

Heavy Duty CNC Turning Lathes
PROTEC 9N Series





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Features

- Up to 8,000mm (315 ") shaft turning length
- Large 5,000kg (11,000lbs) load capacity between centers
- Automatic shifting 2 or 3 speed geared headstock
- Extra wide one-piece cast iron bed
- Induction-hardened and precision-ground guide ways
- High precision ball screws for both axes
- Servo motor for both axes
- Large spindle bore (\varnothing 105, 176 and 254 mm)
- Square tool post featuring Curvic coupling
- Built-in live tailstock spindle(\varnothing 180mm quill dia.)
- Two speeds tailstock spindle
- Guidance hand-wheel (simultaneous 2 axes control)
- X/Z axes electronic hand wheels (MPG)
- Full automatic lubrication to all critical areas

Bed

- The bed is a heavy one-piece casting with thick ribbing to prevent twisting and deformation.
- High quality cast iron is used for its excellent dampening characteristics.
- The flat bed design is suitable for heavy weight of work-piece directly downward onto the bed ways.
- Width of bed is 630 mm.

Headstock

- Extremely rigid, robust box type to sustain heavy duty work.
- 2 or 3 steps gear change for high torque driving with low speed.
- All spindle bearings are precision class and permanently grease lubricated to minimize thermal growth.
- 3 Sizes of spindle bore, 105mm, 176mm and 254mm(4.1 ", 6.9" and 10").
- Main spindle gears & other bearings are forced-lubricated.





Headstock



Big Bore Spindle



Curvic Tool post



Operation Panel

Carriage

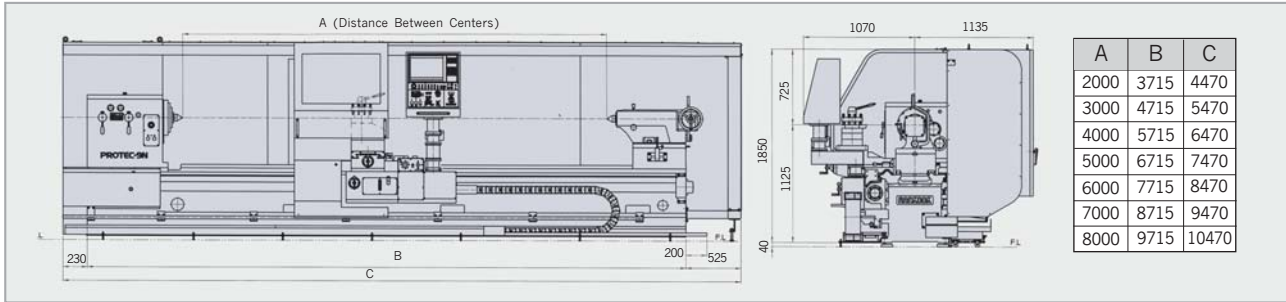
- The extremely rigid extended H-style saddle and wide cross slide allow heavy and interrupted cutting with ultimate stability and high accuracy.
- High precision ball screw for longitudinal and cross feed to obtain high accurate turning with servo motors. Longitudinal and cross handles have pulse generators, not connected directly with ball screw.
- Even the operators accustomed to manual lathes can operate this machine very easily by operating portable handles.
- The fluorine-plastic resin combined way lubrication provides a low friction on surface and prevent guide-way from wearing.
- The manually indexed square tool post features Curvic coupling. It can be positioned per every 15 degree increments. Index repeatability is guaranteed within ± 5 seconds.

Tailstock

- The heavy duty tailstock has a MT#6 center and quill diameter 180mm for to load heavy shafts up to 5 tons(11.000lbs).
- The quill stroke of 250mm and speed reduction gear box(ratio 1:1/4) for drilling operation.
- Built-in live tailstock spindle provided as standard.
- Tailstock body feed is accomplished by a drive hook engaged with the carriage.



External Dimensions



Machine Specifications

Items	Unit	PROTEC						
		9NA		9NB		9NC		
Capacity	Swing over bed	ø 950(37.4)						
	Swing over carriage	ø 630(24.8)						
	Max. turning length	1845(73)	2845(112)	3845(151)	4845(191)	5845(230)	6845(269)	7845(309)
	Distance between centers	2000(79)	3000(118)	4000(157)	5000(197)	6000(236)	7000(275)	8000(315)
	Load capacity between centers	5000(11000)						
Spindle	Spindle bore	ø 105(4)		ø 176(7)		ø 254(10)		
	Spindle nose	A2-11"		A2-11"		A2-15"		
	Spindle speed	2~1000		3~800		2~630		
	Spindle speed range	Manual 3		Manual 2				
	Spindle center taper	MT#6						
Carriage	Type of tool post	Manual H-4(Curvic tool post)						
	Tool size	32 × 32(1.26 × 1.26)						
	X-axis travel(cross)	535(21.1)						
	Z-axis travel(longitudinal)	1845(73)	2845(112)	3845(151)	4845(191)	5845(230)	6845(269)	7845(309)
	X-axis rapid traverse	4(157ipm)						
	Z-axis rapid traverse	6 (236ipm)						
Tailstock	Tailstock quill diameter	ø 180(7.08)						
	Tailstock spindle taper	MT#6						
	Max. quill travel	250(9.8)						
Bed	Bed width	630(24.8)						
	Bed length	3175(146)	4715(186)	5715(225)	6715(264)	7715(304)	8715(343)	9715(382)
Motor	Spindle motor(30min/cont.)	AC 22/18.5(30/25)			AC 26/22(35/30)			
	X-axis servo motor (Torque/Power)	12/1.8(2.4Hp)						
	Z-axis servo motor (Torque/Power)	30/4.2(5.6Hp)						
Machine Weight		7010 (15450)	8090 (17830)	9170 (20220)	10280 (22660)	11360 (25040)	11450 (25240)	13530 (29830)
CNC system		FANUC 21i-TB						

Standard Accessories

- CNC system(Fanuc 21i-TB)
- Main drive motor & electrical equipments
- Automatic spindle shifting
- 4-jaw independent chuck:
9NA: 24", 9NB: 28"(int. dia.176mm), 9NC: 32"(int. dia.176mm)
- Built-in live tailstock spindle
- 2-speed tailstock spindle
- Curvic tool post(Manual H-4)
- Coolant system
- Work light
- Center sleeve
- Center MT#6
- Full length rear chip guard and single front door(for BC2000,3000)
- Chuck cover(9NA: Front, 9NB/9NC: Front & Rear)
- Handle for bite clamping
- Leveling block
- Foundation bolts and liners
- Tool box with necessary tools

Optional Accessories

- 3-jaw scroll chuck Ø14" to 36"
- 4-jaw independent chuck Ø18" to 36"
- Steady rest(metal jaws) Ø50~250mm(2~10")
Ø250~450mm(10~17.7"), Ø450~650mm(17.7~25.6")
- Steady rest(roller jaws), Ø50~250mm(2~10")
Ø250~450mm(10~17.7"), Ø450~650mm(17.7~25.6")
- Follow rest Ø20~200mm(0.8~7.9")
- Auto. tool post H-4, V-8
- Face plate Ø850mm(33.5")
- Tool slide
- Live center MT#6
- Pipe center
- Full length rear chip guard and single front door
(for BC 4000 to 8000)
- Boring bar device Ø100/150/200mm
- Tool holders
- Transformer

Note : Specifications and features are subject to change without prior notice.



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