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Dealer:



2021.A



# T M series



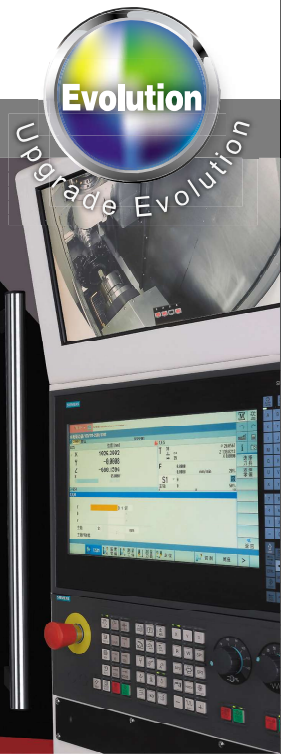
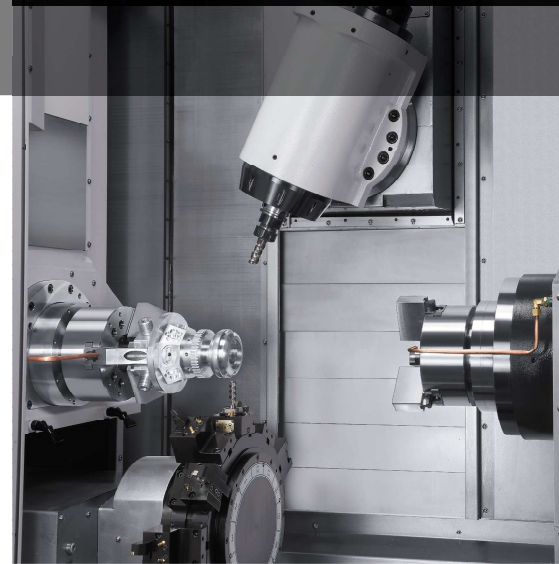
2000  
2500  
3000  
4000



Multioperational turning milling centers



**High Accuracy and  
High Efficiency**



Litz Hitech Corp.  
Litz Machine Tools (JiaXing) Corp.

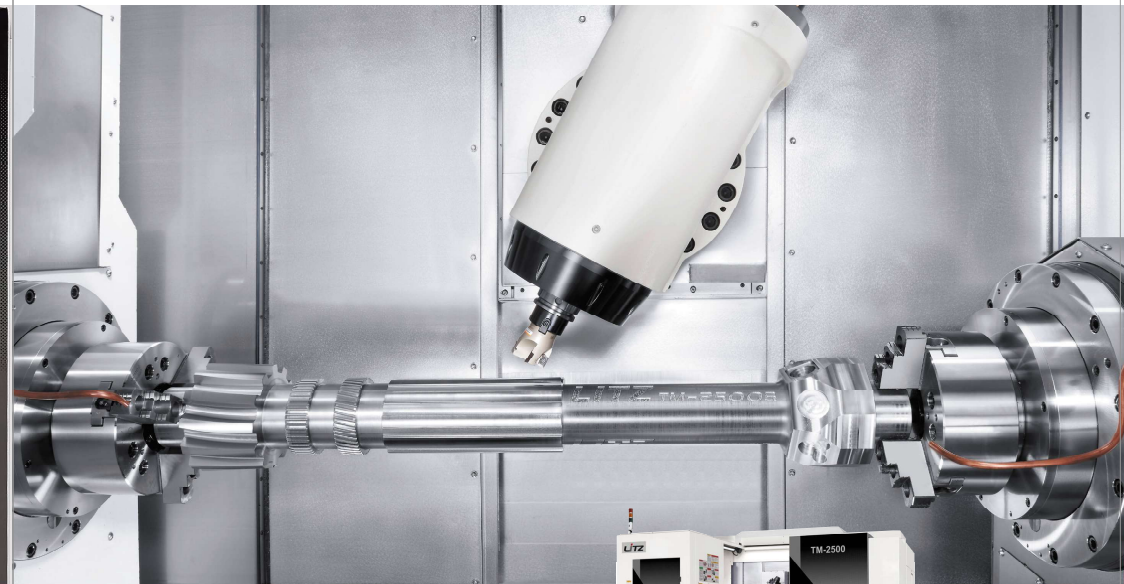
TM series provide solutions for higher machining accuracy  
higher production efficiency.

Rich lines of products along with years of trust  
and performance won by TM series of turning-milling  
combined machine tools

- Further enhanced processing speed and precision by loading just one card for the full machining steps
- High production efficiency by high-rigidity structure and high-power turning and milling spindles
- Larger Y-axis travel for wider range of target workpiece



High-precision, High-efficiency Integrated Mill Turn Centers



Advanced multi-function machine tool running entire  
processing cycle by loading the magazine just once



(TM-2500S)



(TM-2500)



(TM-2500STM)

## Integrated Mill Turn Center at Highest Level of Performance

New technologies are capable of cutting complex-shaped workpieces with high accuracy and efficiency

### TM-2500STM

- The models are equipped with a large machining envelop as well as flexible cutting abilities by combined features of a turning center and a machining center.
- Machine designed with customer's perspective.
- Powerful electric spindle can meet wide range applications.
- Sub-turret provides multiple machining solutions.



**TM-2500: S3+S1+Tailstock**

**TM-2500S: S3+S1+S2**

**TM-2500STM: S3+S1+S2+S4**



## A Revolution of Factory Operation

### The turning lathe evolution.

The new technologies are capable of integrating various machining processes with high accuracy, superb cutting abilities and wide machining envelopes.



### Milling and Turning processes can be done in one machine

Turning lathe + Vertical Milling center	TM-2500STM Series Production Process
2 units	1 units
2 persons	1 persons
2 unit costs	1 unit costs
Equipment	Equipment
Manpower	Manpower
Machine	Machine
2-step process	1-step process
Working Processes	Working Processes
2-3 times cost	1 times cost
Cutting Tool	Cutting Tool
Multiple Setups	Chuck or collet
Fixture	Fixture
Work in progress	Product Holding Location during Production
Product Holding Location during Production	Not required



By combining 2-axis lathe and machining center, the integrated machine can realize a higher return on investment.

#### Weakness of old-time lathe



Lack of tool number      Difficult to check the large workpiece interference.      High cost of live tool holders.

#### Weakness of adding a vertical milling center

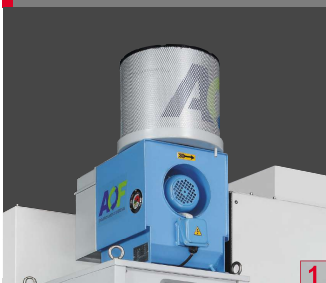
- Need to buy more tooling, and holders.
- Operator needs more time to set up jobs.
- More shop floor needed.

- Shorten the production
- Reduce the secondary operation
- Reduce the transportation cost
- Reduce the equipment cost
- Reduce the footprint
- Enhance the machining precision
- One machine to complete the entire production process from material to finished product.
- Significant reduction of working sequence and production time while improving the working precision.
- Lower fixture costs and less production equipment. Further, labor costs will be reduced as well.
- It not only improves the production efficiency but also reduces the costs and brings.

## Various Functions are Available

The functional systems are deployed on both sides the machine for the convenience of daily mechanical maintenance, inspection and repairs.

Oil Mist Collection Unit <sup>OP</sup>



Compress Air and Lubrication System



Tool Magazine



Electrical Unit



Right side service door



Coolant System



Spindle Cooling System



Hydraulic Unit



(TM-2500)

Coolant System



CTS Unit



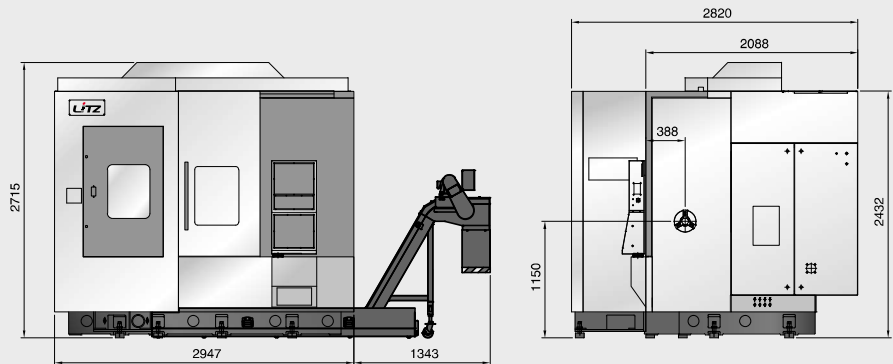
Picture shows 70BAR coolant supply unit <sup>OP</sup>

## Machine Dimensions

### TM-2500

Unit : mm

#### Appearance Dimensions

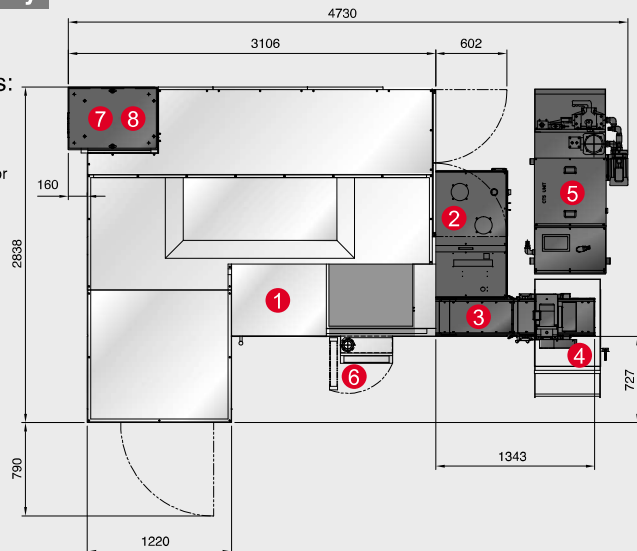


Unit : mm

#### Machine Occupancy

##### Description of parts:

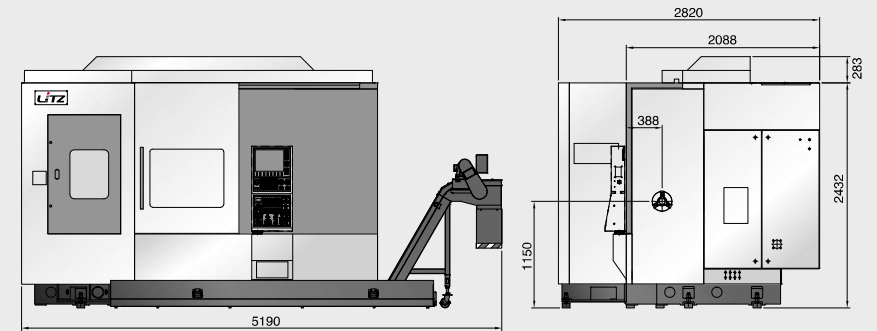
- ① TM-2500 Machine
- ② Water Tank System
- ③ Chain-type Chip Conveyor
- ④ Chip Collection Cart
- ⑤ Spindle Cooling System
- ⑥ Controller
- ⑦ Hydraulic Unit
- ⑧ Oil Cooler Unit



### TM-2500S

Unit : mm

#### Appearance Dimensions

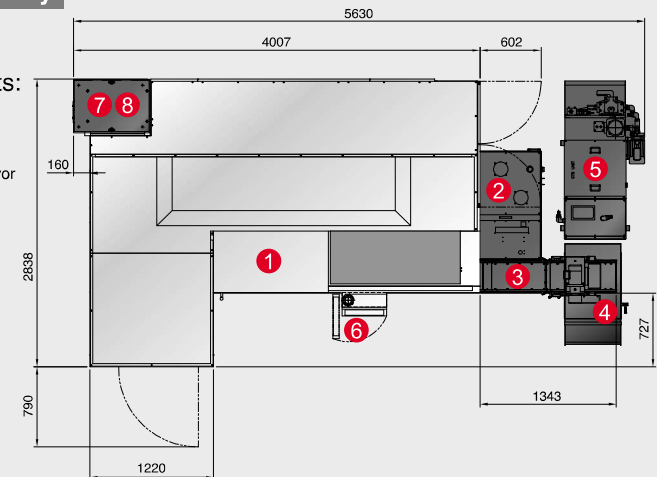


Unit : mm

#### Machine Occupancy

##### Description of parts:

- ① TM-2500S Machine
- ② Water Tank System
- ③ Chain-type Chip Conveyor
- ④ Chip Collection Cart
- ⑤ Spindle Cooling System
- ⑥ Controller
- ⑦ Hydraulic Unit
- ⑧ Oil Cooler Unit

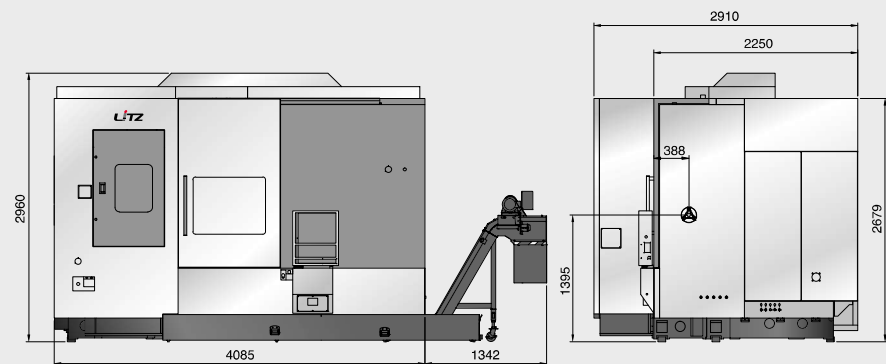


## Machine Dimensions

### TM-2500STM

Unit : mm

#### Appearance Dimensions

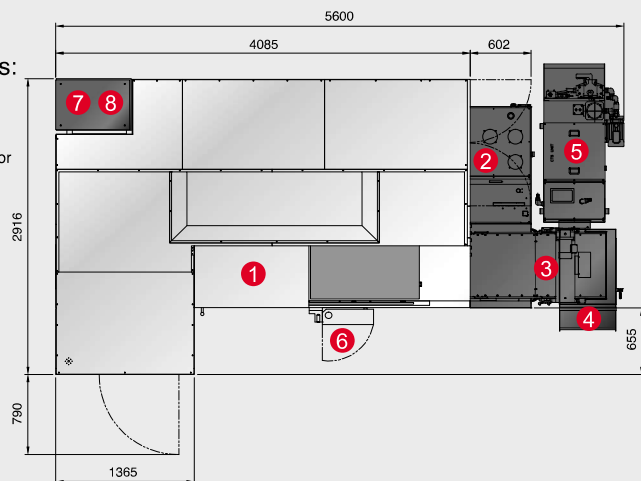


Unit : mm

#### Machine Occupancy

##### Description of parts:

- ① TM-2500 Machine
- ② Water Tank System
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- ⑤ Spindle Cooling System
- ⑥ Controller
- ⑦ Hydraulic Unit
- ⑧ Oil Cooler Unit



## Machine Specifications

	Item	Unit	TM-2500	TM-2500S	TM-2500STM
<b>Capability, Capacity</b>	Max. swing dia.	mm	Ø530	Ø530	Ø530/Ø450
	Max. Machining Diameter	mm	Ø500	Ø500	Ø450/Ø250
	Max. Machining Length	mm	500	1000	1040
	Max. Bar Diameter	mm	Ø65	Ø65	Ø52
<b>Travel</b>	X-Axis Travel	mm	560	560	560
	Y-Axis Travel	mm	±125	±125	±125
	Z-Axis Travel	mm	560+93	1060+93	1080+72
	X2-Axis Travel	mm	-	-	165
	Z2-Axis Travel	mm	-	-	1040
	W-Axis Travel	mm	910	1090	1080
	B-Axis Rotating Angle	degree	-20°~200°	-20°~200°	-20°~200°
	C-Axis Rotating Angle	degree	360°	360°	360°
<b>Feedrate</b>	X-Axis Rapid Feedrate	M/min	36	36	36
	Y-Axis Rapid Feedrate	M/min	36	36	36
	Z-Axis Rapid Feedrate	M/min	36	36	36
	X2-Axis Rapid Feedrate	M/min	-	-	20
	Z2-Axis Rapid Feedrate	M/min	-	-	30
	W-Axis Rapid Feedrate	M/min	8	24	30
	B-Axis Max. RPM	RPM	25	25	25
	C-Axis Max. RPM	RPM	250	250	250
<b>Turning Spindle</b>	Chuck Dimensions S1		8"	8"	8"
	Chuck Nose Type S1		A2-6	A2-6	A2-6
	Hole Diameter S1	mm	Ø75	Ø75	Ø61
	Spindle Max. RPM S1	RPM	4500	4500	4500
	Motor Output Power S1	KW	15/22	15/22	11/15
	Chuck Dimensions S2		-	8"	8"
	Chuck Nose Type S2		-	A2-6	A2-6
	Hole Diameter S2	mm	-	Ø75	Ø61
<b>Milling Spindle</b>	Spindle Max. RPM	RPM	12000	12000	12000
	Motor Output Power	KW	11/22	11/22	11/22
	B-Axis Min Indexing Angle	degree	0.001°	0.001°	0.001°
<b>Tool Change</b>	Tool Indexing Angle/Position		90°/4	90°/4	90°/4
	Tool Type		HSK-63T	HSK-63T	HSK-63T
	Tool Magazine Capacity	T	36	36	40
	Max. Tool Diameter (Without adjacent tool)	mm	Ø90(120)	Ø90(120)	Ø90(120)
	Max. Tool Length	mm	250	250	250
<b>Turret</b>	Max. Tool Weight	kg	8	8	8
	Turret Type		-	-	12 sides
	Tool Holder		-	-	BMT45
	O.D. tool type		-	-	□20
<b>Quill-Type Tailstock</b>	I.D. tool typw		-	-	Ø32
	Live tool RPM	RPM	-	-	5000
	Live Tool power	KW	-	-	2.8
	Quill Type		MT5	-	-
<b>Controller</b>	Model		SIEMENS840D	SIEMENS840D	SIEMENS840D
<b>Machine Dimensions</b>	Machine Height	mm	2715	2715	2960
	Occupancy(Without chip conveyor)	mm	3106x2838	4007x2838	4085x2916
	Machine Weight	kg	9200	11000	15000
<b>Energy Requirement</b>	Power Capacity	KVA	35	42	42
	Compress Air Requirement	kg/cm³	6	6	6

## Machine Specifications

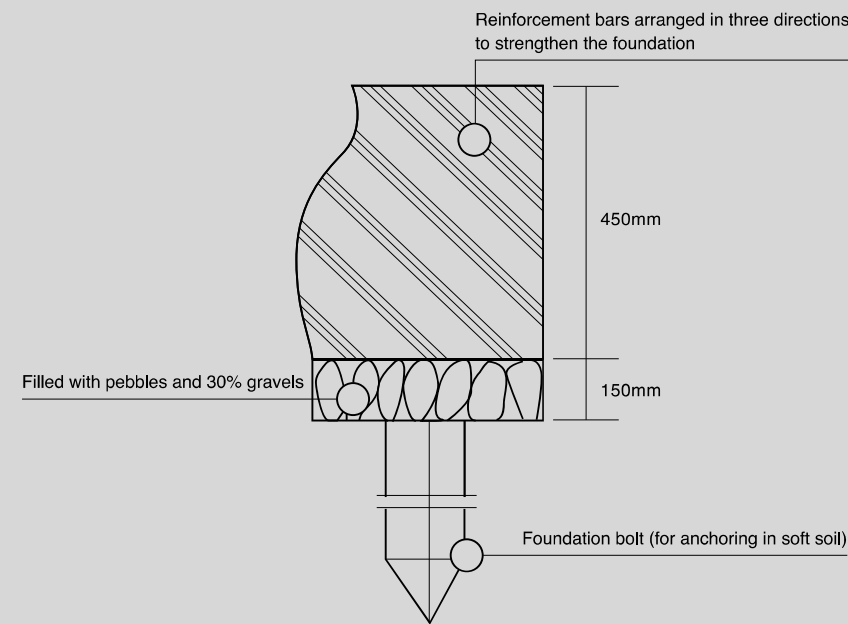
	● Standard	○ Optional	★ Please inquire		TM-2500	TM-2500 S	TM-2500 STM
<b>Spindle System</b>				<b>Controller System</b>			
1st Turning Spindle Max. Speed 4500RPM	●	●	●	FANUC 31i-B(4+1)	○	○	○
2nd Turning Spindle Max. Speed 4500RPM	-	●	●	FANUC 31i-B5(5 axes simultaneous)	○	○	○
Milling Spindle Max. Speed 12000RPM	●	●	●	SIEMENS 840D(5 axes simultaneous)	●	●	★●
Milling Spindle Max. Speed 18000RPM	○	○	○	<b>Chip Management</b>			
Chuck 8"	●	●	●	Chain-type Chip Conveyor	★●	★●	★●
Chuck 10"	○	○	-	Chip Collection Cart(not tiltable)	●	●	●
Sleeve Chuck(Ø60)	○	○	○	Chip Collection Cart(tiltable)	○	○	○
<b>NC Tailstock</b>				Coolant filtration system			
Quill-Type Tail Stock(W-Axis)	●	-	-	<b>Automation System</b>			
Rotary Quill	●	-	-	Rod Automatic Feeder	★○	★○	★○
Fixed Quill	○	-	-	Workpiece Arrestor	★○	★○	-
Tailstock Reverse-Pulling System	○	-	-	Automatic Front Door	○	○	○
Automatic live center installation	-	★○	★○	<b>Tool Magazine System</b>			
<b>High-Accuracy System</b>				Storage Number 36T(TM-2500/2500S)			
X/Y/Z Axis Optical Linear Scale	○	○	○	Storage Number 40T(TM-2500STM)	-	-	●
X/Y/Z Axis Guideway Hollow Cooling	●	●	●	Storage Number 72T(TM-2500/2500S)	○	○	-
B-Axis Optical Linear Scale	●	●	●	Storage Number 80T(TM-2500STM)	-	-	○
C-Axis Encoder	●	●	●	<b>Tool Specifications</b>			
Spindle Oil Cooling System	●	●	●	HSK 63T	●	●	●
<b>Measurement System</b>				CAPTO C6			
Milling spindle tool length measurement	○	○	○	<b>Lower turret(TM-2500STM)</b>			
Workpiece measurement	★○	★○	★○	Boring tool holder	-	-	●
B/C axis center calibration	★○	★○	★○	End-cut tool holder	-	-	●
Turret tool length measurement	-	-	★○	O.D. tool holder	-	-	●
<b>Environmental System</b>				Axial live tool holder			
Oil Mist Collector Device	○	○	○	Radial live tool holder	-	-	●
<b>Coolant</b>				Boring tool sleeve			
High-Pressure Coolant System(30Bar)	●	●	●	Boring tool sleeve	-	-	●
High-Pressure Coolant System(70Bar)	○	○	○	<b>Machining Function</b>			
Coolant level gauge	●	●	●	Tooth Milling Function	○	○	○
Coolant level/Temp. gauge	○	○	○	<b>Safety Measures</b>			
<b>Steady Rest</b>				CE Specification			
	★○	★○	★○	Dual-link Pedal Switch	○	○	○
				Stabilizer	○	○	○
				Transformer	○	○	○

- All the photos contained herein are for reference only. In case of any discrepancy with the actual machine parts, the actual machine shall prevail.
- LITZ reserves the right to modify the product specifications, appearance, equipment or discontinue the products.

## Power and Environment requirements

<b>Power requirement</b>	3 phase 400V±10%50Hz (Voltage stabilizer must be installed in areas with unstable voltage)
<b>Operating temperature</b>	General condition: 10°C-40°C
<b>temperature</b>	Excellent condition: 17°C-25°C
<b>Relative humidity</b>	≤75%
<b>Atmospheric pressure</b>	≥0.5Mpa
<b>Oil type</b>	Hydraulic unit: (ISO VG32) 50L Oil Cooling unit: (ISO VG32) 36L Guide way/ballscrew: grease (Provided one unit per machine)

Foundation requirement: Minimum 300mm concreted floor



### Notice:

1. Siting location should avoid larger deviation of temperature, direct sunlight, dusty, and large vibrations.
2. Concrete foundation flatness within 10 mm.
3. Average concrete surface pressure 0.029 MPa.
4. Surface strength 0.043 MPa.
5. Nearby high frequency voltage generator, electrical charge machines, or shared power supply unit may cause interference and damage the NC. Please contact Litz before commissioning.
6. Follow closely the grounding instruction regulated by Litz.