

## Machine Specifications

Items		Unit	PROTEC-11N (D/E/F)				PROTEC-13N (D/E/F)			
Capacity	Swing over bed	mm(in)	1100 (43.3)				1300 (51.2)			
	Swing over carriage	mm(in)	740 (29.1)				940 (37)			
	Max. turning diameter	mm(in)	1100 (43.3)				1300 (51.2)			
Distance between centers	mm(in)		2000 (79)	3000 (118)	4000 (157)	5000 (197)	6000 (236)	7000 (275)	8000 (315)	
	Load capacity between centers	kg (lbs)	8000 (17600)							
Spindle	Spindle bore	mm(in)	Ø 105 (4) [Ø 330(13)/Ø 381 (15)/Ø 440 (17.3)]							
	Spindle nose	-	A2-15" [A2-20" /A2-20" /A2-28"]							
	Spindle speeds	rpm	1~800 [2~500/3~400/3~400]				1~630 [2~500/3~400/3~400]			
	Spindle speed range	step	Automatic 4 (Automatic 2)							
	Spindle center taper	-	MT#6							
Carriage	Type of tool post	-	Manual H-4 (Curvic tool post)							
	Tool size	mm(in)	32 x 32 (1.26 x 1.26)							
	X-axis travel (cross)	mm(in)	620 (24.4)				720 (28.3)			
	Z-axis travel (Longitudinal)	mm(in)	2000 (79)	3000 (118)	4000 (157)	5000 (197)	6000 (236)	7000 (275)	8000 (315)	
	X-axis rapid traverse	m/min (ipm)	4 (157)							
Z-axis rapid traverse	m/min (ipm)	6 (236)								
Tailstock	Tailstock quill diameter	mm (in)	200 (7.9)							
	Tailstock spindle taper	-	MT#6							
Bed	Max. quill travel	mm(in)	300 (11.8)							
	Bed width	mm(in)	800 (31.8)							
	Bed length	mm(in)	4730 (186)	5730 (226)	6730 (265)	7730 (304)	8730 (344)	9730 (383)	10730 (422)	
Motor	Spindel motor (30 min/Cont.)	kW (HP)	AC 45/37 (60/50)							
	X-axis servo motor	kW (HP)	AC 3(4)							
	Z-axis servo motor	kW (HP)	AC 7 (9.5)							
Machine Weight	11N	kg (lbs)	13500 (29700)	14500 (32000)	15500 (34200)	16500 (36400)	17500 (38600)	18500 (40800)	19500 (43000)	
	13N		14300 (31500)	15300 (33700)	16300 (35900)	17300 (38100)	18300 (40300)	19300 (42500)	20300 (44800)	
CNC System		-	FANUC 21i-TB							

### Standard Accessories

- CNC system (fanuc 21i-TB)
- Main drive motor & electrical equipments
- 4-jaw independent Chuck ø 800 mm (32")
- Rotary type tailstock spindle
- 2-speed tailstock spindle
- Rapid feed device for tailstock body
- Curvic tool post (H-4)
- Coolant system
- Work light
- Center sleeve MT#6 x Metric taper #120
- Center MT#6
- Foundation bolts and liners
- Tool box with necessary tools

### Optional Accessories

- 4-jaw independent chuck ø 1000 mm (40")
- Steady rest (metal, roller jaws) ø 50~350 mm (2~14")
- ø 300~600 mm (12~24"):11N/13N
- ø 550~1000 mm (22~39"):13N
- Follow rest ø 30~200 mm (1.2 ~ 7.9")
- Roll chock stand ø 400~800 mm (15.7~31.5")
- Face plate ø 800 mm (31.5"):11N, ø 1000 mm (39.4"):13N
- Tailstock load meter (thrust meter)
- Auto, tool post
- Tool slide
- Full length rear chip guard and single front door