TSUGAMI
Rem Sales, LLC

B0205-III & B0206-III

CNC Precision Automatic Lathe

Speed, Accuracy, Rigidity

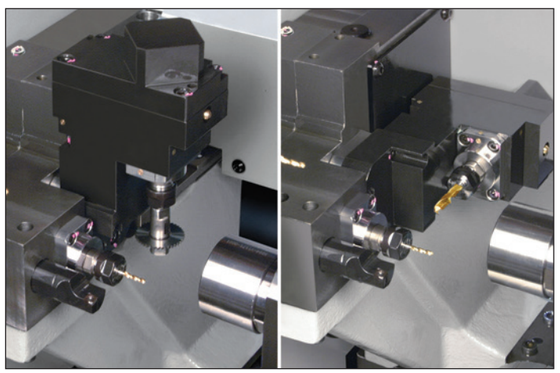


- 20mm Capacity Swissturn
- Designed For Superior Flexibility
- Electronic Integral Motor Guide Bushing
- Easy Access Tool Zone
- Front & Back Simultaneous Machining
- Chucker Convertible – in Minutes

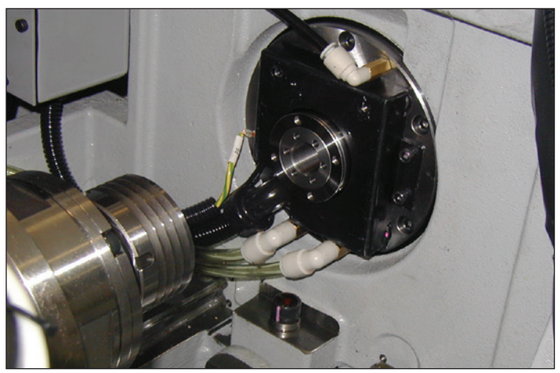
THE RIGHT INGREDIENTS FOR SUCCESS



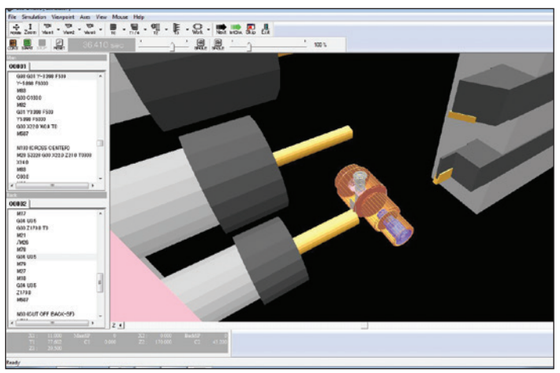
Chucker Convertible - in Minutes



B0205-III Live Backworking Options



Servo Driven Guide Bushing



Abile Part Programming Software Included

Capability

Tsugami B0205/B0206 allows you to perform highly complex front and back simultaneous machining, including off-center drilling, off-center tapping, end-milling or cross drilling on the back side by adding Y-axis on the back tool post (B0206). Plus, overlap capabilities mean more work is done internal to the part process. Cycle time can be significantly reduced using the B0206 Y2 axis and its cross and face driven tools.

Your B0205/B0206 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. The B0206 has Y-axis and live tooling on the sub spindle tool post allowing milling operations traditionally performed on the main spindle to be carried out on the sub spindle internal to the part process. Rounding out the features are integral spindle motors and an integral motor driven bushing for fastest possible acc/dec times and quick C-axis positioning.

Flexibility

At Tsugami, we realize that having the most capable machine available is only part of the requirement. In today's competitive global environment, your business can change daily.



Standard Four Cross Milling Stations
2x ER16 & 2x ER11 for Increased Productivity

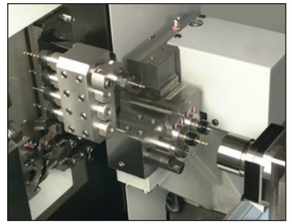
Your Tsugami can be changed over in minutes. Adding a Chucker Kit allows you to convert your B0205/B0206 from a traditional sliding headstock Swiss function to standard lathe-type chucker mode. This allows you to run high-precision parts utilizing standard drawn barstock. Other benefits include shorter remnant, better concentricity and more. This quick-change flexibility makes these machines ready to tackle whatever job comes in the door.

The machine features a wide opening door for easy access, right hand configuration, long headstock stroke for easy access to the headstock collet and bushing, easy access to sub spindle tooling, and horizontal tools for ease of setting. Also included as standard equipment is the "Program Check Function" that allows new programs to be quickly and safely proven out.

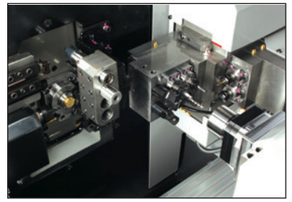
Reliability

The B0205/B0206 are built for the long haul. They feature rugged construction, belt free spindles, live tools, and servo driven guide bushing. Tsugami has the most rigid gang tool post in the industry due to opposing rail slide construction. The B0205/B0206 is built on a heavy duty cast iron base, has thermally symmetrical construction and features 0.1 micron resolution. This rigid platform allows for higher speeds and feeds and more accurately finished parts.

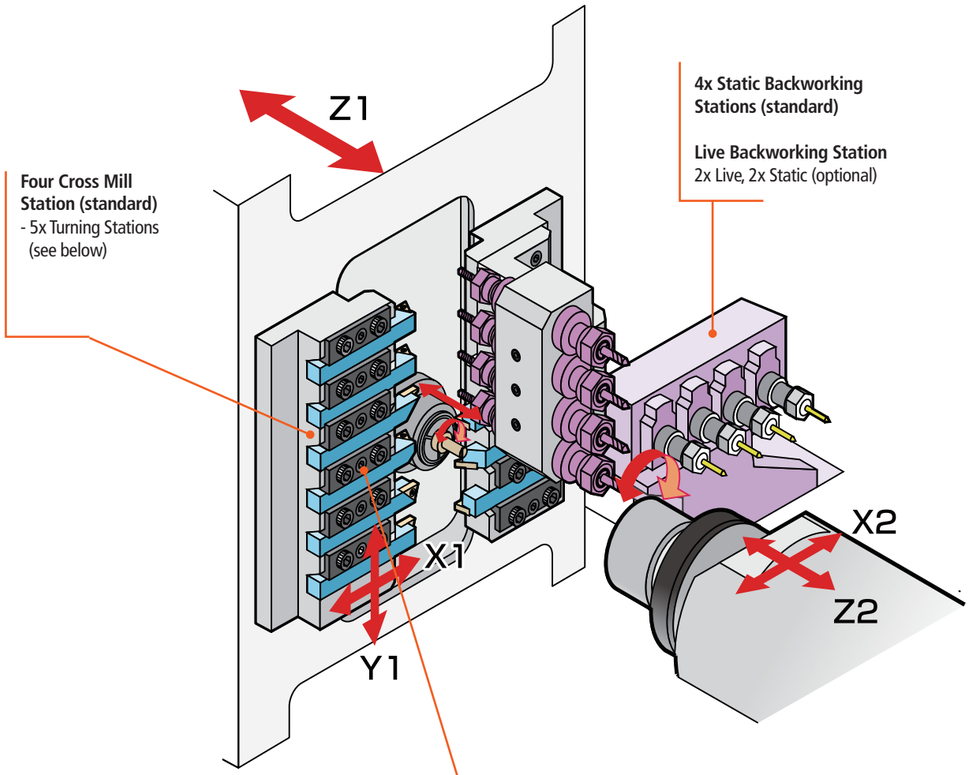
For extra peace of mind, the machine, motors, and control are covered by an industry leading two-year parts and service warranty.



BO205-III Tool Zone



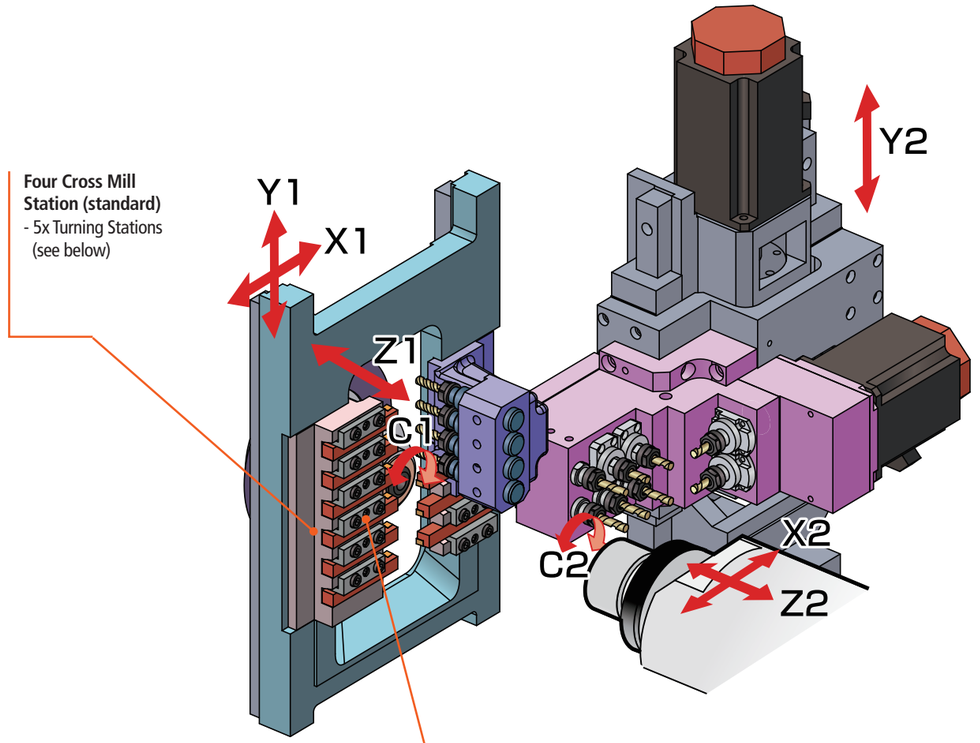
BO206-III Tool Zone

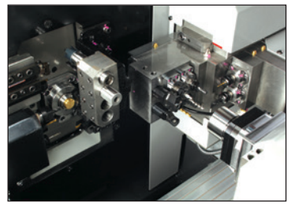




Standard Four Cross Milling Stations
2x ER16 & 2x ER11 for Increased Productivity

B0205-III





BO206-III Tool Zone



Standard Four Cross Milling Stations
2x ER16 & 2x ER11 for Increased Productivity

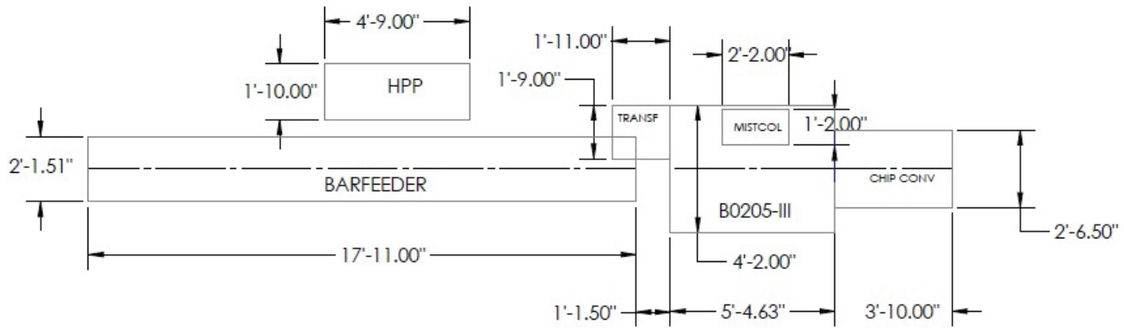
B0206-III

MACHINE STANDARD SPECIFICATIONS

	ITEMS	B0205-III	B0206-III
Machining Capacity, Machining Range	Working Barstock Diameter	ø3 mm (.12 in.) to ø20 mm (.79 in.)	
	Max. Machining Length	210 mm (8.26 in.) (Rotary Guide Bushing) 45 mm (1.77 in.) (Guide Bushless)	
	Max. Main Spindle Drilling Diameter	ø10 mm (.39 in.)	
	Max. Main Spindle Tapping Diameter	M10	
	Max. Back Spindle Chucking Diameter	ø20 mm (.79 in.)	
	Max. Back Spindle Drilling Diameter	ø8 mm (.31 in.)	
	Max. Back Spindle Tapping Diameter	M8	
	Max. Cross Drilling Diameter	ø6 mm (.24 in.) (option)	
	Max. CrossTapping Diameter	M5 x 0.8 (option)	
	Max. Tool Spindle Slotting Cutter Diameter	ø30 mm (1.18 in.)	
	Max. Back Drilling Diameter	ø6 mm (.24 in.) (option)	ø6 mm (.24 in.)
	Max. Back Tapping Diameter	M5 (option)	M5
Machine	Main Spindle Speed	200 to 10,000 min^{-1}	
	Back Spindle Speed	200 to 12,000 min^{-1} (10,000 max with ejector rod)	
	Rotary Guide Bushing Speed	200 to 10,000 min^{-1}: Direct-drive rotary guide bushing 200 to 8,000 min^{-1}: Carrier type rotary guide bushing	
	Tool Spindle Speed	200 to 8,000 min-1 (Option)	
	Total Tool Storage Capacity (Standard / Max.: Option)	21	25
	Tool Size	12 mm x 12 mm x 85 mm (.47 in. x .47 in. x 3.35 in.)	
	Rapid Traverse Rate	32 m/min (105 ft/min) [(X1: 24 m/min (78.74 ft/min)]	
	Controlled axes (linear axes)	5-axis	6-axis
	Rotary Axis	Main Spindle Full "C" Back Spindle 1°	
Motors	Main Spindle	2.2/3.7 kW	
	Back Spindle	1.5/2.2 kW	
	Axis	0.5 kW (X1,X2,Y1,Z1,Z2)	0.5 kW (X1,X2,Y1,Y2,Z1,Z2)
	Cross Drill	0.75 kW (option)	
	Coolant Pump	0.25 kW	
	Lubricating Oil Pump	3 W	
Others	Net Weight	2,000 kg (4409.25 lbs.)	2,050 kg (4519.48 lbs.)
	Power Source Requirement	11 kVA	12 kVA
	Compressed Air Requirement	0.4 Mpa or above	
	Air Discharge Rate	50 NL/min	
	Coolant Tank Capacity	120 L	
	Width x Depth x Height	1,655 x 1,125 x 1,700mm (65.16 x 44.29 x 66.93 in.)	

NC SPECIFICATIONS

ITEMS	B0205-III	B0206-III
NC Unit	FANUC 0i-TD	FANUC 32-iB
Controlled Axes	X1, Z1, Y1, X2, Z2	X1, Z1, Y1, X2, Y2, Z2, C1, C2
Least Input Increment	0.001 mm (X in diameter)	0.001 mm (X1/X2 axis in diameter)
Least Command Increment	X1: 0.0005 mm, other: 0.001 mm	0.001 mm (X1/X2 axis in diameter)
Maximum Programmable Value	± 8 digits	
Interpolation Method	Linear/Circular	
Rapid Traverse Function	32 m/min (105 ft/min) (X1: 24 m/min)	32 m/min (105 ft/min) (X1/Y1/Y2: 24 m/min (78.74 ft/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	X,Y,Z: Absolute, U,V,W: Incremental	X, Z, Y, C: Absolute U, W, V, H: Incremental
Tool Offset Pairs	Main: 64, Back: 64	99
LCD/MDI	8.4" color LCD	10.4" color LCD
Display Language	Japanese/English	
Part Program Storage Size	1 Mbyte (equivalent to 2560m) (main and back in total)	64 kbyte (equivalent to 80m for each path system)
Registerable Programs	800 (main and back in total)	63
Miscellaneous Functions	M5 digits	
Spindle Function	S5 digits	
Tool Function	T4 digits	



"Our machining challenge was to manufacture parts complete, eliminating secondary operations. We looked at competitive Swiss 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

"We looked at multiple different manufacturers of 20mm sliding headstock machines, but Tsugami was definitely the best fit for us. Every time we purchase another Tsugami, the experience seems to get even better. Without hesitation, I would recommend Tsugami to anyone in the market for a user-friendly, dependable and precise machine."

ADAM NAYLOR
Turning Department Manager, Azimuth Technology, LLC | Naples, FL

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