



HIGH-SPEED, HIGH-PRODUCTIVITY  
HORIZONTAL MACHINING CENTER

# NHP

**5500 • 6300 • 8000**



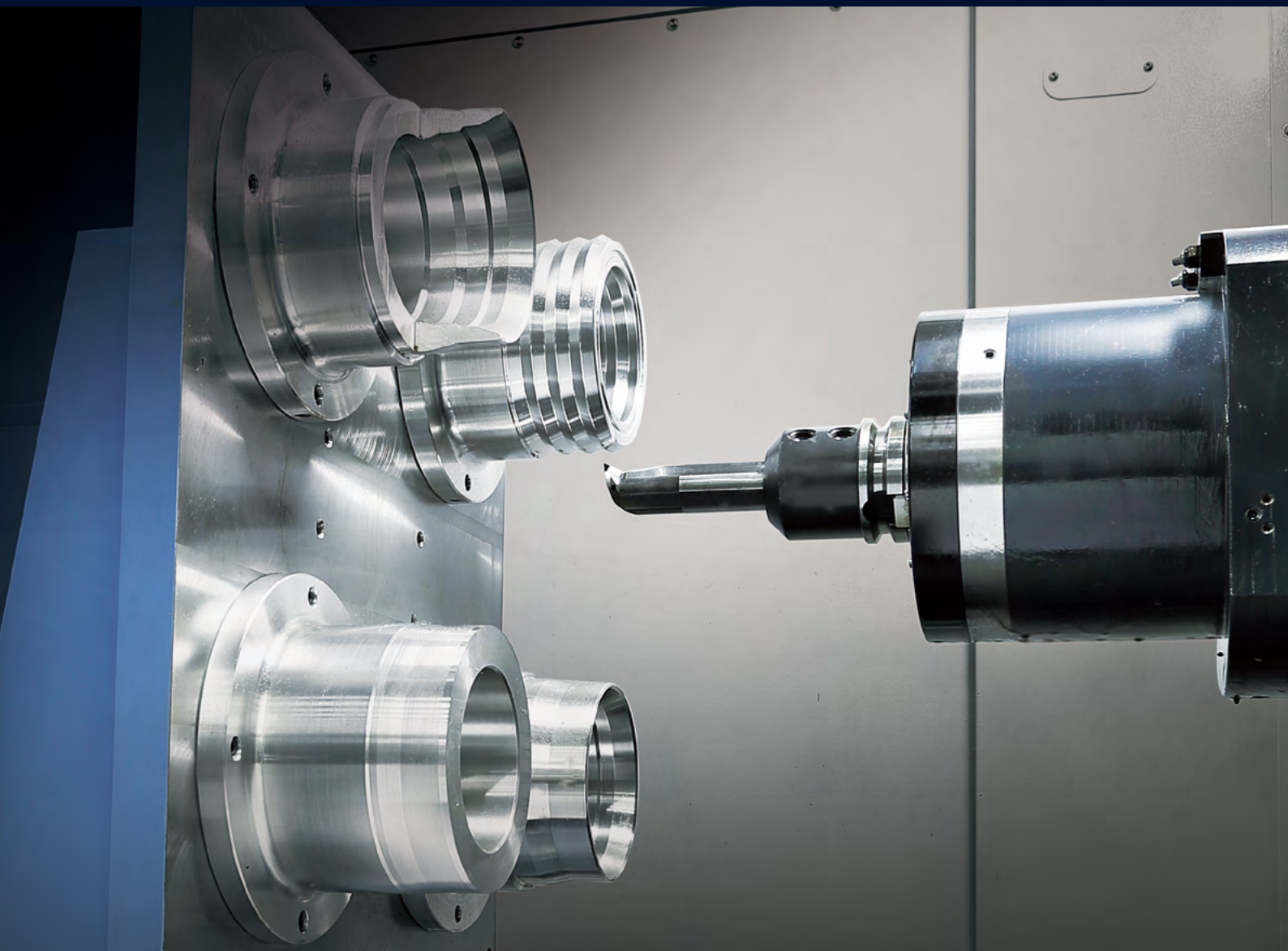
**DN SOLUTIONS**

# NHP 5500 • 6300 • 8000

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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.





### **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 5500 (X/Y/Z)

**800/750/850** mm  
31.5/29.5/33.5 inch

NHP 6300 (X/Y/Z)

**1050/900/1000** mm  
41.3/35.4/39.4 inch

NHP 8000 (X/Y/Z)

**1400/1200/1370** mm  
55.1/47.2/53.9 inch

## Rapid rates

NHP 5500 / 6300

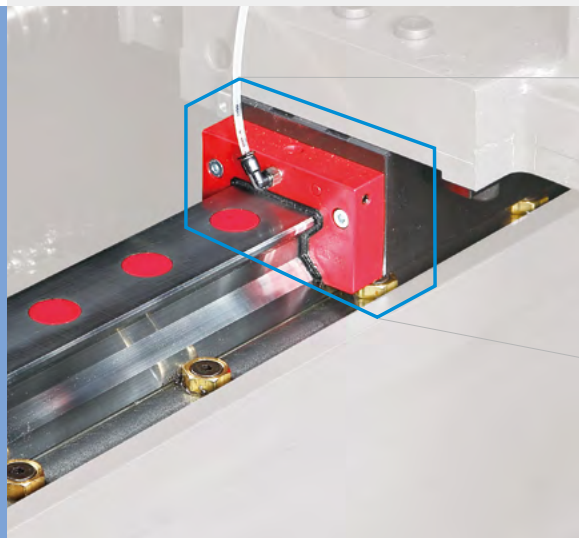
**60** m/min  
2362.2 ipm

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 5500

**Ø850 x H1100** mm  
33.5 X 43.3 inch

NHP 6300

**Ø1050 x H1350** mm  
41.3 X 53.1 inch

NHP 8000

**Ø1450 x H1550** mm  
57.1 X 61.0 inch

## Max. workpiece weight

NHP 5500

**800** kg 1763.7 lb

NHP 6300

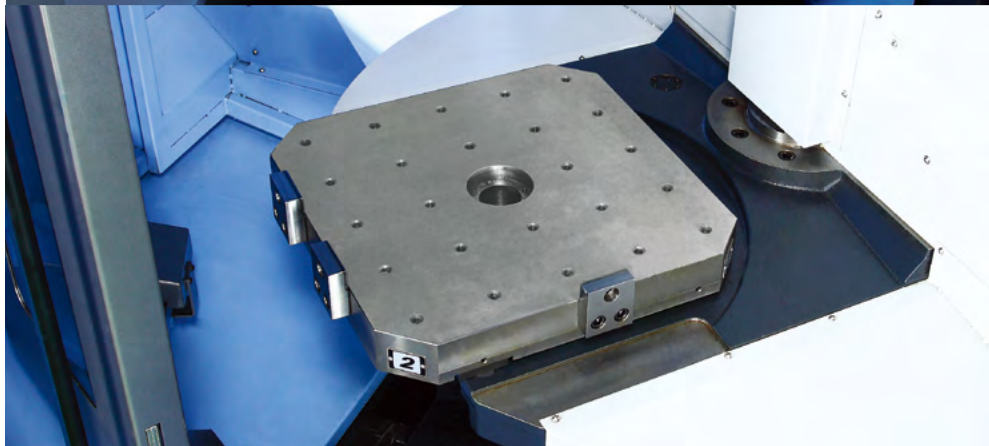
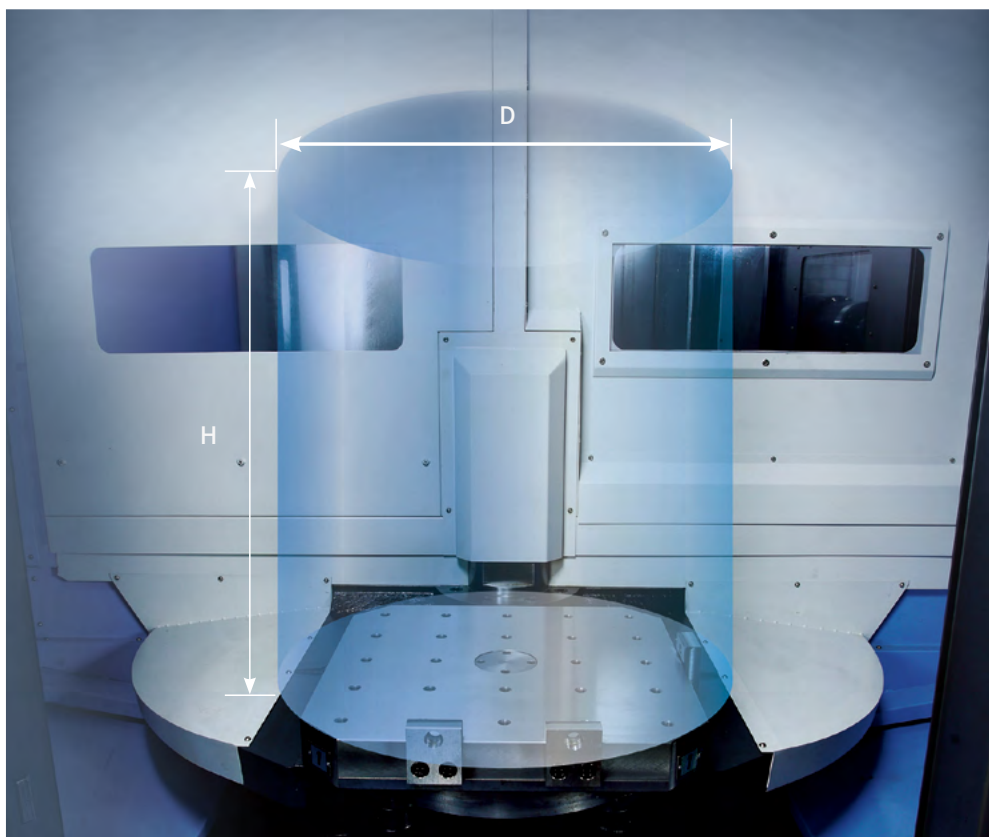
**1500** kg 3306.9 lb

NHP 8000

**2000** kg 4409.2 lb

## Improved pallet and APC system

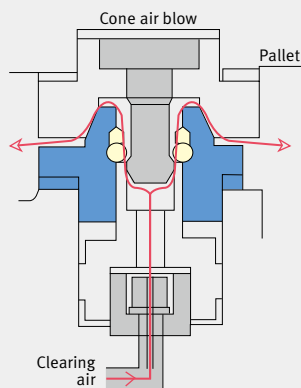
The APC system ensures fast and accurate pallet change operations. In addition to its outstanding performance, the APC has also been designed with more space - improving accessibility and operator convenience.



	NHP 5500	NHP 6300	NHP 8000
Pallet change time	8.5 s	12 s	16 s

## 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.

## 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.



### Max. spindle speed

**10000** r/min

**6000** r/min option

**6000** r/min option

**15000** r/min option

### Max. power

**45 / 25** kW 60.3 / 33.5 hp

**37 / 22** kW 49.6 / 29.5 hp option

**55 / 30** kW 73.8 / 40.2 hp option

**37 / 30** kW 49.6 / 40.2 hp option

### Max. torque

**600** N·m 442.8 ft-lbs

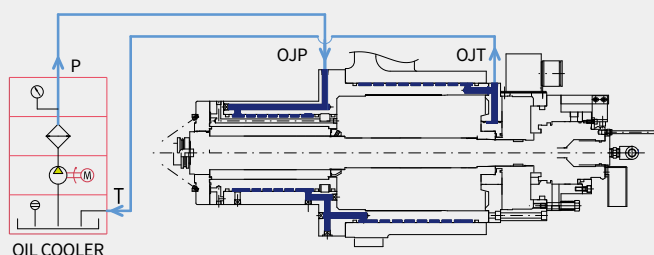
**809** N·m 597.0 ft-lbs option

**1010** N·m 745.4 ft-lbs option

**398** N·m 293.7 ft-lbs option

## 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

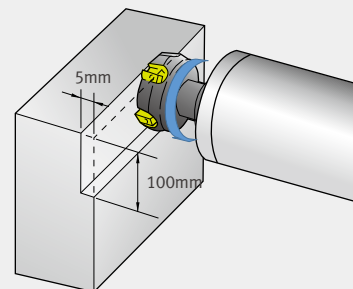
High performance machining can be undertaken quickly and accurately.

### NHP series

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

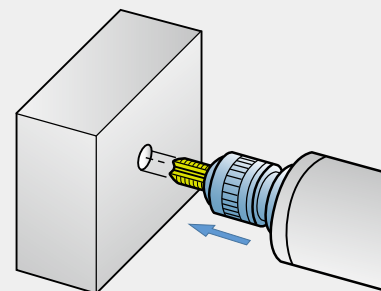
Face Mill\_Carbon Steel (SM45C) [ø125mm(4.9inch) Face mill (8Z)]

	Machining rate	Spindle speed	Feed rate
Previous model	440 cm <sup>3</sup> /min	350 r/min	550 mm/min
NHP series	700 cm <sup>3</sup> /min	500 r/min	1400 mm/min



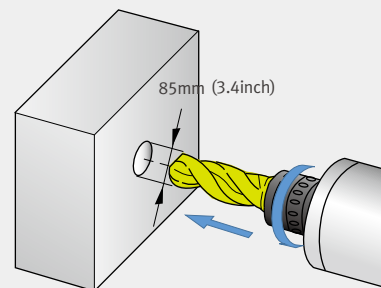
Tap\_Carbon Steel (SM45C)

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 cm <sup>3</sup> /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

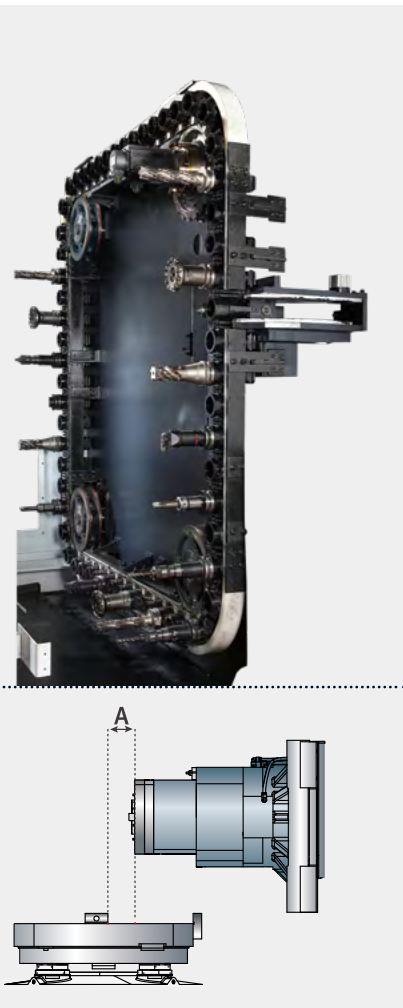
Previous model 977 s

NHP series 900 s ← 77 s





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 5500	320 x 530(12.6 x 20.9)	320 x 600 (12.6 X 23.6)	-	
NHP 6300	320 x 630(12.6 X 24.8)	320 x 700(12.6 X 27.6)	-	
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 5500	2 s		5.5 s	
NHP 6300			5.6 s	
NHP 8000			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.

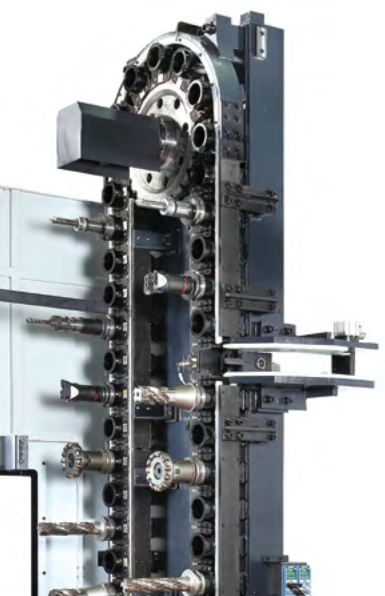
Features

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

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

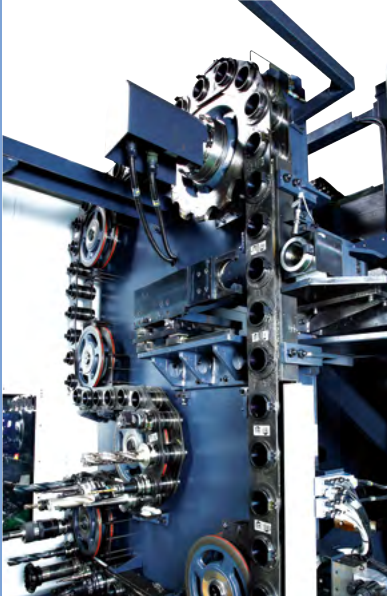
The NHP Series provides 40 tools as a standard feature, and up to 376 tools as an option.

Pot type magazine option



40 / 60 tools

Chain type magazine



90 / 120 / 150 tools

Matrix type magazine



196 / 256 / 316 / 376 tools



# STANDARD | OPTIONAL SPECIFICATIONS

A range of options is available to suit individual requirements.

● Standard ○ Optional X Not applicable

Description	Features		NHP5500/S	NHP 6300	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	○	○	○
		3.0 KW 3.0 MPA	○	○	○
		7.5 KW 7.0 MPA	○	○	○
	Coolant gun		○	○	○
	Oil skimmer		●	●	●
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		○	○	○

\*Please contact DN Solutions to find put more about specifications and options

\*Please contact DN Solutions for information on the NHP 5500S

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



Fire Safety  
Precautions

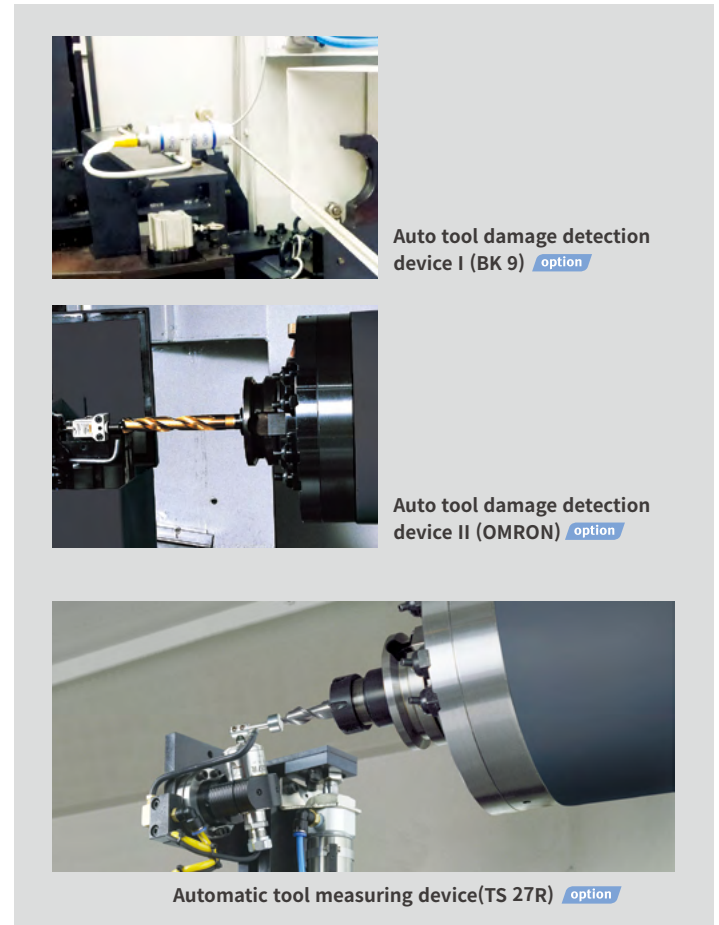
There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before using the machine.

# PERIPHERAL EQUIPMENT

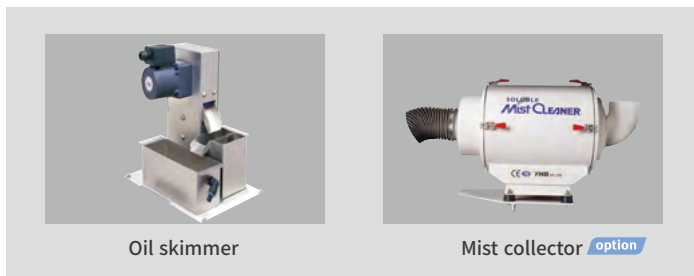
## Chip conveyor option



## Measurement systems



## Environmentally-friendly equipment



## Chip Disposal System



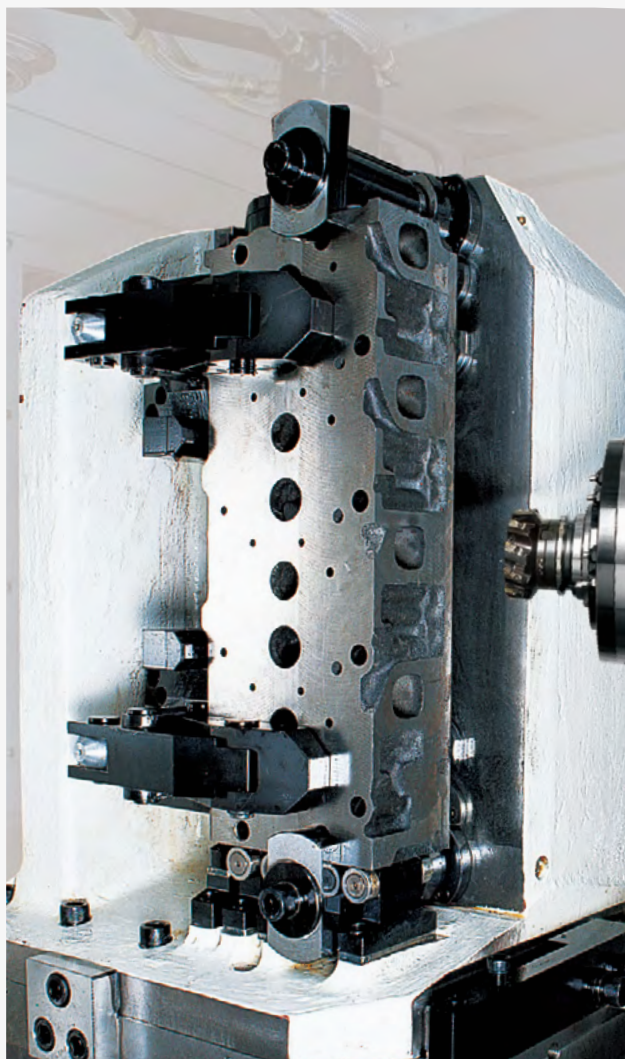
# APPLICATION

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



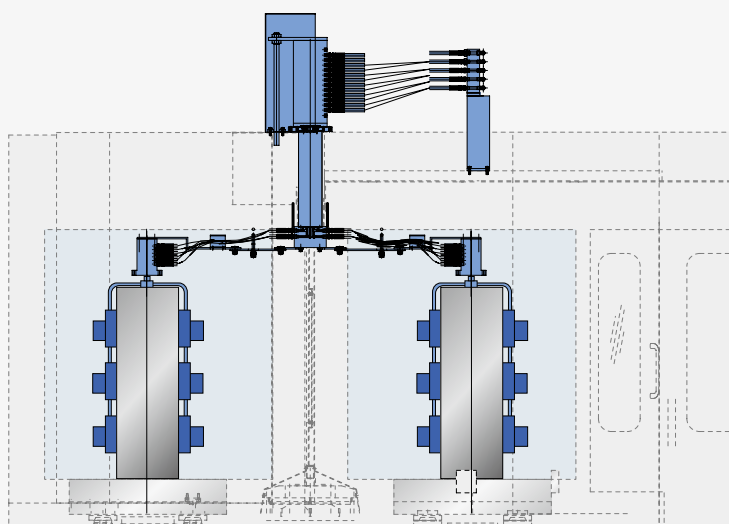
### Hydraulic/pneumatic fixture pot

- 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.



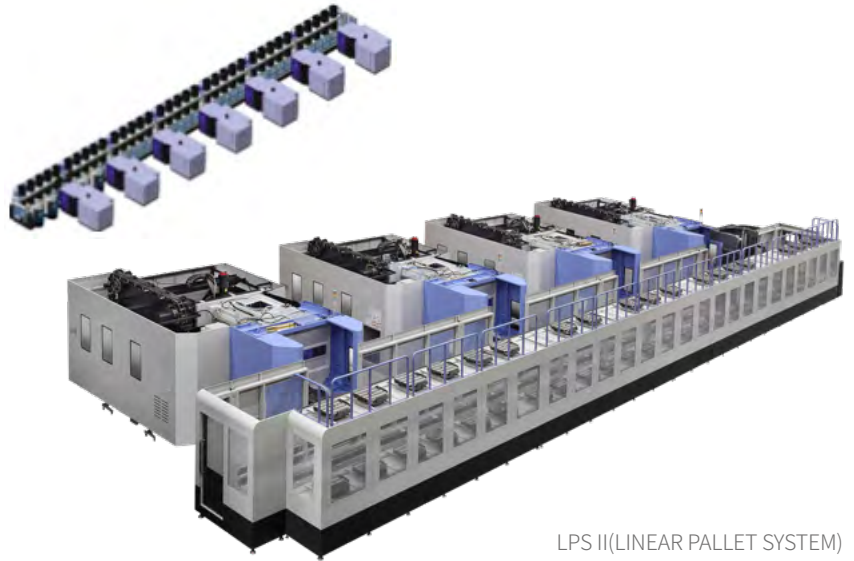


# DN SOLUTIONS MULTI-PALLET SYSTEMS

DN Solutions's linear pallet system (LPS) and multi-pallet system (MPS) 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.



LPS II(LINEAR PALLET SYSTEM)

LPS II Model	LPS 500 II		LPS 630 II	LPS 800 II
Available Model	HP 5100 II	NHP 5500	NHP 6300	NHP 8000
Forking type	Twin Fork type			
No. of machines	1 - 7			
No. of setup stations	1 - 4			
No. of pallets	12 ~ 70		10 ~ 70	8 ~ 70
Dimensions (L x W)	7824 x 2400 mm (308.0 X 94.5 inch)		7904 x 785 mm (311.2 X 30.9 inch)	8952 x 3500 mm (352.4 X 137.8 inch)

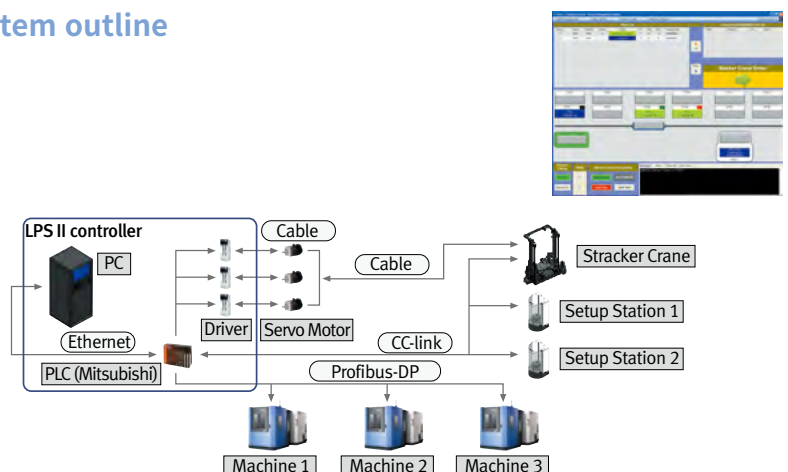
## LPS standard control software

- 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



## 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

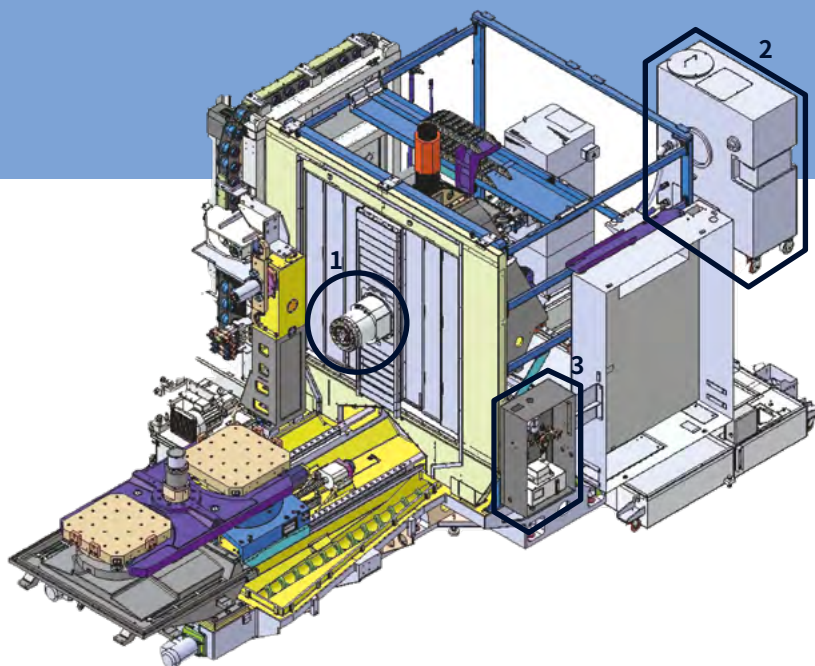


# USER CONVENIENCE

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.

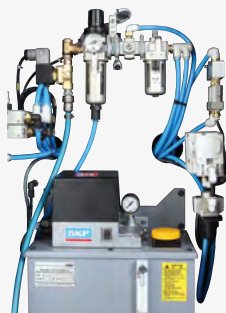


- 2.**  
Coolant through spindle  
function for enhanced  
productivity option



- 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 31i 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
- Ergonomic operator panel
- 4MB Memory
- Hot keys
- Enhance AICC BLOCK
- Touch pen provided as standard



## 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 5500/6300/8000
Controlled axis	Controlled axes		4 (X,Y,Z,B)
	Simultaneously controlled axes		4 axes
	Additional controlled Axis	Add 1 Axis (5th Axis)	●
Data input/output	Fast data server		○
	Memory card input/output		●
	USB memory input/output		●
	Large capacity memory(2GB)*2	Note *2) Available Option only with 15" Touch LCD (iHMI Only)	○
Interface function	Embedded Ethernet		●
	Fast Ethernet		○
	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	○
Feed function	AI contour control I	G5.1 Q_, 40 Blocks	X
	AI contour control II	G5.1 Q_, 200 Blocks	X
	AI contour control II	G5.1 Q_, 600 Blocks	●*
	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	●
		640M(256KB)_ 500 programs	X
		1280M(512KB)_ 1000 programs	X
		2560M(1MB)_ 1000 programs	X
		5120M(2MB)_ 1000 programs	X
		10240M(4MB)_ 1000 programs	●
	Part program storage size & Number of registerable programs	20480M(8MB)_ 1000 programs	○
		2560M(1MB)_ 2000 programs	○
		5120M(2MB)_ 4000 programs	○
		10240M(4MB)_ 4000 programs	○
		20480M(8MB)_ 4000 programs	○
			○
			○

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 Not Available ✳ 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
- Tool state control
- Balluff Tool ID function



### Tool load monitor

option

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

## Productivity improvement functions



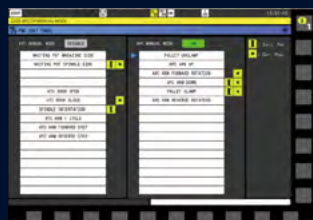
### Adaptive Feed Control

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



### APC Setting Screen

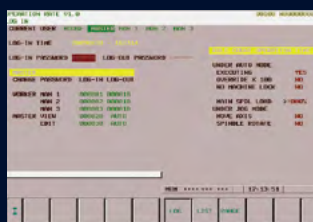
A simple automation function that supports automatic processing of the next pallet by setting the processing program for each pallet of the equipment including APC in advance



### PMC Soft Panel Switch

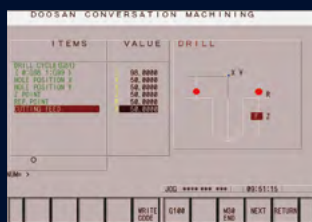
Manual operations that occur continuously in each stages for APC,ATC change command

## Operation support, Help desk functions



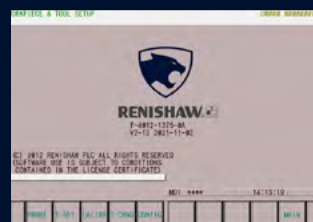
### Operation rate

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



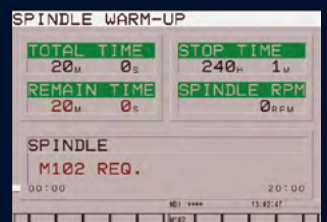
### Pattern Cycle

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

## SIEMENS SINUMERIK ONE

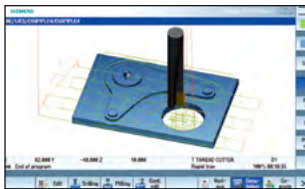
### Even Faster & Easier processing + 398mm screen

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.

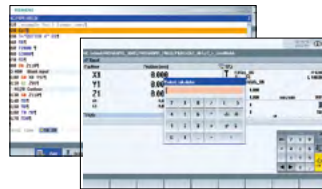
- 18.5 inch touch screen
- 50% improvement in processing speed (compared to S840D)
- Graphic programming
- PLC-based flexible automation/peripheral device expandability



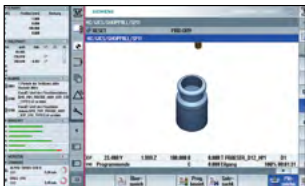
### Conversational convenient function



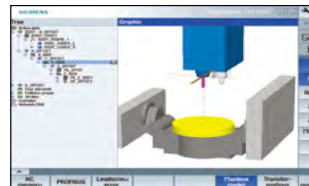
Simulation and machining contour monitoring



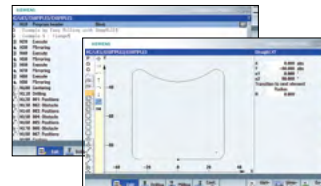
Smart function



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	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		●
	MTConnect		✳
Network	OPCUA		○
	18.5" color display with touch screen		●
Others	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)		○



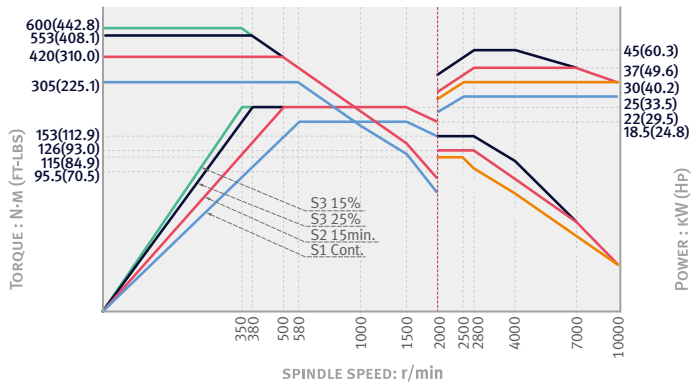
# POWER | TORQUE

## FANUC

10000 r/min standard

Power : 45 / 25 kW (60.3 / 33.5 Hp)

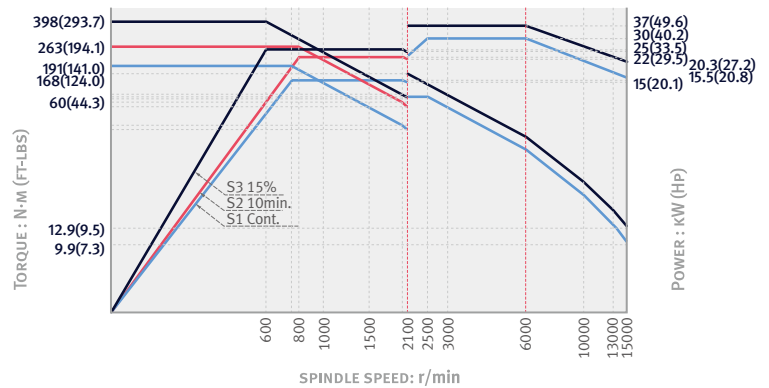
Power : 600 N·m (442.8 ft-lbs)



15000r/min **option**

Power : 37 / 30 kW (49.6 / 40.2 Hp)

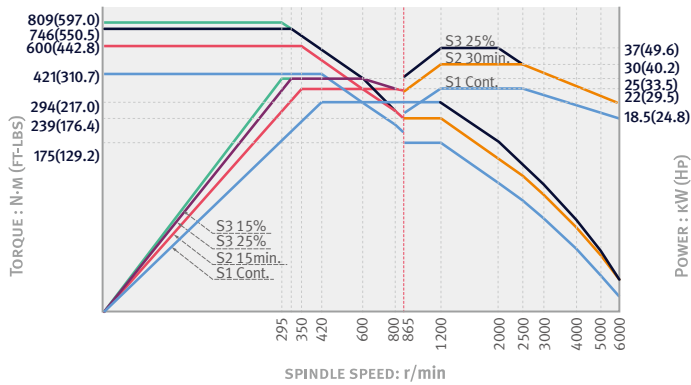
Torque : 398 N·m (293.7 ft-lbs)



6000 r/min **option**

Power : 37 / 22 kW (49.6 / 29.5 Hp)

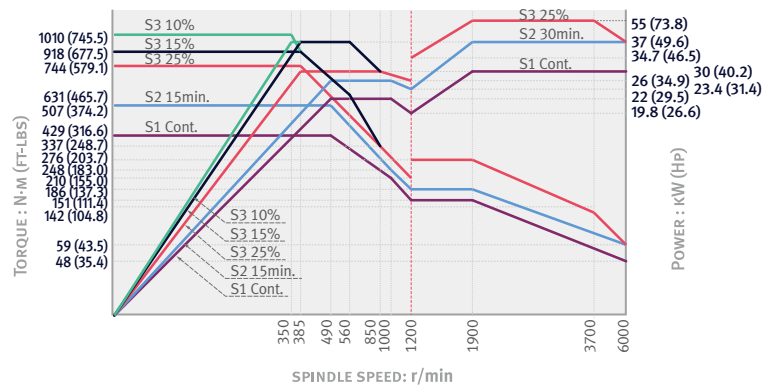
Torque : 809 N·m (597.0 ft-lbs)



6000 r/min **option**

Power : 55 / 30 kW (73.8 / 40.2 Hp)

Torque : 1010 N·m (745.5 ft-lbs)

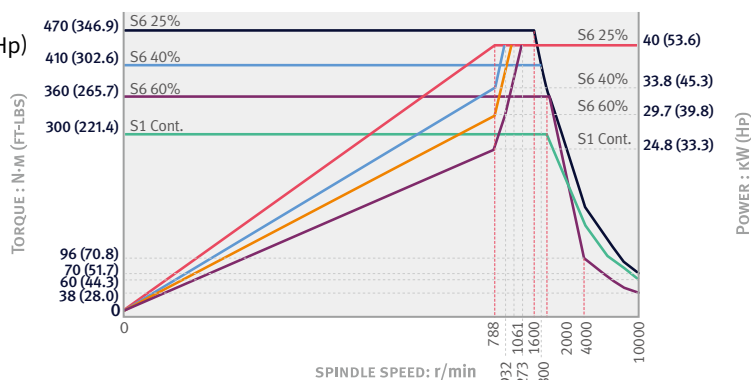


## SIEMENS

10000r/min

Power : 40 / 25 kW (53.6 / 33.5 Hp)

Torque : 470 N·m (346.9 ft-lbs)

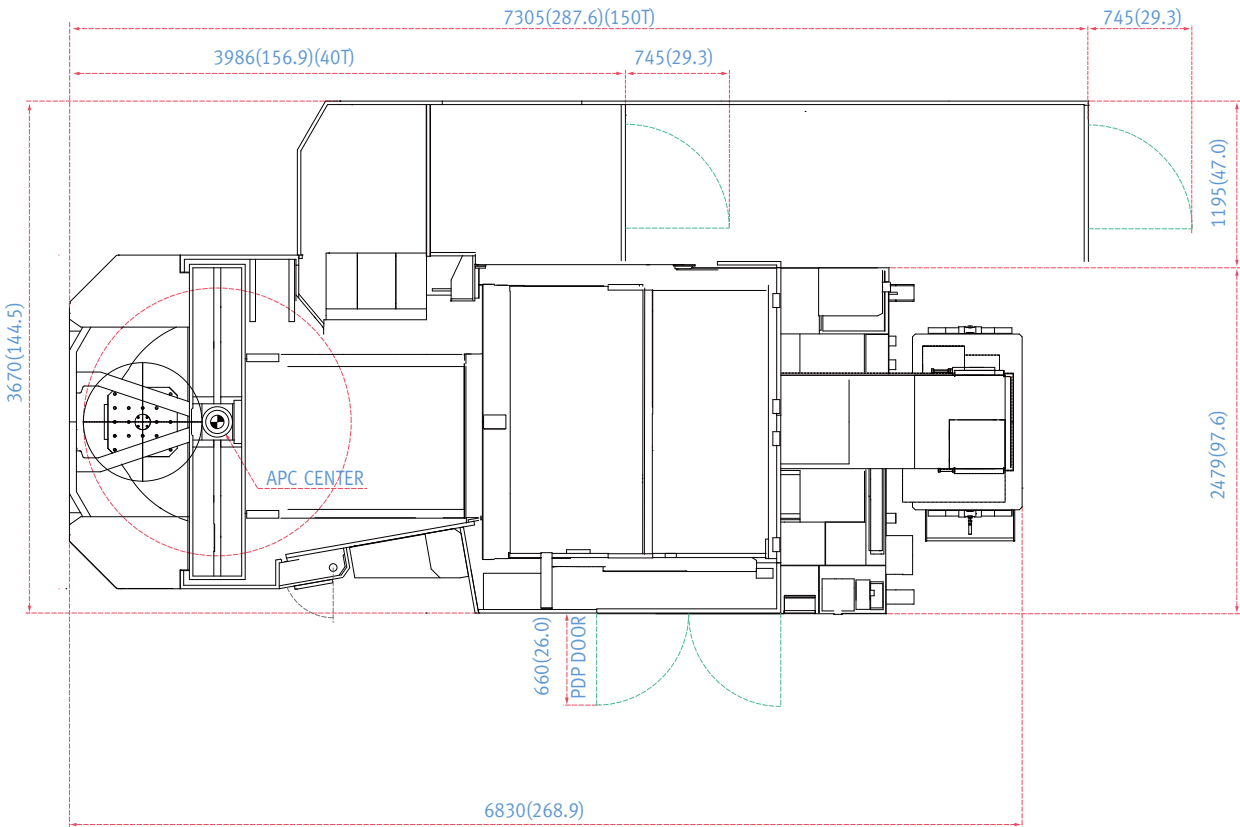


# DIMENSIONS

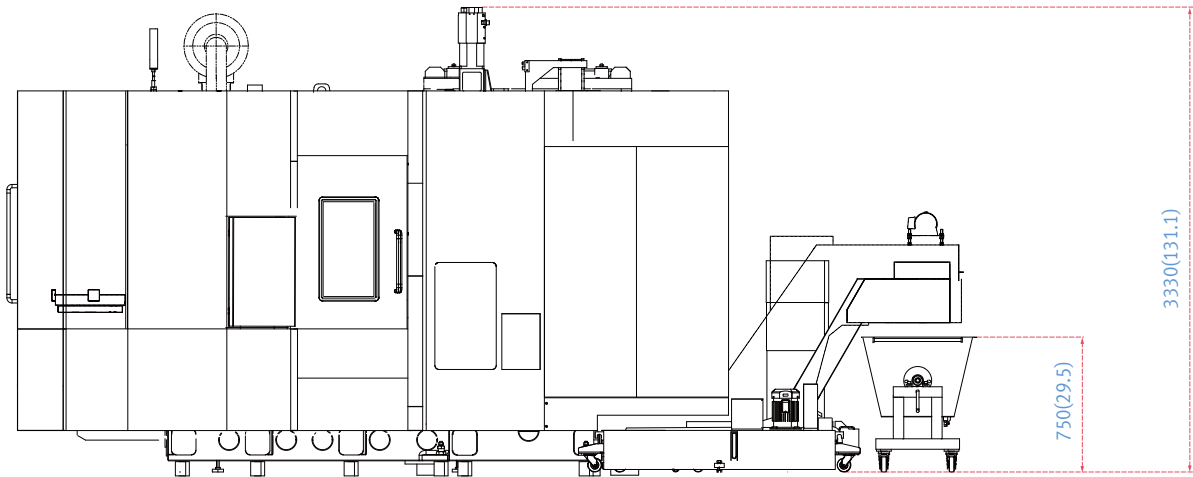
NHP 5500

Units : mm (inch)

TOP



FRONT



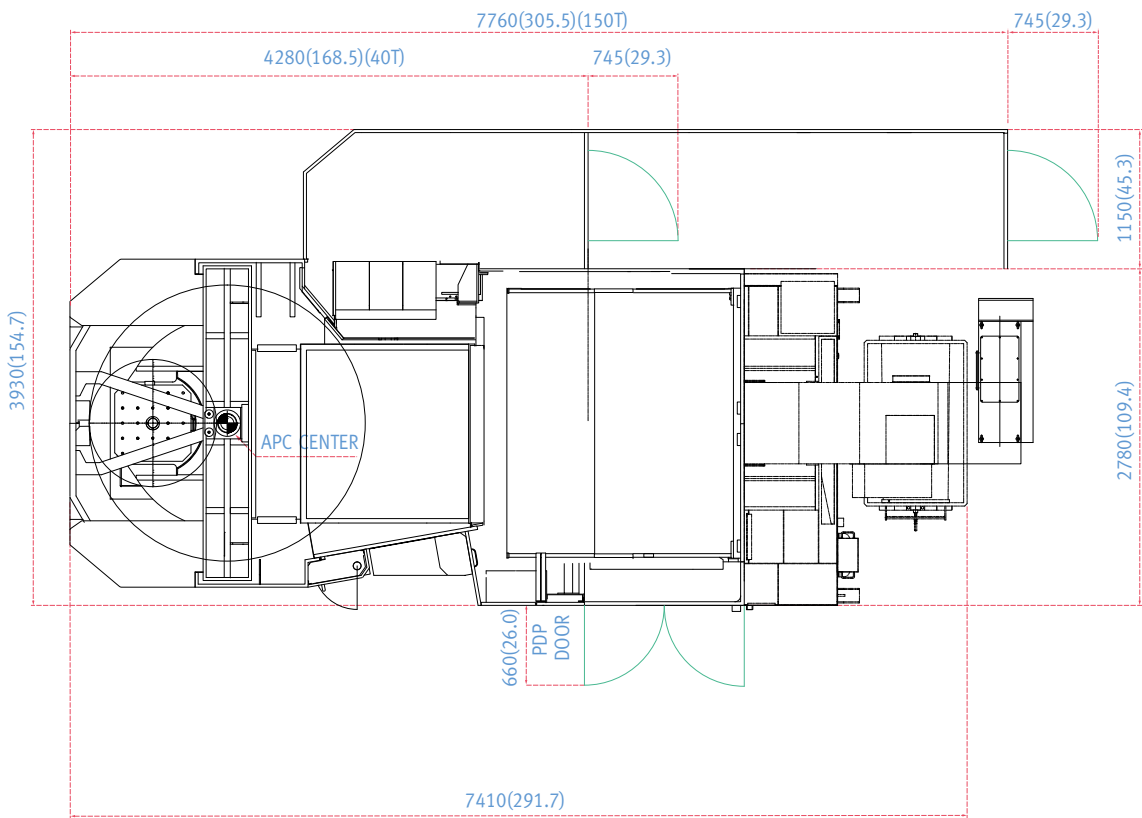
\* Some peripheral equipment can be placed in other areas.

# DIMENSIONS

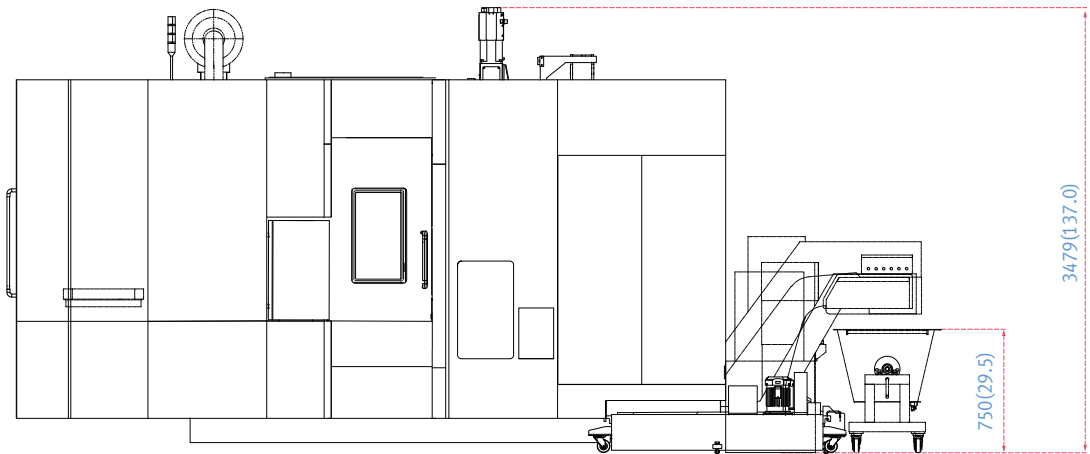
NHP 6300

Units : mm (inch)

TOP



FRONT

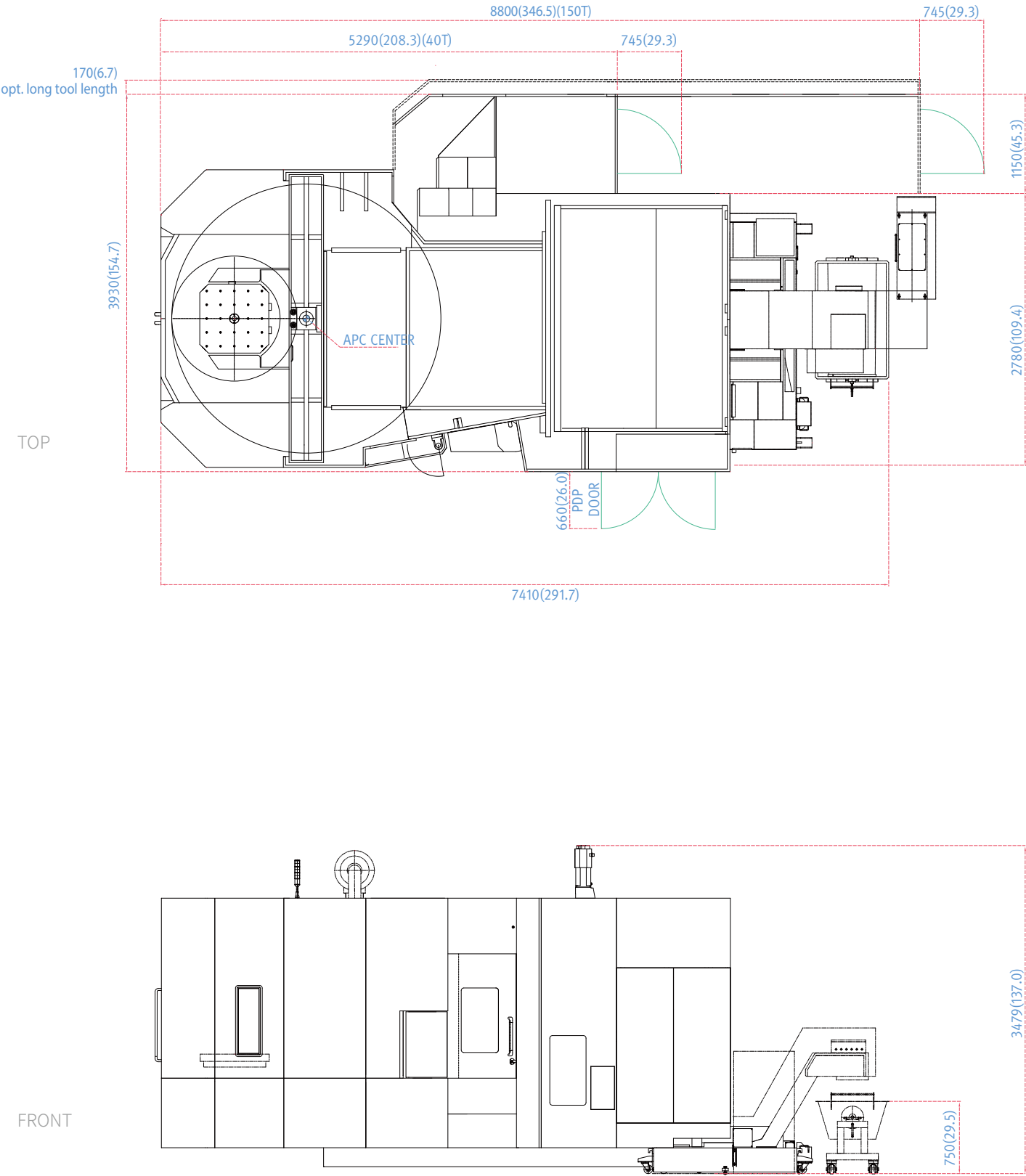




# DIMENSIONS

NHP 8000

Units : mm (inch)



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

# PALLET

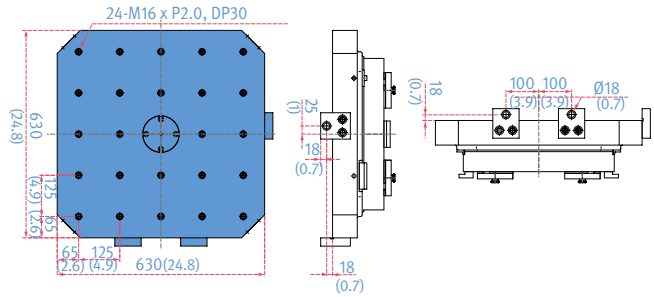
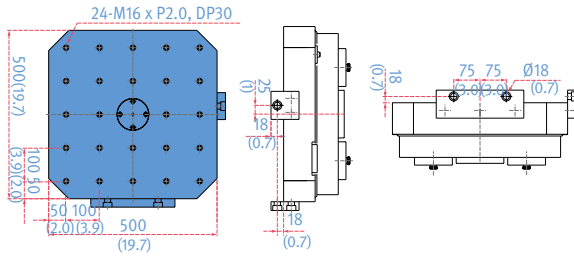
**NHP** 5500/6300/8000

## NHP 5500

Units : mm (inch)

Standard specifications (500 × 500(19.7x19.7))

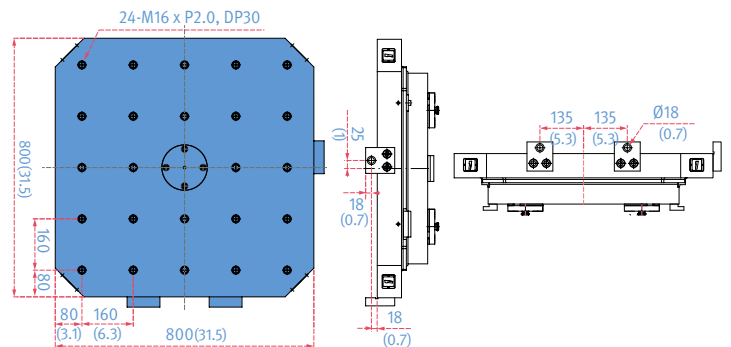
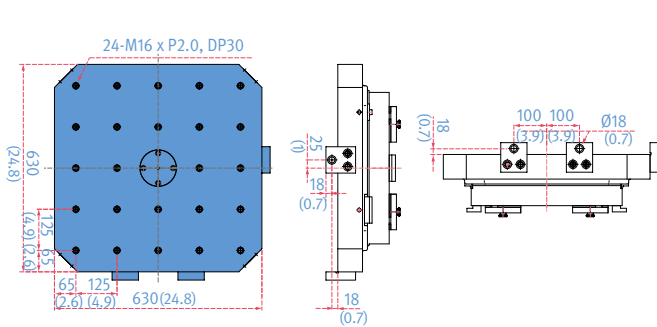
Optional specifications (630 × 630(24.8x24.8))



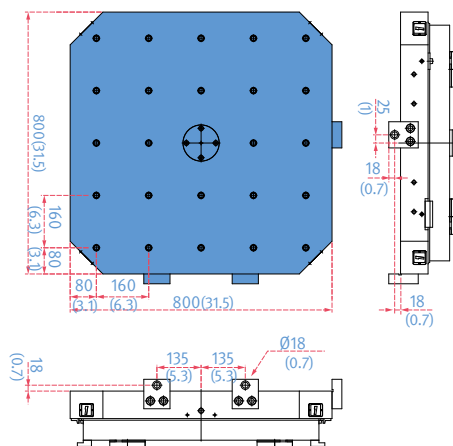
## NHP 6300

Standard specifications (630 × 630(24.8x24.8))

Optional specifications (800 × 800 (31.5x31.5))



## NHP 8000

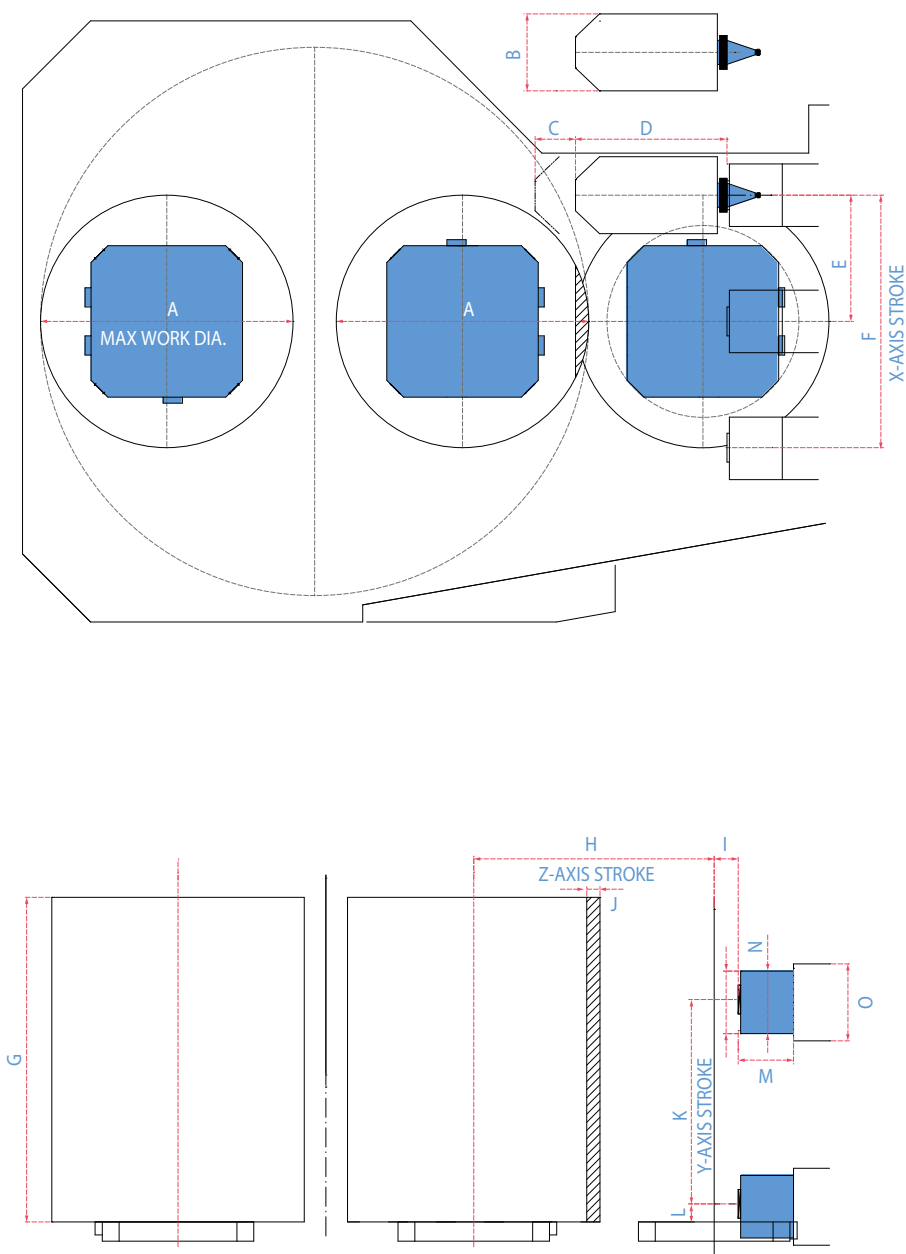


# WORKING AREA

NHP 5500/6300/8000

Workpiece working area

Units : mm (inch)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
NHP 5500	Ø850 (33.5)	Ø320 (12.6)	168 (6.6)	530 (20.9)	400 (15.7)	800 (31.5)	1100 (43.3)	850 (33.5)	100 (3.9)	5 (0.2)	750 (29.5)	75 (3.0)	230 (9.1)	Ø260 (10.2)	Ø320 (12.6)
NHP 6300	Ø1050 (41.3)	Ø320 (12.6)	168 (6.6)	630 (24.8)	525 (20.7)	1050 (41.3)	1350 (53.1)	1000 (39.4)	100 (3.9)	55 (2.2)	900 (35.4)	75 (3.0)	230 (9.1)	Ø260 (10.2)	Ø320 (12.6)
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	NHP5500/S	NHP 6300	NHP 8000
Cutting capacity	Travel distance	X-axis		mm (inch)	800(31.5)	1050(41.3)	1400(55.1)
		Y-axis		mm (inch)	750(29.5)	900(35.4)	1200(47.2)
		Z-axis		mm (inch)	850(33.5)	1000(39.4)	1370(53.9)
	Distance from spindle nose to table center			mm (inch)	100 - 950(3.9 - 37.4)	100 - 1100(3.9 - 43.3)	150 - 1520(5.9 - 59.8)
	Distance from spindle center to table top			mm (inch)	75 - 825(3.0 - 32.5)	75 - 975 (3.0 - 38.4)	75 - 1275 (3.0 - 50.2)
Feed rate	Rapid feed rate	X-axis		m/min	60		50
		Y-axis		m/min	60		50
		Z-axis		m/min	60		50
	Cutting feed rate			mm/min	30000		25000
Pallet	Pallet type				24-M16×P2.0		
	Pallet indexing angle			deg	1 {0.001}*		
	Max. loading capacity			kg (lb)	800(1763.7)	1500(3306.9)	2000(4409.2)
	Max. workpiece size			mm (inch)	850 x 1100 (33.5 x 43.3)	1050 × 1350 (41.3 x 53.1)	1450 x 1550 (57.1 x 61.0)
	Pallet size			mm (inch)	500 x 500 (19.7 x 19.7)	630 x 630 (24.8 x 24.8)	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	2	
	Pallet change time			s	8.5	12	16
	APC indexing angle (rotation)			deg	90	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)	530(20.9) (BT / CAT / DIN), 600(23.6) (HSK)	630(24.8) (BT / CAT / DIN), 700(27.6) (HSK)	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	5.5	5.6	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	825	925	
	Lubricant tank capacity			L	7.2		
Machine dimensions	Height			mm (inch)	3330 (131.1)	3495 (137.6)	3803 (149.7)
	Length			mm (inch)	5940 (233.9)	6520 (256.7)	7878 (310.2)
	Width			mm (inch)	3670 (144.5)	3930 (154.7)	4375 (172.2)
	Weight			kg (lb)	17000 (37478.0)	18000 (39682.6)	27000 (59523.9)

\*{ } : option

\*Please contact DN Solutions for information on the NHP 5500S

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...



## MACHINE GREATNESS™



WHAT YOU MAKE AND HOW YOU MAKE IT MATTERS—SO MAKE IT GREAT WITH DN SOLUTIONS.

### UNBEATABLE MACHINES

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

### 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.

### 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.

### EXPERT SERVICE

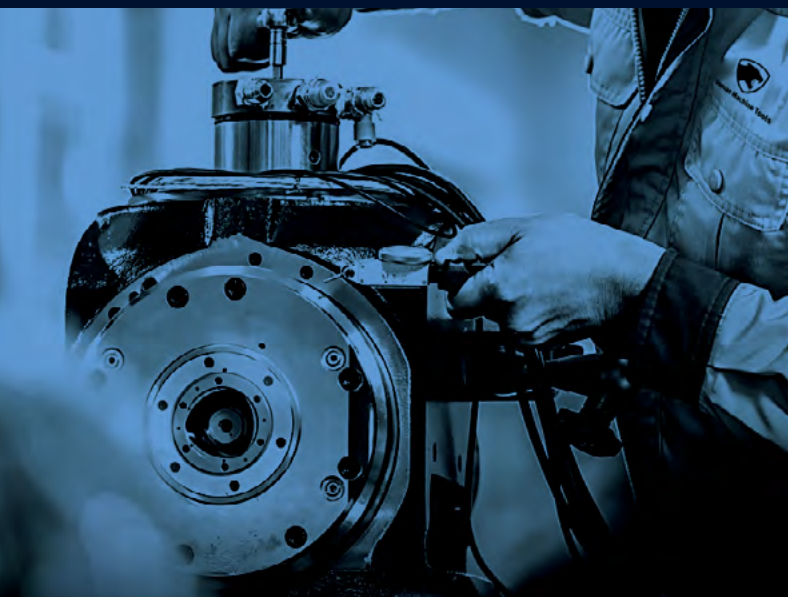
Our dedicated, experienced and knowledgeable team is totally committed to improving your productivity, growth and success.



# CUSTOMER SUPPORT AND SERVICES

**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



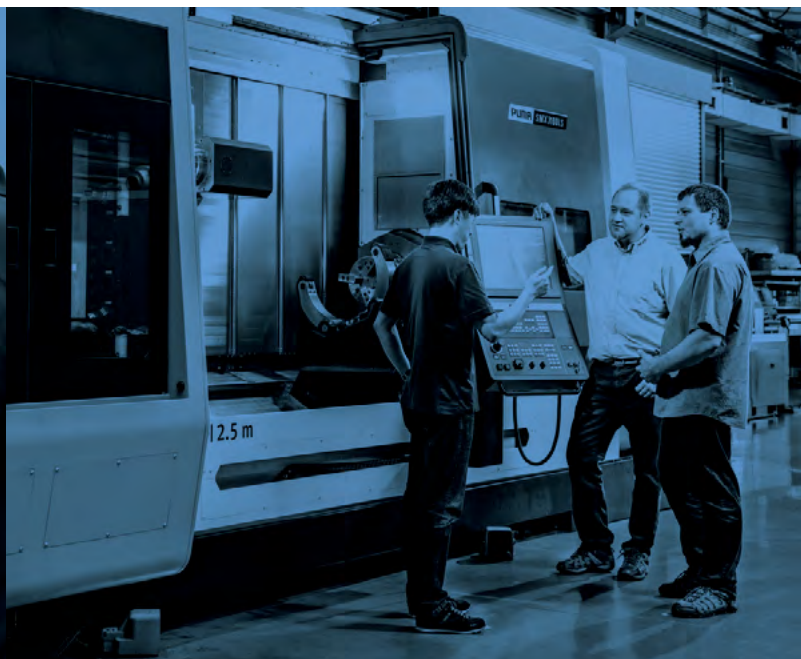
## PARTS SUPPLY

- 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

# RESPONDING TO CUSTOMERS ANYTIME, ANYWHERE

## DN Solutions Global Network

DN Solutions provides systems-based professional support services, before and after the machine tool sale, by responding quickly and efficiently to customers. By supplying spare parts, product training, field service and technical support, we provide the expert care, attention and assistance our customers expect from a market leader.



Global sales and service support network

6	Corporations
155	Dealer networks
51	Technical centers Technical Center, Sales Support, Service Support, Parts Support
204	Service posts
3	Factories







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#### **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.