

TSUGAMI
AMERICA

S206-II

CNC PRECISION AUTOMATIC LATHE

- 20mm Capacity Swissturn
- 8 Backworking Live Tools (4 Standard)
- Direct Drive Rotary Guide Bushing
- High Rigidity Bed
- Oscillation Cutting Capable
- Direct Drive Guide Bushing
- FANUC 32i-B CNC Control

tsugamiamerica.com

S206-II

6-AXIS OPPOSED GANG TOOL SWISS CNC LATHE

SPEED

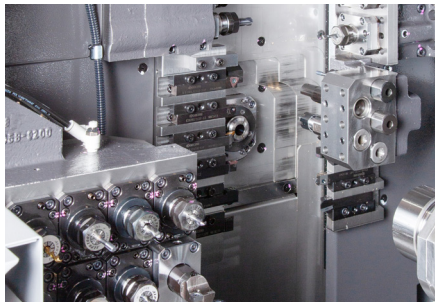
- Perform highly complex front and back simultaneous machining and reduce cycle time by utilizing the Y-axis on the back tool post.
- The S206-II is chucker convertible and features the state of the art Fanuc control for low idle times and high speed cutting.
- The horizontally opposed gang tool layout offers the shortest path tool to tool and therefore, the quickest possible chip to chip time.
- Rounding out the features are integral servo spindle motors and servo driven bushing for fastest possible acc/dec times and quick C-axis positioning

ACCURACY

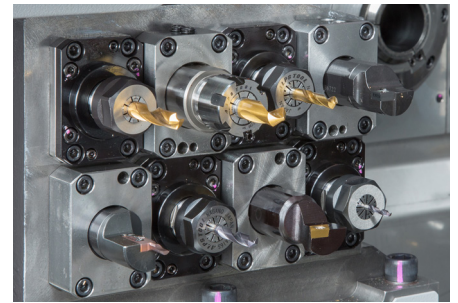
- Tsugami has a long-term reputation for machine accuracy. It all starts with their world-class engineering, incorporating symmetrically designed castings and an “A-frame” design of the gang slide. Utilizing the highest quality, motors, ball screws, rails and bearings assure precise motion control, and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

RIGIDITY

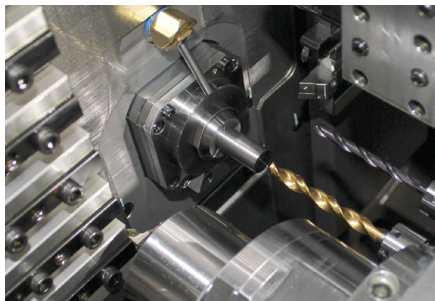
- Tsugami has the most rigid gang tool post in the industry due to opposing rail slides.
- Built on a heavy duty one piece cast iron base with thermally symmetrical construction, this machine features 0.1 micron axis resolution. A more rigid platform allows higher speeds and feeds.
- For extra peace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



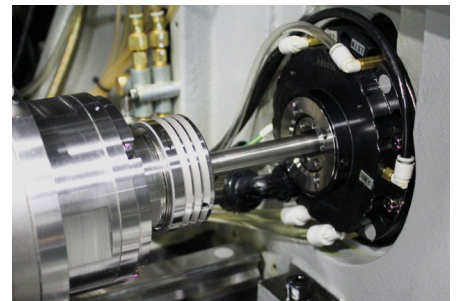
S206-II Tool Zone



S206-II Backworking Block

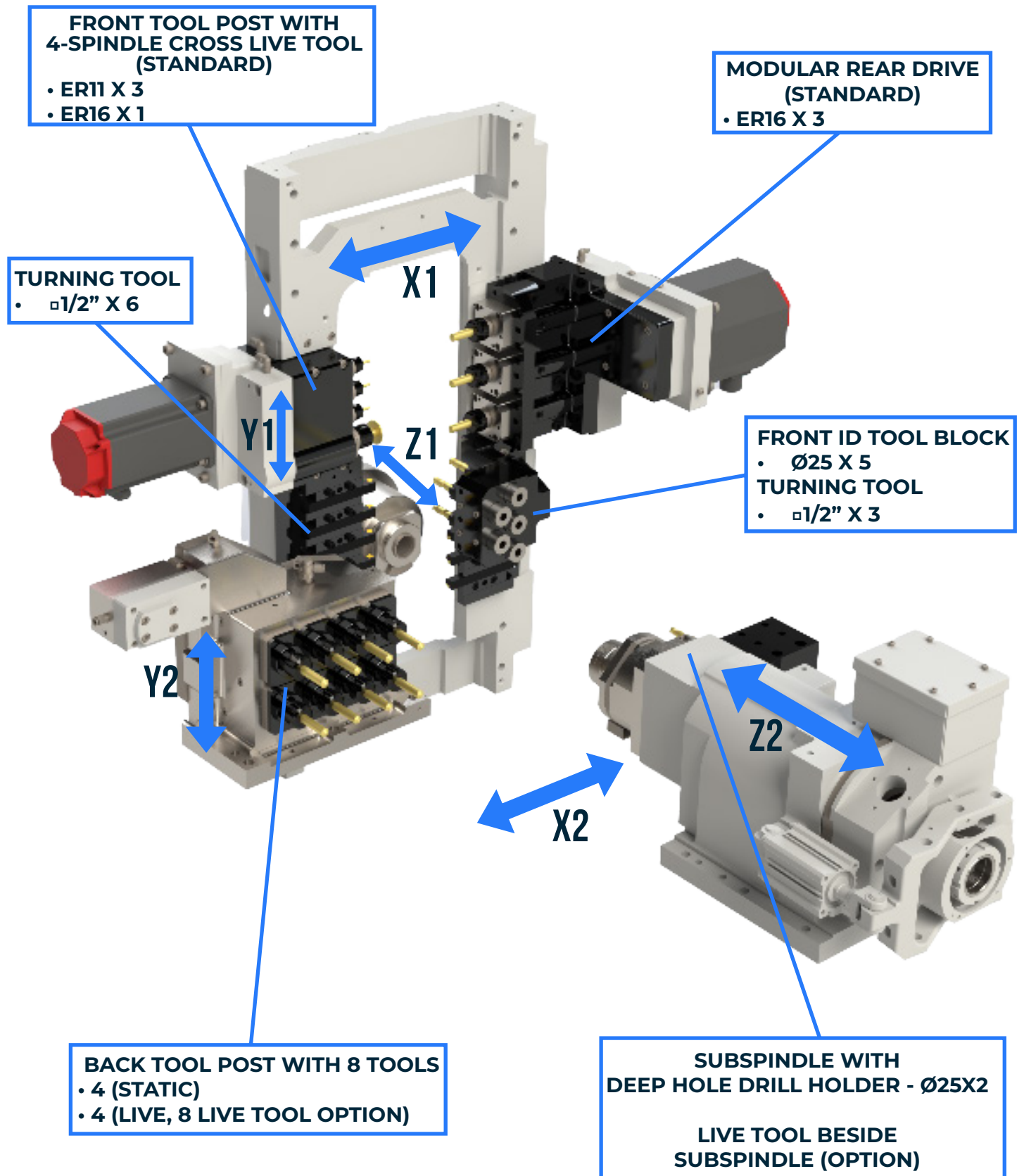


Deep Hole Drilling



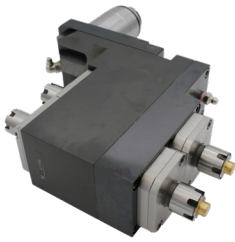
Servo Driven Guide Bushing

WORK ZONE & MODULAR TOOLING



ACCESSORIES

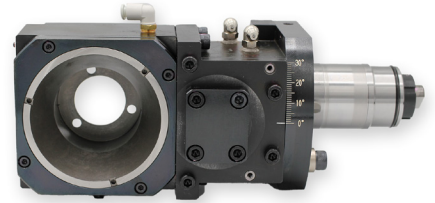
Your S206-II can be accessorized with various tooling options. Some of these options include:



Double Face Spindle



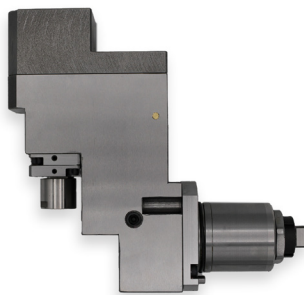
Quick Change Tooling



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

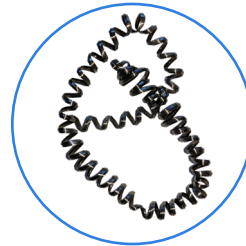


Milling Room

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**

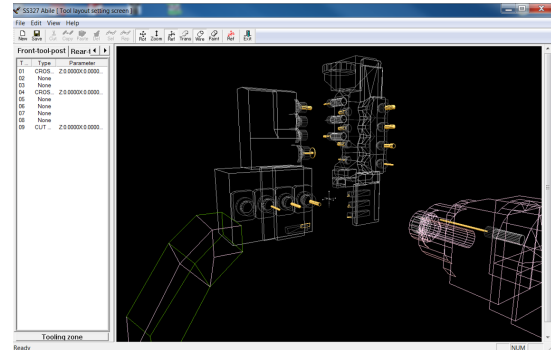


**WITH
OSCILLATION**

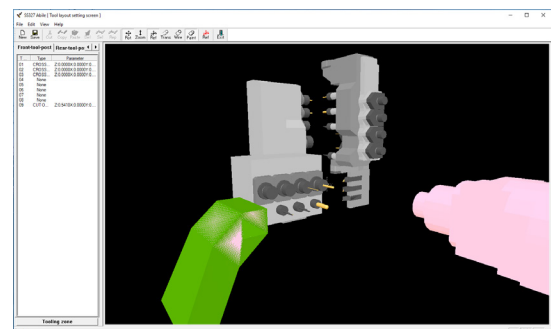
AVAILABLE ON ALL PATHS

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

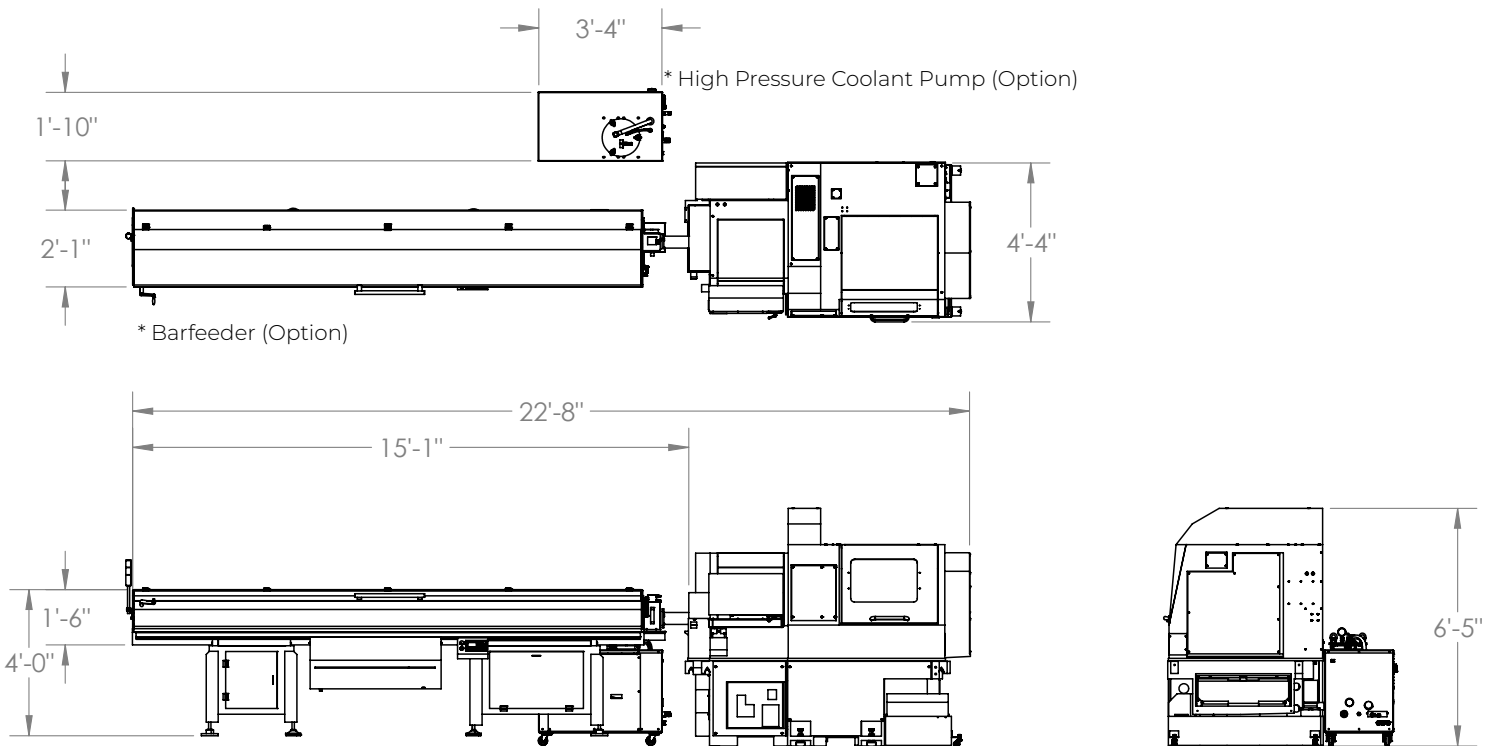
	ITEMS	S206-II
MACHINING RANGE	Working Barstock Diameter	ø20 mm (.79 in.) ø26 mm (1.02 in.) Option
	Max. Machining Length	210 mm (8.26 in.) (Rotary Guide Bushing) 45 mm (1.77 in.) (Chucker Mode)
	Max. Main Spindle Drilling Diameter	ø12 mm (.47 in.)
	Max. Main Spindle Tapping Diameter	M10
	Max. Back Spindle Chucking Diameter	ø20 mm (.79 in.)
	Max. Back Spindle Drilling Diameter	ø10 mm (.393 in.)
	Max. Back Spindle Tapping Diameter	M10
	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	ø30 mm (1.18 in.)
MACHINING CAPABILITY	Max. Back Drilling Diameter	ø8 mm (.31 in.)
	Max. Back Live Tapping Diameter	M6
	Main Spindle Speed	200 to 10,000 min-1
	Back Spindle Speed	200 to 10,000 min-1
	Rotary Guide Bushing Speed	200 to 10,000 min-1: Direct-drive rotary guide bushing
	Tool Spindle Speed	Cross tool spindle on front tool post: 200 to 10,000 min-1 Rear drive / Back drive: 200 to 8,000 min-1
	Total Tool Storage Capacity (Standard/Max. Option)	38/47
	Tool Size	.5 in. x .5 in. x 3.35 in.
	Rapid Traverse Rate	35 m/min (X1,Y1,Z2: 24 m/min)
	Controlled Axes (liner axes)	6-Axis
MOTORS	Main Spindle	3/5 Hp (2.2/3.7 kW)
	Back Spindle	(2.2/3.7 k 3/5 Hp (2.2/3.7 kW) W
	Axis	1 Hp (0.75 kW) - Y1,Z1,X2,Z2
	Cross Dill	Front 1.4 Hp (1 kW) - standard Rear & Back 2 Hp (1.4kW)
	Coolant Pump	0.4 Hp (0.4 kW)
OTHER	Lubricating Oil Pump	3 W
	Net Weight	3,750 kg (7,750 lbs.)
	Power Source Requirement	12.1 kVA
	Compressed Air Requirement	0.4 Mpa or above
	Air Discharge Rate	100 NL/min
	Coolant Tank Capacity	260 L
	Width x Depth x Height	2,150 x 1,270 x 1,970 mm (84.64 x 50 x 77.56 in.)

NC SPECIFICATIONS

ITEMS

S206-II

NC Unit	FANUC 32i-B
Controlled Axes	X1, Z1, Y1, X2, Y2, Z2, C1, C2
Least Input Increment	0.001 mm (X1/X2 axis in diameter)
Least Command Increment	X1, X2: 0.0005 mm, other axes: 0.001 mm
Maximum Programmable Value	± 8 digits
Interpolation Method	Linear/Circular
Feedrate Function	1 to 6,000 mm/min
Feedrate Override	0 to 150%, 10% step
Dwell	G04 0 to 99999.999
ABS/INC Command	X, Z, Y, C: Absolute U, W, V, H: Incremental
Tool Offset Pairs	99, Each Path
LCD/MDI	10.4" color LCD
Display Language	English
Part Program Storage Size	512 kbyte (equivalent to 1,280 m tape length)
Registrable Programs	1,000 (sum of main and back spindle NCs)
Miscellaneous Functions	Main: M Code 5-digits, Back: M Code 3-digits
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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