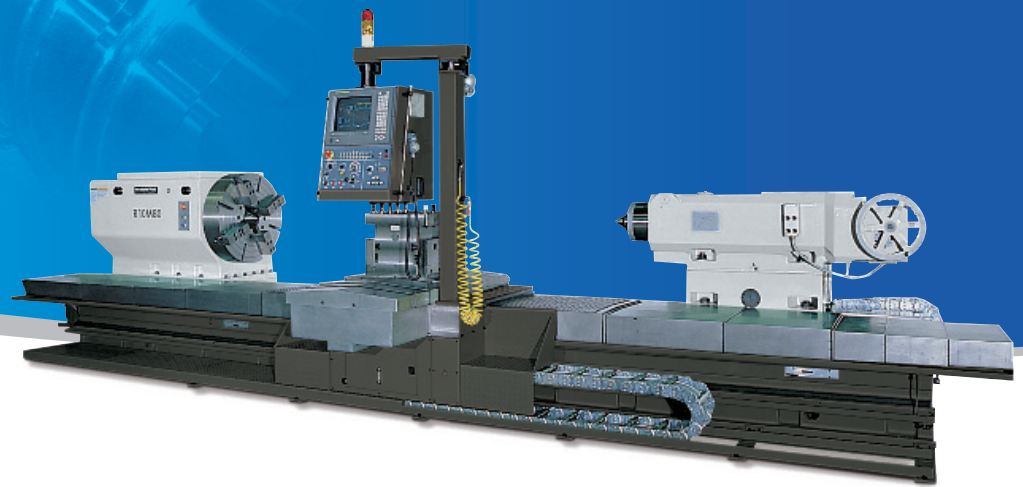


Heavy Duty CNC Roll Lathes  
**R Series**

R10M/R16M/R25W/R50W/R70W/R100TM/R150TM





# **R** Heavy Duty CNC Roll Lathes **Series**

**R10M/R16M/R25W/R50W/R70W/R100TM/R150TM**

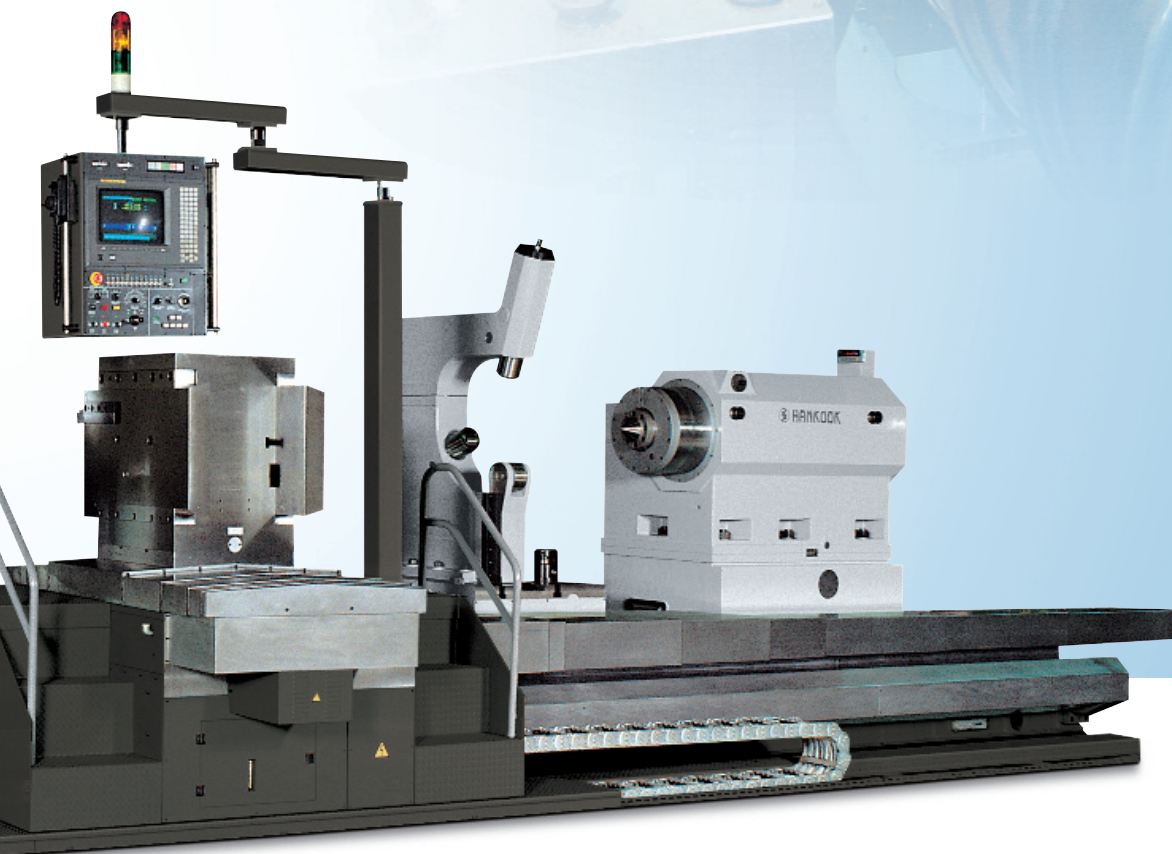
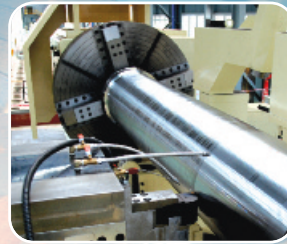
*R series has been produced with Hankook's high technology for large lathe cultivated experience for more than 40 years and designed for heavy duty cutting and accurate machining.*

## **Features**

- Large 10 to 150 tons load capacity between centers
- Automatic shifting 2-gear speed geared headstock
- Unrestrained turning through steady rests due to half carriage
- Extra wide (1200/1600/2000/3400mm) one-piece Meehanite cast iron bed
- Induction-hardened and precision-ground guide ways
- Built-in live tailstock spindle (  $\varnothing$  280 to 900mm quill dia.)
- Rapid feed device for tailstock body and tailstock spindle
- Full automatic lubrication to all critical areas



※ Optional accessories included





### Headstock



- Automatic shifting 2-gear speed geared headstock.
- Double wall construction for spindle support of Meehanite robust cast iron.
- Large diameter spindle in 2 points supporting system.
- Directly connected spindle power construction of powerful DC motor and coupling.
- Main spindle torque (kgf · m): 2020(R10), 3150(R16), 6100(R25), 8000(R40/R50), 12000(R70), 22500(R100/150)
- Constant surface speed control and spindle speed override (50~120%) are accommodated.

### Carriage



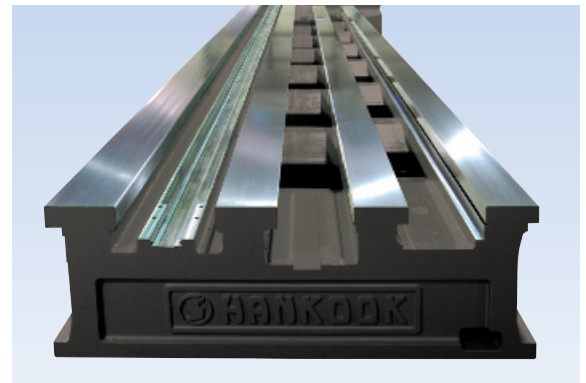
- No interference of steady rests during turning due to half carriage.
- Fluorine resins are plate on the slideways of carriage to decrease the friction of bearing surface.
- Telescopic cover protects the lower side of cross and longitudinal slideways which has induction hardened.
- Heavy duty two lamella type tool post and horizontal 4-station (H-4) tool post.
- As the pendant type control is located at the operator's position, centralized operation including from turning to self-diagnostic can be easily performed.

### Tailstock



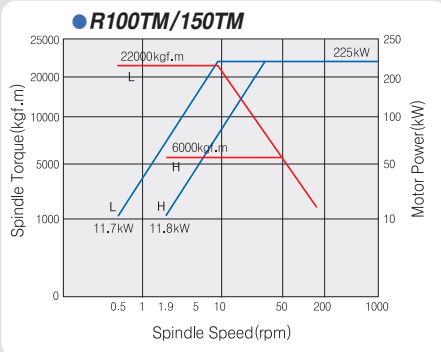
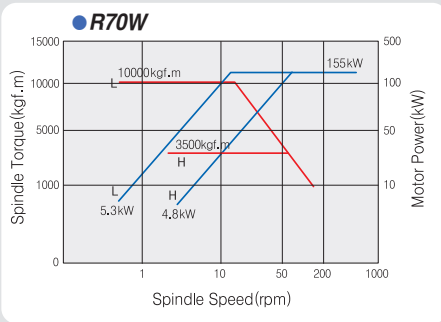
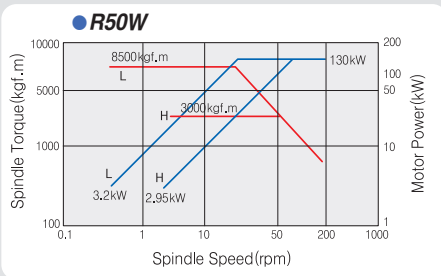
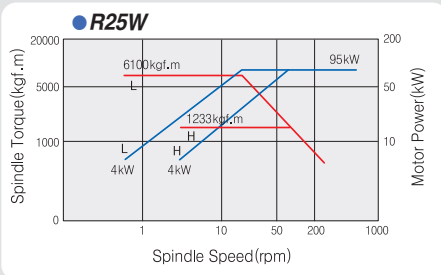
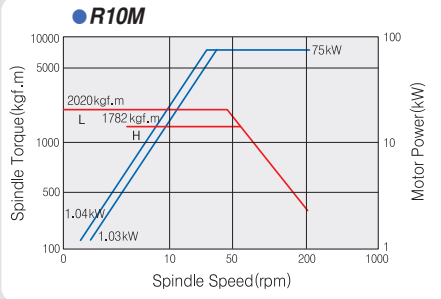
- Tailstock spindle is 280 to 900mm dia. in built-in rotating system.
- Max. thrust load of tailstock spindle is 8000 to 75000kg
- Tailstock has rapid feed device.
- Tailstock spindle is rapid feed also thrust load meter as standard.
- Tailstock ratchet arm device is incorporated for heavy work piece support.

### Bed



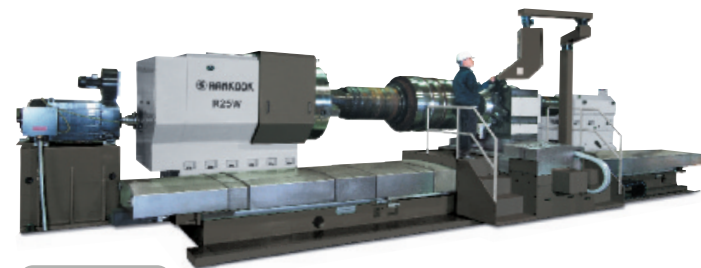
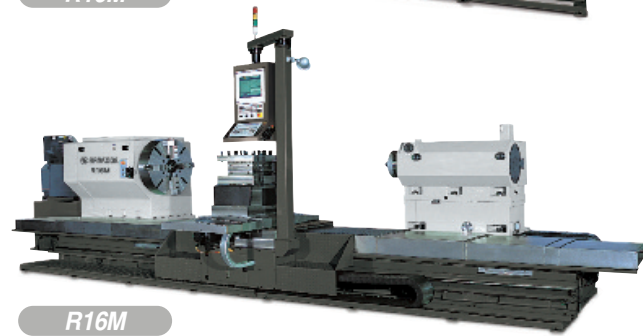
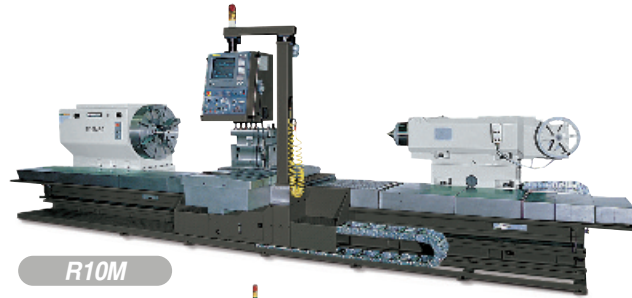
- The bed is a heavy one-piece casting with thick ribbing to prevent twisting and deformation.
- Fine grain Meehanite cast iron is used for its excellent dampening characteristics.
- The square flat bed design is suitable for heavy weight of work-piece directly downward onto the bed ways.
- Width of bed is 1200/1600/2000/1800+1600mm

## Torque & Power Diagram



— Spindle Torque Line  
— Motor Power Line

## R series Line-up





### Machine Specifications

Items		Unit	R10M		R16M		R25W		R50W		R70W
			80	100	100	120	160	200	160	200	220
Capacity	Max. roll turning diameter	mm	800	1000	1000	1200	1600	2000	1600	2000	2200
	Swing over carriage	mm	800	1000	1000	1200	1600	2000	1600	2000	2200
	Max. turning length	mm	2000/3000/4000/5000/6000/7000/8000								
	Distance between centers	mm	2000/3000/4000/5000/6000/7000/8000								
	Load capacity between centers	kg	10,000		16,000		25,000		50,000		70,000
Spindle	Spindle speed	rpm	0.5~250						0.4~185		
	Spindle speed range	step	Auto 2 steps								
	Spindle taper	—	1/12 short taper #100			1/12 short taper #120			1/12 short taper #140		
	Max. spindle torque	kgf.m	2020		3150		6100		8500		10,000
	Max. cutting force	kgf	3000		5000		12,000		16,000		20,000
Carriage	X-axis travel	mm	300	350	450	550	600	800	600	800	950
	Z-axis travel	mm	2000/3000/4000/5000/6000/7000/8000								
	X-axis rapid traverse	mm/min	4000								
	Z-axis rapid traverse	mm/min	6000								
Tool post	Type of tool post	—	H-4				Two lamella				
	No. of tool	ea	4				2				
	Tool post travel	mm	250				300				
	Tool holder width	mm	60		80		100		100		120
Tailstock	Tailstock quill diameter	mm	280		320		400		500		630
	Tailstock spindle taper	—	1/12 short taper #100			1/12 short taper #120			1/12 short taper #140		
	Max. spindle thrust	kgf	8000		12,500		16,000		25,000		50,000
	Type of tailstock spindle	—	Built-in live spindle								
	Max. quill travel	mm	250		250		250		250		250
Bed	Bed width	mm	1200		1200		2000		2000		2000
	Bed height	mm	580				700				
Motor	Spindle motor	kW(Hp)	60/75(80/100)		70(95)		95(125)		130(175)		155(205)
	X-axis servo motor	kW	AC 8.2		AC 10		AC 12		AC 14		AC 14
	Z-axis servo motor	kW	AC 8.2		AC 10		AC 12		AC 14		AC 14
CNC System		—	FANUC 32i-A								

### Standard Accessories

- CNC controller, FAUNC 32i-A
- Spindle and servo drives and motors
- Dead centers (Headstock, Tailstock)
- Hydraulic power unit
- H-4 tool post (R10, R16)
- Lamella type tool post (R25, R40, R50, R70, R100, R150)
- Rotary type tailstock spindle
- Rapid feed device for tailstock body & tailstock spindle
- Tailstock load meter (6-ton)
- X/Z-axis protect steel cover
- Work light & patrol lamp
- Foundation bolts and nuts and leveling block
- Tool box with necessary tools

### Optional Accessories

- 4-jaw independent chuck (2-step heavy duty geared chuck)  
Ø800mm (32"), Ø1000mm (40"), Ø1250mm (50"), Ø1500mm (60")
- Steady rests (roller jaws)
- Hydraulic steady rest
- Roll chock stand, 300~500mm, 500~700mm
- Chuck cover
- Chip conveyor (Z-axis)
- Tailstock load meter (6, 8, 10, 15, 20, 30 tons)
- Special tool holders
- Transformer
- Headstock center, 65°, 70°

R100TM			R150TM		
200	250	300	200	250	300
2000	2500	3000	2000	2500	3000
2000	2500	3000	2000	2500	3000
8000/10,000/12,000~20,000					
8000/10,000/12,000~20,000					
100,000			150,000		
0.5~150					
Auto 2 steps					
1/12 short taper #160					
22,000					
20,000					
950					
8000/10,000/12,000~200,000					
4000					
5000					
Two lamella					
2					
600					
120					
800			900		
1/12 short taper #160					
50,000			75,000		
Built-in live spindle					
150			150		
1800+1600					
700					
225(300)					
AC 16					
AC 16					

## Standard CNC Control Features

### FANUC 32i-A Control Features:

- Simultaneously controllable axes : 2
- Minimum programmable increment : 0.001mm(0.0001")
- Tape storage length : 320m(1048 feet)
- Registerable programs : 63
- Backlash compensation
- Constant surface speed control
- Self diagnostic functions

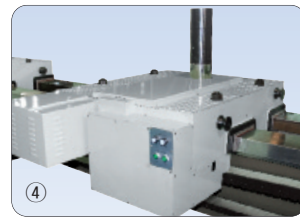
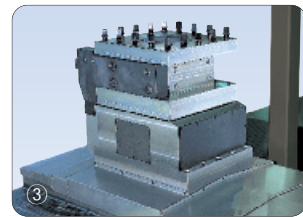
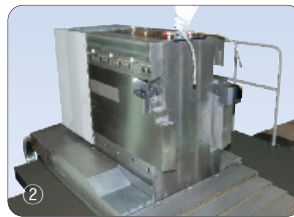
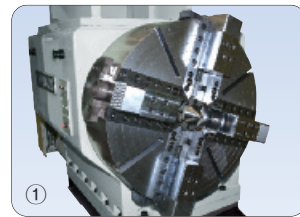
### Programming Features:

- Circular interpolation by radius designation
- Tool nose radius compensation (G40-G42)
- Combined use of absolute/incremental command
- Inch/Metric programming
- Chamfering, coner R
- Multiple repetitive cycles (G70-G76)
- Decimal point programming
- Reference point return (G27-G30)
- Sub-program-4 holds nested
- Extended part program editing

### Operation Features:

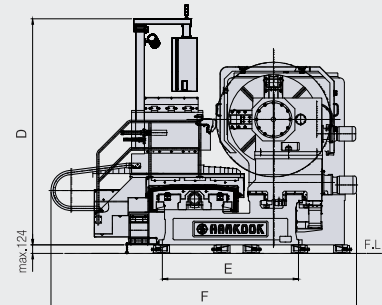
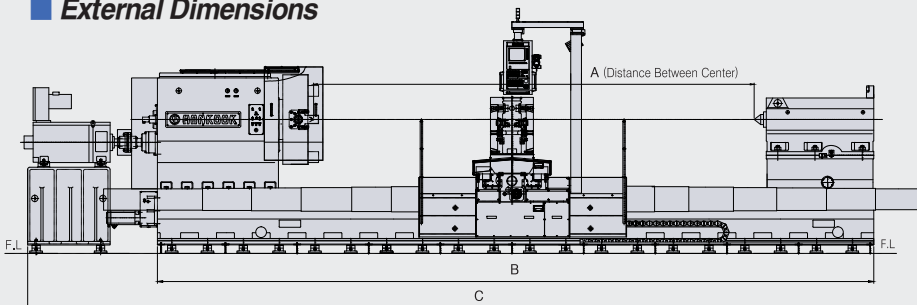
- High resolution 10.4" color LCD
- Absolute position encoders (no zero return required)
- Geometry and wear offsets
- 32 pairs of tool offsets
- Run hour display
- Thread cutting retract
- Direct input of offset valve measured
- Input/output interface (RS232C)
- Keyboard type manual data input (MDI Full key)
- Program protect key
- Incremental offset
- Rapid traverse override
- Feed rate override
- Spindle speed override
- Tape code : EIA, ISO Automatic recognition

## Accessories & Special Applications



- ① 2-step heavy duty geared chuck
- ② Two lamella tool post
- ③ H-4 tool post
- ④ Roll stand
- ⑤ Rack & 2-pinion

## External Dimensions



A (Center Distance)	2000	3000	4000	5000	6000	7000	8000	9000	10000	~	20000
R-10/16	5060	6060	7060	8060	9060	10060	11060	-	-	~	-
R-25/50/70	6000	7000	8000	9000	10000	11000	12000	-	-	~	-
R-100/150	-	-	-	-	-	-	14510	15510	16510	~	26510
R-10/16	7095	8095	9095	10095	11095	12095	13095	-	-	~	-
R-25/50/70	8400	9400	10400	11400	12400	13400	14400	-	-	~	-
R-100/150	-	-	-	-	-	-	19400	20400	21400	~	31400

	R10	R16	R25	R50	R70	R100	R150
D	2400	2400	3200	3200	3200	4000	
E	1160	1160	1900	1900	1900	1620+1490	
F	2750	2750	4265	4265	4265	6180	

unit:mm



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