Mazak

QUICK TURN 200, 250

SERIES



Advanced features of the MAZATROL SmoothC and SmoothG CNC

Fastest CNC in the world - Latest hardware and software for unprecedented speed and precision

Operation control panel layout and process support home screen designed for unsurpassed ease of operation

CNC system with the essentials for your programming requirements [MAZATROL SmoothC]

Smooth user graphical interface allows operation similar to your smart phone / tablet for unsurpassed ease of operation [MAZATROL SmoothG]

PC with Windows® 10 embedded OS [MAZATROL SmoothG]

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.



MAZATROL SMOOTH C

MAZATROL SMOOTH G

Standard CNC system varies by market.

Powerful, High-Rigidity Machines for Long, Large Diameter Workpieces
Specifications designed to meet your production requirements-turning, milling, Y-axis, and second spindle



QUICK TURN 100M SG [MAZATROL SmoothG]

Shown with optional chip conveyor and status light



QUICK TURN 100MSY [MAZATROL SmoothG]

Shown with optional chip conveyor and status light



QUICK TURN turning center series held in high regard by manufacturers around the world since 1981

QUICK TURN 200,250 SERIES

- Wide variety of available integral / spindle motor specifications, from standard spindle to high torque spindle for heavy duty machining.
- Bolt-on tool holders and VDI turrets – both have a 5000 min^{-1} integral spindle / motor rotary tool spindle as standard equipment. 10000 min^{-1} rotary tool spindle is optionally available for the bolt-on tool holder turret.
- By orienting both spindles, high accuracy workpiece transfer from the main spindle to the second spindle can be performed for continuous machining (MS and MSY)
- Advanced automation technology such as gantry loader systems are available.

Extensive Series Range

From turning to milling, Y-axis and second spindles — a wide range of specifications are available to meet your production requirements including the 1000U version for long workpieces. Both the MAZATROL SmoothC and SmoothG CNC systems are available.

● : Standard ○ : Option — : N/A

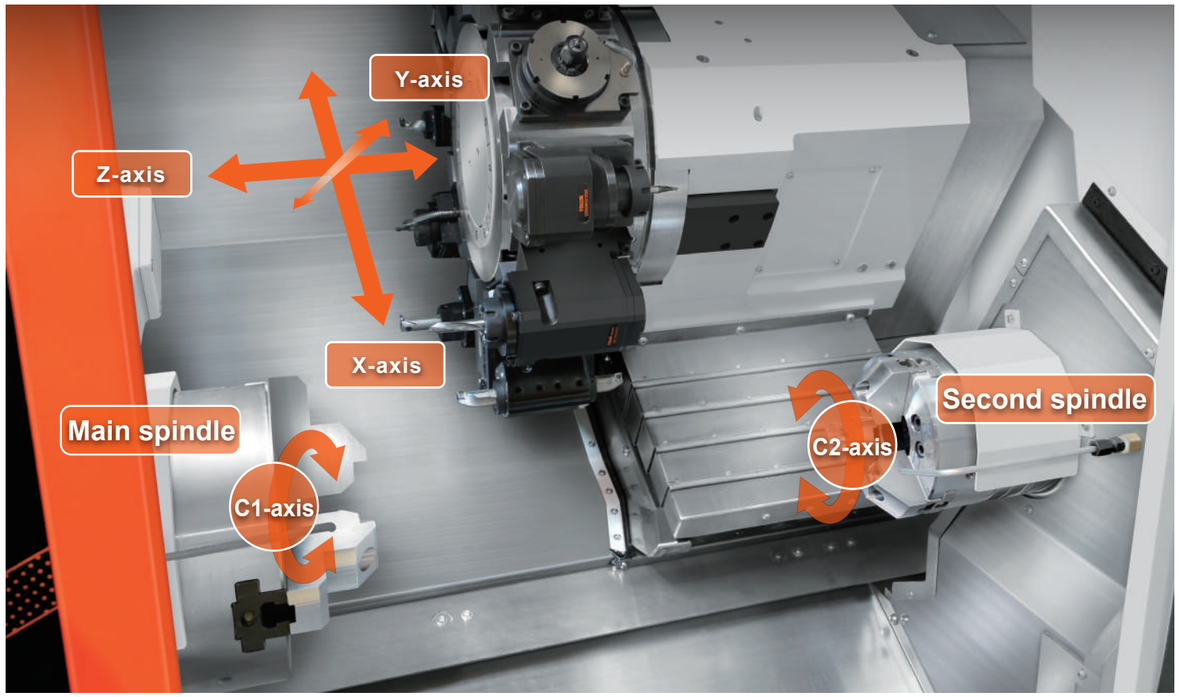
		Max. swing	Turret			Milling function	Second spindle	Y-axis	Tailstock	Universal
			Bolt-on	VDI	16D					
200 L *	250 L *	Φ660 mm	●	—	—	—	—	—	●	500U / 1000U
200MA L *	250MA L *	Φ660 mm	●	—	—	●	—	—	●	500U / 1000U
200MB	250MB	Φ695 mm	○	●	○	●	–	–	●	500U / 1000U
200MY	250MY	Φ695 mm	○	●	○	●	—	●	●	500U / 1000U
200MS	250MS	Φ695 mm	○	●	○	●	●	—	—	500U
200MSY	250MSY	Φ695 mm	○	●	○	●	●	●	—	500U



QUICK TURN 200MA (500U)［MAZATROL SmoothC］



QUICK TURN 250MSY (500U)［MAZATROL SmoothG］



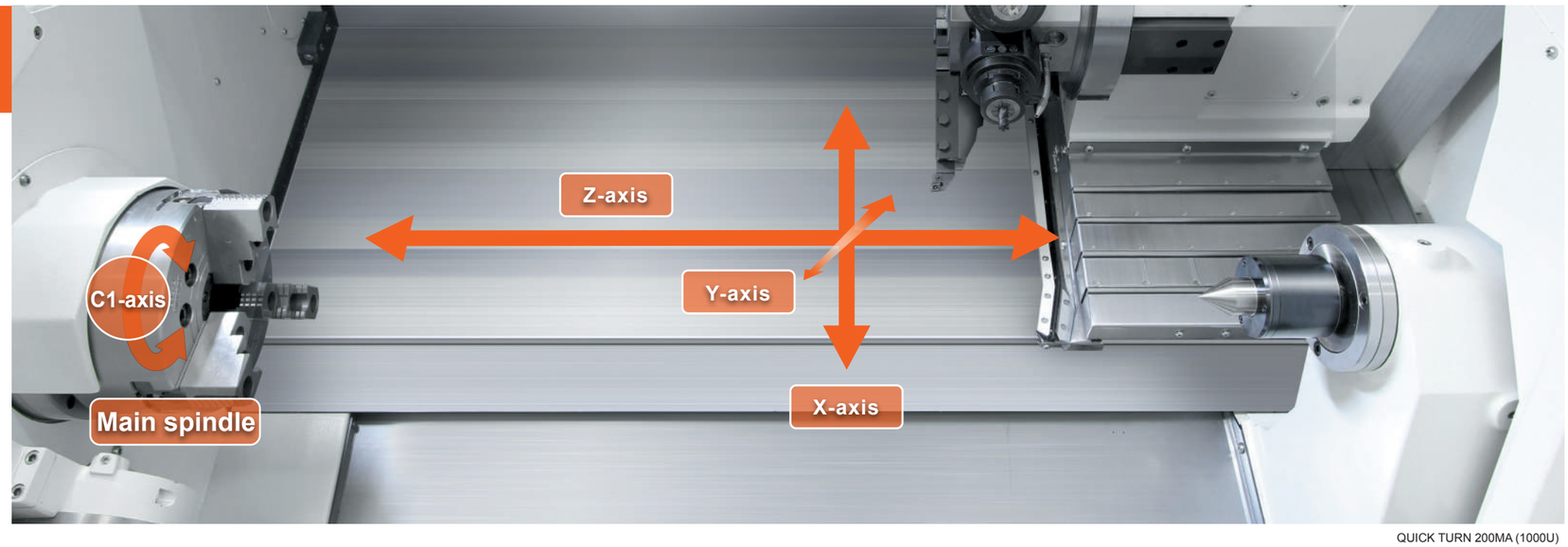
QUICK TURN 250MSY (500U)

1000U for long workpieces

200 L, 250 L, 200MA L, 250MA L, 200MB, 250MB, 200MY, 250MY



QUICK TURN 200MA (1000U)［MAZATROL SmoothG］



QUICK TURN 200MA (1000U)

* L = manufactured in Liaoning, China

Higher Productivity

Main spindle

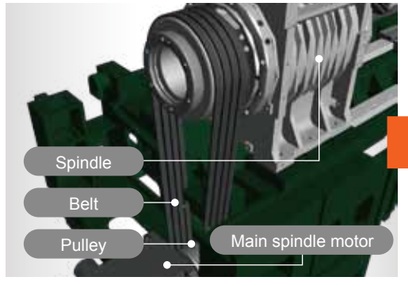
QUICK TURN 200, 250 SERIES

Integral spindle / motor ensures high productivity and high accuracy



QUICK TURN 200, 250 series have different specifications of the integral spindle / motor to meet various machining requirements. Thanks to its design, vibration is minimized during high-speed operation to ensure exceptional surface finishes and maximum tool life. Since no transmission with belts, pulleys or gears is used,the higher efficiency of the integral spindle / motor delivers more power to the tool tip to be used for cutting. The spindle C-axis can be indexed by 0.0001°increments and can also perform contouring (standard equipment for machines with milling function).

Conventional belt drive



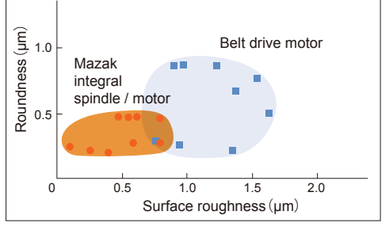
Vibration increases with faster speed

QUICK TURN Integral spindle / motor



Minimum vibration produced by integral spindle / motor

Example results of roundness and surface roughness

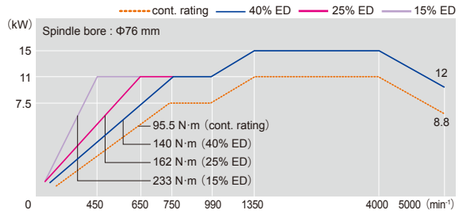


Wide range of spindle power specifications to meet your workpiece requirements

QUICK TURN 200

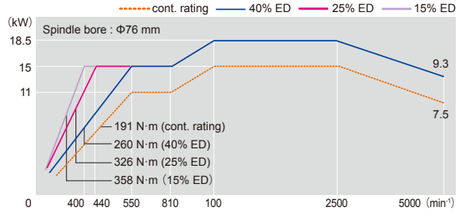
Standard 15.0 kW spindle

Speed	5000 min⁻¹
Output (40% ED / cont. rating)	AC 15.0 kW / 11.0 kW
Torque (15% ED)	233 N•m
Chuck size	8"
Spindle bore	Φ76 mm
Bar work capacity	Φ65 mm



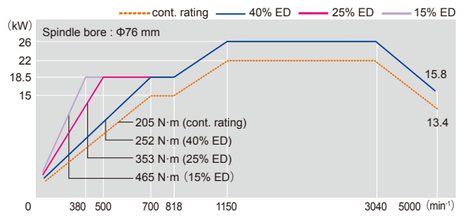
18.5 kW spindle (option)

Speed	5000 min⁻¹
Output (40% ED / cont. rating)	AC 18.5 kW / 15.0 kW
Torque (15% ED)	358 N•m
Chuck size	8"
Spindle bore	Φ76 mm
Bar work capacity	Φ65 mm



26.0 kW spindle (option on MS, MY and MSY)

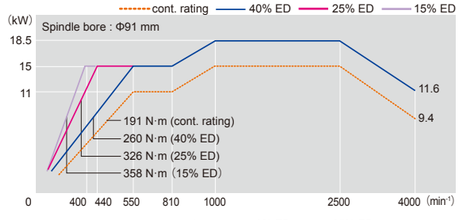
Speed	5000 min⁻¹
Output (40% ED / cont. rating)	AC 26.0 kW / 22.0 kW
Torque (15% ED)	465 N•m
Chuck size	8"
Spindle bore	Φ76 mm
Bar work capacity	Φ65 mm



QUICK TURN 250

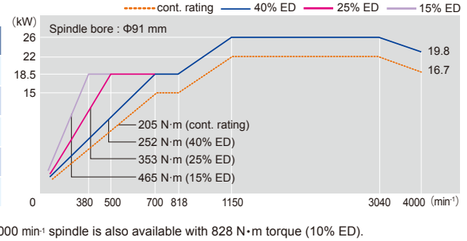
Standard 18.5 kW spindle

Speed	4000 min⁻¹
Output (40% ED / cont. rating)	AC 18.5 kW / 15.0 kW
Torque (15% ED)	358 N•m
Chuck size	10"
Spindle bore	Φ91 mm
Bar work capacity	Φ80 mm



26.0 kW spindle (option)

Speed	4000 min⁻¹
Output (40% ED / cont. rating)	AC 26.0 kW / 22.0 kW
Torque (15% ED)	465 N•m
Chuck size	10"
Spindle bore	Φ91 mm
Bar work capacity	Φ80 mm



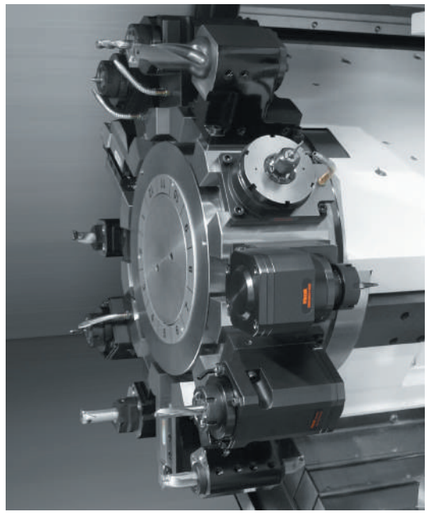
High torque 26.0 kW spindle (option) The 4000 min⁻¹ spindle is also available with 828 N•m torque (10% ED).

Bar work capacity depends on chuck and cylinder specifications.

Higher Productivity

Available Turrets

Bolt-on turret



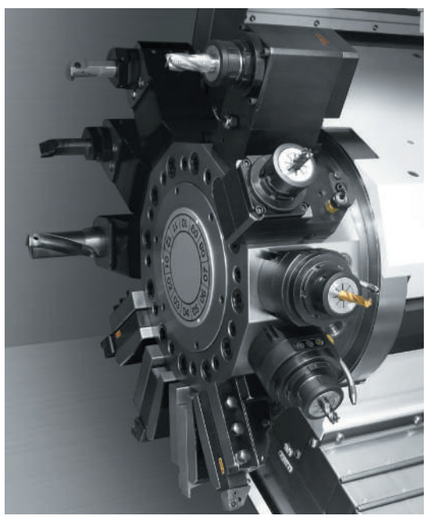
The 12 position drum turret is designed for the minimum interference. By using non-lift rotary indexing, high speed clamping / unclamping can be performed without interference. Additionally, thanks to random selection / shortest path indexing, chip-to-chip time when changing tools is extremely fast.

In case more than 12 tools are required, a 16 position drum turret is optionally available. (MY, MS and MSY)

Type of Tool holder		Standard 12 position drum bolt-on turret	16 position drum bolt-on turret*
Tool capacity		12 tools	16 tools
OD turning, facing tool		□25 mm	□20 mm
Boring bar size		Φ40 mm	Φ32 mm
Turret indexing time	1 step	0.25 s	0.22 s
	Full steps	0.6 s	0.64 s

* Option

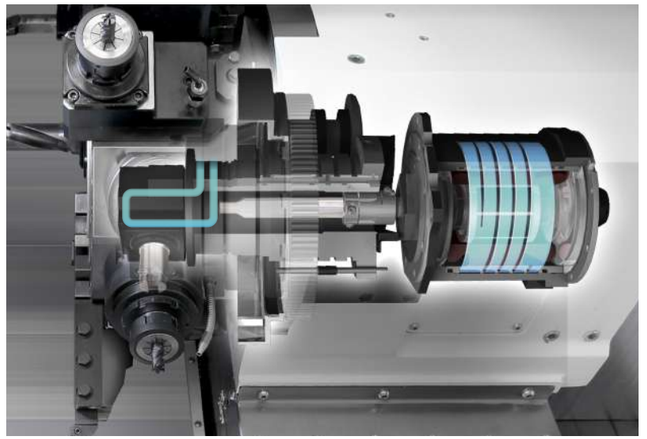
VDI turret



VDI tool holders can quickly and easily be mounted or removed to / from the turret by turning one bolt. Milling holders can be mounted at any turret position for smooth tool setups.

Type of tool holder		VDI
Tool capacity		12 tools
OD turning, facing tool		□25 mm x 150 mm
Boring bar size		Φ40 mm
Turret indexing time	1 step	0.25 s
	Full steps	0.6 s

Smooth Mill Drive - Turret milling spindle integral spindle / motor

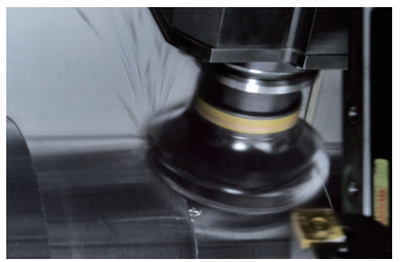


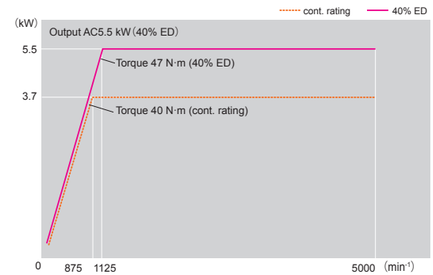
An integral spindle / motor is utilized for the turret milling spindle to minimize vibration for high accuracy. Temperature controlled cooling oil is circulated around the spindle bearings and housing to minimize any thermal change to the spindle.
Standard 5000 min^{-1} and optional high speed 10000 min^{-1} meet the requirements of a wide variety of materials

Rotary tool specification	Bolt-on		VDI
Speed	5000 min^{-1}	10000 min^{-1}	5000 min^{-1}
Output (40% ED / cont. rating)	5.5 kW / 3.7 kW		
Torque	47 N·m (40% ED)	30 N·m (25% ED)	47 N·m (40% ED)

5000 min^{-1} milling specification

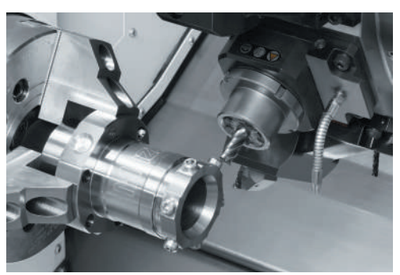
Standard for bolt-on tool holder and VDI turret

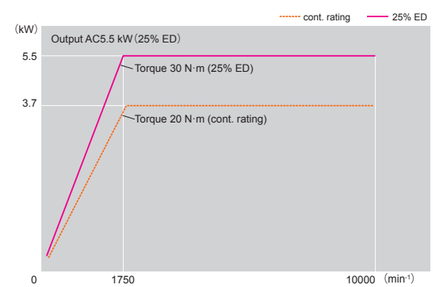




10000 min^{-1} milling specification

Bolt-on tool holder turret only OPTION



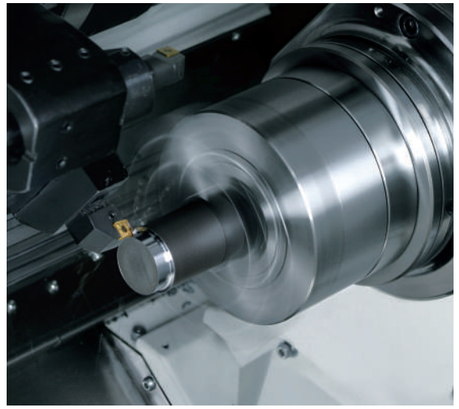


Higher Productivity

Second spindle

200MS, 250MS, 200MSY, 250MSY

By orienting both spindles, high accuracy workpiece transfer from the main spindle to the second spindle can be performed for continuous machining (MS and MSY)

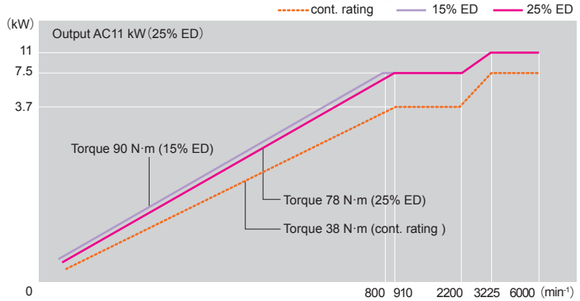


The second spindle also utilizes a high efficiency integral spindle / motor. Powerful turning and milling can be performed with the second spindle. C-axis indexing by 0.0001°increment is standard and contouring is optionally available.

Second spindle (MS, MSY) specification

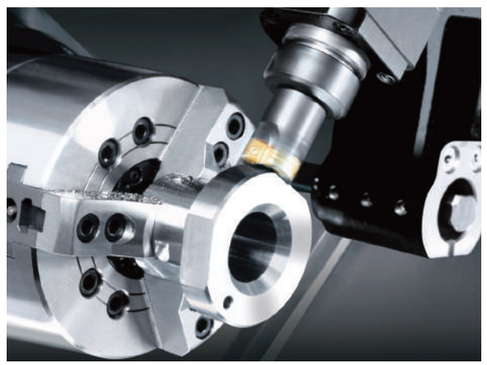
Speed	6000 min^{-1}
Output	11 kW [25% ED] / 7.5 kW [cont. rating]
Torque	90 N·m
Chuck size	6”

Second spindle output / torque diagram

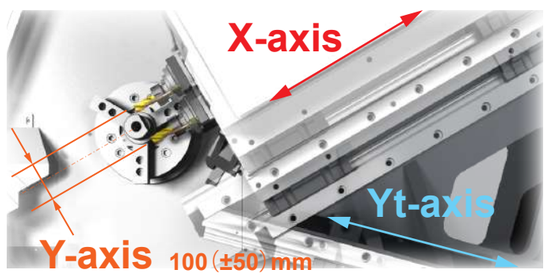


Y-axis

200MY, 250MY, 200MSY, 250MSY

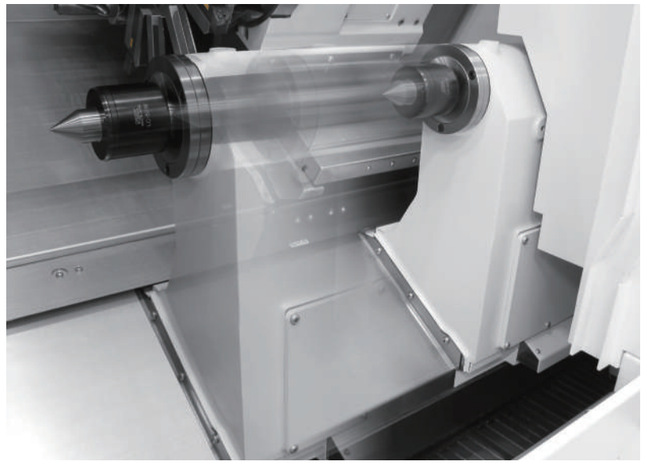


Double slide Y-axis enables multi-tasking machining of large workpieces in a compact machine. The Y-axis has a 100 (±50) mm stroke for the machining of complex and large workpieces.



NC tailstock

200 L*, 250 L*, 200MA L*, 250MA L*, 200MB, 250MB, 200MY, 250MY



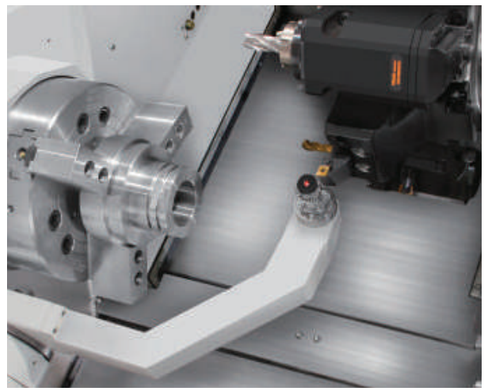
The tailstock travel and thrust is controlled by a servo motor. The operator can set the tailstock position on the setup screen and move the tailstock to the correct position by 0.1 kN increments using a menu-key or M-code. The low thrust force ensures high accuracy turning even for small diameter shaft workpieces.

Machines	Tailstock center
500U	MT No.5 dead center
1000U	MT No.4 built-in center

Operation is much easier compared to manual carriage movement or hydraulic / pneumatic pushing methods.

Tool eye

200 L*, 250 L*, 200MA L*, 250MA L*, 200MB, 250MB 200MY, 250MY, 200MS, 250MS, 200MSY, 250MSY



The tool eye can be programmed for automatic tool measurement and compensation as well as inspection for tool breakage. In addition, since tool setup is done by simply bringing the tool tip into contact with the tool eye, tool setup time is considerably reduced.

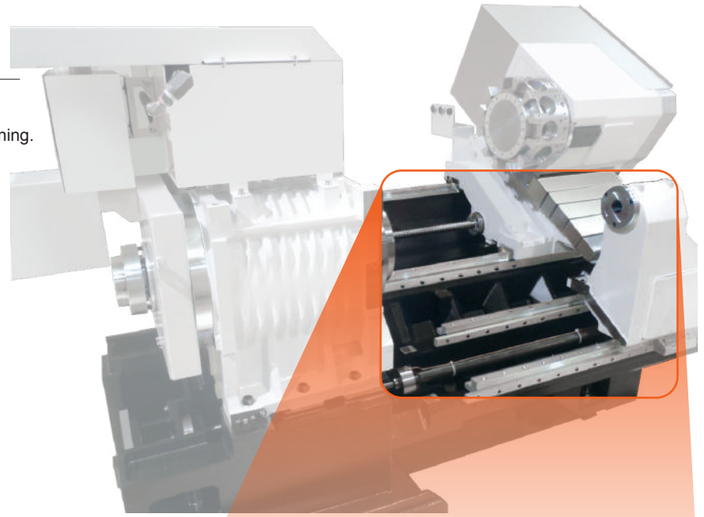
* L = manufactured in Liaoning, China

Higher Accuracy

Machine designed for higher accuracy

High rigidity

The rigid machine construction is designed to ensure high precision during heavy duty machining.



Linear roller guides on all axes

Linear roller guides are utilized on all axes by the QUICK TURN 200, 250 series for high speed, high rigidity and a long service life.



Mazak standard positioning accuracy – 2 times better than the ISO standard

Difference in positioning accuracy in both directions (QUICK TURN 200, 250)		ISO	Mazak standard
Positioning accuracy	X-axis	22 μm	**11 μm**
	Y-axis	22 μm	**11 μm**
	Z-axis	22 μm	**11 μm**
	C-axis (Main spindle)	63 s	**20 s**

Optional Equipment

Automatic opening / closing front door

The automatic opening / closing front door operates in 3 speed steps. If an operator inadvertently places a hand in the opening, operation will automatically stop when the door contacts his hand.



Steady rest

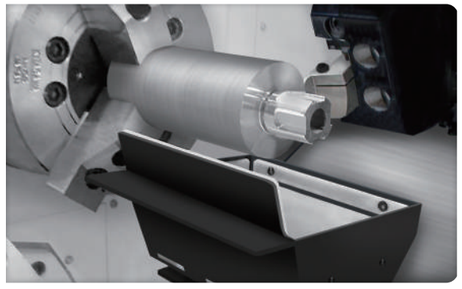
A steady rest provides safe machining of long workpiece. It can be moved automatically by connecting to the turret unit by a coupling pin.

Machines	Steady rest	Max. workpiece diameter
1000U (200 L*, 250 L*, 200MA L*, 250MA L*, 200MB, 300MY, 250MY)	SMW SLUX3.1M	Φ20～165 mm
	SMW SLUA3.1M	Φ22～150 mm



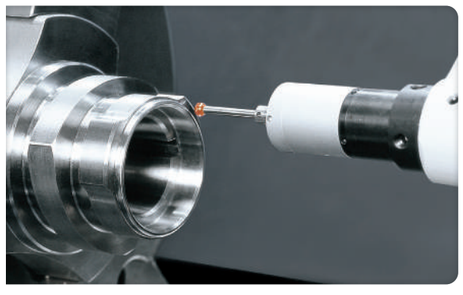
Auto parts catcher

Auto parts catcher automatically moves workpieces to outside of the machine. By using a bar feeder and work conveyor, automatic operation can be performed.



Automatic workpiece measurement

Touch sensor on turret automatically measures workpiece I.D., O.D., and step height, and compensates tools to ensure high machining accuracy.



* L = manufactured in Liaoning, China

Automation

Easy-to-programme robot cell integrated with Mazak's Smooth CNC, ideal for small to medium lot sizes. Automated robot arm for loading and unloading of workpieces. Ideal for applications that require lights-out unmanned running overnight or at weekends, both the machine tool and the robot are controlled from the Mazak Smooth CNC, which provides a seamless interface and extremely fast set-up.

Operation

Allows extended unmanned operation, easy set-up and operational fexibility, whilst leaving access to the machine unrestricted for manual operation when required.

Avalibility

Available over a range of QUICK TURN Smooth turning machines with SmoothG control.

Installation

Quick and easy installation due to integrated and modular design.



Benefits

- Increase revenue
- Decreased labour costs
- Higher gross margins
- Fast reaction to market fluctuations
- Health and safety benefits
- Lower inventory
- Higher productivity
- Increased utilisation
- Multi-control of CNC machines

Environmentally Friendly

Designed with environmental considerations

The environment and our impact on natural surroundings have always been important concerns of Yamazaki Mazak.
This is shown by the fact that all factories in Japan where Mazak machine tools are produced are ISO 14001 certified, an international standard confirming that the operation of our production facilities does not adversely affect air, water or land.

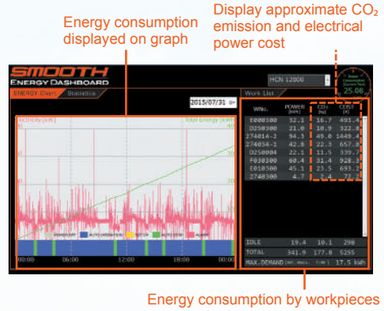
Automatic-off LED worklight and CNC screen is standard equipment for the QUICK TURN 200, 250 series.
The chip conveyor automatically stops operation 5 minutes after cycle completion for reduced electrical power consumption.

High efficiency lubrication system delivers the optimum amount of grease to the linear roller guides and ball screws with lower lubricant consumption.
The grease lubrication system eliminates tramp oil for extended service life of coolant.

Energy Dashboard (MAZATROL SmoothG)

OPTION

The Energy Dashboard provides a convenient visual monitoring of energy consumption and analysis.



Process screen display

- Total energy consumption (of workpiece in operation)
- Current energy consumption





QUICK TURN 250MSY

MAZATROL CNC System

QUICK TURN 200 L*, 250 L*, 200 MA*, 250MA L*

MAZATROL SMOOTH C

Simplified display and key input operation
Following traditional conversational MAZATROL programming, this new system is designed for ease of operation by simplified key operation.



- USB interface
  Transfer program and tool data
- SD card slot
  Transfer program and tool data
- Menu keys under the display can be pressed to go to other pages for program data input and editing
- Compact keypad with unique design for ease of input
- Home screen key goes to the home screen from any display

Home screen

The home screen displays overall process status in an easy to understand manner.

Comprehensive status display on one screen

Machining
Displays axes in operation and load on motors.

Programming
Displays the simulation time and machining time.

Tool data
Displays status of tool layout.

Set up
Displays status of workpiece coordinate setting.

Maintenance
Overview of the status of items requiring maintenance.



MAZATROL conversational programming

MAZATROL interactive programming uses conversational language and automatically determines cutting conditions, M codes, and G codes. Even a beginner operator can quickly make programs.



3D Machine Model

A 3D machine model is available to perform program interference checks with other CAD / CAM simulation software.
(MAZATROL SmoothG, MAZATROL SmoothC)



* L = manufactured in Liaoning, China

MAZATROL CNC System

QUICK TURN 200MB, 250MB, 200MSY, 250MSY, 200MY, 250MY

MAZATROL SMOOTH G

The seventh generation MAZATROL CNC system
— the core of Smooth Technology

From setup to machining
— designed for unsurpassed ease of operation



19" touch panel

Touch panel operation
— similar to your smartphone or tablet

USB port

Interface for peripheral equipment of USB-1.0+2.0 standard.

SD card slot

Transfer program and tool data.

Operation switches

Large switches
— color changes from orange to green when turned on.

Dials

For frequently-used axes selection and feedrate changes.

New interface with touch operation ensures convenient data processing
— programming, confirmation, editing, and tool data registration

Process home screens

Five different home process screens — each home screen displays the appropriate data in an easy-to-understand manner. Icons can be touched in each process display for additional screen displays.

Programming



Tool data



Setup



Machining



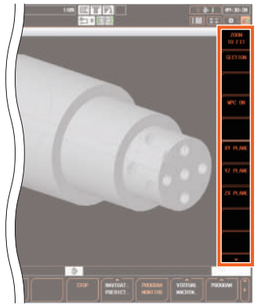
Maintenance



Pop-up windows

Values and items can easily be input/selected on pop-up windows.

Side menu



List menu



Screen key board

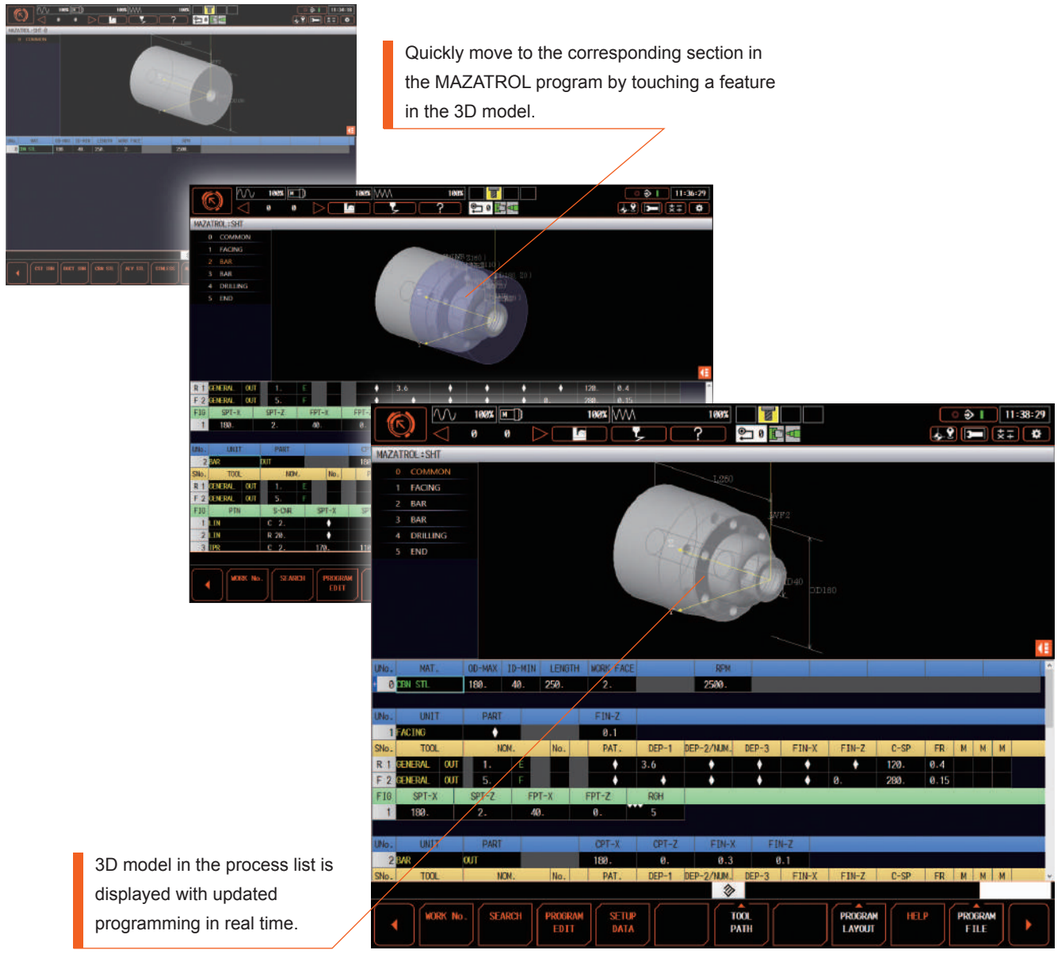


Ease of Programming

Visible programming screen

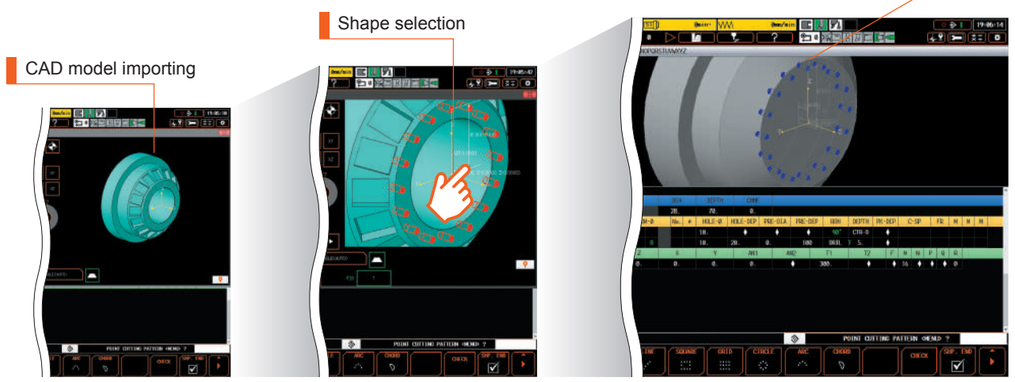
QUICK MAZATROL

MAZATROL program, unit list and 3D workpiece shape are linked to each other. After defining a machining unit in a MAZATROL program, the 3D shape is immediately displayed to easily and quickly check for any programming error.



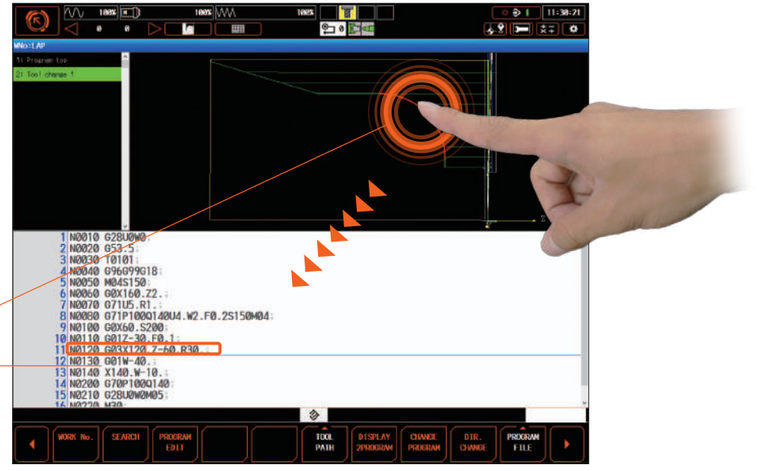
3D ASSIST

Workpiece and coordinates data can be imported from 3D CAD data to a MAZATROL program. No coordinate value inputs are required. Can reduce input errors and time for program checking.



QUICK EIA

Program, process list and 3D tool path display are linked to each other. Visible search on touch screen can reduce the time for program checking.



Ergonomics

Ergonomic design for convenient operation

Front cover

Wide top cover opening provides excellent access for overhead crane

500U opening：627 mm

1000U opening：1177 mm（2-axis, MA）

1000U opening：1312 mm（MB, MS, MY, MSY）



QUICK TURN 200MA (500U)
[MAZATROL SmoothC]

QUICK TURN 200MA (1000U)
[MAZATROL SmoothG]

Storage shelf

MAZATROL SMOOTHC

Rotating operation panel

The operation panel easily rotates to each operator's preferred position.

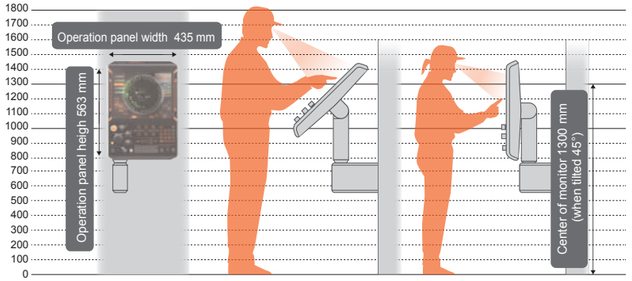


MAZATROL SMOOTHG

Adjustable CNC Touch Panel

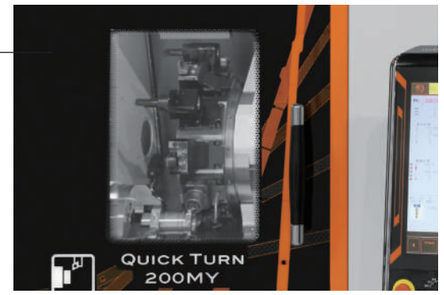
Operation touch panel can be tilted to the optimum position for any operator's height to ensure ease of operation.





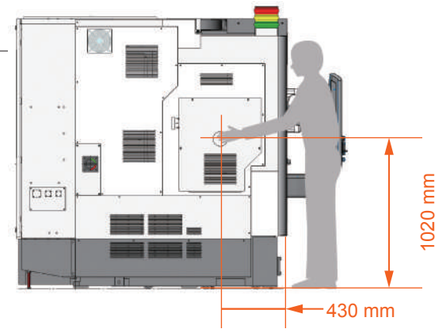
Large window

Large window is located on the operator door for convenient monitoring of machine operation.



Convenient setup

The distance from the front cover to the spindle center line is small for convenient setup and workpiece loading / unloading.



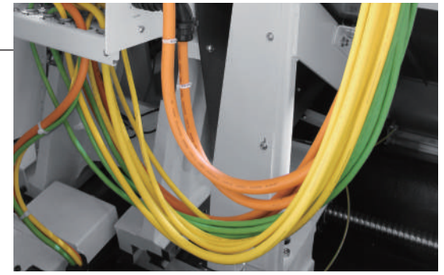
Ease of maintenance

All the items that require frequent access, such as hydraulic and pneumatic valves and lubrication inlets, are at one central location for convenient daily maintenance.



Color-coded cables

Electric cables are color-coded for convenient maintenance.



MAZATROL SmoothC Specifications

	MAZATROL	EIA
Number of controlled axes	Simultaneous 4 axes	
Least input increment	0.0001 mm, 0.0000 1inch, 0.0001 deg	
High speed, high precision control	Shape compensation, Smooth corner control, Rapid traverse overlap	
Interpolation	Positioning (interpolation), Positioning (non-interpolation), Linear interpolation, Circular interpolation, Cylindrical interpolation, Polar coordinate interpolation, Constant lead threading, Re-threading *, Thread start point compensation *, Thread cut-speed override *, Synchronous tapping *	Positioning (interpolation), Positioning (non-interpolation), Linear interpolation, Circular interpolation, Spiral interpolation, Helical interpolation, Constant lead threading, Variable lead threading, Threading (C-axis interpolation type), Cylindrical interpolation *, NURBS interpolation *, Polar coordinate interpolation *, Re-threading *, Thread start point compensation *, Thread cut-speed override *, Synchronous tapping *
Feedrate	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Dwell (time / rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate limitation, Variable acceleration control, G0 slope constant *	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Inverse time feed, Dwell (time / rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate limitation, Time constant changing for G1, Variable acceleration control, G0 slope constant *
Program registration	Number of programs : 256 (Standard) / 960 (Max.), Program memory：2 MB, Program memory expansion：8 MB*, Program memory expansion：32 MB*	
control display	Display：10.4", Resolution：VGA	
Spindle functions	S code output, Spindle speed limitation, Spindle speed override, Spindle speed reaching detection, Multiple position orient, Constant surface speed, Spindle speed command with decimal digits, Synchronized spindle control, Spindle speed range setting	
Tool functions	Number of tool offset : 4000, T code output for tool number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)	Number of tool offset : 4000, T code output for tool number, T code output for group number,Tool life monitoring (time), Tool life monitoring (number of machined workpieces)
Miscellaneous functions	M code output, Simultaneous output of multiple M codes	
Tool offset functions	Tool position offset, Tool length offset, Tool diameter / tool nose R offset, Tool nose shape offset, Tool wear offset, Fixed amount offset, Simple wear offset	Tool position offset, Tool length offset, Tool diameter / tool nose R offset, Tool wear offset, Fixed amount offset, Simple wear offset
Coordinate system	Machine coordinate system, Work coordinate system, Local coordinate system, MAZATROL coordinate system, Additional work coordinates (300 set)	
Machine functions		Polygonal machining *, Hobbing*
Machine compensation	Backlash compensation, Pitch error compensation	
Protection functions	Emergency stop, Interlock, Pre-move stroke check, Barrier	
Automatic operation mode	Memory operation	Memory operation, Tape operation, MDI operation, Ethernet operation *
Automatic operation control	Optional stop, Dry run, Manual handle interruption, MD interruption, TPS, Restart, Single process, Machine lock	Optional block skip, Optional stop, Dry run, Manual handle interruption, MD interruption, TPS, Restart, Restart2, Collation stop, Machine lock
Manual measuring functions	Tool-setting data teach, Tool length teach, Touch sensor coordinates measurement, Workpiece offset measurement, Tool eye measurement	Tool-setting data teach, Tool length teach, Tool offset teach, Touch sensor coordinates measurement, Workpiece offset measurement, Tool eye measurement
Automatic measuring functions	Workpiece measurement, Touch sensor orientation confirmation, Tool eye auto tool measurement, Tool breakage detection	
Interface	PROFIBUS-DP*, EtherNet/IP*, CC-Link*	
Card interface	SD card interface, USB	
EtherNet	10 M / 100 M / 1 Gbps	

* Option

MAZATROL SmoothG Specifications

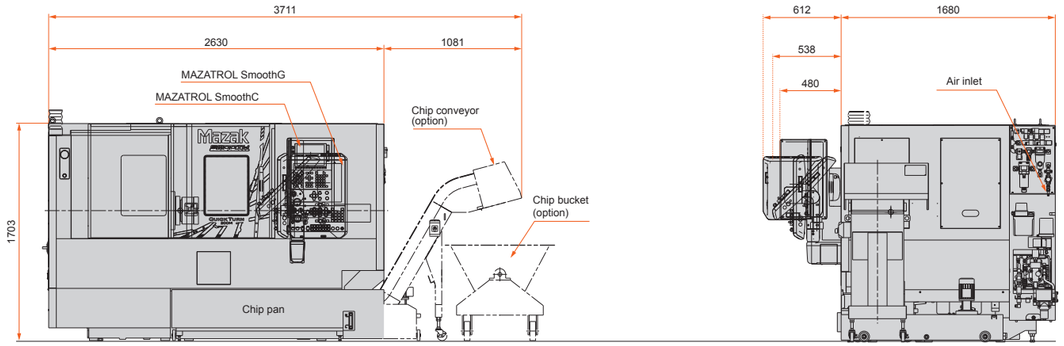
	MAZATROL	EIA
Number of controlled axes	Simultaneous 4 axes	
Least input increment	0.0001 mm, 0.00001 inch, 0.0001 deg	
High speed, high precision control	Shape compensation, Smooth corner control, Rapid traverse overlap	
Interpolation	Positioning (interpolation), Positioning (non-interpolation), Linear interpolation, Circular interpolation, Cylindrical interpolation, Polar coordinate interpolation, Constant lead threading, Re-threading *, Thread start point compensation *, Thread cut-speed override *, Synchronous tapping *	Positioning (interpolation), Positioning (non-interpolation), Linear interpolation, Circular interpolation, Spiral interpolation, Helical interpolation, Constant lead threading, Variable lead threading, Threading (C-axis interpolation type), Cylindrical interpolation *, NURBS interpolation *, Polar coordinate interpolation *, Re-threading *, Thread start point compensation *, Thread cut-speed override *, Synchronous tapping *
Feedrate	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Dwell (time / rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate limitation, Variable acceleration control, G0 slope constant *	Rapid traverse, Cutting feed, Cutting feed (per minute), Cutting feed (per revolution), Inverse time feed, Dwell (time / rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate limitation, Time constant changing for G1, Variable acceleration control, G0 slope constant *
Program registration	Number of programs : 256 (Standard) / 960 (Max.), Program memory：2 MB, Program memory expansion：8 MB*, Program memory expansion：32 MB*	
control display	Display：19" touch panel, Resolution：SXGA	
Spindle functions	S code output, Spindle speed limitation, Spindle speed override, Spindle speed reaching detection, Multiple position orient, Constant surface speed, Spindle speed command with decimal digits, Synchronized spindle control, Spindle speed range setting	
Tool functions	Number of tool offset : 4000, T code output for tool number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)	Number of tool offset : 4000, T code output for tool number, T code output for group number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)
Miscellaneous functions	M code output, Simultaneous output of multiple M codes	
Tool offset functions	Tool position offset, Tool length offset, Tool diameter / tool nose R offset, Tool nose shape offset, Tool wear offset, Fixed amount offset, Simple wear offset	Tool position offset, Tool length offset, Tool diameter / tool nose R offset, Tool wear offset, Fixed amount offset, Simple wear offset
Coordinate system	Machine coordinate system, Work coordinate system, Local coordinate system, MAZATROL coordinate system, Additional work coordinates (300 set)	
Machine functions		Polygonal machining *, Hobbing *
Machine compensation	Backlash compensation, Pitch error compensation	
Protection functions	Emergency stop, Interlock, Pre-move stroke check, Barrier, SAFETY SHIELD (automatic mode)*, VOICE ADVISER	
Automatic operation mode	Memory operation	Memory operation, Tape operation, MDI operation, Ethernet operation *
Automatic operation control	Optional stop, Dry run, Manual handle interruption, MD interruption, TPS, Restart, Single process, Machine lock	Optional block skip, Optional stop, Dry run, Manual handle interruption, MDI interruption, TPS, Restart, Restart2, Collation stop, Machine lock
Manual measuring functions	Tool-setting data teach, Tool length teach, Touch sensor coordinates measurement, Workpiece offset measurement, Tool eye measurement	Tool-setting data teach, Tool length teach, Tool offset teach, Touch sensor coordinates measurement, Workpiece offset measurement, Tool eye measurement
Automatic measuring functions	Workpiece measurement, Touch sensor orientation confirmation, Tool eye auto tool measurement, Tool breakage detection	
Interface	PROFIBUS-DP *, EtherNet/IP*, CC-Link*	
Card interface	SD card interface, USB	
EtherNet	10 M / 100 M / 1 Gbps	

* Option

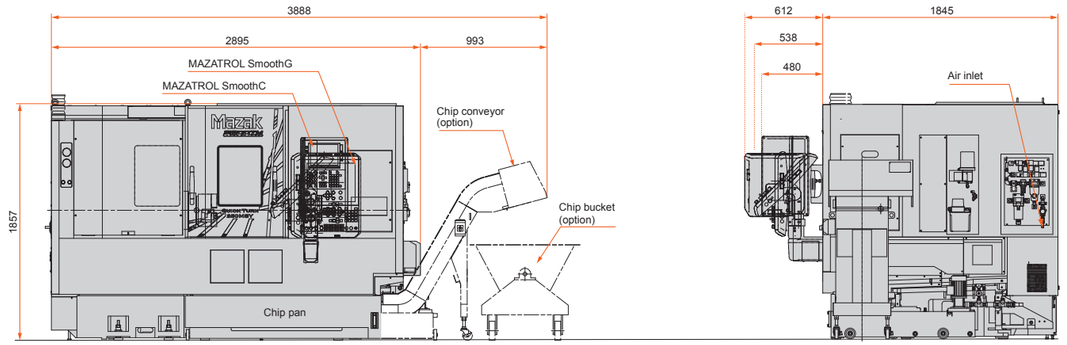
Machine Dimensions

Unit : mm

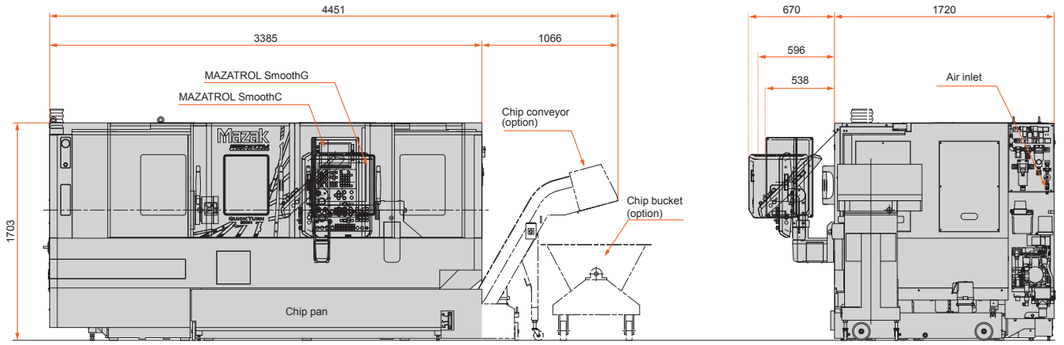
QUICK TURN 200 L*, 250 L*, 200MA L*, 250MA L* (500U)



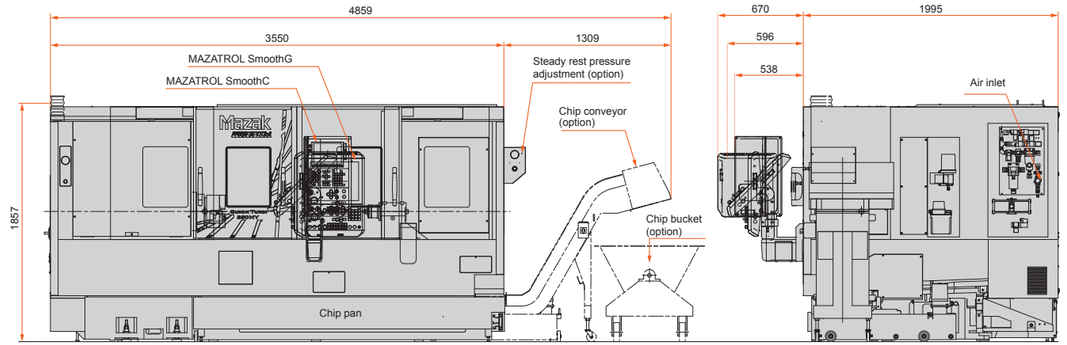
QUICK TURN 200MS, 250MS, 200MSY, 250MSY (500U)



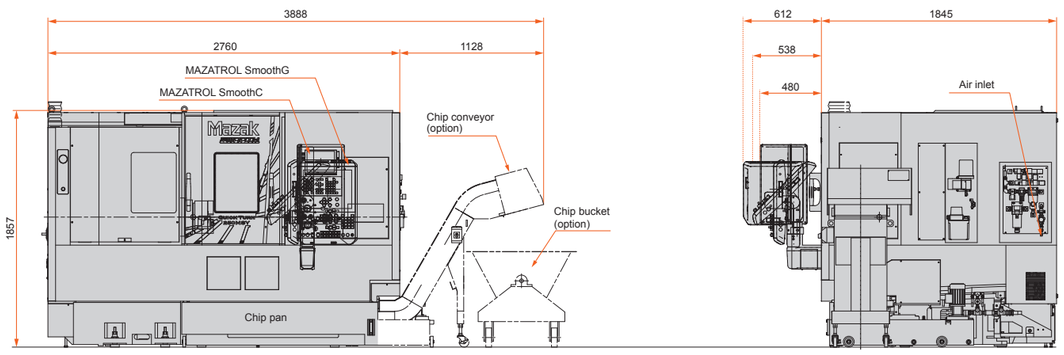
QUICK TURN 200 L*, 250 L*, 200MA L*, 250MA L* (1000U)



QUICK TURN 200MB, 250MB, 200MY 250MY (1000U)



QUICK TURN 200MB, 250MB, 200MY, 250MY (500U)



* L = manufactured in Liaoning, China

Standard Machine Specifications

QUICK TURN 200 L*, 200MA L*, 200MB, 200MY, 200MS, 200MSY

		200 L*	200MA L*	200MB	200MY	200MS	200MSY
Universal		500U / 1000U				500U	
Capacity	Max. swing	Φ660 mm		Φ695 mm			
	Max. machining diameter	Φ350 mm	Φ360 mm	Φ380 mm			
	Max. machining length	541 mm / 1063 mm	535 mm / 1055 mm	541 mm / 1047 mm	555 mm / 1020 mm	—	
	Distance between chuck jaws top faces *1	—				575 mm	
	Bar work capacity*1	Φ65 mm					
Travel	X-axis	195 mm	225 mm	234 mm			
	Z-axis	560 mm / 1105 mm	605 mm / 1125 mm	625 mm / 1090 mm		625 mm	
	Y-axis	—			100 mm (±50 mm)	–	100 mm (±50 mm)
	W-axis	—				585 mm	
Spindle	Chuck size	8"					
	Spindle speed*1	5000 min-1					
	Number of spindle speed ranges	1-Stepless					
	Spindle nose	A2-6					
	Spindle bore	Φ76 mm					
Second spindle	Chuck size	—				6"	
	Spindle speed*1	—				6000 min-1	
	Number of spindle speed ranges	—				1-Stepless	
	Spindle nose	—				A2-5	
	Spindle bore	—				Φ52 mm	
Turret	Turret type	12 position drum turret (Bolt-on)		12 position drum turret (VDI)	12 position drum turret (Bolt-on) [VDI : option]		
	Number of tools	12 tools					
	Turning tool shank size	25 mm					
	Boring bar shank diameter	Φ40 mm					
	Turret indexing time	0.25 sec / 1step					
Rotary tool spindle	Spindle speed	—	5000 min-1				
	Milling capacity	—	Drill：Φ20 mm				
		—	Endmill：Φ20 mm				
		—	Tap：M20 × 2.5				
Feedrate	X-axis	30000 mm/min					
	Z-axis	33000 mm/min					
	Y-axis	—			21000 mm/min	—	21000 mm/min
	C-axis	—	555 min-1				
	W-axis	—				30000 mm/min	
Tailstock	Tailstock stroke	550 mm / 1075 mm		565 mm / 1075 mm		—	
	Tailstock center	MT-No.5(dead center)				—	
Motors	Spindle motor	15 kW (20 HP) [40% ED] / 11 kW (15 HP) [cont. rating]					
	Rotary tool milling motor	5.5 kW (7.5 HP) [40% ED] / 3.7 kW (5 HP) [cont. rating]					
	Second spindle motor	—				11kW [25% ED] / 7.5kW [cont. rating]	
Power requirement	Electrical power requirements	26.3 kVA [30 min. rating] 20.6 kVA [cont. rating]	26.5 kVA [30 min. rating] 20.8 kVA [cont. rating]	26.8 kVA [30 min. rating] 21.1 kVA [cont. rating]	27.6 kVA [30 min. rating] 21.9 kVA [cont. rating]	27.1 kVA [30 min. rating] 21.4 kVA [cont. rating]	28.0 kVA [30 min. rating] 22.3 kVA [cont. rating]
	Air supply	—	0.5 MPa (5 kgf/cm^2), 320 L/min			0.5 MPa (5 kgf/cm^2), 340 L/min	
Coolant	Tank capacity*2	180 L / 270 L		190 L / 260 L			
Machine size	Machine height	1703 mm		1857 mm			
	Floor space requirement*3	2630 mm × 1680 mm / 3385 mm × 1720 mm		2760 mm × 1845 mm / 3550 mm × 1995 mm		2895 mm × 1845 mm	
	Weight*4	4500 kg / 5500 kg *1	4700 kg / 5700 kg *1	5500 kg / 6200 kg *1		5600 kg	5600 kg

* L = manufactured in Liaoning, China
*1 Depends on chuck specifications
*2 Chip pan specification
*3 CNC not included
*4 Chip pan specification. Coolant not included.

QUICK TURN 250 L*, 250MA L*, 250MB, 250MY, 250MS, 250MSY

		250 L*	250MA L*	250MB	250MY	250MS	250MSY
Universal		500U / 1000U				500U	
Capacity	Max. swing	Φ660 mm		Φ695 mm			
	Max. machining diameter	Φ380 mm	Φ360 mm	Φ380 mm			
	Max. machining length	510.5 mm / 1032.5 mm	504.5 mm / 1024.5 mm	512 mm / 1018 mm	526 mm / 991 mm	—	
	Distance between chuck jaws top faces *1	—				539.5 mm	
	Bar work capacity*1	Φ80 mm					
Travel	X-axis	210 mm	225 mm	234 mm			
	Z-axis	560 mm / 1105 mm	605 mm / 1125 mm	625 mm / 1090 mm		625 mm	
	Y-axis	—			100 mm (±50 mm)	—	100 mm (±50 mm)
	W-axis	—				585 mm	
Spindle	Chuck size	10"					
	Spindle speed*1	4000 min-1					
	Number of spindle speed ranges	1-Stepless					
	Spindle nose	A2-8					
	Spindle bore	Φ91 mm					
Second spindle	Chuck size	—				6"	
	Spindle speed*1	—				6000 min-1	
	Number of spindle speed ranges	—				1-Stepless	
	Spindle nose	—				A2-5	
	Spindle bore	—				Φ52 mm	
Turret	Turret type	12 position drum turret (Bolt-on)		12 position drum turret (VDI)	12 position drum turret (Bolt-on) [VDI : option]		
	Number of tools	12tools					
	Turning tool shank size	25 mm					
	Boring bar shank diameter	Φ40 mm					
	Turret indexing time	0.25 sec / 1step					
Rotary tool spindle	Spindle speed	—	5000 min-1				
	Milling capacity	—	Drill：Φ20 mm				
		—	Endmill：Φ20 mm				
		—	Tap：M20 × 2.5				
Feedrate	X-axis	30000 mm/min					
	Z-axis	33000 mm/min					
	Y-axis	—			21000 mm/min	—	21000 mm/min
	C-axis	—	555 min-1				
	W-axis	—				30000 mm/min	
Tailstock	Tailstock stroke	550 mm / 1075 mm		565 mm / 1075 mm		—	
	Tailstock center	MT-No.5(dead center)				—	
Motors	Spindle motor	18.5 kW (25 HP) [40% ED] / 15 kW (20 HP) [cont. rating]					
	Rotary tool milling motor	5.5 kW (7.5 HP) [40% ED] / 3.7 kW (5 HP) [cont. rating]					
	Second spindle motor	—				11kW [25% ED] / 7.5kW [cont. rating]	
Power requirement	Electrical power requirements	31.4 kVA [30 min. rating] 26.4 kVA [cont. rating]	31.5 kVA [30 min. rating] 26.6 kVA [cont. rating]	31.7 kVA [30 min. rating] 26.8 kVA [cont. rating]	32.6 kVA [30 min. rating] 27.7 kVA [cont. rating]	32.1 kVA [30 min. rating] 27.1 kVA [cont. rating]	33.0 kVA [30 min. rating] 28.0 kVA [cont. rating]
	Air supply	0.5 MPa (5 kgf/cm^2) 30 L/min	0.5 MPa (5 kgf/cm^2), 330 L/min			0.5 MPa (5 kgf/cm^2), 350 L/min	
Coolant	Tank capacity*2	180 L / 270 L		180 L / 270 L			
Machine size	Machine height	1703 mm		1857 mm			
	Floor space requirement*3	2630 mm × 1680 mm / 3385 mm × 1720 mm		2760 mm × 1845 mm / 3550 mm × 1995 mm		2895 mm × 1845 mm	
	Weight*4	4800 kg / 5800 kg *1	5000 kg / 6000 kg *1	5800 kg / 6500 kg *1		5900 kg	5900 kg

* L = manufactured in Liaoning, China
*1 Depends on chuck specifications
*2 Chip pan specification
*3 CNC not included
*4 Chip pan specification. Coolant not included.

Standard and Optional Equipment

QUICK TURN 200 L*, 200MA L*, 200MB, 200MY, 200MS, 200MSY

● : Standard ○ : Option — : N/A

		200 L*	200MA L*	200MB	200MY	200MS	200MSY
Machine	Main spindle 8” non through-hole chuck N08	●	●	●	●	—	—
	Main spindle 8” through-hole chuck B-208	○	○	○	○	●	●
	Main spindle 8” through-hole chuck BB-208	○	○	○	○	○	○
	Second spindle 6” through-hole chuck B-206	—	—	—	—	●	●
	12 position drum turret (Bolt-on tool holder)	●	●	—	●	●	●
	16 position drum turret (Bolt-on tool holder)	—	—	—	○	○	○
	12 position drum turret (VDI tool holder)	—	—	●	○	○	○
	Rotary tool 5000 min^{-1}	—	●	●	●	●	●
	Rotary tool 10000 min^{-1} (Bolt-on tool holder only)	—	○	—	○	○	○
	Tailstock (MT-No.5 dead center)	●	●	●	●	—	—
	Tailstock (MT-No4 built-in center)	○	○	○	○	—	—
	Tailstock thrust automatic change	●	●	●	●	—	—
	Live center LC-5SW	○	○	○	○	—	—
	Live center LC-5A	○	○	○	○	—	—
	Automatic steady rest SMW SLUA3.1M (1000U only)	○	○	○	○	—	—
	Automatic steady rest SMW SLUX3.1M (1000U only)	○	○	○	○	—	—
	Preparation for automatic steady rest (1000U only)	○	○	○	○	—	—
	Scale feedback	○	○	○	○	○	○
	Worklight	●	●	●	●	●	●
Factory automation	Absolute position detection	●	●	●	●	●	●
	Spindle orient	○	○	○	○	○	○
	Tool eye	○	○	○	○	○	○
	Automatic chuck jaws open / close	○	○	○	○	●	●
	Chuck jaws air blast	○	○	○	○	○	○
	Chuck jaws air blast (second spindle)	—	—	—	—	●	●
	Workpiece automatic measurement	○	○	○	○	○	○
	Bar feeder interface	○	○	○	○	○	○
	Auto parts catcher	○	○	○	○	○	○
	Workpiece exit conveyor	○	○	○	○	○	○
	Auto front door open / close	○	○	○	○	○	○
	Automatic power on / off and warm up*1	○	○	○	○	○	○
Safety equipment	Operation end buzzer	○	○	○	○	○	○
	Status light (3 colors)	○	○	○	○	○	○
	Electrical power consumption monitor	○	○	○	○	○	○
	Chuck jaws open / close confirmation	●	●	●	●	●	●
	Hydraulic pressure interlock	●	●	●	●	●	●
Coolant / Chip disposal	Double foot pedal chuck switch	○	○	○	○	○	○
	Current leakage circuit breaker (200 mA)	○	○	○	○	○	○
	Overload detection system	○	○	○	○	○	○
	Chip pan without chip conveyor	●	●	●	●	●	●
	Side discharge chip conveyor	○	○	○	○	○	○
	Rear discharge chip conveyor (500U)	○	○	—	—	—	—
	Chip conveyor preparation	○	○	○	○	○	○
	Chip bucket (swing type)	○	○	○	○	○	○
	Chip bucket (fixed type)	○	○	○	○	○	○
	Coolant temperature control	○	○	○	○	○	○
	Turret air blast	○	○	○	○	○	○
	Additional coolant nozzle (head side)	○	○	○	○	○	○
	Mist collector	○	○	○	○	○	○
	Coolant system	●	●	●	●	●	●
	Powerful coolant (520 W)	○	○	○	○	○	○
	Powerful coolant (1.1 kW)	○	○	○	○	○	○
	SUPERFLOW V30C-J	○	○	○	○	○	○
Other	CD manual	●	●	●	●	●	●
	Set of adjusting tools	○	○	○	○	○	○
CNC*2	MAZATROL SmoothC	●	●	●	●	●	●
	MAZATROL SmoothG	○	○	○	○	○	○

* L = manufactured in Liaoning, China
*1 Standard equipment with MAZATROL SmoothG
*2 Standard CNC system varies by market

QUICK TURN 250 L*, 250MA L*, 250MB, 250MY, 250MS, 250MSY

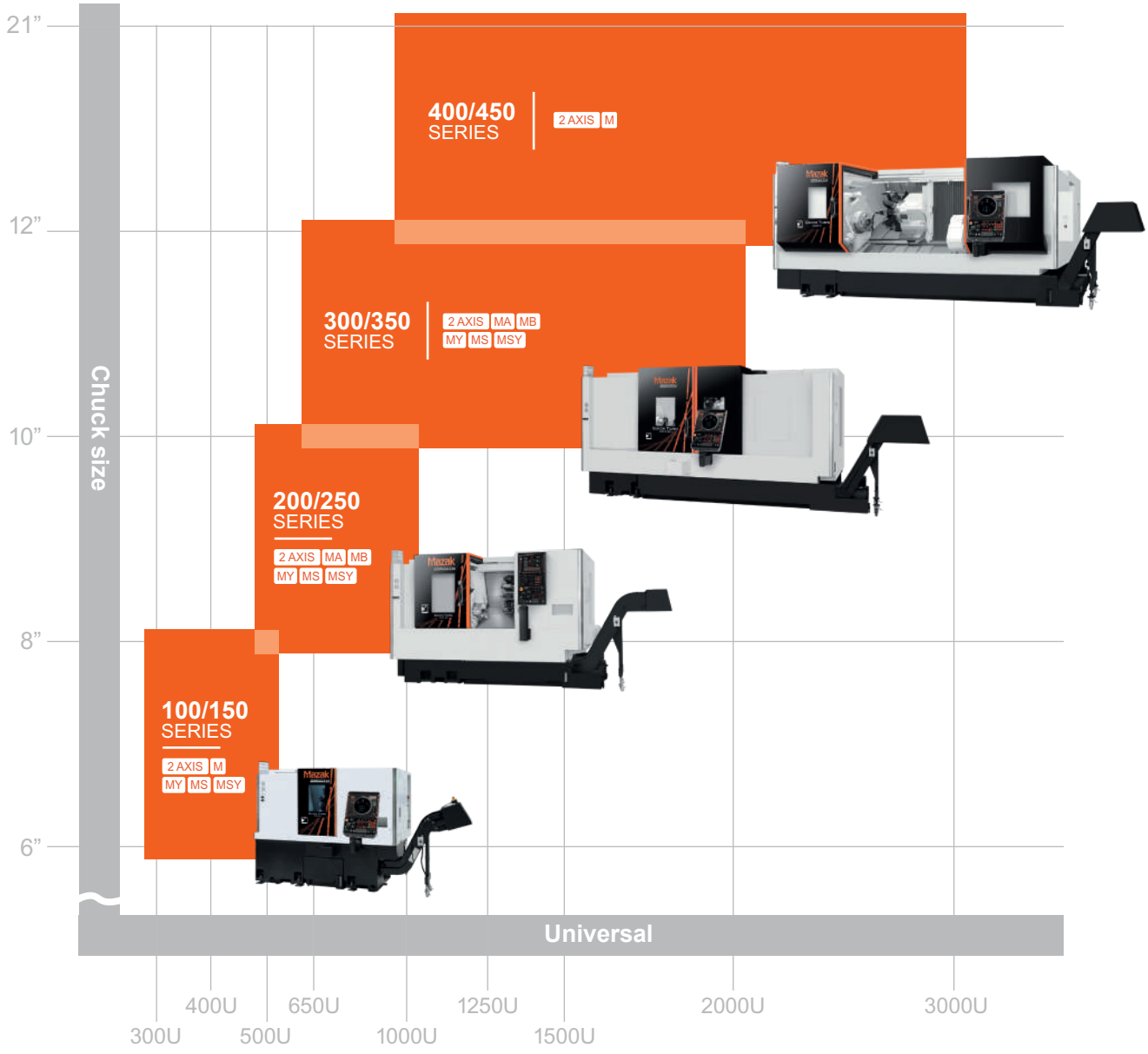
● : Standard ○ : Option — : N/A

		250 L*	250MA L*	250MB	250MY	250MS	250MSY
Machine	Main spindle 10” non through-hole chuck N-10	●	●	●	●	—	—
	Main spindle 10” through-hole chuck B-210	○	○	○	○	●	●
	Main spindle 10” through-hole chuck BB-210	○	○	○	○	○	○
	Second spindle 6” through-hole chuck B-206	—	—	—	—	●	●
	12 position drum turret (Bolt-on tool holder)	●	●	—	●	●	●
	16 position drum turret (Bolt-on tool holder)	—	—	—	○	○	○
	12 position drum turret (VDI tool holder)	—	—	●	○	○	○
	Rotary tool 5000 min^{-1}	—	●	●	●	●	●
	Rotary tool 10000 min^{-1} (Bolt-on tool holder only)	—	○	—	○	○	○
	Tailstock (MT-No.5 dead center)	●	●	●	●	—	—
	Tailstock (MT-No4 built-in center)	○	○	○	○	—	—
	Tailstock thrust automatic change	●	●	●	●	—	—
	Live center LC-5SW	○	○	○	○	—	—
	Live center LC-5A	○	○	○	○	—	—
	Automatic steady rest SMW SLUA3.1M (1000U only)	○	○	○	○	—	—
	Automatic steady rest SMW SLUX3.1M (1000U only)	○	○	○	○	—	—
	Preparation for automatic steady rest (1000U only)	○	○	○	○	—	—
	Scale feedback	○	○	○	○	○	○
	Worklight	●	●	●	●	●	●
Factory automation	Absolute position detection	●	●	●	●	●	●
	Spindle orient	○	○	○	○	○	○
	Tool eye	○	○	○	○	○	○
	Automatic chuck jaws open / close	○	○	○	○	●	●
	Chuck jaws air blast	○	○	○	○	○	○
	Chuck jaws air blast (second spindle)	—	—	—	—	●	●
	Workpiece automatic measurement	○	○	○	○	○	○
	Bar feeder interface	○	○	○	○	○	○
	Auto parts catcher	○	○	○	○	○	○
	Workpiece exit conveyor	○	○	○	○	○	○
	Auto front door open / close	○	○	○	○	○	○
	Automatic power on / off and warm up*1	○	○	○	○	○	○
	Operation end buzzer	○	○	○	○	○	○
	Status light (3 colors)	○	○	○	○	○	○
Safety equipment	Chuck jaws open / close confirmation	●	●	●	●	●	●
	Hydraulic pressure interlock	●	●	●	●	●	●
	Double foot pedal chuck switch	○	○	○	○	○	○
	Current leakage circuit breaker (200 mA)	○	○	○	○	○	○
	Overload detection system	○	○	○	○	○	○
Coolant / Chip disposal	Chip pan without chip conveyor	●	●	●	●	●	●
	Side discharge chip conveyor	○	○	○	○	○	○
	Rear discharge chip conveyor	○	○	—	—	—	—
	Chip conveyor preparation	○	○	○	○	○	○
	Chip bucket (swing type)	○	○	○	○	○	○
	Chip bucket (fixed type)	○	○	○	○	○	○
	Coolant temperature control	○	○	○	○	○	○
	Turret air blast	○	○	○	○	○	○
	Additional coolant nozzle (head side)	○	○	○	○	○	○
	Mist collector	○	○	○	○	○	○
	Coolant system	●	●	●	●	●	●
	Powerful coolant (520 W)	○	○	○	○	○	○
	Powerful coolant (1.1 kW)	○	○	○	○	○	○
	SUPERFLOW V30C-J	○	○	○	○	○	○
Other	CD manual	●	●	●	●	●	●
	Set of adjusting tools	○	○	○	○	○	○
CNC*2	MAZATROL SmoothC	●	●	●	●	●	●
	MAZATROL SmoothG	○	○	○	○	○	○

* L = manufactured in Liaoning, China
*1 Standard equipment with MAZATROL SmoothG
*2 Standard CNC system varies by market

QUICK TURN series range

Extensive series range to meet a wide range of machining requirements.



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