

Heavy Duty Super Large CNC Turning Lathe
DYNATURN Series

DYNATURN-20/22/24/26

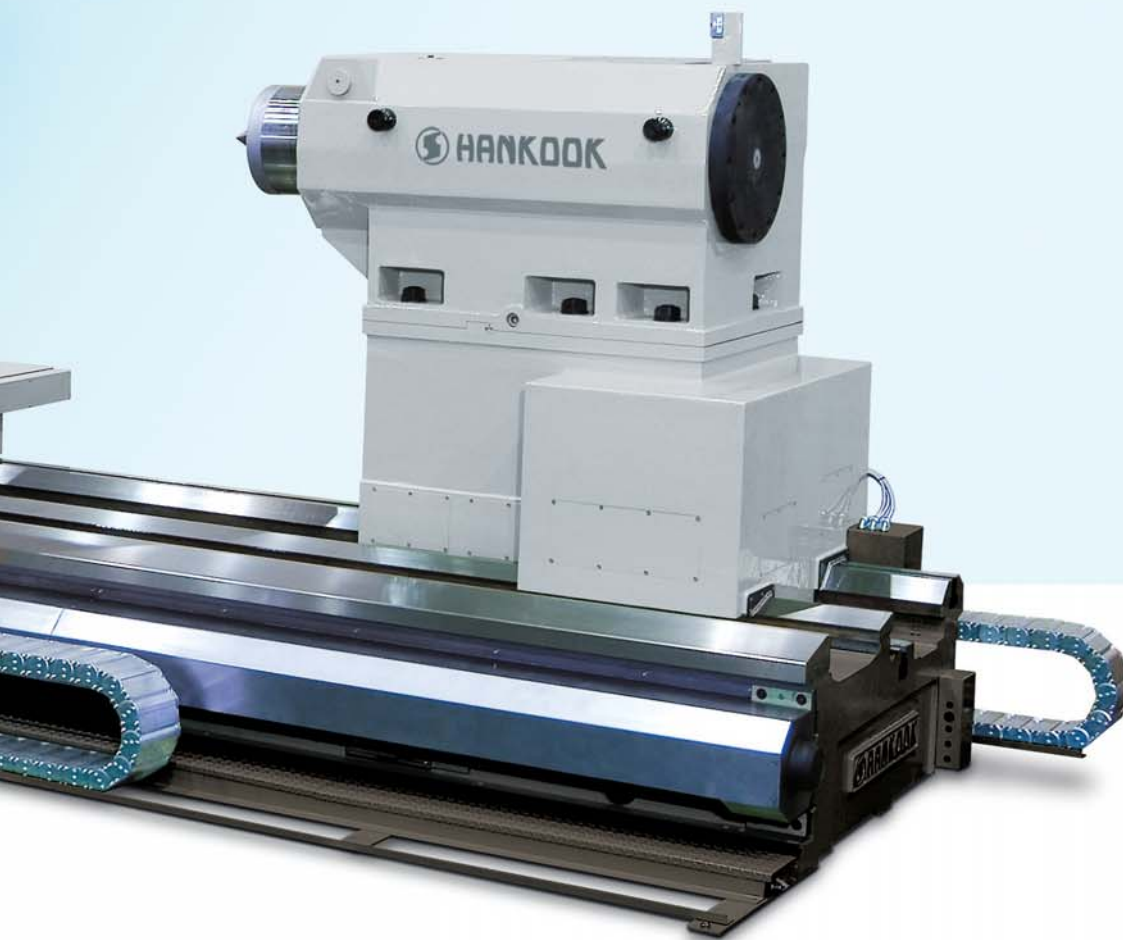




Heavy Duty Super Large CNC Turning Lathe **DYNATURN** 20/22/24/26

DYNATURN CNC lathes will maximize performance for machining extra-large parts that require reliable rigidity for accurate turning.

- Large 25 tons load capacity between centers
- Swing up to 2600mm(102.3")
- Up to 8000mm(315") shaft turning capacity
- Automatic shifting 4 speed geared headstock
- Powerful 6300 kgf.m(45,500 ft.lbs) spindle torque
- Induction-hardened and precision-ground guide ways
- Extra wide(1560mm) one-piece 3-slide way / 4-guideway cast iron bed
- Built-in rotating tailstock spindle (400mm/15.7" spindle dia.) & load meter
- Rapid feed device for tailstock body and tailstock sleeve
- Full automatic lubrication to all critical areas



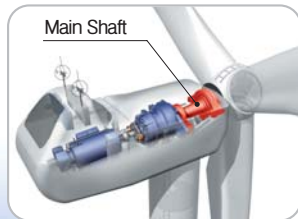


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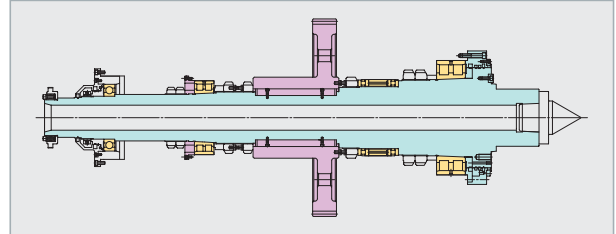
DYNATURN

20/22/24/26

> **DYNATURN** Heavy Duty Super Large CNC Lathe is Tough Enough for Machining 'Wind Turbine Generator Main Shaft'



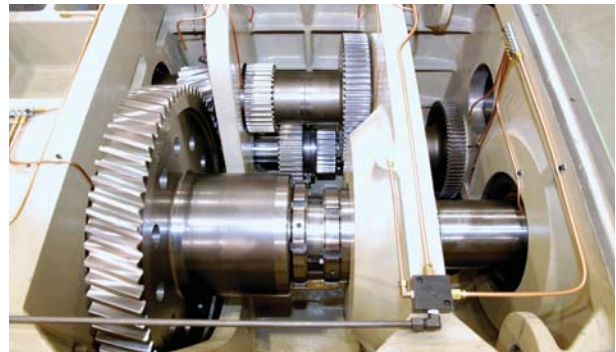
MAIN SPINDLE



The massive A2-15" spindle is dynamically balanced and supported at three points by a large (320mm i.d.) diameter high precision class bearings.

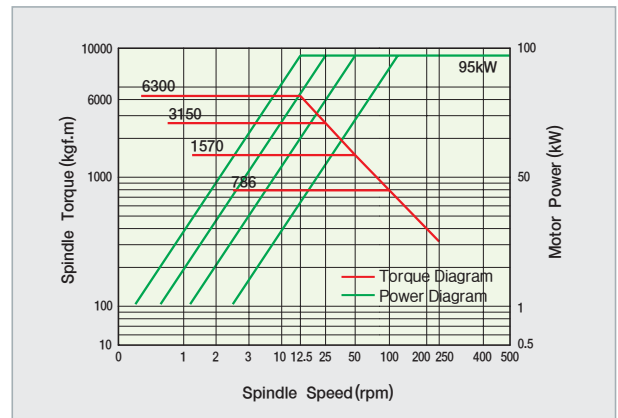
The special alloy steel, forged and heat treated, used for its rigidity and toughness are the essence of the uncompromised rigidity of this heavy duty spindle.

HEAD STOCK



- Automatic shifting 4-gear speed geared headstock.
- Double wall construction for spindle support of high quality robust cast iron.
- High torque (6300kgf.m/45,500 ft.lbs) power ideal forged steel machining.
- High volume forced lubrication system with safety interlock provided.
- Constant surface speed control and spindle speed override (50~120%) are accommodated.

TORQUE & POWER DIAGRAM

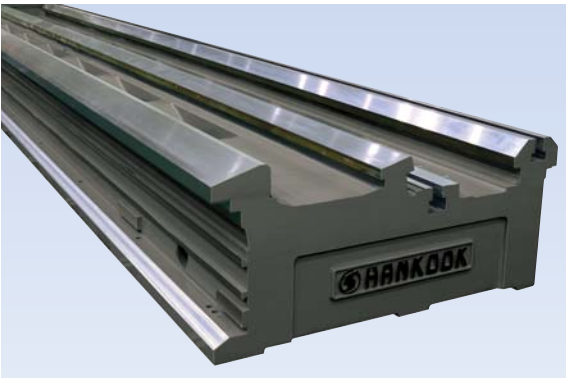


CARRIAGE & TOOL POST



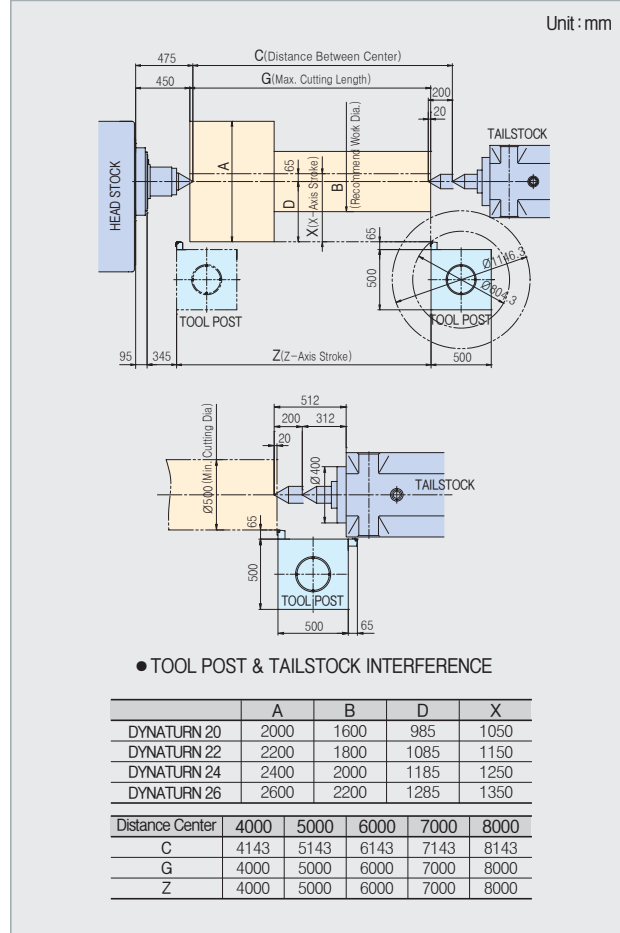
- Fluorine resins on mating surfaces of carriage to decrease the friction of bearing surface.
- Heavy duty automatic horizontal 4–station turret.
- The fully automatic metered lubrication system assures smooth machining operations and low friction surface.
- As the pendant type control is located at the operator’s position, centralized operation including from turning to self–diagnostic can be easily performed.

BED



- The bed is a heavy one–piece casting with thick ribbing to prevent twisting and deformation.
- Fine grain cast iron is used for its excellent dampening characteristics.
- Bed slideways are induction hardened and precisely grounded (Hs75°, 3mm depth)
- 3–slideway and 4–guideway.
- Chips are easily removed through bed chip holes.

TOOL TRAVEL RANGE (H-4 Turret)



TAILSTOCK



- Tailstock spindle is 400mm diameter in built–in rotating system.
- Maximum thrust load of tailstock spindle are 25 tons.
- Tailstock has rapid feed device.
- Tailstock sleeve is rapid feed also thrust load meter as standard.
- Tailstock ratchet arm and spring clamping cylinder device are incorporated for heavy work piece support.
- Long type tailstock body for machining wind turbine shaft. (Center distance(200mm) will be reduced)



MACHINE SPECIFICATIONS

Items		Unit	DYNATURN				
			20	22	24	26	
Capacity	Swing over bed	mm(inch)	2000(78.7) 2200(86.6) 2400(94.5) 2600(102.4)				
	Maximum turning diameter	mm(inch)	2000(78.7) 2200(86.6) 2400(94.5) 2600(102.4)				
	Swing over carriage	mm(inch)	1600(63) 1800(70.9) 2000(78.7) 2200(88.6)				
	Distance between centers	mm(inch)	4000(157)	5000(197)	6000(236)	7000(276)	8000(315)
	Load capacity between centers	ton(lbs)	25(55,100)				
Spindle	Diameter of front bearing	mm(inch)	Ø320(12.6)				
	Spindle speed	rpm	0.5~250				
	Spindle speed range	step	Automatic 4				
	Maximum spindle torque	kgf.m(lbf.ft)	6300(45,567)				
	Maximum cutting force	kg.f(lb.f)	12,000(26,455)				
	Spindle taper hole	-	1/12 metric taper #120				
Turret	Type of tool post	-	Hydraulic automatic H-4				
	Number of tools	EA	4				
	Cutting tool size	mm(inch)	50 Square(2 Square)				
Travel	X-axis travel	mm(inch)	1050(41.3)	1150(45.3)	1250(49.2)	1350(53.1)	
	Z-axis travel	mm(inch)	4000(157)	5000(197)	6000(236)	7000(276)	8000(315)
	X-axis rapid traverse	m/min(ipm)	3(118)				
	Z-axis rapid traverse	m/min(ipm)	6(236)				
Tailstock	Tailstock quill diameter	mm(inch)	Ø400(15.7)				
	Tailstock spindle taper	-	1/12 metric taper #120				
	Quill type	-	Built-in live center type				
	Maximum quill travel	mm(inch)	300(11.8)				
	Body rapid traverse	m/min(ipm)	1.6(63)				
Bed	Bed width×hight	mm(inch)	1560×650(61.4×25.6)				
	Bed length	mm(inch)	8250(325)	9250(364)	10,250(403)	11,250(443)	12,250(482)
Motors	Spindle motor	kW(Hp)	AC 95(126)				
	X/Z-axis servo motor	kW(Hp)	AC 14(18.6)				
	Tailstock rapid motor	kW(Hp)	4P×2.2(3)				
	Tailstock quill rapid motor	kW(Hp)	6P×2.2(3)				
CNC system		-	FANUC 32i-A				

STANDARD ACCESSORIES

- CNC controller (FAUNC 32i-A)
- Spindle and servo drives and motor and electrical equipments
- 4-jaw independent chuck (Ø63").
- Automatic H-4 turret tool post
- Centers (1/12 metric taper #120×60°)
- Hydraulic power unit
- Coolant system
- Live tailstock spindle
- Tailstock body rapid feed system
- Tailstock quill rapid feed system
- Tailstock load meter(20ton)
- Levelling block
- Foundation bolts & nuts
- Work light
- I.D tool holder (Ø63mm)
- Boring bar sleeve (Ø63mm×40/32mm)
- Drill sleeve (Ø63mm×MT#4/3/2)

OPTIONAL ACCESSORIES

- 4-jaw independent chuck (Ø40", Ø50", Ø55", Ø63", Ø70", Ø80", Ø100")
- 4-jaw independent chuck, 2-step heavy duty geared chuck (Ø40"~Ø100")
- Manual steady rest, metal jaws (Ø150-Ø500, Ø500-Ø800mm)
- Manual steady rest, roller jaws (Ø150-Ø500, Ø500-Ø800mm)
- Roll chock stand, metal type (Ø1200-Ø2000mm)
- Chip conveyor
- 380V transformer
- I.D tool holder (Ø63mm)
- Boring bar sleeve (Ø63mm×40, 32, 25, 20, 16mm)
- Drill sleeve (Ø63mm×MT#4, 3, 2)
- Long type tailstock body for machining wind turbine shaft



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

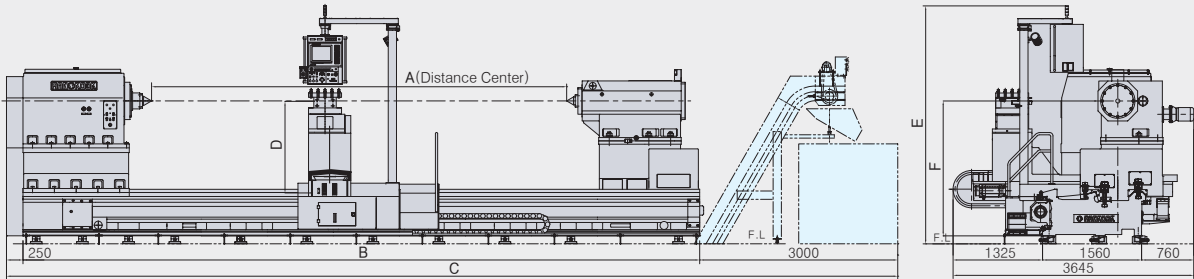
PROGRAMMING FEATURES:

- 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

EXTERNAL DIMENSIONS



		unit:mm								
A	4000	5000	6000	7000	8000	SWING	2000	2200	2400	2600
B	8250	9250	10250	11250	12250	D	1070	1170	1270	1370
C	11500	12500	13500	14500	15500	E	3573	3573	3573	3573
						F	1725	1825	1925	2025





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

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