

## Press Release

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September 1, 2017

# **i 30 V**

## **An evolutionally-advanced vertical machining center for mass production machining is available now**

On September 1, 2017, DMG MORI will release the i 30 V, evolved from the existing vertical machining center MAX 3000.

i 30 V advanced from its predecessor MAX 3000, a vertical machining center with No. 30 taper spindle for mass production parts. By incorporating customers' voices to the previous model, the new i 30 is equipped with No. 40 taper spindle as standard, with a flexibility to mount No. 30 taper spindle as option.

i 30 V incorporates high-speed and high-rigidity in one body; the best-in-class rapid traverse and a robust and deformation-resistant construction with no overhang. It enables various and value-creating machining ranging from high-speed cutting of aluminum to heavy-duty cutting of steel.

The features of the i 30 V are 1. Compact design, 2. High speed, 3. High rigidity, 4. High accuracy, 5. High reliability, 6. Usability and maintainability, and 7. Automation systems:

1. Compact design
  - Compact body ideal for mass production; machine width 1,558 mm; footprint approx. 5.1 m<sup>2</sup>
  - Compact table suitable for small components for automobiles and other industries; table working surface 600 x 300 mm
2. High speed
  - Best-in-class rapid traverse rate for all axes; 62 m/min
  - The high-speed, 2-station APC with best-in class pallet changing time of 2.0 sec. as standard
3. High rigidity
  - Light and high-rigidity body achieved by FEM analysis
  - Roller guides with little elastic deformation against load
  - A large number of rollers incorporated inside the slide unit, achieving high rigidity
  - A robust construction capable of No. 40 taper spindle in a small body

4. High accuracy
  - Deformation-resistant construction with no overhang, realized by the minimum distance between the center of gravity of the moving parts (e.g., column) and the guideways
  - Improved positioning repeatability by employing roller guides
  - Equal distribution of heat generated by spindle motor and rotations to avoid spindle deformation
  - Symmetric design in the X-axis direction, preventing positioning errors arising from thermal deformation
  
5. High reliability
  - A simple, armless-type ATC made by fewer components
  - All linear axes are placed above the machining area and separated by a cover; a structure less affected by chips and coolant that often cause problems during mass-production machining
  - Significant reduction of replacement time of spindle by changing the spindle unit to a cartridge, which even includes the rear bearings, leading to less downtime
  
6. Usability and maintainability
  - COMPACTline operation panel with a touch screen ideal for mass production machining
  - A double sliding door at the setup station side, ensuring a wide door opening of 580 mm
  - Improved accessibility to the spindle and the table from the setup station; easier setup including jig adjustment
  - Centralized layout of devices at the side of the machine; easier daily inspection and maintenance
  - Up to 9 ports (option) for supplying hydraulic and air pressure to fixtures are available per pallet, which enables the machine to mount various types of fixtures
  - The high-speed, 2-station APC allows machining of 2 different workpieces or 2 work processes per pallet; possible to load and unload workpieces and fixtures during operation
  
7. Automation systems
  - High-quality automation solutions for diversifying production challenges in short delivery time:
    - **Stand-alone configuration (Robot system)**  
High-efficiency transfer of workpieces for better productivity; production cost reduction and stabilization of quality by unmanned operation
    - **Linked specifications (Gantry-type loader)**  
A line-ready, mass-production system that achieves complete automation from material supply to ejection of the final product  
Alternative option; connection of DMG MORI's turning center and i 30 V by DMG MORI's gantry loader

- “DMG MORI one-stop service” supports everything about automation systems; machines, loading system, peripheral equipment, production control system, as well as machining technology, jigs, tools and measurement devices.

DMG MORI is committed to continuously develop even more functional and reliable products worth investing by understanding the customers' needs.

Machine type	High productive vertical machining center
Model name	i 30 V
Market	Automotive, hydraulic and pneumatic equipment
Order start	September 1, 2017

#### ■Main specifications

Item		i 30 V
Axis travel (X / Y / Z)	(mm)	400 / 270 / 280
Table size	(mm)	600 × 300
Table loading capacity	(kg)	150(Half pallet)
Rapid traverse rate (X / Y / Z)	(m/min)	62 / 62 / 62
Max. spindle speed	(min <sup>-1</sup> )	15,000 <sup>*1</sup> / 12,000 <sup>*2</sup>
Spindle drive motor	(kW)	5.5 / 5.5 / 3.7(15% ED/continuous)
Tool storage capacity	(tool)	18[27] <sup>*1</sup> / 14[20] <sup>*2</sup>
Pallet changing time	(s)	2.0
Footprint (width x depth)	(mm)	1,558 × 3,273

<sup>\*1</sup> No. 30 taper

<sup>\*2</sup> No. 40 taper



i 30 V (appearance)