

# Control Functions and Specifications

● : Standard ○ : Optional — : None

Controlled axis				
Item	Specifications	TXP-100e	TXP-200e	
Controlled axis	2 axes	●	●	
Simultaneously controlled axis	4 axes	●	●	
Axis name	X / Y / Z / U / V / W / A / B / C	●	●	
Inch / Metric conversion	G21 / G20	●	●	
Least input increment	0.001mm / 0.0001inch / 0.001deg	●	●	
Increment system 1/10	0.0001mm / 0.00001inch / 0.0001deg	●	●	
Fine Acc & Dec control		●	●	
Follow-up		●	●	
Inter lock	All axes / each axis / cutting block start	●	●	
Machine lock	All axes / each axis	●	●	
Emergency stop		●	●	
Overtravel		●	●	
Stored stroke check 1		●	●	
Position switch		●	●	
Backlash compensation	Rapid traverse / cutting feed	●	●	
Stored pitch error compensation		●	●	
Chamfering on/off	M22 / M23	●	●	
M-Code mirror image	M94 / M95 / M96	●	●	
HRV control	HRV2	●	●	
	HRV3	●	●	
Controlled axis expansion (total)	Max. 4 axes	○	○	
Simultaneously controlled axis expansion (total)	Max. 4 axes	○	○	
Operation				
Item	Specifications	TXP-100e	TXP-200e	
Automatic operation		●	●	
DNC operation	Reader / Puncher interface is required	●	●	
Dry run		●	●	
Buffer register		●	●	
Single block		●	●	
MDI operation	MDI-B	●	●	
JOG feed		●	●	
Manual reference position return		●	●	
Manual absolute on and off		●	●	
Manual handle feed rate	X1 / X10 / X100	●	●	
Program number search		●	●	
Sequence number search		●	●	
Manual handle feed	1 unit / each path	●	●	
	2 units	○	○	
Manual handle interruption	Hardware is necessary	●	●	
Sequence number comparison and stop		●	●	
Program restart	Hardware is necessary	●	●	
Interpolation				
Item	Specifications	TXP-100e	TXP-200e	
Positioning	G00	●	●	
Dwell	G04	●	●	
Linear interpolation	G01	●	●	
Circular interpolation	G02 / G03	●	●	
Thread, synchronous cutting	G33	●	●	
Skip function	G31	●	●	
Reference position return	G28	●	●	
Reference position return check	G27	●	●	
2nd reference position return		●	●	
Threading retract		●	●	
Continuous threading	G32	●	●	
Variable lead threading	G34	●	●	
Cylindrical interpolation		●	●	
Polar coordinate interpolation	G12.1 / G13.1	●	●	
3rd / 4th Reference position return	G30	●	●	
Conversational programming function				
Item	Specifications	TXP-100e	TXP-200e	
Manual Guide i	10.4"LCD / MDI is necessary	—	●	
Tool function / Tool compensation				
Item	Specifications	TXP-100e	TXP-200e	
Tool function	T7+1 digit / T6+2 digit	●	●	
Tool offset pairs	64 pairs	●	●	
Tool nose radius compensation		●	●	
Tool geometry / wear compensation		●	●	
Tool offset value counter input		●	●	
Automatic tool offset	G36 / G37 (Touch sencer and Macro B are necessary)	○	○	
Tool life management function		●	●	
Feed function				
Item	Specifications	TXP-100e	TXP-200e	
Rapid traverse rate		●	●	
Rapid traverse override	F0, 25%, 50%, 100%	●	●	
Feed per minute	G94 (mm/min)	●	●	
Feedrate override	0~200%	●	●	
JOG override	0~200%	●	●	
Feed per revolution (mm/rev)	G95, A spindle position coder is required	●	●	
Manual per revolution feed		●	●	
Feed stop		●	●	
Tangential speed constant control		●	●	
Cutting feedrate clamp		●	●	
Automatic acceleration / deceleration		●	●	
Rapid traverse bell-shaped acceleration / deceleration		●	●	
Linear acceleration / deceleration after cutting feed interpolation		●	●	
External deceleration		●	●	
Program input				
Item	Specifications	TXP-100e	TXP-200e	
EIA / ISO automatic recognition		●	●	
Label skin		●	●	
Parity check		●	●	
Control in / out		●	●	
Max. programmable dimension	± 8 - digit	●	●	
Program number	O4 - digit	●	●	
Sequence number	N5 - digit	●	●	
Absolute / Incremental programming		●	●	
Diameter / radius programming		●	●	
Direct drawing dimension programming		●	●	
Decimal point programming / pocket calculator type decimal point programming		●	●	
Input unit 10 time multiply		●	●	
Plane selection	G17 / G18 / G19	●	●	
Rotary axis designation		●	●	
Rotary axis roll-over function		●	●	
Sub program call	4 folds nested	●	●	
Program stop / program end	M00 / M01 / M02 / M30	●	●	
Reset		●	●	
G-Code A system		●	●	
Canned cycles	G70~G76	●	●	
Coordinate system setting		●	●	
Automatic coordinate system setting		●	●	
Coordinate system shift		●	●	
Direct input of Coordinate system		●	●	
Workpiece coordinate system preset		●	●	
Chamfering / corner R		●	●	
Programmable data input	G10	●	●	
Custom macro B	Macro B	●	●	
Optional block skip	1, Hardware is necessary 9, Hardware is necessary	●	○	
Canned cycles for drilling	G80~G89	●	●	
Program format FS10 / 11	Word and address format	●	●	
G-Code B / C system		●	●	
Workpiece coordinate system	G52 / G53 G54~G59	○	○	
Addition of custom macro common variables	#100~#199 / #500~#999	●	●	
Edit operation				
Item	Specifications	TXP-100e	TXP-200e	
Number of registerable programs	400	●	●	
Part program editing		●	●	
Extended part program editing		●	●	
Background editing		●	●	
Program protect		●	●	
Part program storage length	640M (256kbyte)	●	●	
Playback	Hardware is necessary	●	●	
Data input / output				
Item	Specifications	TXP-100e	TXP-200e	
Reader / Puncher interface	RS-232 interface	●	●	
Memory card interface	For maintenance For customer	●	●	
External message		●	●	
Data Server-ATA	Slot unit is necessary Standard 128MB, MAX.2 GB	○	○	
Setting / Display				
Item	Specifications	TXP-100e	TXP-200e	
Status display		●	●	
Current position display		●	●	
Program display	Program name 31 characters	●	●	
Parameter setting and display		●	●	
Alarm display		●	●	
Alarm history display		●	●	
Operation history display		●	●	
Run hour and parts count display	Included Machining time stamp	●	●	
Actual cutting feedrate display		●	●	
Display of spindle speed and T code at all screens		●	●	
Display of hardware and software configuration		●	●	
Graphic function	Graphic display unit is necessary	●	●	
Dynamic graphic display	Graphic function is necessary	●	●	
Help function		●	●	
Clock function		●	●	
Data protection key		●	●	
Erase CRT screen display		●	●	
Servo setting screen		●	●	
Spindle setting screen		●	●	
Periodic maintenance screen		●	●	
Maintenance information screen		●	●	
Multi-language display	English, Chinese French, German, Italian, Korean, Spanish, Japanese, Portuguese, Czech, Polish, Hungarian	●	●	
Operation message history display		●	●	
Auxiliary / Spindle speed function				
Item	Specifications	TXP-100e	TXP-200e	
Auxiliary function (M)	M8 digit	●	●	
High speed M / S / T interface		●	●	
Spindle speed function (S)		●	●	
Spindle override	50~200%	●	●	
Spindle positioning		●	●	
1st spindle orientation	M19	●	●	
Rigid tapping	M29	●	●	
Spindle speed fluctuation detection function		●	●	
Cutting air blast	M14 / M15	○	○	
Auto power off	M30	○	○	
Others				
Item	Specifications	TXP-100e	TXP-200e	
Status output signal		●	●	
Connectable servo motor		●	●	
Connectable servo AMP		●	●	
Connectable spindle motor		●	●	
Connectable spindle AMP		●	●	
8.4"color LCD / MDI (full key)	Separate type	●	—	
10.4"color LCD / MDI (full key)	Separate type	—	●	

We reverse the right to make any modification without notice.



The ATA FLASH memory card interface is standard.

The huge volume of programs and production data can be carried by flash memory card (option) for high-speed data transmission, and monitoring the machining execution.

# VMC

## Vertical Machining Center

**FP Series** High Precision High Performance Die Mold Vertical Machining Center  
FP55A, FP66A, FP100A



**FV Series** High Speed High Performance Vertical Machining Center  
FV56T, FV56A, FV85A, FV102A, FV125A



**XV Series** High Performance Vertical Machining Center  
XV560A, XV1020A, XV1250A

**TV Series** Heavy Duty Vertical Machining Center  
TV116B, TV146A/B, TV158B, TV188B, TV2110B, TV2610B



**MV Series** High Performance High Rigidity Vertical Machining Center  
MV66A, MV76A, MV86A, MV106A, MV138B, MV168A/B

**WV Series** Ultra Wide High Performance Vertical Machining Center  
WV108A/B



**FX Series** 5-Axis Vertical Machining Center  
FX350A

**NSV Series** Ultra High Performance Vertical Machining Center  
NSV66A, NSV85A, NSV102A

**NDV Series** High Precision Die Mold Vertical Machining Center  
NDV66A, NDV85A, NDV102A



**NFV Series** High Performance Vertical Machining Center  
NFV85A, NFV102A

**DCV Series** Advanced Double Column Vertical Machining Center  
DCV2012A/B, DCV3016B, DCV4016B, DCV4025B



# HMC

## Horizontal Machining Center

**H Series** High Production Dual Drive Horizontal Machining Center  
H500A/B, H630B, H800B, H2612B



# CNC LATHES

## CNC Turning Center

**NT Series** High Performance Mill-turn Multi-tasking Center  
NT-2000Y/SY

**GT Series** High Performance Geo Turning Center  
GT-200A/B/MA, GT-250A/B/MA, GT-300A/B/MA/LB, GT-380A/B/LA/LB

**TC Series** High Performance High Precision CNC Lathe  
TC-26, TC-26L, TC-36, TC-36W



Integrated Operation Control System **iOPERATION Plus**  
Spindle Thermal Compensation System **STCPLUS**

Automation Solutions



# YCM®

YEONG CHIN MACHINERY INDUSTRIES CO., LTD.  
888 HOMU RD., HSINCHUANG ■ SHENGANG, TAICHUNG, TAIWAN  
Web Page: [WWW.YCMCNC.com](http://WWW.YCMCNC.com) ■ Email: [sales@YCMCNC.com](mailto:sales@YCMCNC.com)

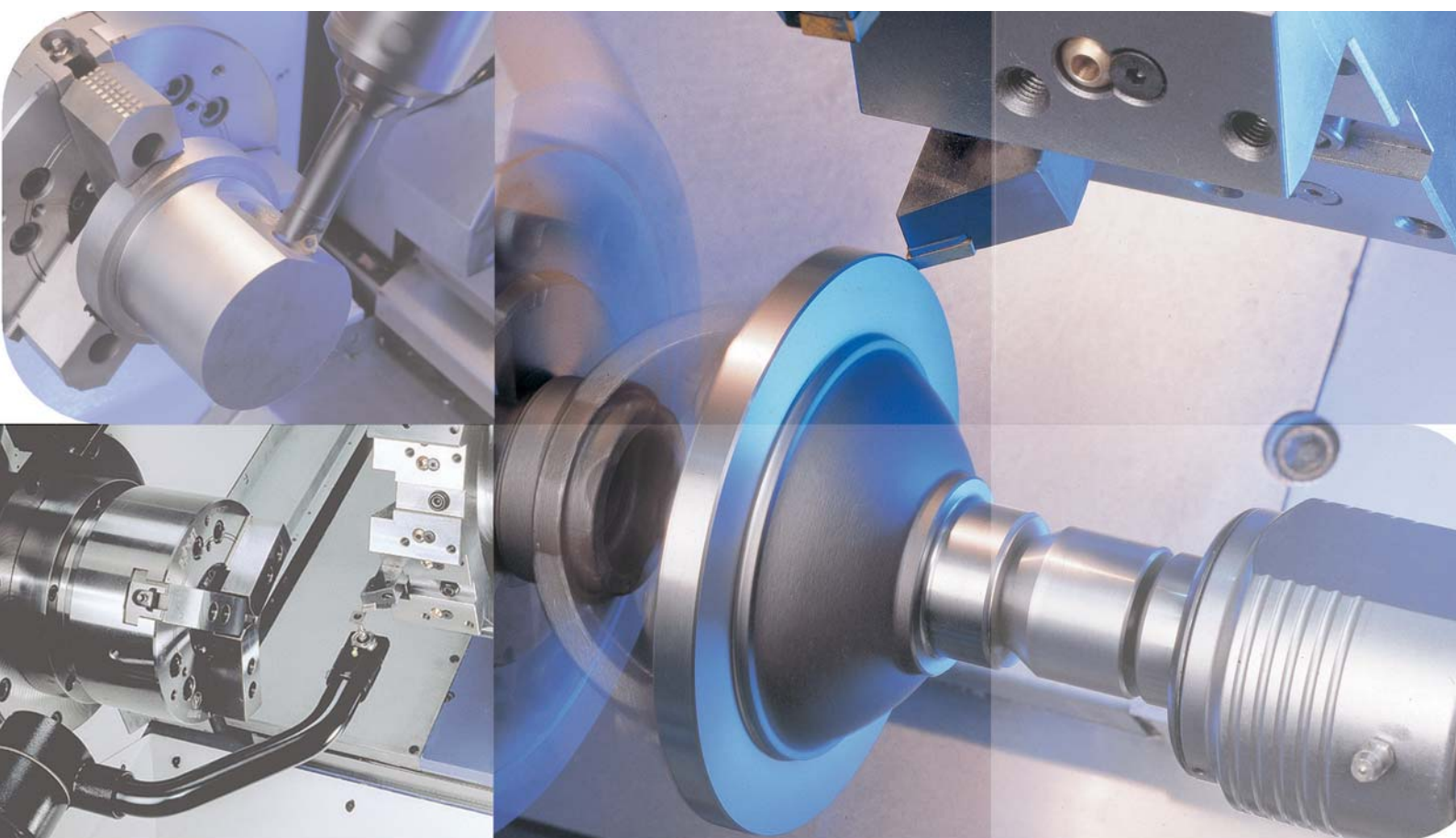


Tel : +886-4-2562-3211  
Fax : +886-4-2562-6479

# TC Series

TC-26 ■ 26L ■ 36 ■ 36W

*High Performance High Precision CNC Lathe*



ISO 9001  
BSMI  
REGISTERED  
CERTIFICATION

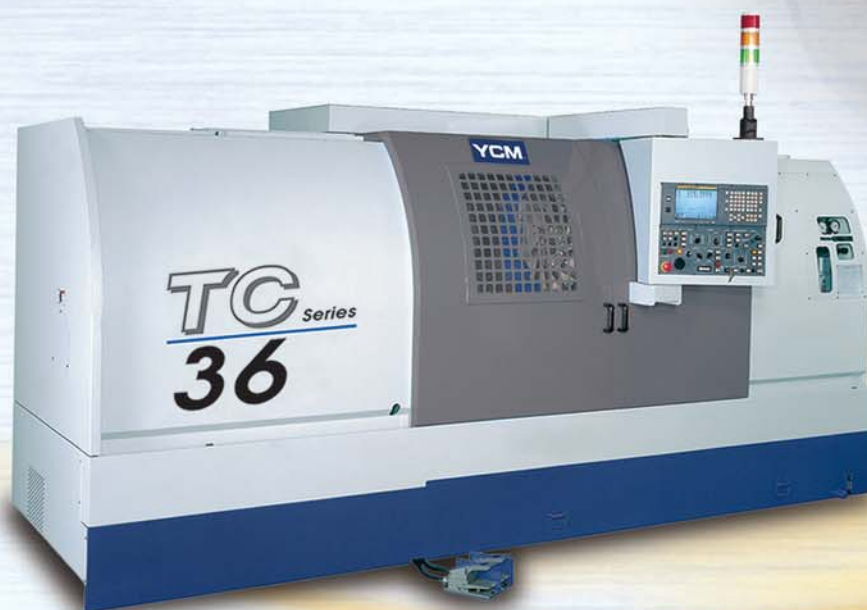




# TC Series

## High performance CNC Lathes

- The utmost performance CNC lathes are specially developed for mass turning production, as in automotive, aerospace, oil and IT electronic industries.
- YCM TC Turning Centers provide the best solution in various and complex parts production; it is a high value added machine tools for key component output.
- Modular spindle designs for various turning application.
- The rigid one-piece MEEHANITE® casting absorbs the turning vibration and ensures job accuracy.
- Fast and Reliable powerful tool turret system indexes for high efficiency production.
- High-speed axial traverse design positions precisely and enlarges the benefit of operation.
- Humanized User Friendly interface, for easy operation and maintenance.
- The complete enclosure safely guards the operator, conforms current-environmental safety regulations.







# TC-26 ■ 26L

- High Speed Spindle at 4,000rpm Maximum.
- Rapid Feed Rate at X : 15m/min **591ipm** ; Z : 20m/min **787ipm** .
- Extremely Rigid One-piece 45° Slant Bed.
- Heavy Cutting With Powerful Gear Head Spindle for Maximum Torque Output at 74.5kg-m **539 lb-ft**.
- Material Removal Efficiency at 410c.c./min. Insert Depth at 8mm **0.31"**.



## High-Speed And High-Rigidity Turret

The 12-station turret index is done by absolute detection, to reduce tool selection mistake.

The powerful turret with large diameter curvic coupling offers high-precision and high rigidity in cutting performance.

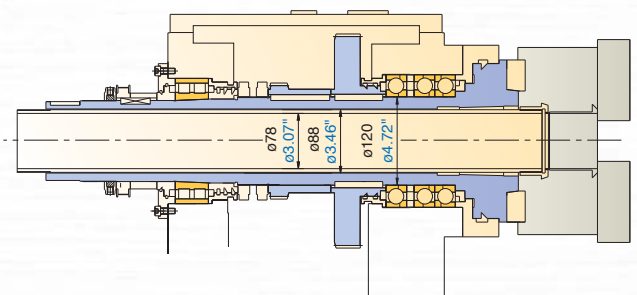
## Powerful Head Stock With Built-in Gears

The Spindle is equipped with high precision angular ball bearing and NN series bearing that provides high precision and rigidity working condition.

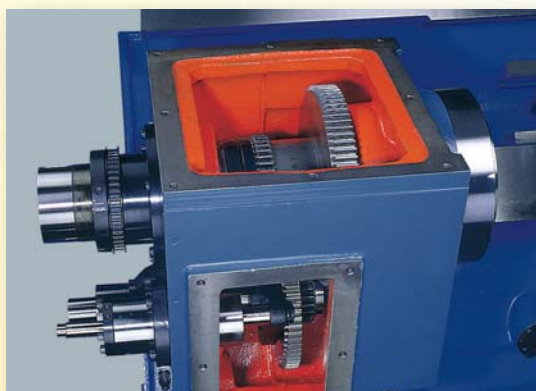
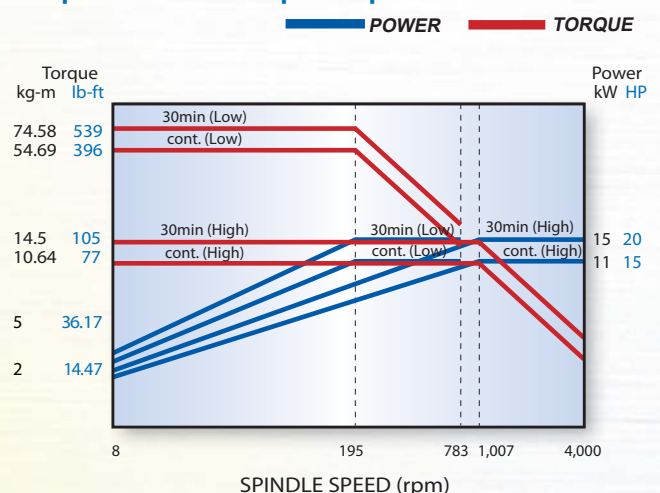
The inner diameter of the bearing is  $\phi 120\text{mm}$   **$\phi 4.72"$** , and  $\phi 88\text{mm}$   **$\phi 3.46"$**  of the spindle through hole, and  $\phi 78\text{mm}$   **$\phi 3.07"$**  of the drawbar through hole that adapts large diameter bar stock jobs.

The powerful spindle with built-in gears provides various speed transmissions.

The maximum output of torque reaches 74.5kg-m **539 lb-ft**, with 4,000rpm maximum spindle speed.



## Spindle Power-Torque Output Chart



## High Precision And High Rigidity Programmable Tail Stock

Using "M" code commands the, quill stroke of the programmable tail stock, can be hooked with a hydraulic hook to the saddle carriage and slide along the Z-axis stroke.

## High Speed And High Precision Feeding Axes

X , Z axes guide ways are well hardened and ground with Turcite-B to reduce the friction and offer utmost rigidity in cutting.

The rapid feed of X : 5m/min **591ipm**; Z : 20m/min **787ipm**.

## Friendly Operation And Maintenance

Hydraulic gauges, control valves of chuck and tail stock, and the central lubrication system are installed at the front side; for easy adjustment and maintenance.

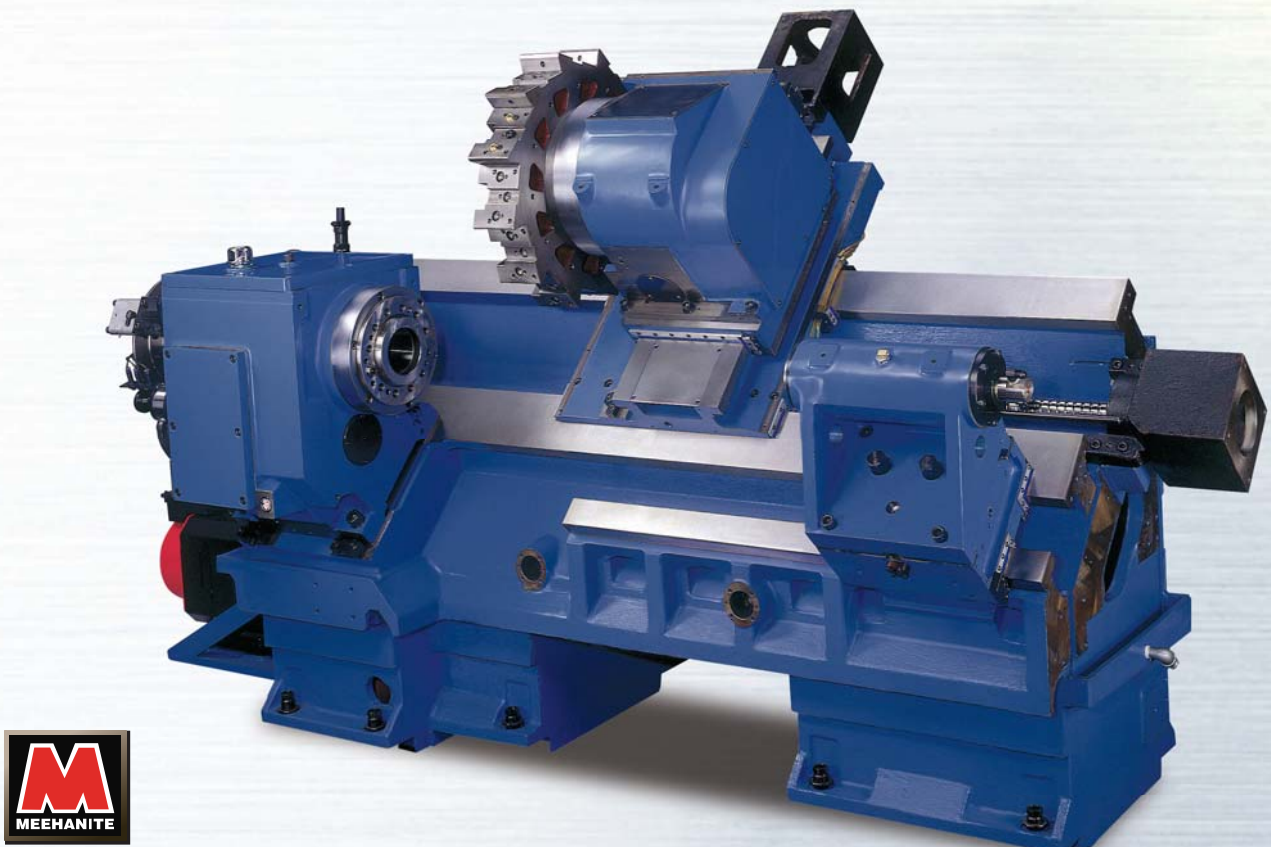
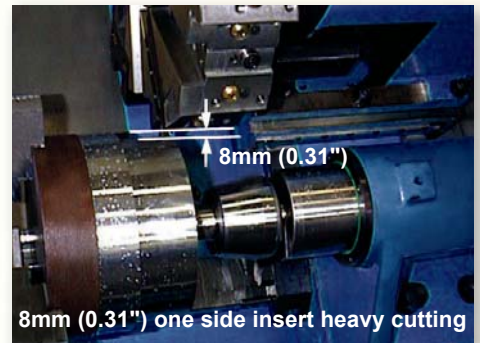
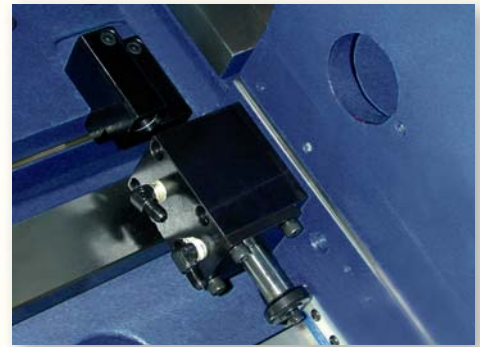
## Directly Driven Ballscrews Of High Precision And Rigidity

This machine is equipped with high precision ball screws and connected with motor directly. Both fixing design supports ends; pre-loaded ball screws provide high rigidity, high precision, and low heat effect without backlash.

## Central Lubrication System

The machine with auto-lubrication design ensures the accuracy through out its life time.

The slide ways of X, Z-axes and ball screws are lubricated. Built-in alarm will occurred when the lubrication oil is insufficient.





# TC-36-36W

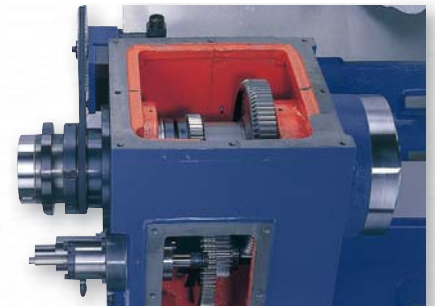
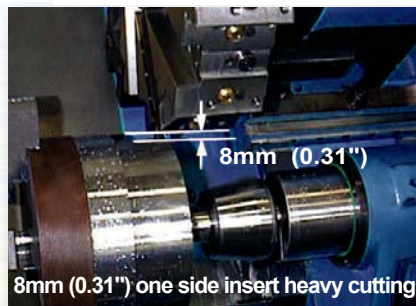
Extremely Rigid One-piece 45° Slant Bed endures maximum cutting force, and is easy to operate.

Powerful Gear-head Spindle with Max. Torque Output at 140kg-m **1,013 lb-ft**, and power outputs at 26kW **35HP**.

## High-speed, High-rigidity Turret

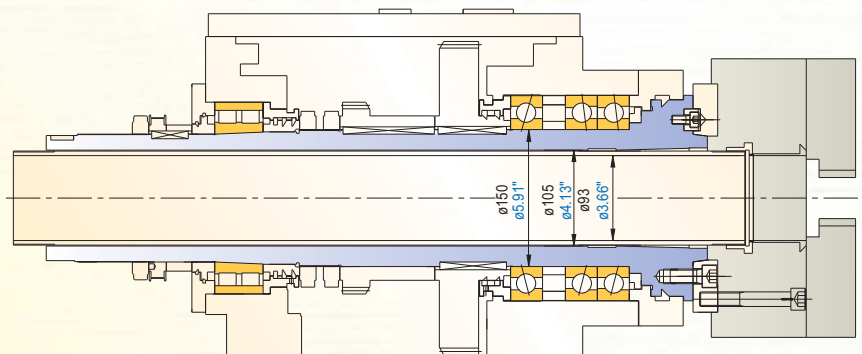
The 12-station turret index is done by absolute detection, and no tool selection mistake is caused.

The powerful turret of large diameter curvic coupling offers high-precision and high rigidity in cutting performance.



## Powerful Head Stock With Built-in Gears

The Spindle is equipped with high precision angular ball bearing and NN series bearing witch provides high precision and rigidity working condition. The inner diameter of the bearing is  $\phi 150\text{mm}$   **$\phi 5.91"$** , and  $\phi 105\text{mm}$   **$\phi 4.13"$**  of the spindle through hole, and  $\phi 93\text{mm}$   **$\phi 3.66"$**  of the drawbar through hole that adapts large diameter bar stock jobs. The powerful spindle with built-in gears provides various speed transmissions. The maximum output of torque reaches 140kg-m **1,013 lb-ft**, with maximum spindle speed of 2,500rpm.





## Directly Driven Ballscrews Of High Precision and Rigidity

This machine is equipped with high precision ball screws and connected with motor directly. Both fixing design supports ends; ball screws are pre-loaded for high rigidity, high precision, low heat effect and without backlash.

## Oil Tank Separated Form The Machine Body

The stand alone oil tank ensures the machining precision will not be affected by heat. It is also convenient and efficiency for clean and maintain the oil tank.

## Friendly Operation And Maintenance

Hydraulic gauges, control valves of chuck and tail stock, and the central lubrication system are located at the front side for easy operation and maintenance.

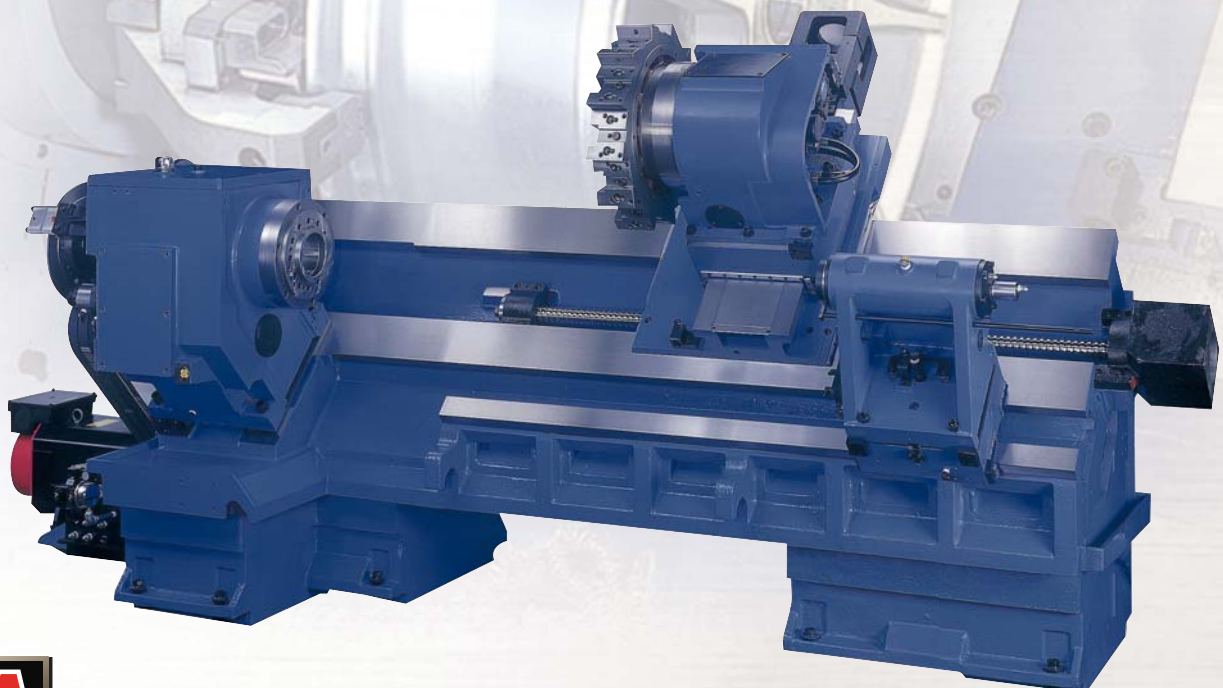
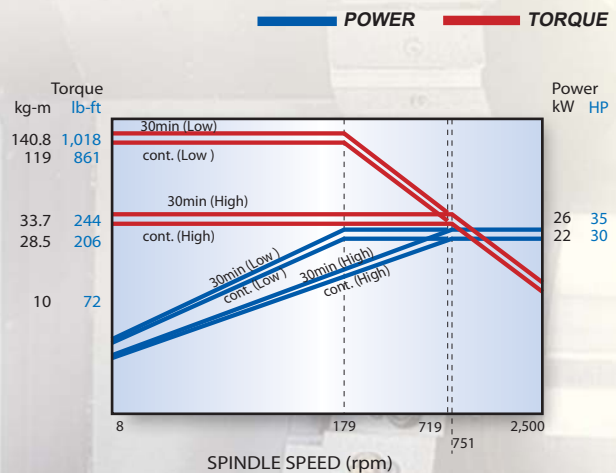
## High Precision And High Rigidity Programmable Tail Stock

Using "M" code commands, the quill stroke of the programmable tail stock, can be hooked with a hydraulic hook to the saddle carriage and slide along the Z-axis stroke. Tail stock revolving quill is standard.

## Environments Concerned Safety Guarding

From the window of the safety guard, operator can see through the engaged job, and shield from the cutting chips and coolant mist.

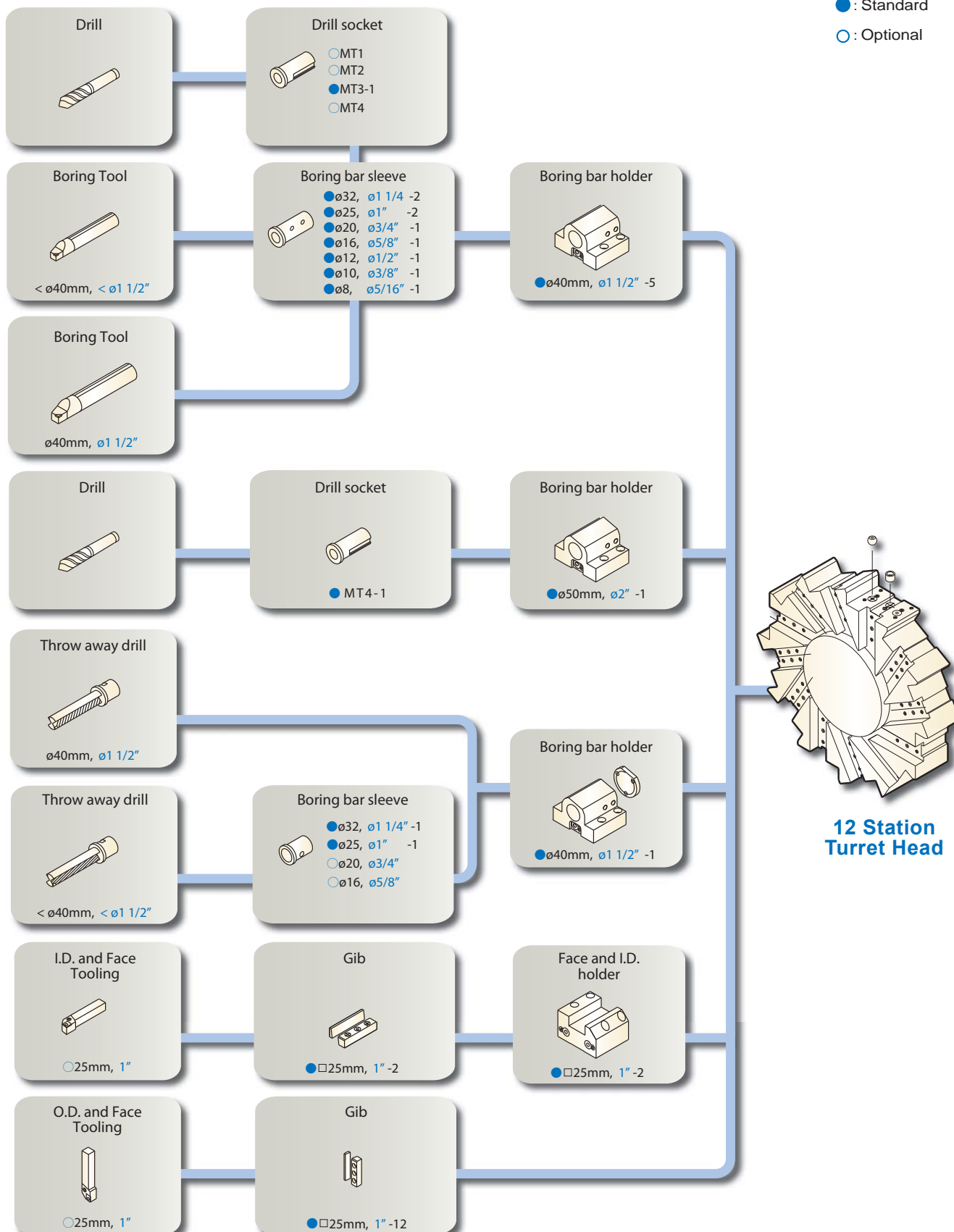
## Spindle Power-Torque Output Chart



# TURRET ACCESSORIES

● : Standard

○ : Optional

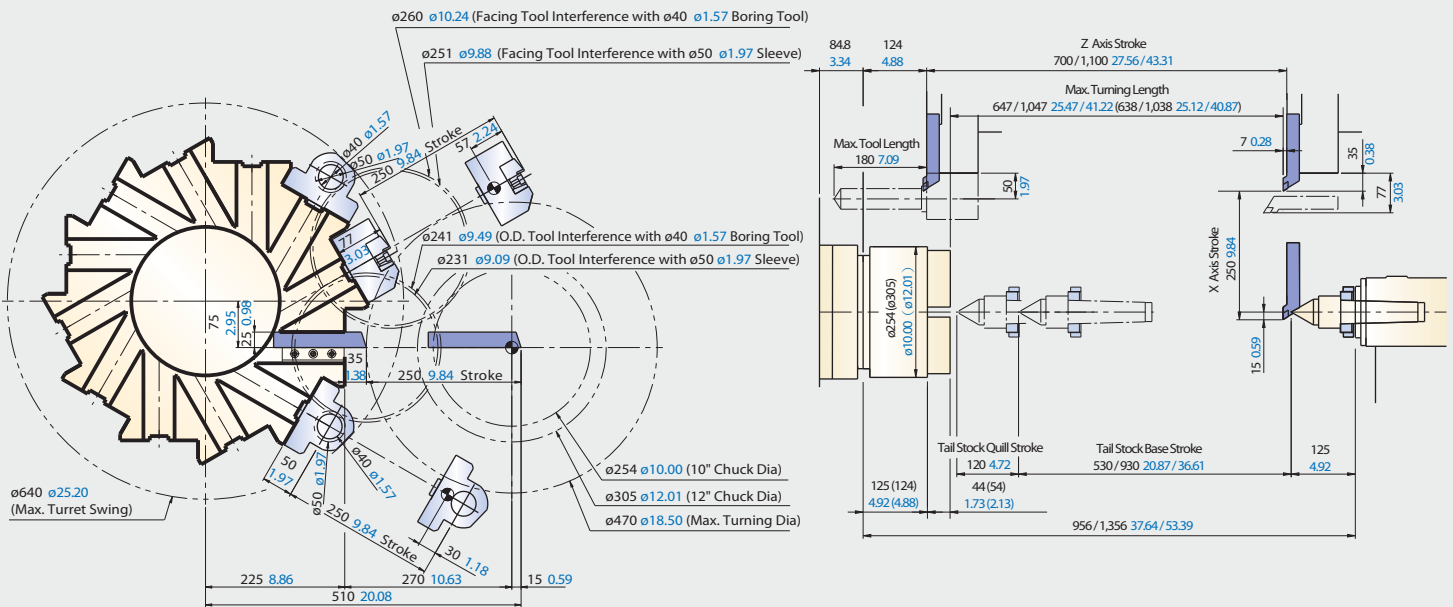




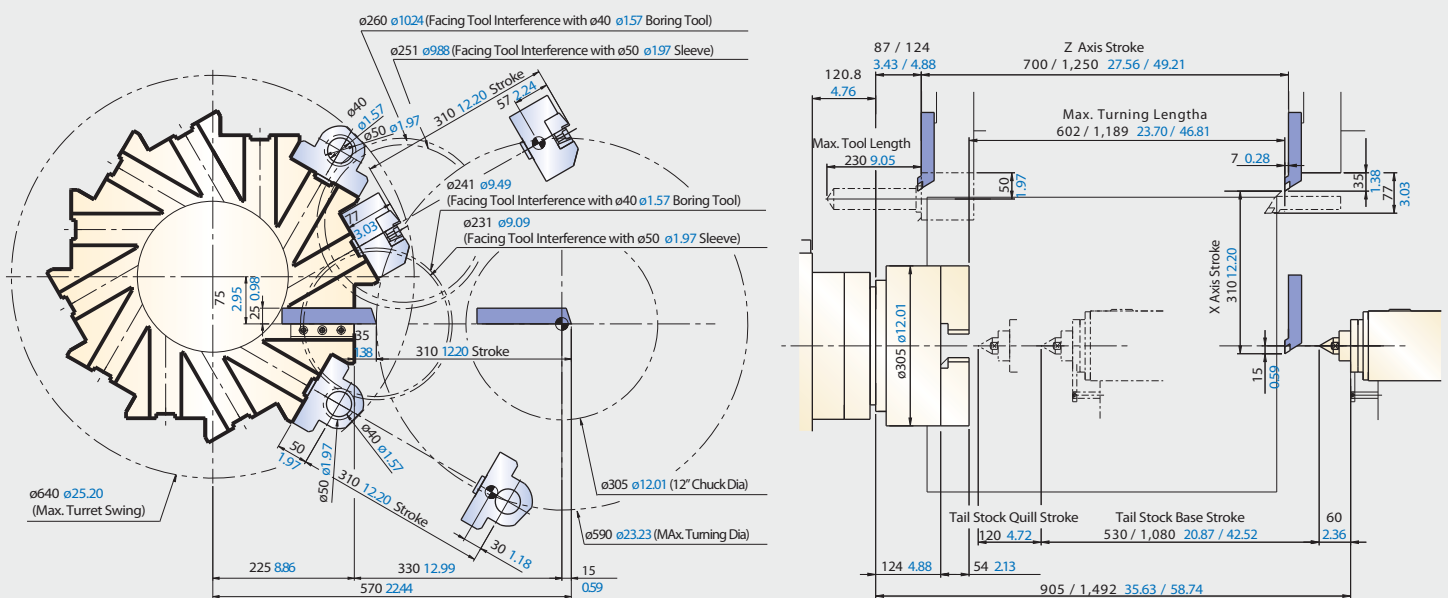
# TOOL INTERFERENCE & WORKING CAPACITY

Unit : mm inch  
 ⬤ : Spindle Center


## TC-26/TC-26L

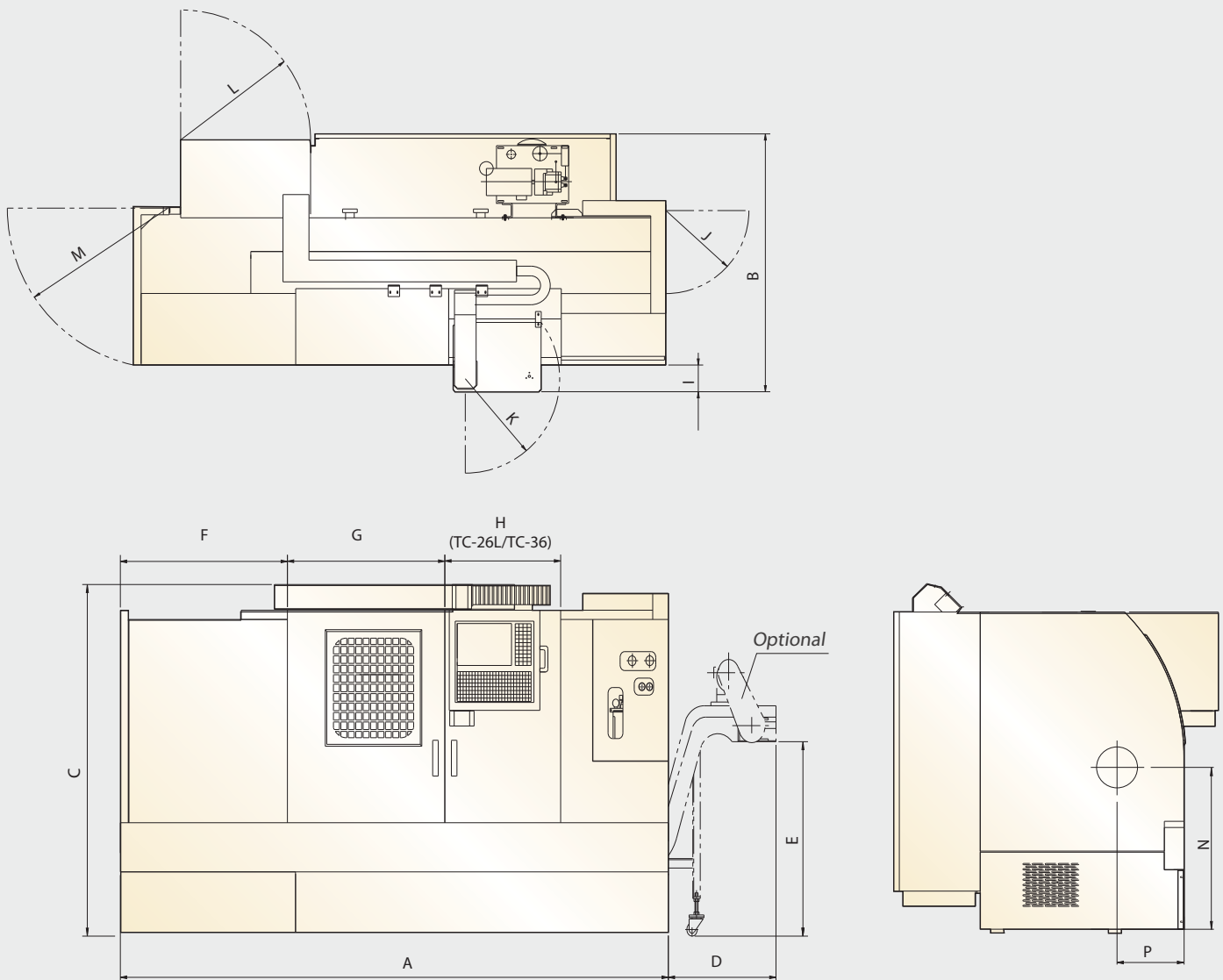


## TC-36W/TC-36



# MACHINE DIMENSIONS

Unit : mm inch  
 : Spindle Center



	A	B	C	D	E	F	G	H (2nd Door)	I	J	K	L	M	N	P
<b>TC-26</b>	3,250 127.95"	1,786 70.31"	1,841 72.48"	730 28.74"	1,029 40.51"	1,010 39.76"	1,060 41.73"	-	185 7.28"	575 22.64"	654 25.75"	900 35.43"	1,090 42.91"	900 35.43"	365 14.37"
<b>TC-26L</b>	3,690 145.28"	1,786 70.31"	1,861 73.27"	730 28.74"	1,029 40.51"	1,125 44.29"	1,060 41.73"	780 30.71"	185 7.28"	575 22.64"	654 25.75"	900 35.43"	1,113 43.82"	900 35.43"	365 14.37"
<b>TC-36W</b>	3,390 133.46"	1,993 78.46"	2,011 79.17"	710 27.95"	1,029 40.51"	1,095 43.11"	1,060 41.73"	-	206 8.11"	556 21.89"	663 26.10"	900 35.43"	1,117 43.98"	960 37.8"	435 17.13"
<b>TC-36</b>	3,936 154.96"	2,093 82.40"	2,011 79.17"	760 29.92"	1,029 40.51"	1,095 43.11"	1,060 41.73"	840 33.07"	206 8.11"	572 22.52"	663 26.10"	900 35.43"	1,117 43.98"	960 37.8"	435 17.13"



# SPECIFICATIONS

ITEMS / MODEL		TC-26	TC-26 <sup>L</sup>	TC-36 <sup>W</sup>	TC-36
CHUCK Diameter		10" (12" ) CHUCK		12" CHUCK	
MACHINING CAPACITY					
Swing Over Bed	mm <a href="#">inch</a>	ø500 <a href="#">ø19.69"</a>		ø690 <a href="#">ø27.17"</a>	
Swing Over Carriage	mm <a href="#">inch</a>	ø350 <a href="#">ø13.78"</a>		ø510 <a href="#">ø20.08"</a>	
Max. Turning Diameter	mm <a href="#">inch</a>	ø470 <a href="#">ø18.50"</a>		ø590 <a href="#">ø23.23"</a>	
Max. Turning Length	mm <a href="#">inch</a>	647 (638) <a href="#">25.47" (25.12")</a>	1,047 (1,038) <a href="#">41.22" (40.87")</a>	602 <a href="#">23.70"</a>	1,189 <a href="#">46.81"</a>
Distance Between Center	mm <a href="#">inch</a>	956 <a href="#">37.64"</a>	1,356 <a href="#">53.39"</a>	905 <a href="#">35.63"</a>	1,492 <a href="#">58.74"</a>
SPINDLE					
Spindle Nose		A2-8			
Spindle Speed	Standard	rpm	10" L : 8~195~783, H : 40~1,007~4,000	12"L : 7~180~719, H : 30~751~2,500	
	Optional	rpm	12" L : 8~195~783, H : 40~1,007~2,500	-	
Hole Through spindle / Hole Through draw bar		mm <a href="#">inch</a>	ø88/ø78 <a href="#">ø3.46"/ø3.07"</a>		ø105/ø93 <a href="#">ø4.13"/ø3.66"</a>
Spindle Motor		kW <a href="#">HP</a>	11/15 <a href="#">15/20</a>		22/26 <a href="#">30/35</a>
MAIN TRAVEL					
X-axis Travel	mm <a href="#">inch</a>	250 <a href="#">9.84"</a>		310 <a href="#">12.20"</a>	
Z-axis Travel	mm <a href="#">inch</a>	700 <a href="#">27.56"</a>	1,100 <a href="#">43.31"</a>	700 <a href="#">27.56"</a>	1,250 <a href="#">49.21"</a>
FEED					
Rated Axial Thrust Force (X / Z)	kgf <a href="#">lb</a>	1,056/792 <a href="#">2,328/1,746</a>			
Max. Axial Thrust Force (X / Z)	kgf <a href="#">lb</a>	2,645/1,983 <a href="#">5,831/4,372</a>			
Rapid Feed Rate (X / Z)	m/min <a href="#">ipm</a>	15/20 <a href="#">591/787</a>			
Cutting Feed Rate	mm/min <a href="#">ipm</a>	1~5,000 <a href="#">0.04~197</a>			
TURRET					
Turret Tool Magazine Capacity (Optional)		12 (8)T			
Shank Height for Square Tool	mm <a href="#">inch</a>	□ 25 <a href="#">1"</a>			
Shank Diameter for Boring Bar	mm <a href="#">inch</a>	ø40 / ø50 <a href="#">ø1 1/2" / ø2"</a>			
TAIL STOCK					
Tail Stock Quill Taper (Optional)		MT-5 (MT-4 Revolving Quill)		MT-4 Revolving Quill	
Tail Stock Quill Diameter	mm <a href="#">inch</a>	ø100 <a href="#">ø3.94"</a>			
Tail Stock Quill Stroke	mm <a href="#">inch</a>	120 <a href="#">4.72"</a>			
Tail Stock Stroke	mm <a href="#">inch</a>	530 <a href="#">20.87"</a>	930 <a href="#">36.61"</a>	530 <a href="#">20.87"</a>	1,080 <a href="#">42.52"</a>
GENERAL					
Power Consumption (Transformer)	kVA	28 (40)		46 (65)	
Machine Weight	kg <a href="#">lb</a>	4,400 <a href="#">9,700</a>	5,500 <a href="#">12,125</a>	5,450 <a href="#">12,015</a>	7,000 <a href="#">15,432</a>

※ We reserve the right to modify and improve our products.



■ Heat Exchanger for electrical cabinet

# ACCESSORIES

● : Standard ○ : Optional ★ : Special

ITEMS		MODEL	TC-26/26 <sup>L</sup>	TC-36 <sup>W</sup> /36
<b>SPINDLE</b>				
Gear Box			●	●
Spindle Air Blast			○	○
Collets Chuck			○	○
Hydraulic Hollow Chuck			●	●
Hard Jaws and Soft Jaws 1 set			●	●
<b>TOOL TURRET</b>				
Tool Turret	8T		○	○
	10T		○	○
	12T		●	●
VDI Tool Turret	VDI ø40		○	○
<b>TOOL HOLDER</b>				
Tool Holder and Tool Sleeve	Tool Holder		●	●
	VDI Tool Holder		○	○
<b>TAIL STOCK</b>				
Center			●	●
Programmable Tailstock			●	●
Fixed Quill (MT5)			●	○
Revolving Quill (MT4)			○	●
<b>COOLANT EQUIPMENT SYSTEM</b>				
Coolant Equipment System			●	●
Heavy Duty Coolant Pump (MTH2-40)			○	○
Oil Skimmer			○	○
Paper Filter			○	○
Coolant Gun			○	○
<b>GENERAL</b>				
Tool Kit			●	●
Work Lamp			●	●
Pilot Lamp			●	●
Automatic Door			○	○
Air Gun			●	●
Hydraulic System			●	●
Foundation Screw Bolt			○	○
Leveling Blocks			●	●
Oil Mist Device			○	○
Automatic Power Off System			○	○
Parts Catcher			○	-
Manual Steady rest			○	○
Hydraulic Steady rest			★	★
Central Lubrication System			●	●
Leveling Blocks and Bolts			●	●
Full Chip Enclosure			●	●
Auto Tool Length Measurement System (METROL H-4A-12)			○	○
Bar Feeder or Only Software			★	★
Z-axis Feeder Safety Clutch			●	●
X-axis Feeder Safety Clutch			○	○
Mechanical, Electrical & Operating Manuals			●	●
Heat Exchanger for Electrical Cabinet			●	●
A/C. Cooler for Electrical Cabinet			○	○
Chip Conveyor (Right Side)			○	○
Work Length setter			○	○
★ Special options, please consult with sales representatives.				



■ Central Lubrication system



■ Hydraulic System



■ Tool Length Measurement System



■ Chip Conveyor