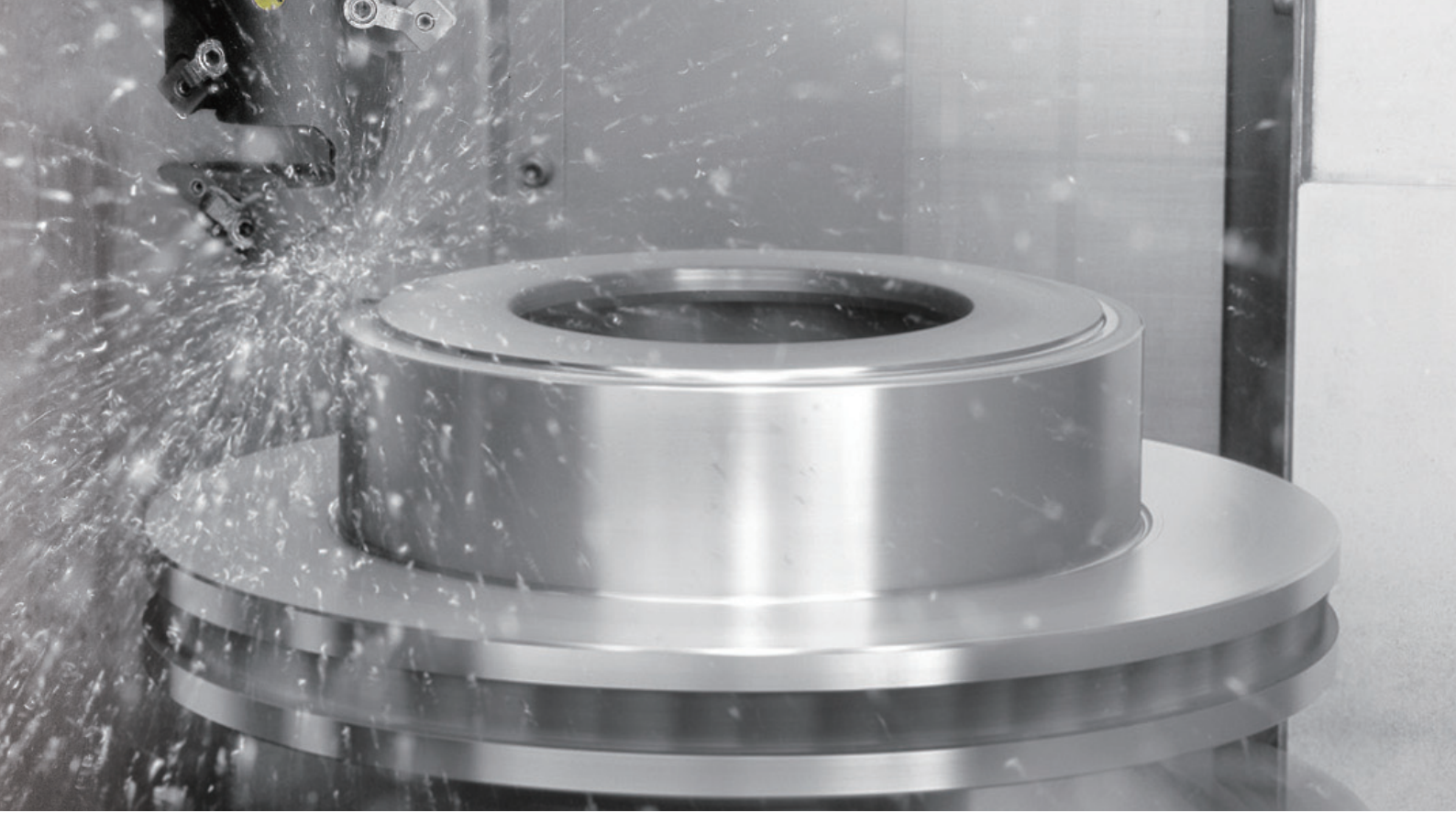


Vertical CNC Lathe

VL-253

VL-253

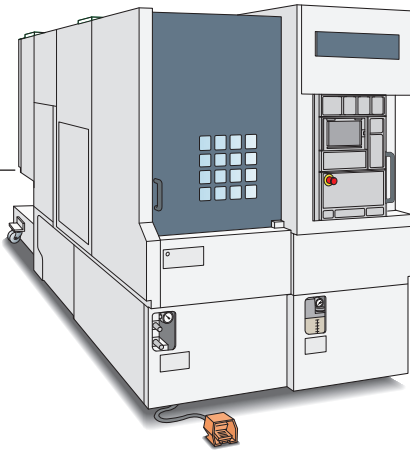




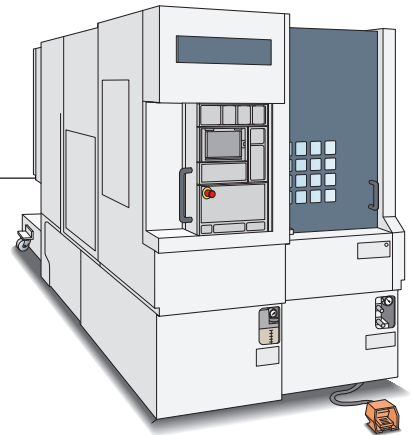
2 variations

We have prepared 2 variations of the VL-253, with the work envelope and NC unit in different places, to suit the customer's equipment and way of operating. This allows efficient handling even with systems using a robot.

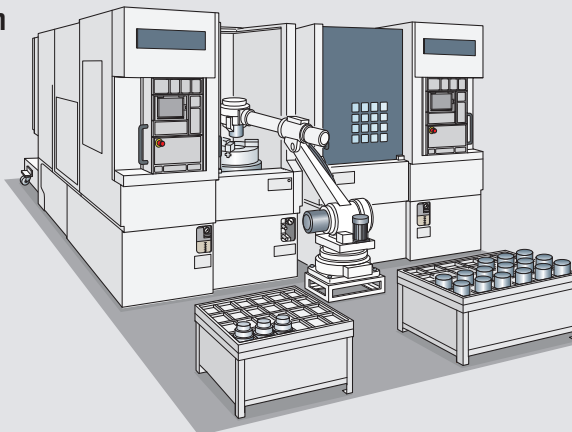
VL-253A1



VL-253A2



Example of system construction



Working area

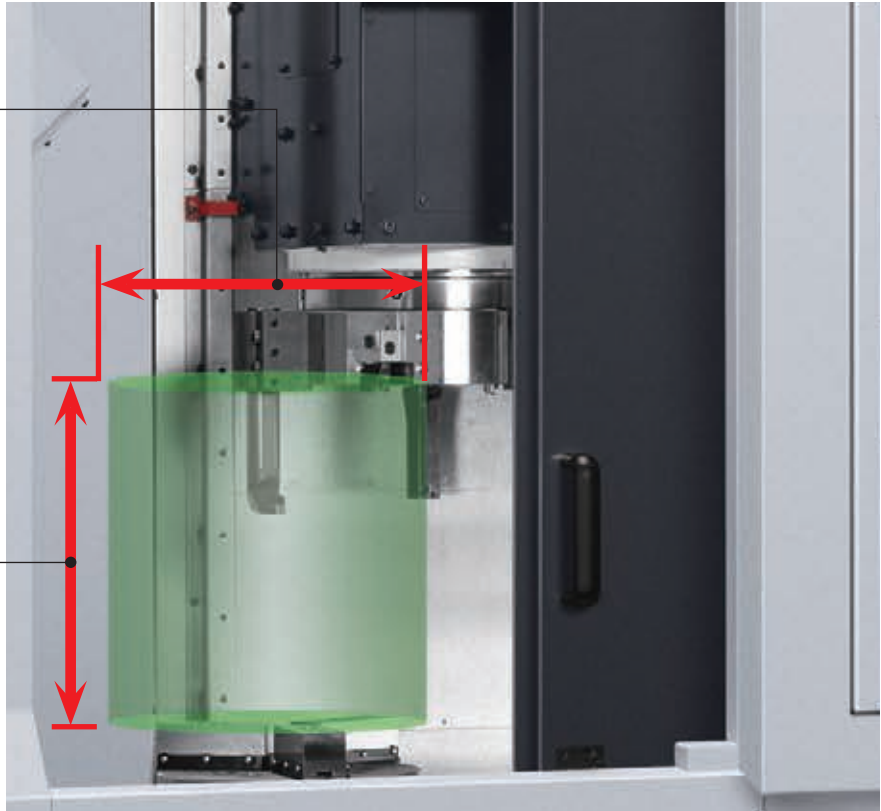
Max. turning diameter

450 mm
(17.7 in.)

Max. turning length

463 mm
(18.2 in.)
<10-inch chuck>

448 mm
(17.6 in.)
<12-inch chuck>



Compact body

Floor space

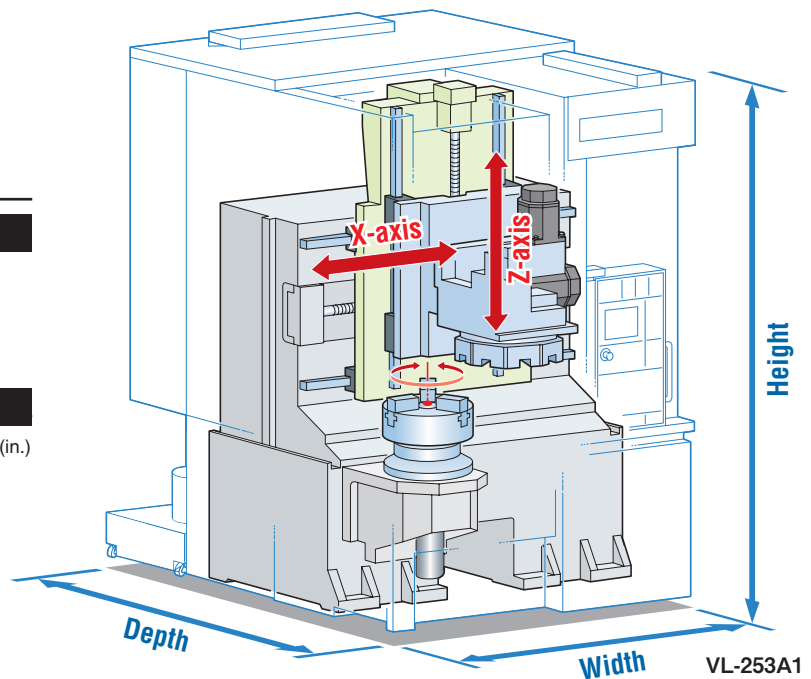
5.0 m² (53.8 ft²)

Machine size

Width: **1,599** (63.0) mm (in.)

Depth: **3,113** (122.6)

Height: **2,443** (96.2)



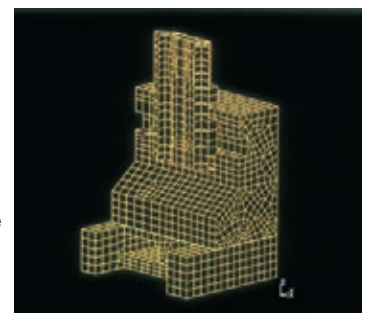
Travel

X-axis: **255** (10.0) mm (in.)

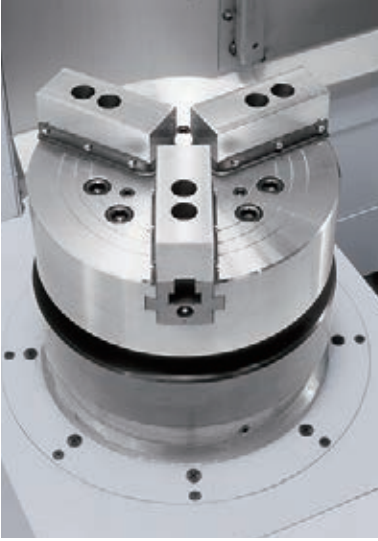
Z-axis: **470** (18.5)

FEM designed body for stable high-speed, high-precision machining.

FEM: Finite Element Method



Spindle, Turret



Can be equipped with 10, 12 inch chucks.
(chuck is optional)



High-speed, 0.3 sec. per station indexing.

Max. spindle speed

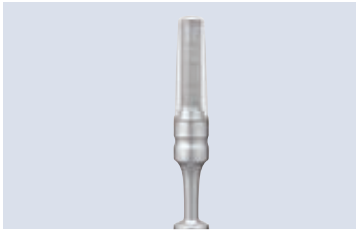
3,000 min⁻¹

Spindle bearing inner diameter

130 mm (5.1 in.)

Peripheral equipment (option)

OP Option



Signal tower 3 layers



Coolant gun <Consultation is required>



In-machine workpiece measuring system



Chip flushing coolant <Consultation is required>

Coolant cooling system (separate type) <Consultation is required>

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.

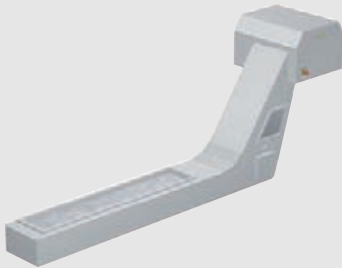
• While this unit is not the only way to completely control the temperature of the coolant, it makes a major contribution to preventing increases in the oil temperature.



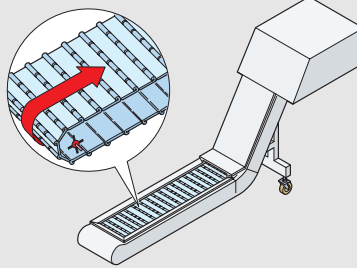
Chip disposal

OP

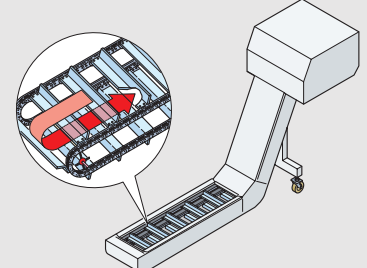
Hinge type+drum filter type <Consultation is required>



Hinge type



Scraper type



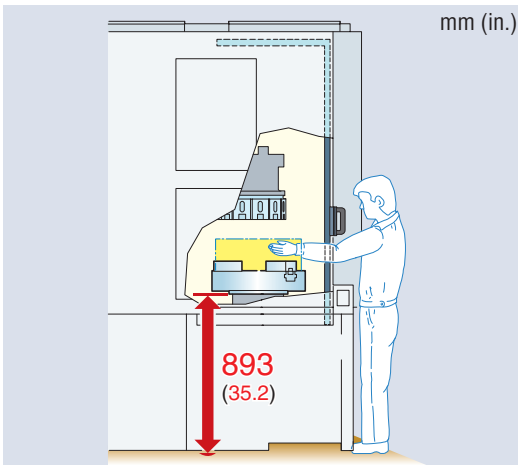
Specifications	Workpiece material and chip size							
	Long	Steel		Powdery	Cast iron		Aluminum/non-ferrous metal	
		Short	Short		Short	Long	Short	Powdery
Hinge type+drum filter type <Consultation is required>	○	○	○	○	○	○	○	○
Hinge type	○	○	×	×	○	×	×	×
Scraper type	×	○	○	○	×	×	×	×

• 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

• 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.
 • The options table below 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.

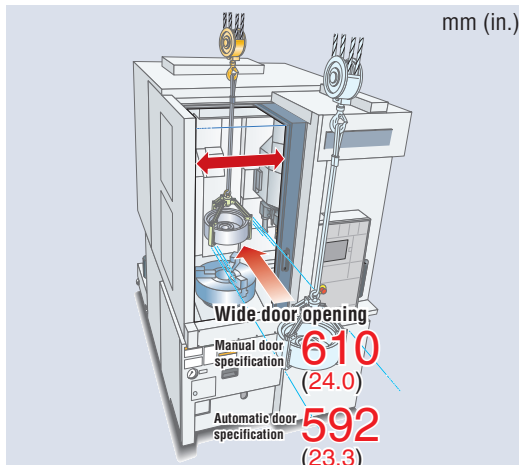
Convenience and safety

Approach to spindle



The spindle has been ideally located to ensure maximum operability. (The illustration shows the VL-553)

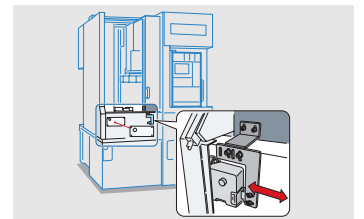
Increased efficiency



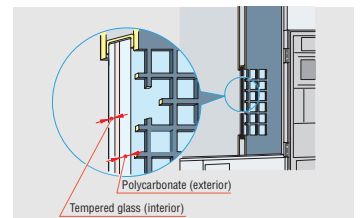
The top panel can be opened and closed, making setups easier when using cranes. (The illustration shows the VL-553MC)

Built for Safety

Door interlock system



Impact resistant viewing window



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

MAPPS IV

A New High-Performance Operating System
for CNC Lathes



● 10.4-inch operation panel

A new high-performance operating system that pursues ease of use, and combines the best hardware in the industry with the advanced application/network systems.

- ▶ Outstanding operability thanks to upgraded hardware
- ▶ New functions for easier setup and maintenance
- ▶ In the event of trouble, DMG MORI SEIKI's remote maintenance service solves it smoothly

MORI-NET Global Edition Advance **OP**

Outstanding operability

Vertical soft-keys

The vertical soft-keys can be used as option buttons or shortcut keys to which you can assign your desired screens and functions, allowing you to quickly display the screen you want.

Keyboard

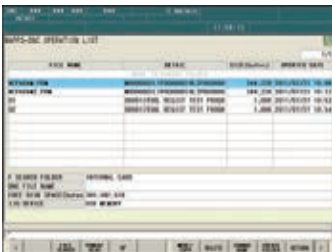
A PC-type keyboard is used as standard, making key input easy.



Program management

External memory DNC operation function **OP**

DNC operation can be performed using programs stored in an external memory (USB or memory card). It is also possible to transfer data between an external memory and the NC memory and delete/copy/rename programs in an external memory.



- Macro programs such as GOTO, IF and WHILE cannot be used in DNC operating programs.

Improved ease of setup

File display and Memo function

Data necessary for setups such as operating instructions, drawing data and text data can be viewed on MAPPS. Text data is editable.



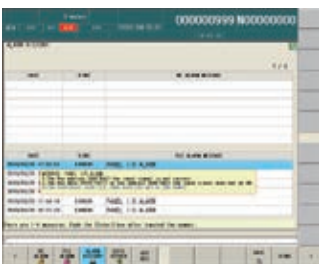
Viewable file types

- PDF • TXT (editable)
- Any file that can be displayed with Internet Explorer is available

Improved ease of maintenance

Alarm help function

When an alarm occurs, MAPPS identifies the cause of the trouble and provides solutions.



Network application systems

Remote Maintenance/Machine Operation Monitoring Service

MORI-NET Global Edition Advance **OP**

This system enables access to customer support services as well as high-speed, large-capacity data transmission between the machines and Service Center, by using a network that combines the internal LAN and the Internet.

- Download data
- Remote alarm support
- Transmission of alarm information

Application for Data Transmission

MORI-SERVER [Standard features]

This enables high-speed transfer of programming data between your office computer and machine, reducing the lead time of pre-machining processes.

Machine specifications

Item		VL-253A1	VL-253A2
Capacity	Swing over bed	mm (in.)	600 (23.6)
	Max. turning diameter	mm (in.)	450 (17.7)
	Standard turning diameter	mm (in.)	355 (13.9)
	Max. turning length	mm (in.)	10-inch chuck: 463 (18.2) 12-inch chuck: 448 (17.6)
Travel	X-axis travel	mm (in.)	255 <225+30> (10.0 <8.9+1.2>)
	Z-axis travel	mm (in.)	470 (18.5)
Spindle	Spindle speed range	min ⁻¹	30—3,000
	Number of spindle speed ranges		1
	Type of spindle nose		JIS A2-8
	Spindle bearing inner diameter	mm (in.)	130 (5.1)
Turret	Number of tool stations		8 [12]
	Shank height for square tool	mm (in.)	25 (1)
	Shank diameter for boring bar	mm (in.)	Max. 50 (2)
	Turret indexing time <1-station>	s	0.3
Feedrate	Rapid traverse rate	mm/min (ipm)	X: 24,000 (944.9) Z: 20,000 (787.4)
	Jog feedrate	mm/min (ipm)	0—5,000 (0—197.0) <20 steps>
Motor	Spindle drive motor <30 min/cont>	kW (HP)	18.5/15 (24.7/20) [22/18.5 (30/24.7)]
	Feed motor <X-/Z-axis>	kW (HP)	3.0/7.0 (4/9.3)
Power sources	Electrical power supply <cont>	<small>194261B02</small> kVA	32.4 [36.6 <high output>]
	Compressed air supply	MPa (psi), L/min (gpm)	— (a compressed air supply may be needed, depending on options and peripheral equipment)
Tank capacity	Coolant tank capacity	L (gal.)	217 (57.3)
Machine size	Machine height <from floor>	mm (in.)	2,443 (96.2)
	Floor space <width×depth>	mm (in.)	1,599×3,113 (63.0×122.6)
	Mass of machine	kg (lb.)	7,500 (16,500)

[] Option JIS: Japanese Industrial Standard

- 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.
- 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
- When the tool tip air blow is regularly used, air supply of more than 300 L/min (79.2 gpm) is separately required.
- The information in this catalog is valid as of March 2012.

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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- If you have any questions regarding the content, contact our sales representative.
- The information in this catalog is valid as of October 2013. 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 SEIKI is not responsible for differences between the information in the catalog and the actual machine.

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Chiba Campus		