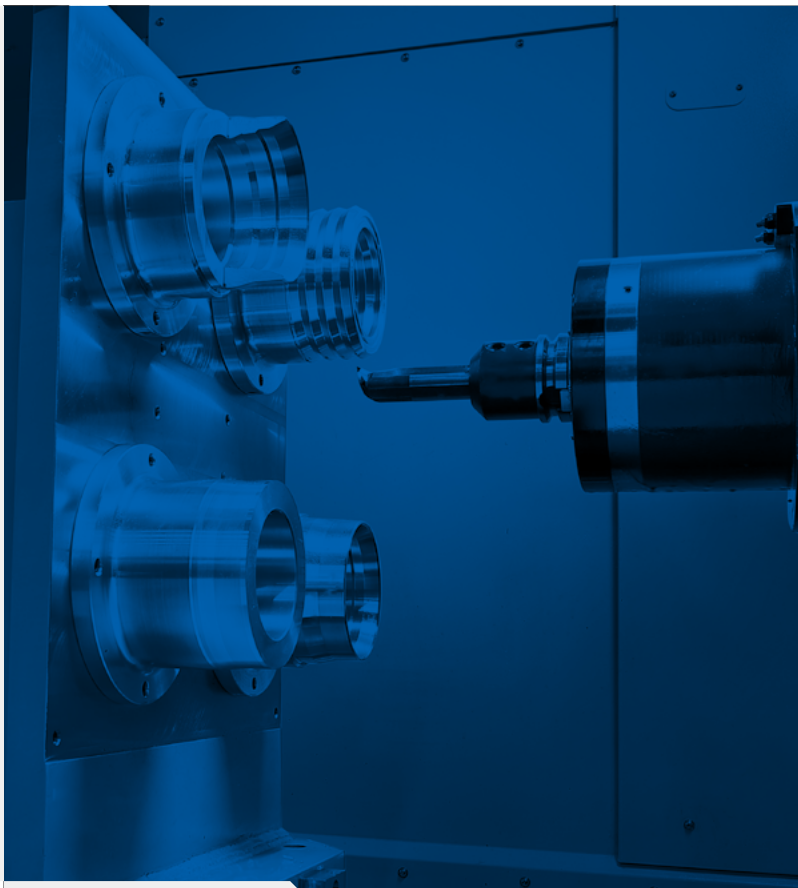
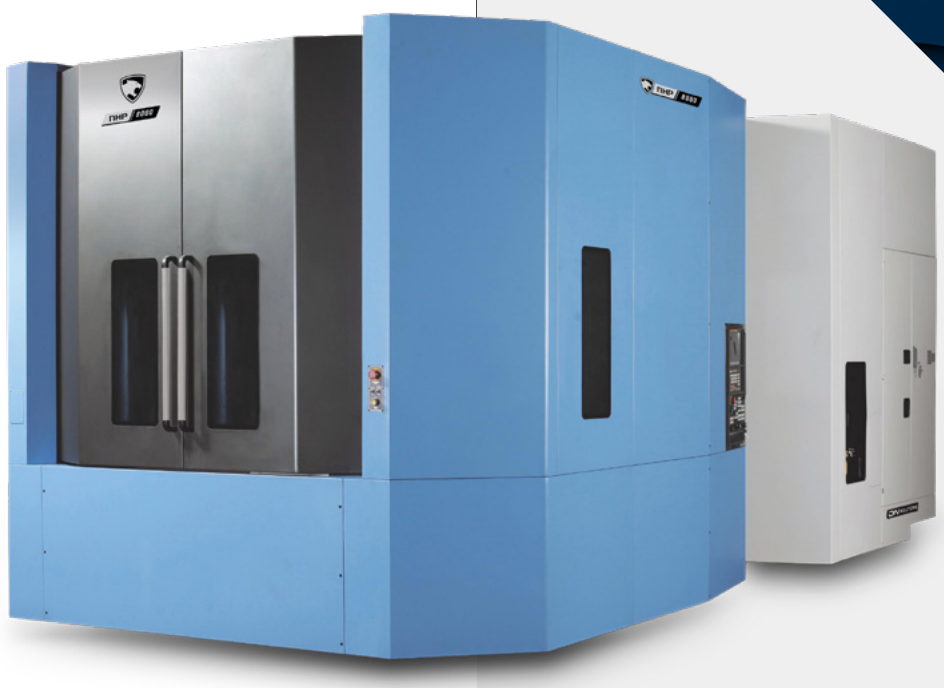
DN SOLUTIONS

HIGH-SPEED, HIGH-PRODUCTIVITY HORIZONTAL MACHINING CENTER

NHP 8000





NHP 8000

NHP series machines are designed to improve your productivity with their high speed, powerful cutting performance and world-class specifications. The machines' one piece bed structure, featuring step guideways, provides extra rigidity and impressive rapid rates ensure high productivity. In addition all NHP machines are equipped with a range of user-friendly functions and features.

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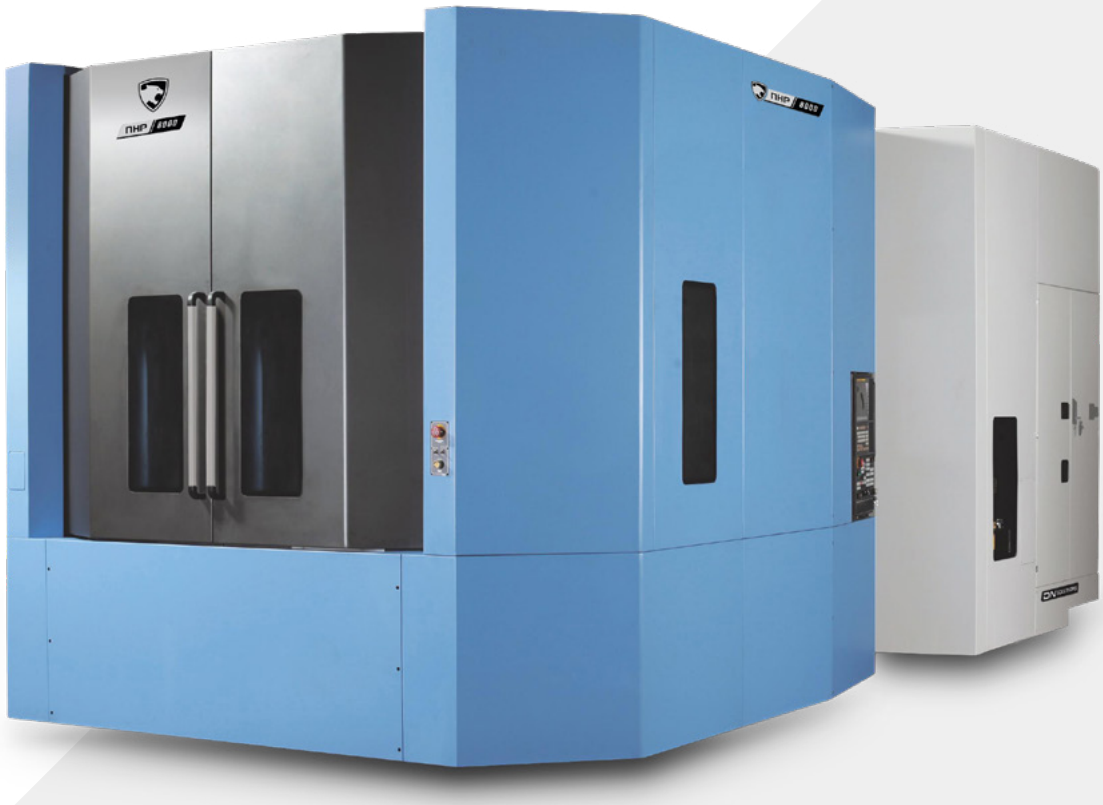


HIGH RIGIDITY ONE-PIECE BED

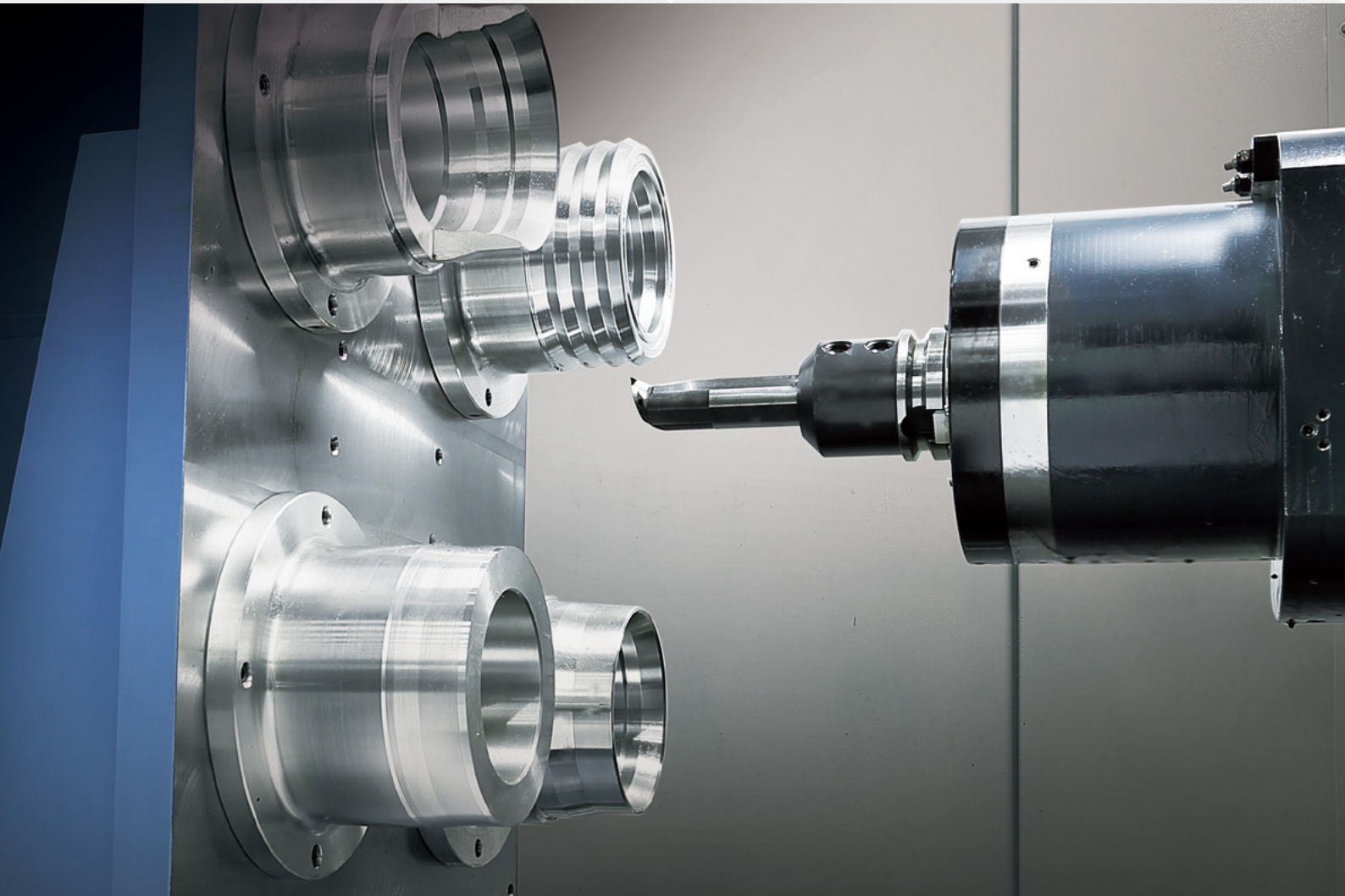
- The high rigidity one piece bed is ideal for heavy-duty machining.

HIGH PRODUCTIVITY AND RELIABILITY

- NHP machines' rapid rates have been increased through the adoption of a high-speed axis drive system. Servo-driven automatic tool changers (ATC) and automatic pallet changers (APC) increase productivity and improve process reliability. (An increased pallet size option is available on the NHP5500 and 6300 machine models).

USER-FRIENDLY FUNCTIONS

- A range of new user-friendly features and functions have been introduced to make operators' lives easier and more productive.



BASIC STRUCTURE

Step guide-type high-rigidity bed supports even-higher productivity.

Travel distances

NHP 8000 (X/Y/Z)

1400/1200/1370 mm
(55.1/47.2/53.9 inch)

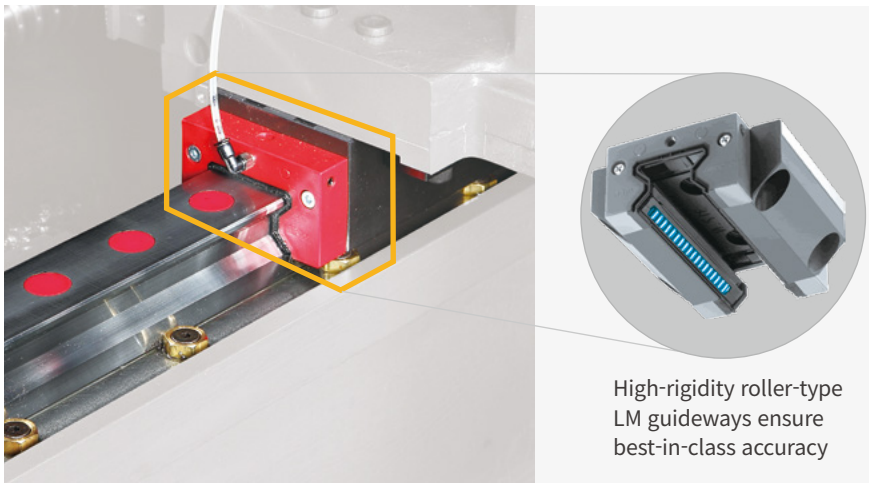
Rapid rates

NHP 8000

50 m/min
(1968.5 ipm)



All axes feature roller-type LM guideways and high-precision, low-noise producing ball screws to improve performance and accuracy.



High-rigidity roller-type LM guideways ensure best-in-class accuracy

TABLE

The servo-driven APC is reliable and stable, and has been designed with your productivity in mind.

Higher cutting power

NHP 8000

Ø1450 x H1550 mm

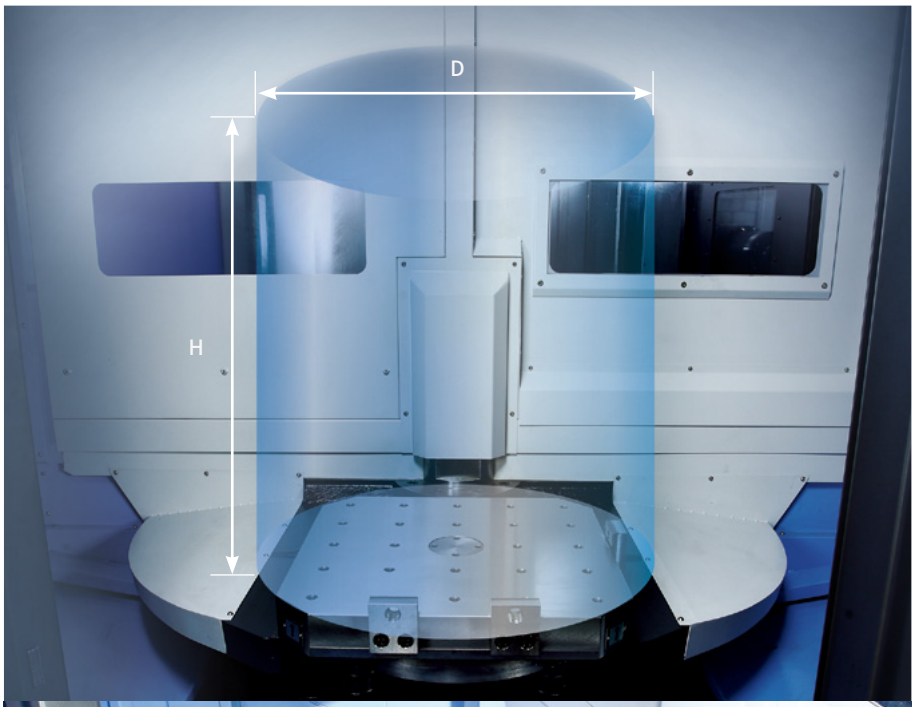
(57.1 X 61.0 inch)

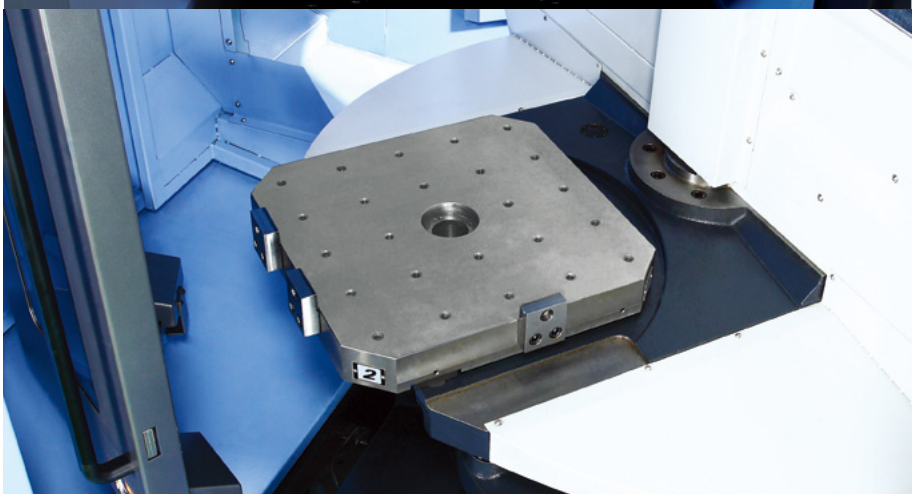
Max. workpiece weight

NHP 8000

2000 kg

(4409.2 lb)





Improved pallet and APC system

The APC system ensures fast and accurate pallet change operations. In addition to its outstanding performance, the APC has also been designed with more space - improving accessibility and operator convenience.

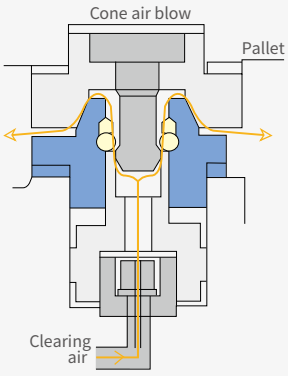
Pallet change time

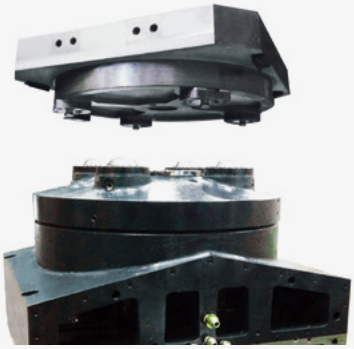
NHP 8000

16 sec

Cone air blower

The mechanism, designed for precise and repeatable pallet positioning, injects high pressure air into the location cones connecting the table to the pallet. This removes chips from the locating surfaces and ensures highly accurate pallet positioning.





SPINDLE

The high-speed spindle minimises vibration and thermal growth whilst offering the fastest acceleration and deceleration rates, guaranteeing superior cutting performance compared to the competition.

Max. spindle speed

10000 {6000 / 15000 OPTION } r/min

Max. spindle power

45 / **25** kW
{37/22, 55/30, 37/30 OPTION } kW
(60.3/33.5, 49.6 /29.5, 73.8 /40.2, 49.6 /40.2 ft-lbs)

Max. motor torque

600 N · m (442.8 ft-lbs)
{809, 1010, 398 OPTION } N · m
(597.0, 745.4, 293.7 ft-lbs)

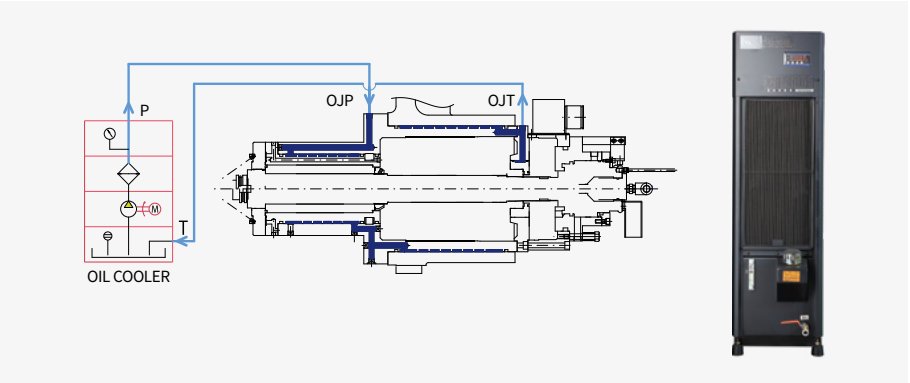


High-speed, high-performance spindle

Designed to minimize vibration and thermal error while offering rapid acceleration and deceleration, the spindle delivers excellent cutting performance irrespective of the material being machined. The spindle's increased rigidity means takes high-speed cutting and heavy-duty machining in its stride.

Spindle cooling system

An oil cooler system is provided as standard to facilitate long machining runs and continuous operation. The oil is cooled in a cooler before being circulated around the spindle bearings and built-in motor to minimise thermal displacement and ensure high precision.



Dual-face tool locking system

The dual contact face and taper system improves rigidity, increases tool life and, by minimising vibrations, ensures high surface finishes and surface integrity.

Type

ISO #50



CUTTING PERFORMANCE

The NHP Series realizes excellent machining performance thanks to its improved structure and comprehensive tooling system.

High cutting power

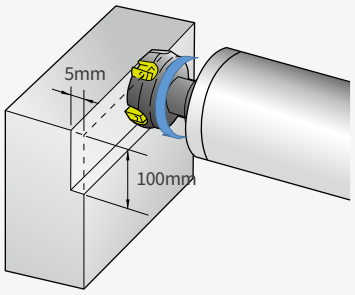
High performance machining can be undertaken quickly and accurately.

(Motor power : 45/25 kW(60.3/33.5 Hp))

NHP series

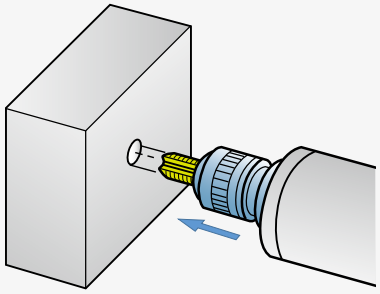
Face Mill_Carbon Steel (SM45C) [ø125mm(4.9inch) Face mill (8Z)]

	Machining rate	Spindle speed	Feed rate
Previous model	440 cm³/min	350 r/min	550 mm/min
NHP series	700 cm³/min	500 r/min	1400 mm/min



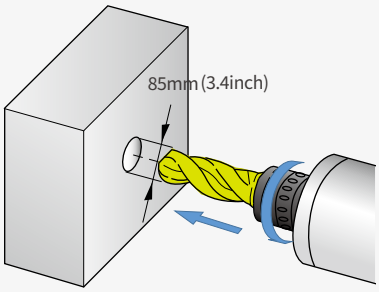
Tap_Carbon Steel (SM45C)

Machining rate	Spindle speed	Feed rate
M42×P4.5	150 r/min	675 mm/min



Drill_Carbon Steel (SM45C) [ø85mm(3.3inch) U-Drill (2Z)]

Machining rate	Spindle speed	Feed rate
567 cm³/min	600 r/min	100 mm/min



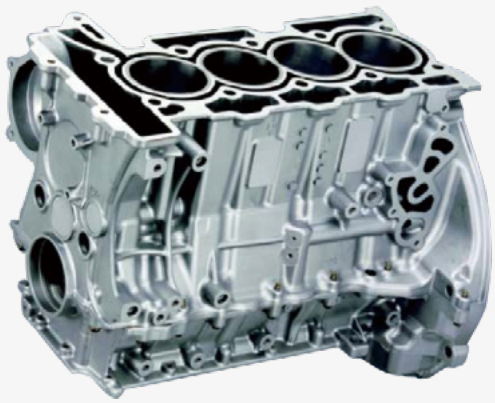
** The results in the catalogue are provided as examples and should be used as a guide. Different cutting and environmental conditions will deliver different results.*

Productivity

High Productivity

8 % Down

- Diesel engine cylinder block
- Material: Cast iron
- No. of tools used: 20



Cycle time

Previous model	977 s
NHP series	**900 s**

↵ **77**s

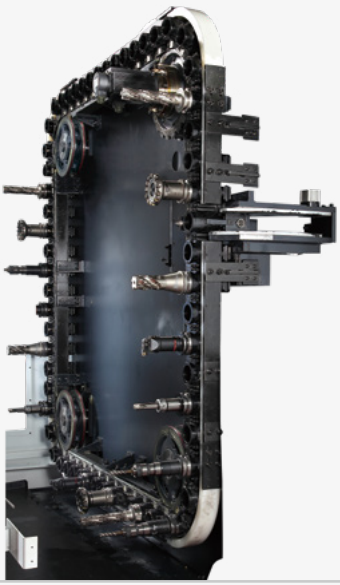
MAGAZINE

40 tools provided as standard in addition to a range of ATC options and configurations.

Servo-driven ATC

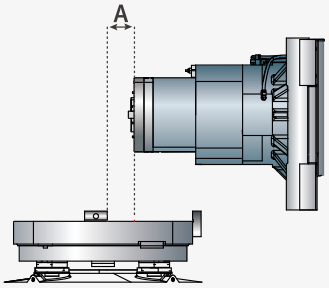
The ATC is able to handle tools weighing up to 25kg/55.1lbs (pot-type magazine); and 30kg/66.1lbs (chain-type magazine). The servo motor ensures fast tool indexing and spindle positioning.

Specifications (Max. tool diameter x max. tool length)				
Model	Standard (mm(inch))		Optional (mm(inch))	
	BT/CT/DIN	HSK	BT/CT/DIN	HSK
NHP 8000	320 x 630 (12.6 X 24.8)	320 x 700 (12.6 X 27.6)	320 x 800 (12.6 X 31.5)	320 x 800 (12.6 X 31.5)
Tool change time (tool weight of less than 12 kg)				
Model	Tool to tool		Chip to chip	
NHP 8000	2 s		6.1 s	



Machining with short tools

The distance between the spindle and the center of the pallet has been reduced to enable heavier-duty machining with shorter tools.



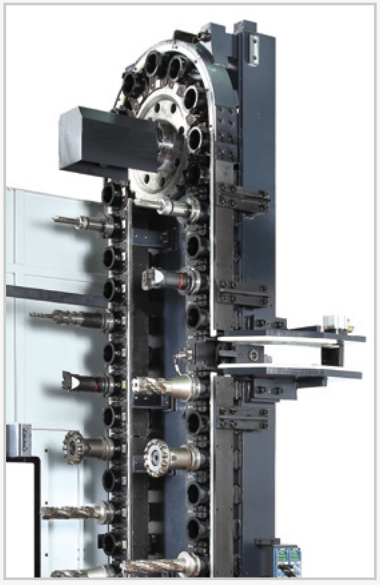
Features

- Increased tool rigidity
- Minimal Z axis displacement at high speed
- Improved ATC repeatability
- Increased tool life

Tool magazine for diverse types of tools, including pot, chain and matrix tool types

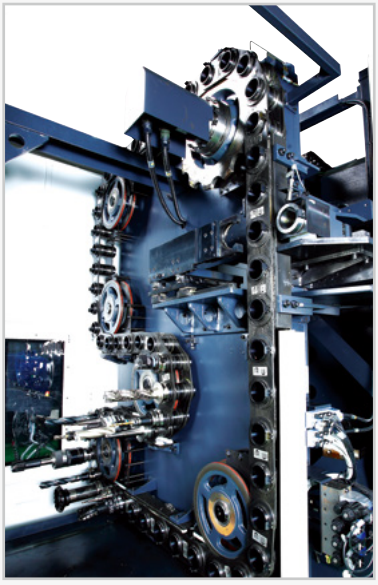
The NHP Series provides 40 tools as a standard feature, and up to 376 tools as an option.

Pot type magazine OPTION



40 / 60 tools

Chain type magazine



90 / 120 / 150 tools

Matrix type magazine



196 / 256 / 316 / 376 tools

STANDARD I OPTIONAL SPECIFICATIONS

A range of options is available to suit individual requirements.

Description	Features		NHP 8000
Tool magazine	40 tools		●
	60 tools		○
	90 tools		○
	120 tools		○
	150 tools		○
Type of tool shank	BT50		●
	CAT50		○
	DIN50		○
	HSK		○
Mist collector	Mist Collector		○
Spindle	6000 r/min	37 / 22 kW (49.6 / 29.5 Hp)	○
	10000 r/min	45 / 25 kW (60.3 / 33.5 Hp)	●
	15000 r/min	37 / 30 kW (49.6 / 40.2 Hp)	○
	6000 r/min High Torque	55 / 30 kW (73.8 / 40.2 Hp)	○
	Spindle air curtain		●
Spindle motor power	45 / 25 kW (60.3 / 33.5 Hp)		●
	37 / 22 kW (49.6 / 29.5 Hp)		○
	37 / 30 kW (49.6 / 40.2 Hp)		○
Hydraulic fixtures	Hydraulic fixture line	2X2	○
		4X4	○
		6X6	○
		8X8	○
	Hydraulic fixture unit		○
Automatic workpiece measurement device	OMP60_RENISHAW		○
	RMP60_RENISHAW		○
Auto tool measuring device	BK MIKRO		○
	NEEDLE SWING TYPE		○
	OMRON (Limit Switch Type)		○
	TS27R		○
	NC 4		○
Accuracy	Linear scale (X-axis)		○
	Linear scale (Y-axis)		○
	Linear scale (Z-axis)		○
Chip handling system	Chip conveyor	HINGED type	○
		SCRAPER type	○
		DRUM type	○
	Chip bucket		○
Coolant	FLOOD		●
	FLUSHING		●
	SHOWER		○
	TSC	1.5 KW 2.0 MPA	○
		3.o KW 3.0 MPA	○
		7.5 KW 7.0 MPA	○
	Water soluble Coolant Chiller***		○
	Coolant gun		○
	Oil skimmer		●
	MQL System		○
Table	Index table (1° control)		●
	Rotary table (0.001° control)		○
Pallet	Tap pallet		●
	T-SLOT pallet		○
AIR	Pallet air seat		○
	AIR GUN		○
MPG	Portable MPG		●
Customized special option	Coolant level switch : Sensing level - Low / High		○
	Coolant tank_Level S/W		○
	APC-set up auto indexing		○
	Setup shower coolant		○

** When using a semi-synthetic type or synthetic type, contact our sales representative or service center in advance.*

*** Technical consultation is mandatory for the chilling of non-water soluble coolant*

⁎ Please contact DN Solutions to find put more about specifications and options *⁎⁎ Please contact DN Solutions for information on the NHP 5500S*

● *Standard* ○ *Optional* *X N/A*

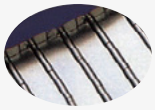
Fire Safety Precautions | There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before using the machine.

PERIPHERAL EQUIPMENT

Chip conveyor OPTION



Scraper type



Hinge type



Drum filter type



Environmentally-friendly equipment

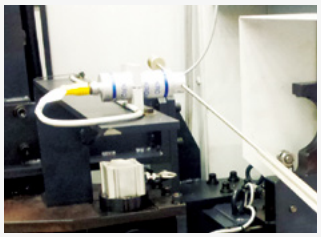


Oil skimmer

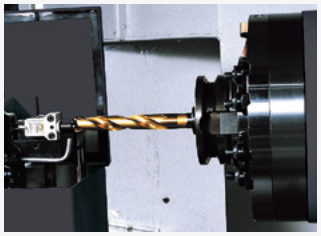


Mist collector OPTION

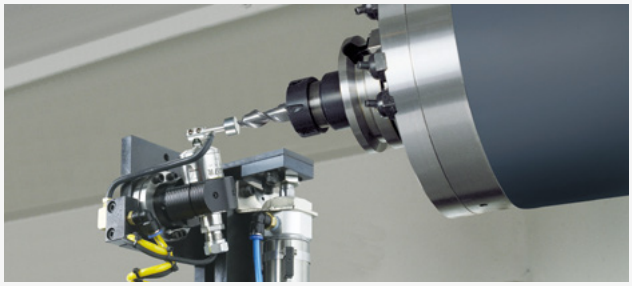
Measurement systems



Auto tool damage detection device I (BK 9) OPTION

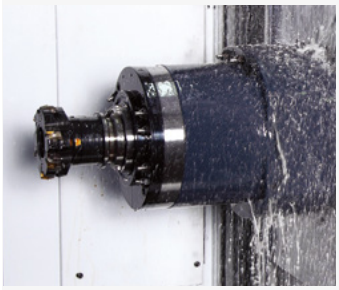


Auto tool damage detection deviceII (OMRON) OPTION

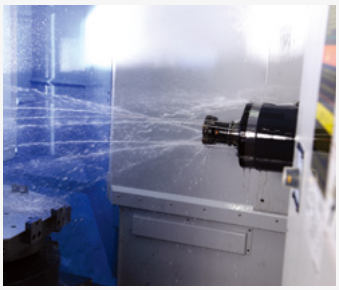


Automatic tool measuring device(TS 27R) OPTION

Chip Disposal System



FLUSHING COOLANT



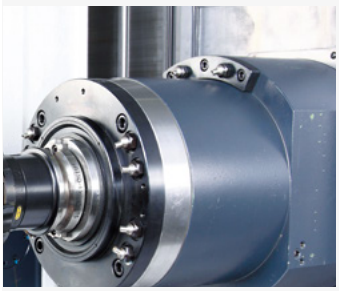
FLOOD COOLANT



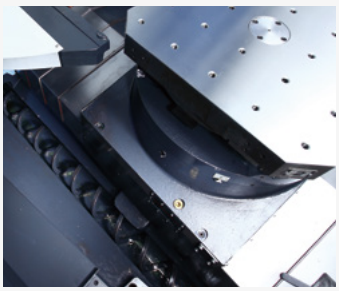
SHOWER COOLANT OPTION



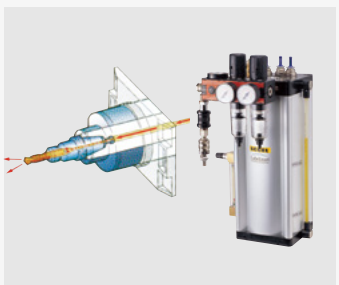
COOLANT GUN OPTION



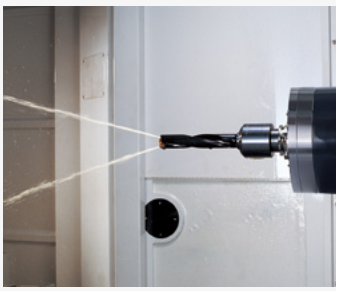
COOLANT SPRAY GUN ON THE SPINDLE HEAD



SCREW CONVEYOR



MQL SYSTEM OPTION MISTING DEVICE



SPINDLE-THROUGH COOLANT SPRAY DEVICE OPTION

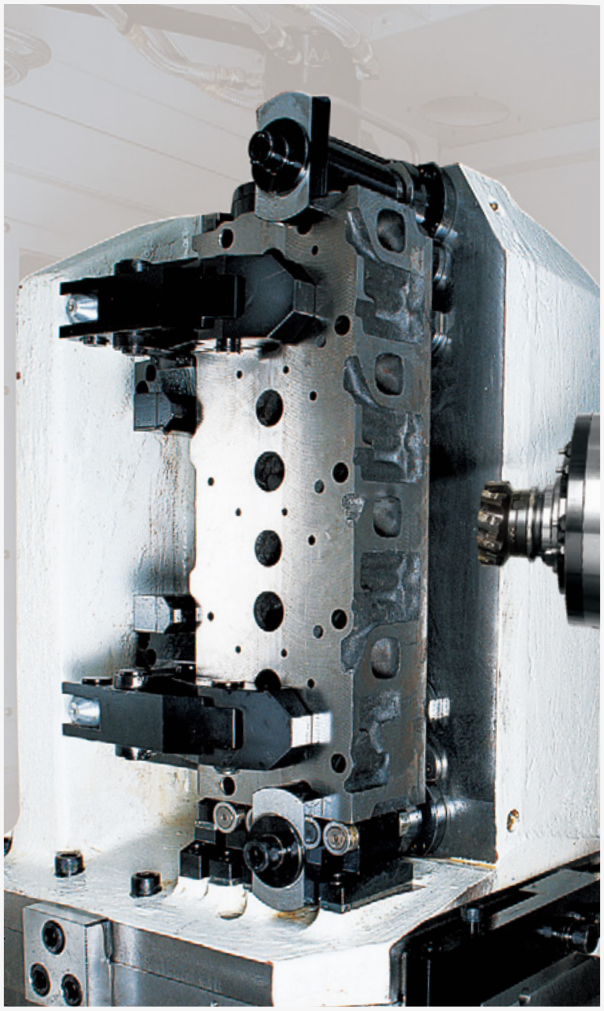
APPLICATION

We offer a wide range of solutions that can be optimized to suit our customer's needs.

Clamping fixtures

The following hydraulic and pneumatic fixture options are available for workpiece set up.

A variety of preparations for workpiece clamping fixtures (hydraulic/pneumatic) OPTION



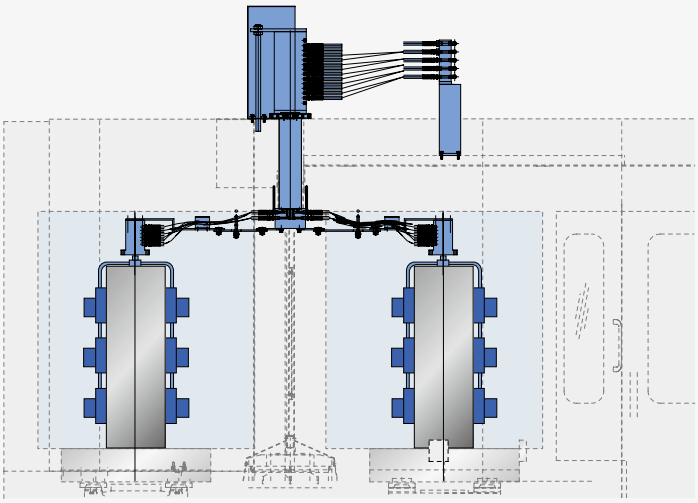
Hydraulic/pneumatic fixture pot

- A/B Line : 2, 4, 6, 8 Pairs (Including solenoid valve)
- P/T Line : 2, 4, 6, 8 Pairs (Excluding solenoid valve)

Clamping fixture hydraulic motor

- 2.2 kW(3.0 HP) / 7MPa
- 3.7 kW(5.0 HP) / 15MPa
- 5.5 kW(7.4 HP) / 21MPa
- 3.7 kW / 15MPa
- 5.5 kW / 21MPa

※ Please provide us with detailed specifications on the order sheet.



DN SOLUTIONS MULTI-PALLET SYSTEMS

DN Solutions's linear pallet system (LPS) and DN Round Srorage (DRS) help optimise productivity. They can be installed quickly and are easily maintained.

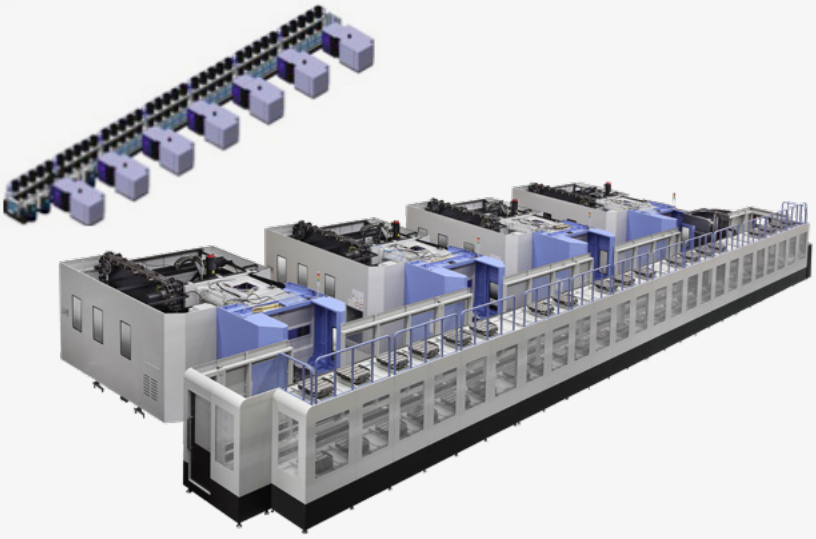
DN Solutions linear pallet system [LPS II] OPTION

Designed to optimized productivity and efficiency, DN Solutions's LPS II linear pallet system delivers outstanding flexibility: the system is scaleable and can be reconfigured to suit individual needs.

Features

- Easy to expand and extend
- Spacious system improves work efficiency
- Stable and efficient system operation
- Fast installation and commissioning
- Applicable for all HMC machines
- Easily maintained

LPS II (Linear Pallet



LPS standard control software

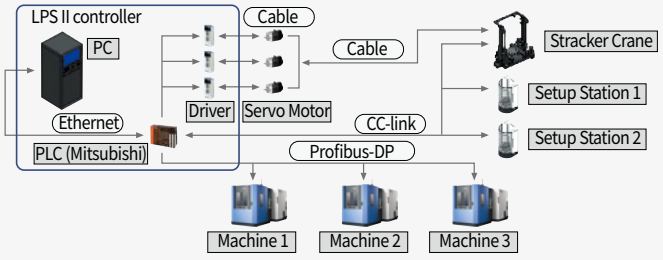
- Easy-storage of basic information for flexibility.
- Platform management software for rapid production and changes in quantity.
- LPS management solution for fast and flexible production and sudden changes in quantity.



DN Solutions production management system [DPMS]

The DPMS is an operating system designed to ensure effective control and management of the LPS. The main window provides a solution that enables a flexible and rapid response to changes in output.

System outline



System Options

LPS II Model	LPS 800 II
Available Model	NHP 8000
Forking type	Twin Fork type
No. of machines	1 – 7
No. of setup stations	1 – 4
No. of pallets	8 ~ 70
Dimensions (L x W)	8952 x 3500 mm (352.4 X 137.8 inch)

DN SOLUTIONS MULTI-PALLET SYSTEMS

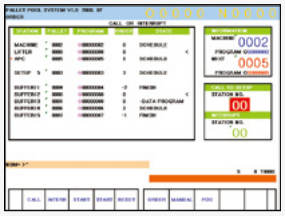
DN Round Storage [DRS] OPTION

Compared to standard machines that use 2-pallet-type APCs, the DRS can handle 7 - 9 pallets for extended machining operations. This facilitates HMLV (High Mix - Low Volume) manufacturing.

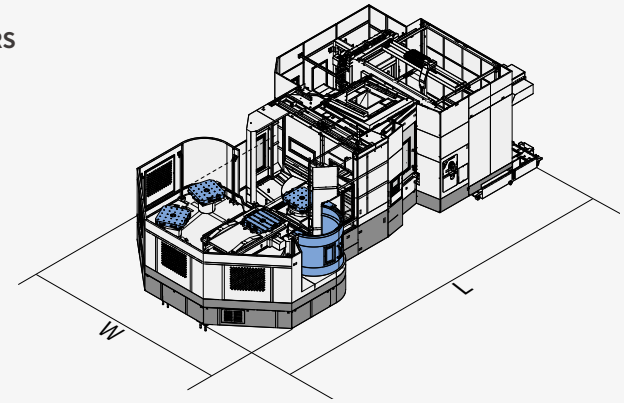
DN Round Storage



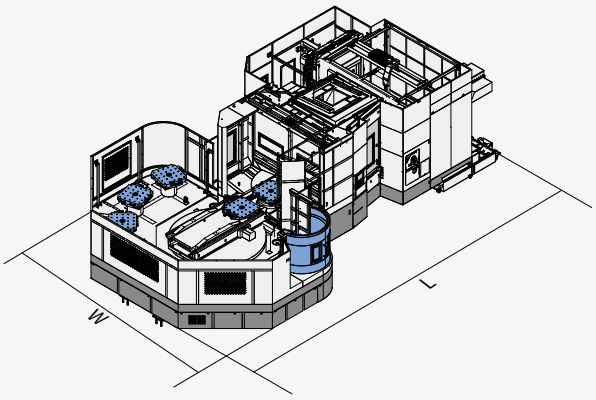
DPMS is an operating system for the control and management of the DRS. DPMS functions include: the scheduling of operations and data input and making data changes.



7 DRS



9 DRS



System Options

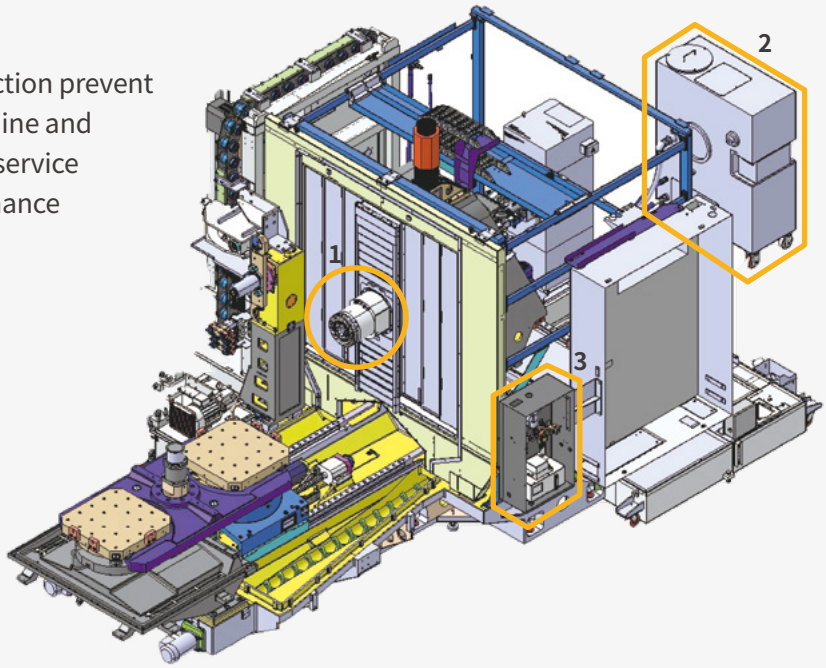
	NHP 8000	
	7- DRS	9 - DRS
No. of pallets (pcs.)	7	9
Foot print (Length) (mm(inch))	12027.5 (473.5)	12738.5 (501.5)
Foot print (Width) (mm(inch))	6462 (254.4)	6706 (264.0)

USER CONVENIENCE

Ergonomic design guarantees users' convenience and safety.

User-oriented design

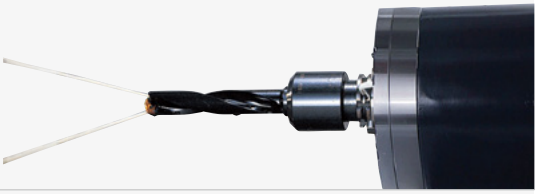
Internal footings and an anti-door-lock function prevent the operator from being locked in the machine and guarantee operator safety. The centralized service unit and screen panel are positioned to enhance operator comfort and convenience.



1.
Flushing system to remove chips from the spindle top and slide cover.



2.
Coolant through spindle function for enhanced productivity OPTION



3.
Centralized utility service unit
The utilities service unit is centralized for easy maintenance.



ATC screen panel provides easy tool data entry at the tool magazine area



Safety has been improved with machine internal footings



Anti-door lock device



FANUC 31iB PLUS

Fanuc 31i Plus maximizes customer productivity and convenience.



15" Touch screen + New OP

DN Solutions Fanuc 31iB/B5 Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout. It features a Qwerty keyboard for fast and easy data input and operation.

FANUC 31i Plus

- 15-inch color display
- Intuitive and user-friendly design

USB and PCMCIA card QWERTY keyboard

- EZ-Guide i standard
- 4MB Memory
- Enhance AICC BLOCK
- Touch pen provided as standard
- Ergonimic operator panel
- Hot keys

iHMI touchscreen

iHMI provides an intuitive interface that uses a touchscreen for quick and easy operation.

Range of applications

Providing various applications related to planning, machining, improvement and utility, for customer convenience.



NUMERIC CONTROL SPECIFICATIONS

FANUC

	Item	Specifications	F31iB PLUS NHP 8000
Controlled axis	Controlled axes		4 (X,Y,Z,B)
	Simultaneously controlled axes		4 axes
	Additional controlled Axis	Add 1 Axis (5th Axis)	O
Data input/output	Fast data server		O
	Memory card input/output		●
	USB memory input/output		●
	Large capacity memory(2GB)*2	Note *2) Available Option only with 15" Touch LCD (iHMI Only)	O
Interface function	Embedded Ethernet		●
	Fast Ethernet		O
	Enhanced Embedded Ethernet function		●
Operation	DNC operation	Included in RS232C interface.	●
	DNC operation with memory card		●
Program input	Workpiece coordinate system	G52 - G59	●
	Addition of workpiece coordinate system	G54.1 P1 X 48 (48 pairs)	●
	Tool number command		T4 digits
	Tilted working plane indexing command	G68.2 TWP	O
Feed function	AI contour control II	G5.1 Q_, 600 Blocks	O
	AI contour control II	G5.1 Q_, 1000 Blocks	●
	High smooth TCP		X
Operation Guidance Function	EZ Guidei (Conversational Programming Solution)		●
	iHMI with Machining Cycle	Note *1) Only with 15" Touch LCD standard	●
	EZ Operation package		●
Setting and display	CNC screen dual display function		●
Network	FANUC MT Connect		✪
	FANUC OPC UA		✪
Others	Display unit	15" color LCD	X
		15" color LCD with Touch Panel	●
	Part program storage size & Number of registerable programs	640M(256KB)_500 programs	X
		1280M(512KB)_1000 programs	X
		2560M(1MB)_1000 programs	X
		5120M(2MB)_1000 programs	X
		10240M(4MB)_1000 programs	●
		20480M(8MB)_1000 programs	O
		2560M(1MB)_2000 programs	O
		5120M(2MB)_4000 programs	O
		10240M(4MB)_4000 programs	O
		20480M(8MB)_4000 programs	O

Network: FANUC MTConnect and FANUC OPC UA available.

** The number of look-ahead blocks may be changed or limited depending on the peripheral device or the configuration of the internal NC system.*

● *Standard* ○ *Optional* X *N/A* ✪ *Available*

EZ WORK

The software developed by DN Solutions features numerous functions designed for convenience and ease of operation.

EZ WORK

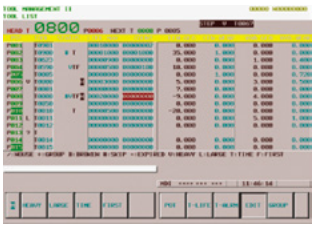
The EZ work package delivers speed and efficiency. This menu-driven innovation not only helps customers reduce setup times, but also simplifies common tasks and procedures, reducing the potential for errors. EZ work reduces operating time, protects machinery, enhances quality and speeds up maintenance interventions.

Tool support functions



Tool management I

- Tool magazine control
- Tool state display
- Fastems Tool Add/ Remove Function OPTION



Tool management II OPTION

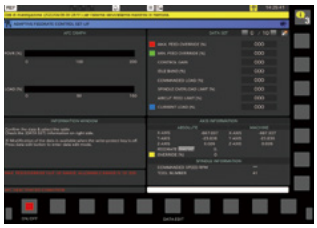
- Tool magazine control
- Tool life management
- Tool life prediction
- Balluff Tool ID function
- Tool state control



Tool load monitor OPTION

- Detection of tool damage
- Detection of abnormalities during operation
- Detection of no-load air cutting

Productivity improvement functions



Adaptive Feed Control

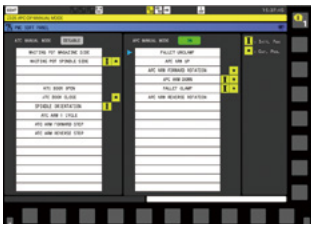
Function to control feedrate so that the cutting can be carried out at a constant load



APC Setting Screen

A simple automation function that supports automatic processing of the next pallet by setting the processing program for each pallet of the equipment including APC in advance

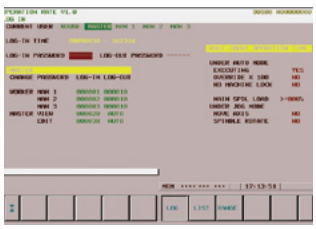
Pallet magazine support functions



PMC Soft Panel Switch

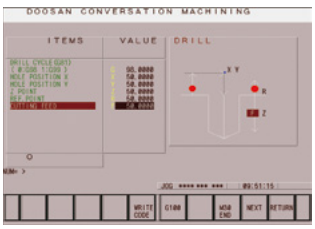
Manual operations that occur continuously in each stages for APC, ATC change command

Operation support, Help desk functions



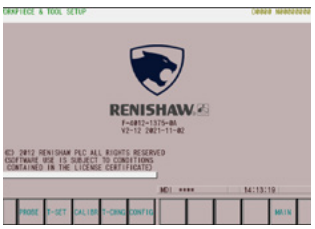
Operation rate

- Measure various machine operating rate
- Support 3 shift operation
- Calculate and save 30 days operating rate
- Show data for a specific period



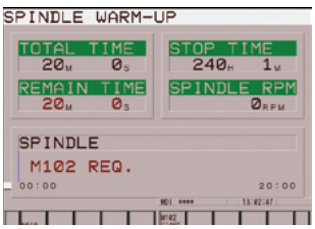
Pattern Cycle

A function to automatically create frequently used part programs.



Renishaw GUI

Renishaw tool length measuring and compensate function



Spindle Warm Up

A function that assists spindle warm-up for spindle life when the spindle has not been used for a certain period of time

CONVENIENT OPERATION

SIENUMERIK ONE

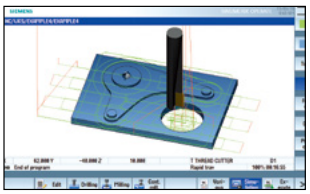


Even Faster & Easier processing + 398mm screen

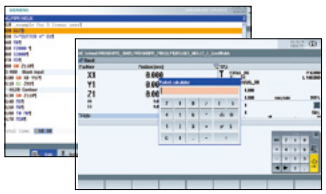
All programming, set-up, actual machining and verification process are getting easier and faster. Especially, intuitive conversational programming guidance with 3D UI(user interface) on 18.5" large touch screen is helpful for unskilled engineers.

- 18.5 inch touch screen
- 50% improvement in processing speed(compared to S840D)
- Graphic programming
- PLC-based flexible automation/ peripheral device expandability

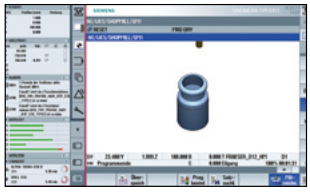
Conversational convenient function



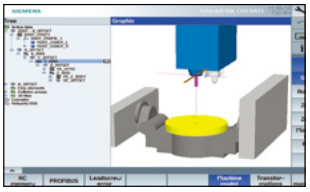
Simulation and machining contour monitoring



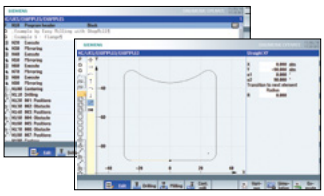
Smart function



Side screen widget



3D collision avoidance and collision avoidance ECO



Shop mill part programming

NUMERIC CONTROL SPECIFICATIONS

SIEMENS

Item		Specifications	S-ONE
Controlled axis	Controlled axes		4 axes (X, Y, Z, B)
	Simultaneously controlled axes		4 axes
Data input/output	Memory card input/output	(Local drive)	●
	USB memory input/output		●
Interface function	Ethernet	(X130)	●
Operation	Execution from Extenal Storage(EES)		○
	On network drive	(without EES option, Extcall)	●
	On USB storage medium, e.g. memory stick	(without EES option, Extcall)	●
Program input	Workpiece coordinate system	G54 - G57	●
	Addition of workpiece coordinate system	G505 - G599	●
Interpolation & Feed function	Top surface		○
	Look ahead number of block		1000
Programming & Editing function	3D simulation, finished part		●
	Simultaneous recording		●
	DXF Reader for PC integrated in SINUMERIK Operate		○
Operation Guidance Function	ShopMill		●
	EZ Work		●
Setting and display	Operation via a VNC viewer		●
Network	MTConnect		✪
	OPCUA		○
Others	18.5" color display with touch screen		●
	21.5" color display with touch screen		○
	CNC user memory	10 MB	●
	Max. CNC user memory	28 MB	○
	Collision avoidance (machine, working area)		○
	Collision avoidance ECO (machine, working area)		○
	Evaluation of internal drive		○
	CNC user memory extend		○
	TOOL ID		○

● *Standard* ○ *Optional* *X N/A* ✪ *Available*

CUSTOMIZED USER-FRIENDLY FLEXIBLE OPERATION SOLUTIONS

CUFOS is a PC based control system created by DN Solutions. equipped with intuitive user-friendly functions such as a smart phone screen and easy customization, CUFOS helps to improve operational efficiency and performance for the user.

FEATURES

19 inch TOUCHSCREEN
- Program memory : 40GB
- App-based Interface like smart phone, tablet PC

EASY PROGRAMMING
- Conversational Programming
- SSD data server : Program file sharing/managing (CF card/USB/External PC)

EASY SET-UP/OPERATION
- CPS(collision protection system)
- Manual viewer
- File manager & PDF viewer

EASY MAINTENANCE
- Status monitor
- Alarm guidance
- Maintenance manager
- Easy connection with external S/W (creating additional App.)

CUFOS



CUFOS INTERFACE

User-friendly screen controls

CUFOS, the PC-based control created by DN Solutions, is an integrated system solution using an intuitive 19-inch touchscreen. The system provides a convenient operator interface, a high level of customization and many useful high technology apps.





Supports various apps in three fields—setup, machining and utility

It provides easy configuration by allowing users to add and edit functions on the home screen according to job requirements.

Intuitive operation via touch screen

Simple customization is available for specific work environments

CUFOS Open CNC

CUFOS operation for enhanced productivity

The CUFOS operating system is based upon the integration of all aspects of the manufacturing process, including setting, machining and maintenance. It consolidates up-to-date software technology created by DN Solutions, to improve overall efficiency and productivity. Using the system's modular construction, each function can be easy integrated with external PC software systems and applications, such as CAM and Tool Data systems.



CUFOS

programming
set up
tool data
machining
maintenance



PC software



Applications

Setting

CUFOS provides management and setting functions such as HMI parameter, user setting, setup manager or e-mail. User setting allows users to register and delete up to six users from the account. CUFOS apps and NC functions can be user-restricted as necessary.





Register up to six user accounts

Memo

Users can generate memos, either with a high level of detail via screen capture, or entered by keyboard/touchscreen.
The user can add data to existing memos if required. A maximum of 120 memos can be saved



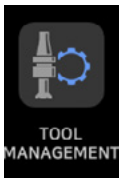


Screen captures

Memo through touch screen or key board or using a captured screen.

EASY SET-UP | OPERATION

Tool management, collision protection between machine unit/ workpiece/tooling and various user guidance provide higher productivity and user-convenience.



Tool management

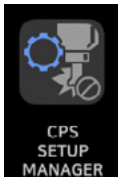
DN Solutions EZ work tool management





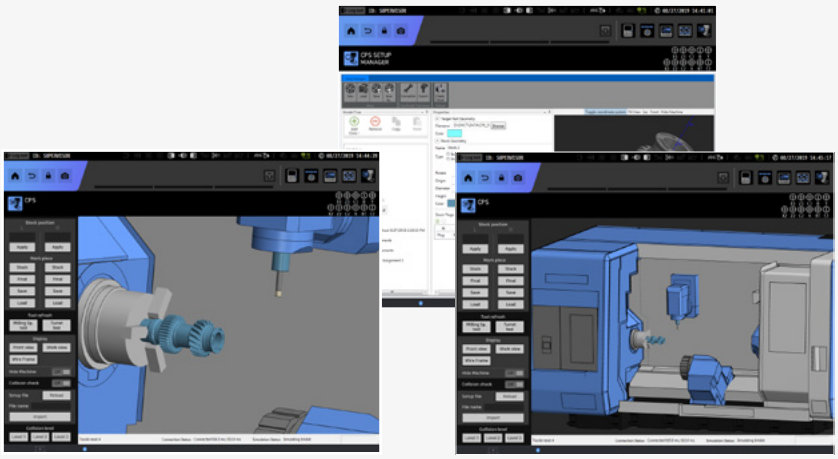
Includes a summary monitoring screen and gives the operator easy access to DN Solutions's own tool management system which provides comprehensive real time data on each tool, such as remaining tool life and status of tool groups.



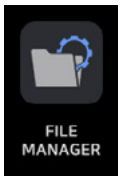


CPS (Collision protection system)

A function to prevent real-time collision between the tool and equipment / machine elements inside the working area.

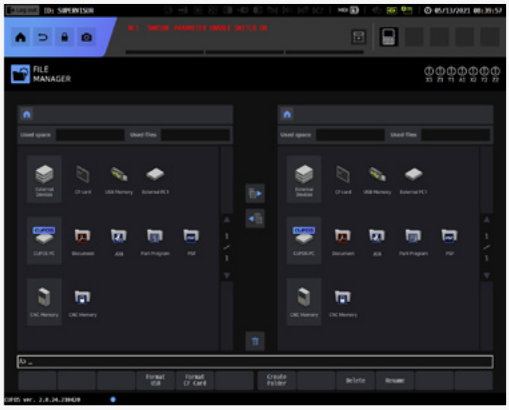


Use the setup manager with the CPS app to build up the machine model, and add tool, workpiece and workholding equipment details.



File Manager & PDF viewer

Ability to transfer various type of files including CF cards, USB memory, external PCs and memory inside CUFOS, NC programs between NC memory.
PDF drawings can be directly open on the screen via PDF viewer



EASY MAINTENANCE

Keeping a machine in best condition through status monitoring, alarm guidance and maintenance manager functions.

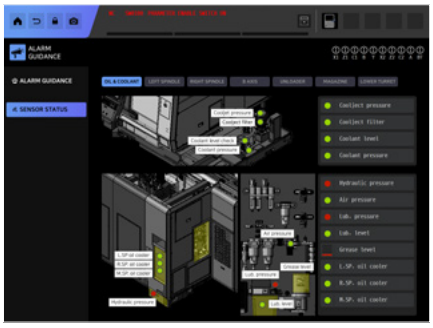
Status monitoring

Monitoring various information such as spindle, milling spindle, feed axis, cycle time, program/tool no. on one screen.



Alarm guidance

Presenting an operator alarm's causes and troubleshooting guides and sending an email when the alarm last for a long time.



Maintenance manager

Monitors the status of machine and control elements, and confirms the alarm condition and maintenanceschedule for preventative maintenance.



CUFOS: STANDARD | OPTIONAL SPECS

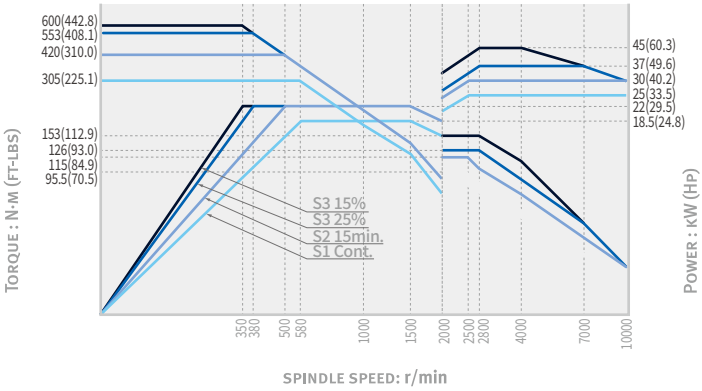
A diverse range of functions and apps are available to meet your needs.

Description	Features		NHP / NHM
Hardware	19" Color LCD Screen		●
	Main RAM memory	16 GB	●
	Storage Memory	SSD 240 GB	●
	2 point-touch panel port		●
	Windows Embedded standard 10 Operating System		●
Applications	DN Solutions Tool Management		○
	Collison Protection System (Note: Incase of using this application, Main Memory 8GB and SSD 64GB are required.)		○
	SSD Data server Application(Note: Incase of using this application, Data server (for Standard CNC) funtion can not be used)		●
	Turncut		○
	Set and Inspection Application(cooperated with Renishaw)		○
	File Manager		●
	FTP Server service		●
	Smart key access control application		○
	Memo Application		●
	Machine status Monitor application		●
	Alarm guidance application		●
	Sketch Cycle		X
	Ez work		●
iHMI basic application	NC Control		●
	FANUC iHMI		●
	Manual viewer Application		●
	Calendar Application		●
	Browser Application		●
	Periodic Maintenace Application		●
	Data Logger Application		●
	Servo viewer Application		●

POWER I TORQUE

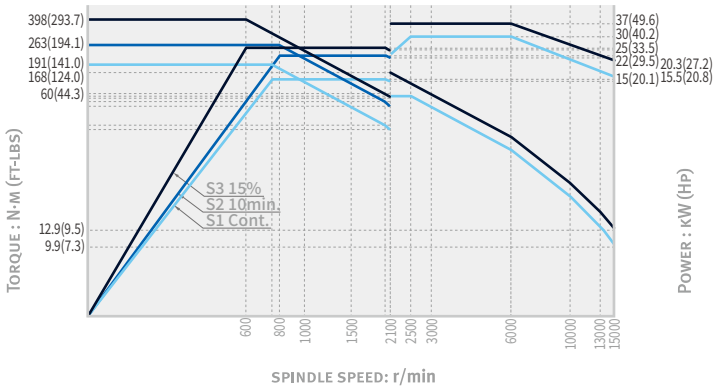
10000 r/min standard FANUC

Power : 45 / 25 kW (60.3 / 33.5 Hp)
Torque : 600 N·m (442.8 ft-lbs)



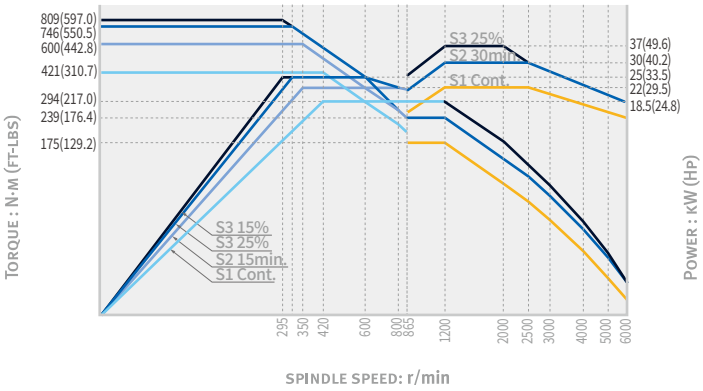
15000 r/min FANUC OPTION

Power : 37 / 30 kW (49.6 / 40.2 Hp)
Torque : 398 N·m (293.7 ft-lbs)



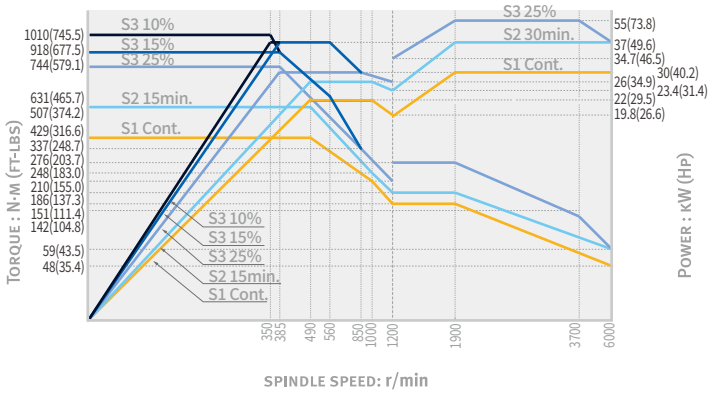
6000 r/min FANUC OPTION

Power : 37 / 22 kW (49.6 / 29.5 Hp)
Torque : 809 N·m (597.0 ft-lbs)



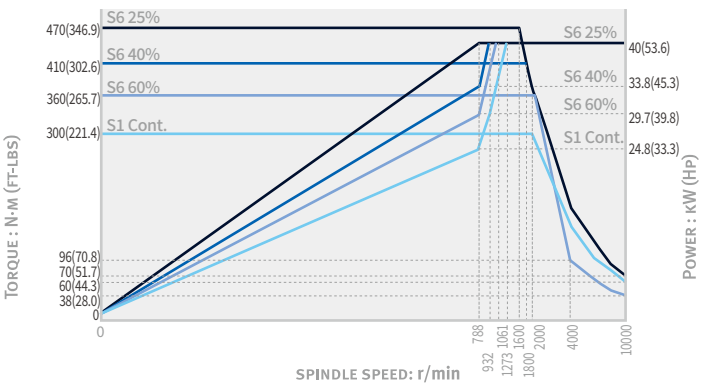
6000 r/min FANUC OPTION

Power : 55 / 30 kW (73.8 / 40.2 Hp)
Torque : 1010 N·m (745.5 ft-lbs)



10000 r/min SIEMENS

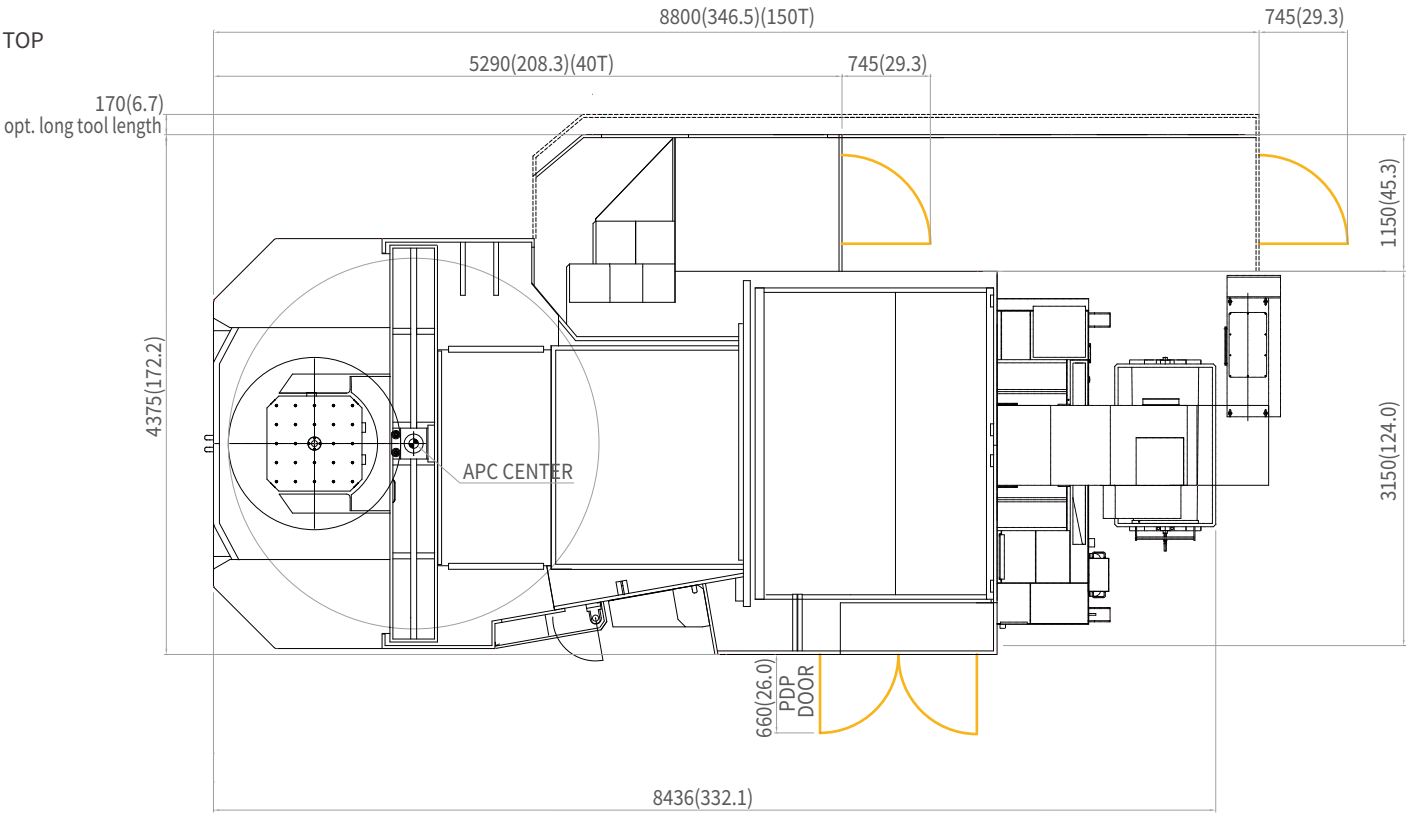
Power : 40 / 40 kW (53.6 / 53.6 Hp)
Torque : 470 N·m (346.9 ft-lbs)



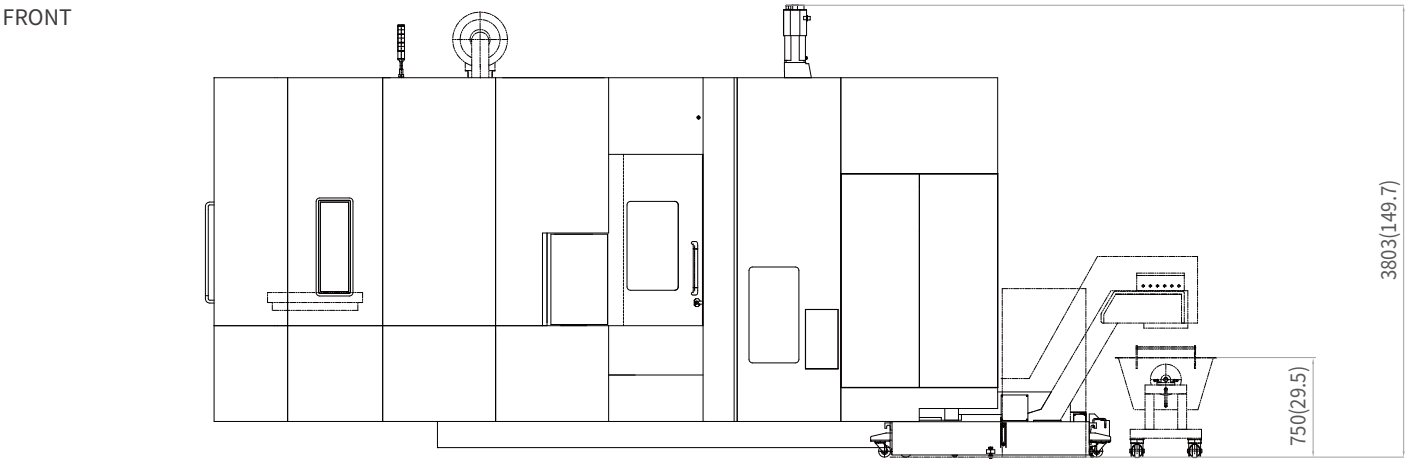
DIMENSIONS

Units : mm (inch)

TOP



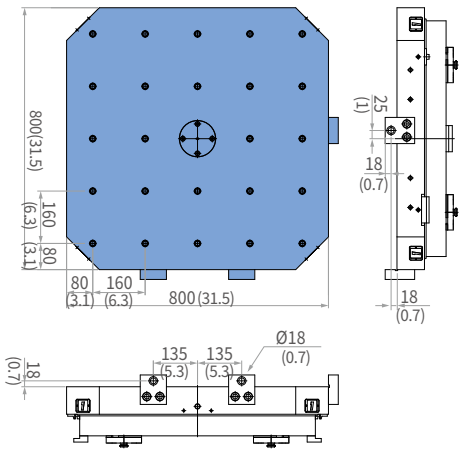
FRONT



** Some peripheral equipment can be placed in other areas.*

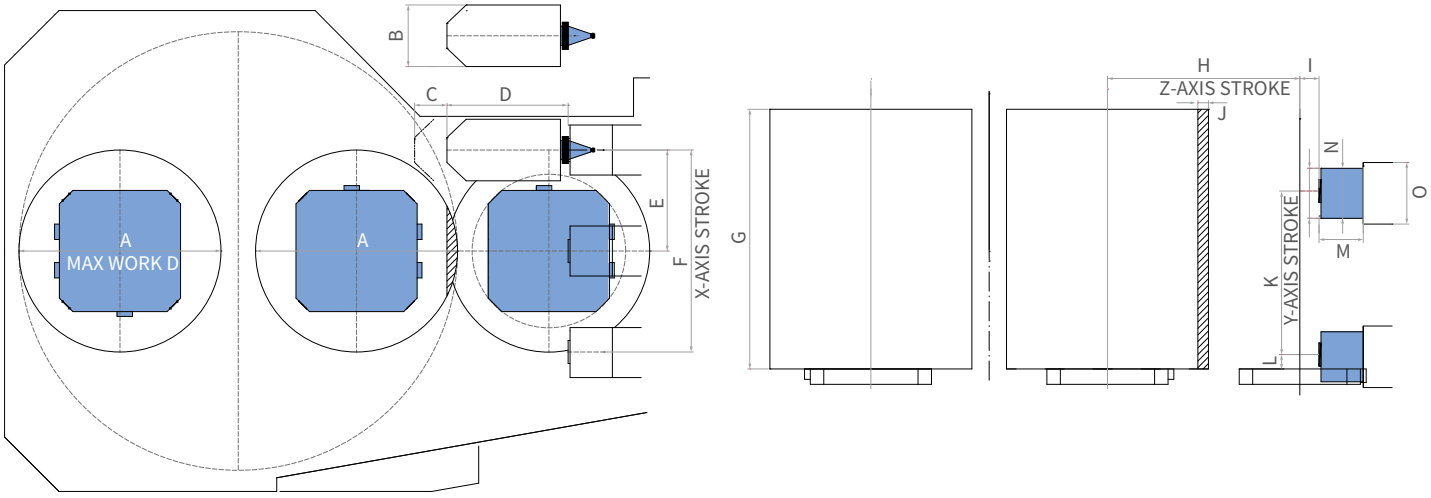
PALLET

Units : mm (inch)



WORKING AREA

Units : mm (inch)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
NHP 8000	Ø1450 (57.1)	Ø320 (12.6)	168 (6.6)	630 (24.8)	700 (27.6)	1400 (55.1)	1550 (61.0)	1370 (53.9)	150 (5.9)	5 (0.2)	1200 (47.2)	75 (3.0)	230 (9.1)	Ø260 (10.2)	Ø320 (12.6)

** Some peripheral equipment can be placed in other areas.*

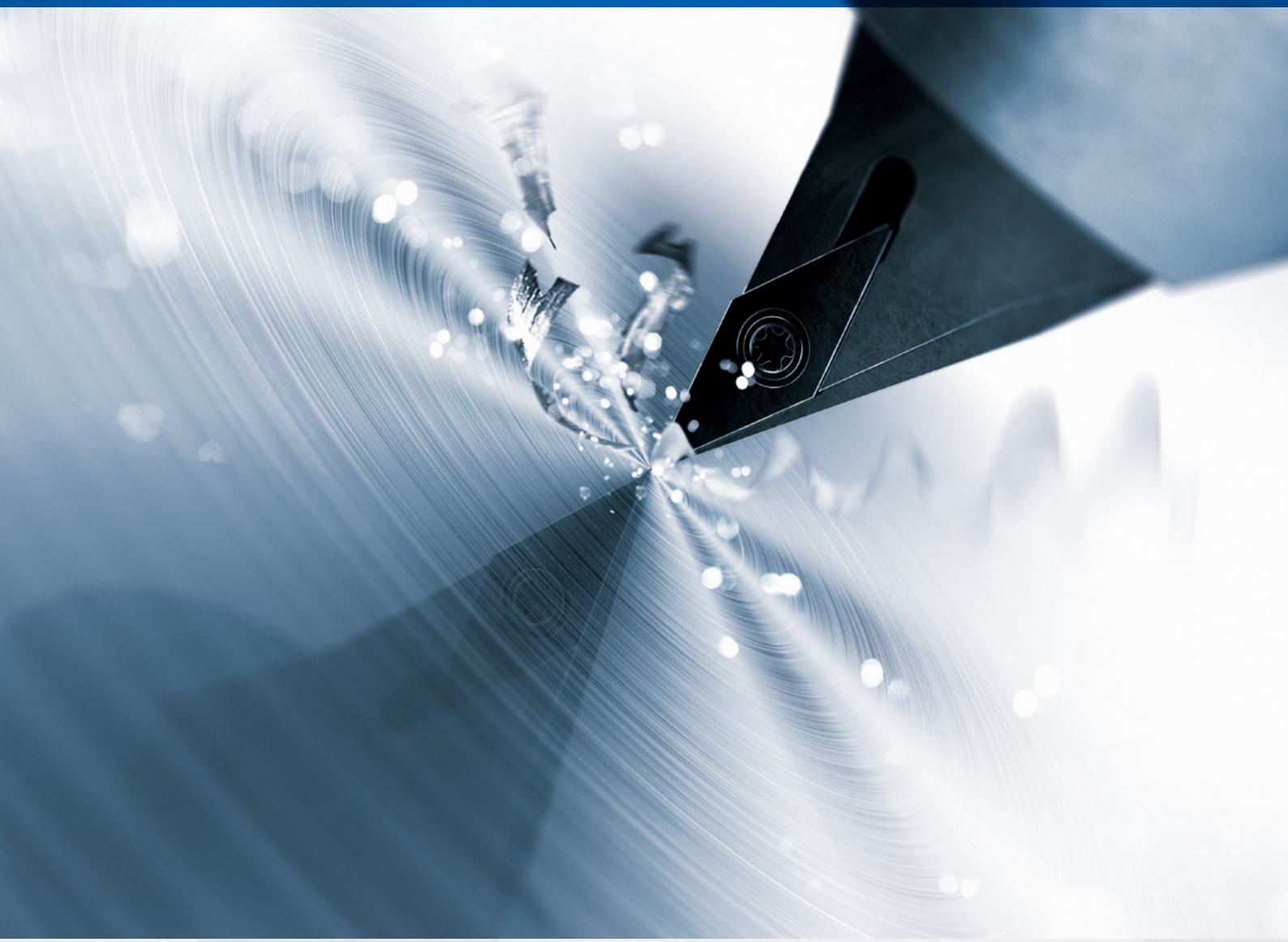
MACHINE SPECIFICATIONS

Description				Unit	NHP 8000
Cutting capacity	Travel distance	X-axis		mm (inch)	1400 (55.1)
		Y-axis		mm (inch)	1200 (47.2)
		Z-axis		mm (inch)	1370 (53.9)
	Distance from spindle nose to table center			mm (inch)	150 - 1520 (5.9 - 59.8)
	Distance from spindle center to table top			mm (inch)	75 - 1275 (3.0 - 50.2)
Feed rate	Rapid feed rate	X-axis		m/min	50
		Y-axis		m/min	50
		Z-axis		m/min	50
	Cutting feed rate			mm/min	25000
Pallet	Pallet type				24-M16×P2.0
	Pallet indexing angle			deg	1 {0.001}*
	Max. loading capacity			kg (lb)	2000 (4409.2)
	Work inertia ***			N·m^2	1294
	Max. workpiece size			mm (inch)	1450 x 1550 (57.1 x 61.0)
	Pallet size			mm (inch)	800 x 800 (31.5 x 31.5)
Spindle	Max spindle speed			r/min	10000 {6000, 15000}*
	Taper				ISO #50, 7/24 TAPER
	Max. torque			N·m (ft-lbs)	600 {809, 398} (442.8 {597.0, 293.7})*
Auto pallet changer (APC)	No. of pallets			ea	2
	Pallet change time			s	16
	APC indexing angle (rotation)			deg	90
Automatic tool changer (ATC)	Type of tool shank	Tool shank		-	BT50 {CAT50 / DIN50 / HSK-A100}*
		Pull stud		-	PS403 (Modified CAT,DIN 69872 #50)
	Tool storage capacity	Pot type		ea	40 {60}*
		Chain type		ea	{90 / 120 / 150}*
		Matrix type		ea	{196 / 256 / 316 / 376}*
	Max. tool diameter	40 / 60 tools	W/O adjacent tool	mm (inch)	320 (12.6)
			With adjacent tool	mm (inch)	125 (4.9)
		90 / 120 / 150 / 196 / 296 / 376 tools	W/O adjacent tool	mm (inch)	320 (12.6)
			With adjacent tool	mm (inch)	130 (5.1)
	Max. tool length			mm (inch)	630 (24.8) (BT / CAT / DIN), 700 (27.6) (HSK)
	Max. tool weight			kg (lb)	25 (55.1) (40 / 60 tools), 30 (66.1) (90 - 376 tools)
	Max. tool moment			N·m (ft-lbs)	34.3 (25.3)
	Tool change time (tool to tool, tools weighing less than 12kg(26.5lb))			s	2.5
	Tool change time (chip-to-chip, tools weighing less than 12kg(26.5lb))			s	6.1
Motor	Spindle motor power			kW (Hp)	45 / 25 {37 / 22, 37 / 30, 55 / 30}* (60.3 / 33.5 {49.6 / 29.5, 49.6 / 40.2, 73.8 / 40.2}*)
Power source	Power consumption			kVA	79 {76, 86, 118}*
	Compressed air pressure			Mpa	0.54
Tank capacity	Coolant tank capacity			L	925
	Lubricant tank capacity			L	7.2
Machine dimensions	Height			mm (inch)	3803 (149.7)
	Length			mm (inch)	7878 (310.2)
	Width			mm (inch)	4375 (172.2)
	Weight			kg (lb)	27000 (59523.9)

*{ } : option
** Please contact DN Solutions for information on the NHP 5500S
** When the workpiece inertia exceeds the specified limit, a separate consultation with DN Solutions is required.

WHY DN SOLUTIONS

The DN Solutions promise, MACHINE GREATNESS, has two important meanings. The first is simple: DN Solutions makes great machines. The second is a challenge to our end-users. With a product line that is this comprehensive, accurate and reliable, we equip our customers to machine greatness.
The big question: ***Why should you choose DN Solutions over other options?*** Here's why…



UNBEATABLE MACHINES

You won't find a more comprehensive range or a better combination of value, performance and reliability anywhere else.

READILY AVAILABLE - ANYWHERE IN THE WORLD

Machining centres (including 5-axis machines), lathes, multi-tasking turning centres and mill-turn machines, and horizontal borers with best-in-class specifications are all available…ready to install.

ROBUST PRODUCT LINE

We offer an impressive range of machine models and hundreds of configurations. Whatever your machining needs and requirements, there's a DN Solutions for you.

EXPERT SERVICE

Our dedicated, experienced and knowledgeable team is totally committed to improving your productivity, growth and success.

RESPONDING TO CUSTOMERS **ANYTIME, ANYWHERE**

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66 COUNTRIES | **140** + SALES NETWORKS | **3** FACTORIES | **6** REGIONAL HQS



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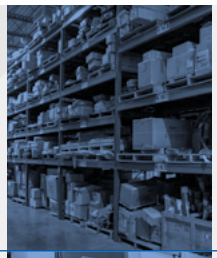
WE'RE THERE FOR YOU WHENEVER YOU NEED US.

We help our customers operate at maximum efficiency by providing them with a range of tried, tested and trusted services - from pre-sales consultancy to post-sales support.



FIELD SERVICES

- On-site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair service



PARTS SUPPLY

- Supplying a wide range of original DN Solutions spare parts
- Parts repair service



TRAINING

- Programming, machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering



TECHNICAL SUPPORT

- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

DN SOLUTIONS

dn-solutions.com

Head Office

19F, 10, Tongil-ro, Jung-gu, Seoul,
Republic of Korea, 04527

Tel: +82-2-6972-0370
Fax: +82-2-6972-0400

DN Solutions America

360 E State PKWY,
Schaumburg, IL. 60173,
United states

Tel: +1-315-265-7500

DN Solutions Europe

Emdener Strasse 24, D-41540
Dormagen, Germany

Tel: +49-2133-5067-100
Fax: +49-2133-5067-111

DN Solutions (India) Private Limited.

Plot No. 137, Devanahalli General
Industrial Area (KIADB), ACIL,
Kundana and Kasaba Area,
Devanahalli, Bengaluru Rural – 562110.
Karnataka, INDIA.

Email: info.india@dncompany.com

DN Solutions China

Room 101,201,301,
Building 39 Xinzhuan Highway
No.258 Songjiang District
China Shanghai (201612)

Tel: +86 21-5445-1155
Fax: +86 21-6405-1472

DN Solutions Vietnam

M.O.R.E building 2F, 40A-40B Ut
Tich Street, 04 Ward 04,
District Tan Binh District,
Ho Chi Minh City, Vietnam

Tel: +84 28-7304-0163

DN Solutions Mexico

Avenida Parque Bicentenario
#100 Nave M65L3-6,
Fraccionamiento San Isidro
Business Park,
Santa Rosa Jauregui,
Querétaro, México

E-mail: efrain.figueroa@
dncompany.com

Sales inquiry

sales@dncompany.com

** For more details, please contact DN Solutions.*
** Specifications and information contained within this catalogue may be changed without prior notice.*

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