

# BARDONS & OLIVER

## A New Generation of CNC Lathes

Single Spindle Big Bore  
Opposed Twin Spindle  
Center Drive

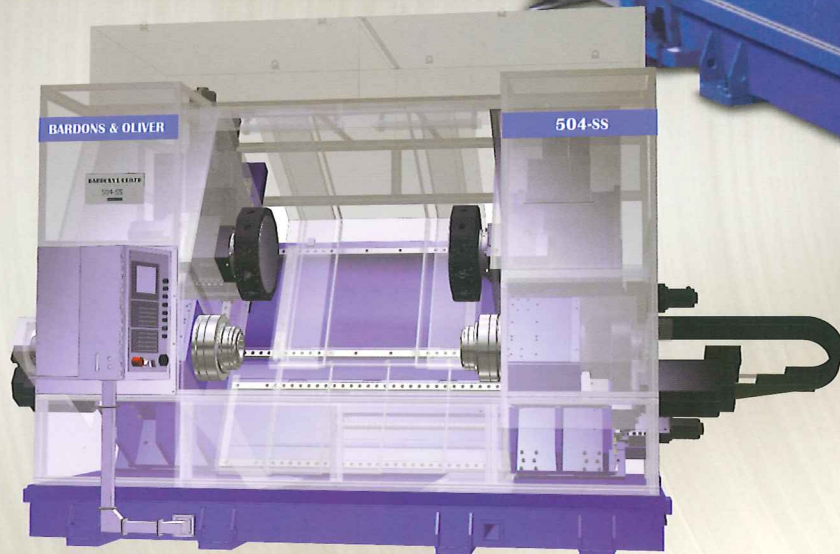
Model BB  
Model SS  
Model CTR



*Three Solutions for Processing Tube and Bar*



# PROCESS TUBE & BAR INTO COMP



*For those operations that require parts with complex machining on both ends, the opposed twin spindle SS model is the right choice. While it's machining the back end of one part, at the same time it can machine the front end of the next part for maximum productivity. When combined with a Bardons & Oliver handling system, any length finished workpiece can be produced.*

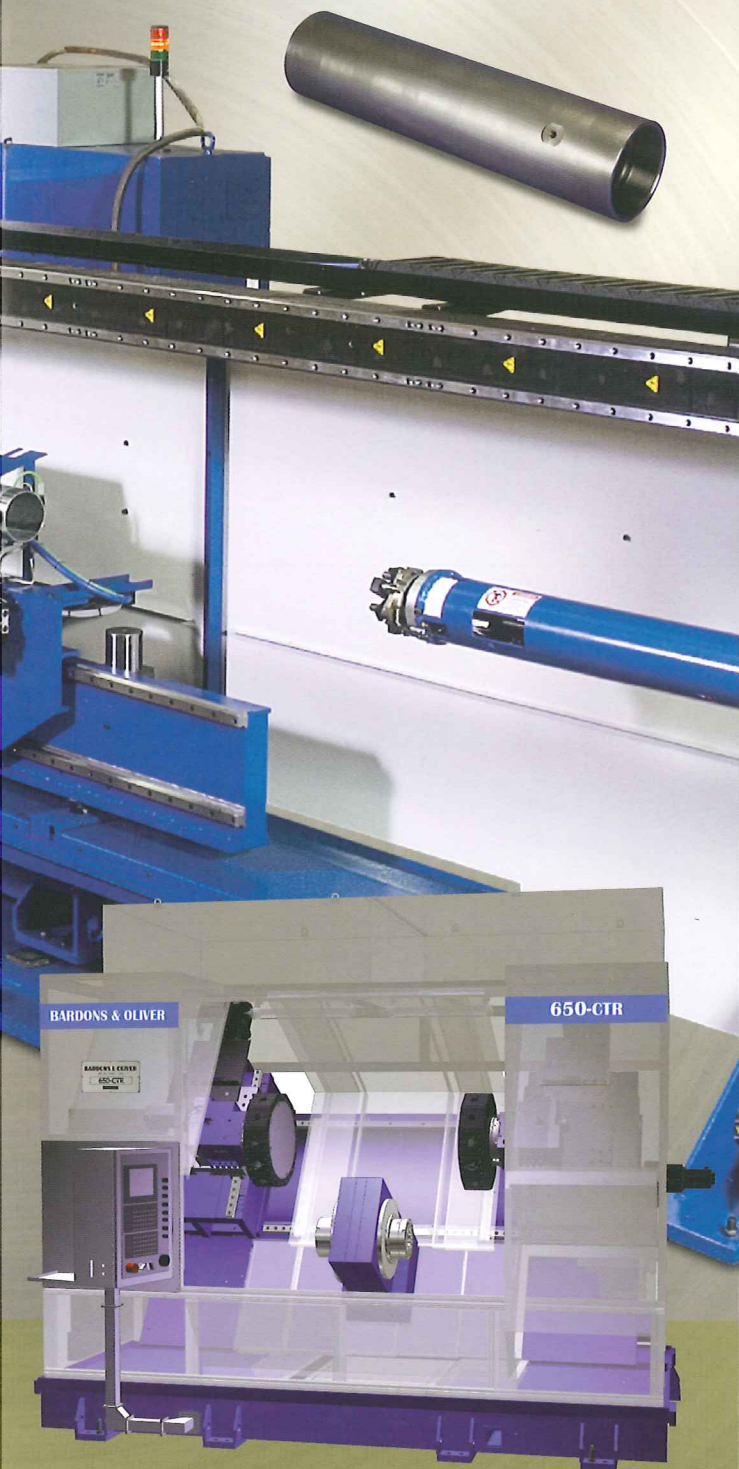
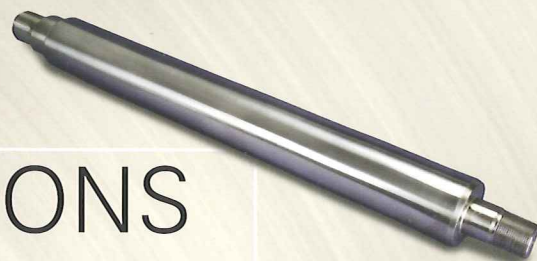


*For parts that require complex machining on the leading end of the workpiece and only OD operations on the second end, there's the single spindle big bore BB model. This machine is ideal for parts such as welded construction hydraulic cylinder tubes and rods. Finished components ready for assembly are produced in one operation.*





# LEX COMPONENTS WITH NO LIMITATIONS



## BARDONS & OLIVER CNC LATHE SPECIFICATIONS

		500	650	850
<b>LATHE MODEL &amp; GENERAL SPECIFICATIONS</b>				
Single Spindle Big Bore		500-BB	650-BB	850-BB
Opposed Twin Spindle		500-SS	650-SS	850-SS
Collet Size	inch/mm	5.25 / 133.3	6.50 / 165.1	8.50 / 215.9
Chuck Size(s)	inch	12 ~ 15 ~ 18	12 ~ 15 ~ 18	12 ~ 15 ~ 18
	mm	305 ~ 381 ~ 450	305 ~ 381 ~ 450	305 ~ 381 ~ 450
Spindle Nose	Am Std	11-A2	11-A2	15-A2
Spindle Bore	inch/mm	5.37 / 136.4	6.56 / 166.6	8.75 / 222.3
Bar Capacity	inch/mm	5.25 / 133.3	6.50 / 165.1	8.50 / 215.9
Linear Guides		Size #55		
Spindle Design		Angular Contact Ball Bearings		
Spindle Speed	rev/min	35-2500	35-2500	35-1600
		Belt Driven		
Max OD Turning Length	inch/mm	18 / 457.2	18 / 457.2	18 / 457.2
Max Turn Diameter	inch/mm	17 / 431.8	17 / 431.8	17 / 431.8

### DRIVE SPECIFICATIONS

CNC Control System (Std)	FANUC 321 Series		
Spindle Drive System (Std)	FANUC a22/7000HVI Alpha AC Digital	FANUC a30/6000HVI Alpha AC Digital	
Spindle HP/Drive (Std)	30 HP Continuous (60 min Rating)	40 HP Continuous (60 min Rating)	
Opt Spindle Drive System	FANUC a30/6000HVI Alpha AC Digital	FANUC a40/6000HVI Alpha AC Digital	
Opt Spindle HP/Drive	40 HP Continuous (60 min Rating)	50 HP Continuous (60 min Rating)	
Servo Drive System	FANUC Alpha HVI AC Digital		
X-Axis Servo / Thrust	a40/4000HVI (4,900 lb Continuous)		
Z-Axis Servo / Thrust	a12/4000HVI (1,523 lb Continuous)		
Max Programmable Feed Rate	200in/min / 5.1m/min		
Max Rapid Traverse Rate	750in/min / 19.1m/min		
X-Axis Travel	inch/mm	17.5 / 444.5	
X-Axis Ballscrew	inch	1.97 OD x .394 Lead	
	mm	50.0 OD x 10.0 Lead	
Z-Axis Travel	inch/mm	20.0 / 508	
Z-Axis Ballscrew	inch	1.97 OD x .394 Lead	
	mm	50.0 OD x 10.0 Lead	

### TURRET

Turret Stations	12-Station		
Tool Interface	VDI-50		
Turret Index System	Bi-Directional / Skip Index		
	Servo Index, Curvic Coupling, Hyd Clamping		
OD Turning Tool Size (Std)	inch	1.00 x 5.00 Square Shank	
	mm	25.4 x 127.0 Square Shank	
ID Boring Bar Diameter (Std)	inch	2.00 Maximum	
	mm	50.8 Maximum	

### OPTIONAL LIVE TOOLING

Live Tooling Horsepower	hp/kw	7.5 / 5.6, 12-Stations	
Live Tooling Drive Motor		FANUC a22/4000 Hvi	
Available Upgrade	hp/kw	12.0 / 9.0, 12-Stations	
Drive Motor		FANUC a30/4000 Hvi	
Available Upgrade	hp/kw	15.0 / 11.0, 12-Stations	
Drive Motor		FANUC a40/4000 Hvi	
Live Tooling Speed	rev/min	4,000	
Live Tooling Torque		265 in-lb Continuous, 883 in-lb Peak	
Max Drilling Capability	inch/mm	1.00 / 25.4	
Live Tooling Collet Size		ER40 (1.181" Max Tool Shank Diameter)	

### OPTIONAL "Y" AXIS

Servo Drive System	FANUC Alpha Hvi AC Digital		
Y-Axis Servo / Thrust	a30/4000Hvi (3,807 lb Continuous)		
Max Axis Programmable Feed Rate	200in/min / 5.1m/min		
Max Axis Rapid Traverse Rate	750in/min / 19.1m/min		
Y-Axis Travel	inch/mm	+/- 3.0 / 76.2	
Y-Axis Ballscrew	inch	1.97 OD x .394 Lead	
	mm	50.0 OD x 10.0 Lead	

### ELECTRICAL POWER & CAPACITIES

Electrical Power	460 vac, 3 phase, 60 hz, 90 kva			
Main Breaker	100 amp Single Spindle Machine, 2x100 amp Twin Spindle Machine			
Hydraulic Reservoir Capacity	Gal/L	30 / 114	30 / 114	30 / 114
Coolant System Capacity	Gal/L	80 / 302 Single Turret Machine, 100 / 378 Twin Turret Machine		

The third machine in this family of high-efficiency turning machines is the center drive lathe. Parts are gripped in the middle while complex machining is performed on both ends at the same time. No re-gripping or relocating of the part allows the highest specifications to be met. The result is dead true tolerances, held end-to-end, unmatched by any other configuration of turning center.

10.25" Bar Capacity Single Spindle Big Bore Model 1025-BB or Opposed Twin Spindle Model 1025-SS - Consult Factory  
Center Drive Lathe Information and Specifications - Consult Factory



Please visit our website to learn more about Bardons & Oliver Tube & Bar Processing Machines, CNC Turning Machines, System Automation, and Robotics Integration. You'll find videos, downloadable literature, technical information and more.

## **BARDONS & OLIVER**



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