Mazak

QTU

SERIES

[200 | 200M | 200MS | 200MY | 200MSY | 250 | 250M | 250MS | 250MY | 250MSY]

[350 | 350M | 350MS | 350MY | 350MSY | 350HP | 350M HP | 350MS HP | 350MY HP | 350MSY HP]

QTU-200

Quality, Affordability and the Highest Level of Precision

Built at the Mazak iSMART Factory™ in Florence, Kentucky, the simple but innovative compact QTU Series machines represent the next generation of world-class CNC Turning Centers that deliver both high productivity and cost effectiveness.

Machine Configurations:

- QTU-200
- QTU-200M
- QTU-200MS
- QTU-200MY
- QTU-200MSY

- QTU-250
- QTU-250M
- QTU-250MS
- QTU-250MY
- QTU-250MSY

- QTU-350
- QTU-350M
- QTU-350MS
- QTU-350MY
- QTU-350MSY

- QTU-350HP
- QTU-350M HP
- QTU-350MS HP
- QTU-350MY HP
- QTU-350MSY HP

M = turret with rotary milling
S = second spindle
Y = Y-axis off-centerline capability
HP = high power

Top 10 Advantages

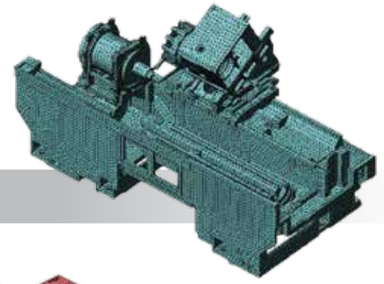
QTU Series machines feature new and innovative technologies that bring high productivity, precision, performance and value to job shops as well as first and second-tier manufacturing suppliers. The series provides the perfect balance of technology and minimized operational costs.

Top 10 Advantages of the QTU Series

1. New design concept for a wide range of machine configurations, including C axis, Y axis and second spindle capability.
2. Extremely rigid base with low center of gravity for stability and vibration dampening.
3. Proven advanced integral spindle motor/headstock technology ensures reliable, maintenance-free high performance.
4. High-precision C-axis delivers .0001 degrees of programmable motion for processing flexibility.
5. Innovative servo turret adds expanded tooling capacity.
6. NC servo-driven tailstock is fully programmable for simple and precise operation.
7. Large swing capacity increases machining capabilities.
8. MAZATROL SmoothC CNC further enhances overall performance.
9. Green, energy efficient and ergonomic features make for ease of use, environmentally friendly, low-maintenance operation.
10. Optional seamless automation integration increases uptime and lights-out production.

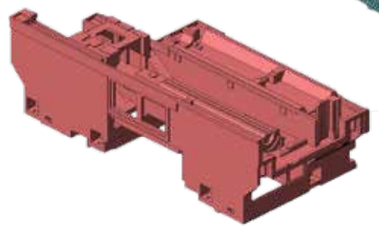
Structure

An innovative base design outfitted with the industry's leading guideway system forms the perfect foundation for the outstanding performance of the QTU Series machines.



BASE

New high-rigidity base/bed design ensures thermal stability and ample part capacity.



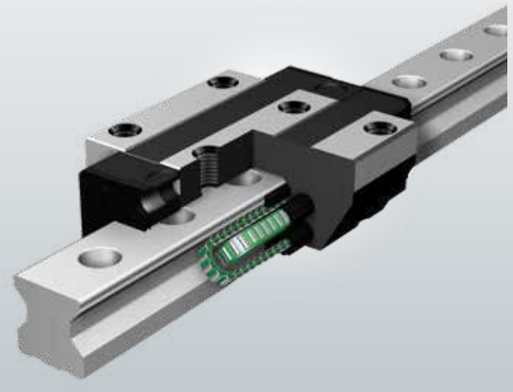
- Finite Element Method (FEM) yields maximum cooling and expansion control
- Low center of gravity provides the foundation and durability for sustained heavy cutting
- Bed lengths range from 20" (508 mm) to 40" (1,016 mm)
- Hand scraped to ensure quality and high precision accuracy
- Large 27.4" (696 mm) swing capacity for less interference
- Maximum turning diameter of 16.25" (410 mm) on QTU-200/QTU-250/QTU-350 and 13.5" (340 mm) on QTU-200/250/350M/MS/MSY
- Rapid traverse rates of 1,181 ipm (30 m/min) in X axes and 1,417 ipm (36 m/min) in Z axes

ROLLER GUIDEWAY SYSTEM

Mazak's MX Hybrid Roller Guide System incorporates a special X-design that efficiently distributes load in four directions — allowing for better force/load distribution across a larger contact area.

MX Hybrid Roller Guide benefits:

- Best combination of consistent performance, accuracy, rigidity and durability
- More surface contact than ball guide systems, yet less friction than boxways
- Greater load capacity
- Unparalleled levels of vibration dampening extends tool life
- Less elastic deformation with rollers
- Minimal lubricant consumption for greener operation
- Maintenance free system



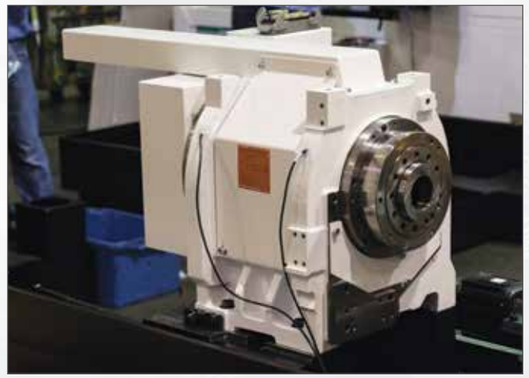
Headstock / Spindle

QTU main spindles are supported in the headstock by triple angular ball bearings in the front and cylindrical roller bearings in the rear, and the spindles are driven directly by integral spindle motors. Thermal distortion is minimized through air cooling systems in the QTU-200/QTU-250 headstocks and with liquid cooling systems in the QTU-350/QTU-350 HP headstocks.

Spindle cooling systems further ensure stable and continuous precision machining by maintaining constant headstock temperatures. With optional main and second spindle C axis milling, the QTUs offer effective Multi-Tasking machining capabilities.

- Variable-speed AC inverter eliminates need for belts and pulleys
- Short acceleration/deceleration times
- Reliable and maintenance free
- Integrated direct-drive, programmable full 360-degree C-axis positioning at 0.0001-degree increments

MAIN TURNING SPINDLE



HEADSTOCK AND SPINDLE

Specifications

QTU-200
- Spindle bore diameter of 2.4" (61 mm)
- Maximum bar diameter of 1.7" (42 mm)
- Speeds from 35 to 6,000 rpm with 90 ft-lb torque
- A2-6, 20 hp (15 kW) (15% ED)

QTU-250
- Spindle bore diameter of 3.0" (76 mm)
- Maximum bar diameter of 2.0" (51 mm)
- Speeds up to 4,500 rpm with 123 ft-lb torque
- A2-6, 20 hp (15 kW) (40% ED)

QTU-350
- Spindle bore diameter of 3.5" (91 mm)
- Maximum bar diameter of 3.0" (76 mm)
- Speeds up to 3,500 rpm with 246 ft-lb torque
- A2-8, 20 hp (15 kW) (25% ED)

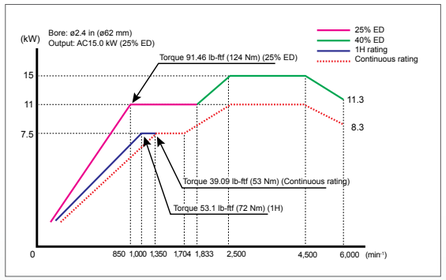
QTU-350 HP
- Spindle bore diameter of 3.6" (91 mm)
- Maximum bar diameter of 3.0" (76 mm)
- Speeds up to 3,500 rpm with 295 ft-lb torque
- A2-8, 30 hp (22kW) (15% ED)

SPINDLE POWER-TORQUE DIAGRAMS

The Mazak integral spindle motor headstock design delivers increased rigidity, high speed and high torque for heavy-duty machining performance. This balance of power and speed boosts material removal rates and shortens machining cycle times.

Primary spindle motor characteristics

QTU-200MS, 200MY, 200MSY



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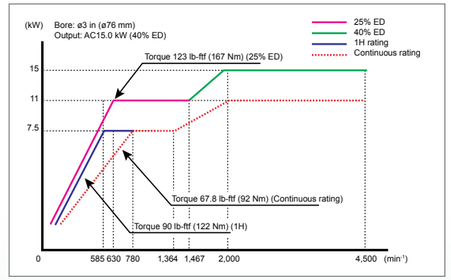
QTU-250/M/MS/MY/MSY



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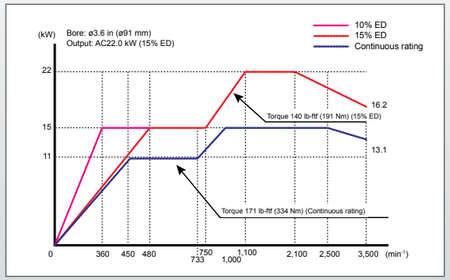
QTU-350HP/M HP/MS HP/MY HP/MSY HP



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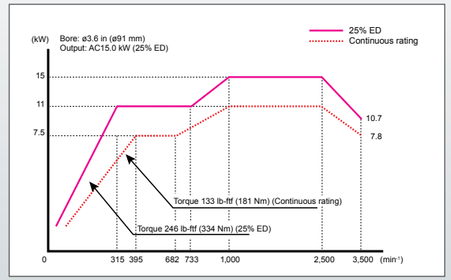
QTU-350/M/MS/MY/MSY



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Second Spindle Option

QTU MS or MSY machines feature second spindles for more productivity and to further reduce cost per part.

In operation, second spindles automatically transfer parts from one spindle to another for secondary operations to eliminate manual part handling. Secondary operations such as back face turning, milling, drilling and tapping can be achieved.

With C-axis option, second spindles position in programmed 0.0001-degree increments and synchronize with machine X and Z axes for complex part contouring on M and S designated models.

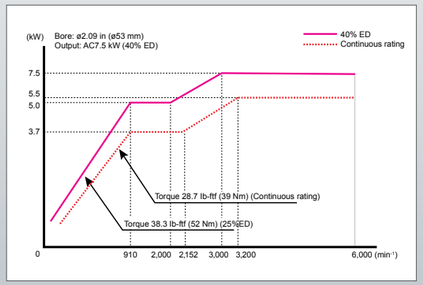
SECOND SPINDLE

FEATURES AND BENEFITS OF SECOND SPINDLES:

- Add Mazak's DONE IN ONE® part processing capability
- Speed range of 35 to 6,000 rpm
- Air cooled
- Provide chuck-to-chuck part transfer capability for backworking/secondary operations
- Programmable C-axis motion
- Full C-axis brake

Second Spindle
MOTOR CHARACTERISTICS

QTU-250MS/350MS/250MSY/350MSY



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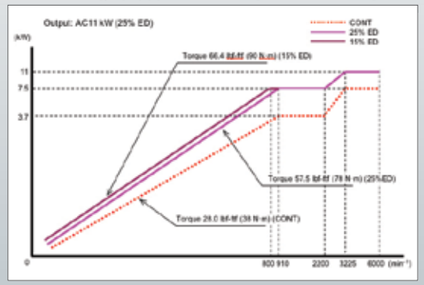
QTU-350HP/M HP/MS HP/MY HP/MSY HP



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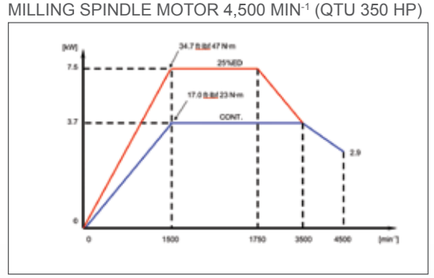
Milling Option

For increased flexibility and Multi-Tasking part processing, QTU-200/250/350 HP/M/MS/MY/MSY machines feature rotary tool spindles for milling (M) capabilities.

MILLING TOOL SPECIFICATION			
Item	**Unit**	**QTU-200/250/350 M/MS/MY/MSY**	
Rotary tool speed		4,500 min-1 (standard)	6,000 min-1 (optional)
Output	hp (kW)	5 (3.7)	
Rotary tool speed	–	Variable automatic speed	
Rotary tool speed	min-1	4,500	6,000
Rotary tool torque	ft-lbf (Nm)	34.7 (47)	17 (23)

MILLING SPINDLE MOTOR 4,500 MIN^{-1} (QTU 350 HP)



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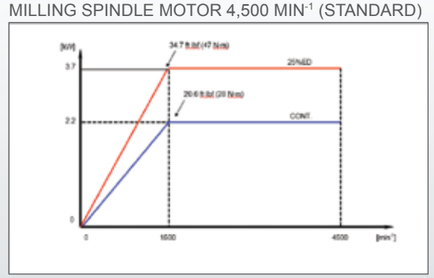
MILLING SPINDLE MOTOR 4,500 MIN^{-1} (STANDARD)



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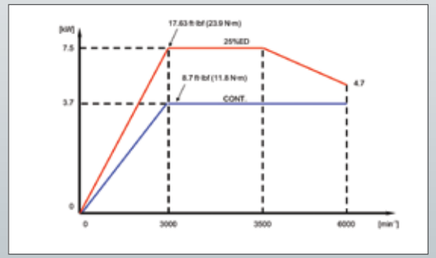
MILLING SPINDLE MOTOR 6,000 MIN^{-1} (OPTIONAL)



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Y-Axis Option

QTU MY and MSY models with Y axis offer off-centerline machining capability featuring Mazak's special high-gain servo-control turret/feed axis-motion. The double-slide design ensures rigid high-speed, high-precision positioning and machining along with smooth axis acceleration/deceleration.

Y-AXIS OPTION

The machine X-axis ballscrews work in tandem with Y-axis ballscrews that are inclined at 30 degrees to move machine turrets +/- 2" (50 mm) in the Y axis.

QTU SERIES MACHINE RAPID TRAVERSE SPEEDS

- 1,181 ipm (30 m/min) in X axis
- 1,418 ipm (36 m/min) in Z axis
- 394 ipm (10 m/min) in Y axis

The addition of Y-axis tandem tooling takes advantage of the Y-axis shift to create multiple tool positions at each turret pocket for increased turret tooling capacity.

Servo Turret

QTU Series machines feature innovative turrets that use roller gear cam drive systems for smooth, high-speed, high-accuracy digital indexing as well as expandability.

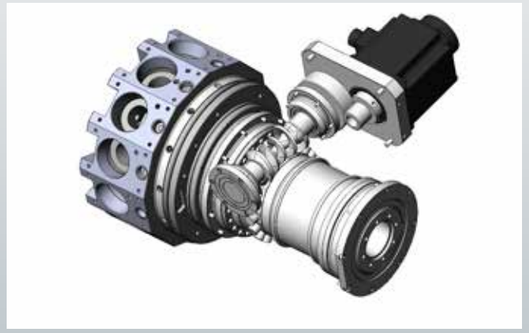
Benefits of the enhanced 12-position, integral-motor turrets:
- High-speed, high-accuracy indexing
- Maximum rigidity
- Expandability and versatility
- Low maintenance

FAST, INTERFERENCE-FREE OPERATION

For significantly reduced non-cut times, QTU turrets are bi-directional and thus rotate – via the shortest path possible – to quickly bring up the next programmed tool. Brushless servomotors provide hydraulic clamping strength, while non-lift indexing capability prevents contamination.

ROLLER GEAR CAM DRIVE SYSTEM

QTU turrets feature industry-proven drive systems that enhance overall machine productivity and performance. The system delivers smooth acceleration/deceleration and extreme durability along with cost-effective and easy maintainability.



ROLLER GEAR CAM DRIVE SYSTEM

3-AXIS SERVO TURRET

Tailstock

NC SERVO-DRIVEN TAILSTOCK

Mazak's fully programmable NC servo-driven tailstock provides simple, precise and automatic operation to reduce setup time and increase productivity. The QTU tailstock includes drilling capability as standard.

Through the part program, the tailstock moves to a known position and the center makes contact with the part at a programmed thrust. With its load-sensing independent drive system, the tailstock has on centerline drilling capability to add part processing versatility.

Servo motor-controlled movement and thrust give Mazak's NC tailstock increased operability and ease of use. The servo motor monitors tailstock thrust and maintains constant thrust while the workpiece is being supported.

Thrust settings are adjustable in increments of 22.5 ft-lb (0.1 kN) of force. The tailstock gives users the option to set thrust levels according to workpiece material and shape. This eliminates the risk of part distortion while simultaneously providing safe and secure holding and support.

NC Servo-driven Tailstock

Tailstock specifications include:

- Center bore Morse taper MT No.5 live center
- Travels (depending on machine model) from 13.250" (340 mm) to 22.125" (565 mm)

LOW-THRUST OPERATION

For extremely delicate and thin cross section workpiece materials such as aluminum, phenolic and resin based materials, a low-thrust function provides holding force settings below 225 ft-lb (1 kN).

HIGH-THRUST TAILSTOCK (OPTION)

This option is for those applications that require higher tailstock thrust (face driver/large drilling) and high throughput.

Optional Equipment

Mazak offers a wide array of options from which to choose for the QTU Series that further enhance machine performance, increase uptime and boost overall operational efficiency.

- Bar feeder and automatic parts catchers for easily implemented, unattended operations
- Automated loading systems (pre-engineered or custom systems) are available for lights out production
- Tool eye automatically measures tool tip positions and detects wear/damage and greatly reduces setup time
- Automatic front door open/close for M-code controlled opening and closing
- Chip conveyor designs for a wide variety of materials
- High-power coolant delivers efficient chip evacuation for longer tool life
- Mist collector maintains clean, safe work areas
- Probe kit provides in-process workpiece measurement
- Turret air blast keeps tool positions clear of chips and debris
- Chuck air blast removes sticking chips from chuck and workpiece. Ideal for MS and MSY machines.

CHIP CONVEYOR

MIST COLLECTOR

Mazak Digital Solutions

For the QTU Series and all its machines, Mazak offers digital solutions for fully integrated, data-driven smart manufacturing. These progressive solutions include SMOOTH TECHNOLOGY, MTConnect®, Mazak SMOOTH Link and the Mazak SmartBox.

SMOOTH TECHNOLOGY

Spanning the entire part-production landscape, Mazak's SMOOTH TECHNOLOGY platform significantly boosts productivity at every stage of the metal cutting process — from programming and setup, metal removal operations, automation, monitoring/data collection and transfer.

Features and benefits of SMOOTH TECHNOLOGY:

- All-encompassing continuously evolving process-performance technology platform
- Combines advanced capabilities of machine tools and leading-edge CNC processing and software technologies
- Makes machine tools easy to use
- Boosts machining speed and performance accuracy

Mazatrol SmoothC Control

Mazak's MAZATROL SmoothC technology is simple but innovative and includes several features that enhance cutting capabilities. The MAZATROL SmoothC makes it easy for operators to generate programs for turning, milling, drilling and tapping operations.

The control incorporates a wide variety of advanced programming functions that allow it to offer complete ease of use and ensure high-speed, high-accuracy machining performance.

Features and Functions include:

- **Rapid Overlap** uses arcing motion between programmed stopping points to shorten cycle times
- **Variable Acceleration Control** allows precise control of individual feed axis during multi-axis cutting
- **Smooth Corner Control** makes cutter path adjustments to help shorten cycle times
- **EIA/ISO and MAZATROL** conversational programming capabilities

Mazatrol SmoothC Specifications

	MAZATROL	EIA
Number of controlled axes	2-6 axis	
Least input increment	0.00001 inch, 0.0001 mm, 0.0001°	
High speed, high-precision control	Smooth corner control, Rapid traverse overlap, Rotary axis shape compensation	Smooth corner control, Rapid traverse overlap, Rotary axis shape compensation
Interpolation	Positioning (Linear interpolation), Positioning (Independent interpolation), Linear interpolation, Circular interpolation, Synchronized milling spindle tapping*	Positioning (Linear interpolation), Positioning (Independent interpolation), Linear interpolation, Circular interpolation, Spiral interpolation, Helical interpolation, Cylindrical coordinate interpolation*, Fine spline interpolation*, Polar coordinate interpolation*, Synchronized milling spindle tapping*
Feed rate	Rapid traverse, Cutting feed, Cutting feed (per minute), Dwell (specified time, specified number of rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate clamp, Variable acceleration/deceleration control	Rapid traverse, Cutting feed, Cutting feed (per minute), Inverse time feed, Dwell (specified time, specified number of rotation), Rapid traverse override, Cutting feed override, G0 speed variable control, Feedrate clamp, Time constant changing for G1, Variable acceleration/deceleration control
Program registration	Max. number of programs: 960, Program storage: 2MB, Program storage expansion: 8MB*, Program storage expansion: 32MB*	
Control display	Display: 10.4" screen, Screen resolution: VGA	
Spindle functions	S code output, Spindle speed clamp, Spindle speed override, Spindle speed reaching detection, Multiple position orient, Constant surface speed, Spindle speed command with decimal digits, Synchronized spindle control, Max. speed control for spindle	
Tool functions	Tool offset pairs: 4000, T code output for tool number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)	Tool offset pairs: 4000, T code output for tool number, T code output for group number, Tool life monitoring (time), Tool life monitoring (number of machined workpieces)
Miscellaneous functions	M code output, Simultaneous output of multiple M codes	
Tool offset functions	Tool position offset, Tool length offset, Tool diameter/tool nose R offset, Tool wear offset	
Tool offset pairs	128	
Coordinate system	Machine coordinate system, Work coordinate system, Local coordinate system, Additional work coordinates (300 set)	
Machine compensation	G0/G1 independent backlash compensation, Pitch error compensation, Volumetric compensation*	
Protection functions	Emergency stop, Interlock, Stroke check before travelling, Retraction function for the vertical axis	
Automatic operation mode	Memory operation	Memory operation, Tape operation, MDI operation, EtherNet operation*
Automatic operation control	Optional stop, Dry run, Automatic handle control, MDI control, TPS, Restart, Machine lock	Optional block skip, Optional stop, Dry run, Automatic handle control, MDI control, TPS, Restart, Restart 2, Collation stop, Machine lock
Manual measuring functions	Tool length and tip teach, Touch sensor coordinates measurement, Workpiece offset measurement, WPC coordinate measurement, Measurement on machine	Tool length and tip teach, Tool offset teach, Touch sensor coordinates measurement, Workpiece offset measurement, WPC coordinate measurement, Measurement on machine
Automatic measuring functions	WPC coordinate measurement, Auto tool length measurement, Sensor calibration, Tool eye auto tool measurement, Tool breakage detection, External tool breakage detection*	Auto tool length measurement, Tool breakage detection, External tool breakage detection*
MDI measurement	Partial auto tool length measurement, Auto tool length measurement, Coordinate measurement	
Interface	PROFIBUS-DP*, EtherNet I/P*, CC-Link*, USB	
Card interface	SD card interface	
EtherNet	10 M/100 M/1 G bps	

* Option

Fast, Easy, Efficient Programming

The continuously innovative Mazak MAZATROL Smooth CNC controls make programming QTU Series machines easy, fast and efficient. The highly versatile controls allow for both EIA/ISO and conversational programming capabilities, while they also significantly shorten programming time and streamline control navigation.

EIA/ISO COMPATIBILITY STANDARD

The MAZATROL SmoothC control uses the same EIA/ISO G-codes as conventional EIA CNC machines. This allows QTU Series machine users to run programs made for other machine brands by simply editing M-codes and confirming axis strokes along with cutting conditions.

CONVERSATIONAL PROGRAMMING

The industry-standard MAZATROL conversational programming makes it possible for inexperienced operators to develop machining programs for QTU Series machines quickly and easily. Operators answer conversationally displayed questions concerning the intended workpiece. These questions include type of material, OD/ID dimensions, part lengths and several others. Then, according to the input data, the MAZATROL control automatically calculates intersection coordinates and tool index positioning in addition to optimized cutting conditions and machining processes.

Number of program lines
89% REDUCTION

EIA/ISO language

MAZATROL language

SMOOTH HOME SCREEN

Innovative operation of the MAZATROL SmoothC CNC streamlines data entry and minimizes the number of displays to reduce all aspects of operation for the QTU Series of machines. Five different process screens each display their appropriate data in an easy to understand manner. Operators can quickly navigate additional process display screens.

SMOOTH Home screens include:
- Programming
- Tool data
- Setup
- Machining
- Maintenance

Mazak Automation Systems

Mazak automation further increases the productivity, throughput and part quality of QTU Series machines. Standard and customized Mazak automation solutions paired with extensive and ongoing support ensure the best fit for higher volume applications and unattended machine operation.

STANDARD AUTOMATION

Bar Feeders

Bar feeders are the simplest, most cost-effective forms of automating the loading and feeding of bar material into a QTU Series machine.

Bar feeders provide the capability to:

- Easily and affordably boost machining efficiency and productivity
- Increase throughput by not having to individually prep and load slug material
- Automatically sequence workpiece machining for minimal bar material scrap
- Machine multiple part types from one piece of bar material
- Process various shapes of material such as hex, square and round, all with minimal changeover time.

GANTRY LOADERS

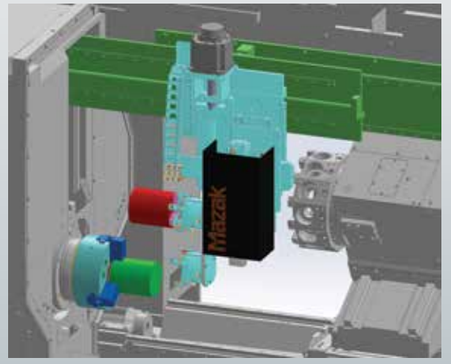
Gantry loaders quickly load and unload workpieces from machines and are ideal for small batch runs of common part families. The automation is easy to install and operate and is most suitable for chucker-style work, but can handle certain length sizes for shaft applications.

Gantry loaders provide the capability to:

- Economically boost efficiency through unsupervised workpiece loading and unloading
- Achieve continuous operation with accurate and consistent performance
- Shorten workpiece change times for an overall increase in productivity
- Increase versatility via a variety of workpiece conveyors and robot hands
- Effectively run multiple machines with only one operator

Hand	Type	Double Hard
	Gripping	3-Jaw
	Work Diameter (*1)	.787" ~ 4.92"
	Work Length (*2)	1.18" ~ 5.9"
	Work Mass	11 lbs x 2
	Hand Rotation	90º x 2 positions
Rotary conveyor (Standard)	Type	Rotary conveyor
	Pallets	6
	Lifter	2 liters
	Type of Work	Chuck work
	Work Diameter	f30 ~ f125mm
	Work Length	20 ~ 350mm
	Maximum height of work	350 mm
	Capacity	Up to 25kg / Pallet

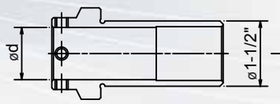
*1 : Work diameter is depend on conveyor type
*2 : Work length is depend on machine type 2ax,
M,MY : 150mm / MS,MSY : 80mm



Tooling System (2 axis)– QTU-200/250/350/350 HP MODELS

(FOR REFERENCE ONLY)

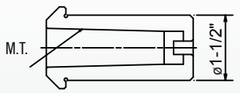
BORING BAR SOCKET



d	STD. QTY.	
	8"	10"
ø1-1/4"	1	1
ø1"	1	1

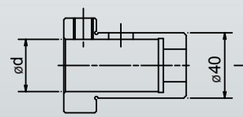
d	STD. QTY.	
	8"	10"
ø3/4"		
ø5/8"		
ø1/2"		
ø3/8"		
ø5/16"		

M.T. DRILL SOCKET



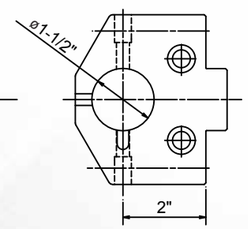
M.T.	STD. QTY.	
	8"	10"
M.T.3		
M.T.2	1	1
M.T.1		

U DRILL SOCKET



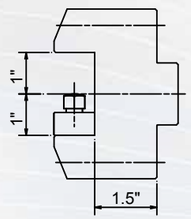
d	STD. QTY.	
	8"	10"
ø32		
ø25		
ø20		

BORING BAR HOLDER



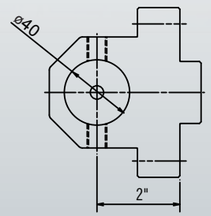
STD. QTY.	
8"	10"
2	2

FACING HOLDER



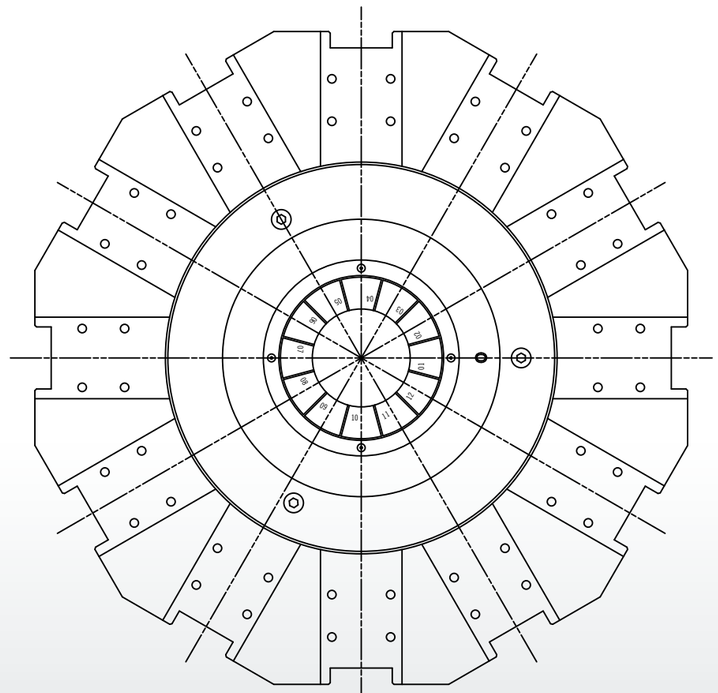
STD. QTY.	
8"	10"

U DRILL HOLDER

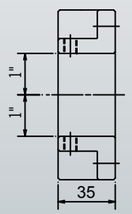


STD. QTY.	
8"	10"
1	1

Metric available upon request.

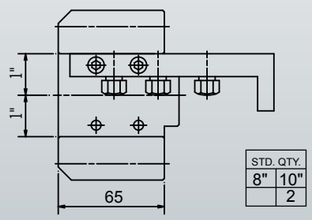


TURNING HOLDER



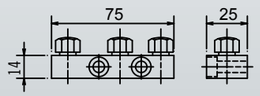
STD. QTY.	
8"	10"
2	

TURNING HOLDER FOR 10" CHUCK



STD. QTY.	
8"	10"
	2

TURNING BLOCK

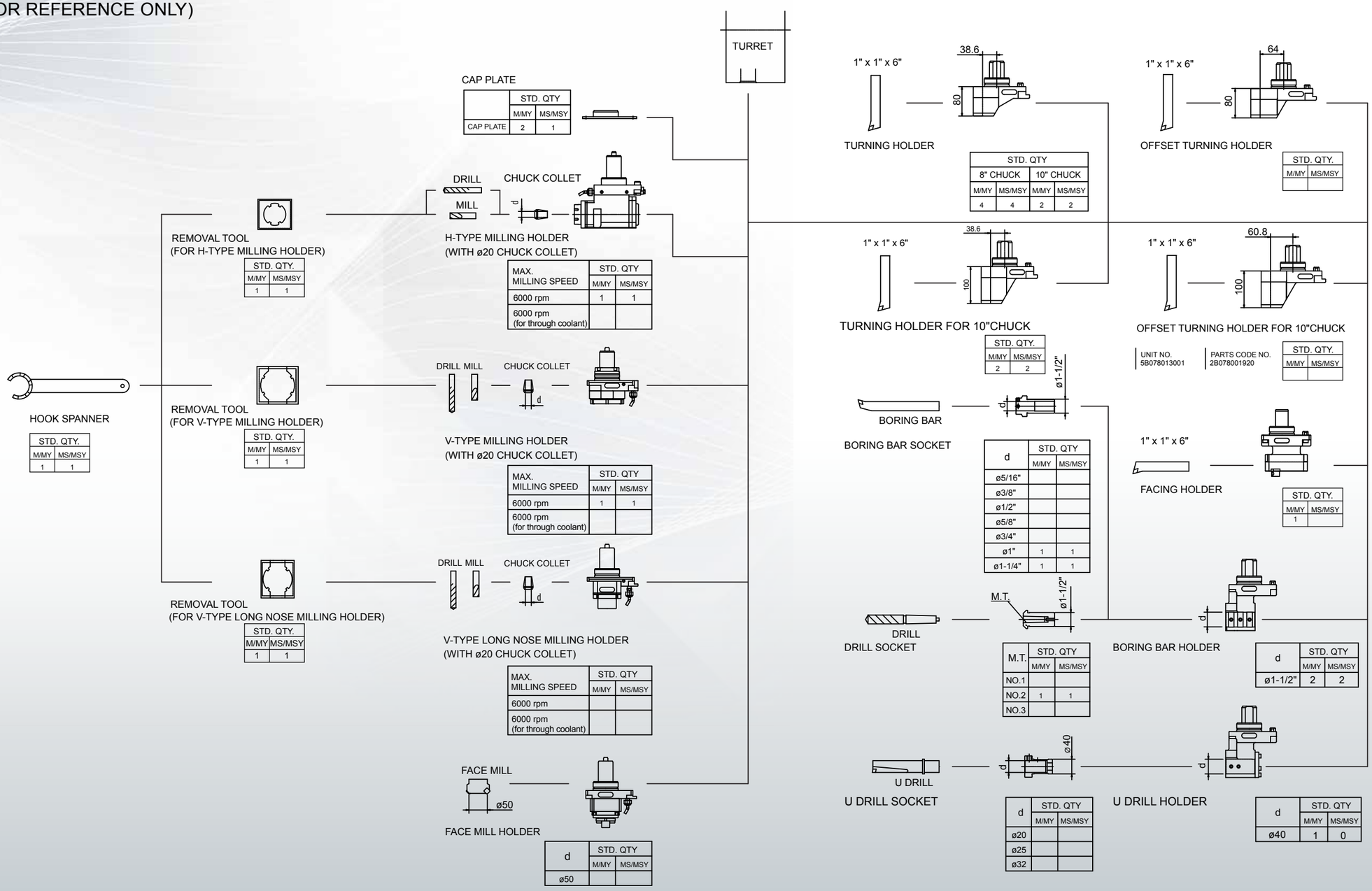


STD. QTY.	
8"	10"
5	3

Metric available upon request.

Tooling System – M/MS/MY/MSY 1st Process

(FOR REFERENCE ONLY)



CHUCK COLLET

TYPE	STD. QTY
ER32-2	
ER32-2.5	
ER32-3	
ER32-3.5	
ER32-4	
ER32-4.5	
ER32-5	
ER32-6	
ER32-7	
ER32-8	
ER32-9	
ER32-10	
ER32-11	
ER32-12	1
ER32-13	
ER32-14	
ER32-15	
ER32-16	1
ER32-17	
ER32-18	
ER32-19	
ER32-20	

CHUCK COLLET
(applicable to through coolant)

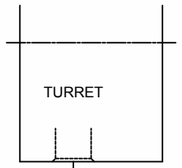
TYPE	STD. QTY
AR32-OH-8	
AR32-OH-8.5	
AR32-OH-9	
AR32-OH-9.5	
AR32-OH-10	
AR32-OH-10.5	
AR32-OH-11	
AR32-OH-11.5	
AR32-OH-12	
AR32-OH-12.5	
AR32-OH-13	
AR32-OH-13.5	
AR32-OH-14	
AR32-OH-14.5	
AR32-OH-15	
AR32-OH-15.5	
AR32-OH-16	
AR32-OH-16.5	
AR32-OH-17	
AR32-OH-17.5	
AR32-OH-18	
AR32-OH-18.5	
AR32-OH-19	
AR32-OH-19.5	
AR32-OH-20	

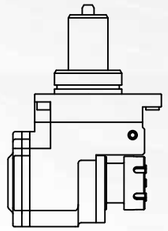
Metric available upon request.

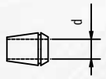
Metric available upon request.

Tooling System – MS/MSY 2nd Process

(FOR REFERENCE ONLY)





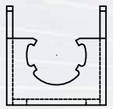


H-TYPE BACK MILLING HOLDER
(WITH ø20 CHUCK COLLET

STD. QTY

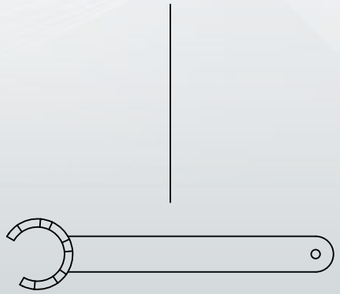
COLLET

d	STD. QTY
0.079" (ø2)	
0.098"(ø2.5)	
0.118" (ø3)	
0.138"(ø3.5)	
0.157" (ø4)	
0.177"(ø4.5)	
0.197" (ø5)	
0.236" (ø6)	
0.276" (ø7)	
0.315" (ø8)	
0.354" (ø9)	
0.394"(ø10)	
0.433"(ø11)	
0.472"(ø12)	
0.512"(ø13)	
0.551"(ø14)	
0.591"(ø15)	
0.630"(ø16)	
0.669"(ø17)	
0.709"(ø18)	
0.748"(ø19)	
0.789"(ø20)	



STD. QTY

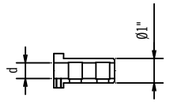
REMOVAL TOOL
(FOR H-TYPE BACK MILLING HOLDER)



HOOK SPANNER

Metric available upon request.

BORING BAR

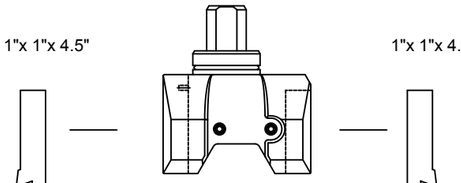


BORING BAR SOCKET

d	STD. QTY
ø5/16"	
ø3/8"	
ø1/2"	
ø5/8"	
ø3/4"	

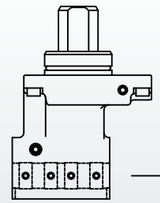
DRILL SOCKET

M.T.	STD. QTY
NO.1	
NO.2	



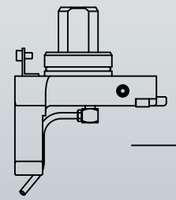
TURNING HOLDER (SS)

STD. QTY
1



BORING BAR HOLDER (SS)

d	STD. QTY
ø1"	1



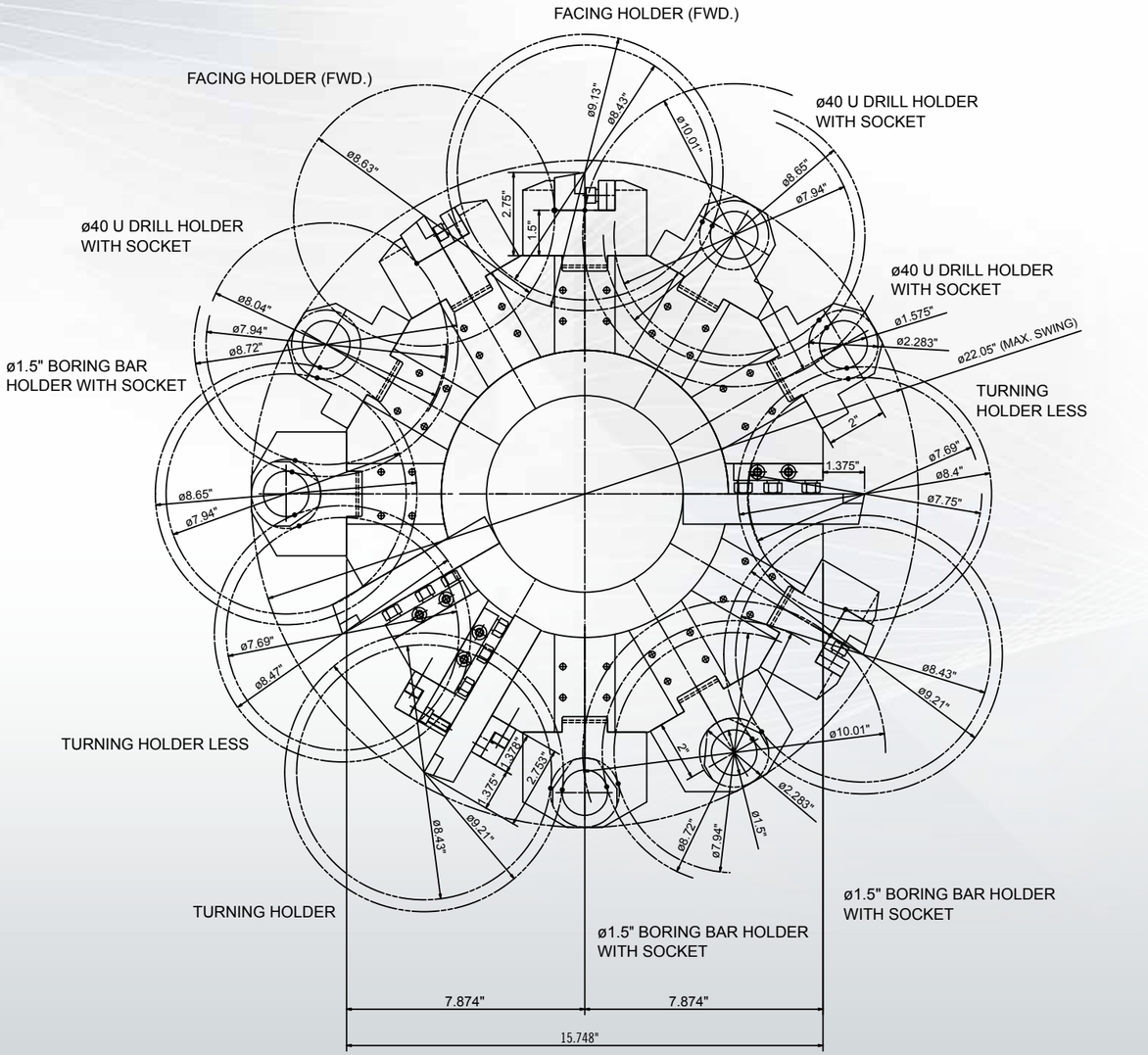
CUT-OFF HOLDER

STD. QTY
1

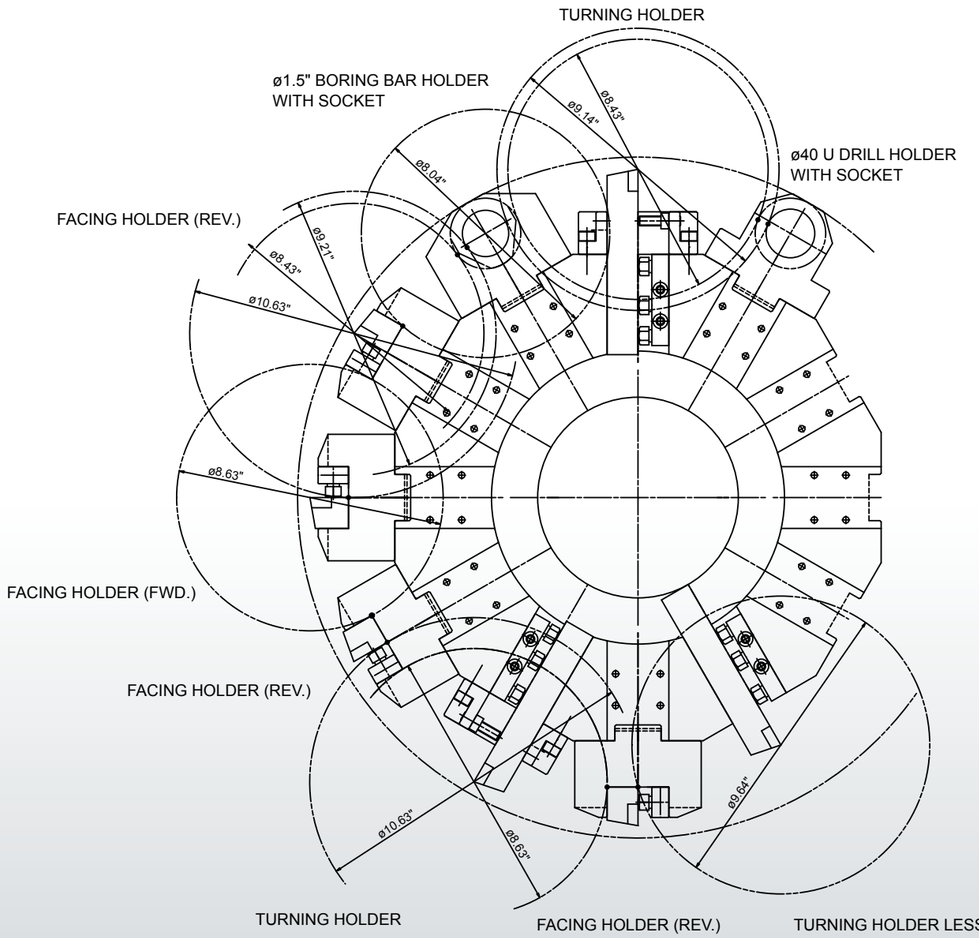
Metric available upon request.

Tooling Interference Diagram – 2-AXIS FOR 6"/8" CHUCK

(FOR REFERENCE ONLY)



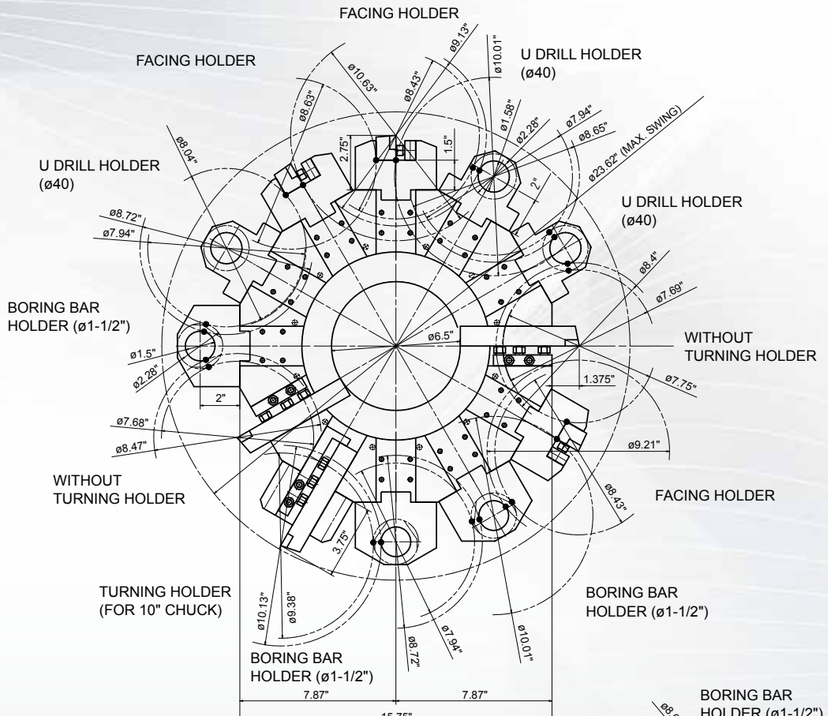
Metric available upon request.

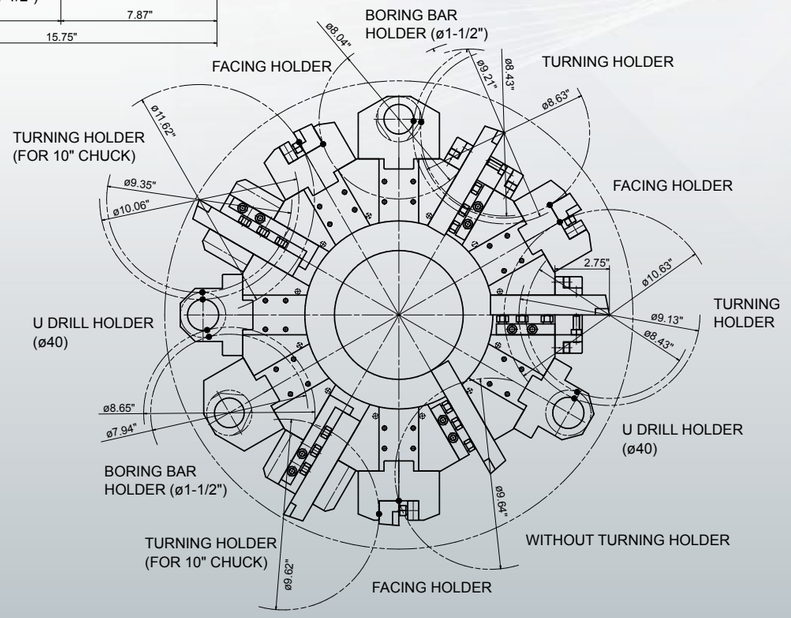


Metric available upon request.

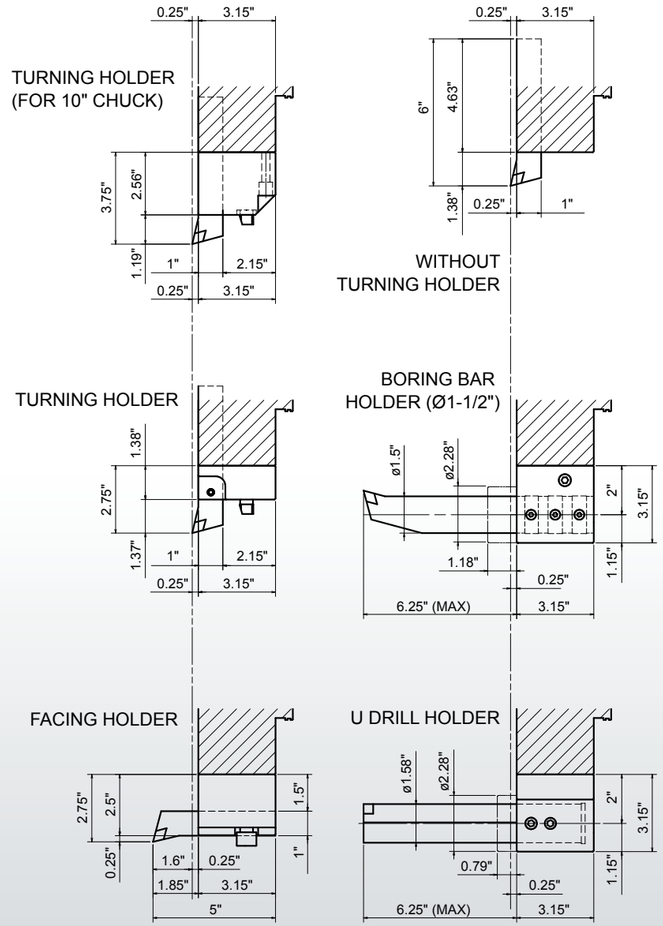
Tooling Interference Diagram – 2-AXIS FOR 10" CHUCK

(FOR REFERENCE ONLY)





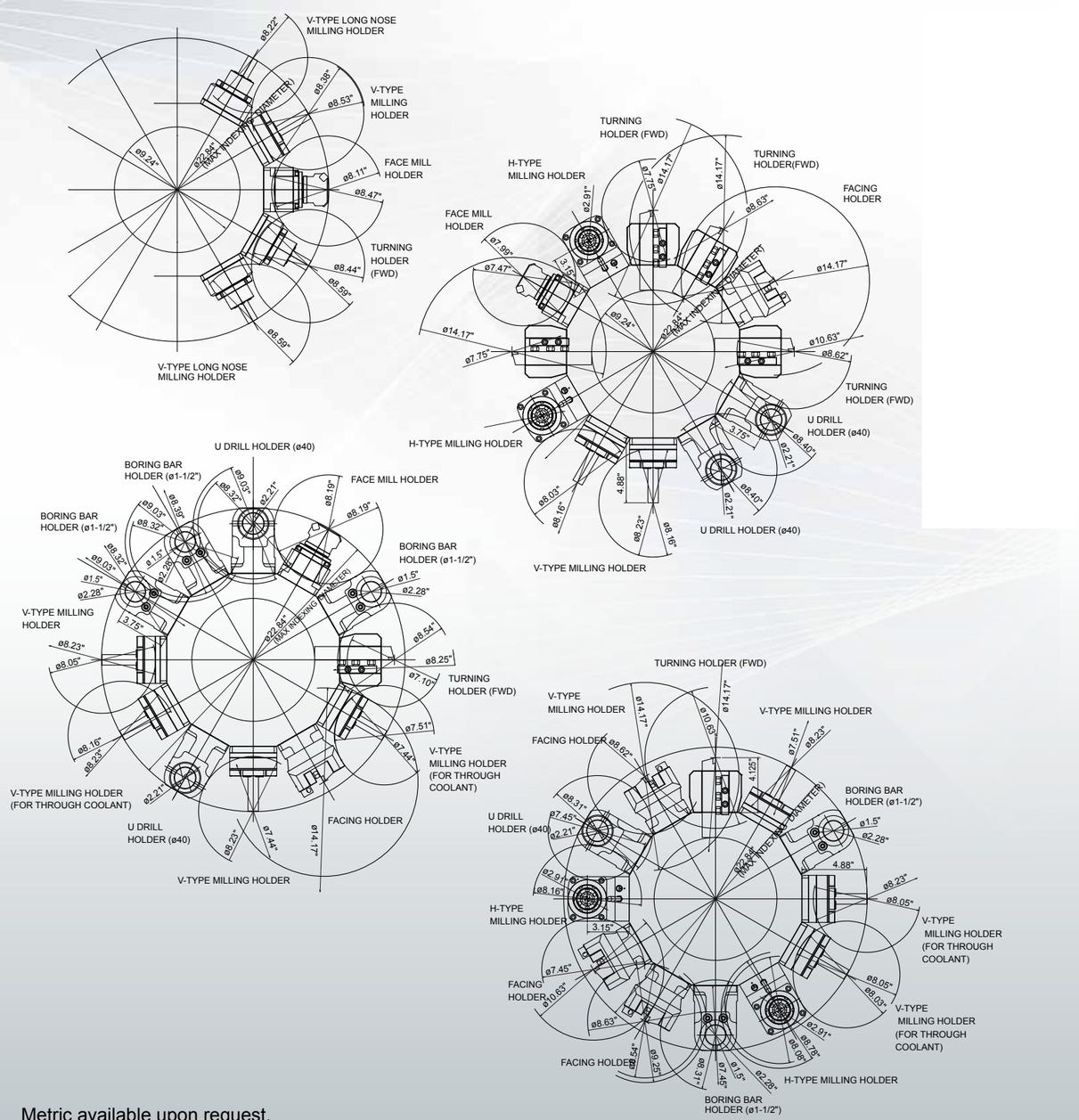
Metric available upon request.



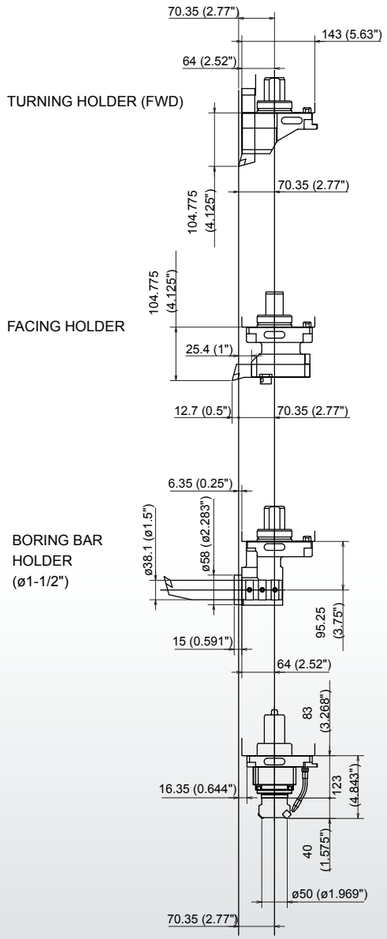
Metric available upon request.

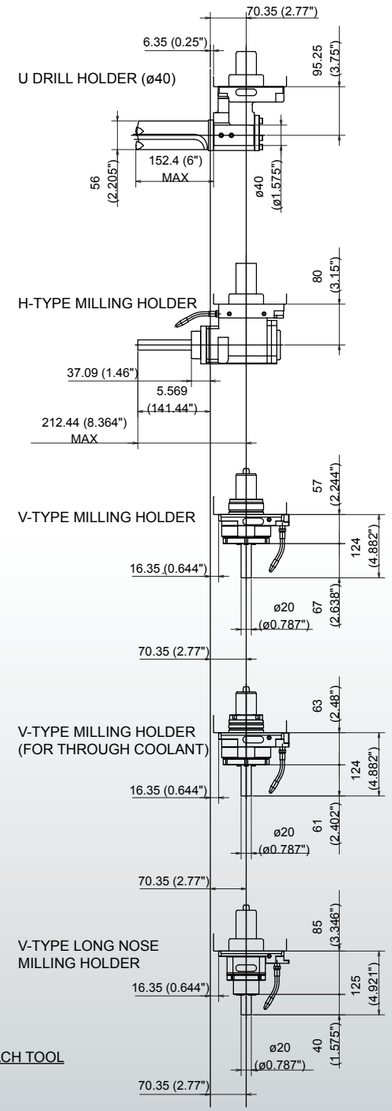
Tooling Interference Diagram – M/MY/MS/MSY FOR 6"/8" CHUCK

1ST PROCESS (FOR REFERENCE ONLY)



Metric available upon request.

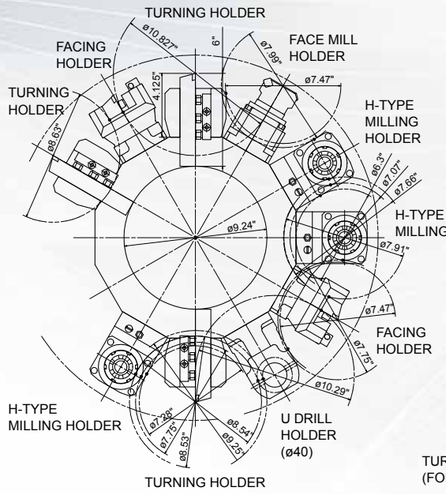


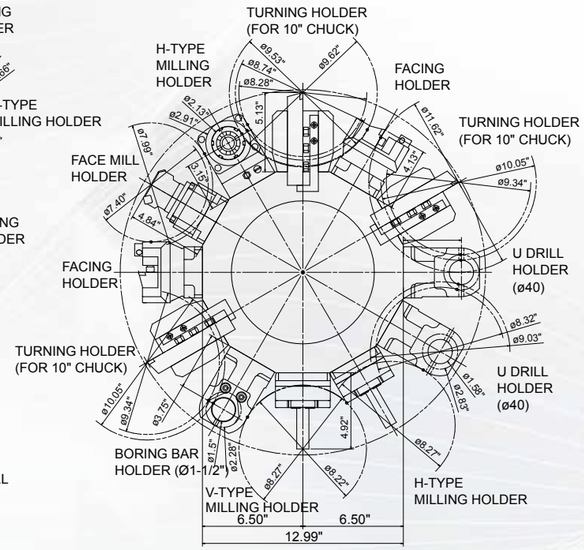


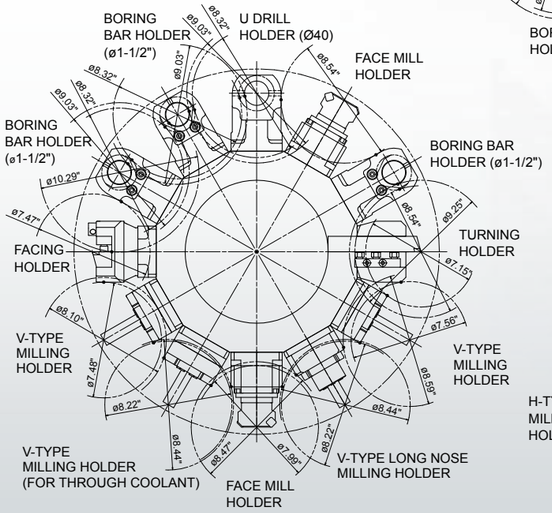
TOOL TIP LOCATION OF EACH TOOL

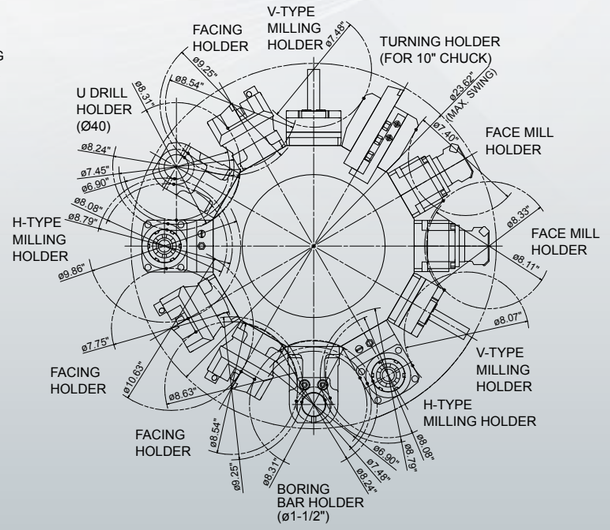
Tooling Interference Diagram – M/MY/MS/MSY FOR 10" CHUCK

1ST PROCESS (FOR REFERENCE ONLY)

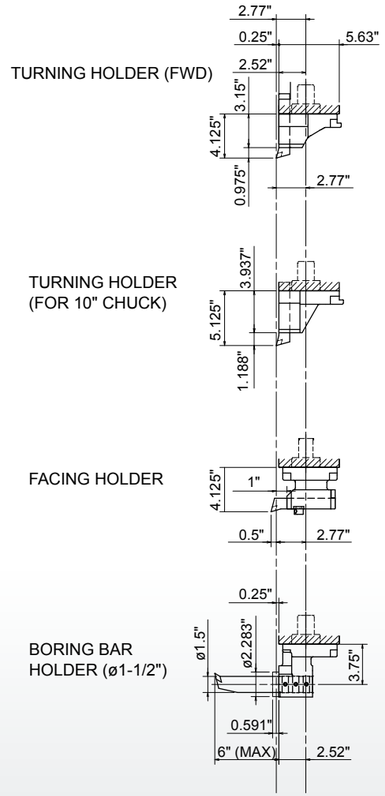


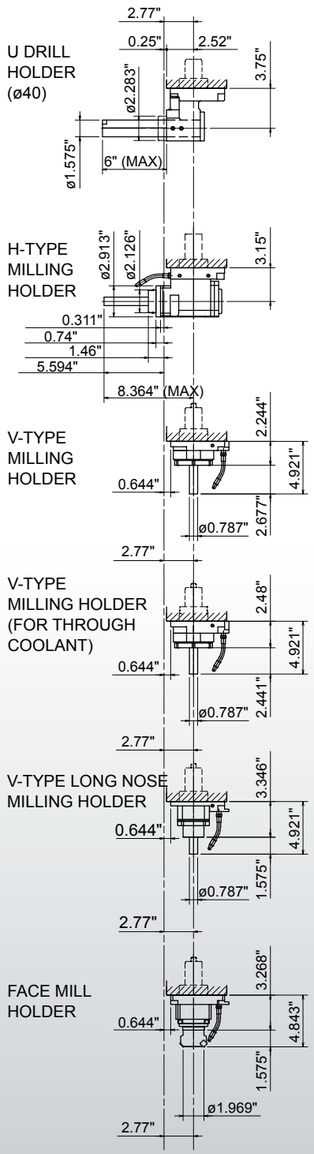






Metric available upon request.



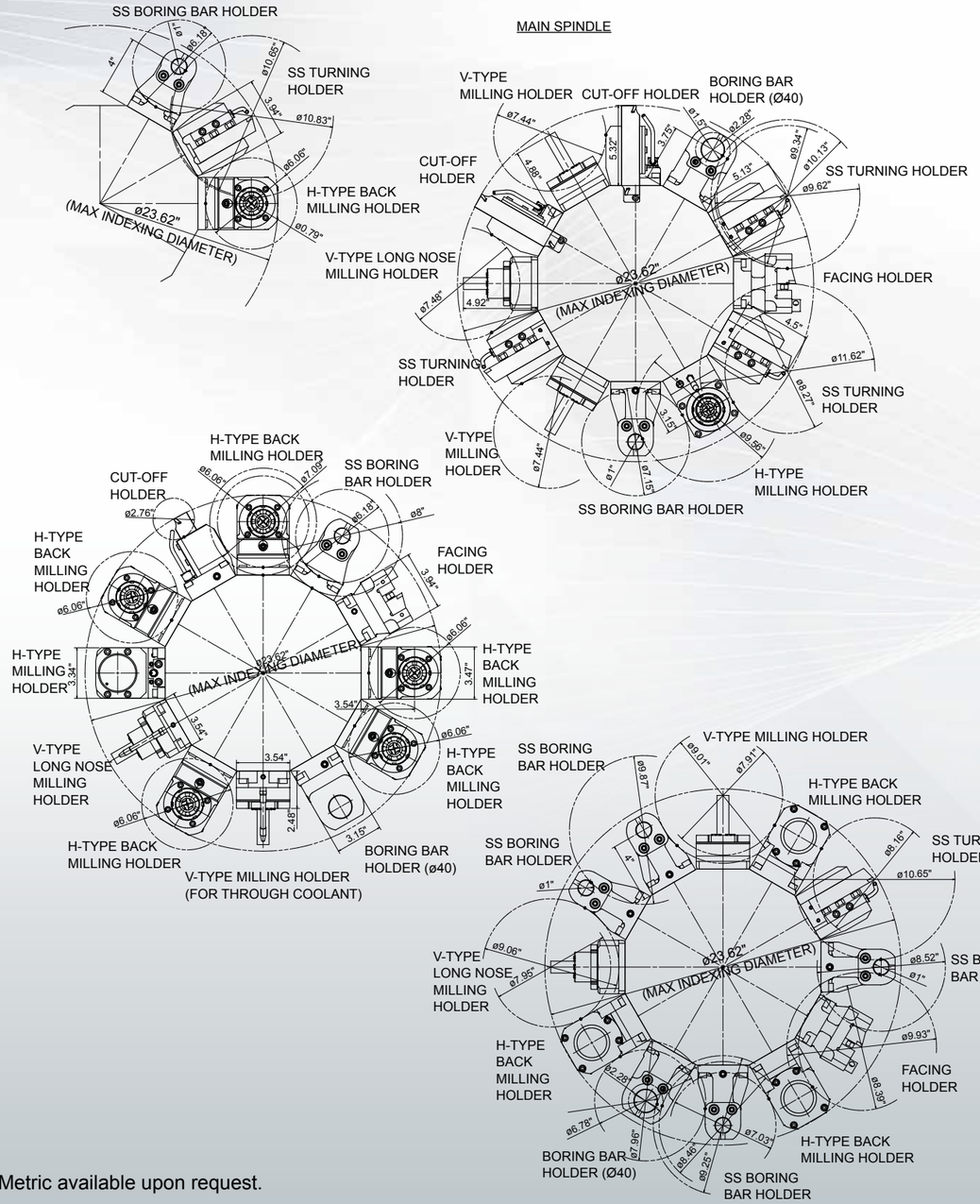


TOOL TIP LOCATION OF EACH TOOL

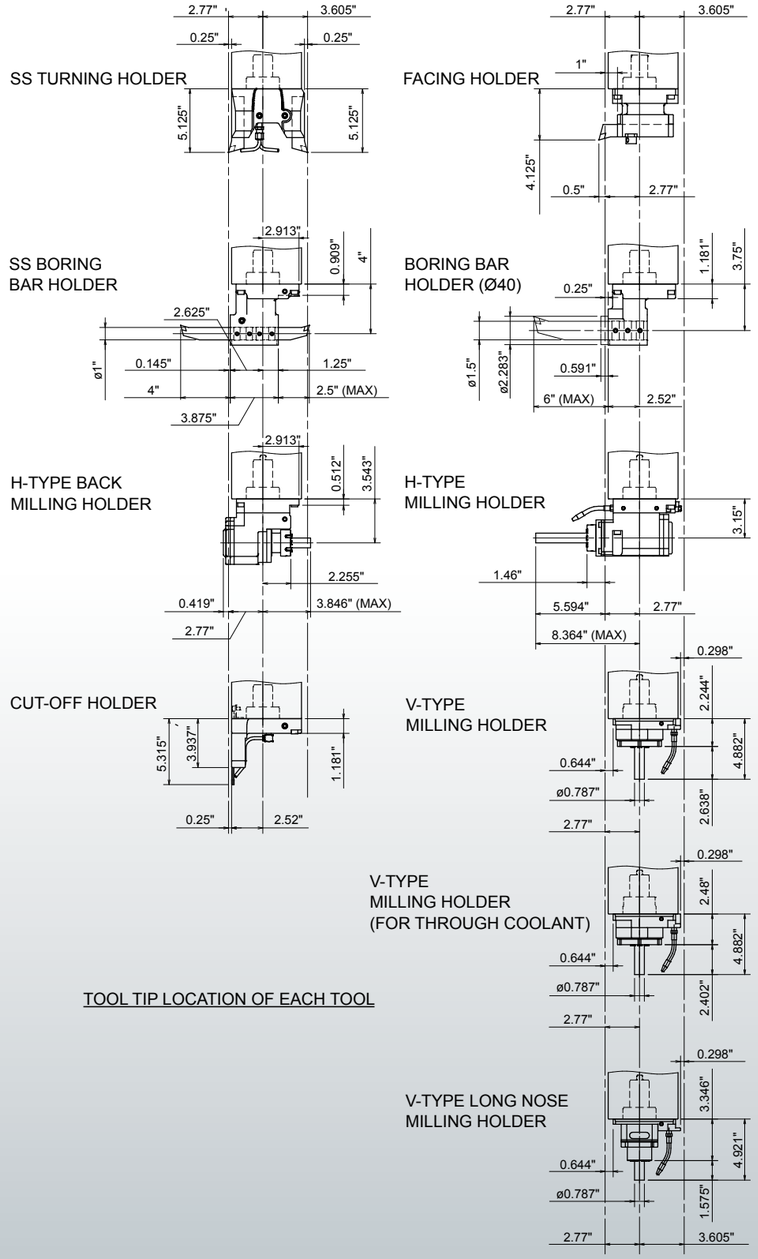
Metric available upon request.

Tooling Interference Diagram – M/MY/MS/MSY FOR 10" CHUCK

1ST PROCESS (FOR REFERENCE ONLY)



Metric available upon request.

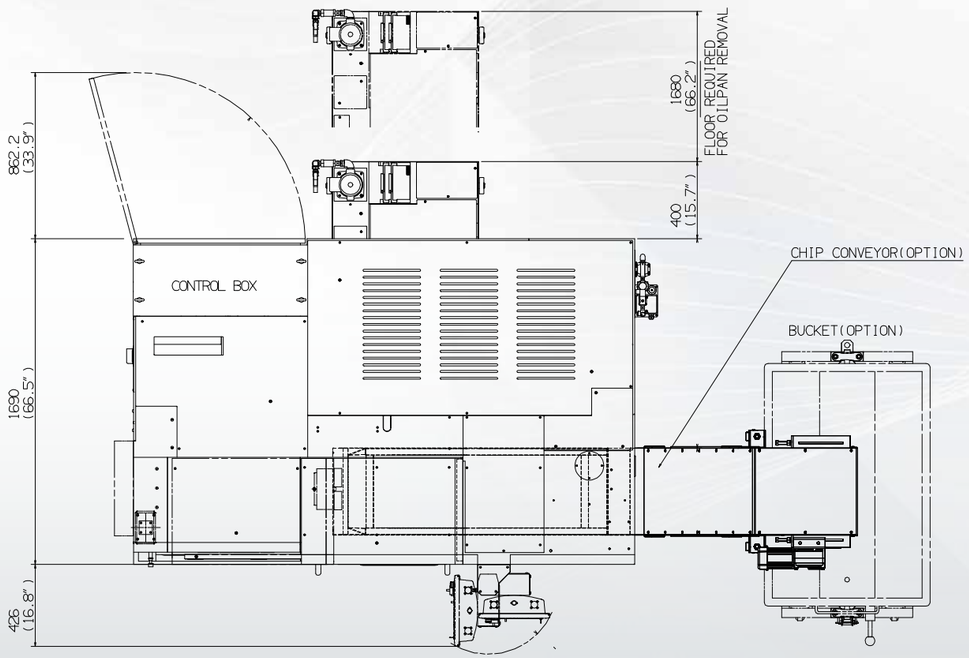


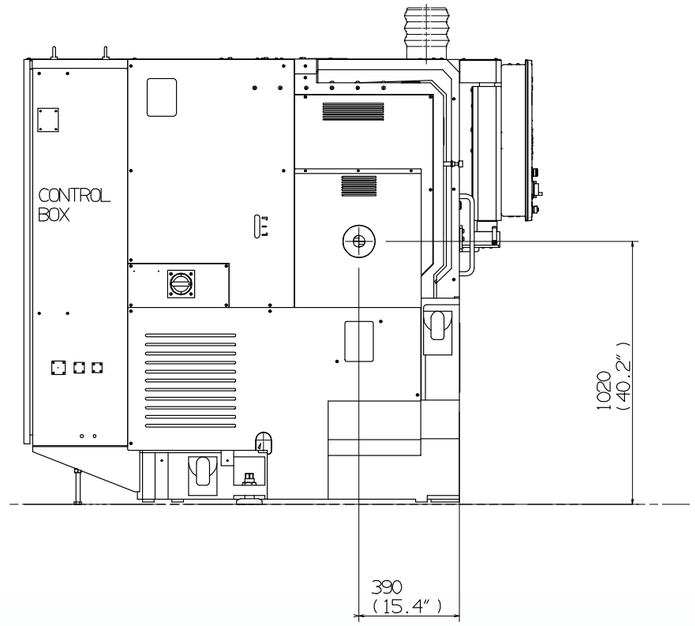
TOOL TIP LOCATION OF EACH TOOL

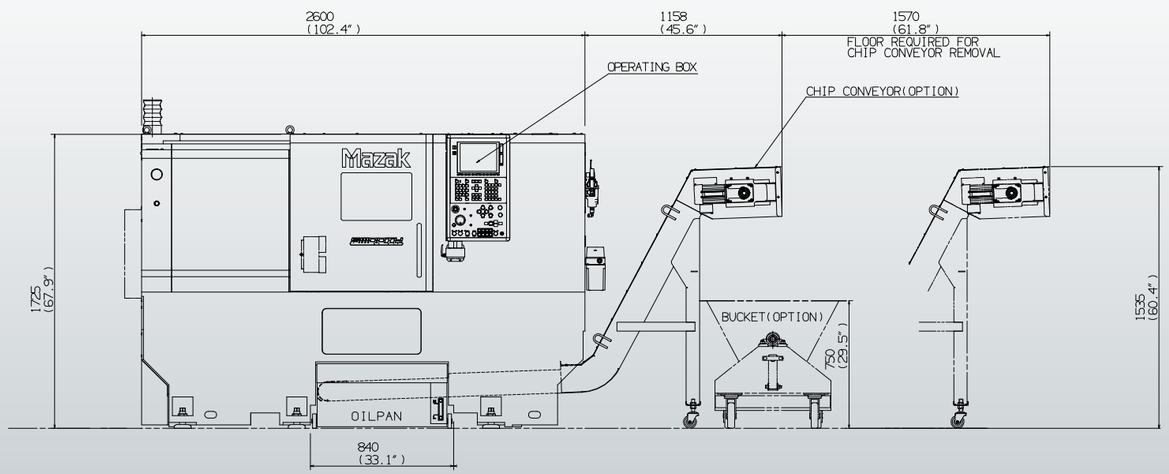
Metric available upon request.

External Dimensions – QTU SERIES 500U SIDE DISCHARGE CONVEYOR

(FOR REFERENCE ONLY)

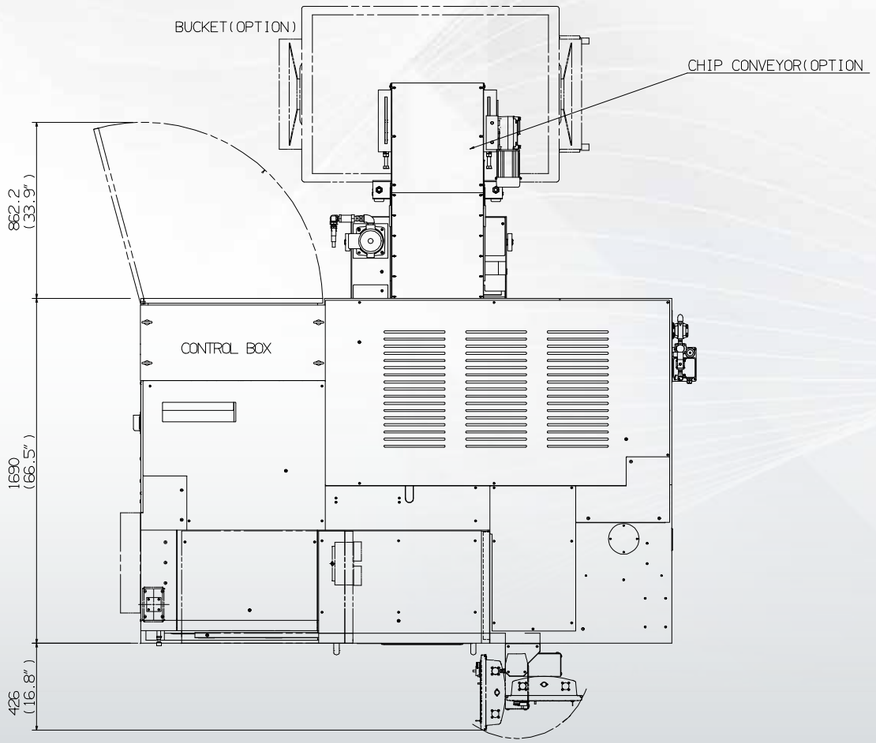


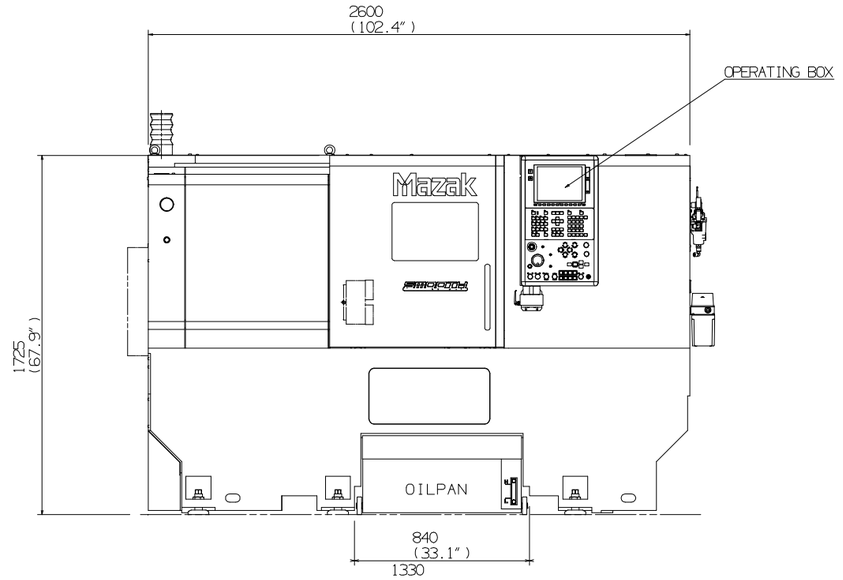


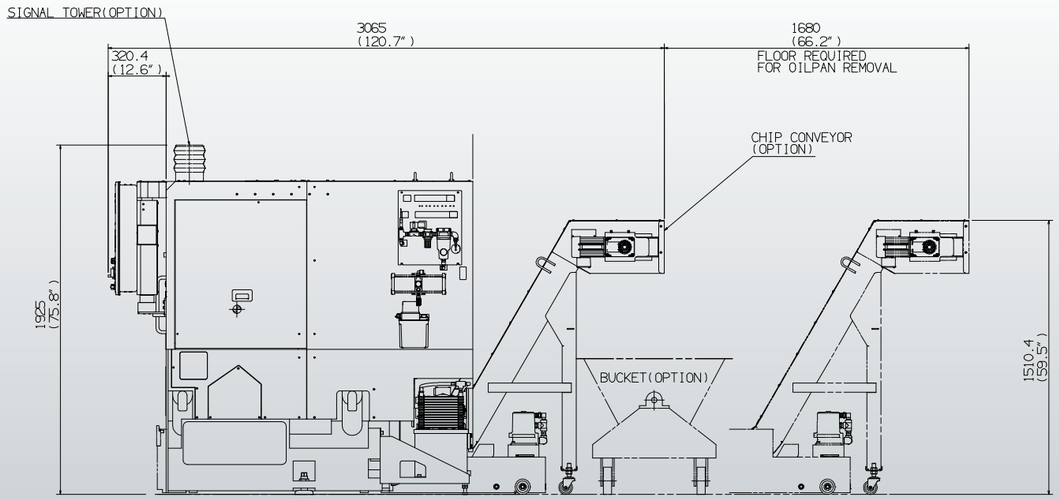


External Dimensions – QTU SERIES 500U REAR DISCHARGE CONVEYOR

(FOR REFERENCE ONLY)

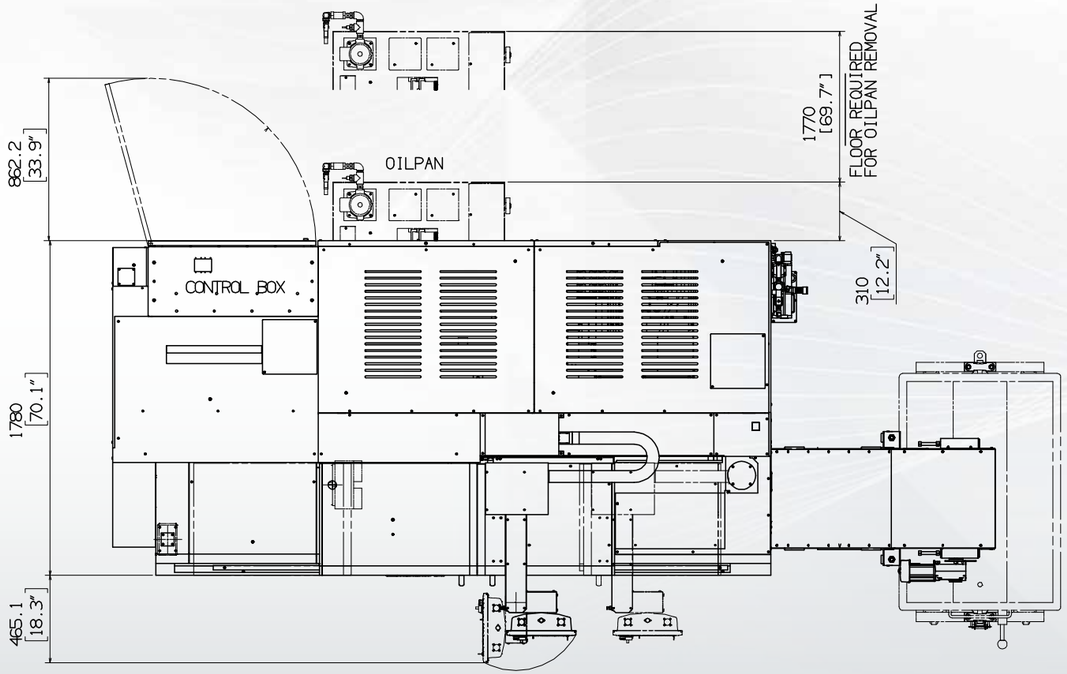


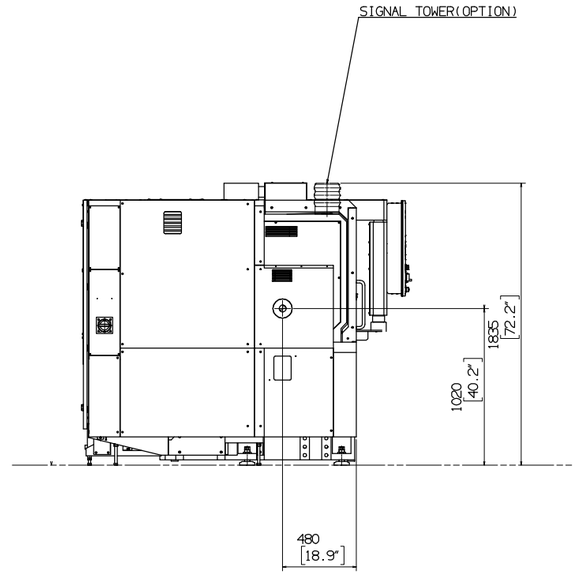


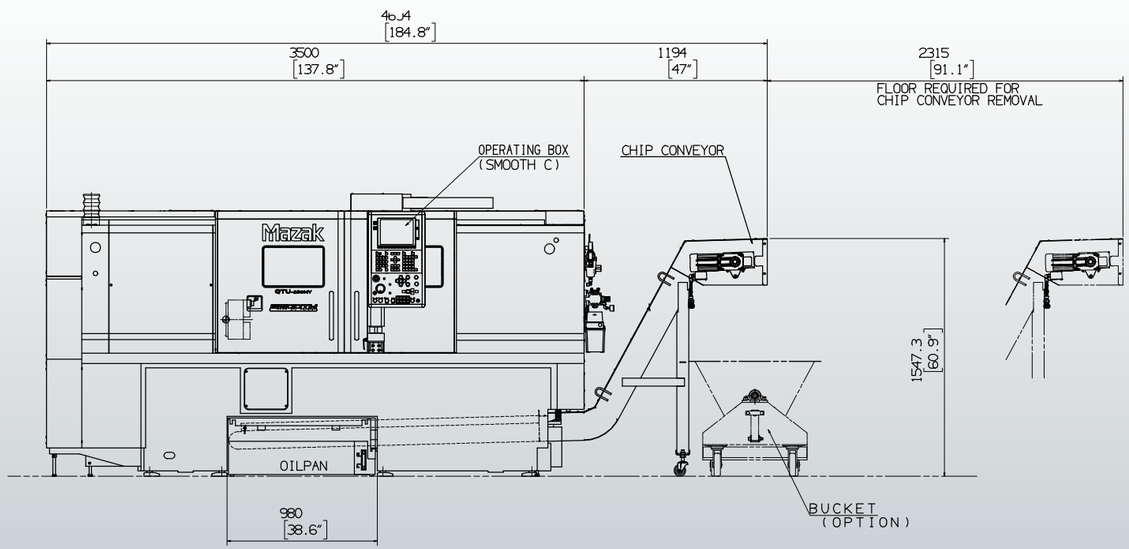


External Dimensions – QTU SERIES 1000 SIDE DISCHARGE CONVEYOR

(FOR REFERENCE ONLY)







Machine Specifications – QTU-200 SERIES

			QTU-200	QTU-200M	QTU-200MS
Bed length			500U	500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)		
	Recommended turning diameter	in (mm)	8.35 (212)		
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)	
	1st spindle chuck size	in	6/8		
	2nd spindle chuck size	in	N/A		5
	Bar working diameter	in (mm)	1.65 (42)		
Main spindle	Maximum speed	rpm	6,000		
	Spindle nose	ASA	JIS A2-6		
	Spindle through hole	in (mm)	2.4 (61)		
Second spindle	Maximum speed	rpm	N/A		6,000
	Spindle nose	FLAT	N/A		JIS A2-5
	Spindle through hole	in (mm)	N/A		2.4 (61)
Turret	Number of tools	–	12		
	OD tool size	in (mm)	1 (25)		
	Maximum boring bar size	in (mm)	1.5 (40)		
	Rotary drill	in (mm)	0.75 (20)		
	Rotary tap	–	M20		
	Rotary endmill	in (mm)	0.75 (20)		
	Turret indexing time (1 station swivel)	s	0.18	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)		
Tailstock	Quill bore taper	MT	MT No. 5		N/A
	Quill travel	in (mm)	13.250 (340)		N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)		
	Travel (Y axis)	in (mm)	N/A		
	Travel (Z axis)	in (mm)	24.5 (625)	23.75 (605)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)		
	Rapid traverse rate (Y axis)	in (mm)	N/A		
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)		
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]		
	Rotary tool motor power	hp (kW)	N/A	7.3 (5.5)	
Power source	Electric power supply (rated capacity)	kVA	27.8	27.7	27.5
Machine dimensions	Height	in (mm)	67.9 (1,725)		
	Width	in (mm)	66.5 (1,690)		
	Length	in (mm)	102.4 (2,600)		
	Weight	lbs (kg)	11,244 (5,100)	11,464 (5,200)	11,685 (5,300)

			QTU-200MY	QTU-200MSY
Bed length			500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)	
	Recommended turning diameter	in (mm)	8.35 (212)	
	Maximum turning diameter	in (mm)	13.5 (340)	
	1st spindle chuck size	in	6/8	
	2nd spindle chuck size	in	N/A	5
	Bar working diameter	in (mm)	1.65 (42)	
Main spindle	Maximum speed	rpm	6,000	
	Spindle nose	ASA	JIS A2-6	
	Spindle through hole	in (mm)	2.4 (61)	
Second spindle	Maximum speed	rpm	6,000	
	Spindle nose	FLAT	JIS A2-5	
	Spindle through hole	in (mm)	2.4 (61)	
Turret	Number of tools	–	12	
	OD tool size	in (mm)	1 (25)	
	Maximum boring bar size	in (mm)	1.5 (40)	
	Rotary drill	in (mm)	0.75 (20)	
	Rotary tap	–	M20	
	Rotary endmill	in (mm)	0.75 (20)	
	Turret indexing time (1 station swivel)	s	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)	
Tailstock	Quill bore taper	MT	MT No. 5	N/A
	Quill travel	in (mm)	13.250 (340)	N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)	
	Travel (Y axis)	in (mm)	4 (100)	
	Travel (Z axis)	in (mm)	23.75 (605)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)	
	Rapid traverse rate (Y axis)	in (mm)	10 (394)	
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)	
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]	
	Rotary tool motor power	hp (kW)	7.3 (5.5)	
Power source	Electric power supply (rated capacity)	kVA	29	28.5
Machine dimensions	Height	in (mm)	67.9 (1,725)	
	Width	in (mm)	66.5 (1,690)	
	Length	in (mm)	102.4 (2,600)	
	Weight	lbs (kg)	11,905 (5,400)	12,125 (5,500)

Machine Specifications – QTU-250 SERIES

			QTU-250	QTU-250M	QTU-250MS
Bed length			500U	500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)		
	Recommended turning diameter	in (mm)	8.35 (212)		
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)	
	1st spindle chuck size	in	8/10		
	2nd spindle chuck size	in	N/A		6
	Bar working diameter	in (mm)	2 (51)		
Main spindle	Maximum speed	rpm	4,500		
	Spindle nose	ASA	JIS A2-6		
	Spindle through hole	in (mm)	3 (76)		
Second spindle	Maximum speed	rpm	N/A		6,000
	Spindle nose	FLAT	N/A		JIS A2-5
	Spindle through hole	in (mm)	N/A		2.4 (61)
Turret	Number of tools	–	12		
	OD tool size	in (mm)	1 (25)		
	Maximum boring bar size	in (mm)	1.5 (40)		
	Rotary drill	in (mm)	0.75 (20)		
	Rotary tap	–	M20		
	Rotary endmill	in (mm)	0.75 (20)		
	Turret indexing time (1 station swivel)	s	0.18	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)		
Tailstock	Quill bore taper	MT	MT No. 5		N/A
	Quill travel	in (mm)	13.250 (340)		N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)		
	Travel (Y axis)	in (mm)	N/A		
	Travel (Z axis)	in (mm)	25 (635)	23.75 (605)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)		
	Rapid traverse rate (Y axis)	in (mm)	N/A		
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)		
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]		
	Rotary tool motor power	hp (kW)	N/A	7.3 (5.5)	
Power source	Electric power supply (rated capacity)	kVA	27.3	28.5	27.4
Machine dimensions	Height	in (mm)	67.9 (1,725)		
	Width	in (mm)	66.5 (1,680)		
	Length	in (mm)	104.3 (2,650)		
	Weight	lbs (kg)	11,310 (5,130)	11,510 (5,220)	11,860 (5,370)

			QTU-250MY	QTU-250MSY
Bed length			500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)	
	Recommended turning diameter	in (mm)	8.35 (212)	
	Maximum turning diameter	in (mm)	13.5 (340)	
	1st spindle chuck size	in	8/10	
	2nd spindle chuck size	in	N/A	6
	Bar working diameter	in (mm)	2 (51)	
Main spindle	Maximum speed	rpm	4,500	
	Spindle nose	ASA	JIS A2-6	
	Spindle through hole	in (mm)	3 (76)	
Second spindle	Maximum speed	rpm	N/A	6,000
	Spindle nose	FLAT	N/A	JIS A2-5
	Spindle through hole	in (mm)	N/A	2.4 (61)
Turret	Number of tools	–	12	
	OD tool size	in (mm)	1 (25)	
	Maximum boring bar size	in (mm)	1.5 (40)	
	Rotary drill	in (mm)	0.75 (20)	
	Rotary tap	–	M20	
	Rotary endmill	in (mm)	0.75 (20)	
	Turret indexing time (1 station swivel)	s	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)	
Tailstock	Quill bore taper	MT	MT No. 5	N/A
	Quill travel	in (mm)	13.250 (340)	N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)	
	Travel (Y axis)	in (mm)	4 (100)	
	Travel (Z axis)	in (mm)	23.75 (605)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)	
	Rapid traverse rate (Y axis)	in (mm)	10 (394)	
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)	
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]	
	Rotary tool motor power	hp (kW)	7.3 (5.5)	
Power source	Electric power supply (rated capacity)	kVA	28.3	28.4
Machine dimensions	Height	in (mm)	67.9 (1,725)	
	Width	in (mm)	66.5 (1,680)	
	Length	in (mm)	104.3 (2,650)	
	Weight	lbs (kg)	11,905 (5,400)	12,260 (5,560)

Machine Specifications – QTU-350 SERIES

			QTU-350	QTU-350M	QTU-350MS	QTU-350MY	QTU-350MSY
Bed length			500U	500U	500U	500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)				
	Recommended turning diameter	in (mm)	10 (255)				
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)			
	1st spindle chuck size	in	10/12				
	2nd spindle chuck size	in	N/A		6	N/A	6
	Bar working diameter	in (mm)	3.03 (77)				
Main spindle	Maximum speed	rpm	3,500				
	Spindle nose	ASA	JIS A2-8				
	Spindle through hole	in (mm)	3.5 (91)				
Second spindle	Maximum speed	rpm	N/A		6,000	N/A	6,000
	Spindle nose	FLAT	N/A		JIS A2-5	N/A	JIS A2-5
	Spindle through hole	in (mm)	N/A		2.4 (61)	N/A	2.4 (61)
Turret	Number of tools	–	12				
	OD tool size	in (mm)	1 (25)				
	Maximum boring bar size	in (mm)	1.5 (40)				
	Rotary drill	in (mm)	0.75 (20)				
	Rotary tap	–	M20				
	Rotary endmill	in (mm)	0.75 (20)				
	Turret indexing time (1 station swivel)	s	0.18	0.19			
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)				
Tailstock	Quill bore taper	MT	MT No. 5		N/A	MT No. 5	N/A
	Quill travel	in (mm)	13.250 (340)		N/A	13.250 (340)	N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)				
	Travel (Y axis)	in (mm)	N/A			+/- 2 (50)	
	Travel (Z axis)	in (mm)	25 (635)	23.75 (605)			
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)				
	Rapid traverse rate (Y axis)	in (mm)	N/A			10 (394)	
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)				
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]				
	Rotary tool motor power	hp (kW)	N/A	Standard: 7.3 (5.5), Option: 10 (7.5)			
Power source	Electric power supply (rated capacity)	kVA	27.3	28.5	27.4	28.3	28.4
Machine dimensions	Height	in (mm)	67.9 (1,725)				
	Width	in (mm)	66.5 (1,690)				
	Length	in (mm)	106.3 (2,700)				
	Weight	lbs (kg)	11,685 (5,300)	11,890 (5,390)	12,200 (5,540)	12,324 (5,590)	12,640 (5,730)

			QTU-350	QTU-350M	QTU-350MY
Bed length			1000U	1000U	1000U
Capacity	Maximum swing	in (mm)	27.4 (695)		
	Recommended turning diameter	in (mm)	10 (255)		
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)	
	1st spindle chuck size	in	10/12		
	2nd spindle chuck size	in	N/A		
	Bar working diameter	in (mm)	3.03 (77)		
Main spindle	Maximum speed	rpm	3,500		
	Spindle nose	ASA	JIS A2-8		
	Spindle through hole	in (mm)	3.5 (91)		
Second spindle	Maximum speed	rpm	N/A	6,000	
	Spindle nose	FLAT	N/A	JIS A2-5	
	Spindle through hole	in (mm)	N/A	2.4 (61)	
Turret	Number of tools	–	12		
	OD tool size	in (mm)	1 (25)		
	Maximum boring bar size	in (mm)	1.5 (40)		
	Rotary drill	in (mm)	0.75 (20)		
	Rotary tap	–	M20		
	Rotary endmill	in (mm)	0.75 (20)		
	Turret indexing time (1 station swivel)	s	0.18	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)		
Tailstock	Quill bore taper	MT	MT No. 5		
	Quill travel	in (mm)	22.125 (565)		
Feed axes	Travel (X axis)	in (mm)	8.5 (215)		
	Travel (Y axis)	in (mm)	N/A		+/- 2 (50)
	Travel (Z axis)	in (mm)	46.25 (1,175)	45.5 (1,155)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)		
	Rapid traverse rate (Y axis)	in (mm)	N/A		10 (394)
	Rapid traverse rate (Z axis)	ipm (m/min)	1,181 (30)		
Motors	Main spindle motor power	hp (kW)	20 (40% ED)/15 (Cont.) [15 (40% ED)/11 (Cont.)]		
	Rotary tool motor power	hp (kW)	N/A	Standard: 5 (3.7), Option: 9 (7.3)	
Power source	Electric power supply (rated capacity)	kVA	27.3	28.5	28.3
Machine dimensions	Height	in (mm)	72.4 (1,840)		
	Width	in (mm)	70.1 (1,780)		
	Length	in (mm)	137.8 (3,500)		
	Weight	lbs (kg)	13,867 (6,290)	14,506 (6,580)	14,947 (6,780)

Machine Specifications – QTU-350 HP SERIES

			QTU-350 HP	QTU-350M HP	QTU-350MS HP	QTU-350MY HP	QTU-350MSY HP
Bed length			500U	500U	500U	500U	500U
Capacity	Maximum swing	in (mm)	27.4 (695)				
	Recommended turning diameter	in (mm)	10 (255)				
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)			
	1st spindle chuck size	in	10/12				
	2nd spindle chuck size	in	N/A		6	N/A	6
	Bar working diameter	in (mm)	3.03 (77)				
Main spindle	Maximum speed	rpm	3,500				
	Spindle nose	ASA	JIS A2-8				
	Spindle through hole	in (mm)	3.5 (91)				
Second spindle	Maximum speed	rpm	N/A		6,000	N/A	6,000
	Spindle nose	FLAT	N/A		JIS A2-5	N/A	JIS A2-5
	Spindle through hole	in (mm)	N/A		2.4 (61)	N/A	2.4 (61)
Turret	Number of tools	–	12				
	OD tool size	in (mm)	1 (25)				
	Maximum boring bar size	in (mm)	1.5 (40)				
	Rotary drill	in (mm)	0.75 (20)				
	Rotary tap	–	M20				
	Rotary endmill	in (mm)	0.75 (20)				
	Turret indexing time (1 station swivel)	s	0.18	0.19			
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)				
Tailstock	Quill bore taper	MT	MT No. 5		N/A	MT No. 5	N/A
	Quill travel	in (mm)	13.250 (340)		N/A	13.250 (340)	N/A
Feed axes	Travel (X axis)	in (mm)	8.5 (215)				
	Travel (Y axis)	in (mm)	N/A			+/- 2 (50)	
	Travel (Z axis)	in (mm)	25 (635)	23.75 (605)			
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)				
	Rapid traverse rate (Y axis)	in (mm)	N/A			10 (394)	
	Rapid traverse rate (Z axis)	ipm (m/min)	1,417 (36)				
Motors	Main spindle motor power	hp (kW)	30 (15% ED)/20 (Cont.) [22 (15% ED)/15 (Cont.)]				
	Rotary tool motor power	hp (kW)	10 (7.5)				
Power source	Electric power supply (rated capacity)	kVA	27.3	28.5	27.4	28.3	28.4
Machine dimensions	Height	in (mm)	67.9 (1,725)				
	Width	in (mm)	66.5 (1,690)				
	Length	in (mm)	106.3 (2,700)				
	Weight	lbs (kg)	11,685 (5,300)	11,890 (5,390)	12,200 (5,540)	12,324 (5,590)	12,640 (5,730)

			QTU-350 HP	QTU-350M HP	QTU-350MY HP
Bed length			1000U	1000U	1000U
Capacity	Maximum swing	in (mm)	27.4 (695)		
	Recommended turning diameter	in (mm)	10 (255)		
	Maximum turning diameter	in (mm)	16.25 (410)	13.5 (340)	
	1st spindle chuck size	in	10/12		
	2nd spindle chuck size	in	N/A		
	Bar working diameter	in (mm)	3.03 (77)		
Main spindle	Maximum speed	rpm	3,500		
	Spindle nose	ASA	JIS A2-8		
	Spindle through hole	in (mm)	3.5 (91)		
Second spindle	Maximum speed	rpm	N/A	6,000	
	Spindle nose	FLAT	N/A	JIS A2-5	
	Spindle through hole	in (mm)	N/A	2.4 (61)	
Turret	Number of tools	–	12		
	OD tool size	in (mm)	1 (25)		
	Maximum boring bar size	in (mm)	1.5 (40)		
	Rotary drill	in (mm)	0.75 (20)		
	Rotary tap	–	M20		
	Rotary endmill	in (mm)	0.75 (20)		
	Turret indexing time (1 station swivel)	s	0.18	0.19	
	Maximum rotary tool speed	rpm	4,500 (Option: 6,000)		
Tailstock	Quill bore taper	MT	MT No. 5		
	Quill travel	in (mm)	22.125 (565)		
Feed axes	Travel (X axis)	in (mm)	8.5 (215)		
	Travel (Y axis)	in (mm)	N/A		+/- 2 (50)
	Travel (Z axis)	in (mm)	46.25 (1,175)	45.5 (1,155)	
Feed rate	Rapid traverse rate (X axis)	ipm (m/min)	1,181 (30)		
	Rapid traverse rate (Y axis)	in (mm)	N/A		10 (394)
	Rapid traverse rate (Z axis)	ipm (m/min)	1,181 (30)		
Motors	Main spindle motor power	hp (kW)	30 (15% ED)/20 (Cont.) [22 (15% ED)/15 (Cont.)]		
	Rotary tool motor power	hp (kW)	10 (7.5)		
Power source	Electric power supply (rated capacity)	kVA	27.3	28.5	28.3
Machine dimensions	Height	in (mm)	72.4 (1,840)		
	Width	in (mm)	70.1 (1,780)		
	Length	in (mm)	137.8 (3,500)		
	Weight	lbs (kg)	13,867 (6,290)	14,506 (6,580)	14,947 (6,780)

Environmentally friendly

Environmental Considerations

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

The QTU Series utilizes a high-efficiency lubrication system that has reduced oil consumption more than 90% versus comparable systems. High-efficiency LED work lights are used for illumination of the machining area. These lights and the optional chip conveyor are automatically shut off after a predetermined time period for lower power consumption when the machine is in the stand-by state.

QTU-200

eco-friendly

Power Consumption Display (Optional)
The electrical power meter displays the machine's accumulated electrical power consumption.

Personnel Sensor
The work lights and CNC display are automatically shut off after a predetermined time period for lower power consumption when the operator is not near the machine. When the personnel sensor detects that the operator has returned to the machine, these lights automatically turn on.

Chip Conveyor/Automatic Power Off (Optional)
The chip conveyor is automatically shut off after a predetermined time period for lower power consumption when the machine is in the stand-by state.

General Contact Locations

NATIONAL TECHNOLOGY CENTER
8025 Production Drive
Florence, Kentucky 41042
(800) 331-9151

MIDWEST TECHNOLOGY CENTER
300 East Commerce Drive
Schaumburg, Illinois 60173
(847) 885-8311

SOUTHWEST TECHNOLOGY CENTER
10950 Greenbend Blvd.
Houston, Texas 77067
(281) 931-7770

SOUTHEAST TECHNOLOGY CENTER
1075 Northbrook Parkway
Suwanee, Georgia 30024
(678) 985-4800

WESTERN TECHNOLOGY CENTER
1333 West 190th Street
Gardena, California 90248
(310) 327-7172

NORTHEAST TECHNOLOGY CENTER
700 Old County Circle
Windsor Locks, Connecticut 06096
(860) 292-4400

DALLAS TECHNICAL CENTER
935 South Kimball, Suite 151
Southlake, Texas 76092
(817) 329-6290

CANADA TECHNOLOGY CENTRE
50 Commerce Court
Cambridge, Ontario N3C 4P7
(519) 658-2021

MEXICO TECHNOLOGY CENTER
Spectrum 100 Parque Industrial Finsa
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Optimum Plus Service and Support

MAZAK OPTIMUM PLUS

To maximize machine tool investments, the Mazak Optimum Plus program represents a company-wide commitment to provide the best-possible, most-comprehensive support.

The Optimum Plus program encompasses Five Pillars – distinct yet interrelated areas:

- Single-source service
- Technical support – machine and CNC
- Parts support
- Progressive learning
- 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 level of productivity.

Benefits of Mazak's single-source approach include:

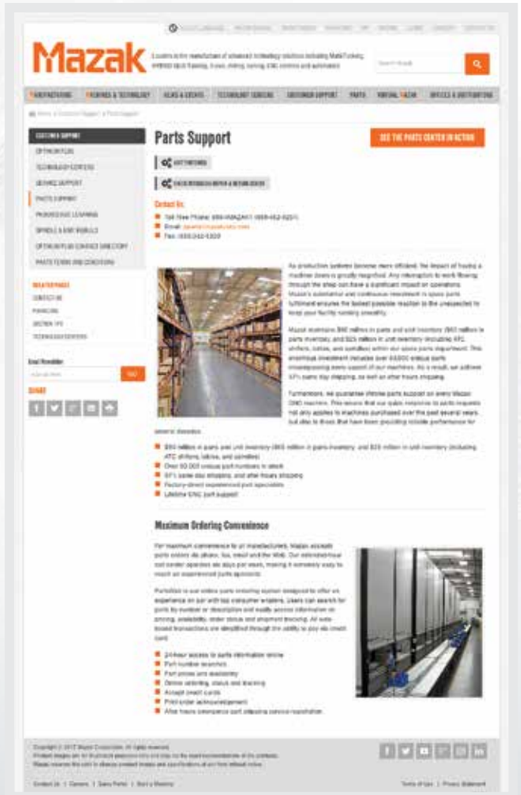
- Free technical phone support and software upgrades for the life of a Mazak machine
- Software support that provides instantaneous diagnostic services via remote real-time systems
- Guaranteed phone response to any technical question within one hour via a 24/7 technical phone support system
- More than 350 factory-trained Mazak service representatives and certified distributor personnel that can be at a customer's 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 warranties on every Mazak machine tool component, including a two-year part warranty on CNC control components.

Technical support for machines and CNCs also includes:

- Additional warranty coverage (available upon request)

Mazak OPTIMUMplus
TOTAL SUPPORT FOR MAZAK CUSTOMERS



The Mazak Optimum Plus program enables customers to maximize the value of their Mazak purchases.

PARTS SUPPORT

Mazak's spare parts fulfillment ensures the fastest possible reaction time. The state-of-the-art Mazak North American Parts Center uses the latest AS/RS fully automated warehouse storage system technology and maintains a $65 million parts inventory.

Benefits of the North American Parts Center include:

- Average 97% same-day parts shipment and after-hours shipping
- 52,000 part numbers in stock
- Call center open Monday-Saturday
- Convenient web-based parts ordering
- Experienced part specialists
- Lifetime CNC parts support

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

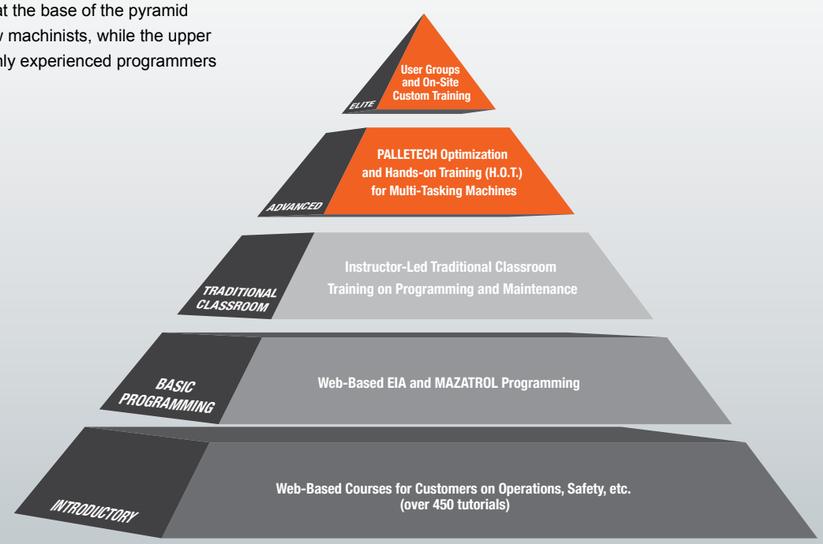
PROGRESSIVE LEARNING

Mazak's Progressive Learning represents a unique, phased approach to education and training for customers, combining hands-on training, web-based instruction and real-world examples. The program's tiers of offerings – Pyramid of Learning – range from self-paced coursework to highly advanced classes. Every Mazak machine includes three years of programming training at no charge to customers.

Mazak's Pyramid of Learning is a visual representation of its approach to training. The lower levels at the base of the pyramid represent basic skills education for new machinists, while the upper levels signify advanced training for highly experienced programmers and operators.

Pyramid of Learning levels include:

- Simple online training
- Introductory programming training
- Traditional hands-on training
- Advanced training
- Customized training



Financing

Mazak Credit Group

As a wholly owned subsidiary of Mazak Corporation, Mazak Credit Group is one-stop choice for manufacturers throughout the United States and Canada that want fast, hassle-free, low-cost financing on a QTU Series machine or any other piece of Mazak equipment. With complete knowledge of Mazak's product portfolio, Mazak Credit provides factory terms that can work to customer advantages. Plus, its direct access to machine specifications, delivery schedules and installation dates eliminates any additional paperwork or a delay in the approval or shipment process.

Advantages of working with Mazak Credit Group:

- Approval of up to $350,000 with a simple credit application (subject to credit approval)
- Quick turnarounds on highly competitive lease and loans with no blanket liens
- Waive security deposits
- Apply machine deposits directly toward advanced rents, fees or monthly rental payments
- Offer 3 to 5 years financing on all Mazak equipment
- Preserve bank credit lines for working capital and your company’s growth
- Structure true leases for off-balance sheet accounting treatment and maximum cash flow
- Online credit application

MCC Credit Group

Optimum Plus Directory

North American Service

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Training Supervisor
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After Hours Service

800-231-1456

QTU SERIES

Mazak

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