AW MILLER
TECHNICAL SALES, INC.

EAST AURORA, NY 716.652.8282 | HARMONY, PA 724.453.1690 | STE-LAURENT, QC 514.333.9174 | HARLEYSVILLE, PA 215.256.8281

QUICK TURN

Mazak

SERIES

From its inception in 1981 and with worldwide cumulative sales of approximately 100,000 units, this best-selling turning center continues to surpass expectations.

With built-in motor spindle designs along with high-rigidity machine structures, QT Series machines give customers high levels of productivity. From turning to milling, Y-axis milling and 2nd spindle designs, our QT Series is as diverse as your needs. A wide lineup of chuck sizes and strokes allows part processing from small lengths and small diameters to large diameters and long lengths.

QUICK TURN 100MSY (300U) [MAZATROL SmoothG]
Shown with optional equipment.

High-performance CNC lathe

QUICK TURN SERIES

QUICK TURN 250MSY (500U)

QUICK TURN 200MY (1000U)

QUICK TURN 450MY (2000U) [MAZATROL SmoothG]
Shown with optional equipment.

- M & MY models (excluding 100M) come standard with built-in motors for rotary tooling.
- VDI or bolt-on turrets are available for mounting rotary tooling.
- Highly accurate 1st & 2nd spindle C-axis orientation function enables workpiece transfer for DONE IN ONE® processing (MS, MSY).
- Simple yet highly productive automation options such as gantry loaders and bar feeders with auto parts catchers.

Vast Lineup of Highly-Productive Models

With numerous machine configurations and options available, the QT Series of machines covers the most demanding applications. From small lot sizes to large production runs, the QT Series can help your shop with dependable high-production results.

QUICK TURN 100MSY (300U) [MAZATROL SmoothG]
Shown with optional equipment.

QUICK TURN 100 SERIES

	Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
		VDI method	Bolt-on method					
100MY	ø21.6" (550 mm)	○	•	•	—	•	•	300U
100MS	ø21.6" (550 mm)	○	•	•	•	—	—	300U
100MSY	ø21.6" (550 mm)	○	•	•	•	•	—	300U

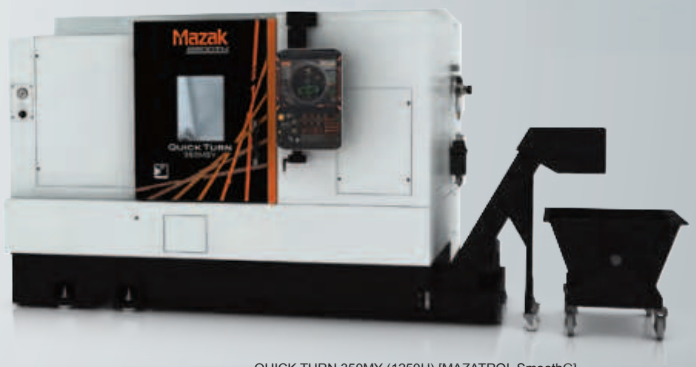
One of our most popular series since its inception. Available configurations include 2-axis, tailstock, chucker, milling, y-axis milling and second spindle.

QUICK TURN 250MSY (500U) [MAZATROL SmoothG]
Shown with optional equipment.

QUICK TURN 200, 250 SERIES

		Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
			VDI method	Bolt-on method					
200	250	ø27.36" (695 mm)	—	•	—	—	—	•	500U/(1000U 250)
200M	250M	ø27.36" (695 mm)	•	○	•	—	—	•	500U
200MY	250MY	ø27.36" (695 mm)	•	○	•	—	•	•	500U/(1000U 250)
200MS	250MS	ø27.36" (695 mm)	•	○	•	•	—	—	500U
200MSY	250MSY	ø27.36" (695 mm)	•	○	•	•	•	—	500U/(1000U 250)

●: Standard accessories ○: Option -: Not available



An ideal machine for medium-sized workpieces, along with the power and torque for maximum profitability. Available configurations include 2-axis, tailstock, chucker, milling, y-axis milling and second spindle.

QUICK TURN 350 SERIES

QUICK TURN 350MY (1250U) [MAZATROL SmoothG]
Shown with optional equipment.

	Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
		VDI method	Bolt-on method					
350	ø26.8" (680 mm)	—	●	—	—	—	●	650U/1500U
350M	ø29.5" (750 mm)	●	○	●	—	—	●	650U/1500U
350MY	ø29.5" (750 mm)	●	○	●	—	●	●	650U/1500U/2000U
350MSY	ø29.5" (750 mm)	●	○	●	●	●	—	650U/1500U

This integral-spindle machine allows for large part processing without belts and gearboxes. Configurations: 2-axis, tailstock, chucker, milling and Y-axis milling.

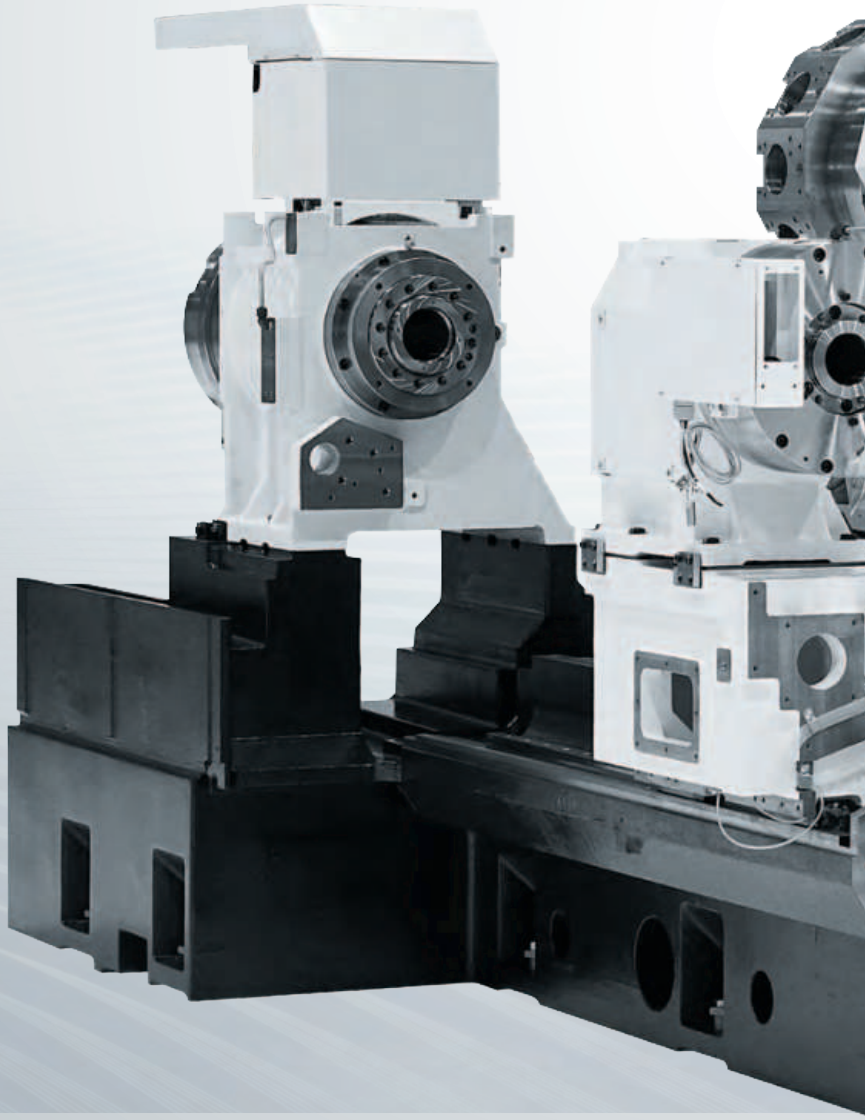
QUICK TURN 450 SERIES

QUICK TURN 450MY (2000U) [MAZATROL SmoothG]
Shown with optional equipment.

	Maximum swing	Turret		Mill function	Tailstock	Bed
		VDI method	Bolt-on method			
450	ø31.9" (810 mm)	—	●	—	●	1000U/2000U
450M	ø32.7" (830 mm)	●	○	●	●	1000U/2000U
450MY	ø32.7" (830 mm)	●	○	●	●	2000U/3000U

Machine Structure

The perfect fusion of machine structure and advanced control technology creates a stable, high-accuracy machining platform.

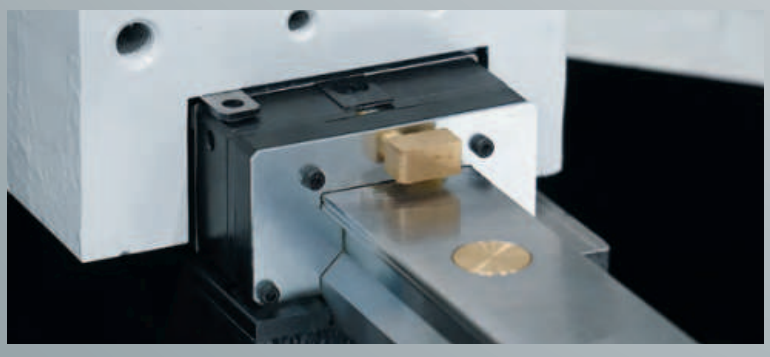


High-rigidity construction

Using structural analysis throughout the design phase, we have created highly rigid machine structures.These structures minimize distortion in heavy cutting and high-speed operations, all while maintaining high accuracy over the long term.

Roller guides on all linear axes

In addition to being able to achieve high speeds, durability, and long service life, roller guides also make it possible to achieve long-term reliable machining, all while being maintenance free.

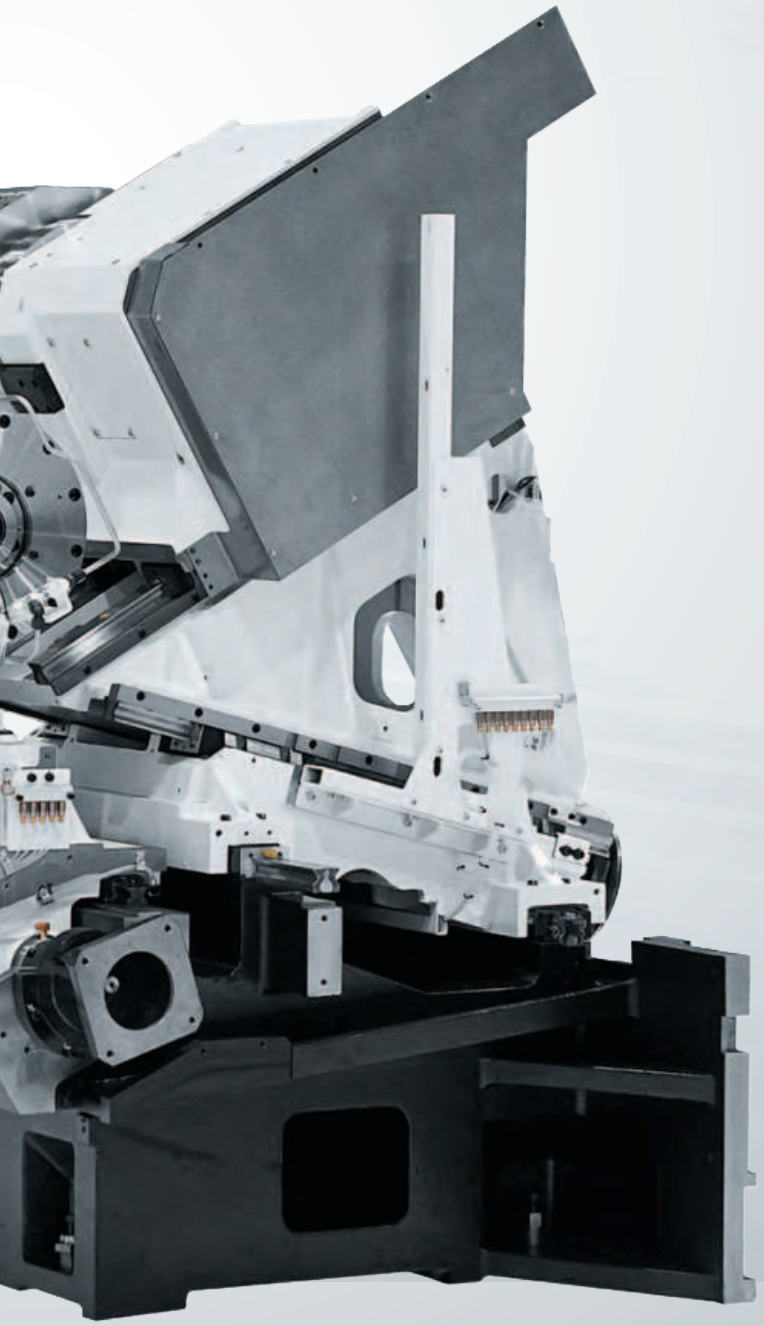


High-precision scale feedback (optional)

Scales with feedback to the CNC can be mounted to the X and Z axes. The scales are ideal for long-term high-precision repeatable positioning, high-precision circular interpolation cutting and machining that requires extreme continuous accuracy.

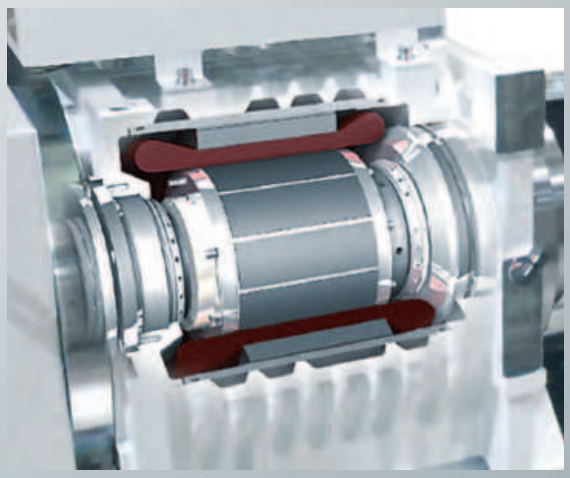
0.0001° C-axis indexing angle

Machines with optional milling have a standard of 0.0001° C-axis precision positioning for both single and 2nd spindle. Simultaneous C-axis contour machining can also be realized with the milling option.



Built-in motor spindle

With no gears or belts that cause vibration, built-in motors improve part roundness and surface finish without mechanical power loss. Maintenance issues such as belt tension adjustment and replacement are unnecessary, while a simple structure ensures high reliability.



Thermal Displacement Control Function, Thermal Shield

Patent pending

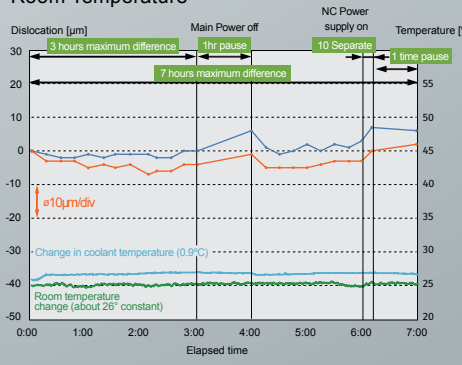
This system uses spindle speed to calculate thermal displacement. High-accuracy correction is simultaneously used for sudden expansion and contraction due to spindle operations like spindle speed increase, decrease or stoppage. As a result, stable machining accuracy is maintained. The new graphical interface allows for visualizing changes in temperature and thermal displacement while adding simple adjustment functions for the user.

*The 100 Series does not support the visualization of temperature change or thermal displacement and lacks the simple adjustment function.

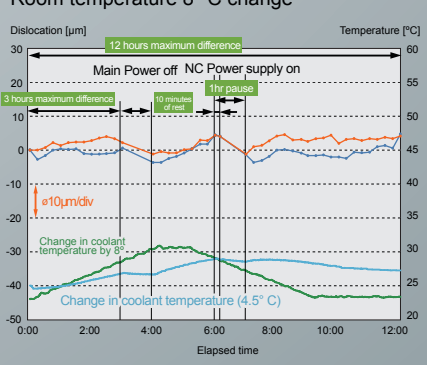
Measurement example (model: QUICK TURN 100MS)

HD1 Attitude control enabled — HD2 Attitude control enabled — Room temperature — Coolant

Room Temperature



Room temperature 8° C change

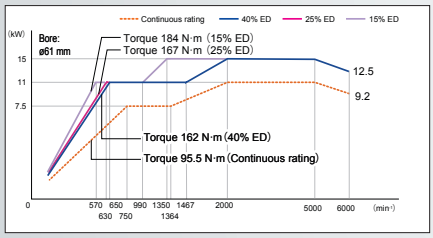


High-Performance Spindle

With the built-in motor design headstocks and spindle cooling of the QUICK TURN machines, users gain high productivity along with extreme accuracy.

QUICK TURN 100 Series

6,000 min^{-1} 20 hp (15 kW) spindle

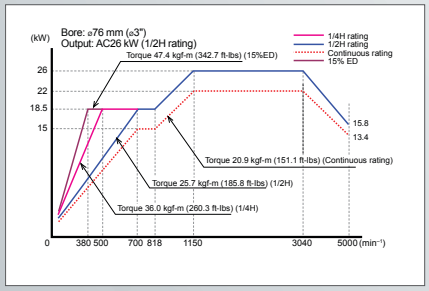


Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through-hole diameter
100MY, 100MS, 100MSY	20 hp (15 kW)	6,000	135 ft-lb (184 N•m)	6"	ø2.40" (61 mm)

QUICK TURN 200 Series/QUICK TURN 250 Series

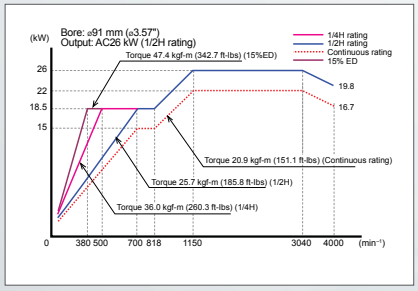
QUICK TURN 200 Series

5,000 min^{-1} 35 hp (26 kW)



QUICK TURN 250 Series

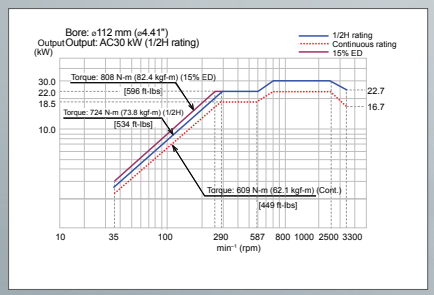
4,000 min^{-1} 35 hp (26 kW)



Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through-hole diameter
200, 200M, 200MY, 200MS and 200MSY	35 hp (26 kW)	5,000	343 ft-lb (465 N•m)	8"	ø2.99" (76 mm)
250, 250M, 250MY, 250MS and 250MSY	35 hp (26 kW)	4,000	343 ft-lb (465 N•m)	10"	ø3.58" (91 mm)

QUICK TURN 350 Series

3,300 min^{-1} 40 hp (30 kW) spindle



Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through-hole diameter
350, 350M, 350MY and 350MSY	40 hp (30 kW)	3,300	596 ft-lb (808 N•m)	12"	ø4.41" (112 mm)

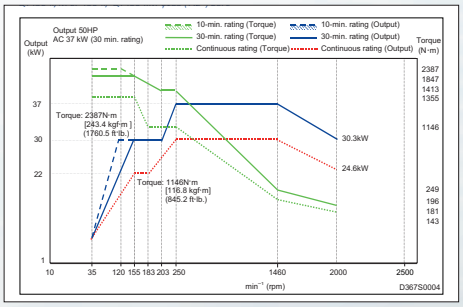
Heavy cutting with high-output and high-torque spindles

Processing results: QUICK TURN 350MY

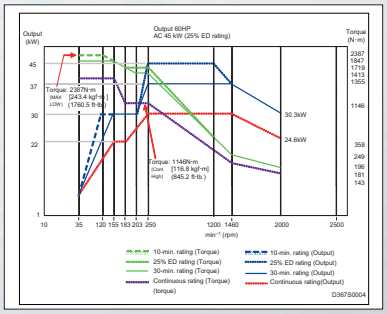
3,300 min^{-1} 40 hp (30 kW) high-torque spindle
Peripheral speed: 590 SFM
Feed rate: 0.016"/rev
Cutting depth: 0.27"

QUICK TURN 450 Series

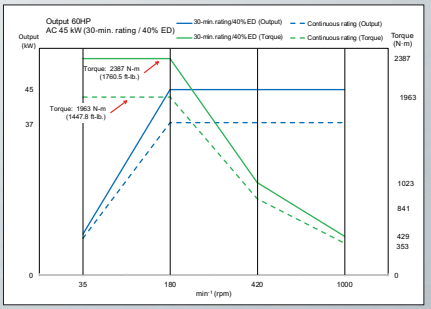
7.28" 50 hp (37 kW) spindle



7.28" 60 hp (45 kW) spindle



10.8" 60 hp (45 kW) spindle

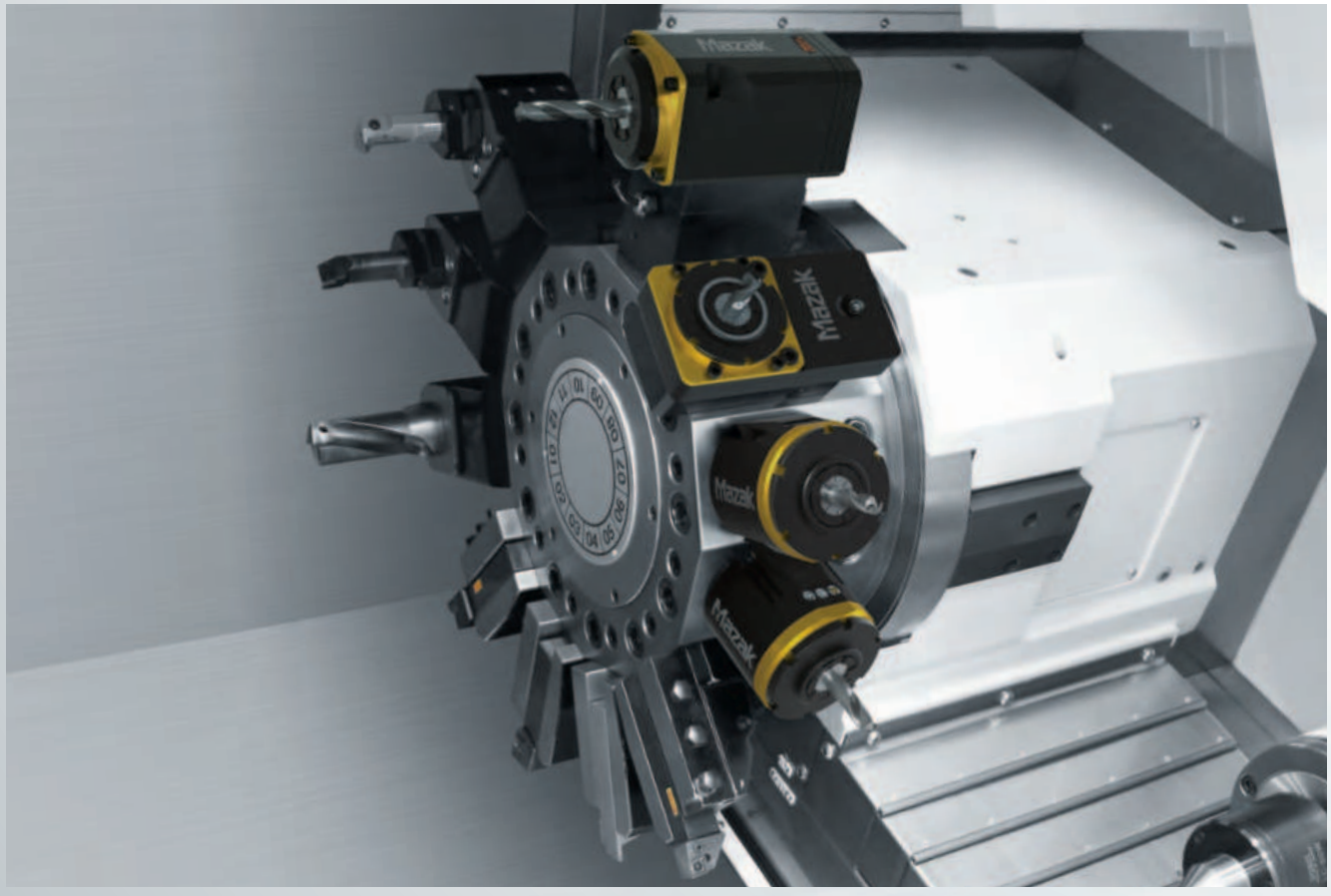


Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through-hole diameter
450, 450M and 450MY	50 hp (37 kW)	2,000	1,760 ft-lb (2,386 N•m)	N/A	ø7.28" (185 mm)
	60 hp (45 kW)	2,000	1,760 ft-lb (2,386 N•m)	N/A	ø7.28" (185 mm)
	60 hp (45 kW)	1,000	1,760 ft-lb (2,386 N•m)	N/A	ø10.8" (274 mm)

High Productivity

Turrets are available in both bolt-on and VDI styles

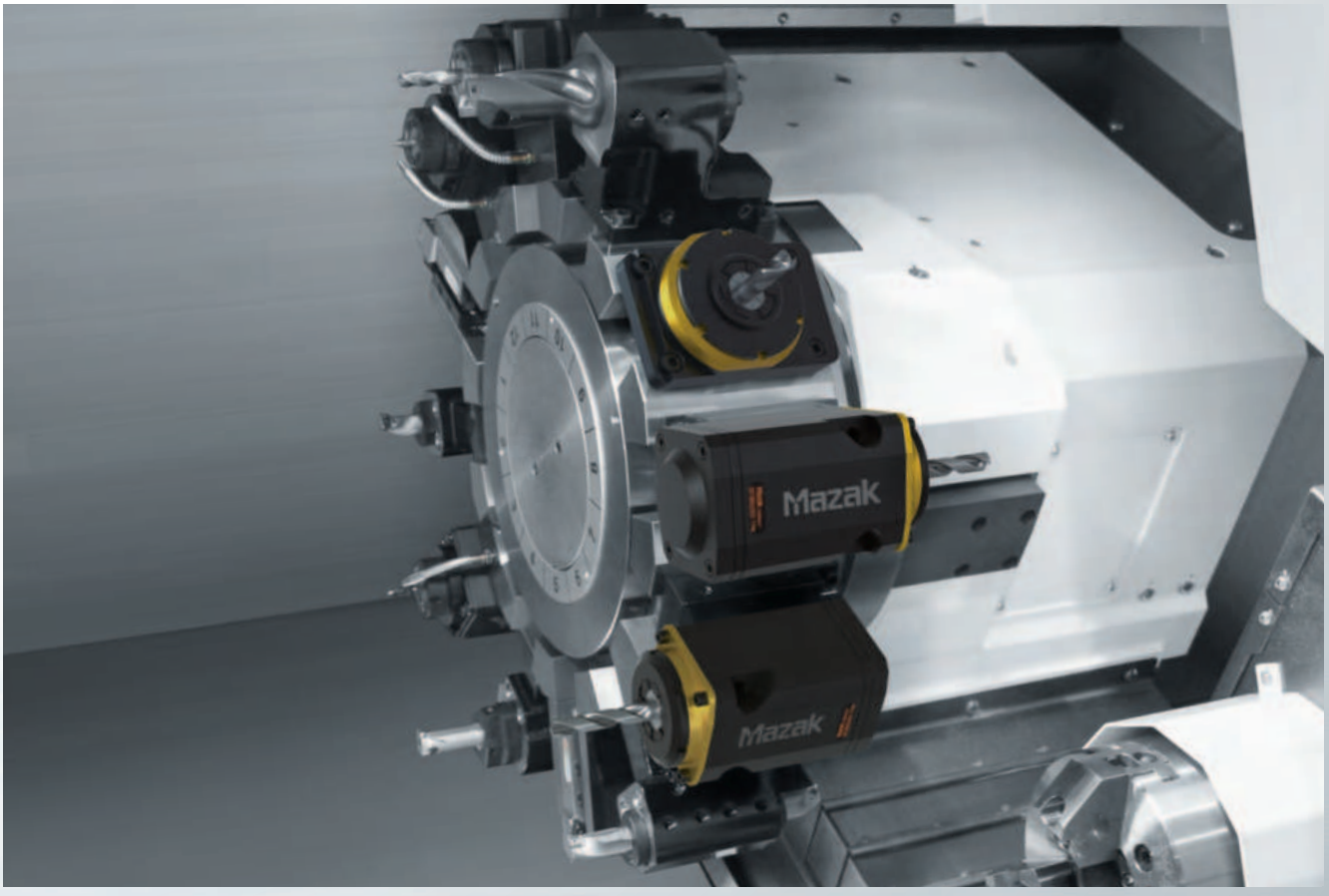
VDI Turret option



Our VDI-type non-lift servo-driven 12-position drum turrets shorten part-processing cycle times through Multi-Tasking functionality achieved with live milling capability. The Mazak VDI turret makes changeovers for new part setups easy and fast, improving overall efficiency.

Compatible models	Turret type	Number of tools
100MY, MS, MSY	12-sided tool post	12
200, 250	12-sided tool post	12
200/250M, MS & MSY	12-sided tool post 16-sided tool post	12 16
350, M, MY, MSY	12-sided tool post	12
450, M & MY	12-sided tool post	12

Bolt-On Turret option



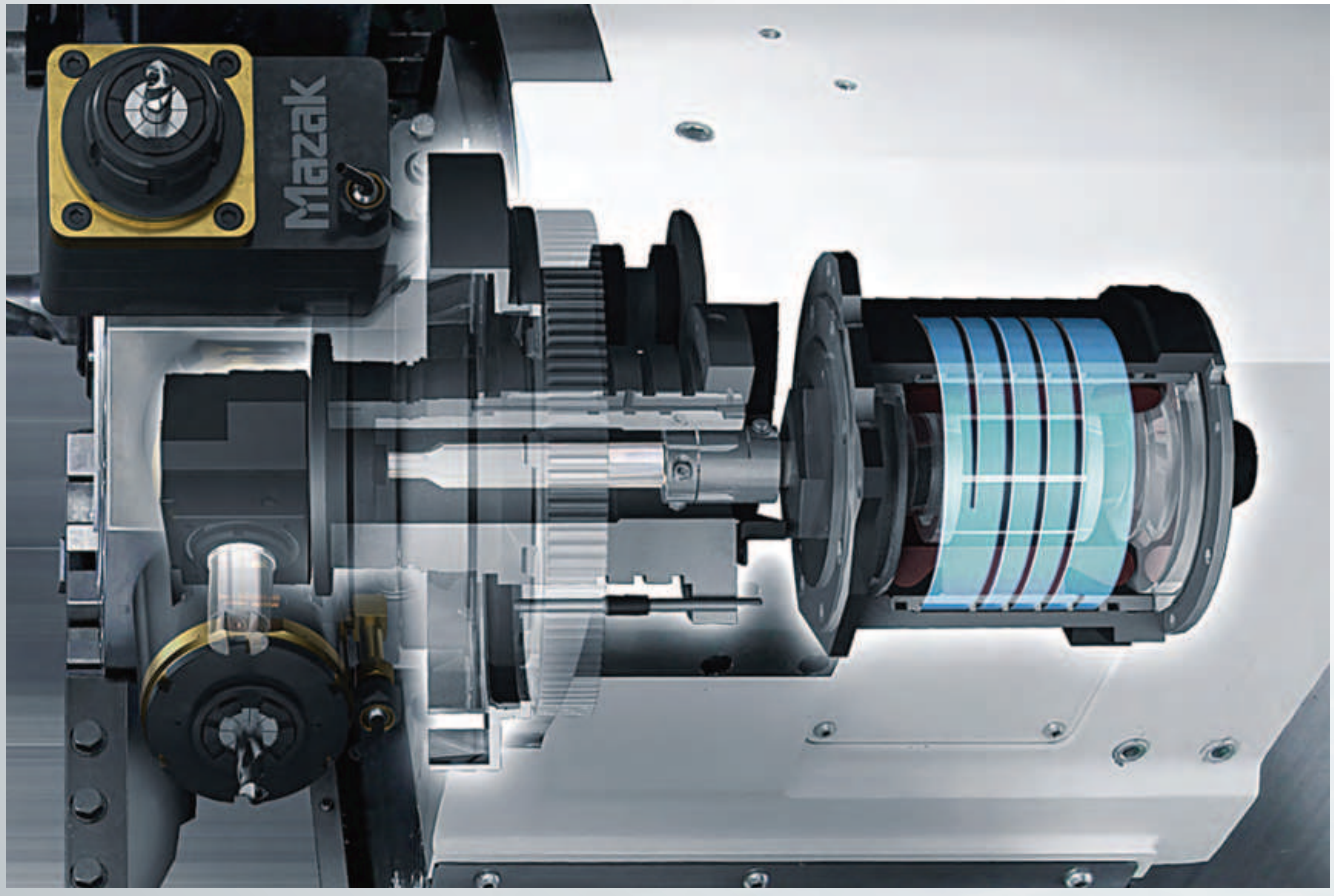
The 12-position drum turret is designed for minimal interference. The use of non-lift rotary indexing and high-speed clamping/unclamping improves performance for non-cutting processes. Additionally, thanks to random selection/shortest path indexing, chip-to-chip time when changing tools is extremely fast.

Compatible models	Turret type	Number of tools
100MY, MS & MSY	12-sided tool post	12
200, 250	12-sided tool post	12
200/250M, MY & MSY	12-sided tool post	12
350M, MY & MSY	12-sided tool post	12
450, 450M & 450MY	12-sided tool post	12

High Productivity

Smooth Mill Drive

Integral spindle/motors used for turret milling spindle(s) minimize vibration for high-accuracy results. Temperature-controlled cooling oil is circulated around the housing to aid in minimizing any thermal changes to the system, improving overall part quality and repeatability.



Mill Holder II

The Mill Holder II tooling for turret lathes improves overall cutting performance significantly. Tool setups are made easier and overall installation and removal of the tooling has been made simpler with the removal tool, which now only requires one spanner wrench for tightening or loosening the collets.

Example of processing capacity (QUICK TURN 100MSY)

ø12 mm (0.47") solid end mill (V-type mill holder II)

Peripheral speed: 262 SFM	Cutting depth (radial direction): 0.47"
Feed rate: 0.009"/rev	Cutting depth (axial direction): 0.47"

100MY, MS & MSY (Smooth mill drive specification)

	5,000 rpm (Standard)	10,000 rpm
Tooling Connection Type	VDI/Bolt-on	Bolt-on
15% ED/Continuous Rating	7.3 hp/5.0 hp	7.3 hp/5.0 hp
Maximum Torque	35.0 ft-lbs	20.0 ft-lbs

200M, MY, MS & MSY/250M, MY, MS & MSY (Smooth mill drive specification)

	6,000 rpm (Standard)	High Torque 6,000 rpm	10,000 rpm
Tooling Connection Type	VDI	VDI/Bolt-on	Bolt-on
15% ED/ Continuous Rating	10 hp/7.3 hp	10 hp/7.3 hp	10 hp/7.3 hp
Maximum Torque	35.0 ft-lbs	51.0 ft-lbs	33.0 ft-lbs

350M, MY & MSY/450M & MY (Smooth mill drive specification)

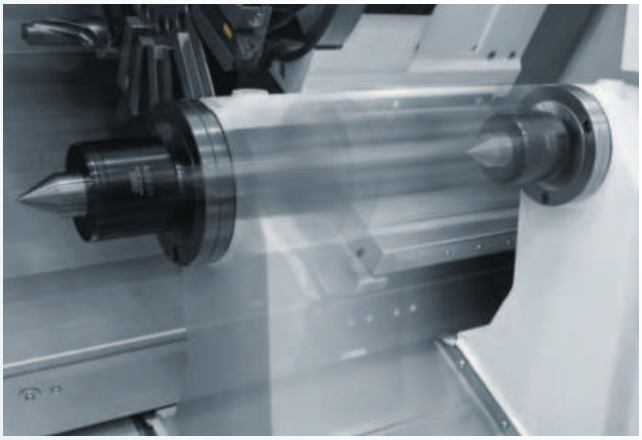
	4,000 rpm (Standard)	High Torque 4,000 rpm	6,000 rpm	High Torque 6,000 rpm
Tooling Connection Type	VDI (CAT40)	VDI (CAT40)	VDI (ER40)/Bolt-on	VDI (ER40)/Bolt-on
15% ED/ Continuous Rating	10 hp/7.3 hp	10 hp/7.3 hp	10 hp/7.3 hp	10 hp/7.3 hp
Maximum Torque	70 ft-lbs	81.1 ft-lbs	70 ft-lbs	81.1 ft-lbs

High Productivity

CNC Tailstock

Servo-driven programmable CNC tailstock

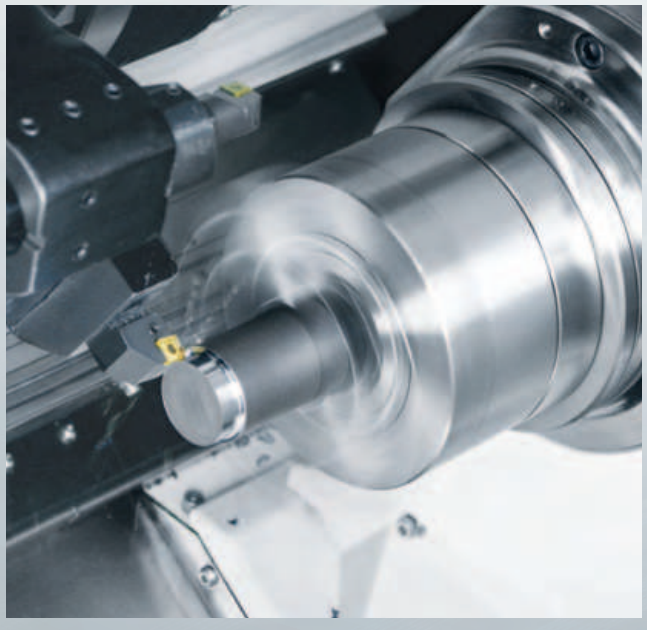
The tailstock employs a servo motor and ball screw for controlled movement and precise thrust adjustments. Pushing force is easily set in increments of 22.5 lbf using the menu soft keys or M-code commands, allowing for the flexibility to process either heavy, large-diameter workpieces or long, thin workpieces. Ease of use is vastly improved compared to the drag and drop method of movement and pressing with hydraulic/pneumatic pressure.



2nd Spindle (MS, MSY)

Highly accurate and powerful second spindles for DONE IN ONE® part processing

Second spindles feature high-performance built-in motors for powerful turning and precision milling. Our non-belt driven C-axis 0.0001° indexing allows for single-point machining and contoured milling while it provides overall part quality and repeatability.



	100MS, 100MSY	200MS, 200MSY 250MS, 250MSY	350MS, 350MSY
Rotational speed	6000 min^{-1}	6000 min^{-1}	4000 min^{-1}
Output (25% ED/ continuous rating)	14.8 hp/10 hp	14.8 hp/10 hp	35 hp/30 hp
Maximum torque (15% ED)	66 ft-lb	66 ft-lb	342 ft-lb
Chuck size	5"	6"	10"

Steadyrest option

To process longer parts with high accuracy, a steadyrest can be installed. Various sizes and models of steadyrests can be added based on the user's applications.

	Actuating Type	Size Range	Steady Rest Base Type
QT250	Hydraulic	ø.32"-ø3.98"	Drag and Drop
QT350	Hydraulic	ø.787" - ø6.5"	Drag and Drop
	Hydraulic	ø2.56" - ø9.25"	
	Manual	ø.78" - ø7.8"	
QT450	Hydraulic	ø.787" - ø6.5"	Ballscrew - programmable
	Hydraulic	ø1.97" - ø7.88"	
	Hydraulic	ø2.56" -ø 9.25"	
	Hydraulic	ø2.05" - ø11.02"	
	Hydraulic	ø3.15" - ø15.35"	
	Manual	ø1.2" - ø8.7"	

Y Axis (MY, MSY)

Accurately and efficiently machine complex part shapes with the large Y-axis strokes of QUICK TURN machines. The compound double slide (X,Y) method allows for machining large workpieces even in a compact machine footprint.

Compatible models	Y-axis travel
100MY, 100MSY, 200MY, 200MSY, 250MY, 250MSY	4.0" (±2.0")
350MY, 350MSY	6.0" (±3.0")
450MY	8.0" (±4.0")

Automation

GR100 Gantry Loader (only on the QUICK TURN 200/250 Series)

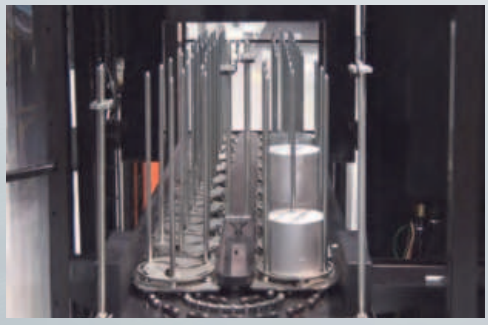
The overhead gantry quickly loads and unloads workpieces from machines, making it ideal for small to medium-batch size runs of common part families. The gantry and machine both utilize the same control, making it easier for operators to learn and run. Conversational programming of the gantry makes it simple and accurate to program.

- Boost efficiency through unsupervised workpiece processing.
- Shorten workpiece changeover times for an increase in overall productivity.
- Allow one operator to effectively run multiple machines.
- Add an inspection conveyor to increase the overall productivity of the cell.

QUICK TURN 250MSY + GR100

2-pallet pitch feed conveyor

Provide a setup area to load and unload raw materials and finished parts without interrupting machine operations.



Rotary conveyor

The rotary pallet conveyor allows for either single or multiple stacked workpieces. The conveyors increase productivity for various part sizes for a high level of output.

*16-pallet rotary conveyor specification only.

TA (TURN ASSIST) MAZATROL SmoothG

A complete automation system that eliminates the need for complicated robot programing, the TURN ASSIST system consists of an industrial robot, stockers and dedicated software, which automates loading, flipping and unloading of finished products. This complete system reduces equipment installation and interfacing issues.

*Only compatible with MAZATROL SmoothG machines.

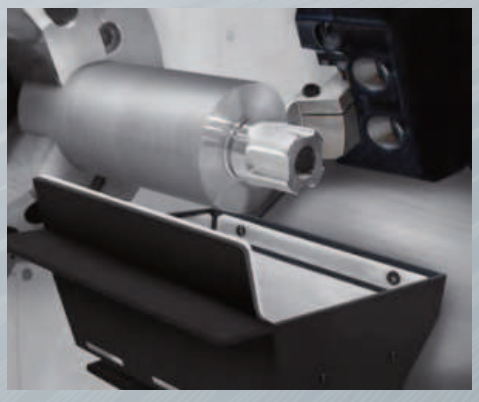
QUICK TURN 250 + TA (Turn Assist)

Bar feeder

An optional bar feeder can automate the loading of bar material. Install various brands of bar feeders quickly and easily with a common interface.

Auto parts catcher (APC)

The optional APC allows for unloading of machined workpieces to an external parts box. Paired with a bar feeder, the APC helps shops realize unattended operation.



Ergonomics and Maintainability

Designed around the operator's ease of use

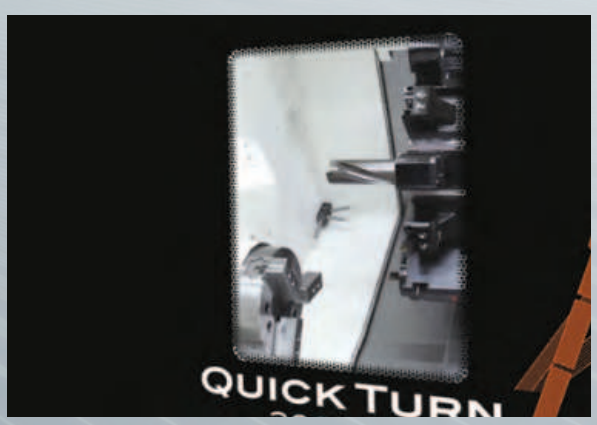
Operator door

An integrated L-shaped design exposes the top and front of the cutting area, giving ample access to crane load large workpieces.

QUICK TURN 350MSY (1500U)
[MAZATROL SmoothG specifications]

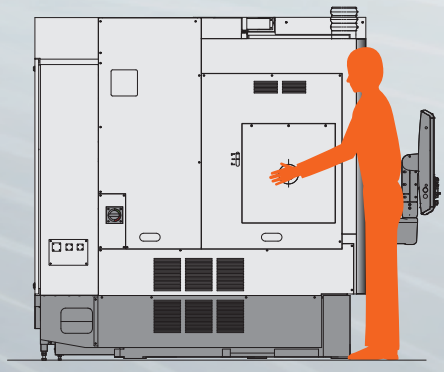
Large window

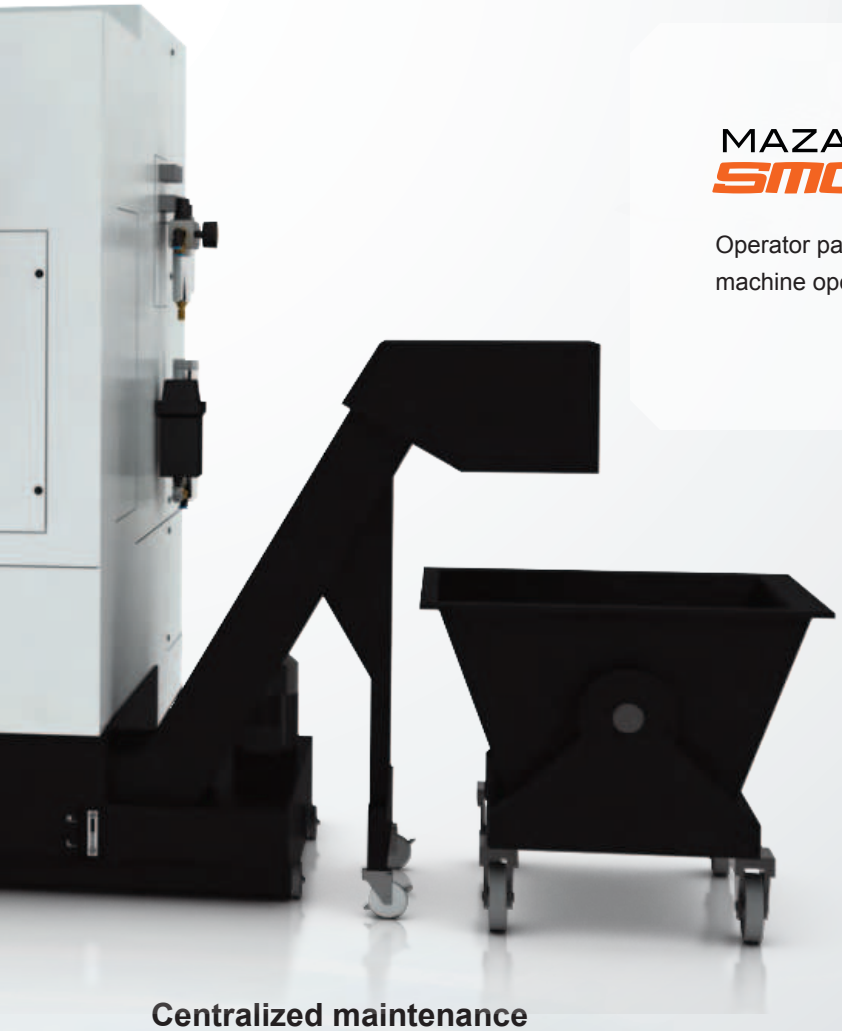
A large, strategically placed window improves the visibility of machining operations.



Ergonomically placed spindle locations

The chuck centerline is easily accessible, and a toe kick allows operators to work upright when loading and unloading workpieces, ultimately reducing fatigue.





MAZATROL
SMOOTH G

Operator panel swivels for easy machine operation or tooling service.

Centralized maintenance

To encourage daily maintenance, valves and lubrications are centrally located on the outside of the machine.

Color-coded cabling

Electrical component cables are color coded according to their intended use. Maintenance is simplified and repair time is reduced.

MAZATROL SmoothG Control

An intuitive touchscreen interface for ease of use from setup to machining

MAZATROL SMOOTHG

Five informative process home screens

The process home screens were developed to place commonly used functions required for machine operation and maintenance in one convenient location. They allow you to easily determine the progress of each process.

Program

Tool data

Setup

Machining

Maintenance

(The above is the process home screen of MAZATROL SmoothG.)

MAZATROL SMOOTH G

Pop-up displays

Based on a selected item or a required data entry, the corresponding menu and keyboard are displayed for fast navigation.

Side menu

List menu

Screen keyboard

Programming

MAZATROL interactive programming

MAZATROL interactive programing uses common language, so you can easily create and edit programs simply by entering data from a part drawing. Inexperienced operators can quickly learn to create programs by utilizing preset cutting conditions and automatic tool path creation.

MAZATROL SmoothG

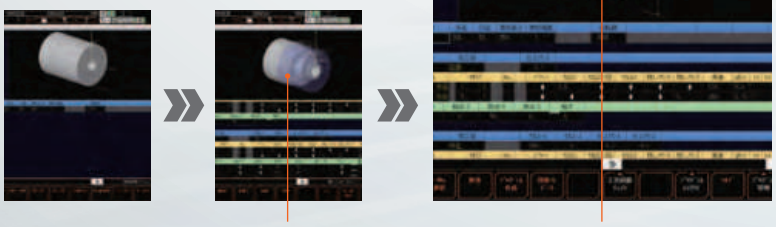
QUICK MAZATROL

Patent pending

MAZATROL SMOOTH G

Interactive programming reduces time

Quick MAZATROL offers the programmer/ operator the option to see – in real time – a 3D model of the finished workpiece as they create the program. This reduces errors that otherwise typically are not found until after machining. Once the program has been created, simply touch and edit a feature to modify features on the workpiece.



Touching a feature in the 3D model will instantaneously take you to the corresponding MAZATROL machining unit in the program. Once there, you can edit the machining unit or navigate freely.

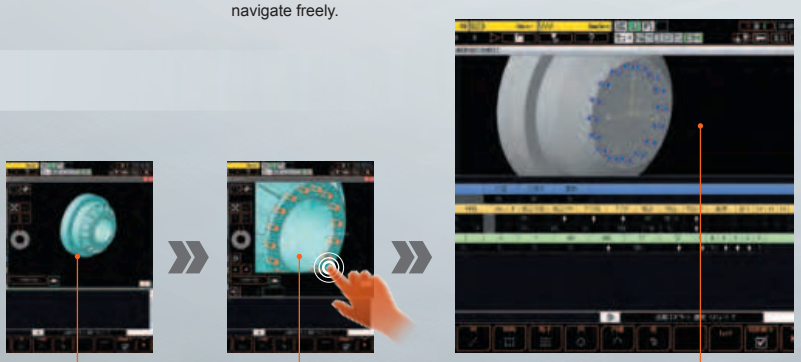
Displays a real-time 3D model of the processed workpiece based on the program.

3D ASSIST

MAZATROL SMOOTH G

Create programs directly from 3D CAD models

Extract processing dimensions and coordinate data from 3D CAD models and incorporate them into MAZATROL programs. Using a solid model of the programmed workpiece greatly reduces numeric input errors.



Load CAD model

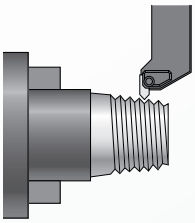
Select geometry

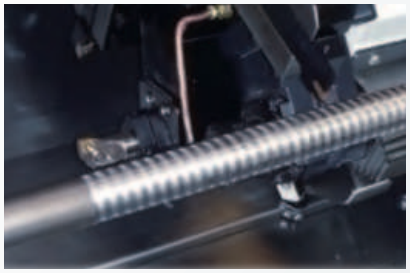
Reflected in the MAZATROL program

Rethreading Function

Patent pending

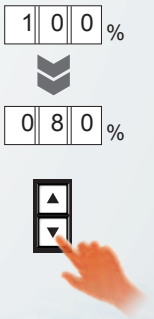
Rethreading can be easily performed on workpieces that have been removed from the chuck or produced on another machine.





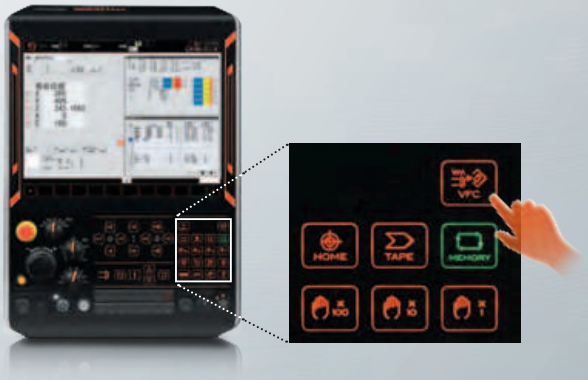
Override Variable Threading Function

The spindle override (spindle rotation speed) can be changed during threading on large-diameter, thin-walled or long parts that are difficult to machine. This allows the operator to find the optimal cutting speed for reducing vibration due to cutting conditions.



VFC Function

After changing the speed and/or feed overrides during an operation and pressing the VFC key, the control learns the altered cutting conditions and writes those to the current program.



Efficient EIA/ISO programming

QUICK EIA MAZATROL SMOOTH G

EIA program visualization

Visualizing the EIA program helps when checking and editing individual program line segments. Touching the tool path on the screen allows you to move to the corresponding program block instantly for review or edit.

Standard and Optional Accessories

Automation Support

Tool eye

For shorter setup times, tools can be automatically registered in the CNC simply by touching the cutting edge on the tool eye sensor(s). Automatic measuring can also be performed while in cycle for process automation.

Automatic chuck jaw open/close

Chuck jaws can be opened and closed using an M-code, which is necessary when using a bar feeder or other robot systems.

High/low chuck pressure switching

Some workpieces and applications require varying chucking pressures. This option allows the operator to switch pressures via an M-code.

Double foot switch

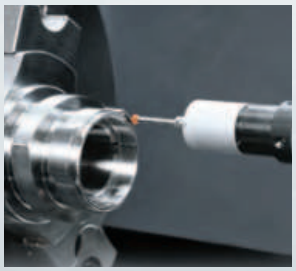
The double foot switch has one pedal for opening the chuck and another one for closing it (also available for second spindle).

Automatic door

The automatic front door opens and closes via an electric actuator.
A tactile pressure sensor safety device keeps the door from closing when pressure is applied.

Workpiece probing

A touch probe mounted in the machine's turret ensures high-accuracy machining and allows for in-process gauging. Tools can be automatically compensated based on measured geometric features like inner and outer diameters on workpieces.



Auto power ON + warm-up/power off

Power is automatically turned on according to timer settings, at which time a warm-up operation is performed. The power can also be turned off with a timer.

3-level signal tower

Displays the operating status of a machine. From the top, red (alarm display), yellow (work completed) and green (automatic operation).

QUICK TURN 250MSY

Coolant

Coolant system (standard)

A coolant pump installed at the rear side of the coolant tank pumps cutting fluid that is then discharged at tool post.

Additional head-side coolant nozzle

Cutting fluid discharges from a nozzle over the top of the headstock to prevent chips from adhering to the chuck and/or workpiece.

Mist collector

Reclaiming the mist created in the machines is critical for a safe and productive work environment. Mist collection systems are sized to each specific model to ensure proper mist evacuation.

Mazak SUPERFLOW® high-pressure coolant system

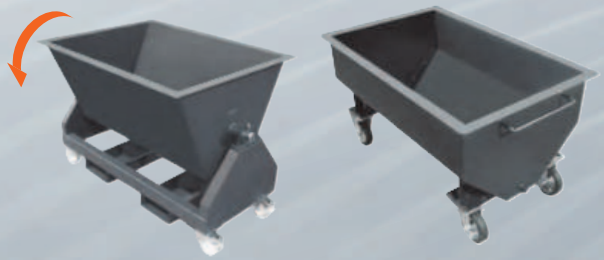
Using high-pressure coolant can boost productivity and maximize tool life by enabling improved chip control and thermal shock reduction.

Chip Disposal

Chip conveyor

Chips are quickly discharged out of the machine to reduce operator work.

Chip bucket (rotary/fixed)

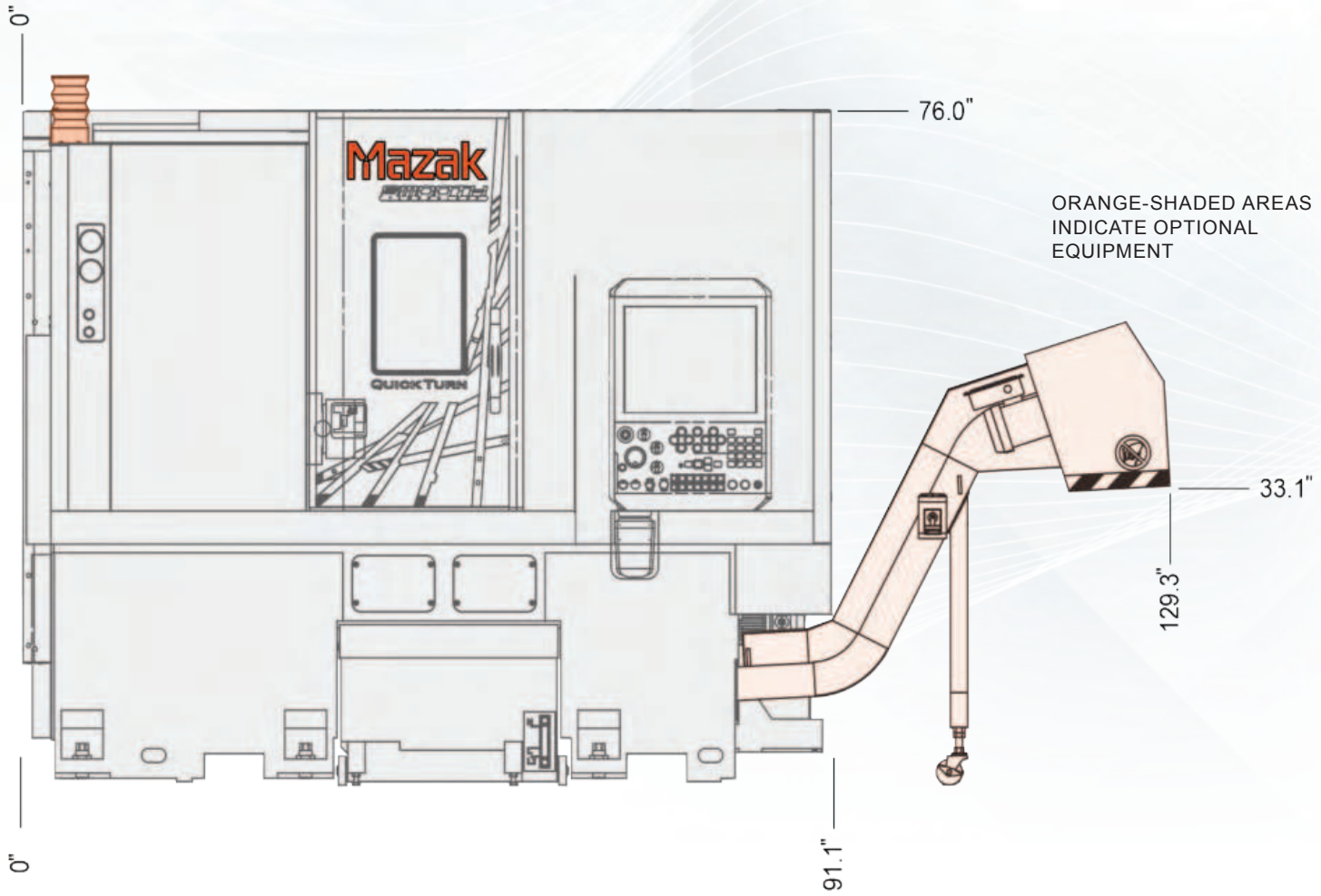


Coolant temperature control

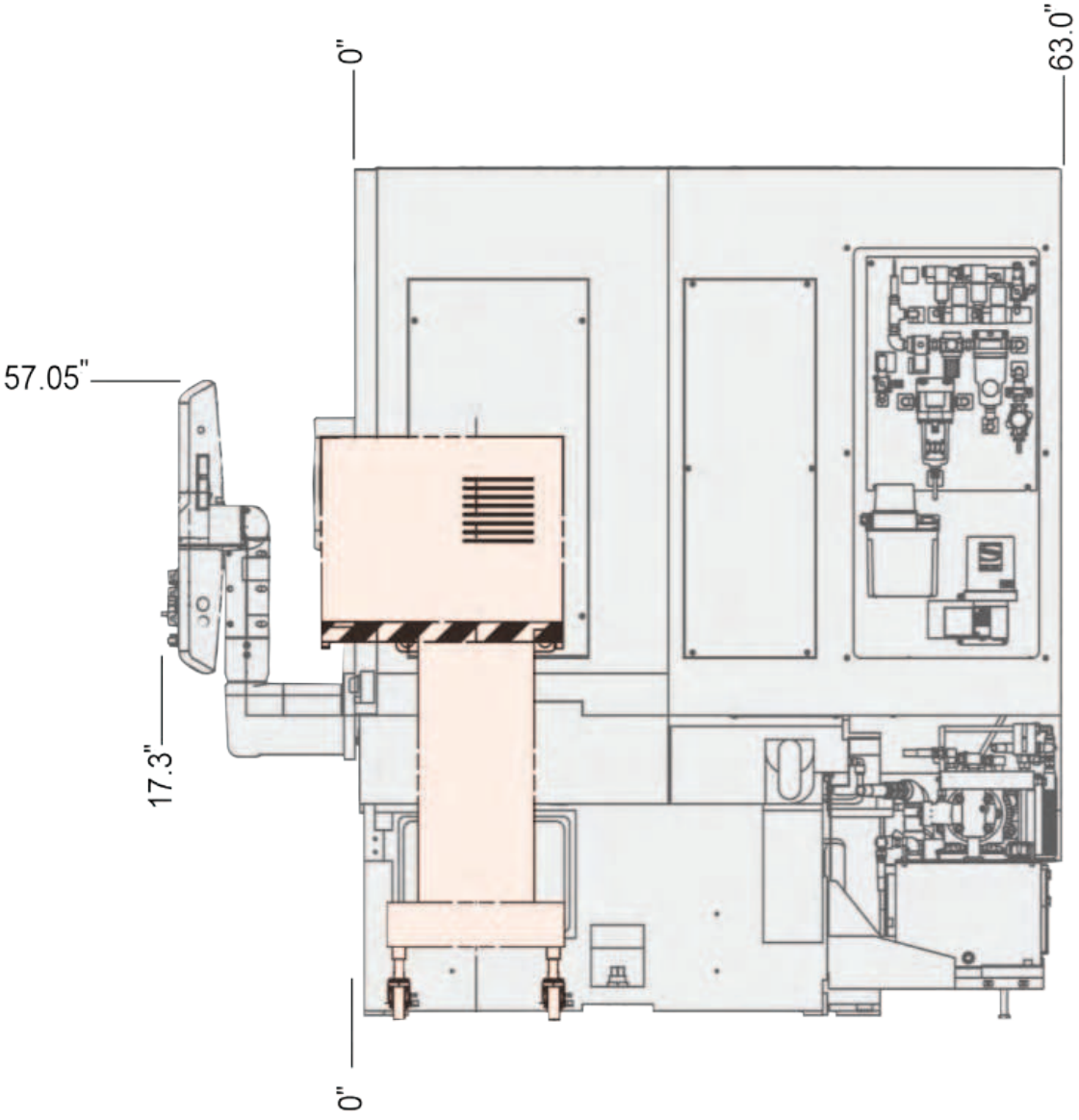
The chiller unit controls the coolant temperature in proportion with the room temperature, allowing for long-term high-precision machining.

External Dimensions – QUICK TURN 100 300U

(FOR REFERENCE ONLY)

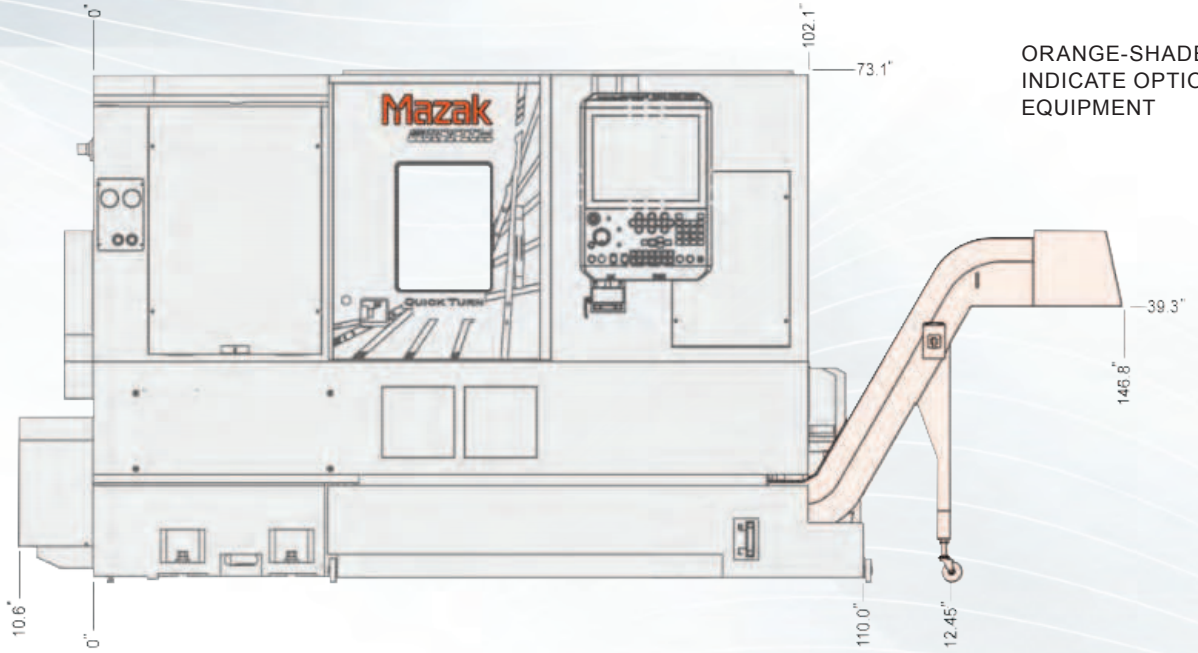


Unit: inch



External Dimensions – QUICK TURN 200, 250 500U

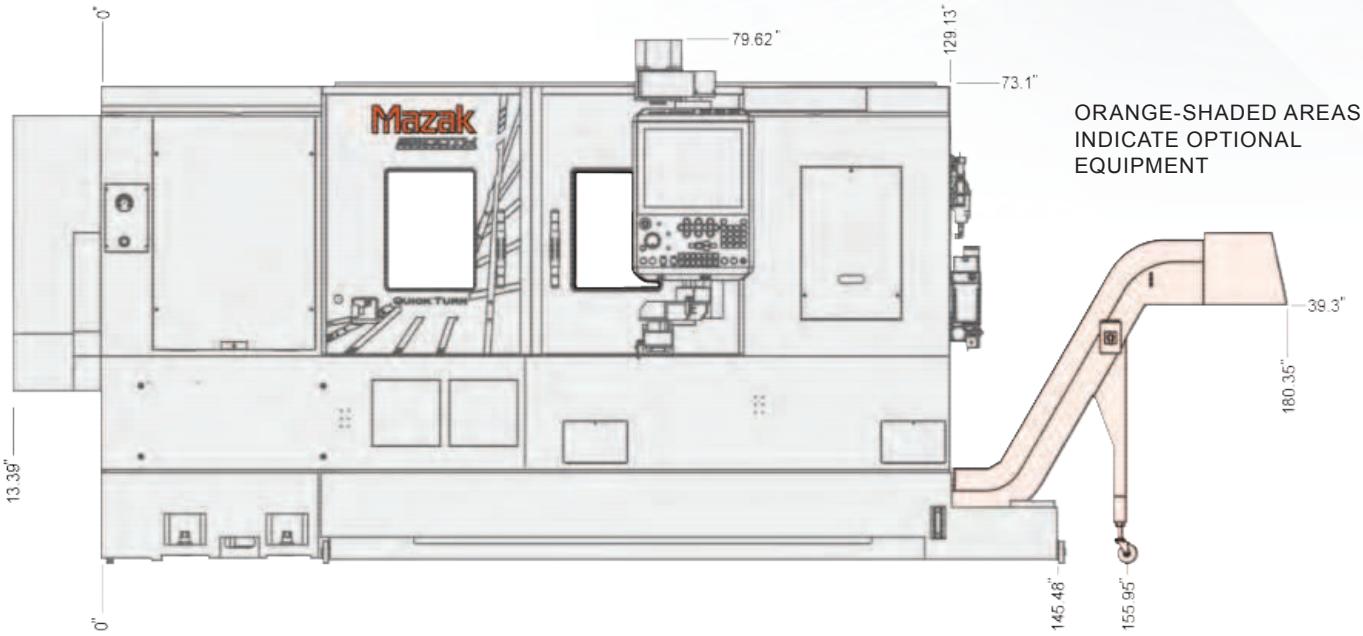
(FOR REFERENCE ONLY)



ORANGE-SHADED AREAS INDICATE OPTIONAL EQUIPMENT

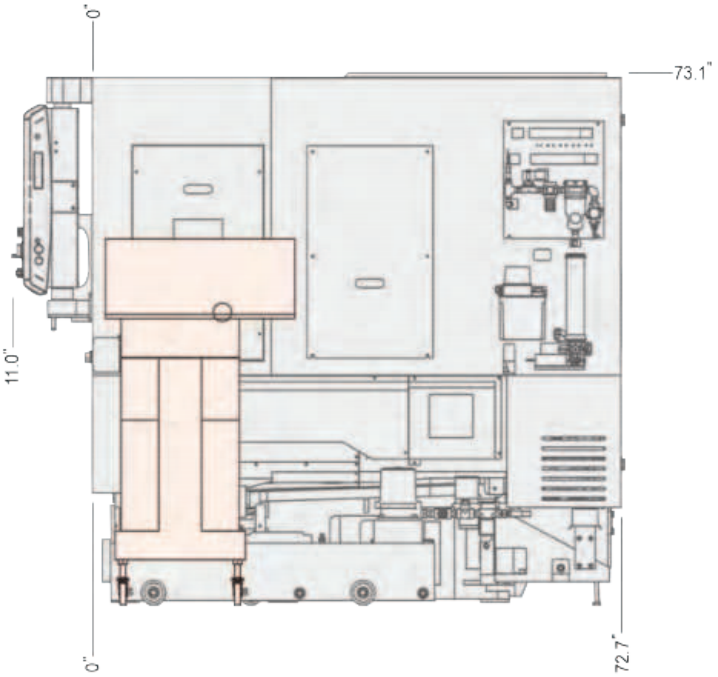
External Dimensions – QUICK TURN 250 1000U

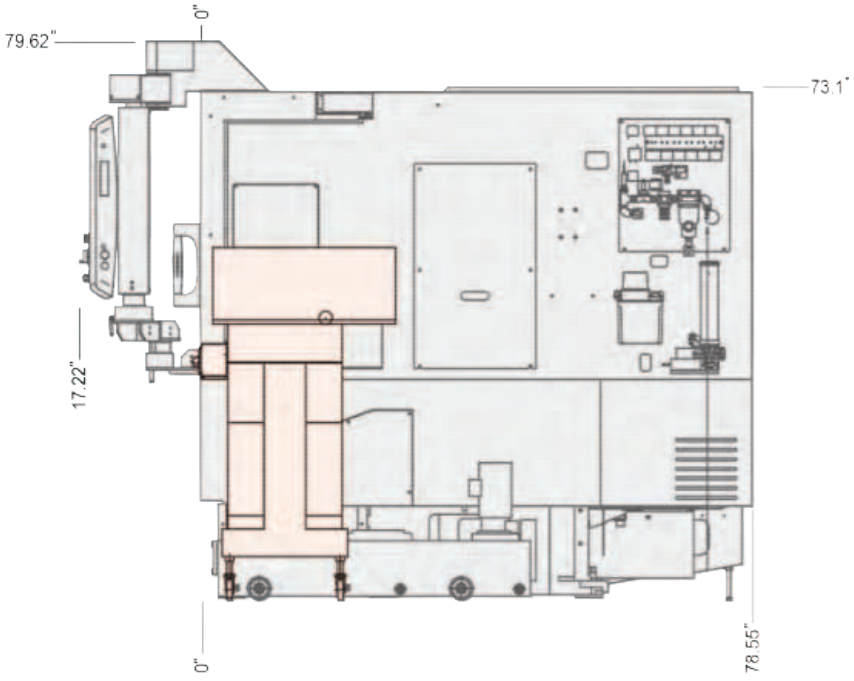
(FOR REFERENCE ONLY)



ORANGE-SHADED AREAS INDICATE OPTIONAL EQUIPMENT

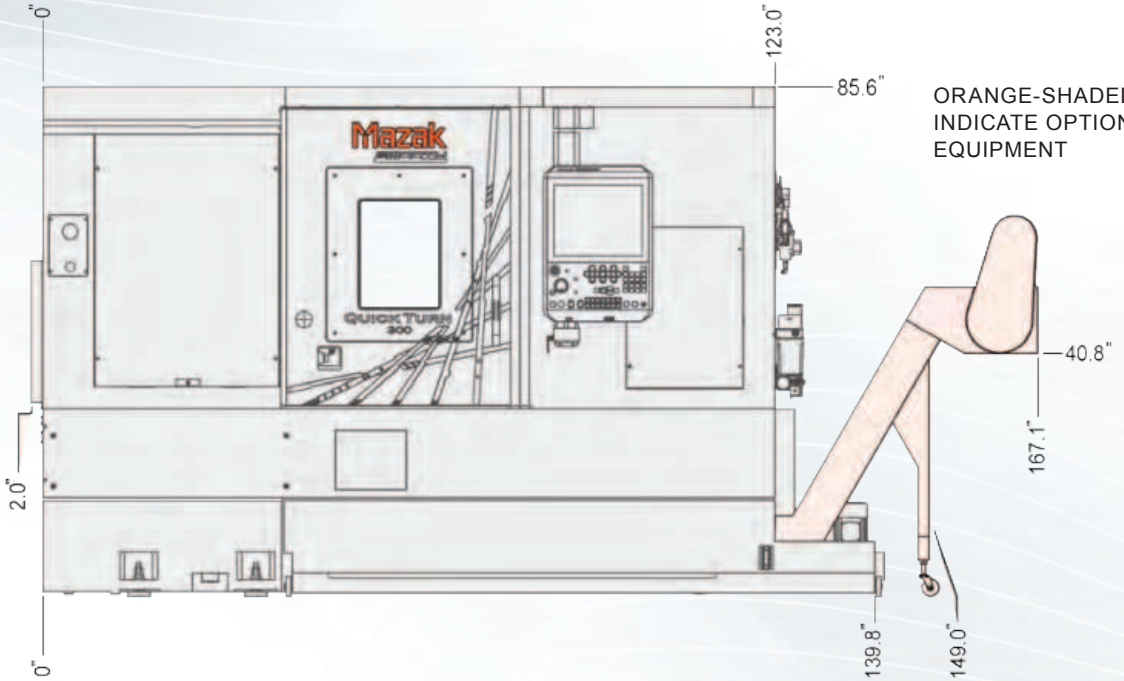
Unit: inch





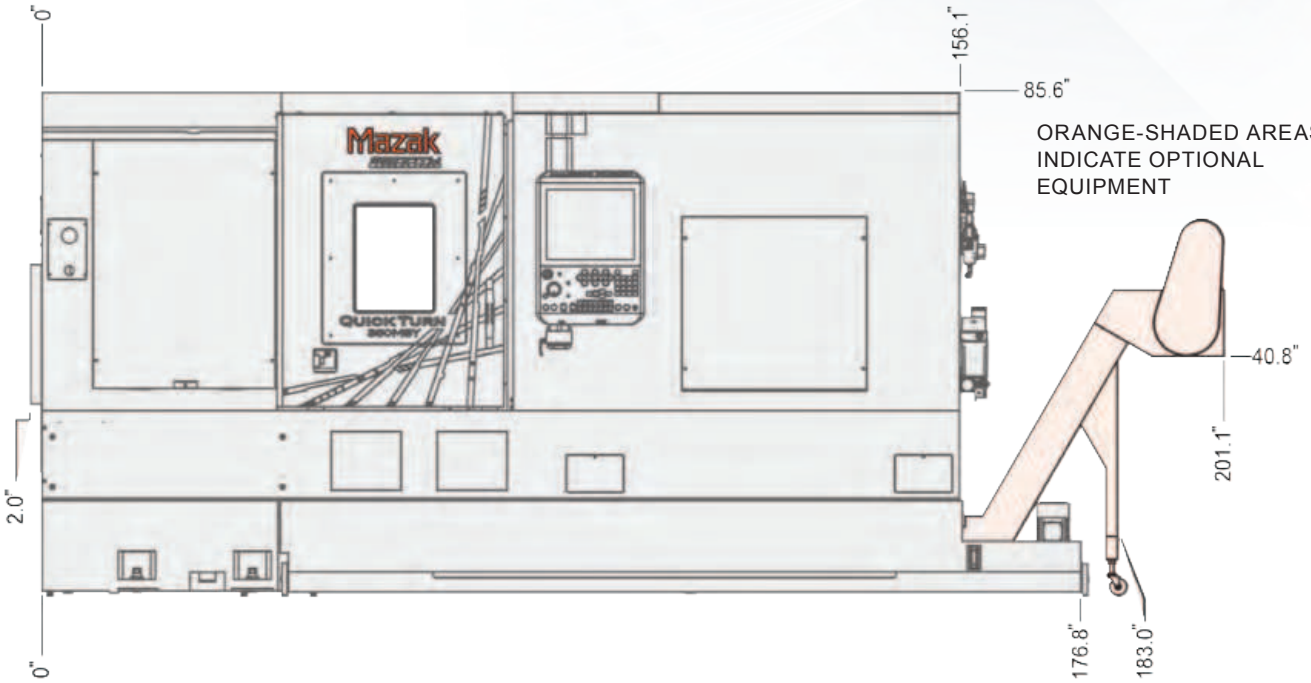
External Dimensions – QUICK TURN 350, 350M, 350MY 650U

(FOR REFERENCE ONLY)



External Dimensions – QUICK TURN 350MS, 350MSY 650U

(FOR REFERENCE ONLY)



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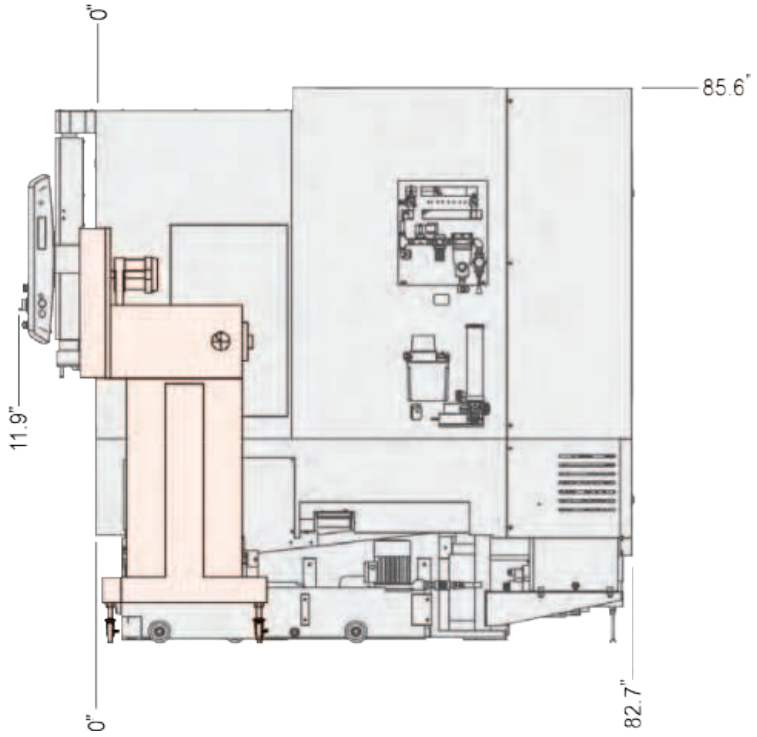
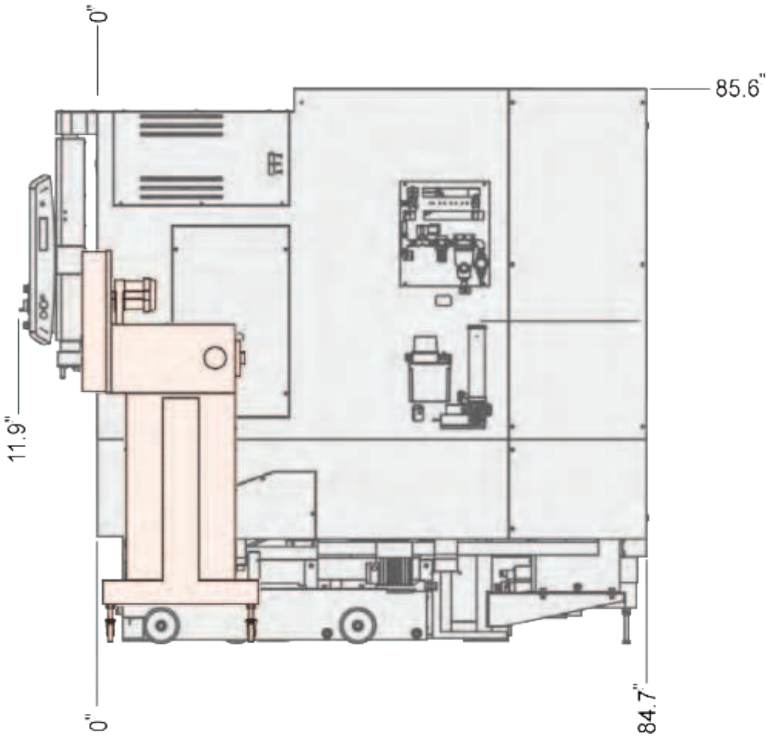
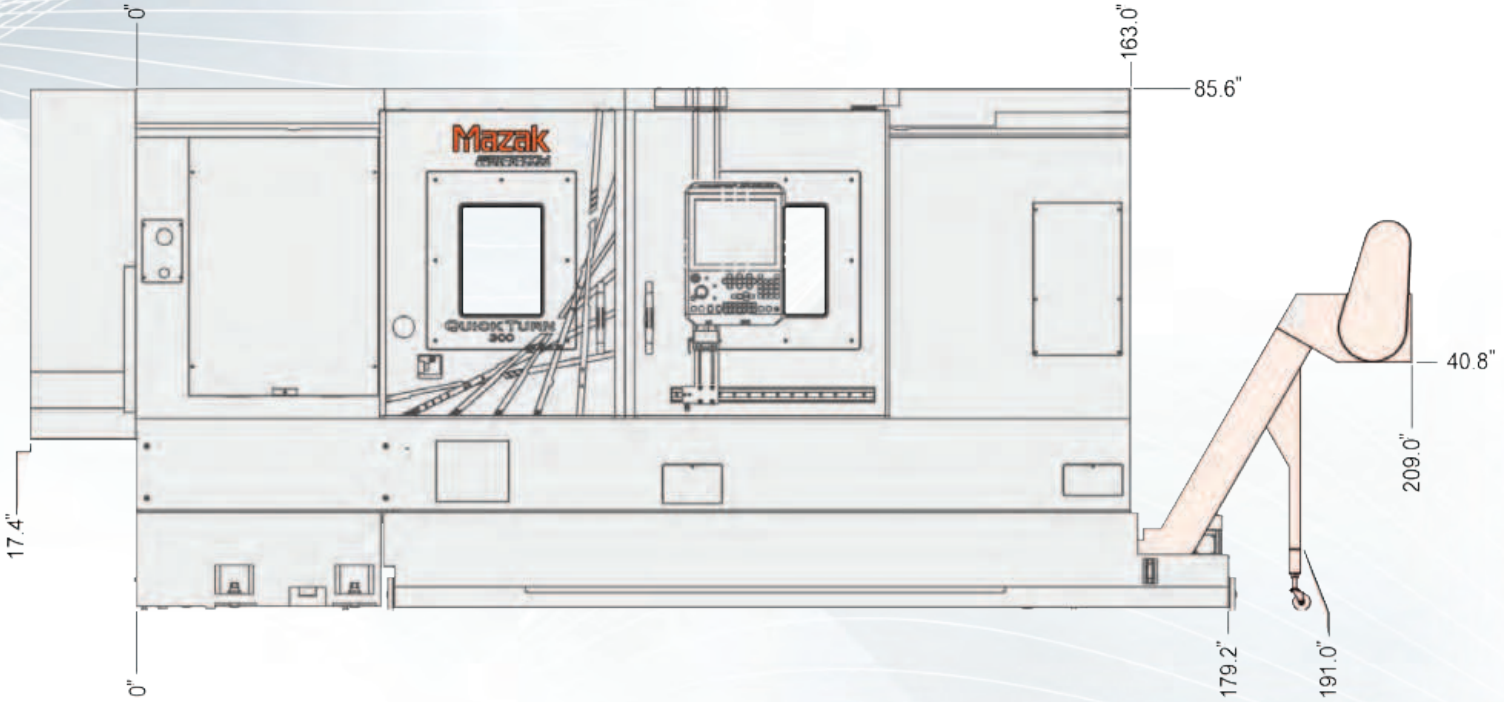




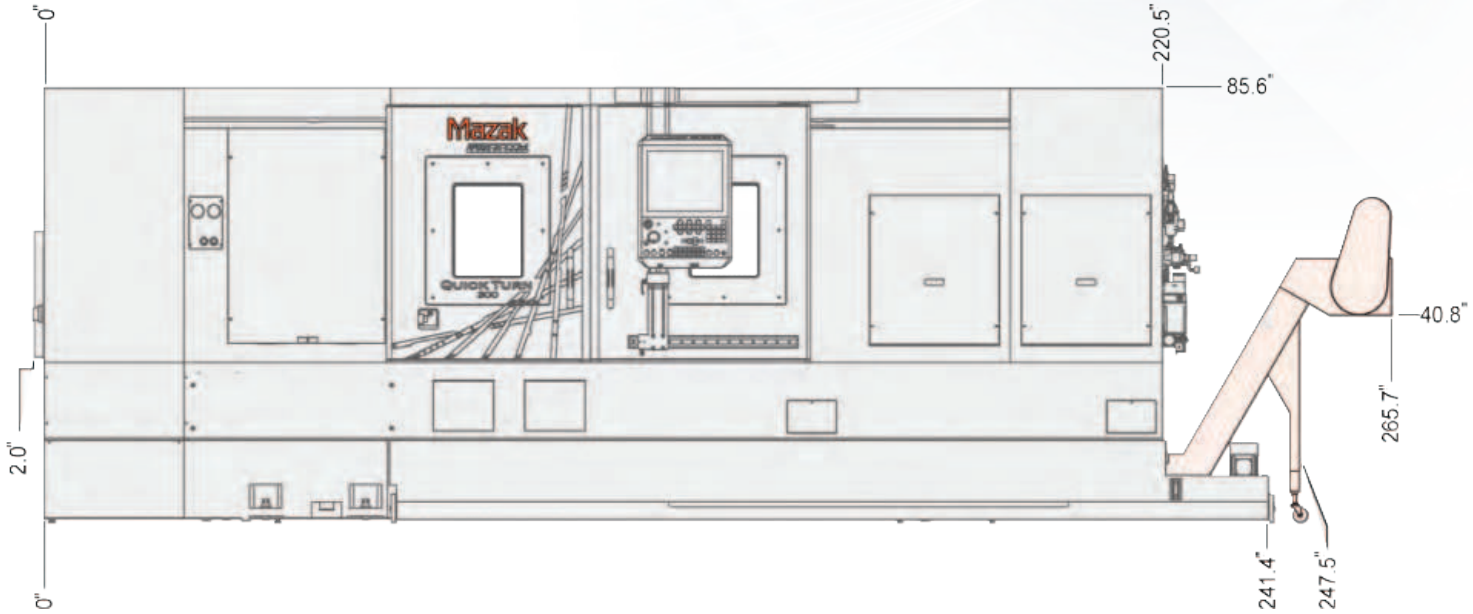
External Dimensions – QUICK TURN 350M 1500U

(FOR REFERENCE ONLY)



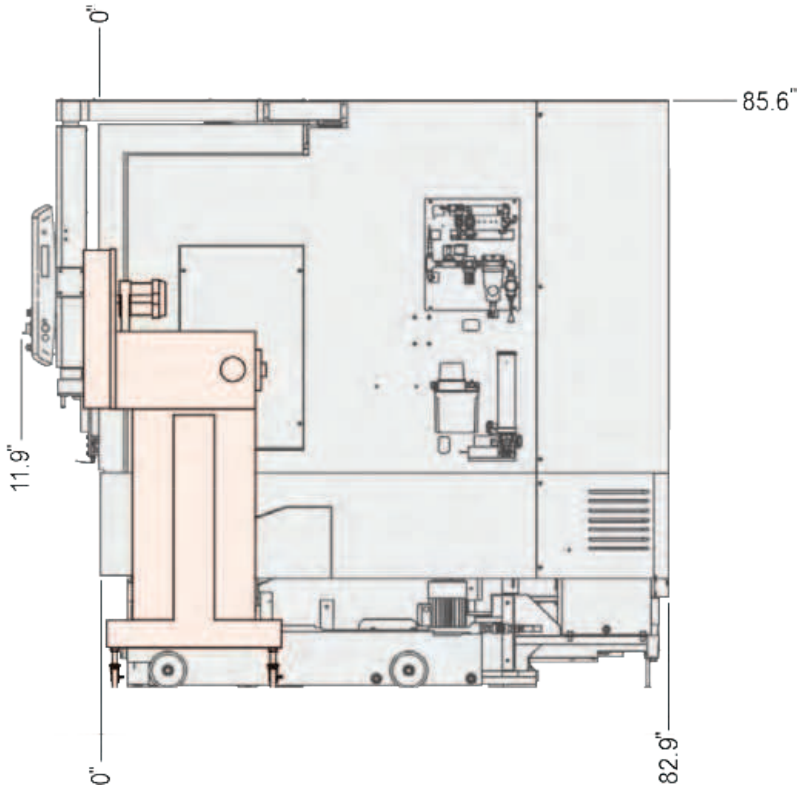
External Dimensions – QUICK TURN 350MS, 350 MSY 1500U

(FOR REFERENCE ONLY)

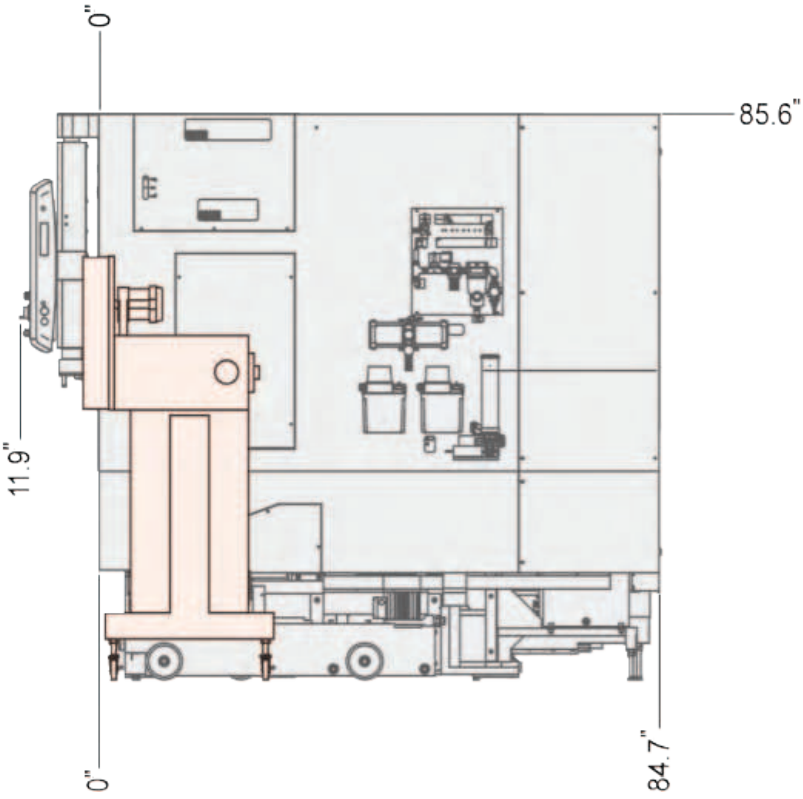


Unit: inch

ORANGE-SHADED AREAS
INDICATE OPTIONAL
EQUIPMENT

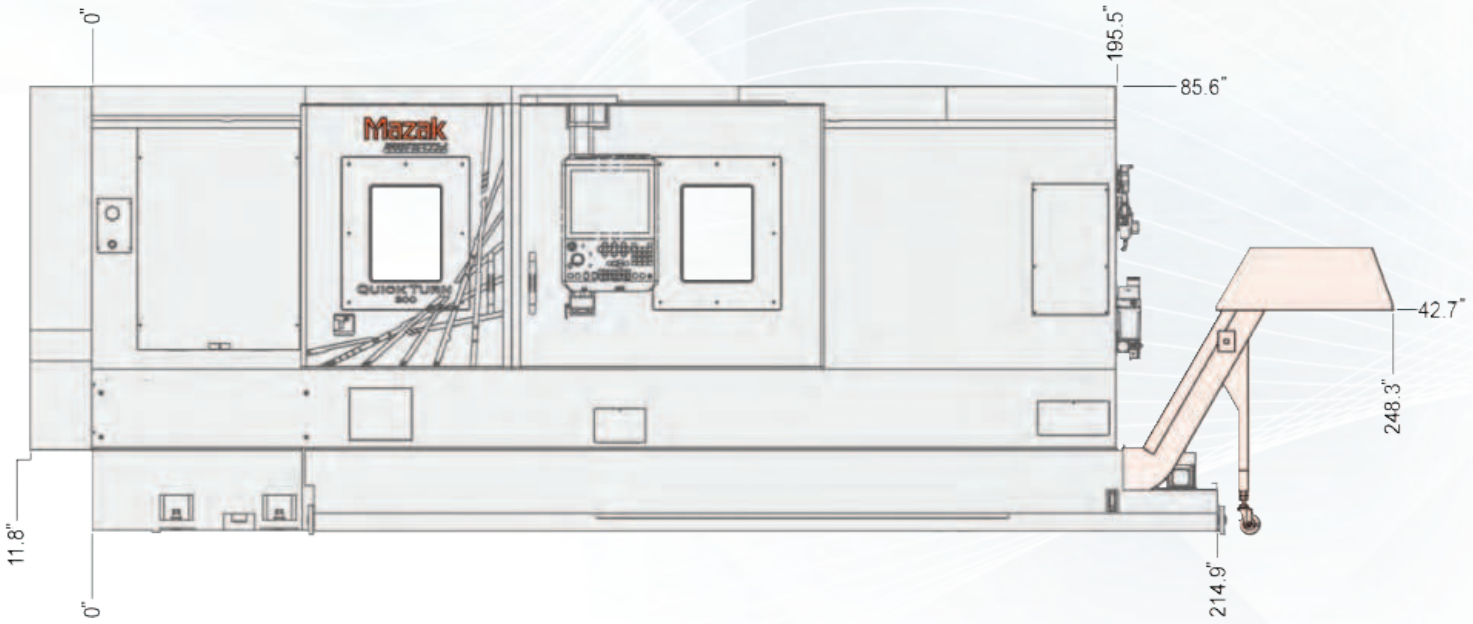


ORANGE-SHADED AREAS
INDICATE OPTIONAL
EQUIPMENT



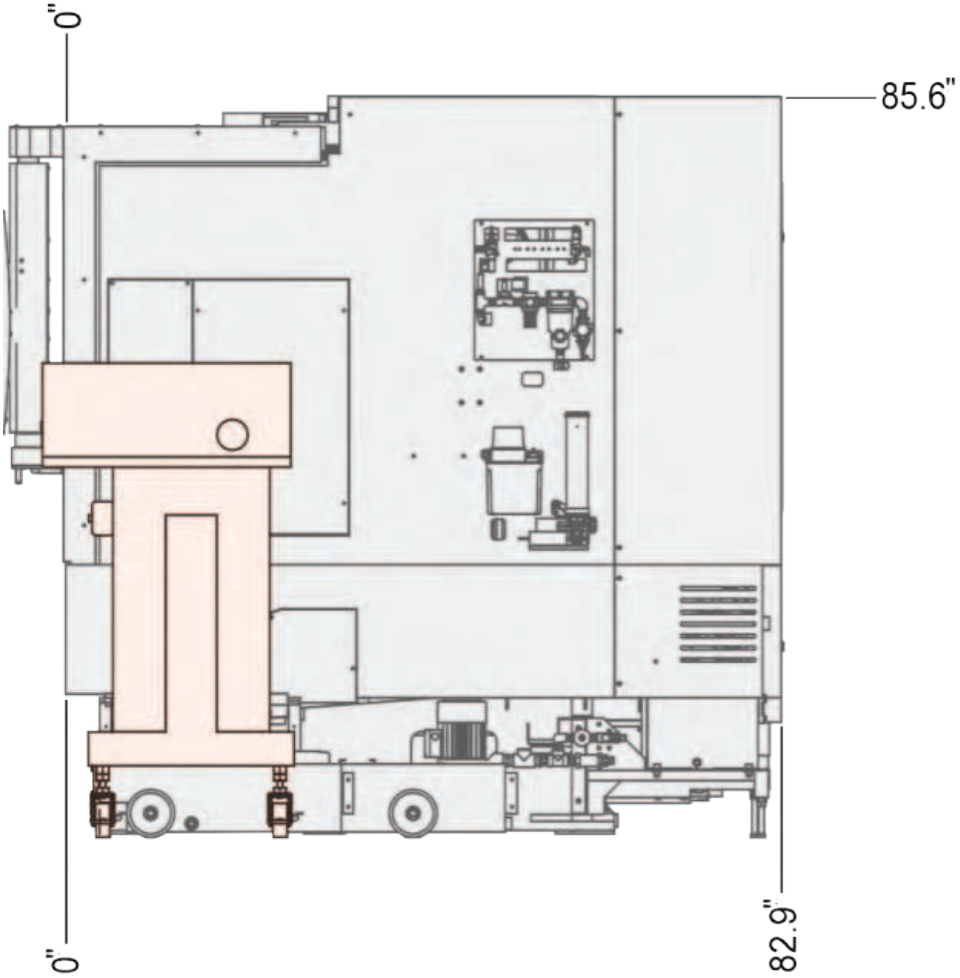
External Dimensions – QUICK TURN 350M 2000U

(FOR REFERENCE ONLY)



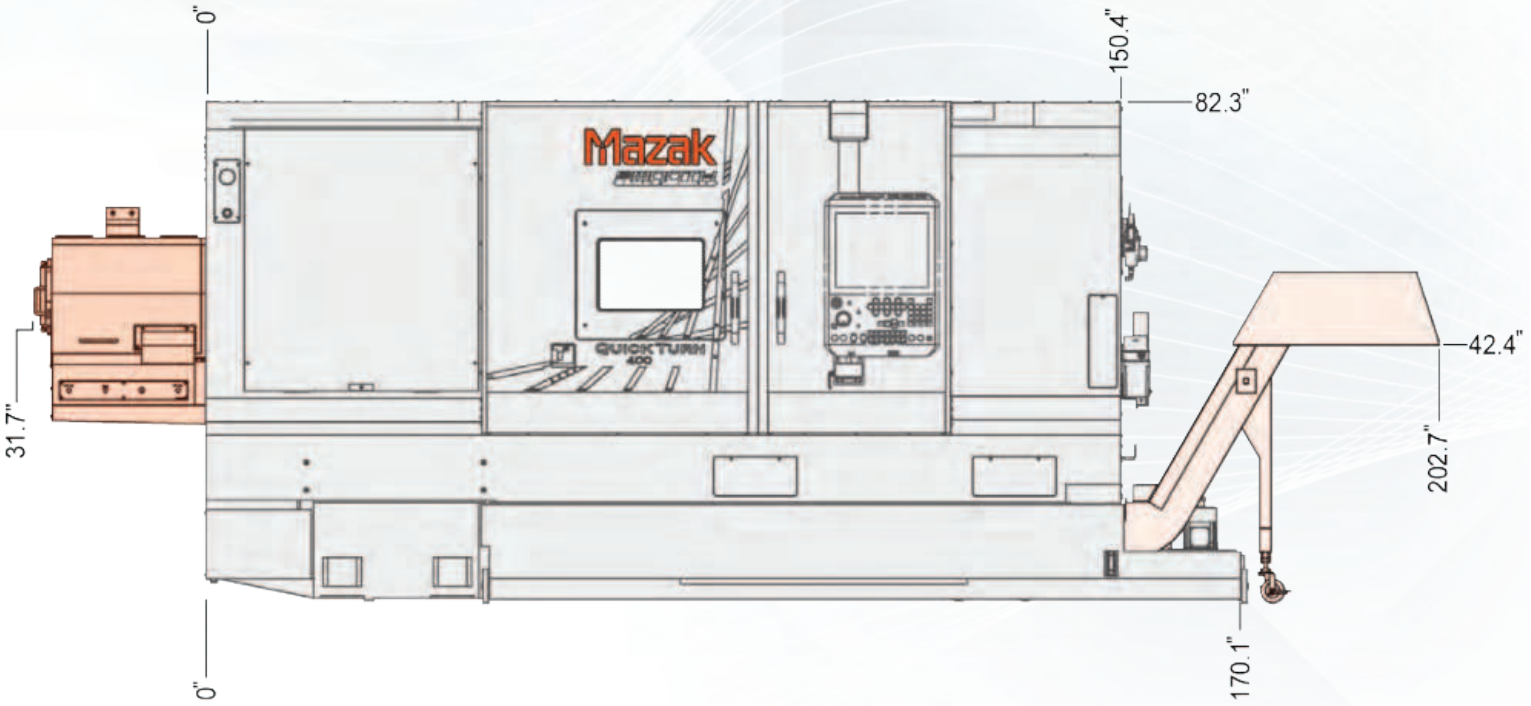
Unit: inch

ORANGE-SHADED AREAS
INDICATE OPTIONAL
EQUIPMENT



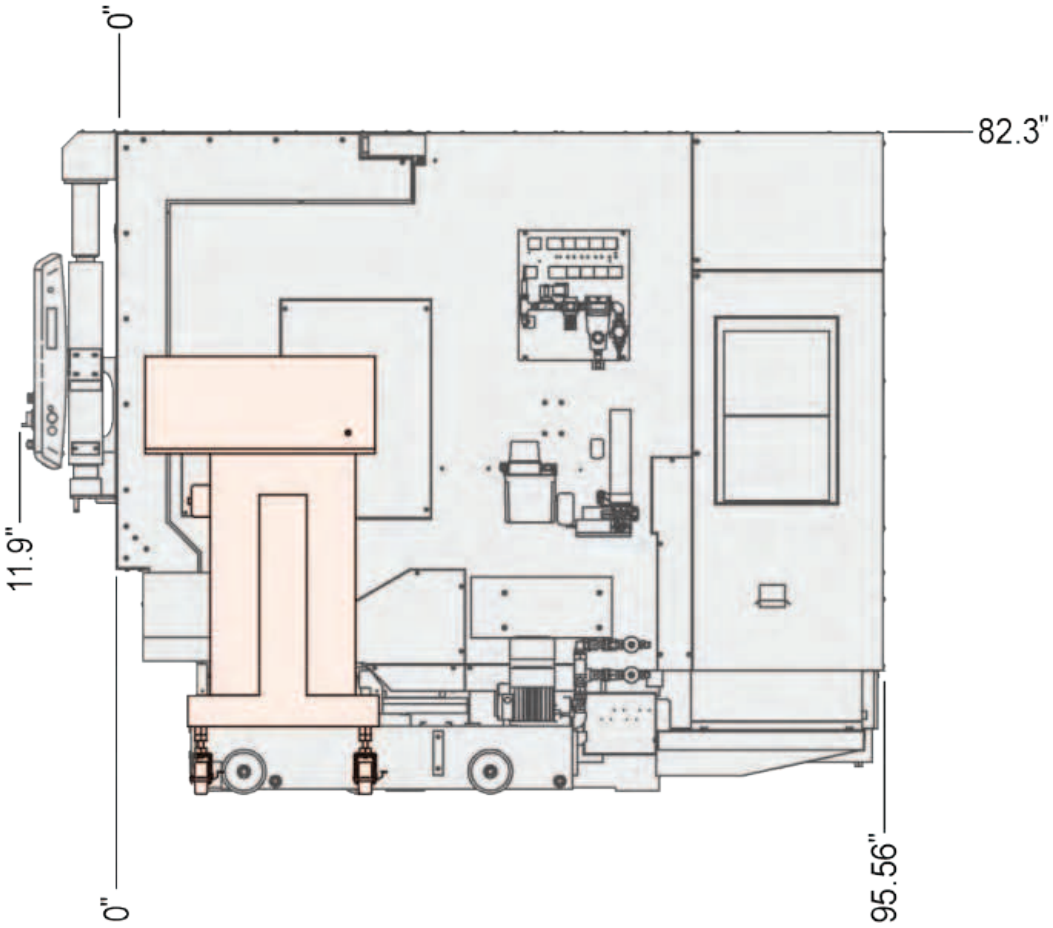
External Dimensions –
QUICK TURN 450, 450M 1000U

(FOR REFERENCE ONLY)



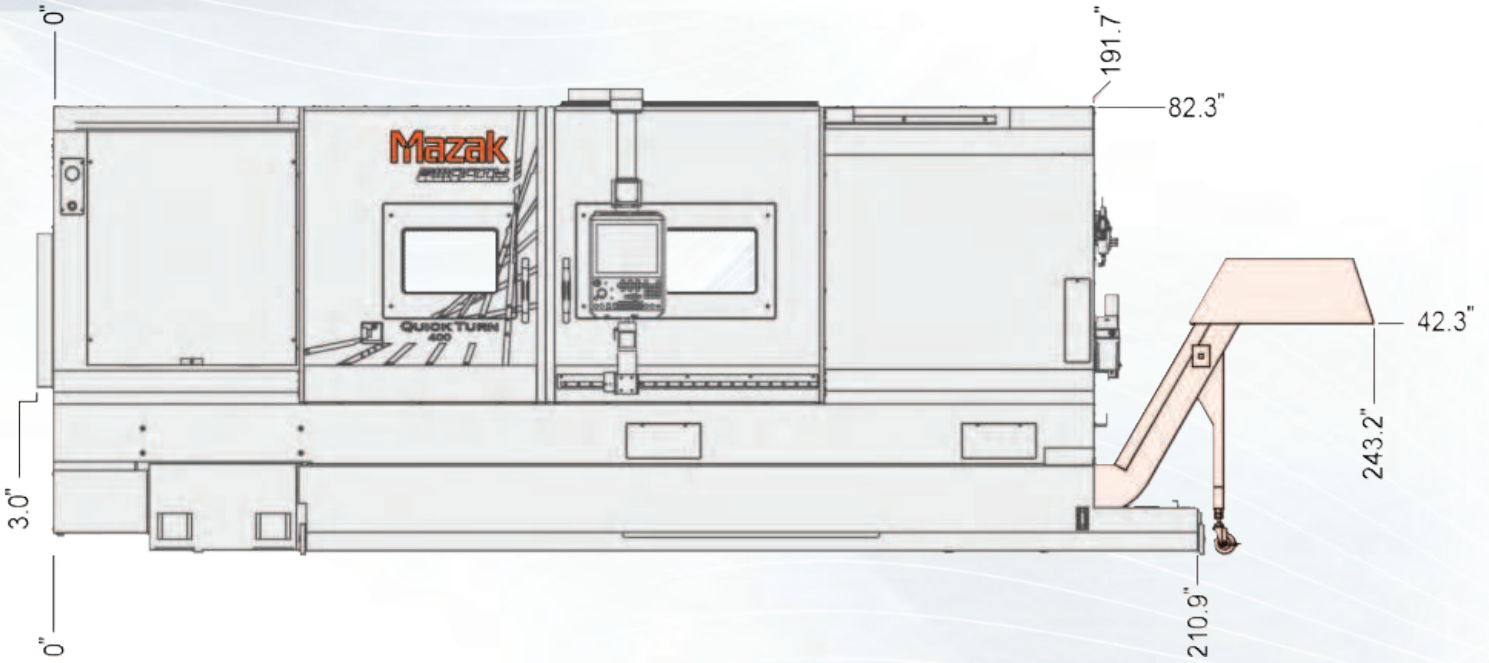
Unit: inch

ORANGE-SHADED AREAS
INDICATE OPTIONAL
EQUIPMENT



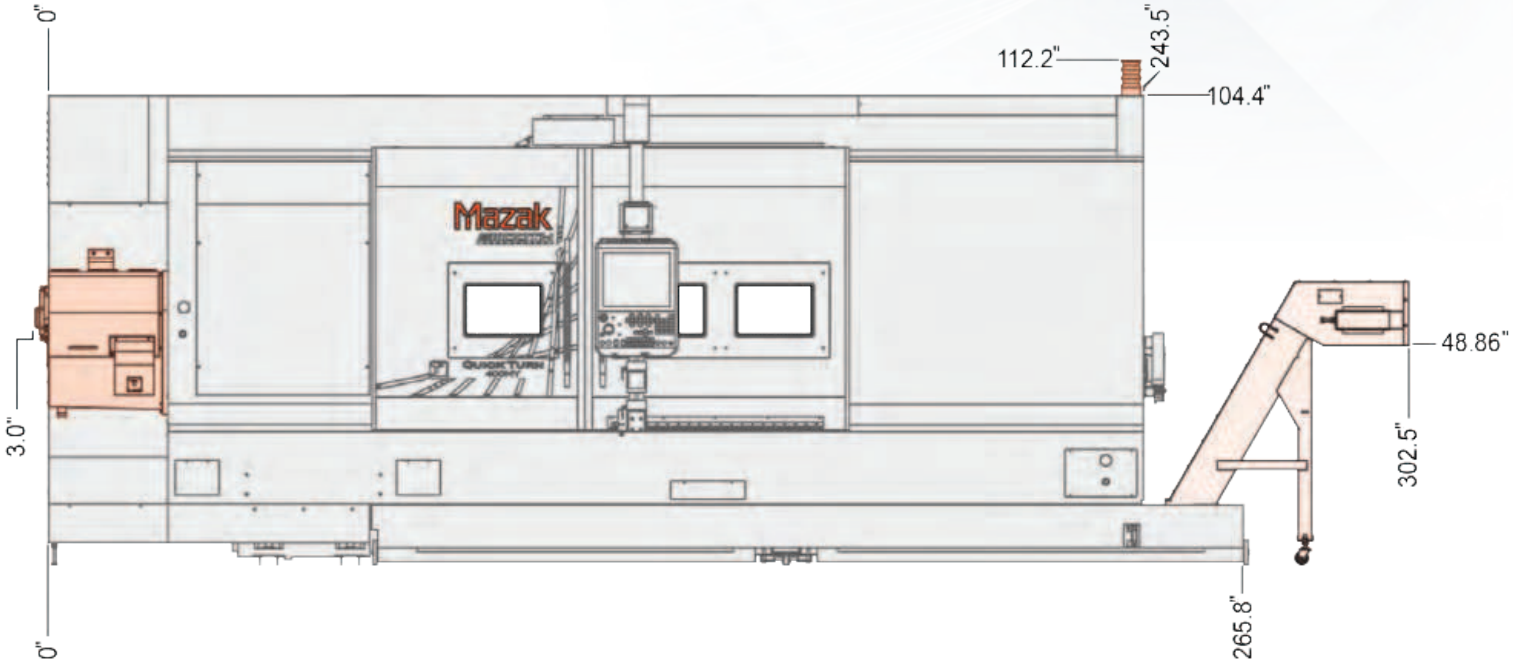
External Dimensions – QUICK TURN 450, 450M 2000U

(FOR REFERENCE ONLY)



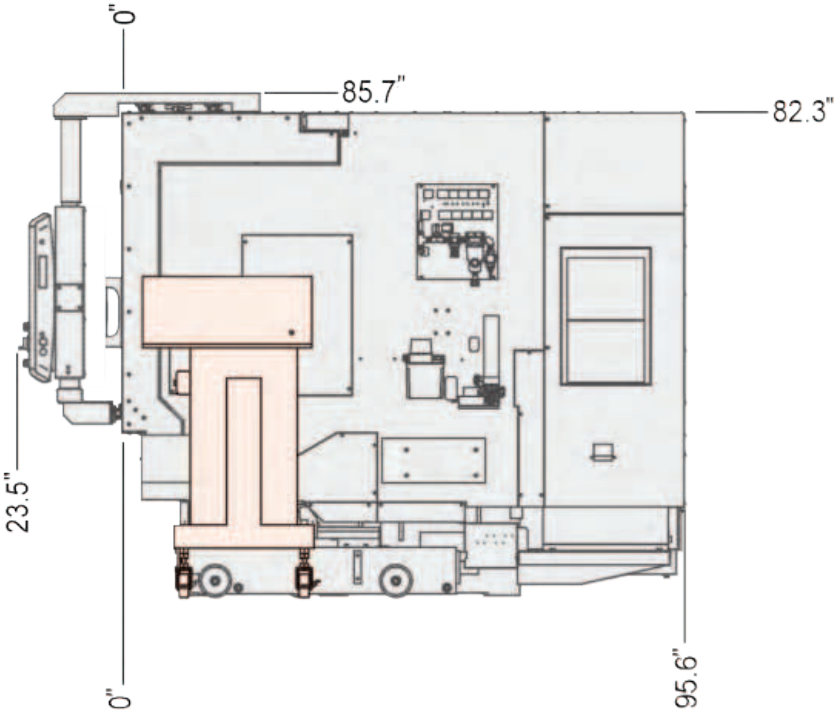
External Dimensions – QUICK TURN 450MY 2000U

(FOR REFERENCE ONLY)

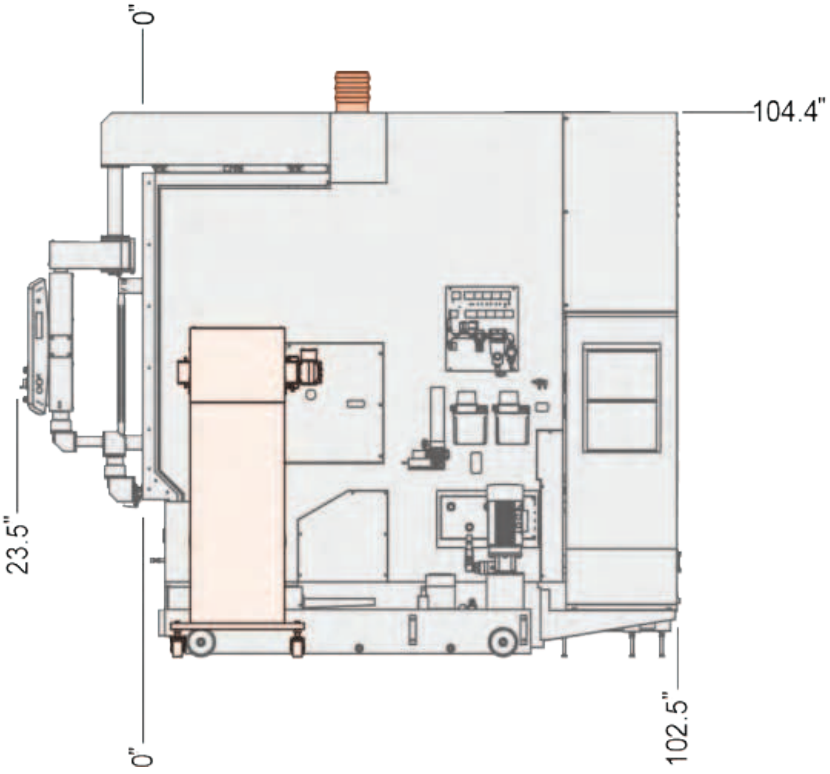


Unit: inch

ORANGE-SHADED AREAS INDICATE OPTIONAL EQUIPMENT

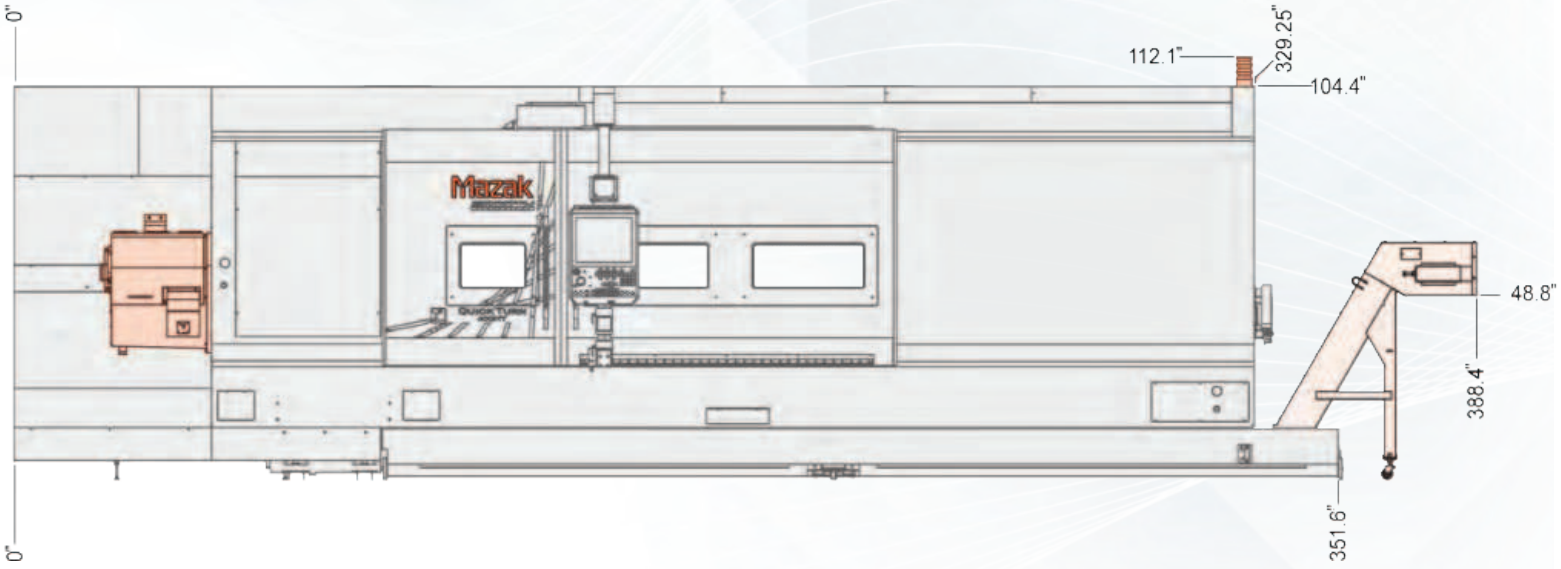


ORANGE-SHADED AREAS INDICATE OPTIONAL EQUIPMENT



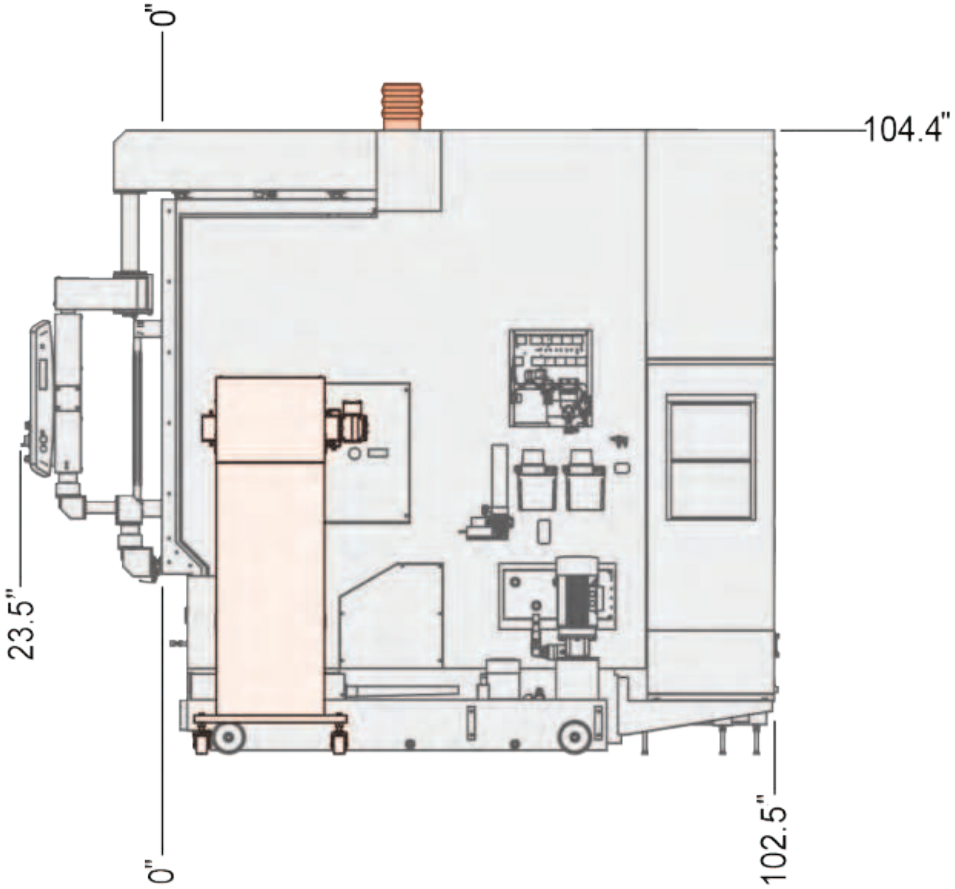
External Dimensions – QUICK TURN 450MY 3000U

(FOR REFERENCE ONLY)



Unit: inch

ORANGE-SHADED AREAS
INDICATE OPTIONAL
EQUIPMENT



Machine Specifications – QUICK TURN 100 Series

				QUICK TURN 100MY
		Bed length		
Capacity	Maximum swing		in (mm)	21.65 (550)
	Maximum bar work capacity		in (mm)	2.0 (52)
	Maximum machining diameter		in (mm)	11.0 (280)
	Maximum machining length	12	in (mm)	13.39 (340)
Main spindle	Chuck size		in	6
	Maximum speed		rpm	6,000
	Motor output (30-minute rating)		hp (kW)	20 (15)
Second spindle	Chuck size		in	—
	Maximum speed		rpm	—
	Motor output (30-minute rating)		hp (kW)	—
Turret (upper)	Number of tools		—	12
	Maximum speed		rpm	5,000
	Mill spindle motor output (40% ED)		hp (kW)	7.4 (5.5)
Feed axes	Travel (X axis)		in (mm)	7.36 (187)
	Travel (Y axis)	12	in (mm)	4.0 (100)
	Travel (Z axis)	12	in (mm)	17.32 (440)
	Travel (W axis and tailstock)	12	in (mm)	—

Specifications reflect standard VDI turret.

				QUICK TURN 100MS	QUICK TURN 100MSY
		Bed length			
Capacity	Maximum swing		in (mm)	21.65 (550)	
	Maximum bar work capacity		in (mm)	2.0 (52)	
	Maximum machining diameter		in (mm)	11.0 (280)	
	Maximum machining length	12	in (mm)	16.131 (410)	
Main spindle	Chuck size		in	6	
	Maximum speed		rpm	6,000	
	Motor output (30-minute rating)		hp (kW)	20 (15)	
Second spindle	Chuck size		in	5	
	Maximum speed		rpm	6,000	
	Motor output (30-minute rating)		hp (kW)	15 (11)	
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	5,000	
	Mill spindle motor output (10-minute rating)		hp (kW)	7.4 (5.5)	
Feed axes	Travel (X axis)		in (mm)	7.36 (187)	
	Travel (Y axis)	12	in (mm)	—	4.0 (100)
	Travel (Z axis)	12	in (mm)	20 (510)	
	Travel (W axis and tailstock)	12	in (mm)	18.11 (460)	

Machine Specifications – QUICK TURN 200 Series

				QUICK TURN 200	QUICK TURN 200M	QUICK TURN 200MY
	Bed length					
Capacity	Maximum swing		in (mm)	27.36 (695)		
	Maximum bar work capacity		in (mm)	2.05 (52)		
	Maximum machining diameter		in (mm)	13.78 (350)		
	Maximum machining length	20	in (mm)	20.16 (512)	21.18 (538)	
Main spindle	Chuck size		in	8		
	Maximum speed		rpm	5,000		
	Motor output (30-minute rating)		hp (kW)	35 (26)		
Second spindle	Chuck size		in	—	—	—
	Maximum speed		rpm	—	—	—
	Motor output (25% ED)		hp (kW)	—	—	—
Turret (upper)	Number of tools		—	12		
	Maximum speed		rpm	—	6,000	
	Mill spindle motor output (10% ED)		hp (kW)	—	10 (7.5)	
Feed axes	Travel (X axis)		in (mm)	8.86 (225)		
	Travel (Y axis)	20	in (mm)	—		4.0 (100)
	Travel (Z axis)	20	in (mm)	21.06 (535)	22.64 (575)	
	Travel (Tailstock)	20	in (mm)	21.65 (550)		

Specifications reflect standard VDI turret.

				QUICK TURN 200MS	QUICK TURN 200MSY
		Bed length			
Capacity	Maximum swing		in (mm)	27.36 (695)	
	Maximum bar work capacity		in (mm)	2.05 (52)	
	Maximum machining diameter		in (mm)	13.78 (350)	
	Maximum machining length	20	in (mm)	22.64 (575)	
Main spindle	Chuck size		in	8	
	Maximum speed		rpm	5,000	
	Motor output (30-minute rating)		hp (kW)	35 (26)	
Second spindle	Chuck size		in	6	
	Maximum speed		rpm	6,000	
	Motor output (25% ED)		hp (kW)	15 (11)	
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	6,000	
	Mill spindle motor output (10-minute rating)		hp (kW)	10 (7.5)	
Feed axes	Travel (X axis)		in (mm)	8.86 (225)	
	Travel (Y axis)	20	in (mm)	—	4.0 (100)
	Travel (Z axis)	20	in (mm)	22.64 (575)	
	Travel (Tailstock)	20	in (mm)	—	—

Machine Specifications – QUICK TURN 250 Series

				QUICK TURN 250	QUICK TURN 250M	QUICK TURN 250MY
		Bed length				
Capacity	Maximum swing		in (mm)	27.36 (695)		
	Maximum bar work capacity		in (mm)	3.0 (76)		
	Maximum machining diameter		in (mm)	13.78 (350)		
	Maximum machining length	20	in (mm)	18.73 (476)	19.86 (504)	
		40	in (mm)	39.17 (995)	—	40.36 (1,025)
Main spindle	Chuck size		in	10		
	Maximum speed		rpm	4,000		
	Motor output (30-minute rating)		hp (kW)	35 (26)		
Second spindle	Chuck size		in	—	—	—
	Maximum speed		rpm	—	—	—
	Motor output (25% ED)		hp (kW)	—	—	—
Turret (upper)	Number of tools		—	12		
	Maximum speed		rpm	—	6,000	
	Mill spindle motor output (10-minute rating)		hp (kW)	—	10 (7.5)	
Feed axes	Travel (X axis)		in (mm)	8.86 (225)		
	Travel (Y axis)	20	in (mm)	—	—	4.0 (100)
		40	in (mm)	—	—	
	Travel (Z axis)	20	in (mm)	20.28 (515)	22.75 (578)	
		40	in (mm)	40.75 (1,035)	—	43.12 (1,095)
	Travel (Tailstock)	20	in (mm)	20.63 (524)	21.75 (552)	
		40	in (mm)	42.13 (1,070)	—	42.13 (1,070)

Specifications reflect standard VDI turret.

				QUICK TURN 250MS	QUICK TURN 250MSY
		Bed length			
Capacity	Maximum swing		in (mm)	27.36 (695)	
	Maximum bar work capacity		in (mm)	3.0 (76)	
	Maximum machining diameter		in (mm)	13.78 (350)	
	Maximum machining length	20	in (mm)	21.27 (540)	
		40	in (mm)	—	36.52 (927.5)
Main spindle	Chuck size		in	10	
	Maximum speed		rpm	4,000	
	Motor output (30-minute rating)		hp (kW)	35 (26)	
Second spindle	Chuck size		in	6	
	Maximum speed		rpm	6,000	
	Motor output (25% ED)		hp (kW)	15 (11)	
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	6,000	
	Mill spindle motor output (10-minute rating)		hp (kW)	10 (7.5)	
Feed axes	Travel (X axis)		in (mm)	8.86 (225)	
	Travel (Y axis)	20	in (mm)	—	4.0 (100)
		40	in (mm)	—	
	Travel (Z axis)	20	in (mm)	22.64 (575)	
		40	in (mm)	—	43.12 (1,095)
	Travel (Tailstock)	20	in (mm)	—	—
		40	in (mm)	—	—

Machine Specifications – QUICK TURN 350 Series

				QUICK TURN 350	QUICK TURN 350M
	Bed length				
Capacity	Maximum swing		in (mm)	26.77 (680)	29.5 (749)
	Maximum bar work capacity		in (mm)	4.0 (102)	
	Maximum machining diameter		in (mm)	16.5 (420)	
	Maximum machining length	26	in (mm)	24.8 (630)	
		60	in (mm)	61.6 (1,565)	
		80	in (mm)	—	
Main spindle	Chuck size		in	12	
	Maximum speed		rpm	3,330	
	Motor output (30-minute rating)		hp (kW)	40 (30)	
Second spindle	Chuck size		in	—	—
	Maximum speed		rpm	—	—
	Motor output (25% ED)		hp (kW)	—	—
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	—	6,000 ER/ 4,000 CAT
	Mill spindle motor output (10-minute rating)		hp (kW)	—	10 (7.5)
Feed axes	Travel (X axis)		in (mm)	8.86 (225)	10.2 (260)
	Travel (Y axis)	26	in (mm)	—	—
		60	in (mm)	—	—
		80	in (mm)	—	—
	Travel (Z axis)	26	in (mm)	26.75 (680)	26.38 (670)
		60	in (mm)	63.63 (1,615)	63.25 (1,605)
		80	in (mm)	—	
	Travel (Tailstock)	26	in (mm)	25.5 (648)	
		60	in (mm)	62.38 (1,584)	
		80	in (mm)	—	—

Specifications reflect standard VDI turret.

				QUICK TURN 350MY	QUICK TURN 350MSY
		Bed length			
Capacity	Maximum swing		in (mm)	29.5 (749)	
	Maximum bar work capacity		in (mm)	4.0 (102)	
	Maximum machining diameter		in (mm)	16.5 (420)	
	Maximum machining length	26	in (mm)	24.8 (630)	25.69 (653)
		60	in (mm)	61.6 (1,565)	63.75 (1,619)
		80	in (mm)	81.9 (2,080)	—
Main spindle	Chuck size		in	12	
	Maximum speed		rpm	3,330	
	Motor output (30-minute rating)		hp (kW)	40 (30)	
Second spindle	Chuck size		in	—	10
	Maximum speed		rpm	—	4,000
	Motor output (25% ED)		hp (kW)	—	35 (26)
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	6,000 ER/4,000 CAT	
	Mill spindle motor output (10-minute rating)		hp (kW)	10 (7.5)	
Feed axes	Travel (X axis)		in (mm)	10.2 (260)	10.8 (275)
	Travel (Y axis)	26	in (mm)	6.0 (152)	
		60	in (mm)		
		80	in (mm)		
	Travel (Z axis)	26	in (mm)	26.38 (670)	26.25 (667)
		60	in (mm)	63.25 (1,605)	63.12 (1,603)
		80	in (mm)	83.50 (2,121)	—
	Travel (Tailstock)	26	in (mm)	25.5 (648)	—
		60	in (mm)	62.38 (1,584)	—
		80	in (mm)	82.5 (2,096)	—

Machine Specifications – QUICK TURN 450 Series

				QUICK TURN 450
		Bed length		
Capacity	Maximum swing		in (mm)	31.89 (810)
	Maximum bar work capacity		in (mm)	7.2 (183)/OPT 10.8 (275)
	Maximum machining diameter		in (mm)	22.83 (580)
	Maximum machining length	40	in (mm)	Chuck dependent
		80	in (mm)	Chuck dependent
Main spindle	Chuck size		in	18 ~ 21
	Maximum speed		rpm	2,000 (OPT 10.8" bore–1,000)
	Motor output (30-minute rating)		hp (kW)	50 (37)
Turret (upper)	Number of tools		—	12
	Maximum speed		rpm	—
	Mill spindle motor output (10-minute rating)		hp (kW)	—
Feed axes	Travel (X axis)		in (mm)	12.12 (308)
	Travel (Y axis)	40	in (mm)	—
		80	in (mm)	—
		120	in (mm)	—
	Travel (Z axis)	40	in (mm)	42.12 (1,070)
		80	in (mm)	83.38 (2,120)
		120	in (mm)	—
	Travel (W axis and tailstock)	40	in (mm)	40.35 (1,025)
		80	in (mm)	81.69 (2,075)
		120	in (mm)	—

Specifications reflect standard VDI turret.

				QUICK TURN 450M	QUICK TURN 450MY
		Bed length			
Capacity	Maximum swing		in (mm)	32.68 (830)	
	Maximum bar work capacity		in (mm)	7.2 (183)/OPT 10.8 (275)	
	Maximum machining diameter		in (mm)	22.83 (580)	
	Maximum machining length	40	in (mm)	Chuck dependent	
		80	in (mm)	Chuck dependent	
		120	in (mm)	—	Chuck dependent
Main spindle	Chuck size		in	18 ~ 21	
	Maximum speed		rpm	2,000 (OPT 10.8" bore–1,000)	
	Motor output (30-minute rating)		hp (kW)	50 (37)	
Turret (upper)	Number of tools		—	12	
	Maximum speed		rpm	6,000 ER/4,000 CAT	
	Mill spindle motor output (10-minute rating)		hp (kW)	10.75 (7.5)	
Feed axes	Travel (X axis)		in (mm)	13.37 (340)	
	Travel (Y axis)	40	in (mm)	—	
		80	in (mm)	—	8.0 (203)
		120	in (mm)	—	
	Travel (Z axis)	40	in (mm)	42.12 (1,070)	—
		80	in (mm)	83.38 (2,120)	83.66 (2,125)
		120	in (mm)	—	125 (3,175)
	Travel (W axis and tailstock)	40	in (mm)	40.35 (1,025)	—
		80	in (mm)	81.69 (2,075)	
		120	in (mm)	—	121.25 (3,080)

Mazak MPower

MPOWER
COMPLETE CUSTOMER CARE

To maximize machine tool investments, the Mazak MPower program represents a company-wide commitment to provide the best-possible, most-comprehensive support. MPower takes complete customer care to the next level, giving manufacturers the tools they need to achieve their business goals and ensure continued success.

MPower encompasses:

- Single-source service
- Technical support – machine and CNC
- Parts support
- Training
- Spindle and unit rebuild

SINGLE-SOURCE SERVICE

Mazak is a single point of contact for any Mazak-related service need, whether it involves a machine, control, accessory or automation solution. This effective service approach helps customers maintain the highest possible levels of productivity.

Benefits of Mazak's single-source approach include:

- Free technical phone support and software upgrades for the life of a Mazak machine
- Digital connectivity with Mazak for online part pricing and ordering
- My Mazak service portal for real-time access to account and service information, to open a case, check service technician availability or resolve issues via phone with tech support
- Guaranteed phone response to any technical question within one hour through a 24/7 technical phone support system
- More than 350 factory-trained Mazak service representatives and certified distributor personnel who can be on site within 24 hours under most circumstances
- Wide variety of services, including laser calibration to ISO, ANSI and JIS standards; ball bar qualification and analysis; preventive maintenance plans and programs; and vibration analysis and benchmarking

TECHNICAL SUPPORT – MACHINE AND CNC

Comprehensive two-year warranties on every Mazak machine tool, paired with local support from a network of Technology and Technical Centers and expert technical service through the company's Remote Assist Services.

Remote Assist benefits:

- Shortens time to repair and reduces costs associated with in-person field service
- Just as in a face-to-face service call, technicians interact with a shop's connected devices to send specific work instructions and communicate with the customer
- Eliminates in-person diagnostics visits prior to parts orders to avoid days of downtime
- Three-way connections let service technicians collaborate on solutions with other experts

PARTS SUPPORT

Identify, order and receive the replacements you need with unprecedented speed and ease through online access to every aspect of parts support. Whether you need a small part or a CNC repair, you're covered 24/7.

Fully automated warehouse storage systems ensure the fastest delivery of Mazak spare parts.

Benefits of the North American Parts Center include:

- Average 97% same-day parts shipment and after-hours shipping
- Digital connectivity with Mazak via PartsWeb to view pricing and online images of parts
- Easily place and track orders from Mazak's inventory of more than 500,000 unique part numbers in stock
- Next-day deliveries
- Connect with Mazak call center Monday-Saturday
- Easy access to experienced part specialists
- Lifetime CNC parts support

TRAINING

Learn to operate, program and maintain your Mazak machine tools so you obtain the full value of your equipment, from installation throughout its working life. Take a self-paced course through our MPower On-Demand Learning (MODL) system, schedule an in-person class at one of our Technology or Technical Centers or sign up for a customized seminar in your shop.

MPower On-Demand Learning:

- Custom tailor training programs
- Select subject matter from more than 100 multi-level courses
- Schedule classes for times that suit your schedules, especially when in-person instruction becomes impossible or inconvenient
- Access essential courses anytime, anywhere
- Full engagement through both online instruction and virtual experiences
- Customized course offerings and subject matter meet your requests
- Adapt classes to suit learning levels and access exactly the right classes to empower your team

SPINDLE AND UNIT REBUILD

Mazak's cost-effective Spindle Rebuilding Services offer customers fast and precise spindle rebuilding under the MPower umbrella. The Mazak Spindle Rebuild Department raises the bar in terms of efficiency and quality in OEM-factory-certified machine tool spindle rebuild services that significantly reduce customer downtime.

- More than three decades of spindle build experience
- Support for 2,000 machine tool spindle models and a wide range of horsepowers and speeds
- More than 1,000 rebuilt spindles in stock ready for exchange
- Average three to five days spindle rebuild turnaround time
- Capacity to rebuild 100 spindles per month

Mazak Capital Equipment Financing (MCEF)

MCEF is a one-stop choice for manufacturers throughout the United States who want fast, hassle-free, low-cost financing on Mazak equipment. Our knowledge of Mazak's product portfolio results in factory terms that can work to your advantage. Plus, with our direct access to machine specifications, delivery schedules and installation dates, we work to reduce additional paperwork or delays in the approval or shipment process.

Mazak
CAPITAL EQUIPMENT FINANCING

MCEF benefits:

- Provides flexible, timely and competitive financing for companies of all sizes
- Offers a one-stop, seamless purchasing experience with direct access to delivery and installation schedules
- Obtains application approvals quickly (often within 24 hours)
- Creates customized financing programs to meet your specific requirements
- Preserves bank credit lines for working capital for your company's growth

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QUICK TURN SERIES

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