

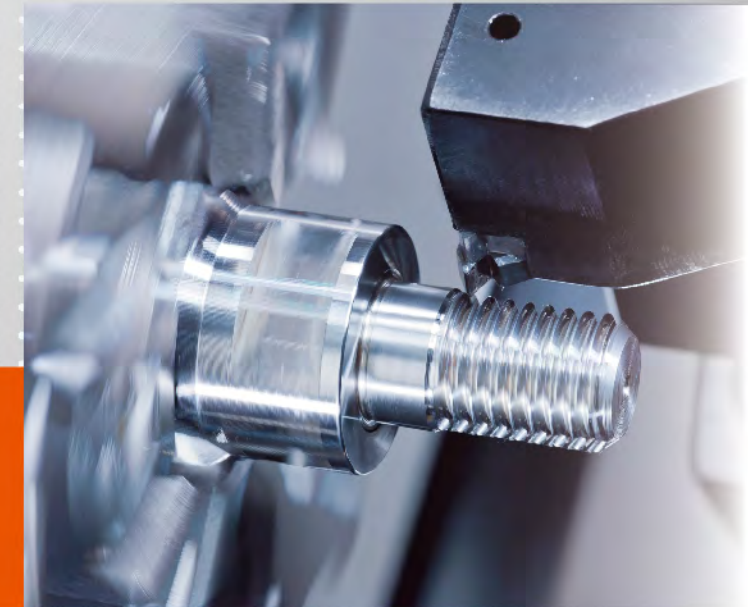


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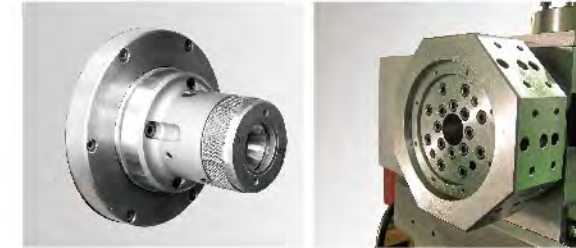


TMT Ergonomically Design Cuts Labor Requirement and Cost !

Compact, Smooth, Labor-saving, Space-saving

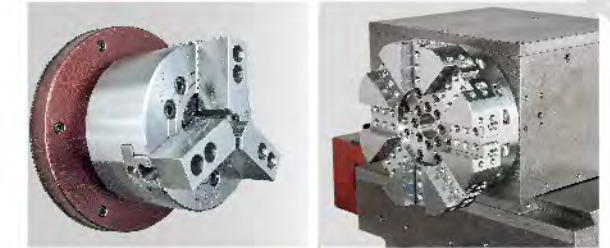


The TMT TL Series CNC lathe features compare construction, small footprint and high efficiency. Outstanding rigidity and stability, combined with the use of a barfeeder, enable the machine to achieve automatic operations that save on labor and costs.



TL-42/52 Series

Octangle 8 stations turret combines with Collet chuck, working together with bar feeder(Opt.), suitable for automatic mass production.



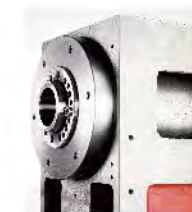
TL-160J/180J Series

Wedge type turret combines with 3 jaw chuck, suitable for single part machining.

A New Level of Heavy Cutting Capability

Rigid Machine Structure

- Box ways on Z axis with accuracy controlled to 5 μ m.
- Rigid base construction features stable machining.



High Speed, High Precision Spindle

- The cartridge type spindle employs P4 grade high precision bearings(TL-42/160J)
- The spindle employs NN type double row cylindrical roller bearing design which minimizing the thermo deformation and offering the optimum performance suitable for precision turning and heavy duty cutting.(TL-52/180J)



Precision Servo Turret

- The turret is driven by a high speed servo motor via precision gears, featuring high speed turret indexing.
- Tool index time to the adjacent tool is 0.1~0.2 second only.



Coolant System

The coolant circulates through various positions of the machine, significantly lowering the temperature of the bed and coolant.



Precision I.D. and O.D. Tool Holder

- Highly rigid O.D. tool holders eliminate tool vibration.
- The I.D. tool holder's run-out to the spindle center is controlled to 5 μ m. Minimum deviation of drilling and I.D. machining.

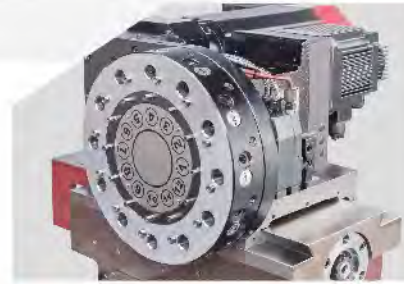


Scraping Techniques

Inheriting Japan techniques, the slideways are fine scrapped, offering rigidity for dynamic cutting

Diverse Optional Devices for Enhanced Performance!

Spindle Power Output / Torque Diagram Travel Diagram



VDI Power Turret

VDI servo power turret offering optimum turning/ milling efficiency.



C-axis Brake

Extra large disc type hydraulic brake for C-axis.



Parts Catcher

The parts catcher is a synchronized design for quick collection of finished products.



Product Conveyor

The product conveyor combined with the barfeeder allows the machine to perform fully automatic operations.



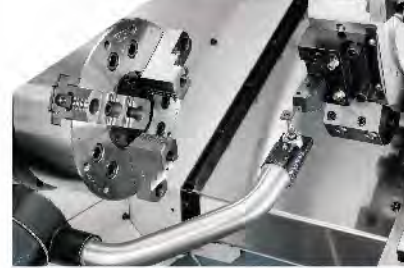
Bar Feeder

Automatic feeding system to replace traditional artificial operating, substantial saving labor requirement.



Oil Mist Collector

Adopt 2-step filter, efficiency saving fuel consumption; avoid oil mist spread to working environment.

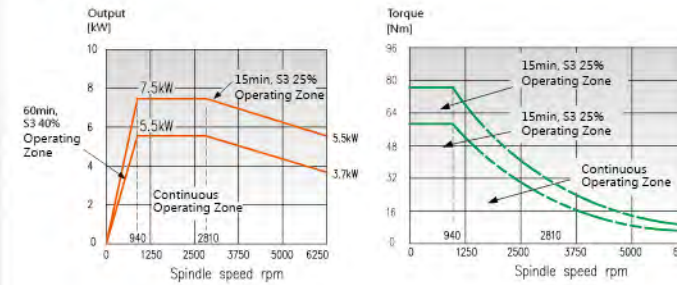


Manual / Auto Tool Presetter

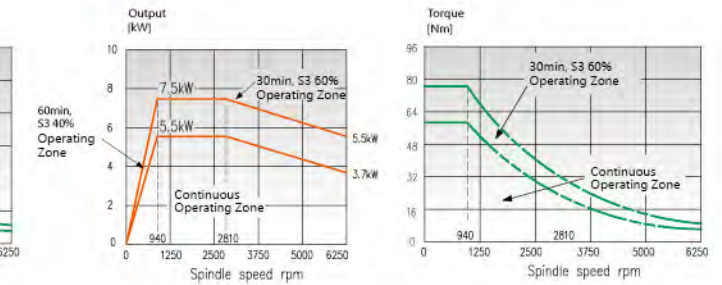
The tool presetter shortens tool set up time and can easily measure tool wear to ensure machining accuracy.

Spindle Power Output / Torque Diagram

TL Series
β6/10000i

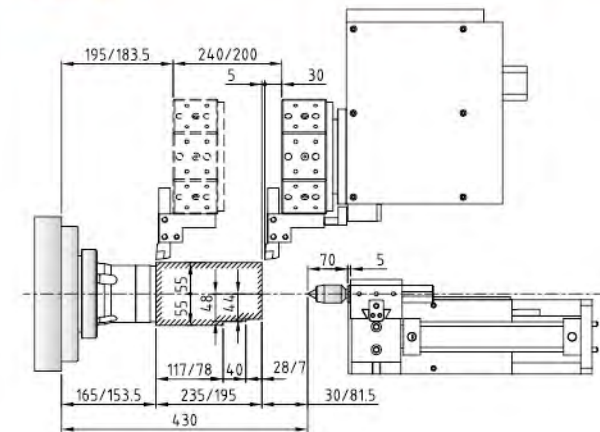


TL-M Series
α6/10000i

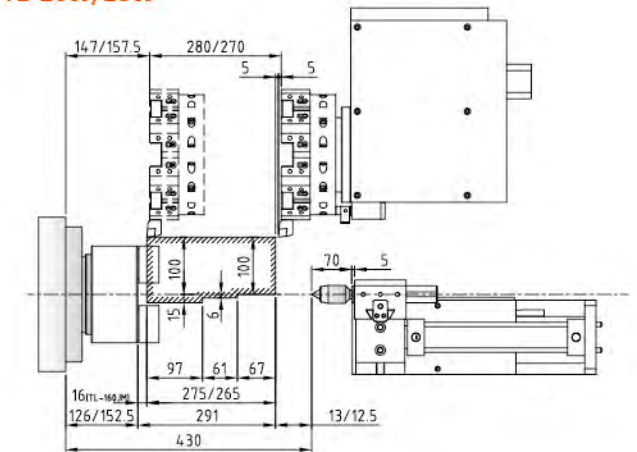


Travel Diagram

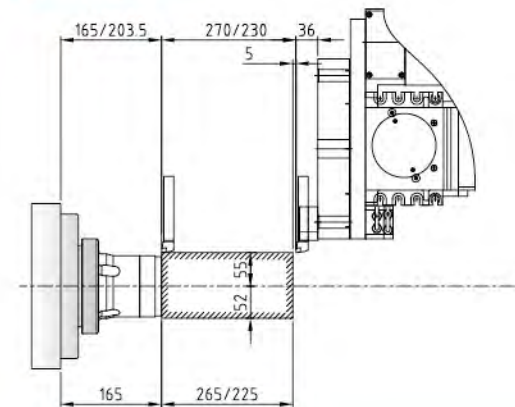
TL-42/52



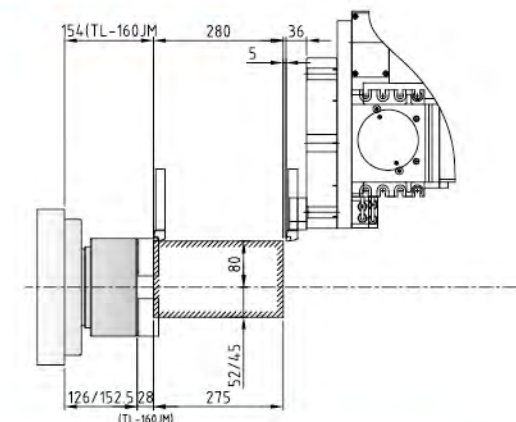
TL-160J/180J



TL-42M/52M

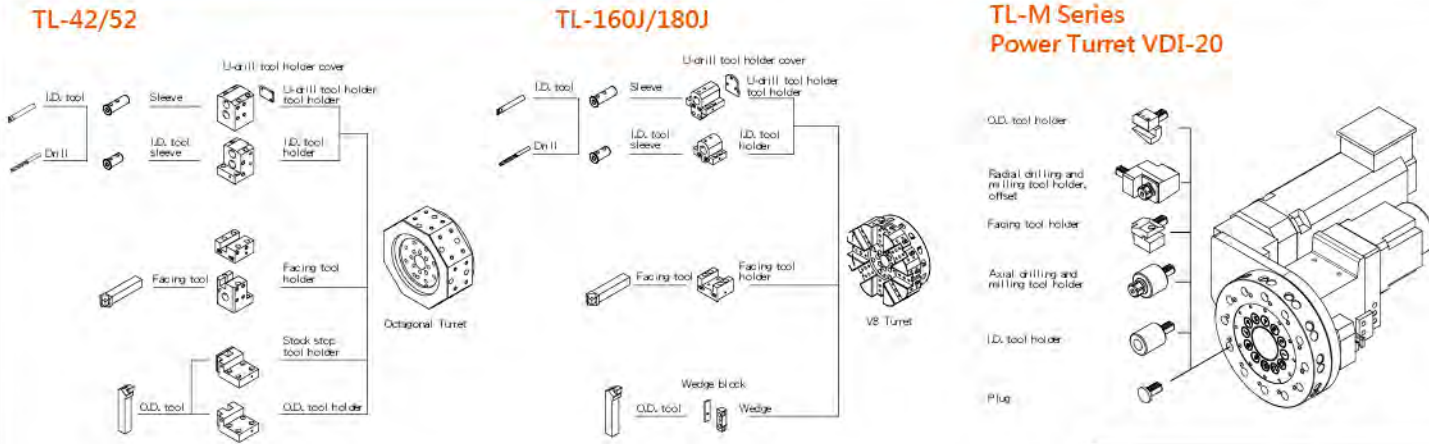


TL-160JM/180JM

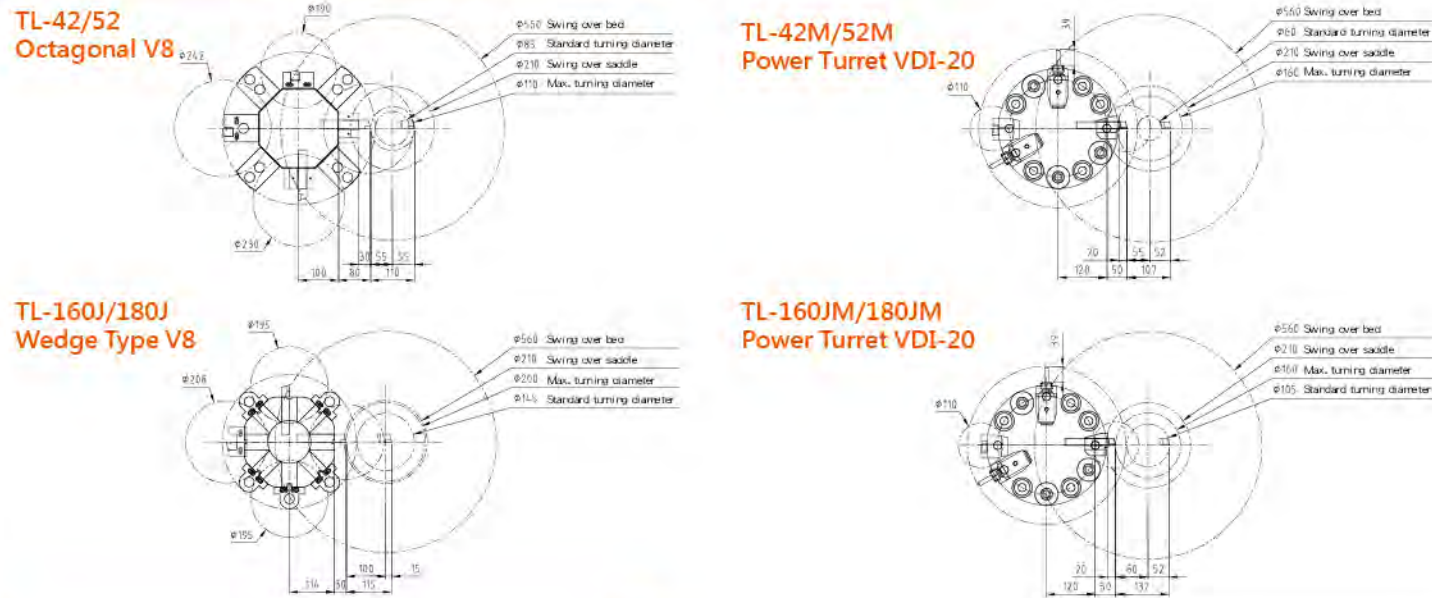


Tool System Tool Interference Diagram Dimensional Drawing

Tool System



Tool Interference Diagram



Dimensional Drawing



Machine Specification

Description	Unit	TL-42	TL-42M	TL-52	TL-52M	TL-160J	TL-160JM	TL-180J	TL-180JM
CONTROLLER		Oi-Mate TD	Oi-TD	Oi-Mate TD	Oi-TD	Oi-Mate TD	Oi-TD	Oi-Mate TD	Oi-TD
CAPACITY									
Swing over bed	mm	Ø560	Ø560	Ø560	Ø560	Ø560	Ø560	Ø560	Ø560
Swing over saddle	mm	Ø210	Ø210	Ø210	Ø210	Ø210	Ø210	Ø210	Ø210
Max. turning diameter	mm	Ø110	Ø160	Ø110	Ø160	Ø200	Ø160	Ø200	Ø160
Max. working length	mm	235	265	195	225	275	275	265	275
Bar capacity	mm	Ø42	Ø42	Ø52	Ø52	Ø42	Ø42	Ø52	Ø52
Chuck size	inch	6"	6"	8"	8"	6"	6"	8"	8"
Type of collet chuck	-	173E	173E	185E	185E	3 jaw chuck	3 jaw chuck	3 jaw chuck	3 jaw chuck
STROKE									
X-axis stroke	mm	110(55+55)	107(55+52)	110(55+55)	107(55+52)	115(100+15)	125(80+45)	115(100+15)	132(80+52)
Z-axis stroke	mm	240	270	200	230	280	280	270	280
FEEDRATE									
Axial rapid feedrate	m/min	X:18, Z:20	X:18, Z:20	X:18, Z:20	X:18, Z:20	X:18, Z:20	X:18, Z:20	X:18, Z:20	X:18, Z:20
Cutting feedrate (X/Z)	mm/min	10000	10000	10000	10000	10000	10000	10000	10000
SPINDLE									
Spindle speed	rpm	5500	5500	4200	4200	4500	4500	4200	4200
Spindle nose	-	A2-5	A2-5	A2-6	A2-6	A2-5	A2-5	A2-6	A2-6
Spindle bore diameter	mm	Ø55	Ø55	Ø66	Ø66	Ø55	Ø55	Ø66	Ø66
TURRET									
Turret type and storage capacity	-	Octangle V8	VDI 20	Octangle V8	VDI 20	Wedge V8	VDI 20	Wedge V8	VDI 20
Square tool dimension	mm	20x20	16x16	20x20	16x16	20x20	16x16	20x20	16x16
Boring tool dimension	mm	Ø25	Ø20	Ø25	Ø20	Ø25	Ø20	Ø25	Ø20
M-axis tool motor output (cont./15 min)	KW (HP)	-	1.1/3.7 (1.4/5)	-	1.1/3.7 (1.4/5)	-	1.1/3.7 (1.4/5)	-	1.1/3.7 (1.4/5)
TAILSTOCK									
Quill stroke	mm	177	-	177	-	177	-	177	-
Quill diameter	mm	Ø30	-	Ø30	-	Ø30	-	Ø30	-
Quill taper	-	MT2	-	MT2	-	MT2	-	MT2	-
MOTOR									
Spindle motor output (cont./30 min)	KW (HP)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)	5.5/7.5 (7.3/10)
X/Z axis servo motor	KW (HP)	1.2/1.2 (1.6/1.6)	1.6/1.6 (2.1/2.1)	1.2/1.2 (1.6/1.6)	1.6/1.6 (2.1/2.1)	1.2/1.2 (1.6/1.6)	1.6/1.6 (2.1/2.1)	1.2/1.2 (1.6/1.6)	1.6/1.6 (2.1/2.1)
X/Z AXIS ACCURACY									
Positioning accuracy(VDI 3441)	mm	0.01		0.01		0.01		0.01	
Repeatability accuracy(VDI 3441)	mm	0.006		0.006		0.006		0.006	
COOLANT TANK									
Coolant tank capacity	L	158		158		158		158	
OTHER									
Power requirements	KVA	15	20	15	20	15	20	15	20
Machine size	mm	2750x1580x1260		2750x1580x1260		2750x1580x1260		2750x1580x1260	
Machine weight	kg	2500	2550	2550	2600	2500	2550	2550	2600

All specifications, dimensions and design characteristics are subject to change without prior notice.

Standard and Optional Accessories

Standard

- FANUC Oi Mate TD/Oi-TD Controller
- Collet Chuck 173E-Ø42/185E-Ø60 (TL-42/52)
- Hollow Hydraulic 3-jaw Chuck 6"/8" (TL-160J/TL-180J)
- Hydraulic V8 Turret/VDI Turret
- Foot Switch Control for Chuck (TL-160J/TL-180J)
- Parts Catcher (TL-42/TL-52)
- Product Conveyor (TL-42/TL-52)
- Coolant System
- Automatic Lubrication System
- 3-color Warning Lamp

- Working Lamp
- Front Air Blast
- Tool Box with ToolsChip
- Conveyor & Chip Cart
- Operation Manual
- Maintenance Manual
- Manual Guide Oi
- Auto Power OFF
- Bar Feeder Interface
- Dynamic Graph Simulation
- Rigid Tapping
- RS-232 Interface
- Memory Card Interface (PCMCIA)
- Ethernet

Option

- Hollow Hydraulic 3-jaw Chuck 6"/8" (TL-42/TL-52)
- Collet Chuck (TL-160J/TL-180J)
- Manual Hydraulic Tailstock
- Foot Switch Control for Chuck (TL-42/TL-52)
- Parts Catcher (TL-160J/TL-180J)
- Product Conveyor (TL-160J/TL-180J)
- Auto Door
- Oil Mist Collector
- High Pressure Cutting Coolant Motor
- Bar Feeder
- Oil Skimmer
- Manual/ Auto Tool Persetter
- Transformer

Standard and optional equipment listed as above are for reference only. The correct information is dependent on customer's order.