

TSUGAMI
AMERICA

B0386-III

CNC PRECISION AUTOMATIC LATHE

- 38mm Capacity Chucker Convertible Swissturn
- Main Side Gang with 7 Turning Tools, 7 Driven Tools (3 Modular), and 5 ID Tool Positions
- Sub Side Y Axis with Driven Tool Positions (4 Standard), up to 32 Total Tools Available
- Oscillation Cutting Capable
- Direct Drive Guide Bushing
- Fanuc 32i-B CNC Control

tsugamiamerica.com

B0386-III

6-AXIS OPPOSED GANG TOOL SWISS CNC LATHE

SPEED

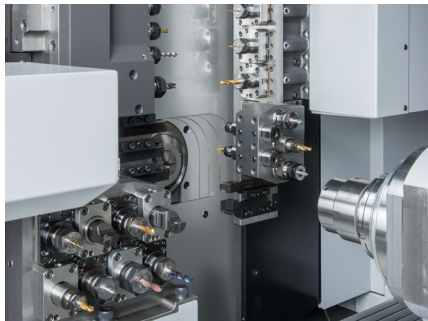
- The B0386-III is chucker convertible with overlap capabilities on the Y2 axis and its 8 modular driven tool positions (4 standard, 8 optional), meaning more work is done simultaneously to reduce your cycle time.
- Large linear guides and a three toggle collet clamping system, are just a few of engineering advancements made for optimal workholding, larger tools, and heavier cuts.
- Functions such as thread whirling, polygon turning, and angled drilling are available options to tackle whatever job comes in the door.

ACCURACY

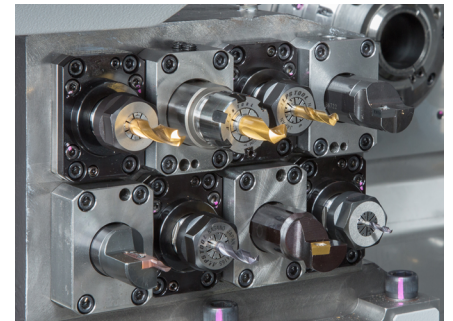
- Tsugami has a long-term reputation for machine accuracy. It all starts with their world-class engineering, incorporating symmetrically designed castings and an "A-frame" design of the gang slide. Utilizing the highest quality, motors, ball screws, rails and bearings assure precise motion control, and unique spindle cooling all work in concert and contribute to repeatable accuracy over the long life of the machine tool.

RIGIDITY

- Tsugami has the most rigid gang tool post in the industry due to opposing rail slides.
- Built on a heavy duty one piece cast iron base with thermally symmetrical construction, this machine features 0.1 micron axis resolution. A more rigid platform allows higher speeds and feeds.
- For extra peace of mind, the machines, motors, and Fanuc controls are covered by an industry leading two-year parts and service warranty.



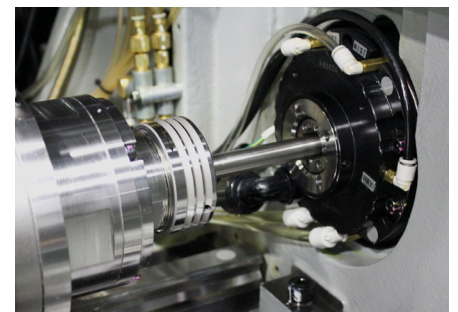
B0386-III Tool Zone



B0386-III Backworking Block

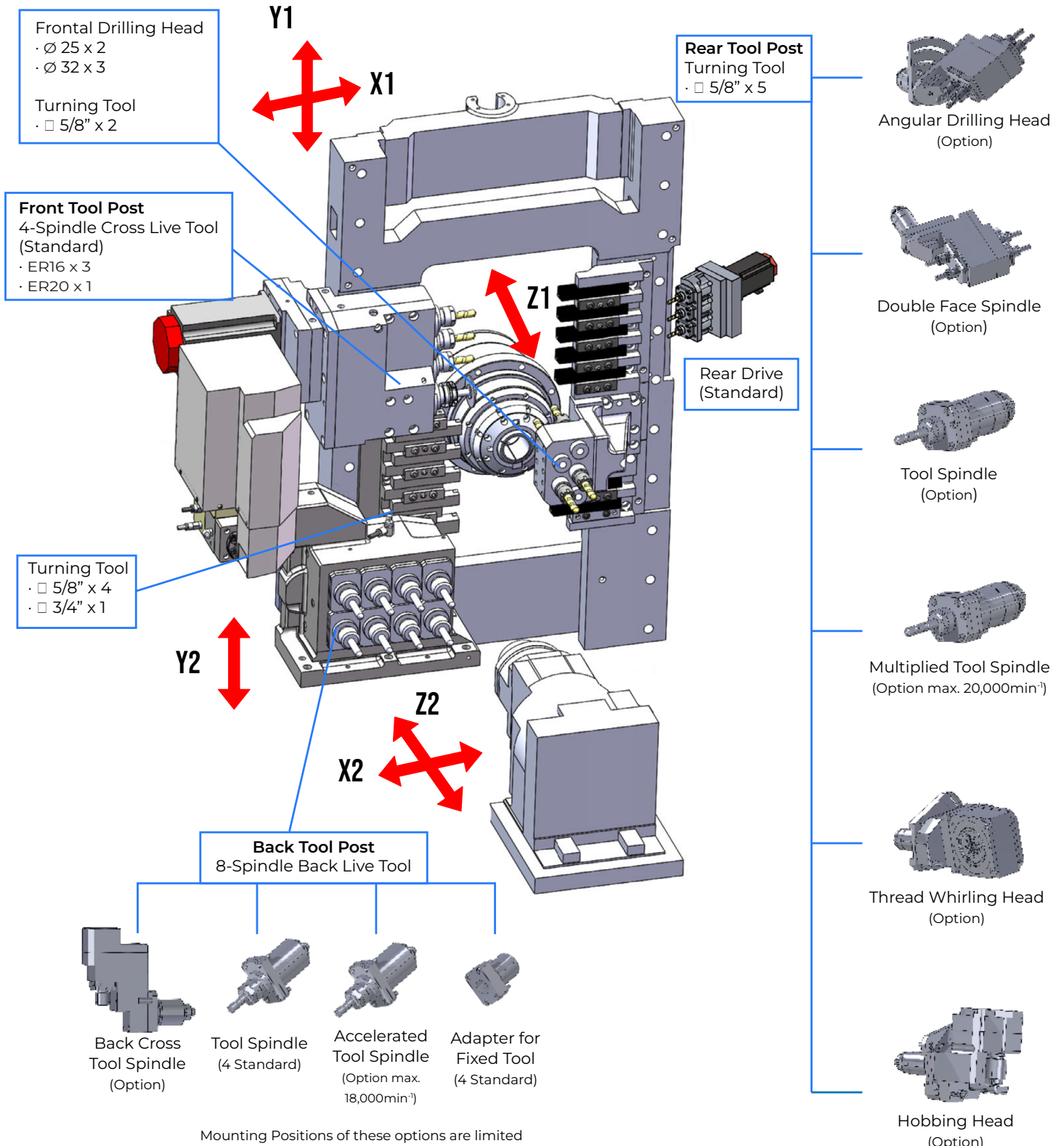


Chucker Mode



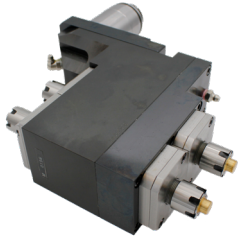
Servo Driven Guide Bushing

WORK ZONE & MODULAR TOOLING

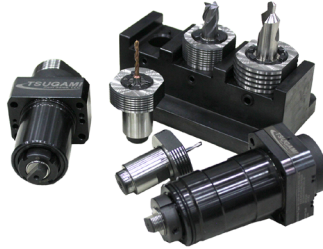


ACCESSORIES

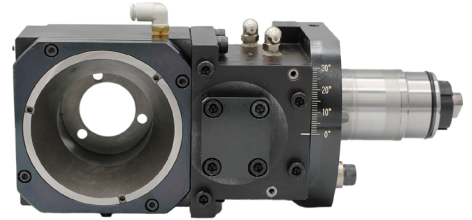
Your B0386-III can be accessorized with various tooling options. Some of these options include:



Double Face Spindle



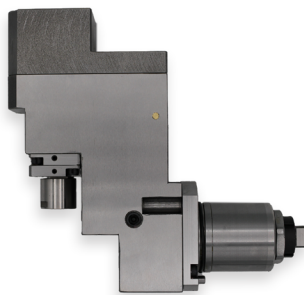
Quick Change Tooling



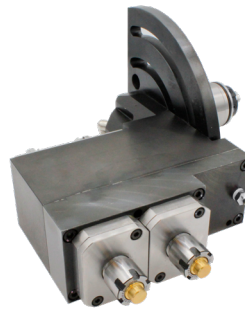
Thread Whirling Head



Back Tool Spindle



Back Cross Tool Spindle



Double Angular Drilling Head



Static Adapter

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 Tsgami users in North America!



Grinding Room



Make Ready Facility

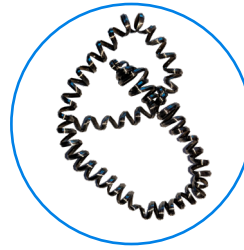


Milling Room

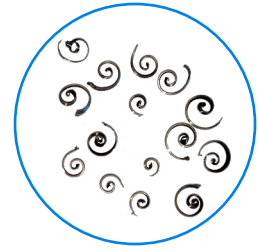
OSCILLATION CUTTING

Oscillation Cutting is a technological breakthrough that oscillates a servo axis to help break chips in tough to cut materials, reduces heat in the cut, while not diminishing tool life.

- Productivity is increased by significantly reducing operator interruption to remove hanging or bird nesting chips.
- Easy to program by special G code
- Oscillation parameters can be changed easily within the program for machining multiple features with multiple tools.
- Can be used for many machining operations including OD turning, drilling, boring, grooving, cutoff, circular interpolation, and most FANUC canned cycles.



**WITHOUT
OSCILLATION**

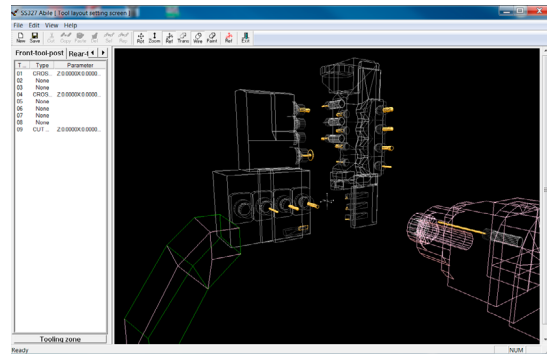


**WITH
OSCILLATION**

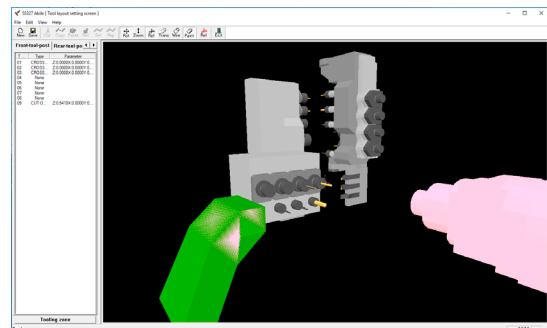
AVAILABLE ON ALL PATHS

ABILE SOFTWARE

- Developed by Tsugami, Abile is capable of programming moderately complex machined parts. Abile incorporates all basic machines featured and several material types with predetermined feed rates.
- Abile allows first time users to quickly become proficient with Swiss processing despite having limited knowledge. Abile comes free with your machine purchase and requires no license fees, maintenance agreements, or seat limitations.
- Abile allows you to generate a 2 or 3-path part program, complete, with specific and editable codes in standard FANUC G Code format. Abile automatically generates machine process and provides component run times.



Program Generator



Tool Setting

MACHINE STANDARD SPECIFICATIONS

ITEMS

B0386-III

MACHINING RANGE

Working Barstock Diameter	ø38 mm (1.50 in.)
Max. Machining Length	330 mm (12.60 in.) (with Guide Bushing) 70 mm (2.76 in.) (Chucker Mode)
Max. Main Spindle Drilling Diameter	ø13 mm (.51 in.)
Max. Main Spindle Tapping Diameter	M12
Max. Back Spindle Drilling Diameter	ø12 mm (.47 in.)
Max. Back Spindle Tapping Diameter	M12
Max. Cross Drilling Diameter	ø8 (Front tool post/Rear tool post/Back tool post)
Max. Cross Tapping Diameter	M6 (Front tool post/Rear tool post/Back tool post)
Max. Tool Spindle Slotting Cutter Diameter	ø45 mm (1.77 in.) (T4)
Max. Back Drilling Diameter	ø10 mm (.39 in.)
Max. Back Live Tapping Diameter	M8

MACHINING CAPABILITY

Main Spindle Speed	200 to 6,000 min ⁻¹
Back Spindle Speed	200 to 7,000 min ⁻¹
Rotary Guide Bushing Speed	200 to 6,000 min ⁻¹ : Direct-drive rotary guide bushing
Tool Spindle Speed	200 to 6000 min ⁻¹ (Normal speed 4800 min ⁻¹)
Total Tool Storage Capacity (Standard Spec)	32
Tool Size	5/8" (6 pcs), 3/4" mm (1 pc)
Rapid Traverse Rate	32 m/min (X1, Z1, Y1, Y2: 24 m/min)
Spindle Index	C1 Axis and C2 Axis

MOTORS

Main Spindle	10/15 Hp (7.5/11 kW)
Back Spindle	5/7.5 Hp (3.7/5.5 kW)
Cross Drill of Front Tool Post	200 to 6,000min ⁻¹ (Normal spindle speed 4,800min ⁻¹)
Cross Drill of Rear Tool Post Drive	200 to 6,000min ⁻¹ (Normal spindle speed 4,800min ⁻¹)
Rotary Tool of Back Tool Post	2 Hp (1.4 kW)
Y2 Axis	0.7 Hp (0.5 kW)
X1, Y1, Z1, X2, Z2 axis	1 Hp (0.75 kW)
Coolant Pump	0.5 Hp (0.4 kW)
Lubricating Oil Pump	3 W

OTHER

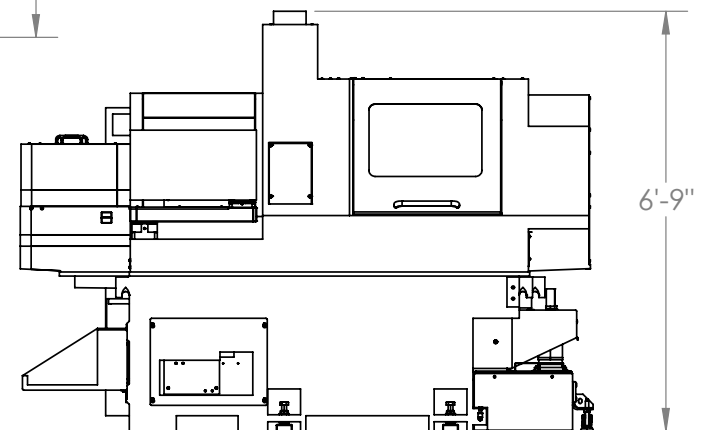
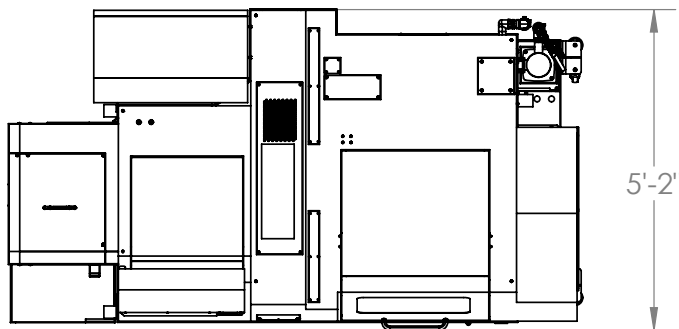
Compressed Air Requirement	0.4 MPa or above
Air Discharge Rate	100 NL/min
Power Source Requirements	22.4 kVA
Coolant Tank Capacity	260L
Width x Depth x Height	2,240 x 1,515 x 2,050 mm/ 88 x 60 x 81in
Weight	4,850 kg / 10,694 lbs.

NC SPECIFICATIONS

ITEMS

B0386-III

NC Unit	FANUC 32i-B
Controlled Axes	X1, Y1, Z1, X2, Y2, Z2, C1, C2
Least Input Increment	0.001mm (Diametrical designation for X1, X2 axes)
Least Command Increment	X1, X2 axes 0.0005 mm, other axes 0.001 mm
Maximum Programmable Value	± 8 digits
Interpolation Method	Linear/Circular
Rapid Traverse Function	32 m/min (X1, Y1, Z1, Y2: 24 m/min)
Feedrate Function	1 to 6,000 mm/min
Feedrate Override	0 to 150%, 10% step
Dwell	G04 0 to 99999.999
ABS/INC Command	G04, 0 to 99999.999
Tool Offset Pairs	99, Each Path
LCD/MDI	10.4" color LCD
Display Language	English
Part Program Storage Size	256 Kbytes
Registrable Programs	63 (main/back in total)
Spindle Function	S Code 5 digits
Tool Function	T Code 4 digits



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 35-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.

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