

# STS-42J • STS-52J • STS-60J

Twin Spindle CNC Lathe | Refined and Miniaturized

- ▶ FANUC control
- ▶ Extremely compact footprint for a twin spindle lathe
- ▶ Bar capacity of 42, 52, even 60mm
- ▶ Newly refined drive system for sub-spindle
- ▶ Unprecedented price point for automated bar machining

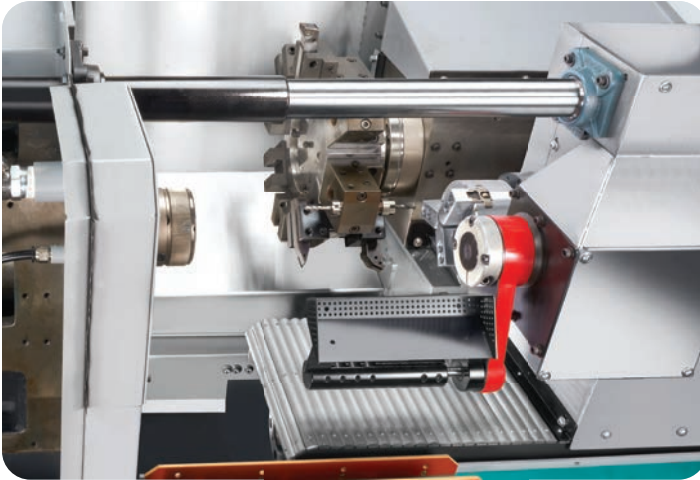


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## FEATURES

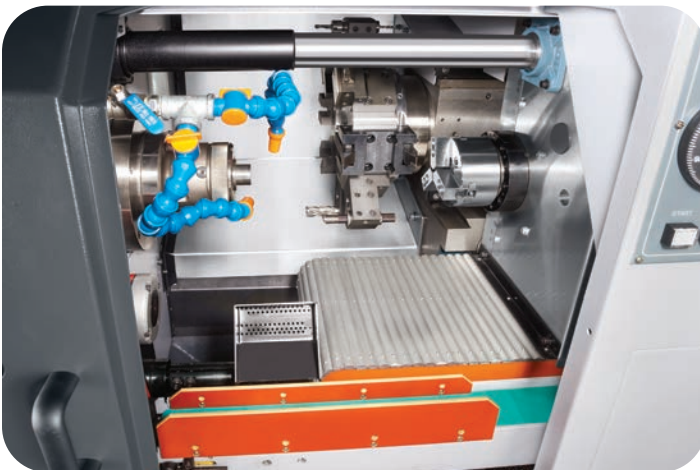


By listening to user feedback, we've designed the lathe with careful attention to operator ergonomics, ease of maintenance and reduction of overall floor space. All without sacrificing the lathe's twin spindle performance. You'd be surprised at how much this machine can do in such a small footprint.



## **POWERFUL 10.5HP SYNERGIC TWIN SPINDLE WITH LINK DRIVE**

The patented design ensures perfect synchronization between main and sub-spindles, makes the full spindle motor power available to the sub-spindle and reduces weight on the sub-spindle, which contributes to improved machine dynamics.



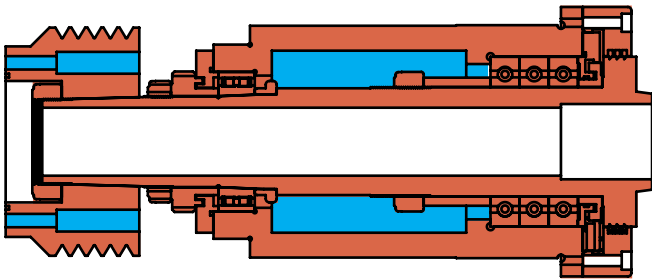
## **FULLY LOADED MACHINE**

The standard machine comes with INDEX B-series collet nose on the main spindle (3-jaw chuck is optional). The sub-spindle uses 4" chuck or 5C collet nose. Parts catcher and parts conveyor are included as standard equipment. Cubic can integrate and support optional accessories such as mist collector, different types of bar feeders, even provide a turn-key package.



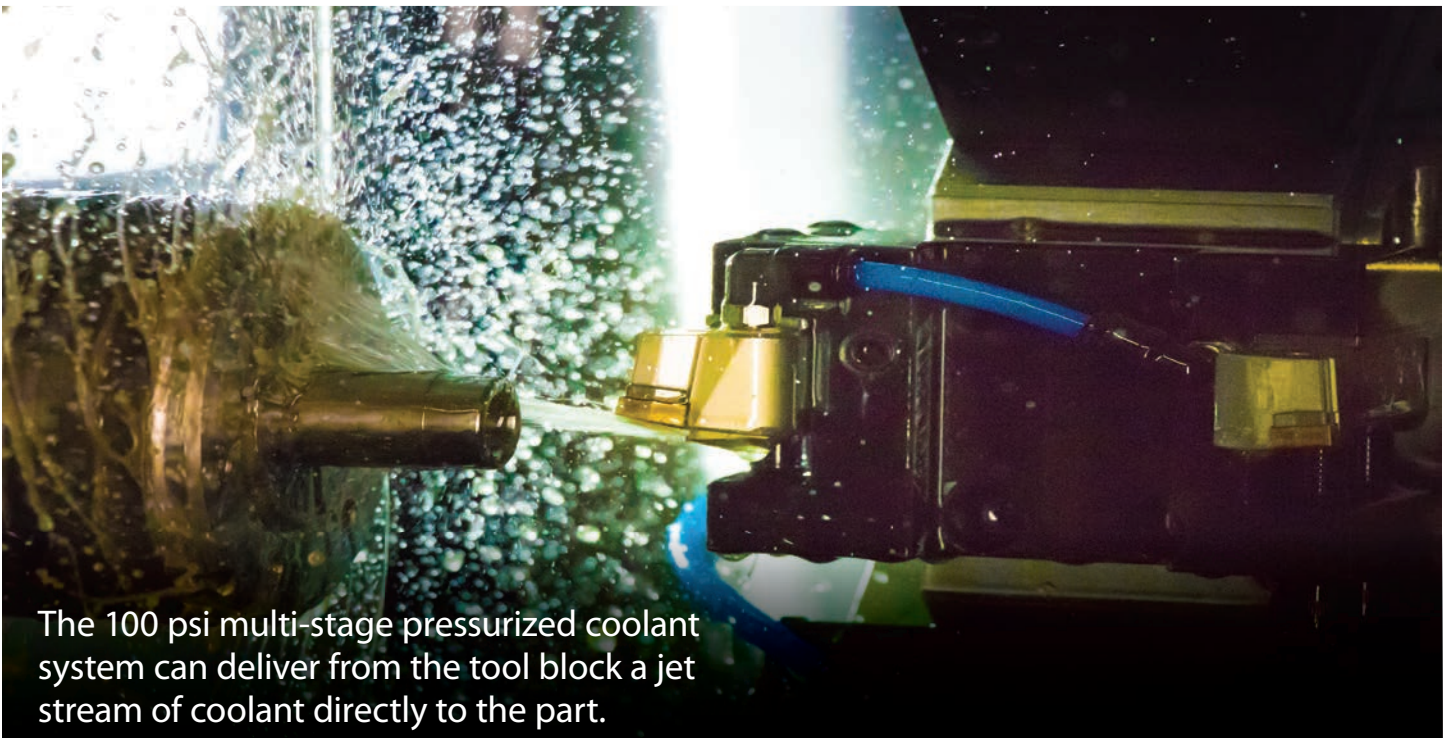
### **16-STATION TOOL TURRET WITH FANUC SERVO**

- ▶ With tool change time of only 0.15 second, the high-speed turret reduces idle time.
- ▶ 8-side turret with 16 stations
- ▶ Back machining with the sub-spindle greatly expands the scope of secondary operations the machine carry out in one setup.
- ▶ With the appropriate application, the tooling layout provides many opportunities to improve cycle time by overlapping front and back machining.



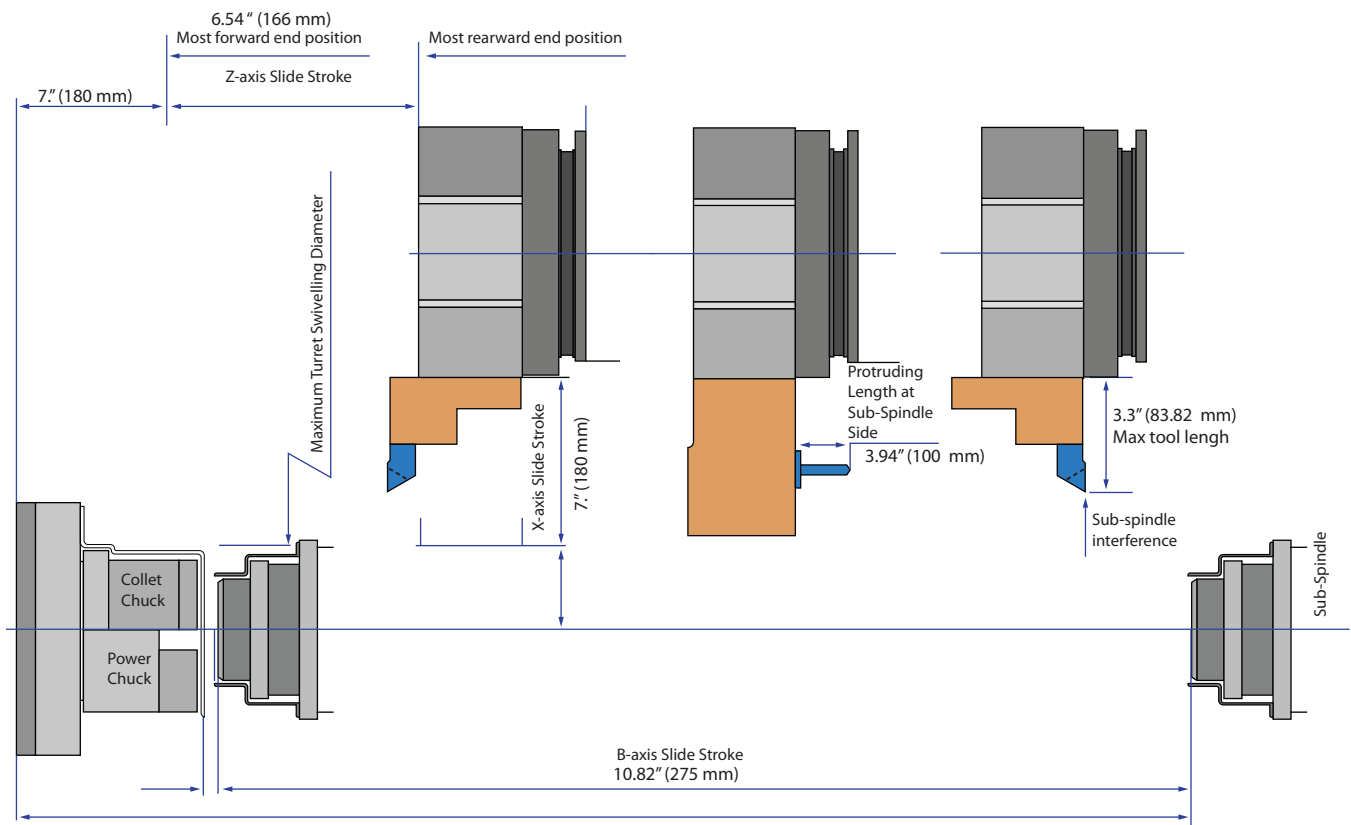
### **HIGH-PRECISION SPINDLE WITH OPTIMIZED DESIGN**

- ▶ The high precision spindle is supported by symmetrical headstock structure to prevent thermal distortion.
- ▶ The spindle design incorporates years of machine design know-how into a compact package combining high rigidity and high accuracy, making it ideal for both heavy and precise cutting.

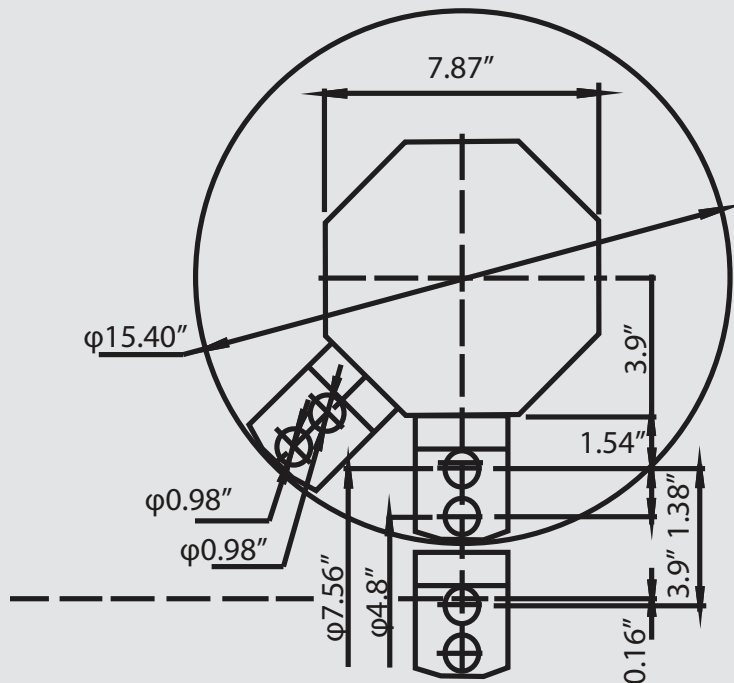


The 100 psi multi-stage pressurized coolant system can deliver from the tool block a jet stream of coolant directly to the part.

## TOOLING AREA

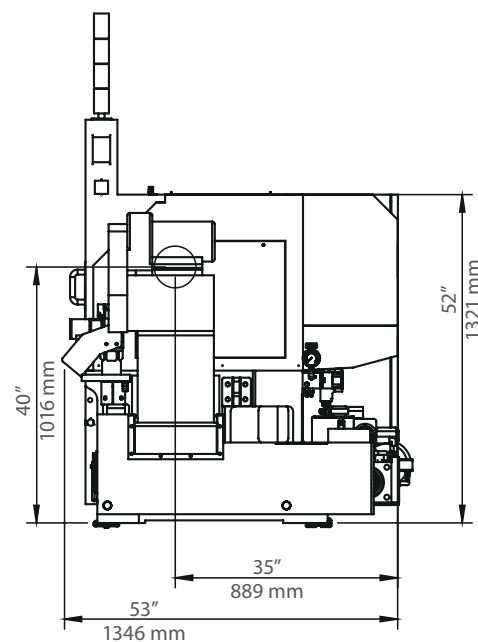
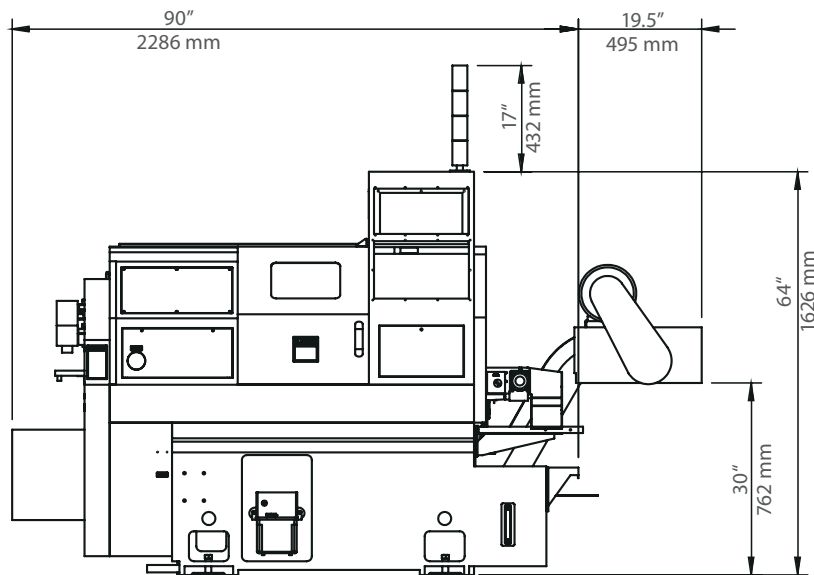


## MAX. INTERFERENCE OF TOOLS

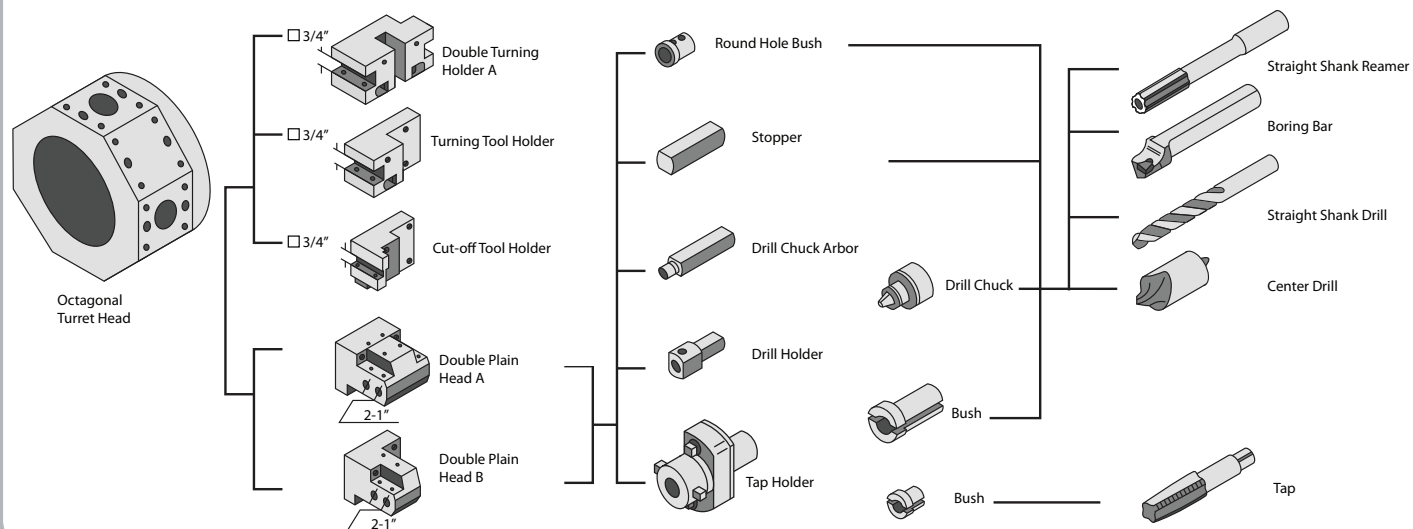




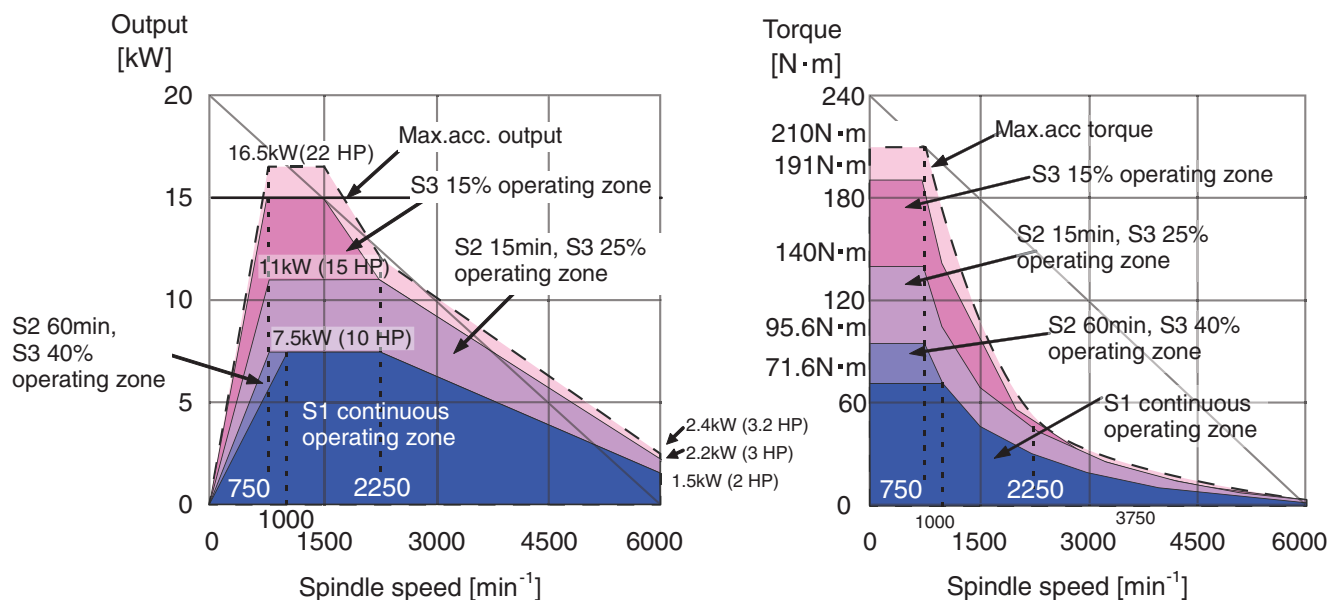
## MACHINE DIMENSIONS



## TURRET TOOL SYSTEM DIAGRAM



## STS-42J SPINDLE SPEED & TORQUE



\* Charts for STS - 52J / STS - 60J would be slightly different due to pulley ratio of 1:2.45, instead of 1:2 on STS - 42J

## STANDARD ACCESSORIES

- ▶ FANUC OiTF control with color LCD
- ▶ Digital servo drive and motors on X, Z, B and turret
- ▶ 4000 rpm 10.5 HP FANUC spindle drive & motor
- ▶ 8-side turret with 16 stations
- ▶ Hydraulic chucking cylinder on main spindle
- ▶ Hydraulic chucking cylinder on sub spindle
- ▶ B type collet nose
- ▶ 4" Hydraulic chuck on sub spindle
- ▶ 3 Double socket round tool holders
- ▶ 3 Double sided square shank holders
- ▶ 2 Single sided square shank holders
- ▶ 2 Set of round bushings
- ▶ Centralized lubrication system
- ▶ Medium pressure flood coolant system with through turret ports
- ▶ Full enclosure with door
- ▶ 3 Stage status light bar
- ▶ Work light
- ▶ 4 Levelling blocks
- ▶ 1 Set of FANUC OiTF manuals (DVD)
- ▶ Machine maintenance and parts manual
- ▶ Machine electrical manual
- ▶ Machine inspection report
- ▶ Parts catcher and conveyor
- ▶ Chuck / collet foot pedals

## OPTIONAL ACCESSORIES

- ▶ Mist collector
- ▶ Chip conveyor
- ▶ Chip cart
- ▶ FEDEK HD 65 short magazine bar loader
- ▶ FEDEK SUNNY 542 12' magazine bar loader
- ▶ High-pressure coolant
- ▶ 6" chuck on main spindle
- ▶ Fire suppression unit

## SPECIFICATIONS

Model		STS-42J	STS-52J	STS-60J
Control		FANUC 0iTF	FANUC 0iTF	FANUC 0iTF
Capability	Bar capacity	1 5/8" (42mm)	2" (52mm)	2.36" (60mm)
	Repeatability	±0.0001"	±0.0001"	±0.0001"
	Positioning accuracy	±0.0001"	±0.0001"	±0.0001"
Travels & feeds	X-axis travel	7.09" (180mm)	7.09" (180mm)	7.09" (180mm)
	Z-axis travel	6.54" (166mm)	6.54" (166mm)	6.54" (166mm)
	B-axis travel	10.82" (275mm)	10.82" (275mm)	10.82" (275mm)
	X-axis servo motor	2.4 HP	2.4 HP	2.4 HP
	Z-axis servo motor	2.4 HP	2.4 HP	2.4 HP
	B-axis servo motor	1.6 HP	1.6 HP	1.6hp
	X-axis rapid traverse	708 ipm (18m/min)	708 ipm (18m/min)	708 ipm (18m/min)
	Z-axis rapid traverse	945 ipm (24m/min)	945 ipm (24m/min)	945 ipm (24m/min)
	B-axis rapid traverse	787 ipm (20m/min)	787 ipm (20m/min)	787 ipm (20m/min)
Main spindle	Spindle nose	A2-5	A2-6	A2-6
	Chucking options	6" 3-Jaw chuck or B42 index collet	6" 3-Jaw chuck or B52 index collet	6" 3-Jaw chuck or B60 index collet
	Spindle motor	10.5 HP continuous	10.5 HP continuous	10.5 HP continuous
	Spindle speed	10 - 4000 rpm	10 - 3500 rpm	10 - 3500 rpm
Sub spindle	Spindle nose	85mm	85mm	85mm
	Chucking options	4" chuck or 5C collet	4" chuck or 5C collet	4" chuck or 5C collet
	Spindle speed	10 - 4000 rpm	10 - 3500 rpm	10 - 3500 rpm
Turret	Type	Servo turret	Servo turret	Servo turret
	Servo motor	1 HP	1 HP	1 HP
	Stations	16 Stations	16 Stations	16 Stations
	Indexing time	0.15 Sec	0.15 Sec	0.15 Sec
Misc.	Medium pressure coolant pump	100 PSI	100 PSI	100 PSI
	Net weight	6283 lbs (2850 kg)	6283 lbs (2850 kg)	6283 lbs (2850 kg)
	Gross weight	6944 lbs (3150 kg)	6944 lbs (3150 kg)	6944 lbs (3150 kg)
	Dimensions (inch)	110 X 51 x 61"	110 X 51 x 61"	110 X 51 x 61"
	Dimensions (mm)	2800 X 1300 x 1560mm	2800 X 1300 x 1560mm	2800 X 1300 x 1560mm
Requirements	Voltage	208 - 230 VAC	208 - 230 VAC	208 - 230 VAC
	Power	12 KVA	12 KVA	12 KVA
	Compressed air	90 PSI	90 PSI	90 PSI



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