



TSUGAMI
AMERICA

SS38MH-5AX

CNC MULTIFUNCTION LATHE

- 38mm Capacity Chucker Convertible Multifunction Swissturn
- Simultaneous Five Axis Contour Capability
- 20,000 rpm B Axis Tool Spindle with 40 Tool Carousel
- Sub Side Y Axis with 5 Driven Tool Positions, 5 Static Tool Potions
- Direct Drive Guide Bushing
- FANUC 31i-B5 CNC Control

tsugamiamerica.com

SS38MH-5AX

MULTIFUNCTION LATHE WITH B-AXIS

SPEED

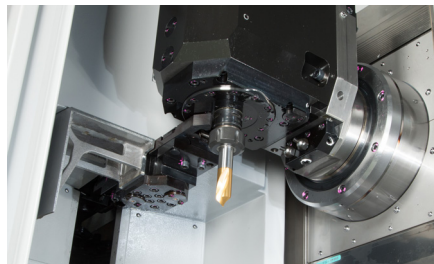
- The SS38MH-5AX's backworking overlap with live tool capability allows for multiple tools in the cut, and shorter cycle times.
- Equipped with an automatic tool changer and a 40 tool magazine, 10 tools on the back tool post and 2 deep hole drill positions.
- 5 modular type live tools on back tool post for optimum allocation of machining capability.
- Add a Chucker Kit to convert from a traditional sliding headstock to standard lathe-type chucker mode.

ACCURACY

- High efficiency toggle clamp type collet actuator reduces cycle time and eliminates expensive chucks and actuators.
- The CAPTO C4 tooling in the automatic tool changer can be either fixed (for turning) or driven (for drills, mills, taps, etc.) in all tool magazine locations.
- The linear glass scales on the X1, X2, Y1, and Z1 axis slide ensure high accuracy machining and repeatability.

RIGIDITY

- The SS38MH-5AX is built on a heavy duty one piece cast iron base with thermally symmetrical construction. A more rigid platform allows higher speeds and feeds, and heavier depth of cut.
- For extra peace of mind, the machines, motors, and FANUC controls are covered by an industry leading two-year parts and service warranty.



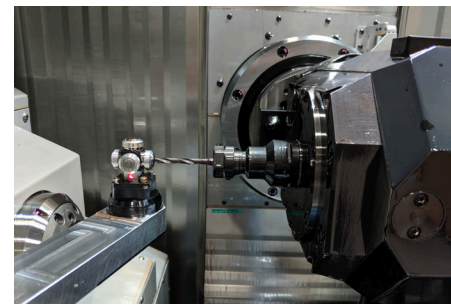
SS38MH-5AX Tool Zone



SS38MH-5AX Back Tool Post



SS38MH-5AX Tool Magazine



SS38MH-5AX Tool Presetter

ACCESSORIES

Your SS38MH-5AX can be accessorized with various tooling options. Some of these options include:



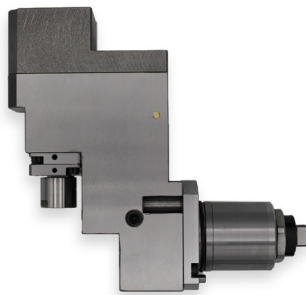
Back Tool Spindle



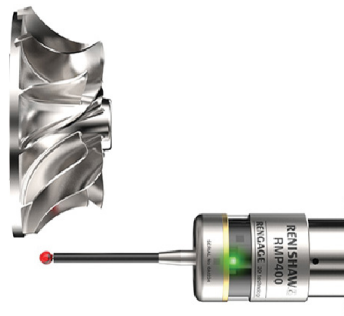
Quick Change Tooling



Static Adapter



Back Cross Tool Spindle



High-Accuracy Reinshaw Machine Probe

Our team can create anything needed to transform your tool zone to fit your part and process.

NEED SOMETHING CUSTOM?

From the machine Make Ready process, to integrating mechanical and robotic loading and unloading systems, to custom tool creation and spindle repair, IMG is dedicated to supporting all Tsumagi users in North America!



Grinding Room



Make Ready Facility



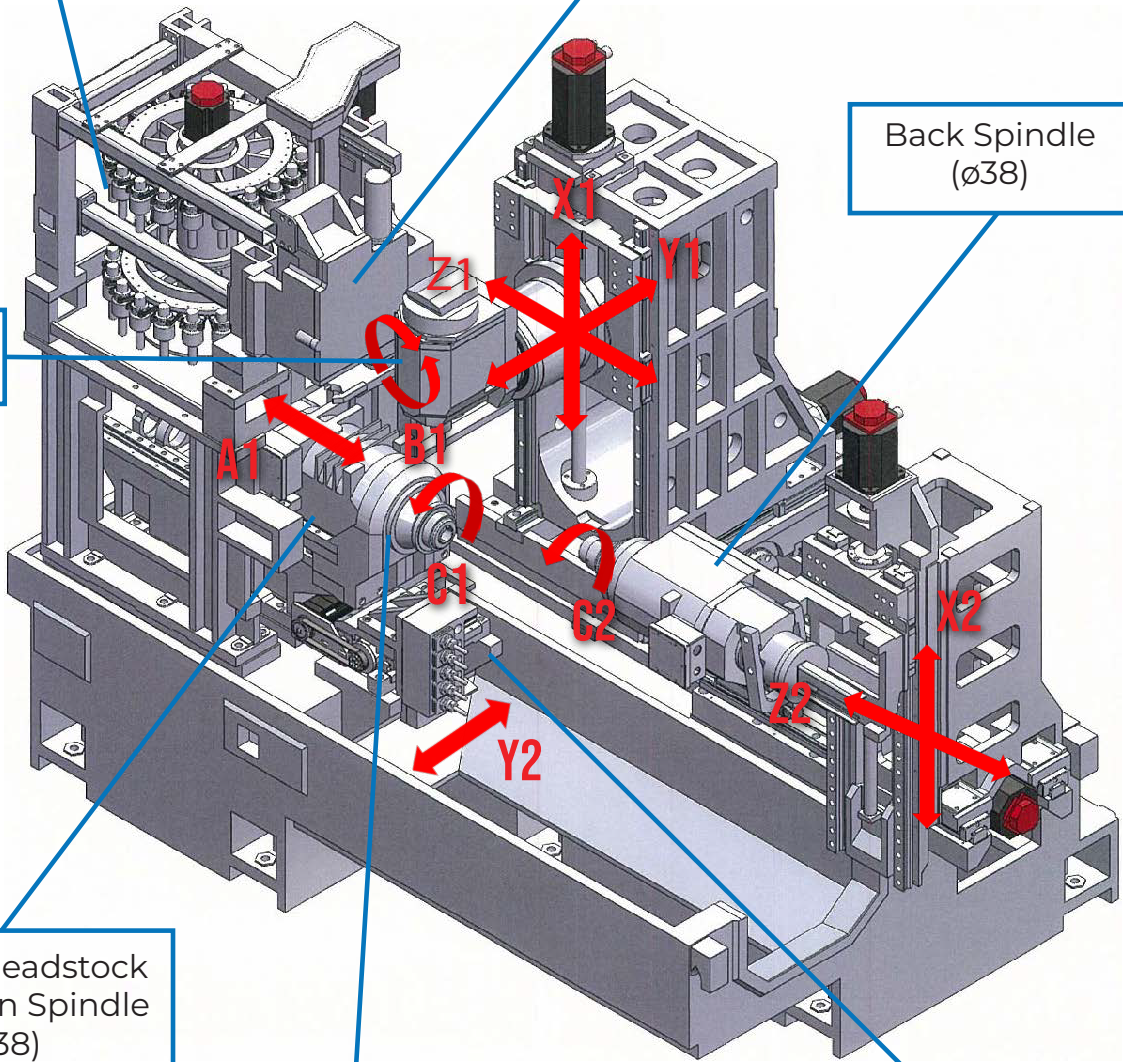
Milling Room

40-Tool Magazine
(CAPTO C4)
Tools and holders are option

ATC (Arm Type)

Back Spindle
($\phi 38$)

Tool Spindle



Sliding Headstock
Type Main Spindle
($\phi 38$)

Guide-bushless or
Direct-drive guide bushing
Standard Chucker Kit

Back Tool Post
(Live x 5, Fixed x 5)
Modular type live tool (tool spindle)
and fixed tool (drill holder) are standard.



MACHINE STANDARD SPECIFICATIONS

STANDARD SPECIFICATIONS

ITEMS	SS38MH-5AX
Max. Machining diameter	1.5 in / 38 mm
Max. Machining length	3.9 in / 100 mm (Chucker Mode) 1.5 in / 300 mm (Direct-drive guide bushing)
Max. Main spindle drilling diameter	.63 in / 16 mm
Max. Back spindle drilling diameter	.5 in / 12 mm
Max. Main spindle tapping diameter	M12
Max. Back spindle tapping diameter	M12
Max. Tool spindle drilling diameter	.5 in / 12 mm
Max. Tool spindle tapping diameter	M12
Max. Back tool post drilling diameter	.4 in / 10 mm
Max. Back tool post tapping diameter	M8
Max. Back tool spindle drilling diameter	.3 in / 8 mm
Max. Back tool spindle tapping diameter	M6
Main/Back spindle speed	200 to 7,000 rpm
Tool spindle speed	200 to 20,000 rpm
Least increment of B-axis index angle	0.001 (continuous)
B-axis index angle	-15° to 195°
Main spindle/back spindle index angle	0.001 (continuous)
Back tool post (modular type live tool)	Max speed: 6,000 rpm
Back tool post (fixed tool)	25 mm/5 tools
Tool selection	Specified address, random indexing
Tool storage capacity	40 Tools
Tool interface	CAPTO C4
Rapid traverse rate	32 m/min
Main/Back spindle motor	7.5/5 Hp (5.5/3.7 kW)
Tool spindle motor	15/7.5 Hp (11/5.5 kW)
X1 motor	3.6 Hp (2.7 kW)
Y1, X2, Z2 motor	3.5 Hp (2.5 kW)
Z1 motor	4 Hp (3.0 kW)
Back rotary tool motor	1.4 Hp (1.0 kW)
Y2 axis, Tool magazine, ATC, Transfer motor	0.7 Hp (0.5 kW)
A1 motor	1 Hp (0.75 kW)
Coolant tank capacity	180 L
Compressed air requirement	0.4 MPa or above
Air discharge rate	280 NL/min
Size (width x depth x height)	116 x 79 x 85 in (2,930 x 2,000 x 2,160 mm)
Weight	15,652 lbs (7,100 kg)

MACHINE ACCESSORIES

ITEMS	SS38MH-5AX
Main spindle adapter	Standard
Back spindle adapter	Standard
Door interlock (Tooling zone side door/Main spindle side door)	Standard
Coolant flow switch	Standard
Spindle cooling unit	Standard
Standard tools	Standard
Main/back spindle C axis	Standard
Main spindle air purge Back spindle air purge Tool spindle air purge	Standard
Periodic maintenance screen	Standard
Automatic power shut off	Standard
Direct drive guide bushing	Standard
Guide-bushless	Standard
Tool spindle	Standard
Back tool adapter	Standard
Drill holder	Standard
Deep hole drill holder	Standard
Bar feeder interface	Standard
Work conveyor	Standard
Front discharge	Standard
Rear discharge	Option
Signal indicator	Standard
Tool checker	Standard
Chip conveyor	Option
Oil-mist separator	Option
Spindle-through coolant	Standard
Automatic fire extinguisher	Option

NC SPECIFICATIONS

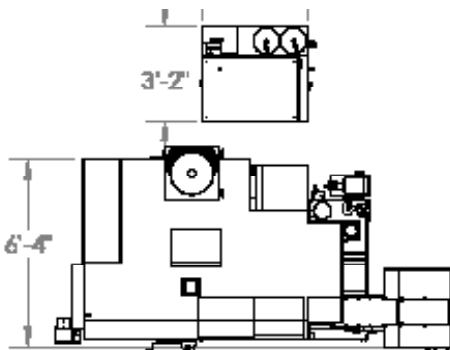
NC UNIT

ITEMS	SS38MH-5AX
NC Unit	FANUC 31i-B5
Controllable axes	X1, Y1, Z1, A1, X2, Y2, Z2, B, C1, C2
Least input increment	0.001 mm (X1/X2 axis in diameter)
Max. Programmable value	± 8 digits
Interpolation function	Linear / circular
Cutting Feed Rate	1 to 6,000 mm/min
Feed Rate Override	0 to 150 %, 10 % step
Dwell	G040 to 99999.99
Absolute/incremental command	X, Z, Y, A, C, B Absolute U, W, V, H Incremental
No. of tool offsets	Main: 160 Back: 40
LCD/MDI	10.4"color LCD
Display Language	English
Part program storage size	1 Mbyte (Total of all paths)
Auxiliary function	M5 digits
Tool function	T5 digits
Spindle function	S5 digits
Data Server	4 GB

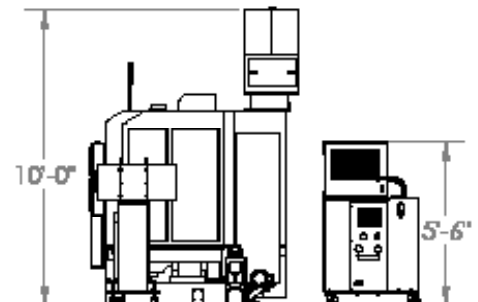
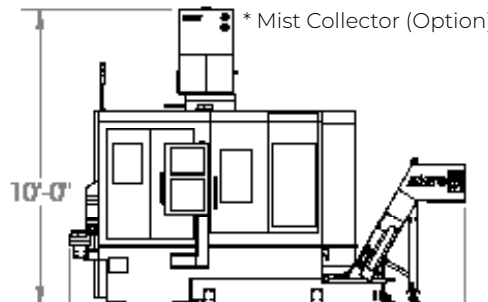
NC ACCESSORIES

ITEMS	SS38MH-5AX
Chasing function	Standard
Continuous threading	Standard
Manual pulse generator	Standard
Memory card interface and USB	Standard
Background editing	Standard
Run time and parts number display	Standard
Custom macro	Standard
Constant surface speed control	Standard
Synchronization control (rotation, phase)	Standard
Tool geometry / wear offset	Standard
Programmable data input	Standard
Chamfering corner R	Standard
Tool nose radius compensation	Standard
Multiple repetitive cycle	Standard
Expanded program editing	Standard
Canned cycle for drilling	Standard
Rigid tap (Main spindle, Back spindle, Tool spindle)	Standard
Spindle speed fluctuation detection	Standard
Three-dimensional coordinate conversion	Standard
Cut-off detection (differential)	Standard
RS232C Interface	Standard
Part Program storage size 2Mbyte	Option
Number of registrable programs expansion (1000)	Option
Tool Center Point Control	Standard
AI Contour Control	Standard
Nano Smoothing	Standard

* High Pressure Coolant Pump (Option)



* Mist Collector (Option)



Since 1978, Tsugami America (formerly known as Tsugami/Rem Sales) has been the exclusive source for Precision Tsugami CNC machine tools in North America. Headquartered in Windsor, CT, Tsugami America provides machine tools and engineering expertise through an extensive network of authorized distributors and technical centers. Technical support and customer service are available throughout North America. Our distributors' trained service personnel provide technical support throughout the long life-cycle of our Tsugami machine tools, and work hand-in-hand with Tsugami America's engineers to deliver common-sense solutions to everyday problems.

Our application engineers help customers tackle and solve the toughest high-precision manufacturing challenges, on-time and on-budget. We have a 40-year history and reputation of serving the needs of small parts manufacturers in North America with the highest level of expertise and customer care. Our industry-respected, knowledgeable staff is comprised of both long-time employees and fresh faces all who share a commitment to provide you, our customers, with the competitive advantage to "do more with less" every day.

DISTRIBUTION NETWORK

The Robert E. Morris Company

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

Morris Midwest Wisconsin & Illinois

Serving: WI, IL, MI Upper Peninsula
www.morrismidwest.com

Methods & Equipment Associates

Serving: MI
www.methods-equipment.com

Ellison Technologies

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

MAQUIPRIME

Serving: Mexico
www.maquiprime.com.mx

Morris South

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

Morris Great Lakes

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

Technical Equipment Sales Co

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

Hartwig, Inc.

Serving: MO, IL, IA, KS, CO, OK, TX, LA, MT, UT, NM, ID, WY
www.hartwiginc.com

Morris Midwest Minnesota

Serving: MN, ND, SD
www.morrismidwest.com

Precision 360

Serving: FL, PA, NJ, DE, MD
www.precision360.com

Arizona CNC

Serving: AZ, NV
www.arizonacnc.com

EMEC Machine Tools Inc.

Serving: Eastern Canada
www.emecmt.com

Thomas Skinner

Serving: Western Canada
www.thomasskinner.com

TSUGAMI AMERICA LOCATIONS

WINDSOR, CT

651 Day Hill Road
Windsor, CT 06095

FORT WAYNE, IN

4501 Earhart Drive, Suite B
Fort Wayne, IN 46809

BROOKLYN PARK, MN

9495 Winnetka Avenue N, Suite 100
Brooklyn Park, MN 55445

FULLERTON, CA

1521 E Orangethorpe Ave, Suite E
Fullerton, CA 92831

860-687-3400 | www.tsugamiamerica.com | info@tsugamiamerica.com

TSUGAMI AMERICA IS ISO 9001:2015 CERTIFIED QMS