



HQR
SERIES



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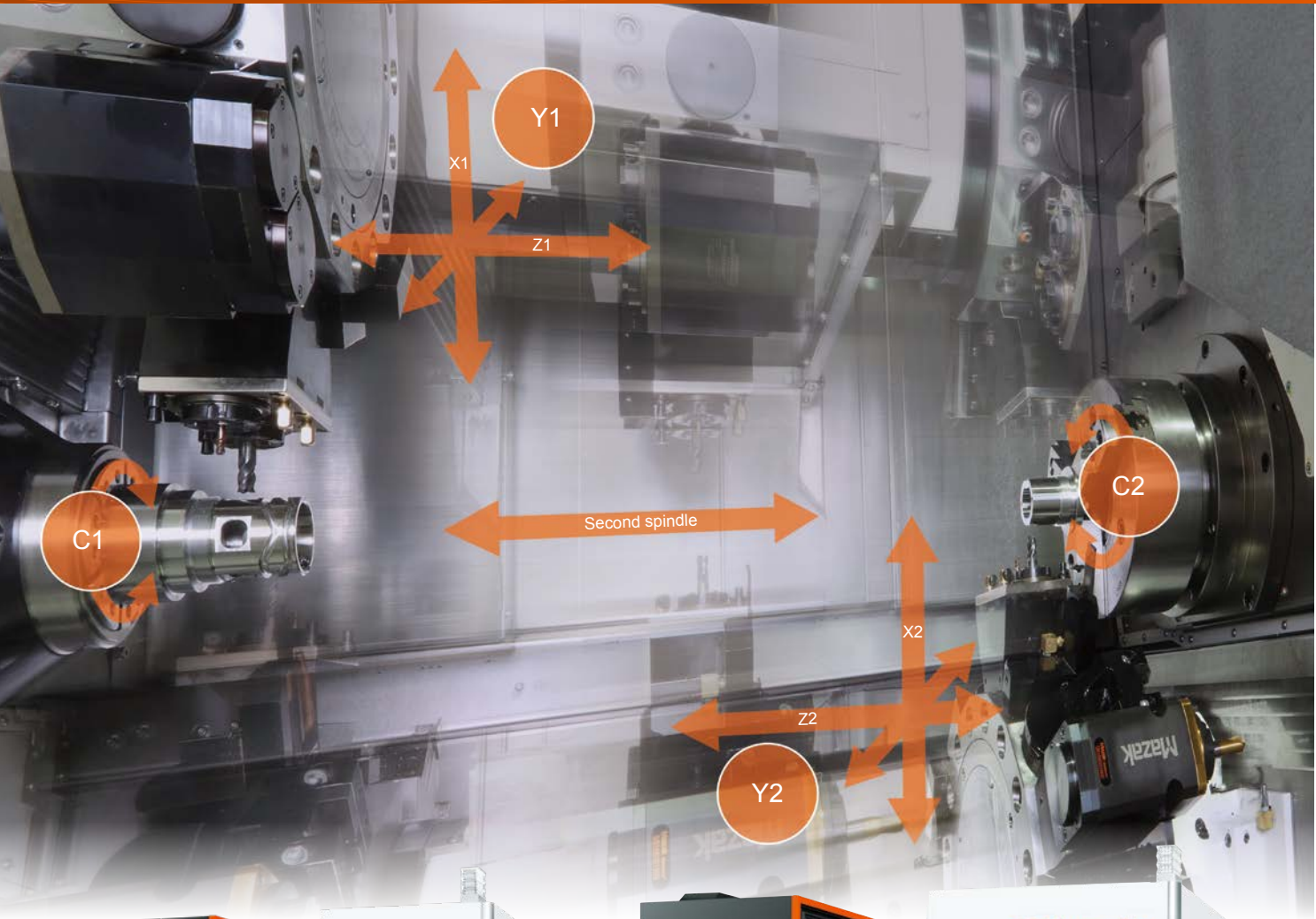
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HQR SERIES 22.04.0 G 99J1B1322E0



HQR SERIES



HQR-150MSY
Shown with optional equipment

HQR-200MSY (850U)
Shown with optional equipment

2 turret / 2 spindle machine construction for reduced cycle time

High efficiency integral spindle / motors in both left and right headstocks perform powerful turning and high accuracy C-axis indexing in 0.0001° increments

In addition to the standard 12 position drum turret and 16 position drum turret are optionally available

High accuracy milling thanks to the rotary tool spindle on both turrets and long Y-axis stroke

A variety of automation equipment such as bar feeders, workpiece unloader and robot are optionally available

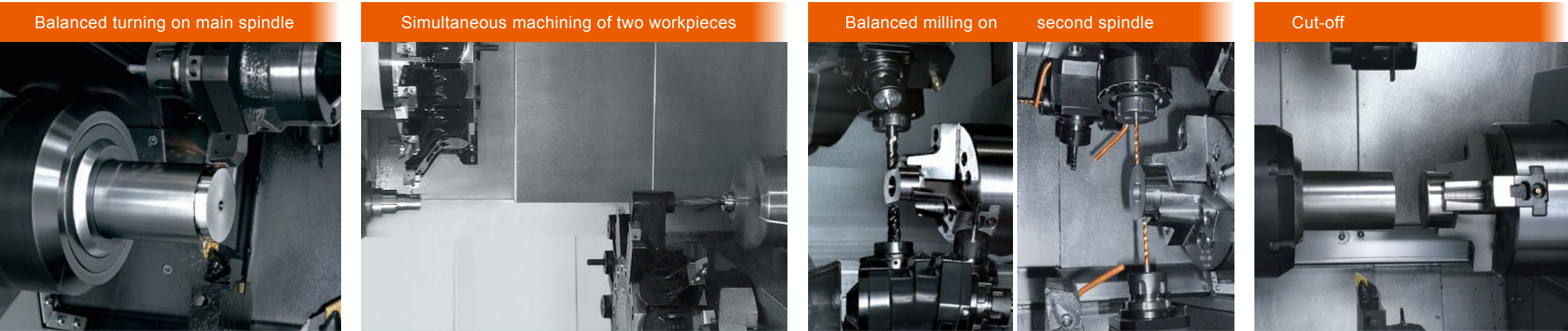
	Main Spindle Max. spindle speed Output (30 min. rating) Chuck size	Second Spindle Max. spindle speed Output (30 min. rating) Chuck size	Turret	Rotary tool spindle Max. spindle speed Output	Universal
100MSY	6000 min ⁻¹ (rpm) 11 kW (15 HP) 6"	6000 min ⁻¹ (rpm) 11 kW (15 HP) 6"	12D (VDI)	6000 min ⁻¹ (rpm) 5.5 kW (7.5 HP) (10 min. rating)	600U
150MSY	5000 min ⁻¹ (rpm) 15 kW (20 HP) 6"	5000 min ⁻¹ (rpm) 15 kW (20 HP) 6"	12D (VDI)	6000 min ⁻¹ (rpm) 11 kW (15 HP) (3 min. rating)	600U
				10000 min ⁻¹ (rpm) 5.5 kW (7.5 HP) (40% ED)	
200MSY	5000 min ⁻¹ (rpm) 22 kW (30 HP) 8"	5000 min ⁻¹ (rpm) 22 kW (30 HP) 8"	12D (VDI) 16D (VDI)	6000 min ⁻¹ (rpm) 5.5 kW (7.5 HP) (10 min. rating)	850U 1300U
				6000 min ⁻¹ (rpm) 11 kW (15 HP) (3 min. rating)	
250MSY	4000 min ⁻¹ (rpm) 26 kW (35 HP) 10"	5000 min ⁻¹ (rpm) 22 kW (30 HP) 8" 4000 min ⁻¹ (rpm) 26 kW (35 HP) 10"	12D (VDI) 16D (VDI)	6000 min ⁻¹ (rpm) 5.5 kW (7.5 HP) (10 min. rating)	850U 1300U
				6000 min ⁻¹ (rpm) 11 kW (15 HP) (3 min. rating)	

Standard Option

2 turret / 2 spindle machine design for reduced cycle times

The HQR series can perform high-efficiency cutting such as simultaneous 1st and 2nd operations and balanced cutting by utilizing the upper and lower turrets.

By synchronized machining of both turrets, balance cutting that minimizes workpiece displacement can be performed. Additionally, simultaneous turning reduces cycle time.



Sample workpieces

- Workpiece : Pulley
- Material : Aluminum
- Cutting time : 5 min



- Workpiece : Sleeve
- Material : Carbon steel
- Cutting time : 4.5 min



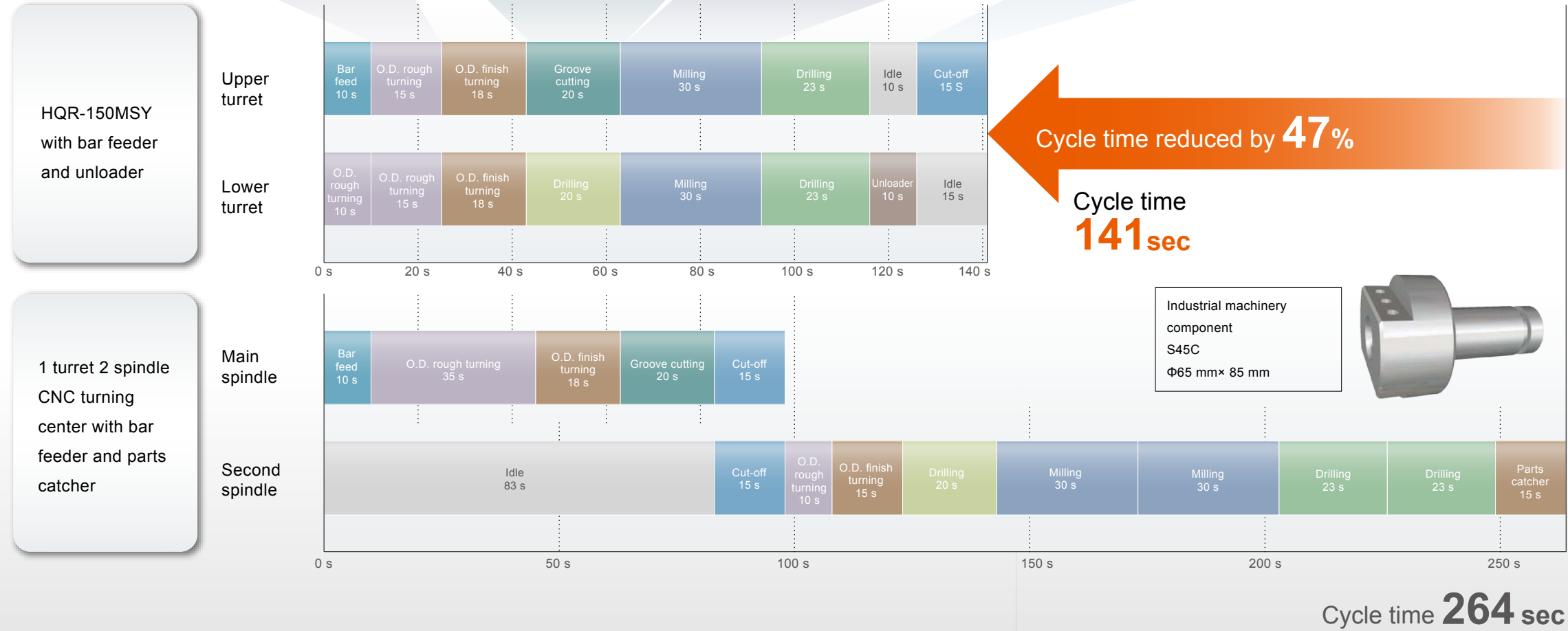
- Workpiece : Machine component
- Material : Carbon steel
- Cutting time : 10 min



- Workpiece : Piston housing
- Material : Carbon steel
- Cutting time : 3.9 min



- Workpiece : Shaft
- Material : Carbon steel
- Cutting time : 4 min



High efficiency integral spindle / motors in both headstocks



Thanks to its design, vibration is minimized during high-speed operation to ensure exceptional surface finishes and maximum tool life. Since no belts, pulleys or gears are used, the higher efficiency of the integral spindle / motor delivers more power to the tool tip to be used for cutting. The spindle C1-axis and C2-axis* can be indexed by 0.0001° increments and can also perform contouring.

*0.0001° indexing on C2-axis is optional

Conventional belt drive

Vibration increases with faster speed

HQR integral spindle / motor

Minimum vibration reduced by integral spindle / motor

Example results of roundness and surface roughness

Parameter	Mazak integral spindle / motor	Belt drive motor
Roundness (μm)	0.2 - 0.5	0.8 - 1.2
Surface roughness (μm)	0.1 - 0.4	0.5 - 1.0

Bar work capacity

Since both the main spindle and second spindle have large spindle bores, bar material can be efficiently machined.

Machine(s)	Main spindle	Second spindle
HQR-100MSY	Φ52 mm	Φ52 mm
HQR-150MSY	Φ65 mm	Φ52 mm
HQR-200MSY	Φ65 mm	Φ65 mm
HQR-250MSY	Φ80 mm	Φ65 mm
HQR-250MSY	Φ80 mm	Φ80 mm

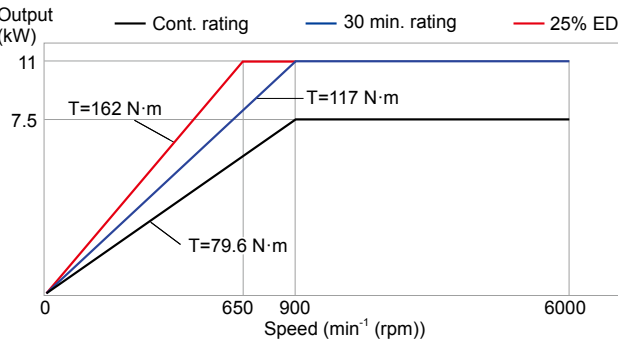
* Spindle speed is 4000 min⁻¹ (rpm).

Spindle output / torque diagram

6000 min⁻¹ (rpm) 11 kW (15 HP) spindle

HQR-100MSY main spindle / second spindle
HQR-150MSY second spindle

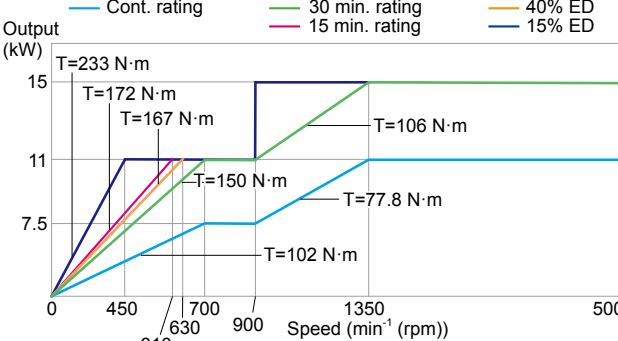
Output (30 min. rating / cont. rating)	11 kW / 7.5 kW
Torque (25% ED)	162 N·m
Spindle bore	Φ61 mm



5000 min⁻¹ (rpm) 15 kW (20 HP) spindle

HQR-150MSY main spindle

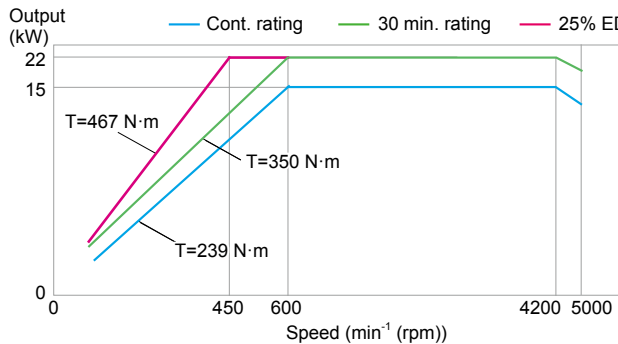
Output (30 min. rating / cont. rating)	15 kW / 11 kW
Torque (15% ED)	233 N·m
Spindle bore	Φ76 mm



5000 min⁻¹ (rpm) 22 kW (30 HP) spindle

HQR-200MSY main spindle / second spindle

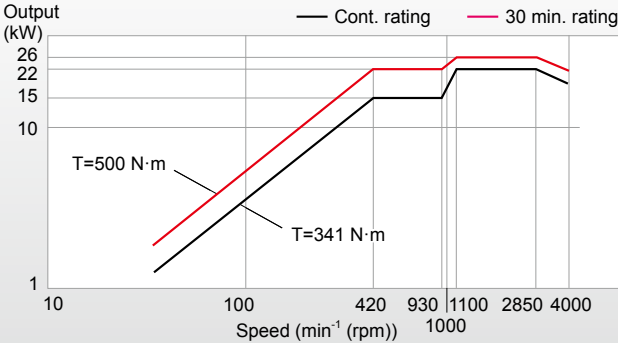
Output (30 min. rating / cont. rating)	22 kW / 15 kW
Torque (25% ED)	467 N·m
Spindle bore	Φ76 mm



4000 min⁻¹ (rpm) 26 kW (35 HP) spindle

HQR-250MSY main spindle
HQR-250MSY second spindle (Φ91 mm bore : option)

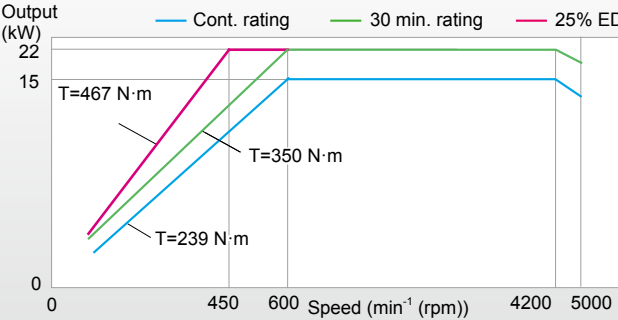
Output (30 min. rating / cont. rating)	26 kW / 22 kW
Torque (30 min. rating)	500 N·m
Spindle bore	Φ91 mm



5000 min⁻¹ (rpm) 22 kW (30 HP) spindle

HQR-250MSY second spindle

Output (25% ED / cont. rating)	22 kW / 15 kW
Torque (25% ED)	467 N·m
Spindle bore	Φ76 mm

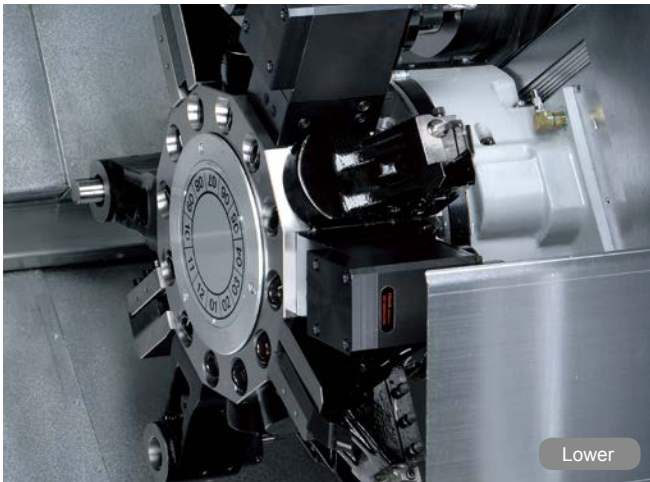
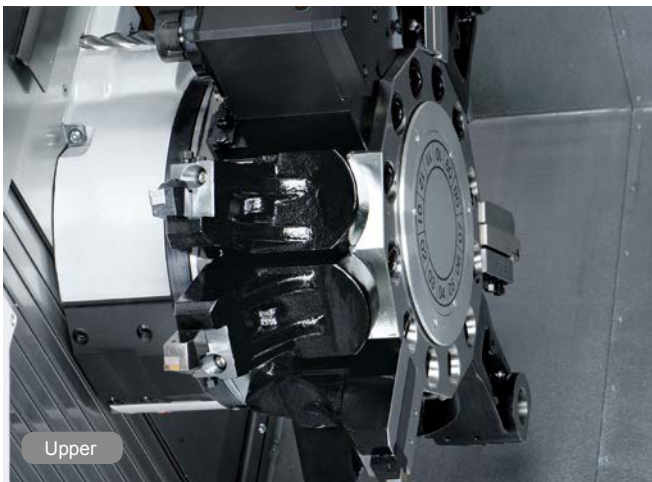


High-performance non-lift turret

12 position drum turret

Both the upper and lower 12 position drum turrets can mount either turning or milling tools on each of the 12 positions for convenient setup.

Turning tool shank	□20 mm [100 MSY, 150 MSY] □25 mm [200 MSY, 250 MSY]
Boring bar shank diameter	Φ32 mm [100 MSY, 150 MSY] Φ40 mm [200 MSY, 250 MSY]



16 position drum turret (200MSY, 250MSY) OPTION

Turning tool shank	□20 mm
Boring bar shank diameter	Φ32 mm



Rotary tool spindle

Milling spindle provides performance comparable to a small machining center from powerful face milling to high speed drilling.

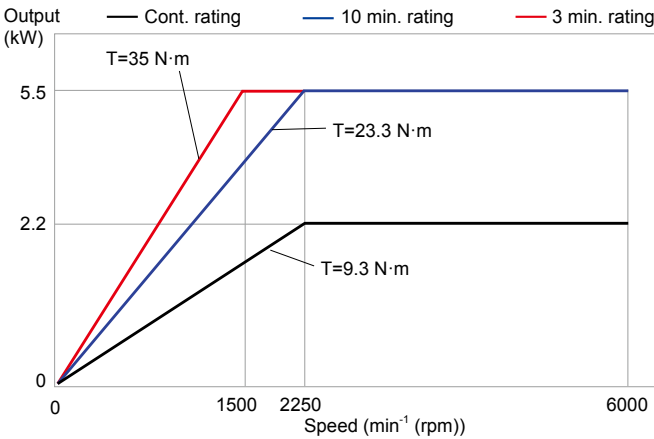
Milling capacity

12 position drum turret	
100MSY, 150MSY	Drill Φ16 mm Endmill Φ16 mm Tap M16 × 2.0
200MSY, 250MSY	Drill Φ20 mm Endmill Φ20 mm Tap M20 × 2.5
16 position drum turret	
200MSY, 250MSY	Drill Φ16 mm Endmill Φ16 mm Tap M16 × 2.0

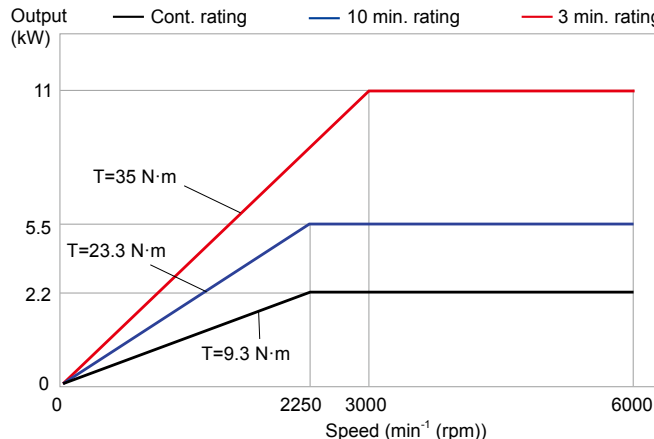


Rotary tool spindle output / torque diagram

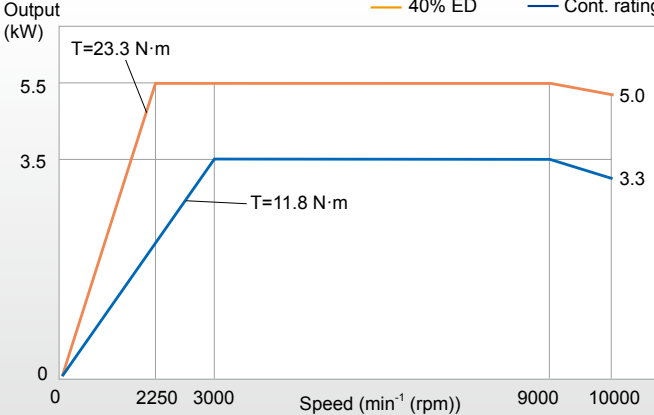
6000 min⁻¹ (rpm), 5.5 kW (7.5 HP)



6000 min⁻¹ (rpm), 11 kW (15 HP) spindle **OPTION**



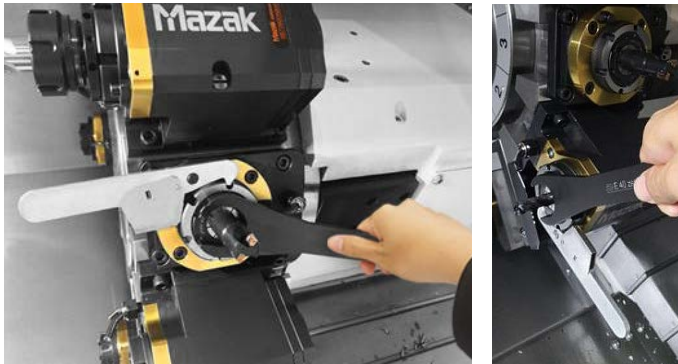
10000 min⁻¹ (rpm), 5.5 kW (7.5 HP) spindle **OPTION**
(HQR 100,150 only)



Higher Productivity

Quick-Change Mill Holder

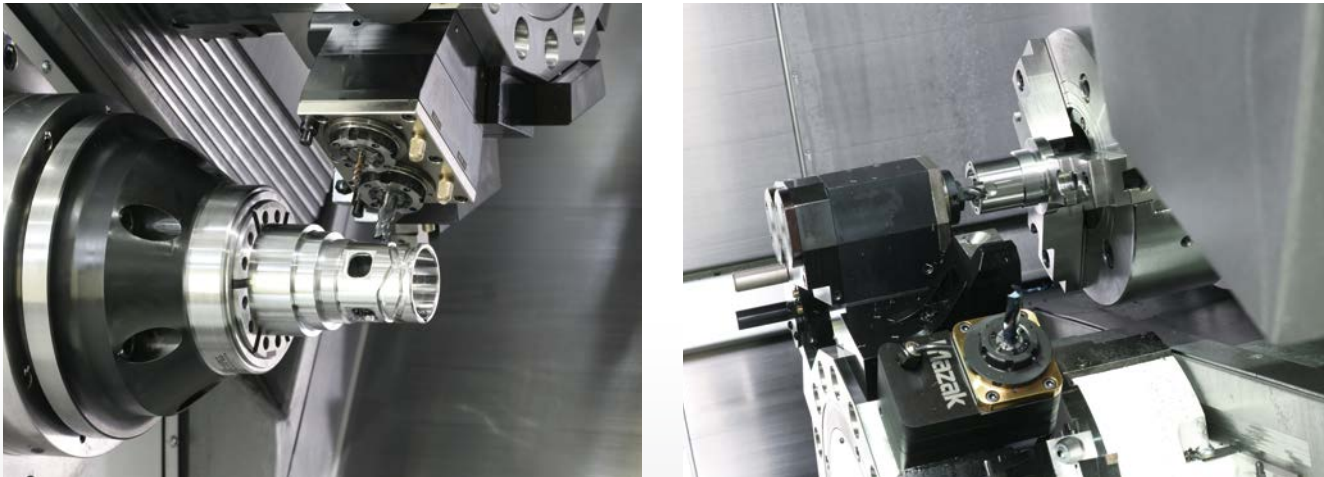
The HQR series use tool holder equipped with Quick Change system for higher machining capability. A wide variety of tools can be mounted by using adapter. Tools can be mounted / removed easily by using one-hand wrench.



One hand wrench can easily tight by spring

Upper / lower turret Y- axis

The Y-axis stroke (upper turret :100 mm [±50 mm] lower turret :100 mm [±50 mm]) makes it possible to perform a wide variety of machining.



Higher Accuracy

Ai Thermal Shield

New algorithms automatically determine the amount of compensation to be applied according to changes in the temperature to ensure even higher machining accuracy.



Roundness

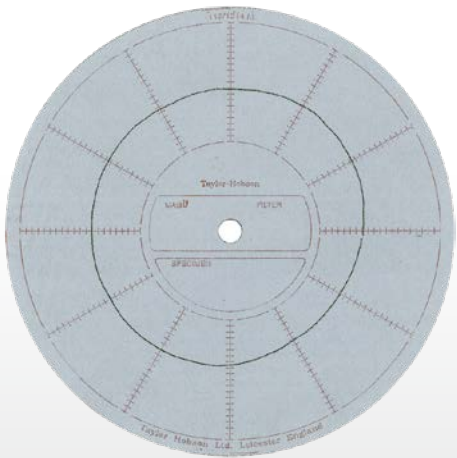
HQR-150MSY test results

The inspection is conducted according to ISO-230 on a recommended foundation with room temperature controlled to 22°C±1°C after machine has reached operation temperature.

Material	Brass JIS C3604
Spindle speed	3000 min ⁻¹ (rpm)
Machining conditions	Feedrate 0.03 mm/rev D.O.C 0.02 mm
Tool	Diamond tool (DA2200) Nose R 0.4 mm



Results 0.26 μm (Main spindle)



Results 0.30 μm (Second spindle)

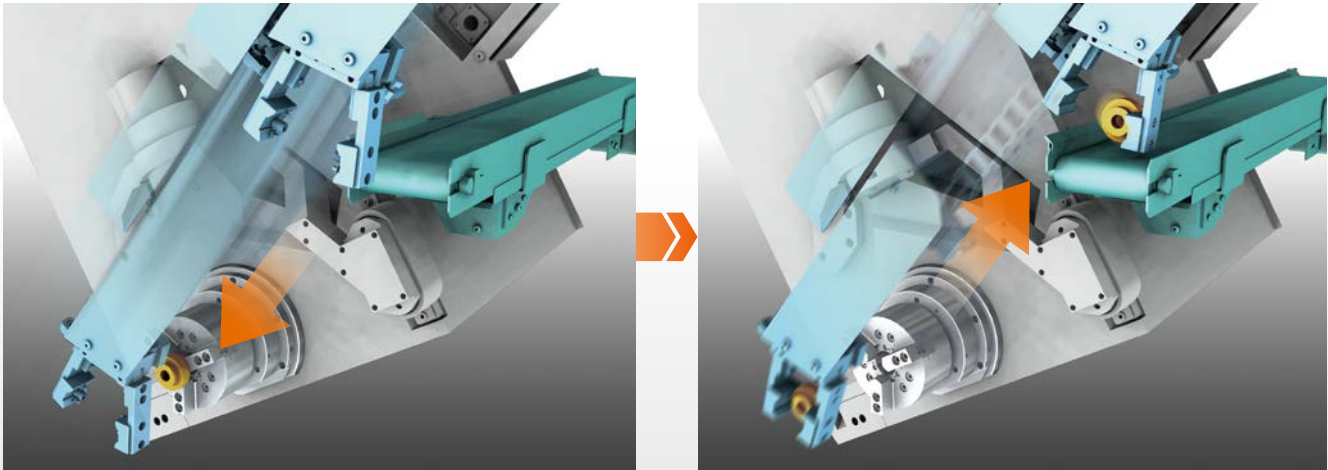
Bar feeder and workpiece unloader

Effective operation from bar material to finished workpiece.
The unloader hand is designed to prevent any marring of the finished workpiece surface.



Workpiece unloader

The work unloader removes the workpiece from the chuck and transfers it outside of the machine without damaging the machined surfaces.



Automatic operation system ROBOT LOADER 100 (200MSY, 250MSY)

By utilizing the work loader robot and pallet, automatic operation for chuck workpieces can be performed over extended periods of time to realize high productivity.



Automation for chuck workpieces

- Easy setup by MAZATROL SmoothG
- Minimum floor space requirements
- Large pallet storage
- Safe operation

Standard hand	Double hands with 3-jaws for chuck workpieces (D3)
Max. workpiece weight*	10 kg × 2
Max. diameter	Φ20 mm ~ Φ150 mm
Workpiece length	20 mm ~ 100 mm

* When grips outer diameter

Loading material



Unloading finished workpiece



Transferring workpiece to pallet



Fastest CNC in the world

Latest hardware and software for unprecedented speed and precision

Smooth graphical user interface

MAZATROL Smooth graphical user interface for unsurpassed ease of operation
Touch screen operation - operate similar to your smartphone / tablet

Ease of operation

Designed for unsurpassed ease of operation

Shown with optional dual monitor

4 axes simultaneous CNC

MAZATROL *SMOOTHG*

5 process home screens

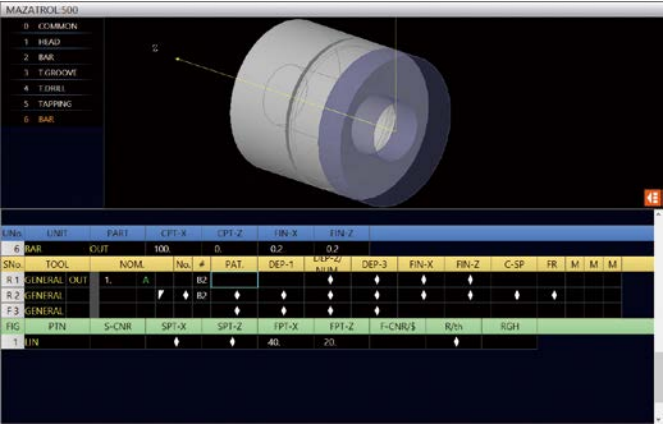
Programming, confirmation, editing and tool data registration



MAZATROL SmoothG CNC system - conversational programming for machining with upper and lower turrets

By simply selecting requirements for machining - such as workpiece material and surface finish - from the conversational menu and inputting data - cutting conditions and the tool path are automatically made. By combining these units, the entire machining program can be easily made with the MAZATROL SmoothG. Different from standard EIA / ISO programs, the feedrate for each axis movement does not have to be determined and input - as a result, the number of program lines is considerably reduced.

Both upper and lower turrets are easily operated by conversational programs - to use the lower turret, all that is required to input is the "lower turret mark :  " for the respective tool in the program. Additionally, machining programs are easily made for separate machining of both spindles by the upper and lower turrets, simultaneous machining and balanced machining of both turrets thanks to the MAZATROL SmoothG conversational programming.



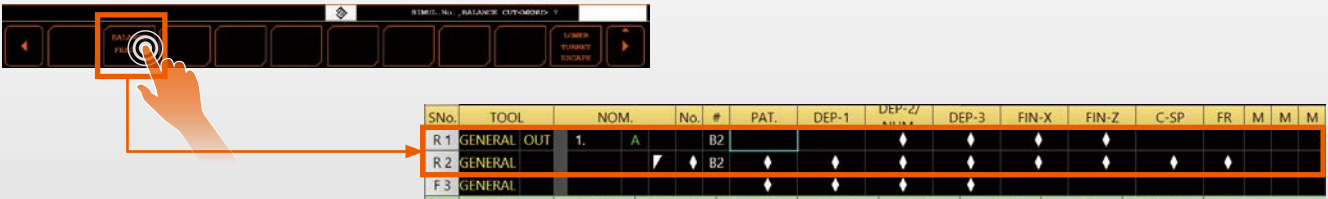
SNo.	TOOL	NOM.	No.	#	PAT.	DEP-1	DEP-2	DEP-3	FIN-X	FIN-Z	C-SP	FR	M	M	M
R 1	GENERAL	OUT	1.	A	B2						120.	0.45			
F 2	GENERAL	OUT	1.	A	B2						196.	0.15			
F 3	GENERAL	OUT	1.	A	B2										
FIG	PTN	S-CNR	SPT-X	SPT-Z	FPT-X	FPT-Z	F-CNR	R/tn	R/tn	R/tn					
1	IN				40.	20.	5.1								



Select which turret is to be used for machining

Convenient balance cut programming

The balance cut program can be conveniently made by just selecting balance cut on the turning program unit.



Ease of Programming

Programming screen links tool path, workpiece shape and programming to reduce programming time

QUICK MAZATROL

[Reduced time for conversational programming]
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.



Quickly move to the corresponding section in the MAZATROL program by touching a feature in the 3D model



3D model in the process list is displayed with updated programming in real time

3D ASSIST

[Making a program directly from 3D CAD data]
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.

CAD model importing



Shape selection

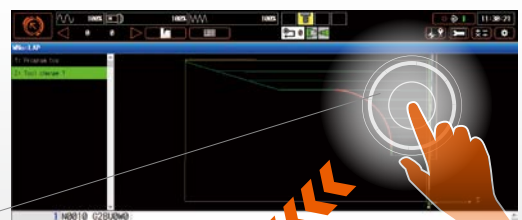


Automatically input to MAZATROL program



QUICK EIA

[EIA program visualization]
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.



Selecting tool path by touching the screen



Moving to the corresponding EIA program line

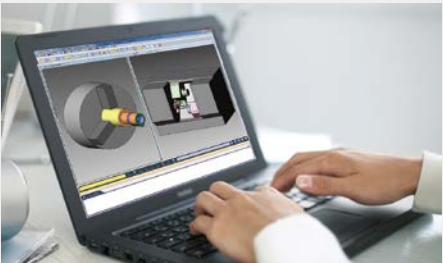
MAZATROL SmoothG Specifications

	MAZATROL	EIA
Number of controlled axes	Simultaneous 2 ~ 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 function	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), Tool life monitoring (wear)	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), Tool life monitoring (wear)
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, Ai Thermal shield	
Protection functions	Emergency stop, Interlock, Pre-move stroke check, Barrier, SAFETY SHIELD (manual mode), 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, MDI interruption, TPS, Restart, Single process, Machine lock	Optional block skip, Optional stop, Dry run, Manual handle interruption, MDI interruption, TPS, Restart, Restart 2, Collation stop, Machine lock
Manual measuring function	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 function	Workpiece measurement, Sensor calibration, Tool eye auto tool measurement, Tool breakage detection	
Interface	PROFIBUS-DP*, EtherNet/IP*, CC-Link*, CC-Link IE Field Basic	
Memory	SD card interface, USB	
Ether Net	10 M / 100 M / 1 Gbps	

*Option

3D machine model

A 3D machine model is available to perform program interference checks with other CAD / CAM simulation software.



Optional Equipment

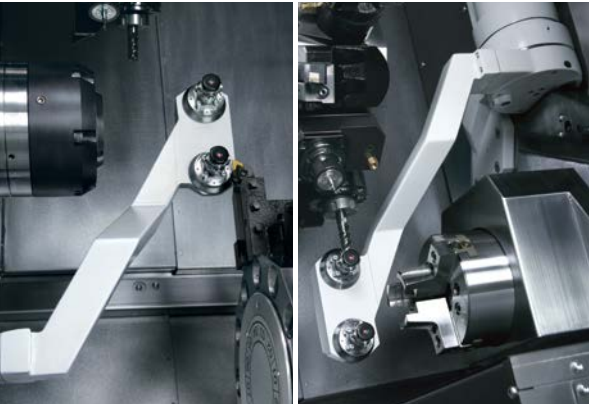
Automatic opening / closing front door

The automatic opening / closing front door operates at 3 speeds.
If an operator inadvertently places a hand in the opening, operation will automatically stop when the door contacts operator's hand.



Tool eye

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.



Area separator (1300U)

Area separator divides the machining area between the 1st spindle and the 2nd spindle. This allows workpiece loading / unloading from the spindle while the other spindle is machining.



Standard and Optional Equipment

		● : Standard ○ : Option — : N/A					
		100MSY	150MSY	200MSY (850U)	200MSY (1300U)	250MSY (850U)	250MSY (1300U)
Machine	12 position drum turret	●	●	●	●	●	●
	16 position drum turret (VDI)	—	—	○	○	○	○
	Rotary-tool spindle speed 6000 min ⁻¹ (rpm) / 5.5 kw	●	●	●	●	●	●
	Rotary-tool spindle speed 6000 min ⁻¹ (rpm) / 11 kw	○	○	○	○	○	○
	Rotary-tool spindle speed 10000 min ⁻¹ (rpm) / 5.5 kw	○	○	—	—	—	—
	Second spindle bore Φ91 mm 4000 min ⁻¹ (rpm)	—	—	—	—	○	○
	Absolute position detection	●	●	●	●	●	●
	Work light	●	●	●	●	●	●
	Double foot-pedal switch	○	○	○	○	○	○
	Status light (3 colors)	○	○	○	○	○	○
	Status light (1 color)	○	○	○	○	○	○
Chuck	Through-hole chuck (B-206)	○	○	—	—	—	—
	Through-hole chuck (BR06)	○	○	—	—	—	—
	Through-hole chuck (B-208)	—	—	○	○	—	—
	Through-hole chuck (BR08)	—	—	○	○	—	—
	Through-hole chuck (BR10)	—	—	—	—	○	○
	Collet chuck (SAD-50)	○	○	—	—	—	—
	Collet chuck (CB65-ND-A)	—	○	○	○	—	—
	Second spindle through-hole chuck (B-206)	○	○	—	—	—	—
	Second spindle through-hole chuck (BR06)	○	○	—	—	—	—
	Second spindle through-hole chuck (B-208)	—	—	○	○	○	○
	Second spindle through-hole chuck (BR08)	—	—	○	○	○	○
	Second spindle through-hole chuck (BR10)	—	—	—	—	○	○
Safety equipment	Front door interlock	●	●	●	●	●	●
	Hydraulic pressure interlock	●	●	●	●	●	●
	Overload detection system	○	○	○	○	○	○
Factory automation	Automatic chuck jaw open / close	●	●	●	●	●	●
	Chuck open / close confirmation	●	●	●	●	●	●
	Machining end buzzer	○	○	○	○	○	○
	Spindle orient	○	○	○	○	○	○
	Second spindle C-axis contouring (0.0001°)	○	○	○	○	○	○
	Calendar-type automatic power ON / OFF + warm-up operation	●	●	●	●	●	●
	Tool eye (main / second spindle)	○	○	○	○	○	○
	Workpiece measurement (upper turret)	○	○	○	○	○	○
	High / low chuck pressure (main / second spindle)	○	○	○	○	○	○
	Main spindle chuck jaws air blast	○	○	○	○	○	○
	Second spindle chuck jaws air blast	●	●	●	●	●	●
	Turret air blast (upper / lower turret)	○	○	○	○	○	○
	Automatic front door open / close	○	○	○	—	○	—
	Area separator	—	—	—	○	—	○
	Tail center attachment	○	○	○	○	○	○
	Bar feeder interface	○	○	○	○	○	○
	Filler tube	○	○	○	○	○	○
Coolant / chip disposal	Workpiece unloader + workpiece conveyor	○	○	○	○	○	○
	Robot interface	○	○	○	○	○	○
	ROBOT LOADER 100	—	—	○	○	○	○
	Scale feedback (X1, X2)	○	○	○	○	○	○
	Scale feedback (Z1)	○	○	○	○	○	○
	Splash guard	●	●	●	●	●	●
	Coolant tank (260 L)	●	●	—	—	—	—
	Coolant tank (310 L)	—	—	●	—	●	—
	Coolant tank (400 L)	—	—	—	●	—	●
	Coolant system	●	●	●	●	●	●
	Coolant temperature control system	○	○	○	○	○	○
	Powerful coolant 1.1 kW	○	○	○	○	○	○
	High pressure coolant 1.5 MPa (15.3 kgf/cm ²)	○	○	○	○	○	○
	Additional coolant (main / second spindle)	○	○	○	○	○	○
Others	Chip conveyor (side / rear discharge)	○	○	○	○*2	○	○*2
	Chip bucket (fixed / rotary type)	○	○	○	○	○	○
	Mist collector	○	○	○	○	○	○
	Preparation for mist collector	○	○	○	○	○	○
	Adjustment tools	●	●	●	●	●	●
	One set of manuals	●	●	●	●	●	●
	Foundation kit	●	●	●	●	●	●
	Dual monitor for MAZATROL SmoothG CNC	○	○	○	○	○	○

*1 Not on second spindle side

*2 Side discharge chip conveyor only for 1300U

Standard Machine Specifications

		HQR-100MSY	HQR-150MSY	HQR-200MSY		HQR-250MSY	
Universal		600U		850U	1300U	850U	1300U
Capacity (upper / lower turret)	Max. swing	Φ320 mm / Φ270 mm		Φ370 mm / Φ320 mm			
	Max. machining diameter	Φ300 mm / Φ172 mm		Φ344 mm / Φ212 mm			
	Distance between chuck jaw faces (both spindles)	620 mm		860 mm	1325 mm	860 mm	1325 mm
	Bar work capacity** (Main spindle / Second spindle)	Φ52 mm / Φ52 mm	Φ65 mm / Φ52 mm	Φ65 mm / Φ65 mm		Φ80 mm / Φ65 mm	
Travel (upper / lower turret)	X-axis	175 mm / 111 mm		207 mm / 141 mm			
	Y-axis	100 mm (±50 mm) / 100 mm (±50 mm)					
	Z-axis	520 mm / 580 mm		760 mm / 815 mm	1225 mm / 1280 mm	760 mm / 815 mm	1225 mm / 1280 mm
Main spindle	Spindle speed**	6000 min ⁻¹ (rpm)	5000 min ⁻¹ (rpm)			4000 min ⁻¹ (rpm)	
	Spindle nose	A2-5	A2-6			A2-8	
	Spindle bore	Φ61 mm	Φ76 mm			Φ91 mm	
	Rapid traverse rate : C-axis	555 min ⁻¹ (rpm)					
Second spindle	Spindle speed**	6000 min ⁻¹ (rpm)		5000 min ⁻¹ (rpm)			
	Spindle nose	A2-5		A2-6			
	Spindle bore	Φ61 mm		Φ76 mm			
	Second headstock stroke (W-axis)	625 mm		865 mm	1330 mm	865 mm	1330 mm
	Second headstock positioning speed (W-axis)	30000 mm/min					
	Rapid traverse rate : C-axis	555 min ⁻¹ (rpm)					
Upper / lower turret	Turret type	12-position drum turret (VDI)					
	Number of tools	12 tools					
	Turning tool shank	□ 20 mm		□ 25 mm			
	Boring bar shank diameter	Φ32 mm		Φ40 mm			
	Turret indexing time	0.2 s / 1 step					
Rotary tool spindle	Spindle speed	6000 min ⁻¹ (rpm)					
	Milling capacity	Drill : Φ16 mm, Endmill : 16 mm, Tap : M16 × 2.0		Drill : Φ20 mm, Endmill : 20 mm, Tap : M20 × 2.5			
Feedrate (upper / lower turret)	Rapid traverse rate : X-axis	30000 mm/min / 24000 mm/min					
	Rapid traverse rate : Y-axis	26000 mm/min / 20000 mm/min					
	Rapid traverse rate : Z-axis	40000 mm/min / 40000 mm/min		36000 mm/min / 36000 mm/min			
Motors	Main spindle (30 min. rating / cont. rating)	11 kW (15 HP) / 7.5 kW (10 HP)	15 kW (20 HP) / 11 kW (15 HP)	22 kW (30 HP) / 15 kW (20 HP)		26 kW (35 HP) / 22 kW (30 HP)	
	Second spindle (30 min. rating / cont. rating)	11 kW (15 HP) / 7.5 kW (10 HP)		22 kW (30 HP) / 15 kW (20 HP)			
	Rotary tool spindle (10 min. rating)	5.5 kW (7.5 HP)					
Power requirement	Required power capacity (cont. rating)	34.6 kVA	39.6 kVA	59.4 kVA		69.6 kVA	
	Air supply	0.5 MPa, 500 L/min					
Coolant tank capacity	Tank capacity	260 L		310 L	400 L	310 L	400 L
Machine size	Height	2428 mm		2498 mm			
	Floor space requirement**2	2862 mm × 2316 mm		3510 mm × 2641 mm	4670 mm × 2701 mm	3510 mm × 2641 mm	4670 mm × 2701 mm
	Machine weight	9160 kg	9220 kg	12850 kg	14980 kg	13250 kg	15380 kg

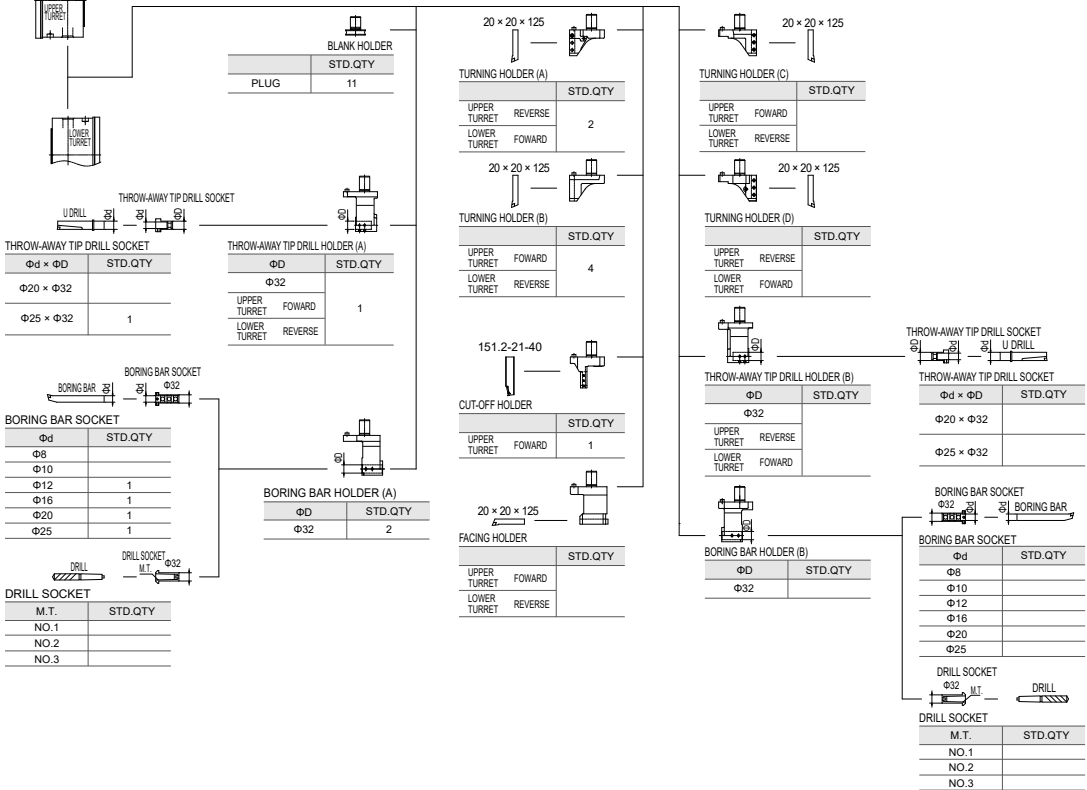
**1 Depends on chuck specifications
**2 Operation panel and chip conveyor not included

Tooling System

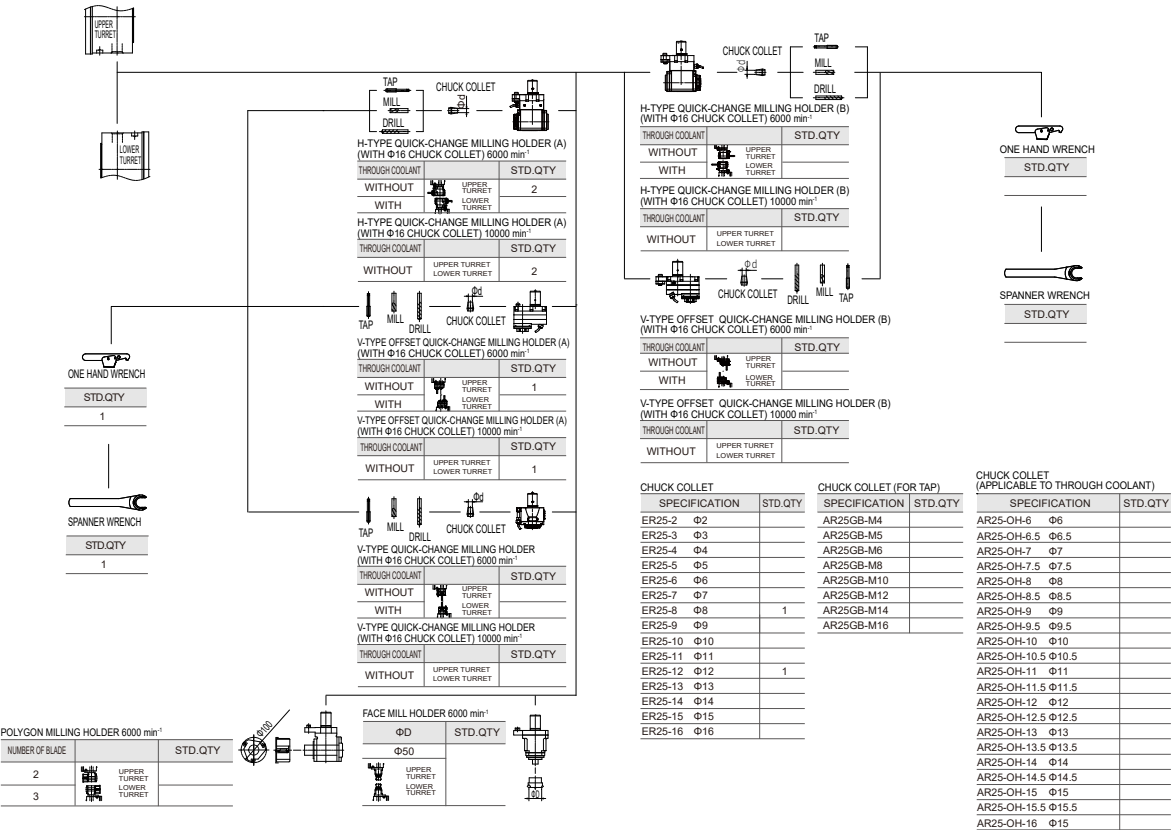
Unit : mm (inch)

HQR-100MSY, 150MSY 12 position upper / lower turret

Turning



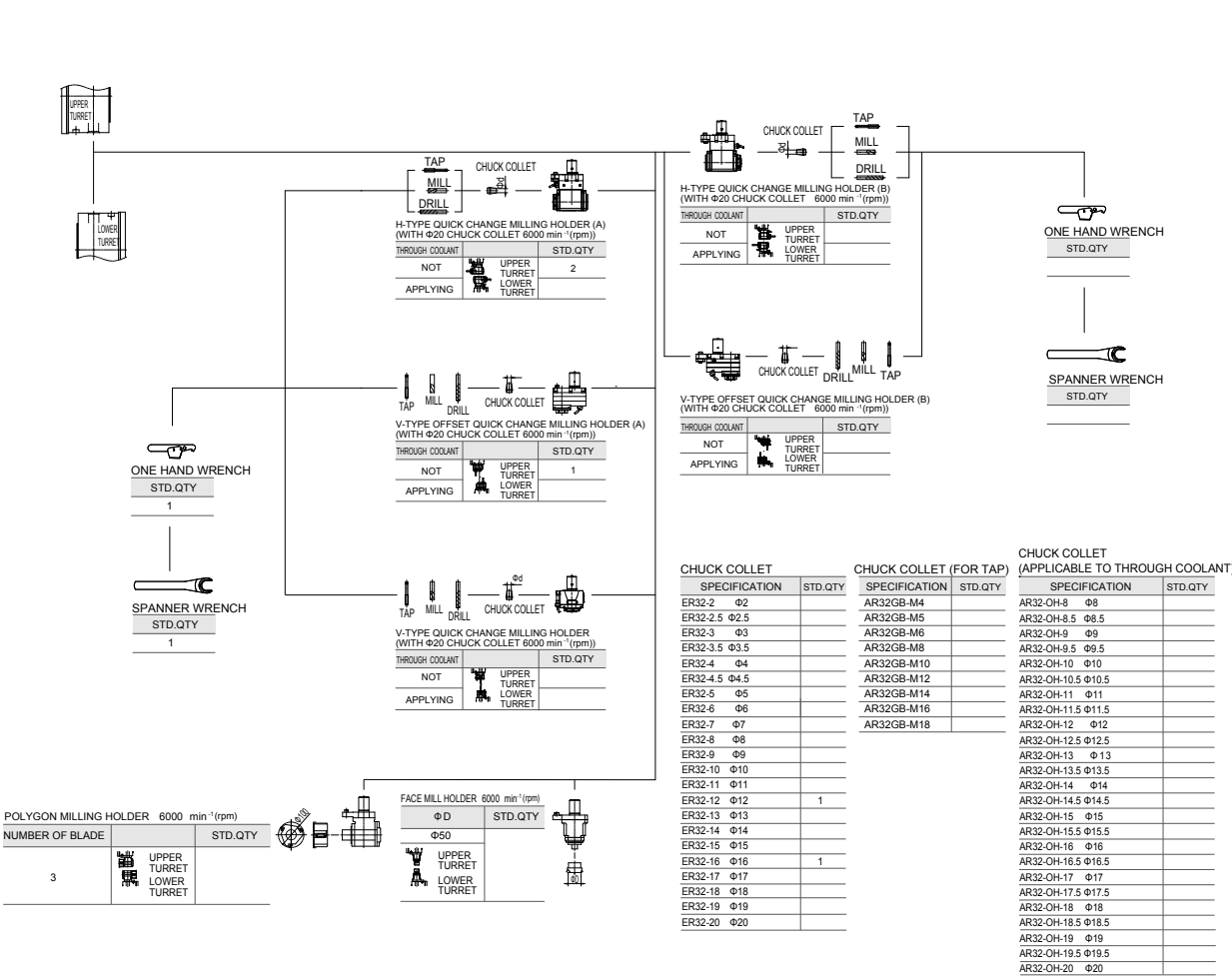
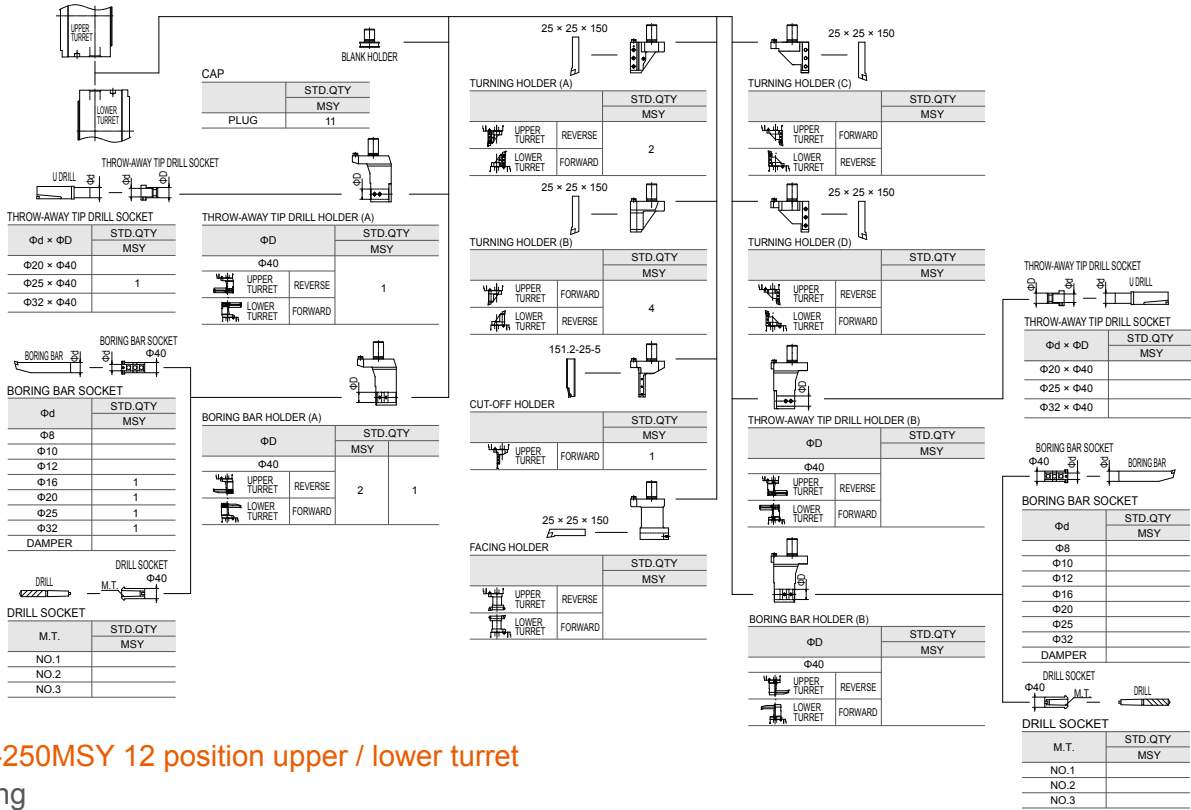
Milling



HQR-200MSY, 250MSY 12 position upper / lower turret

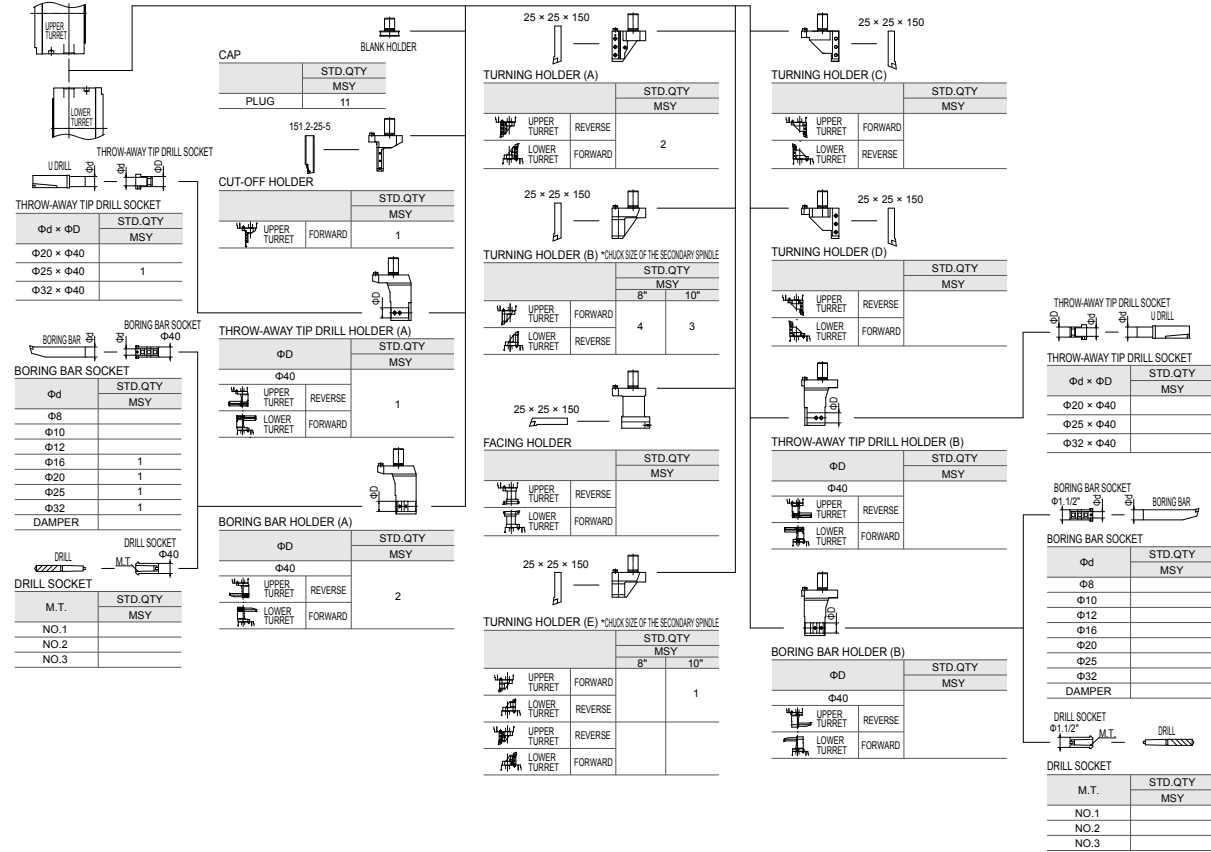
Turning

Milling

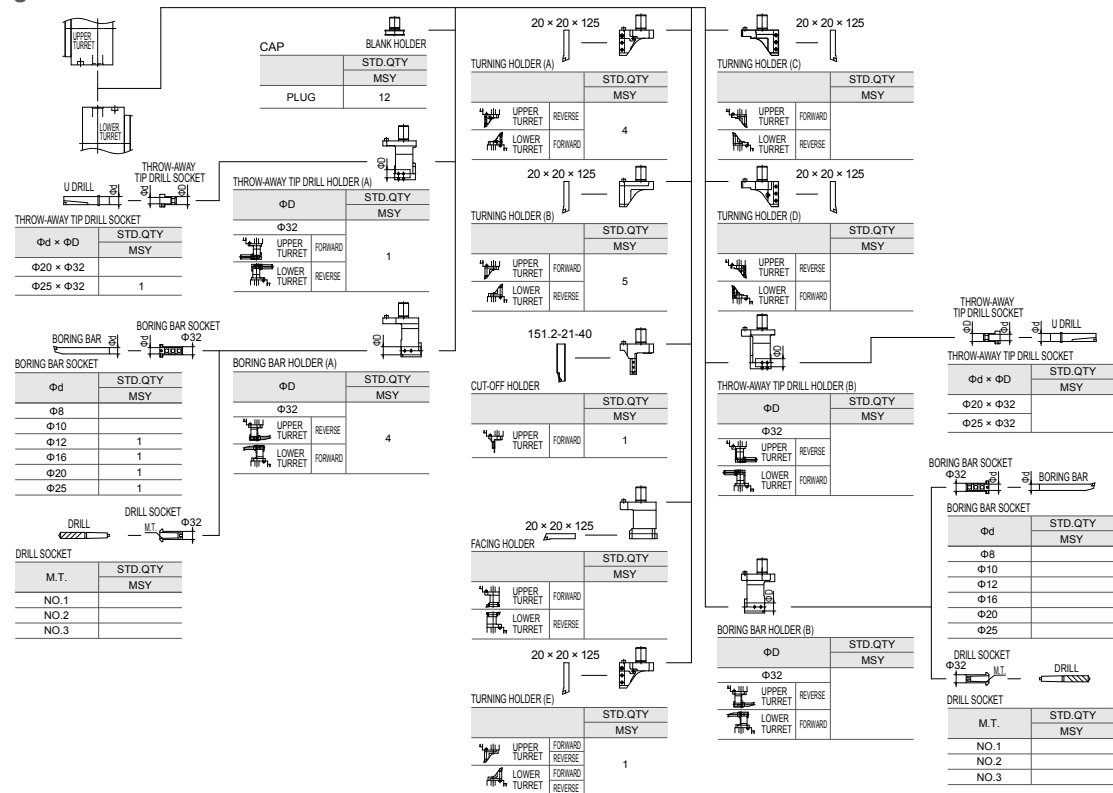


HQR-250MSY 12 position upper / lower turret

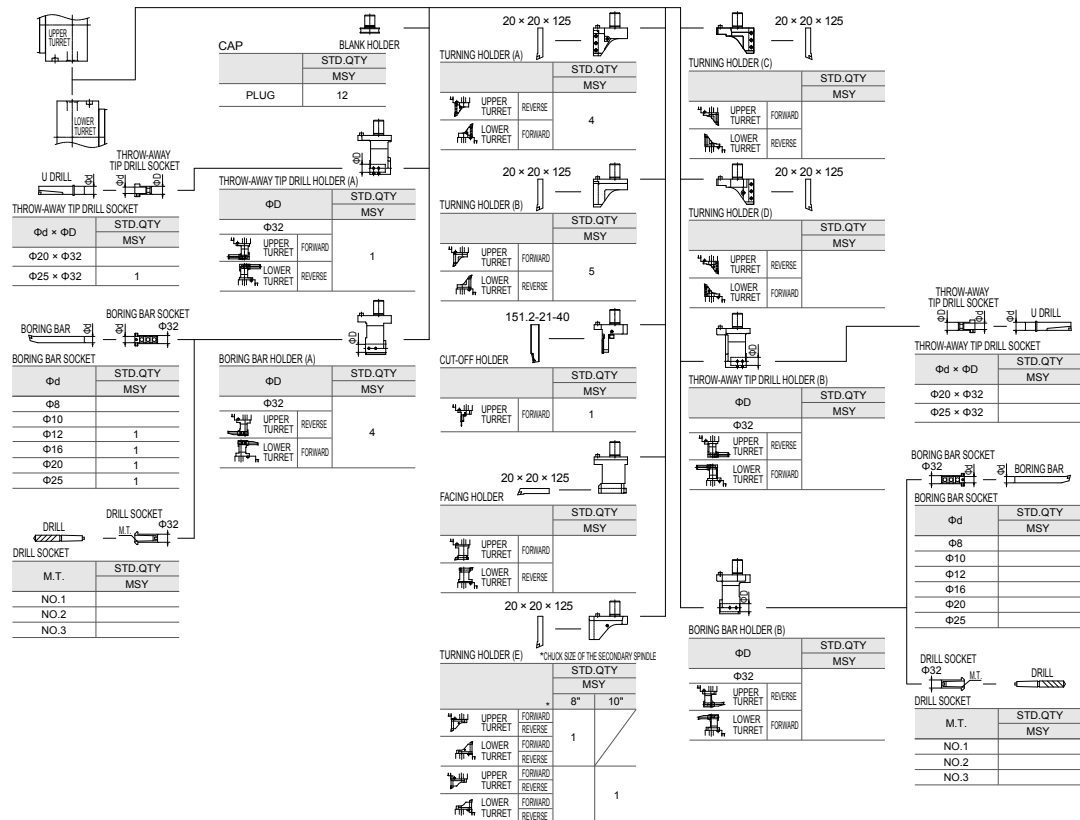
Turning



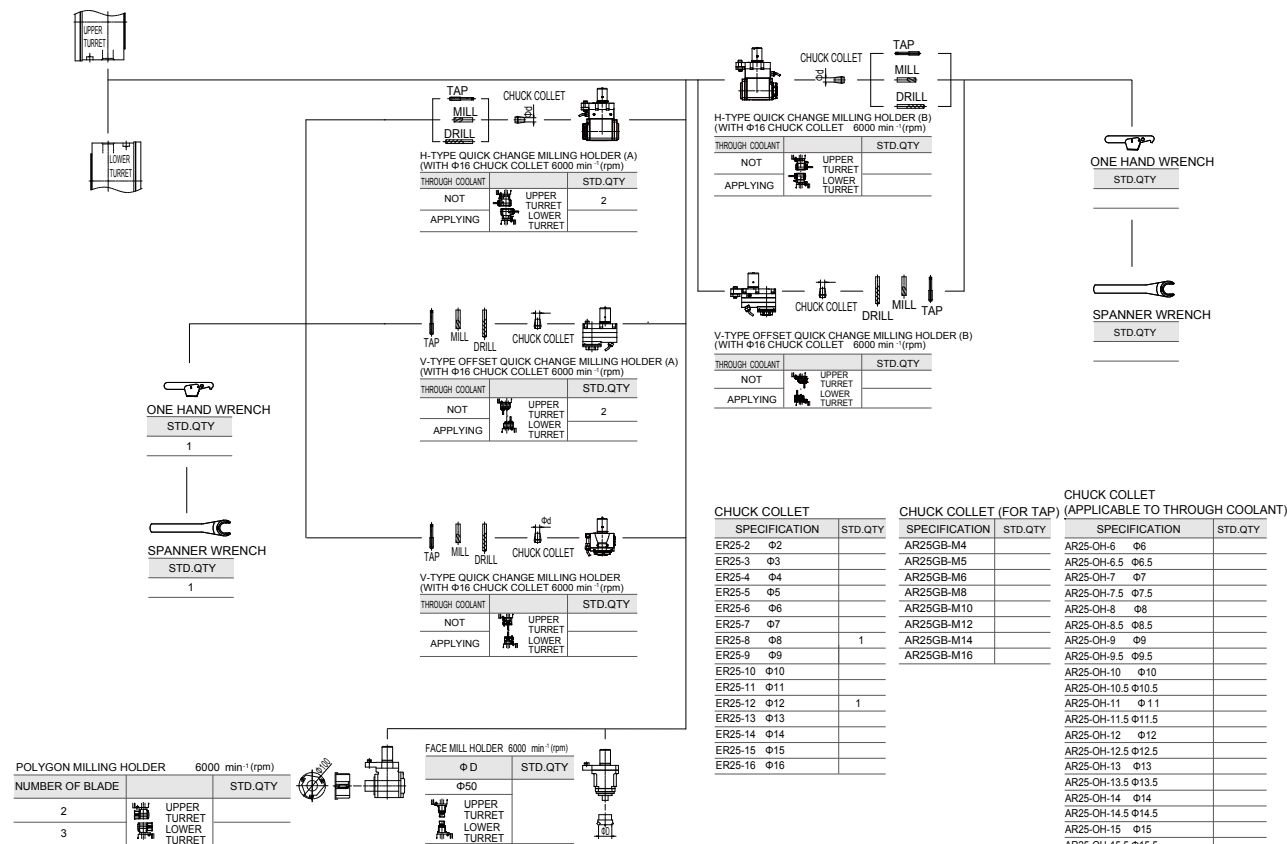
Turning



Turning



Milling

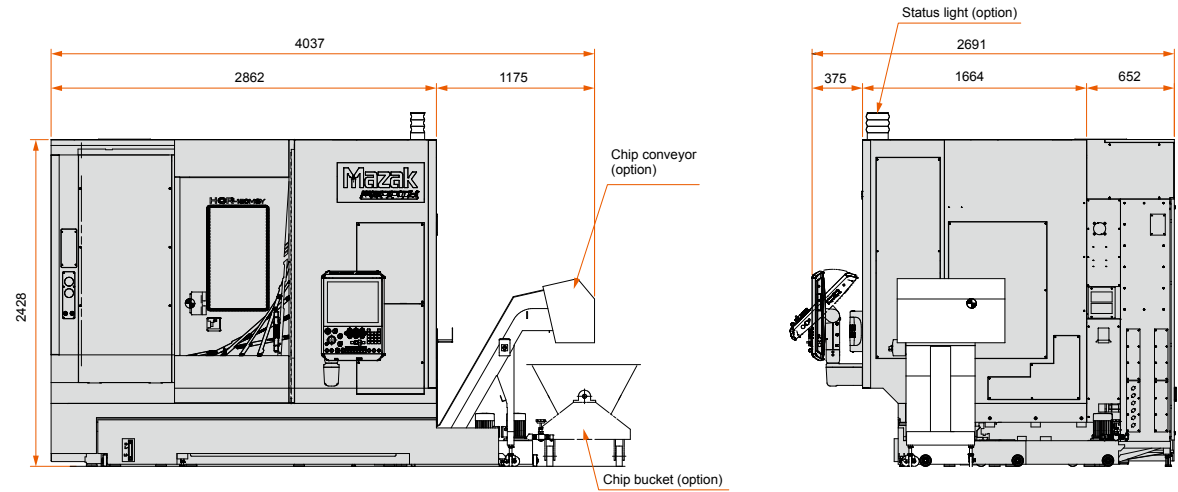


Environmentally Friendly

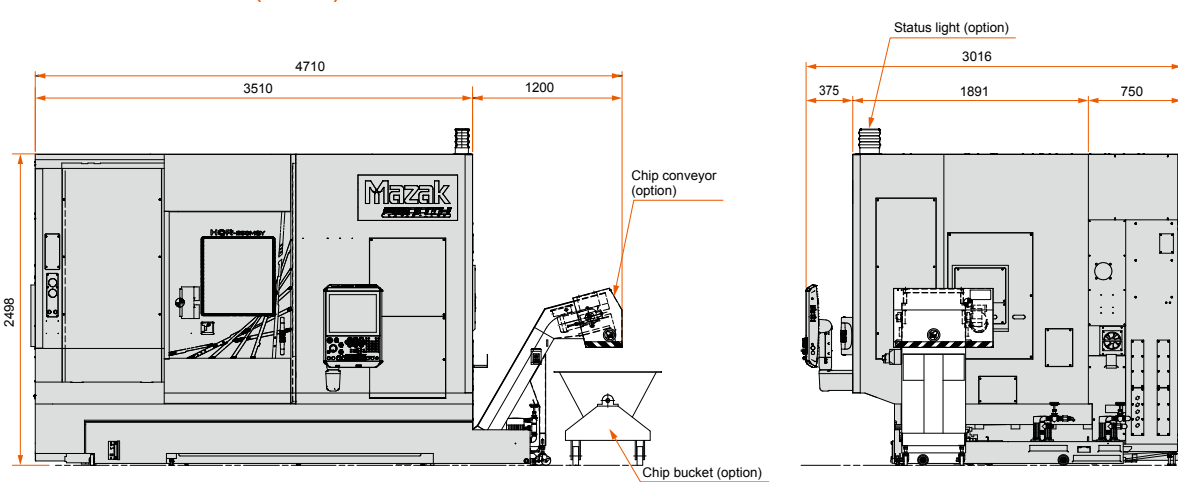
Machine Dimensions

Unit : mm

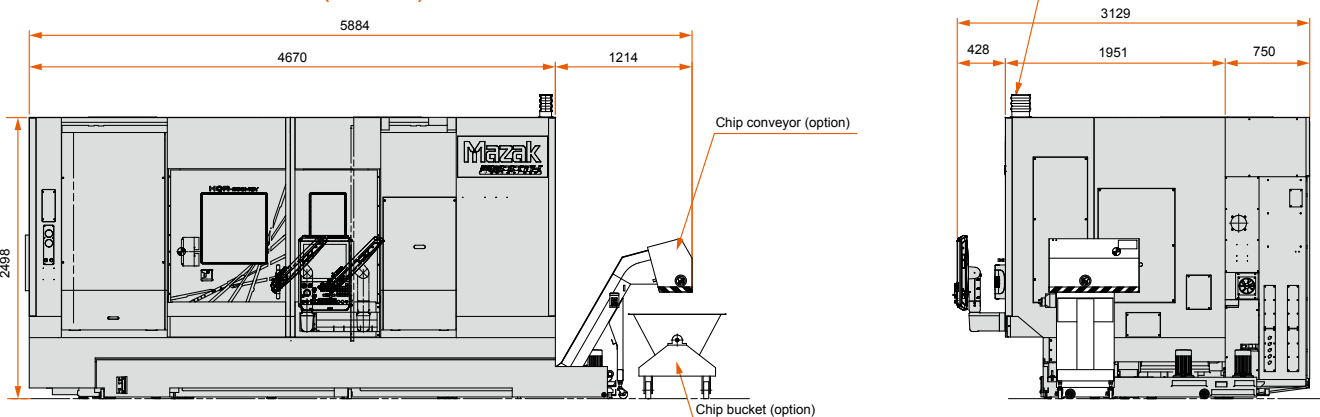
HQR-100MSY, 150MSY



HQR-200MSY, 250MSY (850U)



HQR-200MSY, 250MSY (1300U)



Mazak Go GREEN

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.



The linear roller guides and ball screws are lubricated by grease which eliminates tramp oil in the coolant resulting in a much longer service life for the coolant.

When the machine is not operated for a pre-registered period of time, the machine worklights and the CNC backlight are turned off automatically. They are automatically turned on when the motion sensor detects the return of the operator.

