



CUTEX-160

6"-8" Chucker Horizontal Turning Center



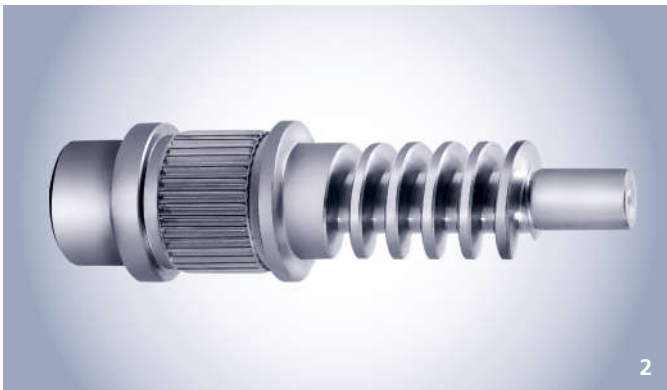


6"-8" CHUCKER HORIZONTAL TURNING CENTER

6"-8" Horizontal Turning Center

The fast turret indexing time of 0.15sec/step and 36m/min feedrate minimize the time between each cut process, and the high-power chuck clamp guarantees precision turning every time—providing superb performance for any mass production applications.

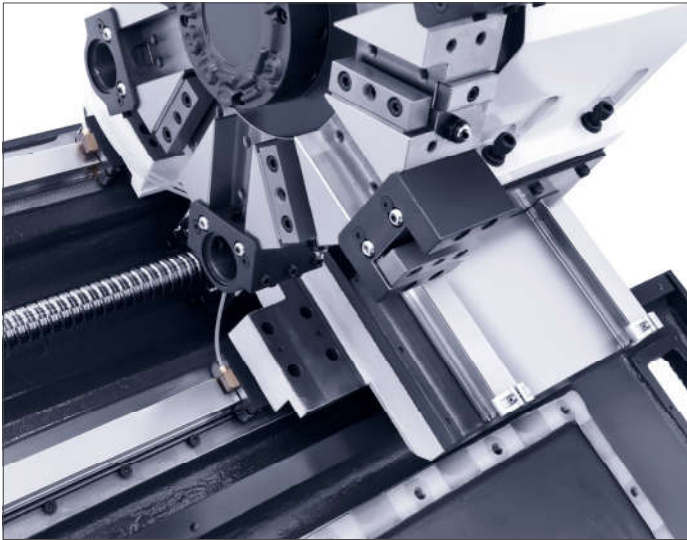
1 Valve Body / Industrial Material / SM45C 2 Screw Shaft / Automobile / SAE11L17
3 Serration Shaft / Automobile / SM43C 4 Shaft / Industrial Material / SM45C 5 Spline Hub / Automobile / SCR420H



STANDARD IN 6"-8" HORIZONTAL TURNING CENTERS

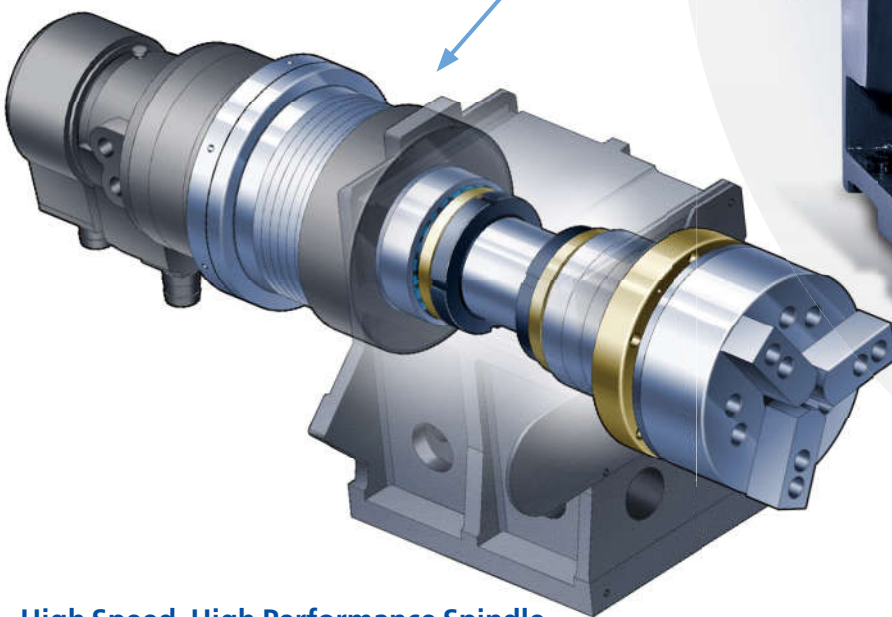
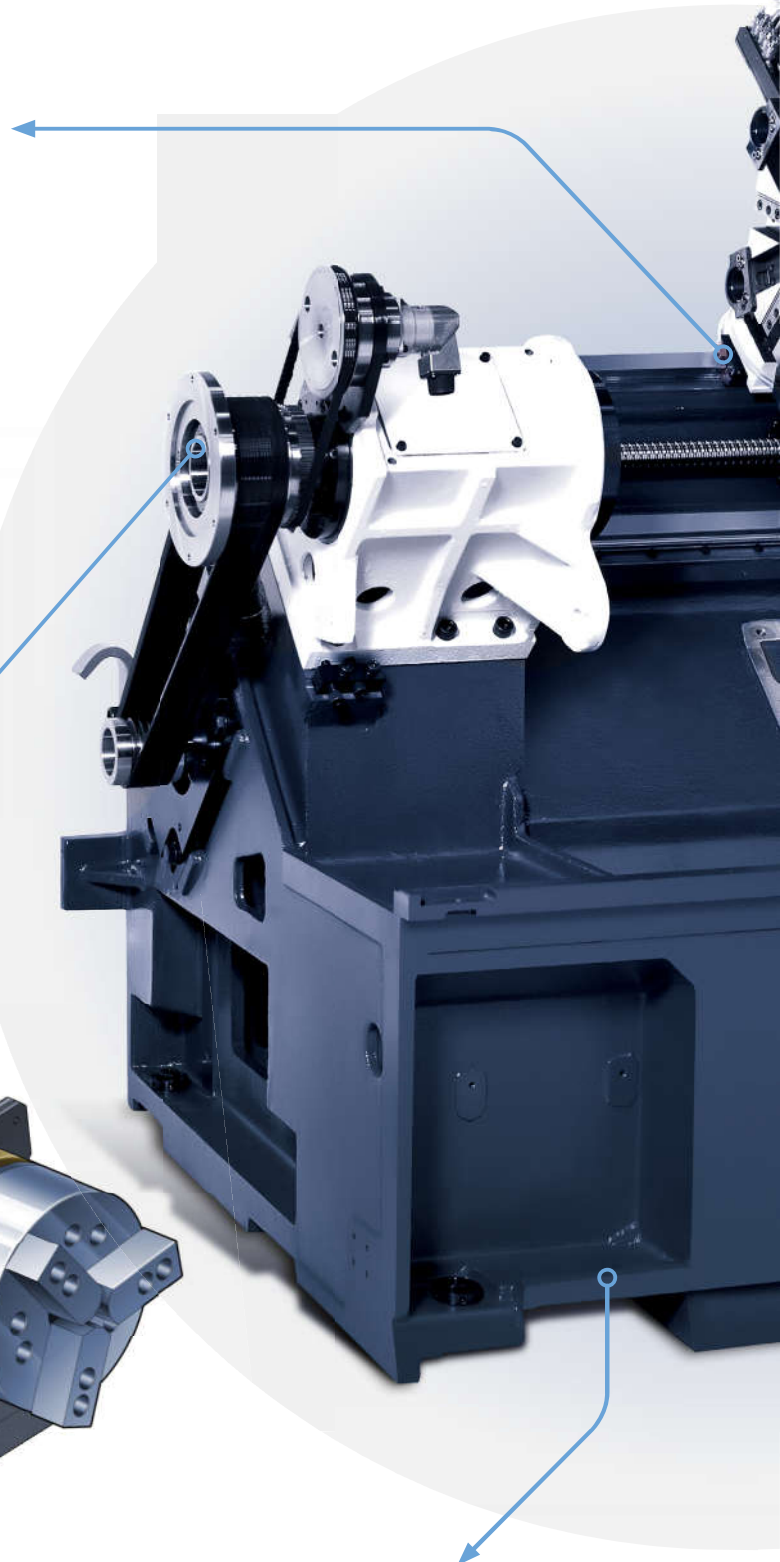
The pinnacle of Hwacheon technology, CUTEX-160 quickly became the industry standard in small-size turning centers when it was introduced. With its compact design, rigid construction, and a wide range of options such as bar feeder and parts catcher, CUTEX-160 will be a perfect solution for all your production requirements. The machine incorporates L-HTLD, the Hwacheon Lathe Tool Load Detection system, which monitors the tool load in real time to protect your valuable assets and to provide consistent, quality results.





Extra Rigid LM Guide

CUTEX-160 incorporates highly rigid LM guides on all axes with fast feedrate of 36m/min, to cut down the time between processes, and to enhance machine precision.

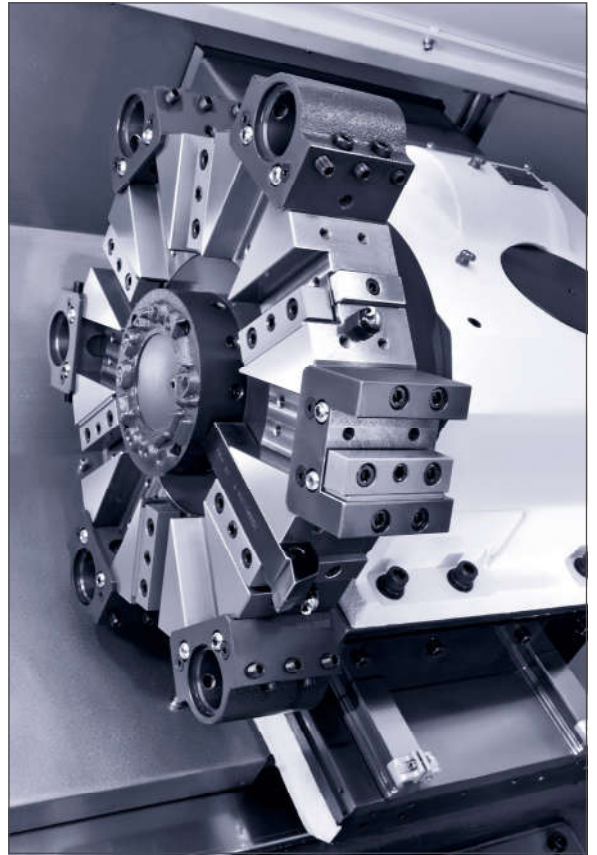
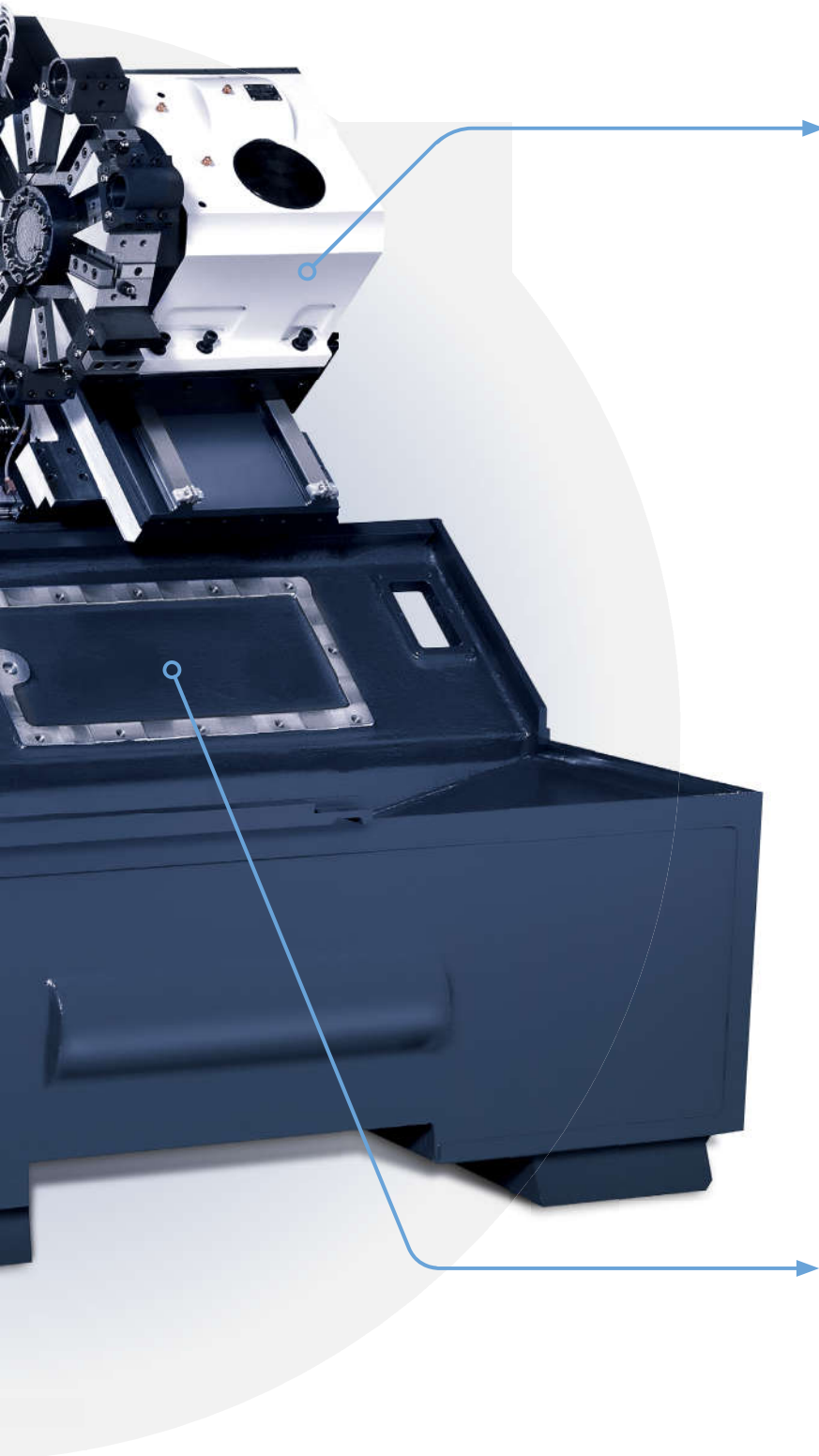


High Speed, High Performance Spindle

Hwacheon's high-performance spindle delivers predictable, quality results consistently at high speed machining.

Extra Rigid Single Frame Construction

The integrated 45-degrees torque rib frame bed is made of Meehanite cast iron to limit heat distortion; and it prevents thermal displacement during high-speed machining to guarantee accurate, consistent results.



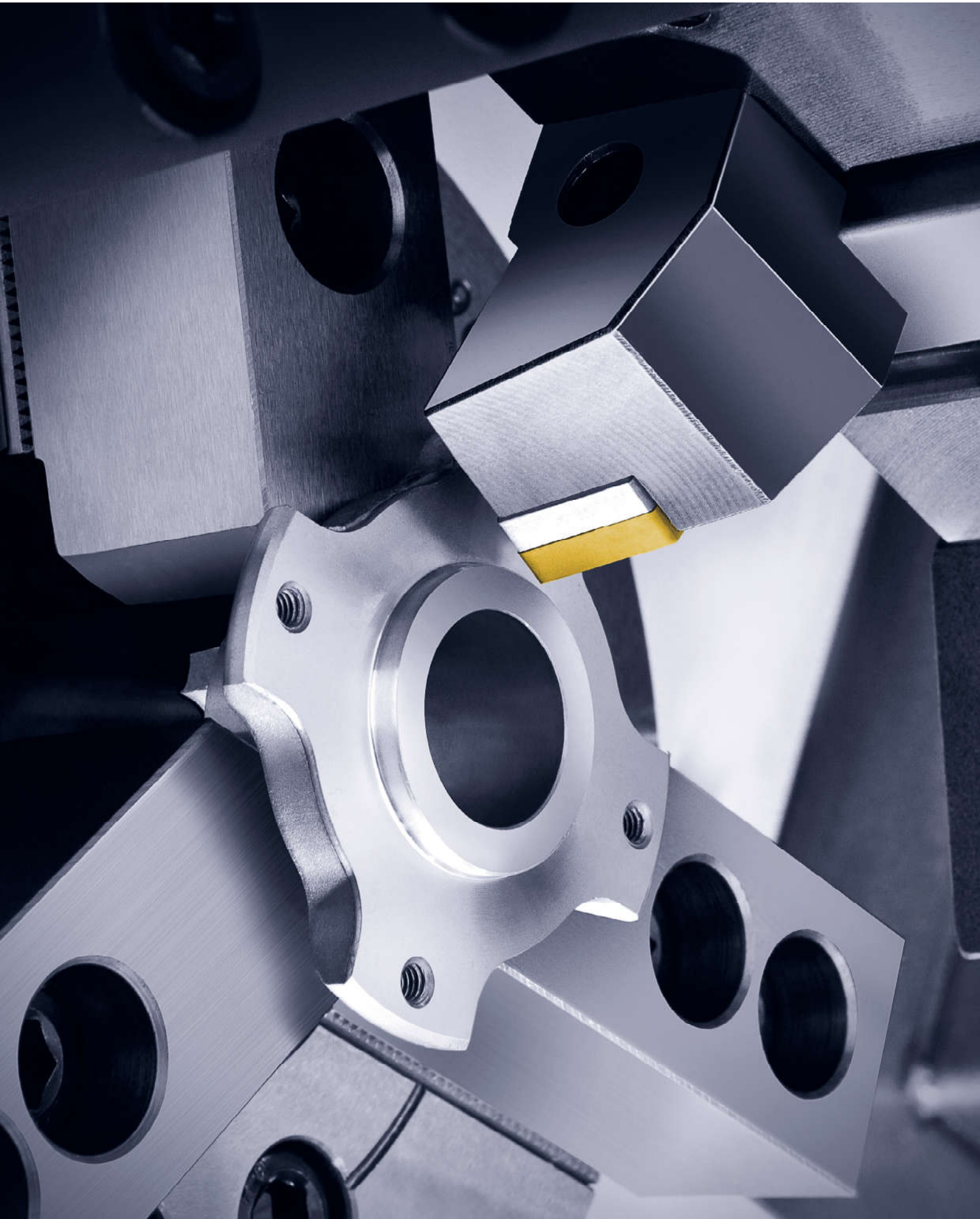
Tough, Rapid Indexing Turret

The turret in CUTEX-160 offers an index time of 0.15sec/step and a clamping power of 4,300kg_r(9,480lb_r).



Programmable Tailstock (Option)

The programmable tailstock in CUTEX-160 is automatically positioned by the Z-axis slide, and provides firm hold for extra-long workpieces.



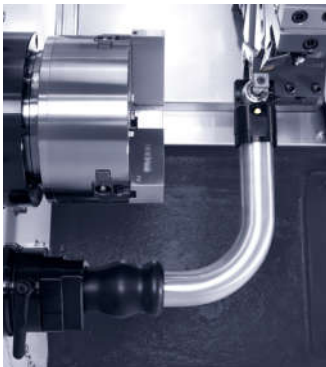
USER FRIENDLY DESIGN, A WIDE RANGE OF OPTIONAL FEATURES

CUTEX-160 horizontal center is designed to be user friendly, so you can concentrate on what you do best: creating quality product —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.



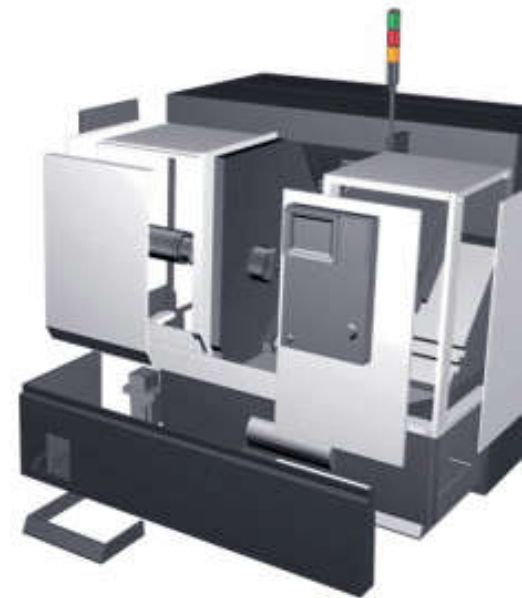
Parts Catcher (Option)

The parts catcher dissipates the scrap materials left over after machining—to make your work safer and more time efficient.



Manual 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.



Easy Maintenance

CUTEX-160 is designed with the user in mind—all machine components are easily accessible for service and maintenance.

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.

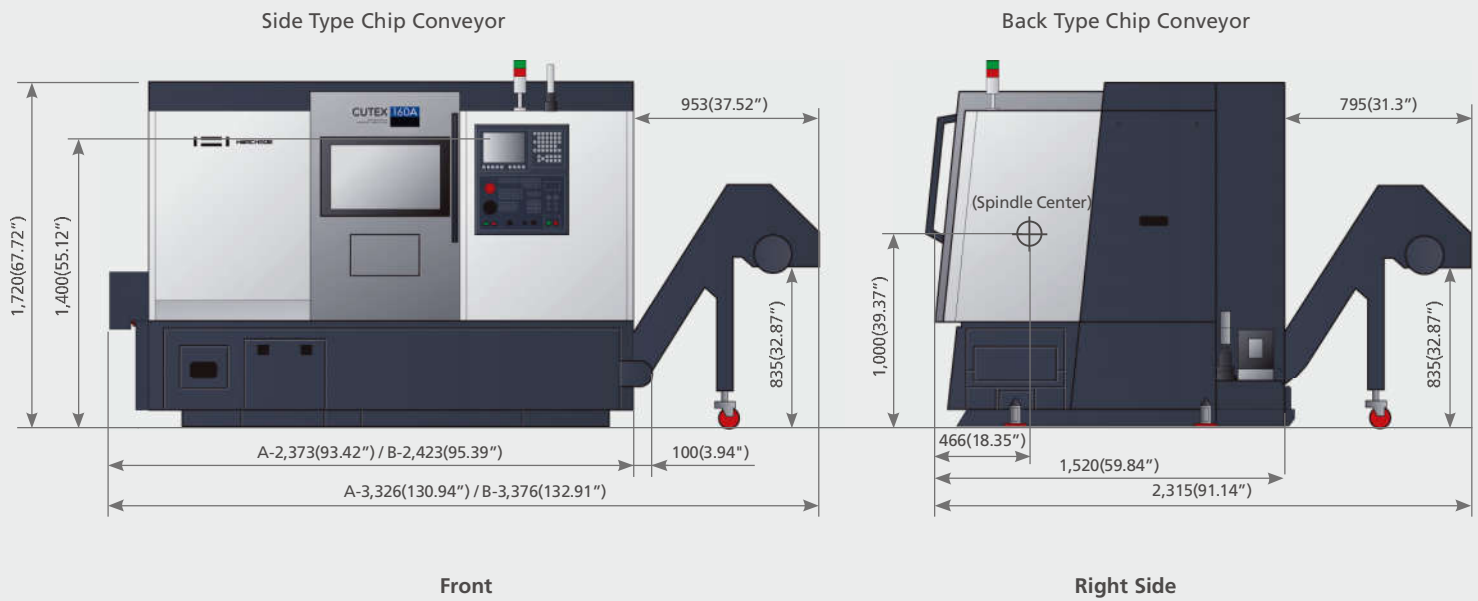
Load Detection Limit 2

Alarm + Machine Stop

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

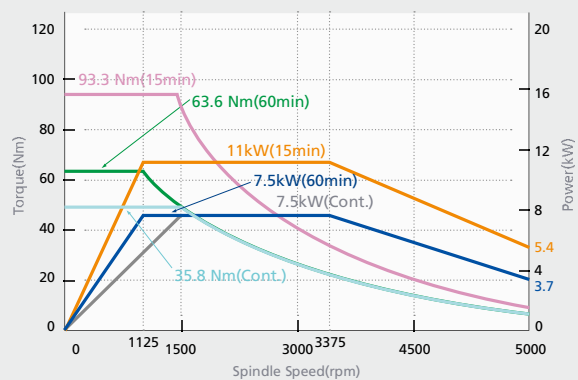
Product Data

* Unit: mm(inch)

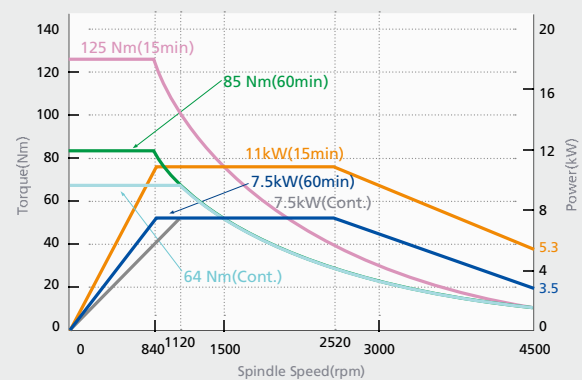


Spindle Power-Torque Diagram

CUTEX-160A (STD)



CUTEX-160B (STD)

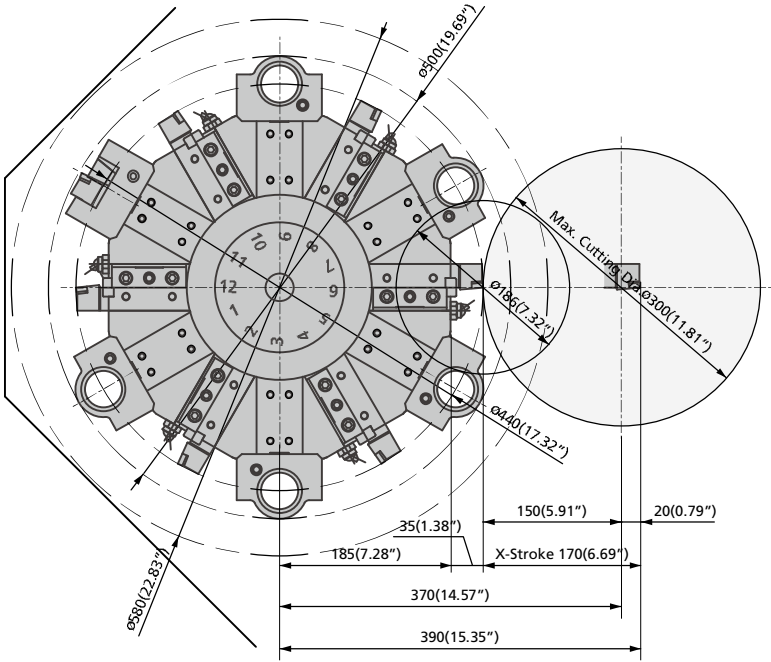


Tool Interference Diagram

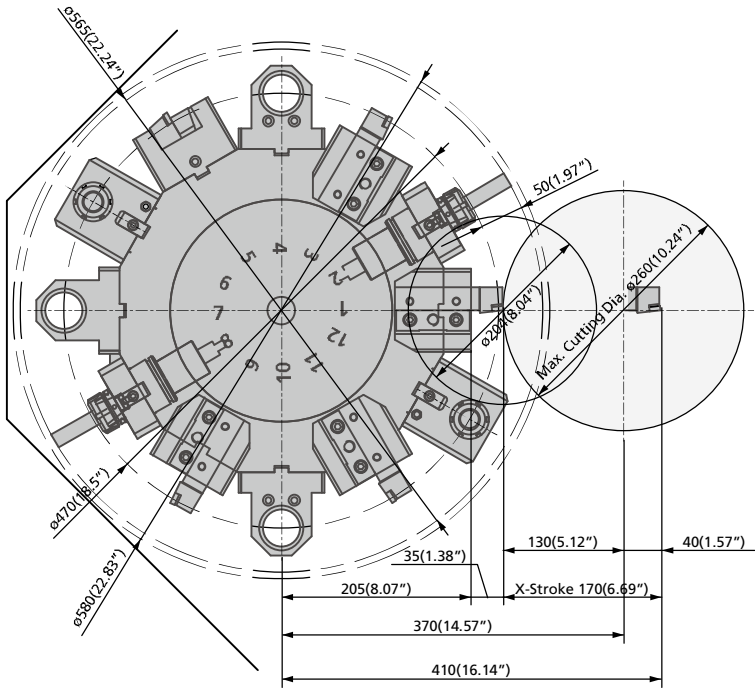
※ Unit: mm(inch)

CUTEX-160

STD



MC

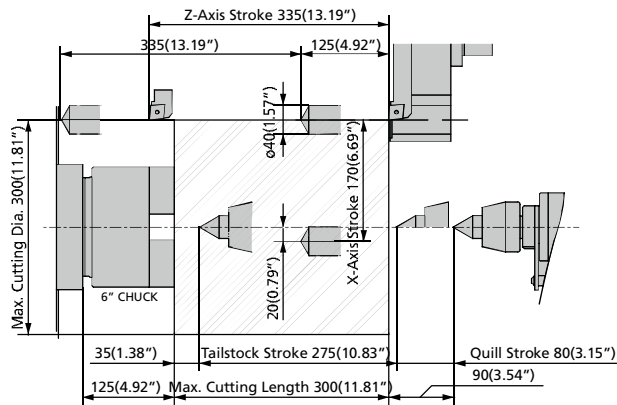


Moving Range

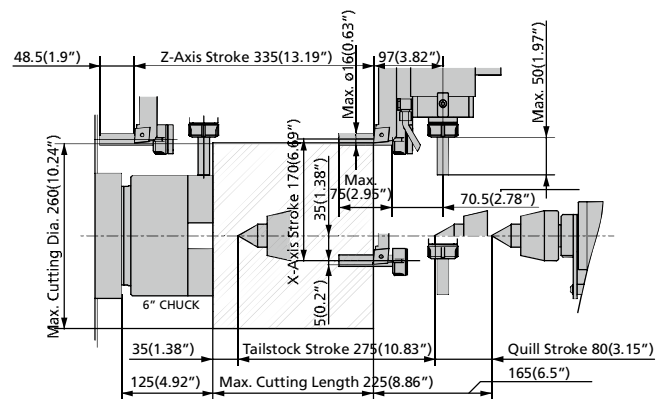
※Unit: mm(inch)

CUTEX-160A

STD

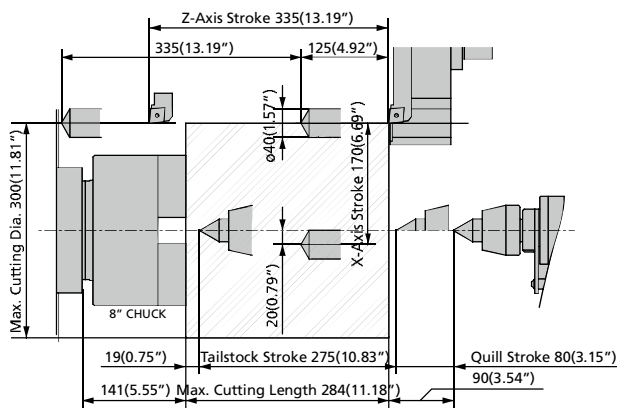


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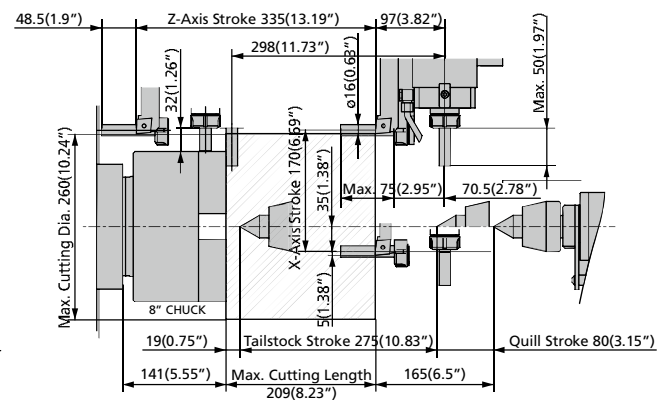


CUTEX-160B

STD

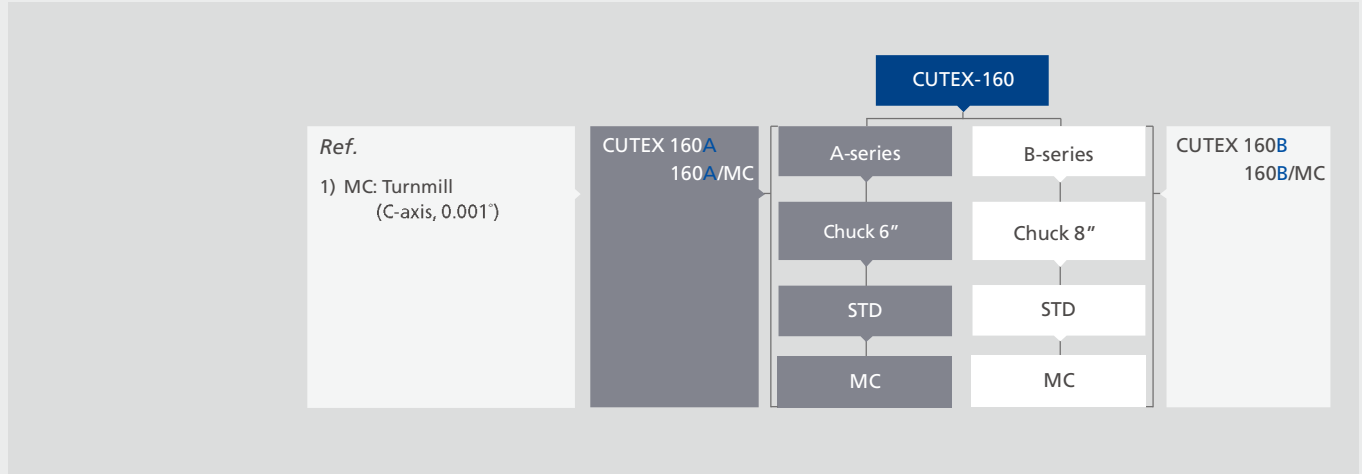


MC



Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM		CUTEX-160 SERIES			
		160A	160A/MC	160B	160B/MC
Capacity					
Swing over Bed	mm (inch)	Ø550 (21.65")			
Max. Cutting Diameter	mm (inch)	Ø300 (11.81")	Ø260 (10.24")	Ø300 (11.81")	Ø260 (10.24")
Standard Cutting Diameter	mm (inch)	Ø186 (7.32")	Ø204 (8.03")	Ø186 (7.32")	Ø204 (8.03")
Max. Cutting Length	mm (inch)	300 (11.81")	225 (8.86")	284 (11.18")	209 (8.23")
Chuck Size	inch	6"		8"	
Spindle					
Type of Spindle Nose	ASA	A2-5		A2-6	
Max. Spindle Speed	rpm	6,000		4,500	
Through Spindle Hole Diameter	mm (inch)	Ø56 (2.20")		Ø62 (2.44")	
Max. Bar Size	mm (inch)	Ø45 (1.77")		Ø51 (2.01")	
Spindle Bearing Inner Diameter	mm (inch)	Ø90 (3.54")		Ø100 (3.94")	
Spindle Motor	kW (HP)	11/7.5 (15/10)			
Turret					
Number of Tool Station	ea	12			
Tool Size	mm (inch)	□25 x Ø40 (□1" x Ø1.5")			
Turret Indexing Time	sec / step	0.15			
Axes					
Rapid Speed (X/Z)	m/min (ipm)	36/36 (1,417 / 1,417)			
Max. Stroke (X/Z)	mm (inch)	170/335 (6.69" / 13.19")			
Feed Motor (X/Z)	kW (HP)	1.8/1.8 (2.4/2.4)	3.0/1.6 (4/2.2)	1.8/1.8 (2.4/2.4)	3.0/1.6 (4/2.2)
Tailstock (Opt.)					
Quill Dia.	mm (inch)	Ø60 (2.5")			
Quill Stroke	mm (inch)	80(3.15")			
Taper Hole	MT	#4			
Turnmill (Opt.)					
Spindle Motor	kW (HP)	-	3.7/2.2 (5/3)	-	3.7/2.2 (5/3)
Max. Spindle Speed	rpm	-	5,000	-	5,000
Max. Drill/Tap Size	mm	-	Ø16 (0.63") /M12	-	Ø16 (0.63") /M12
Min. Index Angle	° (deg)	-	0.001°	-	0.001°
Tank Capacity					
Lubrication	ℓ (gal)	2 (0.53)			
Hydraulic	ℓ (gal)	11 (2.9)			
Coolant	ℓ (gal)	81(21.4)			
Power Sources					
Electrical Power Supply	kVA	20	25	20	25
Dimension					
Height	mm (inch)	1,720 (67.72")			
Floor Space (L×W)	mm (inch)	2,373 x 1,520 (93.43" x 59.84")		2,423 x 1,520 (95.39" x 59.84")	
Weight	kg _r (lb _r)	3,200 (7,055)	3,280 (7,231)	3,200 (7,055)	3,280 (7,231)
NC Controller					
Fanuc 0i-TF					

Standard and Optional Product Components

Standard Accessories		Optional Accessories	
• Coolant System	• Tool Kit & Box	• Air Blower	• Set of Hard Jaws
• Door Interlock	• Tooling System	• Air Gun	• Siemens Controller (828D)
• Foot Switch	• Turret with 12 Stations	• Auto Door	• Tailstock (MT#4)
• Hydraulic Chuck & Cylinder	• Work Light	• Bar Feeder Interface	• Tool Life Management
- CUTEX-160A: 6"	• Manual Guide i	• Chip Conveyor, Side Type / Back Type	• Tool & Work Counter, External/ Internal
- CUTEX-160B: 8"	• 10.4" Color LCD	• Coolant Gun	• Tool Presetter (Manual)
• Leveling Bolt & Plate		• Chuck Pressure Check Switch	• Transformer
• Operation Manual & Part List		• Chuck Pressure Compensation	• Turnmill & C-Axis Indexing (0.001")
• Signal Lamp with 3 Colors (R,G,Y)		• Dual Pressure (Chuck)	• Turnmill Holder (Axial / Radial)
• Set of Soft Jaws		• Dual Pressure (C-axis brake)	• U-Drill Holder
		• High Pressure Pump, 6 Bar/ 15Bar	• 15" Color LCD (only FANUC)
		• L-HTLD (Lathe-Hwacheon Tool Load Detect)	
		• NC Cooler	
		• Oil Skimmer	
		• Parts Catcher	

NC Specifications [Fanuc Oi-TF]

※ - : Not available S : Standard O : Option

ITEM	SPECIFICATION	STD	MC
Controlled axis			
Controlled axis (Cs axis)	2-Axes	2-Axes	3-Axes
Simultaneously controlled axes	2-Axes	2-Axes	3-Axes
Least input increment	0.001mm, 0.001deg, 0.0001inch	S	S
Least input increment 1/10	0.0001mm, 0.0001deg, 0.00001inch	O	O
inch/metric conversion	G20, G21	S	S
Stored stroke check 1,2,3		S	S
Chamfering on/off		S	S
Backlash compensation		S	S
Operation			
Automatic & MDI operation		S	S
Program number search		S	S
Sequence number search		S	S
Dry run, single block		S	S
Manual handle feed	1Unit	S	S
Manual handle feed rate	x1, x10, x100	S	S
Interpolation function			
Positioning	G00	S	S
Linear interpolation	G01	S	S
Circular interpolation	G02, G03	S	S
Dwell (Per seconds)	G04	S	S
Polar coordinate interpolation	G12.1/G13.1	-	S
Cylindrical interpolation	G7.1	-	S
Threading	G32	S	S
Multiple threading		S	S
Threading retract		S	S
Continuous threading		S	S
Variable lead threading	G34	S	S
Reference position return 1st	G28	S	S
Reference position return check	G27	S	S
2,3,4th reference position return	G30	S	S
Arbitrary speed threading		O	O
Feed function			
Rapid traverse override	F0, F25, F50, F100	S	S
Feed per minute (mm/min)	G98	S	S
Feed per revolution (mm/rev)	G99	S	S
Rapid traverse bell-shaped acceleration/deceleration		S	S
Feedrate override	0-150 %	S	S
Jog feed override	0-1,260 mm/min	S	S
Tool function / compensation			
Tool function	T4-digits	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
Direct input tool offset value measured B	Tool presetter option is required	O	O
Program input			
Tape code	EIA / ISO	S	S

ITEM	SPECIFICATION	STD	MC
Program input			
Optional block skip	9ea	S	S
Program number	04-Digits	S	S
Sequence number	N8-Digits	S	S
Decimal point programming		S	S
Coordinate system setting	G50	S	S
Coordinate system shift		S	S
Workpiece coordinate system	G54-G59	S	S
Workpiece coordinate system preset	G92.1	S	S
Direct drawing dimension programming		S	S
G code system	A	S	S
Programmable data input	G10	S	S
Sub program call	10Folds Nested	S	S
Custom macro B		S	S
Addition of custom macro - common variables	#100-#199, #500-#999	S	S
Canned cycles		S	S
Multiple repetitive cycle		S	S
Multiple repetitive cycle II		S	S
Canned cycles for drilling		S	S
Manual Guide i		S	S
Spindle speed function			
Constant surface speed control	G96 / G97	S	S
Spindle override	50-120 %	S	S
Spindle orientation		S	S
Rigid tapping		O	S
Spindle synchronous control		-	
Editing operation			
Part program storage length	1,280m (512 kB)	S	S
Number of register able programs	400ea	S	S
Background editing		S	S
Extended part program editing		S	S
Play back		S	S
Operation/Display			
Clock function		S	S
Self-diagnosis function		S	S
Alarm history display		S	S
Help function		S	S
Run hour and parts count display		S	S
Graphic function		S	S
Dynamic graphic display		O	O
Multi-language display	English, German, French, Italian, Chinese, Spanish, Korean, Portuguese, Polish, Hungarian, Swedish, Russian	S	S
Data input/output			
Reader/Puncher interface CH1	RS232C	S	S
Reader/Puncher interface CH2	RS232C	S	S
Ethernet interface		S	S
Memory card interface		S	S
USB card interface		S	S

Hwacheon Global Network

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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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