



CUTEX-160

6"-8" Chucker Horizontal Turning Center



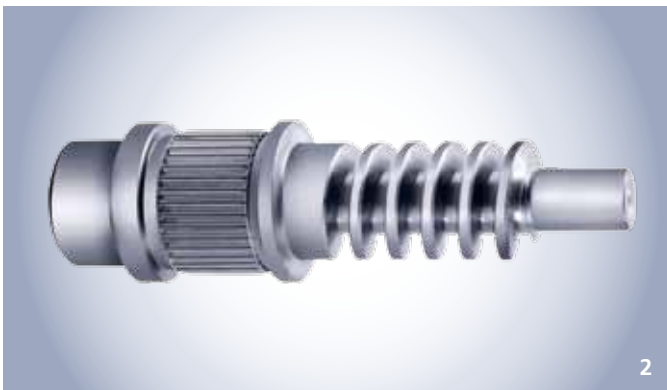


6"-8" CHUCKER HORIZONTAL TURNING CENTER

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.

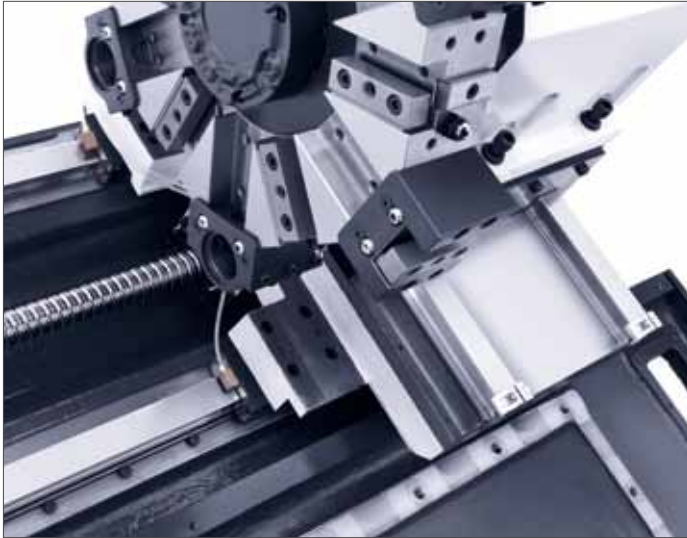
1 Valve Body / Industrial Material / SM45C 2 Screw Shaft / Automobile / SAE11L17
3 Serration Shaft / Automobile / SM43C 4 Shaft / Industrial Material / SM45C 5 Spline Hub / Automobile / SCR420H



STANDARD IN 6"-8" HORIZONTAL TURNING CENTERS

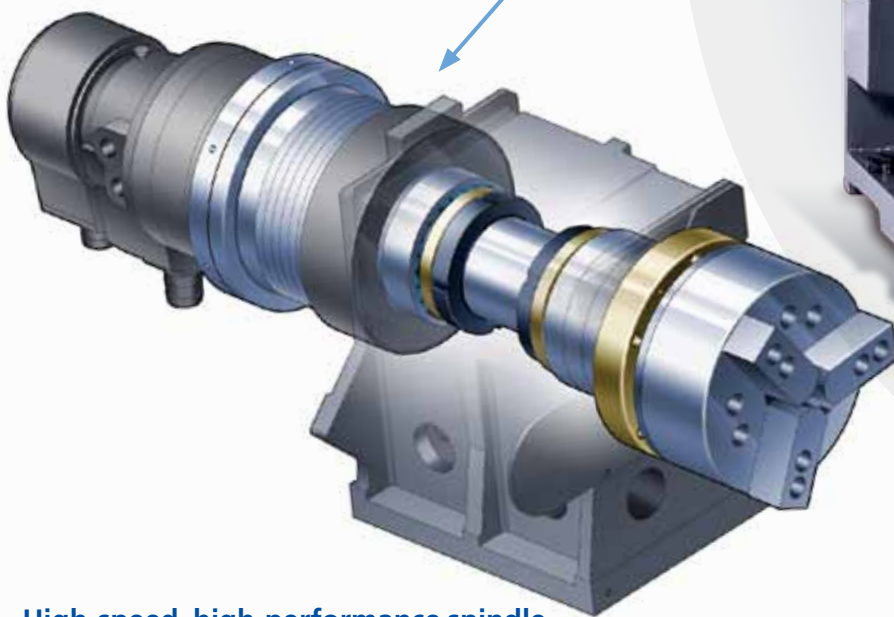
The pinnacle of Hwacheon technology, CUTEX-160 quickly became the industry standard in small-size turning centers when it was introduced. With its compact design, rigid construction, and a wide range of options such as bar feeder and parts catcher, CUTEX-160 will be a perfect solution for all your production 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.





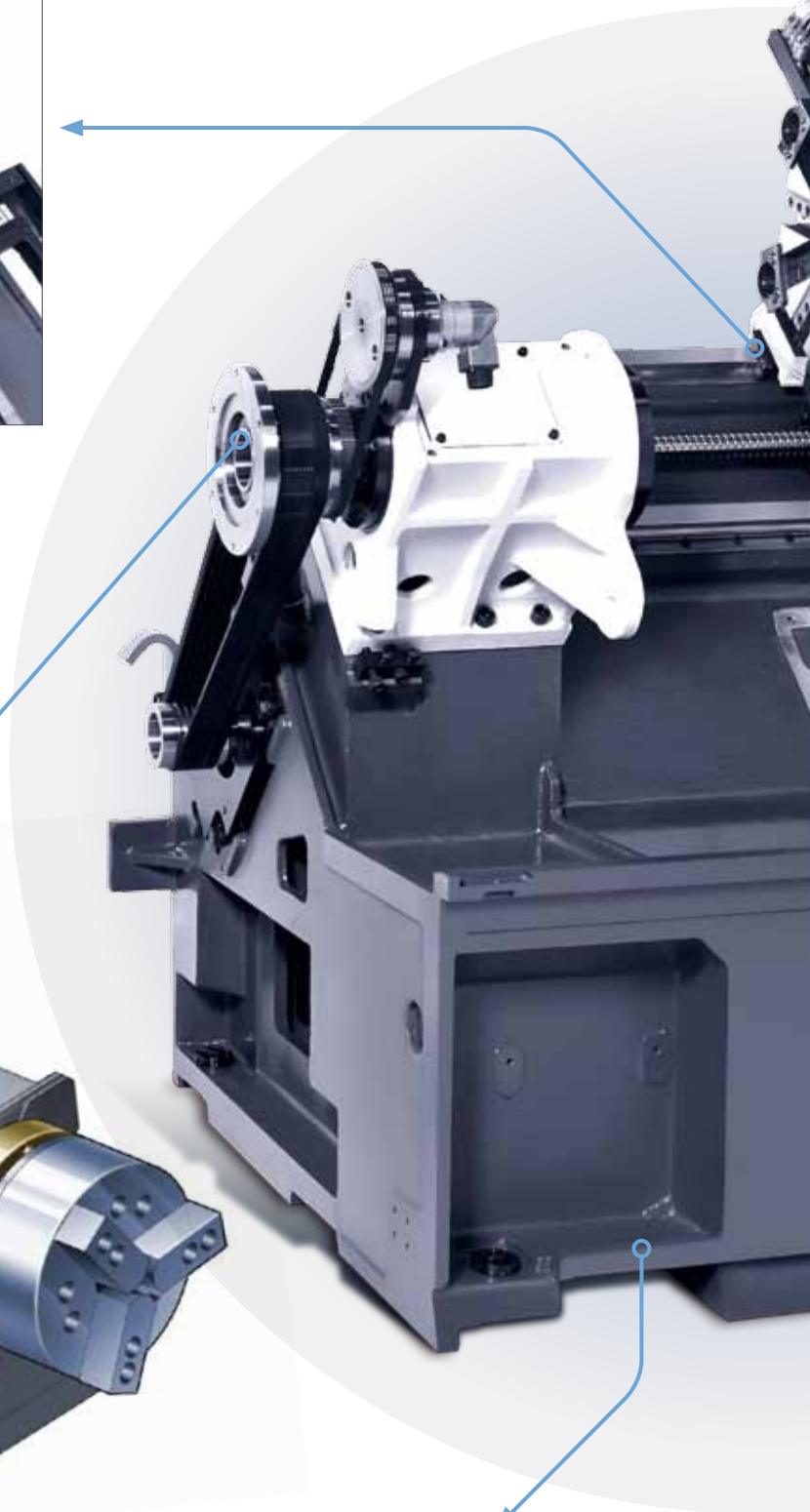
Extra rigid LM Guide

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.



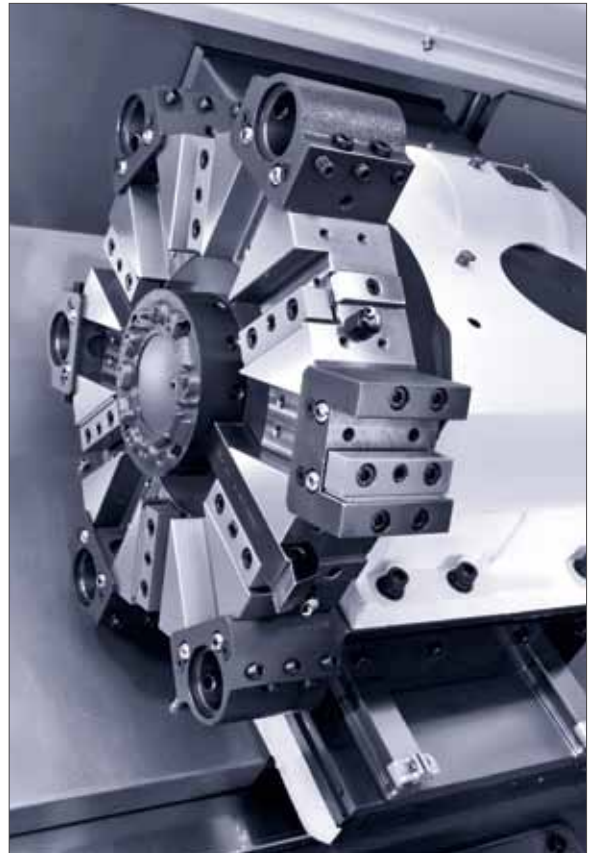
High-speed, high-performance spindle

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



Extra rigid single frame construction

The integrated 45-degree 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.



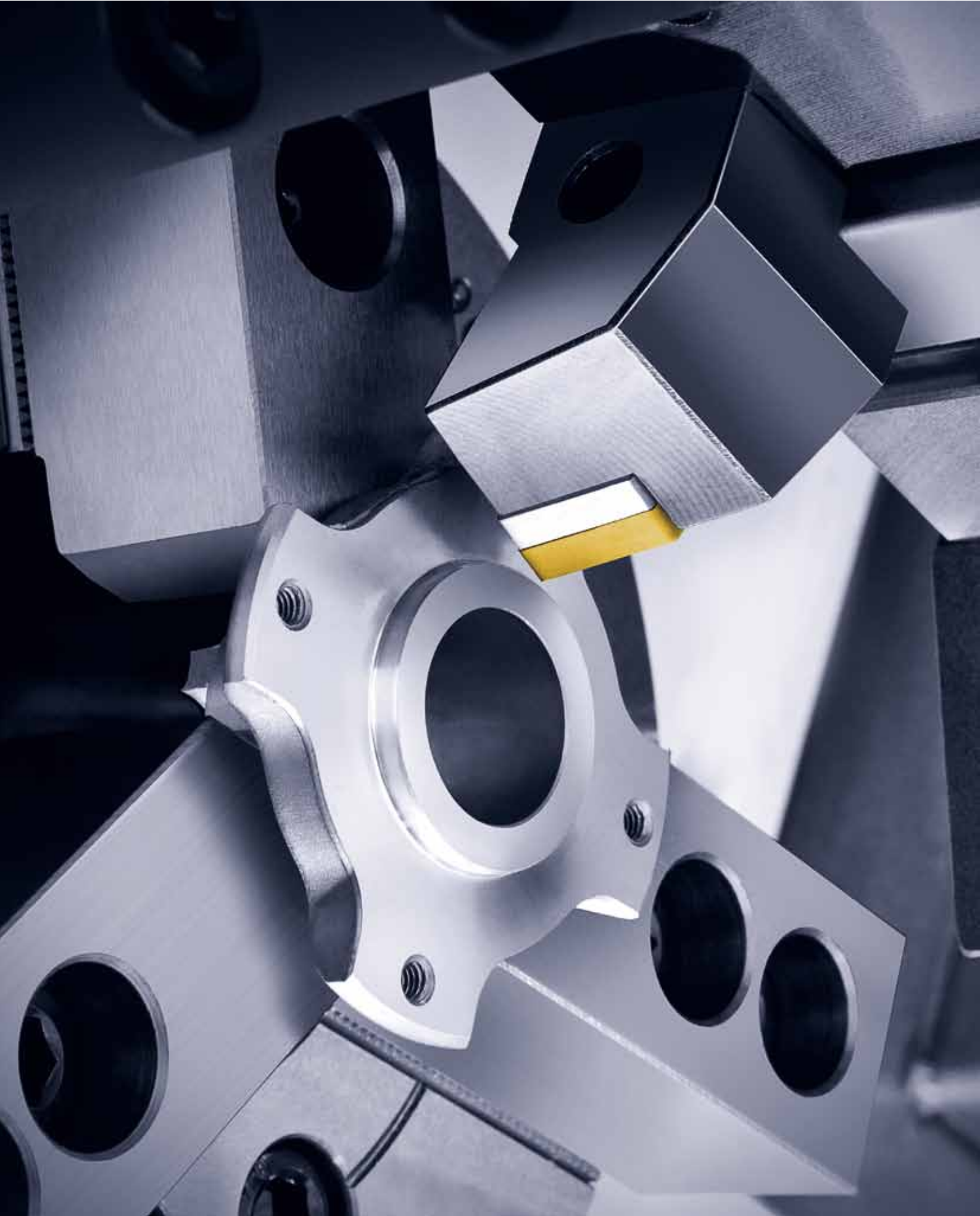
Tough, rapid indexing turret

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



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 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.



Parts Catcher (Option)

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



Tool Presetter (Option)

The tool presetter employs a highly accurate sensor with the repeatability of 5µm or less 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.

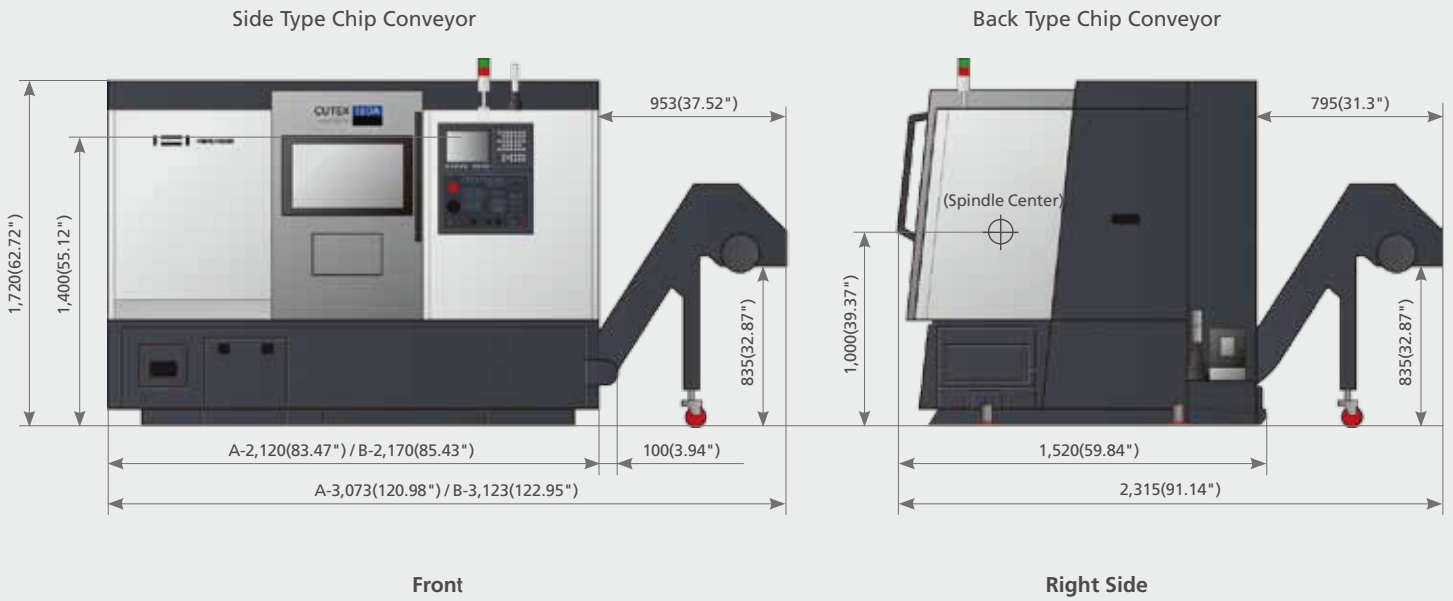
Load Detection Limit 2

Alarm + Machine Stop

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

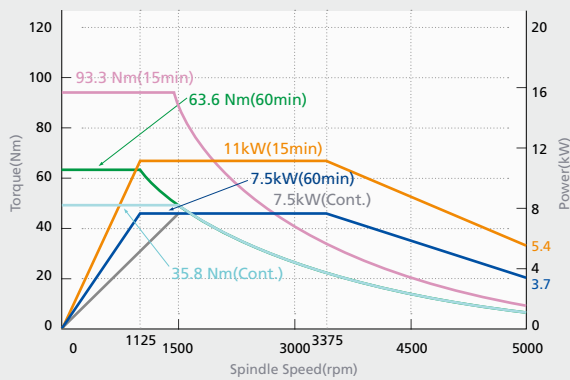
Product Data

* Unit: mm(inch)

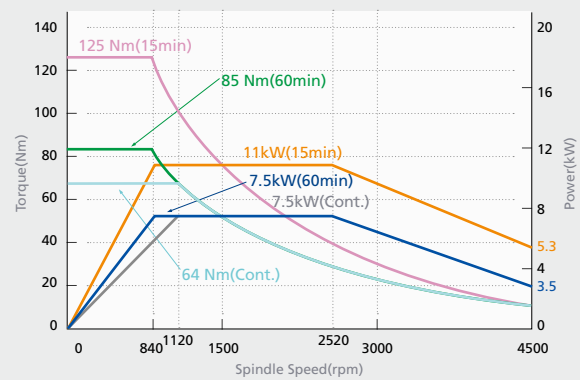


Spindle Power-Torque Diagram

CUTEX-160A (STD)



CUTEX-160B (STD)

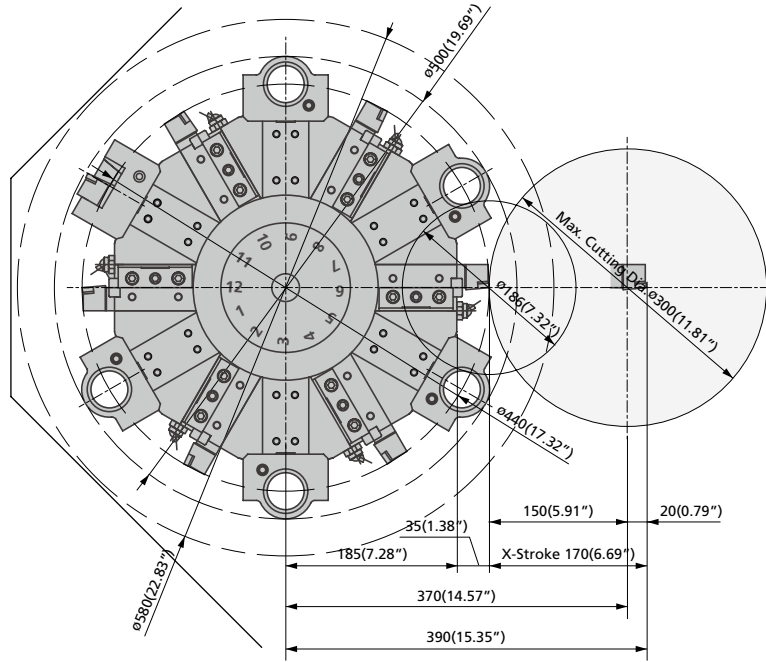


Tool Interference Diagram

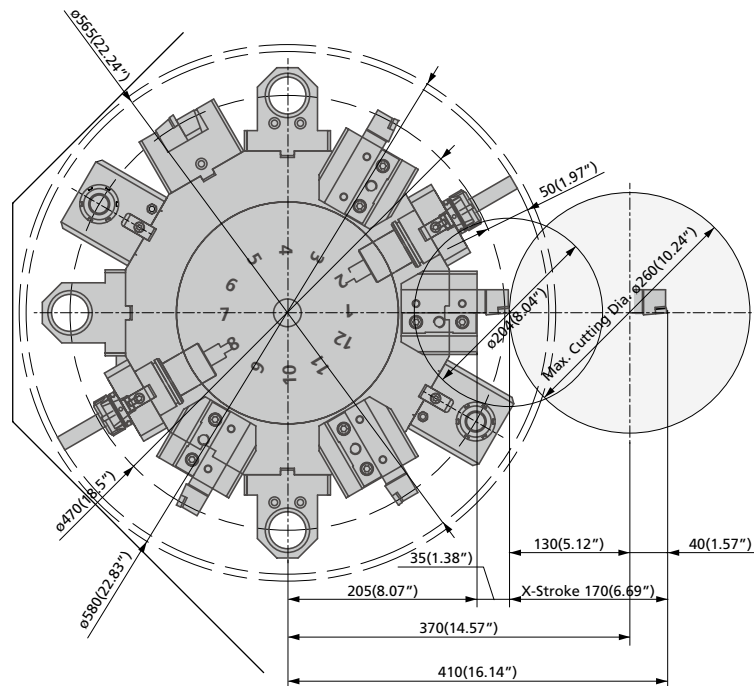
※Unit : mm(inch)

CUTEX-160

STD



MC

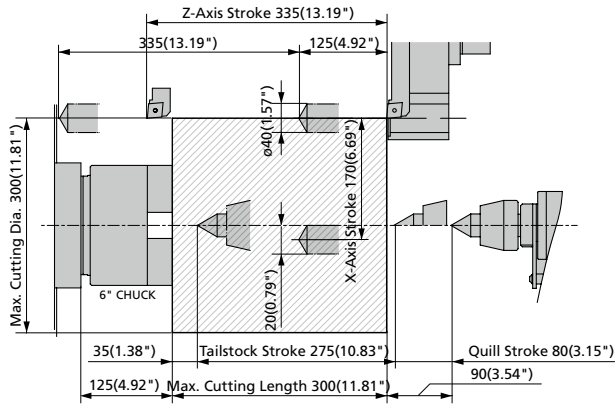


Moving Range

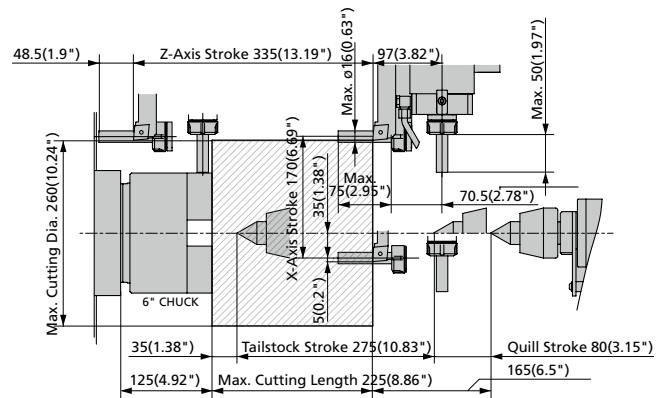
※Unit : mm(inch)

CUTEX-160A

STD

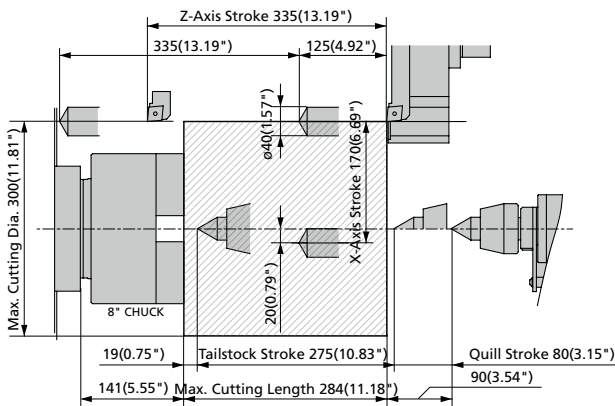


MC

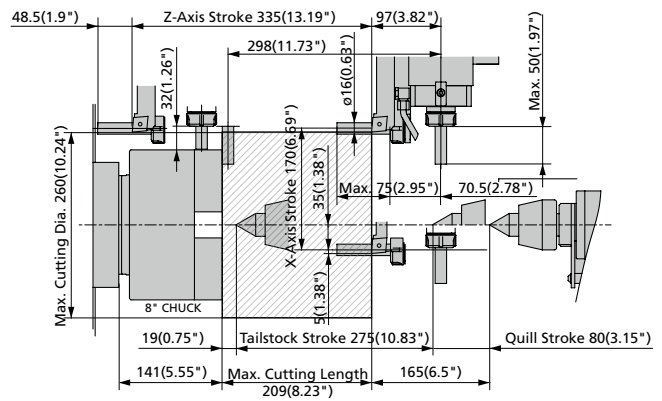


CUTEX-160B

STD

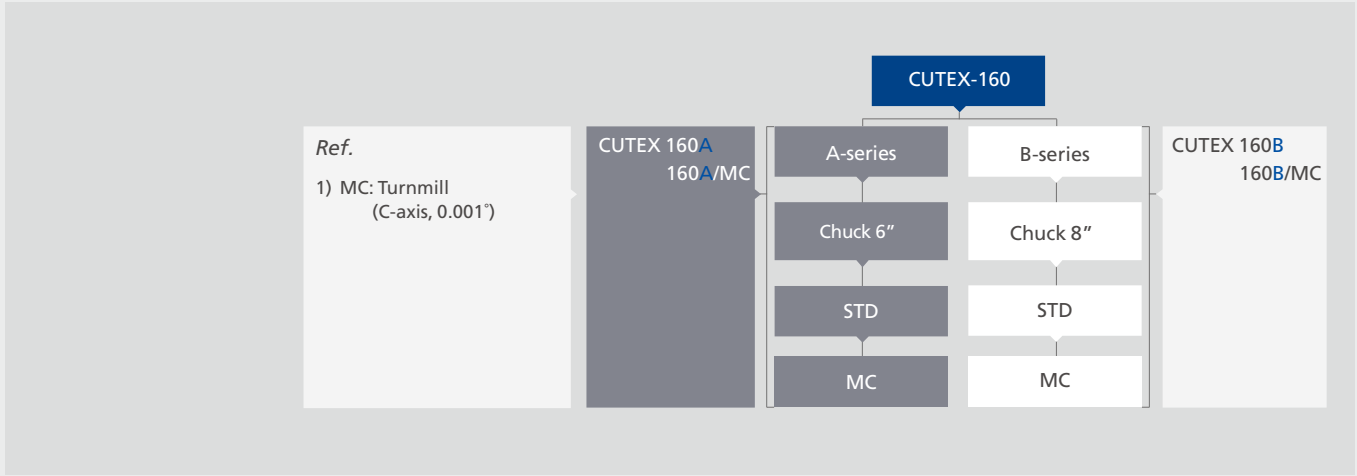


MC



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 (8.04")	Ø186 (7.32")	Ø204 (8.04")
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")	
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			
Feedrates					
Rapid speed (X/Z)	m/min (ipm)	36/36 (1417.32 / 1417.32)			
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 (2.36")			
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)	82(22)			
Power Sources					
Electrical power supply	kVA	25			
Dimension					
Height	mm (inch)	1,720 (67.72")			
Floor space (LxW)	mm (inch)	2,120 x 1,520 (83.47" x 59.84")		2,170 x 1,520 (85.43" x 59.84")	
Weight	kg (lb)	3,200 (7,055)	3,280 (7,231)	3,200 (7,055)	3,280 (7,231)
NC Controller					
Fanuc 0i-TD					

Standard and Optional Product Components

Standard Accessories		Optional Accessories	
• Coolant system	• Tool kit & box	• Air blower	• Parts catcher
• Door interlock	• Tooling system	• Air gun	• Signal lamp with 3 colors (R,G,Y)
• Foot switch	• Turret with 12 station	• Auto door	• Siemens Controller (828D)
• Hydraulic chuck & cylinder	• Work light	• Bar feeder interface	• Tailstock (MT#4)
- CUTEX-160A: 6"	• Manual Guide i	• Chip conveyor, Side type / Back type	• Tool life management
- CUTEX-160B: 8"	• 10.4" LCD Monitor	• Coolant gun	• Tool & work counter, External/ Internal
• Leveling bolt & plate		• Chuck pressure check switch	• Tool presetter (Manual)
• Operation manual & part list		• Chuck pressure Compensation	• Transformer
• Signal lamp with 2 colors(R, G)		• Chuck dual pressure system	• Turnmill & C-axis indexing (0.001°)
• Set of soft jaws		• Set of Hard jaw	• Turnmill holder (Axial / Radial)
		• L-HTLD	• U-drill holder
		(Lathe-Hwacheon Tool Load Detect)	
		• NC cooler	
		• High pressure pump, 6 bar/ 15bar	
		• Oil skimmer	

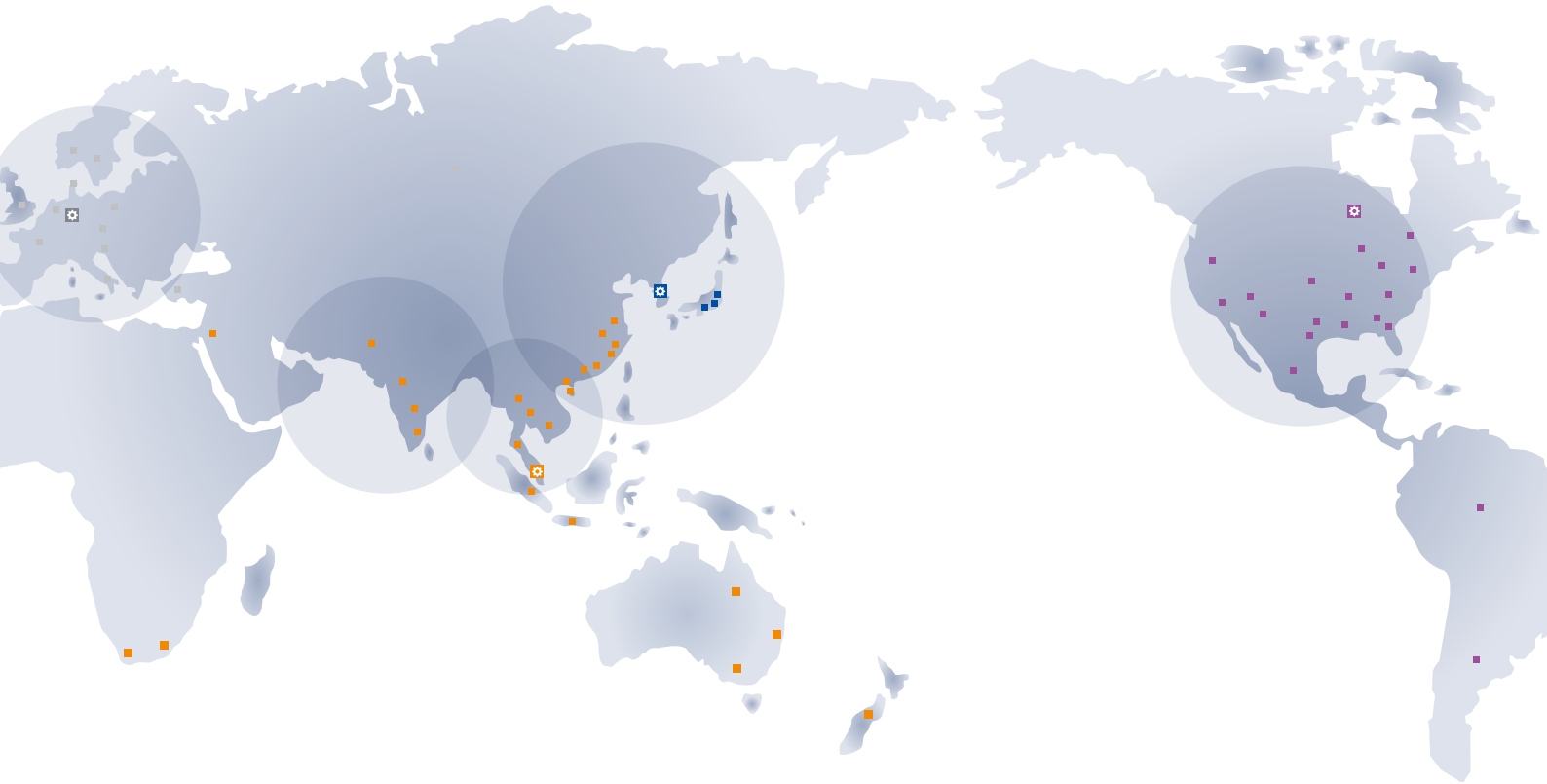
NC Specifications [Fanuc Oi-TD]

※ - : 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	Optional block skip	1ea	S	S
Simultaneously controlled axes	2-Axes	2-Axes	3-Axes	Program number	O4-Digits	S	S
Least input increment	0.001mm, 0.001deg, 0.0001inch	S	S	Sequence number	N5-Digits	S	S
Least input increment 1/10	0.0001mm, 0.0001deg, 0.00001inch	O	O	Decimal point programming		S	S
inch/metric conversion	G20, G21	S	S	Coordinate system setting	G50	S	S
Stored stroke check 1		S	S	Coordinate system shift		S	S
Stored stroke check 2,3		S	S	Workpiece coordinate system	G54-G59	S	S
Chamfering on/off		S	S	Workpiece coordinate system preset	G92.1	S	S
Backlash compensation		S	S	Direct drawing dimension programming		S	S
Operation				G code system	A	S	S
Automatic & MDI operation		S	S	Programmable data input	G10	S	S
Program number search		S	S	Sub program call	10Folds Nested	S	S
Sequence number search		S	S	Custom macro B		S	S
Dry run, single block		S	S	Addition of custom macro -common variables	#100-#199, #500-#999	S	S
Manual handle feed	1Unit	S	S	Canned cycles		S	S
Manual handle feed rate	x1, x10, x100	S	S	Multiple repetitive cycle		S	S
Interpolation function				Multiple repetitive cycle II		S	S
Positioning	G00	S	S	Canned cycles for drilling		S	S
Linear interpolation	G01	S	S	Small-hole peck drilling cycle		S	S
Circular interpolation	G02, G03	S	S	Manual guide i		S	S
Dwell (Per seconds)	G04	S	S	Spindle speed function			
Polar coordinate interpolation	G12.1/G13.1	-	S	Constant surface speed control	G96 / G97	S	S
Cylindrical interpolation	G7.1	-	S	Spindle override	50-120 %	S	S
Threading	G32	S	S	Spindle orientation		S	S
Multiple threading		S	S	Rigid tapping		O	S
Threading retract		S	S	Spindle synchronous control		-	
Continuous threading		S	S	Editing operation			
Variable lead threading	G34	S	S	Part program storage length	1,280m (512 kB)	S	S
Reference position return 1st	G28	S	S	Number of register able programs	400ea	S	S
Reference position return check	G27	S	S	Background editing		S	S
2,3,4th reference position return	G30	S	S	Extended part program editing		S	S
Feed function				Play back		S	S
Rapid traverse override	F0, F25, F50, F100	S	S	Operation/Display			
Feed per minute (mm/min)	G98	S	S	Clock function		S	S
Feed per revolution (mm/rev)	G99	S	S	Self-diagnosis function		S	S
Rapid traverse bell-shaped acceleration/deceleration		S	S	Alarm history display		S	S
Feedrate override	0-150 %	S	S	Help function		S	S
Jog feed override	0-1,260 mm/min	S	S	Run hour and parts count display		S	S
Tool function / compensation				Graphic function		S	S
Tool function	T4-digits	S	S	Multi-language display	English, German, French, Italian, Chinese, Spanish, Korean, Portuguese, Polish, Hungarian, Swedish,Russia	S	S
Tool offset pairs	64pairs	S	S	Data input/output			
Tool nose radius compensation		S	S	Reader/Puncher interface CH1	RS232C	S	S
Tool geometry/wear compensation		S	S	Reader/Puncher interface CH2	RS232C	S	S
Tool life management		O	O	Ethernet interface		S	S
Automatic tool offset	Tool presetter option is required	O	O	Memory card interface		S	S
Direct input tool offset value measured B	Tool presetter option is required	O	O				
Program input							
Tape code	EIA RS244 / ISO840	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.

HEAD OFFICE

HWACHEON MACHINE TOOL CO., LTD

976-1, JANGDEOK-DONG GWANGSAN-GU, GWANGJU, KOREA
TEL: +82-62-951-5111 FAX: +82-62-951-0086

SEOUL OFFICE

1022-7, BANGBAE-DONG, SEOCHO, SEOUL, KOREA
TEL: +82-2-523-7766 FAX: +82-2-523-2867

USA

HWACHEON MACHINERY AMERICA, INC.

50, LAKEVIEW PARKWAY VERNON HILLS, IL60061, USA
TEL: +1-847-573-0100 FAX: +1-847-573-9900

SINGAPORE

HWACHEON ASIA PACIFIC PTE. LTD.

21 BUKIT BATOK CRESCENT, #08-79 WCEGA TOWER SINGAPORE 658065
TEL: +65-6515-4357 FAX: +65-6515-4358

GERMANY

HWACHEON MACHINERY EUROPE GMBH

JOSEF-BAUMANN STR. 25, 44805, BOCHUM, GERMANY
TEL: +49-2349-128160 FAX: +49-2349-128166