

High-Productivity Vertical Machining Center

i 30 V

i 30 V



i 30 V

Compact Body Full of High-performance Features

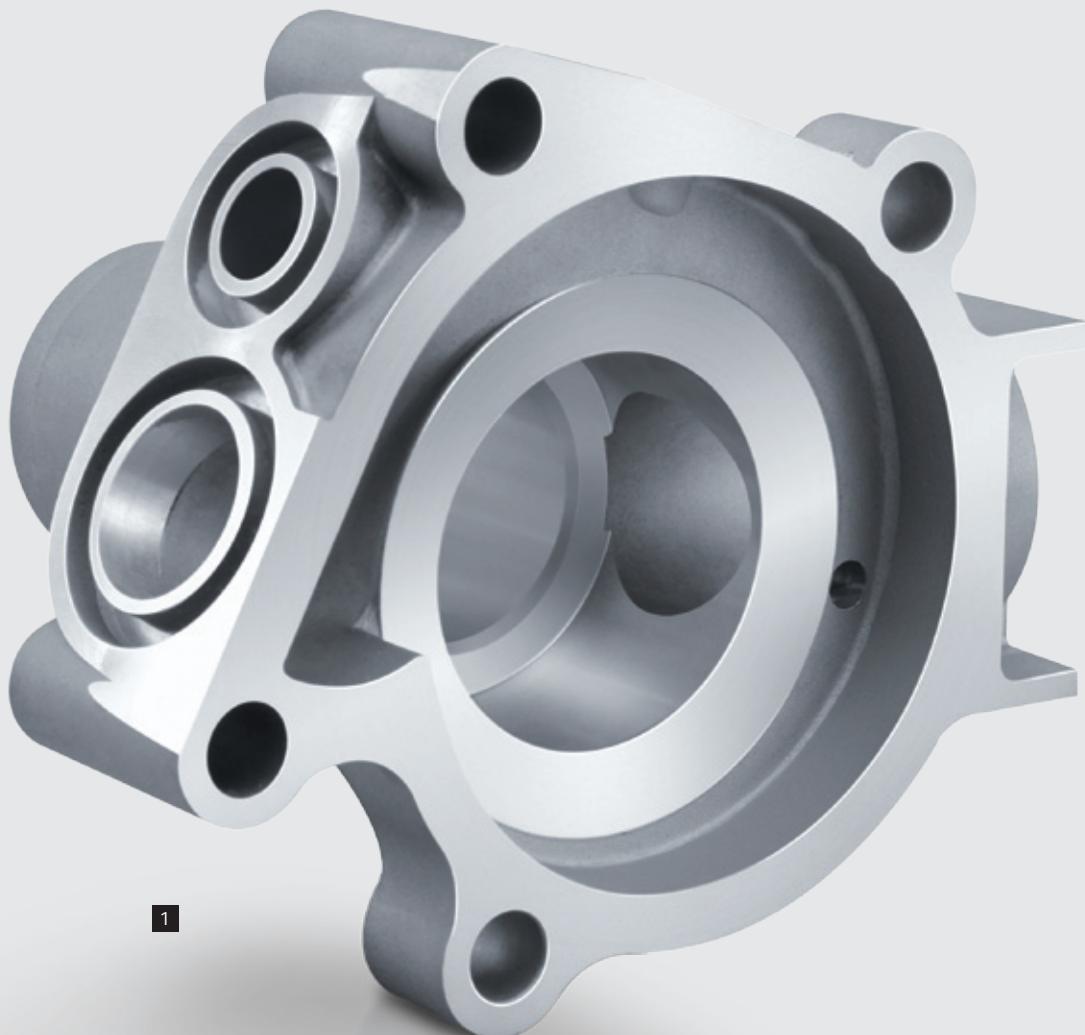
In the automotive parts industry where many manufacturers are facing fierce competition in the global market, reducing manufacturing cost is one of the biggest challenges to be addressed.

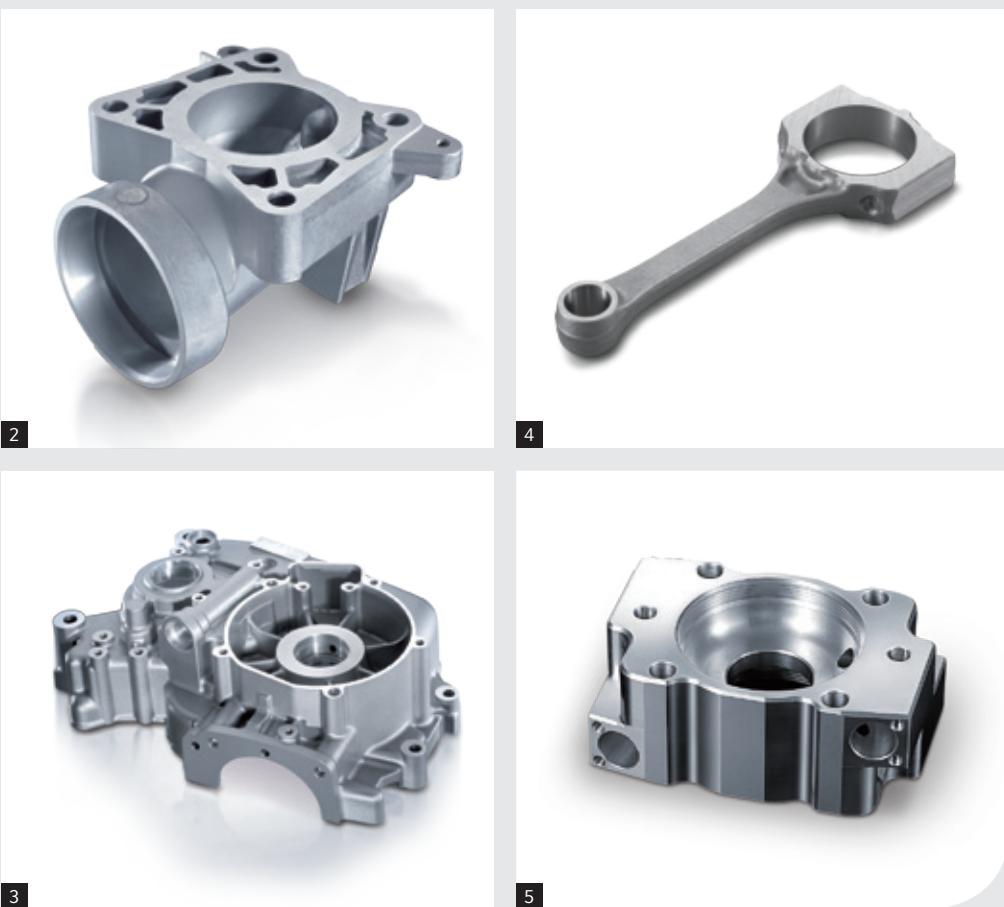
To meet the challenge, machine tools capable of providing maximum productivity are absolutely essential.

The i 30 V, designed with a focus on compactness, is an ideal choice for mass production machining.

Having a compact body and capability of high speed machining, the machine demonstrates excellent performance in machining mass production parts.

The i 30 V equipped with a variety of high-performance features brings greater productivity to our customers.



Automobiles

- 1 Water pump
- 2 Pump housing
- 3 Engine housing
- 4 Connecting rod

Hydraulic & Pneumatic equipment

- 5 Valve

Applications and Parts

Highlights

- Machine Highlights

Machine and Technology

Others

Machine Specifications

i 30 V

Compactness and High Productivity

With a rapid traverse rate of 62 m/min (2,440.9 ipm) and a pallet change time of 2.0 sec, the i 30 V achieves the high speed required for machining mass production parts.

Reduced cycle times ensured by high-speed / high-acceleration machining allow for even greater efficiency.

The machine employs a highly rigid No. 40 taper spindle in a compact body to deliver superb cutting performance.

The streamlined design made it possible to achieve space saving with a machine width of 1,558 mm (61.3 in.) while ensuring high speed and high rigidity.

04

Space-saving design

- + Machine size <width × depth × height>: 1,558 × 3,273 × 2,650 mm
(61.3 × 128.9 × 104.3 in.)
- + Mass of machine: 4.93 t (10,846 lb.)
<approx. 20% DOWN compared with conventional machine>
- + Smaller footprint and greater productivity

Floor space
Approx. 5.1 m²
(54.9 ft²)

High rigidity

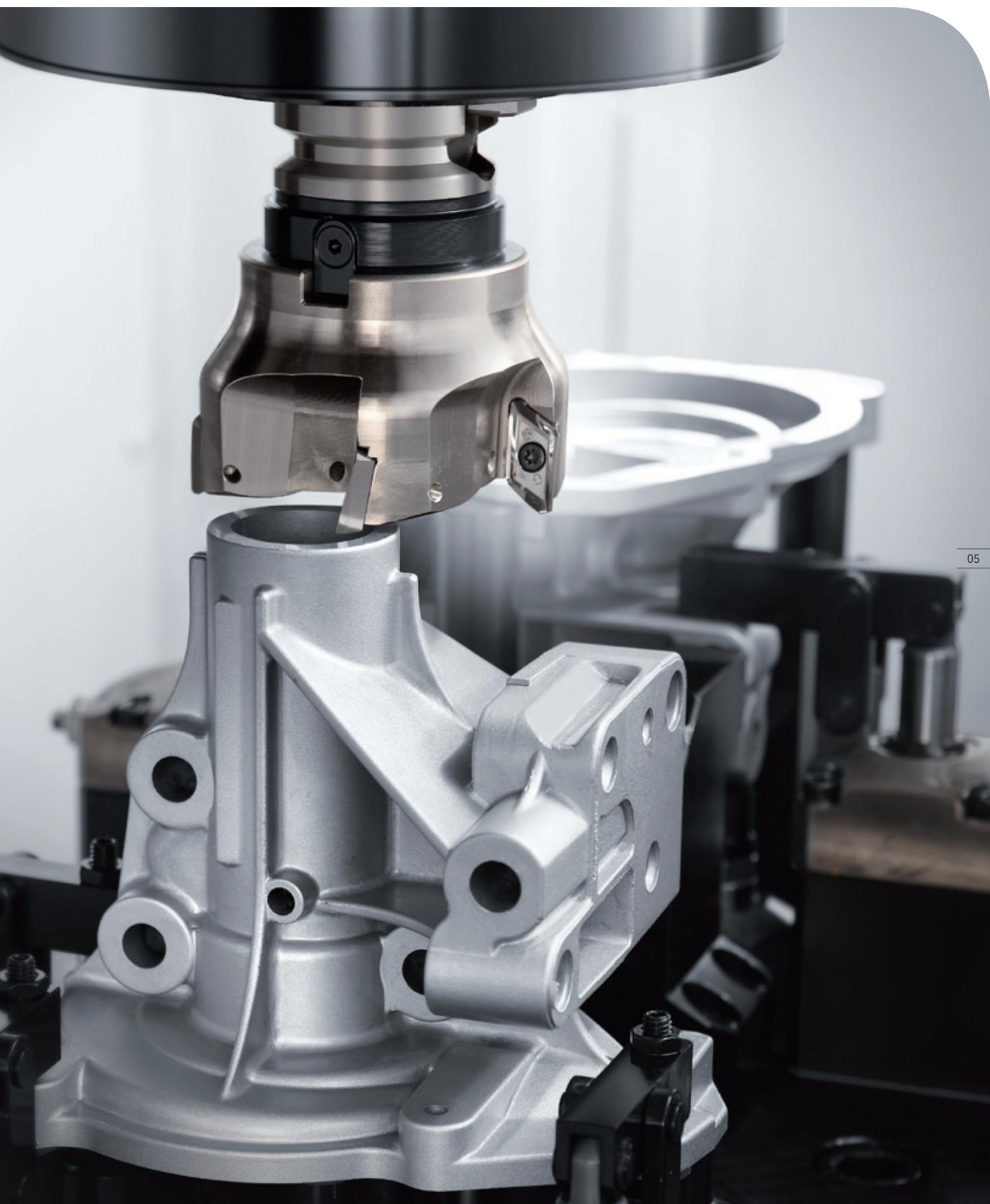
- + No. 40 taper spindle in a compact body
- + Robust, deformation-resistant construction with no overhang
- + Roller guides employed

High speed

- + Rapid traverse rate: 62 m/min (2,440.9 ipm)
<approx. 30% UP compared with conventional machine>

Reliability

- + Simple, armless-type ATC enables fewer components
- + Outstanding chip disposal



Applications and Parts

Highlights

Machine and Technology

• Main Features

Others

Machine Specifications

i 30 V

Highest Rigidity Achieved with Sophisticated Construction

DMG MORI utilizes FEM analysis from the basic design stage and simulates various operating conditions and environmental changes to achieve the streamlined, sophisticated and robust structure. The machine's linear axes are all located above the machining area, minimizing the effects of chips and coolant.

1 High-rigidity bed

- + 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

2 FEM analysis (FEM: Finite Element Method)

- + Light and high-rigidity body is achieved by FEM analysis

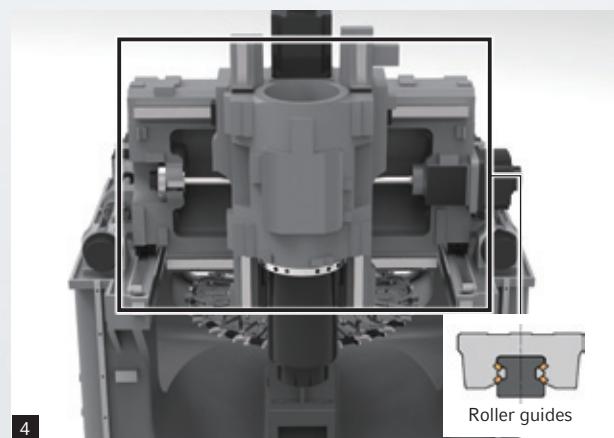
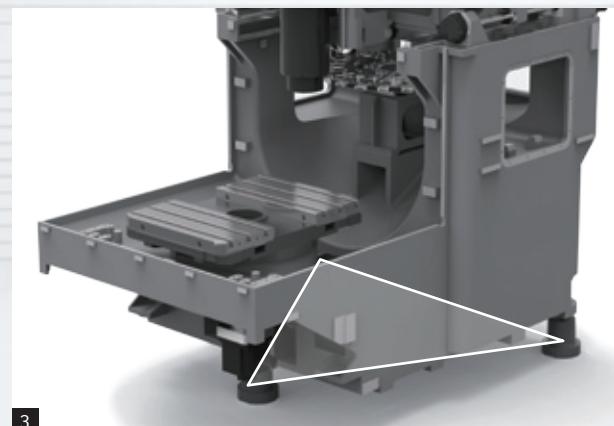
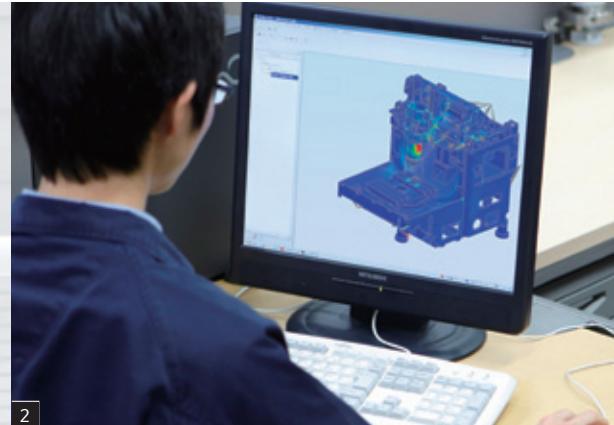
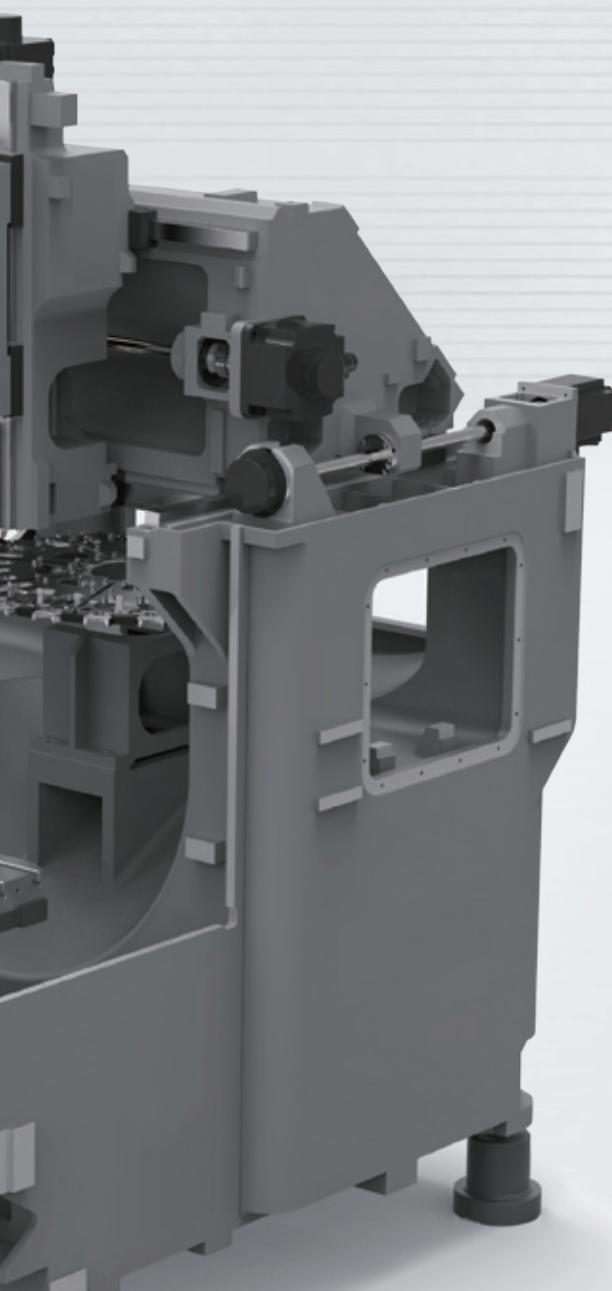
3 3-point support structure

- + The three-point support system makes it easy to perform horizontal adjustments, dramatically reducing installation time
- + Structure not susceptible to ground conditions or deterioration over time

4 Roller guides

- + Roller guides with little elastic deformation against load
- + A large number of rollers are incorporated inside the slide unit, achieving high rigidity





[Applications and Parts](#)

[Highlights](#)

Machine and Technology

› High-speed Machining

› Spindle

[Others](#)

[Machine Specifications](#)

i 30 V

Overwhelmingly High Speed with Rapid Traverse Rate of 62 m/min (2,440.9 ipm)

In developing the i 30 V, DMG MORI pursued high speed needed for machining mass production parts and has achieved a rapid traverse rate of 62 m/min (2,440.9 ipm) on all axes. The machine's efficient and agile movement allows for shorter non-cutting time, contributing to greater productivity. The DDS (Direct Drive Spindle) motor is employed to maximize the machine's performance in any machining operation, from high-speed to heavy-duty cutting.

DDS: Direct Drive Spindle

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High-speed machining

- + Rapid traverse rate <X, Y and Z axes>: 62 m/min (2,440.9 ipm)

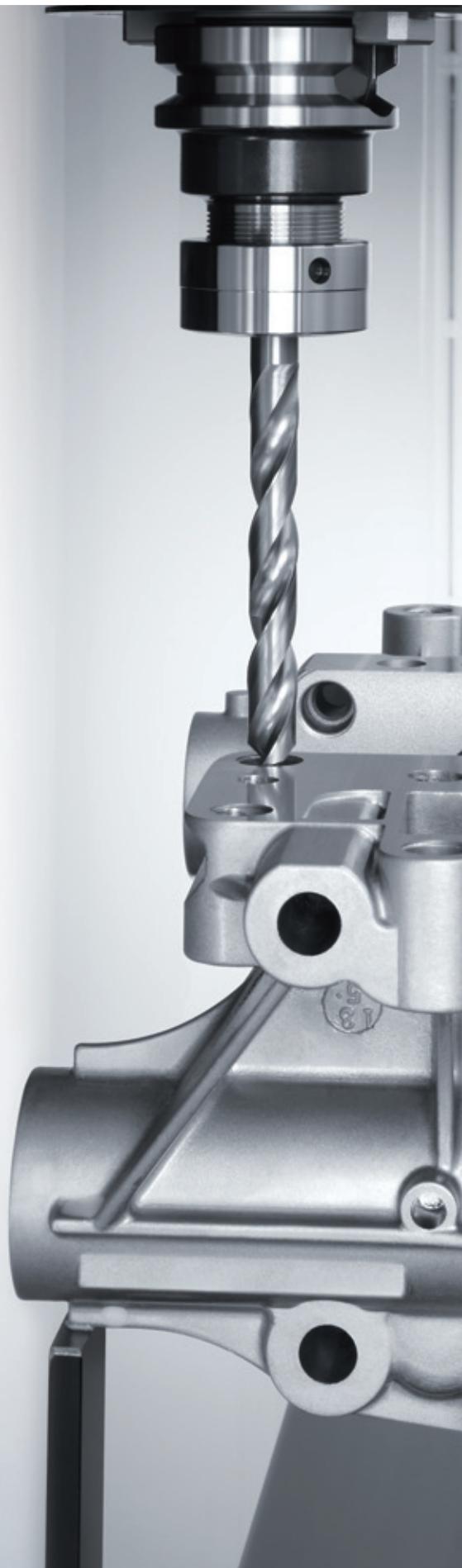
No. 40 taper spindle

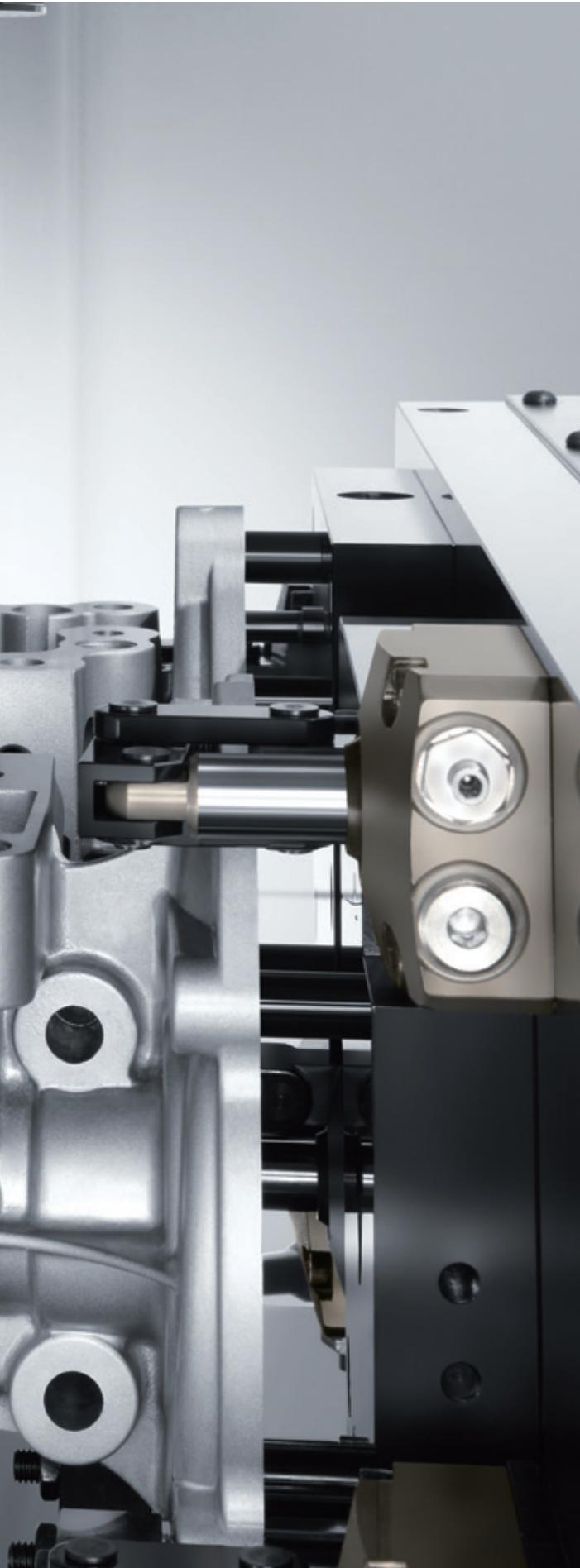
- + Type of tool shank: BT40 [CAT40] [DIN40]
- + Max. spindle speed: 12,000 min⁻¹
- + Output: 5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <15%ED / 15 min / cont>
- + Max. spindle torque: 52.5 N•m (38.7 ft•lbf) <15%ED>
- + Spindle bearing inner diameter: 65 mm (2.6 in.)

[] Option

No. 30 taper spindle

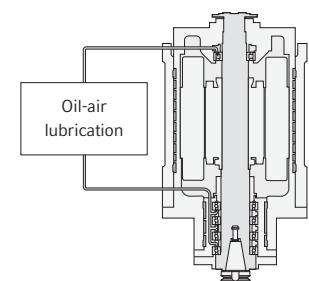
- + Type of tool shank: BT30
- + Max. spindle speed: 15,000 min⁻¹
- + Output: 5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <15%ED / 15 min / cont>
- + Max. spindle torque: 52.5 N•m (38.7 ft•lbf) <15%ED>
- + Spindle bearing inner diameter: 55 mm (2.2 in.)





Oil-air lubrication

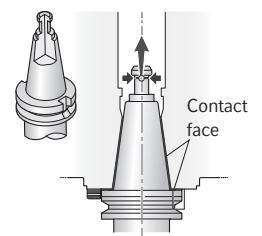
- + Oil-air lubrication minimizes heat generation caused by agitation resistance
- + Air purge, which increases air pressure in the bearing, prevents foreign matter from getting inside



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Two-face contact specification (option)

- + 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.

Oil heat exchanger

- + Oil-heat exchanger for spindle unit cooling offered as standard
- + The spindle unit is provided with an oil jacket to control thermal displacement



i 30 V

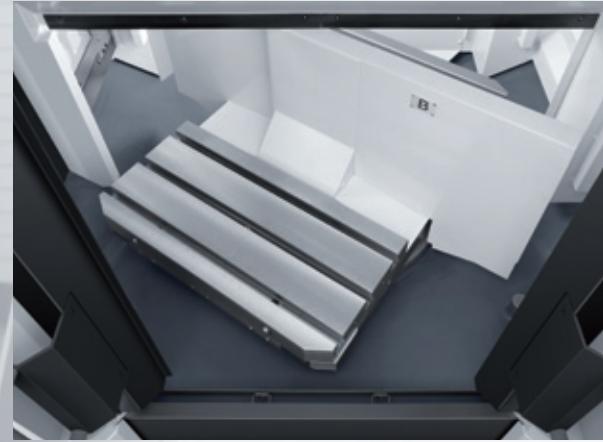
High-speed APC Equipped as Standard

The original non-lift structure enables the machine to offer the fastest pallet change time in its class of 2.0 sec. The simplified APC structure ensures greater reliability. The machine can handle two different workpieces or processes on one machine, and also improves operating efficiency as setup work can be done while machining is in progress. Moreover, employing the 2-station APC allows for automatic workpiece changes at the setup station by means of a robot, greatly improving efficiency.

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.)

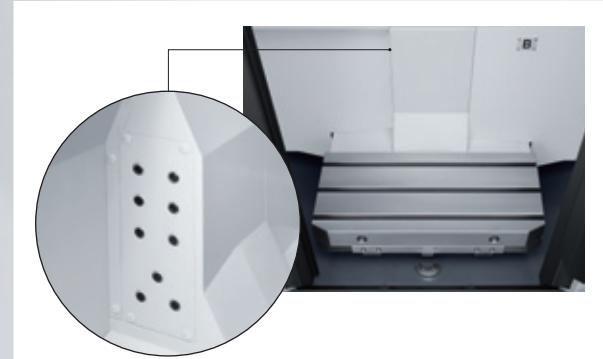




High-speed APC

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

- + 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: 2.0 sec.



(Rc1/4 × 4 ports, Rc1/8 × 4 ports, Rc3/8 × 1 port)

Hydraulic / pneumatic pressure piping port (option)

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.

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

Applications and Parts

Highlights

Machine and Technology

› Tool Magazine

Others

Machine Specifications

i 30 V

Simple ATC to Maximize Productivity

Thanks to the simple armless type ATC that requires far fewer components, higher reliability has been achieved. It's smooth, high-speed tool changes resulting from the simple, streamlined design shortens non-cutting time.

Tool storage capacity

- + No. 40 taper spindle: 14 [20] tools
- + No. 30 taper spindle: 18 [27] tools

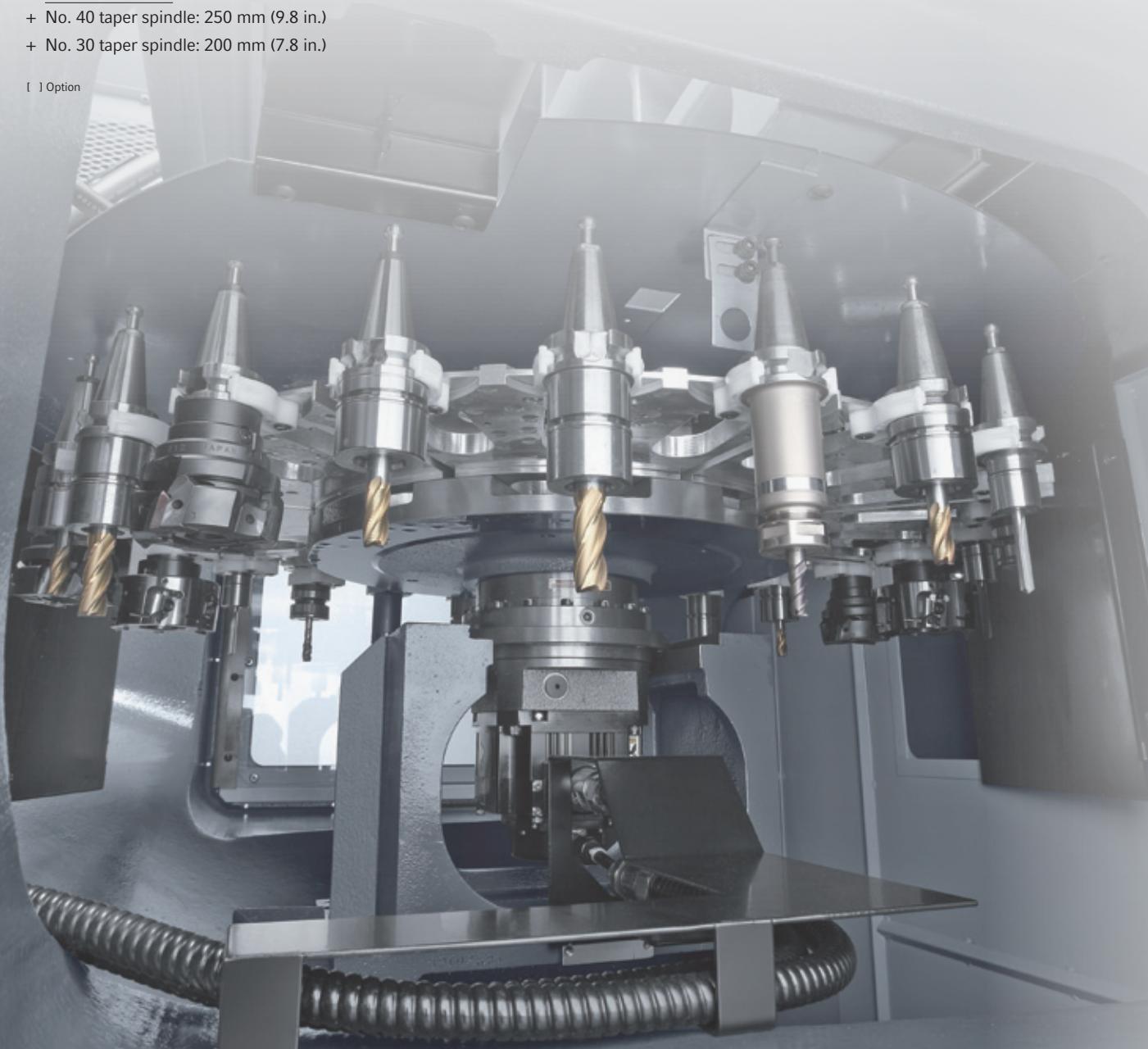
Max. tool mass

- + No. 40 taper spindle:
6 kg (13.2 lb.) <total capacity: 60 kg (132 lb.)>
- + No. 30 taper spindle:
3 kg (6.6 lb.) <total capacity: 40 kg (88 lb.)>

Max. tool length

- + No. 40 taper spindle: 250 mm (9.8 in.)
- + No. 30 taper spindle: 200 mm (7.8 in.)

[] Option



Tool changing time

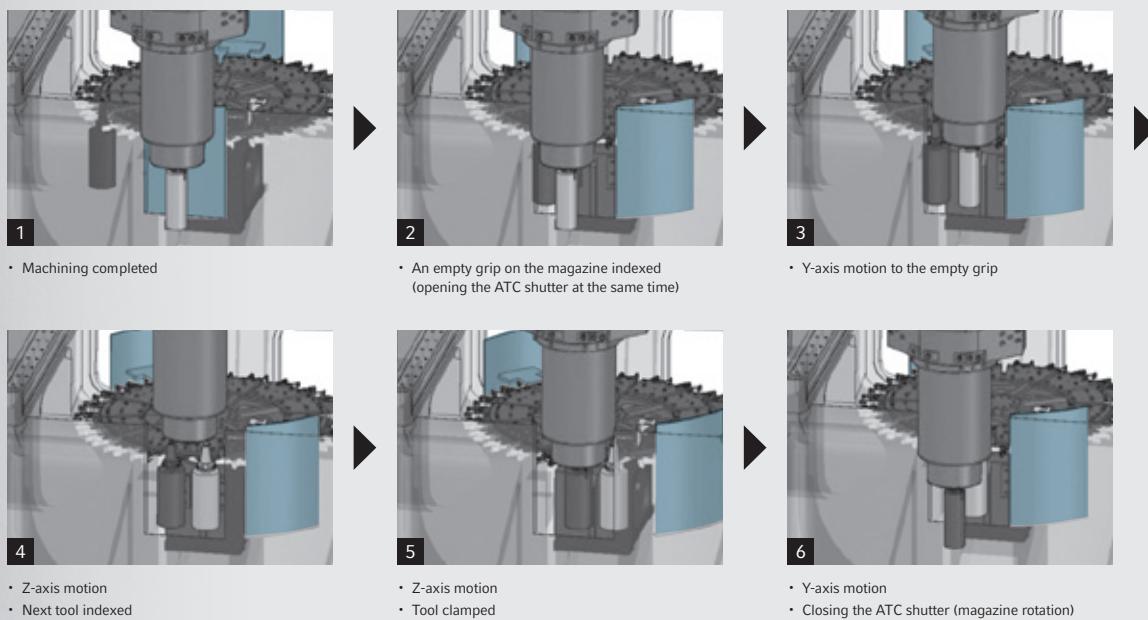
| Tool-to-tool | | No. 40 taper spindle | | No. 30 taper spindle | |
|---|------|----------------------|-------------|----------------------|-------------|
| Standard (max. / min.) | sec. | 14 tools | [20 tools] | 18 tools | [27 tools] |
| High acceleration (max. / min.) | sec. | 3.3 / 2.6 | [2.9 / 2.2] | 3.0 / 2.4 | [2.6 / 2.0] |
| Cut-to-cut (chip-to-chip) <ISO> | | No. 40 taper spindle | | No. 30 taper spindle | |
| Standard (max. / min.) | sec. | 14 tools | [20 tools] | 18 tools | [27 tools] |
| High acceleration (max. / min.) | sec. | 4.5 / 3.6 | [4.1 / 3.2] | 4.5 / 3.8 | [4.1 / 3.4] |
| [] Option | | | | | |
| 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.

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 of the magazine wheel, resulting in shorter tool change time.



* No. 40 taper spindle: Two shutters are provided only for the 14-tool magazine. For the 20-tool magazine, a shutter is provided at one location on the machine side.
 No. 30 taper spindle: Two shutters are provided only for the 18-tool magazine. For the 27-tool magazine, a shutter is provided at one location on the machine side.
 • 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 µm) 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.

i 30 V

Open Innovation for Maintaining Ideal Machining Quality

We offer a variety of high-performance peripheral equipment according to customer needs and workpieces. The combination of the i 30 V machine and high-performance peripheral equipment delivers high-precision machining and excellent durability. We also provide DMG MORI Qualified Products (DMQP) that satisfy DMG MORI standards in quality, performance and maintainability.

DMQP: DMG MORI Qualified Products

Chip conveyor <external> (option)

- + Reduced chip accumulation inside the machine
- + Operator spends less time removing chips

| Workpiece material and chip size | Steel | | | Cast iron | Aluminum / non-ferrous metal | | |
|----------------------------------|-------|-------|---------|-----------|------------------------------|-------|---------|
| | Long | Short | Powdery | Short | Long | Short | Powdery |
| Hinge type *1 | ○ | — | — | — | ○ | — | — |
| Scraper type | — | ○ | ○ | — | — | — | — |
| Scraper type + drum filter type | — | ○*2 | ○ | — | — | ○ | ○ |
| Hinge type + drum filter type | ○ | ○ | ○*3 | ○ | ○ | ○ | ○*3 |
| Magnet scraper type | — | ○ | ○ | ○ | — | — | — |

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

*2 Filter is made of steel.

*3 For details, please consult our sales representative.

● [Chip size guidelines] Short: chips 50 mm (2.0 in.) or less in length, bundles of chips ø 40 mm (ø 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 our sales representative.

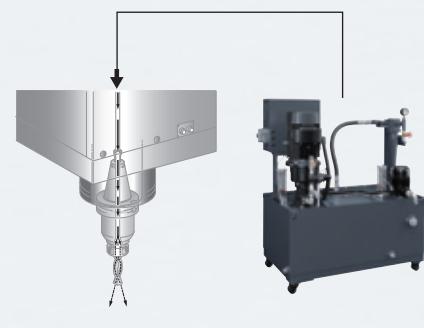
● Chip conveyors are available in various types for handling chips of different shape and material. For details, please consult our sales representative.

Through-spindle coolant system <separate type> (option)

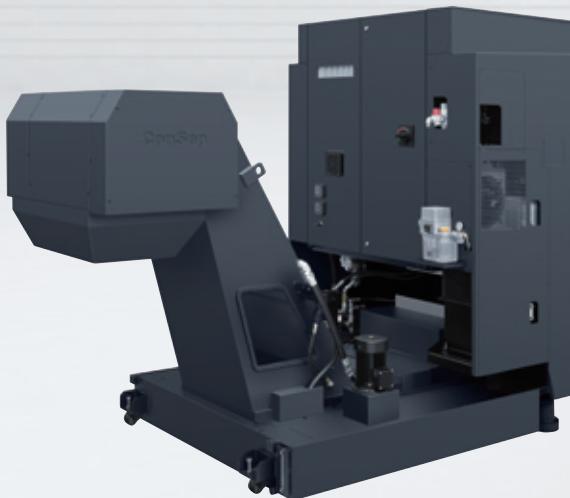
- + Coolant is supplied to the tool tip via through holes in the spindle and the tool
- + The through-spindle coolant system effectively eliminates chips, cooling the machine point and lengthening the lives of your tools

| | Unit on coolant tank | Separate type |
|---|--|--|
| Discharge pressure MPa (psi) | 1.5 / 7.0 (217.5 / 1,015) | 1.5 / 3.5 / 7.0 (217.5 / 507.5 / 1,015) |
| Installation space <width X depth> mm (in.) | 360×360 (14.2×14.2) <line filter unit> | 780 × 1,190 (30.7×46.9) <high-pressure coolant system> |
| Water-soluble coolant | ○ | |
| Oil-based coolant | — | ○* |
| Coolant filtration accuracy μm | 40 | 20 |

* 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. For details, please consult our sales representative.



⚠ Flammable coolant such as oil-based coolant has a high risk of ignition, and will cause fire or machine breakage if ignited. If you have to use a flammable coolant for any reason, please be sure to consult our sales representative.



In-machine measuring system (option)

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

Touch sensor (optical signal transmission type) <spindle>*

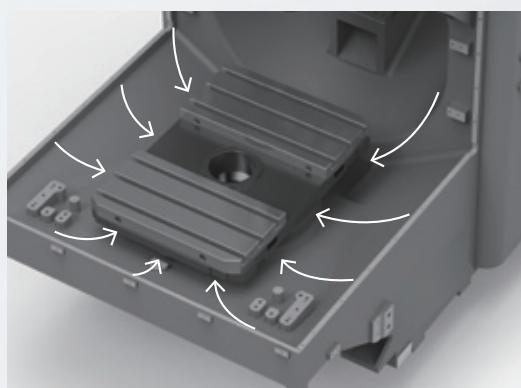


Touch sensor <table>



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* Equipped with the high-speed spindle for which the spindle bearing uses a ceramic ball. So the energization type touch sensor cannot be used.
● The photo shown may differ from actual machine.



Coolant chiller <separate type> (option)

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 or a high-pressure coolant system, please be sure to consult 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.



Center trough structure

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

i 30 V

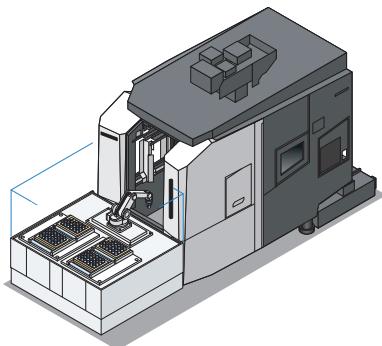
Solutions Best Matched to Customers' Needs

The i 30 V is available with many different automation options, such as a robot and a gantry loader for mass production lines. DMG MORI provides the best solution to solve customers' diversifying manufacturing challenges.

Stand-alone configuration <consultation is required> (option)

Robot loading / unloading

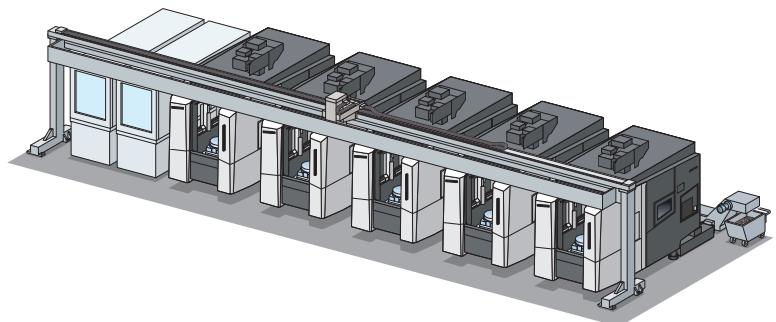
Introduction of the robot enables high-efficiency transfer of workpieces for better productivity. It helps to reduce costs and to stabilize quality.



Linked specifications <consultation is required> (option)

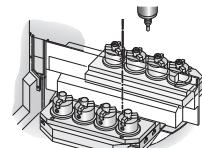
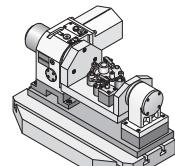
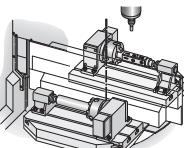
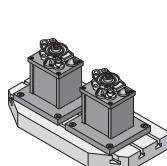
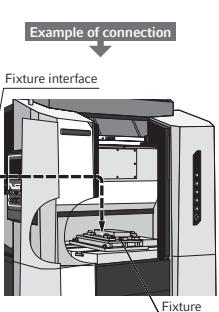
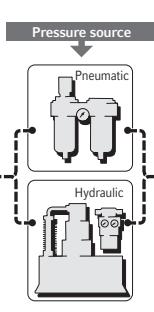
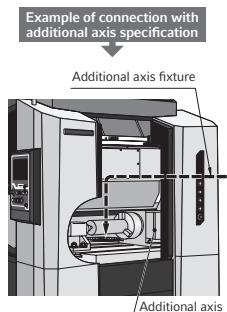
Gantry-type loader

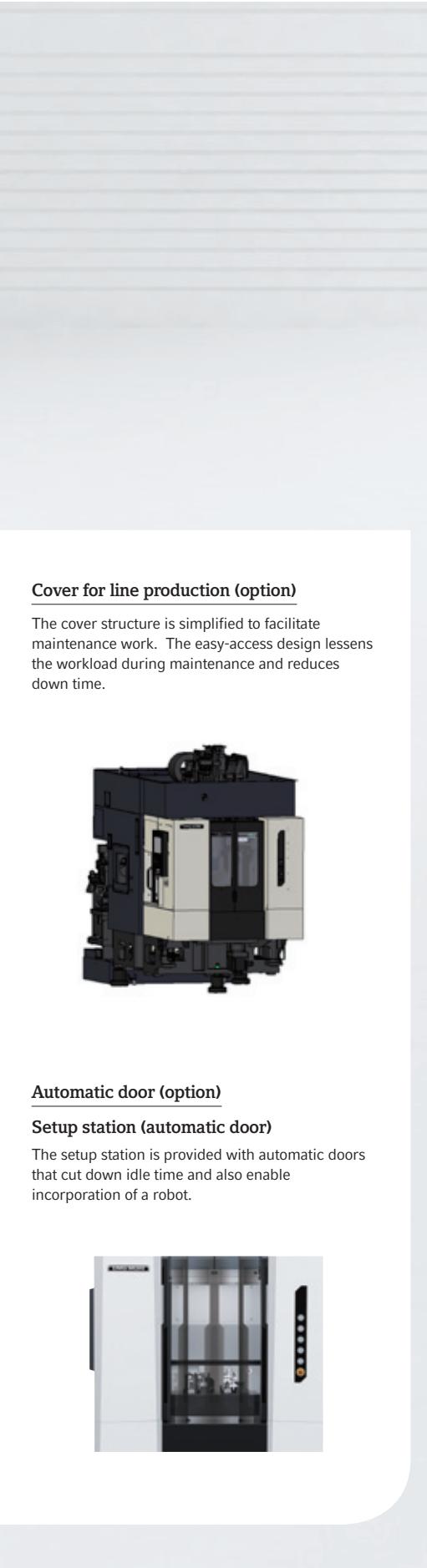
A line-ready, mass-production system that achieves complete automation, from materials supply to ejection of the final product.



Fixture interface (option)

Fixture examples





Cover for line production (option)

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



Automatic door (option)

Setup station (automatic door)

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



MAPPSconnected – Perfect Solution for Automation Systems

MAPPSconnected is a system that connects machines with various peripherals and robots via network to integrate monitoring, scheduling and production management. The system solves issues about installation of automated systems, such as connections with peripherals and the system management and costs.

- + Easy-to-see screen to monitor operation status of the entire system
- + Easy-to-see screen layout enables operators to view all necessary information at a time
- + Compact design contributes to space saving
- + Provide common user interface with CELOS / MAPPS V for smooth and efficient operation
- + Employ the MAPPS operation panel to offer the same long-term maintenance support as the machine

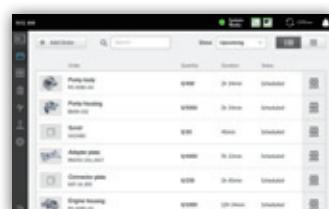
CELOS: Control Efficiency Lead Operation System

MAPPS: Mori Advanced Programming Production System



System monitor screen

Check transfer status on a screen that displays the equipment as they are actually arranged



Schedule screen

Check existing orders, set the setup work and create new jobs

Applications and Parts

Highlights

Machine and Technology

- Improved Workability
- Maintenance

Others

Machine Specifications

i 30 V

Pursuit of Usability

The i 30 V was designed with the first priority on operators' operability. Many features to facilitate machine operation were incorporated throughout the machine, including a wide door opening and better accessibility to the table. Moreover, the hydraulic unit and other peripherals requiring periodic maintenance are placed in an easily accessible location to improve maintainability.



1 Wide door opening

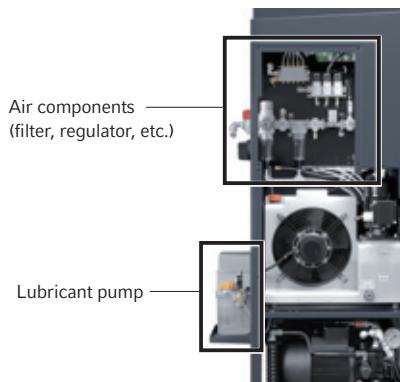
A double sliding door is used at the setup station side, ensuring a wide door opening.



+ Door opening: 580 mm (22.8 in.)

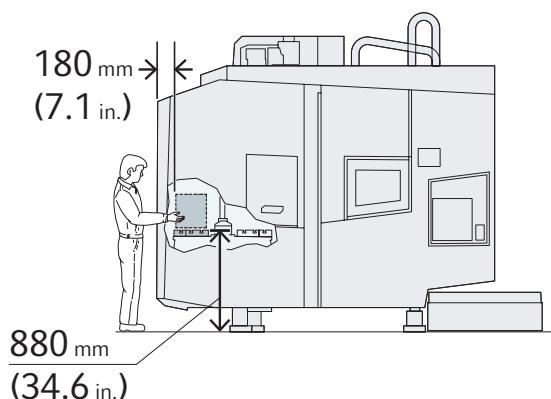
4 Centralized layout of devices

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



2 Accessibility to the table from setup station

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



3 COMPACTline

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



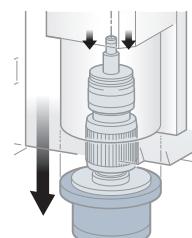
5 Non-lift APC

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



6 Replacement of spindle unit

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



i 30 V



One Stop Service for Various Needs DMG MORI Qualified Products

The DMG MORI Qualified Products (DMQP) program <option> is designed to certify peripherals that meet DMG MORI standards in quality, performance and maintainability. DMG MORI collaborates with our partners in the world and provides customers with peripherals required for their machining. We take care of the arrangement from selection to installation to support best-quality machining. DMG MORI helps customers improve productivity by offering the total solutions including quality peripherals as well as machine tools.

- + Offer peripheral equipment optimal for each customer at one stop
- + Provide support including connection and setup of machines and peripheral equipment
- + Achieve efficient connections with optimal interfaces



Handling

Robot system

Chip conveyor (external)

Machining

Mist collector

High-pressure coolant system

Oil skimmer

Air compressor

Measuring

In-machine measuring system (tool)

Tool presetter

In-machine measuring system (workpiece)

Surface roughness measuring system

Monitoring

Electrical cabinet chiller

Coolant chiller

Coolant float switch

Signal lamp

• The options above are examples. For details, please consult our sales representative.

DMQP: DMG MORI Qualified Products

Robot



In-machine measuring system (workpiece)



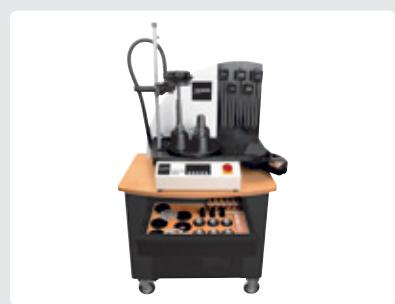
Tool presetter



Tool balance measuring system



Shrink fit system



Coolant filtration filter



Air dryer



Air compressor



Electrical cabinet chiller



Oil skimmer



Tool



Applications and Parts

Highlights

Machine and Technology

Others

› COMPACTline

› Power-saving

Machine Specifications

i 30 V

COMPACTline Suitable for Mass Production Machining

The COMPACTline, a simple and compact operation system, is equipped with various helpful functions, allowing the operators to customize display contents according to machining situations.

- + Easy-to-see screen layout for viewing necessary machine information on one screen
- + Customizable display contents to fit each customer's needs
- + Improved setups by displaying necessary machine information according to operation
- + Enhanced workability by displaying machine information and machine operation buttons on one touch panel
- + Compact design for space-saving



Reduction in Environmental Burden

To conserve limited resources and protect global environment. The i 30 V pursues a high "environmental performance" that is required of machine tools.

When the latest DMG MORI vertical machining center "i 30 V" and the "ULTIMILL V3000" manufactured in 2002 are compared, the annual power consumption can be reduced by approximately 30%*.

* The effect indicated above may not be achieved depending on the machines, cutting conditions, environmental conditions at measurement.

Power-saving Functions

- + If the screen is not touched for a certain amount of time and NC operation is not being performed, power is cut off to the servo motor, the spindle, the coolant pump and the chip conveyor, thereby saving energy
- + The latest, energy-efficient components with low power consumption and LED lighting are employed
- + The positioning speed is automatically adjusted in accordance with the spindle acceleration / deceleration time to achieve optimal acceleration / deceleration control

Reduced Cycle Times

- + The next M-code command can be specified before the previous command is completed. This enables multiple operations to be overlapped, resulting in shorter cycle times
- + The number of pecking operations in a deep hole drilling cycle is automatically controlled according to the cutting load, shortening the machining time



Applications and Parts

Highlights

Machine and Technology

Others

Machine Specifications

- Machine Size

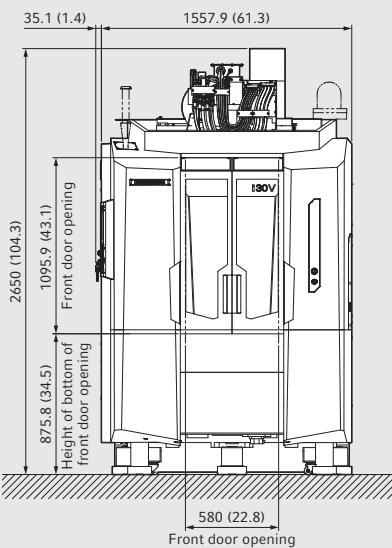
i 30 V

Machine Size

mm (in.)

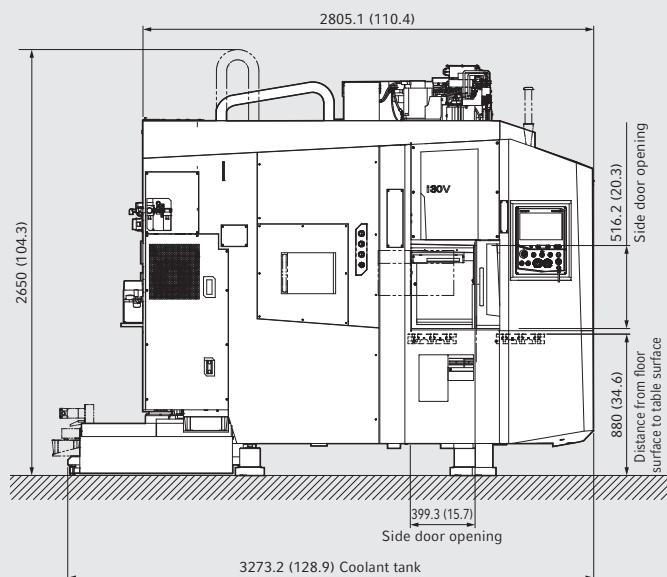
Standard

Front view



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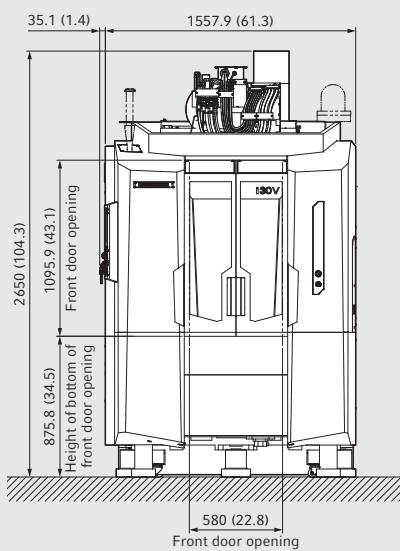
Side view



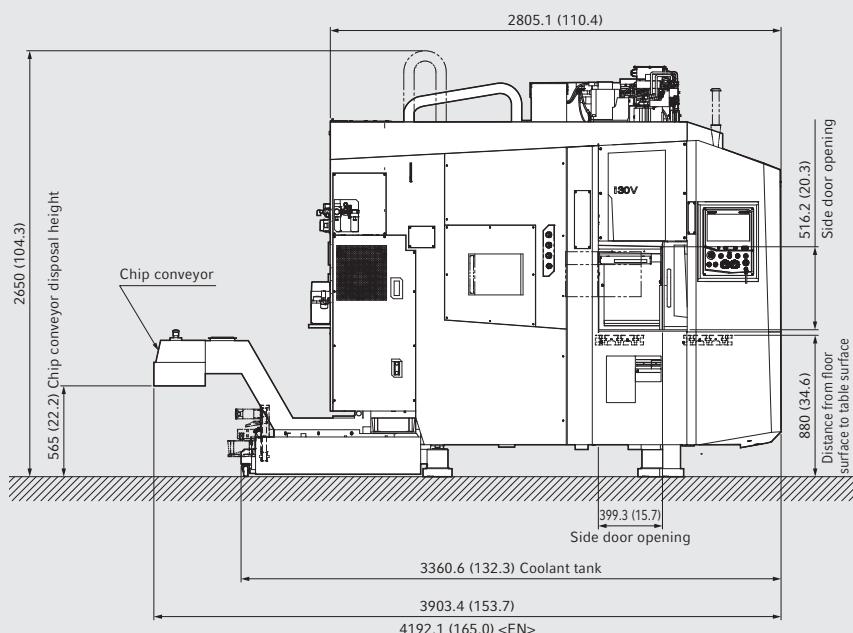
mm (in.)

External chip conveyor specifications: hinge type (option)

Front view



Side view



Applications and Parts

Highlights

Machine and Technology

Others

Machine Specifications

- Machine Size

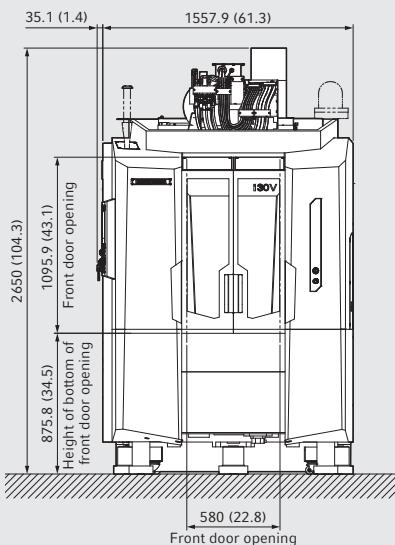
i 30 V

Machine Size

mm (in.)

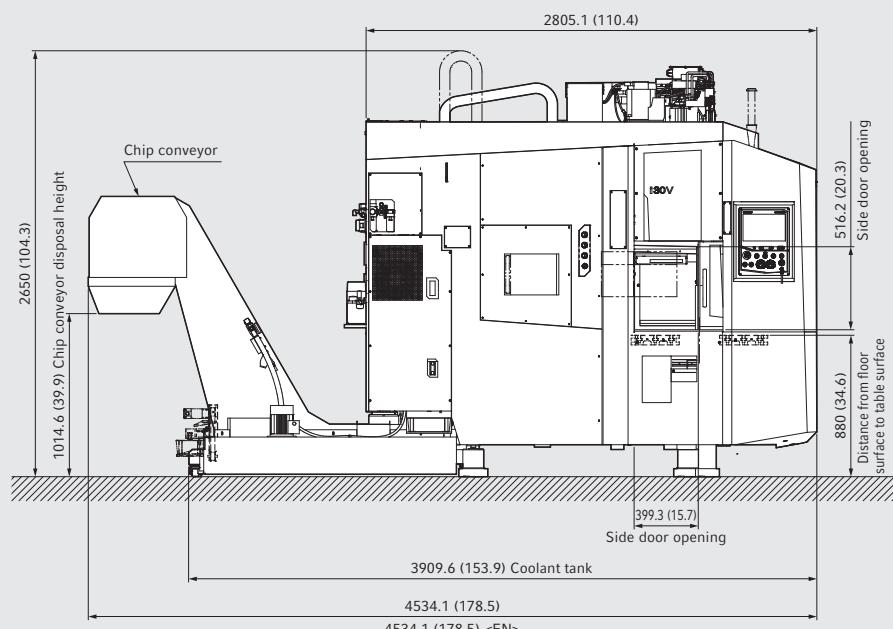
External chip conveyor specifications: hinge type + drum filter type (option)

Front view



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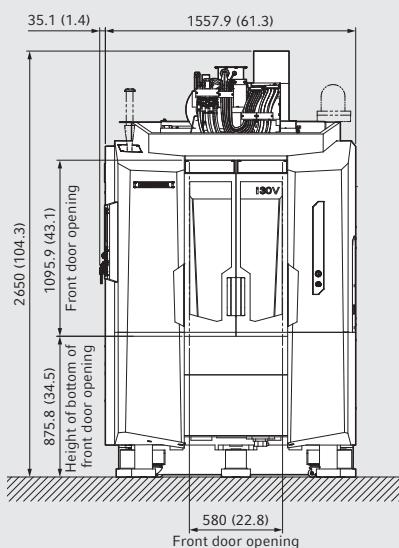
Side view



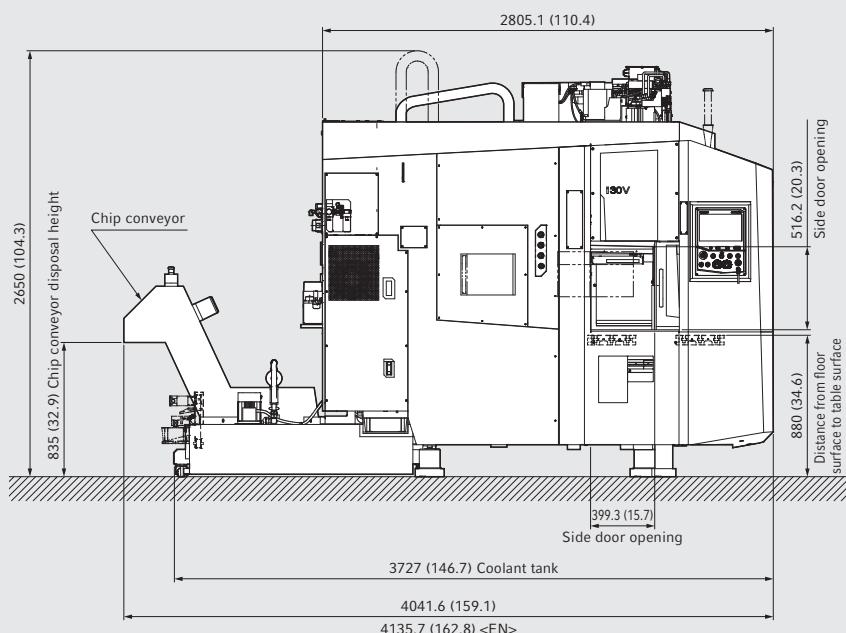
mm (in.)

External chip conveyor specifications: scraper type + drum filter type (option)

Front view



Side view



Applications and Parts

Highlights

Machine and Technology

Others

Machine Specifications

- Machine Size
- Machine Specifications

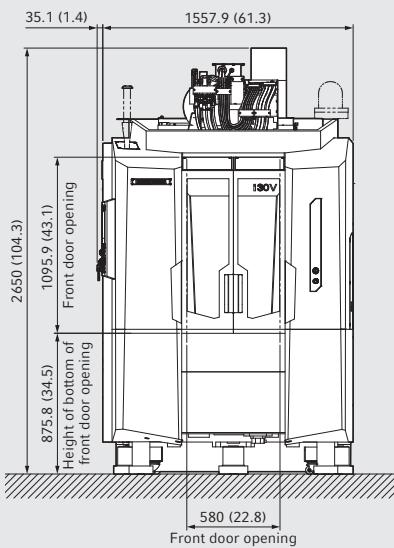
i 30 V

Machine Size

mm (in.)

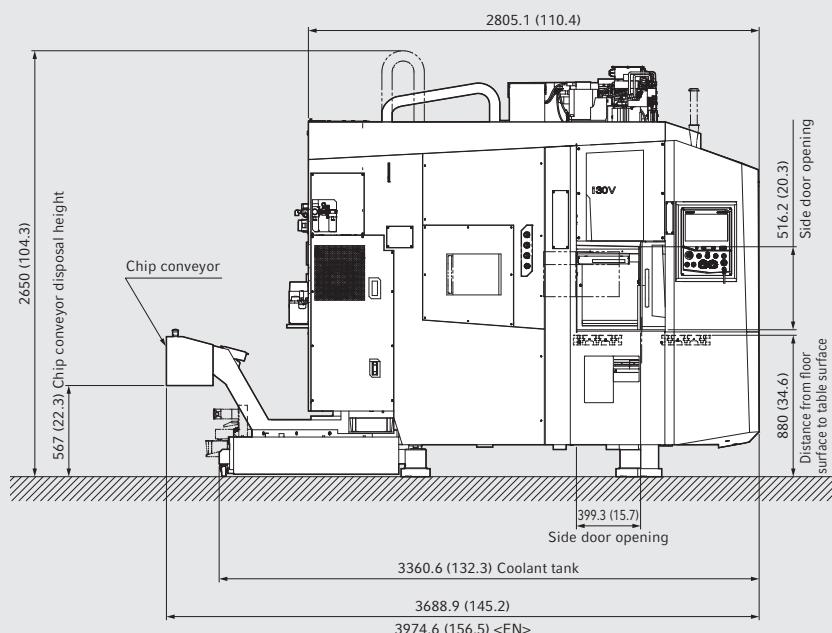
External chip conveyor specifications: scraper type, magnet scraper type (option)

Front view



28

Side view



i 30 V

Machine Specifications

| i 30 V | | | | |
|--|--|---|---|---|
| | 40 | 30 | | |
| 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.)> ^{*1} | | |
| Table | | | | |
| Distance from floor surface to table surface | mm (in.) | 880 (34.6) <including a pallet thickness of 60 mm (2.4 in.)> ^{*1} | | |
| Working surface | mm (in.) | 600 × 300 (23.6 × 11.8) | | |
| Table loading capacity | kg (lb.) | 150 (330) | | |
| Spindle | | | | |
| Max. spindle speed | min ⁻¹ | 12,000 15,000 | | |
| 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)> | | |
| ATC | | | | |
| Type of tool shank | | BT40 [CAT40] [DIN40] BT30 | | |
| Tool storage capacity | | 14 [20] 18 [27] | | |
| 14 tools | mm (in.) | 110 (4.3) | | |
| 20 tools | mm (in.) | 110 (4.3) | | |
| 18 tools | mm (in.) | — | | |
| Max. tool diameter | | 95 (3.7) <adjacent tool: more than ø 80 mm (ø 3.14 in.)> 110 (4.3) <adjacent tool: ø 80 mm (ø 3.14 in.) or less> | | |
| 27 tools | mm (in.) | — | | |
| Max. tool length | mm (in.) | 85 (3.3) <adjacent tool: more than ø 78 mm (ø 3.07 in.)> 100 (3.9) <adjacent tool: ø 78 mm (ø 3.07 in.) or less> | | |
| Max. tool mass | kg (lb.) | 250 (9.8) 200 (7.8) | | |
| Tool changing time ^{*2} (max. / min.) | Tool-to-tool Cut-to-cut (chip-to-chip) | s s | 6 (13.2) <total capacity: 60 (132)> 14, 20 tools: 3.3 / 2.6 [2.9 / 2.2] ^{*3} 14 tools: 4.5 / 3.6 [4.1 / 3.2] ^{*3} 20 tools: 4.5 / 3.8 [4.1 / 3.4] ^{*3} | 3 (6.6) <total capacity: 40 (88)> 18, 27 tools: 3.0 / 2.4 [2.6 / 2.0] ^{*3} 18 tools: 4.0 / 3.2 [3.6 / 2.8] ^{*3} 27 tools: 4.1 / 3.4 [3.7 / 3.0] ^{*3} |

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

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

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

*3 High acceleration

● 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.

● When the two-face contact specification is selected, a two-face contact tool and other tools cannot be used together.

● Tool changing time: The time differences are caused by the different conditions (travel distances, etc) for each standard.

● For details, please check the Detailed Specifications.

● The information in this catalog is valid as of August 2018.

Applications and Parts

Highlights

Machine and Technology

Others

Machine Specifications

- Machine Specifications
- Standard & Optional Features

i 30 V

Machine Specifications

| i 30 V | | |
|-----------------------------|---------------------|--|
| 40 | | 30 |
| | 2 | |
| | 2-station turn-type | |
| Pallet changing time | s | 2.0 |
| Motor | | |
| Spindle drive motor | kW (HP) | 5.5 / 5.5 / 3.7 (7.5 / 7.5 / 5) <15%ED / 15 min / cont> |
| Machine size | | |
| Machine height | mm (in.) | 2,650 (104.3) |
| Floor space <width × depth> | mm (in.) | 1,558 × 3,273 (61.3 × 128.9) |
| Mass of machine | kg (lb.) | 4,930 (10,846) <including the pallet weight of 120 kg (264 lb.)> |
| Control unit | | |
| Mitsubishi Electric | | M730UM |

• Machine size: the actual values may differ from those specified in the catalogue, depending on the optional features and peripheral equipment.

• For details, please check the Detailed Specifications.

• The information in this catalog is valid as of August 2018.

Standard & Optional Features

●: Standard ○: Options
 ☆: Consultation is required
 -: Not applicable

| | i 30 V | |
|--|--|-------------|
| | 40 | 30 |
| Spindle | | |
| BT40 | ● | - |
| CAT40 | ○ | - |
| DIN40 | ○ | - |
| BT30 | - | ● |
| 12,000 min ⁻¹ : 5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <15%ED / 15 min / cont> | ● | - |
| 15,000 min ⁻¹ : 5.5 / 5.5 / 3.7 kW (7.5 / 7.5 / 5 HP) <15%ED / 15 min / cont> | - | ● |
| Pallet / APC | | |
| 2-station turn-type APC | ● | ● |
| Pallet | ●*1 | ●*1 |
| T-slot | ○ | ○ |
| Tap (metric, inch) | ○ | ○ |
| Fixture / Steady rest | | |
| Workpiece holding detection | ○ | ○ |
| Hydraulic fixture interface | ○ | ○ |
| Pneumatic fixture Interface | ○ | ○ |
| Magazine | | |
| 14 tools | ● | - |
| 18 tools | - | ● |
| 20 tools | ○ | - |
| 27 tools | - | ○ |
| Coolant | | |
| Coolant gun | ○ | ○ |
| Shower coolant | ○ | ○ |
| Through-spindle coolant system (unit on coolant tank) ^{*3} center through | 1.5 MPa (217.5 psi) 7.0 MPa (1,015 psi) | ○*2 ○*2 |
| | 1.5 MPa (217.5 psi) | ☆ |
| | 3.5 MPa (507.5 psi) | ☆ |
| Through-spindle coolant system (separate type) ^{*3} center through | 7.0 MPa (1,015 psi) Interface <1.5 MPa (217.5 psi)> Interface <3.5 MPa (507.5 psi)> Interface <7.0 MPa (1,015 psi)> | ☆ ○ ○ |
| Coolant chiller (separate type) | For standard coolant system | ○ ○ |

*1 When the cover for line production is selected, this specification is provided as an option.

*2 DMQP (DMG MORI Qualified Products)

*3 When using oil-based coolant, please consult our sales representative.

● DMQP: Please see Page 20 for details.

● For details, please check the Detailed Specifications.

● The information in this catalog is valid as of August 2018.

● Specifications, accessories, safety device and function are available upon request.

● Some options are not available in particular regions. For details, please consult our sales representative.

 Flammable coolant such as oil-based coolant has a high risk of ignition, and will cause fire or machine breakage if ignited.
 If you have to use a flammable coolant for any reason, please be sure to consult our sales representative.

i 30 V

Standard & Optional Features

●: Standard ○: Options

| | | i 30 V | |
|--|-----------------------|---|--------------------------------------|
| | | 40 | 30 |
| Coolant | | | |
| Mist collector | AFS-600 ^{*4} | Including stand | <input type="radio"/> * ² |
| Mist collector | HVS-150 | Including stand (cannot be used in Europe) | <input type="radio"/> * ² |
| Mist collector interface | | AFS-600 (electric parts only) | <input type="radio"/> |
| | | HVS-150 (electric parts only) | <input type="radio"/> |
| Chip disposal | | | |
| Chip conveyor (external) | | Rear discharge, hinge type | <input type="radio"/> |
| | | Rear discharge, scraper type | <input type="radio"/> |
| | | Rear discharge, scraper type + drum filter type | <input type="radio"/> |
| | | Rear discharge, hinge type + drum filter type | <input type="radio"/> |
| | | Rear discharge, magnet scraper type | <input type="radio"/> |
| Measurement | | | |
| In-machine measuring system (table) ^{*5} | | Touch sensor | (M) <input type="radio"/> |
| In-machine measuring system (spindle) ^{*5*6} <including air blow for tool tip> | | Touch sensor (optical signal transmission type) | (R) <input type="radio"/> |
| Automation | | | |
| Automatic door | | | <input type="radio"/> |
| Robot interface (EtherNet/IP) <EtherNet/IP interface is necessary required separating> | | | <input type="radio"/> |
| Other | | | |
| Dry anchor | | | <input type="radio"/> |
| Signal lamp | | 4 colors (LED type: red, yellow, green, blue) | <input type="radio"/> |
| Manual pulse generator (separate type) | | | ● |

*2 DMQP (DMG MORI Qualified Products)

*4 Not compatible with oil-based coolant. If using oil-based coolant, select the HVS-150.

*5 The specifications vary depending on the manufacturers. (M: made by MagneScale R: made by RENISHAW)

*6 Equipped with the high-speed spindle for which the spindle bearing uses a ceramic ball. So the energization type touch sensor cannot be used.

● DMQP: Please see Page 20 for details.

● For details, please check the Detailed Specifications.

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If you have to use a flammable coolant for any reason, please be sure to consult our sales representative.

<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 or its distributor representative. DMG MORI 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 and its distributor representative shall have no obligation to re-enable such Equipment. DMG MORI 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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+ If you have any questions regarding the content, please consult our sales representative.

+ The information in this catalog is valid as of August 2018. Designs and specifications are subject to changes without notice.

+ The machines shown in the catalog may differ from the actual machines. The location and the size of the nameplates may also differ from the actual machines, or the nameplates may not be attached to some machines.

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

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