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Dealer:

CNC MACHINERY SALES AUSTRALIA

2019.A

LITZ

LEAD · INNOVATION · TECHNOLOGY · ZEAL

TM. series

2000 | 2000S | 2000ST
2500 | 2500S | 2500ST
3000 | 3000S | 3000ST
4000 | 4000S | 4000ST

Multioperational turning milling centers

High Accuracy and High Efficiency

Evolution
Upgrade Evolution

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

Evolution

Upgrade Evolution

TM series

Multioperational turning milling centers

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

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

(TM-2500S)

(TM-2500)

Evolution
Upgrade Evolution

Lathing-milling combined machine with multiple processing functions and super cost-effectiveness

Improve production efficiency and profitability by shortening the processing time.

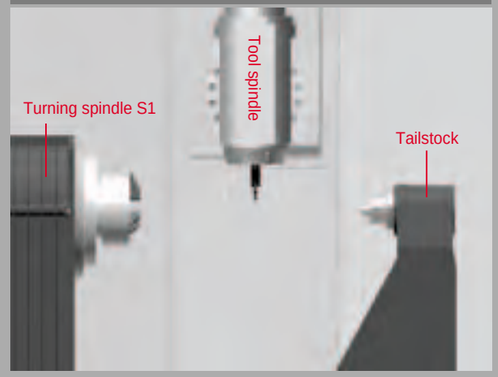
Vortex

CAPTO cutter handle

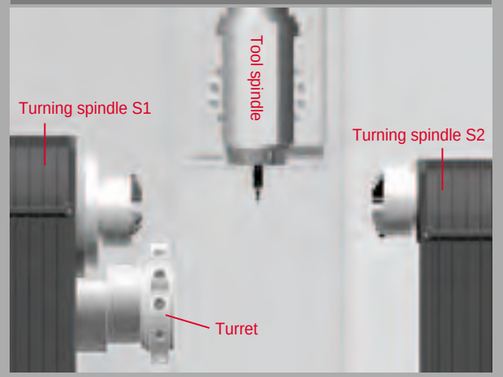
Generator enclosure

Blade

TM-2500



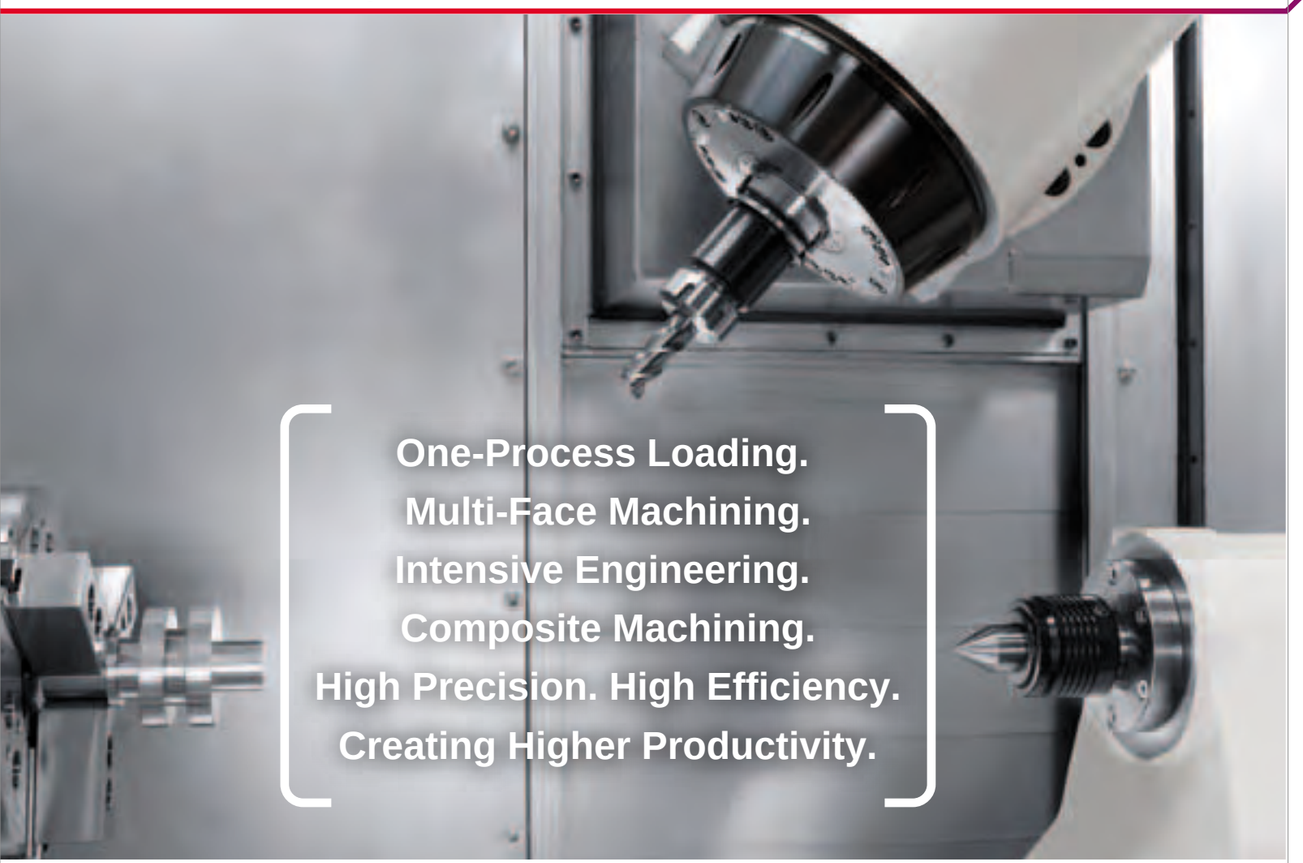
TM-2500S / STM



Datasheet / Model code	TM2500	TM2500S	TM2500STM
Turning spindle S1	●	●	●
Turning spindle S2	—	●	●
Tailstock	●	—	—
Turret	—	—	●
Tool spindle	●	●	●

● Standard configuration features — NA

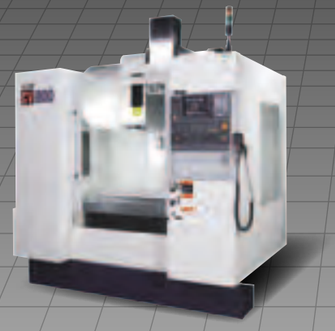
A Revolutionary Machine **Smart and Integrated Design**



One-Process Loading.
Multi-Face Machining.
Intensive Engineering.
Composite Machining.
High Precision. High Efficiency.
Creating Higher Productivity.

CNC Turning Center

+



Vertical Machining Center

=

Evolution
Upgrade Evolution

TM-Series composite model brings the following benefits:

- Less equipment investment cost
- Smaller equipment footprint
- Lower labor cost
- Lower fixture cost
- Lower power consumption
- Lower workpiece loading/unloading cost
- Reduced cycle times
- Lower transportation cost

Integrated Production Machine → **Higher return**

Faster working speed to shorten the delivery time easily.
High-precision workpiece brings you higher return on investment.

A Revolution of Factory Operation

Evolution
Upgrade Evolution

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

- 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.

	Equipment and Working Processes	Cost	Machine	Manpower	Working Processes	Cutting Tool	Fixture	Product Holding Location during Production
Former Production Line	2 units (3 steps)	2-3 unit costs	2 unit costs	2 persons	3-step process	2-3 times cost	Multiple Setups	Work in progress
LITZ TM-Series Production Process	1 unit (2 steps)	1 unit cost	1 unit cost	1 person	2-step process	1 time cost	Chuck or collet	Not required

Solid basic structure

Solid machine base design provides the cutting rigidity required by your machine

Technical Highlights

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Flexible machining through all directions

- Wider Y-axis travel: 250mm
- Max. working diameter: Ø 500mm

Optimal cutting conditions

- One machine to perform turning and milling at the same time.
- Shorten the working time to the minimum.
- Larger working range and less interference.

Achieve maximum machining efficiency in milling and turning

- Designed with the same milling capacity as the machining center.
- Equal machining range is provided for the 1st and the 2nd turning spindles.

Maintain stable machining precision in longer term

- Spindle thermal compensation system OP
- Thermal drift inhibiting system for guideways of X/Y/Z axis.
- X/Y/Z axis and B/C axis optical linear scale OP

Shorten the production cycle through convenient first article machining

- User-friendly HMI interface. Easy operation.
- Standard equipment of FANUC controller to achieve safe operation and shorten the adjustment time.

Maximize the machine capability

- The machining conditions are optimized by the use of FANUC Manual Guide!
- Optimized processing conditions with Siemens Shop mill (conversation processing program)

Tailstock reverse-pulling System

- Enhance the rigidity for cutting long workpiece.
- Achieve optimal efficiency for cutting thin workpiece, such as blade cutting.

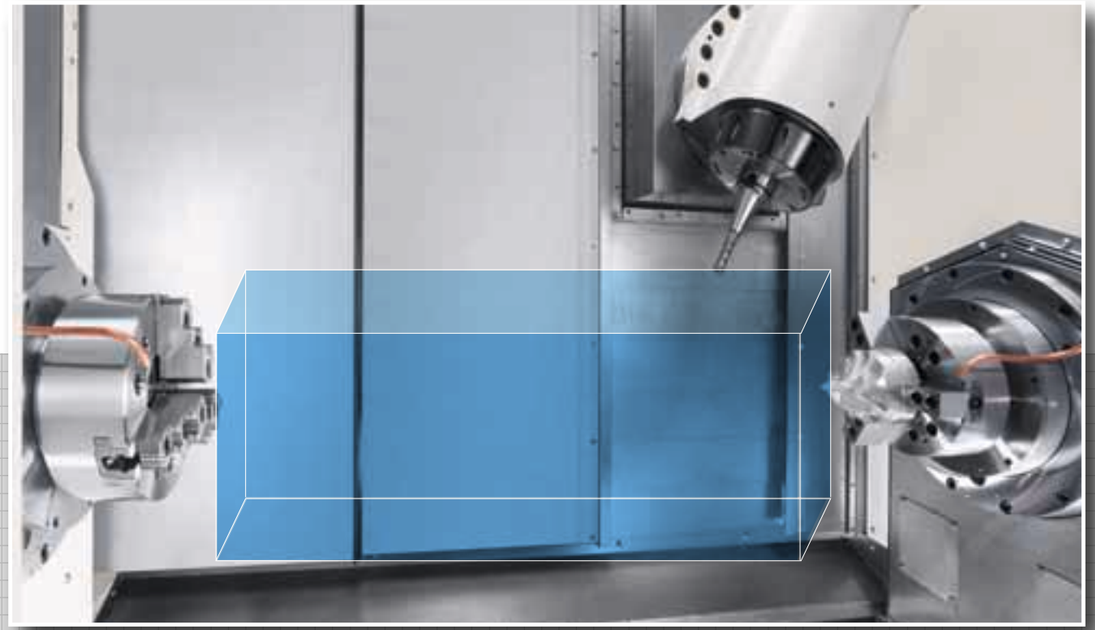
Combine range of requirements into one ultimate and multi-function machine tool

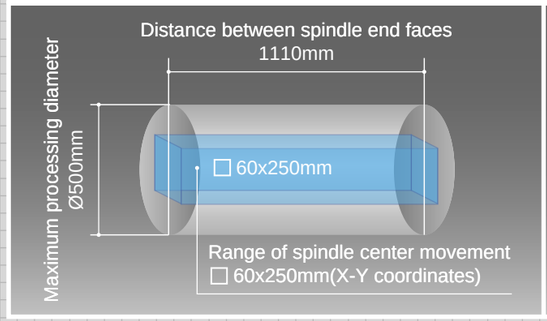
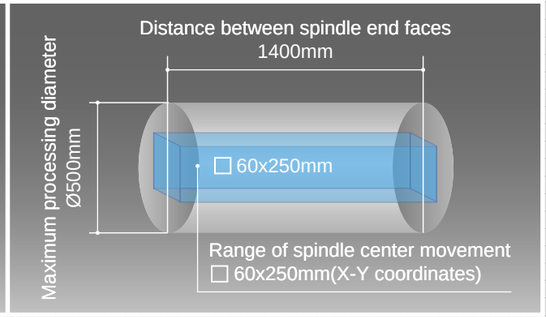
High precision, high rigidity, high function, process integration

Composite machine center

The high-precision, high-efficiency multi-tasking TM series featuring thermal deformation reduction and compact footprint design are ideal for making small, high-precision, and complex geometry components employed by medical and measurement devices. Thanks to its turning and milling combined processing technology this machine is capable of single-mounting based high-precision machining.

The next-generation machine featuring high-precision, reduced fixture requirements, lower labor costs and smaller footprint by cutting tool preparation time, scheduling, and delivery time.



TM-2500	TM-2500S
	

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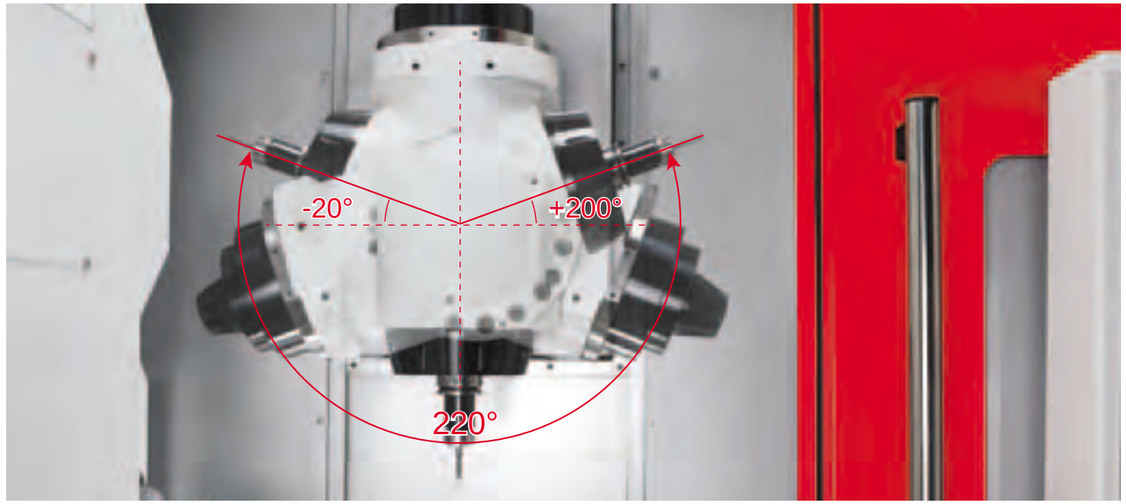
Wide Machining Scope

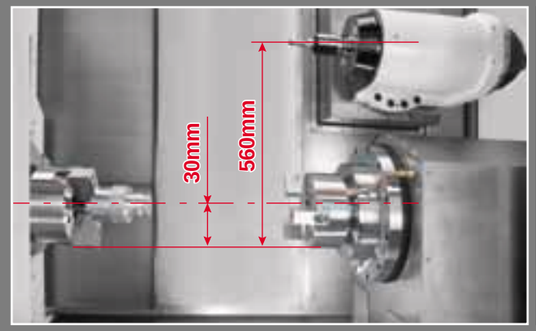
Ultra-wide B-axis rotation range: 220°

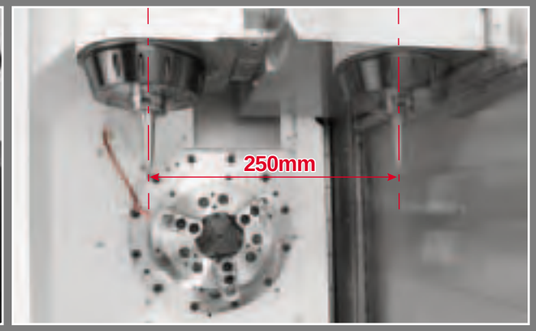
Ultra-wide B-axis rotation range (220°) enables both the primary and the secondary spindle (optional) featuring the same machining area. The B-axis drive in the NC-B axis specification employs slicing precision up to 0.001° to enable high-precision 5-axis interlocking.

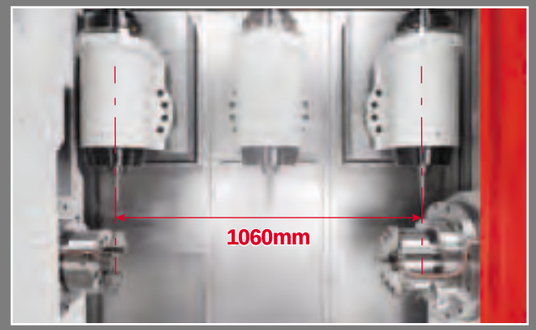


B-axis rotation angle: 220° (-20° ~ +200°)

Travel distance of individual spindle





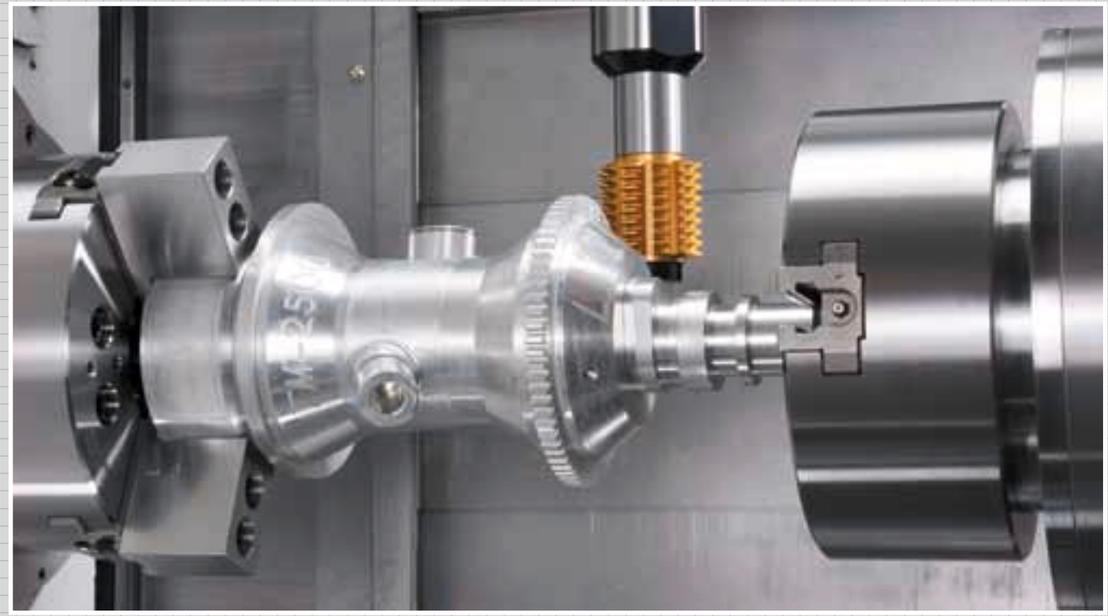


▲ Y-axis movement: 250mm (±125mm)

◀ X/Y/Z transfer momentum
560 / 250 / 1060 + 93mm (TM-2500S)

Turning-milling spindle

Featuring machining center equivalent turning and milling spindle



Featuring high production efficiency, this turning and milling spindle may provide highly efficient machining with smaller machining center equivalent and comprehensive turning and milling capacity.

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Highest machining efficiency regardless of milling or turning

Excellent machining efficiency for hard to cut materials

Milling

Turning

3D surface machining

Powerful turning and milling spindle

It may address the first spindle for a wide variety of workpieces

The turning spindle featuring a built-in motor is a high-performance spindle addressing the needs from high-speed and high-precision processing for smaller workpieces to medium and high-speed machining cutting of non-ferrous metal. Stable positioning accuracy with exclusive C-axis lock system.

The second spindle that enables continuous scheduling 1 and 2

- Same as spindle 1, the spindle 2 comes with built-in motor for turning and milling.
- Continuous processing can be performed up to the finished product for improved machining accuracy.

Spindle torque / output-rotation speed diagram

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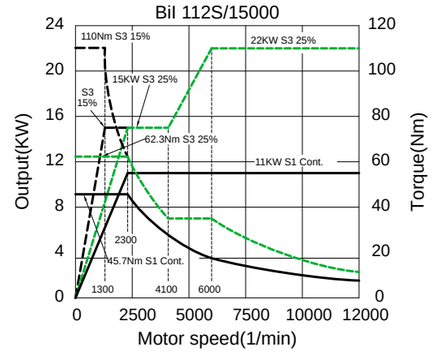
Milling spindle (FANUC)

Spindle maximum speed : 12000 RPM

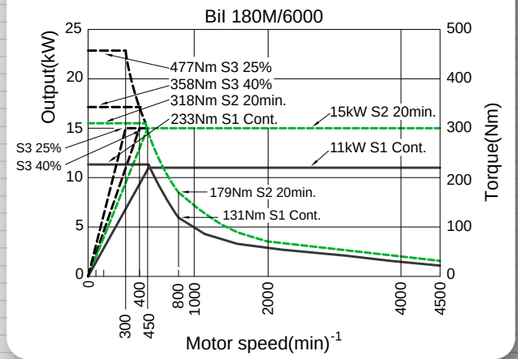
BiI/12S/15000



Turning spindle (FANUC)

Spindle maximum speed : 4500 RPM

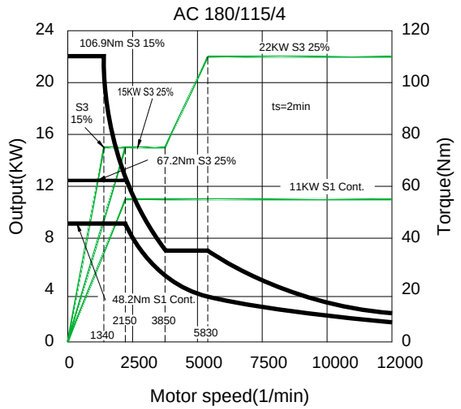
BiI/180M/6000



Milling spindle (Siemens)

Spindle maximum speed : 12000 RPM

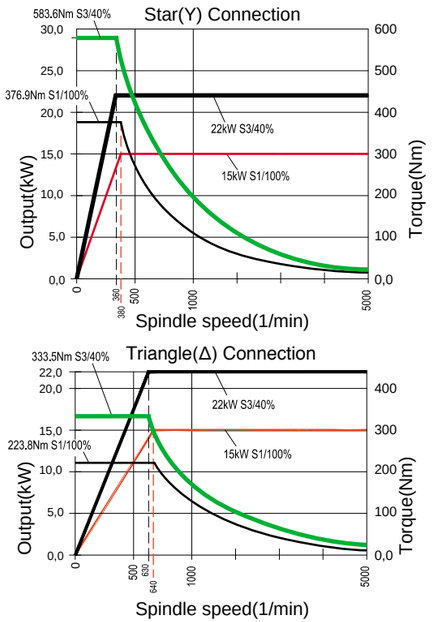
AC 180/115/4



Turning spindle (Siemens) S1, S2

Spindle maximum speed : 4500 RPM

AC 300/240/8

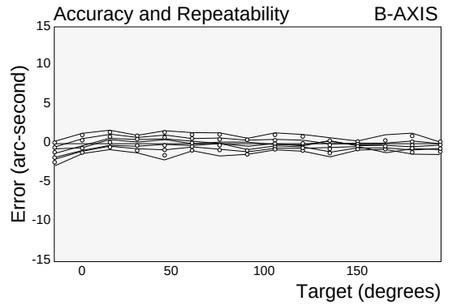


B/C-axis with high slicing accuracy

B-axis slicing accuracy

The high-precision and highly-dynamic transmission system and high-precision optical ruler configuration (OP) provide high slicing accuracy for the B-axis.

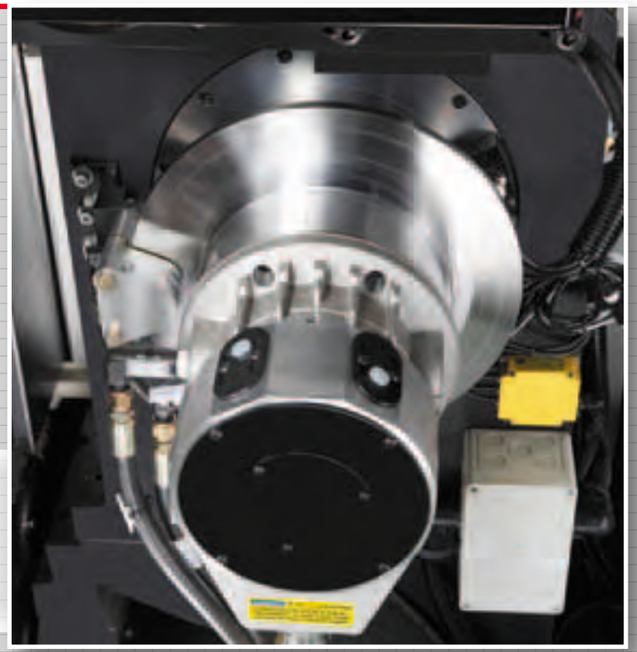
ISO standard		TM-2500	
		LITZ STD.	Actual performance figures
B-axis	Bidirectional positioning accuracy	14 seconds	4.61 seconds
	Repeatability of one-way positioning (positive)	4 seconds	2.77 seconds
	Repeatability of one-way positioning (negative)	4 seconds	2.42 seconds



(Note) These figures of precision are subject to IS-230 experimental method, environment at ambient temperature of 22°C±1°C, and machine mounted on foundation built in compliance with codes of this company.

High-precision positioning control of C-axis

The first and the second turning spindle are equipped with high-precision C-axis with high-precision scale for high-precision machining of complex geometry workpieces while the high-rigidity machine bed supports high precision and high efficiency machining.



C-axis slicing accuracy

Featuring high-precision decoder for high-resolution C-axis slicing for high positioning accuracy.

NC tailstock (TM-2500)

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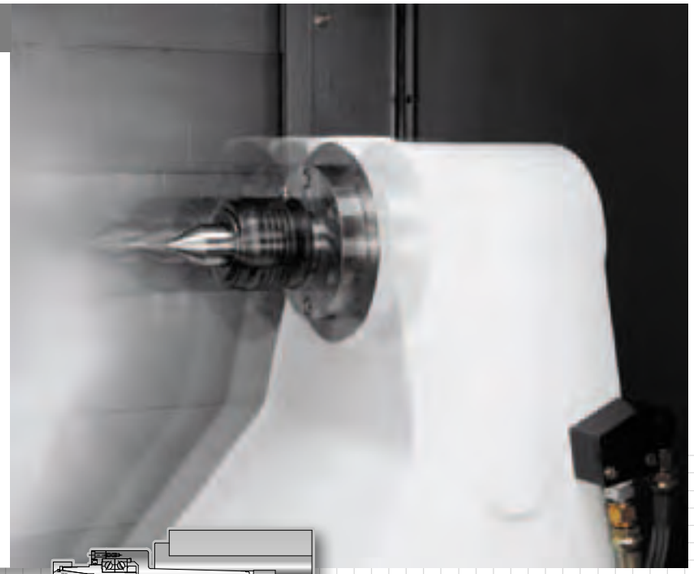
Standard configuration: programmable drive force switch command

Either coarse or fine machining, the entire process can be executed continuously with the optimum driving force by programming the NC tailstock.

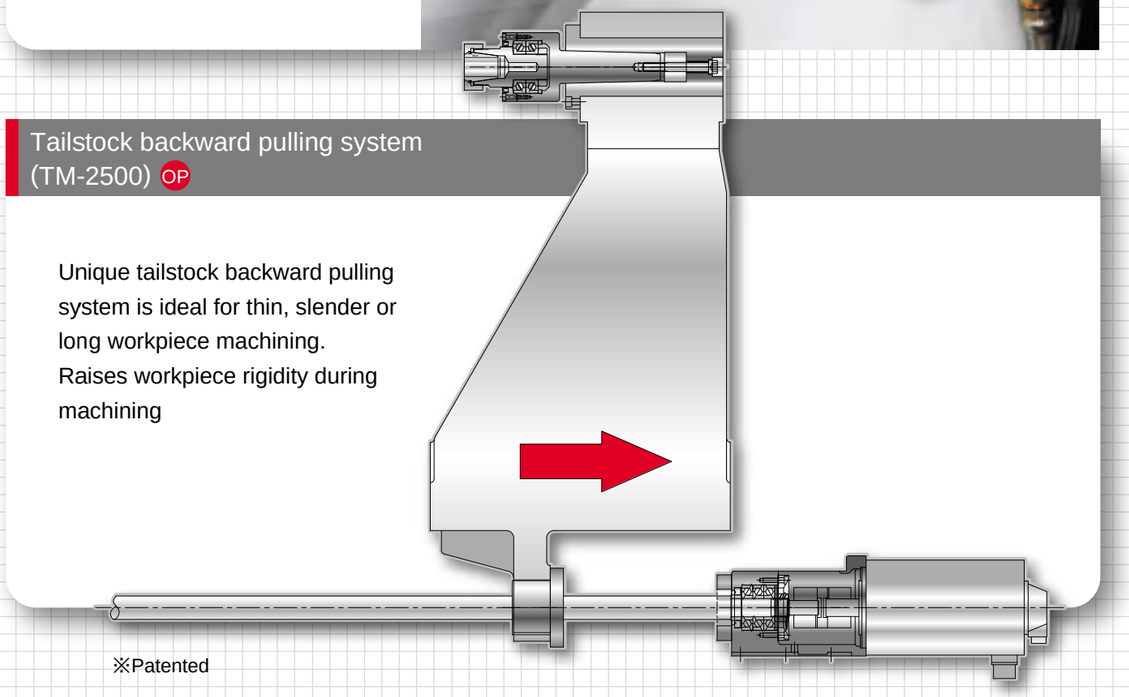
Large stroke NC tailstock

The W-axis tailstock stroke of 910mm can be handled from long workpieces to short-sized workpieces, expanding the processing range.



Tailstock backward pulling system (TM-2500) OP

Unique tailstock backward pulling system is ideal for thin, slender or long workpiece machining.
Raises workpiece rigidity during machining

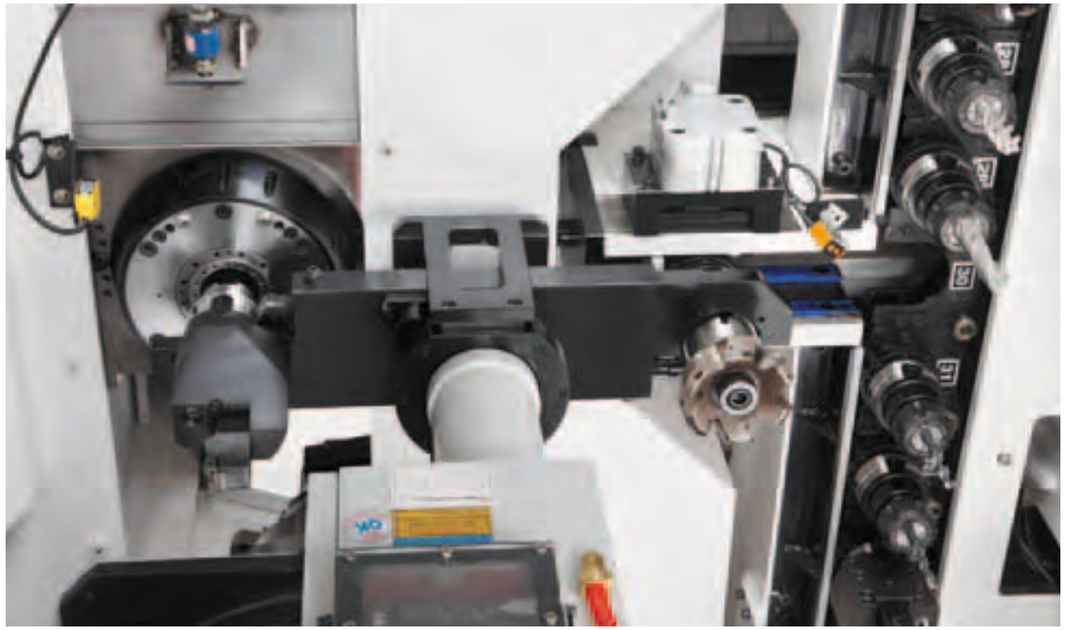


※Patented

Automatic tool changer

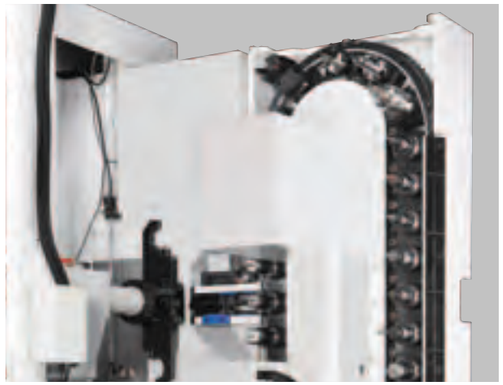
ATC System

High speed tool changer



The high-speed tool changer employs cam mechanics to enable fast and reliable tool changes for high-efficiency machining.

Tool Magazine Unit



Capacity of standard tool magazine may contain up to 36 cutters while the optional one has 72 cutters.
The TM-2500 series may select tool specifications according to customer requirements.

Tool magazine for tool exchanges at the front of machine

Tool magazine located in front of the machine for easier tool exchanges and status monitoring.

Automatic feeder system and chip discharger

External chip discharger

Provide two types of chip discharger depending on geometry and substance of chips.
Please select chip discharger according to your processing type.

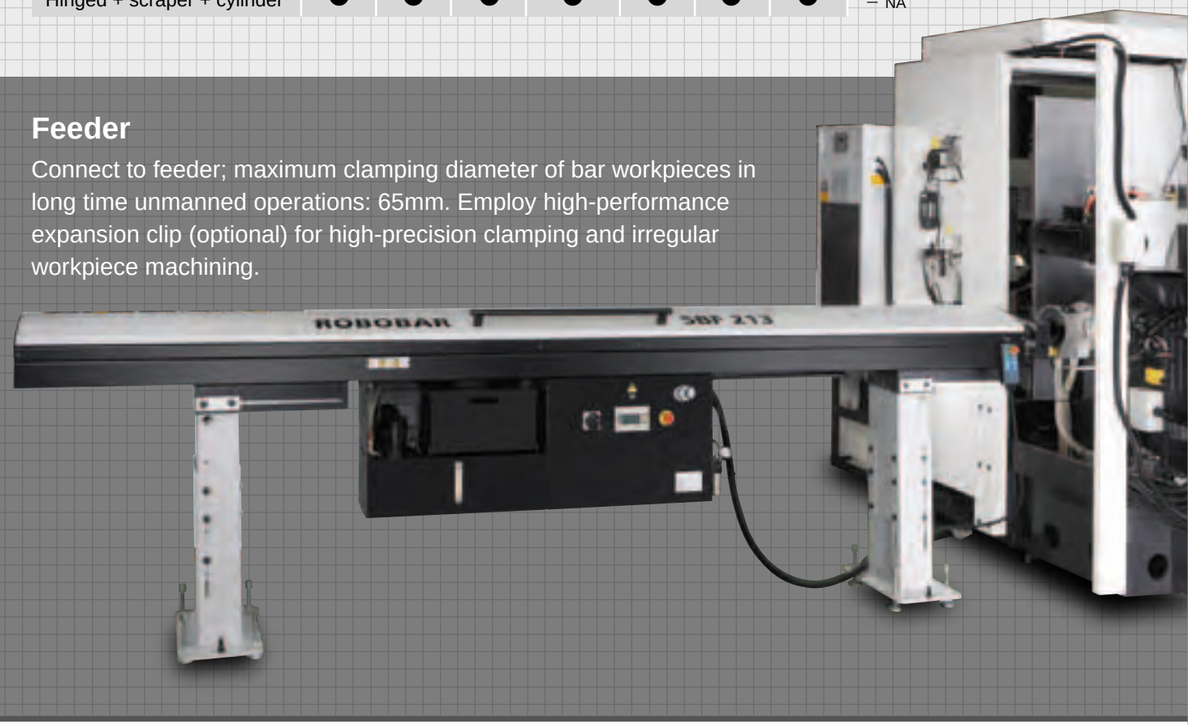
Technical parameters	Workpiece materials and chip size						
	Steel			Cast	Aluminum, non-ferrous		
	Long	Short	Powder	IronShort	Long	Short	Powder
Hinged	●	-	-	-	●	-	-
Hinged + scraper + cylinder	●	●	●	●	●	●	●

Chip size reference
Short : chips are no more than 50mm long and diameter of chip clusters no more than 40mm
Length : greater than the above size

● Applicable
– NA

Feeder

Connect to feeder; maximum clamping diameter of bar workpieces in long time unmanned operations: 65mm. Employ high-performance expansion clip (optional) for high-precision clamping and irregular workpiece machining.



Online measurement system (Blum) OP

Meet the multi-task requirements of turning and milling integrated machine; combining the advantages of two measurement technologies in one sophisticated system.

Measure turning

- Measure rotating tools with laser beam (without physical contact)
- Measure non-rotating tools (turning tool) with contact measurement
- The laser beam was calibrated before delivery for easy installation
- Good economy performance as one system suffices measuring both turning and milling tools

Measure milling cutter

Your niche

- Raise output and quality
- Eliminate damages due to broken cutters
- Reduce downtime for setup and enable unmanned operation
- Reduce product scrap rate

Evolution
Upgrade Evolution

Wide range of options for you to create a high efficiency machining system

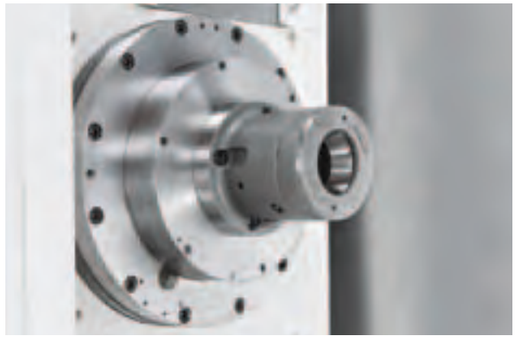
Parts Catcher OP

Organize workpieces (of dimension up to ø65mm X130mm X 2kg) in mixing box in front of the machine.

36-tool magazine / 72-tool magazine OP

Applicable with multiple types of workpieces; select magazine for 72-tool for long time machining.

Collet Chuck OP

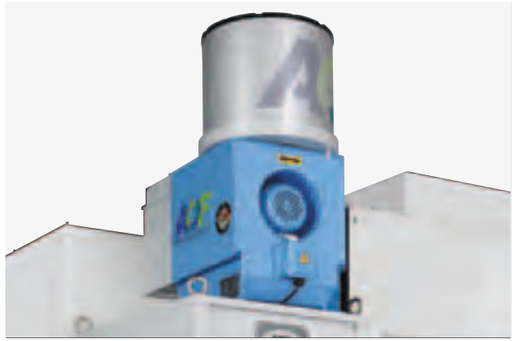


Equipped with various chuck devices suitable for holding a wide range of bar workpieces.

Coolant thru spindle

High-pressure cooling system to fill the cutter tip with coolant at pressures up to 70 bars.

Oil Demister System OP

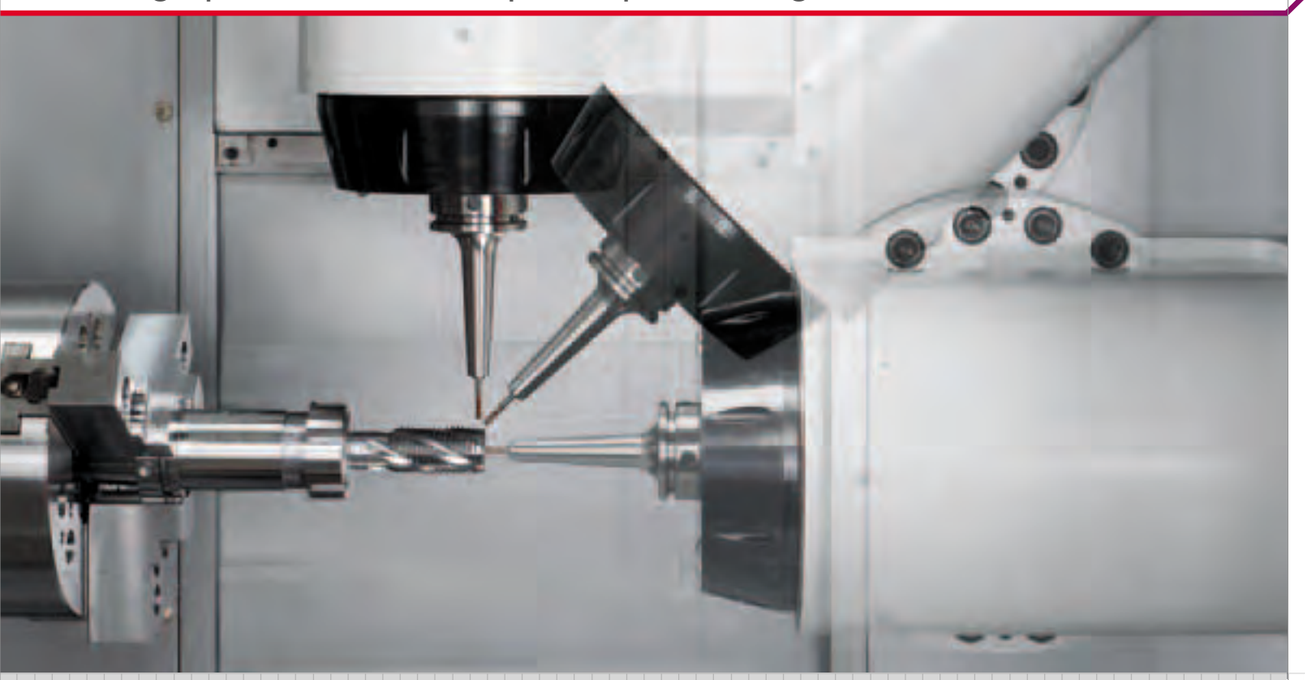


Your machine featuring smoke outlet to connect to external oil mist collection system and easier centralized management at customer workshop to prevent oil mist from hampering the workshop environment.

Hob function OP

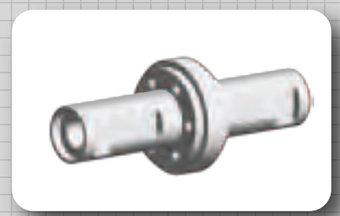
Milling cutter tooth machining.

High performance composite processing machine



Rich machining functions and multi-process integration

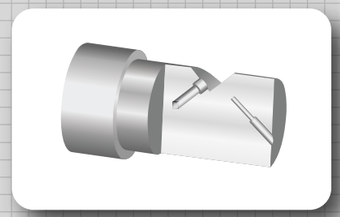
Face turning and D-turning



External milling and turning

Outer circular slot and cam machining

Eccentric drilling



Bevel milling cutter bevel drilling

Hob and milling cutter tooth machining

Processing example

Aircraft industry

Medical machinery industry

Automobile industry

Construction machinery industry

General machinery industry

Information and communication equipment industry

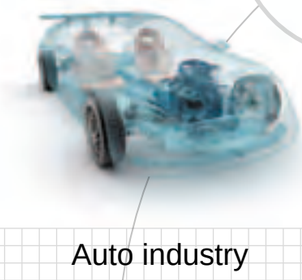
Mold manufacturing industry

Conveyor machinery industry

Home appliance industry

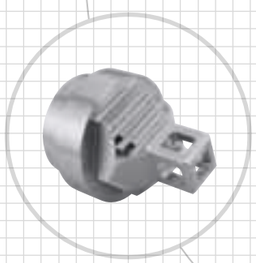
Residential equipment industry

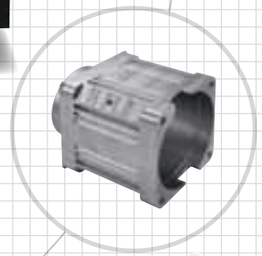
Industry and application mold manufacturing



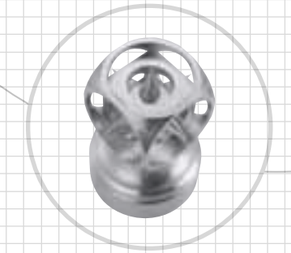
Auto industry

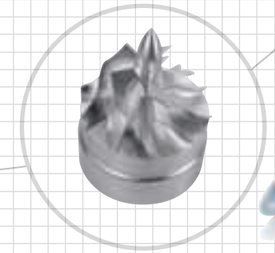
Mechanical industry

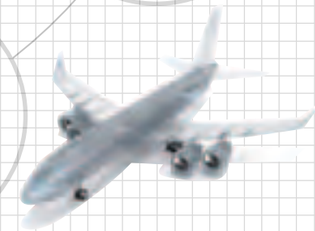




Home appliance







Aviation and power generation

Perfect Ergonomics and Optimal Approaching Performance

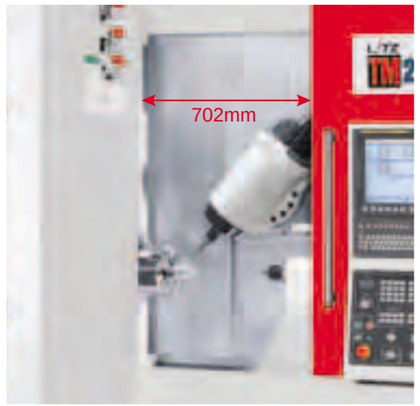
The machine is designed for the convenience and accessibility of operation. Based on the ergonomics, designed from the viewpoint of an operator, such a user-friendly design enables easy change of tools and workpieces.

Loading tool from front side 1

Improve the efficiency of preparation time.
Magazine located in front of the machine, it can shorten operator's moving distance and improve work efficiency. Large magazine capacity in order to meet multitask.

TM series
Max. Tool Length : 250mm
Max. Tool Diameter : Ø90mm
Max. Tool Weight : 5 kg

Wide front door 2



Large Window for Easy Observation of Workpiece Set Up and Status 3

The width of the door opening is large enough to ensure easy accessibility, operation and maintenance.

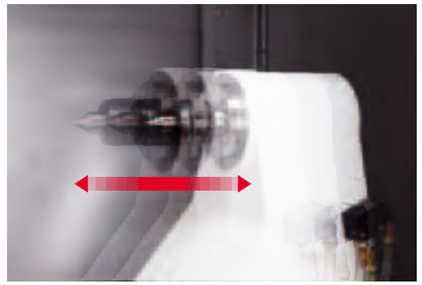
The design of large window improves the performance of visual observation. Large window provides easy observation of the cutting status and better accessibility for adjustment if needed. Therefore, operation efficiency can be enhanced.
The maximum opening width of the window can reach 710 x 600mm.

Swivel CNC Controller Panel 4

Standard equipment includes revolving controller with 15" large screen.

NC Controlled Automatic Traveling Tailstock 6

The display of CNC tailstock preparation can easily memorize the thrust force. Through M-code command, it can correctly move to the programmed position.
In the meantime, the thrust force can be easily set through the softkey on the menu or M-code with the unit of 0.1KN. It not only enhances the operability but also simplifies the tailstock preparation procedure.



Rotary Window OP 7

Rotary window is available as an option for easy monitoring of machining status.

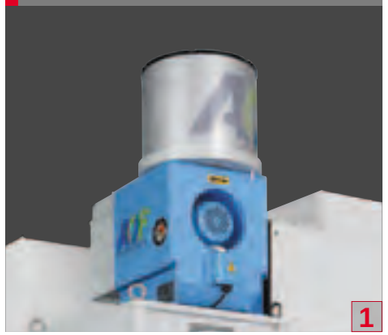
Excellent Accessibility of Spindle and Workpiece 5

The position of the spindle-located at 1150mm above the ground-and close distance of the center of the chuck-388mm-enable easy work of loading and unloading of workpiece. (TM-2500)

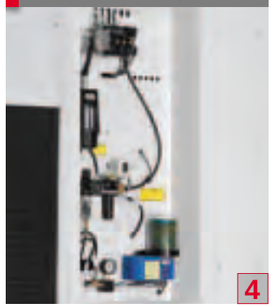
Convenient Service and Maintenance

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

Oil Mist Collection Unit OP



Compress Air and Lubrication System



Tool Magazine

Spindle Cooling System

Hydraulic Unit

Right side service door

Electrical Unit

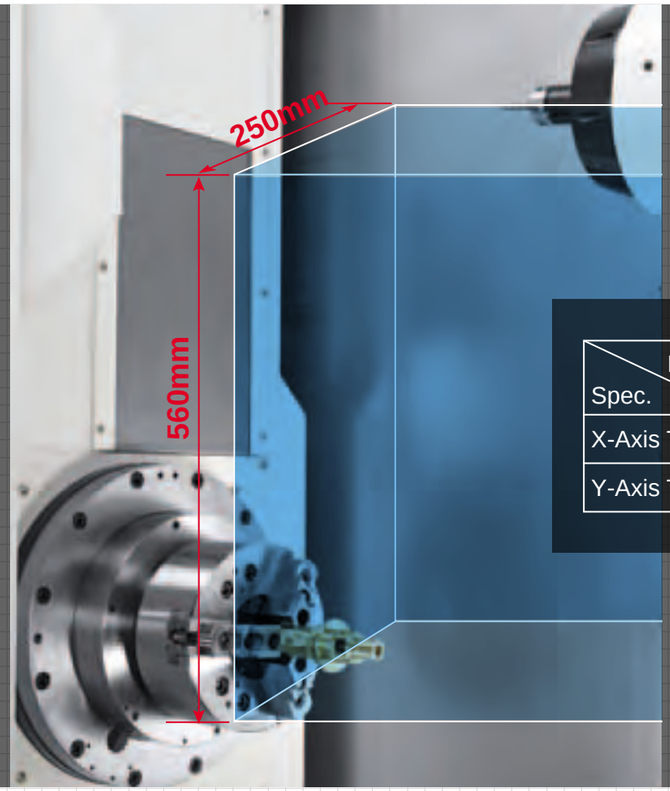
Coolant System

Chip Conveyor System

CTS Unit

Longer Travel Allows Easier and Comfortable Operation

With longer travel, it releases the unsafe feeling due to possible collision when preparing the tools.

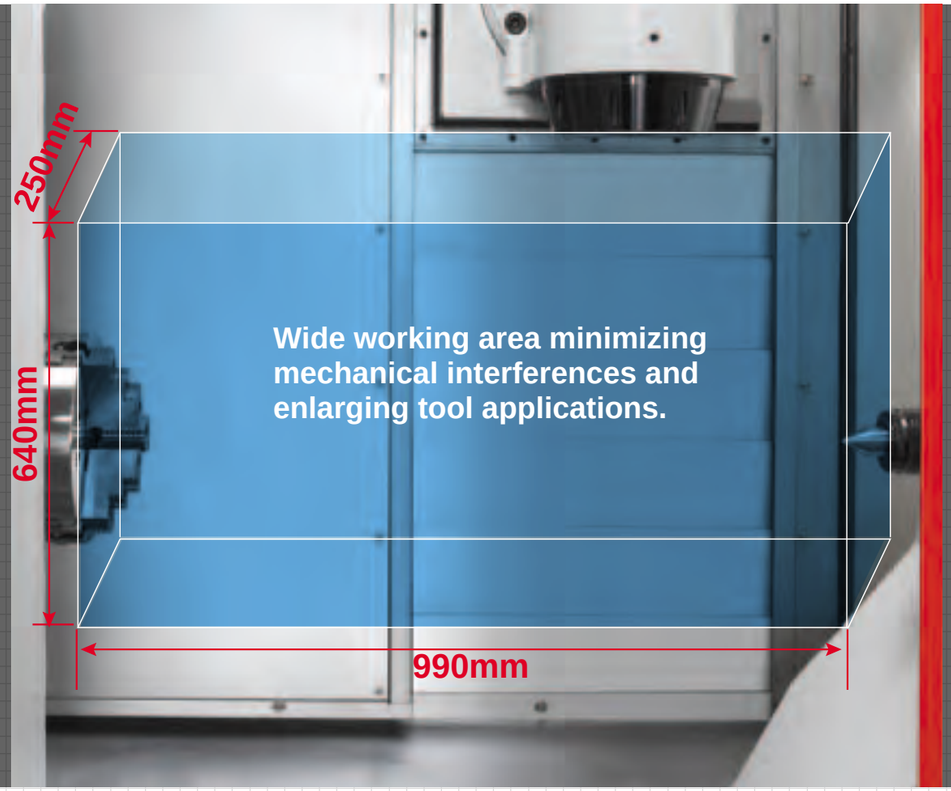


Spec. \ Model	TM-2500	TM-2500S
X-Axis Travel	560 mm	560 mm
Y-Axis Travel	250 mm	250 mm

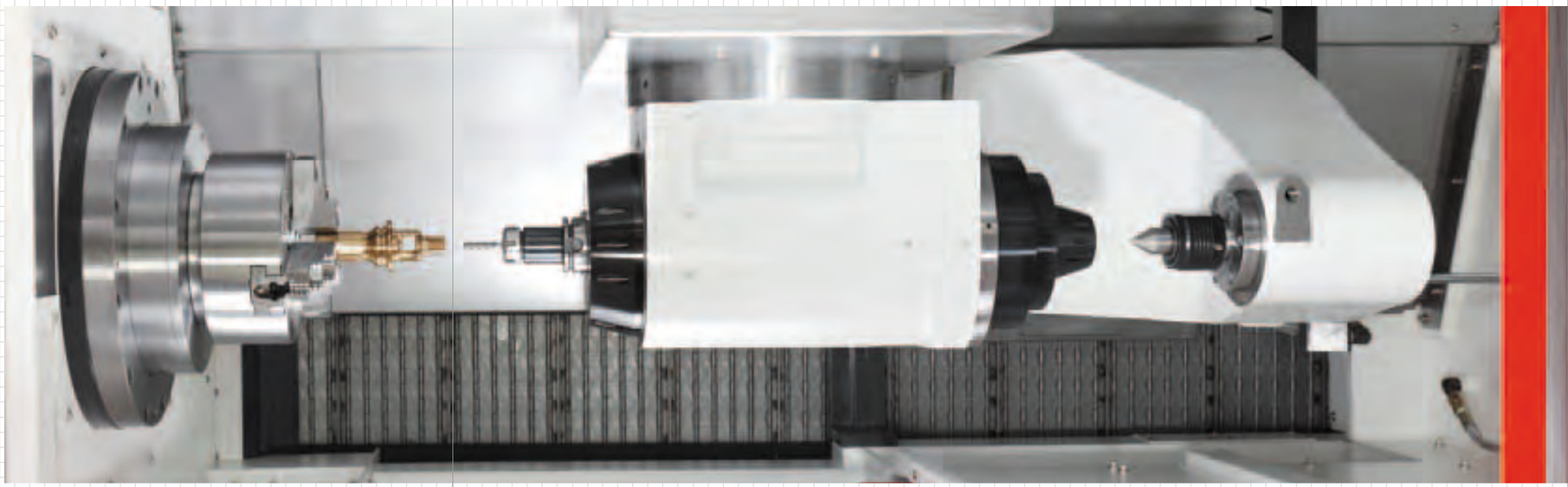
Larger spindle unit and tool space are realized in the absence of interference

Through the design of milling spindle unit (Y-Axis : Home; B-Axis : 0º), the collision can be avoided between the chuck and the tool tip.

Flexible Machining from Each Direction



Wide working area minimizing mechanical interferences and enlarging tool applications.



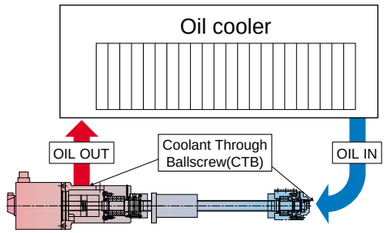
Stable high-precision detection and control

Laser detection

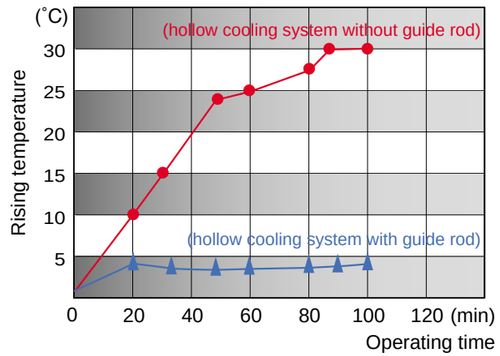
Linear and rotary axis are laser inspected to get error value and compensated with NC to ensure high precision repetitive and positioning and workpiece machining.

Three-axis guide rod hollow cooling system

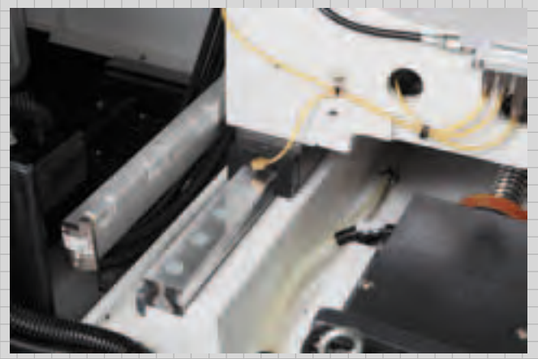
The 3-axis transmission guide rod system employs hollow cooling design to minimize heat and thermal expansion of ball screw during high-speed operations with cooling oils to balance high speed and high precision at the same time.



Hollow guide rail cooling benefits diagram

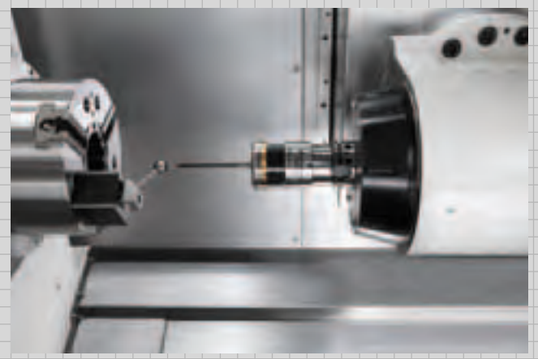


Optical Linear Scale OP



X/Y/Z/B/W/C axis

Turning and milling axis (B/C) center calibration system

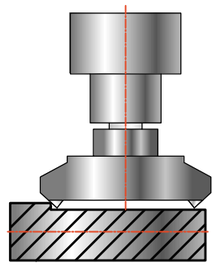


Processing capacity

Milling Application

Turning Application

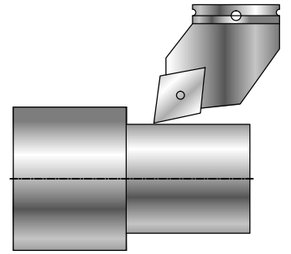
Milling (tool spindle)



Tool diameter (mm)	Turning width (mm)	Turning in (mm)	Feed rate (mm/rev)	Speed (min^{-1})
Ø50 (4-piece cutter)	40	3	0.53	1300

Work materials : S45C

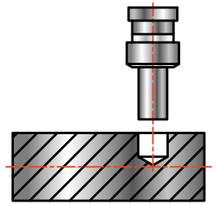
Turning



	Turning cross-sectional area (mm)	Feed rate (mm/rev)	Speed (min^{-1})
First spindle	5.5	0.2	730
Second spindle	5.5	0.2	730

Work materials : S45C

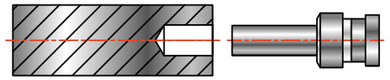
Drilling (tool spindle)



Drilling diameter (mm)	Feed rate (mm/rev)	Speed (mim^{-1})
Ø20.5	0.1	1600

Work materials : S45C

Drilling (turning spindle)



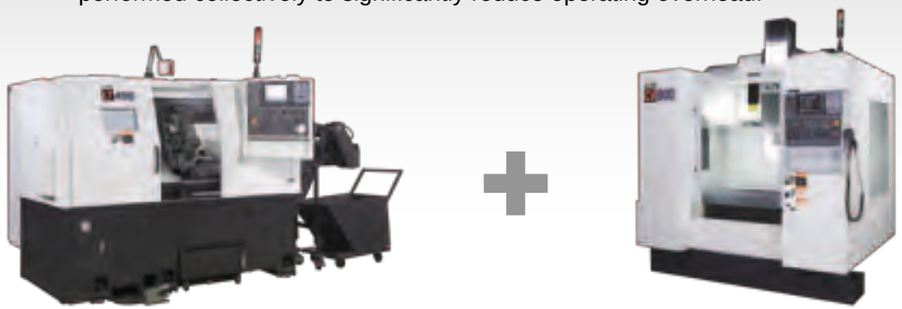
	Drilling diameter (mm)	Feed rate (mm/rev)	Speed (mim^{-1})
First spindle	Ø20.5	0.1	1300
Second spindle	Ø20.5	0.1	1300

Work materials : S45C

Power Saving Program of Integrated Machining

Before

- In the past, the machining of complicated workpieces can only be achieved by using both CNC lathe and machining center.
- Now with an integrated production center of high-efficiency, the work can be performed collectively to significantly reduce operating overhead.



Integrated Production Center

New

- Intensive engineering to use less equipment.
- Shorten the machining time to significantly reduce the overhead.
- Overall manufacturing costs can be sustainably reduced, including tools, equipment, labor and indirect expenses.

Annual power consumption (capacity <KW>)

After improvement
Electricity is reduced by
by 43%

After improvement
Machining time is shortened
by 67%

An Environmental-Friendly, Power-Saving Machine

Evolution
Upgrade Evolution

Effective Utilization of Limited Resources and Environmental Protection:

TM-Series use a variety of energy-saving design techniques to protect the environment.

To Promote Energy Saving

- The internal lighting is designed with automatic shutoff function.
- The chip conveyor stops automatically when the automatic operation program is completed.
- The heat exchanger remains inactive if temperature inside the electrical cabinet does not reach the threshold.
- Use LED lamp.
- The working lamp goes off automatically when the doors are closed.
- Use M-code (M08/M09) to activate or deactivate the Oil Mist Collector.
- Automatic power cut-off function.

Driven by Environmental Protection

- Use Oil Mist Collector.
- When the axis stops, the system will stop supplying lubricant oil.
- The machine is tightly enclosed by sheet metals to reduce noise and diffusion of oil mist.
- In-line transmission design to reduce noise and loss of power.
- Use steel pallets, instead of wooded pallets, for machine delivery so they can be reused.
- Use grease lubrication system.

Superb eco-friendly, energy-saving design

Delivery by steel pallets + container transportation

Power Consumption Monitor

The ammeter can be installed on the machine in order to elevate the energy saving awareness of an operator.

After improvement
Annual power consumption:
745KWH

After improvement
Emission reduced by
282KG

Tool system diagram

HSK-63T (standard)
CAPTO (optional)

Milling

Regular

- PSC / IAP
- PSC / CIAP
- PSC / MAP
- PSC / CMAP
- PSC / FMA
- PSC / FMB
- FACE MILLING CUTTER
- ACCESSORIES
- PSC / FMC
- PSC / SCA
- COLLET
- SEALED CAP
- SEALED COLLET
- PSC / MLD
- PSC / SFC
- NUT
- COLLET
- PSC / ER
- ER WRENCH
- PSC / PNER
- COLLET
- PSC / SBL
- SKS WRENCH
- NUT
- COLLET
- PSC / SKS
- PSC / SK3
- PSC / SLN

- PSC ADAPTER
- PSC ADAPTER
- TEST BAR
- PSC BLANK

Turning

- BT / PSC ADAPTER
- CAT / PSC ADAPTER
- DAT / PSC ADAPTER
- HSK / PSC ADAPTER

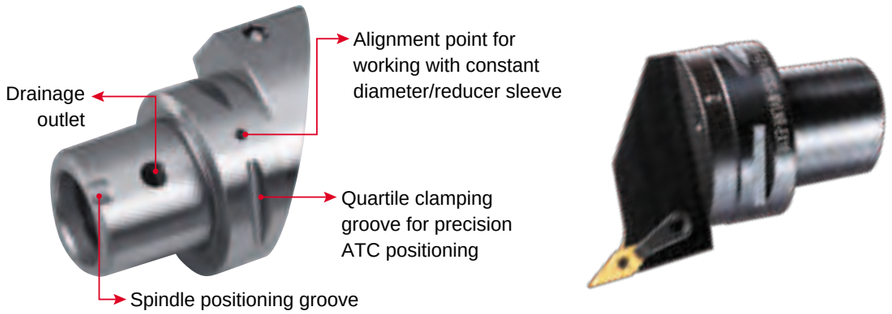
- PSC / MWLN
- PSC / MTJN
- PSC / MCLN
- PSC / MDJN
- PSC / DWLN
- PSC / DTJN
- PSC / DCLN
- PSC / MCMN
- PSC / MDNN
- PSC / MVVN
- PSC / MVLN
- PSC / SV20
- PSC / SN20
- PSC / S

Boring

- PSC / PCK
- PSC / PMB
- PSC / PBJ
- PSC / SCK
  PSC / MCK
- EXTENSION SPACER
- PSC / SBJ
- SCK BORING HEAD
- SMB BORING HEAD
- SBE
- BORING CUTTER
- ACCESSORIES

(Pictures of tools : courtesy of Chain Headway)

CAPTO tool features and high pressure cooling system OP



Features of CAPTO tools

- High precision
- Very good balance and concentricity
- Extremely high torque transmission capability
- Direct coolant injection at cutting edge
- Very stable when using large overhanging tools
- Ability to withstand high axial forces
- Quick tool exchange
- Modularization based flexibility
- Automatic tool exchange
- Virtually unlimited spindle speed
- No weak section in existence, e.g. keyways
- Use internal cooling tools
- Excellent bending rigidity
- Large axial clamping force
- Tighten or loosen the module with a mere half turn
- Easy module assembly and disassembly
- Hydraulic tensioning: magazine embedded clamping slot for mechanical clamping

Four-sided contact

- High clamping rigidity
- High clamping precision and stability
- Long service life
- Good operability
- Strong versatility
- 1:20 slope and three sides restraining flange slope
- 2.8624 (self-locking at small slope)
- Triangular polygonal bevel drive
- Modular combination based internal thread holes
- PSC tool shank employs quartile instead of ring holding grooves to enable precision positioning for ATC operation

Lathe machining - high efficiency fast exchange

- Share of cutting time spent in lathe machining account for one third of the total time with the remaining two-thirds consumed by machine inspection and preparation, cutting tool and workpiece inspection, and workpiece exchanges.
- Average tool exchange time when using the original cutting tools: 8.5 minutes.
- Average time consumed by for tool cutting tool blades: 2.5 minutes.
- Reduce the aforementioned exchange and positioning time to an average of 1 minute with the PSC cutting tool quick exchange system.
- Reduce annual cutting tool exchange and blade positioning time down to 50~200 hours.
- Raise production efficiency by 25% odd

High pressure coolant system - green light production

High pressure cooling has become the standard options for most advanced CMC lathes and multi-function machines. The CAPTO device automatically delivers coolant to the nozzle. These high precision nozzles precisely inject coolant to the appropriate position on the blade to create "hydraulic wedge" between the chip and the rake face of the blade.

This benefits the following:

- Good chip control — result in less machine downtime
- Fixed high precision nozzle — result in safer machining process
- Extend tool life — by 50%
- Increase productivity — by 20% faster cutting speed

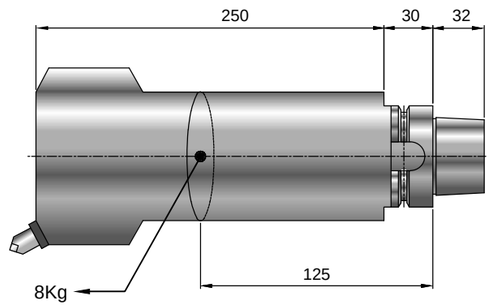
Investment in high-pressure cooling function of machine tool is small in amount and quick in return. The use of CAPT0 is the key factor for the machining industry's success toward safe and high efficiency manufacturing. That is, apply optimum tool-machine interface in a safe and high efficiency solution to ensure your success in the future.

Evolution
Upgrade Evolution

Tool Dimensions Diagram

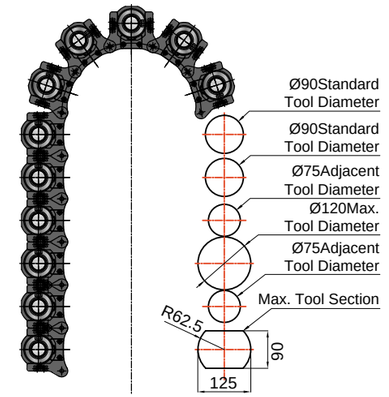
Unit：mm

Tool Dimensions



Weight inclusive of Holder, Chuck, Collet and Tool.

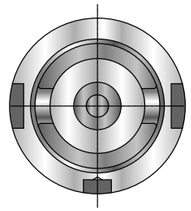
Max. Tool Diameter

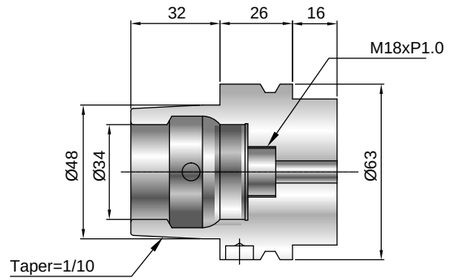


Tool Shank Dimensions

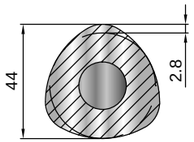
Unit：mm

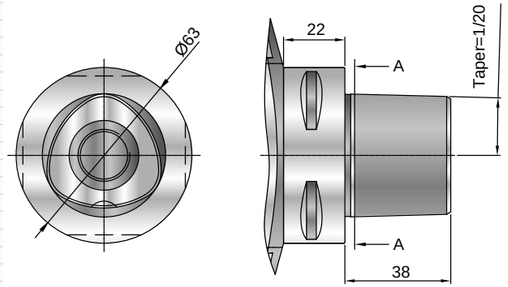
HSK-63T





CAPTO C6 OP



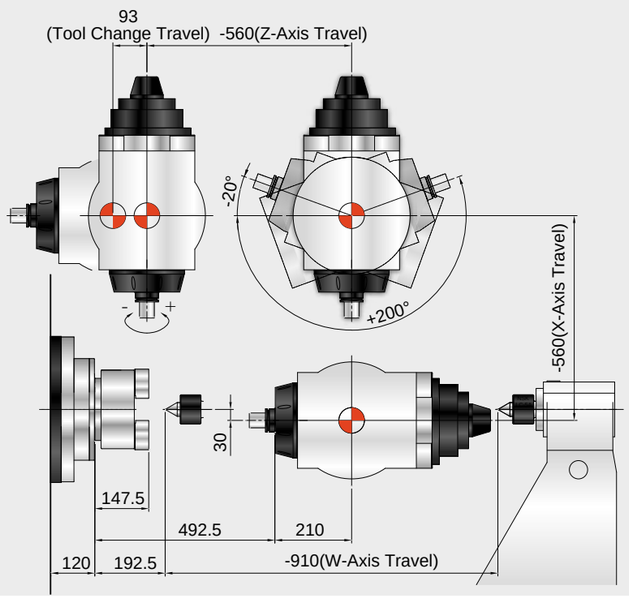


Working Area Diagram

TM-2500

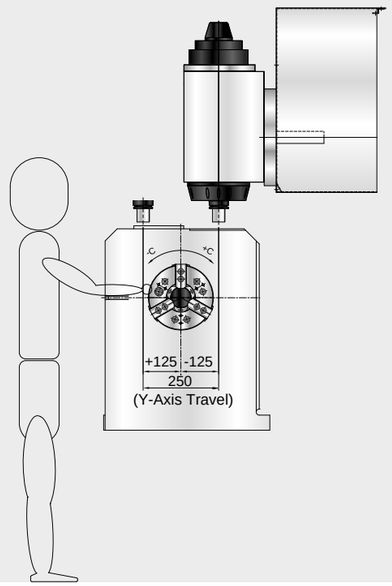
Unit：mm

B-Axis



Unit：mm

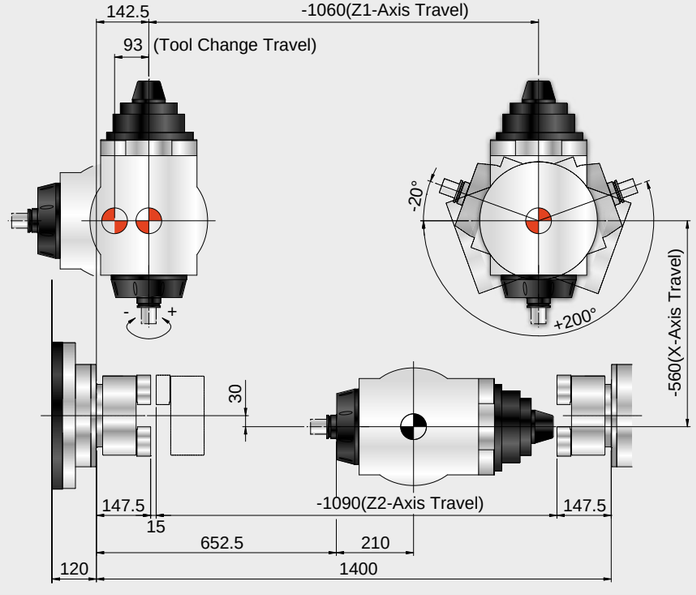
Y-Axis



TM-2500S

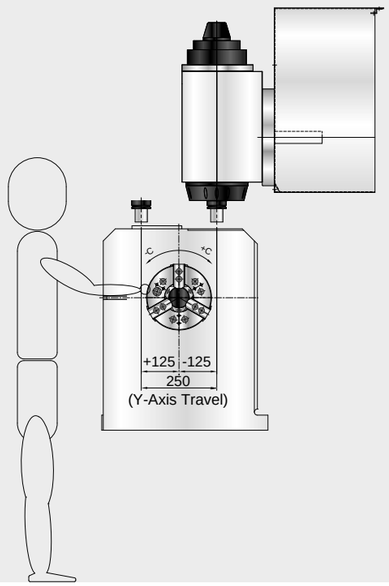
Unit：mm

B-Axis



Unit：mm

Y-Axis

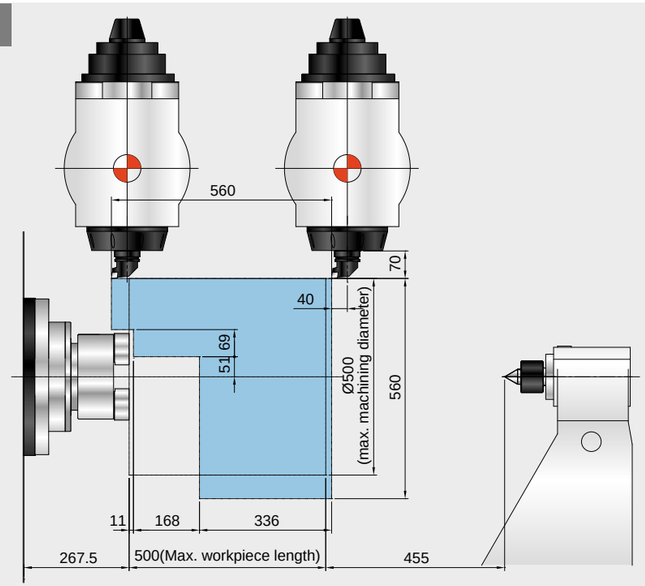


Movement Area

TM-2500

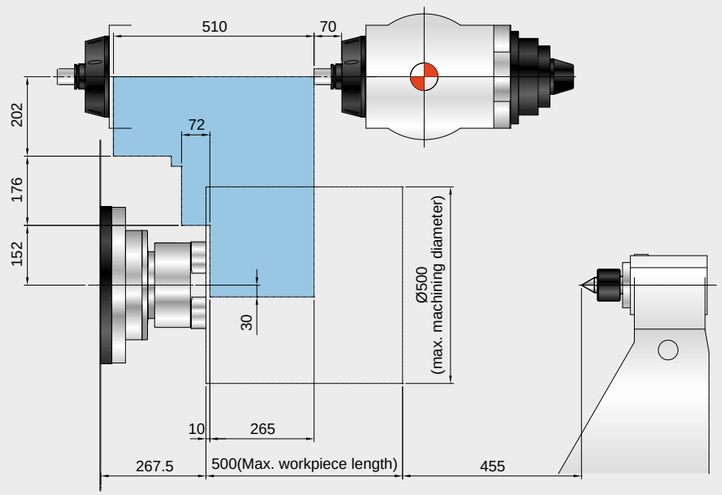
Unit：mm

OD Tool Spindle



Unit：mm

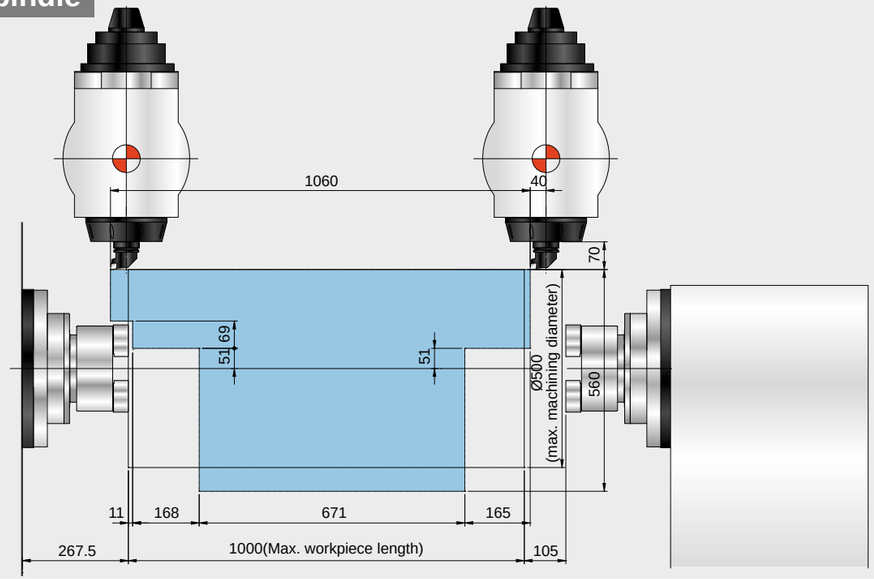
ID Tool Spindle



TM-2500S

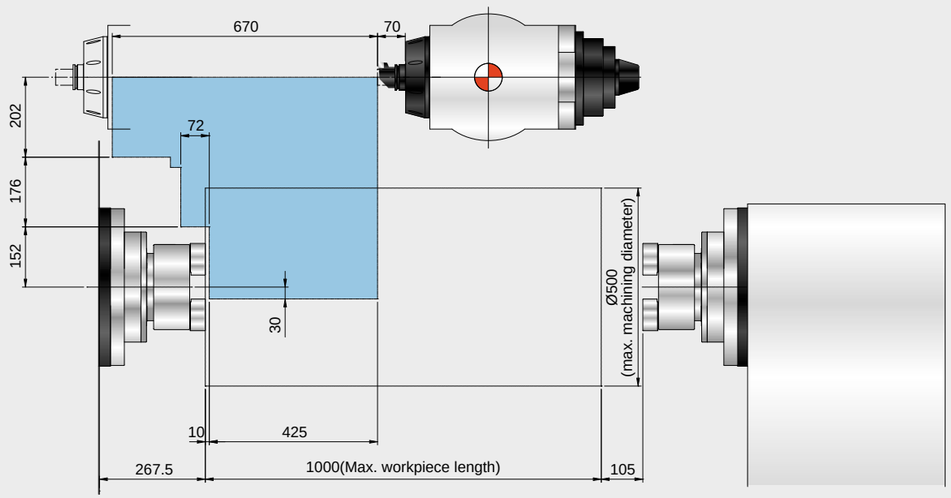
Unit：mm

OD Tool Spindle



Unit：mm

ID Tool Spindle

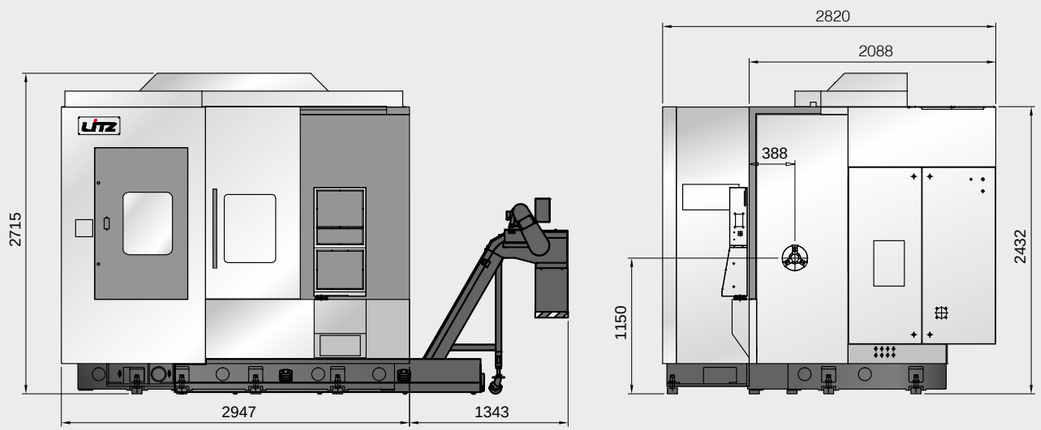


Machine Dimensions

TM-2500

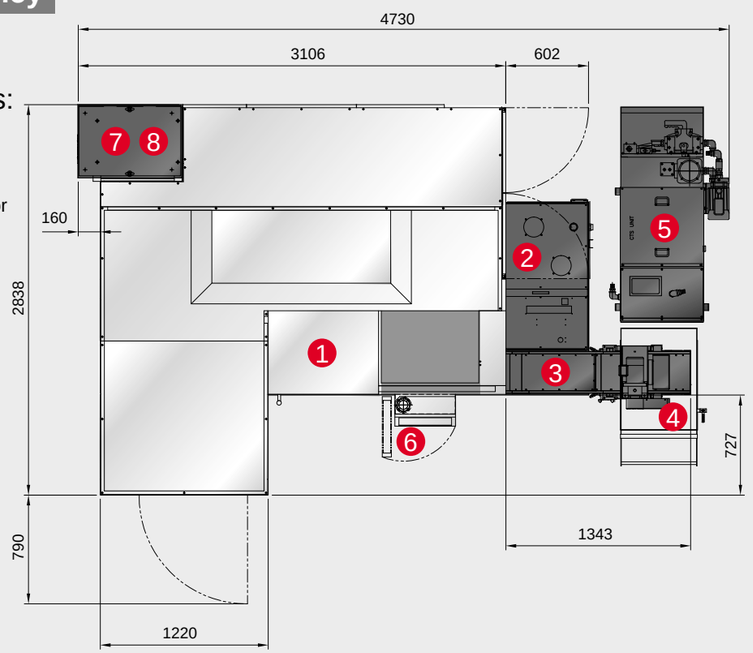
Unit：mm

Appearance Dimensions



Unit：mm

Machine Occupancy



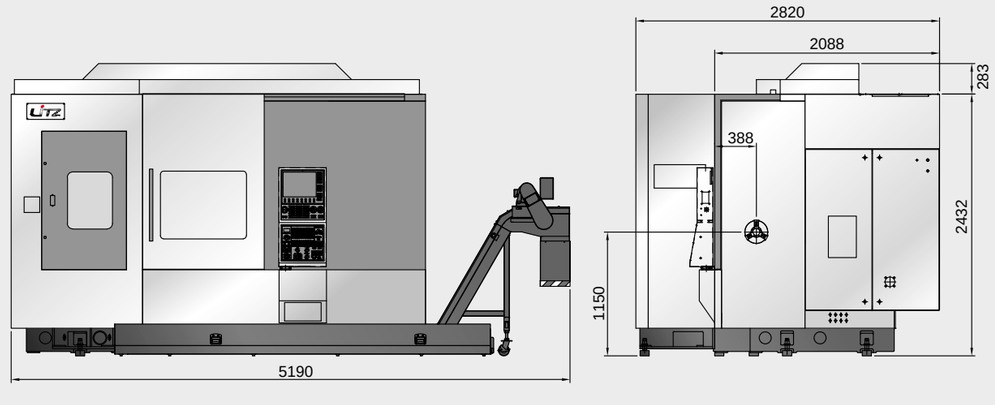
Description of parts:

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

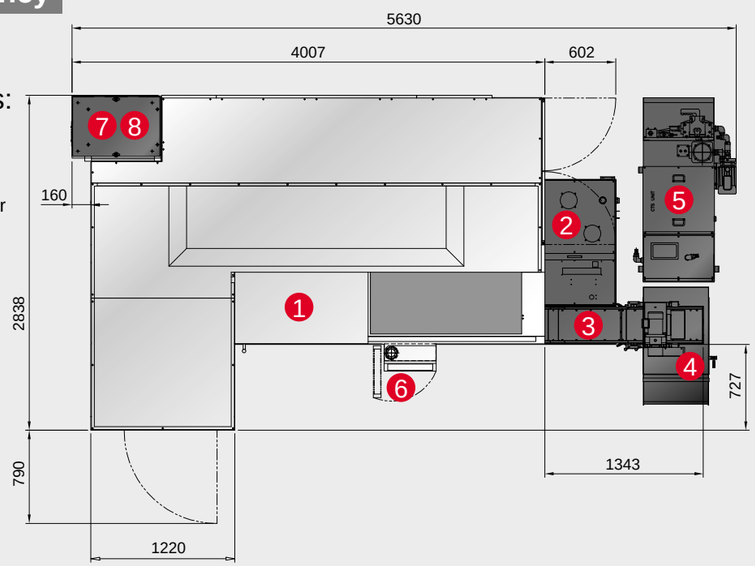
Unit：mm

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 Specifications

	Item	Unit	TM-2500	TM-2500S
Capability, Capacity	Max. swing dia.	mm	Ø530	Ø530
	Max. Machining Diameter	mm	Ø500	Ø500
	Max. Machining Length	mm	500	1000
	Max. Bar Diameter	mm	Ø65	Ø65
Travel	X-Axis Travel	mm	560	560
	Y-Axis Travel	mm	±125	±125
	Z1-Axis Travel	mm	560+93	1060+93
	Z2-Axis Travel	mm	-	1090
	W-Axis Travel	mm	910	-
	B-Axis Rotating Angle	degree	-20˚~200˚	-20˚~200˚
	C-Axis Rotating Angle	degree	360˚	360˚
Feedrate	X-Axis Rapid Feedrate	mm	36	36
	Y-Axis Rapid Feedrate	mm	36	36
	Z1-Axis Rapid Feedrate	mm	36	36
	Z2-Axis Rapid Feedrate	mm	-	24
	W-Axis Rapid Feedrate	mm	8	-
	B-Axis Max. RPM	RPM	25	25
	C-Axis Max. RPM	RPM	250	250
Turning Spindle	Chuck Dimensions S1		8"	8"
	Chuck Nose Type S1		A2-6	A2-6
	Hole Diameter S1	mm	Ø75	Ø75
	Spindle Max. RPM S1	RPM	4500	4500
	Motor Output Power S1	KW	15/22	15/22
	Chuck Dimensions S2		-	8"
	Chuck Nose Type S2		-	A2-6
	Hole Diameter S2	mm	-	Ø75
	Spindle Max. RPM S2	RPM	-	4500
	Motor Output Power S1	KW	-	15/22
Milling Spindle	Spindle Max. RPM	RPM	12000	12000
	Motor Output Power	KW	11/22	11/22
	B-Axis Min Indexing Angle	degree	0.001˚	0.001˚
Tool Change	Tool Indexing Angle/Position		90˚/4 positions	90˚/4 positions
	Tool Type		HSK-63T	HSK-63T
	Tool Magazine Capacity	T	36	36
	Max. Tool Diameter (Without adjacent tool)	mm	Ø90(120)	Ø90(120)
	Max. Tool Length	mm	250	250
	Max. Tool Weight	kg	8	8
Quill-Type Tailstock	Quill Type		MT5	-
Controller	Model		SIEMENS840D	SIEMENS840D
Machine Dimensions	Machine Height	mm	2715	2715
	Occupancy(Without chip conveyor)	mm	3106x2838	4007x2838
	Machine Weight	kg	9200	11000
Energy Requirement	Power Capacity	KVA	35	42
	Compress Air Requirement	kg/cm³	6	6

Machine Specifications

Evolution
Upgrade Evolution

● Standard ○ Optional ★ Please inquire

Spindle System	TM-2500	TM-2500S
1st Turning Spindle Max. Speed 4500RPM	●	●
2nd Turning Spindle Max. Speed 4500RPM	-	●
Milling Spindle Max. Speed 12000RPM	●	●
Milling Spindle Max. Speed 18000RPM	○	○
Chuck 8"	●	●
Chuck 10"	○	○
Sleeve Chuck(Ø60)	○	○

NC Tailstock		
Quill-Type Tail Stock (W-Axis)	●	-
Rotary Quill	●	-
Fixed Quill	○	-
Tailstock Reverse-Pulling System	○	-

High-Accuracy System		
X/Y/Z Axis Qptical Linear Scale	○	○
X/Y/Z Axis Guideway Hollow Cooling	●	●
B-Axis Optical Linear Scale	★●	★●
C-Axis Encoder	●	●
Spindle Oil Cooling System	●	●

Measuring System		
Turning / Milling Tool Measuring System (BLUM)	○	○
Workpiece Measuring System	○	○
B/C Axis Central Calibration System	★○	★○

Environmental System		
Oil Mist Collector Device	○	○

Coolant		
High-Pressure Coolant System (18Bar)	●	●
High-Pressure Coolant System (70Bar)	○	○

Controller System	TM-2500	TM-2500S
FANUC 31i-B (4+1)	○	○
FANUC 31i-B5 (5 axes simultaneous)	○	○
SIEMENS 840D (5 axes simultaneous)	●	●

Chip Management		
Chain-type Chip Conveyor	★●	★●
Chip Collection Cart	●	●

Automation System		
Rod Automatic Feeder	○	○
Workpiece Arrestor	○	○
Automatic Front Door	○	○

Tool Magazine System		
Storage Number 36T	●	●
Storage Number 72T	○	○

Tool Specifications		
HSK 63T	●	●
CAPTO C6	○	○

Machining Function		
Tooth Milling Function	○	○

Safety Measures		
CE Specification	○	○
Dual-link Pedal Switch	○	○

・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.

Showroom Center and Technical Support

Business and Service Locations Around the World

Showroom Centers are aimed at providing high-quality, fast, comprehensive, and professional top grade services for customers in neighboring areas. They fulfill the business vision of LITZ—"LITZ, your life long good partner"—by satisfying each and every customer's needs, including spare parts provision and maintenance, training, machining demo, process solution preparation, and information sharing.

Trustworthy

During the usage of LITZ machines, we provide great service and rapid spare parts supply, to assure the machine is in good condition.

Showroom Centers

- Planned 5S Centers
- Established 5S Centers

5S Stores Around the Country

(Sales, Service, Showcase, Service and Spare Parts, Technical Support)

LITZ Machinery provides demonstrations and services within an arm's length.

The marketing system from LITZ Showcase Center reflects LITZ's commitment to customer service. The well-established, fast and professional technical support, along with adequate equipment supply and well-organized training systems assure excellent machine operation. This is the priority concern for the majority of our machine customers.

The concept of the LITZ Showcase Center is to create a close relationship among the machine manufacturers, machine dealers, and customers. In addition to showing the latest products from LITZ, the center is also equipped with a CNC training workshop and spare parts warehouse. The professional technical teams provide training, maintenance, accessories and sales to our customers to achieve a comprehensive and thoughtful one-stop service.

Nation-wide Sales and Service System

- Business and Service Center
- Warehouse for spare parts
- Technical Showcase Center (5S Offices)
- Production Factory

Jiaxing LITZ

Taiwan LITZ