

LEADWELL
LEADWELL CNC MACHINES MFG., CORP.

Complete

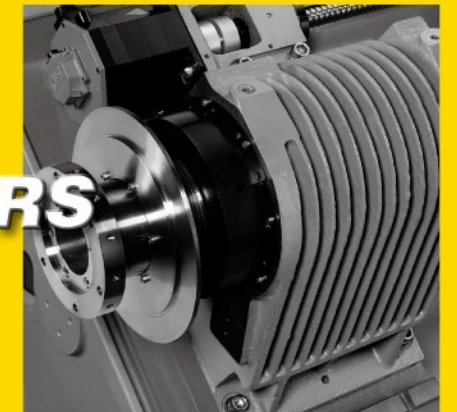
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T-6L Series

CNC TURNING CENTERS



T-6L Series CNC Turning Center

Innovative new design to **outperform previous models**

MORE POWERFUL

- Powerful main spindle with high torque and 6000 R.P.M. spindle speed

INCREASED CAPACITY

- 6 inch chuck standard.
- ø52mm bar capacity standard

FASTER / MORE PRODUCTIVE

- Fast rapid rates X - axis 36 m/minute & Z - axis 36 m/minute.
- Tool to tool turret indexing time 0.4 sec, 180° indexing 1.2 sec.



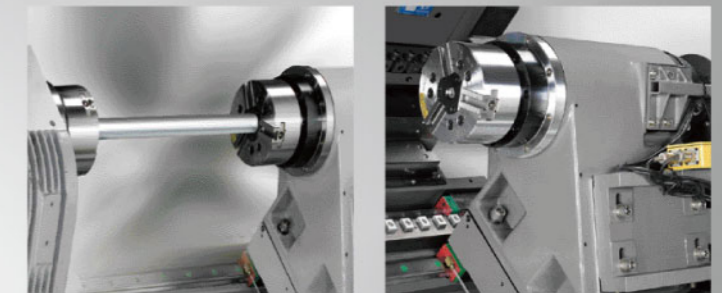
Easy to use membrane touch-pad control station

S + M

SUB-SPINDLE

The sub-spindle replaces the standard tailstock on turning centers. A position CZI sensor is attached to the sub-spindle so the sub-spindle can then be synchronized with the main spindle. Special software allows the work piece to be transferred from the main spindle to the sub-spindle at any speed for secondary machining operations. This eliminates the need for operator intervention.

- * Allows machining of both ends of parts.



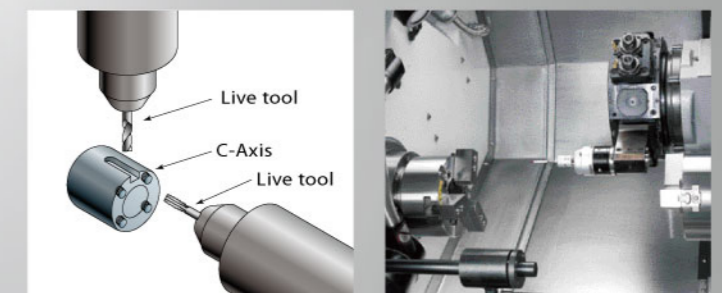
LIVE TOOL TURRET

The live tool turret replaces the standard turret on T-6 LSM turning centers. Each tool can then become a rotating tool for both milling and drilling operations.

- Tools can be either radially or axially oriented.

Power Turret Cutting Capacity:

Tool	12 live tools
Drill	10mm
End Mill	12mm
Tapping	M10xP1.5



T-6L Series CNC Turning Center

Rigid Construction

HEADSTOCK

Heavy duty thermally symmetrical headstock design has heat dissipating fins to minimize thermal distortion during long machining cycles. All critical components are machined in a temperature controlled environment and assembled in a clean-room.

- Cartridge style spindle provides quick and easy replacement.

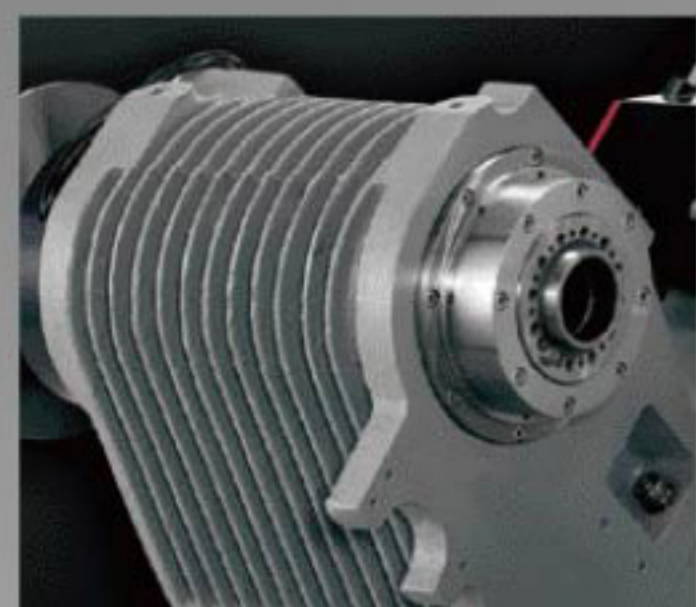
CARTRIDGE TYPE SPINDLE

The heavy-duty spindle utilizes high quality bearings to support heavy cutting.

- Heavy duty A2-5 spindle nose
 - Wide bearing spacing for high rigidity
 - Special heat treatment for critical parts
 - Highly accurate draw tube mechanism
 - Precision Labyrinth seal
 - Large diameter quill for high rigidity
 - Optimum spacing of front bearings to spindle nose for highest rigidity
- All of which produces better part finish in less time.

THE ROLLER TYPE LINEAR GUIDE WAY

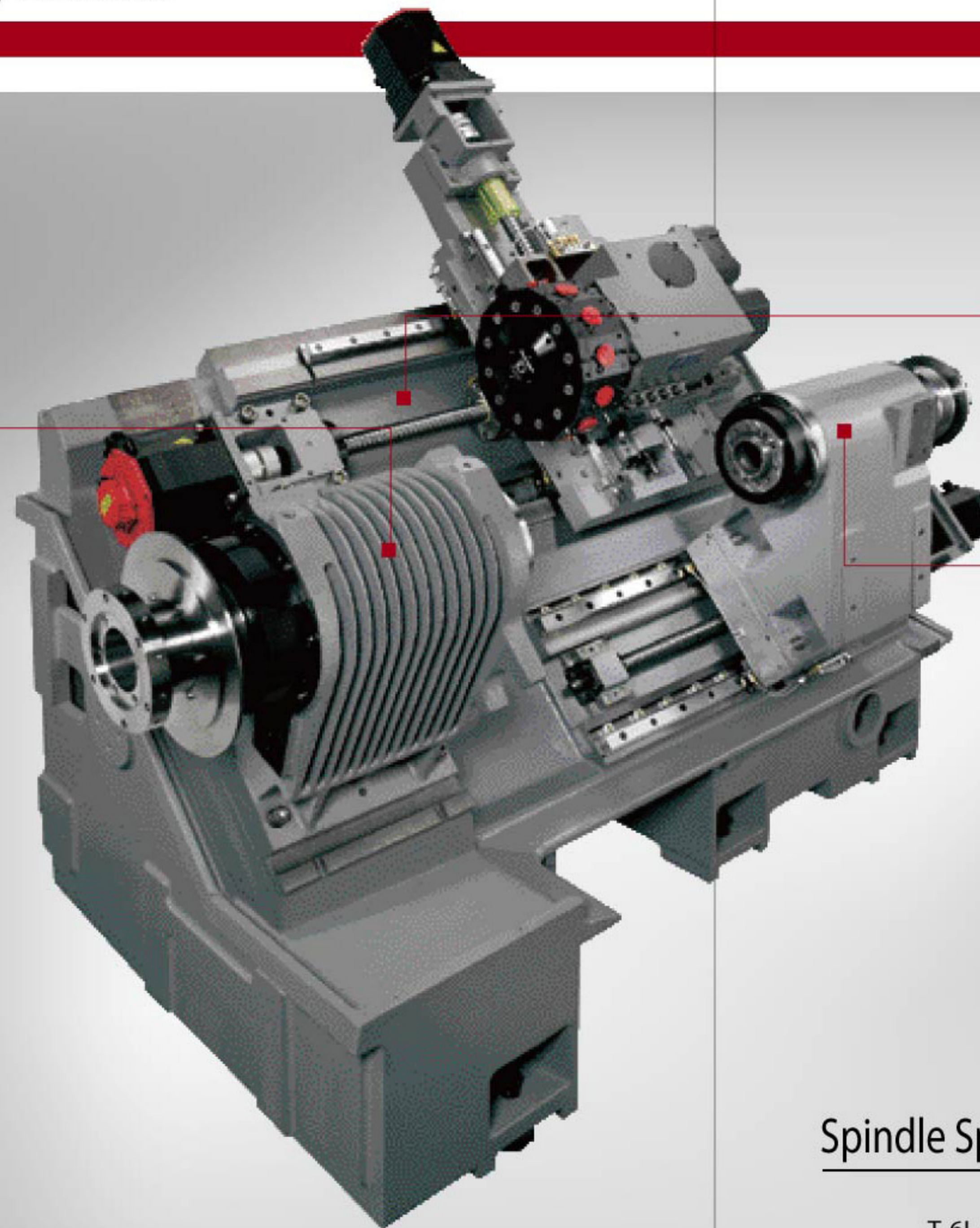
T-6L series equip with roller type linear guide way can provide higher rigidity and make the movement more smooth and stability, especially for the request of high accuracy and heavy load.



CARTRIDGE TYPE SPINDLE



THE ROLLER TYPE LINEAR GUIDE WAY



- The 45 degree slant bed design allows chips to fall directly into the chip tank, avoiding accumulation inside the machine.

TAILSTOCK

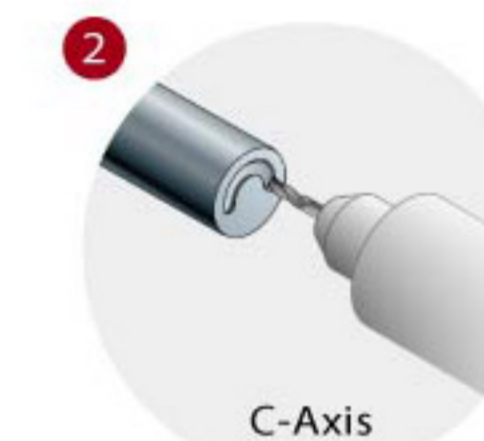
- Heavy duty tailstock with large diameter quill and precision #5 Morse taper provides outstanding rigidity.
- The tailstock is driven by servo motor to increase the accuracy. Without the impulse when adjustment by hydraulic.

C-Axis option

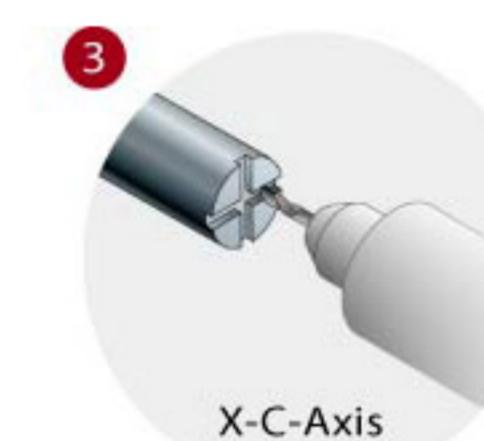
By synchronizing the optional C Axis with the live tooling, machining of cylindrical cams and other complex work pieces becomes easy, saving time and money for each part. The headstock spindle becomes a fully programmable servo axis with the C-Axis option.



Z-C-Axis



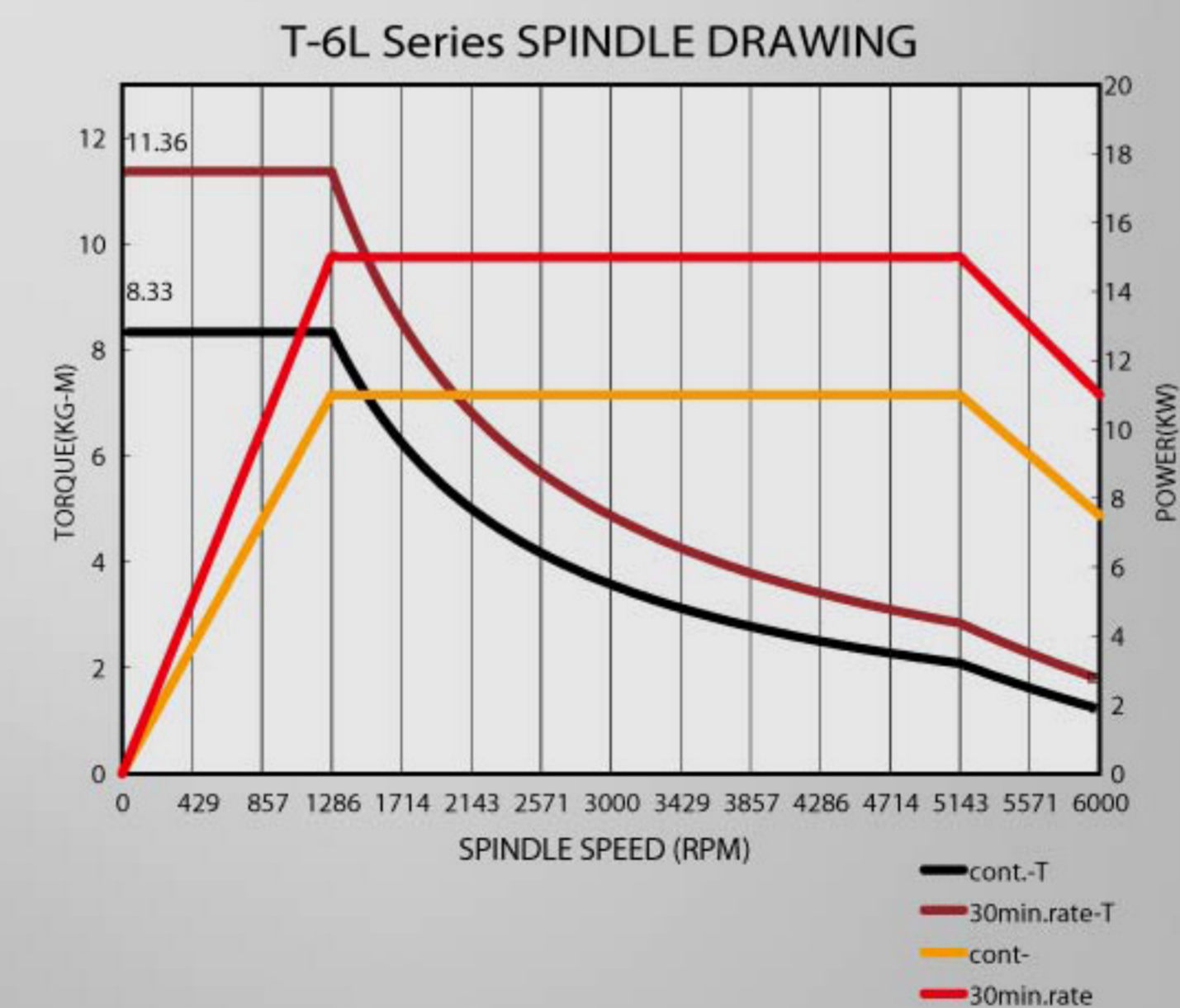
C-Axis



X-C-Axis

- C Axis index resolution: 0.001 degrees
- Max. C-axis speed: 40 rpm
- Switching between normal turning & synchronization with live tooling takes less than 1 second.

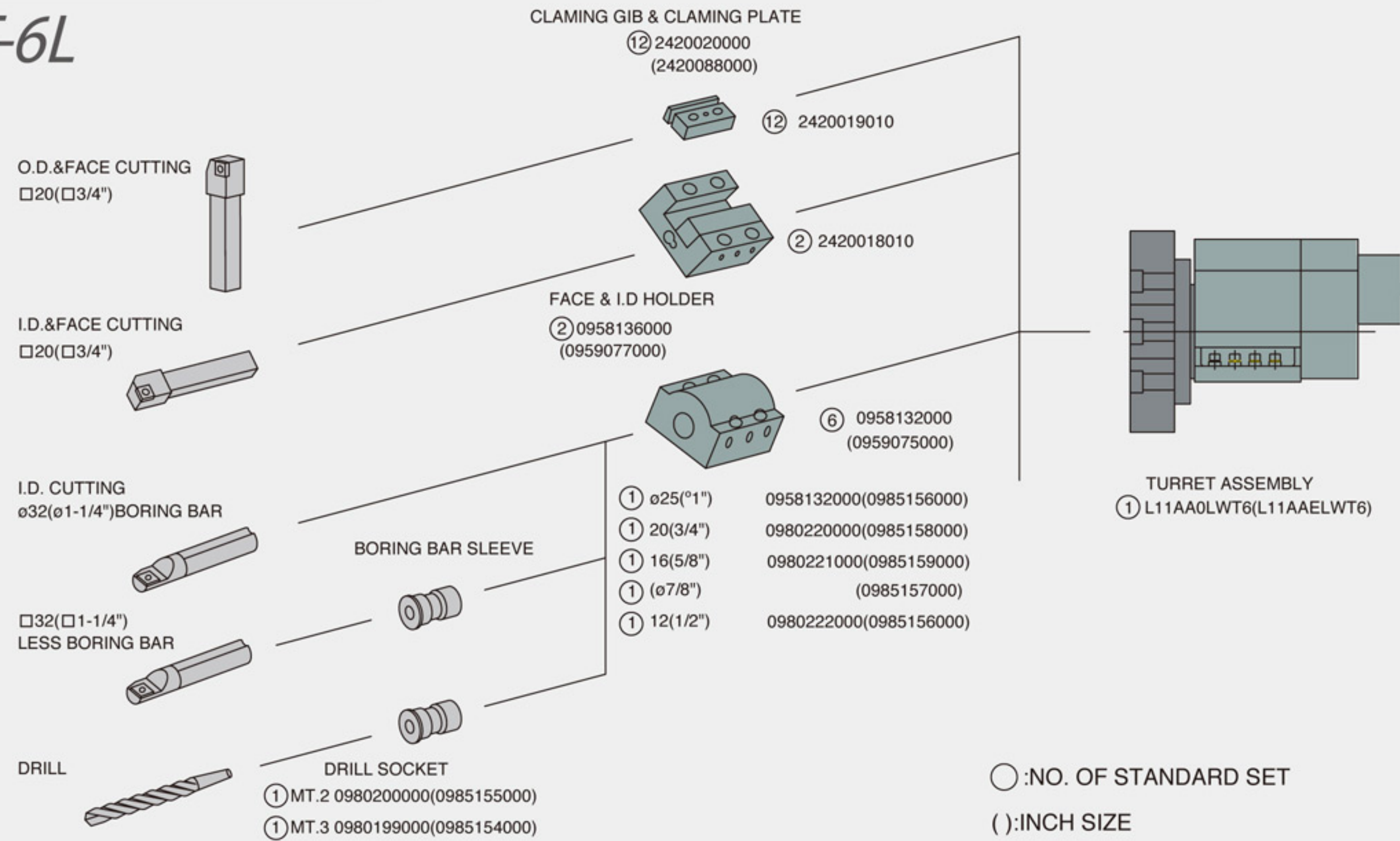
Spindle Speed/Output Diagram



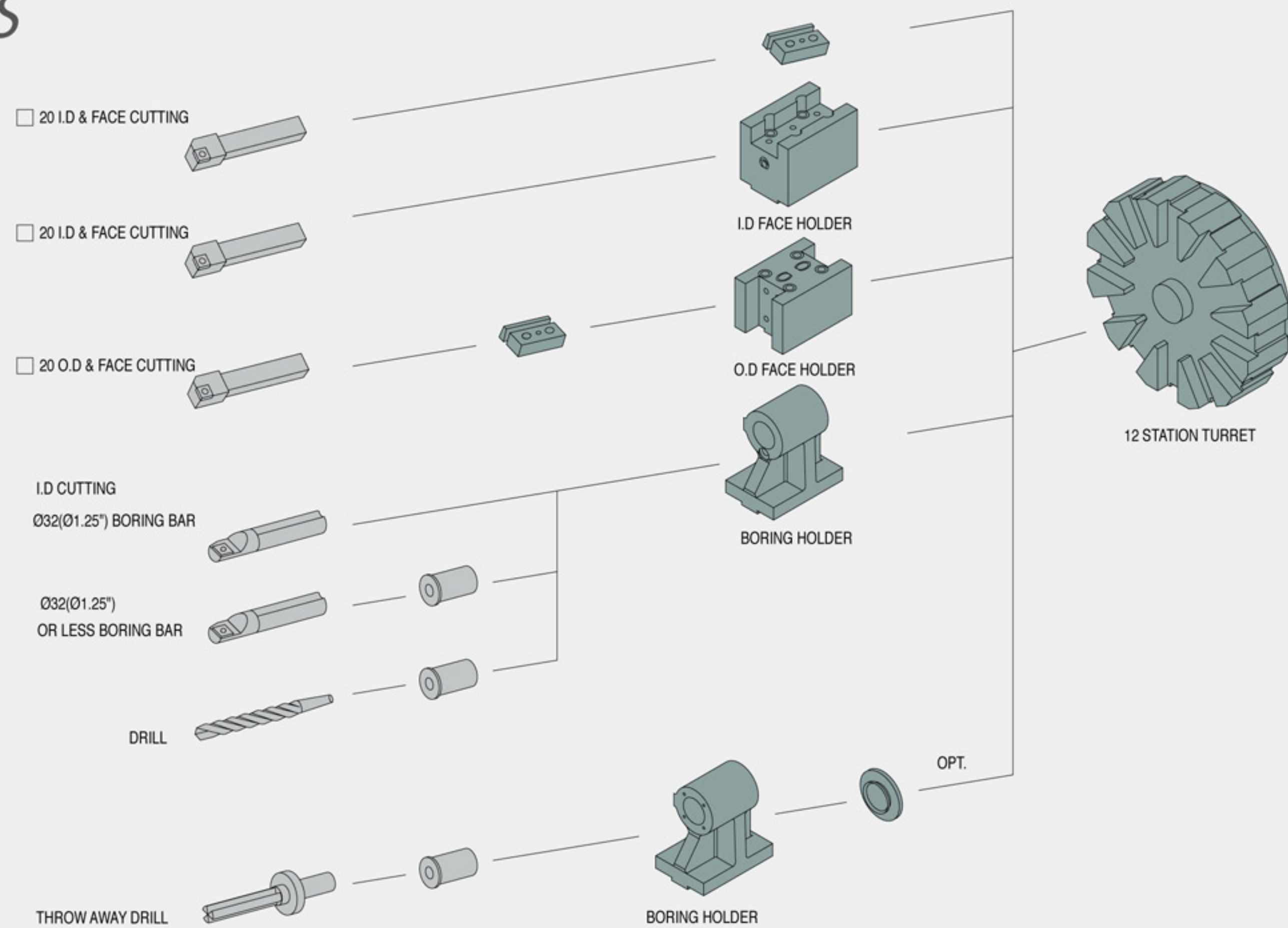
T-6L Series CNC Turning Center

Tooling System

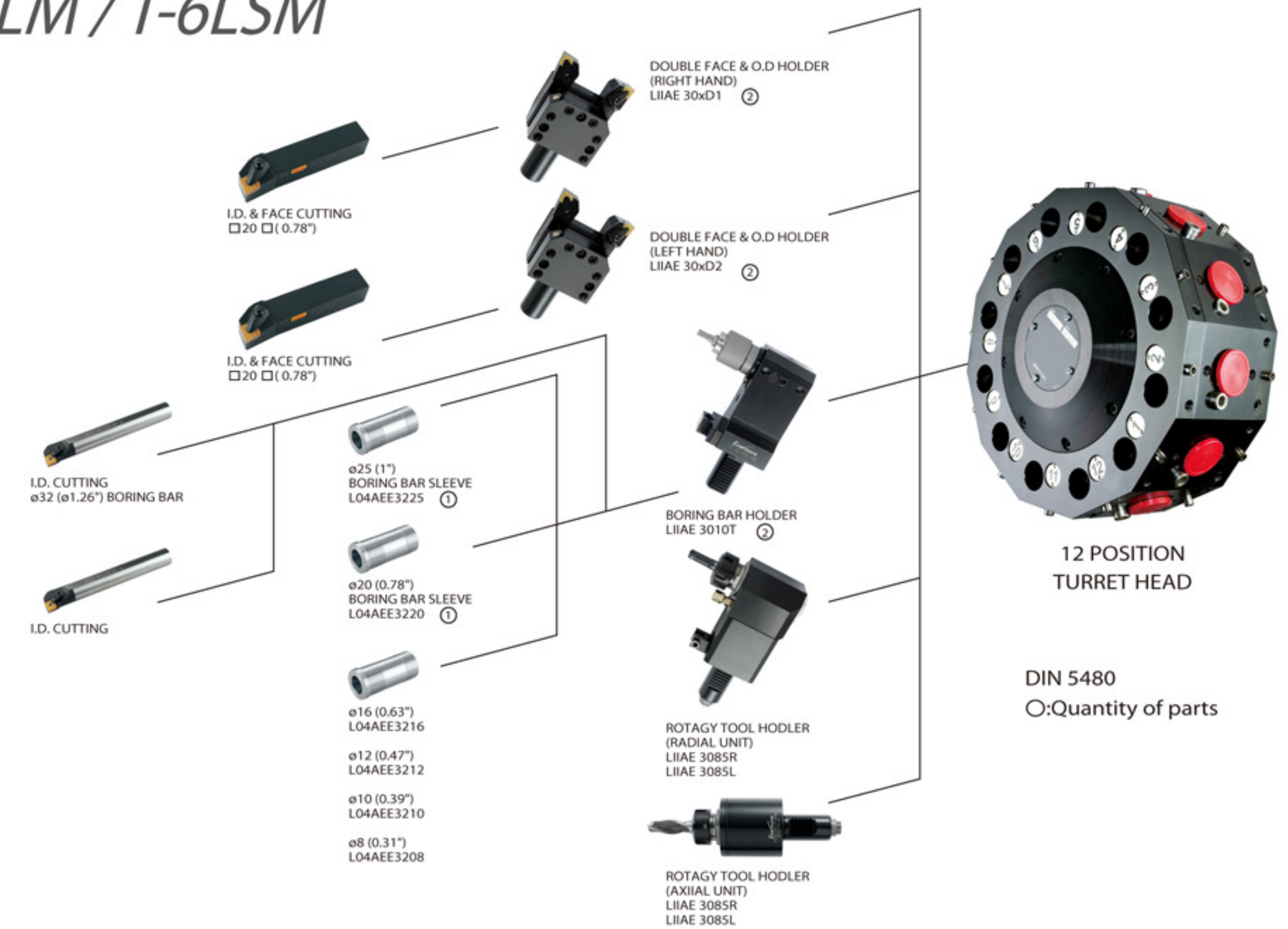
T-6L



T-6LS

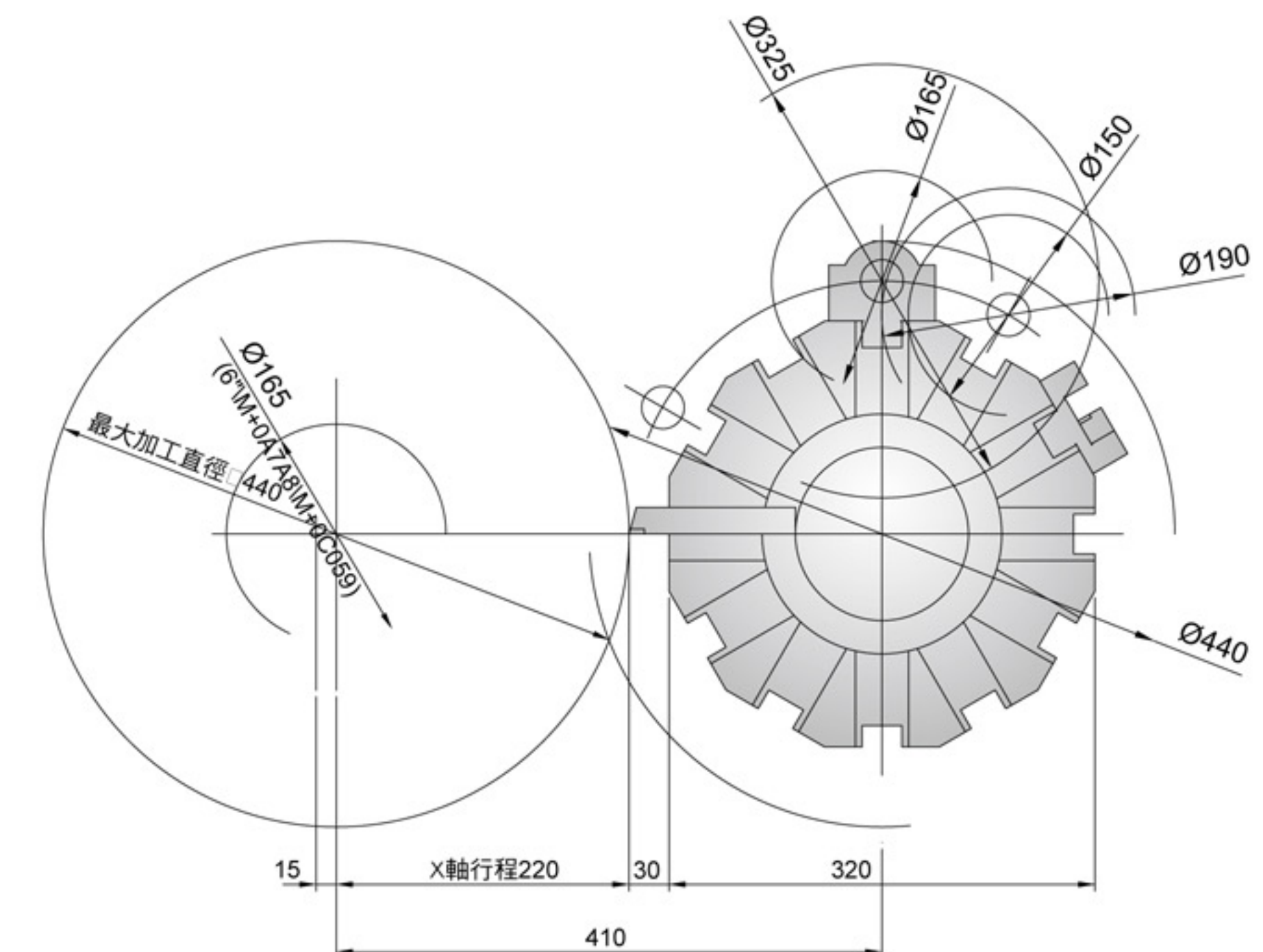


T-6LM / T-6LSM



Tooling Interference

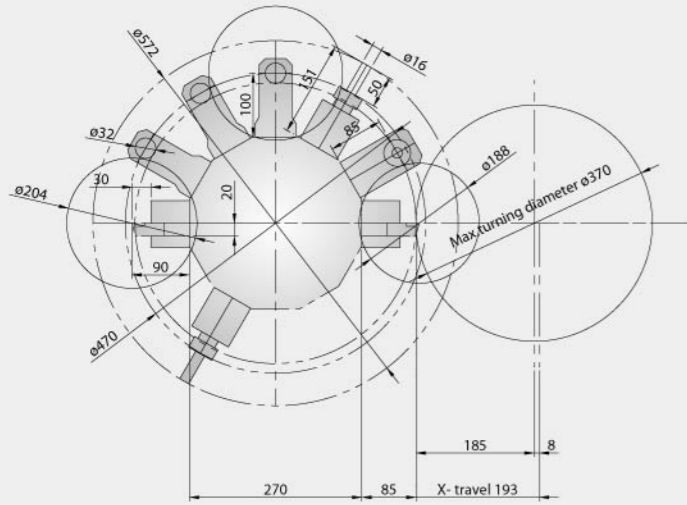
T-6L



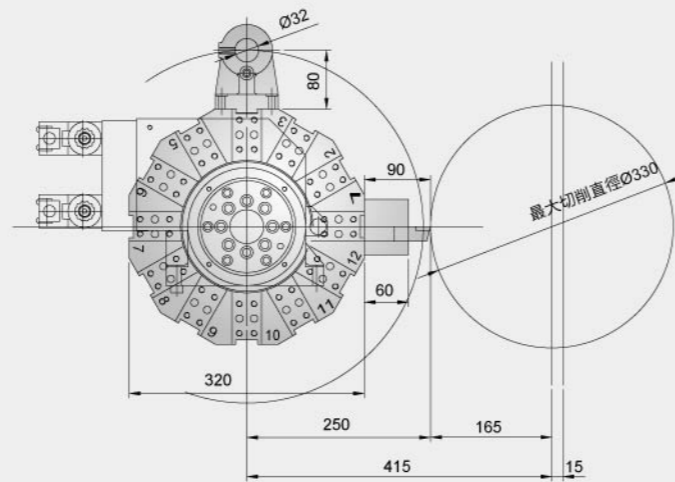
T-6L Series CNC Turning Center

Tooling interference

T-6LSM / T-6LM

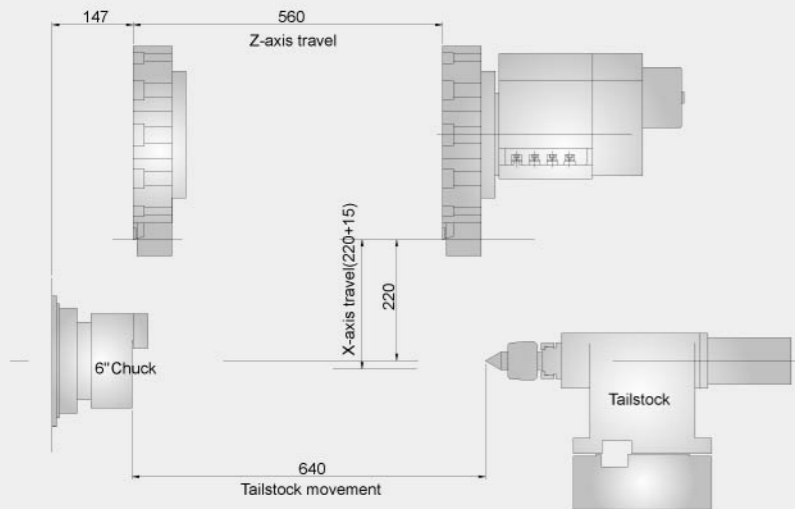


T-6LS

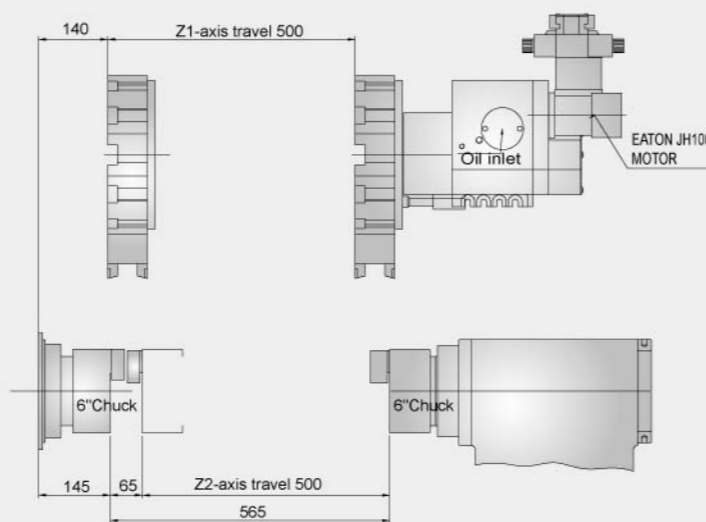


Capacity

T-6L

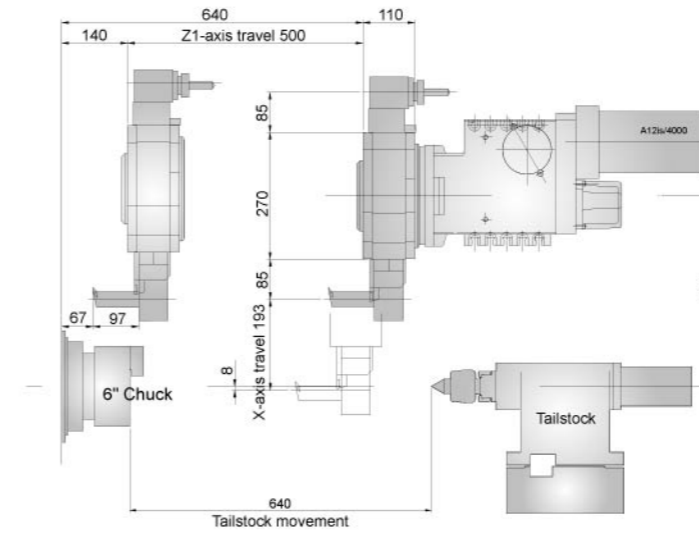


T-6LS

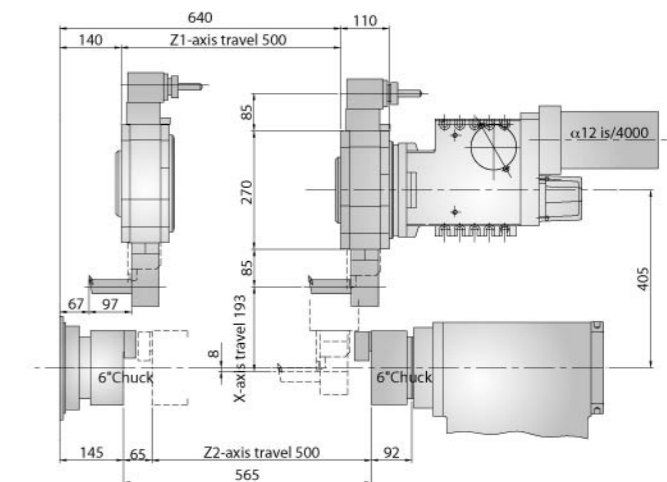


Capacity

T-6LM

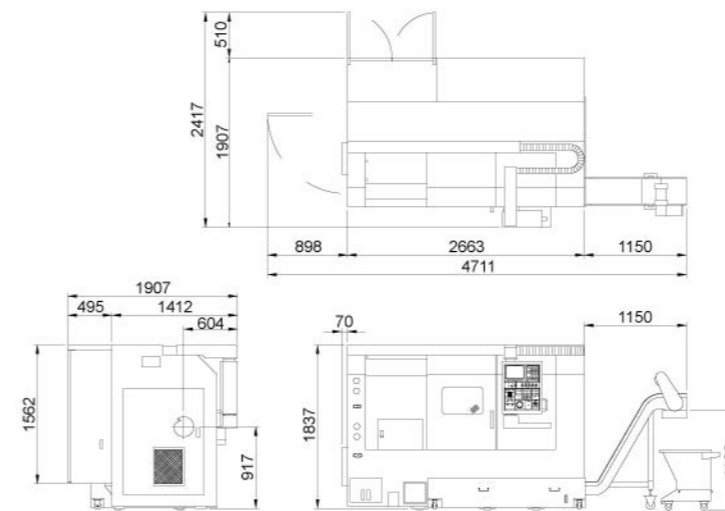


T-6LSM

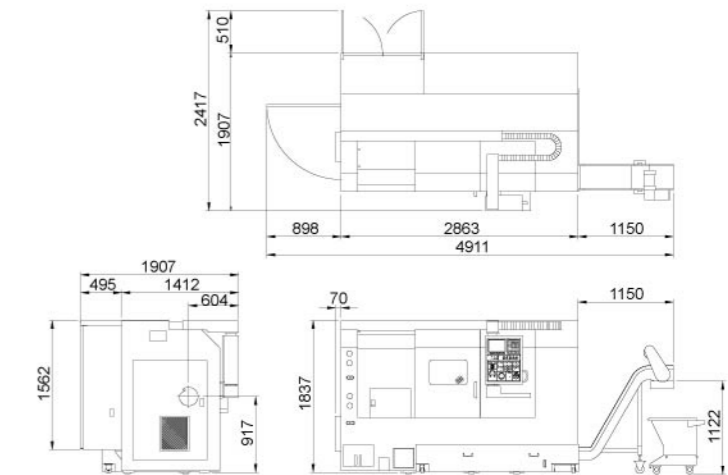


Machine Size

T-6L / T-6LM



T-6LS / T-6LSM



T-6L Series CNC Turning Center

Machine Specifications

ITEM	MODEL	Unit	T-6L		T-6LM	
			STD.	OPT.	STD.	OPT.
CAPACITY						
Max swing	mm (in)		520 (20.5)		520 (20.5)	
Max turning diameter	mm (in)		440 (17.3)		370 (14.6)	
Max turning length	mm (in)		560 (22)		500 (19.7)	
Bar capacity	mm (in)		ø51 (2) / ø66 (2.6)		ø51 (2) / ø66 (2.6)	
TRAVEL						
X axis	mm (in)		220+15 (8.7+0.6)		185+8 (7.3+0.3)	
Z axis	mm (in)		560 (22.1)		500 (19.7)	
Z2 axis	mm (in)		---		---	
SPINDLE						
Spindle speeds range	rpm		6000	4000	6000	4000
Chuck size	mm (in)		6"	8"	6"	8"
Spindle motor power	KW (HP)		15 (20.1)		15 (20.1)	
Min. spindle indexing increment			---		±0.001°	
SUB SPINDLE						
Sub spindle speeds range	rpm		---		---	
Sub chuck size	mm (in)		---		---	
Sub spindle motor power	KW (HP)		---		---	
Sub spindle feed motor	KW (HP)		---		---	
TURRET						
Number of tool stations	pcs		12		12	
Shank height for square tool	mm (in)		□20(0.8)		VDI30 20(0.8)	
Turret indexing time (adjacent tool)	sec		1.0		0.4	
Rotary tool spindle speed range:axis units	rpm		---		4000	
FEEDRATE						
X/Z/Z2 axis rapid traverse	mm(in)/min		36000/36000 (1417.3/1417.3)		36000/36000/20000 (1417.3/1417.3)	
MOTORS						
X/Z/Z2 axis motor	kw (HP)		3 (4)		3 (4)	
MACHINE SIZE						
Total machine weight	kg		3900		3900	
Machine length	mm (in)		2730 (107.5)		2730 (107.5)	
Machine width	mm (in)		1910 (75.2)		1910 (75.2)	
Machine height	mm (in)		1830 (72.1)		1830 (72.1)	
Power requirement	KVA		30		30	

STANDARD ACCESSORIES

- Metric disc
- Manual tailstock
- VDI disc (For T-6LM)
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-Belt

OPTIONAL ACCESSORIES

- Transformer
- Programmable tailstock
- Parts catcher
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Spindle air out blow
- High pressure pump
- Chip conveyer
- Chip bucket
- Collet chuck
- Oil mist collector
- Oil skimmer
- Inch disc
- Tool setter
- Main Spindle air outer blow
- Automatic workpiece measurement

Machine Specifications

ITEM	MODEL	Unit	T-6LS		T-6LSM	
			STD.	OPT.	STD.	OPT.
CAPACITY						
Max swing	mm (in)		520 (20.5)		520 (20.5)	
Max turning diameter	mm (in)		330 (1.3)		370 (14.6)	
Max turning length	mm (in)		500 (19.7)		500 (19.7)	
Bar capacity	mm (in)		ø51 (2) / ø66 (2.6)		ø51 (2) / ø66 (2.6)	
TRAVEL						
X axis	mm (in)		165+15 (6.5+0.6)		185+8 (7.3+0.3)	
Z axis	mm (in)		500 (19.7)		500 (19.7)	
Z2 axis	mm (in)		500(19.7)		500(19.7)	
SPINDLE						
Spindle speeds range	rpm		6000	4000	6000	4000
Chuck size	mm (in)		6"	8"	6"	8"
Spindle motor power	KW (HP)		15 (20.1)		15 (20.1)	
Min. spindle indexing increment			---		±0.001°	
SUB SPINDLE						
Sub spindle speeds range	rpm		4500		4500	
Sub chuck size	mm (in)		6"		6"	
Sub spindle motor power	KW (HP)		7.5(10)		7.5(10)	
Sub spindle feed motor	KW (HP)		1.6(2.1)		1.6(2.1)	
TURRET						
Number of tool stations	pcs		12		12	
Shank height for square tool	mm (in)		□20(0.8)		VDI30 20(0.8)	
Turret indexing time (adjacent tool)	sec		1.0		0.4	
Rotary tool spindle speed range:axis units	rpm		---		4000	
FEEDRATE						
X/Z/Z2 axis rapid traverse	mm(in)/min		36000/36000/20000 (1417.3/1417.3/787.4)		36000/36000/20000 (1417.3/1417.3/787.4)	
MOTORS						
X/Z/Z2 axis motor	kw (HP)		3 (4)		3 (4)	
MACHINE SIZE						
Total machine weight	kg		4150		4150	
Machine length	mm (in)		2950 (116.1)		2950 (116.1)	
Machine width	mm (in)		1910 (75.2)		1910 (75.2)	
Machine height	mm (in)		1830 (72.1)		1830 (72.1)	
Power requirement	KVA		45		45	

STANDARD ACCESSORIES

- Metric disc
- Buzzer
- Heat exchanger
- Full enclosed splash guard
- 3 jaw open center chuck
- Foot switch
- Wide angle V-Belt
- VDI disc (For T-6LSM)

OPTIONAL ACCESSORIES

- Main Spindle air outer blow
- Tool setter
- Parts catcher
- Alarm lamp
- Air conditioner
- Bar feeder
- Auto door
- Chip conveyer
- Chip bucket
- Oil skimmer
- Automatic workpiece measurement
- High pressure pump
- Collet chuck
- Sub. Spindle air outer blow