



M08SY

CNC Lathe with Y-Axis

Speed, Accuracy, Rigidity

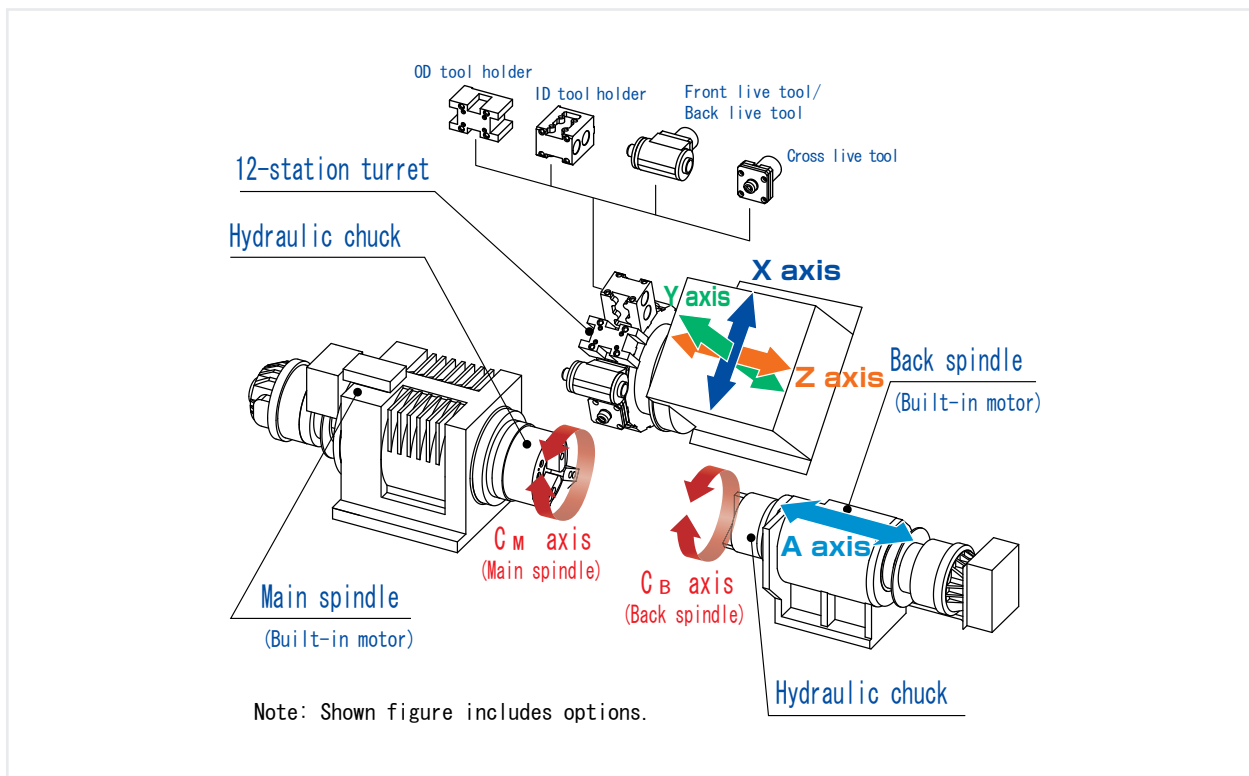


- Turning Center with Back Spindle & Y-Axis
- Powerful Milling Capability
- Designed For High Productivity
- Live Tool Capability on All Positions
- Value-Priced, Fast ROI
- Small Footprint Machine

THE RIGHT INGREDIENTS FOR SUCCESS

Capability

The M08SY allows you to perform highly complex machining, such as turning, drilling, boring, cross-drilling and milling. Both the main and back spindles are equipped with state of the art integral servo motor spindles which minimize vibration and provide superior responsiveness for heavy duty cutting and fine finishing of workpieces. The Y-axis control enables diverse, off-center machining of complicated parts, plus incorporating the back spindle eliminates the need for secondary operations.



M08SY (8 inch chuck)

Max. machining diameter: $\varnothing 280/\varnothing 65$ mm ($\varnothing 11.02/2.56$ in.) (Barstock), Max. machining length: 380 mm (14.96 in.)

Flexibility

Ideal for a wide range of applications, the M08SY is built for high-accuracy, high-productivity machining. The Y axis allows for turret tool positioning above or below center. The robust 12 position turret mounted to the Y axis allows for driven tooling to be mounted at any turret position for use on the main or back spindles. This tool zone flexibility coupled with the C axis provides you with the capability and flexibility to machine virtually any feature and drop your part complete in one clamping.

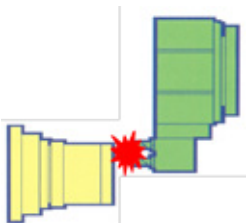
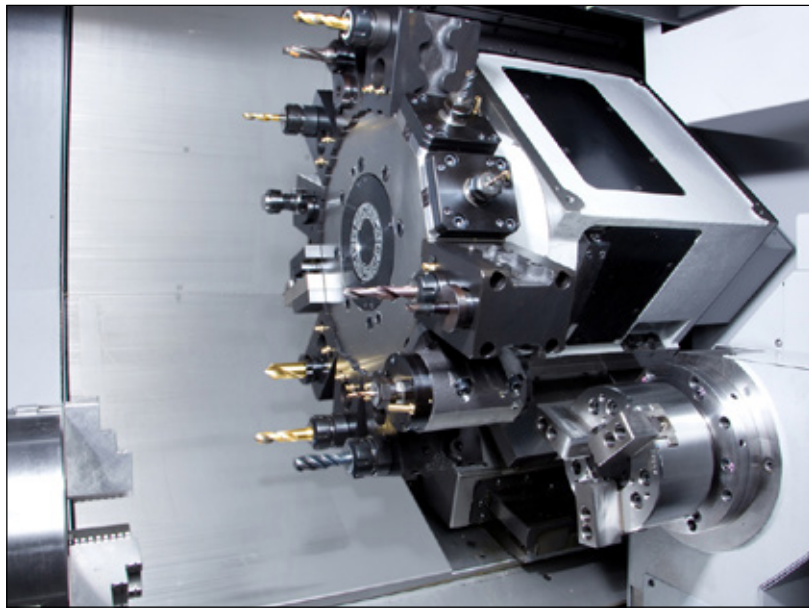
Reliability

The M08SY is built for the long haul and features a very robust yet compact base. The X and Y features massive box way construction allowing for superior rigidity and dampening when taking heavy cuts. The Z slide is comprised of heavy duty linear roller ways for speed and rigidity. The three axes are designed for exceptional accuracy and long machine life.

The X axis has a thermal compensation package as standard. Compensation is performed by measuring the thermal displacement by the touch sensor installed on the X-axis slide. It allows you to choose your compensation timing, whether between every part cycle or over a predetermined amount of time.

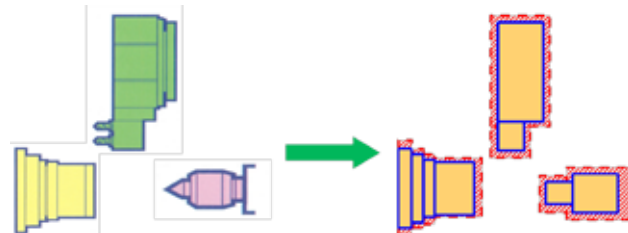
For extra peace of mind, the machine, motors and CNC control are covered by Tsugami's industry leading two-year parts and service warranty.

Work Zone



Retraction Function By Abnormal Load Detection (Standard)

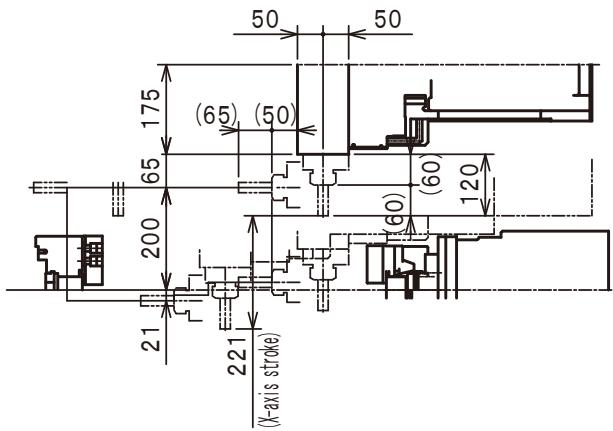
When the load level exceeds the set level, which can result in collision and cutting tool breakage, an alarm will sound and cause the slide to retract immediately to minimize machine damage.



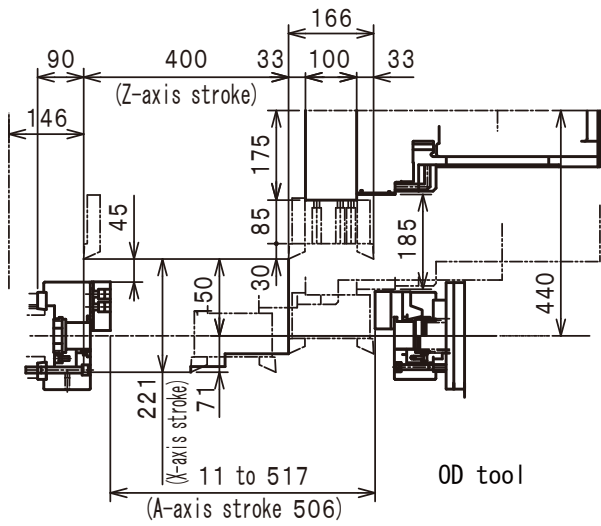
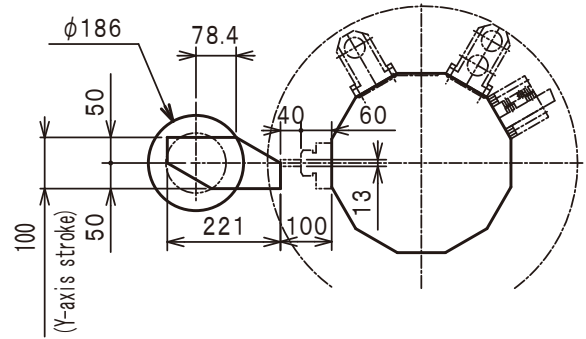
Interference Prevention Function at Debug Mode (Standard)

Creates a rectangular area from the machine components as the interference area. (Red shaded area is interference area). When the machine enters into the interference area in debug mode, the axis stops moving and the alarm sounds. Settings of interference area can be adjusted.

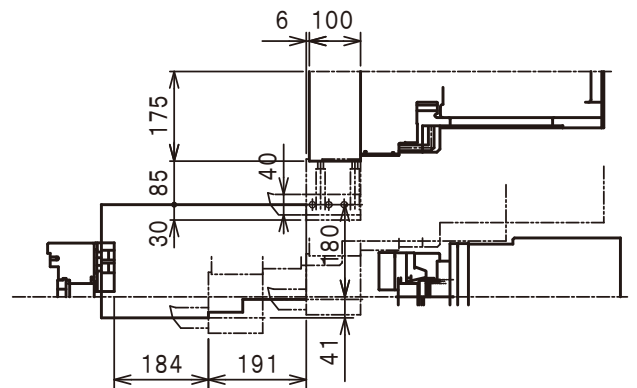
WORK ZONES / MODULAR TOOLING



Live tool



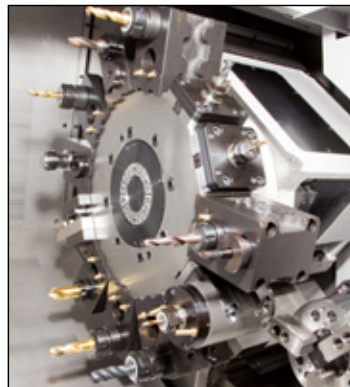
OD tool



ID holder



Back Spindle



Work Zone

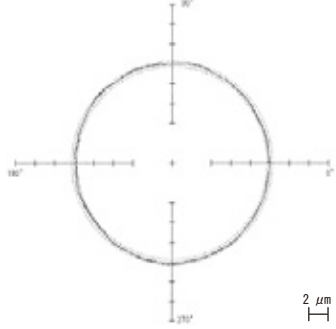


Tool Setter Option

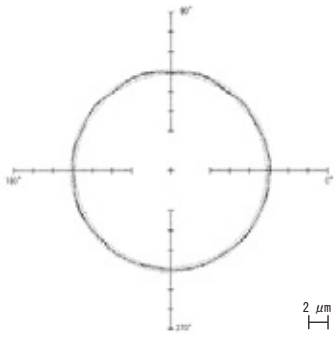
High Accuracy Machining

Roundness

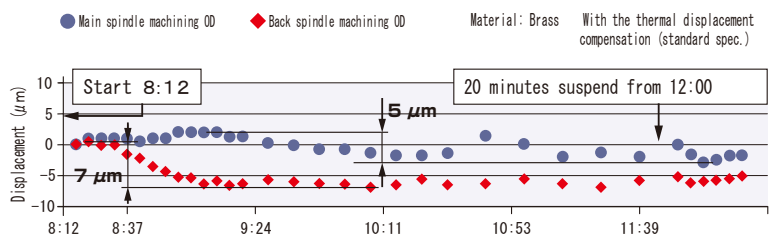
Main spindle
Roundness: 0.4 μm
Natural diamond tool



Back spindle
Roundness: 0.4 μm
Natural diamond tool

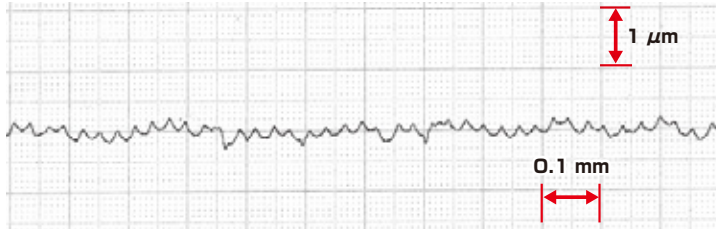


Continuous machining accuracy without warm-up operation: Main spindle: 5 μm / Back spindle: 7 μm



Surface roughness

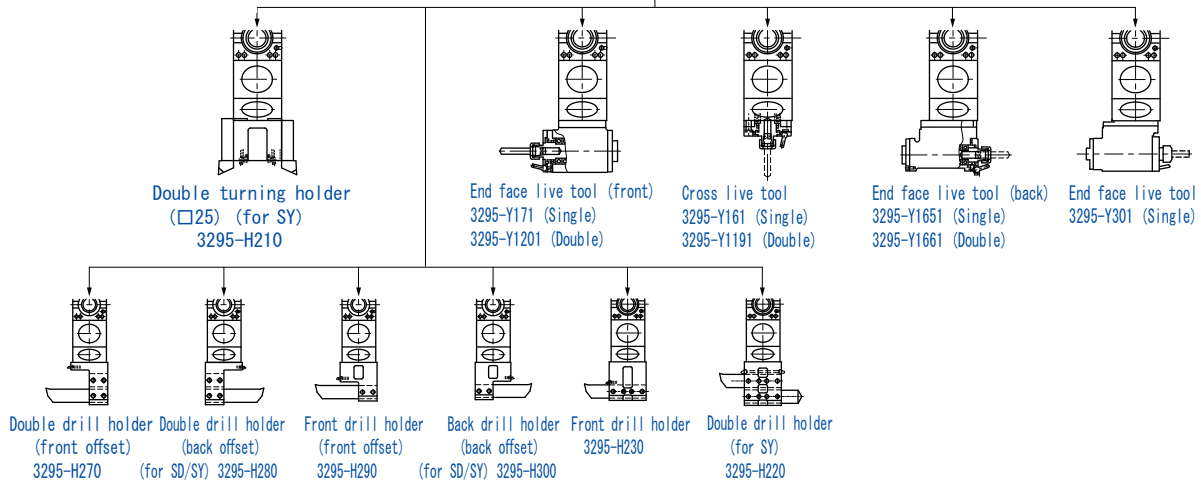
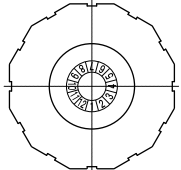
Material: Brass



$R_a = 0.06 \mu\text{m}$ Longitudinal magnification = 10,000
 $R_z = 0.36 \mu\text{m}$ Lateral magnification = 100

Note: The accuracy described above may not be obtained according to machined material, processing condition or the ambient environment.

Tool Holder (Option)



MACHINE SPECIFICATIONS

Standard Specifications

ITEM	M08SY
Max. machining diameter	ø280/ø65 (Barstock) mm (ø11.02/ø2.56 (Barstock) in.)
Max. machining length	380 mm (14.96 in.)
Chuck size	8 inch
Max. spindle speed	4,500 rpm
Shape of spindle end	JIS A2-6
Main spindle bore	ø73 mm (2.87 in.)
Spindle bearing ID	ø100 mm (3.94 in.)
Number of stations	12
OD tool shank	25 mm (.98 in.)
Drill holder hole diameter	ø40 mm (1.57 in.)
Max. back spindle speed	4,500 rpm
Back spindle end	ø140 flat
Back spindle bore/Back spindle bearing ID	ø59/ø80 mm (ø2.32/ø3.15 in.)
Back spindle chuck	6 inch
Max. live tool speed	5,000 rpm
Main spindle motor	7.5/11 kW (10/14.8 hp)
Back spindle motor	5.5/7.5 kW (7.4/10 hp)
Live tool motor	2.2 (30 min-1)/3.7 (15 min-1) kW
X/Z-axis motor	1.8 kW (2.4 hp)
A/Y-axis motor	A: 1.2 kW Y: 1.8 kW (A: 1.6 hp Y: 2.4 hp)
Stroke X/Z	X: 221 mm Z: 400 mm (X: 8.70 in. Z: 15.75 in.)
Stroke A/Y	A: 506 mm Y: ±50 mm (A: 19.92 in. Y: ±1.97 in.)
Rapid traverse rate X/Z	X: 24 m/min Z: 27 m/min (X: 945 ipm Z: 1,062 ipm)
Rapid traverse rate A/Y	A: 30 m/min Y: 12 m/min (Z: 1,181 ipm Y: 472 ipm)
Power source requirements	30 kVA
Compressed air requirement	0.5 Mpa
Air discharge rate	100 NL/min
Size (width x depth x height)	2,470mm x 1,850mm x 1,930mm (97.24 in. x 72.83 in. x 75.98 in.)
Weight	5,900 kg (13,007 lbs)

Included Accessories

ITEM
Chip conveyor Hinge type - right side discharge
Work catcher with conveyor
Sub spindle chuck 6" - 3 Jaw Hollow
(4) Double turning holder
(4) Double drill holder
(2) Boring sleeve (1" x 5/8")
(2) Boring sleeve (1" x 3/4")
(2) Cross drill head
(2) Front/back drill head
Work stopper
Cut-off holder
Internal illumination light
Door interlock
Turret-through coolant
Hydraulic cylinder unit
Standard tools
Plate, leveling bolt
Transit clamps
Spindle air purge
Touch switch
Live tool rigid tap
Main/Back spindle C-axis (with brake)

Options

ITEM
Foot switch
Tool setter - manual swivel type
Collet chuck

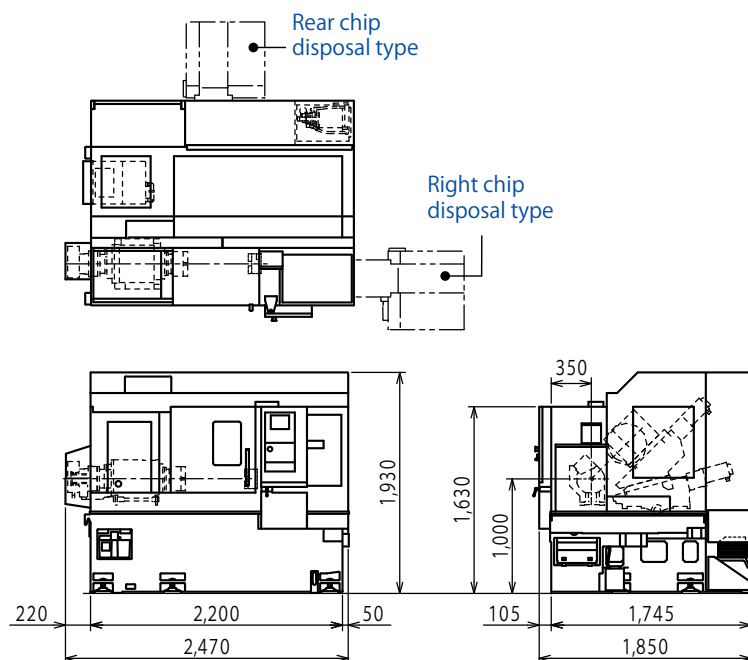
NC SPECIFICATIONS

NC Unit

ITEM	M08SY
NC unit	FANUC Oi-TD
Controllable axes	X, Y, Z, C _M , C _B , A
Least input increment	0.001 mm (.000040 in.)
Maximum commandable value	± 8 digits
Interpolation method	Linear / circular
Cutting feed rate	1 to 6,000 mm/min (1 to 236 in/min)
Feed rate override	0 to 150%, 10% step
Dwell	G04, 0 to 99999.999
Absolute/incremental command	X, Y, Z, C _M , C _B , A: Absolute U, V, W, H _M , H _B : Incremental
Tool offset value	± 6 digits
Tool offset pairs	64 pairs
LCD/MDI	8.4" color LCD
Display language	English
Part program storage size	1 MB (equivalent to tape length 2,560 m)
No. of registerable programs	800
Miscellaneous function	M4 digits
Spindle function	S4 digits
Tool function	T4 digits

NC Accessories

ITEM	M08SY
Chasing function	Standard
Continuous thread cutting	Standard
Manual pulse generator	Standard
Memory card I/O interface	Standard
RS232C I/O interface	Option
Back ground editing	Standard
Run time/parts number display	Standard
Custom macro	Standard
Constant surface speed control	Standard
Tool geometry / wear offset	Standard
Programmable data input	Standard
Chamfering and corner R	Standard
Multiple repetitive cycle	Standard
Expanded program editing	Standard
Direct drawing dimension input	Standard
Inch/metric conversion	Standard
Canned cycle for drilling	Standard
Rigid tapping	Standard
Abnormal load detection	Standard
Manual handle retrace	Option
Variable-lead thread cutting	Standard
Thread cutting cycle retract	Standard
Cylindrical interpolation	Standard
Polar coordinate interpolation	Standard
Helical interpolation	Option
MANUAL GUIDE i	Option



“Our machining challenge was to manufacture parts complete, eliminating secondary operations. We looked at competitive machines, but ultimately chose Tsugami based on reliability, cost and service. Tsugami machines have the attachments to make the simplest to the most difficult parts we manufacture.”

ED GAJEWSKI

President/Owner, Gage Manufacturing Inc. | Elk Grove, IL

“I would recommend Tsugami to others in the industry because the machines are well-rounded, versatile and backed by exceptional support. Our Tsugami machines have helped us stay on the cutting edge of technology and remain competitive in the markets we serve.”

ROB REDDEN

Sales Engineering Manager, MultiSource Manufacturing | Ramsey, MN

DISTRIBUTION NETWORK

The Robert E. Morris Company

Serving: CT, MA, RI, NH, VT, ME, NY, NJ
www.robertemorris.com

Morris South

Serving: NC, SC, GA, VA, AL, MS, TN, AR, FL
www.morrissouth.com

Technical Equipment

Serving: OH, IN, KY
www.techequip.com

Morris Great Lakes

Serving: NY, PA, WV
www.morrisgreatlakes.com

Morris Midwest

Serving: MN, WI, IL,
MI upper peninsula, ND, SD
www.morrismidwest.com

The Lance Co.

Serving: PA, NJ, DE, MD
www.lanceco.com

Ellison Technologies

Serving: CA, WA, OR, NV
www.ellisontechnologies.com

Rem Sales Direct

Serving: MI
www.remsales.com

Hartwig, Inc.

Serving: MO, IL, IA, KS, CO, OK, TX, LA
www.hartwiginc.com

Protecnic de México, S.A de C.V.

Serving: Mexico
www.protecnic.com.mx

Arizona CNC

Serving: AZ
www.arizonacnc.com

EMEC

Serving: Canada
www.emecmt.com

Haas Factory Outlet

Serving: FL
www.haasflorida.com

Network Machinery

Serving: MI
www.networkmachinery.com

Thomas Skinner

Serving: Western Canada
www.thomasskinner.com



910 Day Hill Road, Windsor, CT 06095

860-687-3400 Phone | 860-687-3401 Fax | www.remsales.com | sales@remsales.com