

High-Productivity Vertical Machining Center

MAX 3000

# MAX 3000



# Highly Reliable, Super-High-Speed/High-Precision No. 30 Taper Machining Center that Revolutionizes Production Site

The MAX 3000 is a No. 30 taper machine with agility and high rigidity. The machine achieves energy savings and brings a dramatic transformation to production sites. The design quality and operating convenience have been improved by adopting a new ergonomic cover design and a touch screen operation panel. With its robust construction it achieves machining performance on a par with a No. 40 taper machine while taking maximum advantage of shorter lead times and other benefits of high speed and high acceleration. Because it is even more compact than conventional machines, and because it can be easily applied to expanded systems with linked specifications or other options besides using it in a stand-alone configuration, it is extremely effective for mass production in the automotive industry in particular.



The Nikkan Kogyo Shimbun sponsored  
“56th Best 10 New Products Awards  
(Monodzukuri Prize)”

## Main features

## Basic structure

## Feature

## ! Highly rigid structure not subject to postural changes

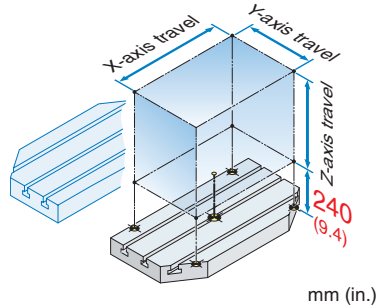
## Travel

X-axis: **400 mm**  
(15.7 in.)

Y-axis: **270 mm**  
(10.6 in.)  
<+200 mm  
(+7.9 in.)\*>

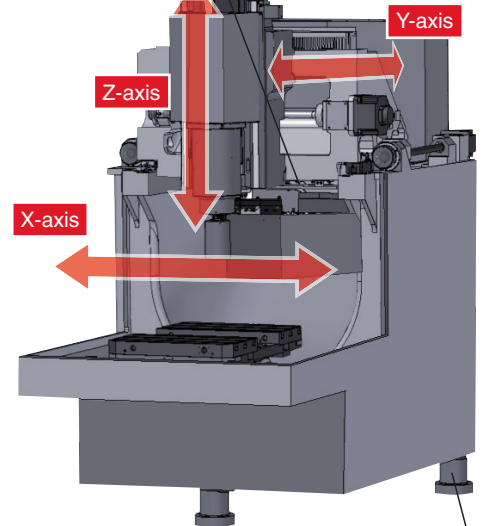
Z-axis: **280 mm**  
(11.0 in.)

\* For ATC



## Machining area and feed system separated

The telescopic covers are arranged at the upper part in the machine, where they are not so susceptible to the effects of chips.



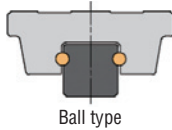
## 3-point support structure

The 3-point support structure ensures a stable machine installation.

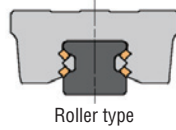
## Feature

## ! Roller guides employed

Roller guides have the excellent characteristic that they show little elastic deformation under load. A large number of rollers are incorporated inside the slide unit, achieving high rigidity.



Ball type



Roller type

## Feature

## ! Rapid traverse rate increased by approx. 30%

## Rapid traverse rate &lt;X, Y and Z axes&gt;

Previous model **MAX 3000**  
48 m/min → **62 m/min**  
(1,889.8 ipm) (2,440.9 ipm)

Approx. 30%UP

## Cutting feedrate &lt;X, Y and Z axes&gt;

Previous model **MAX 3000**  
48 m/min → **62 m/min**  
(1,889.8 ipm) (2,440.9 ipm)

Approx. 30%UP

## Feature

## ! Minimized floor space

The profile is even slimmer than conventional machines. It achieves both reduced floor space and increased productivity.

## Floor space

Previous model **MAX 3000**  
5.9 m<sup>2</sup> → **5.1 m<sup>2</sup>**  
(63.5 ft<sup>2</sup>) (54.9 ft<sup>2</sup>)

Approx. 14%DOWN

## Mass of machine

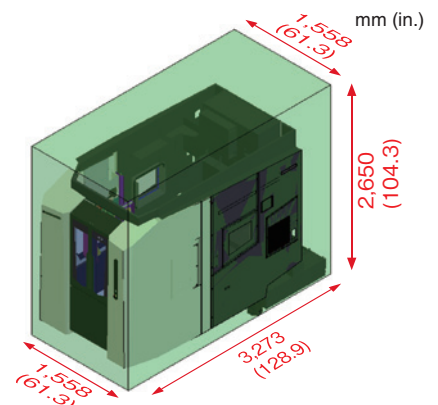
Previous model **MAX 3000**  
6.0 t → **4.85 t**  
(13,200 lb) (10,670 lb.)

Approx. 20%DOWN

## Machine size

Previous model **MAX 3000**  
17.6 m<sup>3</sup> → **13.5 m<sup>3</sup>**  
(621.5 ft<sup>3</sup>) (476.7 ft<sup>3</sup>)

Approx. 23%DOWN



## Spindle



For the spindle drive, we use the high-efficiency DDS (Direct Drive Spindle) motor which extracts full power over a wide range, from high-speed machining to heavy-duty cutting.

■ Spindle bearing inner diameter ■ Max. spindle speed

**55 mm (2.2 in.)**

**15,000 min<sup>-1</sup>**

■ Type of spindle taper hole

**No. 30 taper**

■ Spindle drive motor <15%ED/15 min/cont>

**5.5/5.5/3.7 kW**  
(7.5/7.5/5 HP)

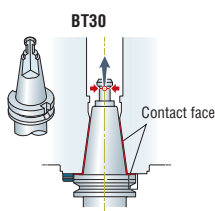
**52.5/35.0/23.6 N·m**  
(38.7/25.8/17.4 ft·lbf)

## Two-face contact specification

OP

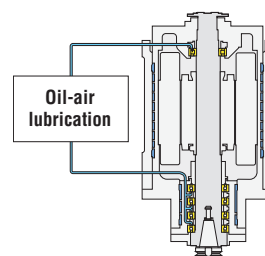
Tool rigidity has been improved by contact of both the spindle taper and the tool flange. This extends the useful life of a tool, raises cutting power and improves the machining accuracy.

- When the two-face contact specification is selected, a two-face contact tool and other tools cannot be used together.
- All DMG MORI spindles are made in-house to better meet our customer needs. For details, please consult with our sales representative.



## Oil-air lubrication

For bearing lubrication, we have employed a oil-air lubrication system, which supplies minimum amount of lubricating oil and reduces heat generation caused by resistance to stirring. Air enables effective cooling, and the air purge which increases air pressure for bearings prevents foreign matter from getting inside.

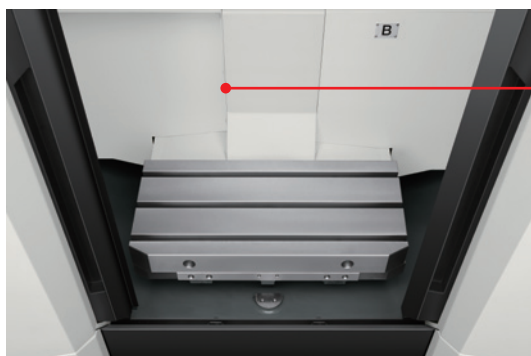


## Easy to install additional axes and hydraulic/pneumatic fixtures

## Hydraulic/pneumatic pressure piping port

OP

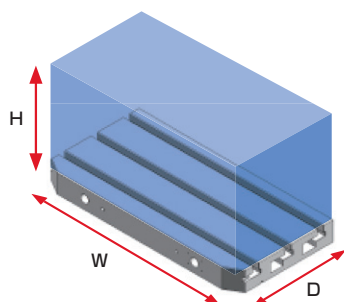
More hydraulic and pneumatic pressure piping ports than on conventional machines are provided on the APC rotation cover. No external piping is required. Hydraulic and pneumatic fixtures and rotary tables can be used with ease.



Hydraulic/pneumatic pressure piping port  
(Rc1/4×9 ports)

- Enables machining of a wide range of workpieces
- Shortens machining time and achieves greater efficiency
- Fixtures and rotary tables easily accommodated

## Table



■ Max. workpiece size <W×D×H>

**600×300×310 mm**  
(23.6×11.8×12.2 in.)

■ Table loading capacity

**150 kg (330 lb.)** <single pallet>

■ Table working surface

**600×300 mm**  
(23.6×11.8 in.)



# Main features

## ATC, Magazine



### Simple armless type ATC



#### Tool changing time

Cut-to-cut (chip-to-chip) <ISO>

<Standard>

**3.1** sec. (max.)

**2.7** sec. (min.)

<High acceleration> **OP**

**2.7** sec. (max.)

**2.3** sec. (min.)

Tool-to-tool

<Standard>

**2.6** sec. (max.)

**2.2** sec. (min.)

<High acceleration> **OP**

**2.2** sec. (max.)

**1.8** sec. (min.)

ISO 10791-9 JIS B6336-9 ISO: International Organization for Standardization  
JIS: Japanese Industrial Standard

• Depending on the arrangement of tools in the magazine, the cut-to-cut (chip-to-chip) time may be longer.



#### Tool storage capacity

**18** tools

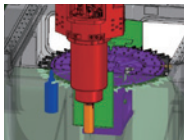
**27** tools **OP**

## ATC shutter

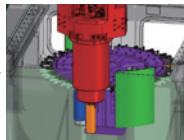


### Shorter tool changing time achieved

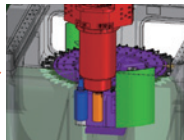
Magazine shutters are provided at two locations on the magazine wheel, so the shutter that is closer to the tool change opening is automatically indexed. This minimizes the rotation angle required to execute a tool change, and shortens the tool change time.



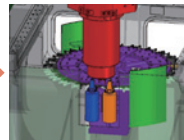
• Machining completed



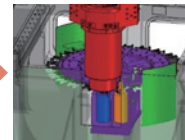
• An empty grip on the magazine indexed (opening the ATC shutter at the same time)



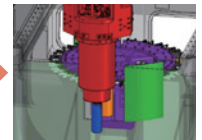
• Y-axis motion to the empty grip



• Z-axis motion  
• Next tool indexed



• Z-axis motion  
• Tool clamped



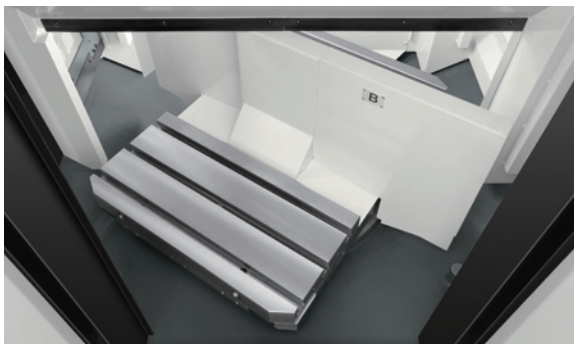
• Y-axis motion  
• Closing the ATC shutter (magazine rotation)

• In order to prevent chips getting jammed in the tool taper section, which affects machining/measuring accuracy, tool taper cleaning coolant purified through the line filter (50  $\mu$ m) is discharged to clean the taper section at tool changes. Coolant is discharged for all the tools: if there is any tool that should not be subjected to the coolant discharge, please consult us.

## APC



### High-speed APC equipped as standard



This APC offers high-speed pallet change that reduces non-cutting time.

The structure has been simplified to achieve improved reliability. The ability to handle two types of workpiece or two processes on a single machine makes it possible to accommodate increases and decreases in the production volume of multiple workpieces. And performing setup changes during machining shortens the non-operating time of the machine.

- Non-lift motion required for APC rotation (non-lift up APC)
- High-speed positioning by cross roller bearing + servomotor
- Chip entry prevented by labyrinth + V-ring

#### Pallet changing time

Previous model **MAX 3000**

**2.5** sec. → **2.0** sec. **Reduced by 20%**

# High-precision equipment

## Fan cooler

The spindle unit is provided with an oil jacket to control thermal displacement.



## Coolant cooling system (separate type)

OP

Raised coolant temperature causes thermal displacement in the fixtures and workpiece, affecting the machining accuracy of the workpiece. Use this unit to prevent the coolant from heating up. **When using oil-based coolant**, the coolant temperature can become extremely high even with the standard coolant pump, so please be sure to select this unit.

**When using oil-based coolant, please be sure to consult with our sales representative.**

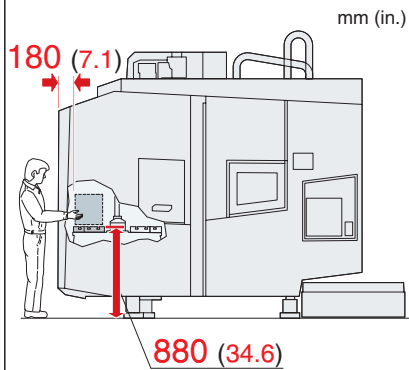
- While this unit is not the only way to completely control the temperature of the coolant, it makes a major contribution to preventing increases in the oil temperature.



## Improved workability

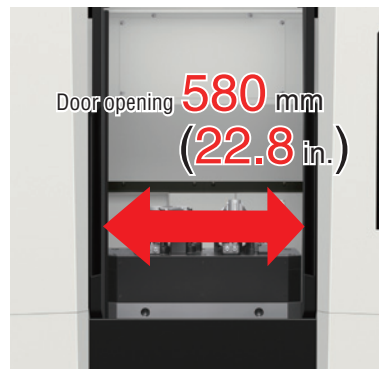
For the MAX 3000, we have installed features throughout the machine to improve operability based on the complete operator-centered concept.

### Closer approach to the table



Operators can get closer to the table, which makes setup easier.

### Wide door opening



A double sliding door is used at the setup station side, ensuring a wide door opening.

### Touch screen operation panel



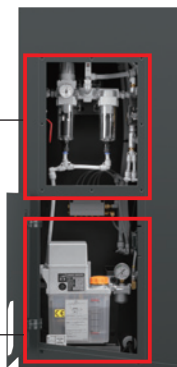
Operating convenience has been improved with a touch screen operation panel.

## Maintenance

### Centralized layout of devices

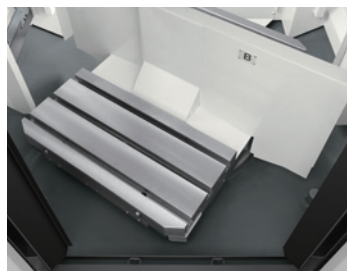
Air components  
(filter, regulator, etc.)

Lubricant pump



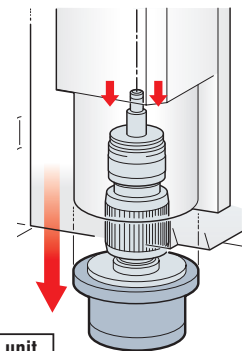
All maintenance devices are centrally located on the left side of the machine.

### Non-lift APC



An original non-lift system has been incorporated to prevent chips and coolant from entering.

### Replacement of spindle unit



By changing the spindle unit to a cartridge, which even includes the rear bearings, we have dramatically reduced replacement time.

# Peripheral equipment

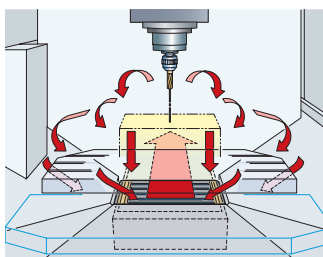
Feature



## Improved chip disposal

### Center trough structure

Chips are collected in the central area and discharged from the machine through the center trough.



### Chip conveyor (external) OP



Scraper type + drum filter type

● The photo shown may differ from actual machine.

- Accumulation of chips on the table decreased
- Operator spends less time removing chips

Specifications	Workpiece material and chip size						
	Steel			Cast iron		Aluminum/non-ferrous metal	
	Long	Short	Powdery	Short	Long	Short	Powdery
Hinge type*1 OP	○	×	×	×	○	×	×
Scraper type OP	×	○	○	×	×	○	○
Scraper type + drum filter type OP	×	○ Filter is made of steel	○	×	×	○	○
Hinge type + drum filter type OP	◎	◎	○*2	○	◎	◎	○*2
Magnet scraper type OP	×	○	○	○	×	×	×

\*1 Short or dust-like chips may flow into the tank, causing frequent cleaning.

\*2 Please contact our sales representative for details.

● Chip size guidelines

Short: chips 50 mm (2.0 in.) or less in length, bundles of chips

φ 40 mm (φ 1.6 in.) or less

Long: bigger than the above

● The options table shows the general options when using coolant. Changes may be necessary if you are not using coolant, or depending on the amount of coolant, compatibility with machines, or the specifications required.

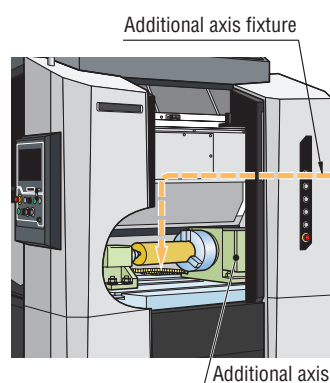
● Please select a chip conveyor to suit the shape of your chips. When using special or difficult-to-cut material (chip hardness HRC45 or higher), please consult with our sales representative.

● Chip conveyors are available in various types for handling chips of different shape and material. For details, please consult with our sales representative.

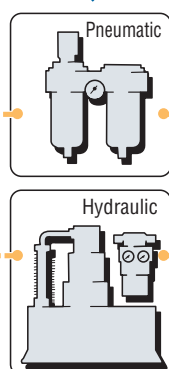
### Fixture interface

OP

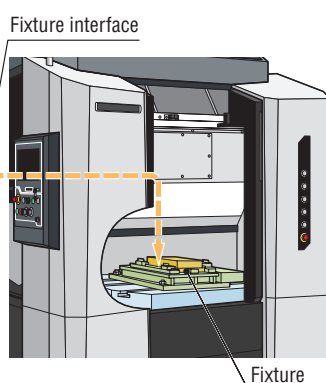
#### Example of connection with additional axis specification



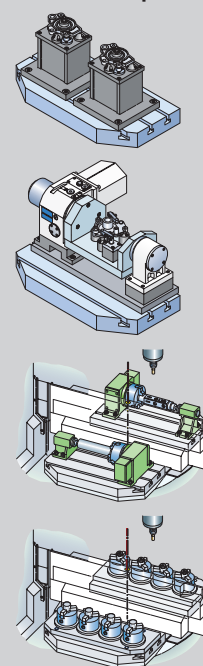
#### Pressure source



#### Example of connection



#### Fixture examples



#### Check list (for hydraulic/pneumatic fixtures)

- Pressure source
  - ☐ Hydraulic
  - ☐ Pneumatic
- Supplied pressure \_\_\_\_\_ MPa
- No. of circuits
  - Hydraulic \_\_\_\_\_
  - Pneumatic \_\_\_\_\_
- For workpiece holding detection \_\_\_\_\_
- Others
  - ☐ Clamp check system
  - ☐ Fixture washing coolant system
  - ☐ Fixture air blow system

● The colors and configuration shown in the photographs or illustrations may differ from those of the actual product.

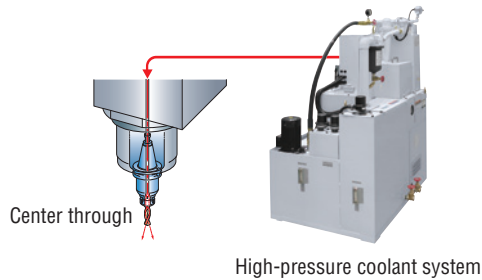


## Peripheral equipment

### Through-spindle coolant system (separate type)

OP

Coolant is supplied to the tool tip via through holes in the spindle and the tool. The through-spindle coolant system effectively eliminates chips, cooling the machine point and lengthening the lives of your tools.



	Unit on coolant tank	Separate type
Discharge pressure	1.5 MPa (217.5 psi)	1.5/3.5/7.0 MPa (217.5/507.5/1,015 psi)
Installation space <width × depth>	360 × 360 mm (14.2 × 14.2 in.) <line filter unit>	780 × 1,085 mm (30.7 × 42.7 in.) <high-pressure coolant system>
Water-soluble coolant	○	○
Oil-based coolant	×	○*
Coolant filtration accuracy	40 μm	20 μm

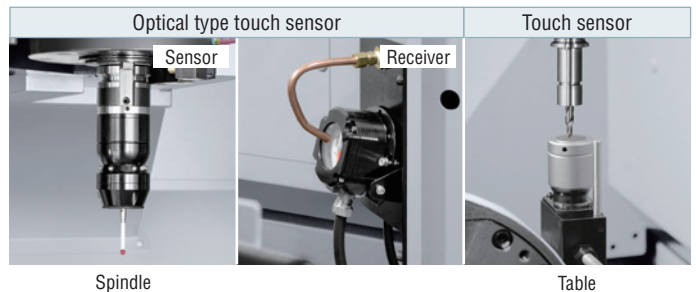
\* Oil-based coolant may not be filtered appropriately depending on its viscosity. In such cases it is advisable to select the high-pressure coolant unit (special option), which uses a ceramic backwashing filter in the filtration system instead of a regular cyclone filter. Please contact our sales representative for details.

**⚠** Do not use a flammable coolant or oil-based coolant because it may ignite and cause fire or machine breakage. If you have to use a flammable coolant for any reason, please consult with our sales representative.

### In-machine measuring system

OP

Automates measurement of tools and workpieces using a spindle-mounted sensor and automates setting of tool length using a table-mounted sensor.



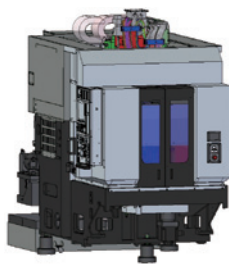
## Automatic operation support

A diverse range of specifications to provide the best system for your needs.

### Cover for line production

OP

The cover structure is simplified to facilitate maintenance work. The easy-access design lessens the workload during maintenance and reduces down time.



### Automatic door specification\*

OP

#### Setup station (automatic door)

The setup station is provided with automatic doors that cut down idle time and also enable incorporation of a robot.

\* When the cover for line production is selected, this specification is provided as standard.



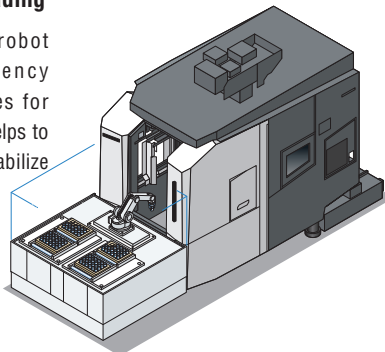
### Stand-alone configuration

OP

Consultation is required

#### Robot loading/unloading

Introduction of the robot enables high-efficiency transfer of workpieces for better productivity. It helps to reduce costs and to stabilize quality.



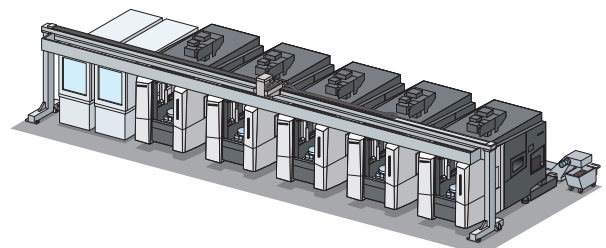
### Linked specifications

OP

Consultation is required

#### Gantry-type loader

A line-ready, mass-production system that achieves complete automation, from materials supply to ejection of the final product.



# DMSQP (DMG Mori Seiki Qualified Products) OP

## Selected peripherals with superior quality, performance and maintainability.

The DMSQP program is designed to certify peripherals that meet DMG MORI standards in quality, performance and maintainability. DMSQP provides customers with even greater peace of mind.

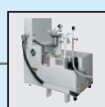
### Comprehensive support with machine + peripherals

DMG MORI provides comprehensive support, from proposal to delivery and maintenance, for high-quality peripherals that offer superior performance and maintainability.

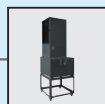
#### Comprehensive support with machine+ peripherals



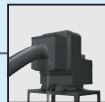
#### DMSQP



Through-spindle coolant system



Coolant cooling system



Mist collector



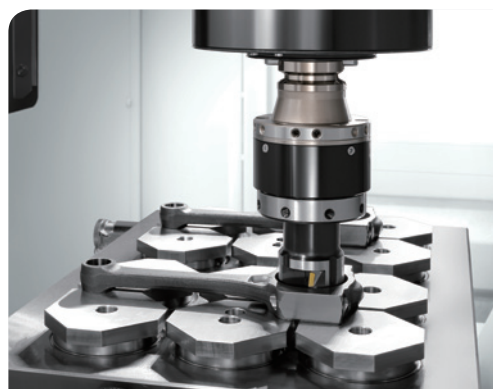
DMG MORI Service Center

#### Advantages of DMSQP

- Qualified peripherals are arranged by DMG MORI
- Two-year warranty, the same as machines  
(Parts relating to machine breakdown will be guaranteed free for 2 years from the date of installation, and labor costs to repair will be free for 1 year)
- Toll-free phone support is available 24 hours a day, 365 days a year (Japan only)

## Package OP

Packages are available according to varieties of customers' production forms.



#### Example of packages

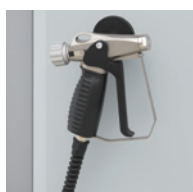
Aluminum machining package

Casting machining package

Steel machining package

Difficult-to-cut materials machining package

Die & Mold machining package



# MORI-NETWORK

Network Application Systems

MORI-NET, DMG MORI Messenger, Net Service

For shorter total production time for all our customers

## DMG MORI's software Line-up

This network system application achieves fast information sharing and increased production efficiency.

— [Internet]  
— [LAN]

### Remote Maintenance/Machine Operation Monitoring Service

## MORI-NET Global Edition Advance

#### ■ Features

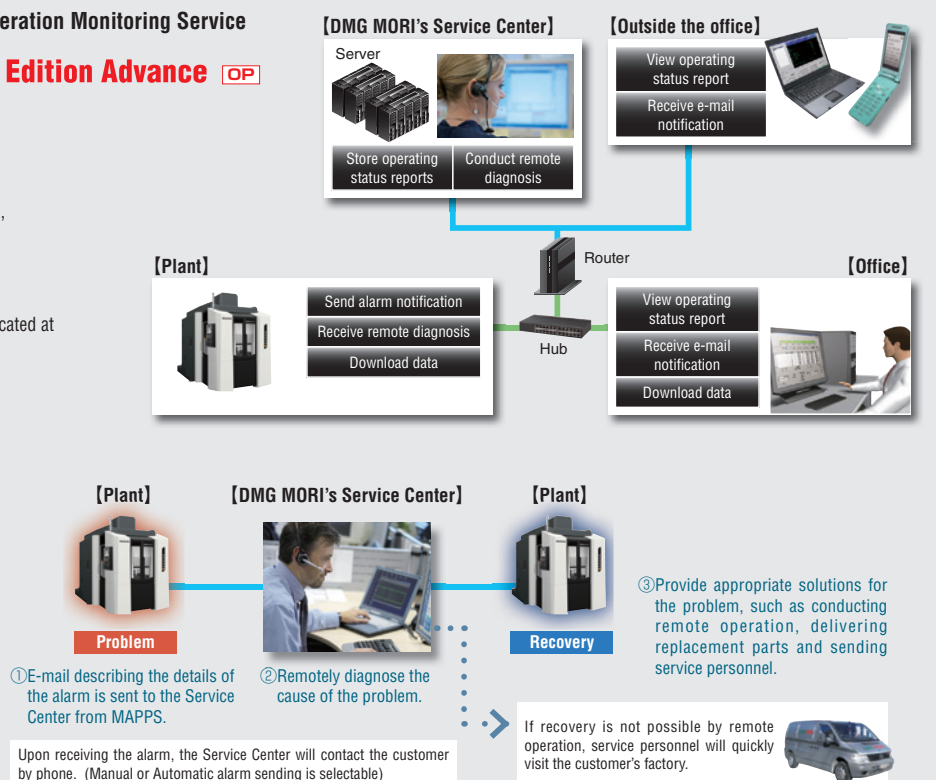
- Remote maintenance service by DMG MORI Service Center
- Internet-based, high speed (max. 1 Gbps), large capacity network
- No server installation is required — reduction in initial cost
- Download various data from the server located at DMG MORI

#### ■ Remote alarm support

When an alarm goes off, an alarm notification will be sent to the DMG MORI Service Center simply by pressing the "Send e-mail" button on MAPPS.

DMG MORI service personnel will remotely diagnose the cause of the problem, and quickly provide solutions for machine recovery.

- This service may not be available in some areas. Please contact our sales representative for details.

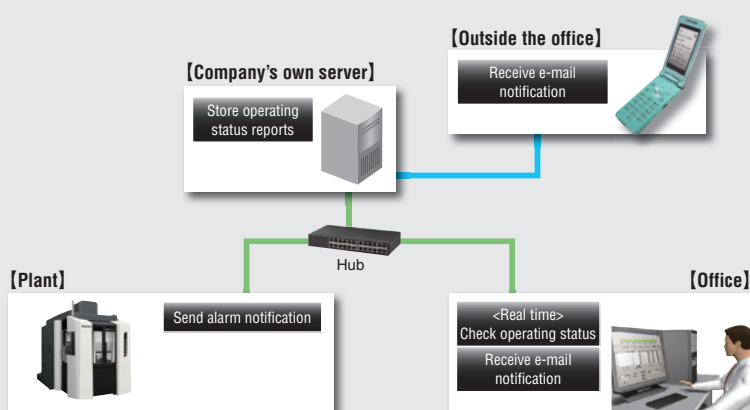


### Machine Operation Monitoring System

## DMG MORI Messenger

#### ■ Features

- Intra-corporate network system
- Up to 30 machines can be connected with one server
- The operating status of your machines can be centrally managed in real time



### MAPPS Screen Remote Control and Browsing Application

## Net Service

This is an application which allows you to remotely operate and view the MAPPS screens from your office computer.

# ACT Advanced Communication Technology

## Advanced Communication Technology (ACT) connects machine tool and peripheral devices

DMG MORI's new proposal, ACT, is designed to strengthen connections between machine tools and peripheral equipment by standardizing communication and software of the entire system. With ACT, standardization of interfaces of peripherals, simplified wiring, and labor saving can be achieved.

— [Internet]  
— [LAN]

### Industrial Network for Peripheral Equipment Control

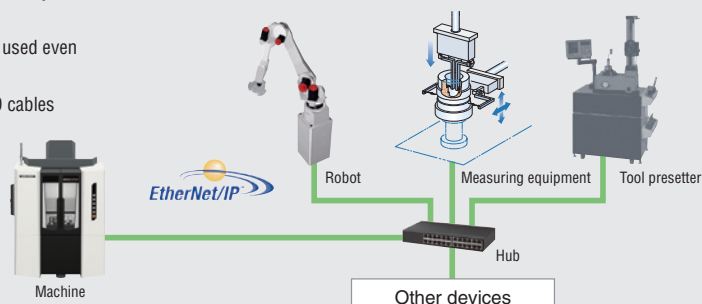
## MAPPS EtherNet/IP I/F OP

This industrial network using the standard Ethernet (TCP/IP) offers high speed and reliable connection. Simple Plug and Play connections, which are made available just by connecting to the hub through MAPPS, enable you to build a system easily. The use of standard cables also helps to reduce costs.

#### ■ Features

- Connections between a machine and peripheral equipment become easy because standard LAN cables are used
- Thanks to increased versatility, your peripheral equipment can be used even when the machine tools are replaced by new ones
- Reliability is significantly increased by reducing the number of I/O cables

- Easy system construction
- Connection with existing devices
- Inexpensive devices



### Communication Interface for Monitoring Machine Operation

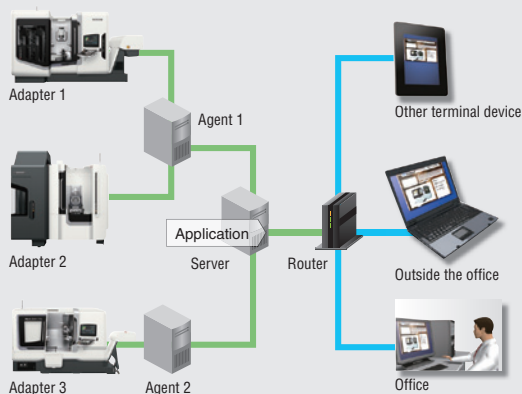
## MAPPS MTConnect I/F

MTConnect, which was introduced by the Association for Manufacturing Technology (AMT) in 2008, is a new XML (Extensible Markup Language) based communication protocol that offers an open interface. This interface allows you to build a system to monitor the operating status of your machines.

#### ■ Features

- Open communication interface allows you to access to your company's system
- This makes it possible for you to build a system to monitor the operating status of your machines via the Internet

#### ■ System examples



#### ■ Application examples



Your machines are displayed all at once, allowing you to quickly call up the machine you wish to check.



Operating status can be checked in real time.



You can check the operating history on the Gantt chart screen.

- A server and application must be prepared by the customer.
- For introduction of MTConnect, separate consultation is required.

## Reduction in environmental burden

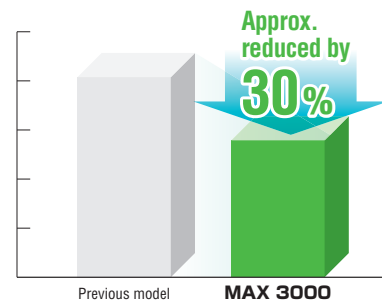


To conserve limited resources and protect global environment. The MAX 3000 pursues a high “environmental performance” that is required of machine tools.



### Approx. 30% reduction in total power consumption

By minimizing the power consumed during standby, the machine achieves a approx. 30% reduction in standby power consumption compared with the previous model. It is not only eco-friendly, but also helps reduce your energy costs.



### Power-saving function

Power consumption is reduced while operating the machine efficiently.



#### Automatic machine light function

If the operation panel is not touched for a certain amount of time, the interior light automatically turns off. This saves energy and lengthens the life of the machine lights.

#### Automatic sleep function

If the keyboard is not touched after a certain amount of time and NC operation is not being performed, power is cut off to the servo motor and the coolant pump, thereby saving energy.

### LED lighting

LED with high luminous efficiency offers a high light output at a low wattage, contributing to reducing electricity use.





# Machine specifications

Item			MAX 3000
Travel	X-axis travel <Longitudinal movement of saddle>	mm (in.)	400 (15.7)
	Y-axis travel <Cross movement of column>	mm (in.)	270 (10.6)
	Z-axis travel <Vertical movement of spindle head>	mm (in.)	280 (11.0)
	Distance from table surface to spindle gauge plane	mm (in.)	240—520 (9.4—20.5) <including a pallet thickness of 60 mm (2.4 in.)>*
	Distance from bed front surface to spindle center	mm (in.)	733—1,003 (28.9—39.5)
	Distance from column front surface to spindle center	mm (in.)	277 (10.9)
Table	Distance from floor surface to table surface	mm (in.)	880 (34.6) <including a pallet thickness of 60 mm (2.4 in.)>*
	Working surface	mm (in.)	600×300 (23.6×11.8)
	Table loading capacity	kg (lb.)	150 (330)
Spindle	Max. spindle speed	min <sup>-1</sup>	15,000
	Type of spindle taper hole		No. 30
	Spindle bearing inner diameter	mm (in.)	55 (2.2)
Feedrate	Rapid traverse rate	mm/min (ipm)	X, Y, Z: 62,000 (2,440.9)
	Cutting feedrate	mm/min (ipm)	1—62,000 (0.04—2,440.9) <when using high-precision control (look-ahead control)>
	Jog feedrate	mm/min (ipm)	0—1,260 (0—50.0) <15 steps>
ATC	Type of tool shank		BT30 <when the two-face contact specification is selected, a two-face contact tool and other tools cannot be used together>
	Type of retention knob		45° (MAS-I) [60° (MAS-II)]
	Tool storage capacity		18 [27]
	Max. tool diameter	Tool storage capacity 18 tools	mm (in.) 95 (3.7) <adjacent tool: more than φ 80 mm (φ 3.14 in.)> 110 (4.3) <adjacent tool: φ 80 mm (φ 3.14 in.) or less>
		Tool storage capacity 27 tools	mm (in.) [85 (3.3) <adjacent tool: more than φ 78 mm (φ 3.07 in.)>] [100 (3.9) <adjacent tool: φ 78 mm (φ 3.07 in.) or less>]
	Max. tool length	mm (in.)	200 (7.8)
	Max. tool mass	kg (lb.)	3 (6.6) <total capacity: 40 (88)>
	Max. tool mass moment <from spindle gauge line>	N·m (ft·lbf)	2 (1.5)
	Tool changing time	Tool-to-tool	s 2.6/2.2 (max./min.) <18 tools> [high acceleration: 2.2/1.8 (max./min.) <18 tools>]
	<ul style="list-style-type: none"> <li>The time differences are caused by the different conditions (travel distances, etc) for each standard.</li> <li>Depending on the arrangement of tools in the magazine, the cut-to-cut (chip-to-chip) time may be longer.</li> </ul>	Cut-to-cut (chip-to-chip) ISO10791-9 JIS B6336-9	s 3.1/2.7 (max./min.) <18 tools> [high acceleration: 2.7/2.3 (max./min.) <18 tools>] [4.0/3.6 (max./min.) <27 tools>] [high acceleration: 3.6/3.2 (max./min.) <27 tools>]
APC	Number of pallets		2
	Method of pallet change		2-station turn-type
	Pallet changing time	s	2.0
Motor	Spindle drive motor	kW (HP)	5.5/3.7 (7.5/5) <15 min/cont>
	Feed motor	kW (HP)	X: 2.0 (2.7) Y: 1.5×2 (2×2) Z: 3.5 (4.7)
	Coolant pump motor	kW (HP)	0.52 (0.7)
Power sources <standard>	Electrical power supply <cont>	kVA	18.7
	Compressed air supply	MPa (psi), L/min (gpm)	0.5 (72.5), 340 (89.8) (when the tool tip air blow is regularly used, air supply of 300 L/min (79.2 gpm) is separately required) <ANR>
Tank capacity	Coolant tank capacity	L (gal.)	250 (66)
Machine size	Machine height <coolant tank specifications>	mm (in.)	2,650 (104.3)
	Floor space <width × depth> (coolant tank specifications)	mm (in.)	1,558×3,273 (61.3×128.9)
	Mass of machine	kg (lb.)	4,850 (10,670) <including the pallet weight of 120 kg (264 lb.)>
Noise data	A-weighted, time-average radiated sound pressure level	dB	70—73 (Measurement uncertainty is 4 dB)

[ ] Option ISO: International Organization for Standardization JIS: Japanese Industrial Standard

\* When the cover for line production is selected, the pallet is provided as an option.

- Max. spindle speed: depending on restrictions imposed by the workpiece clamping device, fixture and tool used, it may not be possible to rotate at the maximum spindle speed.
- ANR: ANR refers to a standard atmospheric state; i. e., temperature at 20 °C (68 °F), absolute pressure at 101.3 kPa (14.7 psi) and relative humidity at 65%.
- Power sources, machine size: the actual values may differ from those specified in the catalogue, depending on the optional features and peripheral equipment.
- Compressed air supply: please be sure to supply clean compressed air <air pressure: 0.7 MPa (101.5 psi), pressure dew point: 10 °C (50 °F) or below>.
- A criterion capacity to select a compressor is 90 L/min (23.8 gpm) per 0.75 kW (1 HP).

However, this figure may differ depending on the type of compressors and options attached. For details, please check the compressor specifications.

- Noise data: the measurement was performed at the front of the machine with a maximum spindle speed of 15,000 min<sup>-1</sup>. Please contact our sales representative for details.

● The information in this catalog is valid as of July 2014.

# DMG MORI

**2-year warranty, twice the peace of mind.**

For machines delivered outside of Japan, parts relating to machine breakdown will be guaranteed free for 2 years from the date of installation, and labor costs to repair will be free for 1 year. Please contact our sales representative for details.



## <Precautions for Machine Relocation>

**EXPORTATION:** All contracts are subject to export permit by the Government of Japan. Customer shall comply with the laws and regulations of the exporting country governing the exportation or re-exportation of the Equipment, including but not limited to the Export Administration Regulations. The Equipment is subject to export restrictions imposed by Japan and other exporting countries and the Customer will not export or permit the export of the Equipment anywhere outside the exporting country without proper government authorization. To prevent the illegal diversion of the Equipment to individuals or nations that threaten international security, it may include a "Relocation Machine Security Function" that automatically disables the Equipment if it is moved following installation. If the Equipment is so-disabled, it can only be re-enabled by contacting DMG MORI SEIKI or its distributor representative. DMG MORI SEIKI and its distributor representative may refuse to re-enable the Equipment if it determines that doing so would be an unauthorized export of technology or otherwise violates applicable export restrictions. DMG MORI SEIKI and its distributor representative shall have no obligation to re-enable such Equipment. DMG MORI SEIKI and its distributor representative shall have no liability (including for lost profits or business interruption or under the limited service warranty included herein) as a result of the Equipment being disabled.

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- DMG MORI SEIKI is not responsible for differences between the information in the catalog and the actual machine.

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