

Mazak

# QUICK TURN

S E R I E S







QUICK TURN SERIES

QUICK TURN 200MY (1000U)

QUICK TURN 250MSY (500U)

From its inception in 1981 and with worldwide accumulative 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 allow part processing from small lengths and small diameters to large diameters and long lengths.



QUICK TURN 100M (400U) [MAZATROL SmoothG]  
The photo includes options.



QUICK TURN 400M (2000U) [MAZATROL SmoothG]  
The photo includes options.

High-performance CNC lathe

# QUICK TURN SERIES

- M & MY models come standard with built-in motors for rotary tooling (excluding 100M).
- 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 100M (400U) [MAZATROL SmoothC]  
The photo includes options.

## QUICK TURN 100 SERIES

	Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
		VDI method	Bolt-on method					
100	Φ22.8" (580 mm)	—	•	—	—	—	•	300U
100M	Φ22.8" (580 mm)	—	•	•	—	—	•	400U
100MY	Φ21.6" (550 mm)	◦	•	•	—	•	•	300U
100MS	Φ21.6" (550 mm)	◦	•	•	•	—	—	300U
100MSY	Φ21.6" (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]  
The photo includes options.

## QUICK TURN 200, 250 SERIES

		Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
			VDI method	Bolt-on method					
200	250	Φ24" (610 mm)	—	•	—	—	—	•	500U/(1000U 250)
200M	250M	Φ24" (610 mm)	•	◦	•	—	—	•	500U
200MY	250MY	Φ24" (610 mm)	•	◦	•	—	•	•	1000U/(1500U 250)
200MS	250MS	Φ24" (610 mm)	•	◦	•	•	—	—	500U
200MSY	250MSY	Φ24" (610 mm)	•	◦	•	•	•	—	500U



•Standard accessories ◦Option -Not available



QUICK TURN 350MY (1250U) [MAZATROL SmoothG]  
The photo includes options.

## QUICK TURN 350 SERIES

	Maximum swing	Turret		Mill function	2nd spindle	Y axis	Tailstock	Bed
		VDI method	Bolt-on method					
350	Φ26.8" (680 mm)	—	•	—	—	—	•	650U/1250U
350M	Φ29.5" (750 mm)	•	◦	•	—	—	•	650U/1250U
350MY	Φ29.5" (750 mm)	•	◦	•	—	•	•	650U/1500U/2000U
350MSY	Φ29.5" (750 mm)	•	◦	•	•	•	—	650U/1500U

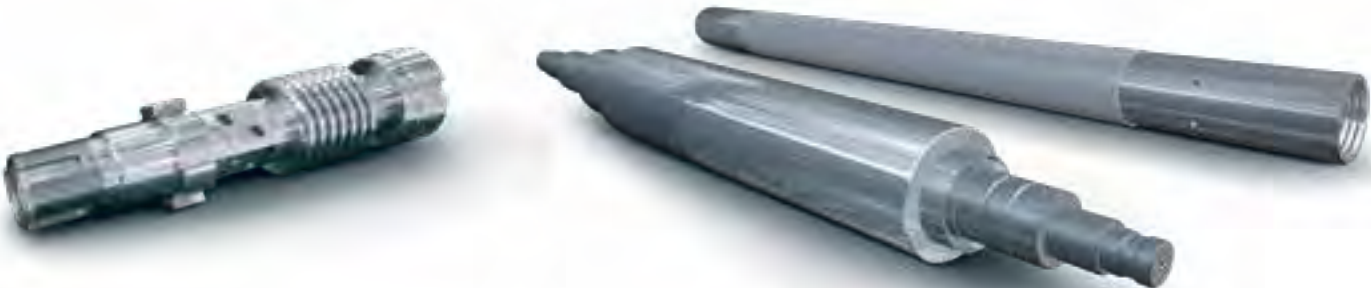
This integral spindle machine allows for large part processing without belts and gearboxes. Configurations: 2-axis, tailstock, chucker, milling and Y-axis milling.



QUICK TURN 400M (2000U) [MAZATROL SmoothG]  
The photo includes options.

## QUICK TURN 400, 450 SERIES

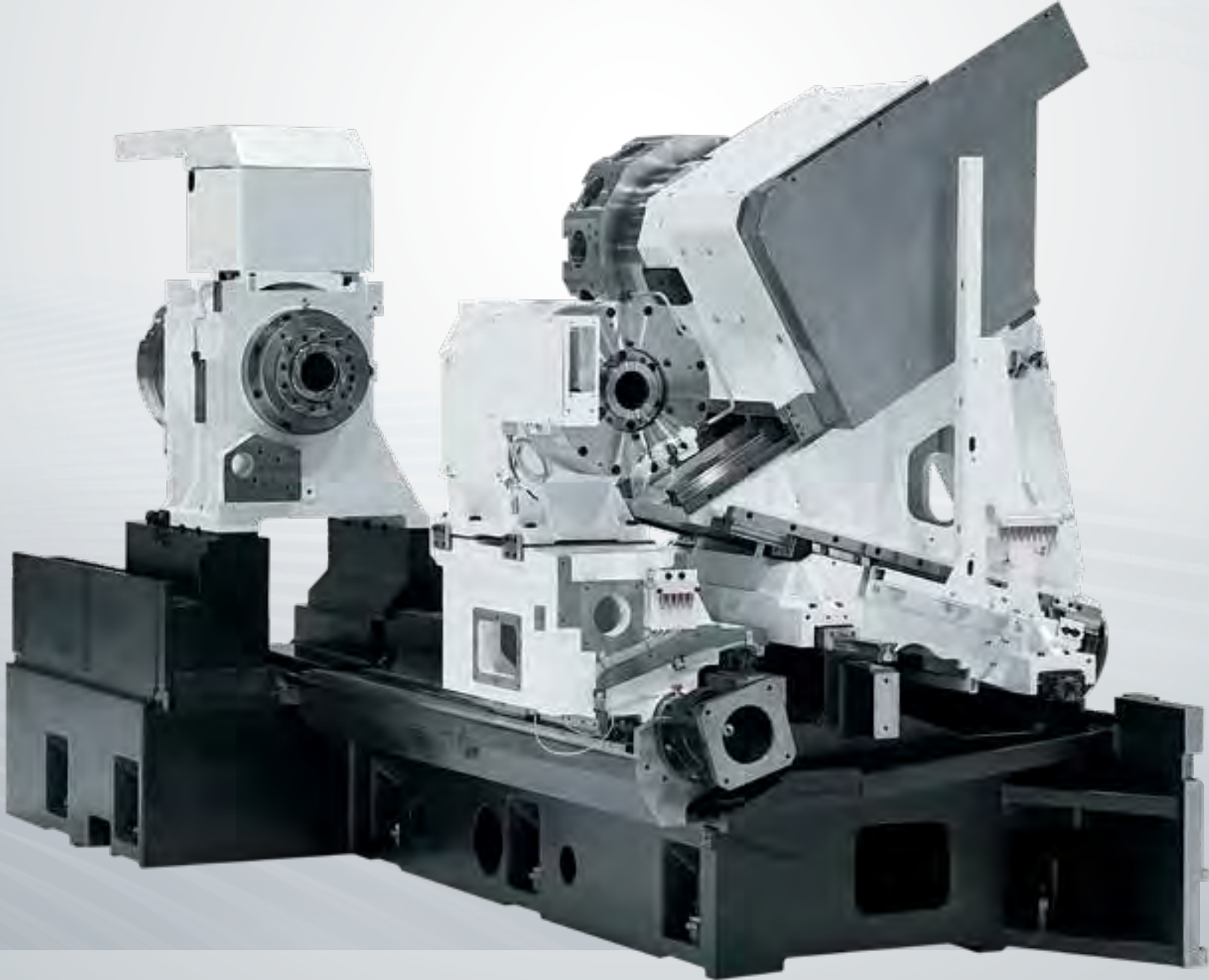
		Maximum swing	Turret		Mill function	Tailstock	Bed
			VDI method	Bolt-on method			
400	450	Φ33.3" (845 mm)	—	•	—	•	1000U/2000U/(3000U 450)
400M	450M	Φ33.3" (845 mm)	•	◦	•	•	1000U/(2000U/3000U 450M)
	450MY	Φ33.1" (840 mm)	•	◦			2000U/3000U





# 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.

### 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.



### Roller guides on all linear axis

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

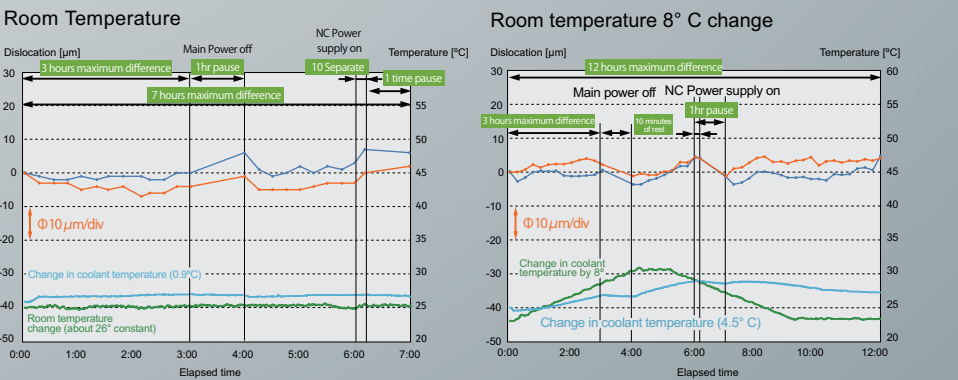
Machines with optional milling have a standard of 0.0001° C-axis precision positioning for both single and 2nd spindle machines. Simultaneous C-axis contour machining can also be realized with the milling option.

### 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)



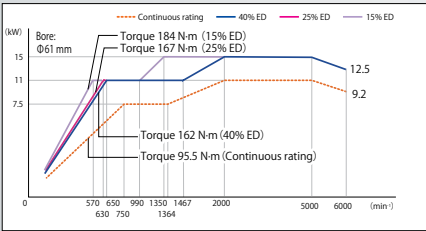


# High-performance Spindle

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

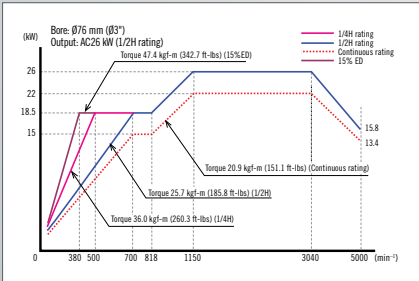
6,000 min<sup>-1</sup> 20 hp (15 kW) spindle



Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through hole diameter
100, 100M, 100MY, 100MSY	20 hp (15 kW)	6,000	135 ft-lb (184 N*m)	6"	Φ2.40" (61 mm)

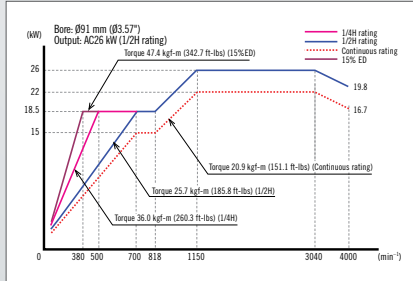
## QUICK TURN 200 series/QUICK TURN 250 Series

QUICK TURN 200 Series  
5,000 min<sup>-1</sup> 35 hp (26 kW)



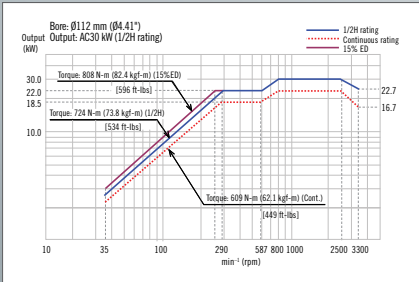
Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through hole diameter
200, 200M, 200MY, 200MS and 200MSY	35 hp (26 kW)	5,000	343 ft-lb (465 N*m)	8"	Φ2.99" (76 mm)
250, 250M, 250MY, 250MS and 250MSY	35 hp (26 kW)	4,000	343 ft-lb (465 N*m)	10"	Φ3.58" (91 mm)

QUICK TURN 250 Series  
4,000 min<sup>-1</sup> 35 hp (26 kW)



## QUICK TURN 350 series

3,300 min<sup>-1</sup> 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"	Φ4.41" (112 mm)

Heavy cutting with high-output and high-torque spindles

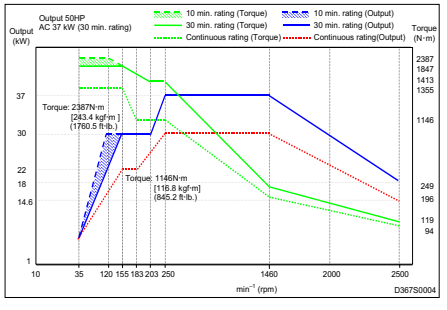
Processing results QUICK TURN 350MY

3,300 min<sup>-1</sup> 40 hp (30 kW) high-torque spindle  
Peripheral speed: 590 SFM  
Feed rate: 0.016 inch/rev  
Cutting depth: 0.27 inch



## QUICK TURN 400 Series

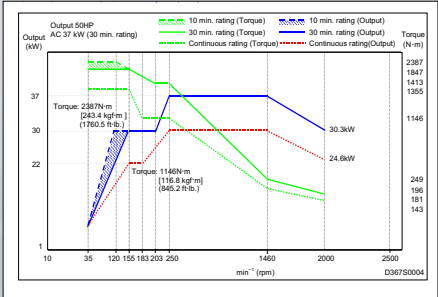
3,300 min<sup>-1</sup> 50 hp (37 kW) spindle



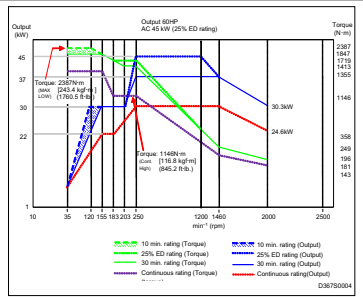
Compatible models	Maximum output	Rotational speed	Maximum torque	Chuck size	Spindle through hole diameter
400, 400M	50 hp (37 kW)	2,500	1,760 ft-lb (2,386 N*m)	12"	Φ5.2" (132 mm)

## QUICK TURN 450 Series

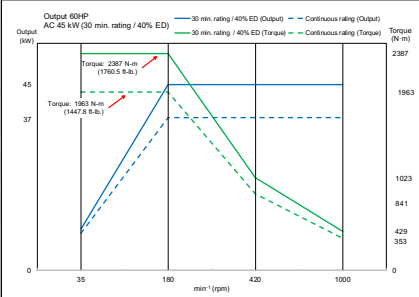
7.28" 50 hp (37 kW) spindle



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	Φ7.28" (185 mm)
	60 hp (45 kW)	2,000	1,760 ft-lb (2,386 N*m)	N/A	Φ7.28" (274 mm)
	60 hp (45 kW)	1,000	1,760 ft-lb (2,386 N*m)	N/A	Φ10.8" (274 mm)



# High Productivity

Turrets are available in both Bolt-on and VDI styles



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
200M, MY, MS & MSY	12-sided tool post	12
250M, MY, MS & MSY	16-sided tool post	16
350, M, MY, MS, MSY	12-sided tool post	12
400 & M, 450, M & MY	12-sided tool post	12



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. If more than 12 tools are required, a 16-sided tool post option is also available.

Compatible models	Turret type	Number of tools
100	12-sided tool post	12
		8
100M	12-sided tool post	12
100MY, MS, MSY	12-sided tool post	12
200	12-sided tool post	12
250	12-sided tool post	12

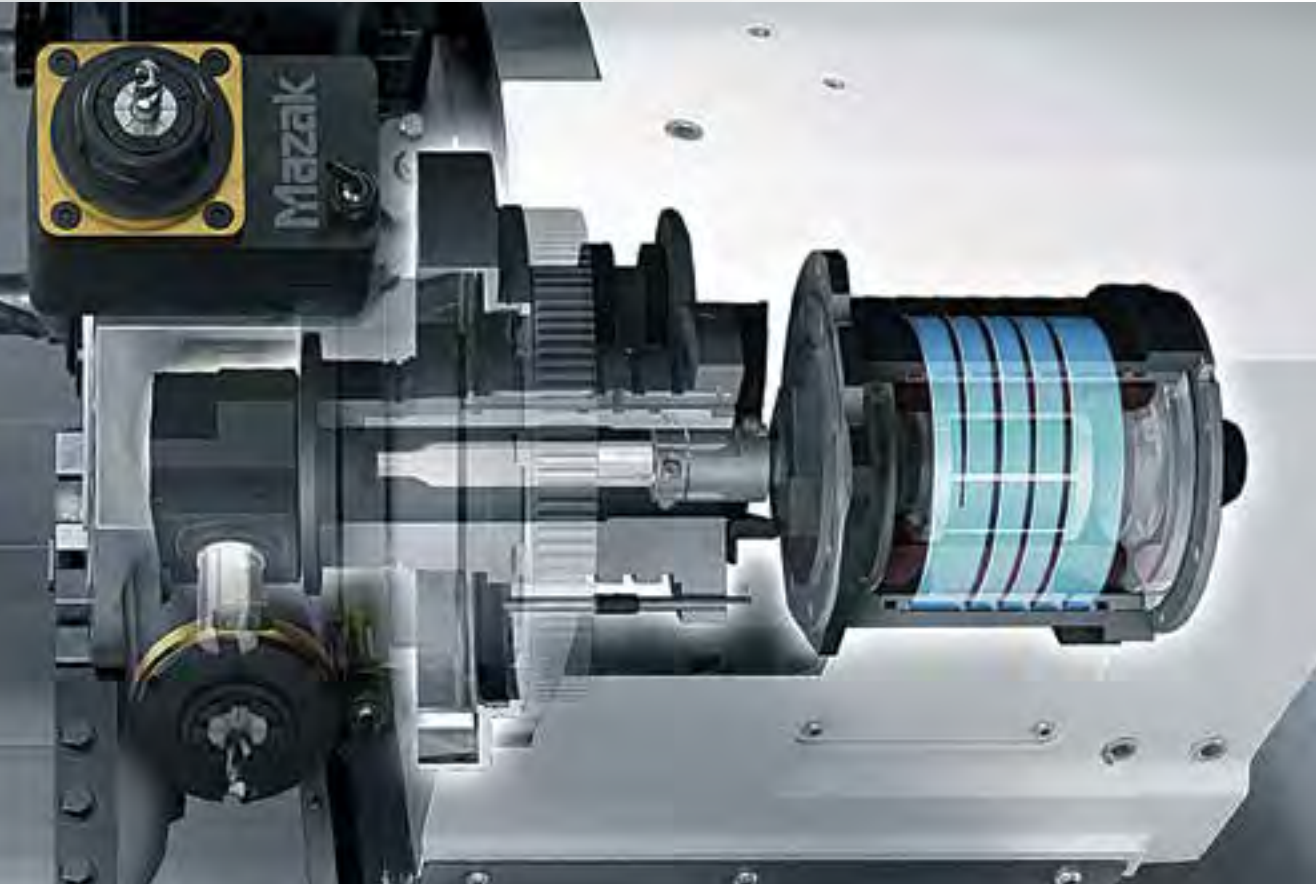
Compatible models	Turret type	Number of tools
200M, MY, MS and MSY	12-sided tool post	12
250M, MY, MS and MSY	16-sided tool post*	16
350M, MY and MSY	12-sided tool post	12
400 and 400M	12-sided tool post	12
450, 450M and 450MY	12-sided tool post	12



# 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 will significantly improve overall cutting performance. 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)

Φ12 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" inch/rev      (Axial direction): 0.47"



100M, MY, MS & MSY (Smooth mill drive specification)					
4,500 min <sup>-1</sup> specification (QT100M only)		5,000 min <sup>-1</sup> specification (MY, MS & MSY)		10,000 min <sup>-1</sup> specification (MY, MS & MSY)	
Rotary tool specifications	Bolt-on method	Rotary tool specifications	Bolt-on/ VDI method	Rotary tool specifications	Bolt-on method
Rotational speed output	4,500 min <sup>-1</sup>	Rotational speed output	5,000 min <sup>-1</sup>	Rotational speed output	10,000 min <sup>-1</sup>
40% ED/continuous rating	7.3 hp/5.0 hp	40% ED/continuous rating	7.3 hp/5.0 hp	40% ED/continuous rating	7.3 hp/5.0 hp
Maximum torque	35.0 ft-lb	Maximum torque	35.0 ft-lb	Maximum torque	35.0 ft-lb

200 M, MY, MS & MSY / 250M, MY, MS & MSY (Smooth mill drive specification)					
6,000 min <sup>-1</sup> specification		6,000 min <sup>-1</sup> specification high torque		10,000 min <sup>-1</sup> specification	
Rotary tool specifications	Bolt-on/ VDI method	Rotary tool specifications	Bolt-on/ VDI method	Rotary tool specifications	Bolt-on/ VDI method
Rotational speed output	6,000 min <sup>-1</sup>	Rotational speed output	6,000 min <sup>-1</sup>	Rotational speed output	10,000 min <sup>-1</sup>
10% ED/continuous rating	10 hp/7.3 hp	10% ED/continuous rating	10 hp/7.3 hp	10% ED/continuous rating	10 hp/7.3 hp
Maximum torque	35.0 ft-lb	Maximum torque	51.0 ft-lb	Maximum torque	33.0 ft-lb

350M, MY & MSY / 400M / 450M & MY (Smooth mill drive specification)					
4,000 min <sup>-1</sup> specification		6,000 min <sup>-1</sup> specification		4,000 min <sup>-1</sup> specification	
Rotary tool specifications	VDI CAT40	Rotary tool specifications	Bolt-on/ VDI method	Rotary tool specifications	Bolt-on/ VDI method
Rotational speed output	4,000 min <sup>-1</sup>	Rotational speed output	6,000 min <sup>-1</sup>	Rotational speed output	6,000 min <sup>-1</sup>
10% ED/continuous rating	10 hp/7.3 hp	10% ED/continuous rating	10 hp/7.3 hp	10% ED/continuous rating	10 hp/7.3 hp
Maximum torque	40.0 ft-lb	Maximum torque	35.0 ft-lb	Maximum torque	51.0 ft-lb



# 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 Pound using the menu soft keys or M code commands, allowing for the flexibility to process either heavy, large-diameter workpieces or long, thin workpieces. Compared to the drag & drop method of movement and pressing with hydraulic/pneumatic pressure, the ease of use has been vastly improved.



## Steadyrest option

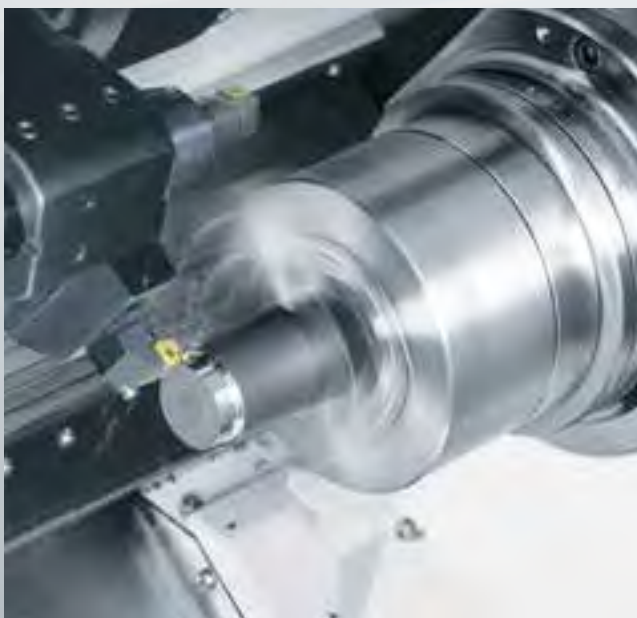
To process longer parts with high accuracy, a steadyrest can be installed. Various sizes and models of steadyrests can be added based on the user's applications.



## 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 degree indexing allows for single point machining and contoured milling while providing overall part quality and repeatability.



	100MS, 100MSY	200MS, 200MSY 250MS, 250MSY	350MS, 350MSY
Rotational speed	6000 min <sup>-1</sup>	6000 min <sup>-1</sup>	5000 min <sup>-1</sup>
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"

## Y axis (MY, MSY)

With the large Y-axis strokes of QUICK TURN machines, you can accurately and efficiently machine complex part shapes. 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

By providing a setup area, you can load and unload raw materials and finished parts without interrupting machining 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 SMOOTH-G

A complete automation system that eliminates the need for complicated robot programming, 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. With a common interface, various brands of bar feeders can be quickly and easily installed.



## Auto parts catcher (APC)

The optional APC allows for unloading of workpieces that have been machined to an external parts box. The APC paired with a bar feeder helps shops realize unattended operation.





# Ergonomics and maintainability

Designed around the operator's ease of use.

## Operator door

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



## MAZATROL SMOOTHG

The operator panel swivels, allowing you to operate the machine or service the tooling with ease.



QUICK TURN 350MSY (1250U)  
[MAZATROL SmoothG specifications]

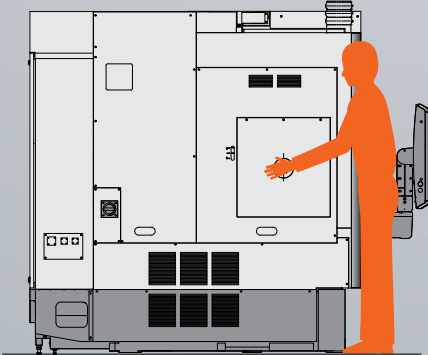
## Large window

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.



## 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.

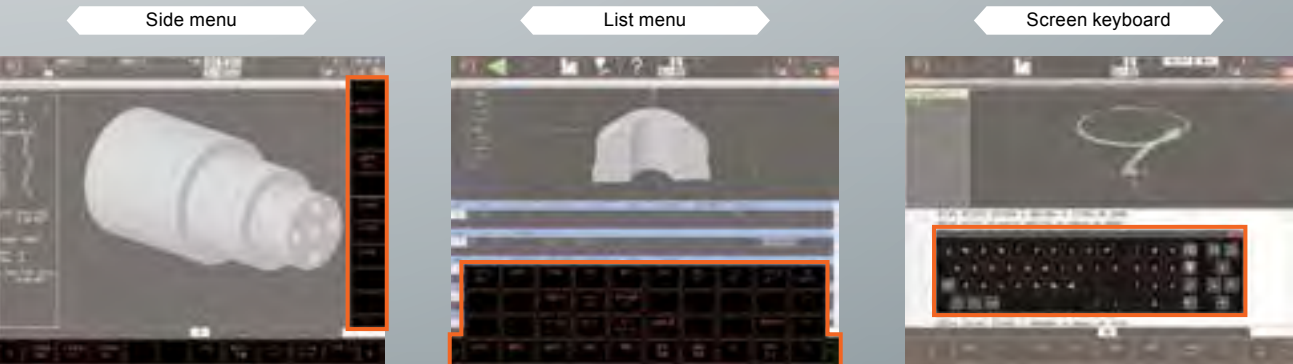


(The above is the process home screen of MAZATROL SmoothG.)

**MAZATROL**  
**SMOOTHG**

## Pop-up displays

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





# Programming

## MAZATROL Interactive programming

MAZATROL interactive programming 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.



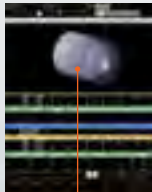
MAZATROL SmoothG

### QUICK MAZATROL Patent pending

MAZATROL  
SMOOTHG

#### 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 are usually not found until the actual machining has occurred. Once the program has been created, one can easily modify features on the workpiece by simply touching the desired feature and making the edits.



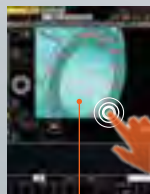
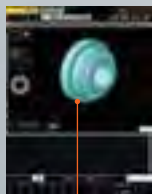
Touching a feature in the 3D model will instantaneously take you to the corresponding MAZATROL machining unit in the program. Once there, you can edit the machining unit or navigate freely.

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

### 3D ASSIST MAZATROL SMOOTHG

#### Create programs directly from 3D CAD models

Processing dimensions and coordinate data can be extracted from 3D CAD models and incorporated into MAZATROL programs. Using a solid model of the programmed workpiece greatly reduces numeric input errors.



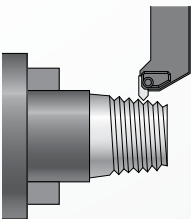
Load CAD model

Select geometry

Reflected in the MAZATROL program

### Re-threading Function Patent pending

Re-threading can be easily performed on workpieces that have been removed from the chuck or machined 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 SMOOTHG

#### Visualization of EIA program

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.

Touch the toolpath on the screen.



Focus goes to the selected line of program for editing or checking.



# Standard and Optional Accessories

## Automation Support

### 1 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.



### 2 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.

### 3 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.

### 4 Double foot switch

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



### 5 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.

### 6 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.



### 7 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.

### 8 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 100M

## Coolant

### 11 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.



### 12 Additional head-side coolant nozzle

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



### 13 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.

### 14 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

### 9 Chip conveyor

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

### 10 Chip bucket (rotary/fixed)



### 15 Coolant temperature control

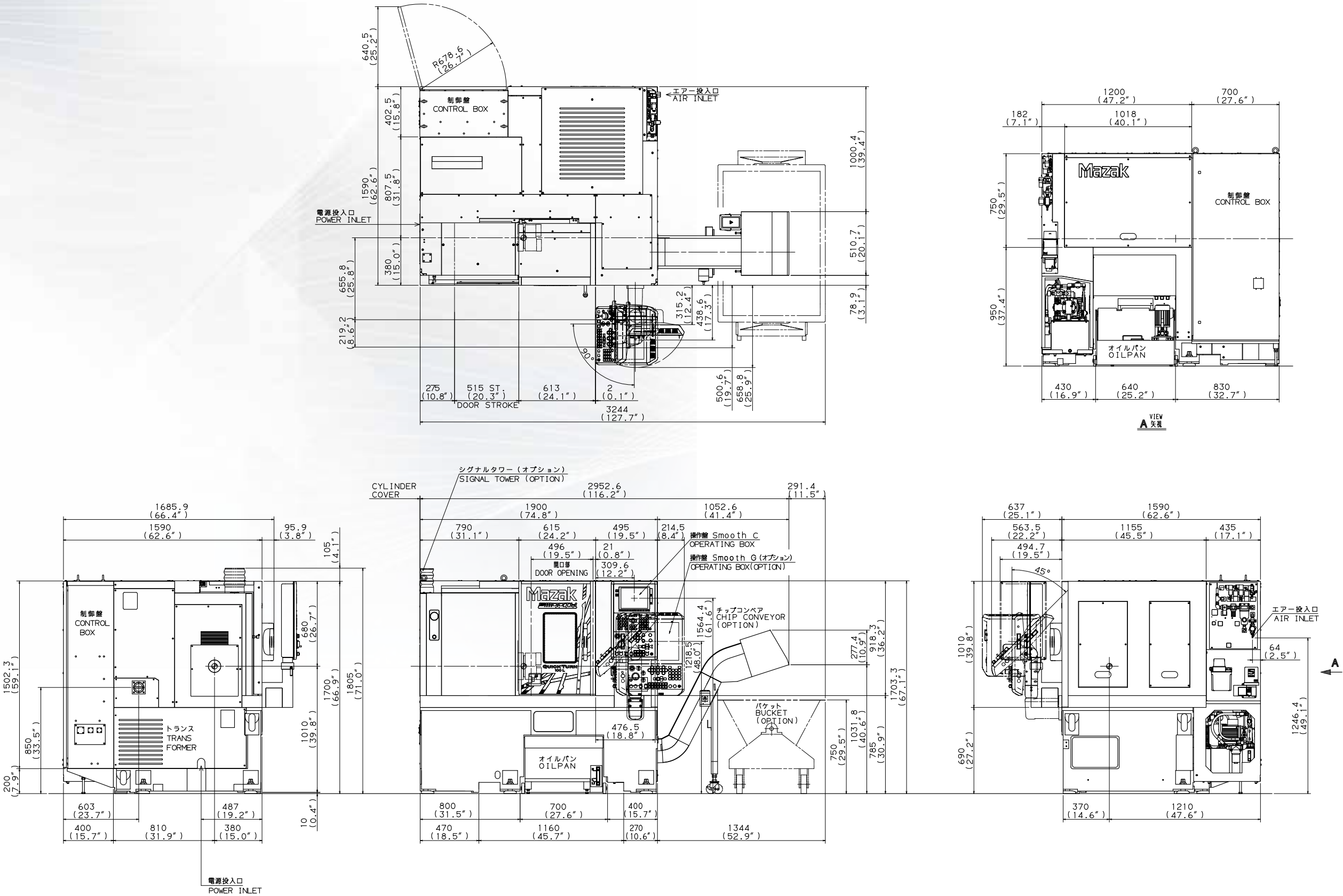
The chiller unit controls the coolant temperature in proportion with the room temperature, allowing for long-term high-precision machining.



Unit: mm (inch)

# External Dimensions – QUICK TURN 100 300U

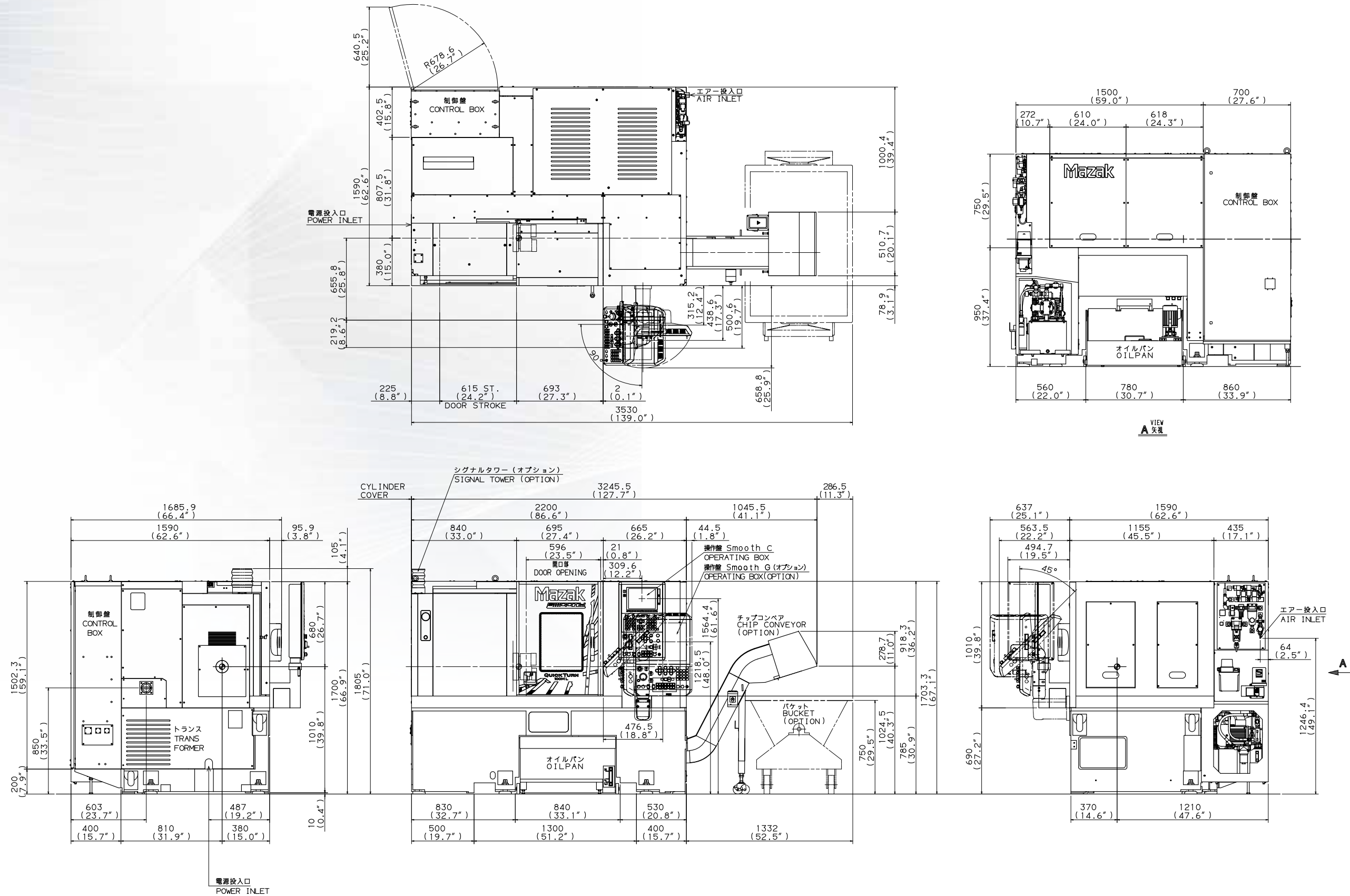
(FOR REFERENCE ONLY)





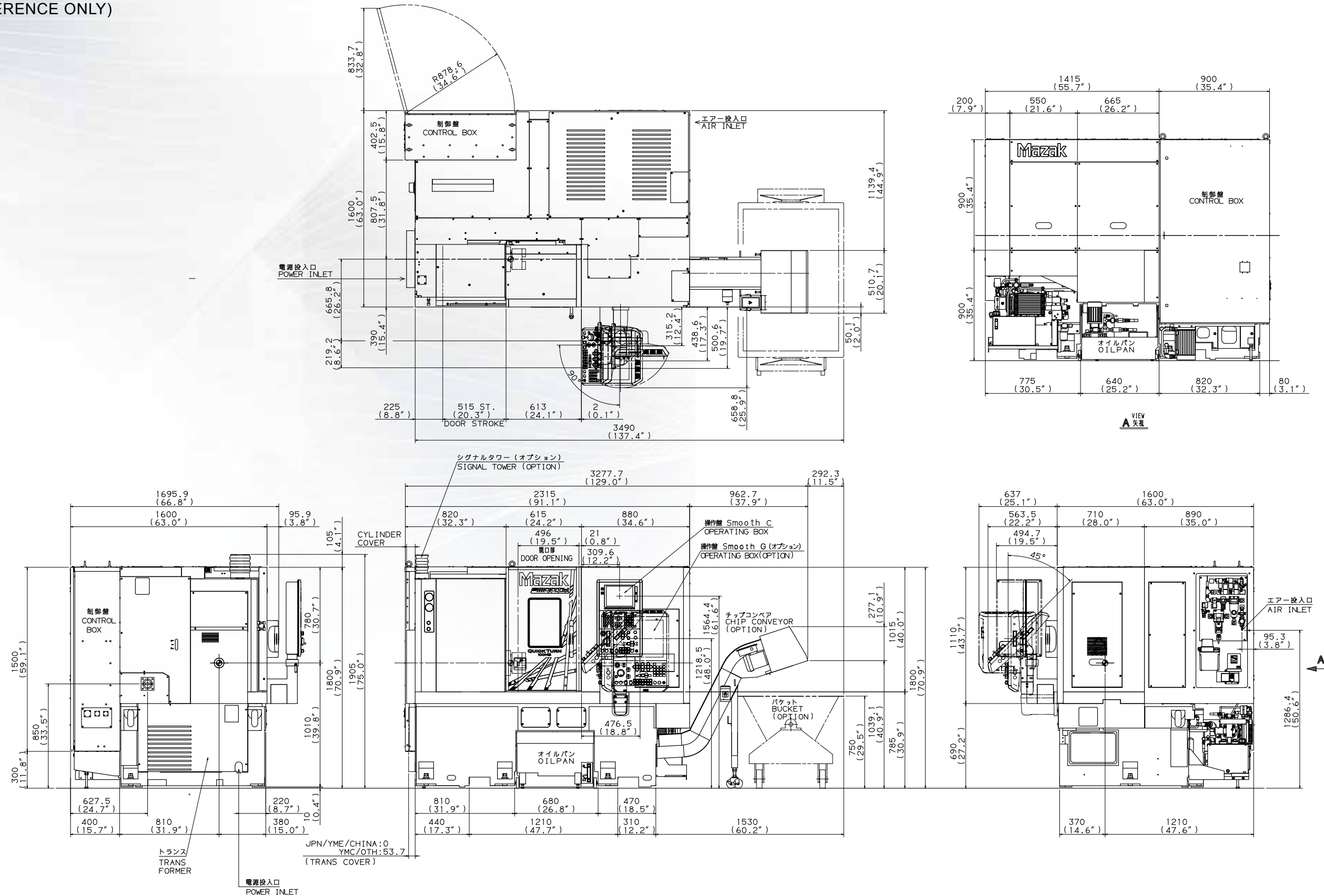
# External Dimensions – QUICK TURN 100M 400U

(FOR REFERENCE ONLY)





## External Dimensions – QUICK TURN 100MS 300U (FOR REFERENCE ONLY)



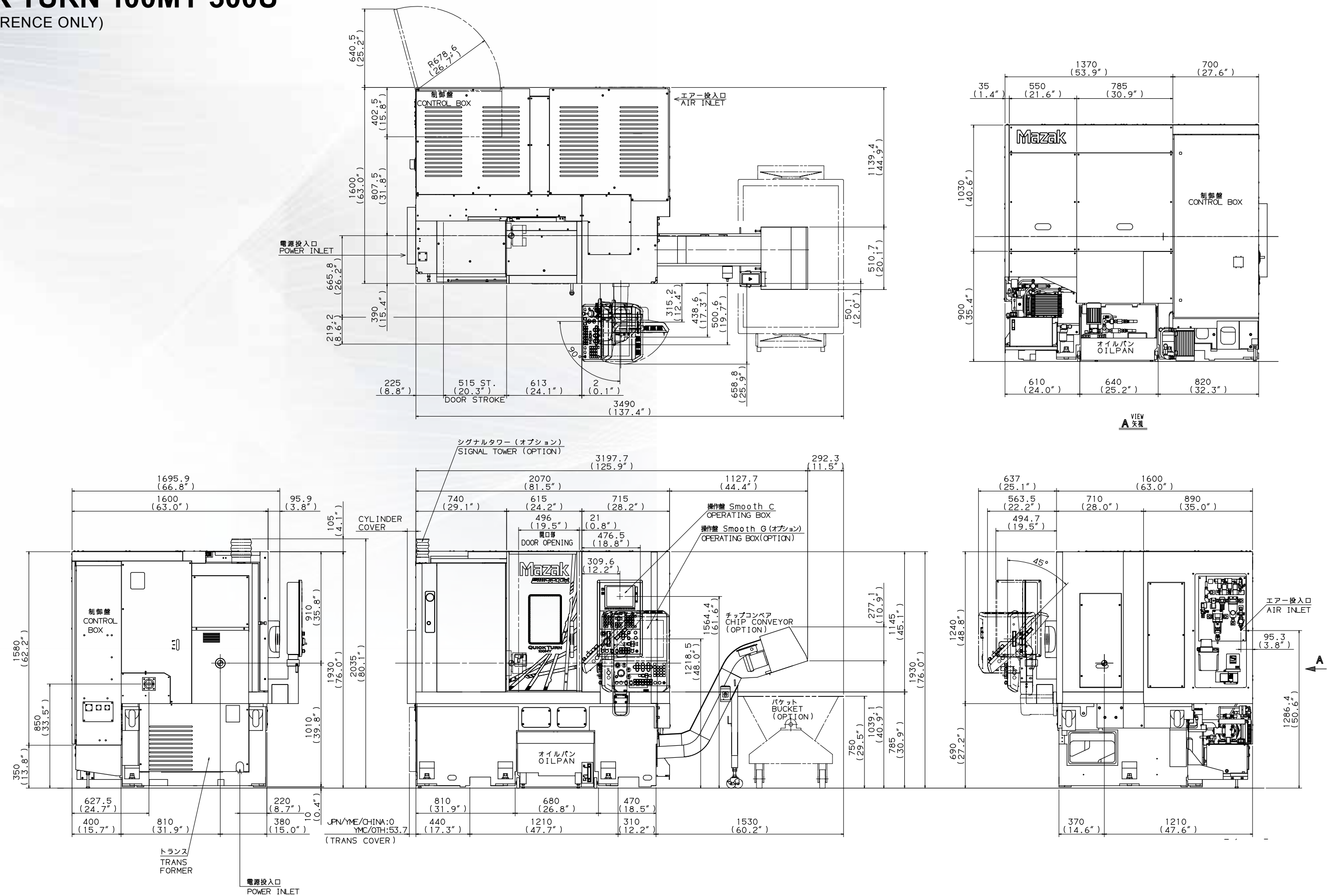


## 32



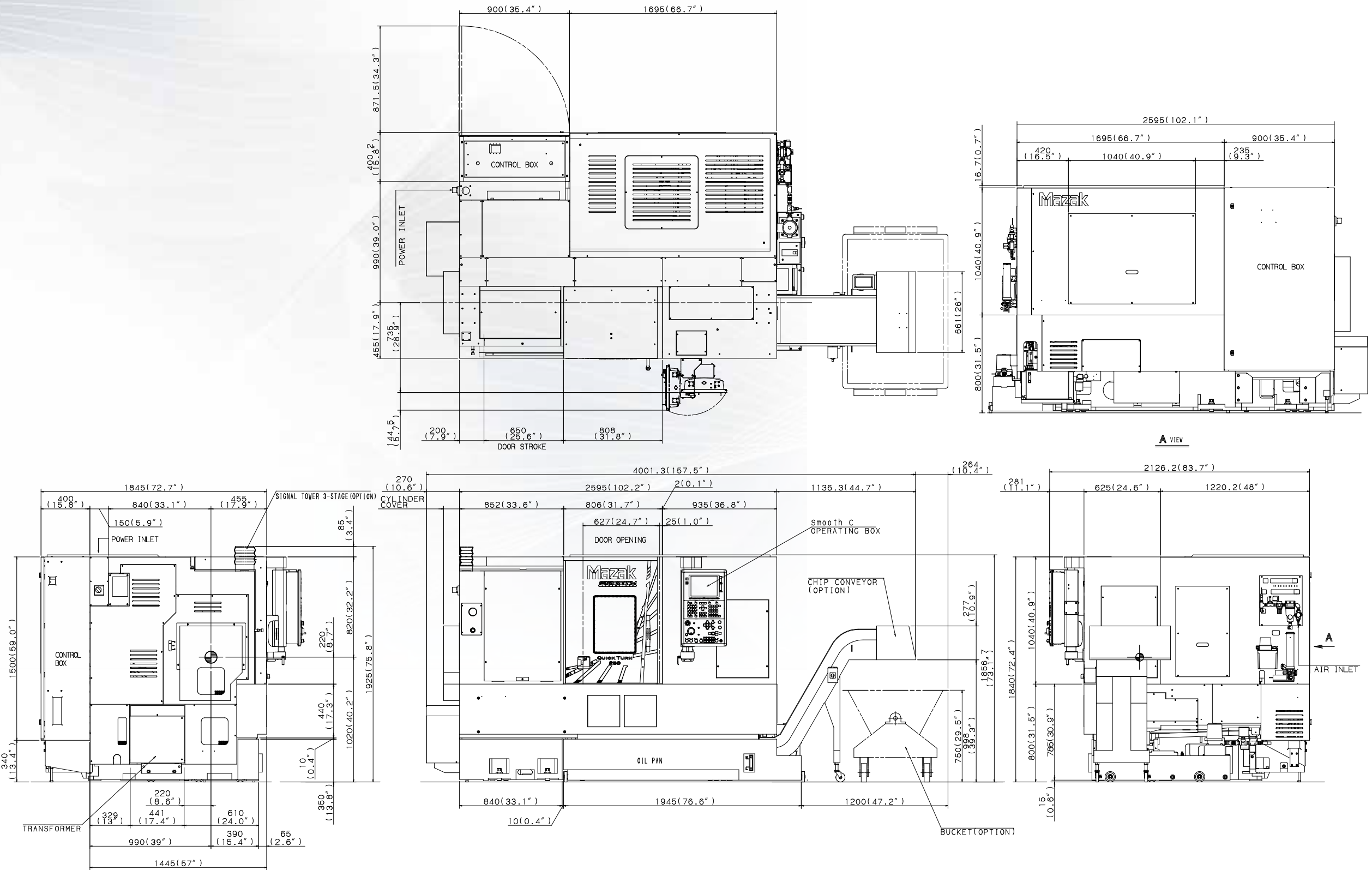


# External Dimensions – QUICK TURN 100MY 300U (FOR REFERENCE ONLY)



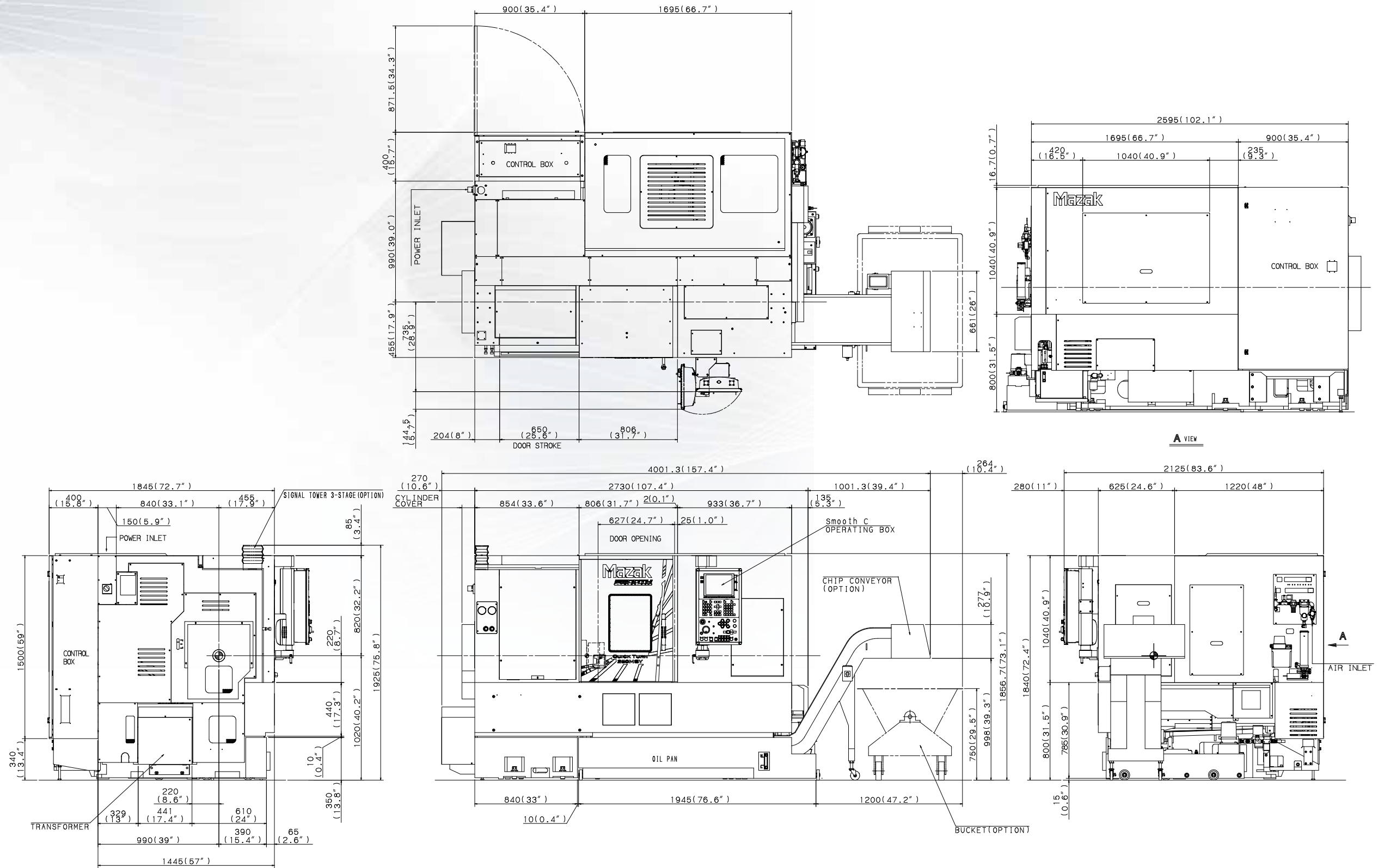


External Dimensions – QUICK TURN 200,  
200M, 200MY, 250, 250M, 250MY – 500U  
(FOR REFERENCE ONLY)





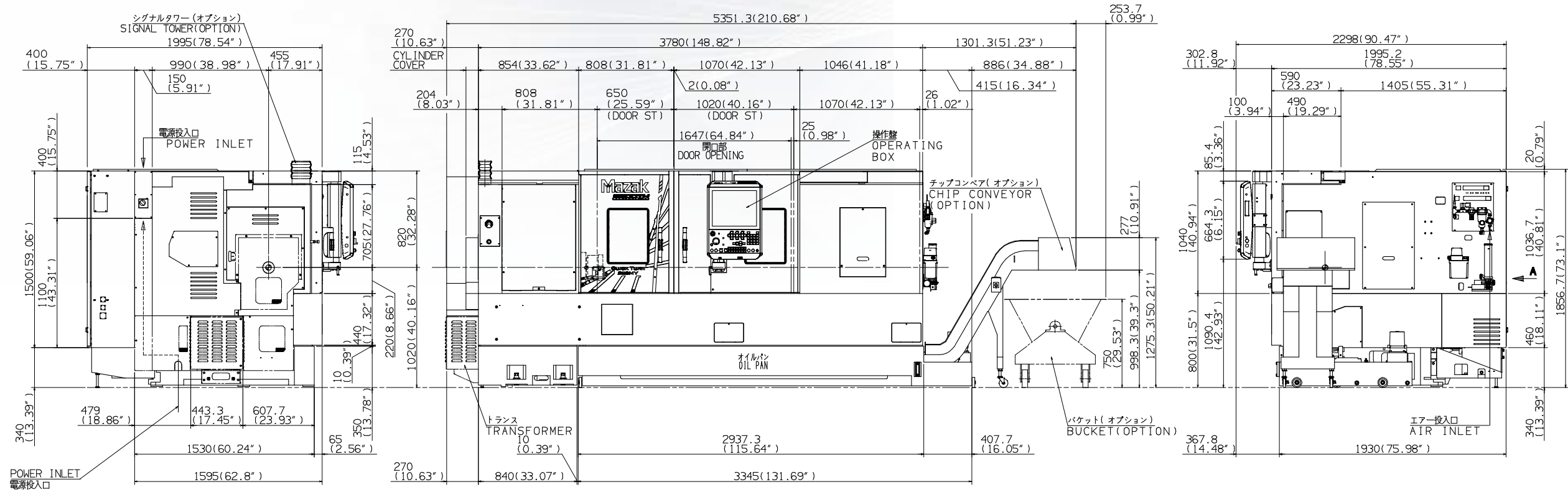
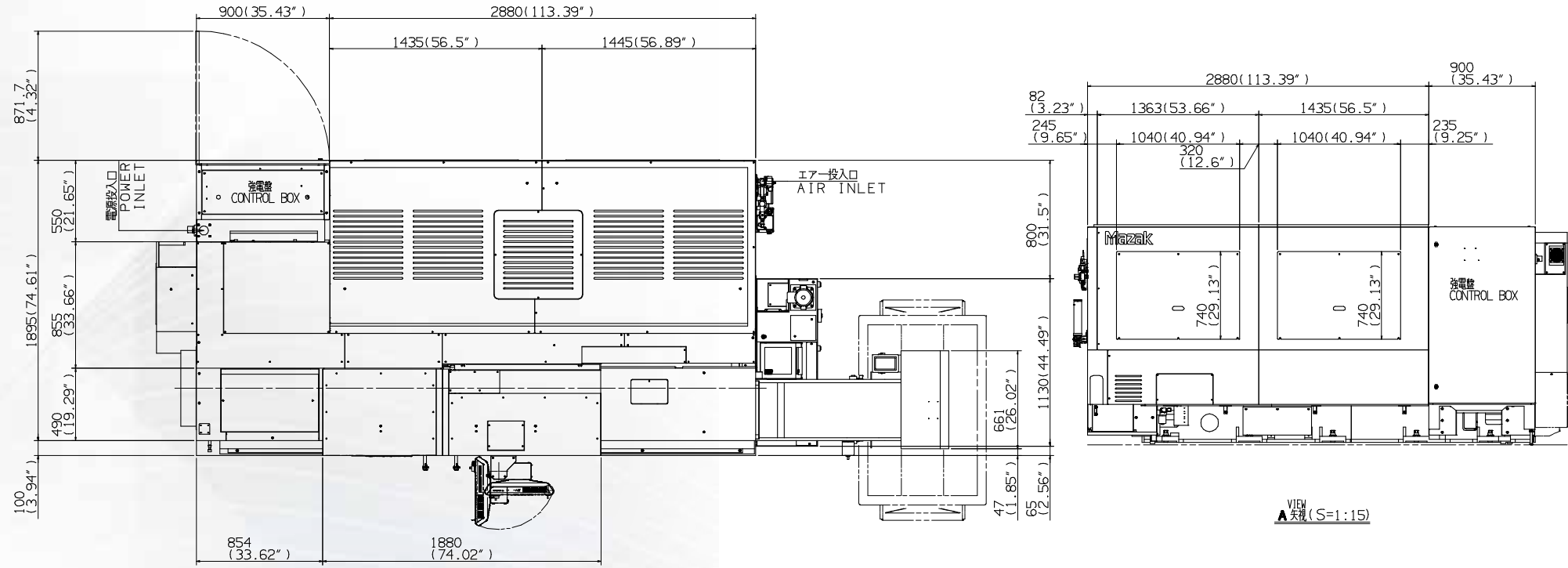
# External Dimensions – QUICK TURN 200MS, 200MSY, 250MS, 250MSY – 500U (FOR REFERENCE ONLY)





## External Dimensions – QUICK TURN 250MY 1500U

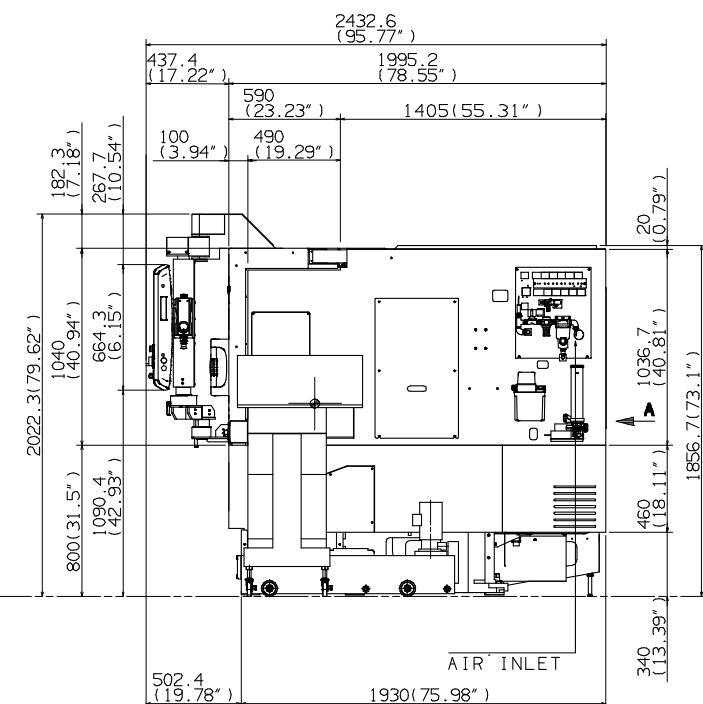
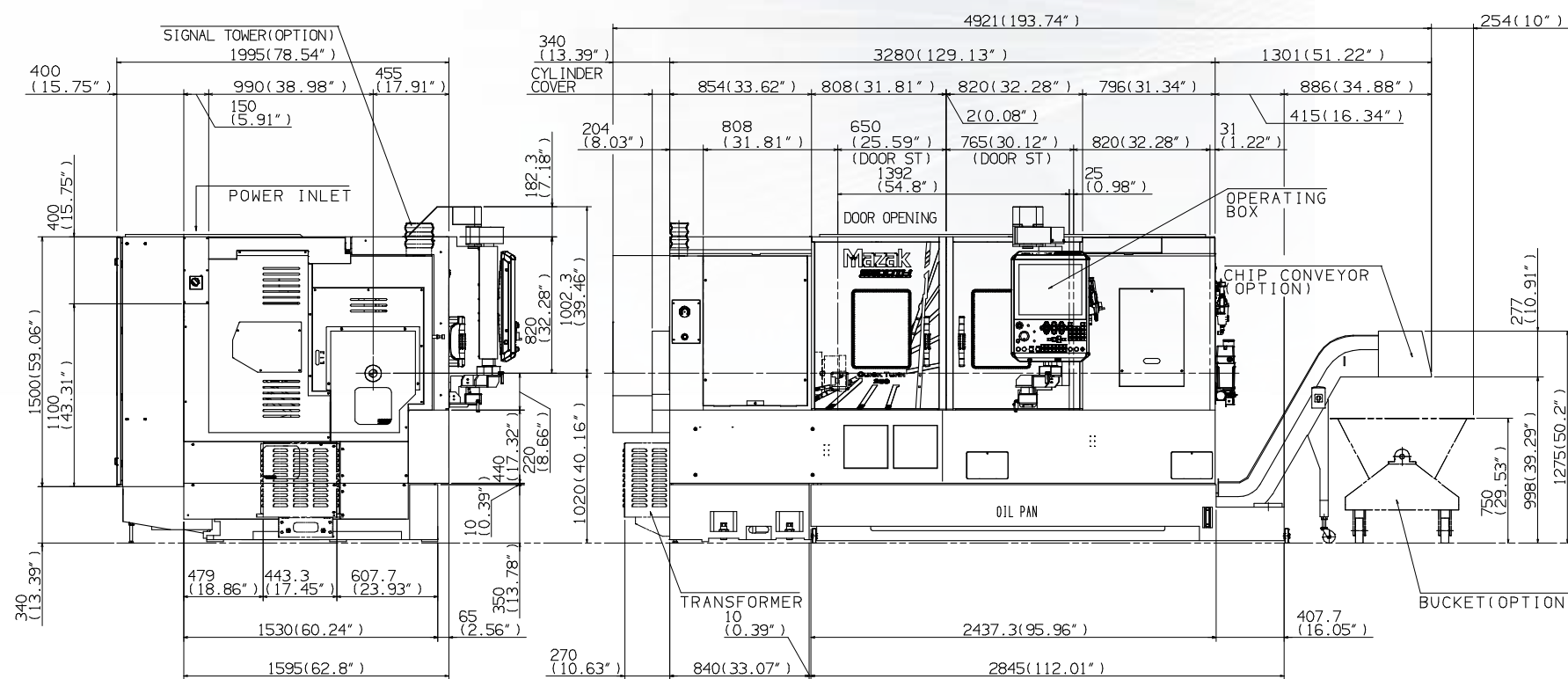
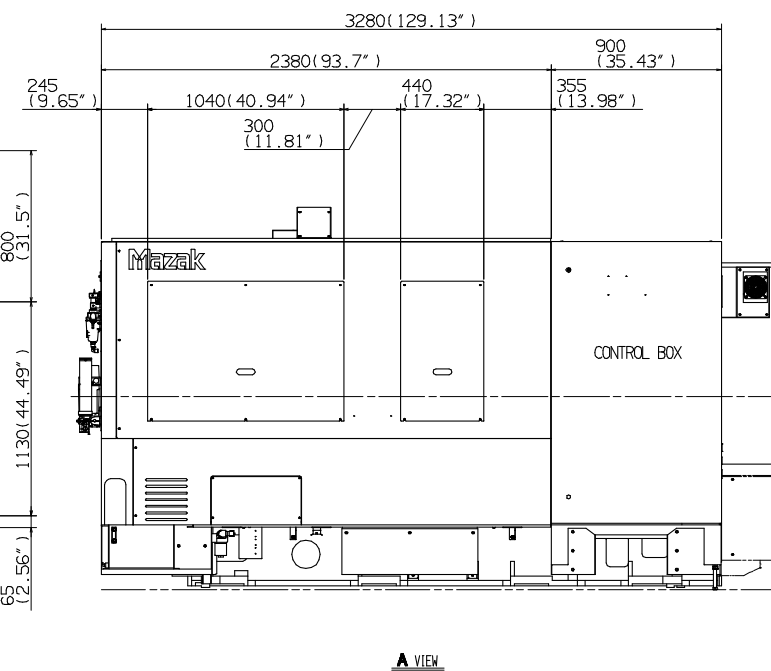
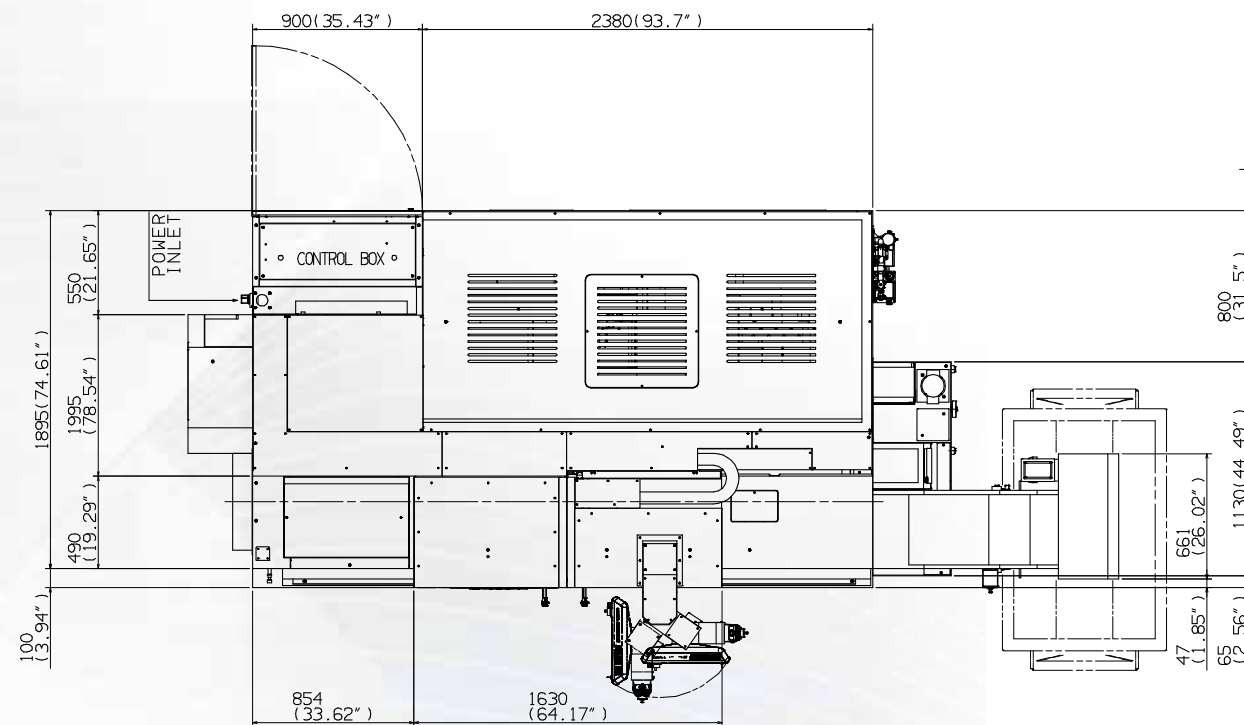
(FOR REFERENCE ONLY)





## External Dimensions – QUICK TURN 250, 250M, 250MY – 1000U

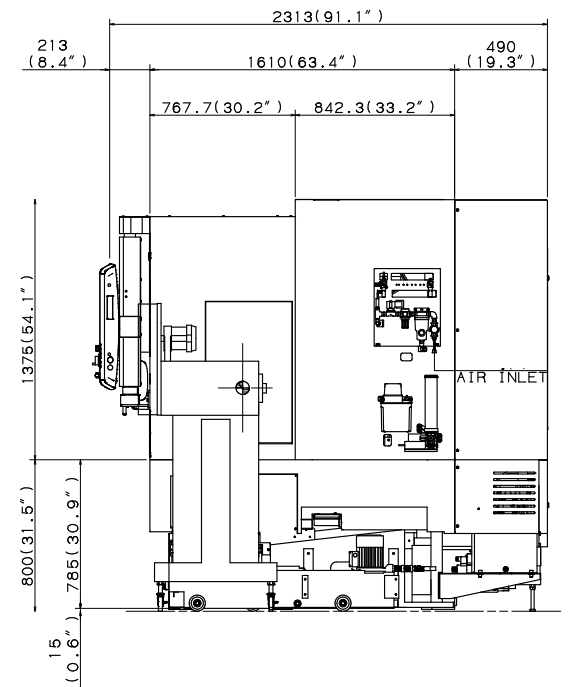
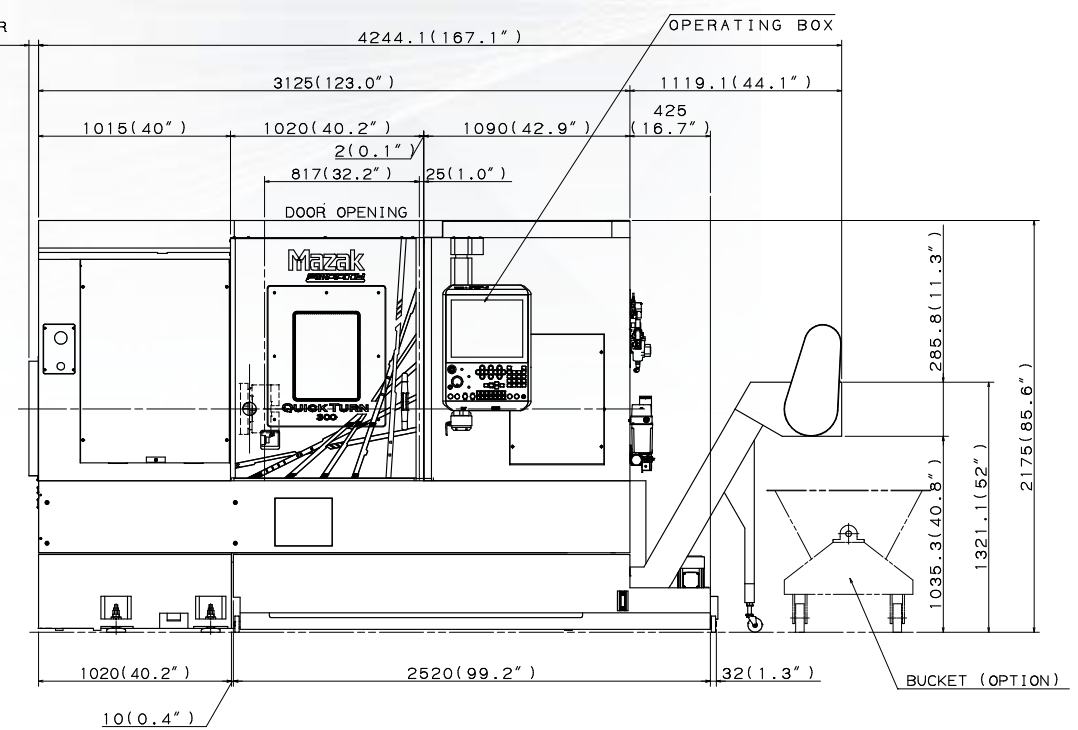
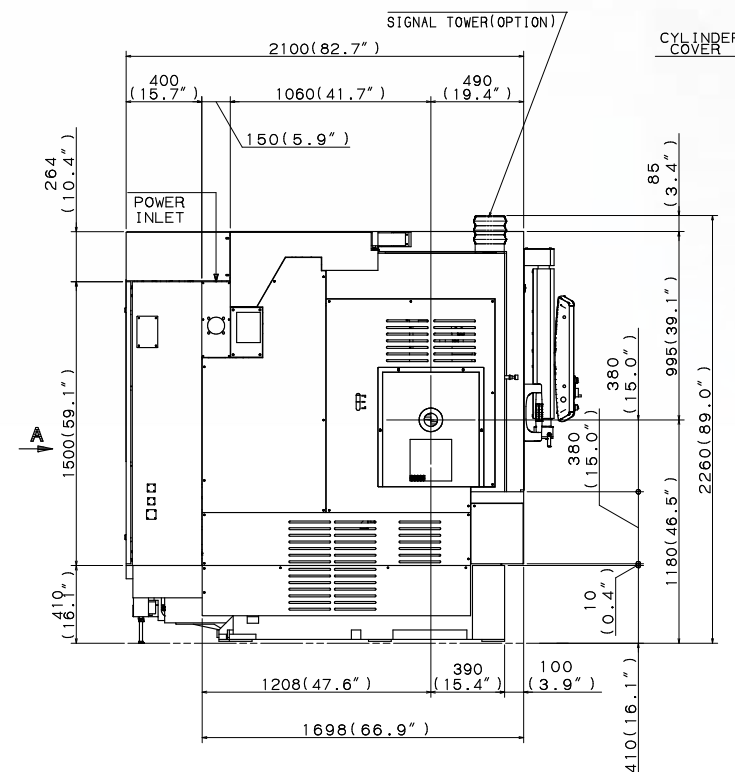
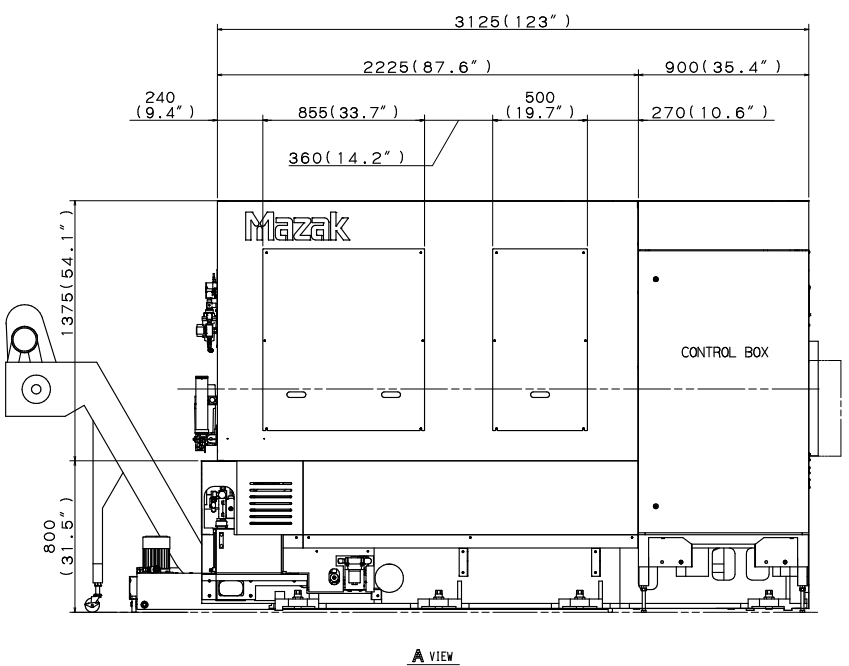
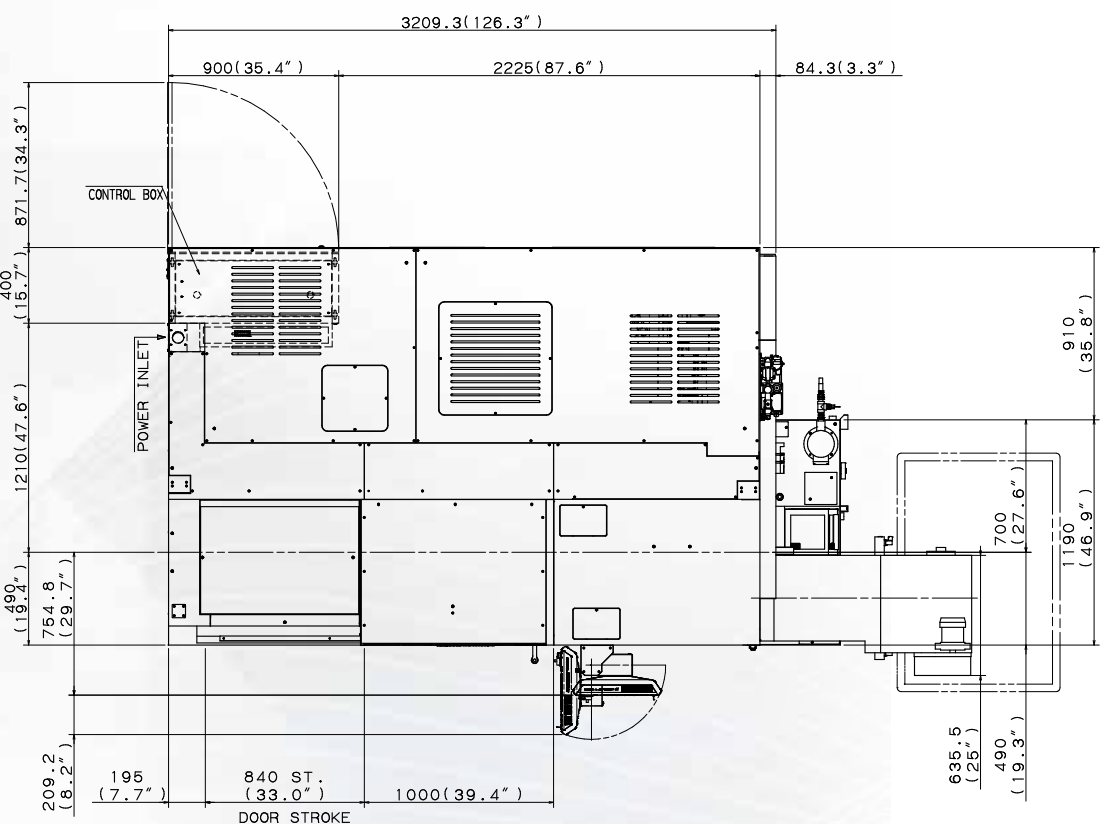
(FOR REFERENCE ONLY)



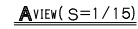


# External Dimensions – QUICK TURN 350, 350M, 350MY – 650U

(FOR REFERENCE ONLY)

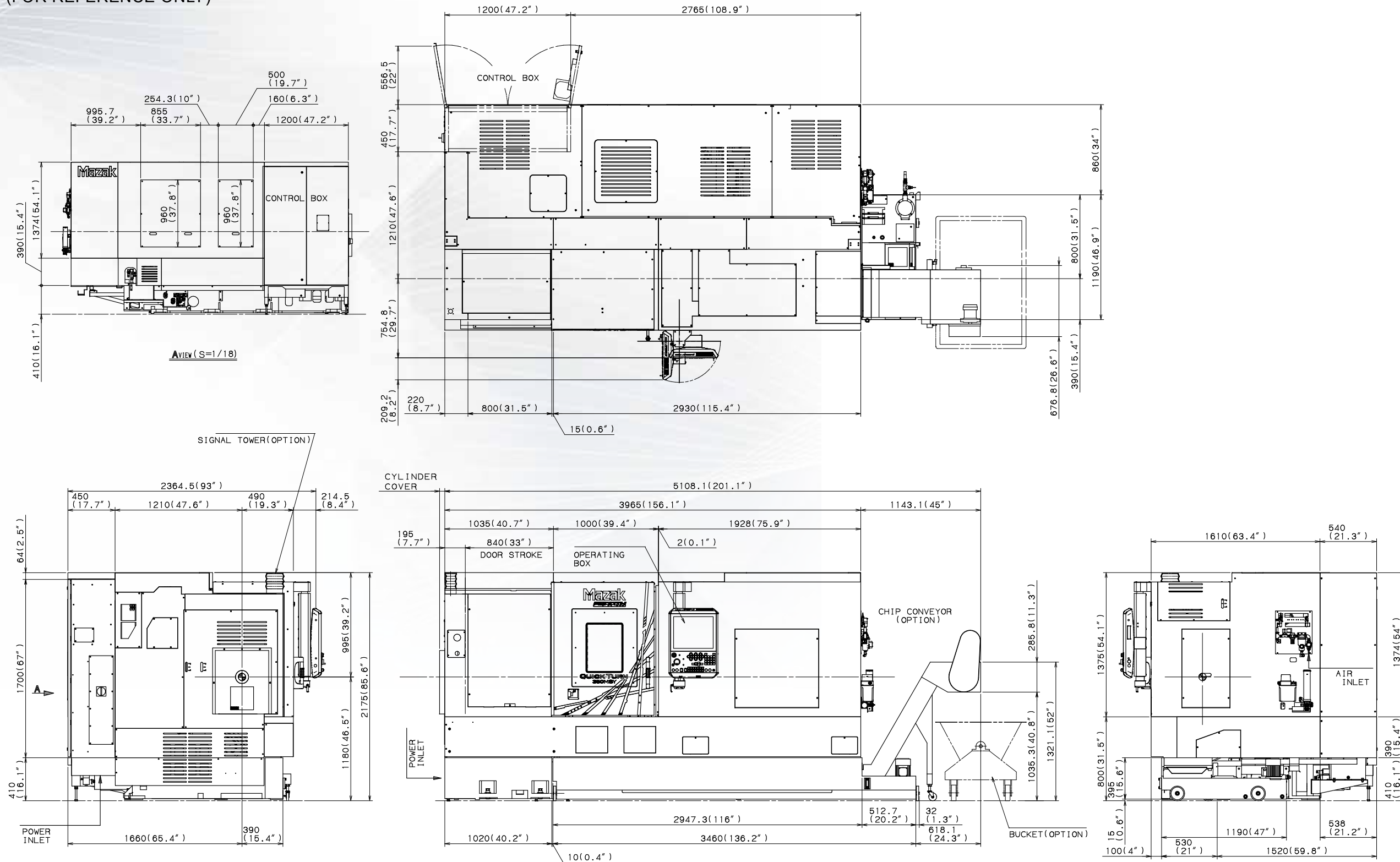


(FOR REFERENCE ONLY)





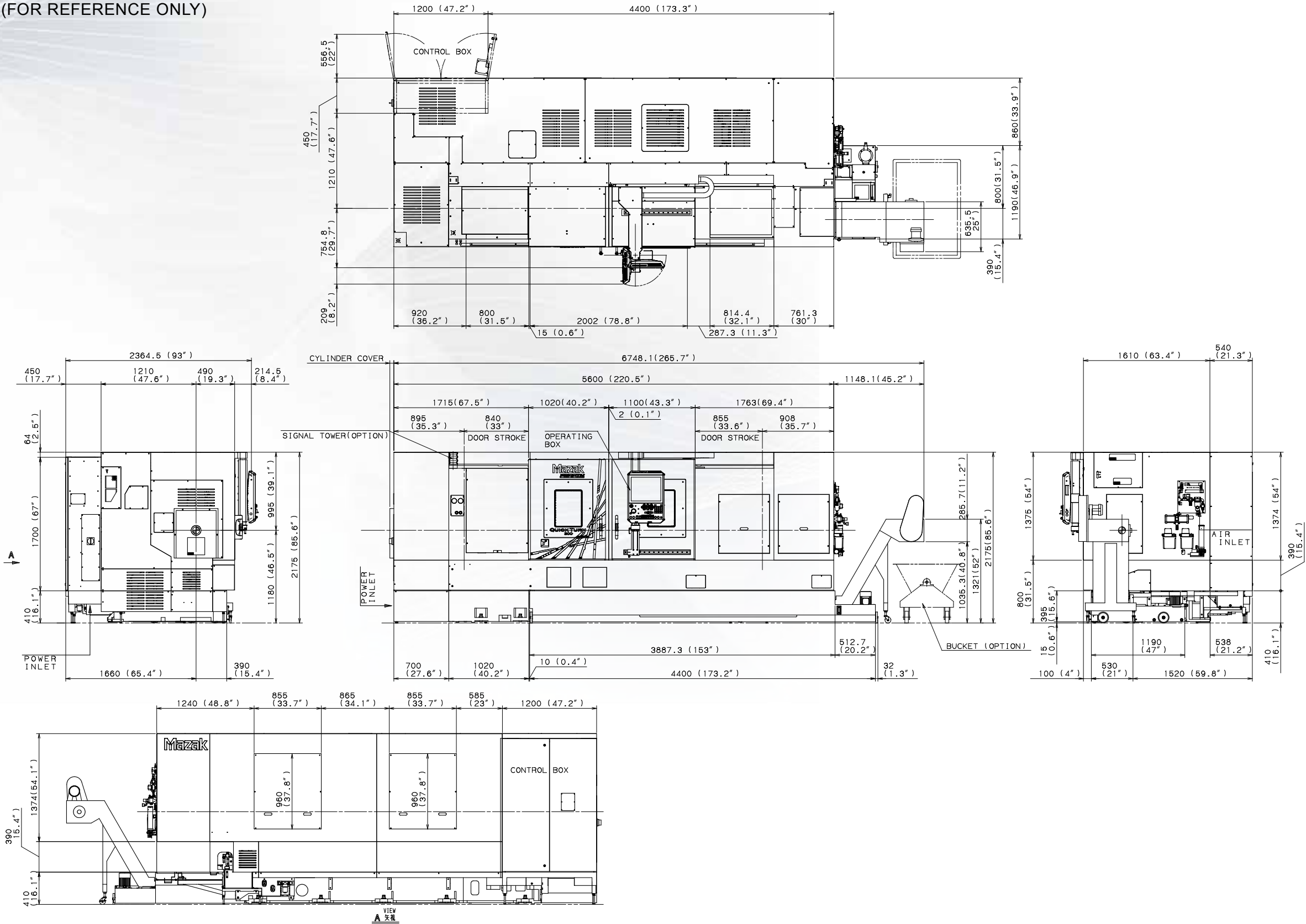
## External Dimensions – QUICK TURN



# External Dimensions – QUICK TURN

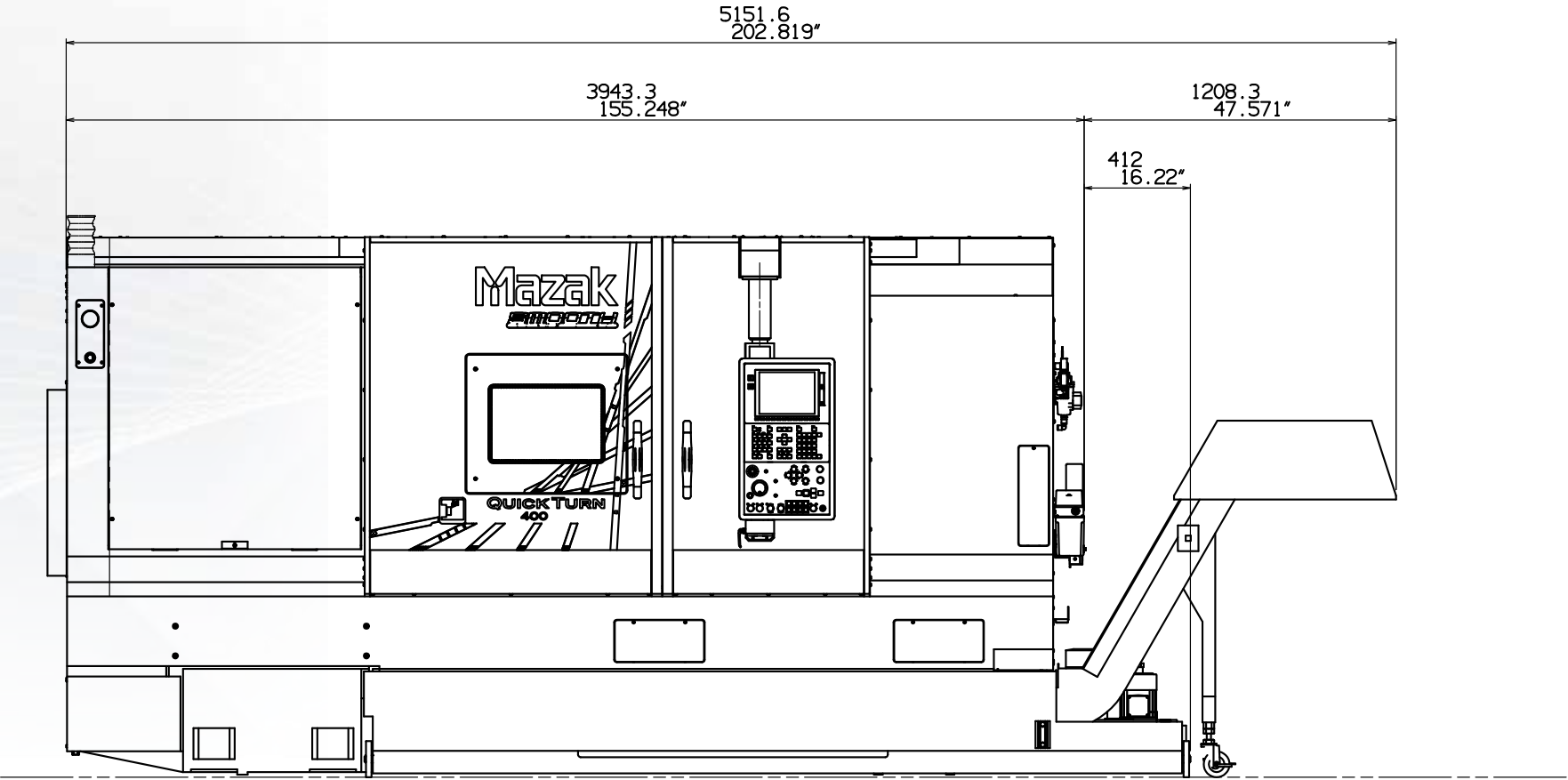
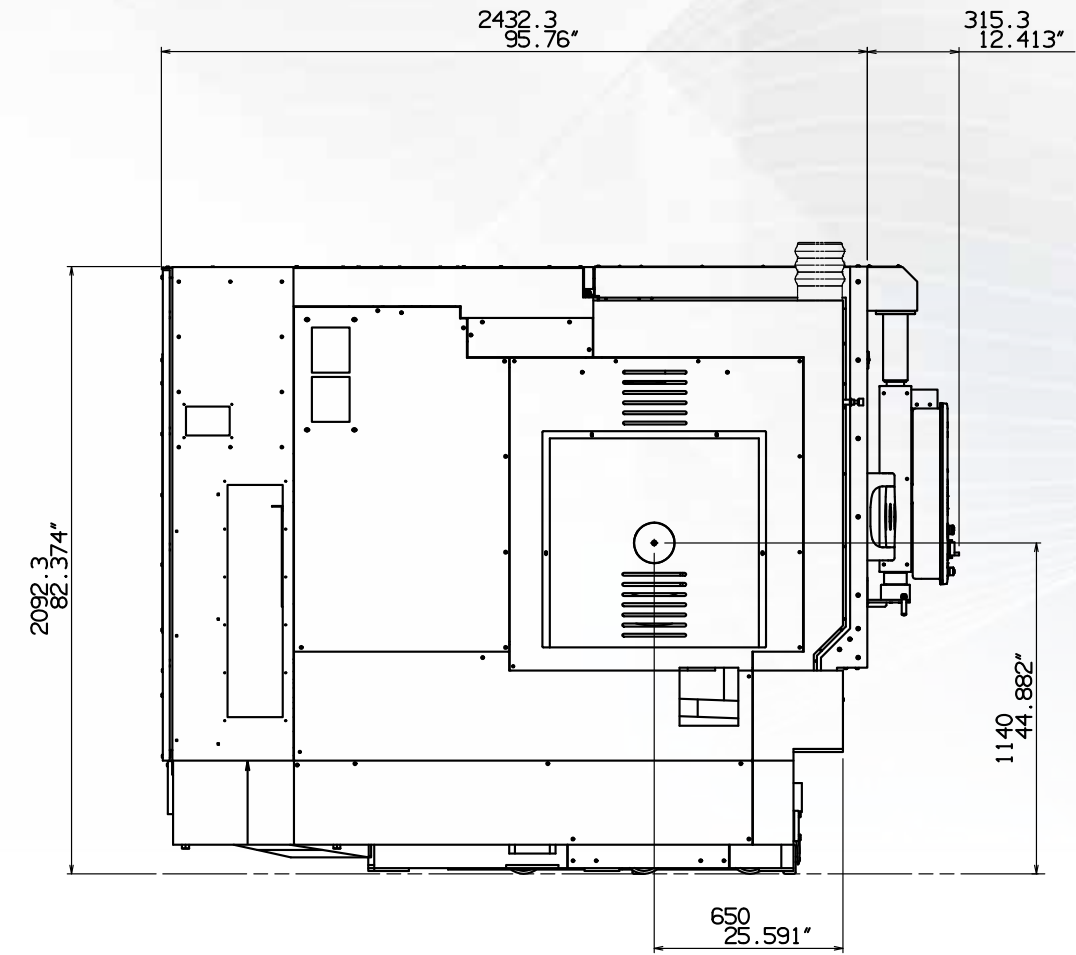
## 350MSY – 1500

(FOR REFERENCE ONLY)

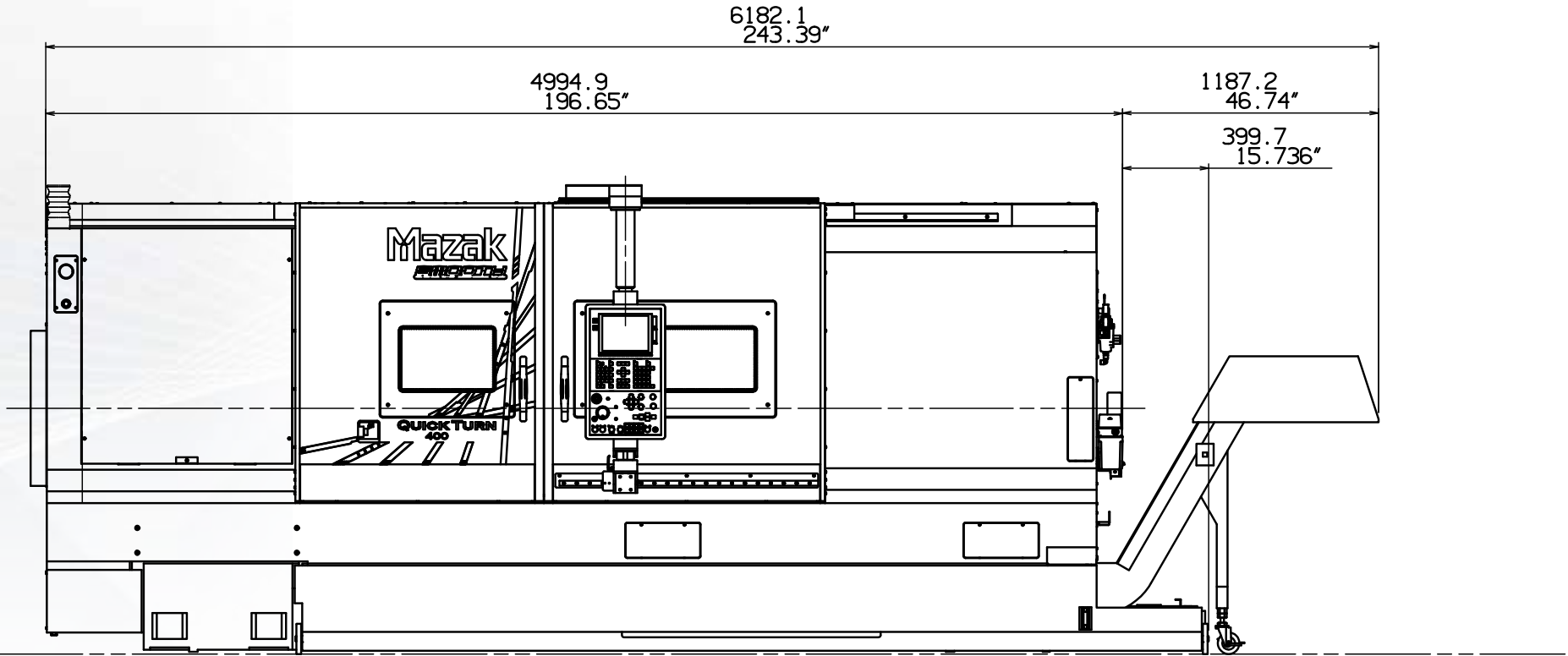
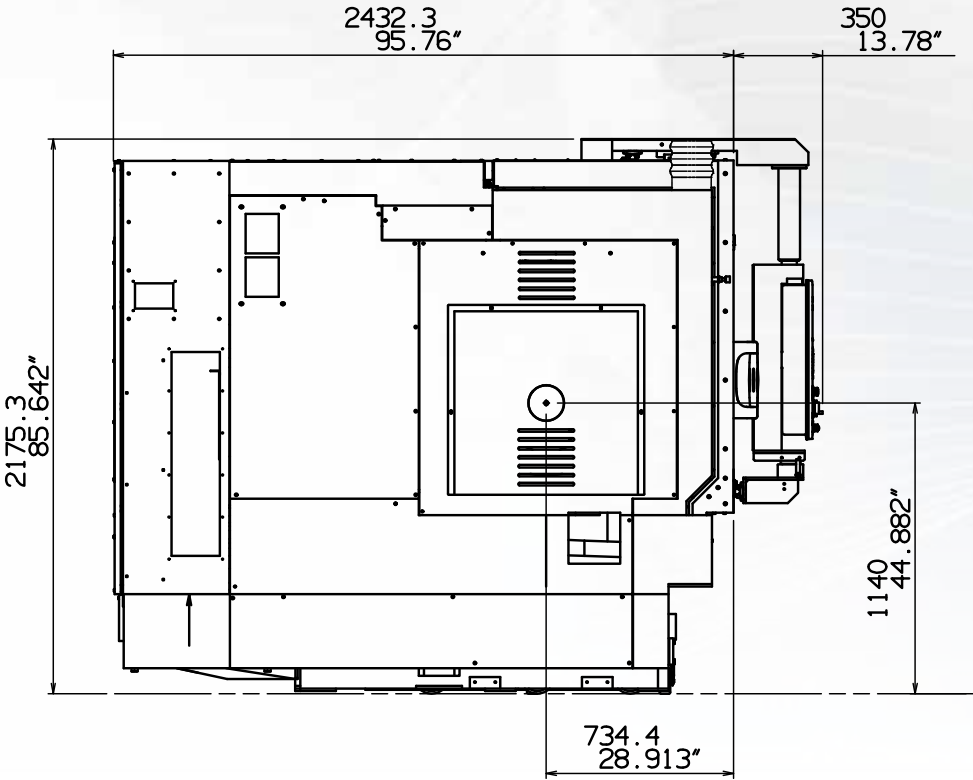




**External Dimensions – QUICK TURN 400,  
400M, 450, 450M – 1000U**  
(FOR REFERENCE ONLY)



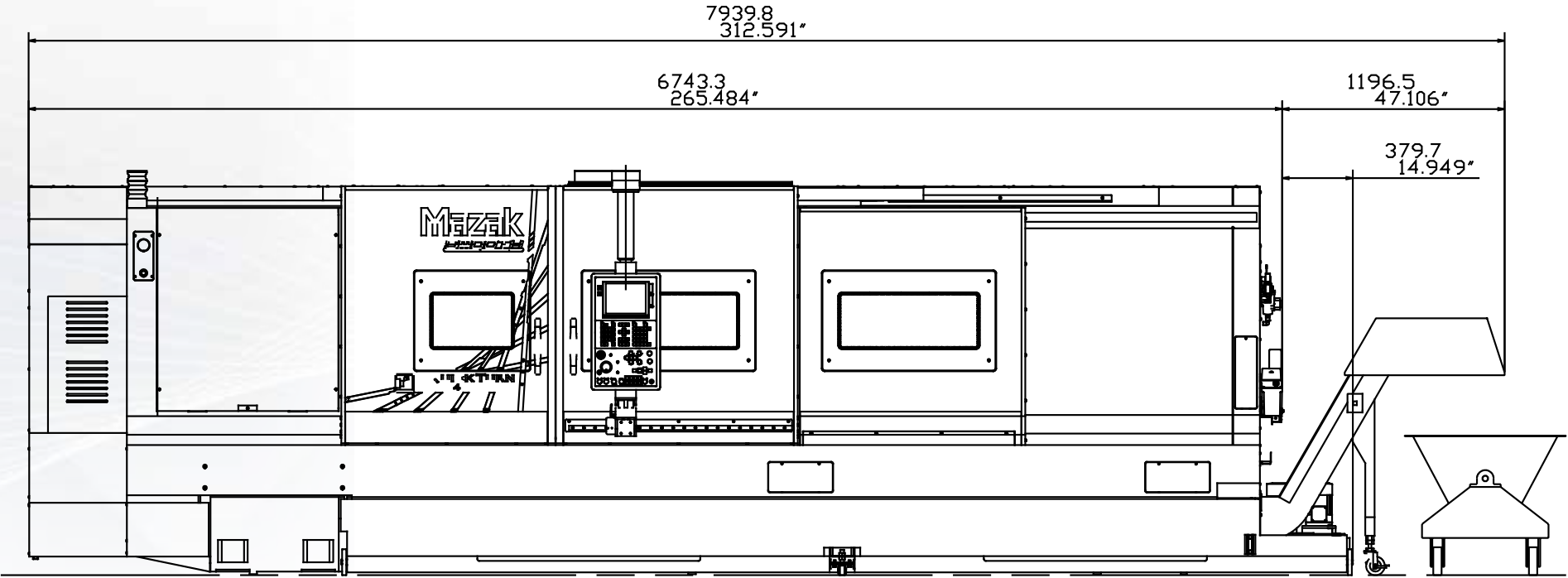
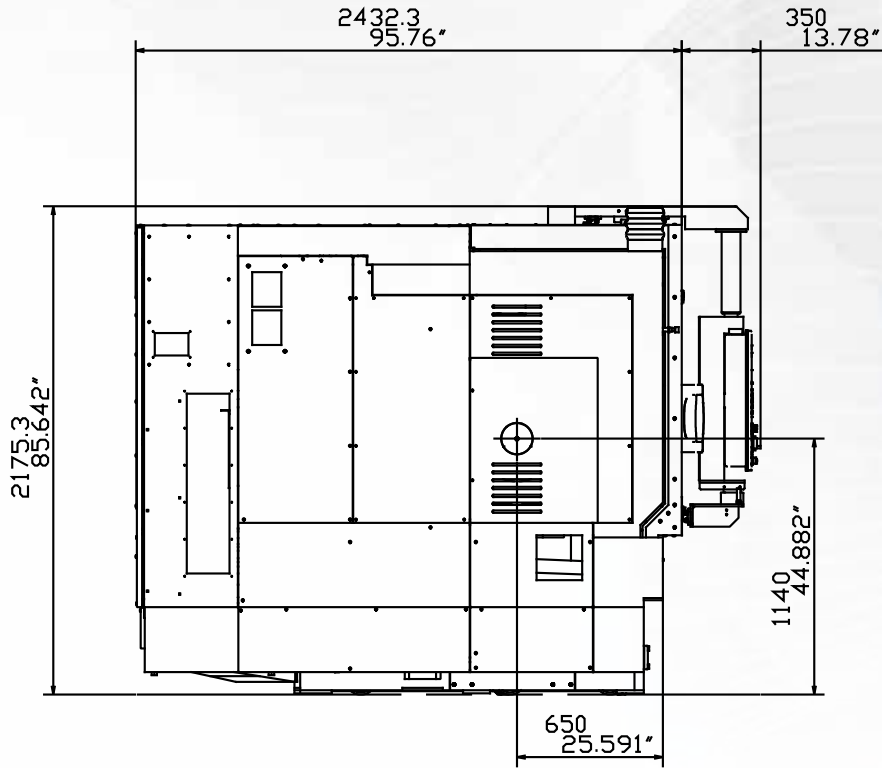
**External Dimensions – QUICK TURN**  
**400, 450, 450M – 2000U**  
(FOR REFERENCE ONLY)





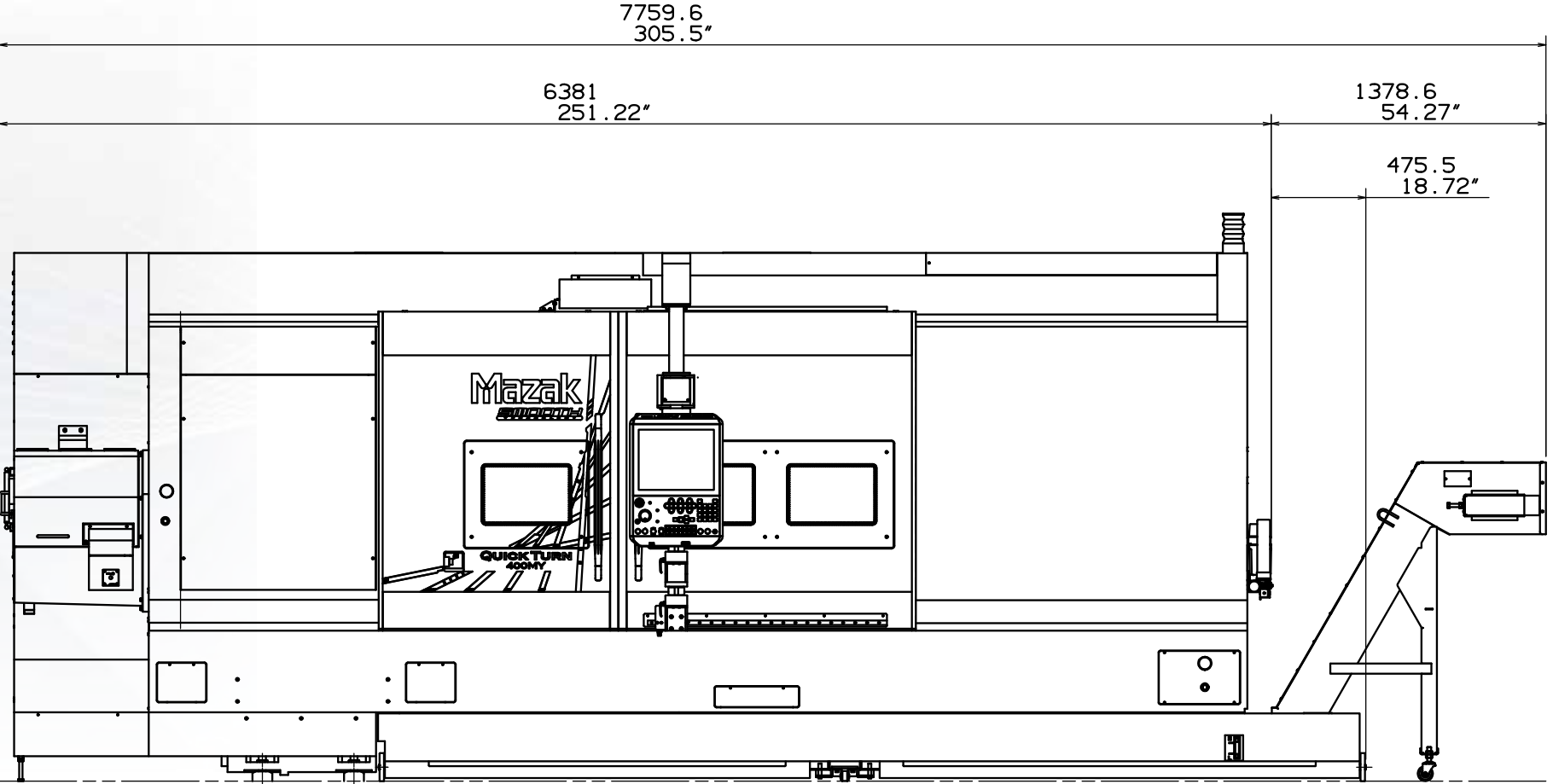
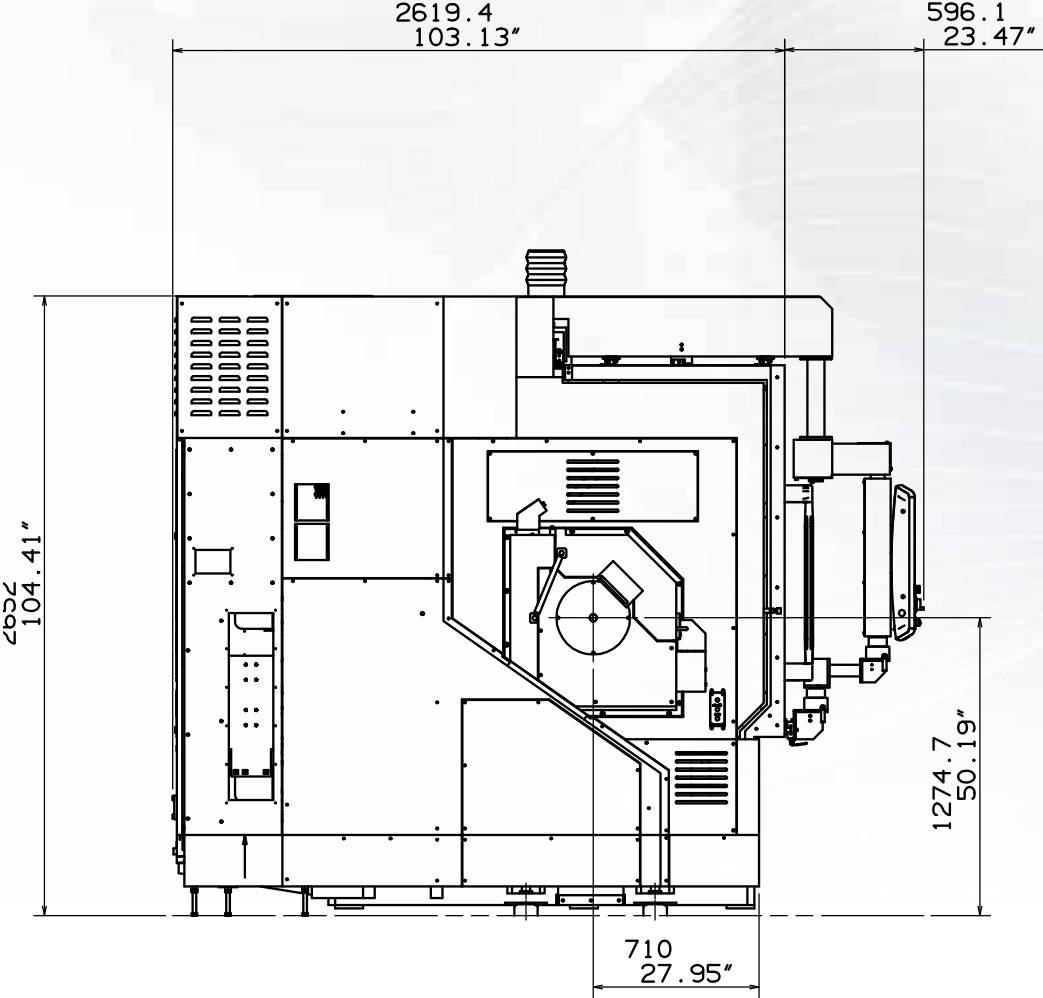
**External Dimensions – QUICK TURN 450,  
450M – 3000U**  
(FOR REFERENCE ONLY)

Unit: mm (inch)



**External Dimensions – QUICK TURN**  
**450MY – 2000U**  
(FOR REFERENCE ONLY)

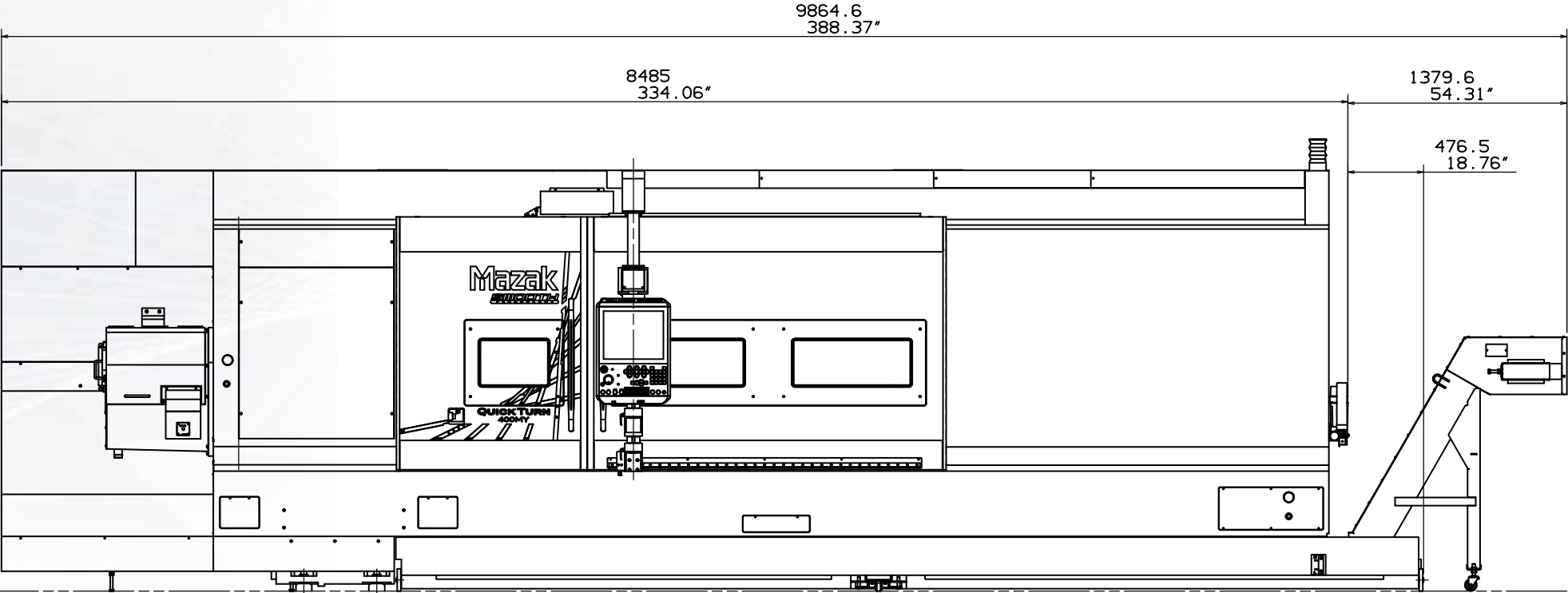
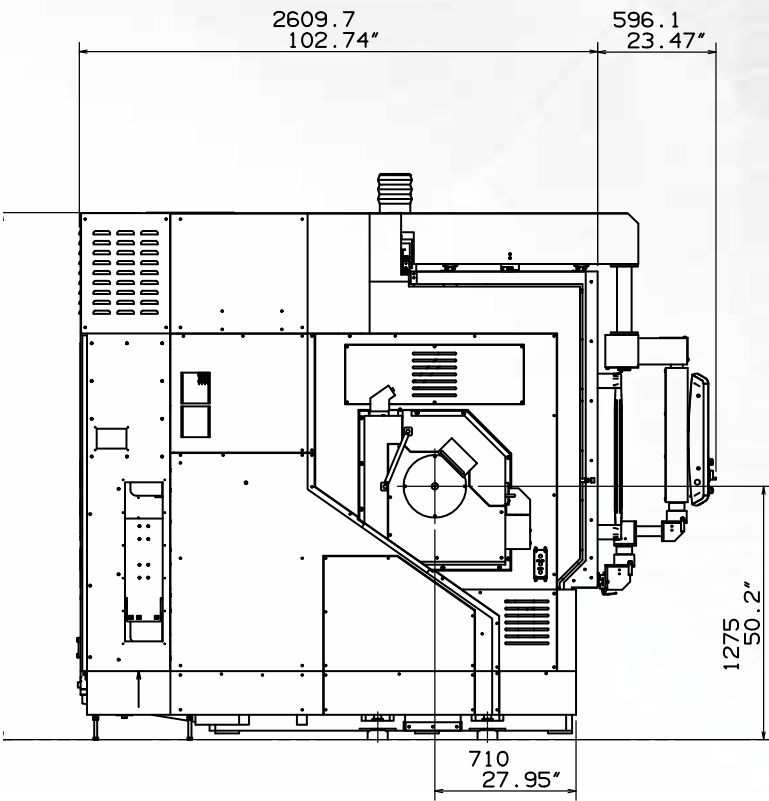
Unit: mm (inch)





**External Dimensions – QUICK TURN**  
**450MY – 3000U**  
(FOR REFERENCE ONLY)

Unit: mm (inch)



Machine Specifications QUICK TURN 100 Series

				QUICK TURN 100	QUICK TURN 100M	QUICK TURN 100MY
		Bed length				
Capacity	Maximum swing		in (mm)	22.83 (580)		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)	12.16 (309)	—	13.39 (340)
		20	in (mm)	—	16.9 (429)	—
Main spindle	Chuck size		in	6		
	Maximum speed		rpm	6,000		
	Motor output (30-minute rating)		hp (kW)	20 (7.5)		
Second spindle	Chuck size		in	—	—	—
	Maximum speed		rpm	—	—	—
	Motor output (30-minute rating)		hp (kW)	—	—	—
Turret (upper)	Number of tools		—	12		
	Maximum speed		rpm	—	6,000	
	Mill spindle motor output (40% ED)		hp (kW)	—	7.4 (5.5)	
Feed axes	Travel (X axis)		in (mm)	7.75 (200)	7.25 (184)	7.125 (181)
	Travel (Y axis)	12	in (mm)	—	—	4.0 (100)
		16	in (mm)	—		
	Travel (Z axis)	12	in (mm)	13.25 (340)	—	14.125 (510)
		16	in (mm)	—	20.125 (511)	—
	Travel (W-Axis and Tailstock)	12	in (mm)	13.75 (350)	—	
		16	in (mm)	—	20.75 (527)	—

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)	
		20	in (mm)	—	—
Main spindle	Chuck size		in	6	
	Maximum speed		rpm	6,000	
	Motor output (30-minute rating)		hp (kW)	20 (7.5)	
Second spindle	Chuck size		in	5	
	Maximum speed		rpm	5,000	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)	7.125 (181)	
	Travel (Y axis)	12	in (mm)	—	4.0 (100)
		16	in (mm)	—	
	Travel (Z axis)	12	in (mm)	14.125 (510)	
		16	in (mm)	—	
	Travel (W-Axis and Tailstock)	12	in (mm)	17.875 (460)	
		16	in (mm)	—	



Machine Specifications QUICK TURN 200 Series

				QUICK TURN 200	QUICK TURN 200M	QUICK TURN 200MY
		Bed length				
Capacity	Maximum swing		in (mm)	24.02 (610)	26.5 (673)	
	Maximum bar work capacity		in (mm)	2.0 (52)	2.5 (64)	
	Maximum machining diameter		in (mm)	13.78 (350)	14.75 (375)	
	Maximum machining length	20	in (mm)	20.16 (512)	21.28 (541)	
		40	in (mm)	—	—	41.66 (578)
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)	8.75 (222)	9.0 (229)	
	Travel (Y axis)	20	in (mm)	—	4.0 (100)	
		40	in (mm)	—	4.0 (100)	
	Travel (Z axis)	20	in (mm)	21.12 (536)	22.75 (578)	
		40	in (mm)	—	—	43.12 (1,095)
	Travel (Tailstock)	20	in (mm)	21.75 (537)		
		40	in (mm)	—	—	42.13 (1,070)

Specifications reflect standard VDI turret.

				QUICK TURN 200MS	QUICK TURN 200MSY
		Bed length			
Capacity	Maximum swing		in (mm)	26.5 (673)	
	Maximum bar work capacity		in (mm)	2.5 (64)	
	Maximum machining diameter		in (mm)	14.75 (375)	
	Maximum machining length	20	in (mm)	22.75 (578)	
		40	in (mm)	—	—
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	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)	9.0 (229)	
	Travel (Y axis)	20	in (mm)	—	4.0 (100)
		40	in (mm)	—	—
	Travel (Z axis)	20	in (mm)	22.75 (578)	
		40	in (mm)	—	—
	Travel (Tailstock)	20	in (mm)	—	—
		40	in (mm)	—	—

Machine Specifications QUICK TURN 250 Series

				QUICK TURN 250	QUICK TURN 250M	QUICK TURN 250MY
		Bed length				
Capacity	Maximum swing		in (mm)	24.02 (610)	26.5 (673)	
	Maximum bar work capacity		in (mm)	3.25 (83)		
	Maximum machining diameter		in (mm)	13.78 (350)	14.75 (375)	
	Maximum machining length	20	in (mm)	18.73 (476)	19.86 (504)	
		40	in (mm)	39.10 (993)	—	40.36 (1,025)
		60	in (mm)	—	—	59.86 (1,520)
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)	8.75 (222)	9.0 (229)	
	Travel (Y axis)	20	in (mm)	—	—	4.0 (100)
		40	in (mm)	—	—	
		60	in (mm)	—	—	
	Travel (Z axis)	20	in (mm)	20.25 (514)	22.63 (575)	22.75 (578)
		40	in (mm)	40.75 (1,035)	—	43.12 (1,095)
		60	in (mm)	—	—	62.75 (1,594)
	Travel (Tailstock)	20	in (mm)	20.63 (524)	21.75 (553)	21.75 (552)
		40	in (mm)	39.63 (1,006)	—	42.13 (1,070)
		60	in (mm)	—	—	61.84 (1,571)

Specifications reflect standard VDI turret.

				QUICK TURN 250MS		QUICK TURN 250MSY	
			Bed length				
Capacity	Maximum swing		in (mm)		26.5 (673)		
	Maximum bar work capacity		in (mm)		3.25 (83)		
	Maximum machining diameter		in (mm)		14.75 (375)		
	Maximum machining length	20	in (mm)		21.27 (540)		
		40	in (mm)		—		—
		60	in (mm)		—		—
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		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)		9.0 (229)		
	Travel (Y axis)	20	in (mm)		—		4.0 (100)
		40	in (mm)		—		
		60	in (mm)		—		
	Travel (Z axis)	20	in (mm)		22.75 (578)		
		40	in (mm)		—		—
		60	in (mm)		—		—
	Travel (Tailstock)	20	in (mm)		—		—
		40	in (mm)		—		—
		60	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)	10.0 (264)	16.5 (419)
	Maximum machining length	26	in (mm)	23.80 (605)	
		60	in (mm)	60.67 (1,541)	
		80	in (mm)	—	
Main spindle	Chuck size		in	12	
	Maximum speed		rpm	3,330	
	Motor output (30-minute rating)		hp (kW)	40	
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)	10.12 (257)	
	Travel (Y axis)	26	in (mm)	—	—
		60	in (mm)	—	—
		80	in (mm)	—	—
	Travel (Z axis)	26	in (mm)	26.37 (670)	
		60	in (mm)	63.25 (1,607)	
		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 (419)	18.0 (457)
	Maximum machining length	26	in (mm)	23.80 (605)	25.69 (653)
		60	in (mm)	60.67 (1,541)	62.41 (1,585)
		80	in (mm)	81.09 (2,060)	—
Main spindle	Chuck size		in	12	
	Maximum speed		rpm	3,330	
	Motor output (30-minute rating)		hp (kW)	40	
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)	10.12 (257)	11.0 (279)
	Travel (Z axis)	26	in (mm)	6.0 (152)	
		60	in (mm)		
		80	in (mm)		
	Travel (Z axis)	26	in (mm)	26.37 (670)	26.25 (667)
		60	in (mm)	63.25 (1,607)	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 400/450 Series

				QUICK TURN 400	QUICK TURN 400M	QUICK TURN 450
		Bed length				
Capacity	Maximum swing		in (mm)	33.27 (845)		
	Maximum bar work capacity		in (mm)	4.0 (102)		7.2 (183)
	Maximum machining diameter		in (mm)	22.83 (580)		
	Maximum machining length	40	in (mm)	40.35 (1,025)		Chuck dependant
		80	in (mm)	81.69 (2,075)		Chuck dependant
		120	in (mm)	—		Chuck dependant
Main spindle	Chuck size		in	12 ~ 15		18 ~ 21
	Maximum speed		rpm	2,500		2,000
	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)	12.12 (308)	13.37 (340)	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)	83.50 (2,121)	—	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)	—	81.69 (2,075)
		120	in (mm)	—	—	116.14 (2,950)

Specifications reflect standard VDI turret.

				QUICK TURN 450M	QUICK TURN 450MY
		Bed length			
Capacity	Maximum swing		in (mm)	33.27 (845)	33.07 (840)
	Maximum bar work capacity		in (mm)	7.2 (183)	
	Maximum machining diameter		in (mm)	22.83 (580)	
	Maximum machining length	40	in (mm)	Chuck dependant	
		80	in (mm)	Chuck dependant	
		120	in (mm)	Chuck dependant	
Main spindle	Chuck size		in	18 ~ 21	
	Maximum speed		rpm	2,000	
	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 (Z 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)	83.66 (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)	116.14 (2,950)	



**MAZAK CORPORATION  
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