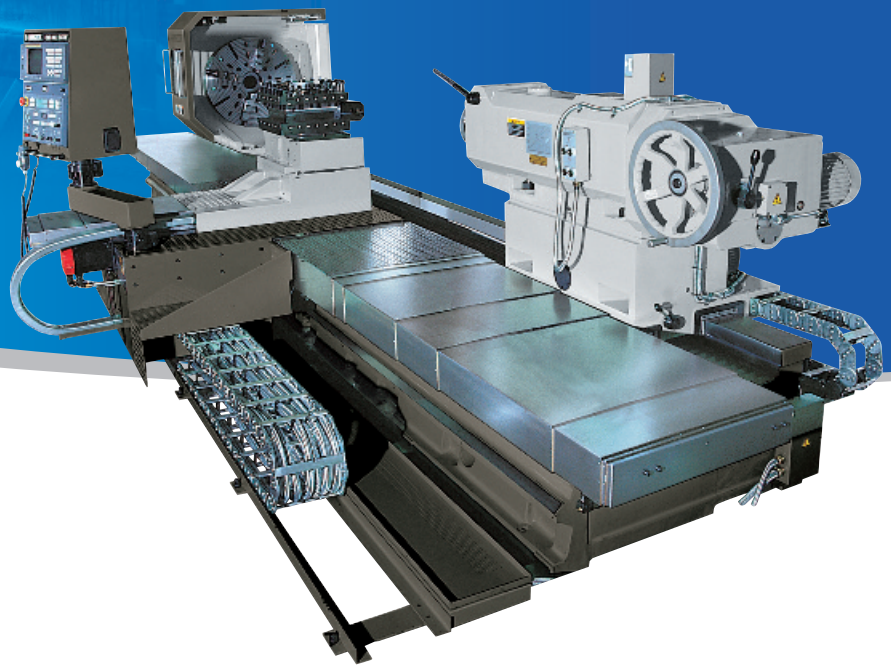
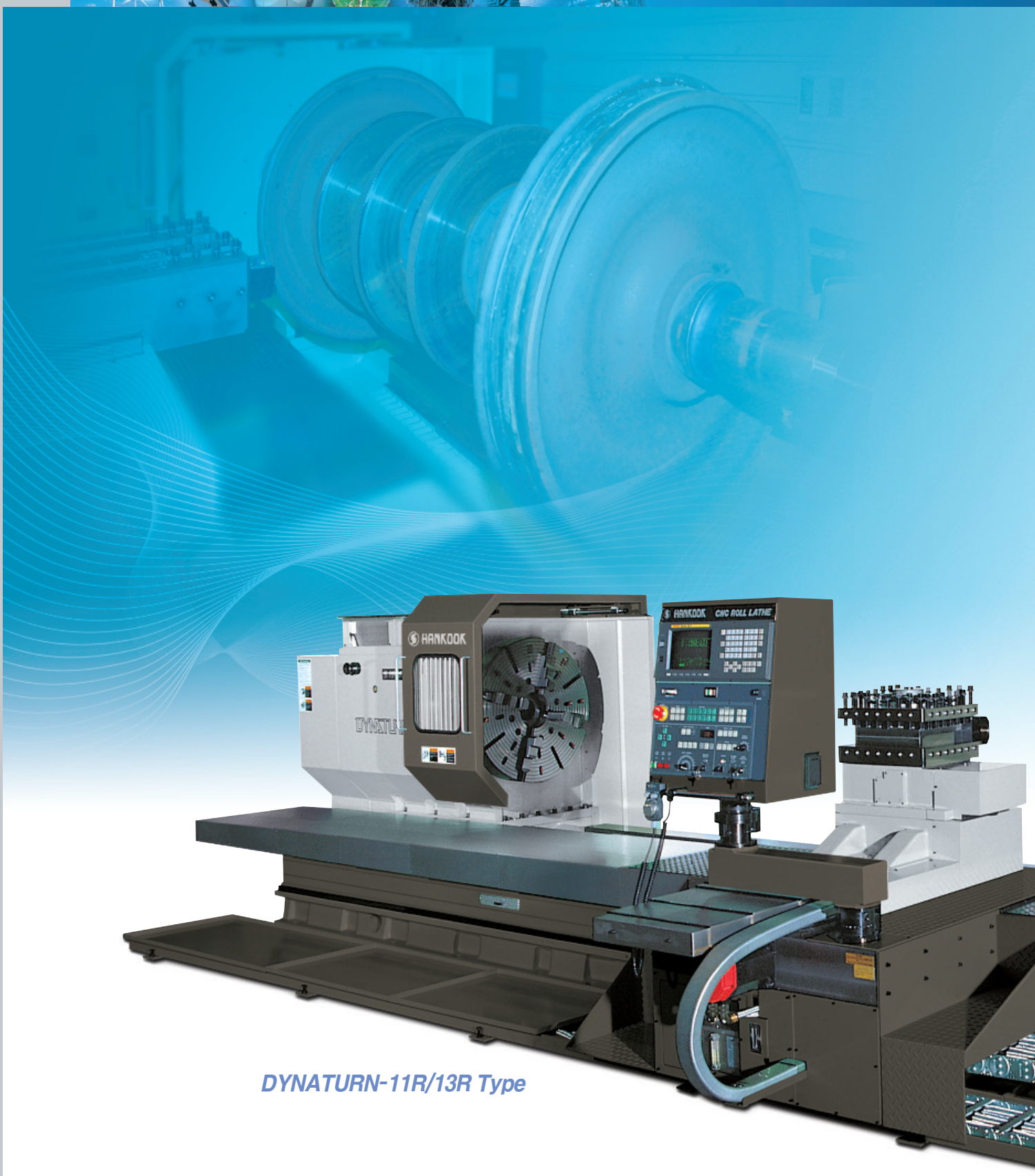
Half Carriage, Heavy Duty CNC Turning Lathe

DYNATURN R Series

DYNATURN-8R/DYNATURN-11R/DYNATURN-13R



HANKOOK



DYNATURN-11R/13R Type

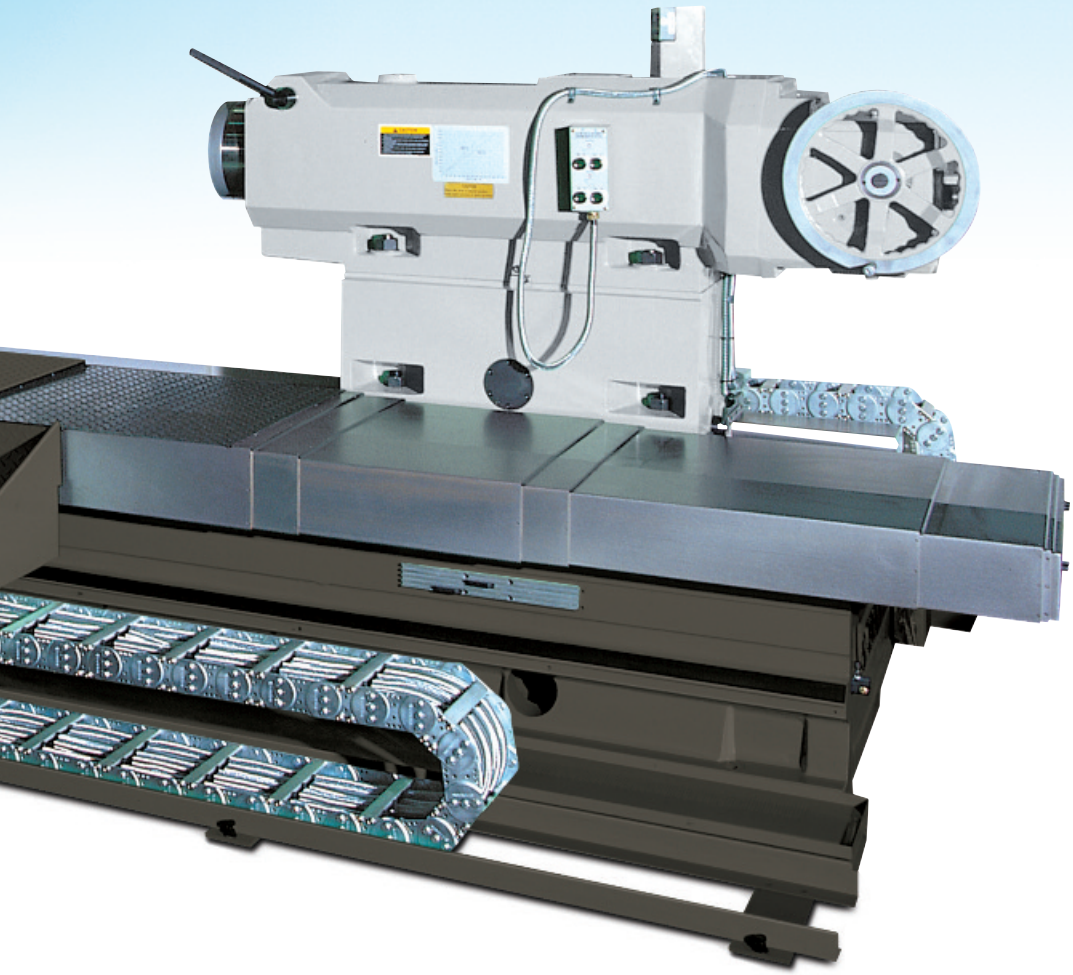
Half Carriage, Heavy Duty CNC Turning Lathe

DYNATURN 8R/11R/13R

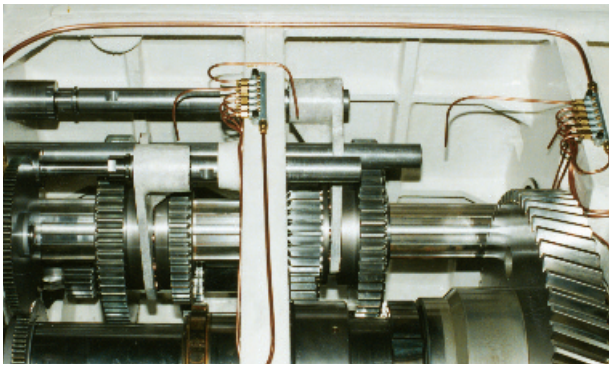
Hankook Dynaturn-R CNC turning lathes feature rugged cast iron construction, consistent quality in design and production and the "Human Engineering" which makes the operator more efficient. These together make the Hankook Dynaturn-R CNC turning lathe a cost effective investment.

Features

- Massive one piece cast iron bed construction.
- Hardened and ground bed ways for long life and accurate service.
- CE compliant electrical package insures reliability and serviceability.
- Headstock with Automatic shifting and constant surface speed control and high torque power delivery.
- No interference of steady rests during turning due to half carriage.
- Wide carriage to ensure the highest accuracy and rigidity.
- Built-in rotating tailstock spindle & load meter.
- Designed for high productivity and accuracy with the lowest maintenance cost.

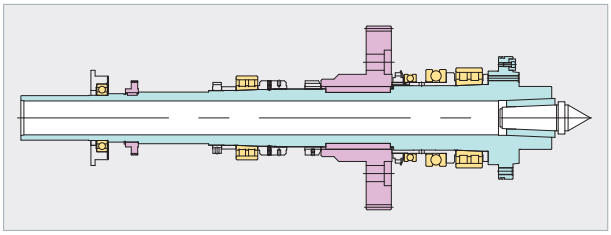


Head Stock



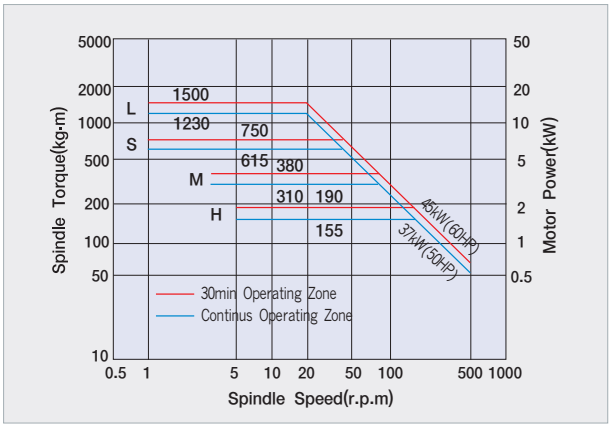
The construction of this heavy duty box type headstock is reinforced thick wall cast iron for maximum rigidity.
The design of this robust headstock features heavily ribbed double wall support for spindle front bearings and the reinforced thick wall positioned in the middle to provide the true three point spindle supports.
The four hydraulically shifted gear ranges provide a broad range of constant power, speed and torque to suit a wide variety of turning operations.
High volume forced lubrication system with safety interlock provided.

Main Spindle



The massive A2-15″ spindle is dynamically balanced and supported at three points by a large(200mm i.d.) diameter super precision class bearings. The main spindle delivers up to 1,500kg·m of torque.

Spindle Torque



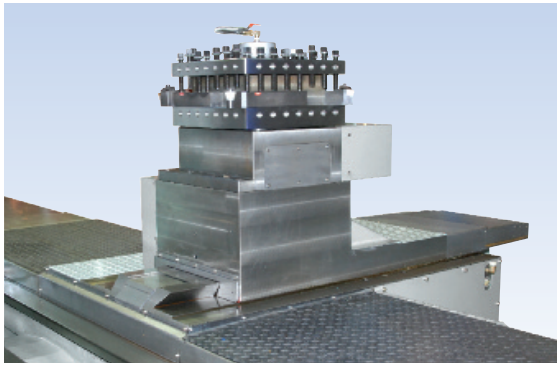
Tailstock

The heavy duty box type tailstock of high quality cast iron construction boasts a large 270mm diameter quill and a built-in rotating spindle.
The tailstock is designed to handle workpieces of up to 12tons between centers without steady rest.
All tailstock spindle bearings are high precision class to assure superior machining accuracy.
The ratchet lock device manually engaged with the racks embedded along the bed casting prevents the tailstock from slippage.
The hydraulic tailstock load meter permits precise setting of quill thrust: work weight vs. thrust requirement chart provided at the tailstock. Motorized rapid traverse systems are provided for fast positioning of both quill and tailstock body.

Bed

The extra wide one-piece solid bed of Meehanite cast iron is construction is densely ribbed to withstand the intense forces of heavy cutting and loading. This extremely rigid bed is fully stress relieved, induction hardened, and then precision ground in one set up for inherent accuracy.
The 4-way bed design permits carriage to pass through the tailstock and special steady rests.
This machine features an additional slide way in the low front section of the bed for added rigidity.
For easy disposal of chips, steep angle chutes are provided in between the bed ways.
Z axis ballscrew located on the middle of the bed is fully designed for safe axis movement, heavy duty cutting of large workpiece and high precision machining.

Carriage

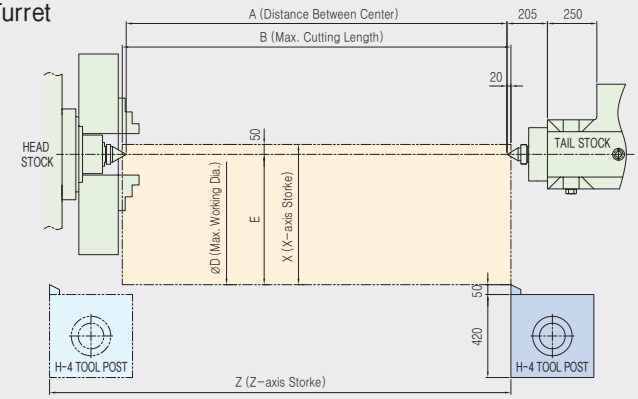


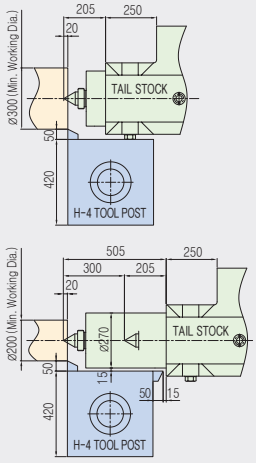
The extremely rigid extended saddle and the wide cross slide driven by large diameter high precision ballscrews are designed to handle the enormous 1500kg.m of full spindle torque.
Heavy and interrupted cuts are no match for these rigid designed saddle, cross slide and the drive mechanisms.
The floroplastic resin anti-friction material is bonded onto the sliding surfaces of saddle and cross slide combined with fully automatic metered lubrication system assures smooth machining operations and low friction surface.

Tool Travel Range

Unit: mm

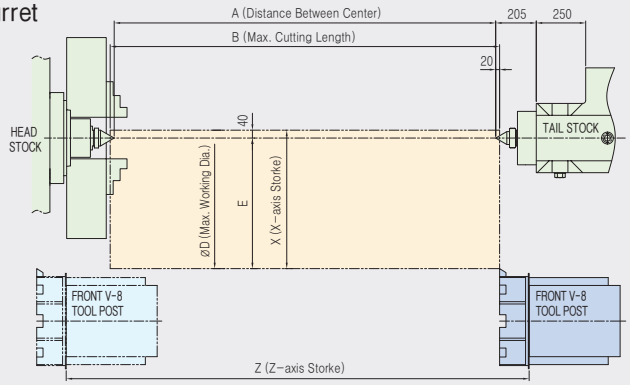
H-4 Turret

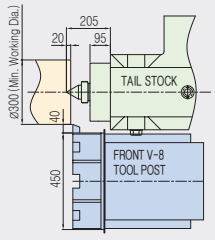




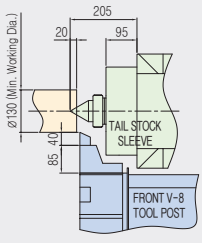
TOOL POST & TAILSTOCK INTERFERENCE

V-8 Turret

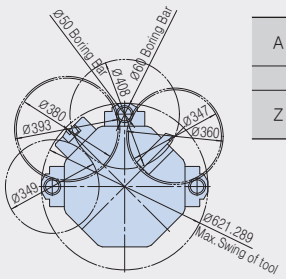




TOOL POST & TAILSTOCK INTERFERENCE



EXTERNAL TOOL HOLDER



V-8 TOOL INTERFERENCE

A	8R	2165	3165	4165	5165	6165	7165	8165
	11R/13R	2165	3165	4165	5165	6165	7165	8165
B		2000	3000	4000	5000	6000	7000	8000
Z	8R	3525	4525	5525	6525	7235	8235	9235
	11R/13R	2600	3600	4600	5600	6600	7600	8600

		8R	11R	13R
D		800	1120	1320
E	H-4	410	580	680
	V-8	420	590	690
X	H-4	460	750	750
	V-8	450	740	740

Machine Specifications

Items			Unit	DYNATURN-R			DYNATURN-RM		
				8R	11R	13R	8RM	11RM	13RM
Capacity	Swing over bed		mm(in)	1000(39.4)	1360(53.5)	1580(62.2)	1000(39.4)	1360(53.5)	1580(62.2)
	Swing over cross slide		mm(in)	800(31.5)	1120(44.1)	1320(52)	800(31.5)	1120(44.1)	1320(52)
	Max. turning diameter		mm(in)	1000(39.4)	1360(53.5)	1580(62.2)	1000(39.4)	1360(53.5)	1580(62.2)
	Distance between centers		mm(in)	2000(79)	3000(118)	4000(157)	5000(197)	6000(236)	7000(276) / 8000(135)
	Max. turning length		mm(in)	2000~8000(79~315) Same as center distance					
	Max. load between centers		kg(lbs)	12000(26500)					
Spindle	Spindle speed		rpm	1~500					
	Spindle bore		mm(in)	105(4.13)					
	Spindle speed range		–	Auto 4 ranges					
	Spindle nose		ASA	A2-15					
	Spindle taper		–	1/10 Metric taper #120					
C-axis	Max. speed		rpm	–			11.11		
	Max. torque		kgf·m	–			140		
Travel	X-axis travel		mm(in)	460(18.1)	630(24.8)	730(28.7)	460(18.1)	630(24.8)	730(28.7)
	Z-axis travel	8R	mm(in)	3525(138.8)	4525(178.1)	5525(217.5)	6525(256.9)	7235(284.8)	8235(324.2) / 9235(363.6)
		11R/13R	mm(in)	3300(130)	4165(164)	5140(202)	6125(241.1)	6620(260.6)	7610(299.6) / 8570(337.4)
	X/Z-axis rapid traverse		m/min(ipm)	4 / 6(157/236)					
Tool post	Standard tool post		–	Auto H-4 Turret			Disk drum type V-8M		
	Cutting tool size		mm(in)	□50(□2″)			□32(□1.26″)		
Tailstock	Quill diameter		mm(in)	270 (10.62)					
	Quill type		–	Built-in live spindle					
	Max. quill travel		mm(in)	300 (11.81)					
	Spindle taper		–	1/10 Metric taper #80					
Bed	Bed width		mm(in)	1010 (39.8)	1200 (47.2)		1010 (39.8)	1200 (47.2)	
	Bed length		mm(in)	5060(199.2)	6060(238.6)	7060(277.9)	8060(317.3)	9060(356.7)	10060(396.1) / 11060(435.4)
Motor	Main 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 4(5.4)					
	C-axis servo motor		kW(Hp)	–			AC 3.8(5)		
Power capacity(including for options)			kVA	75					
Machine weight		8R	kg(lbs)	14700 (32400)	16200 (35700)	17800 (39200)	19300 (42500)	20900 (46100)	22400 (49400) / 23900 (52700)
		11R		17000 (37500)	18600 (41000)	20100 (44300)	21700 (47800)	23300 (51400)	24800 (54600) / 26300 (58000)
		13R		17900 (39400)	19500 (43000)	21000 (46300)	22600 (49800)	24100 (53100)	25600 (56400) / 27100 (59700)
CNC Controller			–	FANUC 0i series					

Standard Accessories

- CNC controller, FAUNC 0i series
- Spindle motor & electrical equipments
- 4-jaw independent chuck, Ø24″(8R), Ø32″(11R), Ø40″(13R)
- Automatic index turret (Hydraulic H-4)
- Rotary tailstock spindle
- Rapid feed device for tailstock body & quill
- Tailstock load-meter (6-ton)
- Hydraulic power unit
- Coolant system
- Automatic lubrication system for guides
- Center sleeve (1/10 taper #120×Metric taper #80)
- Center (for haedstock and tailstock), 1/10 taper #80×75°
- Patrol lamp & work light
- Chuck cover
- Boring tool holder (Ø63mm)
- Boring bar sleeve (Ø63×50, 32mm)
- Drill sleeve (Ø63×MT#4, 3)
- Levelling block, Foundation bolt & nut
- Tool box with maintenance tools

Optional Accessories

- 4-jaw independent chuck, Ø32″, Ø40″, Ø50″, Ø55″, Ø63″
- 4-jaw independent chuck (2-step heavy duty jaw, Short taper) Ø32″, Ø40″, Ø50″, Ø55″, Ø63″
- Steady rest, roller jaws (Ø100-350mm: for 11R/13R, Ø300-500mm: for 11R, Ø300-600mm: for 13R)
- Steady rest, metal jaw (Ø100-350mm: for 11R/13R, Ø300-500mm: for 11R, Ø300-600mm: for 13R)
- Hyd. follow rest, metal jaws (Ø50-200mm)
- Roll stand
- Hydraulic automatic turret (V-8)
- Boring tool holder (Ø63mm)
- Boring bar sleeve (Ø63×50, 32, 25, 20, 16mm)
- Drill sleeve (Ø63×MT#4, 3, 2)
- Face plate, Ø40″(Ø1000mm)
- Tailstock load-meter (8, 10 ton)
- Hydraulic tailstock spindle (Only for Quill in & out)
- Chip conveyor & bucket
- Transformer

Standard CNC Control Features

FANUC 0i series CONTROL FEATURES:

- Simultaneously controllable axes : 2
- Minimum programmable increment : 0.001mm(0.0001″)
- Part program storage size : 512KByte
- Registerable programs : 400EA
- Backlash compensation
- Constant surface speed control
- Self diagnostic functions

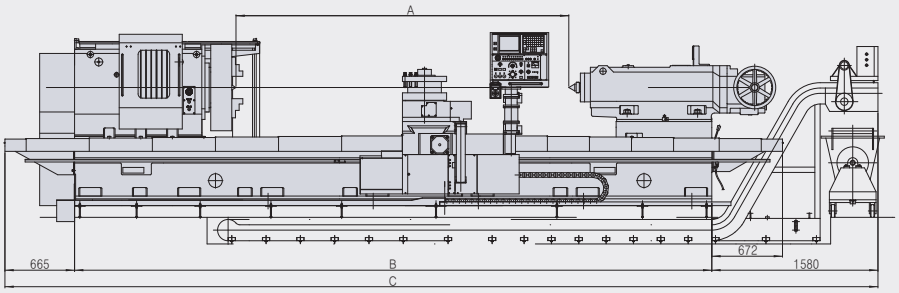
PROGRAMMING FEATURES:

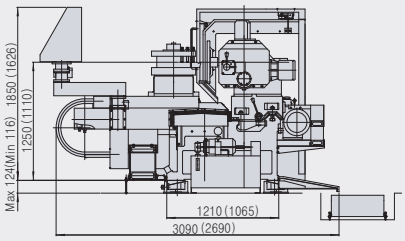
- Circular interpolation by radius designation
- Tool nose radius compensation (G40-G42)
- Combined use of absolute/incremental command
- Inch/Metric programming
- Chamfering, coner R
- Multiple repetitive cycles (G70-G76)
- Decimal point programming
- Reference point return (G27-G30)
- Sub-program-4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

External Dimensions





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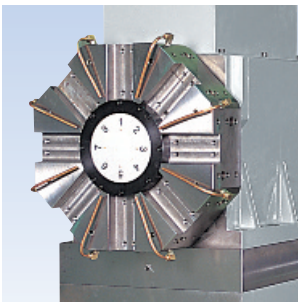
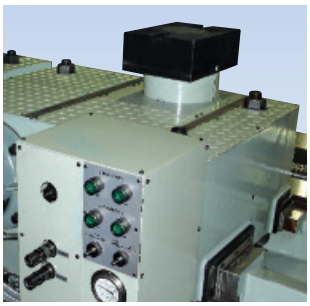
Unit: mm

A	2000	3000	4000	5000	6000	7000	8000
B	5060	6060	7060	8060	9060	10060	11060
C	7305	8305	9305	10305	11305	12305	13305

Optional Equipments


V-8 Tool post


Box type Tool post


Roll stand


Hydraulic follow rest

ISO 9001 REGISTERED FIRM

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