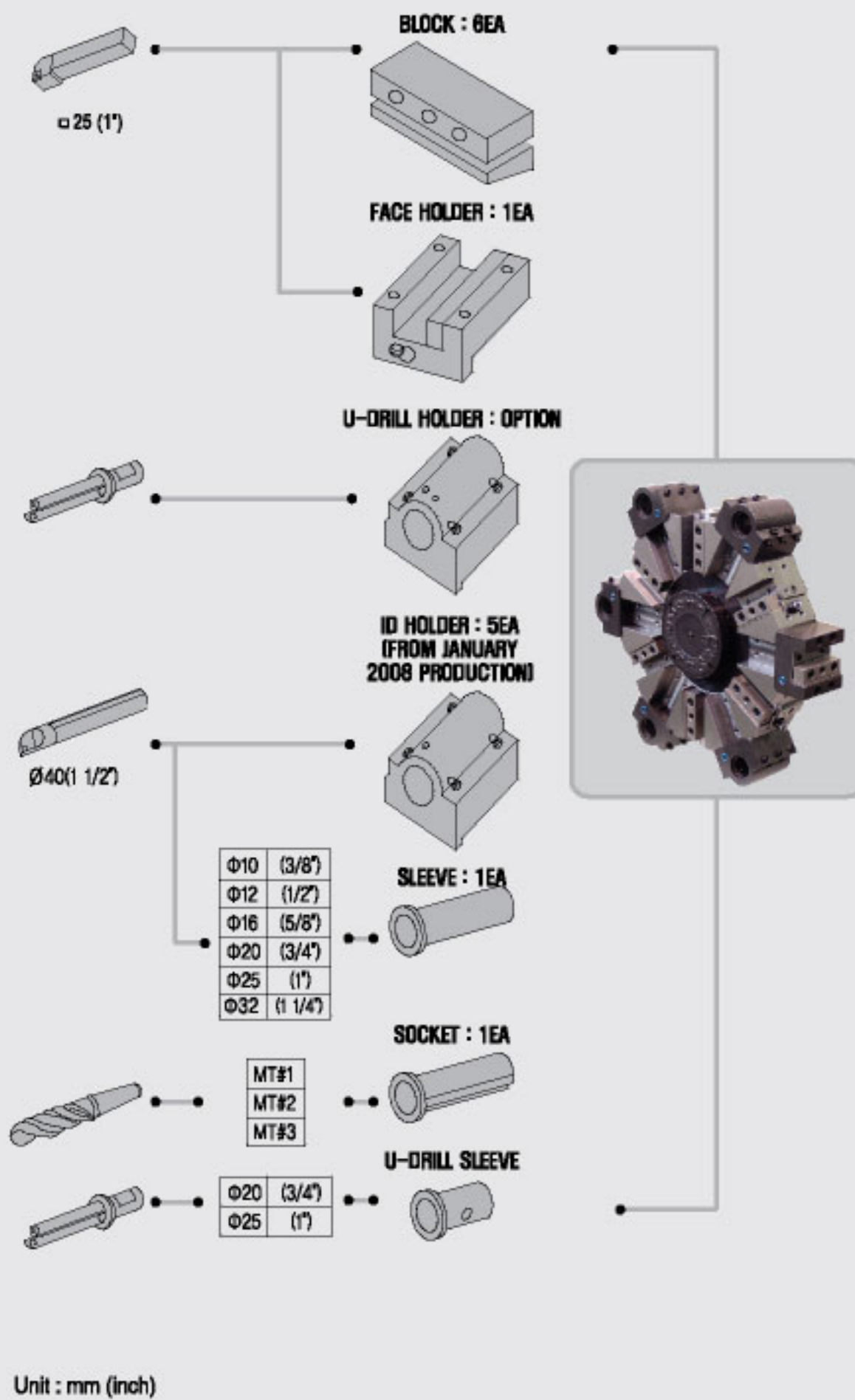
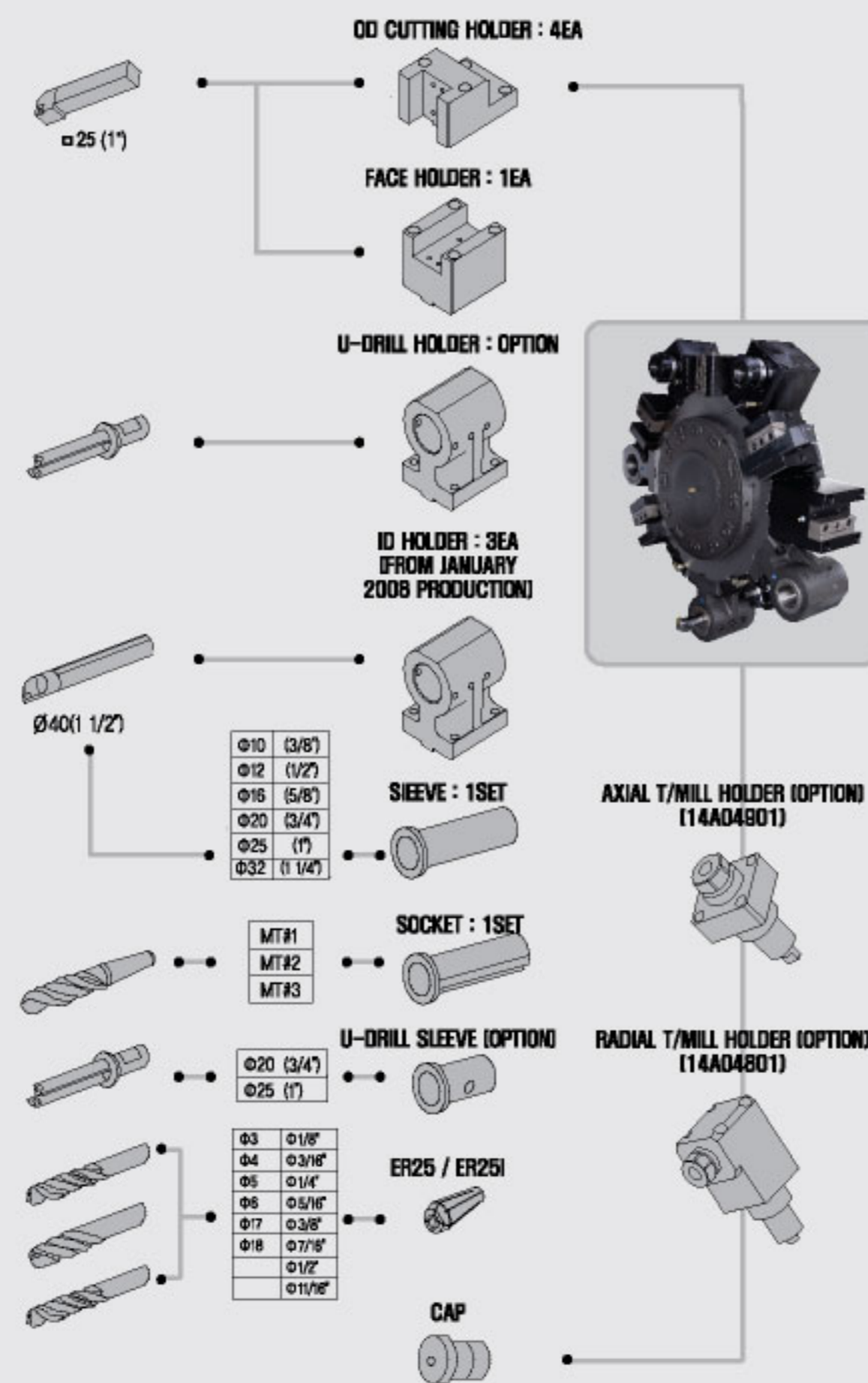


Tooling System

[STD. BMT] Tooling System

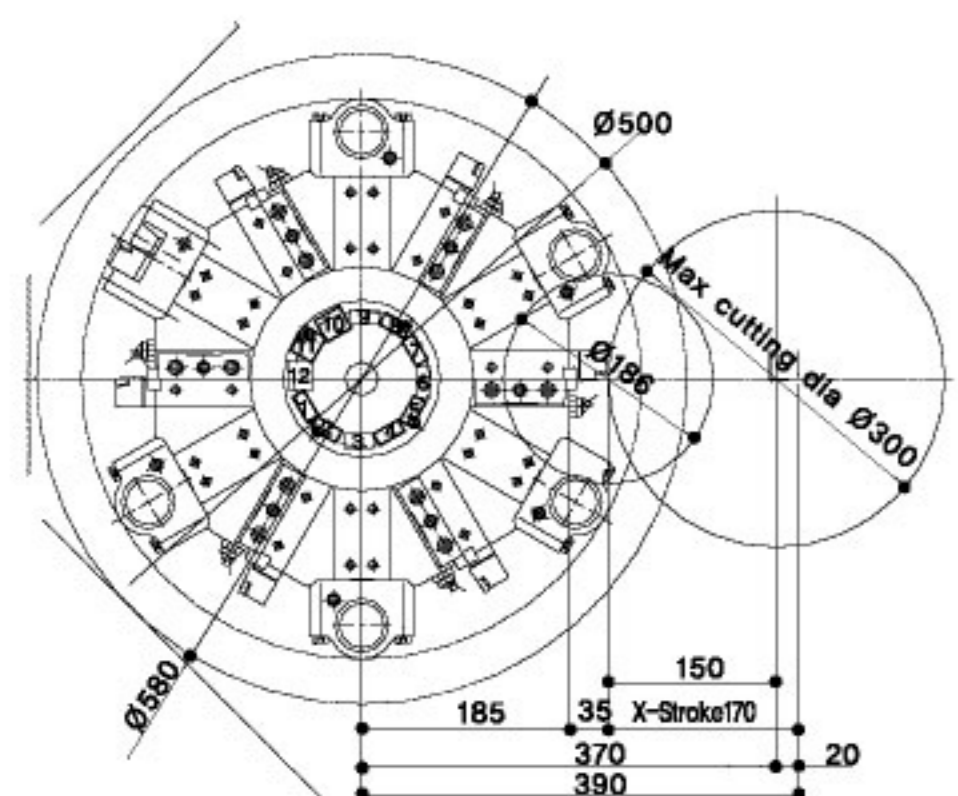


[T/MILL. BMT] Tooling System

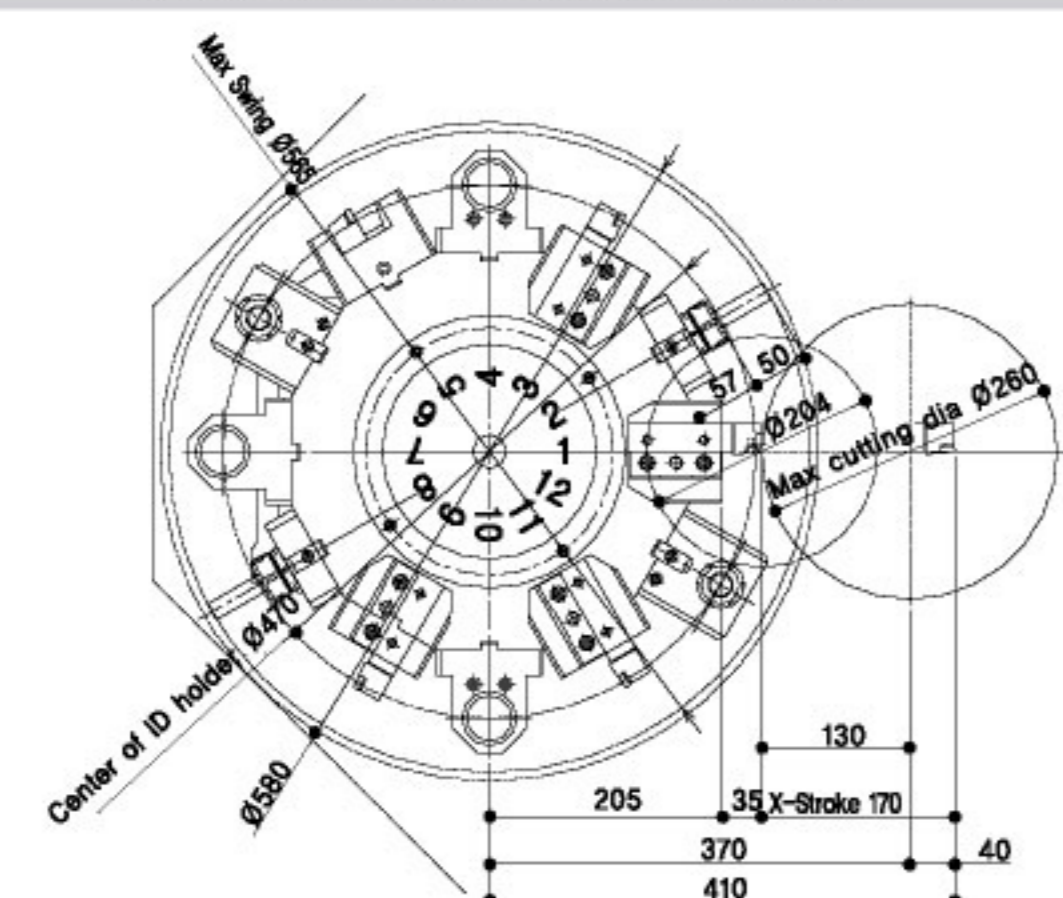


Tool Interference Diagram

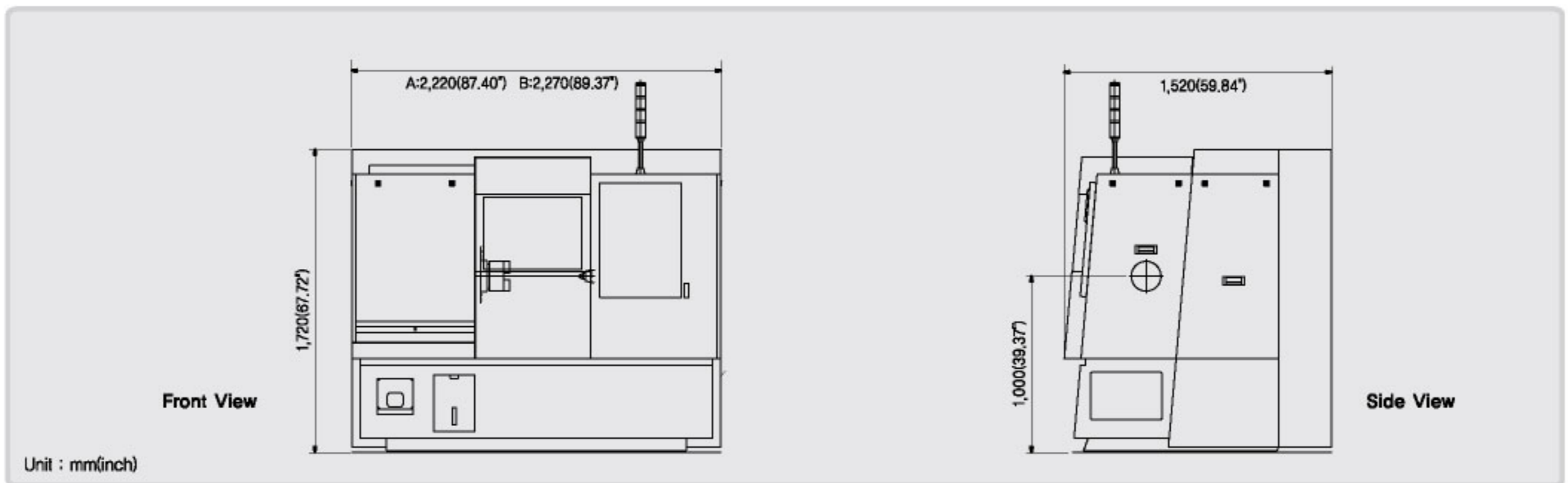
Turret Interference Dia. (Standard)



Turret Interference Dia. (Turn mill)



Dimension



Machine Specifications

ITEM	UNIT	CUTEX 160A	CUTEX 160AMC	CUTEX 160B	CUTEX 160BMC
CAPACITY					
Swing over bed	mm(inch)	φ500(21.65)			
Max. turning diameter	mm(inch)	φ300(11.81)	φ280(10.24)	φ300(11.81)	φ280(10.24)
Standard turning diameter	mm(inch)	φ170(6.69)			
Max. turning length	mm(inch)	300(11.81)	225(8.85)	284(11.18)	209(8.23)
Chuck Size	inch	6"			
SPINDLE					
Type of spindle nose	ASA	A2-5	A2-6		A2-6
Max. spindle speed	rpm	6,000	4,500		4,500
Through spindle hole diameter	mm(inch)	φ56(2.20)	φ62(2.5)		φ62(2.5)
Max. Bar Size	mm(inch)	φ45(1.77)	φ5(12)		φ5(12)
Spindle bearing inner diameter	mm(inch)	φ90(3.54)	φ100(3.94)		φ100(3.94)
Spindle drive motor	kW(HP)	117.5(15/10)			
TURRET					
Number of tool station	ea	12			
Shank height for square tool	mm(inch)	φ25xφ40 (1.7x1.3)			
Turn indexing time (Tool to Tool)	sec.	0.15			
FEEDRATE					
Rapid speed (VZ)	m/min	50/58			
Max. Steeple (VZ)	mm/min	170(35/6.59)(18.19)			
Feed Motor (VZ)	kW(HP)	1.6(1.92/2.2)	3.0(1.64/2.2)	1.6(1.92/2.2)	3.0(1.64/2.2)
TAIL STOCK					
Quill Dia.	mm(inch)	φ80(3.15)			
Quill Stroke	mm(inch)	φ80(3.15)			
Quill Taper	MT	#4			
TURN MILL (OPTION)					
Spindle drive motor	kW(HP)	3.7(2.25/3)	-		3.7(2.25/3)
Max. spindle speed	rpm	5,000	-		5,000
Max. Drill/Tip size	mm	φ16(φ0.5)/M12	-		φ16(φ0.5)/M12
Min. Index angle	°(grad)	0.001	-		0.001
TANK					
Lubrication	ℓ (gal)	4 (1)			
Hyd.	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 (L,W)	mm(inch)	2,220 x 1,520(87.40x59.84)		2,270 x 1,520(89.37x59.84)	
Weight	kg(lb)	3,200(7,055)	3,280(7,231)	3,200(7,055)	3,280(7,231)
NC CONTROLLER					
FANUC Oi-TB					

Standard Accessories Optional Accessories

- Hydraulic chuck & cylinder(6" Hollow)
- Soft jaw
- Hydraulic unit
- Coolant system
- Flood switch
- Work light
- Tool kit & box
- Operation manual & part list
- Tooling system
- Signal lamp(R,G)
- Leveling bolt & plate
- Door interlock
- Transformer(25kVA)
- Automatic door
- Tail stock(MT#4)
- Body program
- Quill program
- Chip conveyor & box(Side type)
- Trun mill & C-axis indexing(0.001")
- Air blower
- Air gun
- U-drill holder
- Coolant gun
- Tool & work counter
- Tool presetter
- Hard jaw
- NC cooler
- High pressure pump(6 bar)
- Flare catcher
- Chuck pressure check switch
- Main spindle motor(117.5kw)
- Signal lamp(R,G,Y)
- Bar feeder
- Bar feeder interface

* Specifications are subject to change without notice. Not responsible for misprints or typographical errors.

NC Specifications (FANUC Oi-TB)

ITEM	SPEC	STD	MC
Controlled axis			
Controlled axis (including Co-axial)	2-axis	2-axis	3-axis
Structure/axis controlled axis	2-axis	2-axis	3-axis
Lead input increment	0.001mm, 0.0001deg, 0.0001inch		
Lead input increment (1/10)	0.0001mm, 0.0001deg, 0.0001inch		
Inch/metric conversion	G20, G21		
Stored stroke check 1			
Stored stroke check 2,3			
Chamfering on/off			
Operation			
Backlash compensation			
Automatic & M/C operation			
Program number search			
Sequence number search			
Dry run, single block			
Manual handle feed rate	1/10, x100		
Manual handle feed rate	1/10, x100		
Positioning	G00		
Linear interpolation	G01		
Circular interpolation	G02, G03		
Dwell (Per second)	G04		
Helix coordinate interpolation	G02, G03(I)		
Cylindrical interpolation	G71		
Treading	G32		
Multiple threading			
Threading retract			
Continuous threading			
Variable lead threading	G34		
Reference position return	G28		
Reference position return check	G27		
2nd reference position return	G30		
Feed function			
Rapid traverse override	F0, F25, F50, F100		
Feed per rev. (mm/rev)	G96		
Feed per revolution (mm/rev)	G97		
Rapid traverse bell-shaped acceleration/deceleration			
Feedrate override	0-150%		
Rapid traverse override	F0, F25, F50, F100		
Acc. feed override	0-150 mm/min		
Tool code	T#, R#, S#, D#, C#, G#		
Optional block skip	EA, RS24M, SC24M		
Program number	04-digit		
Sequence number	N5-digit		
Decimal point programming			
Coordinate system setting	G50		
Coordinate system shift			
Workpiece coordinate system	G54-G59		
Workpiece coordinate system preset	G92.1		
Direct drawing dimension programming			
G code system	B/C		
Programmable data input	G10		
Sub program call	M98, M99		
Custom macro B	#100-#999, #500-#999		
Addition of custom macro common variables	#100-#999, #500-#999		
canned cycles			
Multiple repetitive cycle			
Multiple repetitive cycle II			
canned cycles for drilling			
Small hole peck drilling cycle			
Manual guide			
Spindle speed function			
Constant surface speed control	G96/G97		
Spindle override	50-150%		
Spindle orientation			
Rigid tapping			
Spindle synchronous control	Only for T2 SMC Model & C-240 SMC		
Tool function compensation			
Tool function	T4-digit		
Tool offset parts	±60bits 64parts	64bits	64parts
Tool nose radius compensation			
Tool geometry/wear compensation			
Tool life measurement			
Automatic tool offset	Tool presetter option is required		
Direct input tool offset value measured B	Tool presetter option is required		
Tool program storage length	2400(2K)	64K	64K
Number of registrable programs	400EA	400EA	400EA
Background editing			
Extended part program editing			
Play back			
Chips function			
Self-diagnose function			
Alarm history display			
Help function			
Run hour and parts count display			
Graphic function			
Dynamic graphic display	English/German/French/Italian/Chinese, Spanish/Korean/Portuguese/Polish, Hungarian/Swedish		
Multi-language display			
Data input/output			
Reader/Puncher interface C/H	RS232C		
Reader/Puncher interface C/H2	RS232C		
Memory card interface			
Display unit	10.4" color LCD		
Others			



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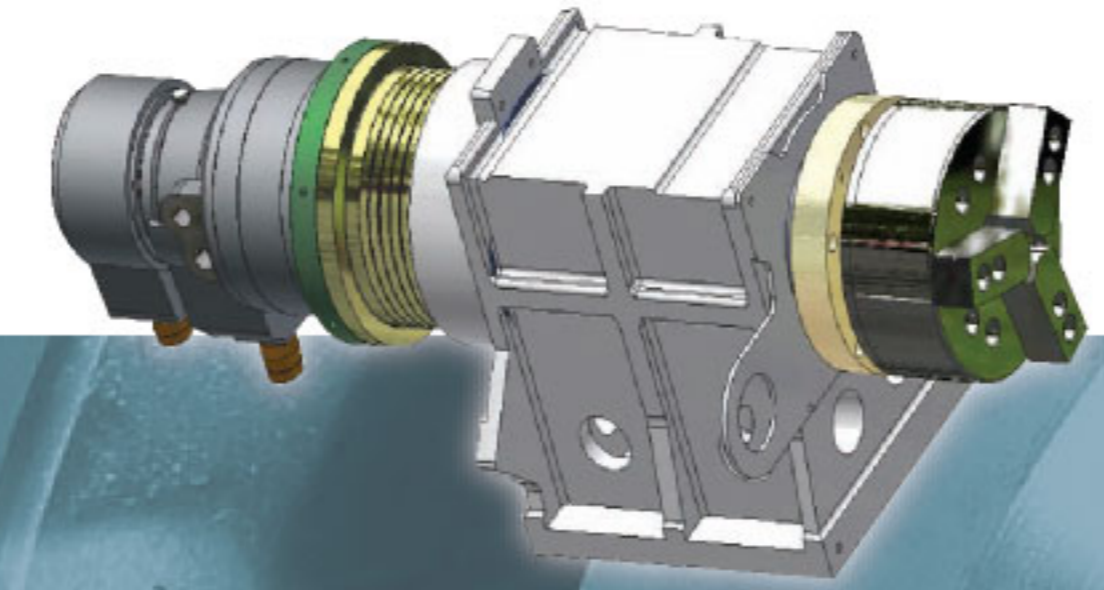
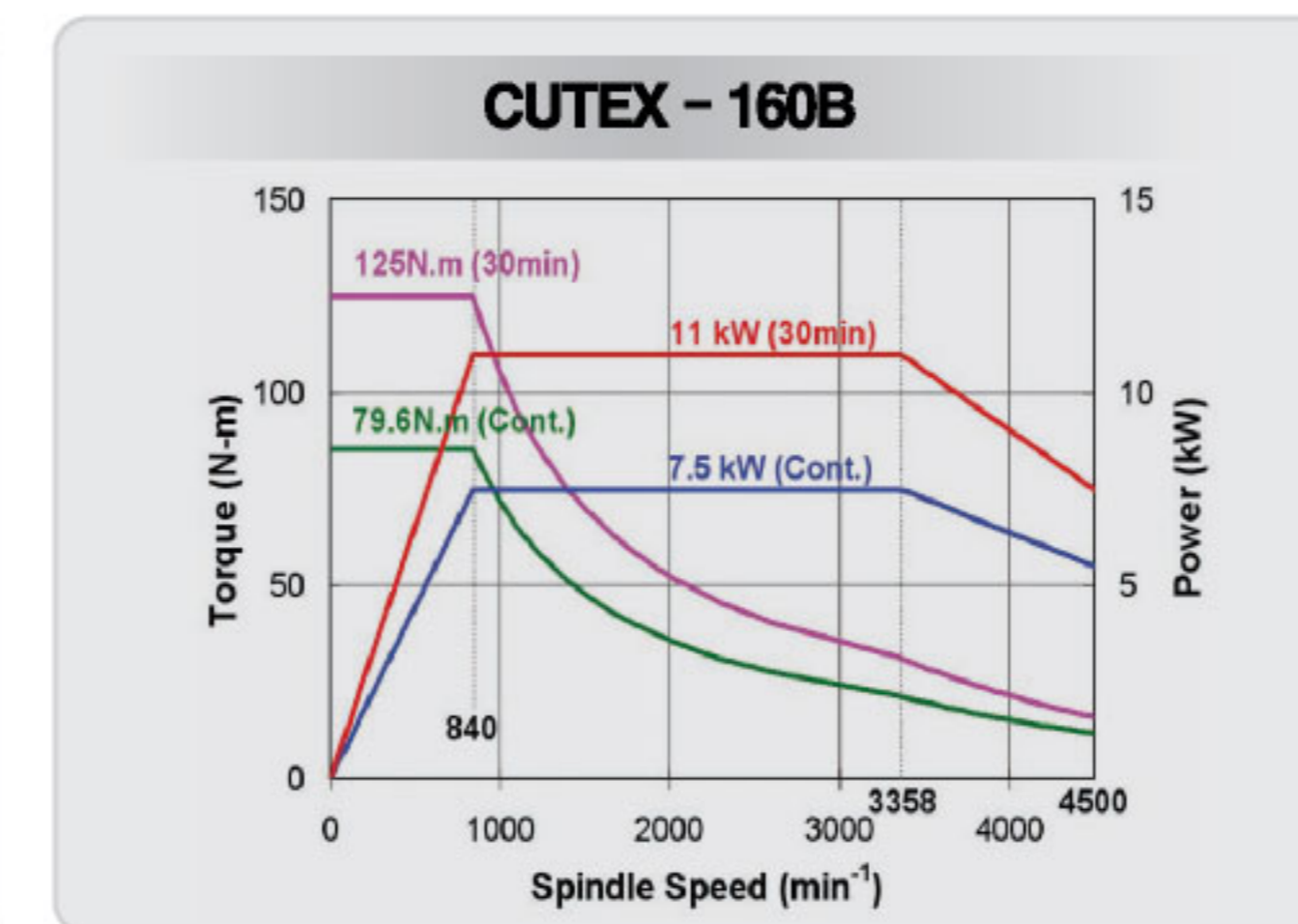
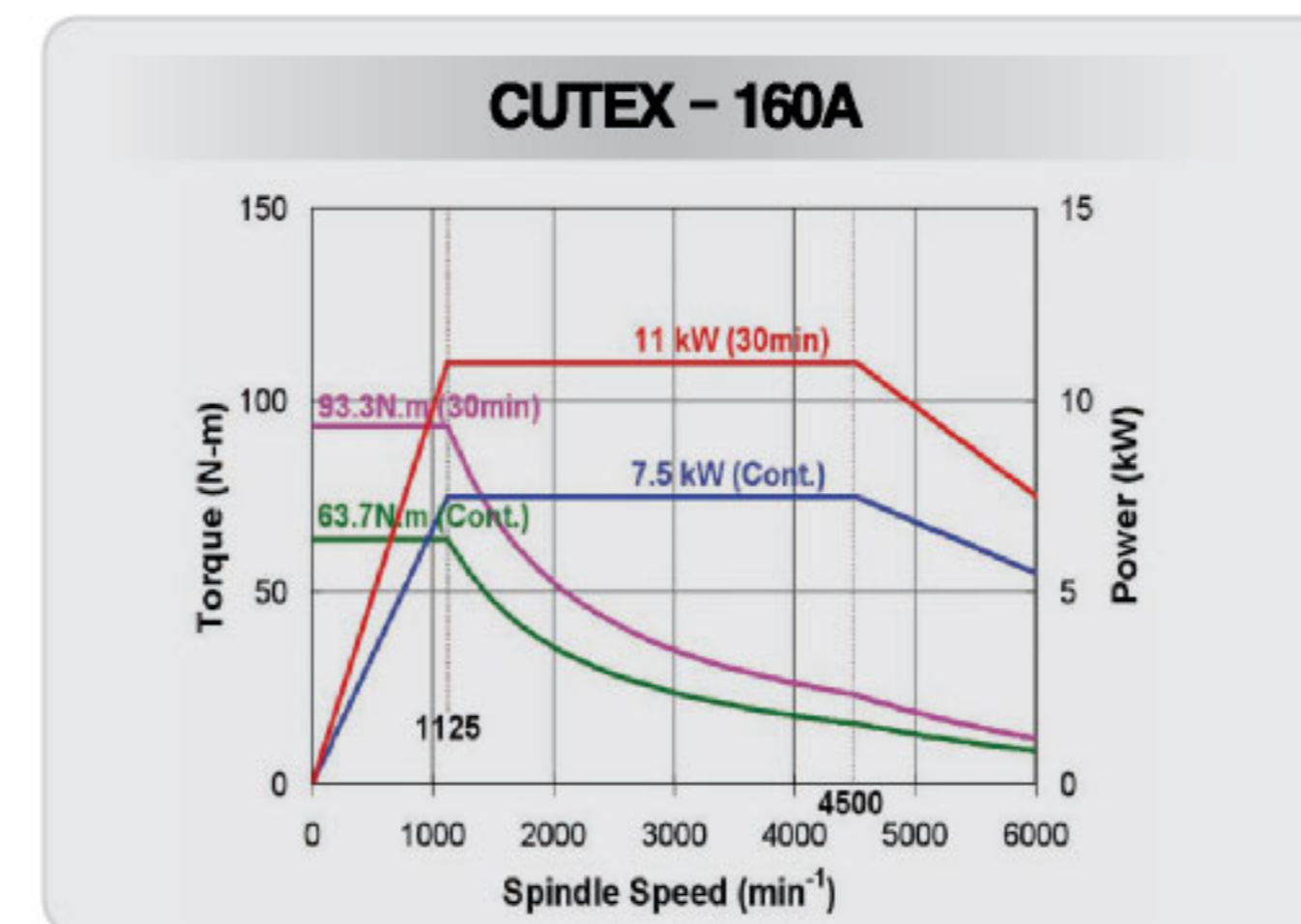


High Performance Turning Center

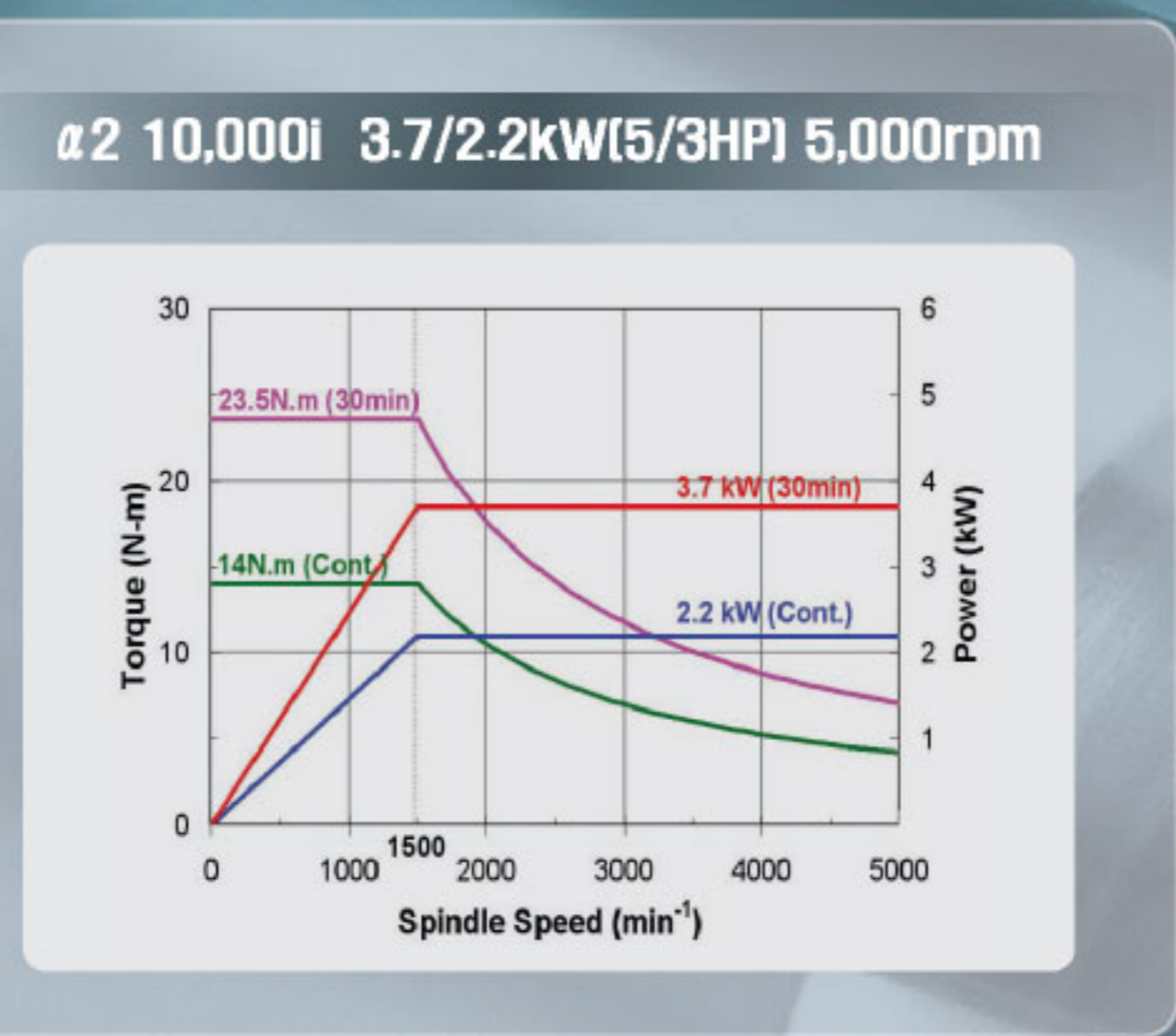


High Performance Turning Center

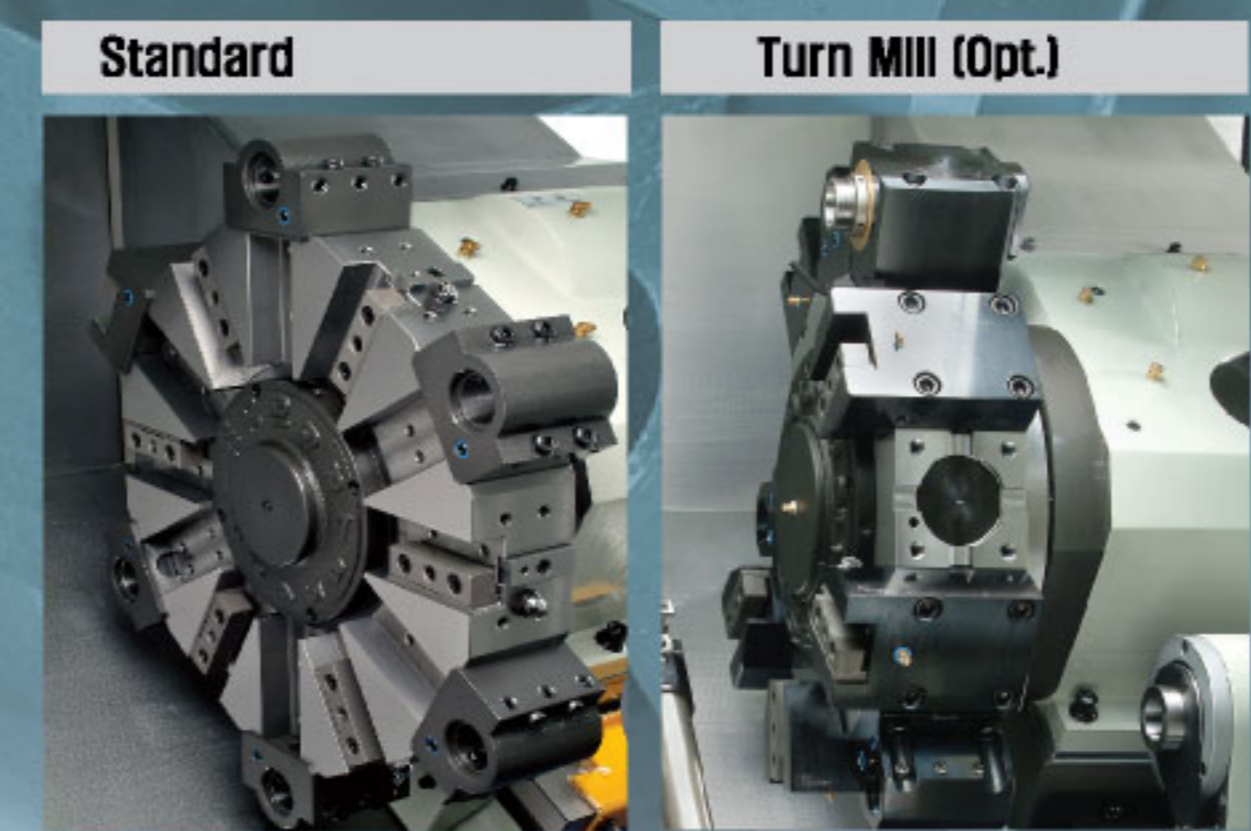
Main Spindle Torque Dia.



Spindle Power Diagram (Turn mill)



Quick Indexing Turret

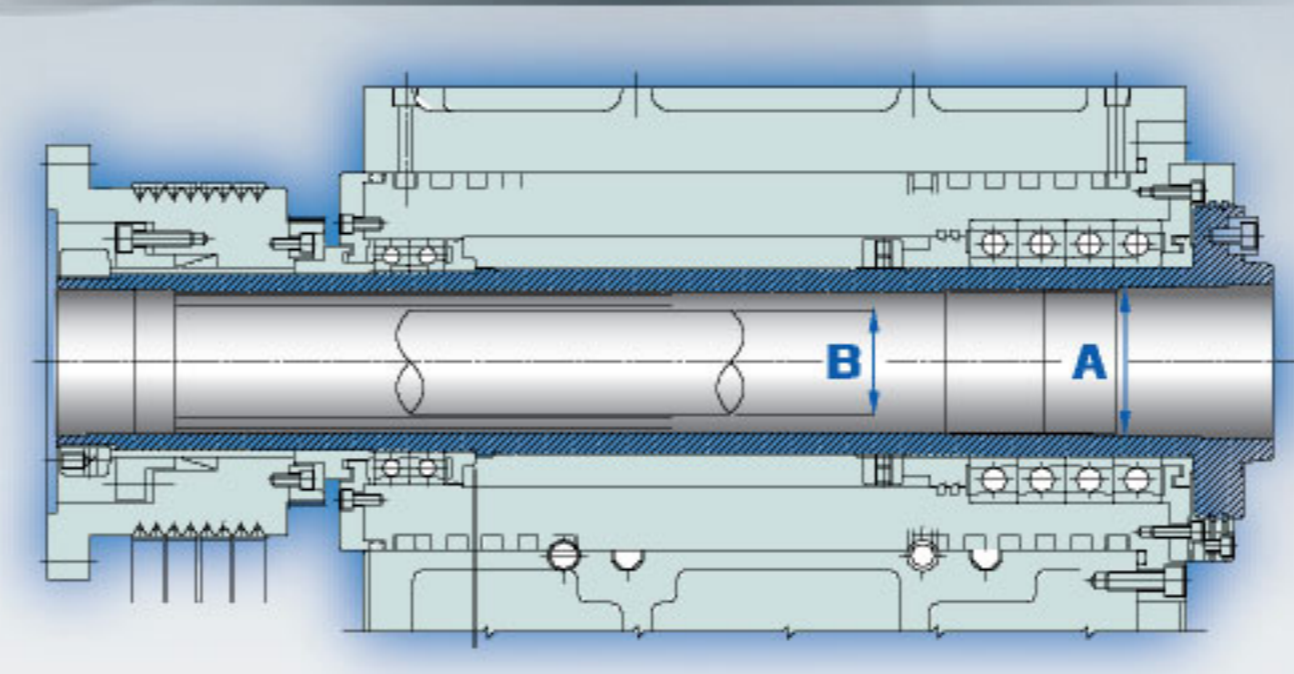


- Turret type : 3piece+servo
- Turret station : 12station
- Rotation time : 0.35sec
- Tool to tool : 0.15sec
- Repeatability : ±0.6sec
- Clamp force : 4,300kgf(9,480lbf)
- Driven tools for milling, tapping, drilling contribute to highly intensive process with spindle indexing(MC:0.001, M:2.5) by an AC spindle motor.

	A (spindle hole)	B (work size)
CUTEX-160A	Ø56(Ø2.2)	Ø43(Ø1.7)
CUTEX-160B	Ø62(Ø2.5)	Ø51(Ø2)

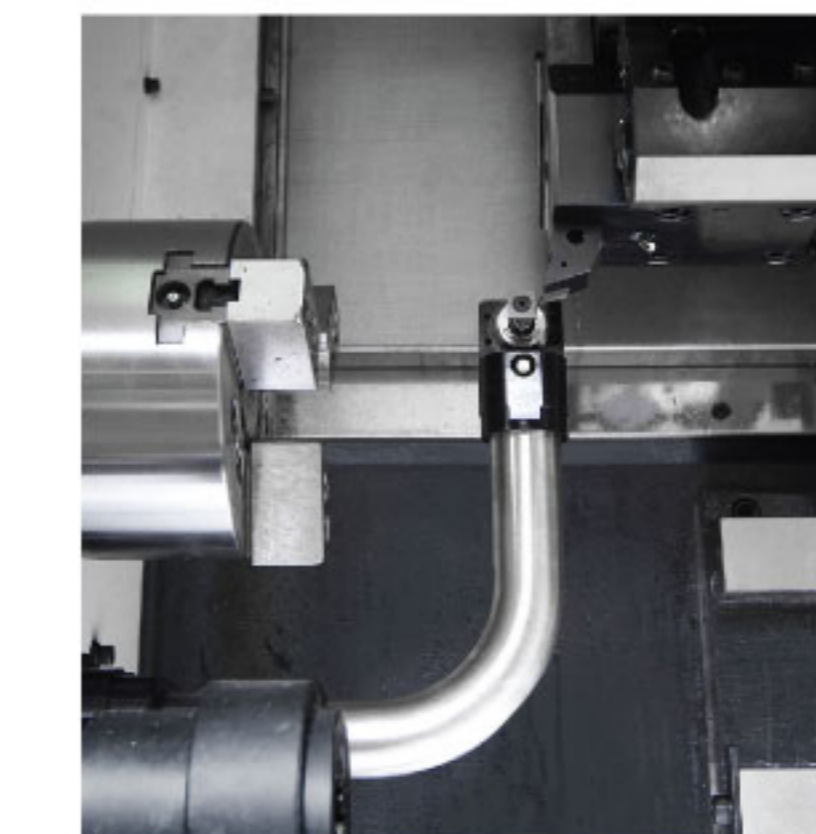
Hi-Speed Spindle

Stable Structure Spindle



Various Function

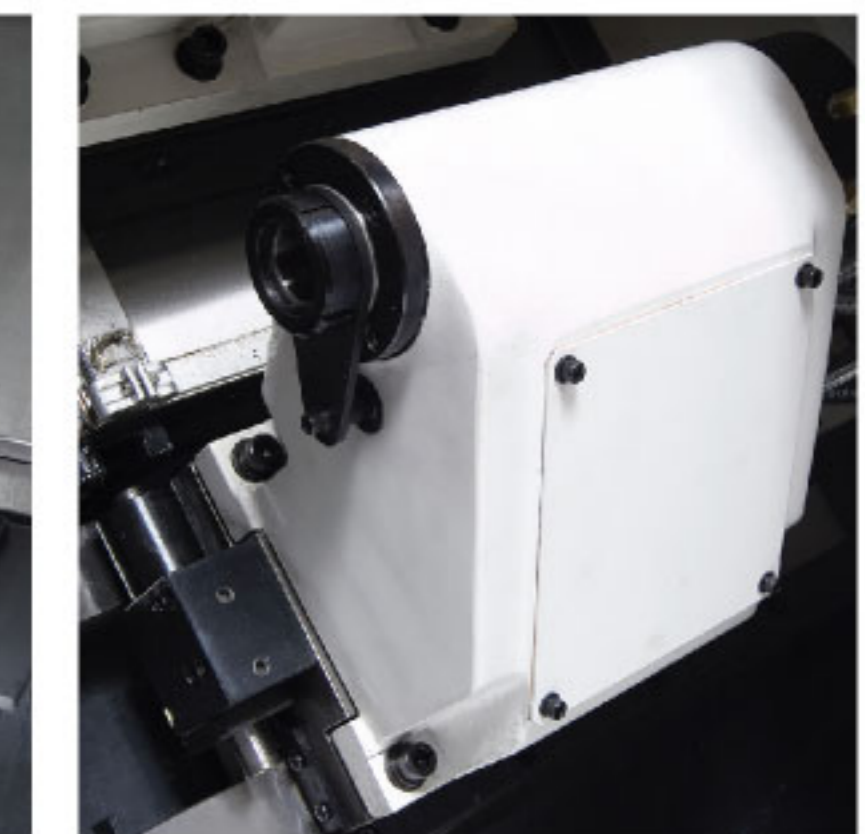
- Tool presetter (Option)
- Parts catcher & Bar-feeder(Option)
- Built-in tall stock (Option)



Tool position adjust, work piece zero point, and coordinate system set-up can be set by simply touching the touch sensor. Thus, tool set-up time is shortened to less than 15sec. And this option achieves high productivity and high precision.



Parts fall into parts catcher and high productivity is possible. Workpiece size -Max. Ø45mm(Ø1.8") L=160mm(6.3") Productivity elevation(Bar feeder)



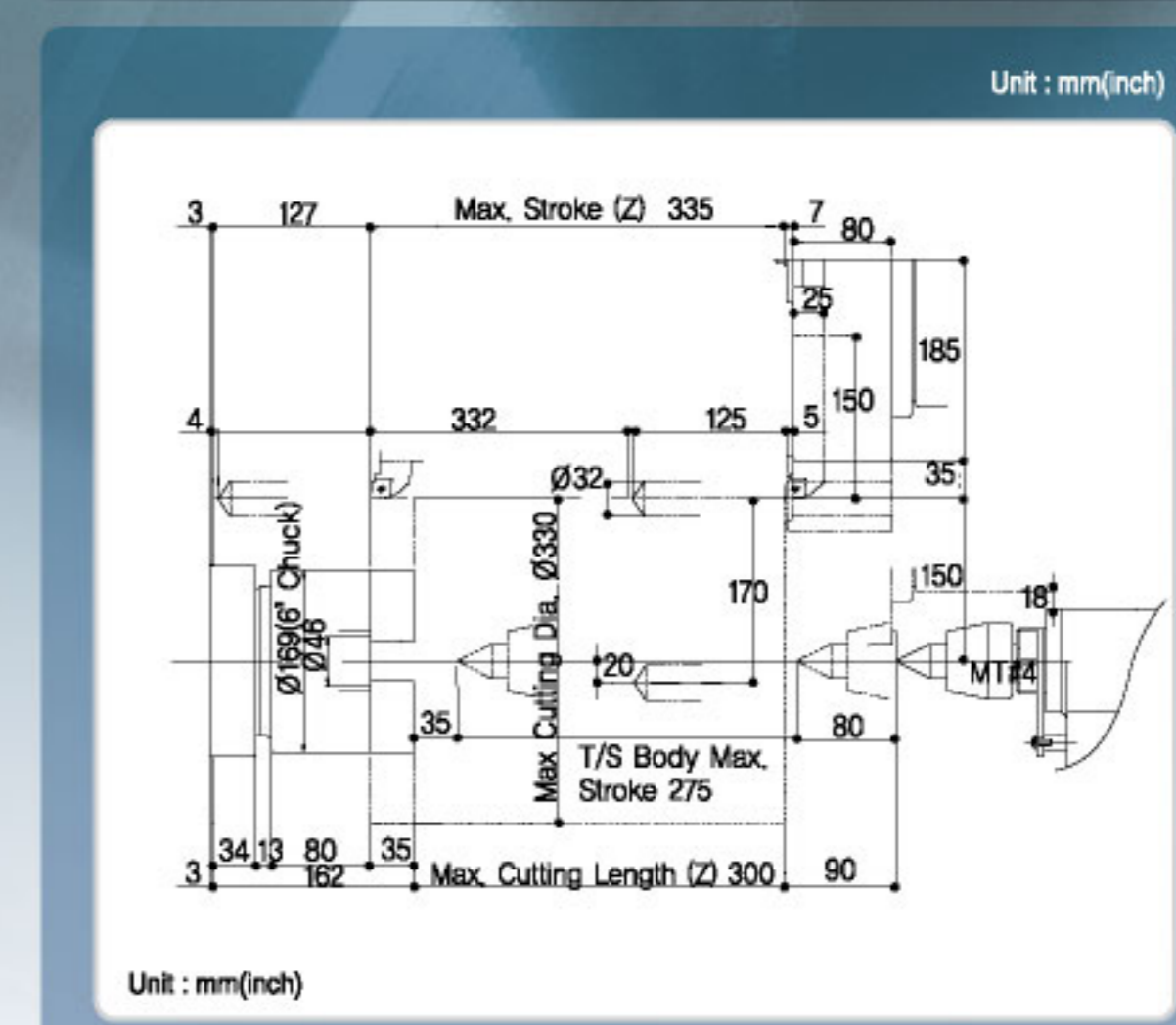
Live center(MT#4) for high rigid machining. Easy to use by quill program(Opt.)

- 10.4" LCD with full key

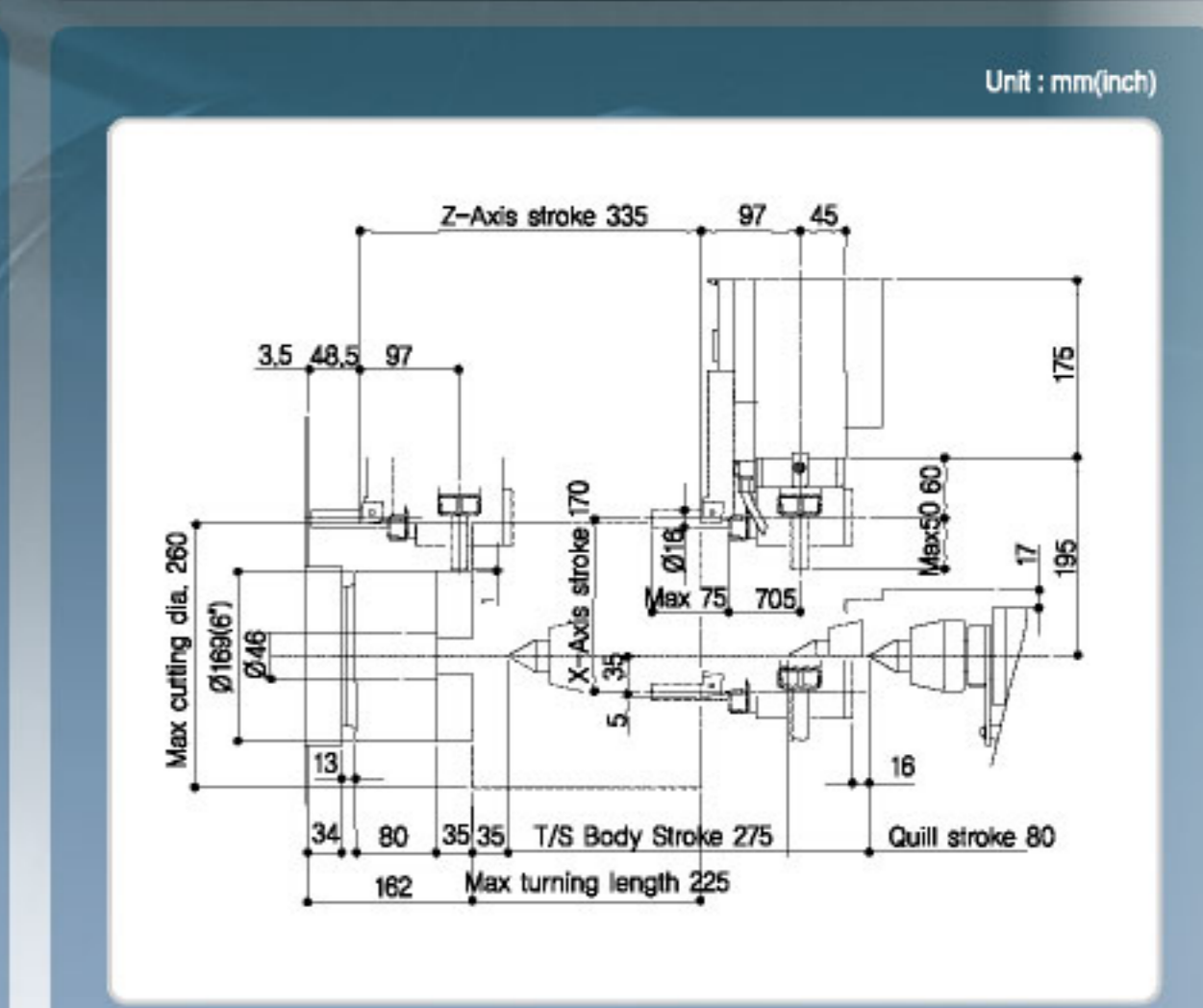


Moving Range

Moving Range [Standard / 6"Chuck]



Moving Range [Turn Mill / 6"Chuck]



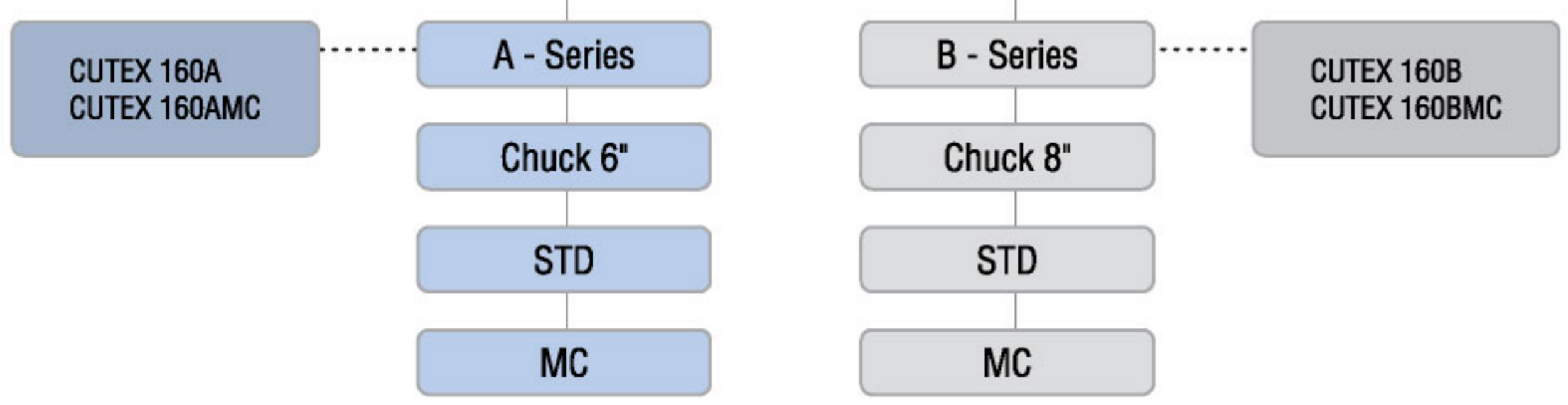
CUTEX 160

MAIN FEATURE

- Spindle & easy - access/Maintenance design
- Box type single slant 45° bed frame
- The best rapid traverse in its level class - 36m/min(1,417ipm)
- 0.15sec tool indexing time & reducing lead time
- Complex machining with turn mill
- User oriented easy operation & easy access structure



CUTEX 160



Ref. 1)STD:T/Stock 2)MC:Milling-Function C-Axis(0.001")