170	
K1	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150	
K2	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150	
K3	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-150	
K4	60-160	60-160		100-250	100-250	100-250			300-1000	300-1000			60-130	
K5	60-160	60-160		100-250	100-250	100-250							50-100	
K6	60-160	60-160		100-180	100-180	100-180							50-100	
K7	60-160	60-160		100-180	100-180	100-180							50-100	
N1	150-800										300-1500	300-1500	200-800	
N2	150-800										300-1500	300-1500	200-800	
N3	150-500										200-800	200-800	200-800	
N11	150-400										180-800	180-800	200-800	
S1	20-50		20-80										20-60	
S2	20-50		20-80										20-60	
S3	20-50		20-80										60-50	
S11	20-50		20-80										20-50	
S12	20-50		20-80										20-50	
S13	20-50		20-80										20-50	
H3							80-180	80-180						
H5							80-200	80-200						
H7							80-150	80-150						
H8							80-150	80-150						
H11														
H12														
H21														
H31														

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

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Recommended cutting speeds for boring (related to workpiece material and insert grade) – Inch

SMG	V _c (sf/min)												
	26	25	TS2000	TP1020	TP1030	51	CBN10/ CBN010	81	CBN200	82	PCD20	91	Axiabore
P1	262-656	197-591		328-1148	328-1148	328-1148							262-820
P2	262-656	197-591		328-1148	328-1148	328-1148							262-820
P3	262-656	197-591		328-1148	328-1148	328-1148							262-820
P4	262-656	197-591		328-1148	328-1148	328-1148							262-820
P5	262-656	197-591		328-1148	328-1148	328-1148							230-755
P6	262-591	197-525		328-984	328-984	328-984							230-755
P7	262-525	197-525		328-820	328-820	328-820							230-755
P8	262-427	197-427		328-820	328-820	328-820							230-656
P11	262-591	197-492		328-984	328-984	328-984							230-656
M1	197-525	197-459	197-656	262-656	262-656	262-656							197-656
M2	197-525	197-459	197-656	262-656	262-656	262-656							197-656
M3	197-492	197-427	197-656	262-656	262-656	262-656							197-591
M4	197-492	197-394	197-591	262-591	262-591	262-591							197-558
M5	197-492	197-394	197-591	262-591	262-591	262-591							197-558
K1	197-525	197-525		328-820	328-820	328-820		984-3281	984-3281				197-492
K2	197-525	197-525		328-820	328-820	328-820		984-3281	984-3281				197-492
K3	197-525	197-525		328-820	328-820	328-820		984-3281	984-3281				197-492
K4	197-525	197-525		328-820	328-820	328-820		984-3281	984-3281				197-427
K5	197-525	197-525		328-820	328-820	328-820							164-328
K6	197-525	197-525		328-591	328-591	328-591							164-328
K7	197-525	197-525		328-591	328-591	328-591							164-328
N1	492-2625									984-4921	984-4921		656-2625
N2	492-2625									984-4921	984-4921		656-2625
N3	492-1640									656-2625	656-2625		656-2625
N11	492-1312									591-2625	591-2625		656-2625
S1	66-164		66-262										66-197
S2	66-164		66-262										66-197
S3	66-164		66-262										197-164
S11	66-164		66-262										66-164
S12	66-164		66-262										66-164
S13	66-164		66-262										66-164
H3							262-591	262-591					
H5							262-656	262-656					
H7							262-492	262-492					
H8							262-492	262-492					
H11													
H12													
H21													
H31													

SMG = Seco material group V_c = m/min (sf/min) All cutting data are start values

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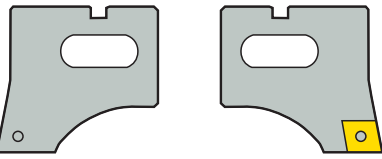
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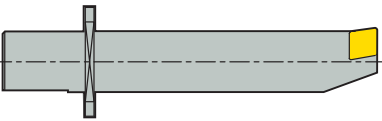
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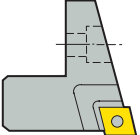
Insert locking keys and screws of all boring insert holders, tools and cartridges

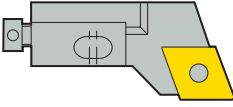
		Accessories			Spare Parts	
		Torx driver for insert locking screw*			Insert locking screw	
 For rough boring insert holders		For insert size	Designation	Torx Plus	Designation	Torx Plus
		CP...0502	T07P-3	07	C02245-T07P	07
		CC...0602	T07P-3	07	C02504-T07P	07
		CC...09T3	T15P-3	15	C04008-T15P	15
		CC...1204	T15P-3	15	C05012-T15P	15
		CC...1605	T15P-3	15	C05012-T15P	15
		SC...0502	T07P-3	07	C02245-T07P	07
		SC...0602	T07P-3	07	C02504-T07P	07
		SC...09T3	T15P-3	15	C04008-T15P	15
		SC...1204	T15P-3	15	C05012-T15P	15
SC...1505	T15P-3	15	C05012-T15P	15		

* One Torx driver is delivered with each rough boring head.

		Accessories			Spare Parts	
		Torx driver for insert locking screw*			Insert locking screw	
 For Axiabore™ type tool		For insert size	Designation	Torx Plus	Designation	Torx Plus
		WB...0301...	T06P-3	06	C02035-T06P	06
		CC...0602...	T07P-3	07	C02504-T07P	07
	-	T15P-3	15	C04008-T15P	15	

Spare parts for insert holders

		Spare Parts				
		Insert key		Insert screw		
 For fine boring insert holders, chamfering insert holders and back boring insert holders		For insert size	Designation	Torx Plus	Designation	Torx Plus
		WB...0301...	T06P-2	06	C02035-T06P	06
		CC...0602...	T07P-3	07	C02504-T07P	07
		CC...09T3...	T15P-3	15	C04008-T15P	15
		TC...1102...	T07P-3	07	C02504-T07P	07

		Accessories			Spare Parts	
		Torx driver for insert locking screw*			Insert locking screw	
 For cartridges		For insert size	Designation	Torx Plus	Designation	Torx Plus
		CC...16...	T15P-2	15	C05012-T15P	15
		SC...15...	T15P-2	15	C05012-T15P	15
		TC...16...	T15P-2	15	C03509-T15P	15
		TC...22...	T15P-2	15	C05012-T15P	15

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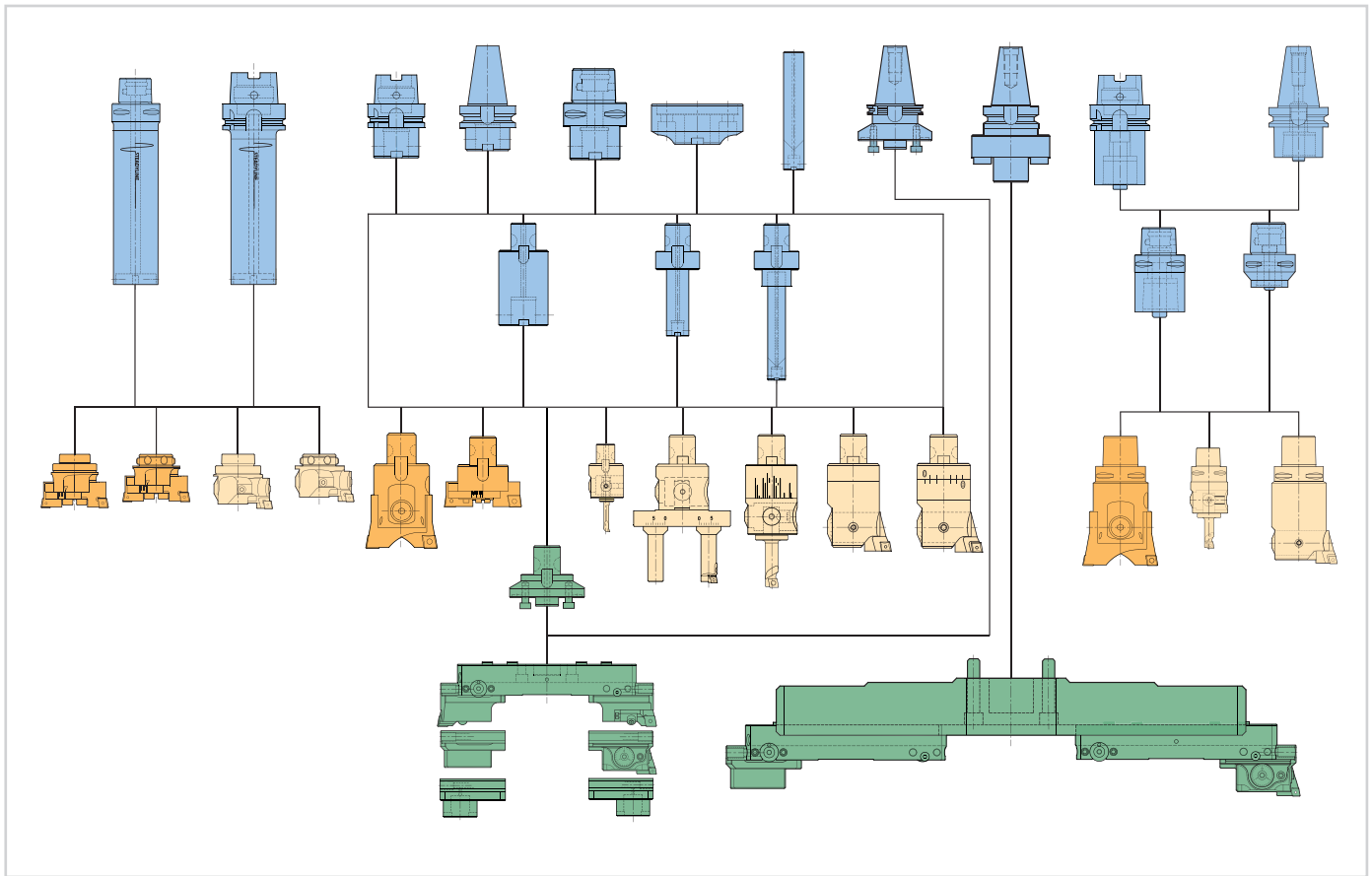
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Suitable holders for boring heads



The boring heads feature Graflex®, Seco-Capto™, GL or BA machine side connection

The boring heads can be used on any machine type, using the suitable Graflex® adapter, Seco-Capto™ adapter or Steadyline® vibration boring/turning bar.

Steadyline® vibration damping for boring operations

Boring heads with GL or BA machine side connections are designed to be mounted on Steadyline® boring/turning bars with HSK-T/A and Seco-Capto™ machine side connections. This allows to perform rough and fine boring operations with 6xD, 8xD and 10xD projections, in very stable conditions.

Modular Graflex® and Seco-Capto™ boring bars

All bore lengths up to 6xD can be reached by selecting the required Graflex® intermediates, e.g. the extra-long ones with extension section in carbide. Highest assembly rigidity is obtained by selecting the longest and widest arbor possible, then completing with smaller intermediates.

The Graflex® and Seco-Capto™ connections guarantees a unique orientation of the boring heads, achieving a cutting edge orientation according to ISO. The Graflex® modules are designed to be clamped together by the side.

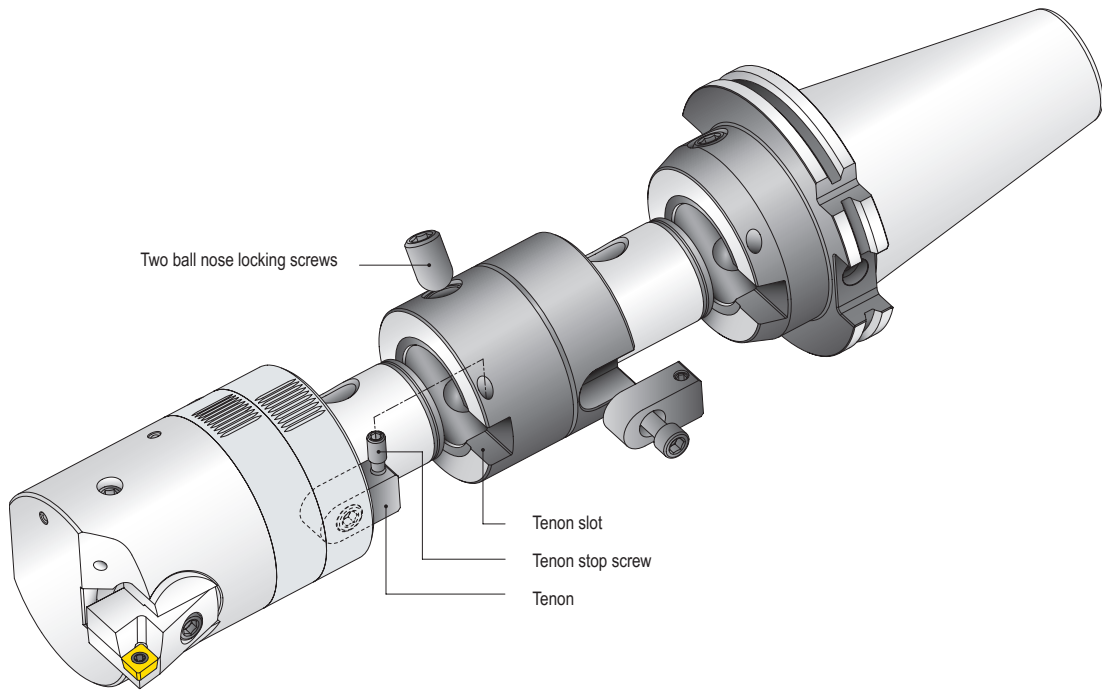
For boring heads with GL machine side connection for Steadyline®, select the shortest Steadyline® bar from the Tooling Systems catalog. These bar exist with HSK-T/A and Seco-Capto™ machine side connection. Other spindle types can be equipped, using the shortest Seco-Capto™ adapters. For classic boring heads (steel), select the classic Graflex® and Seco-Capto™ arbors and intermediates from the Tooling Systems catalog. For Bridge bars, see Graflex® adapters and direct holders page 643.

Note! Jumbo Bridge bars are designed to be held on milling cutter holders or to be fitted directly on a machine's spindle front.

Locking advice for Graflex® classic connection shanks G. on boring heads (using a tenon with stop screw).

For boring, no need to tighten the tenon's stop screw, as the connection's self locking action is allowed.
 For rough boring in heavy duty, we recommend to apply the 'high value' torques for the Graflex® ball nose screws.

See also the detailed 'Graflex® connection assembly procedure' in the Tooling Systems catalog.



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Locking advice for Seco-Capto™ connection shanks C. on boring heads: No specific advice. For boring heads, the general instructions are applicable, see below.

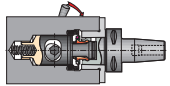
Tightening torques for Seco-Capto™ receivers connections with center bolt clamping (Basic Holders, Intermediates).

Seco-Capto Size	Centre bolt tightening torque (Nm)	Centre bolt tightening torque (ft/lbs)
C3	40-50	30-37
C4	50-60	37-44
C5	90-100	66-74
C6	160-180	118-133
C8	160-180	118-133



Tightening torques for Seco-Capto™ receivers connections with segment clamping, actuated by cam shaft side locking (Flange Mounts.)

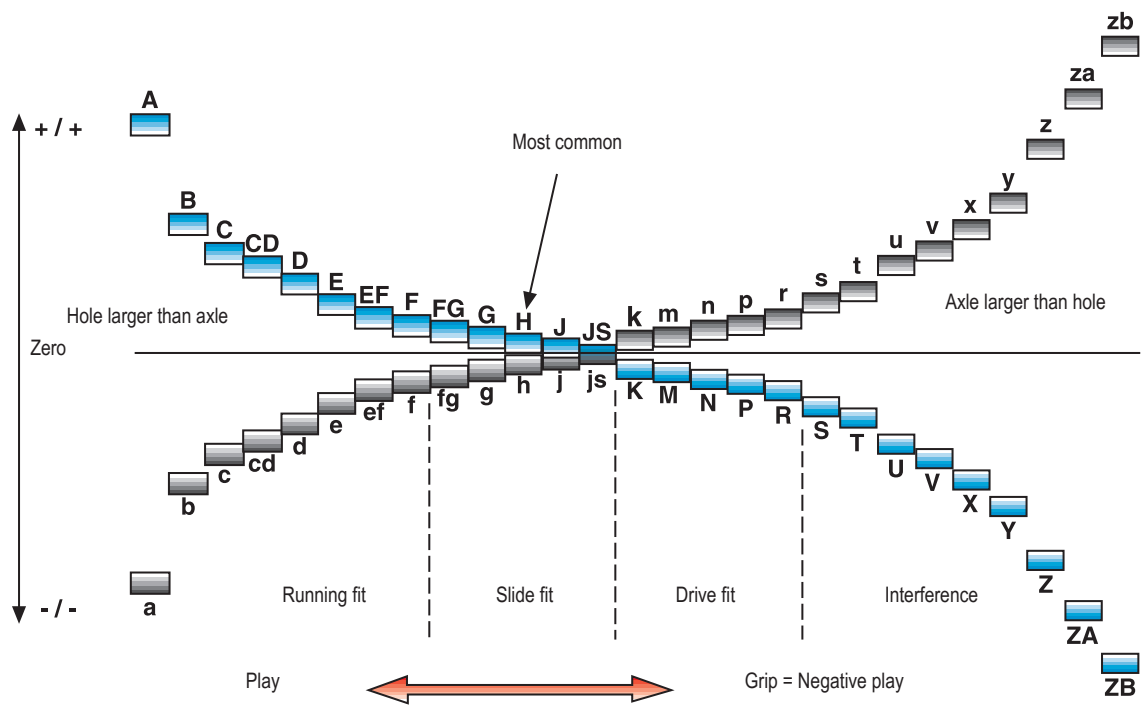
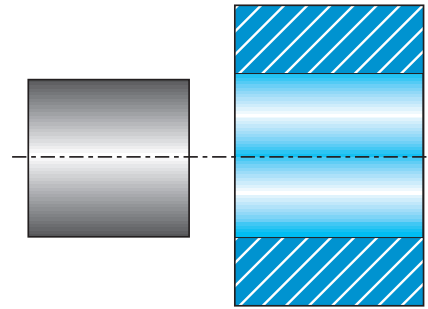
Seco-Capto Size	Cam tightening torque (Nm)	Cam tightening torque (ft/lbs)
C3	35	26
C4	50	37
C5	70	52
C6	90	66
C8	130	96



The Seco-Capto™ joint features a self-locking taper. Where the center bolt system is used, unscrew the centre bolt until the bolt head makes contact with the tool holder, causing the bolt to force the taper joint apart. When using the cam shaft side clamping system, over untightening of the cam will force the taper joint apart.

ISO Standard tolerance for hole and shaft – Axle tolerances

Axle tolerance position is denominated with **small letters**
 Bore tolerance position is denominated with **CAPITAL LETTERS**



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ISO tolerance table

ISO tolerances for holes (µm)													
Hole Ø mm (inch)	D10	E9	F7	F8	G7	G9	H6	H7	H8	H9	H10	H11	H12
≤ 3 (0.118")	+60 +20	+39 +14	+16 +6	+20 +6	+12 +2	+27 +2	+6 0	+10 0	+14 0	+25 0	+40 0	+60 0	+100 0
3 ≥ 6 (0.236")	+78 +30	+50 +20	+22 +10	+28 +10	+16 +4	+34 +4	+8 0	+12 0	+18 0	+30 0	+48 0	+75 0	+120 0
6 ≥ 10 (0.394")	+98 +40	+61 +25	+28 +13	+35 +13	+20 +5	+41 +5	+9 0	+15 0	+22 0	+36 0	+58 0	+90 0	+150 0
10 ≥ 18 (0.708")	+120 +50	+75 +32	+34 +16	+43 +16	+24 +6	+49 +6	+11 0	+18 0	+27 0	+43 0	+70 0	+110 0	+180 0
18 ≥ 30 (1.181")	+149 +65	+92 +40	+41 +20	+53 +20	+28 +7	+59 +7	+13 0	+21 0	+33 0	+52 0	+84 0	+130 0	+210 0
30 ≥ 50 (1.969")	+180 +80	+112 +50	+50 +25	+64 +25	+34 +9	+71 +9	+16 0	+25 0	+39 0	+62 0	+100 0	+160 0	+250 0
50 ≥ 65 (2.559")	+220 +100	+134 +60	+60 +30	+76 +30	+40 +10	-	+19 0	+30 0	+46 0	+74 0	+120 0	+190 0	+300 0
65 ≥ 80 (3.150")													
80 ≥ 100 (3.937")	+260 +120	+159 +72	+71 +36	+90 +36	+47 +12	-	+22 0	+35 0	+54 0	+87 0	+140 0	+220 0	+350 0
100 ≥ 120 (4.724")													
120 ≥ 140 (5.512")	+305 +145	+185 +85	+83 +43	+106 +43	+54 +14	-	+25 0	+40 0	+63 0	+100 0	+160 0	+250 0	+400 0
140 ≥ 160 (6.299")													
160 ≥ 180 (7.087")													
180 ≥ 200 (7.874")	+355 +170	+215 +110	+96 +50	+122 +50	+61 +15	-	+29 0	+46 0	+72 0	+115 0	+185 0	+290 0	+460 0
200 ≥ 225 (8.858")													
225 ≥ 250 (9.843")													
250 ≥ 280 (11.0236")	+400 +190	+240 +110	+108 +56	+137 +56	+69 +17	-	+32 0	+52 0	+81 0	+130 0	210 0	+320 0	+520 0
280 ≥ 315 (12.402")													
315 ≥ 355 (13.976")	+440 +210	+265 +125	+119 +62	+151 +62	+75 +18	-	+36 0	+57 0	+89 0	+140 0	+230 0	+360 0	+570 0
355 ≥ 400 (15.748")													

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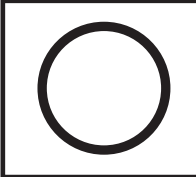
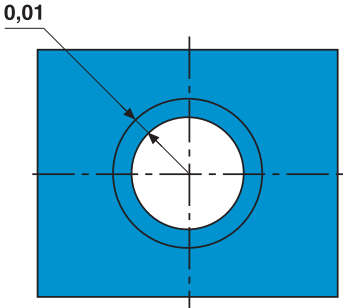

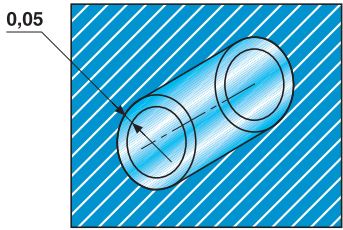

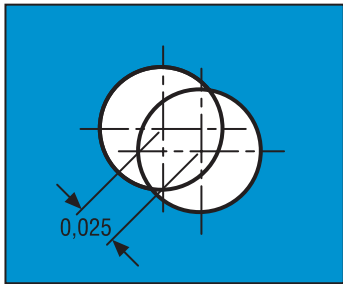
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ISO tolerance table

ISO tolerances for holes (µm)												
Hole Ø mm (inch)	H13	JS7	JS9	K6	K7	M6	M7	N7	N9	P7	P9	R7
≤ 3 (0.118")	+140 0	+/-5	+/-12,5	0 -6	0 -10	-2 -8	-2 -12	-4 -14	-4 -29	-6 -16	-6 -31	-10 -20
3 ≥ 6 (0.236")	+180 0	+/-6	+/-15	+2 -6	+3 -9	-1 -9	0 -12	-4 -16	0 -30	-8 -20	-12 -42	-11 -23
6 ≥ 10 (0.394")	+220 0	+/-7,5	+/-18	+2 -7	+5 -10	-3 -12	0 -15	-4 -19	0 -36	-9 -24	-15 -51	-13 -28
10 ≥ 18 (0.708")	+270 0	+/-9	+/-21,5	+2 -9	+6 -12	-4 -15	0 -18	-5 -23	0 -43	-11 -29	-18 -61	-16 -34
18 ≥ 30 (1.181")	+330 0	+/-10,5	+/-26	+2 -11	+6 -15	-4 -17	0 -21	-7 -28	0 -52	-14 -35	-22 -74	-20 -41
30 ≥ 50 (1.969")	+390 0	+/-12,5	+/-31	+3 -13	+7 -18	-4 -20	0 -25	-8 -33	0 -62	-17 -42	-26 -88	-25 -50
50 ≥ 65 (2.559")	+460 0	+/-15	+/-37	+4 -15	+9 -21	-5 -24	0 -30	-9 -39	0 -74	-21 -51	-32 -106	-30 -62
65 ≥ 80 (3.150")												
80 ≥ 100 (3.937")	+260 +120	+159 +72	+71 +36	+90 +36	+47 +12	-	+22 0	+35 0	+54 0	+87 0	+140 0	+350 0
100 ≥ 120 (4.724")												
120 ≥ 140 (5.512")												
140 ≥ 160 (6.299")	+305 +145	+185 +85	+83 +43	+106 +43	+54 +14	-	+25 0	+40 0	+63 0	+100 0	+160 0	+400 0
160 ≥ 180 (7.087")												
180 ≥ 200 (7.874")												
200 ≥ 225 (8.858")	+355 +170	+215 +110	+96 +50	+122 +50	+61 +15	-	+29 0	+46 0	+72 0	+115 0	+185 0	+460 0
225 ≥ 250 (9.843")												
250 ≥ 280 (11.0236")	+400 +190	+240 +110	+108 +56	+137 +56	+69 +17	-	+32 0	+52 0	+81 0	+130 0	210 0	+520 0
280 ≥ 315 (12.402")												
315 ≥ 355 (13.976")	+440 +210	+265 +125	+119 +62	+151 +62	+75 +18	-	+36 0	+57 0	+89 0	+140 0	+230 0	+570 0
355 ≥ 400 (15.748")												

Geometrical tolerance

	Drawing symbol	Tolerance area	
Circularity	 <table border="1"> <tr> <td>0,01 mm (0.0004")</td> </tr> </table>	0,01 mm (0.0004")	
0,01 mm (0.0004")			
Cylindricity	 <table border="1"> <tr> <td>0,05 mm (0.0020")</td> </tr> </table>	0,05 mm (0.0020")	
0,05 mm (0.0020")			
Positioning localisation	 <table border="1"> <tr> <td>0,05 mm (0.0020")</td> </tr> </table>	0,05 mm (0.0020")	
0,05 mm (0.0020")			

Steels, ferritic and martensitic stainless steels

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
P1	Free-cutting steels	$360 < R_m < 880$	11 SMn30 $R_m = 385 \text{ N/mm}^2$	1500	0,14
P2	Low-alloy ferritic steels, $C < 0.25\%wt$ Low-alloy weldable general structural steels	$320 < R_m < 600$	S235JRG2 $R_m = 420 \text{ N/mm}^2$	1600	0,23
P3	Ferritic & ferritic/pearlitic steels, $C < 0.25\%wt$ Weldable general structural steels Case-hardening steels	$430 < R_m < 610$	16 MnCr 5 $R_m = 550 \text{ N/mm}^2$	1800	0,14
P4	Low-alloy general structural steels, $0.25\% < C < 0.67\%wt$ Low-alloy Quench & Temper steels	$520 < R_m < 1200$	C 45E $R_m = 660 \text{ N/mm}^2$	2000	0,15
P5	Structural steels, $0.25\% < C < 0.67\%wt$ Quench & Temper steels	$550 < R_m < 1200$	42 CrMo 4 $R_m = 700 \text{ N/mm}^2$	2020	0,18
P6	Low-alloy through-hardening steels, $C > 0.67\%wt$ Low-alloy spring and bearing steels	$520 < R_m < 1200$	C 100S $R_m = 600 \text{ N/mm}^2$	2100	0,17
P7	Through-hardening steels, $C > 0.67\%wt$ Spring and bearing steels	$600 < R_m < 1200$	100 Cr 6 $R_m = 650 \text{ N/mm}^2$	2160	0,17
P8	Tool steels High Speed Steels (HSS)	$600 < R_m < 1200$	X 40 CrMoV 5 1 $R_m = 700 \text{ N/mm}^2$	2400	0,20
P11	Ferritic & martensitic stainless steels	$415 < R_m < 1200$	X 20 Cr 13 $R_m = 675 \text{ N/mm}^2$	2000	0,15
P12	Maraging and precipitation-hardening stainless steels	$500 < R_m < 1200$	X 5 CrNiCuNb 16 4 $R_m = 1100 \text{ N/mm}^2$	2100	0,17

Free-cutting, austenitic and duplex stainless steels

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
M1	Free-cutting austenitic stainless steels		X 10 CrNiS 18 9	1700	0,14
M2	Low-alloy austenitic stainless steels		X 5 CrNi 18 10	1920	0,18
M3	Medium-alloy austenitic stainless steels		X 2 CrNiMo 18 14 3	2070	0,17
M4	High-alloy austenitic and duplex stainless steels		X 2 CrNiMoN 22 5 3	2230	0,16
M5	Difficult high-alloy austenitic and duplex stainless steels		X 2 CrNiMoN 25 7 4	2510	0,13

Cast irons

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
K1	Grey cast irons (GCI)		EN-GJL-250	930	0,32
K2	Compacted graphite irons (CGI)		EN-GJV-400	1000	0,35
K3	Malleable cast irons (MCI)		EN-GJMB-550-4	1050	0,37
K4	Nodular cast irons (SGI)		EN-GJS-500-7	1160	0,37
K5	Austempered ductile irons (ADI)		EN-GJS-1000-5		
K6	Austenitic lamellar cast irons		EN-GJLA-XNiCuCr15-6-2		
K7	Austenitic nodular cast irons		EN-GJSA-XNiMn23-4		

Non-ferrous metals

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
N1	Aluminium alloys, Si < 9%		AW-7075		
N2	Aluminium alloys, 9% < Si < 16%		AC-44200 Si = 12%		
N3	Aluminium alloys, Si > 16%		AISI17Cu5		
N11	Copper alloys		CW614N	740	0,26

Superalloys and titanium

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
S1	Iron-based superalloys		Disalloy		
S2	Cobalt-based superalloys		Stellite 21		
S3	Nickel-based superalloys		Inconel 718	2530	0,21
S11	Titanium, low alloyed, (α)		Ti		
S12	Titanium, medium alloyed, (α + β)		TiAl6V4	1500	0,24
S13	Titanium, high alloyed, (near β and β)		Ti10V2Fe3Al		

Hard materials

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
H3	Case-hardened steels	58 < HRC < 62	16 MnCr 5 60 HRC	2070	0,14
H5	Quenched & Tempered steels	38 < HRC < 56	42 CrMo 4 50 HRC	2320	0,18
H7	Quenched & Tempered steels Bearing steels	56 < HRC < 64	100 Cr 6 60 HRC	2480	0,17
H8	Tool steels High Speed Steels (HSS)	38 < HRC < 64	X 40 CrMoV 5 1 50 HRC	2750	0,20
H11	Martensitic stainless steels	38 < HRC < 50	X 20 Cr 13 45 HRC	2300	0,15
H12	Maraged and precipitation- hardened stainless steels	1200 < R_m < 1650	X 5 CrNiCuNb 16 4 $R_m = 1450 \text{ N/mm}^2$	2410	0,17
H21	Manganese steels	23 < HRC < 64	X 120 Mn 12 50 HRC		
H31	White cast irons	50 < HRC < 64	EN-GJN-HV600(XCr11) 55 HRC		

Other difficult materials

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
PM1	Low-alloy PM-materials		F-0008 Fe-0.7C		
PM2	Medium-alloy PM-materials		FLC-4608 Fe2Cu1.8Ni 0.5Mo0.2Mn0.8C		
PM3	High-alloy PM-materials Exhaust valve seat materials, etc.				
HF1	Hardfacing alloys Welded or plasma-deposited iron-based alloys				
HF2	Hardfacing alloys Welded or plasma-deposited cobalt- and nickel-based alloys				
CC1	Sintered tungsten carbide		G50		

Plastics and Composites

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
TS1	Thermosetting polymers		Urea formaldehyde (UF)		
TS2	Thermosetting carbon-fibre composites		T300 T700 T800 HTA-S IMA - Epoxy (M21)...		
TS3	Thermosetting glass-fibre composites		Epoxy - HX..(42..)E glass (7781...)...		
TS4	Thermosetting aramide-fibre composites		Kevlar 49		
TP1	Thermoplastic polymers		Polycarbonate (PC)		
TP2	Thermoplastic carbon-fibre composites		PPS/PEEK - T300..		
TP3	Thermoplastic glass-fibre composites		PPS/PEEK - E-glass or A-glass...		
TP4	Thermoplastic aramide-fibre composites				

Graphite

SMG	Description	Properties	Reference	$k_{c1.1}$	m_c
GR1	Graphite		R 8500		

SMG

SMG	EN	EN-Nr	W-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS	
P1	11 SMn 30	1.0715	1.0715	9 SMn 28	S 250	230 M 07	CF 9 SMn 28	SUM 22	1912	G12130	
	11 SMnPb 30	1.0718	1.0718	9 SMnPb 28	S 250 Pb		CF 9 SMnPb 28	SUM 22 L	1914	G12134	
	10 S 20	1.0721	1.0721	10 S 20	10 F 1	210 M 15	CF 10 S 20				
			1.0722	10 SPb 20	10 PbF 2		CF 10 SPb 20				
	15 SMn 13	1.0725	1.0723	15 S 20		210 A 15		SUM 32	1922		
	35 S20	1.0726	1.0726	35 S 20	35 MF 4	212 M 36			1957	G11400	
	46 S20	1.0727	1.0727	46 S 20	46 S 20	212 M 44			1973	G11460	
	11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36			G12150	
11 SMn 37	1.0736	1.0736	9 SMn 36	S 300	240 M 07	CF 9 SMn 36			G12150		
S235JR	1.0037	1.0037	St 37-2	E 24-2		Fe 360 B	STKM 12 C		1311		
S235JRG2	1.0038	1.0116	St 37-3	E 24-3, E 24-4	4360-40 C	Fe 360 D FF			1312, 1313		
S275J2G3	1.0144	1.0144	St 44-3 N	E 28-3, E 28-4	4360-43 C	Fe 430 D FF	SM 41 C		1412, 1414		
C 10	1.0301	1.0301	C 10	34 C 10, XC 10	045 M 10	C 10	S 10 C			G10100	
		1.0401	C 15	37 C 12, XC 18	080 M 15	C 15, C 16			1350	G10170	
C22	1.0402	1.0402	C 22	C 20	050 A 20	C 20, C 21			1450	G10200	
S355JR	1.0570	1.0570	St 52-3	E 36-3, E 36-4	4360-50 C	Fe 510 B	SM 50 YA		2172, 2132		
C 15R	1.1141	1.1141	Ck 15	XC 15, XC 18	080 M 15	C 15, C 16			1370	G10170	
		1.1158	Ck 25	XC 25	060 A 25	C 25	S 25 C			G10250	
		1.2162	21 MnCr 5	20 NC 5			SCR 420 H				
P3	16 Mo 3	1.5415	1.5415	15 Mo 3	15 D 3	1501-240	16 Mo 3		2912		
			1.5423	16 Mo 5		1503-245-420	16 Mo 5	SB 450 M		G45200	
	14 NiCr 14	1.5752	1.5752	14 NiCr 14	12 NC 15	655 M 13		SNC 815 (H)		G33106	
			1.5919	15 CrNi 6	16 NC 6	S 107	16 CrNi 4				
	18 NiCrMo 7 6	1.6587	1.6587	18 CrNiMo 7 6	18 NCD 6	820 A 16	18 NiCrMo 7				
	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511	G51170	
	16 MnCrS 5	1.7139	1.7139	16 MnCrS 5							
	20 MnCr 5	1.7147	1.7147	20 MnCr 5	20 MC 5		20 MnCr 5	SMnC 420 (H)		G51200	
20 MnCrS 5	1.7149	1.7149	20 MnCrS 5	20 MnCrS 5			SMnC 21 H				
13 CrMo 4 5	1.7335	1.7335	13 CrMo 4 4	15 CD 3.5	1501-620 Gr. 27	14 CrMo 4 5		2216			
		1.7337	16 CrMo 4 4	15 CD 4.5	1501-620 Gr. 27	14 CrMo 4 5		2216			
10 CrMo 9 10	1.7380	1.7380	10 CrMo 9 10	10 CD 9.10	1501-622 Gr. 31	12 CrMo 9 10		2218	J21890		
P4	C35		1.0501	C 35	55 C 35	060 A 35	C 35		1550	G10350	
	E 335	1.0503	1.0503	C 45	65 C 45	80 M 46	C 45	S 45 C	1650	G10430	
	C40		1.0511	C 40	60 C 40	080 M 40	C 40	S 40 C			
	E 360	1.0070	1.0535	St 70-2	A 70-2		Fe 690		1655		
	C60	1.0601	1.0601	C 60	CC 55	080 A 62	C 60			G10600	
			1.1157	40 Mn 4	35 M 5	150 M 36				G10390	
	G 28 Mn6	1.1165	1.1165	30 Mn 5		120 M 36		SMn 1 H, SCMn 2		G13300	
	C 35E	1.1181	1.1181	Ck 35	XC 38 H1	080 M 36	C 35	S 35 C	1572	G10340	
	C 45E	1.1191	1.1191	Ck 45	XC 42	080 M 46	C 45	S 45 C	1672	G10420	
	C 60E	1.1221	1.1221	Ck 60	XC 60	080 A 62	C 60	S 58 C	1665, 1678	G10640	
			1.1740	C 60 W	Y3 55			SK 7			
P5	55 SiCr7	1.7100	1.0904	55 Si 7	55 S 7	250 A 53	55 Si 8		2085, 2090		
			1.2330	35 CrMo 4	34 CD 4	708 A 37	35 CrMo 4			T51620	
			1.2542	45 WCrV 7			BS 1	45 WCrV 8 KU		2710	T41901
			1.2714	56 NiCrMoV 7			BH 224-5	56 NiCrMoV7-KU	SKT 4		T61206
			1.5121	46 MnSi 4							
			1.5710	36 NiCr 6	35 NC 6	640 A 35			SNC 236		
			1.5736	36 NiCr 10	35 NC 11			35 NiCr 9	SNC 631 (H)		
	36 CrNiMo 4		1.6511	36 CrNiMo 4	40 NCD 3	816 M 40	38 NiCrMo 4 (KB)			G98400	
	34 CrNiMo 6	1.6582	1.6582	34 CrNiMo 6	35 NCD 6	817 M 40	35 NiCrMo 6 (KW)	SNCM 447	2541	G43400	
	34 Cr 4	1.7033	1.7033	34 Cr 4	32 C 4	530 A 32	34 Cr 4 (KB)	SCR 430 (H)		G51320	
	41 Cr 4	1.7035	1.7035	41 Cr 4	42 C 4	530 M 40	41 Cr 4	SCR 440 (H)		G51400	
	25 CrMo 4	1.7218	1.7218	25 CrMo 4	25 CD 4 S	708 M 25	25 CrMo 4 (KB)	SCM 425	2225	G41300	
	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400	
	42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400	
		1.7361	32 CrMo 12	30 CD 12	722 M 24	32 CrMo 12		2240			
50 CrV 4	1.8159	1.8159	50 CrV 4	50 CV 4	735 A 50	51 CrV 4	SUP 10	2230	H61500		
41 CrAlMo 7 10	1.8509	1.8509	41 CrAlMo 7	40 CAD 6.12	905 M 39	41 CrAlMo 7	SACM 645	2940	K24065		
C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770	G10700		
C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870	G10950		
C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880			
		1.1645	C 105 W2	Y1 105		C 100 KU	SK 3				
		1.1663	C 125 W	Y2 120		C 120 KU	SK 2				

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U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
	1213				Annealed	
	12 L 13				Annealed	
	1108				Annealed	
	11 L 08				Annealed	
					Annealed	
	1140	40			Annealed	
	1146				Annealed	
	1215				Annealed	
	12 L 14				Annealed	
		16D			Annealed	
	A573 Grade 58	18kp	11 378		Annealed	
	A573 Grade 70	St14kP	11 448		Annealed	
	1010	10			Annealed	
F.1110	1015	15			Annealed	
	1020, 1023	20	12 024		Annealed	
		17G1S	11 523		Annealed	
F.1511	1015	15			Annealed	
F.1120	1025	25			Annealed	
					Annealed	
	A204 Grade A		15 020		Annealed	
	4520				Annealed	
	3310, 9314	20X2H4A	16 420		Annealed	
	4320		16 220		Annealed	
					Annealed	
F.1516	5115	12KHN2	14 220		Annealed	
		18HG			Annealed	
	5120	20KH	14 221		Annealed	
	5120 H	20KH			Annealed	
	A182-F11, A182-F12	12KHM	15 121		Annealed	
	A387 Grade 12 Cl. 2				Annealed	
F.155	A182-F22	12KH8	15 313		Annealed	
F.1130	1035	35	12 040		Annealed	
F.5110	1045	45	12 050		Annealed	
	1040	40	12 041		Annealed	
F.1150	1055	55			Annealed	
	1060	60	12 061		Annealed	
	1039	40G			Annealed	
	1330	30G2			Annealed	
F.1135	1035	35			Annealed	
F.1140	1045	45	12 050		Annealed	
F.1150	1064	60			Annealed	
	1060	60			Annealed	
F.144	9255	55S2			Annealed	
F.1250	4135	35KHM			Annealed	
F.5241	S1	5KHV2S			Annealed	
	L6	5KHNV			Annealed	
	5045				Annealed	
	3135				Quenched & Tempered	
	3435				Annealed	
	9840				Quenched & Tempered	
F.1280	4340	38H2N2MA	16 343		Annealed	
	5132	35KH			Quenched & Tempered	
	5140	40H	14 140		Quenched & Tempered	
F.1251	4130	20KHM	15 130		Quenched & Tempered	
F.1252	4142, 4140	38HM	15 142		Annealed	
F.1252	4142, 4140	38HM	15 142		Quenched & Tempered	
					Quenched & Tempered	
F.143	6150	50KHFA	15 260		Quenched & Tempered	
F.1740	A355 Cl. A				Annealed	
F.5103	1070	70			Annealed	
F.5117	1095				Annealed	
F.5118	W1	U10A			Annealed	
		U10			Annealed	
	W1	U13			Annealed	

SMG

SMG	EN	EN-Nr	W.-Nr	DIN	AFNOR	BS	UNI	JIS	SS	UNS		
P7	107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3		107 CrV 3 KU			T61202		
			1.2510	100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3	2140	T31501		
	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU			T31502		
	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258	G51986		
P8	X 210 Cr 12	1.2080	1.2080	X 210 Cr 12	Z 200 C 12	BD 3	X 210 Cr 13 KU	SKD 1		T30403		
			1.2343	X 38 CrMoV 5 1	Z 38 CDV 5	BH 11	X 37 CrMoV 5 1 KU	SKD 6		T20811		
	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242	T20813		
	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260	T30102		
			1.2365	X 32 CrMoV 3 3	32 DCV 28	BH 10	30 CrMoV 12 27 KU	SKD 7		T20810		
			1.2436	X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2		2312		
			1.2601	X 165 CrMoW 12			X 165 CrMoW 12 KU			2310		
			1.2713	55 NiCrMoV 6	55 NCDV 7			SKT 4			T61206	
	HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02		HS 6-5-2-5	SKH 55		2723		
	HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWW 09-08-04	BM 42	HS 2-9-1-8	SKH 51			T11342	
	HS 18-1-2-5	1.3255	1.3255	S 18-1-2-5	Z 80 WKCV 18-05-04-01	BT 4	HS 18-1-1-5	SKH 3			T12004	
	HS 6-5-2	1.3343	1.3343	S 6-5-2	Z 85 WDCV 06-05-04-02	BM 2	HS 6-5-2	SKH 9, SKH 51		2722	T11302	
	HS 2-9-2	1.3348	1.3348	S 2-9-2	Z 100 DCWW 09-04-02-02		HS 2-9-2	SKH 58		2782	T11307	
HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1	HS 18-0-1	SKH 2			T12001		
P11	X 6 Cr 13	1.4000	1.4000	X 6 Cr 13	Z 6 C 12	403 S 17	X 6 Cr 13	SUS 403	2301	S41008		
	X 12 Cr 13	1.4006	1.4006	X 10 Cr 13	Z 10 C 13	410 S 21	X 12 Cr 13	SUS 410	2302	S41000		
	X 6 Cr 17	1.4016	1.4016	X 6 Cr 17	Z 8 C 17	430 S 15	X 8 Cr 17	SUS 430	2320	S43000		
	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303	S42000		
	X 39 Cr 13	1.4031	1.4031	X 40 Cr 13	Z 40 C 14	420 S 45	X 40 Cr 14	SUS 420	2304	S40280		
	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A			S44002	
	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327	S44003		
	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17		X 105 CrMo 17	SUS 440 C			S44004	
	X 3 CrNiMo 13 3	1.4313	1.4313	X 5 CrNi 13 4	Z 5 CN 13 4	425 C 11	X 6 CrNi 13 04	SCS 5		2385	S41500	
	X 18 CrNi 28	1.4749	1.4749	X 18 CrNi 28	Z 18 C 25					2322	S44600	
	P12	X 6 NiCrTiMoV 25 15	1.4534	1.4534	X 3 CrNiMoAl 13 8 2						S13800	
		X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4						S15500	
		1.4540	1.4540	X 4 CrNiCuNb 16 4	Z 4 CNUNb 16.4 M						S15500	
X 4 CrNiCuNb 16 4		1.4540	1.4540	X 4 CrNiCuNb 16 4							S15500	
X 5 CrNiCuNb 16 4		1.4542	1.4542	X 5 CrNiCuNb 16 4				SUS 630			S17400	
X 5 CrNiCuNb 17 4		1.4548	1.4548	X 5 CrNiCuNb 17 4	Z 6 CNU 17.4			SCS 24, SUS 630			S17400	
X 7 CrNiAl 17 7		1.4564	1.4564	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81	X 7 CrNiAl 17 7	SUS 631	2388		S17700	
X 2 NiCoMoTi 18 12 4		1.6356	1.6356	X 2 NiCoMoTi 18 12 4							K93160	
X 2 NiCoMoTi 18 9 5		1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09						K93120	
X 2 NiCoMo 18 9 5		1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09						K93120	
X 2 NiCoMo 18 8 5		1.6359	1.6359	X 2 NiCoMo 18 8 5							K92890	
X 2 NiCoMo 18 8 5		1.6359	1.6359	X 2 NiCoMo 18 8 5			S 162				K92890	
M1	X 10 CrNiS 18 9	1.4305	1.4305	X 10 CrNiS 18 9	Z 10 CNF 18.09	303 S 31	X 10 CrNi 18 09	SUS 303	2346	S30300		
	X 2 CrNi 19 11	1.4306	1.4306	X 2 CrNi 19 11	Z 2 CN 18.10	304 S 12	X 3 CrNi 18 11	SUS 304 L	2352	S30403		
M2	X 5 CrNi 18 10	1.4301	1.4301	X 5 CrNi 18 10	Z 6 CN 18.09	304 S 31	X 5 CrNi 18 11	SUS 304	2333	S30400		
	X 5 CrNiMo 17 12 2	1.4401	1.4401	X 5 CrNiMo 17 12 2	Z 3 CND 17.11.1	316 S 31	X 5 CrNiMo 17 12	SUS 316	2347	S31600		
	X 6 CrNiNb 18 10	1.4550	1.4550	X 6 CrNiNb 18 10	Z 6 CANNb 18.10	347 S 31	X 6 CrNiNb 18 11	SUS 347		2338	S34700	
	X 9 CrNi 18 8	1.4310	1.4310	X 12 CrNi 17 7	Z 12 CN 17.07	301 S 21	X 12 CrNi 17 07	SUS 301		(2331)	S30100	
	X 12 CrNi 18 8	1.4300	1.4300	X 12 CrNi 18 8	Z 12 CN 18	302 S 25		SUS 302		2331	S30200	
	X 2 CrNiMo 18 14 3	1.4435	1.4435	X 2 CrNiMo 18 14 3	Z 2 CND 17.13	316 S 12	X 2 CrNiMo 17 13 2	SCS 16, SUS 316 L		2353	S31603	
M3	X 2 CrNiMoN 17 13 3	1.4429	1.4429	X 2 CrNiMoN 17 13 3	Z 2 CND 17.13 Az	316 S 62	X 2 CrNiMoN 17 13 3	SUS 316 LN		2375	S31653	
	X 2 CrNiN 18 10	1.4311	1.4311	X 2 CrNiN 19 11	Z 2 CN 18 .10 Az	304 S 62	X 2 CrNiN 18 11	SUS 304 LN		2371	S30453	
	X 3 CrNiMo 18 12 3	1.4466	1.4466	X 5 CrNi 18 15		317 S 16	X 5 CrNi 18 15	SUS 317		2366	S31700	
	X 9 CrNiSiN 21 11 2	1.4835	1.4893	X 9 CrNiSiN 21 11 2		310 S 31				2368	S30815	
	X 12 CrNi 25 21	1.4335	1.4335	X 12 CrNi 25 21	Z 12 CN 25.20	310 S 24	X 6 CrNi 26 20	SUH 310, SUS 310 S		2361	S31008	
	X 2 CrNiMoN 22 5 3	1.4462	1.4462	X 2 CrNiMoN 22 5	Z 2 CND 22.05 Az	332 S 15	X 2 CrNiMoN 22 5				2377	S31803
M4	X 2 CrNiMoSi 19 5	1.4424	1.4417	X 2 CrNiMoSi 19 5	Z 2 CND 18.05.03						2376	S31500
	X 2 NiCrMoCu 25 20 5	1.4539	1.4539	X 2 NiCrMoCu 25 20 5	Z 2 NCDU 25 20	904 S 13					2562	N08904
	X 3 CrNiMo 27 5 2	1.4460	1.4460	X 4 CrNiMo 27 5 2	Z 3 CND 25.7 Az		X 3 CrNiMo 27 5 2	SUS 329 J 1		2324	S32900	
	X 5 CrNiCuNb 16 4	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51				2570	S66286	
	X 1 CrNiMoN 20 18 7	1.4547	1.4529	X 1 CrNiMoN 20 18 7	Z 1 CNDU 20.18.05 Az		X 1 CrNiMoN 20 18 7				2778	S31254
M5	X 1 CrNiMoN 25 22 8	1.4652	1.4652	X 2 CrNiMoN 25 22 7								S32654
	X 10 NiCrAlTi 32 20	1.4876	1.4876	X 10 NiCrAlTi 32 20	Z 10 NC 32.21			NCF 800				N08800
	X 2 CrNiMoN 25 7 4	1.4410	1.4410	X 2 CrNiMoN 25 7 4	Z 3 CND 25.07 Az		X 2 CrNiMoN 25 7 4			2328	S32750	

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U.N.E./I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
F.520L	L2	11KHF			Annealed	
F.5220	O1	9KHVG			Annealed	
	O2	9G2F			Annealed	
F.5230	S2100	SHKH15	14 109		Annealed	
F.5212	D3	KH12			Annealed	
	H11	4KH5MFS			Annealed	
F.5318	H13	4KH5MF1S			Annealed	
F.5227	A2	9KH5VF			Annealed	
	H10	3KH3M3F			Annealed	
F.5213		KH12			Annealed	
		KH12MF			Annealed	
F.520.S	L6	5KHNM			Annealed	
F.5613	M35	R6M5K5			Annealed	
	M42	R2AM9K5			Annealed	
	T4	R18K5F2			Annealed	
F.5603	M2	R6M5			Annealed	
	M7				Annealed	
	T1	R18			Annealed	
	403	08KH13			Annealed	Ferritic
F.3401	410, CA-15	12KH13, 08KH13			Annealed	Martensitic
F.3113	430	12KH17			Annealed	Ferritic
F.5261	420	20KH13	17 022		Annealed	Martensitic
F.3404	420	40KH13			Annealed	Martensitic
	440 A				Annealed	Martensitic
	440 B	95KH18			Annealed	Martensitic
	440 C	95KH18			Annealed	Martensitic
	A182 F6NM			F6NM	Annealed	Martensitic
	446	15KH28			Annealed	Ferritic
	XM-13			PH 13-8 Mo	Solution annealed	Austenitic
	XM-12			15-5 PH	H1150	Martensitic
	XM-12			15-5 PH	Solution annealed	Martensitic
	XM-12			15-5 PH	H1025	Martensitic
	SAE 630			17-4 PH	H1150	Martensitic
	630			17-4 PH	Solution annealed	Martensitic
	631	09KH17N7YU1		17-7 PH	Solution annealed	Austenitic/Ferritic
	AMS 6515			Marage 350	Solution annealed	Martensitic
	AMS 6521			Marage 300	Solution annealed	Martensitic
	AMS 6514			Marage 300, Vascomax C300	Solution annealed	Martensitic
	AMS 6512			Marage 250	Solution annealed	Martensitic
	AMS 6512			Marage 250, Vascomax C250	Solution annealed	Martensitic
F.3508	303	12KH19N9			Annealed	Austenitic
F.3504	304 L	03KH18N11			Annealed	Austenitic
F.3504	304	08KH18N10	17 240		Annealed	Austenitic
F.3534	316	08KH17H13M2T	17 346		Annealed	Austenitic
F.3524	347	08KH18N12B			Annealed	Austenitic
F.3517	301	07KH16N6			Annealed	Austenitic
	302	12KH18N9			Annealed	Austenitic
F.3533	(316 L)	03KH17N14M3	17 349		Annealed	Austenitic
	316 LN	03KH16N15M3			Annealed	Austenitic
F.3541	304 LN	03KH18N11			Annealed	Austenitic
	317	08KH17H15M3T			Annealed	Austenitic
				253 MA	Annealed	Austenitic
	310 S	12KH25N20			Annealed	Austenitic
	329 LN			SAF 2205	Annealed	Duplex
				3RE60	Annealed	Duplex
	904L				Annealed	Super austenitic
	329				Annealed	Duplex
	660			A286	Solution annealed	Austenitic
				254 SMO	Annealed	Super austenitic
				654 SMO	Annealed	Super austenitic
				Alloy 800	Annealed	Austenitic
	F 53			SAF 2507	Annealed	Super duplex

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K1	EN-GJL-150	0.6150	0.6150	GG-15	Fl 15 D	Grade 150	G15	FC 150	01 15-00	F11601	
	EN-GJL-200	0.6200	0.6200	GG-20	Fl 20 D	Grade 220	G20	FC 200	01 20-00	F12101	
	EN-GJL-250	0.6250	0.6250	GG-25	Fl 25 D	Grade 260	G25	FC 250	01 25-00	F12401	
	EN-GJL-350	0.6350	0.6350	GG-35	Fl 35 D	Grade 350	G35	FC 350	01 35-00	F13502	
	EN-GJL-215			GG-220 HB					02 19		
K2	EN-GJV-300			GJV-300							
	EN-GJV-350			GJV-350							
	EN-GJV-400			GJV-400							
	EN-GJV-450			GJV-450							
	EN-GJV-500			GJV-500							
K3	EN-GJMB-550-4	0.8155		GTS-55-04	P 540/5	P 540/5	P 55-04	PCMP55-04	08 54-00	F24130	
K4	EN-GJS-350-22	0.7033	0.7033	GGG-35.3	FGS 370-17	Grade 350/22		FCD 350-22L	07 17-15		
	EN-GJS-400-15	0.7040	0.7040	GGG-40	FGS 400-12	Grade 420/12	GS 400-12	FCD 400-18L	07 17-02	F32800	
	EN-GJS-400-18	0.7043	0.7043	GGG-40.3	FGS 370-17	Grade 370/17	GSO 42/17		07 17-12	F32800	
	EN-GJS-500-7	0.7050	0.7050	GGG-50	FGS 500-7	Grade 500/7	GS 500-7	FCD 500-7	07 27-02	F33800	
	EN-GJS-600-3	0.7060	0.7060	GGG-60	FGS 600-3	Grade 600/3	GS 600-3	FCD 600-3	07 32-03	F34100	
	EN-GJS-700-2	0.7070	0.7070	GGG-70	FGS 700-2	Grade 700/2	GS 700-2	FCD 700-2	07 37-01	F34800	
K5	EN-GJS-1000-5			GJS-1000-5						ADI grade 5	
	EN-GJS-1200-2			GJS-1200-2						ADI grade 2	
	EN-GJS-1400-1			GJS-1400-1						ADI grade 3	
	EN-GJS-800-8			GJS-800-8						ADI grade 4	
K6	EN-GJLA-XNiCr 20-2	0.6660	0.6660	GGL-NiCr 20 2	FGL Ni20 Cr2	Grade F2			05 23-00	F41002	
	EN-GJLA-XNiCr 30-3	0.6676	0.6676	GGL-NiCr 30 3	FGL Ni30 Cr3	Grade F3				F41004	
	EN-GJLA-XNiCuCr 15-6-2	0.6655	0.6655	GGL-NiCuCr 15 6 2	FGL Ni15 Cu6 Cr2	Grade F1				F41000	
K7	EN-GJSA-XNiMn 13-7	0.7652	0.7652	GGG-NiMn 13 7	FGS Ni13 Mn7	Grade S6			07 72-00		
	EN-GJSA-XNiCr 20-2	0.7660	0.7660	GGG-NiCr 20 2	FGS Ni20 Cr2	Grade S2				F43000	
	EN-GJSA-XNiMn 23-4	0.7673	0.7673	GGG-NiMn 23 4	FGS Ni23 Mn4	Grade S2M				F43010	
	EN-GJSA-XNiCr 30-3	0.7676	0.7676	GGG-NiCr 30 3	FGS Ni30 Cr3	Grade S3				F43003	
	EN-GJSA-XNi 35	0.7683	0.7683	GGG-Ni 35	FGS Ni35					F43006	
	AW-1050A	Al99.5	3.0255	Al99.5	A-5/1050A	1B		(A1050)	4007		AA1050A
AW-2011	AlCuBiPb	3.1655	AlCuBiPb	A-U5PbBi/2011	FC1		A2011	4355		AA2011	
AW-2014	AlCuSiMn	3.1255	AlCuSiMn	A-U4SG/2014	H15			4338		AA2014	
AW-5005	AlMg1	3.3315	AlMg1	A-G0.6	N41			4106		AA5005	
AW-6060	AlMgSi0.5	3.3206	AlMgSi0.5	A-GS/6060	(H9)			4103		AA6060	
AW-6063	AlMgSi0.7	3.3210	AlMgSi0.7	A-GSUC/6061	(H10)		(A6063)	4104, 4107		AA6005	
AW-3103	AlMn1	3.0515	AlMn1		N3			4054		AA3103	
AW-3003	AlMn1Cu	3.0517	AlMn1Cu	A-M1/3003			A3003			AA3003	
AW-7020	AlZn4.5Mg1	3.4335	AlZn4.5Mg1	A-Z5G/7020	H17			4425		AA7020	
AW-7075		3.4365	AlZnMgCu1.5	A-Z5GU/7075	2L95/2L96			A7075		AA7075	
AC-42000		3.2341	G-AlSi5Mg	A-S7G	LM25	3599		AC 4C	4244		
AC-46200	AlSi8Cu3(Si)	3.2161	G-AlSi8Cu3						4251	A13800	
MG-P-63	MgAl6Zn	3.5612	G-MgAl6Zn	G-A6-Z1	MAG-E-121					M11600	
MG-P-61	MgAl8Zn	3.5812	G-MgAl8Zn	(G-A7-Z1)							
MN65120	MgSe3Zn2Zr1	3.5103	G-MgSe3Zn2Zr1	ZRE1	MAG6-TE					M12330	
AC-43400	AlSi10Mg(Fe)	3.2381	G-AlSi10Mg	A-S10G	LM9				4253	A13600	
AC-44200	AlSi12	3.2382	GD-AlSi12								
AW-6082	AlMgSi1	3.2315	AlMgSi1	A-SGM0.7/6082	H30				4212	AA6082	
N3	AlSi17Cu5							ADC14			
N11	CC331G		2.0940.01	CuAl10Fe	CuAl10Fe	AB1			5710	C95200	
	CC333G		2.0975.01	CuAl10Ni	CuAl10Ni5Fe5	AB2			5716	C95500	
		CuNi10Fe1Mn	2.0872	CuNi10Fe1Mn	CuNi10Fe1Mn	CN102			5667		C70600
				CuNi10Zn45							
		CW408J	2.0790	CuNi18Zn19Pb	CuNi18Zn19Pb1						C76300
	CW352H		2.1176	CuPb10Sn	CuSn10Pb10	LB2			5640		C93700
	CC480K		2.1050.01	CuSn10	CuSn10	CT1			5443		C90700
			2.1087	CuSn10Zn					5458		C90500
	CW452K	CuSn6	2.1020	CuSn6	CuSn6	PB103		C5191	5428		C51900
	CW502L	CuZn15	2.0240	CuZn15	CuZn15	CZ102		C2300	5112		C23000
	CW706R	CuZn28Sn1	2.0470	CuZn28Sn1	CuZn29Sn1				5220		C44300
	CW508L	CuZn37	2.0321	CuZn37	CuZn37	CZ108			5150		C27200
	CW717R	CuZn38Sn1	2.0530	CuZn38Sn1							C46400
	CW614N	CuZn39Pb3	2.0401	CuZn39Pb3	CuZn39Pb3	CZ121			5170		C38500
	CW612N	CuZn40Pb2	2.0402	CuZn40Pb2	CuZn39Pb2	CZ120			5168		C37800
	CW622N	CuZn44Pb2	2.0410	CuZn44Pb2		CZ104			5272		C68700

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S1											
S2											
S3	NiMo30		2.4810							N10002	
	NiMo16Cr15W		2.4819							N10276	
	NiCr19Fe19Nb5Mo3		2.4668							N07718	
				2.4669							N07750
	NiCr20TiAl		2.4631								N07080
	NiCr19Co18Mo4Ti3Al3									N07500	
	NiCr20Co13Mo4Ti3Al		2.4654							N07001	
S11			3.7024							R54620	
S12										R56320	
	TiAl6V4		3.7164							R56400	
S13				TiV10Fe2Al3							
H3	16 MnCr 5	1.7131	1.7131	16 MnCr 5	16 MC 5	527 M 17	16 MnCr 5	SCR 415	2511	G51170	
H5	C 67S	1.1231	1.1231	Ck 67	XC 68	060 A 67	C 70		1770	G10700	
	C 75S	1.1248	1.1248	Ck 75	XC 75	060 A 78	C 75		1774, 1778	G10780	
	C 100S	1.1274	1.1274	Ck 101		060 A 96		SUP 4	1870	G10950	
	C 105U	1.1545	1.1545	C 105 W1	Y1 105		C 100 KU		1880		
			1.2550		60 WCrV 7	55 WC 20		55 WCrV 8 KU			
	55 Cr 3	1.7176	1.7176	55 Cr 3	55 C 3	527 A 60	55 Cr 3	SUP 9 (A)	2253	G51550	
42 CrMo 4	1.7225	1.7225	42 CrMo 4	42 CD 4	708 M 40	42 CrMo 4	SCM 440 (H)	2244	G41400		
107 CrV 3	1.2210	1.2210	115 CrV 3	100 C 3			107 CrV 3 KU			T61202	
H7		1.2510		100 MnCrW 4	90 MWCV 5	BO 1	95 MnWCr 5 KU	SKS 3	2140	T31501	
	90 MnCrV 8	1.2842	1.2842	90 MnCrV 8	90 MV 8	BO 2	90 MnVCr 8 KU			T31502	
	100 Cr 6	1.3505	1.3505	100 Cr 6	100 C 6	534 A 99	100 Cr 6	SUJ 2	2258	G51986	
H8	X 40 CrMoV 5 1	1.2344	1.2344	X 40 CrMoV 5 1	Z 40 CDV 5	BH 13	X 40 CrMo 5 1 1 KU	SKD 61	2242	T20813	
	X 100 CrMoV 5	1.2363	1.2363	X 100 CrMoV 5 1	Z 100 CDV 5	BA 2	X 100 CrMoV 5 1 KU	SKD 12	2260	T30102	
	X 155 CrVMo 12 1		1.2379	X 155 CrVMo 12 1	Z 160 CDV 12	BD 2	X 155 CrVMo 12 1 KU	SKD 11		T30402	
			1.2436		X 210 CrW 12			X 215 CrW 12 1 KU	SKD 2	2312	
			1.2601		X 165 CrMoV 12			X 165 CrMoV 12 KU		2310	
			1.2713		55 NiCrMoV 6	55 NCDV 7			SKT 4		T61206
HS 6-5-2-5	1.3243	1.3243	S 6-5-2-5	Z 85 WDKCV 06-05-05-04-02			HS 6-5-2-5	SKH 55	2723		
HS 2-10-1-8	1.3247	1.3247	S 2-10-1-8	Z 110 DKCWV 09-08-	BM 42		HS 2-9-1-8	SKH 51		T11342	
HS 18-0-1	1.3355	1.3355	S 18-0-1	Z 80 WCV 18-04-01	BT 1		HS 18-0-1	SKH 2		T12001	
H11	X 20 Cr 13	1.4021	1.4021	X 20 Cr 13	Z 20 C 13	420 S 37	X 20 Cr 13	SUS 420 J 1	2303	S42000	
	X 70 CrMo 15	1.4109	1.4109	X 65 CrMo 14	Z 70 D 14			SUS 440 A		S44002	
	X 90 CrMoV 18	1.4112	1.4112	X 90 CrMoV 18	Z 2 CND 18 05	409 S 19	X CrTi 12	SUS 440 B	2327	S44003	
	X 105 CrMo 17	1.4125	1.4125	X 105 CrMo 17	Z 100 CD 17			X 105 CrMo 17	SUS 440 C		S44004
	X 4 CrNiCuNb 16 4	1.4540	1.4540	X 4 CrNiCuNb 16 4							S15500
X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4					SUS 630		S17400	
X 5 CrNiCuNb 16 4	1.4542	1.4542	X 5 CrNiCuNb 16 4					SUS 630		S17400	
X 7 CrNiAl 17 7	1.4568	1.4568	X 7 CrNiAl 17 7	Z 9 CAN 17.7	301 S 81		X 7 CrNiAl 17 7	SUS 631	2388	S17700	
X 8 CrNiMoAl 15 7 5	1.4574	1.4574	X 8 CrNiMoAl 15 7 5							S15700	
X 6 NiCrTiMoV 25 15	1.4980	1.4943	X 4 NiCrTi 25 15	Z 6 NCTDV 25.15	HR 51			SUH 660	2570	S66286	
X 2 NiCoMo 18 8 5	1.6359	1.6359	X 2 NiCoMo 18 8 5		S 162					K92890	
X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09						K93120	
X 2 NiCoMoTi 18 9 5	1.6358	1.6358	X 2 NiCoMoTi 18 9 5	Z 2 NKD 19-09						K93120	
X 2 NiCoMoTi 18 12 4	1.6356	1.6356	X 2 NiCoMoTi 18 12 4							K93160	
H21	X 120 Mn 12	1.3401	1.3401	X 120 Mn 12	Z 120 M 12	BW 10		SC MnH 1	2183		
H31	EN-GJN-HV520	0.9620	0.9620	G-X330 NiCr 4 2	FB Ni4 Cr2 BC	Grade 2 A			05 12-00	F45001	
	EN-GJN-HV550	0.9625	0.9625	G-X260 NiCr 4 2	FB Ni4 Cr2 HC	Grade 2 B			05 13-00	F45000	
	EN-GJN-HV600(XCr11)	0.9630	0.9630	G-X300 CrNiSi 9 5 2	FB Cr9 Ni5	Grade 2 C, D, E			04 57-00	F45003	

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U.N.E./ I.H.A.	AISI / ASTM	GOST	ČSN	Misc. Brands	Condition	Structure
				Discolloy	Precipitation hardened	
				Haynes 25		
				Stellite 21		
				Hastelloy C		
		KHN65MV		Hastelloy C-276		
				IN 100		
				Inconel 718		
				Inconel X-750	Solution annealed	
				Nimonic 80A		
				René 41		
				Udimet 500		
				Waspalloy		
				Ti	Commercially pure	Ti (α)
	AMS 4919			Ti 6-2-4-2	Annealed	Ti (α)
	AMS 4943			Ti 3Al-2.5V (grd 9)	Annealed	Ti (α+β)
	AMS 4920, Grade 5	VT6		Ti 6Al-4V	Annealed	Ti (α+β)
	AMS 4986			Ti 10V-2Fe-3Al	Annealed	Ti (β)
F.1516	5115	12KH2	14 220		Case hardened	
F.5103	1070	70			Quenched & Tempered	
F.5107	1078, 1080	75			Quenched & Tempered	
F.5117	1095				Quenched & Tempered	
F.5118	W1	U10A			Quenched & Tempered	
	S1	5KHV2SF			Quenched & Tempered	
	5155				Quenched & Tempered	
F.1252	4142, 4140	38HM	15 142		Quenched & Tempered	
F.520L	L2	11KHF			Quenched & Tempered	
F.5220	O1	9KHVG			Quenched & Tempered	
	O2	9G2F			Quenched & Tempered	
F.5230	52100	SHKH15	14 109		Quenched & Tempered	
F.5318	H13	4KH5MF1S			Quenched & Tempered	
F.5227	A2	9KH5VF			Quenched & Tempered	
F.5211	D2	KH12MF			Quenched & Tempered	
F.5213		KH12			Quenched & Tempered	
		KH12MF			Quenched & Tempered	
F.520.S	L6	5KHNM			Quenched & Tempered	
F.5613	M35	R6M5K5			Quenched & Tempered	
	M42	R2AM9K5			Quenched & Tempered	
	T1	R18			Quenched & Tempered	
F.5261	420	20KH13	17 022		Quenched & Tempered	Martensitic
	440 A				Quenched & Tempered	Martensitic
	440 B	95KH18			Quenched & Tempered	Martensitic
	440 C	95KH18			Quenched & Tempered	Martensitic
	XM-12			15-5 PH	H900	Martensitic
	SAE 630			17-4 PH	H1025	Martensitic
	SAE 630			17-4 PH	H900	Martensitic
	AMS 5528	09KH17N7YU1		17-7 PH	TH1050	Martensitic
	632			PH 15-7 Mo	TH1050	Martensitic
	660			A286	Precipitation hardened	Austenitic
	AMS 6512			Marage 250	Precipitation hardened	Martensitic
	AMS 6521			Marage 300	Precipitation hardened	Martensitic
	AMS 6521			Marage 300	Precipitation hardened	Martensitic
	AMS 6515			Marage 350	Precipitation hardened	Martensitic
	A128 Grade A			Hadfield		
	A532 IB (NiCr-LC)			Ni-Hard 2		White cast iron
	A532 IA (NiCr-HC)			Ni-Hard 1		White cast iron
	A532 ID (Ni-HiCr)			Ni-Hard 4		White cast iron

Cemented carbide inserts and insert carriers

Cemented carbide inserts and cemented carbide insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

These products meet all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Seco Tools will buy back used inserts and solid carbide tools for recycling. Inserts and solid carbide tools should be separated from other metal waste (steel, aluminium, copper etc).

All packing material is fully recyclable.

CBN and PCD inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Seco Tools will buy back used CBN- or PCD-tipped inserts for recycling. Inserts should be separated from other metal waste (steel, aluminium, copper etc). Solid CBN-inserts may be discarded as landfill waste.

All packing material is fully recyclable.

Black oxide insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations.

Disposal:

Used insert carriers may be sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling.

All packing material is fully recyclable.

Cermet inserts

Inserts from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Cermet grade C15M inserts do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is higher than specified in norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin. These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for cermet inserts. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling cermet inserts.

Regrinding:

Wet or dry grinding can produce potentially hazardous dusts or mists that can irritate skin, eyes, nose, throat and result in lung damage or disease. To avoid injury use proper safety precautions and protective equipment.

Disposal:

Used inserts may be recycled. Inserts should be separated from other metal waste (steel, aluminium, copper, etc) including cemented carbide inserts. All packing material is fully recyclable.

Nickel coated insert carriers

Insert carriers from Seco Tools are not included in the product range intended for the following requirements. Nevertheless Seco Tools can make the following declaration.

This product meets all requirements in RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment), WEEE (Waste Electrical & Electronic Equipment) and ELV (End of Life Vehicles) requirements.

Products do not contain mercury, lead, hexavalent chromium, cadmium, CFC, HCFC, flame retardants or solvents in concentrations that exceed specifications in the regulations. Insert carriers do contain nickel and will leach nickel when in contact with the skin. Amount of leaching is not higher than norm SS-EN 1811 Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin.

These norms are intended for products that are in direct and prolonged contact with the skin and are therefore not directly applicable for insert carriers. Persons with known allergic reactions to nickel are advised to wear protective gloves when handling nickel coated insert carriers.

Disposal:

Used tools maybe sent for recycling together with ordinary steel waste (swarf and discarded steel scrap) for recycling. All packing material is fully recyclable.

Intentionally added alloying elements

Grade	Cemented carbide											Coating						
	W	Ti	Ta	Nb	Co	Cr	Ni	Mo	C	N	Ru	Ti	Al	C	N	O	Si	Nb
CP20	■				■				■			■			■			
CP200	■				■	■			■			■	■		■			
CP300	■	■	■	■	■				■			■	■		■			
CP500	■				■	■			■			■	■		■			
CP600	■				■	■			■			■	■		■			
C15M	■	■	■	■	■		■	■	■									
CF	■				■		■	■	■									
CM	■				■		■	■	■									
DP2000	■				■				■			■	■	■	■	■		
DP3000	■	■	■	■	■				■			■	■	■	■	■		
DS2050	■				■	■			■						■			
DS4050	■				■				■						■			■
F15M	■				■	■			■			■	■		■			
F25M	■	■	■	■	■				■			■	■		■			
F30M	■				■	■			■			■	■		■			
F40M	■				■	■			■			■	■		■			
HX	■		■		■				■			■	■		■			
H02	■		■		■				■			■	■		■			
H15	■				■				■			■	■		■			
H25	■				■				■			■	■		■			
KX	■				■				■			■	■		■			
MH1000	■				■				■			■	■		■			
MK1500	■		■		■				■			■	■	■	■	■		
MK2050	■		■		■				■			■	■	■	■		■	
MM4500	■				■				■			■	■	■	■	■	■	
MP1501	■		■	■	■				■			■	■	■	■	■	■	
MP2050	■				■				■		■	■	■	■	■	■	■	
MP2501	■		■	■	■				■			■	■	■	■	■	■	
MP3000	■				■	■			■			■	■	■	■	■	■	
MS2500	■		■	■	■				■			■	■	■	■	■	■	
MS2050	■				■	■			■			■	■	■	■	■	■	
RX1500	■		■		■		■	■	■			■	■	■	■	■	■	
RX2000	■		■		■				■			■	■	■	■	■	■	
RM2020	■				■				■			■	■	■	■	■	■	
RM2090	■				■				■			■	■	■	■	■	■	
RN2010	■				■				■			■	■	■	■	■	■	
RS2090	■				■				■			■	■	■	■	■	■	
T350M	■		■	■	■				■			■	■	■	■	■	■	
T25M	■		■	■	■				■			■	■	■	■	■	■	
TGH1050	■				■		■		■			■	■	■	■	■	■	
TGK1500	■				■				■			■	■	■	■	■	■	
TGP25	■	■	■	■	■				■			■	■	■	■	■	■	
TGP35	■		■	■	■				■			■	■	■	■	■	■	
TGP45	■		■	■	■				■			■	■	■	■	■	■	
TGS2050	■				■		■		■			■	■	■	■	■	■	
TH1000	■				■				■			■	■	■	■	■	■	
TH1500	■				■				■			■	■	■	■	■	■	
TK0501	■				■				■			■	■	■	■	■	■	
TK1501	■		■		■				■			■	■	■	■	■	■	
TM1501	■	■	■	■	■				■			■	■	■	■	■	■	
TM2000	■	■	■	■	■				■			■	■	■	■	■	■	
TM2501	■	■	■	■	■				■			■	■	■	■	■	■	
TM3501	■				■				■			■	■	■	■	■	■	
TM4000	■	■	■	■	■				■			■	■	■	■	■	■	
TP0501	■	■	■	■	■		■		■			■	■	■	■	■	■	
TP1020	■	■	■	■	■				■			■	■	■	■	■	■	
TP1030	■	■	■	■	■				■			■	■	■	■	■	■	
TP1501	■	■	■	■	■				■			■	■	■	■	■	■	
TP25	■	■	■	■	■		■		■			■	■	■	■	■	■	
TP200	■	■	■	■	■				■			■	■	■	■	■	■	
TP2501	■	■	■	■	■		■		■			■	■	■	■	■	■	
TP3501	■	■	■	■	■				■			■	■	■	■	■	■	
TP40	■				■				■			■	■	■	■	■	■	
TS2000	■				■		■		■			■	■	■	■	■	■	
TS2050	■				■				■			■	■	■	■	■	■	
TS2500	■		■		■				■			■	■	■	■	■	■	
TTP2050	■				■		■		■			■	■	■	■	■	■	
T250D	■				■				■			■	■	■	■	■	■	
T400D	■				■				■			■	■	■	■	■	■	
T100R	■		■		■				■			■	■	■	■	■	■	
T60M	■	■	■	■	■				■			■	■	■	■	■	■	
883	■		■		■				■			■	■	■	■	■	■	
890	■				■	■			■			■	■	■	■	■	■	

Introduction

Drilling

Reaming

Boring

Annex

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