

Heavy Duty CNC Turning Lathes
PROTEC 11N/13N





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PROTEC 11/13N

Features

- Suitable for large diameter workpiece (\varnothing 1100/1300mm)
- Up to 8,000mm (315 ") shaft turning length
- Large 8 tons (17,600lbs) load capacity between centers
- Automatic shifting 4 or 2 speed geared head stock
- Big bore spindle \varnothing 330, 381 and \varnothing 440mm
- Extra wide one-piece cast iron bed
- Induction-hardened and precision-ground guide ways
- High precision ball screws and servo motors for both axes
- Square tool post featuring Curvic coupling
- Powerful 37kW(50HP) spindle motor
- Built-in live tailstock spindle (\varnothing 200mm quill dia.)
- Rapid feed device for tailstock body
- Guidance hand-wheel (simultaneous 2 axes control)
- X/Z axes electronic hand-wheels (MPG)
- Full automatic lubrication to all critical areas

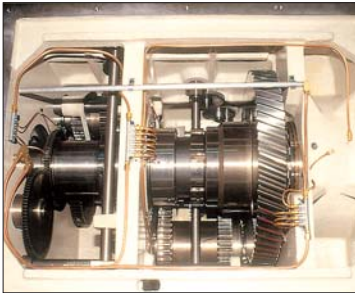
Bed

- 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 800mm(31.5 ")

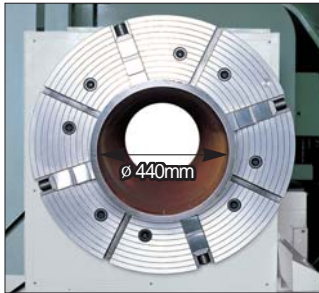
Headstock

- Three points support system for main spindle, double-row cylindrical roller bearing with angular ball bearing in front, and double-row cylindrical roller bearing at rear.
- Automatic 4 steps gear change for high torque driving with low speeds.
- All spindle bearings are precision class and permanently grease lubricated to minimize thermal growth
- Spindle bore, \varnothing 105mm(4.13 "), 330mm(13 "), 381mm(15 ") and 440mm(17.3 ")
- Main spindle gears and other bearings are forced-lubricated.





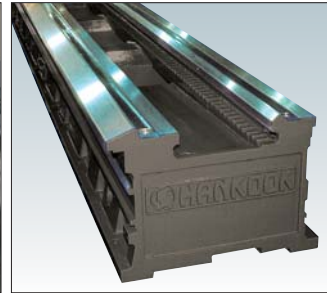
Headstock



Big Bore Spindle



Auto. V-8 Turret (Option)



Bed

Carriage

- The extremely rigid extended H-style saddle wide and cross slide allow heavy and interrupted cutting with ultimate stability and high accuracy.
- Even the operators accustomed to manual lathes can operate this machine very easily by operating portable handles.
- HANKOOK's own designed Guidance Handwheel can achieve a manual feed, auto mechanical feed, circular turning (simultaneous 2 axes control).
- 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.
- 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.

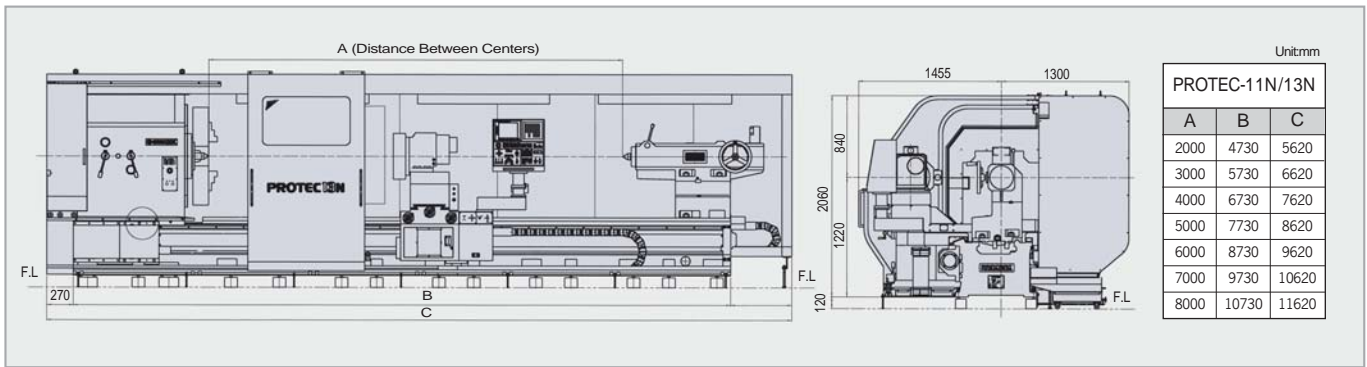
Tailstock

- The heavy duty tailstock has a MT#6 center and quill diameter 200mm to load heavy shafts up to 8tons (17,600lbs).
- The quill stroke of 300mm and speed reduction gear box(ratio 1:1/4) for drilling operation.
- Rotary type tailstock spindle.
- Rapid feed device for tailstock body



※ Optional accessories included

External Dimensions



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 speed	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 (Cubic tool post)							
	Tool size	mm(in)	32 × 32 (1.26 × 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							
	Max. quill travel	mm(in)	300 (11.8)							
Bed	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	Spindle motor	kW(Hp)	AC 37/45 (50/60)							
	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 Ø32"(Ø36":D/E/F)
- 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×Metric taper #120
- Center MT#6
- Foundation bolts and liners
- Tool box with necessary tools

Optional Accessories

- 4-jaw independent chuck Ø1000mm (40")
- Steady rest(metal, roller jaws)Ø50~350mm(2~14"), Ø300~600mm(12~24"): 11N/13N
- Ø550~1000mm(22~39"): 13N
- Follow rest Ø30~200mm(1.2~7.9")
- Roll chock stand Ø400~800mm(15.7~31.5")
- Face plate Ø800mm(31.5"): 11N, Ø1000mm(39.4"): 13N
- Tailstock load meter(thrust meter)
- Auto. tool post
- Tool slide
- Full length rear chip guard and single front door

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



HEAD OFFICE & PLANT
HANKOOK MACHINE TOOLS CO., LTD.
 52, Ungnam-dong, Seongsan-gu, Changwon-si,
 Gyeongsangnam-do, Korea.
 TEL: 82-55-282-7781/7660 FAX: 82-55-284-9791
 E-mail:sales@hanmachine.com
www.hanmachine.com

AMERICA OFFICE
Hankook America, Corp.
 1601 Atlantic Drive-#109 West Chicago,
 IL 60185 U.S.A
 TEL: 1-630-562-9240
 FAX: 1-630-562-9250
 E-mail:hankookamerica@msn.com

EUROPE OFFICE
Hankook Machine Germany GmbH
 Schwalbacher Str. 62
 65760 Eschborn/Germany
 TEL: 49-6196-99849-0 FAX: 49-6196-99849-29
 E-mail: info@hanmachine.de
www.hanmachine.de