

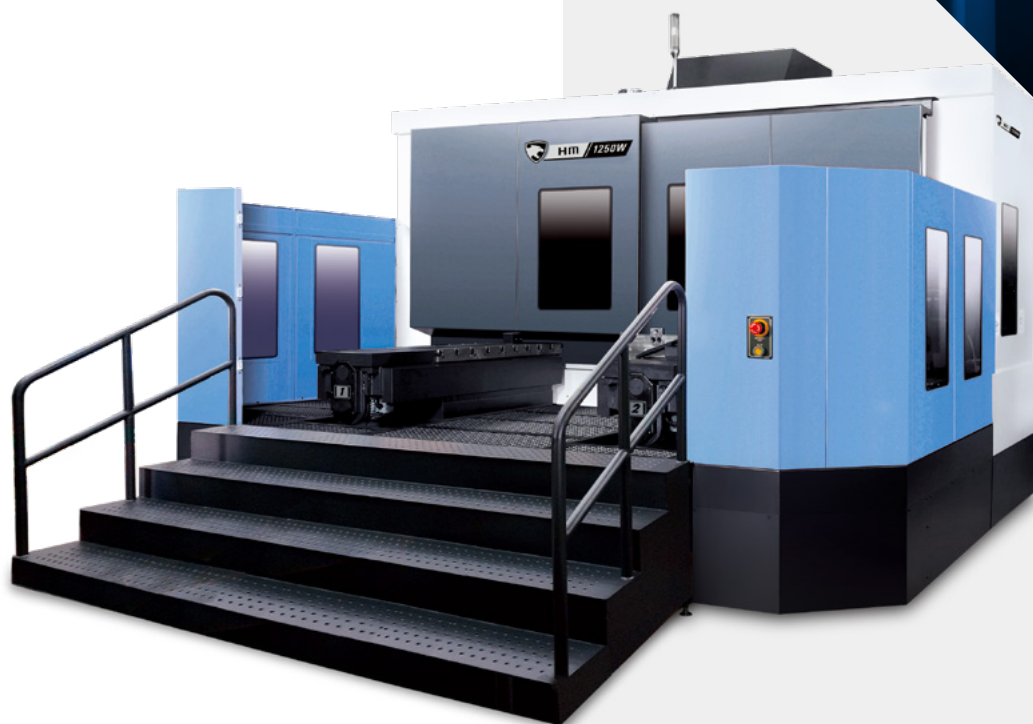
LARGE HORIZONTAL MACHINING CENTER

# **HM 1000 · 1250 · 1250W**

**HM 1000**

**HM 1250**

**HM 1250W**



# HM 1000 · 1250 · 1250W

A twin pallet horizontal machining center designed for processing large workpieces. A wide variety of machining applications can be carried out with the 1000/1250mm pallet size and optional W axis capability. The heavy duty box guideways, high torque gearbox spindle and minimum non-cutting time will provide users with a high level of productivity and added value.

## CONTENTS

### Product Overview

### Basic Information

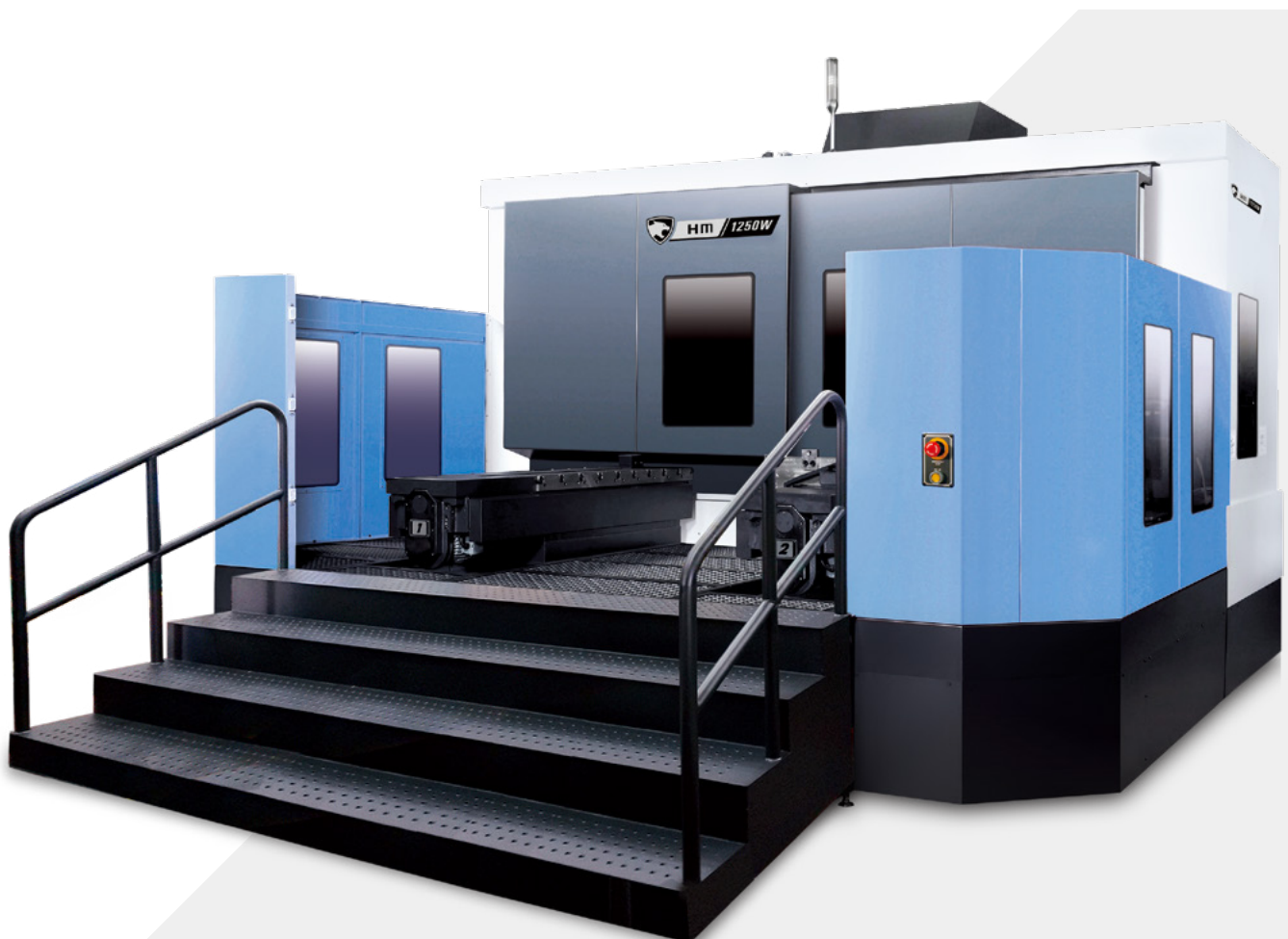
- 04 Basic Structure
- 05 Spindle
- 06 Magazine
- 07 Table
- 07 Cutting Performance

### Detailed Information

- 08 Standard / Optional Specifications
- 09 Peripheral Equipment
- 10 Multi pallet system
- 11 FANUC 31iB PLUS
- 13 SIENUMERIK ONE
- 14 Power | Torque
- 15 External Dimensions
- 16 Table Dimensions
- 16 Tool shank
- 17 Machine Specifications

### Customer Support Service

- 18 Why DN Solutions
- 19 Customer Support and Services
- 19 Global Network



**IMPROVED PRODUCTIVITY  
WITH HIGH PERFORMANCE  
SPECIFICATIONS**



High torque gearbox spindle, box-type guideways, and high rigidity cast structure achieves high productivity.

**GENERAL TYPE AND OPTIONAL  
W AXIS APPLICATIONS**

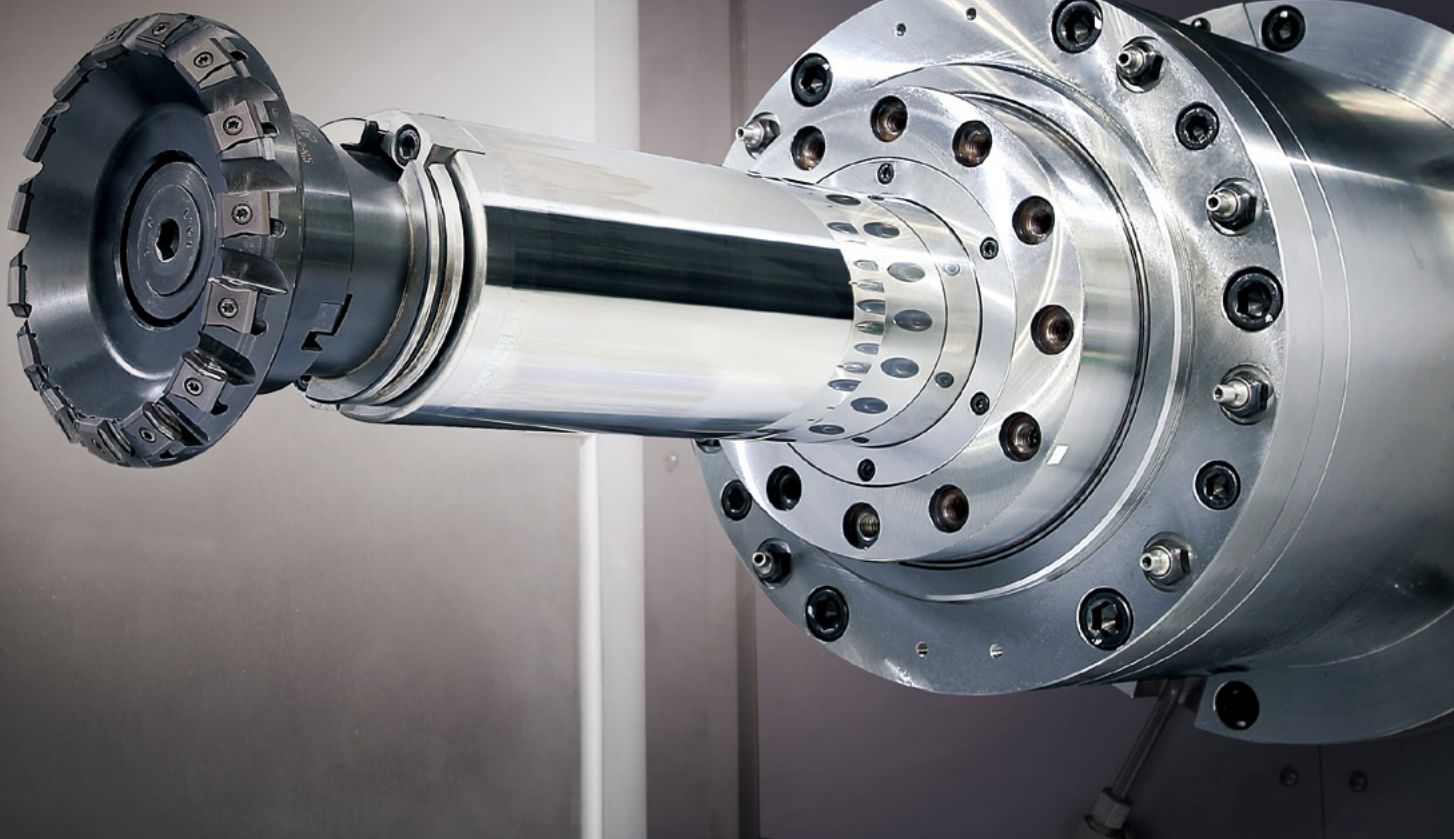


A wide variety of large workpieces can be handled due to the machine's large capacity and optional W axis for long boring applications.

**READY FOR AUTOMATION  
WITH STANDARD PALLET  
CHANGE SYSTEM**



The shuttle-type pallet changer satisfies the needs for long-term operation and automation.



# BASIC STRUCTURE

High rigidity bed supports high accuracy.

## Large Horizontal Machining Center

Designed for large workpieces requiring heavy duty cutting performance, the HM1000/1250/1250W offer the solution for various requirements.

Travel distance (X / Y / Z axis)

HM 1000

**2100 / 1250 / 1250** mm  
(82.7 / 49.2 / 49.2 inch)

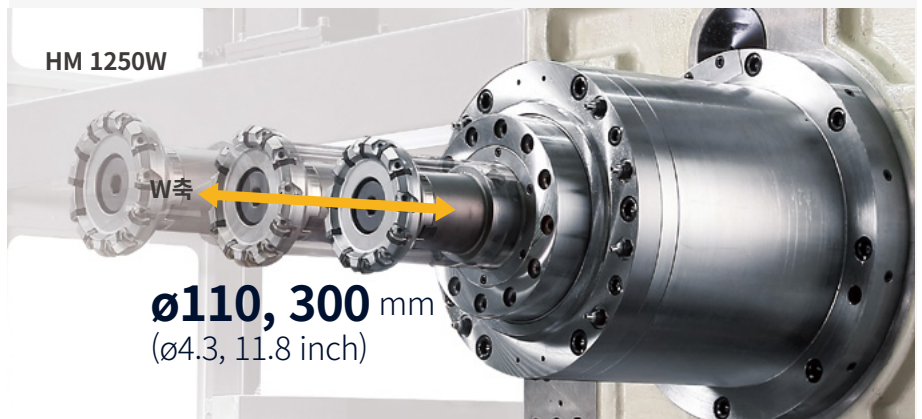
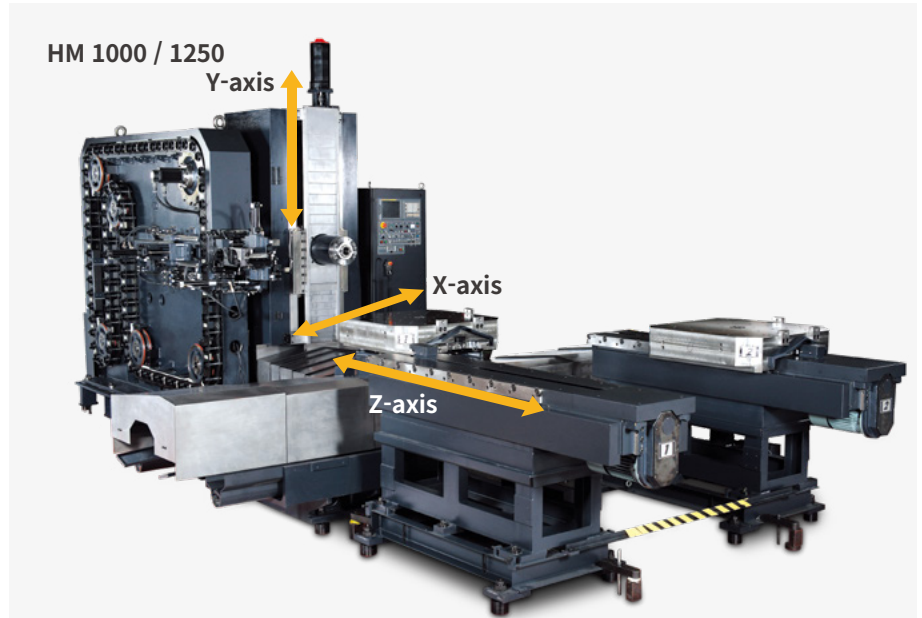
HM 1250

**2100 / 1500 / 1500** mm  
(82.7 / 59.1 / 59.1 inch)

Travel distance (X / Y / Z / W axis)

HM 1250W

**2100 / 1400 / 1400 / 300** mm  
(82.7 / 55.1 / 55.1 / 11.8 inch)



## Stable High-rigidity Axis Structure

All the linear axes are driven by high precision preloaded ballscrews to minimise thermal error. They are coupled directly to the absolute-type servo motor to optimise accuracy.

Rapid traverse rate (X / Y / Z axis)

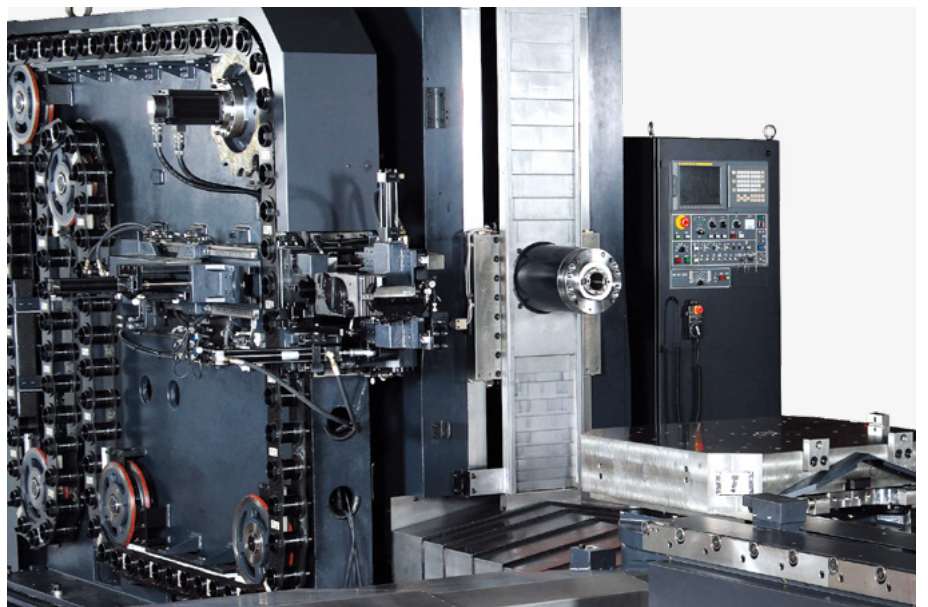
HM 1000 / HM 1250

**24 / 24 / 24** m/min  
(944.9 / 944.9 / 944.9 ipm)

Rapid traverse rate (X / Y / Z / W axis)

HM 1250W

**24 / 24 / 24 / 6** m/min  
(944.9 / 944.9 / 944.9 / 236.2 ipm)



# SPINDLE

Gearbox driven spindle realizes high productivity.

## Gearbox Spindle

High torque spindle, dual contact tool system, and spindle cooling system adopted as standard realize high stability and reliability.

### Max. spindle speed

HM 1000 / 1250

**6000** {6000/8000 OPTION} r/min

HM 1250W

**3000** r/min

### Max. spindle motor power (30min. /Cont.)

HM 1000 / 1250

**26 / 22** {37 / 30, 26 / 22 OPTION} kW  
(34.9 / 29.5 {49.6 / 40.2, 34.9 / 29.5} Hp)

HM 1250W

**45 / 37** kW (60.3 / 49.6 Hp)

### Max. spindle torque

HM 1000 / 1250

**1989.4** {3687/ 1410 OPTION} N·m  
(1468.2 {2721.0 / 1040.6} ft-lbs)

HM 1250W

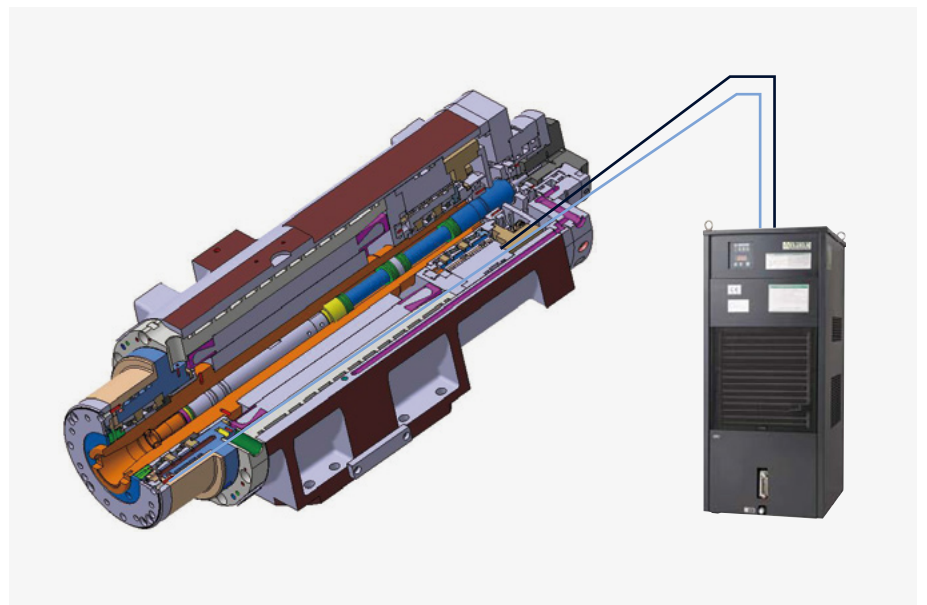
**1910** N·m (1409.6 ft-lbs)

HM 1000 / 1250



## Spindle Cooling

Adopted as a standard feature, the oil cooler system minimizes thermal error over an extended time of operation. The oil cooler system minimizes thermal error over an extended period of operation.



# MAGAZINE

Reliability is further improved with the adoption of servo motors and the tool storage capacity can be extended up to 316 tools.

## Tool storage capacity

HM 1000 / 1250 / 1250W

**60**

{90 / 120 / 196 / 256 / 316 <sup>(Matrix)</sup> OPTION} ea

## Tool-to-Tool (T-T-T)

HM 1000 / 1250 / 1250W

**12** sec

## Max. tool diameter (Neighboring pot empty)

HM 1000 / 1250 / 1250W

**130** (300) mm

(5.1 (11.8) inch)

## Max. tool length

HM 1000

**650** mm

(25.6 inch)

HM 1250

**650** {800\* OPTION} mm

(25.6 {31.5\* } inch)

\* In case of HM 1250 with Max. Workpiece diameter 2000 mm spec.

\* Only compatible with chain magazine 60T, 90T, and 120T (Matrix not available))

HM 1250W

**700** mm

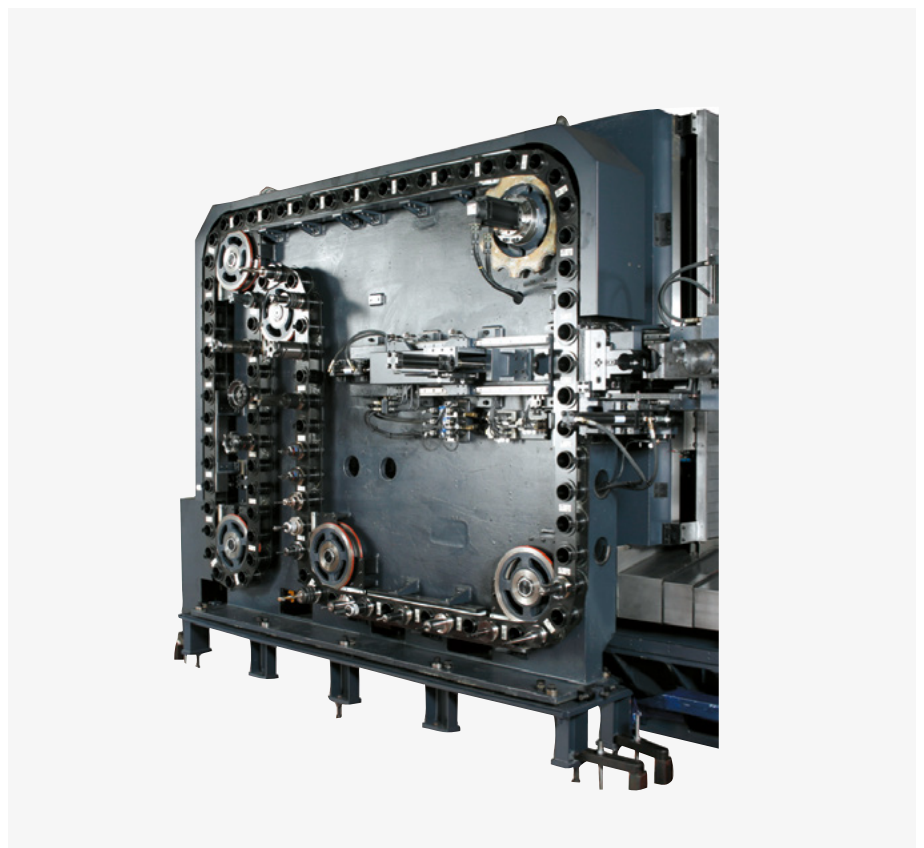
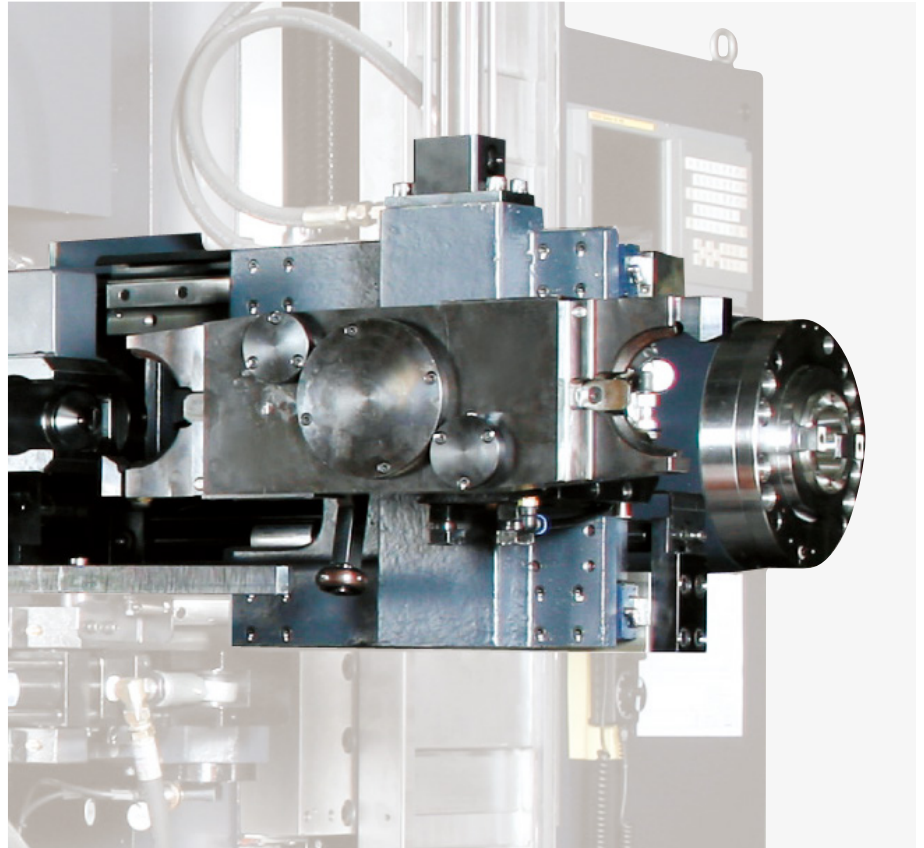
(27.6 inch)

## Max. tool weight

HM 1000 / 1250 / 1250W

**30** kg

(66.1 lb)



# TABLE

The table capacity is suitable for large workpieces .

### Pallet size

HM 1000

**1000 x 1000**

(39.4 x 39.4 inch)  
{1250 x 1000 OPTION} mm  
{49.2 x 39.4} inch

HM 1250 / 1250W

**1250 x 1250**

(49.2 x 49.2 inch)  
{1250 x 1000 OPTION} mm  
{49.2 x 39.4} inch

### Max. work size

HM 1000

**2000 x 1475** mm  
(78.7 x 58.1 inch)

HM 1250 / 1250W

**2000 x 1725**  
{2300 x 1725 OPTION} mm  
{18.7 x 67.9 {90.6 x 67.9} inch}

\* It is non circular.

### Loading capacity

HM 1000 / 1250

**3000** {5000 OPTION} kg  
(6613.8 {11023.0 }lb)

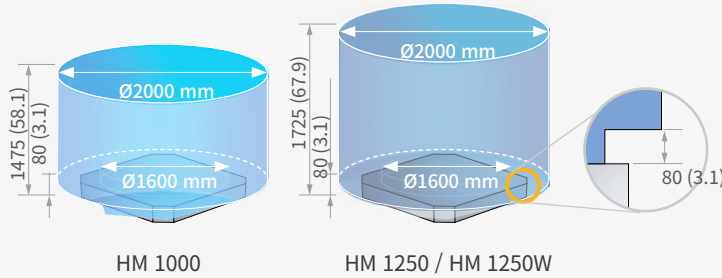
HM 1250W

**5000** kg  
(11023.0 lb)

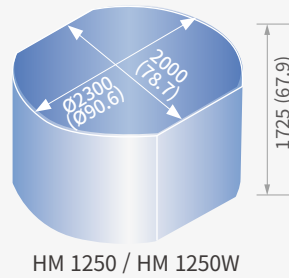
The shuttle-type, automatic pallet changer as standard specification improves productivity.

Unit : mm (inch)

Circular max. work size



Non circular max. work Size

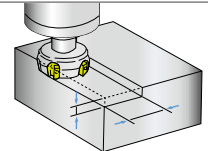


# MACHINING PERFORMANCE

HM 1250W

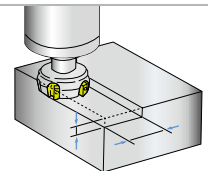
### Face mill (material : SM45C / W-axis : 300 mm (11.8 inch))

Tool mm (inch)	Spindle speed (r/min)	Feed rate mm/min (ipm)	Cutting width mm (inch)	Cutting depth mm (inch)	Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> ))
D125	360	300 (11.8)	80 (3.1)	1.7 (0.067)	40.8 (2.5)



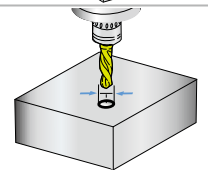
### Face mill (소재 : SM45C / W축 : 0mm)

Tool mm (inch)	Spindle speed (r/min)	Feed rate mm/min (ipm)	Cutting width mm (inch)	Cutting depth mm (inch)	Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> ))
D125	300	1680 (66.1)	100 (3.9)	7 (0.3)	1176 (71.8)
	300	1400 (55.1)	100 (3.9)	8 (0.3)	1120 (68.3)
	300	1300 (51.2)	100 (3.9)	9 (0.4)	1170 (71.4)



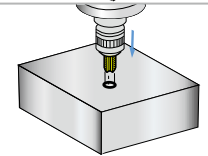
### U-drill

Tool mm (inch)	Spindle speed (r/min)	Feed rate mm/min (ipm)	Cutting depth mm (inch)
D85	560	165 (6.5)	50 (2.0)
D120	380	77 (3.0)	50 (2.0)



### Tap

Tool mm (inch)	Spindle speed (r/min)	Feed rate mm/min (ipm)	Cutting depth mm (inch)
M48 x 5	100	500 (19.7)	45 (1.8)



\* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

# STANDARD | OPTIONAL SPECIFICATIONS

Diverse optional features are available for customer-specific work applications.


Description	Features	HM 1000	HM 1250	HM 1250W
PALLET TYPE	0.001 DEGREE	○	○	○
	1 DEGREE	●	●	●
NO. OF PALLETS	2 EA	●	●	●
	2 EA + 1 SPARE PALLET	○	○	○
	2 EA + 2 SPARE PALLETS	○	○	○
	2 EA + 3 SPARE PALLETS	○	○	○
	2 EA + 4 SPARE PALLETS	○	○	○
	6 PALLETS MAGAZINE STATION - PMG	○	○	○
PALLET CHECK SYSTEM	AIR LIMIT SENSING	○	○	○
	1000 X 1000 MM	●	○	○
PALLET SIZE	1250 X 1000 MM	○	○	○
	1250 X 1250 MM	X	●	●
REFERENCE OF WORKPIECE SETTING	CENTER BUSH	○	○	○
	120 EA	○	○	○
TOOL STORAGE CAPACITY	196 EA	○	○	○
	60 EA	●	●	●
	90 EA	○	○	○
AUTO TOOL MEASURING DEVICE	ENCODER NEEDLE TYPE_BK MIKRO	○	○	○
	OMRON LIMIT SWITCH TYPE	○	○	○
	RMI-Q_ONLY_RENISHAW	○	○	○
	TS27R_RENISHAW	○	○	○
AIR	AIR BLOWER	○	○	○
	AIR GUN	○	○	○
OIL SKIMMER	BELT TYPE	○	○	○
	COOLANT GUN	○	○	○
COOLANT	Water soluble Coolant Chiller**	○	○	○
	SHOWER COOLANT	○	○	○
THROUGH SPINDLE COOLANT	1.5 kW_2.0 MPA	○	○	○
	1.5 kW_2.0 MPA_CYCLON FILTER	○	○	○
	1.5 kW_3.0 MPA_COOLJET BAG FIL	○	○	○
	3.7 kW_7.0 MPA_BAG FILTER	○	○	○
	3.7 kW_7.0MPA_PAPER ROLL FILTER	○	○	○
	4.0 kW_2.0 MPA	○	○	○
	3.0 kW_3.0 MPA_CYCLON FILTER	○	○	○
	5.5 kW_7.0 MPA_DUAL BAG FILTER	○	○	○
7.5 kW_7.0 MPA_CYCLON FILTER	○	○	○	
AUTO WORKPIECE MEASURING DEVICE	OMP60_RENISHAW	○	○	○
	RMP60_RENISHAW	○	○	○
CALIBRATION BLOCK	CALIBRATION BLOCK	○	○	○
	FORKLIFT_380L	○	○	○
CHIP CONVEYOR	ROTATION_380L	○	○	○
	HINGED BELT_LEFT SIDE	○	○	○
	MAGNETIC SCRAPER_LEFT SIDE	○	○	○
LINEAR SCALE (X/Y/Z AXIS)	ABSOLUTE PULSE CODER	○	○	○
MIST COLLECTOR	2.2 KW_NONE WATER SOLUBLE	○	○	○
	2.2 KW_WATER SOLUBLE	○	○	○
SAFETY SENSOR FOR OPERATOR	ARRAY SENSOR	○	○	○
TEST BAR	TEST BAR GAUGE	○	○	○
WORK LOCATING CONFIRMATION	AIR LIMIT SENSING_2 PORT	○	○	○
AIR CONDITIONER	AIR CONDITIONER	○	○	○
AUTOMATIC POWER OFF	AUTOMATIC POWER OFF	○	○	○
AUTOMATIC POWER ON	AUTOMATIC POWER ON	○	○	○
ELECTRIC CABINET LIGHT	ELECTRIC CABINET LIGHT	○	○	○
FASTEMS FMS INTERFACE	FASTEMS FMS INTERFACE	○	○	○
MPG	3 MPG_PORTABLE TYPE	○	○	○
	SINGLE PALLET	○	○	○
	HYD. FIXTURE 2X2	○	○	○
	X, Z AXIS SLIDE COVER CHIP FLUSHING	○	○	○
	TOOL LENGTH 800MM	X	○	X
	AUTO DOOR HEIGHT (1725mm → 2000mm)	X	○	X
Customized Special Option	15K SPINDLE HEAD	X	○	X

\* Please contact your DN Solutions representative for detailed machine information. .

\* 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

● Standard ○ Optional X N/A

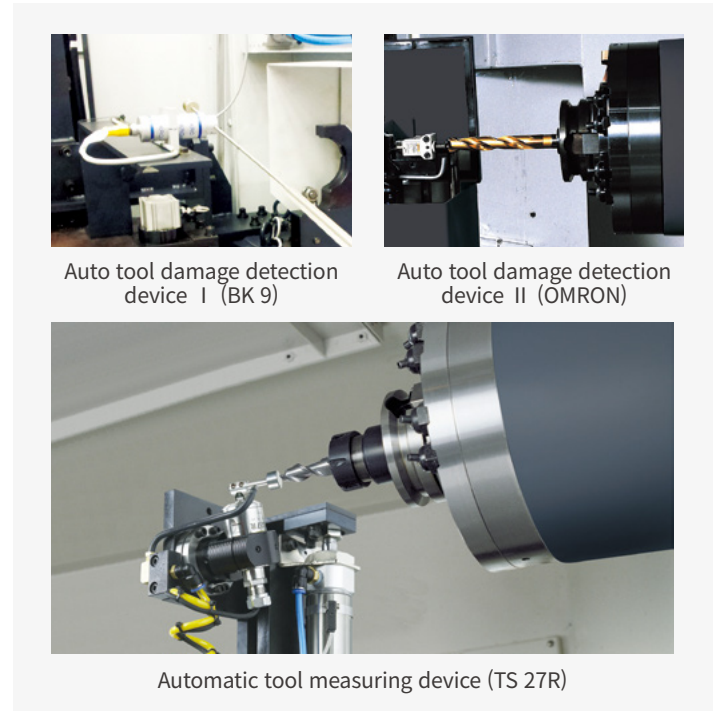
 Fire Safety Precautions | There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before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

# PERIPHERAL EQUIPMENT

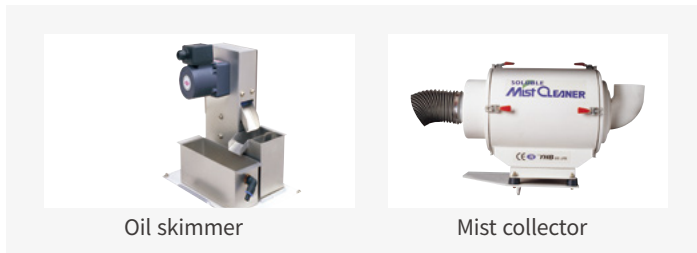
## Chip Conveyor



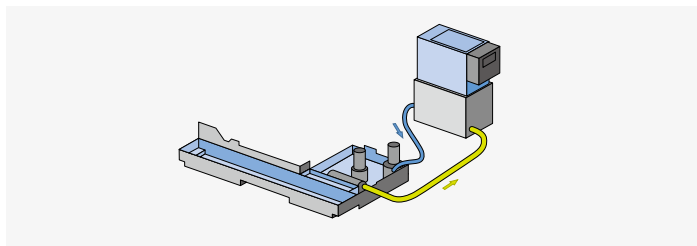
## Measurement systems



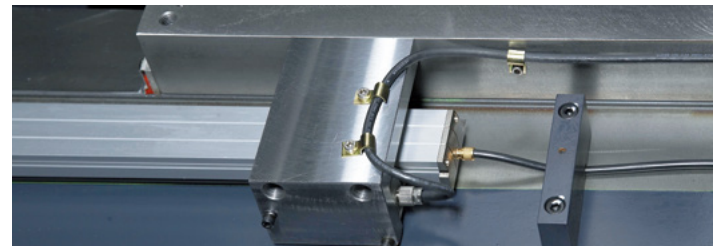
## Environment friendly devices



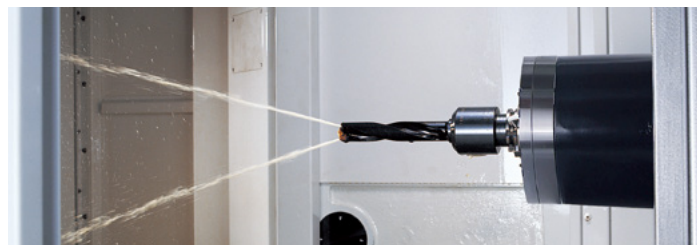
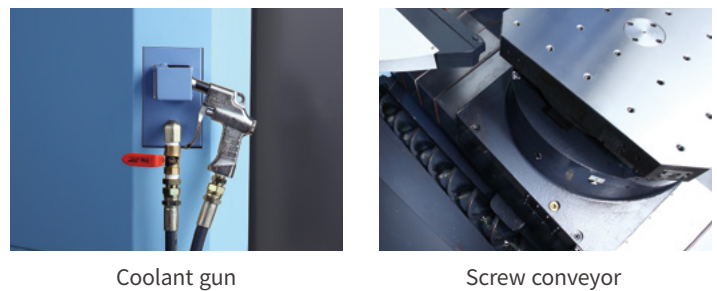
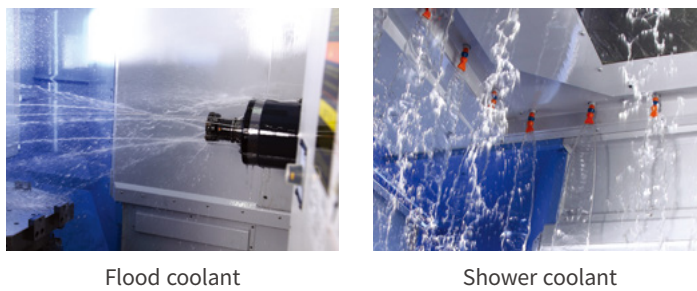
## Cutting oil cooling system



## Linear scale feedbacksystem



## Chip disposal system



Spindlethrough coolant spray device (TSC)

MQL system (Misting device)

# MULTI PALLET SYSTEM

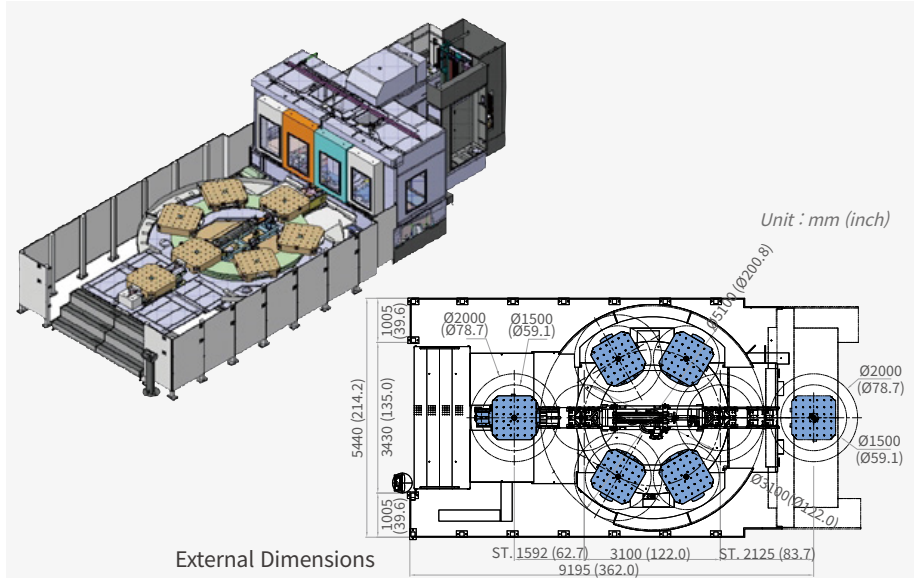
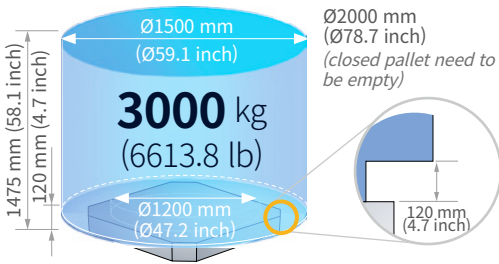
DN Solutions Pallet Extension System provides automated solution to maximize productivity. Simple installation and ease of maintenance makes it convenient for users to operate and maintain.

## Round Pallet System (Pallet Magazine)

The PMG system is composed of a rotating pallet pool storage unit and a feed mechanism to transfer the pallet to and from the machine working area. In addition, a pallet can be transferred to a separate setup station where the operator has allround access for loading the workpiece.

### Features

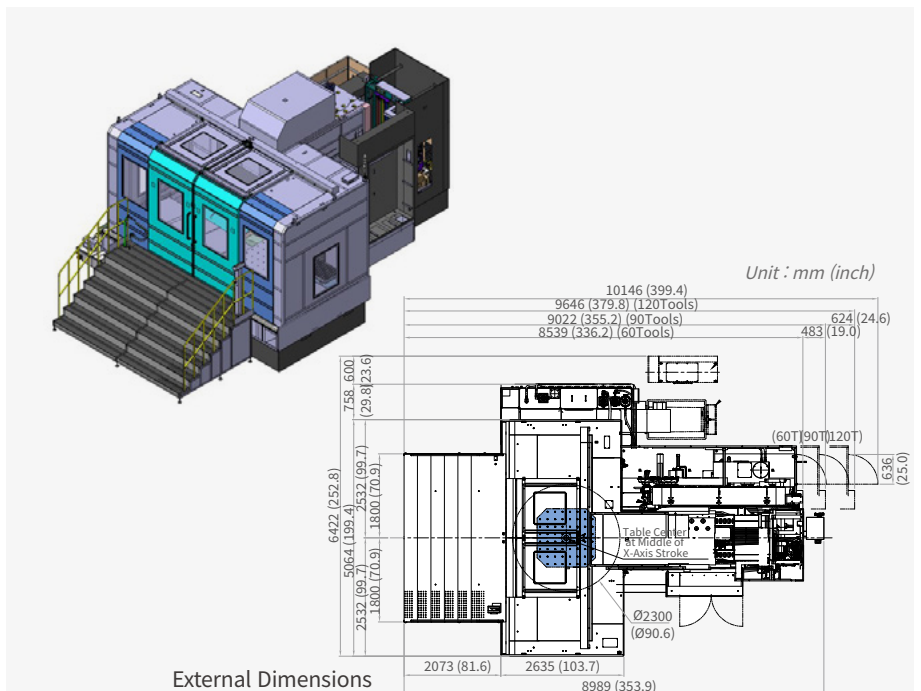
- Conventional multi pallet changer round type
- Available large volume workpiece
- Driven by hydraulic unit
- Stable pallet changing unit
- Pallet scheduling operation (1-Path, PMC control)



Available model		HM 1000	HM 1250	HM 1250W
Pallet dimension	mm (inch)	1000 x 1000 (39.40 x 39.4), 1250 x 1000 (49.2 x 39.4)		
Workpiece diameter	mm (inch)	Cont. : 1500 (59.1) Adjacent Pallets Empty : 2000 (78.7)		
Workpiece height	mm (inch)	1475 (58.1)	1725 (67.9)	
Workpiece weight	kg (lb)	3000 (6613.8)		
Magazine type		Round type		
Operation		Pallet scheduling operation (1-path, PMC control)		
Pallet drive device		Hydraulic Motor & Chain		
Hydraulic power unit	kW (Hp)	7.5 (10.1)		

## Single pallet system

Space can be reduced by Single-pallet system.



Description		HM 1000	HM 1250	HM 1250W
Max work-piece size	mm (inch)	2000 x 1475 (78.7 x 58.1)		2300 x 1725

\* This layout is for HM1250 Single pallet

# DN SOLUTIONS FANUC 31i PLUS

FANUC 31i-B 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

Description	Item	Specifications	F31iB PLUS HM1000 / HM1250 / HM1250W
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		○
Operation	Enhanced Embedded Ethernet function		●
	DNC operation	Included in RS232C interface.	●
Program input	DNC operation with memory card		●
	Workpiece coordinate system	G52 - G59	●
	Addition of workpiece coordinate system	G54.1 P1 X 48 (48 pairs)	●
	Tool number command		T4 digits
Feed function	Tilted working plane indexing command	G68.2 TWP	○
	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	●
Setting and display	EZ Operation package		●
	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	●
		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.

# CONVENIENT OPERATION

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

## EZ WORK

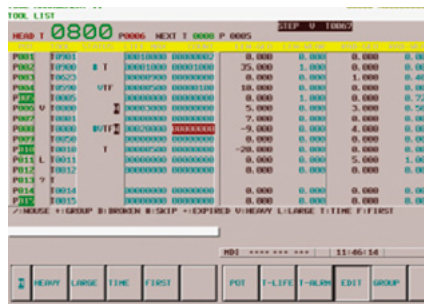
The EZ work package delivers speed and efficiency. This menu-driven innovation not only helps customers reduce setup times, but also simplifies common tasks and procedures, reducing the potential for errors. EZ work reduces operating time, protects machinery, enhances quality and speeds up maintenance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

### Tool support functions



#### Tool management I OPTION

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



#### 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

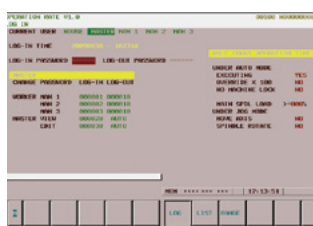
### Pallet magazine support functions



#### PMC Soft Panel Switch

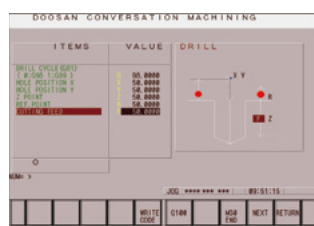
Manual operations that occur continuously in each stages for APC,ATC change command

### 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

## SIEMENS SINUMERIK ONE

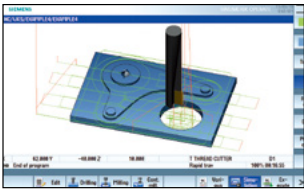
### Even Faster & Easier processing + 398mm screen

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.

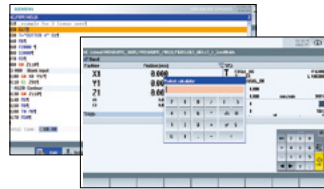
- 18.5 inch touch screen
- 50% improvement in processing speed(compared to S840D)
- Graphic programming
- PLC-based flexible automation/peripheral device expandability



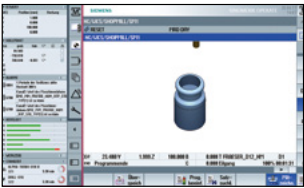
### Conversational convenient function



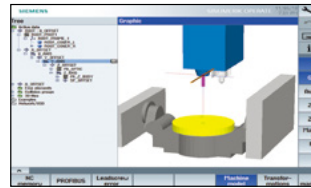
Simulation and machining contour monitoring



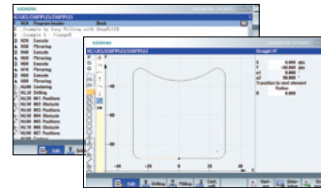
Smart function



Side screen widget



3D collision avoidance and collision avoidance ECO



Shop mill part programming

## NUMERIC CONTROL SPECIFICATIONS

SIEMENS

Description	Item	Specifications	S-ONE
			HM1000/HM1250
Controlled axis	Controlled axes ( 제어축수 )		4 axes ( X, Y, Z, B )
	Simultaneously controlled axes ( 동시 제어축수 )		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		●
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)		○

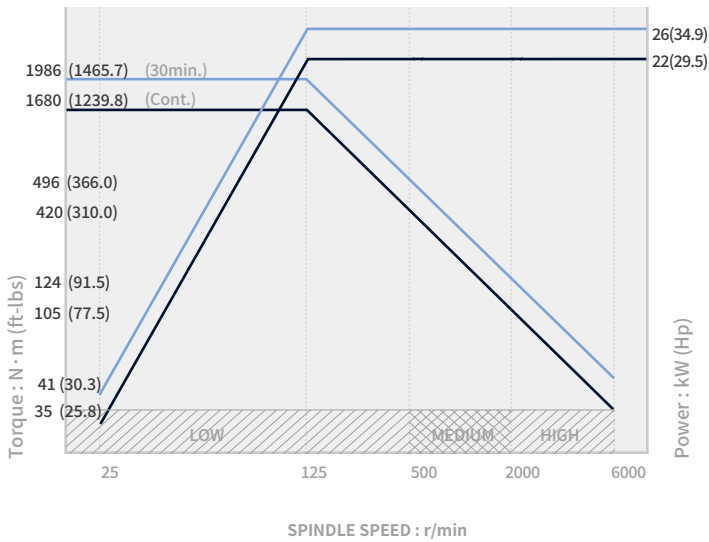
\* HM1250W is excluded from the scope of application.

# POWER | TORQUE

## HM 1000 / 1250

Max. spindle speed  
**6000** r/min  
 Max. spindle torque  
**1986** N·m (1465.7 ft-lbs)

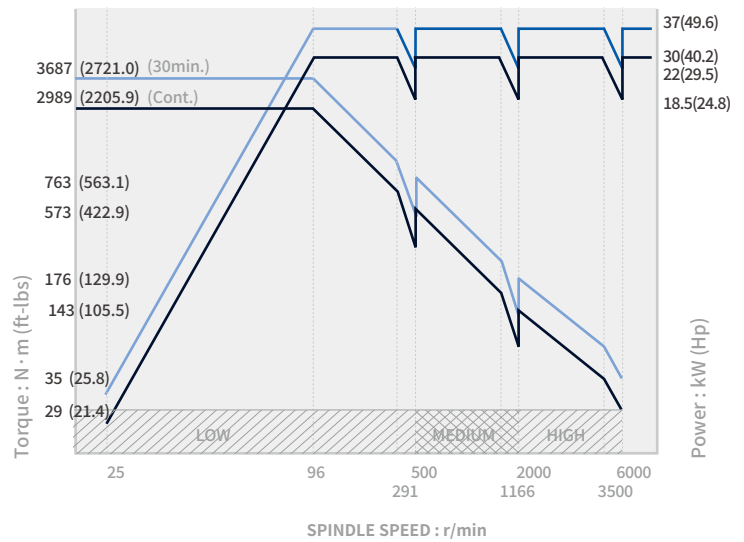
Max. spindle power  
**26 / 22** kW  
 (34.9 / 29.5 Hp)



## HM 1000 / 1250

Max. spindle speed  
**6000** r/min OPTION  
 Max. spindle torque  
**3687** N·m (2721 ft-lbs)

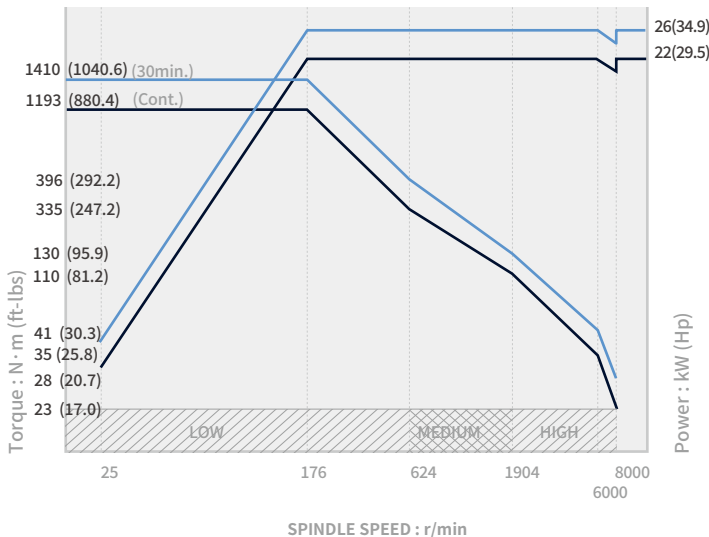
Max. spindle power  
**37 / 30** kW  
 (49.6 / 40.2 Hp)



## HM 1000 / 1250

Max. spindle speed  
**8000** r/min OPTION  
 Max. spindle torque  
**1410** N·m (1040.6 ft-lbs)

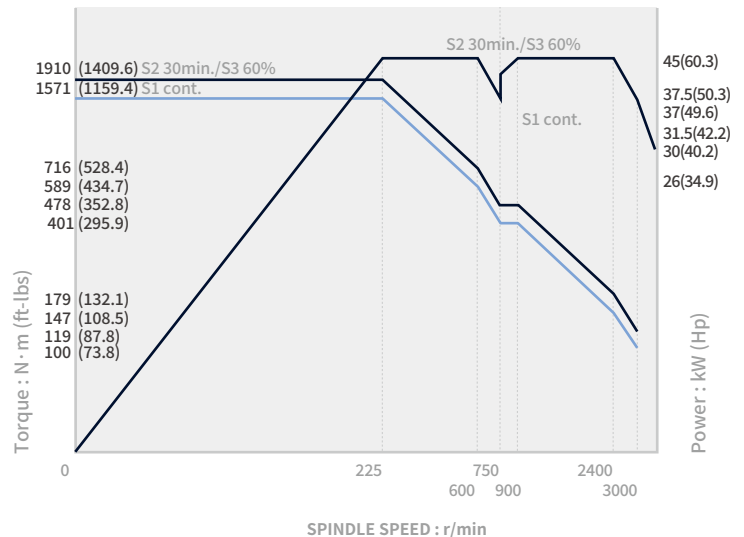
Max. spindle power  
**26 / 22** kW  
 (34.9 / 29.5 Hp)



## HM 1250W

Max. spindle speed  
**3000** r/min  
 Max. spindle torque  
**1910** N·m (1409.6 ft-lbs)

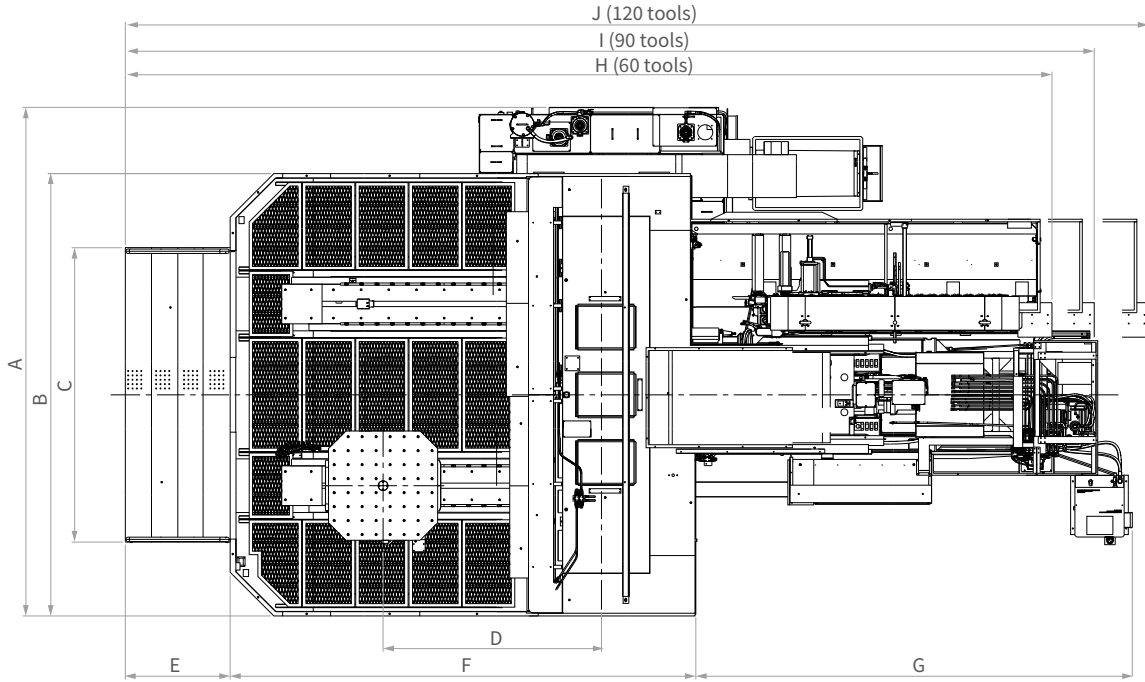
Max. spindle power  
**45 / 37** kW  
 (60.3 / 49.6 Hp)  
(30min. / Cont.)



# EXTERNAL DIMENSIONS

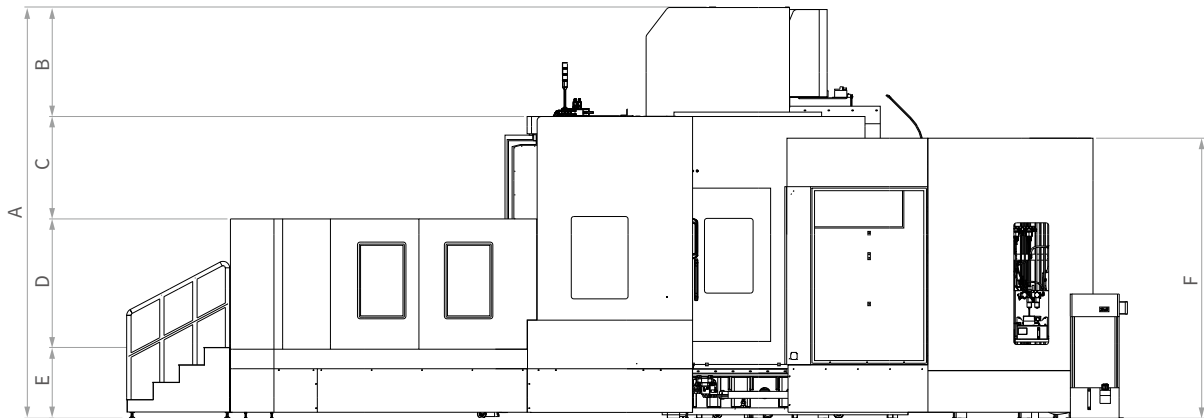
Unit : mm (inch)

TOP



Model	A	B	C	D	E	F	G	H	I	J
HM 1000	5822 (229.2)	5064 (199.4)	3370 (132.7)	2100 (82.7)	1162 (45.7)	4780 (188.2)	3715 (146.3)	9928 (390.9)	10411 (409.9)	11035 (434.4)
HM 1250	5822 (229.2)	5064 (199.4)	3370 (132.7)	2500 (98.4)	1200 (47.2)	5330 (209.8)	4000 (157.5)	10530 (414.6)	11000 (433.1)	11623 (457.6)
HM 1250W	5822 (229.2)	5064 (199.4)	3370 (132.7)	2500 (98.4)	1200 (47.2)	5330 (209.8)	4996 (196.7)	10606 (417.6)	11089 (436.6)	11713 (461.1)

FRONT



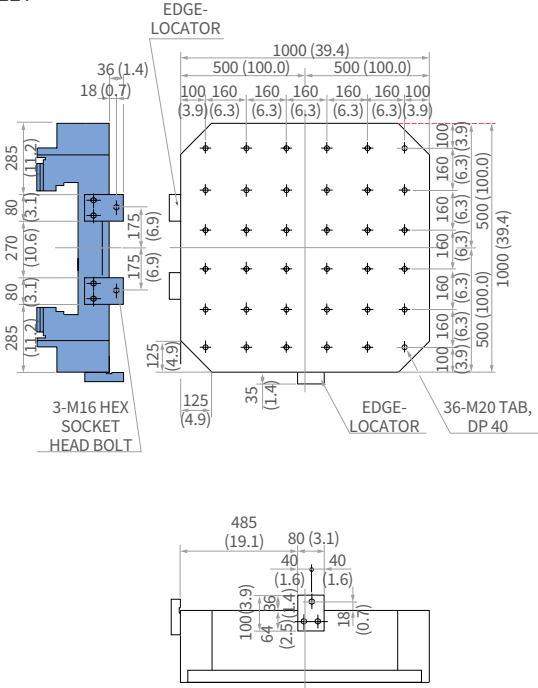
Model	A	B	C	D	E	F
HM 1000	3885 (153.0)	660 (26.0)	929 (36.6)	1493 (58.8)	803 (31.6)	3225 (127.0)
HM 1250	4130 (162.6)	660 (26.0)	1179 (46.4)	1493 (58.8)	803 (31.6)	3225 (127.0)
HM 1250W	4581 (180.4)	1106 (43.5)	1179 (46.4)	1481 (58.3)	815 (32.1)	3225 (127.0)

\* Some peripheral equipment can be placed in other places

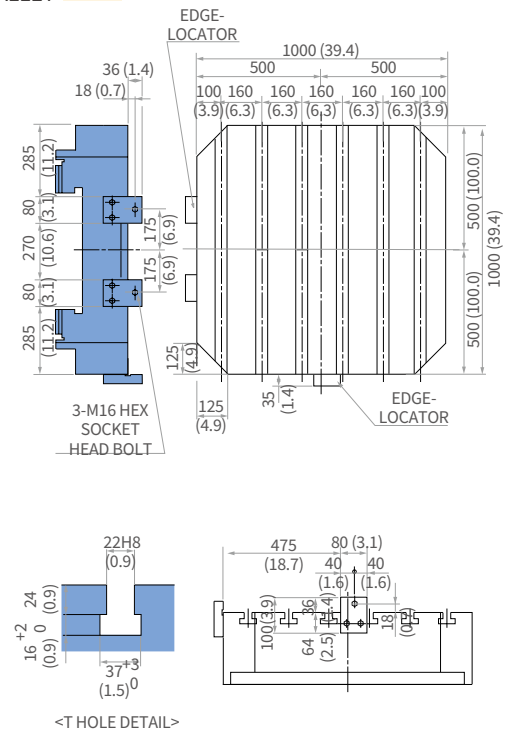
# TABLE DIMENSIONS

Unit : mm (inch)

TAP PALLET



T - SLOT PALLET OPTION

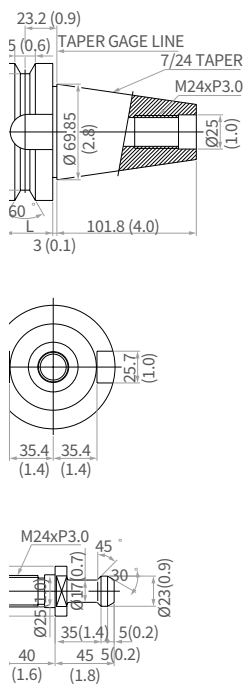


# TOOL SHANK

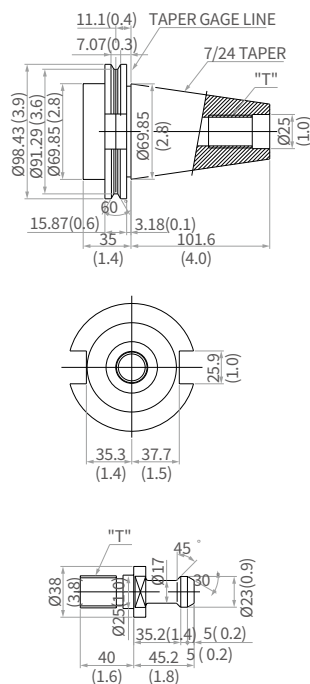
BT50 tool

Unit : mm (inch)

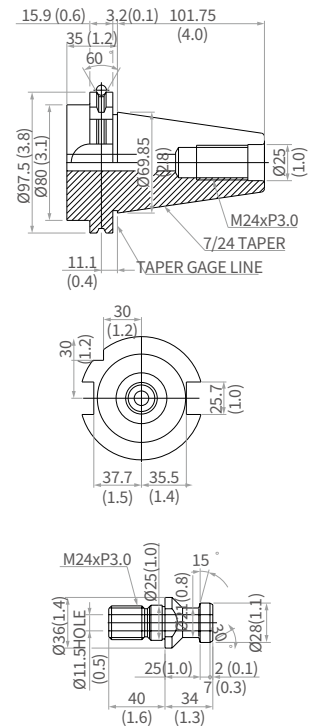
BT50



CAT 50



DIN 50



# MACHINE SPECIFICATIONS

Description		Unit	HM 1000	HM 1250	HM 1250W
Travels	X-axis	mm (inch)	2100 (82.7)		
	Y-axis	mm (inch)	1250 (49.2)	1500 (59.1)	1400 (55.1)
	Z-axis	mm (inch)	1250 (49.2)	1500 (59.1)	1400 (55.1)
	W-axis	mm (inch)	-	-	300 (11.8)
Table	Distance from table top to spindle nose	mm (inch)	75 ~ 1325 (3.0 ~ 52.2)	50 ~ 1550 (2.0 ~ 61.0)	50 ~ 1450 (2.0 ~ 57.1)
	Table size	mm (inch)	1000 x 1000 {1250 x 1000} (39.4 x 39.4 {49.2 x 39.4})	1250 x 1250 {1250 x 1000} (49.2 x 49.2 {49.2 x 39.4})	
	Loading capacity	kg (lb)	3000 {5000} (6613.8 {11023.0})		5000 (11023.0)
	Table type	-	36-M20 x P2.5 {44-M20 x P2.5}	60-M2 x P2.5 {44-M20 x P2.5/ 36- M20 x P2.5}	
	Max. workpiece size (Ø x H)	mm (inch)	2000 X 1475 (78.7 X 58.1)		
Spindle	Max. spindle speed	r/min	6000 {6000 / 8000}		3000
	Taper	-	ISO #50, 7/24		
	Max. spindle torque	N·m (ft·lb)	1989.4 {3687 / 1410} (1468.2 {2721.0 / 1040.6})		1910 (1409.6)
	Spindle motor power	kW (Hp)	26 / 22 {37 / 30, 26 / 22} (34.9 / 29.5 {49.6 / 40.2, 34.9 / 29.5})		45 / 37 (60.3 / 49.6)
Feedrate	Rapid traverse rate (X / Y / Z / W)	m/min (ipm)	24 / 24 / 24 (944.9 / 944.9 / 944.9)		24 / 24 / 24 / 6 (944.9 / 944.9 / 944.9 / 236.2)
	Cutting feedrate	mm/min (ipm)	12000 (472.4)		
ATC	Type of tool shank	-	BT / CAT / DIN 50		
	Tool storage capacity	ea	60 {90 / 120 / 196 / 256 / 316}		
	Max. tool diameter (Neighboring pot empty)	mm (inch)	130 (300) (5.1(11.8))		
	Max. tool length	mm (inch)	650 (25.6)	650 {800*} (25.6 {31.5*})	700 (27.6)
	Max. tool weight	kg (lb)	30 (66.1)		
	Max. tool moment	N·m (ft·lb)	34.3 (25.3)		
	Method of tool selection	-	Fixed address		
	Tool change time (Tool-To-Tool)	sec	12		
Machine Dimensions	Length x Width	mm (inch)	9657 x 5822 (380.2 / 229.2)	10530 x 5822 (414.6 / 229.2)	11526 x 5822 (453.8 / 229.2)
	Height	mm (inch)	3885 (153.0)	4130 (162.6)	4581 (180.4)
	Weight	kg (lb)	29000 (63933.1)	31000 (68342.3)	33000 (72751.5)
CNC	NC system	-	FANUC 31i Plus		
Power source	Electric power	kVA	71 {82, 68.5}		90

{ } : Option

\* In case of HM 1250 with Max. Workpiece diameter 2000 mm spec.

\* Only compatible with chain magazine 60T, 90T, and 120T (Matrix not available)

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