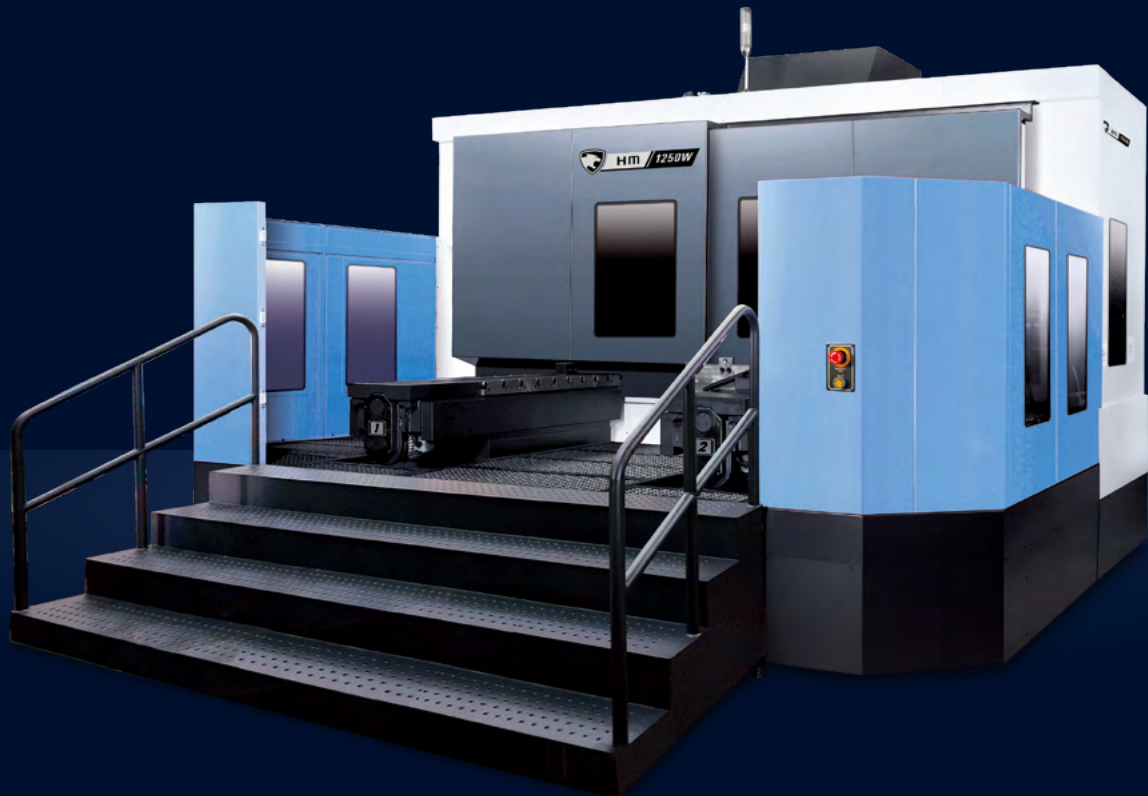




LARGE HORIZONTAL MACHINING CENTER

# HM

**1000 • 1250 • 1250W**



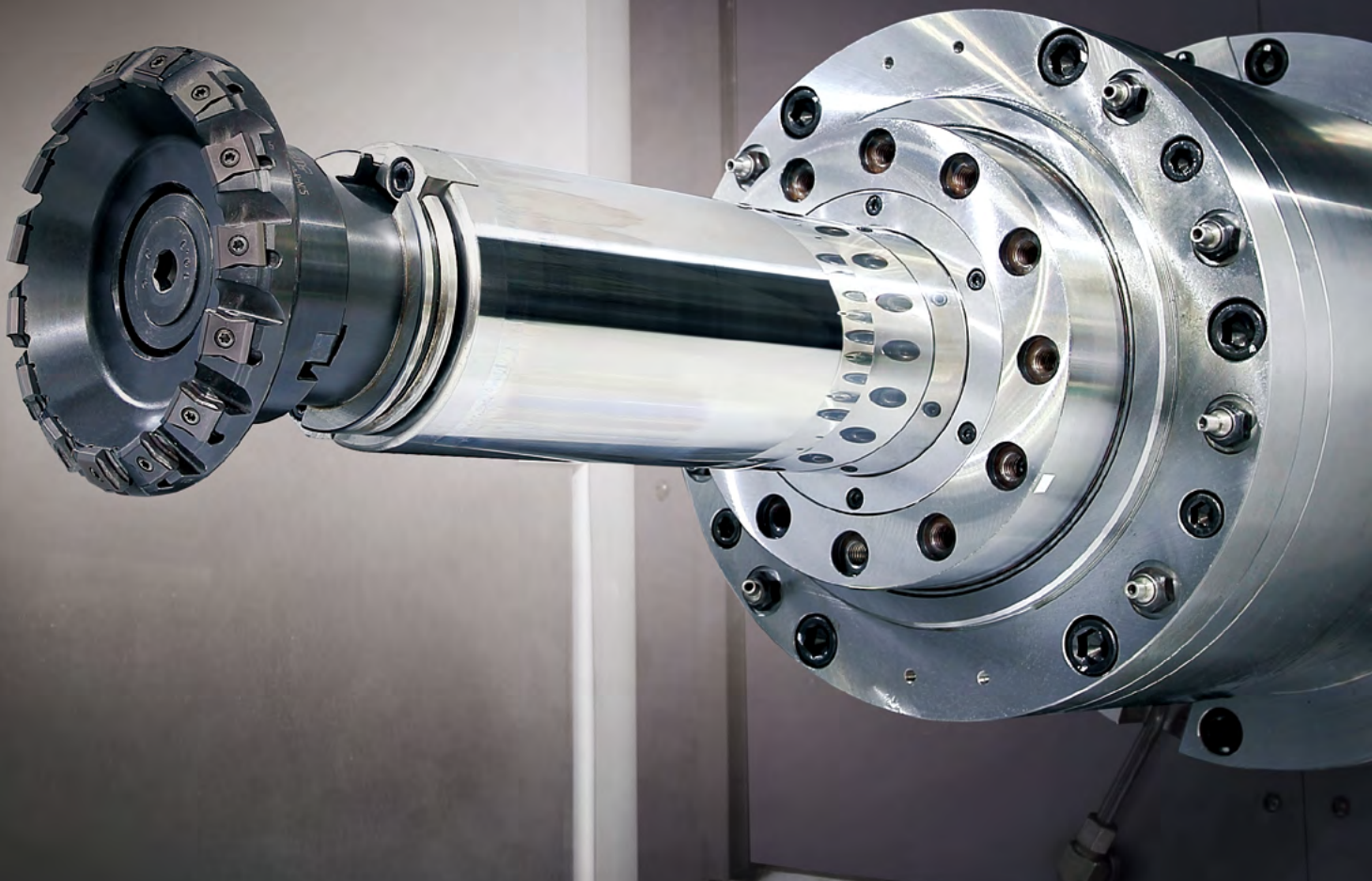
**DN SOLUTIONS**

# HM 1000 • 1250 • 1250W

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A twin pallet horizontal machining centre 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.





### 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 1200

**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

### 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

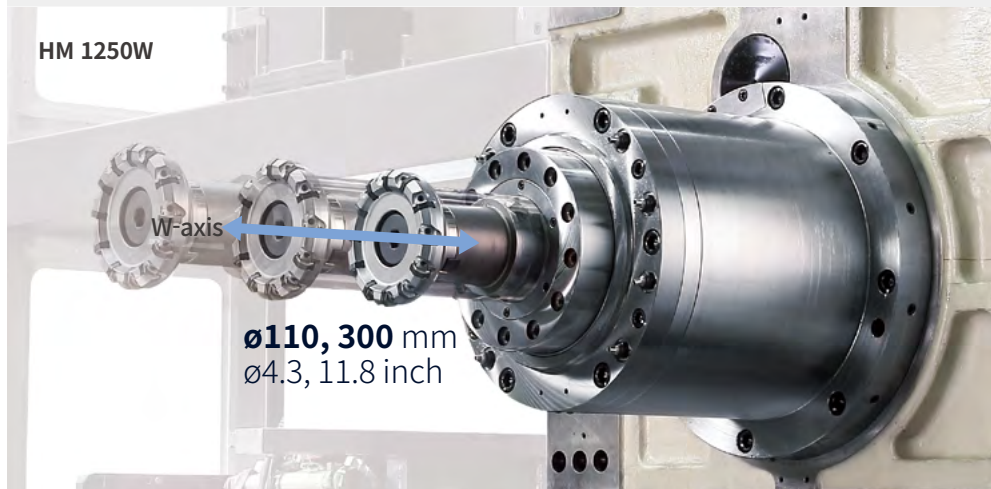
**24 / 24 / 24 / 6** m/min

944.9 / 944.9 / 944.9 / 236.2 ipm

\* The HM1250W Y-axis is applied with roller LM guideway.



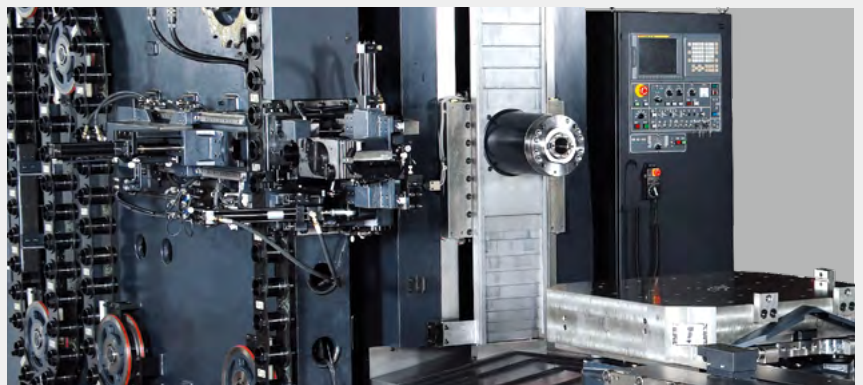
HM 1000 / 1250



HM 1250W

## 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.



# 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 / HM 1250

**6000** r/min  
**6000 / 8000** r/min option

HM 1200W

**3000** r/min

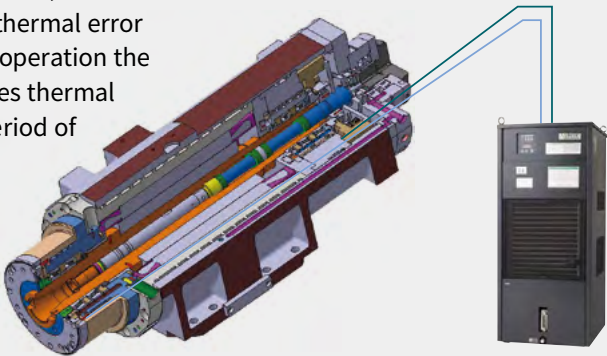
| Item                                 | Unit        | HM 1000 / 1250                                                            | HM 1250W                 |
|--------------------------------------|-------------|---------------------------------------------------------------------------|--------------------------|
| Max. spindle speed                   | r/min       | 6000<br>{6000, 8000}                                                      | 3000                     |
| Spindle motor power (30min. / Cont.) | kW (Hp)     | 26 / 22<br>{37 / 30, 26 / 22}<br>(34.9 / 29.5 {49.6 / 40.2, 34.9 / 29.5}) | 45 / 37<br>(60.3 / 49.6) |
| Max. spindle torque                  | N·m (ft·lb) | 1989.4 {3687 / 1410} (1468.2 {2721.0 / 1040.6})                           | 1910 (1409.6)            |

{ } : option



## Spindle Cooling

Adopted as a standard feature, the oil cooler system minimizes thermal error over an extended time of operation the oil cooler system minimises 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-to-Tool ( T-T-T )

HM 1000 / HM 1250

**10** s

HM 1250W

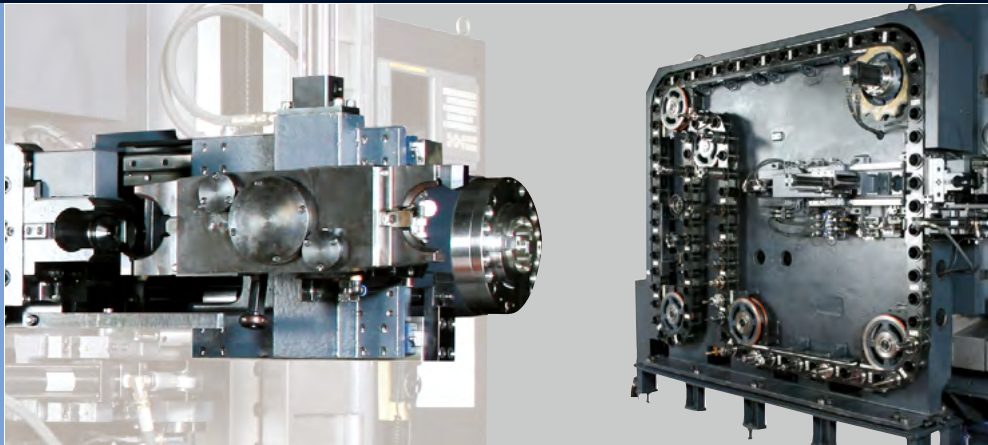
**12** s

## Tool storage capacity

**60** ea

90 / 120 / 196 / 256 /

**316** ea option



| Item                                       | Unit      | HM 1000                                 | HM 1250                  | HM 1250W   |
|--------------------------------------------|-----------|-----------------------------------------|--------------------------|------------|
| Tool storage capacity                      | ea        | 60 {90 / 120, 196 / 256 / 316 (MATRIX)} |                          |            |
| Tool-to-Tool                               | sec       | 10                                      |                          | 12         |
| 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)                               |                          |            |

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

# TABLE | CUTTING PERFORMANCE

The table capacity is suitable for large workpieces .

## Pallet size

HM 1000

**1000 x 1000** mm  
39.4 x 39.4 inch

**1250 x 1000** mm option  
49.2 x 39.4 inch

HM 1250 / HM 1200W

**1250 x 1250** mm  
49.2 x 49.2 inch

**1250 x 1000** mm option  
49.2 x 39.4 inch

## Max. work size

HM 1000

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

HM 1250 / HM 1200W

**2000 x 1725** mm  
18.7 x 67.9 inch

**2300 x 1725** mm option  
90.6 x 67.9 inch

\* It is non circular

## Loading capacity

HM 1000 / HM 1250

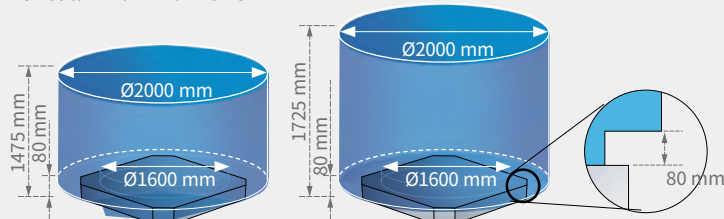
**3000** kg 6613.8 lb  
**5000** kg 11023.0 lb option

HM 1200W

**5000** kg 11023.0 lb

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

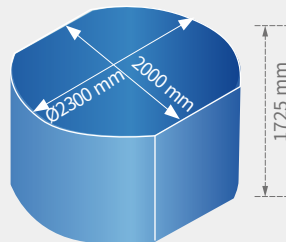
Circular max. work size



HM 1000

HM 1250 / HM 1200W

Non circular max. work size



HM 1250 / HM 1200W

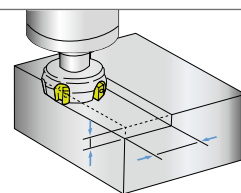


## Machining Performance

HM 1250W

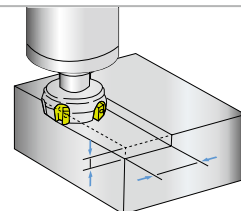
Face mill (material : SM45C / W-axis : 300 mm (11.8 inch))

| Tool<br>mm (inch) | Spindle speed<br>r/min | Feed rate<br>mm/min (ipm) | Cutting width<br>mm (inch) | Cutting depth<br>mm (inch) | Chip removal rate<br>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)                                                     |



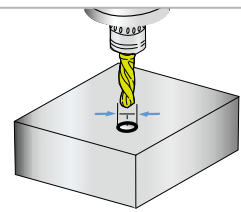
Face mill (material : SM45C / W-axis : 0 mm (0 inch))

| Tool<br>mm (inch) | Spindle speed<br>r/min | Feed rate<br>mm/min (ipm) | Cutting width<br>mm (inch) | Cutting depth<br>mm (inch) | Chip removal rate<br>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)                                                    |



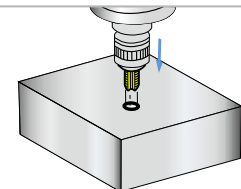
U-drill

| Tool<br>mm (inch) | Spindle speed<br>r/min | Feed rate<br>mm/min (ipm) | Cutting depth<br>mm (inch) |
|-------------------|------------------------|---------------------------|----------------------------|
| D85 (D3.3)        | 560                    | 165 (6.5)                 | 50 (2.0)                   |
| D120 (4.7)        | 380                    | 77 (3.0)                  | 50 (2.0)                   |



Tap

| Tool<br>mm (inch)    | Spindle speed<br>r/min | Feed rate<br>mm/min (ipm) | Cutting depth<br>mm (inch) |
|----------------------|------------------------|---------------------------|----------------------------|
| M48 x 5 (M1.9 x 0.2) | 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

A range of options is available to suit individual requirements.

| 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                   | ○       | ○       | ○        |
| PALLET SIZE                     | 1000 X 1000 MM                      | ●       | ○       | ○        |
|                                 | 1250 X 1000 MM                      | ○       | ○       | ○        |
|                                 | 1250 X 1250 MM                      | X       | ●       | ●        |
| REFERENCE OF WORKPIECE SETTING  | CENTER BUSH                         | ○       | ○       | ○        |
| TOOL STORAGE CAPACITY           | 120 EA                              | ○       | ○       | ○        |
|                                 | 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                          | ○       | ○       | X        |
|                                 | AIR GUN                             | ○       | ○       | ○        |
| OIL SKIMMER                     | BELT TYPE                           | ○       | ○       | ○        |
| COOLANT                         | COOLANT GUN                         | ○       | ○       | ○        |
|                                 | 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                   | ○       | ○       | ○        |
| CHIP CONVEYOR                   | FORKLIFT_380L                       | ○       | ○       | ○        |
|                                 | 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                 | ○       | ○       | ○        |
| CUSTOMIZED SPECIAL OPTION       | SINGLE PALLET                       | ○       | ○       | ○        |
|                                 | HYD. FIXTURE 2X2                    | ○       | ○       | ○        |
|                                 | X, Z AXIS SLIDE COVER CHIP FLUSHING | ○       | ○       | ○        |
|                                 | TOOL LENGTH 800MM                   | X       | ○       | X        |
|                                 | AUTO DOOR HEIGHT (1725mm → 2000mm)  | X       | ○       | X        |
|                                 | 15K SPINDLE HEAD                    | X       | ○       | X        |

\* Please contact DN Solutions for detailed specification information.

● Standard ○ Optional X Not applicable

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

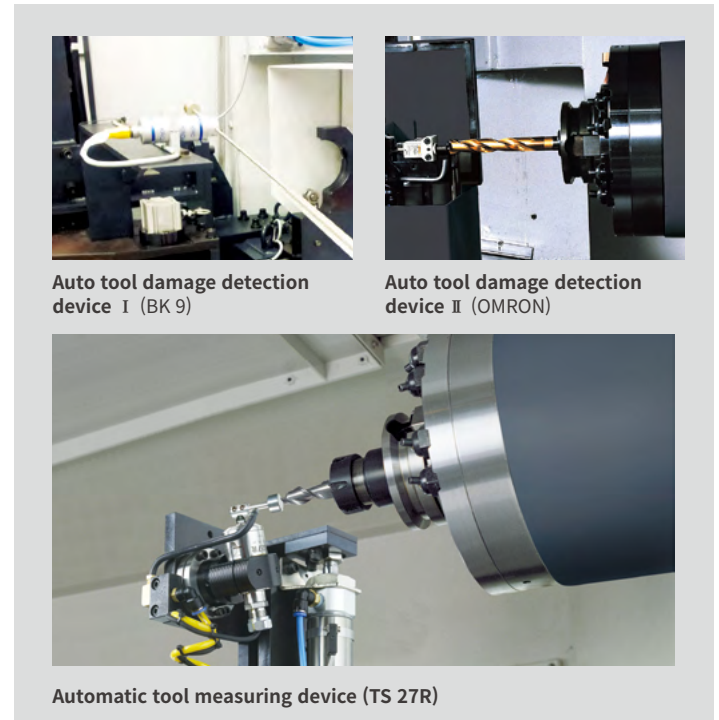
 **Fire Safety Precautions** | There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully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

# PERIPHERAL EQUIPMENT

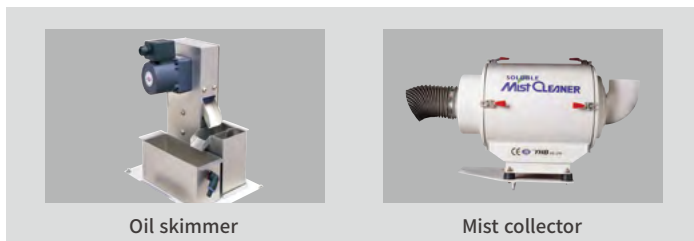
## Chip Conveyor



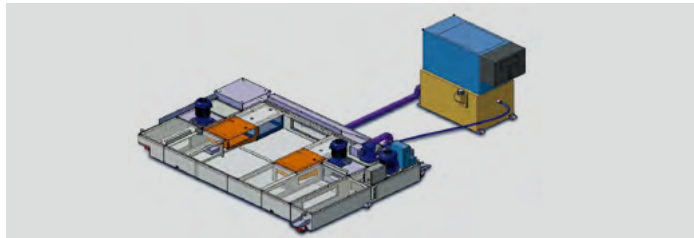
## Measurement Systems



## Environment Friendly Devices



## Cutting Oil Cooling System



## Linear Scale Feedback System



## Chip Disposal System





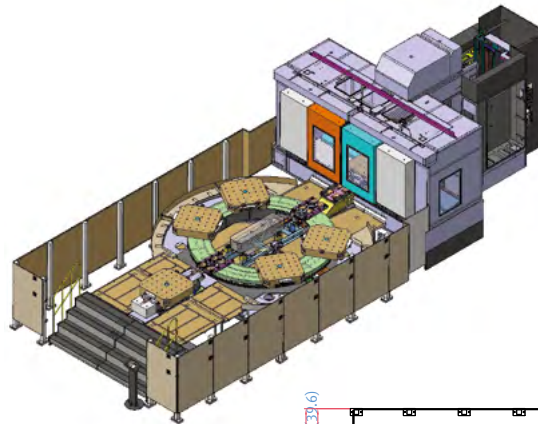
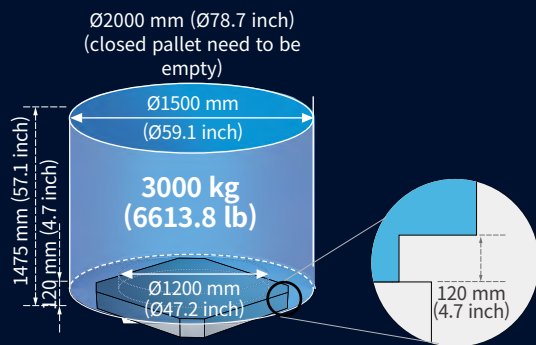
# MULTI PALLET SYSTEM

## PMG (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.

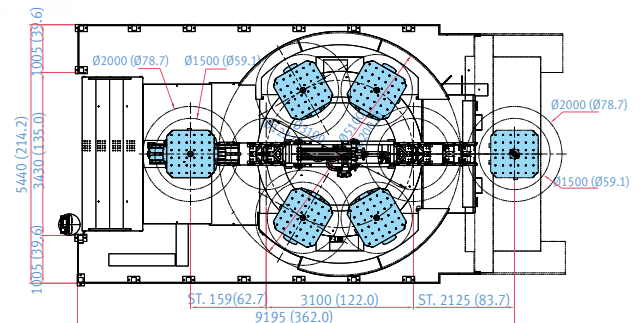
### Features

- 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)



### External Dimensions

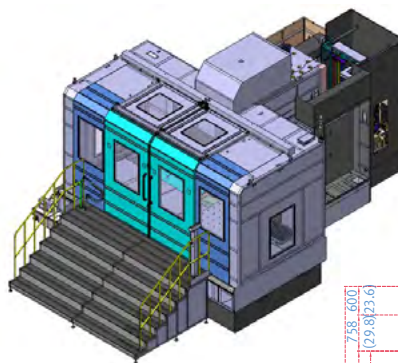
Unit : mm (inch)



| Available Model      |           | HM 1000                                                   | HM 1250     | HM 1250W |
|----------------------|-----------|-----------------------------------------------------------|-------------|----------|
| Pallet Dimension     | mm (inch) | 1000 x 1000 (39.4 x 39.4), 1250 x 1000 (49.2 x 39.4)      |             |          |
| Workpiece Diameter   | mm (inch) | 1500 (59.1) {2000 (78.7), closed pallet need to be empty} |             |          |
| 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)                                                |             |          |

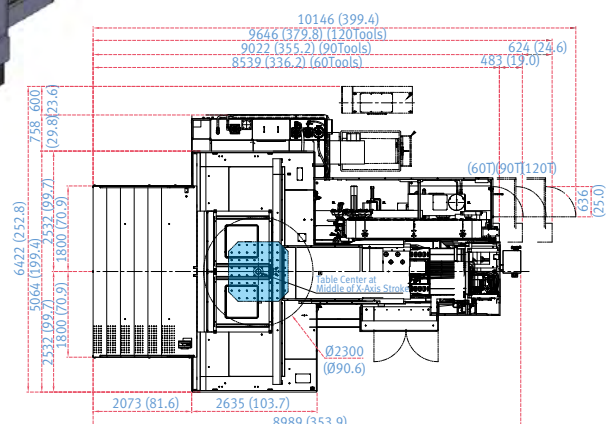
## Single pallet system

Space can be reduced by Sige-pallet system.



### External Dimensions

Unit : mm (inch)



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

\* This layout is for HM1250 Single pallet

# 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<br>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                                               |                                                               | ○                                       |
|                             | 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                                | ●                                       |
|                             | 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                                    | ○                                       |
|                             |                                                             | 2560M(1MB) _2000 programs                                     | ○                                       |
|                             |                                                             | 5120M(2MB) _4000 programs                                     | ○                                       |
|                             |                                                             | 10240M(4MB) _4000 programs                                    | ○                                       |
|                             |                                                             | 20480M(8MB) _4000 programs                                    | ○                                       |

# 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



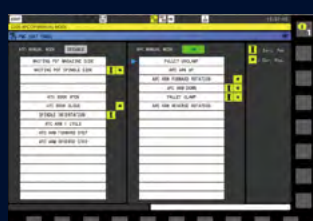
### Adaptive Feed Control

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



### APC Setting Screen

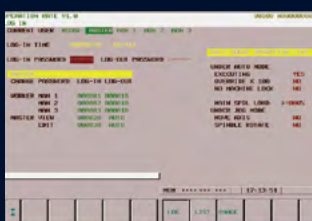
A simple automation function that supports automatic processing of the next pallet by setting the processing program for each pallet of the equipment including APC in advance



### PMC Soft Panel Switch

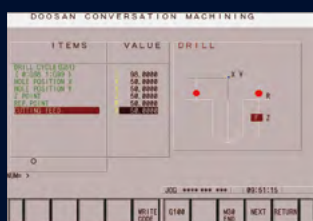
Manual operations that occur continuously in each stages for APC,ATC change command

## 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



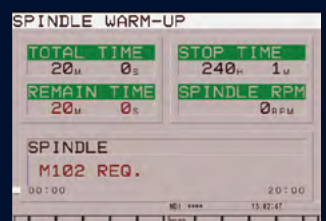
### Pattern Cycle

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

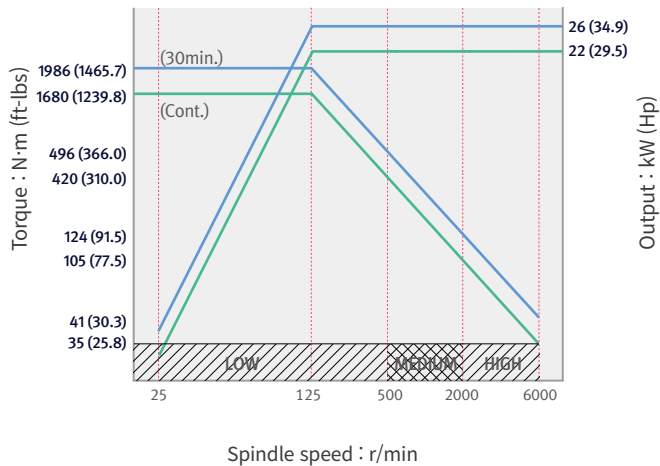


# POWER | TORQUE

## HM 1000 / 1250

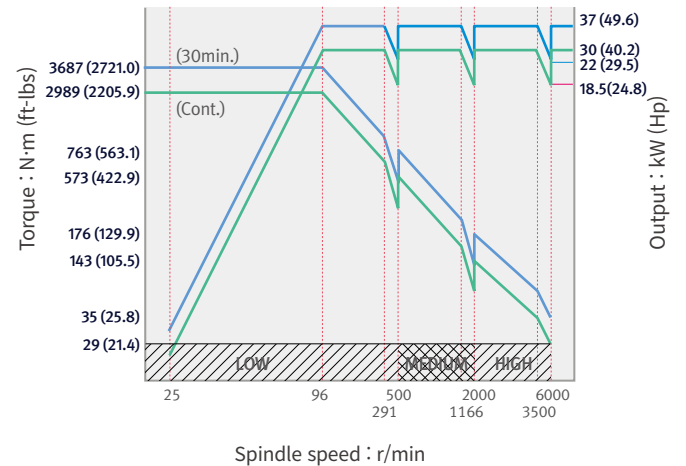
### 6000 r/min

Spindle motor power: **26 / 22 kW**  
34.9 / 29.5 Hp



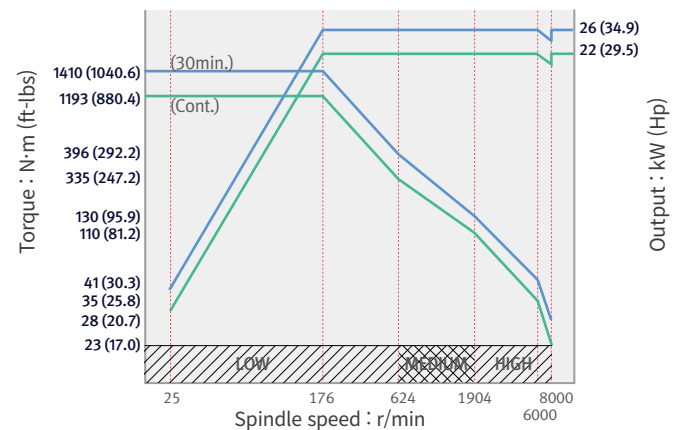
### 6000 r/min option

Spindle motor power: **37 / 30 kW**  
49.6 / 40.2 Hp



### 8000 r/min option

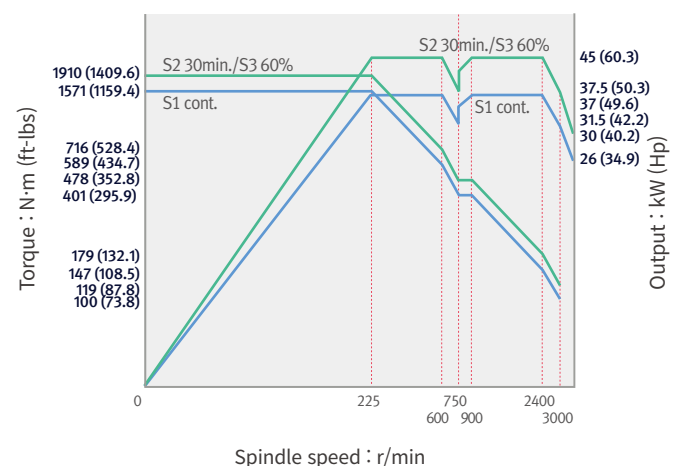
Spindle motor power: **26 / 22 kW**  
34.9 / 29.5 Hp



## HM 1250W

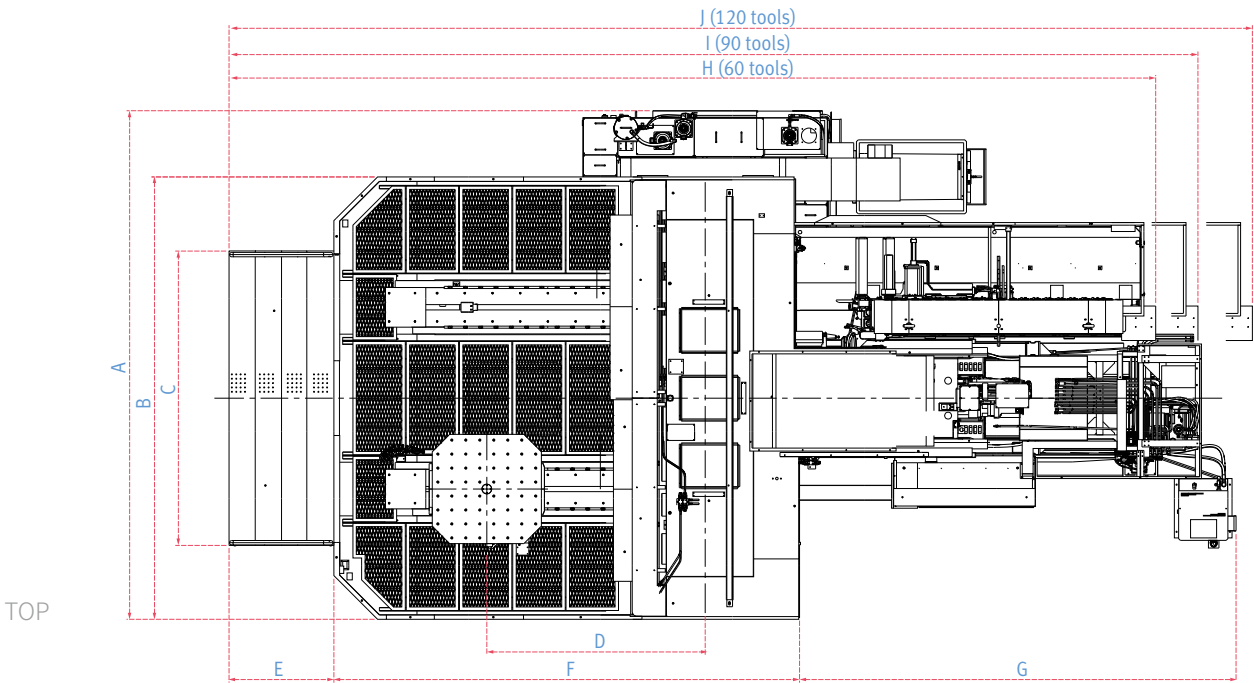
### 3000 r/min

Spindle motor power: **45 / 37 kW** (30min. / Cont.)  
60.3 / 49.6 Hp

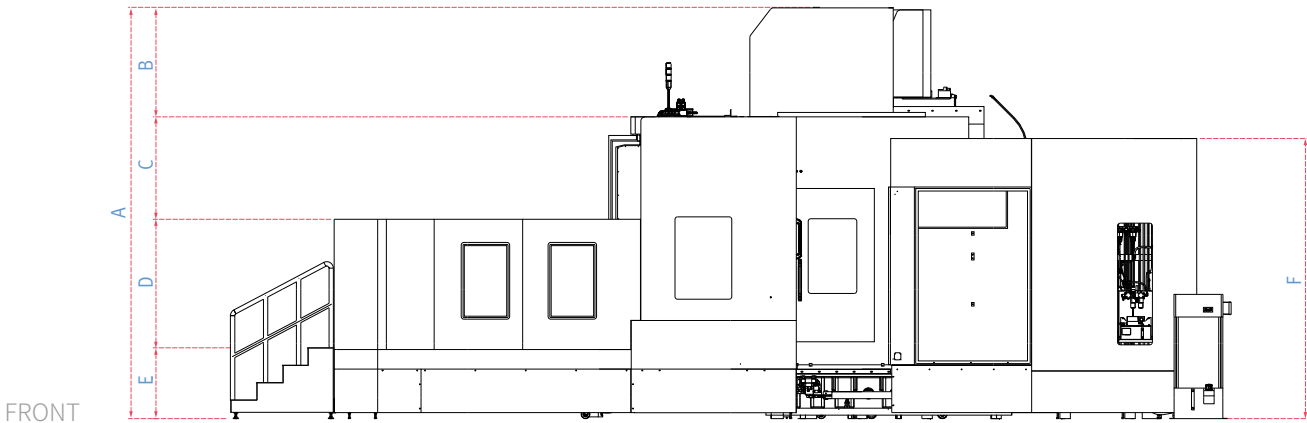


# DIMENSIONS

Units : mm (inch)



| 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) |



| 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





# 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<br>(3.0 ~ 52.2)                                              | 50 ~ 1550<br>(2.0 ~ 61.0)                                | 50 ~ 1450<br>(2.0 ~ 57.1)                        |
|                    | Table size                                    | mm (inch)    | 1000 x 1000 {1250 x 1000}<br>(39.4 x 39.4 {49.2 x 39.4})               | 1250 x 1250 {1250 x 1000}<br>(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<br>{44-M20 x P2.5}                                       | 60-M2 x P2.5<br>{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}<br>(34.9 / 29.5 {49.6 / 40.2, 34.9 / 29.5}) |                                                          | 45 / 37<br>(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<br>(Neighboring pot empty) | mm (inch)    | 130 (300) (5.1(11.8))                                                  |                                                          |                                                  |
|                    | Max. tool length                              | mm (inch)    | 650 (25.6)                                                             | 650 {800*}<br>(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<br>(Tool-To-Tool)            | sec          | 10                                                                     |                                                          | 12                                               |
| Machine Dimensions | Length x Width                                | mm (inch)    | 9657 x 5822<br>(380.2 / 229.2)                                         | 10530 x 5822<br>(414.6 / 229.2)                          | 11526 x 5822<br>(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.



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\* For more details, please contact DN Solutions.

\* Specifications and information contained within this catalogue may be changed without prior notice.