

Hi-TECH 550

15"-18" Chucker Horizontal Turning Center





15"-18" CHUCKER HORIZONTAL TURNING CENTER

High Performance Mid-size 15"-18" Horizontal Turning Center

Hi-TECH 550 is equipped with the extra rigid tool post of highest durability to deliver the most stable, precision machining performance even at hard turning.

1 Spindle Housing/Machine Tool Industry/SM45C 2 Motor Housing/Machine Tool Industry/SM45C

3 Valve Body/Industrial Material/CF8M 4 Spindle Shaft/Machine Tool Industry/SNCF420



HEAVY DUTY CUTTING WITH BOX WAY & GEAR BOX TYPE

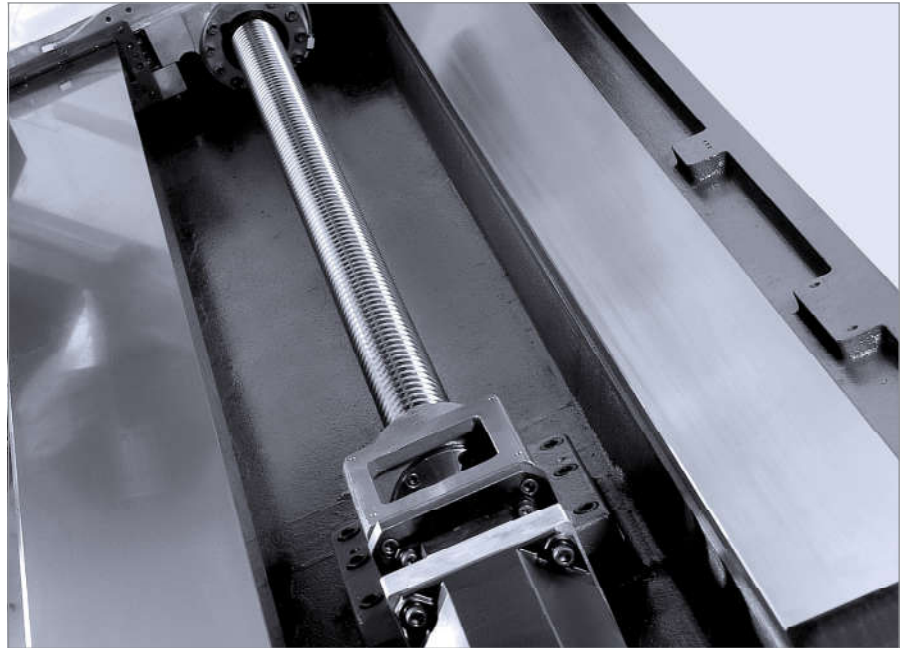
Hwacheon's Hi-TECH 550 incorporates tough box way design which makes it an ideal turning center for heavy duty hard turning. It's equipped with a long bed for extra-length workpieces, and with the programmable tailstock and steady rest for stability and precision. Machining precision is enhanced even further because all of the Hi-TECH 550's axes can be installed with highly accurate linear scales; and the fast turret indexing time of 0.2 seconds per step will increase your productivity.





Hand-Scraped to Perfection

The guide-ways are hand-scraped and polished to the highest precision based on Hwacheon's 60 years craftsmanship experience, this to reduce vibration and allows precision feed during heavy operations.

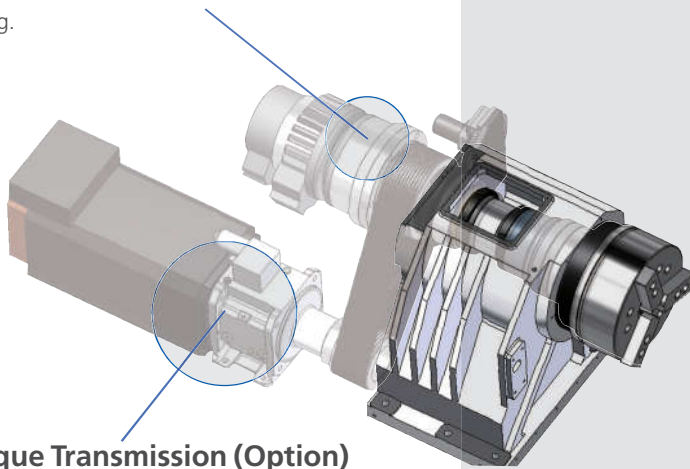


Box Way Design

Hi-TECH 550's box way guide design improves rigidity and precision after many hours of continued operation.

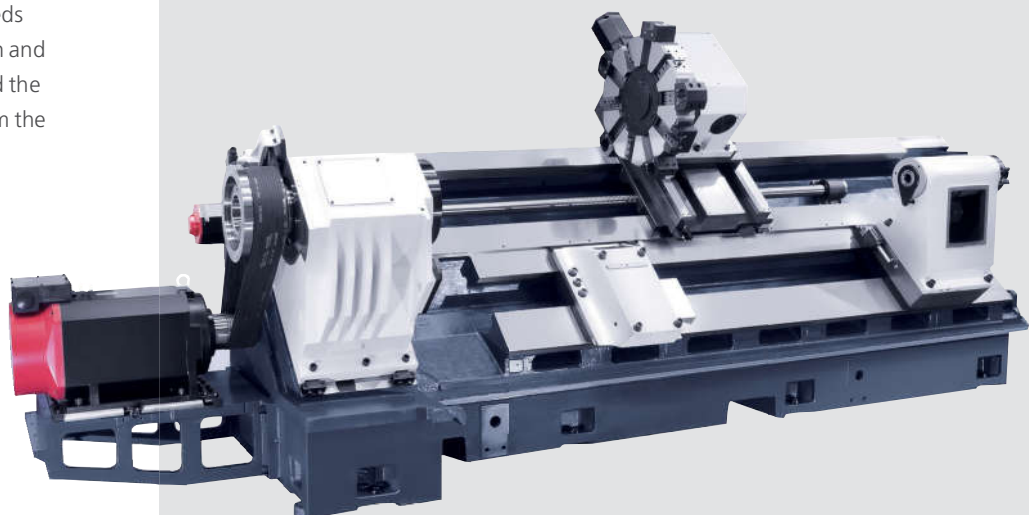
High Performance Spindle

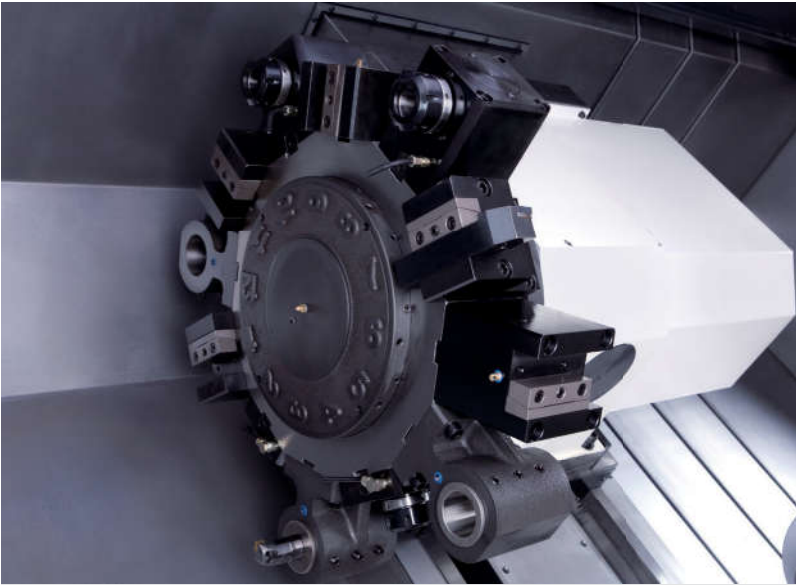
Hwacheon's unique spindle technology delivers quality and precision at high speed cutting.



High Torque Transmission (Option)

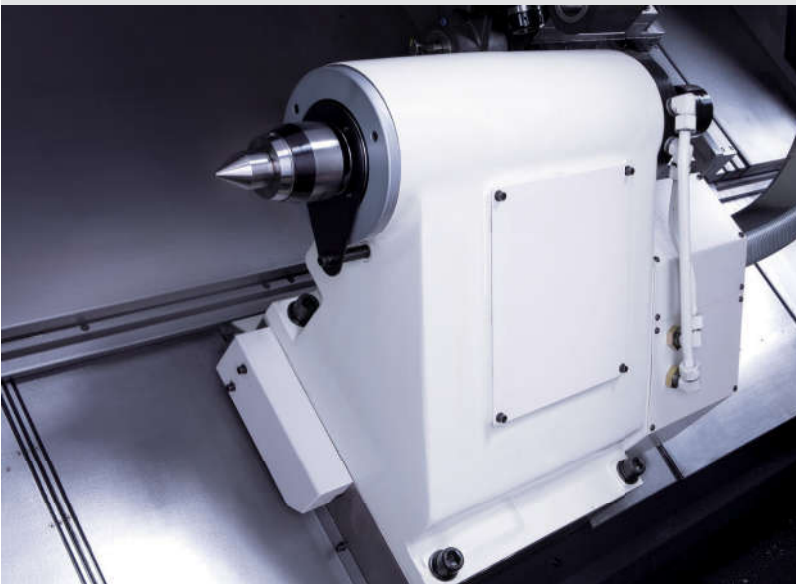
The gear-driven transmission provides power and versatility. It provides high torque at low speeds without compromising high-speed operation and performance. The transmission assembly and the spindle motor have been designed away from the spindle to limit heat and vibration transfer.





Tough, Rapid Indexing Turret

The turret in Hi-TECH 550 with a powerful clamping force offers an index time of 0.2sec/step for faster, more stable machining.



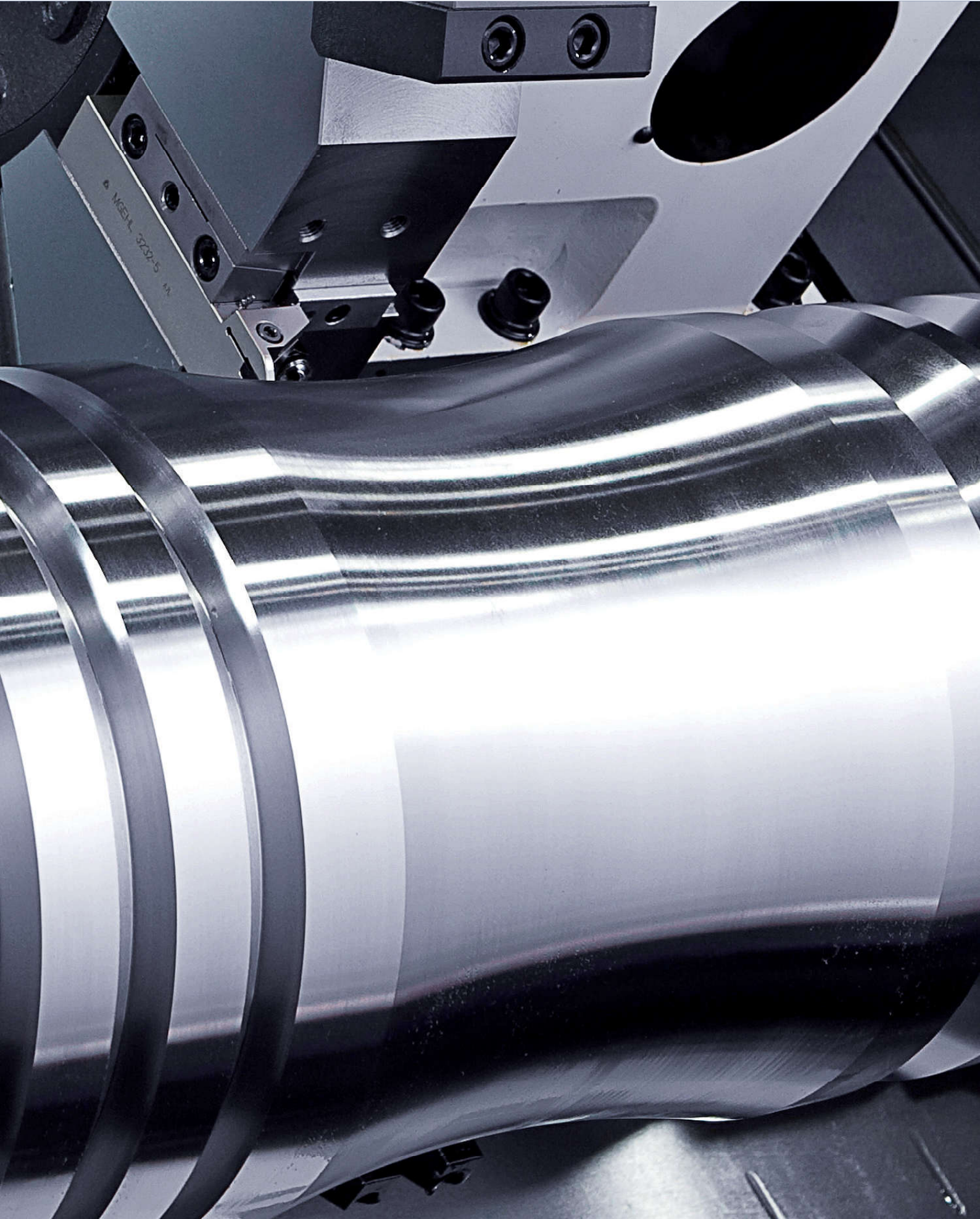
Programmable Tailstock (Standard)

The tailstock can be programmed to position itself in semi-auto, and it provides firm support for extra-long workpieces to guarantee machining precision. The tail spindle can be operated either by the foot switch or by programming, while providing firm, stable oil-pressure chucking.



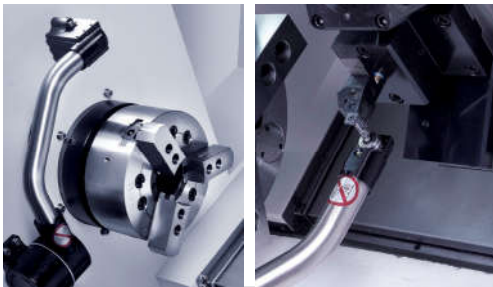
Steady Rest (Option)

Add the Steady rest when working with extra-long workpieces to raise machining precision.



USER FRIENDLY DESIGN, A WIDE RANGE OF OPTIONAL FEATURES

Hi-TECH 550 is designed to be user friendly, so you can concentrate on what you do best: creating quality products—without losing your valuable time to the worries of machine failure and safety. A wide variety of performance upgrade options are available for faster, more precise machining.



Tool Presetter (Option)

The tool presetter employs a highly accurate sensor to precisely compute for the coordinate settings in less than 15 seconds per tool. Different tool shapes and their tolerance values are entered automatically for the coordinate calculations.



Linear Scale (Option)

To determine the coordinates with the highest of accuracy, and to correct the axis coordinate error caused by thermal displacement, the magnetic absolute output linear scales can be installed on all axes.

L-HTLD: Hwacheon Lathe Tool Load Detect System (Option)



The Hwacheon Lathe Tool Load Detect System constantly detects and diagnoses the tool load under a process to prevent tool wear and damage, and to keep your machine and tools in optimal shape.

Load Detection Limit 1

Alarm + Feed Hold

> When the LIMIT 1 Alarm sounds, the system holds the feed and the machine goes into standby.

Load Detection Limit 2

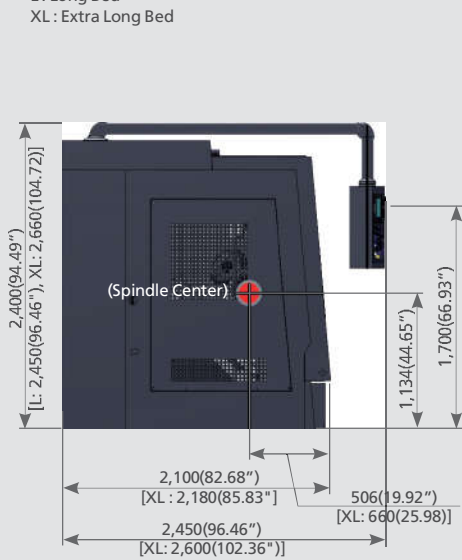
Alarm + Machine Stop

> When the LIMIT 2 Alarm sounds, the system stops the machine, and must be reset to operate it.

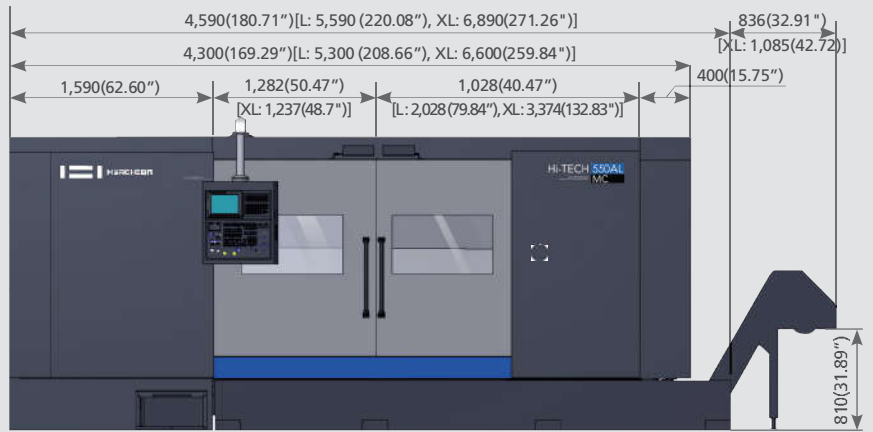
Product Data

* Unit: mm(inch)

L : Long Bed
XL : Extra Long Bed



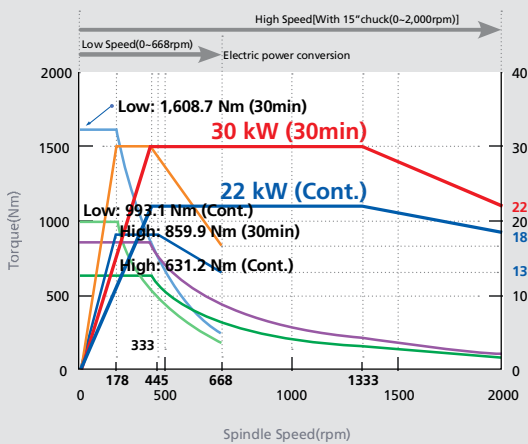
Left Side



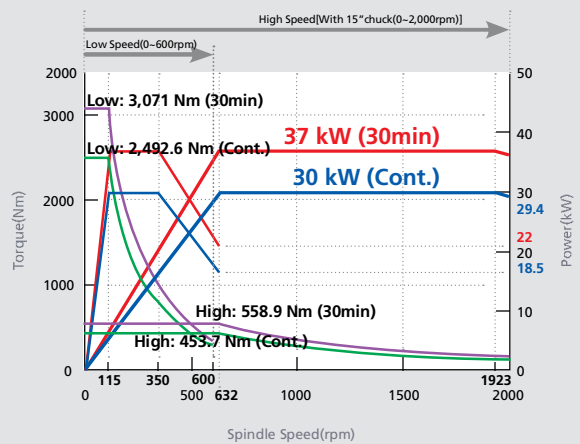
Front

Spindle Power-Torque Diagram

Standard



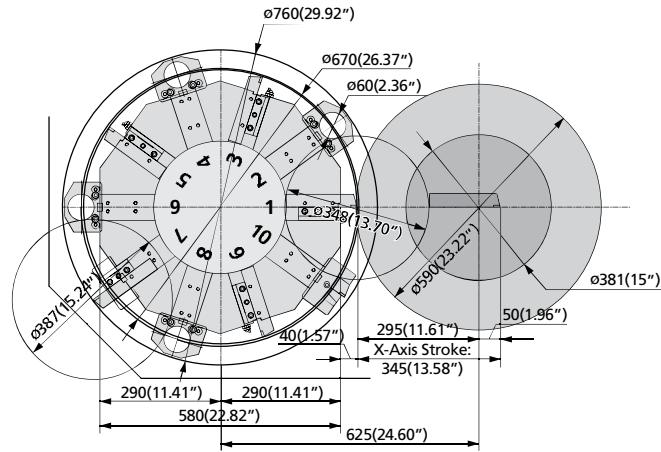
Option(with Gear Box)



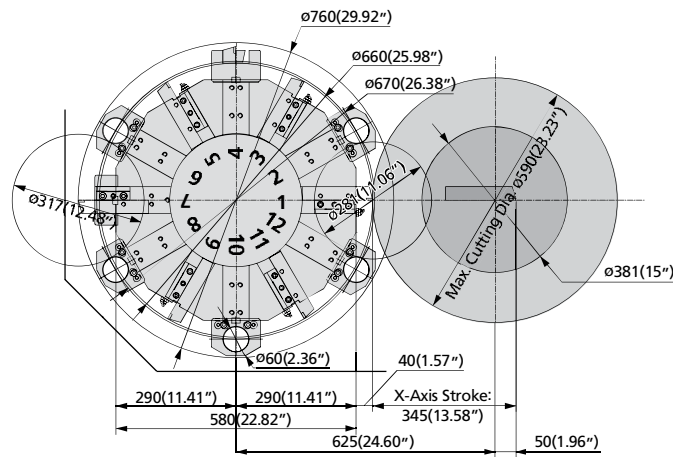
Tool Interference Diagram

※ Unit : mm(inch)

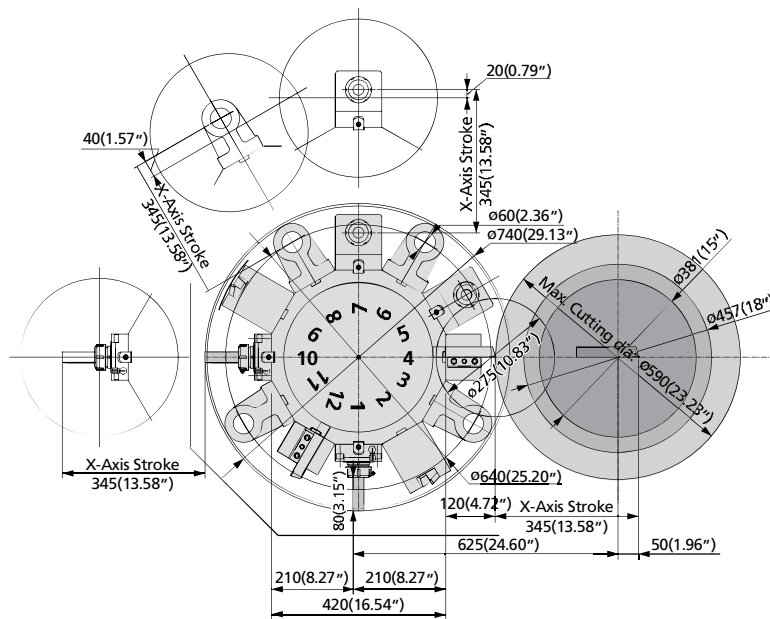
STD 10 Station



12 Station



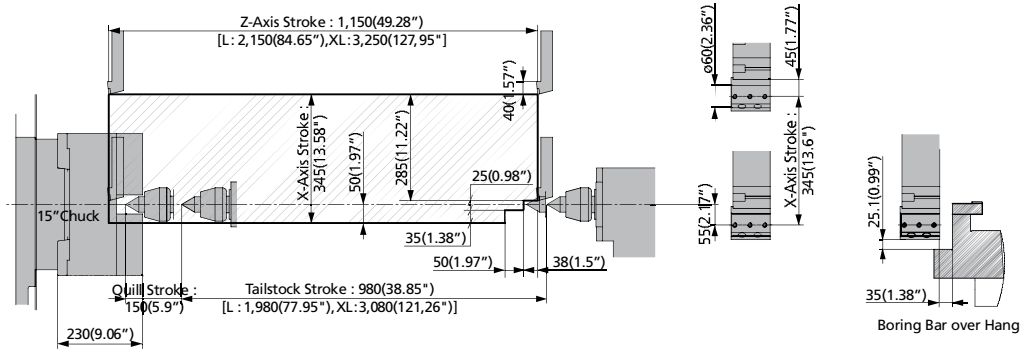
MC



Moving Range

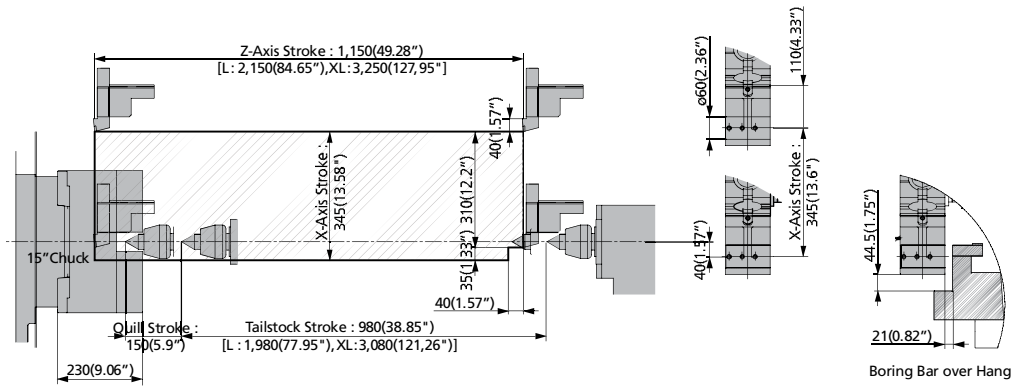
※Unit: mm(inch)

O.D Holder

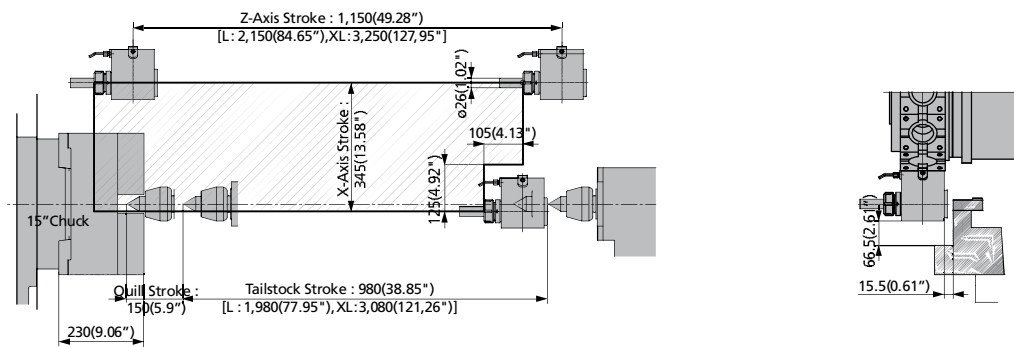


MC

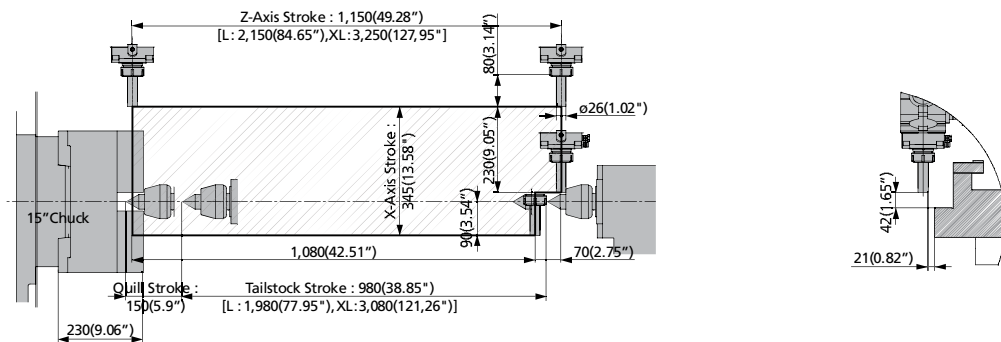
O.D Holder



Radial Turnmill Holder

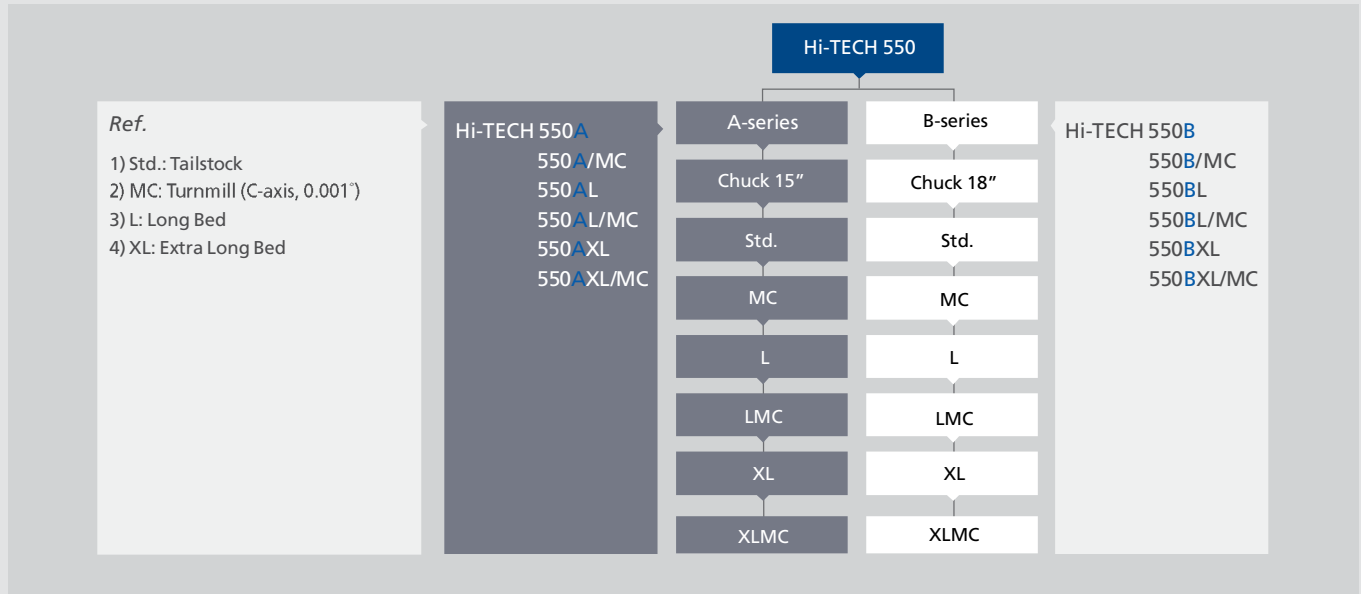


Axial Turnmill Holder



Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM	HI-TECH 550 SERIES						
	550A / AMC	550AL / ALMC	550AXL / AXLMC	550B / BMC	550BL / BLMC	550BXL / BXLMC	
Capacity							
Swing over Bed	mm (inch)	Ø800 (Ø31.50")					
Max. Cutting Diameter	mm (inch)	Ø590 (Ø23.23")					
Standard Cutting Diameter	mm (inch)	Std.: Ø387 (Ø15.23"), MC: Ø275 (Ø10.83")					
Max. Cutting Length	mm (inch)	1,100 (43.31")	2,100 (82.68")	3,200 (125.98")	1,100 (43.31")	2,100 (82.68")	3,200 (125.98")
Chuck Size	inch	15"			18"		
Spindle							
Type of Spindle Nose	ASA	A2-11					
Max. Spindle Speed	rpm	2,000			1,800		
Through Spindle Hole Diameter	mm (inch)	Ø132 (Ø5.20")					
Max. Bar Size	mm (inch)	Ø116 (Ø4.57")					
Spindle Bearing Inner Diameter	mm (inch)	Ø180 (Ø7.09")					
Spindle Motor	kW (HP)	30 / 22 (40 / 30)					
Turret							
Number of Tool Station	ea	Std.:10 (Opt.: 12), MC:12					
Tool Size	mm (inch)	□32 x Ø60 (□1.25" x Ø2.5")					
Turret Indexing Time	sec / step	0.2					
Feed rates							
Rapid Speed (X/Z)	m/min	20 / 24	20 / 20	20 / 10	20 / 24	20 / 20	20 / 10
Max. Stroke (X/Z)	mm (inch)	345 / 1,150 (13.58" / 45.28")	345 / 2,150 (13.58" / 84.65")	345 / 3,250 (13.58" / 127.95")	345 / 1,150 (13.58" / 45.28")	345 / 2,150 (13.58" / 84.65")	345 / 3,250 (13.58" / 127.9")
Feed Motor (X/Z)	kW (HP)	4 / 4 (5.4 / 5.4)	4 / 7 (5.4 / 9.5)		4 / 4 (5.4 / 5.4)	4 / 7 (5.4 / 9.5)	
Tail Stock							
Quill Dia.	mm (inch)	Ø120 (Ø4.72")					
Quill Stroke	mm (inch)	150 (5.91")					
Quill Taper	MT	# 5					
Turnmill (MC)							
Spindle Motor	kW (HP)	7.5/5.5(10/7.5)					
Max. Spindle Speed	rpm	4,000					
Max. Drill/Tap Size	mm	Ø32(Ø1.26")/M20					
Min. Index Angle	°(deg)	0.001					
Tank							
Lubrication	ℓ (gal)	12 (3.17)					
Hydraulic	ℓ (gal)	50 (13.21)					
Coolant	ℓ (gal)	250 (66)	380 (100)	580 (153)	250 (66)	380 (100)	580 (153)
Power Sources							
Electrical Power Supply	kVA	65					
Dimension							
Height	mm (inch)	2,400 (94.49")	2,450 (96.46")	2,660 (104.72")	2,400 (94.49")	2,450 (96.46")	2,660 (104.72")
Floor Space (LxW)	mm (inch)	4,590 x 2,450 (180.71" x 96.46")	5,590 x 2,450 (220.08" x 96.46")	6,890 x 2,600 (271.26" x 102.36")	4,590 x 2,450 (180.71" x 96.46")	5,590 x 2,450 (220.08" x 96.46")	6,890 x 2,600 (271.26" x 102.36")
Weight	kgf (lb _s)	Std.:9,500 (20,944) MC:10,000 (22,046)	Std.:12,000 (26,455) MC:12,500 (27,558)	Std.:15,500 (34,172) MC:16,000 (35,274)	Std.:9,700 (21,385) MC:10,200 (22,487)	Std.:12,200 (26,896) MC:12,700 (27,999)	Std.:15,700 (34,613) MC:16,200 (35,714)
NC Controller				Fanuc Oi-TF			

Standard and Optional Product Components



Standard Accessories		Optional Accessories	
• Built in tailstock (only XL Type)	• Signal Lamp with 2 Colors (R, G)	• Air Blower	• Part Catcher
• Coolant System	• Tailstock (MT#5)	• Air Gun	• Set of Hard Jaw
• Door Interlock	- Tailstock Body Program	• Bar Feeder Interface	• Signal Lamp with 3 Colors (R, G, Y)
• Foot Switch	- Tailstock Quill Program	• Chip Conveyor & Box (Side Type)	• Spindle Motor Upgrade
• Hydraulic Chuck - Hollow	• Tooling System	• Chuck Dual Pressure System	37/30kW with gear box
- Hi-TECH 550A: 15"	• Tool Kit & Box	• Chuck Pressure Check Switch	• Steady Rest
- Hi-TECH 550B: 18"	• Work Light	• Chuck Pressure Compensation	• Steady Rest Base
• Hydraulic Unit (40kg/cm ²)	• 10.4" Colors LCD	• Coolant Gun	• Tool Presetter (Automatic type)
• Leveling Bolt & Plate		• High Pressure Coolant System, 6bar / 15bar	• Tool & Work Counter, External / Internal
• Manual Guide i		• L-HTLD	• Transformer
• Multiple Repetitive Cycle 2		(Lathe-Hwacheon Tool Load Detect)	• Turnmill Function Including C-Axis (0.001")
• Operation Manual & Part List		• Linear Scale (X / Z)	• Turnmill Spindle Motor Upgrade, 11/7.5kW
• Set of Soft Jaws		• NC Cooler	• Turnmill Holder (Axial / Radial)
			• U-Drill Holder
			• 15" Color LCD (only FANUC)

NC Specifications [Fanuc Oi-TF]

※ - : Not available S : Standard O : Option

ITEM	SPECIFICATION	Std.	MC	ITEM	SPECIFICATION	Std.	MC
Controlled axis				Program input			
Controlled axis (Cs axis)	2-Axes	2-Axes	3-Axes	Tape code	EIA / ISO	S	S
Simultaneously controlled axes	2-Axes	2-Axes	3-Axes	Optional block skip	9ea	S	S
Least input increment	0.001 mm, 0.001 deg, 0.0001 inch	S	S	Program number	O4-Digits	S	S
Least input increment 1/10	0.0001 mm, 0.0001 deg, 0.00001 inch	O	O	Sequence number	N8-Digits	S	S
inch/metric conversion	G20, G21	S	S	Decimal point programming		S	S
Stored stroke check 1, 2, 3		S	S	Coordinate system setting	G50	S	S
Chamfering on/off		S	S	Coordinate system shift		S	S
Backlash compensation		S	S	Workpiece coordinate system	G54-G59	S	S
Operation				Workpiece coordinate system preset	G92.1	S	S
Automatic & MDI operation		S	S	Direct drawing dimension programming		S	S
Program number search		S	S	G code system	A	S	S
Sequence number search		S	S	Programmable data input	G10	S	S
Dry run, single block		S	S	Sub program call	10 folds nested	S	S
Manual handle feed	1Unit	S	S	Custom macro B		S	S
Manual handle feed rate	x1, x10, x100	S	S	Addition of custom macro common variables	#100-#199, #500-#999	S	S
Interpolation function				Canned cycles		S	S
Positioning	G00	S	S	Multiple repetitive cycle		S	S
Linear interpolation	G01	S	S	Multiple repetitive cycle II		S	S
Circular interpolation	G02, G03	S	S	Canned cycles for drilling		S	S
Dwell (Per seconds)	G04	S	S	Manual guide i		S	S
Polar coordinate interpolation	G12.1 / G13.1	-	S	Spindle speed function			
Cylindrical interpolation	G7.1	-	S	Constant surface speed control	G96 / G97	S	S
Threading	G32	S	S	Spindle override	50 - 120 %	S	S
Multiple threading		S	S	Spindle orientation		S	S
Threading retract		S	S	Rigid tapping		O	S
Continuous threading		S	S	Spindle synchronous control		-	-
Variable lead threading	G34	S	S	Editing operation			
Reference position return 1st	G28	S	S	Part program storage length	1,280m (512kB)	S	S
Reference position return check	G27	S	S	Number of register able programs	400ea	S	S
2,3,4th reference position return	G30	S	S	Background editing		S	S
Feed function				Extended part program editing		S	S
Rapid traverse override	F0, F25, F50, F100	S	S	Play back		S	S
Feed per minute (mm/min)	G98	S	S	Clock function		S	S
Feed per revolution (mm/rev)	G99	S	S	Self-diagnosis function / Alarm history display		S	S
Rapid traverse bell-shaped acceleration/deceleration		S	S	Help function		S	S
Feedrate override	0-150%	S	S	Run hour and parts count display		S	S
Jog feed override	0-1,260 mm/min	S	S	Graphic function		S	S
Tool function / compensation				Dynamic graphic display		O	O
Tool function	T4-digits	S	S	Multi-language display	English, German, French, Italian, Chinese, Spanish, Korean, Portuguese, Polish, Hungarian, Swedish, Russian	S	S
Tool offset pairs	128pairs	S	S				
Tool nose radius compensation		S	S				
Tool geometry/wear compensation		S	S				
Tool life management		O	O				
Automatic tool offset	Tool presetter option is required	O	O	Data input/output			
Direct input tool offset value measured B	Tool presetter option is required	O	O	Reader/Puncher interface CH1	RS232C	S	S
Others				Reader/Puncher interface CH2	RS232C	S	S
Display unit	10.4" Color LCD	S	S	Ethernet interface	Embedded Ethernet	S	S
				Memory card interface		S	S
				USB card interface		S	S

Hwacheon Global Network

 Hwacheon Headquarter  Hwacheon America  Hwacheon Europe  Hwacheon Asia



HWACHEON

Please call us for product inquiries.

www.hwacheon.com

The product design and specifications may change without prior notice.
Read the operation manual carefully and thoroughly before operating the product,
and always follow the safety instructions and warnings labels attached on the surfaces of the machines.

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