Z-MaT®

Smart CNC Solutions

GENERAL CATALOGUE // 2024 edition 07 //

Z-MaT Factory No.1: Zhejiang Manufacturing Base

Z-MaT Factory No.2: Nanjing Manufacturing Base

Z-MaT stands for Zhenhuan Machine Tool Company, one of the largest and fastest growing machine tool builders – worldwide.
Z-MaT manufactures a wide range of CNC machines, which includes CNC Turning Centers, Horizontal CNC Lathes, Vertical Machining Centers, Horizontal Machining Centers, Gantry Machining Centers and Special Purpose Machines.

In addition, Z-MaT is recognized for the company's advanced development and technological advantage in the field of modular manufacturing and solutions providing capability. Various spindles, guideways, tailstocks, CNC controllers, turrets, live toolings, automatic auxiliary equipment and bed structures are available on a wide variety of Z-MaT CNC machines to optimize efficiency, stability and investment according to the customer's workpiece requirements. Thousands of customers' competitive advantage are gained through tailor-made CNC Machines and Solutions provided by Z-MaT.

With distribution around the world, investment from Hong Kong, research and development centered in Taiwan, manufacturing and assembly in China, Z-MaT is a responsible international corporation. Z-MaT is known and recognized for providing unmatched support to customers, employees, and to the environment.

Z-MaT is committed to building partnerships with educational institutions, community organizations, governmental agencies and private companies. Our ultimate goal is to be a conscientious public partner in providing smart manufacturing solutions that serve industry and positively impact the world.

Z-MaT has More Than 200 Models of CNC machines in the company product line. Z-MaT has exported CNC machines to over 80 countries, recognized as a pioneer and leader in supplying complete smart manufacturing solutions world-wide.

Timeline of Z-MaT Development:

1990 Established in 1990 as a mold and auto parts manufacturer. The early company was successful and experienced rapid growth. The company gained valuable experience using CNC machine tools in the manufacturing of the company's product line.

1999 In 1999 capital investment from Hong Kong expanded the company's capacity – pushing Z-MaT onto the international business stage.

2000 From 2000 onward Z-MaT made a variety of machine tools for use in the company's parts manufacturing. These tools dramatically increased productivity and cut costs.

2005 In 2005 Z-MaT moved out of auto parts manufacturing and fully committed the company's resources into the production of CNC machine tools.

2010 In 2010 Z-MaT established a precision parts manufacturing subsidiary, named Giessen to produce high speed and precision spindles.

2011 In 2011 the company established a global marketing strategy and began using the new Z-MaT logo. Rewarded as AAA credit rating company.

2015 In 2015 Z-MaT established a R&D center subsidiary in Taiwan, named GreaMaT. The 4-axis Turning Center TC500 was designed in the same year in Taichung Taiwan.

2017 In 2017 Z-MaT established a second plant in Nanjing city, 3 times the area of our existing headquarter factory. Larger size machines, HMC and Gantry Milling has been made in the new plant. The production capacity has been increased extraordinarily.

2022 In 2022 Nanjing Zhenhuan Machinery Co. Ltd. renamed as Z-MaT Machine Tool Group Co., Ltd. And Z-MaT started to operate as group company.
Acquire www.zmat.com domain name and use it as official Z-MaT group website domain.

2023 In 2023, Z-MaT recruited talent to establish the second R&D center and BD department at its Nanjing factory. The new R&D team designed and built a 5-axis simultaneous machining center with a tandem drive swiveling rotary table (A/C-axis) and a gantry cross beam (X/Y/Z-axis).
Z-MaT implemented the EZM (Electrical Z-MaT Manufacturing) intelligent manufacturing platform, which integrates ERP, OA, and CRM software, milestone of improvement of QC and management efficiency.

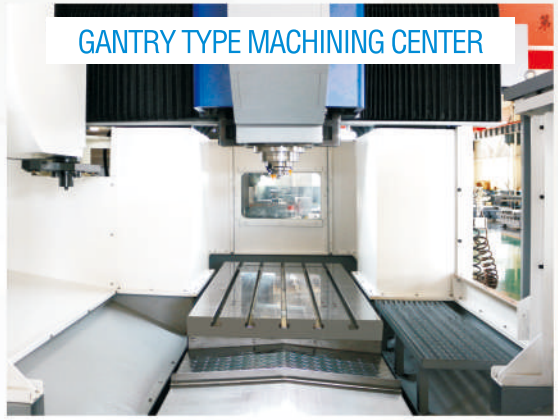
Milling

Vertical Machining Center

Twin Spindle Machining Center

Same investment double productivity,
a secret weapon for the large volume products manufacturer

Gantry Machining Center



Horizontal Machining Center

Compact Apc Solution -MX530H / VMX640

5-Axis Machining Center U630

Contents

Turning

Special Purpose Machine

101 Professional Manufacturer Broad Production line

Service Network

The Latest - MILLING & DRILLING TAPPING TECHNOLOGY

- Vertical Machining Center
- Gantry Machining Center
- Horizontal Machining Center
- Tapping Center
- 5-Axis Machining Center

Steadfast In Our Faith

Recently, the machining center industry are playing a price game, manufacturers are pushing machining center prices down in a race to the bottom.
The machine tools builders are facing overwhelming pressure to push prices lower and lower in order to compete. Their margins are being cut slimmer and slimmer. This only drives a need to cut costs by using lower priced components, reducing manufacturing processes and designing lighter machine. Though the parameters seem the same, the machines are getting weaker and service is getting poorer. CNC machines are a complex piece of equipment, integrated with pre-service and after-service for a long term operating life, it is impossible to identify the difference by sight. The end user will pay the price by running the machine at high cost and worse accuracy, reduced operating life, increased machine downtime and after sales service.
Z-MaT has always been known for being a manufacturer of heavyweight machines.
We were a massive CNC machines end-user before. Our faith is helping our customer gain competitive advantage by providing them with cost-effective products, fast and superior service and tailor-made machining solutions. Our company, and our people will never compromise on our commitment to providing quality products and service.

CONTROL SYSTEM

Cutting edge and easier operation

Siemens 828D for CNC Milling

Optimum scalability in the compact class
Based on CNC performance versions, more complex machines with additional axes/spindles and 2 machining channels can be implemented.

Standard with 10.4 TFT Panels
The high-resolution 10.4" TFT SINUMERIK 828 color displays are attractive as a result of their ruggedness and user friendliness. SINUMERIK Operate facilitates intuitive and efficient machine operation.

Operator friendly
- 10.4" TFT color display in the 4:3 format
- Full QWERTY keyboard with short-stroke keys
- All operating screens can be quickly accessed using 16 softkeys
- Simple data transfer using front interfaces with degree of protection IP65 (USB 2.0,RJ45 Ethernet)
- Proximity/distance sensor for smart display control Rugged and maintenance free
- Die-cast magnesium panel front with scratch-resistant glass
- Operators can wear work gloves
- NV-RAM memory without requiring a buffer battery
- No fan and hard disk
- Simple commissioning via USB interface
- Include spindle and feedrate override.

Fanuc 0i MF Plus for CNC Milling

As a successor to the Series 0i-MF, the FANUC Series 0i-MF Plus has been released with renewed design, enhanced basic functions and the pursuit of ease of use. It is equipped with the latest control technology for fine surface machining and reducing cycle time, and with customizable functions that can flexibly create screens suitable for machine tools.

- 10.4" unit, the MDI unit with a new design, new color combination and hierarchical icon display.
- AICC
- Fanuc Picture for second development
- High-Speed Rigid Tapping
- Helical interpolation
- Smart overlap
- Smart rigid tapping
- Dynamic graphic display function
- Multi-step skip
- Manual handle retrace
- Smart load meter
- G54-G59 Plus 48 Additional Workpiece Coordinate Offsets
- Milling G-code systems A/B/C
- Direct Drawing Dimension Programming
- Programmable Data Input
- 400 Tool Off sets Pairs
- Tool Life Management
- High-Speed Skip for Probing

Z-MaT & FANUC Series 0i-F PLUS

A new generation of High-performance CNC

- HRV+ High Response AC Servo System
- Edit Program In Memory Card
- Fast Cycle-time Technology
- Quick Program Restart
- AICC Ⅰ (TYPE 5)/ AICCⅡ+ (TYPE 1/3/*5)
  AI Contour Control Ⅰ / AI Contour Control Ⅱ+
- Smooth Tolerance+ Control
- Machining Condition Selection Function TYPE 1/3/ *5)
- Manual Handle Retrace (TYPE*1/*3/*5)
- Polygon Turning
- Polar Coordinate Interpolation
- Cylindrical Interpolation (TYPE*3/*5)

■ Standard ■ Standard in MF PLUS ■ Standard in TF PLUS
* Option in MF PLUS * Option in TF PLUS

Fine Surface Technology

· AICC Ⅰ / AICC Ⅱ +

This function enables suppression of acceleration/deceleration delays and servo delays that become larger with increases in the feedrate and reduction of machining profile errors.

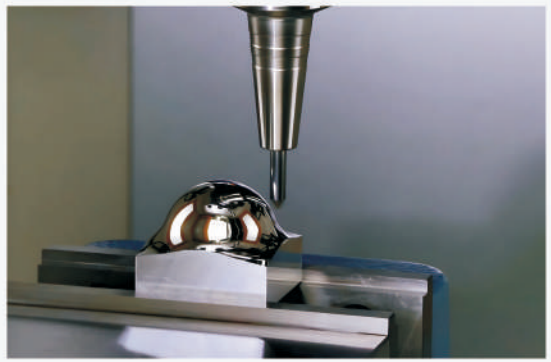
· Smooth Tolerance+Control

This function generates smooth machining path within specified tolerance.

· Machining Condition Selection Function

For AICC function parameters which place importance on feedrate or precision are set and a precision level is specified according to the machining condition during machining.

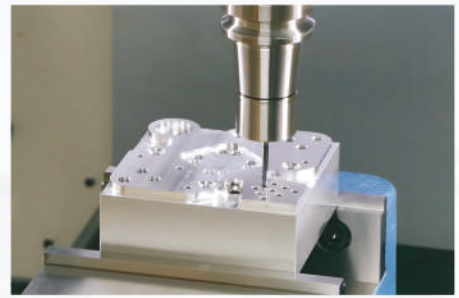
■ Standard in MF PLUS

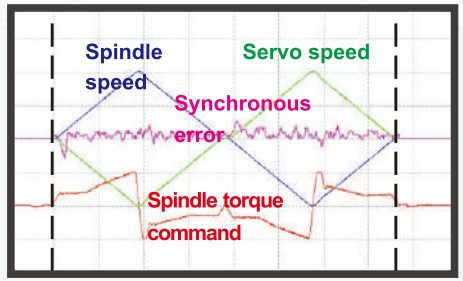


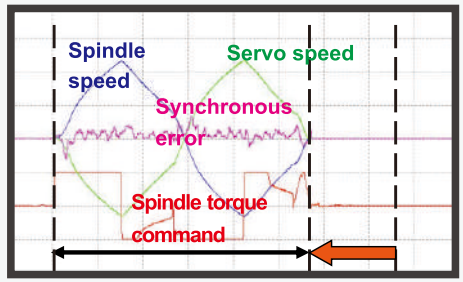
Smart Rigid Tapping

· Spindle axis always using full power in acc./dec.
· Servo axis following spindle axis through FSSB communication

■ Standard





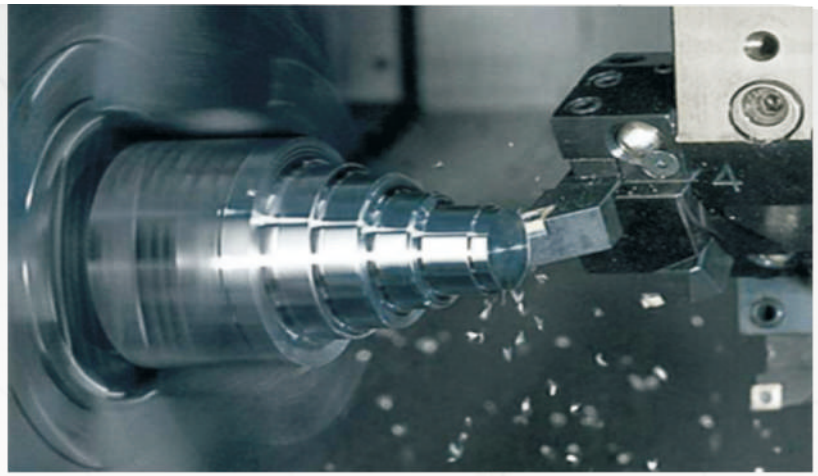


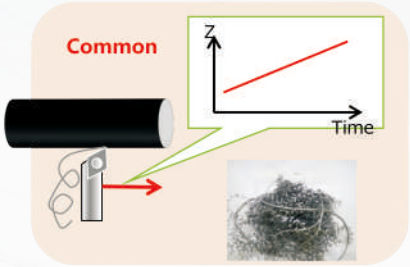
Servo Learning Oscillation

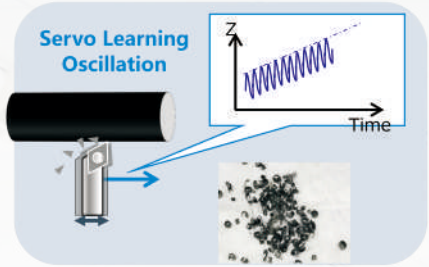
· A function for shredding chips in lathe applying high frequency oscillation with Servo Learning Control

· This function is necessary to two-axes oscillation cutting

* Option in TF PLUS







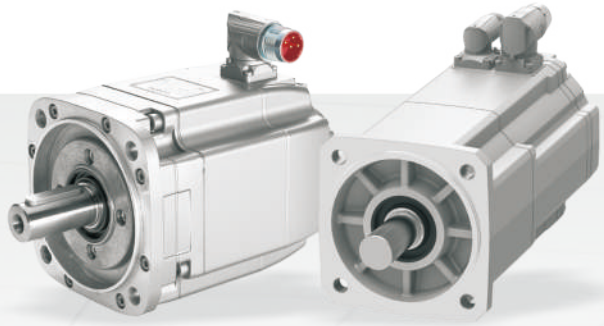
FANOVI

Multifunctional HMI product based on FANUC CNC

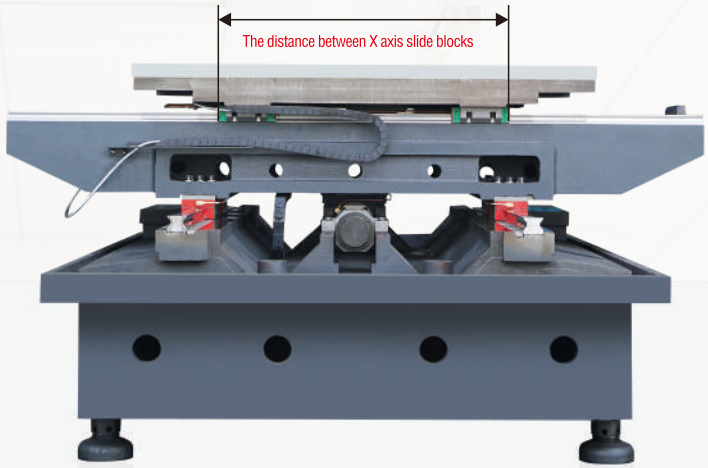
■ Standard

THE RIGIDITY IS HIDDEN IN THE DESIGN DETAILS

It's hard to tell a machine quality by only reading parameters. However, you could always find design details in Z-MaT machine sparkling the spirit of Z-MaT R&D team in full pursuit of solid inside quality.



V10: 880mm (3 pairs of slide blocks)
V8: 820mm (2 pairs of slide blocks)
V6: 750mm (2 pairs of slide blocks)
VMC1050E: 820mm (3 pairs of slide blocks)
F1055: 770mm (2 pairs of slide blocks)



Standard with More Powerful Motor

To exploit the mechanical robust design performance, Z-MaT uses powerful servo motors to drive axes, spindles, tool changers, etc. Taking one point as example, for medium size VMC, Z-MaT use rated 3.0(Fanuc) /3.1(Siemens), Max. 9.4kw, 45N.M high torque axis servo motor, while others commonly use 2.0 or 2.5kw rated one.

Larger Size LM Slide Blocks

Z-MaT VMC uses heavy duty linear rails together with large-size slide block which support and guide the motion much more steady than regular ones. It is one of the Z-MaT unique mechanical engineering details for super anti-vibration, rigidity and long life characteristics.

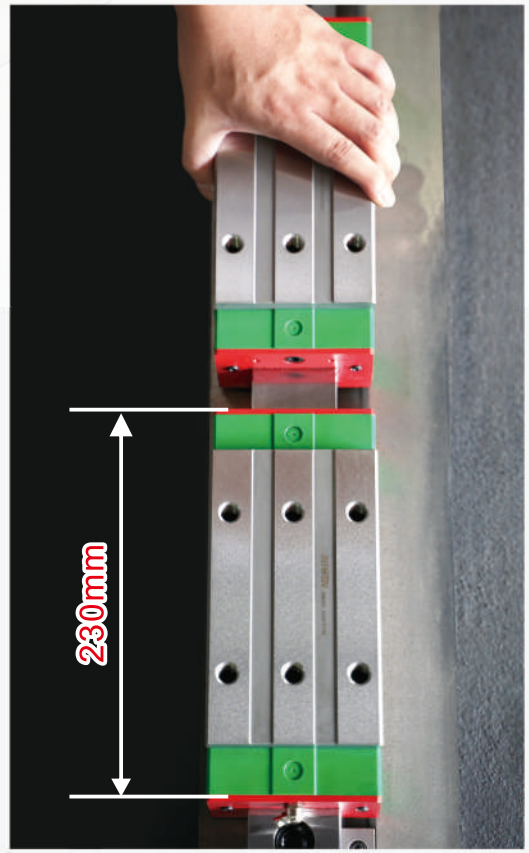


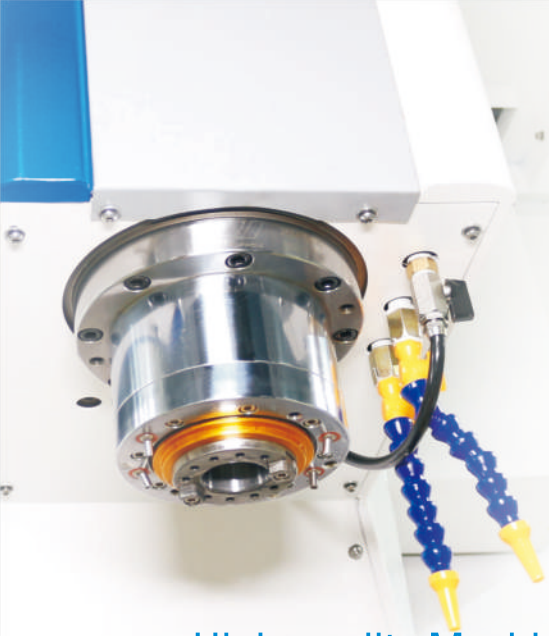
Photo: Power V10 Z axis slide blocks

Wider Width of Distance Between Slide Blocks

The distance between slide blocks is a very important parameter which affects machine accuracy, rigidity and load capacity. If the span between the slide blocks are short, it's not able to guarantee the accuracy and rigidity in the full travel due to bending occurred by side thrust force.

One Class-up Servo Driver

In addition, Z-MaT usually uses 'one class-up' servo driver to shorten start-stop time, to increase over-load capacity. Matched with solid mechanical, it extremely increases the CNC machine reliability and performance.



High-quality Machining Supported by High-performance Spindle

The machining centers are equipped with high-performance spindles with various speeds and sizes, whose design is optimized through structural analysis to increase rigidity of machining. The high durability and high speed of the spindle allow high quality machining.

High-Capacity Spindle Unit

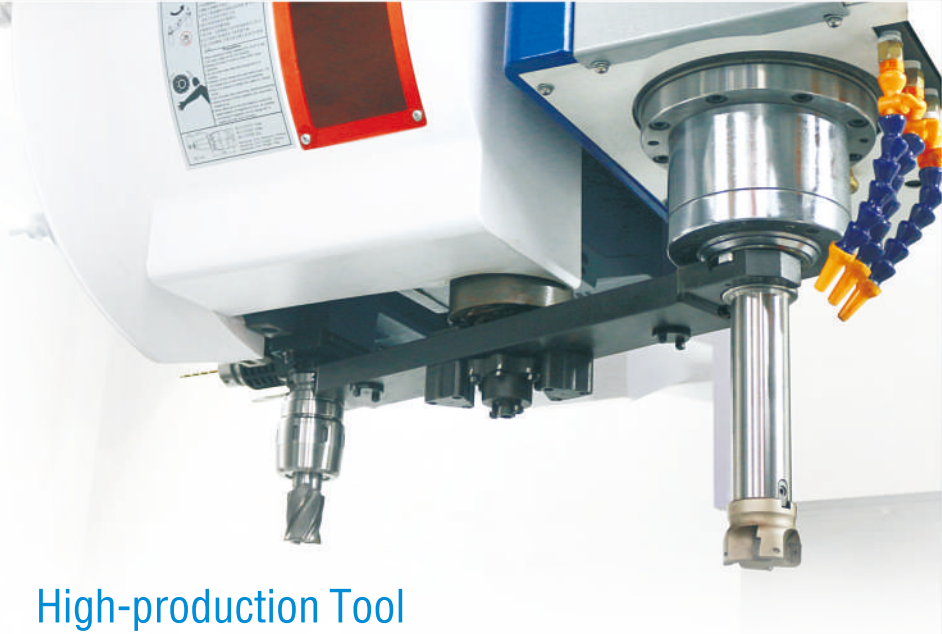
The advanced design of our spindles provides high axial-thrust capability, yet generates minimal heat. Several options of spindle heads and speed are available to fulfill various high speed machining requirements.

High Efficiency Belt-drive Spindle

The high efficiency belt-drive spindle provides 8000 rpm spindle speed which depends on machining requirements.
Spindle oil cooler system is optional item for all series to prevent thermal expansion effects and thermal deformation.
The contact surfaces between headstock and spindle are all precisely hand scraped to ensure optimal performance and precision.

High Speed, High Power Direct Drive Spindle

Direct drive spindle efficiently separates the heat generated from the motor, which reduces deformation, therefore increasing machining accuracy.



High-production Tool Changer With Super-fast Exchange Speed

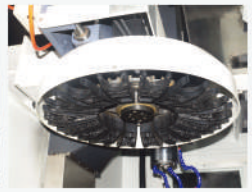
Tool storage capacity 24/30/40/60 tools increases productivity and reduces setup times. A double-arm gripper swaps tools quickly to minimize non-cutting time. Locating the tool changer outside of the work envelope frees up additional workspace, keeps tools and tool pockets free of contamination, and adds greater flexibility when using large fixtures or rotary tables. With adjacent pockets empty, the tool changer will accept oversize tooling.

Fast and Reliable

- The high-performance magazine and ATC achieve quick tool change to minimize non-cutting time.
- The highly reliable magazine and ATC that cover a wide range of tools ensure solid tool changes and flexible machining.
- The ATC arm equipped with a holding lever for securing a tool tightly holds a long and heavy tool, offering reliable tool change.

Full Guard ATC

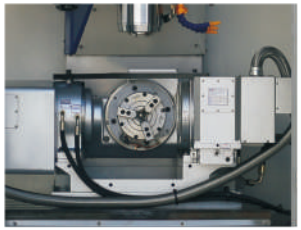
Disk Arm ATC



Carousel ATC

Open Innovation for Maintaining Ideal Machining Quality

We offer a variety of high-performance peripheral equipment according to customer production requirements.
The combination of the VMC machine and high-performance peripheral equipment delivers high-precision machining and excellent durability.

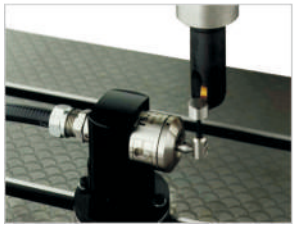


4th and 5th axis auxiliary device interface

Users who wish to set up a rotary axis on the table to increase application flexibility are encouraged to contact sales representatives.

Chip conveyor

Reduced chip accumulation inside the machine and operator spends less time removing chips.



Automatic measurement

Automatic tool setting and workpiece measurement offer easy operation and help operator save working time.

Coolant through spindle center

Coolant to be supplied to the tip through the holes of the spindle and tool.

Spindle Oil Chiller

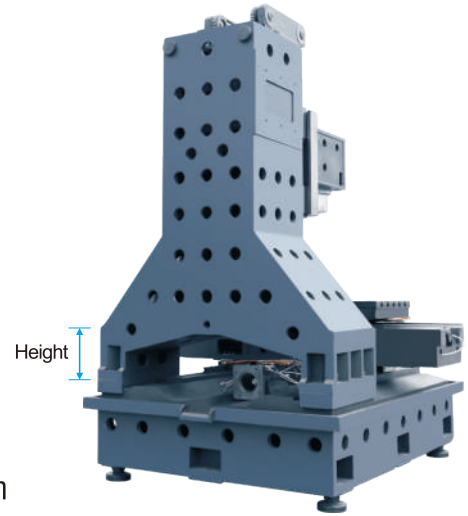
An oil cooler correlated to room temperature can be equipped for long-term operation at high speed.

Gearbox

Spindle with gearbox provides two speeds of High-Low torque.

Height raised

100-300mm



One Piece raised column

When the distance between the table top and the spindle nose needs to be extended, for example, to accommodate a fixture or rotary axis on the table, the column can be raised. 1 piece-monoblock design structure guarantees the rigidity and reliability.

HIGH SPEED F SERIES

Fast Motion Design

To increase your productivity, the Z-MaT F series vertical machining center is standard with a 48m/min fast traverse, a high-speed ATC, big pitch C3 ballscrew, cylindrical roller linear guideway. The all-around design enhanced performance of the F series machines are popularly applied to 5G, IT, aero space and defence industry.

Standard Features

- Disk type ATC
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Operator Door Safety Lock
- Air Conditioned Electrical Cabinet
- Handheld Air Gun
- 10000rpm Belt-Drive Spindle
- Spindle Oil Chiller

Optional Features

- CNC Controlled 4th Axis Rotary Table
- Different CNC Control System
- Coolant Through Spindle
- Chip Conveyor
- 12000rpm Direct Drive Spindle

F650 F1055 F1060

Specifications

		Unit	F650	F855	F1060	F1055
Table	Table size	mm	750×500	950×550	1200×600	1200×550
	Max.load	Kg	400	500	600	600
	T slot(width×nos.×distance)	mm	14×5×80	18×5×90	18×5×100	18×5×90
Travel	X Travel	mm	600	800	1000	1000
	Y Travel	mm	500	550	600	550
	Z Travel	mm	550	550	550	550
	Spindle center to column	mm	510	570	610	580
	Spindle nose to table	mm	100-650	130-680	130-680	130-680
	Guideway type		LM (Roller)	LM (Roller)	LM (Roller)	LM (Roller)
Spindle	Spindle speed	rpm	10000,*12000	10000,*12000	10000,*12000	10000,*12000
	Spindle type		BT40	BT40	BT40	BT40
	Main servo motor	kW	5.5/7.5 *7.5/11	7.5/11	7.5/11,*11/15	7.5/11,*11/15
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	48	48	48	48
	ATC capacity/type	No./type	24/Disk	24/Disk	24/Disk	24/Disk
	Max. weight of tool	kg	8	8	8	8
Dimension &Weight	Power capacity	kVA	24	24	24	24
	Dimension	mm	2200×2000×2250	2500×2100×2300	2700×2150×2400	3000×2300×2680
	Weight (about)	kg	4500	6000	6300	6500

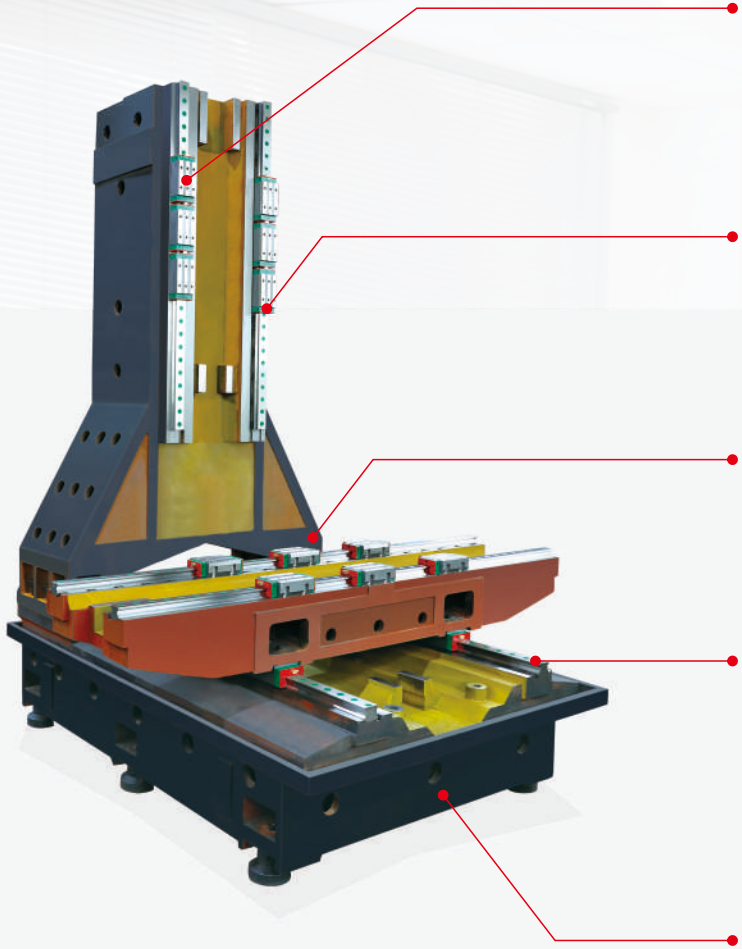
SAME SIZE & HIGHER RIGIDITY

Machine is designed with large work area and big loading capacity, combines high speed and high rigidity.
High milling capacity and powerful drives make the machine super versatile, it can make a wide variety of workpieces for different industries.

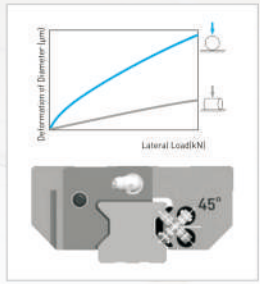
- Optimal machine design ensures super rigidity of the machine.
  -Heavy duty roller type linear guideway
  -Larger motor power
  -Wider guideway span
  -Heavier machine weight
  -Standard with BT40-150 type big spindle and BT50 spindle is available as option
- The casting bed and Y-shaped column design provide solid support to ensure ultimate dynamic accuracy.
- The contact surfaces of the column and bed are all hand scraped to ensure precision assembly, strong structure and loading balance.

POWER V SERIES VERTICAL MACHINING CENTER

Rigidity Features 5-Combo!



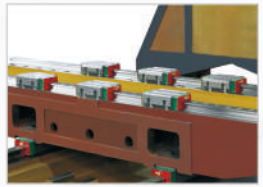
Note: The picture is the frame of Power V10.



4x45°-Roller

Longer running life higher rigidity roller LM

With 4-rows of rollers arranged at a contact angle of 45 degrees, the guideway has equal load ratings in the radial, reverse radial and lateral directions. The contact pressure of the rolling element is distributed on the line region, rollers have a greater contact area than balls, this provides the roller guideway with higher load capacity and longer running life. The figure shows the rigidity of a roller and a ball under equal volume.

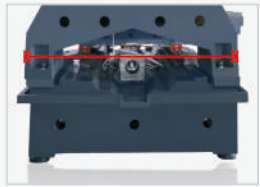


6 units

More slide blocks

X/Z axis linear guideway

X and Z axes both use 6 slide block bearings to support spindle units and worktables



1320mm

Wide span column structure provides optimal machining rigidity.The headstock retains stability and accuracy even under high speed traveling.

45/55/45mm

Larger X/Y/Z axis linear guideway

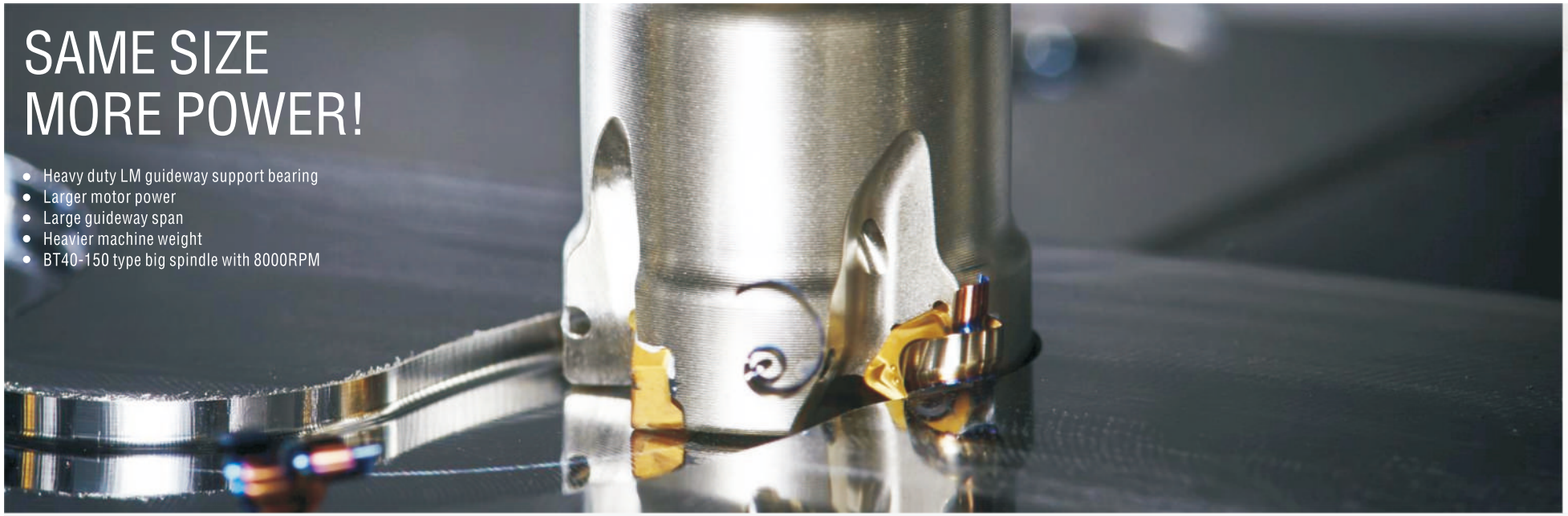
Rather than popular 35mm width LM as standard of this size VMC, we use 55mm and 45mm width size on Power V10. Moreover we select longer overall LM block length for greater rated load.

8200kg

Heavier weight of machine

Robust casting design is an essential feature for resisting vibration. No matter how good other parameters look, it will affect the machining performance of hard material and heavy cutting, further impact on productivity, accuracy and running life.

POWER V SERIES



Standard Features

- ■ Disk arm type ATC
- ■ Ergonomic CNC Panel & MPG
- ■ Automatic Lubrication System
- ■ Full Machine Enclosure
- ■ Operator Door Safety Lock
- ■ Air Conditioned Electrical Cabinet
- ■ Handheld Air Gun

Optional Features

- □ CNC Controlled 4th/5th Axis Rotary Table
- □ Different CNC Control System
- □ Higher Speed Spindle
- □ Coolant Through Spindle
- □ Chip Conveyor
- □ Spindle Oil Chiller

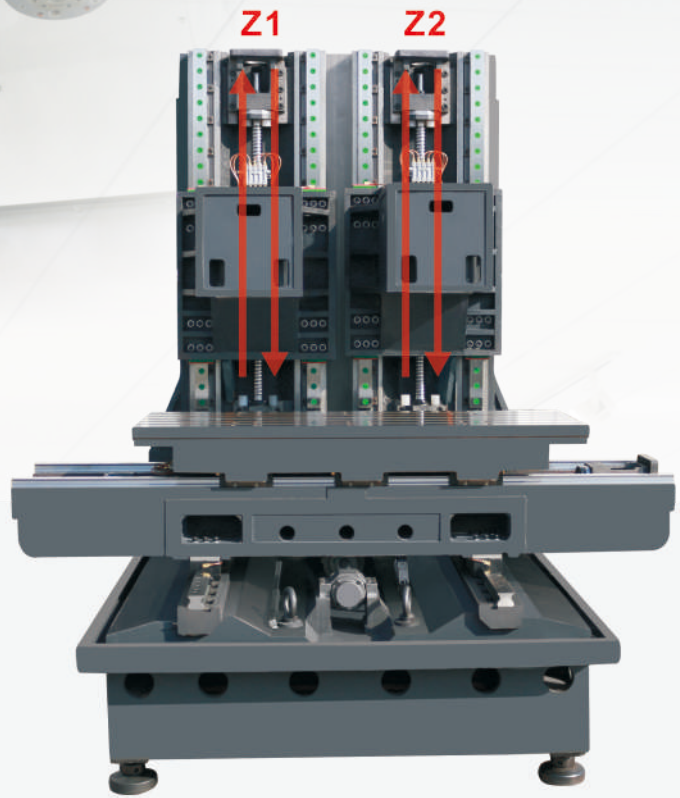
POWER V10

Specifications

		Unit	Power V6	Power V8	Power V10
Table	Table size	mm	1000×450	1200×520	1400×650
	Max.load	kg	750	800	1000
	T slot(width×nos.×distance)	mm	18×3×130	18×5×90	18×5×100
Travel	X Travel	mm	600	850	1050
	Y Travel	mm	400	500	650
	Z Travel	mm	530	570	600
	Spindle center to column	mm	450	580	670
	Spindle nose to table	mm	130-660	130-700	120-720
	Guideway type		LM (Roller)	LM (Roller)	LM(Roller)
Spindle	Spindle speed	rpm	8000,*10000, *12000	8000, *10000, *12000	8000, *10000, *12000
	Spindle type		BT40	BT40,*BT50	BT40, *BT50
	Main servo motor	kW	7.5/11, *11/15	11/15	11/15, *15/18.5
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	30	30/30/30	30
	ATC capacity/type	No./type	24/Disk Arm	24/Disk Arm	24/Disk Arm
	Max. weight of tool	kg	8	8, *15	8
Dimension &Weight	Power capacity	kVA	21	21	25
	Dimension(L×W×H)	mm	2600×2150×2300	3000×2200×2350	3200×2500×2450
	Weight (about)	kg	5200	6800	8200

Note: " * " means optional, "LM" means linear motion guide way.

TWIN-SPINDLE MACHINING CENTER



Power WZ8 with Double Z axes

- ◆ One spindle or two spindle mode are as user's wish, which creates flexibility according to the volume size.
- ◆ It enables easy tool length offset adjustment for both spindles.
- ◆ It extends life time of spindle and fixtures.

Great Advantages

+High productivity and small footprint

By twin spindle design, one VMC can cut two workpieces simultaneously which increases the productivity by almost 200%, meanwhile the floor space occupied is the same as one traditional VMC.

+Reduced investment and maintenance costs

The customer can reduce the base machine cost compared to two conventional VMC. Additionally, for ancillary items such as spindle probe, 4th axis rotary table, mist collector etc, only one is required, thereby reducing the total investment cost.

+ Less electricity consumption, Eco-friendly.

Electricity consumption and operator walking distance are all reduced. This green and environmental protection design philosophy is one of the core structures of our brand promises.

Same Investment Double Efficiency

Power W6/8 with Single Z axis

Unlike the Power WZ8, Power W6 and W8 are designed with a single Z axis. The simpler structure reduces the user's investment, and the double spindle design offers as high productivity as the double Z Axes type-POWER WZ8.

The price, the electricity consumption, the floor space and the labor investment are similar to one Standard VMC, meanwhile the productivity will be almost doubled. No doubt, it will enhance user's competitive advantages tremendously.

It can be a secret weapon for the large volume products manufacturer.

Standard Features

- Disk arm type ATC X2
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Operator Door Safety Lock
- Air Conditioned Electrical Cabinet
- Air System with Handheld Air Gun

Optional Features

- CNC Controlled 4th Axis Rotary Table
- Different CNC Control System
- Higher Speed Spindle
- Coolant Through Spindle
- Chip Conveyor
- Spindle Oil Coolant
- Automatic Tool Setter
- Automatic Workpiece Measurement
- Water Gun

POWER WZ8

POWER W6

Specifications

		Unit	Power W6	Power W8	Power WZ6	Power WZ8
Table	Table size	mm	1200×450	1300×520	1200×450	1300×520
	T slot(width×nos.×distance)	mm	18×3×130	18×5×90	18×5×90	18×5×90
	Max.load	kg	700	800	700	800
Travel	X/Y/Z1.Z2 Travel	mm	450/400/500	650/500/550	450/400/500/500	650/500/570/570
	Spindle nose to table	mm	150-650	150-700	150-650	130-700
	Spindle center to column	mm	450	580	450	580
	Distance between two spindle centers	mm	400	450	400	550
	Guideway type	mm	LM (Roller)	LM (Roller)	LM (Roller)	LM (Roller)
Spindle(1, 2)	Spindle type		BT40-150	BT40-150	BT40-150	BT40-150
	Main servo motor	kW	7.5/11, *11/15	7.5/11, *11/15	7.5/11, *11/15	11/15, *15/18.5
	Spindle speed	rpm	8000, *12000	8000, *12000	8000, *12000	8000, *12000
Feed & Magazine	X/Y/Z axis rapid traverse	m/min	30/30/30	30/30/30	30/30/30	30/30/30
	ATC capacity/type	Nos./type	2×24/Disk Arm	2×24/Disk Arm	2×24/Disk Arm	2×24/Disk Arm
	Max.weight of tool	kg	8	8	8	8
Dimension & Weight	Power capacity	kVA	33	38	40	46
	Dimension	mm	2650×2070×2340	3100×2210×2310	2700×2100×2340	3230×2250×2430
	Weight(about)	kg	5500	7500	6000	8000

Note: “*” means optional, "LM" means linear motion guide way.

MEDIUM & SMALL SERIES

Conventional Mill & drill is past,
VMC is better for production of parts

Standard Features

- Automatic Tool Changer
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Operator Door Safety Lock
- Heat Exchanger
- Air Conditioned Electrical Cabinet (VMC500/VMC700E)
- Handheld Air Gun

Optional Features

- CNC Controlled 4th/5th Axis Rotary Table
- Different CNC Control System
- Higher Speed Spindle
- Coolant Through Spindle
- Chip Conveyor
- Air Conditioner (Except VMC500/VMC700E)
- 10000rpm Belt-Drive Spindle
- 12000rpm Direct Drive Spindle

Specifications

		Unit	VMC320	VMC420E	VMC550E	VMC400	VMC600E	VMC500	VMC700E
Table	Table size	mm	600×305	720×305	800×305	600×380	800×380	700×400	800×400
	T slot(width×nos.×distance)	mm	14×3×85	14×3×85	14×3×85	14×3×110	14×3×110	18×3×110	18×3×110
	Max.load	kg	260	260	260	350	350	350	400
Travel	X/Y/Z Travel	mm	320/240/450	420/240/450	550/240/450	400/350/450	600/350/450	500/400/450	700/400/450
	Spindle nose to table	mm	50-500	50-500	50-500	50-500	50-500	90-540	90-540
	Spindle center to column	mm	380	380	380	450	450	450	450
	Guideway type		LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ	LM(Roller):XYZ	LM:XYZ	LM(Roller):XYZ
Spindle	Spindle type		BT30	BT30	BT30	BT40	BT40	BT40	BT40
	Main servo motor	kW	5.5/7.5	5.5/7.5	5.5/7.5	5.5/7.5	5.5/7.5	5.5/7.5,*7.5/11	5.5/7.5,*7.5/11
	Spindle speed	rpm	8000	8000	8000	8000,*12000	8000,*12000	8000,*12000	8000,*12000
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	28/28/28	28/28/28	28/28/28	28/28/28	28/28/28	28/28/28	28/28/28
	ATC capacity/type	No./type	12/Carousel	12/Carousel	12/Carousel	24/Disk,*16/Carousel	24/Disk,*16/Carousel	24/Disk, *16/Carousel	24/Disk, *16/Carousel
	Max. weight of tool	kg	3	3	3	8	8	8	8
Dimension &Weight	Power capacity	kVA	14	14	14	15	15	17	17
	Dimension	mm	2150×1790×1740	2150×1790×1740	2150×1790×1740	2240×1950×1990	2240×1950×1990	2160×1880×1750	2160×1880×1750
	Weight (about)	kg	2400	2500	2600	3300	3500	3500	3700

Note: " * " means optional, "LM" means linear motion guide way.

LARGE & GIANT SERIES

The High Performance Series machines feature heavier machine castings, big ballscrews and heavy duty linear guideways that provide superior surface finishes, excellent thermal stability, and quiet operation during heavy cutting.

Standard Features

- Disk arm type ATC
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Operator Door Safety Lock
- Air Conditioned Electrical Cabinet
- Handheld Air Gun

Optional Features

- CNC Controlled 4th/5th Axis Rotary Table
- Different CNC Control System
- Higher Speed Spindle
- Coolant Through Spindle
- Chip Conveyor

VMC1300E

VMC840

Specifications

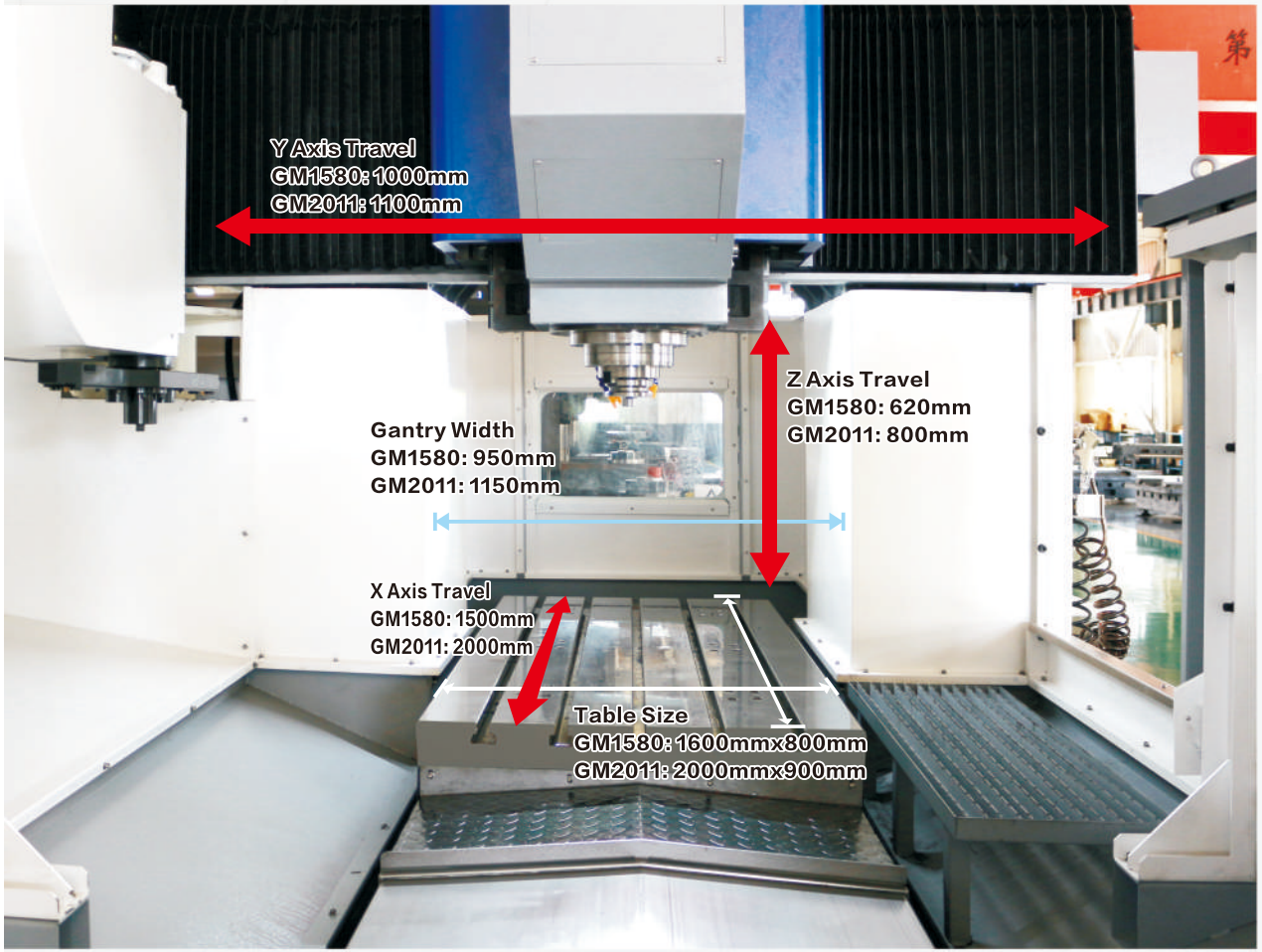
		Unit	VMC840	VMC1050E	VMC1200E	VMC1300E	VMC1375	VMC1580
Table	Table size	mm	1000x470	1300×520	1400×520	1600×650	1600×750	1700×800
	T slot(width×nos.×distance)	mm	18x3x120	18×5×90	18×5×90	18×5×100	18×5×140	18×5×150
	Max.load	kg	700	800	800	1000	1300	1500
Travel	X/Y/Z Travel	mm	800/400/530	1050/500/570	1200/500/570	1300/650/600	1300/750/700	1500/800/700
	Spindle nose to table	mm	130-660	130-700	130-700	120-720	130-830	130-830
	Spindle center to column	mm	450	580	580	670	760	810
	Guideway type		LM(Roller):XYZ	LM(Roller):XYZ	LM(Roller):XYZ	LM(Roller):XYZ	LM(Roller):XYZ	LM(Roller), BOX: Z
Spindle	Spindle type		BT40	BT40,*BT50	BT40,*BT50	BT40,*BT50	BT40,*BT50	BT50
	Main servo motor	kW	7.5/11	11/15	11/15	11/15, *15/18.5	11/15, *15/18.5	15/18.5
	Spindle speed	rpm	8000,*12000	8000,*12000	8000,*12000	8000,*12000	8000,*12000, *6000	8000, *6000
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	30/30/30	30/30/30	30/30/30	30/30/30	24/24/20	20/20/15
	ATC capacity/type	No./type	24/Disk	24/Disk	24/Disk	24/Disk	24/Disk	24/Disk
	Max. weight of tool	kg	8	8, *15	8, *15	8, *15	8, *15	15
Dimension &Weight	Power capacity	kVA	21	21	21	25	25	30
	Dimension	mm	2550×2070×2340	3100×2200×2410	3460×2160×2410	3600×2500×2450	3600×2800×3000	4000×3100×3100
	Weight (about)	kg	5500	7000	7200	9000	13000	17000

Note: " * " means optional, "LM" means linear motion guide way.

GANTRY TYPE MACHINING CENTER

Product Map

Ideal envelope for medium and large-size parts machining. Gantry structure guarantees super rigidity and great machining capacity.



Ongoing Refinement

- GM2011 is designed with 4 rails large-size cylindrical roller Linear guideways under “U” brace Structure, this provides high rigidity and gains better stress flow which minimizes overhang and vibration.
- Rib reinforced working table restrains vibration while increasing machining stability.
- The Finite Element Method (FEM) analysis provides optimum machine design and light-weighted structure advantages while ensuring best machine rigidity.
- BT50 big spindle with powerful spindle servo motor, suitable for heavy cuts in low speeds and precision cuts in high speeds.

Standard Features

- BT50 8000rpm spindle
- Disk arm type ATC
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Air Conditioned Electrical Cabinet
- Handheld Air Gun

Optional Features

- CNC Controlled 4th Axis Rotary Table
- Different CNC Control System
- 6000rpm BT50-190 spindle

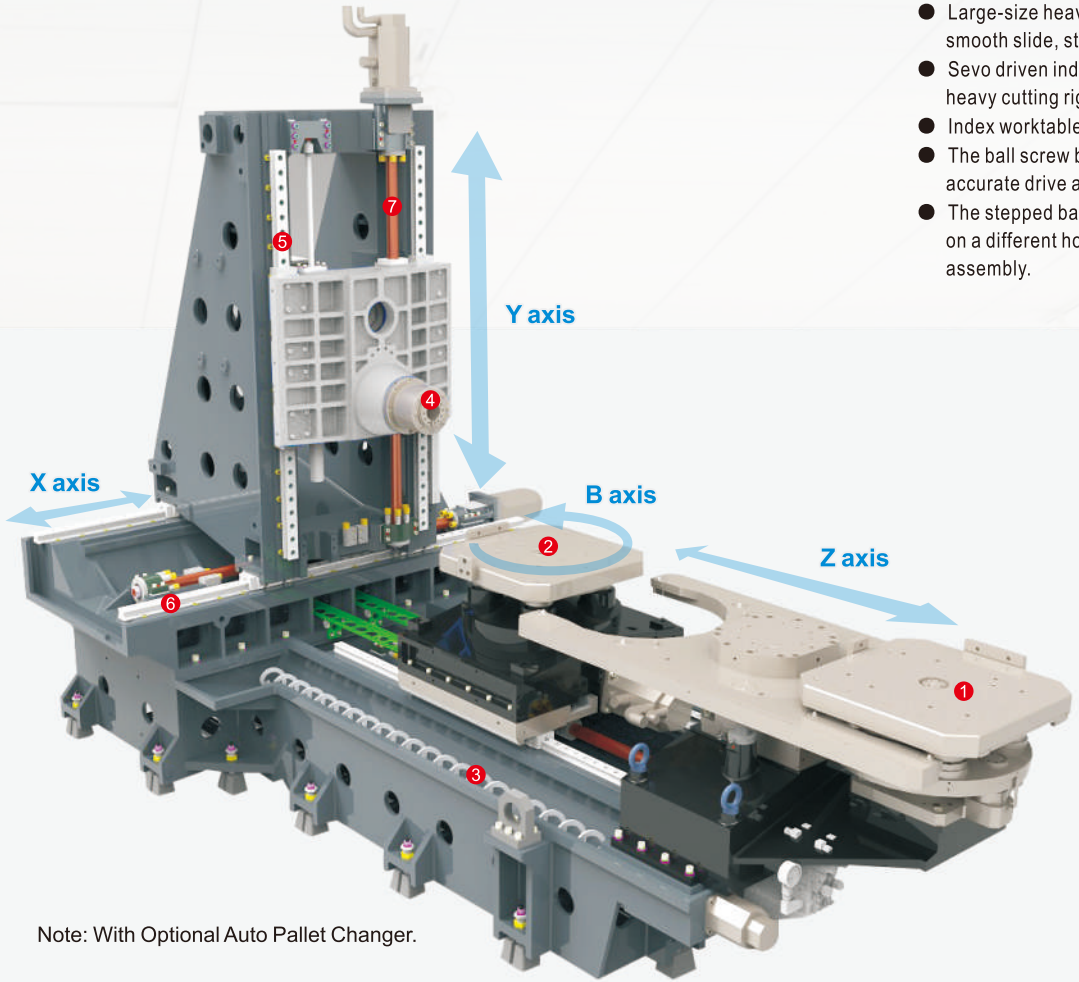
Specifications

		Unit	GM1580	GM2011
Table	Table size	mm	1600×800	2000×900
	Max.load	kg	1800	2000
	T slot(width×nos.×distance)	mm	22×5×140	22×7×125
Capacity	X Travel	mm	1500	2000
	Y Travel	mm	1000	1100
	Z Travel	mm	620	800
	Spindle nose to table	mm	150-770	120-920
	Gantry width	mm	950	1150
	Guideway type		LM (Roller)	LM(Roller)
Spindle	Spindle speed	rpm	8000, *6000	8000,*6000
	Spindle type		BT50-155, *BT50-190	BT50-155, *BT50-190
	Main servo motor	kW	15/18.5	15/18.5
Feed	X/Y/Z axis rapid traverse	m/min	20	20
	Max. feedrate	mm/min	10000	10000
ATC	ATC capacity/type	No./type	24/Disk Arm	24/Disk Arm
	Max. weight of tool	kg	15	15
Others	Power capacity	kVA	40	40
	Dimension	mm	4500×3700×3700	6000×3650×3700
	Weight (about)	kg	15000	18000

Note: “*” means optional, "LM" means linear motion guide way.

HORIZONTAL MACHINING CENTER

Upright T-Base Structure – column is movable as X axis and worktable is moving as Z axis, this design matches the design concept of super precision boring machines. The worktable is carrying the workpiece to the static spindle while machining, it maximizes the spindle rigidity and accuracy.



Note: With Optional Auto Pallet Changer.

Cutting-edge Design

- The Finite Element Method (FEM) analysis provides optimum machine design and optimum structure advantages while ensuring the best machine rigidity. Meehanite standard Casting along with twice aging treatment for long term reliability.
- BT50-190 large size spindle unit offers wide range machining capacity from low-speed heavy cutting to high-speed precision cutting applications.
- Large-size heavy duty roller type linear motion guideways applied on all 3-axis for rigid support, smooth slide, stable accuracy as well as easier maintenance.
- Sevo driven index worktable B-axis and hydraulic locking guarantee the fast index speed and the heavy cutting rigidity.
- Index worktable uses curvic coupling for high-accuracy indexing.
- The ball screw brackets at both ends of the X-Y-Z axes ballscrews are preloaded for highly accurate drive and positioning.
- The stepped base and column design of the MC-H Series, where two X-axis linear guide rails are on a different horizontal planes, increases the rigidity and stability of the spindle-head column assembly.

01	Optional Auto Pallets Changer (APC)	
02	Index Work Table	a)Std: 1 degree b)Opt: NC 0.001°
03	Chip-Removal System	
04	BT50-190 Heavy-Duty Spindle	
05	Cylindrical Roller Linear Motion Guide-way	
06	Stepped Base and Column Design	
07	Large-Size Super Precision Ballscrew	

Standard Features

- BT50 Spindle
- Chain arm Type ATC 40 Pcs
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Air Conditioned Electrical Cabinet
- Chip Conveyor

Optional Features

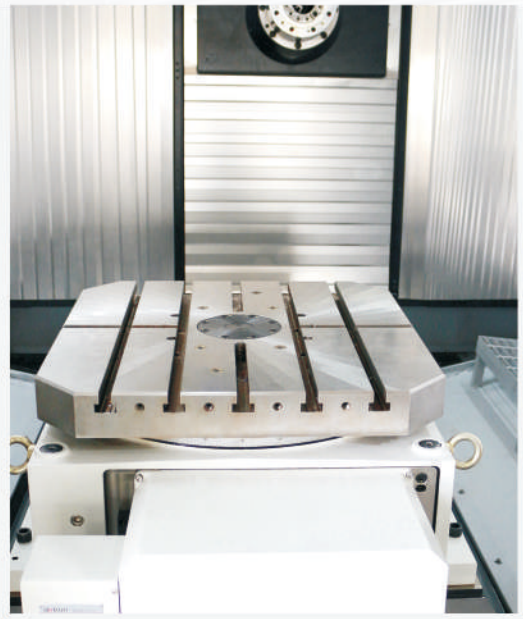
- Coolant Through Spindle
- Different CNC Control System
- Different Spindle
- Auto Pallet Changer

MC630H

Specifications

		Unit	MC630H	MC800H	MC1000HE
Table	Table size	mm	630×630	800×800	1000×1000
	T slot (Nos.-width-distance)	mm	5-18T-100	5-22T-160	7-22T-125
	Max.load	kg	1200	1600	3000
	Table quantities	pc	1, *APC	1, *APC	1
	Table indexing degree	degree	1, *0.001	1, *0.001	1, *0.001
	Max. swing dia. of workpiece	mm	950	1150	1300
Travel	X/Y/Z Travel	mm	1100/800/1100	1300/1100/1200	1300/1100/1100
	Spindle center to table	mm	50-850	45-1145	45-1145
	Spindle end to table center	mm	125-1225	150-1350	250-1350
Spindle	Spindle type		BT50-190	BT50-190	BT50
	Main servo motor	kW	15/18.5	15/18.5, *22	18.5/15
	Spindle speed	rpm	6000	6000	6000
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	24/24/24	24/24/24	24/20/24
	ATC capacity/type	No./type	40, *30/Chain type	40, *60 /Chain type	40, *60
	Max.weight of tool	kg	20	20	20
	Max.dia. of tool	mm	125/225	125/225	Φ125/250
	Max. length of tool	mm	600	600	450
Dimension &weight	Power capacity	kVA	65	75	70
	Dimension	mm	4800×3500×3500	6800×4000×3915	6900×4000×3915
	Weight(about)	kg	19000	22000	23000

Note: “*” means optional. APC: Auto Pallet Changer.

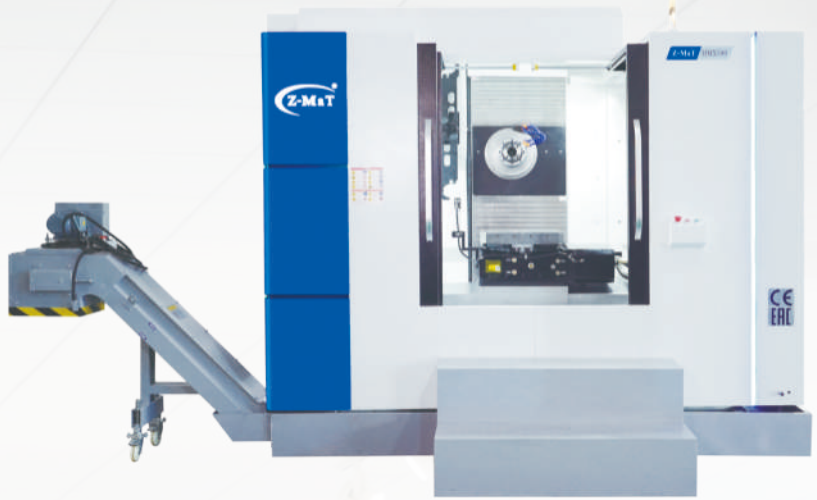


HORIZONTAL MACHINING CENTER- HMX SERIES

Cross Sliding Table Structure —Static column and cross sliding table, modular design offers the most economical and compact horizontal machining Center HMX series. X and Z axes provided to the table and the spindle moves in the Y axis alone. By one time clamping, milling, drilling, boring, broaching, reaming and tapping can be applied on all 4 sides of the work pieces. It is best for machining complex parts of boxes, plates, disks, valves, housing types, etc.

Machine Characteristics

- Full guard protection, user friendly and easy maintenance.
- Positive displacement lubrication system
- Chip conveyor, chips are conveyed at two sides and collected in the rear
- BT50-190 spindle with oil chiller system
- Spindle air curtain protection function
- The Finite Element Method (FEM) analysis provides optimum machine design and structure advantages while ensuring the best machine rigidity. Meehanite standard Casting along with twice aging treatment for long term reliability.
- Large-size heavy duty roller type linear motion guideways applied on all 3-axis for rigid support, smooth slide, stable accuracy as well as easier maintenance.



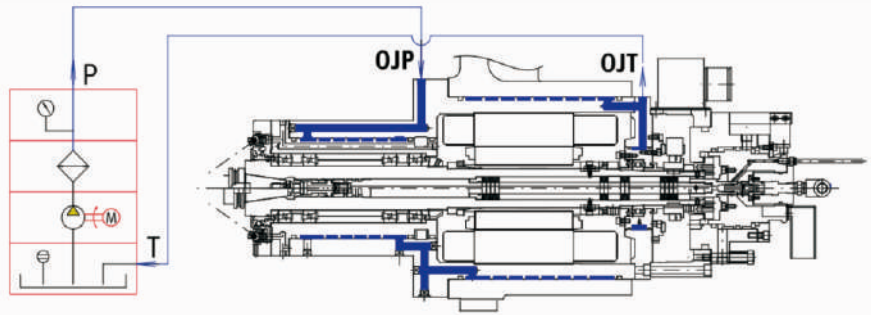
HMX500

Specifications

		Unit	HMX500	HMX630
Table	Table size	mm	500×500	630×630
	T slot (Nos.-width-distance)	mm	5-18T-100	5-18T-125
	Max.load	kg	500	1200
	Table quantities	pc	1	1
	Table indexing degree	degree	1° , *0.001°	1°, *0.001°
	Max. swing dia. of workpiece	mm	850	1000
Travel	X/Y/Z Travel	mm	1000/600/650	1000/600/850
	Spindle center to table	mm	100-700	100-700
	Spindle end to table center	mm	150-800	230-1080
Spindle	Spindle type		BT40, *BT50	BT50-190
	Main servo motor	kW	15/18.5	15/18.5
	Spindle speed	rpm	8000, *6000	6000
Feed &Magazine	X/Y/Z axis rapid traverse	m/min	24/20/24	24/20/24
	ATC capacity/type	No./type	30/ Disc	30 / Disc
	Max.weight of tool	kg	8, *15	15
	Max.dia. of tool	mm	105/200	105/200
	Max. length of tool	mm	400	400
Dimension &weight	Power capacity	kVA	25	35
	Dimension	mm	3100×3600×2610	3100×3800×2750
	Weight(about)	kg	7500	9000

Spindle Oil Chiller System

The spindle thermal expansion is reduced by configuring spindle oil coolant system. It gurantees the long time continuous running at high speed spindle rotation. It improves machining accuracy and spindle life.



COMPACT APC SOLUTION -MX530H / VMX640

EXCHANGE WORKPIECES WITHOUT STOPPING MACHINE

The dual-workstation machining center facilitates automatic interchange of worktables. While one workstation is engaged in machining, the other side switches to load raw workpiece without the need for downtime. It ensures efficient and high-precision machining mass batch products.

VMX640

Machine Characteristics

- The rotary table is divided into front and rear worktables, controlled by an automatic system for seamless transition. The front and rear worktables serve distinct purposes, with one designated for machining and the other for clamping. This design optimizes clamping processes, enabling continuous operation without interruptions.
- High-Quality Castings: The main castings are crafted using advanced Meehanite high-grade cast iron through resin sand casting technology. Employing advanced finite element analysis techniques, the design is structurally sound, layout-optimized, and undergoes secondary aging treatment, ensuring long-term machining stability.
- Double-Sided End Gear Table Structure: The exchangeable table features a double-sided end gear structure, providing high positioning accuracy and strong load-bearing capacity.

Standard Features

- Dual Workstation Worktable
- Three-axis Roller LM Guideway
- Automatic Lubrication System
- Automatic Coolant System
- Coolant Tank and Chip Conveyor
- Chassis Chip Flush
- Electrical Cabinet Air Conditioning
- Handheld Air Gun and Water Gun

Optional Features

- Oil Mist Collector
- Tool Setter
- Workipiece Touch Probe
- Coolant Through Spindle
- Spindle Oil Chiller

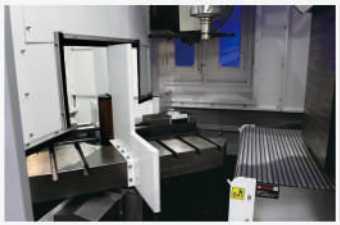


Image of VMX640 Vertical

Image of MX530H Horizontal

Specifications

	Unit	MX530H	VMX640
X-Axis Travel	mm	600	600
Y-Axis Travel	mm	70-420(350)	400
Z-Axis Travel	mm	400	510
Distance from Spindle End Face to Worktable Surface	mm	0-400	150-660
Distance from Spindle Center to Column Guide Surface		/	450
Worktable Area	mm	900×820(unilateral 450×820)	1140×820(unilateral 570×820)
Maximum Load Capacity of the Worktable	kg	600(unilateral300kg)	600(unilateral300kg)
T-Slot Width		3-22T×P90×2	3×22H8×130×2
Maximum Spindle Speed	rpm	6000	8000
Spindle Hole Dimensions		BT50	BT40
Rapid Displacement of X/Y/Z Axes	m/min	30/30/30	30/30/30
Maximum Cutting Feed Rate	mm/min	10000	8000
Rated Power	kW	15/18.5	11
X, Y, Z Positioning Accuracy	mm	0.012	0.012
X, Y, Z Repeat Positioning Accuracy	mm	0.006	0.006
Overall Dimensions (Length x Width x Height)	mm	3500×3000×2780	3500×2750×2780
Machine Weight (Net Weight) Approximately	kg	7500	7000

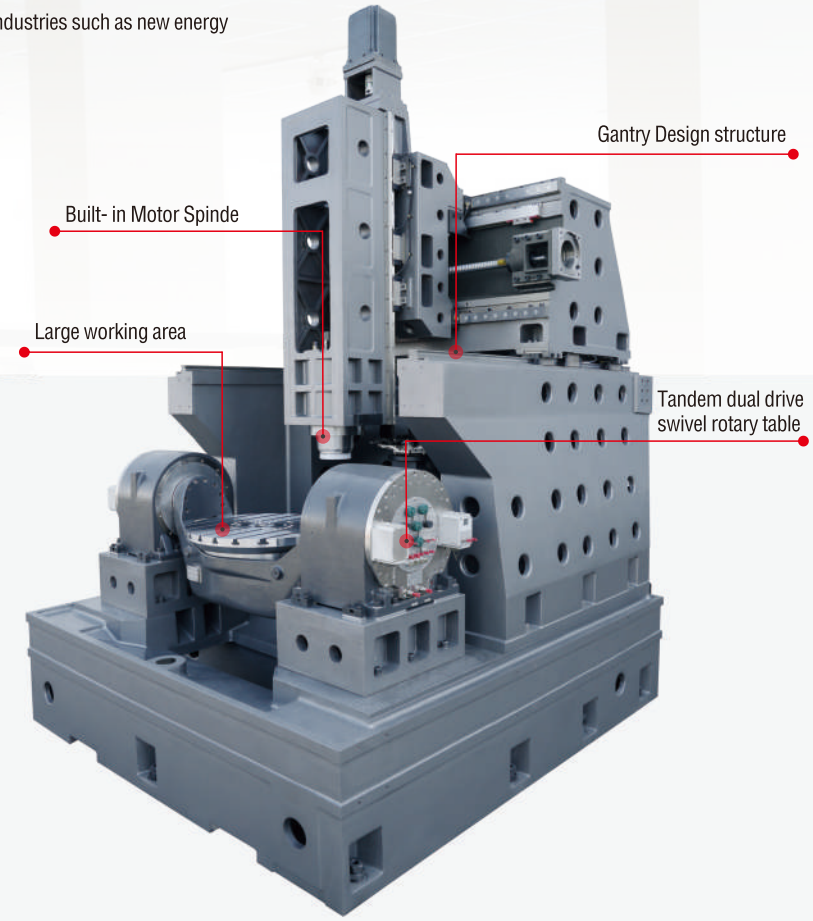
ULTRA HIGH-PERFORMANCE 5-AXIS MACHINING CENTER U630

5-axis Simultaneously Technology

Tool magazine is integrated into the machine bed to save space

3-axis in the Tool, 2-axis in the Workpiece

- The U630 5-Axis Machining Center adopts Gantry Type Design with the Crossbeam in Motion, Column and Worktable Fixed.
- The crossbeam, on both sides of the gantry, moves in the front and rear Y-axis direction. The saddle moves left and right in the X-axis direction on the crossbeam, and the spindle moves up and down in the Z-axis direction on the saddle. It is equipped with a swiveling A/C rotary table, enabling 5-axis simultaneous machining allowing for one-time clamping to complete multi-sided machining of the part. This effectively reduces the number of clampings and is suitable for machining of complex spatial surfaces, including industries such as new energy vehicles, molds, aerospace, and medical devices.



Sample Workpieces of U630


Capsule connecting ring


Integral blade disk


Fan blade disk


Engine crankcast

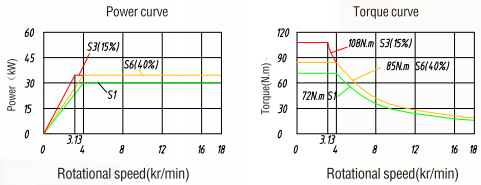

Lamina


Impeller

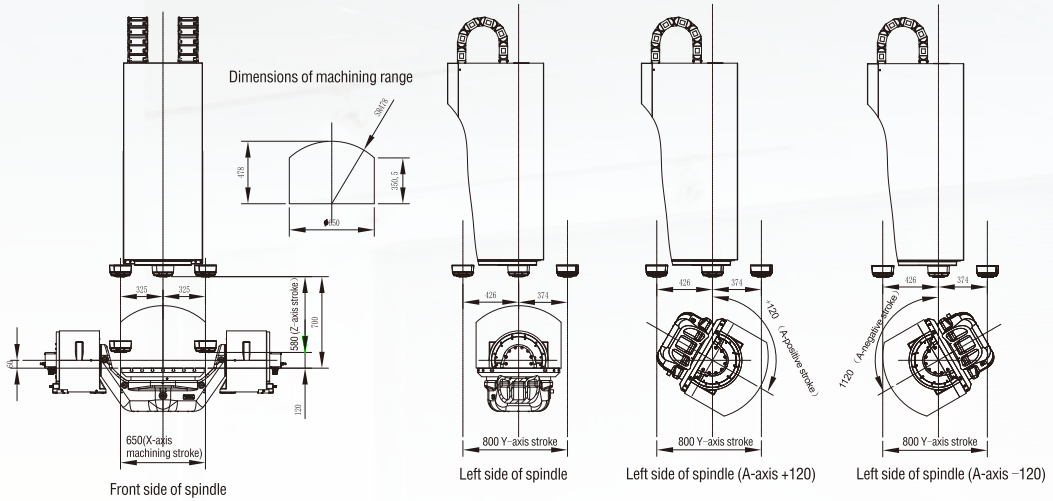
Machine Characteristics

- The gantry-type structure provides strong rigidity and constant load, effectively ensuring the accuracy of the machine.
- Closed-loop control for X/Y/Z/A/C axes ensures high precision and allows for high-precision machining.
- The entire machine undergoes finite element analysis to ensure high rigidity. All components are finely crafted to maintain machine accuracy over an extended period.
- The machine is equipped with the Siemens 840D 5-Axis CNC system, ensuring reliable operation at various environment.
- It features a high-power electric spindle to meet requirements for both heavy-duty cutting and precision machining.
- The reinforced column structure, subjected to rigorous finite element analysis and optimization, is structurally sound, guaranteeing the rigidity and accuracy retention of the machine.
- For reliable machining processes in automated systems, the production cabin is with chip-waste-optimized stainless steel cladding and integrated bed flushing from left/right/front/rear ensures ideal chip disposal.

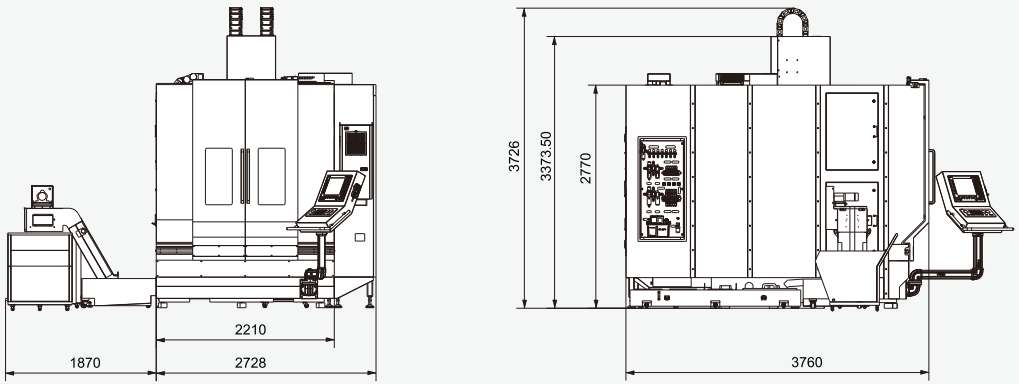
18000rpm Built-in Motor Spindle



Working Range Diagram



Machine Dimensions



ULTRA HIGH-PERFORMANCE 5-AXIS MACHINING CENTER

Standard Features

- Full Enclosed Protective Cover
- HSKA63 Internal Electric Spindle at 18000rpm
- 30-Tool Magazine
- X/Y/Z Axes equipped with Heidenhain linear scales;
- A/C Axes equipped with Heidenhain rotary encoders
- High-Precision Spindle Oil Cooler
- Electrical Cabinet Air Conditioning
- Rigid Tapping
- Ethernet, CF Card, USB Interfaces
- Chain-Type Chip Conveyor
- Centralized Lubrication System
- Bed chip flushing system
- Automatic Coolant System
- LED Three-Color Warning Light
- Detachable Electronic Handwheel
- Renishaw toolsetter TS27R
- Renishaw workpiece touchprobe OMP60
- SINUMERIK 840D SI 15inch Screen

Optional Features

- HSK-E50 Internal Electric Spindle at 36000rpm
- Minimum Quantity Lubrication System
- Coolant Temperature Control System
- Workpiece Measurement System
- Tool Measurement System
- Oil Mist Collector
- Center Through Spindle
- 200GB SSD for Expanded Program Storage
- Hollow Ball Screw Cooling System
- Collision Avoidance System
- Automatic Correction System for Rotary Center Error
- Load Adaptive Control (LAC)
- Graphite Machining
- CTS system
- SINUMERIK ONE 19inch screen

Specifications

		Unit	U630
Capacity	Max. workpiece diameter	mm	650
	Distance from spindle face to table surface	mm	120-720
	X/Y/Z-axis travel	mm	750/800/600
	A axis travel	°	240° (±120°)
	C axis travel	°	360°
	Rapid rapid traverse	m/min	36
	Cutting feed speed	mm/min	1-10000
	Maximum speed A/C	rpm	60/100
Spindle	Spindle drive type		Build in Motor spindle
	Spindle taper hole		HSK A63
	Rated power of electric spindle	kW	30
	Rated torque of electric spindle	Nm	72
	Maximum spindle speed	rpm	18000
Swivel Table	Table size	mm	Φ630
	Load capacity of rotary table	kg	850
	Rotary axis reference hole	mm	Φ50 H8
	T-slot	mm	7-18×80
	Continuous torque A/C	Nm	1290×2/600
	Maximum torque A/C	Nm	2400×2/1100
Tool Changer	Type		Chain Type
	Number of tool positions		30,*40,*60,*200
	Maximum tool diameter (Full/beside empty)	mm	Φ75/Φ120
	Maximum tool length	mm	Φ300
	Maximum tool weight	Kg	8
	Tool change time (tool to tool)	Second	4
Control system	Numerical control system		Siemens 840D
	X/Y/Z/A*2/C axes motor power	kW	4.3/5.2/4.3/6.25*2/4.46
	Servo motor rated torque X/Y/Z	Nm	27/36/27
Accuracy	Positioning accuracy X/Y/Z	mm	0.006
	Repeatability accuracy X/Y/Z	mm	0.003
	Positioning accuracy A/C	arc-sec	5
	Repeatability accuracy A/C	arc-sec	3
Others	Screw specification X/Y/Z	mm	40/55/40
	Guideway specification X/Y/Z	mm	Roller 45/45/45
	Power Capacity	kW	68
	Compressed Air	Mpa	0.6-0.8
	Dimension (LxWxH)	mm	2728×3760×3726
	Weight	kg	19500

Note:"*" means optional.

HIGH SPEED TAPPING CENTER

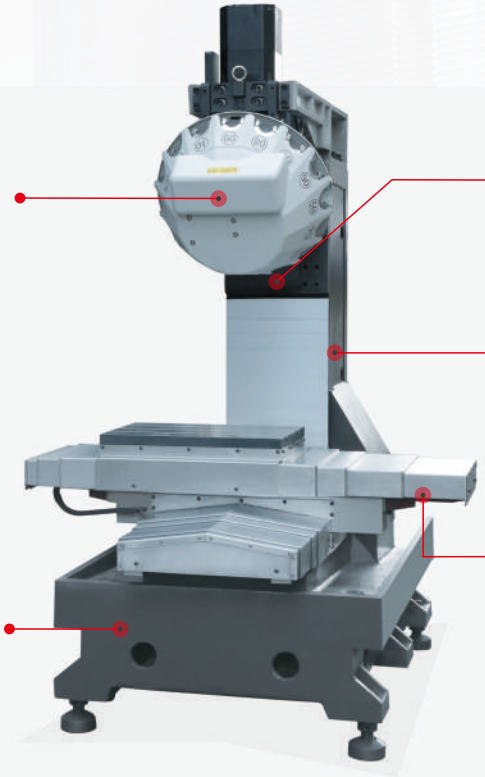
Machine Characteristics

- Advanced casting design uses precision annealing with traditional aging methods used on each casting. Provides optimal damping of vibration and ensures long-term stability and quality results.
- Both base and column have wide spacing between ways, resulting in a design that is solid as a rock and stable as a mountain.
- Direct drive spindle provides high efficiency, and low noise – assuring speed and torque during high-speed tapping operations.
- Gripper arm type tool magazine – for rapid tool changes and solid machining performance.
- Solid ball screw, bearing structure and high precision linear guideways supports rapid traverse and high speed machining. Also, assures proper orientation of machine during operation.
- Rear chip conveyor is compact and makes for easy chip removal. Chip flow is direct and easy.

Specifications

	Unit	Z540
Table size	mm	600×400
Max. load of table	kg	250
T slot(width x nos.x distance)	mm	14×3×100
X axis travel	mm	500
Y axis travel	mm	400
Z axis travel	mm	300
Spindle nose to table	mm	155-455
Spindle center to column	mm	465
X/Y/Z axis rapid traverse	m/min	48
Spindle type		BT30
Spindle driving method		Direct drive
Spindle speed	rpm	12000, *20000
Spindle motor power	kW	3.7/5.5
ATC type		Gripper Arm
ATC capacity		16, *21
Max.weight of tools	kg	3
Tool change time	s	2
Dimension	mm	1800×2230×2300
Weight(about)	kg	2600

Note:"*" means optional.



ATC Tool Magazine
Gripper arm type magazine, fast tool changing.

Main Spindle
Standard spindle speed is 12000rpm. Rigid tapping function is standard.

Machine Column
Y-Shape column design, stable structure and good rigidity.

LM Guideway
Rapid travel reach to 48m/min, fast response and high positioning accuracy.

Optimum Structure
Big span machine bed, stable structure and strong carrying capacity.

AUTOMATION & PRODUCTION LINE

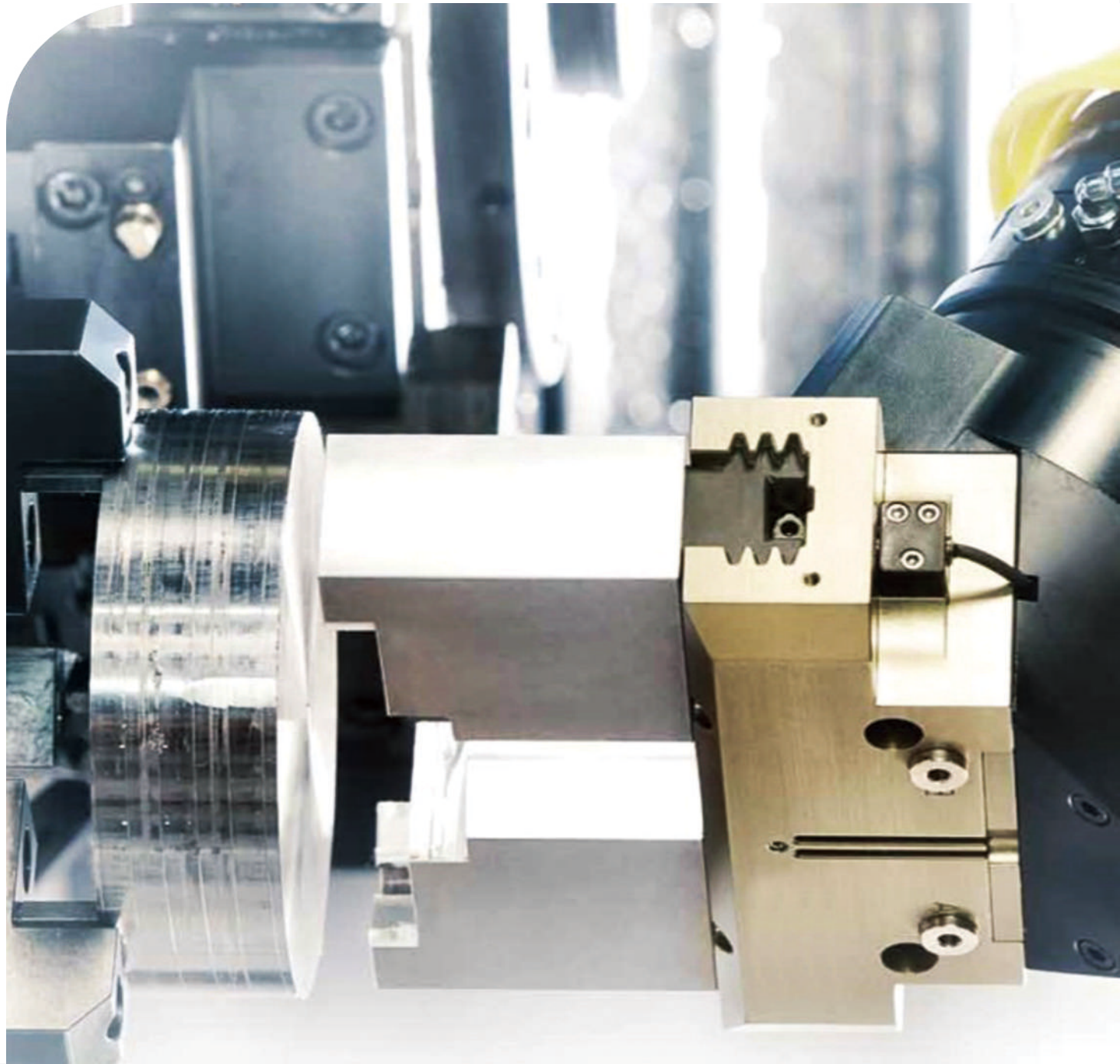
Machine With Robot

From the set-up of raw materials to the removal of finished workpieces all on one machine, Z-MaT has smart solutions for complete automation. Reduce labor costs and the time between cuts by using loaders, unloaders, and bar feeders to ensure the greatest profit in production.

With a combination of different tooling and workholding solutions, this series offers great flexibility for many usage scenarios.

Machine Characteristics

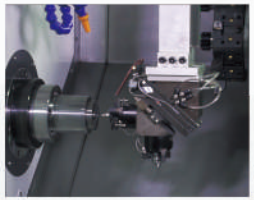
- SL6-R and FL300-R are integrated with Gantry Robot as a unit, designed with a compact size it can be fitted in a standard container which can reduce installation and freight costs hugely, meanwhile the long distance transportation damage risk is eliminated.
- Most Z-MaT CNC machine have standard solutions with Z-MaT self made Gantry Robot such as Star SL6, Star SL8, TN500-S, STL8-S,
- Flash FL300, DA66G, etc.
- Heavier loading weight is available as option. Steel beam and aluminum alloy lift column are the quality foundation



GANTRY LOAD AUTOMATION

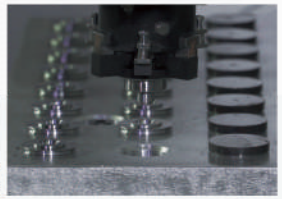
All Z-MaT machines are designed to allow the working area to be loaded efficiently from the front and from the top. Since the gantry loading equipment was developed and manufactured by Z-MaT, optimum matching of the individual components is guaranteed. The newly developed loading portal is characterized by very high acceleration rates and velocities as well as very high positioning accuracy and is suitable for loading workpieces of different dimensions. Together with a wide range of CNC machines, our engineering talents are capable to supply complete automatic production line turnkey solutions.

SL6-R FL300-R STL8-S SL8-R



Different Clamping Tools

Different Grippers



Work Feeder Station

Procedures of Automation Solution

Sales representatives confirm the demand of reducing labors for mass production parts.

Discuss all the details with Z-MaT engineers.

Find the most reliable way to realize the production target.

COMPACT UNIVERSAL AUTOMATION

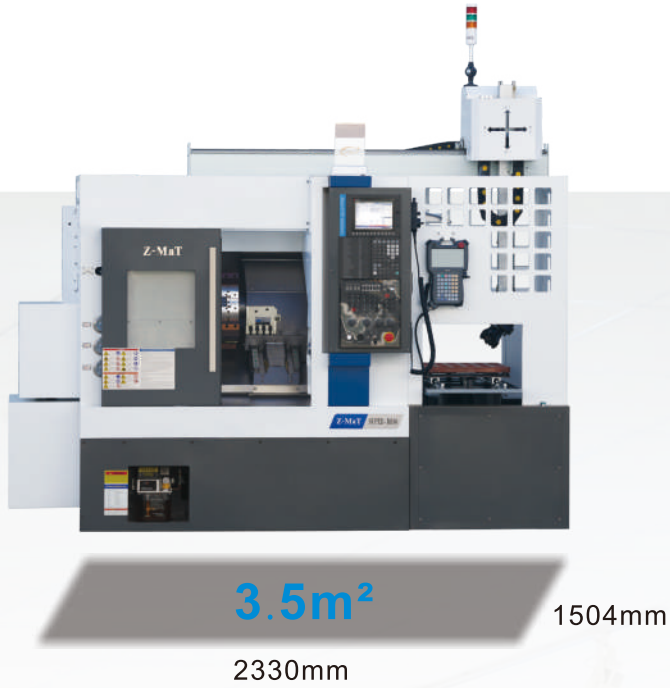
AUTOMATION WITH ROBOT

Realize a complete automation solution by same investment of a lathe

A super compact design with width only 1504mm and still has large travel 160mm on X axis and 375mm on Z axis.

It takes only 3.5m² footprint for M106 with gantry robot & stocker, which is almost same floor occupation as existing 6 inchx350mm Turning Center.

M106

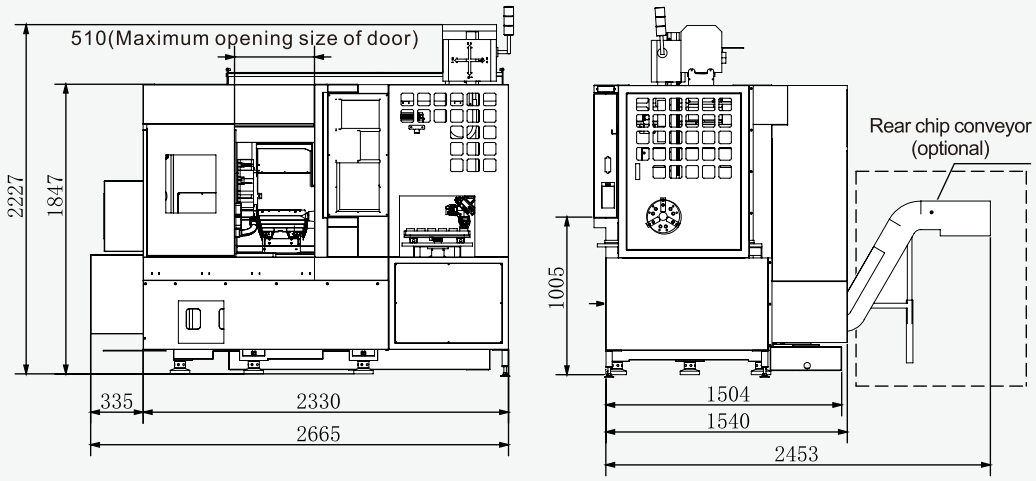


A big capacity turning center with stocker fits well into standard container!

Specifications

		Unit	Super M106
Capacity	Max. length of workpiece	mm	350
	Max. swing diam. over bed	mm	320
	Max. swing diam. over slide	mm	200
Spindle	Spindle speed	rpm	5000
	Spindle nose		A2-5
	Diam. of spindle Bore	mm	56
	Max. diam. of through-hole	mm	46
	Main motor	kW	10kW, *7.5/11
Axis	X axis Travel	mm	160
	Z axis Travel	mm	375
	Rapid travers	m/min	25
Turret	Center height	mm	80
	No. of tool stations		8，*12
	Tool shank size	mm	25×25，*20×20
Tailstock	Type		LM
	Taper of quill		MT4
	Travel of quill	mm	/
	Travel of tailstock	mm	320
*Gantry Robot	Controller	-	Syntec
	Lift Capacity	Kg	6
	Workpiece Capacity	Kg	1，*2.5
	Rapid Traverse	m/min	80
	Transmission Type	-	Gear type
	Guideway	-	Linear guideway
Others	Power capacity	kVA	16
	Weight (about)	Kg	3000
	Overall dimension(L×W×H)	mm	1700×1800×1700

NOTE: “*” means optional.

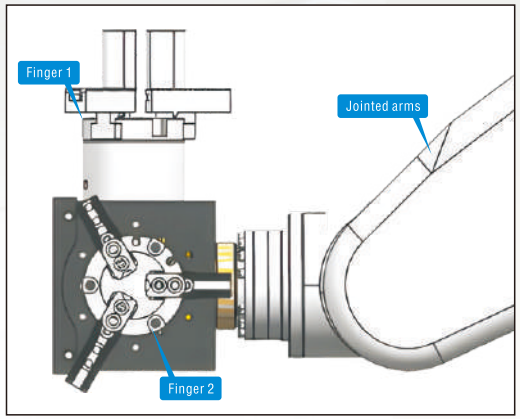


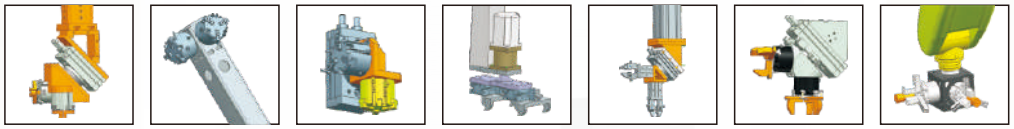
Note: Except of Super M106-R, numerous other models are available with gantry robot solutions.

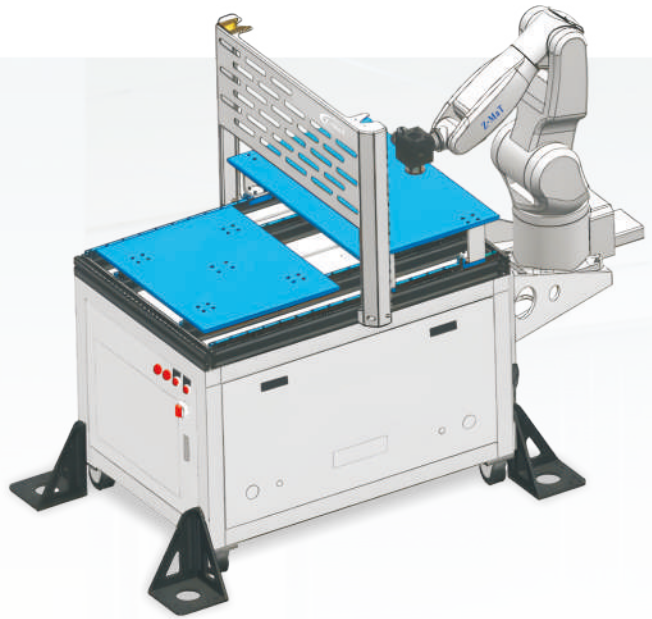
Universal Robot Package: UR7-P

End picker:

- The end picker (air jaw) clamps and fixes the product and material:
- Clamping cylinders drive the clamping fingers, which are serrated and adjustable to meet the needs of multiple products of the same type and model:
- The approximate shape of the hand jaw part is for reference only:
- The schematic diagram is for reference only, please refer to the actual:



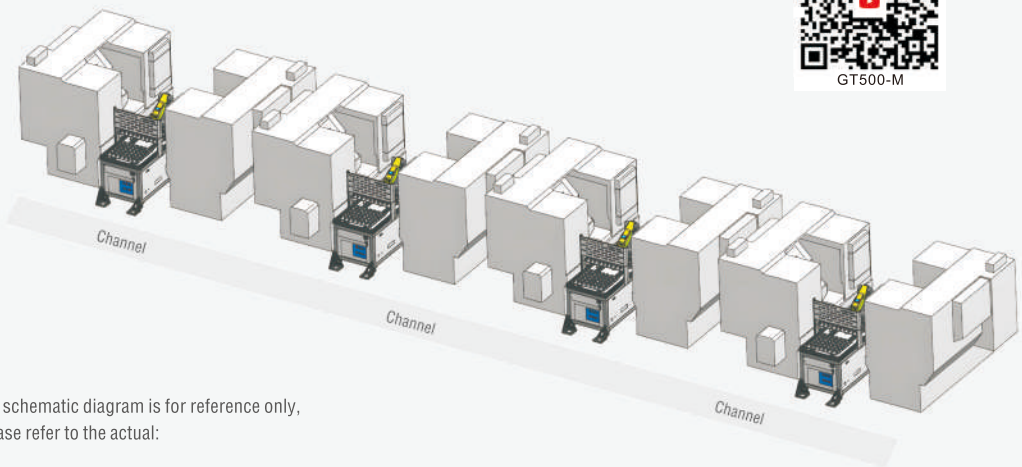




		UR7-P
Payload		7KG
Max Working Radius		980mm
DOF		6 Axis
Joint weight		49KG
Max Speed	J1	337.5°/S
	J2	337.5°/S
	J3	360°/S
	J4	367°/S
	J5	576°/S
	J6	576°/S
Max Operation Area	J1	±170°
	J2	+135°~-70°
	J3	+75°~-75°
	J4	±160°
	J5	±120°
	J6	±360°
Level of protection Specification		IP54/IP65(Wrists)
Position Repeat Accuracy		±0.05mm
Working Temperature		0~45℃
feed bin		Interactive
Security fence		Standard (customized logos are available)
Overall weight		300kg

Figure of the workshop for reference:

GT500-M



Note: The schematic diagram is for reference only, please refer to the actual:

VERTICAL CNC LATHE

Excellent option for large, heavy, thin-walled or complicated parts

Advantages of the VT Series Compared to a Horizontal CNC Lathe:

VT Series Advantage

	NO or YES
Smallest floor space – required footprint?	✔ Footprint 50% Smaller
Easiest parts loading and unloading?	✔ Requires 50% Less Set-Up
Best parts machining roundness results?	✔ No deflection from gravity
Strongest foundation for heavy cutting?	✔ Twice the weight, power tripled
Best for turning complicated parts?	✔ Simpler clamping process

VT320

Outstanding Efficiency & Accuracy

Machine Characteristics

- Standard 8-Station Turret – Stands up to versatile production requirements.
- Compact design, PLUS, square base casting minimizes floor space requirements and increases anti-vibration forces.
- High speed spindle unit with powerful servo drive motor – offers high speed finish cutting, AND low speed heavy duty cutting in the same compact machine.

Standard Features

- Hydraulic 3-jaw Chuck
- 8-station Turret
- Chip Conveyor
- Fully Enclosed Guard
- Hydraulic System
- Heat Exchanger Of Electric Cabinet

Optional Features

- Driven Tool Turret
- Gear Box
- Multi Tool Cutting
- Oil Mist Collector
- Air Conditioner Of Electric Cabinet

Specifications

		Unit	VT320	VT400	VT600	VT800
Capacity	Max. swing dia.	mm	Φ450	Φ550	Φ750	Φ950
	Max. cutting dia.	mm	Φ320	Φ450	Φ600	Φ850
	Max. cutting height	mm	400	420	600	780
Chuck	Chuck type		Hydraulic chuck	Hydraulic chuck	Hydraulic chuck	Hydraulic chuck
	Chuck size	inch	10"	12"	21" , * 18"	21"
Spindle	Spindle speed	rpm	2500	2500	1000, *Gear box	1500
	Main motor power	kW	15/18	15/18	15/18, *18.5,*22	22/30
	Spindle nose		A2-8	A2-8	A2-11	A2-11
Turret	Turret center height	mm	100	125	160	160
	No. of tools	nos	8, *12	8, *12	8, *12	8, *12
	Tool shank size	mm	25×25, *BMT55	32×32	40×40, *BMT65	40×40
Axis	X/Z axis travel	mm	300(+250:-50)/400	350(+300:-50)/450	450(+400:-50)/600	480(+400:-80)/780
	X/Z axis rapid traverse	m/min	15/18	15/18	15/18	15/18
Others	Power consumption	kVA	18	22	35	35
	Dimension (LxWxH)	mm	1600×2000×2200	1900×2100×2900	2200×2300×3300	2050×3820×3600
	Weight (About)	kg	5500	7500	11500	13000

Note: "*" means optional.


Wheel Hub


Steering Knuckle

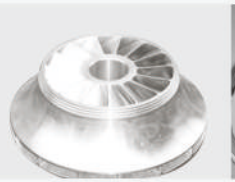

Differential Case


Motor Case


Brake Hub


Brake Disc


Flange


Impeller


Bearing

STAR FAMILY TURNING CENTERS

STAR STL/ SL/ STH-B/ TN/ TS/ DT SERIES

The STAR family of CNC lathes feature a cast mono-block, slant bed design and has configurable tooling options.

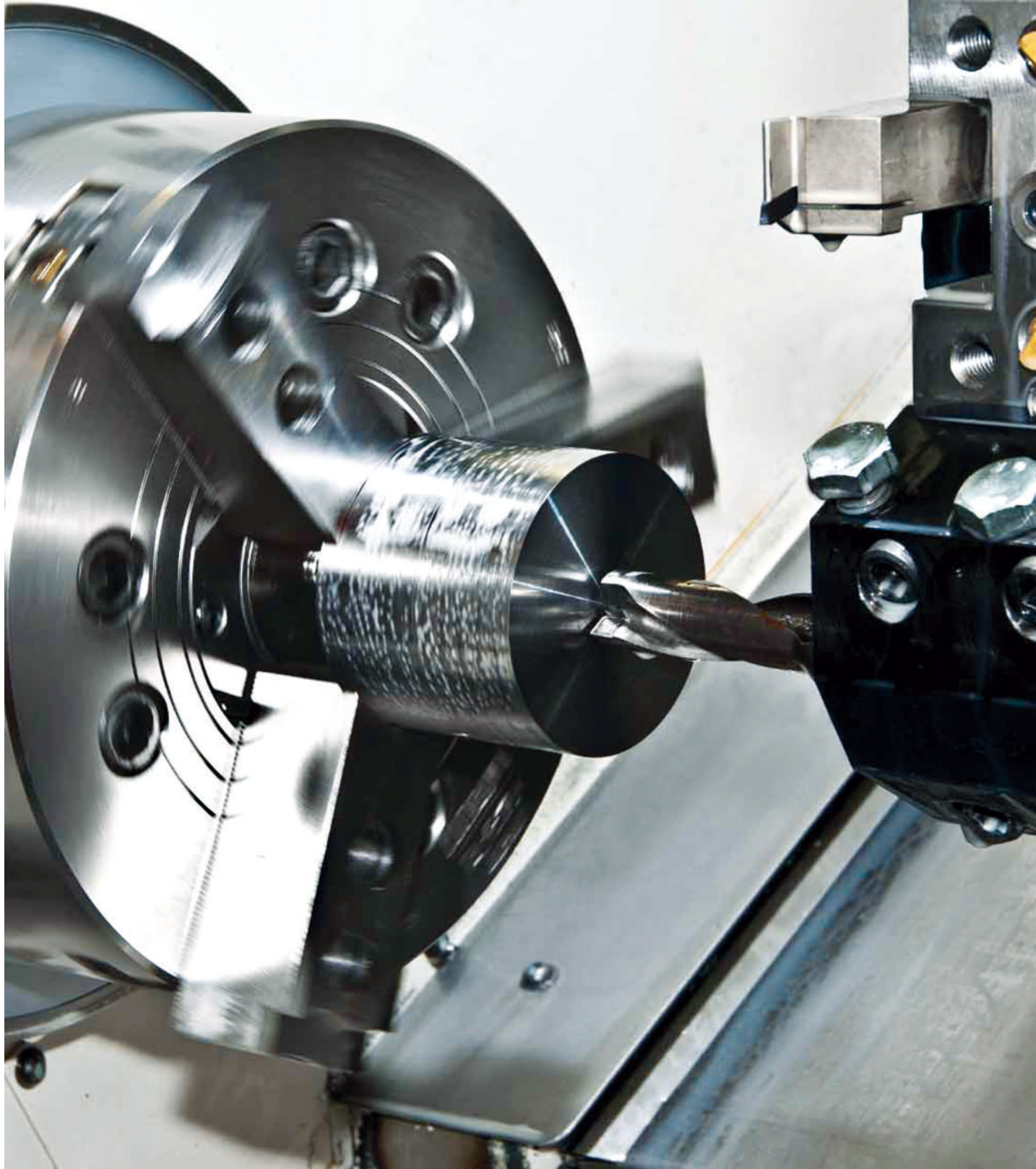
The SL Series lathes are typically equipped with a high-speed bi-directional indexing turret and a hydraulic chuck.

The STL series adds a tailstock to the lathe features.

The TN series are equiped with driven tool turret and C axis for secondary milling /drilling /tapping.

The TS series is designed without a tailstock for saving space and investment meanwhile it retains the same efficiency and capacity as the TN series. Furthermore, the TS500 can put a real powerful VMC spindle under the turret for rigid milling.

The DT series is standard with Y axis for off center milling, together with sub spindle option. Complex workpieces can be finished in one time set-up.



BRILLIANT INNOVATION SOPHISTICATED TECHNOLOGY

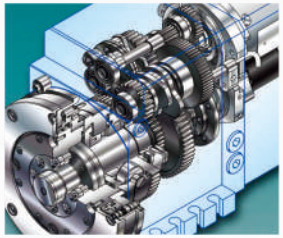
Heavy-Duty Cast Iron Base – PLUS, Quality Components

Nearly all Star Family Lathes have a heavy-duty cast base with "true align" slant bed design. The machine bed, head stock, turret and tailstock are aligned on the same plane. This unique design feature reduces heat build-up and resulting thermal expansion. The net result is a higher precision machine tool.

Additional resulting efficiencies from the "true align" design are greater rigidity and smoother operation – which provides a variety of benefits. You can expect to produce highly accurate parts with extremely fine surface finishes.

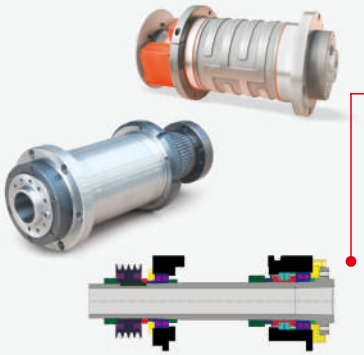
There are multiple benefits to having a lathe that combines such a large sized "vibration damping" solid, cast base – PLUS, properly aligned and balanced components. Some of these benefits include: 1) Smoother slide surface operation 2) Higher speed and accuracy 3) Fewer machine adjustments and lower maintenance costs 4) Shortened machine warm-up time, and 5) Lower power consumption.

The Foundation for Success



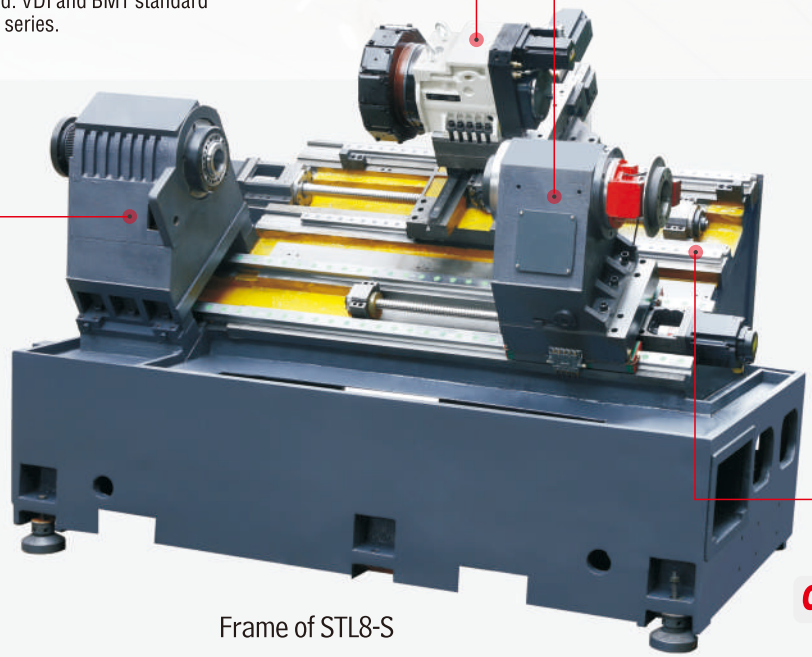
Turret Features

Bi-directional indexing high speed 8/12 station static tools type or 12 stations driven tools type turret provides optimal tool change efficiency and speed. VDI and BMT standard are available in this series.



Rigid Headstock and Spindle

Different types and size spindles are available on one model which adds extreme flexibility and optimized machining performance according to the target workpieces of customer.

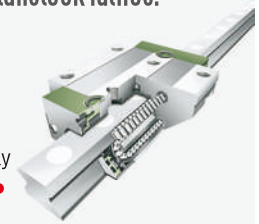


Frame of STL8-S

Sub-spindle & Automatic Tailstock

This efficient tailstock provides a combination of rigidity, accuracy and rapid set-up times on sub spindle or servo automatic tailstock solutions. In addition, Z-MaT smartly designed an economic automatic tailstock. The tail stock body is positioned by a hydraulic traction bar on LM guideway.

90% reduction in set-up time, compared to manual tailstock lathes.



Cylindrical Roller
Linear Motion Guideway

Base and bed are
One-piece square casting
monoblock design

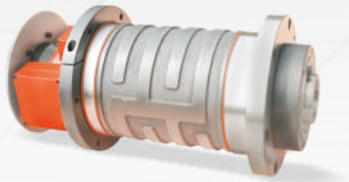
SPINDLE & TURRET FEATURES

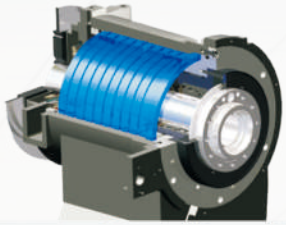
Combined Speed and Rigidity

Different size direct mount spindles, cartridge type spindles and built-in motor spindles are standard according to exact models. With modular design production, each model has various spindle options to create the perfect balance of speed and rigidity.

The headstock and main spindle are manufactured then assembled and tested in a clean room. Heavy duty type spindle is supported by a double-row tapered cylindrical roller bearing plus angular ball bearing and double-row cylindrical roller bearing in the rear. It is a perfect marriage of speed and rigidity.

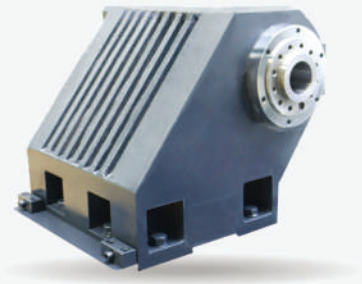
Built-in Motor Spindle





Cartridge Type Spindle

Direct Mount Spindle



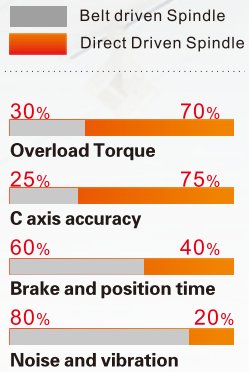
C Axis Motion

PMSM(spindle permanent magnet synchronous motor) type Direct Driven Spindle provides high-precision C axis motion that is fully interpolated with X and Z Motion.

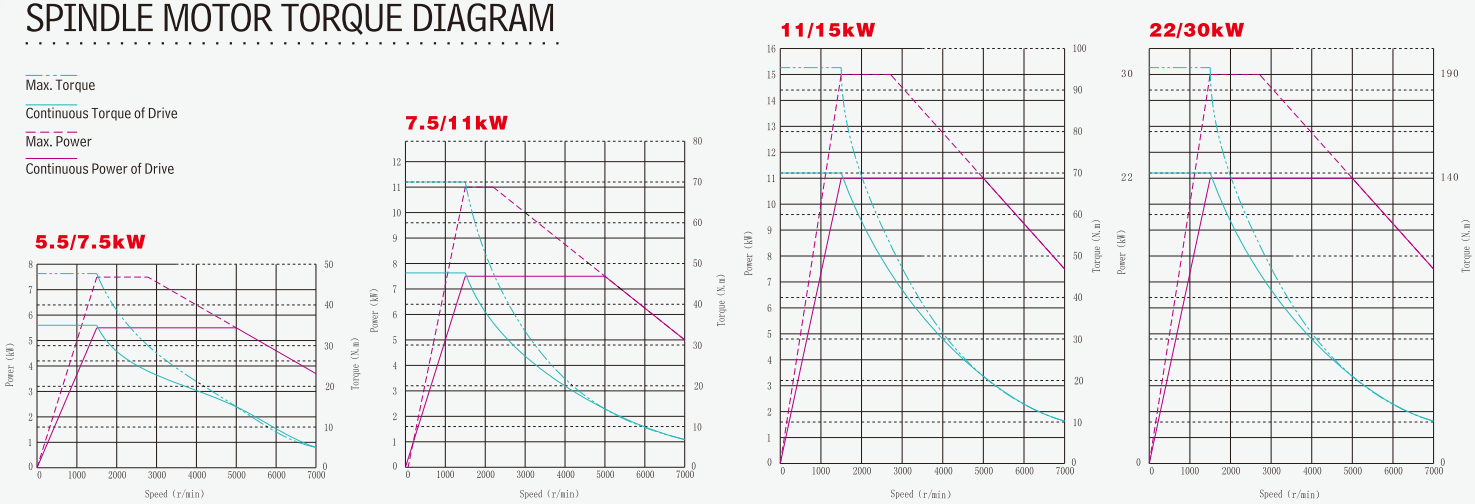
Direct Driven Spindle

Electrical spindle (Built-in motor) offers higher torque, better overload capability and high speed acceleration which shortens cycle time and increases productivity better than a traditional belt driven spindle. The machine is running with less vibration and less noise, together with better accuracy. It represents a new generation of turning center.

Overload protection and oil coolant are standard features to guarantee long term stability.



SPINDLE MOTOR TORQUE DIAGRAM



Note: The real spindle output torque are converted by actual belt pulley ratio, please contact sales repsentative to get more technical details.
The above diagrams are shown as 4 poles servo motor. 6, 8, 10 poles are widely selected to increase torque at low speed.

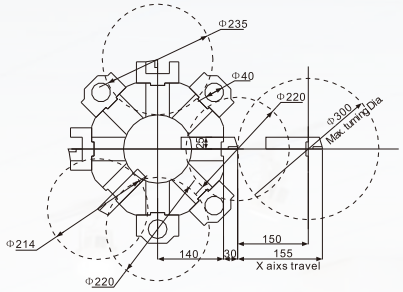
VARIOUS HIGH CLASS TURRET

Increase efficiency and reliability

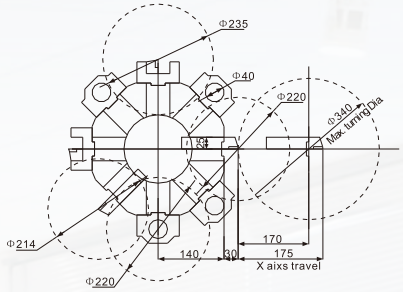
8-station turret is standard on 2 axes cnc lathes. 12-station driven tool turret is standard for 3 and 4 axes turning centers. High quality, high speed bi-directional indexing turret provides optimal tool change efficiency and speed.

Tool Interference Diagram

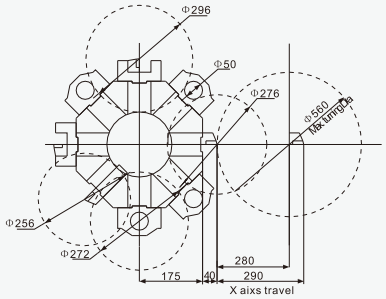
STAR STL6 BTP80-8



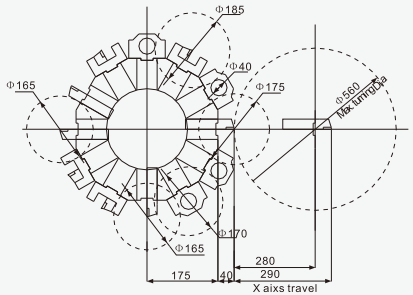
STAR STL8/STL8-II BTP80-8



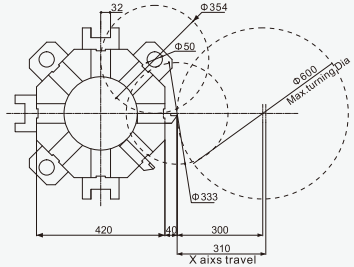
STAR STL10/STL12 BTP100-8



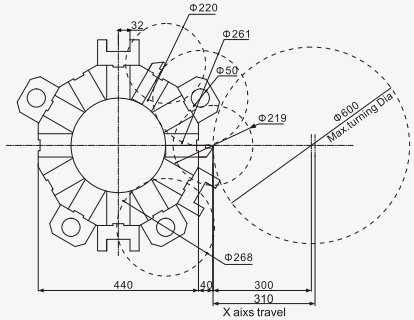
STAR STL10/STL12 BTP100-12

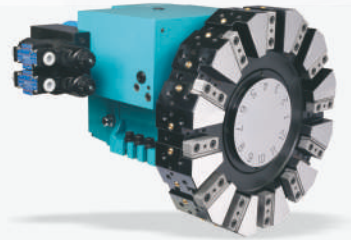


STAR STL15 BTP125-8



STAR STL15 BTP125-12



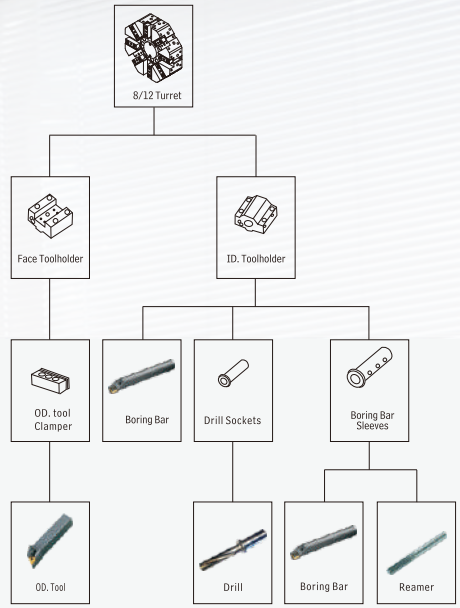


Hydraulic

Servo

Tooling System

STAR STL6/STL8/STL8-II/STL10/STL12



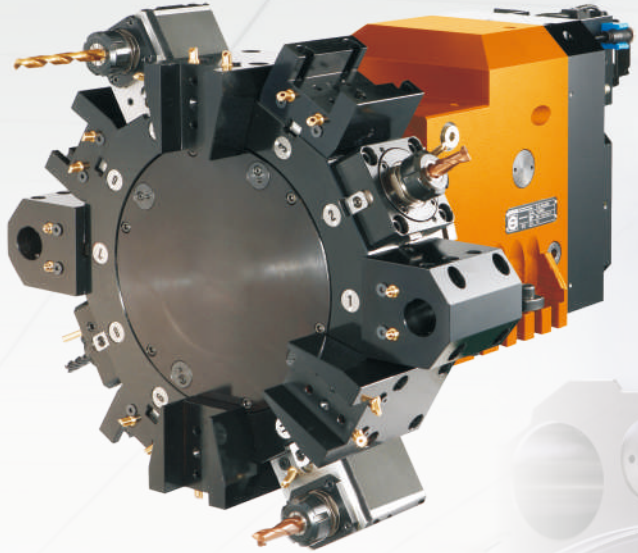
	Adjacent tool change and lock time	Opposite tool change and lock time
8P Center Height - 63	0.6s	2s
8P BTP63	0.4s	1.4s
8P Center Height -80	0.6s	2s
8P BTP80	0.45s	1.6s

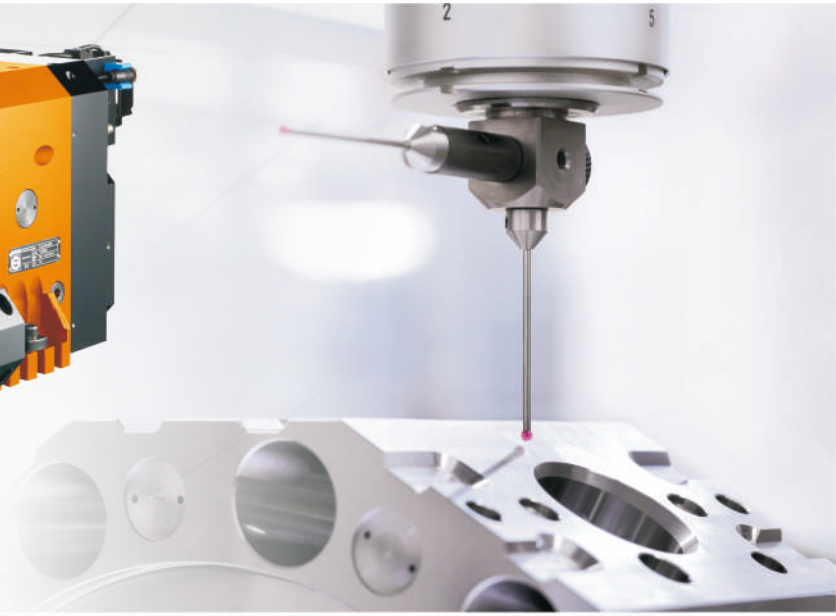
Optional Hydraulic Turret — Z-MaT Adopted Standard Turret

DRIVEN TOOL POWER TURRET FEATURES

Powerful Driven Tool Turret

Standard with 12-station driven tool turret, it features bi-directional indexing and non-lifting. The high quality, high speed power turret provides optimal tool change efficiency and speed.
Robust construction of internal elements ensures smooth transmission of high torque and speed. Only the tool in position gets drive. Motorized Cam operated mechanism ensures positive engage and disengage movements of the clutch for the driven tool. All drive elements are grease lubricated and properly sealed to prevent coolant entry.





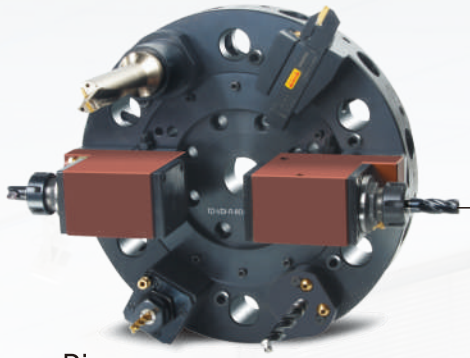
BMT Standard

The BMT “Base Mounted Turret” holder will mount solidly to the face of the turret with 4 socket head cap screws, and is located and further secured with locating keys present on the turret face. These keys eliminate the need for indicating the toolholder to straighten it. Operator does not need to adjust the straightness for BMT toolholder, overall precision is based on the precision of the toolholder, and which is not adjustable.

BMT AND VDI TECHNOLOGY

VDI Technology

The VDI system is a quick change clamping system for each tool holder within the tool disc. Tool changes can therefore be performed within seconds, rather than minutes as with the traditional Block Bolt on system.



VDI30/12-STATION

DIN5480 ★[ATH-30ER25-80] ER25
★[ATH-40ER32-80] ER32
* Compact size is opiton
0 degree live tool holder on Axial(Face)direction

DIN5480 ★[RTH-30ER25-80] ER25
★[RTH-40ER32-80] ER32
* Compact size is opiton
90 degree live tool holder on Radial(OD) direction

DIN69880 ★[B1 (30 20 40)] [B5 (30 20 40)] □20
★[B1 (40 25 44)] [B5 (40 25 44)] □25
*B5 is extra length design
Application of OD turn and face

DIN69880 ★[C1 (30 20)] □20
★[C1 (40 25)] □25
Application of ID Bore and face

DIN69880 ★[Z2 30]
★[Z2 40]
Plug to seal VDI hole

VDI40/12-STATION

DIN69880 ★[E2 (30x32)] Φ32
★[E2 (40x32)] Φ32
*Other sizes option
Boring Bar tool holder

DIN69880 ☆[E1 (30x32)] Φ32
☆[E1 (40x32)] Φ32
*Other sizes option
Through Coolant Boring tool holder

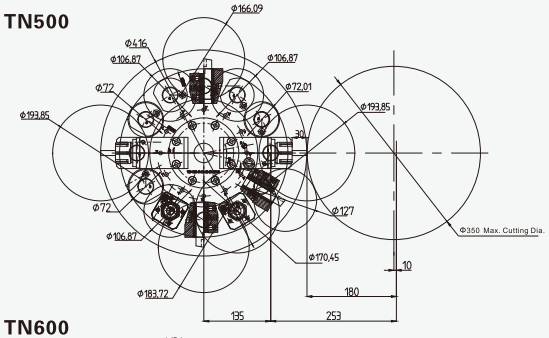
DIN6499 ☆[E4 (30x25)] ER25 ☆[E4 (40x25)] ER25
☆[E4 (30x32)] ER32 ☆[E4 (40x32)] ER32
☆[E4 (30x40)] ER40 ☆[E4 (40x40)] ER40
Er Collet tool holder

DIN69880 ☆[B3 (30 20 40)] [B7 (30 20 40)] □20
☆[B3 (40 25 40)] [B7 (40 25 40)] □25
*B7 is extra length design
Application of OD turn and face

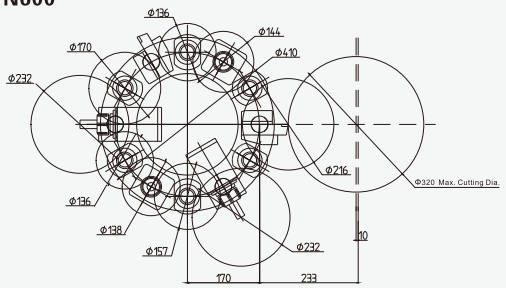
DIN69880 ☆[C3 (30 20)] □20
☆[C3 (40 25)] □25
Application of ID Bore and face

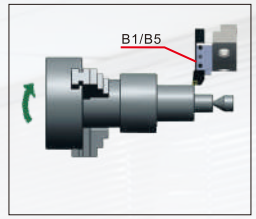
Tool Interference Diagram

TN500

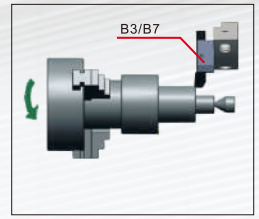


TN600

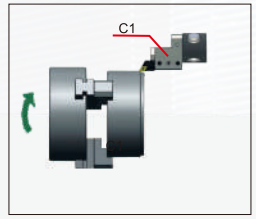




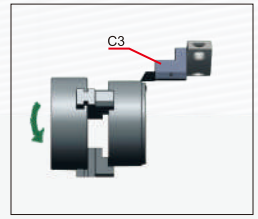
Spindle Rotation clockwise application of OD Turn and Face



Spindle Rotation Anticlockwise application of OD Turn and Face



Spindle Rotation clockwise application of Face and ID Bore



Spindle Rotation Anticlockwise application of Face and ID Bore

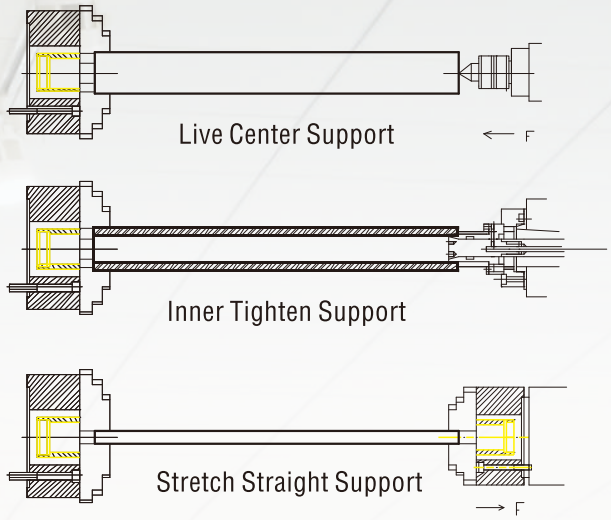
Note:

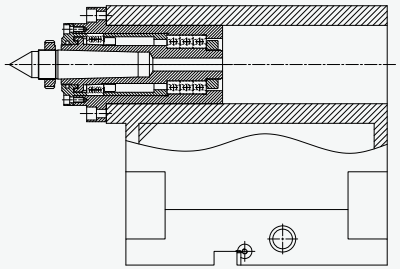
Ⅰ.The codes in [e.g. C1 (30 20] is purchasing codes. Written in Blue color is for VDI30, written in red color is for VDI40.
Ⅱ. ★ mark means that the tool holders often used for general workpiece, we recommend customer to buy together with machine.
Ⅲ.☆mark means that the tool holders occasionally used for some workpiece.
Ⅳ.*mark means that option size is available, please contact our sales representative for details.
Ⅴ.There are more different VDI standard toolholders, you may get from your closest local market or consult Z-MaT's sales reps. for further details.

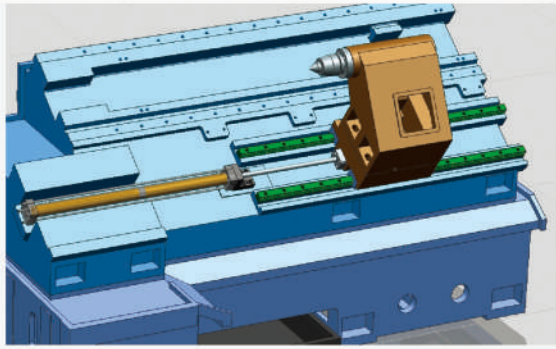
Usage Scenario

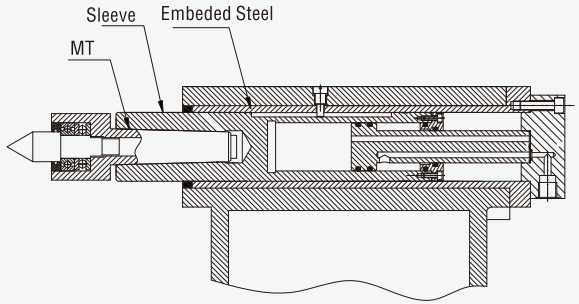
VARIOUS TAILSTOCK FEATURES

Typical Application Diagram of Spindle Type & Servo Programmable Tailstock









SST: Small Spindle Type Tailstock

The tailstock is designed similar to the sub-spindle structure. It offers great rigidity, accuracy and wide capability. Live center lubrication is not necessary on such a structure.

HPT: Hydraulic Programmable Tailstock

The complete tailstock body is driven by a hydraulic traction bar on cylindrical roller linear motion guide way. With no sleeve design and linear motion guide way, it ultimately increases the accuracy as well as being free of lubrication and maintenance. It has the same full automatic travel feature as the servo programmable tailstock. Set up time is saved and efficiency is increased by such a deign.

Embeded Steel Tailstock

Unlike traditional tailstock, Z-MaT uniquely created an embeded steel type tailstock. The design extremely resists wear and increases accuracy.

VARIOUS SUPERB ACCESSORIES

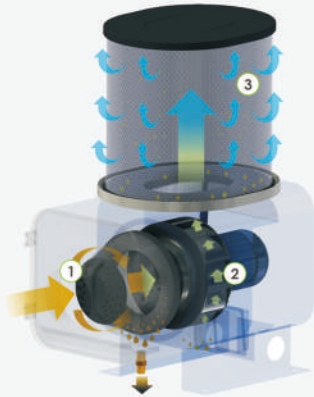
2/3/4 Jaws Chuck

DIN Standard Collet

Hollow Hydraulic Cylinder

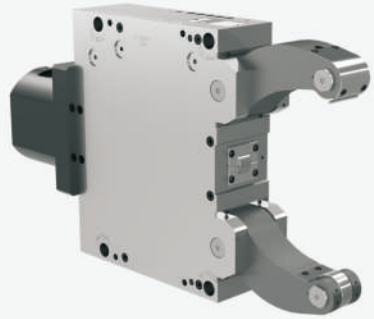
Solid Hydraulic Cylinder

Bar Feeder



Oil Mist Collector

Tool Setter



Steady Rest

STAR STL SERIES

Slant bed, Tailstock, Linear Guideway

Standard Features

- Hydraulic 3-jaw Chuck
- 8-station Turret
- Automatic Lubrication System
- Automatic Coolant System
- Hydraulic Tailstock
- 3 Color Indicator Lamp
- Work Lamp
- Fully Enclosed Guard
- Hydraulic System
- Heat Exchanger Of Electric Cabinet

Optional Features

- 12-Station Turret
- Different Chucks And Collets
- Automatic Tailstock
- Chip Conveyor
- Tool Setter
- Bar Feeder
- Oil Mist Collector
- Air Conditioner Of Electric Cabinet
- Servo/Hydraulic/Manual Steady Rest

Specifications

	Unit	STL5		STL6		STL8		STL8-550		
Capacity										
Chuck size	inch	5", *6"		6", *8"		8", *10"		8", *10"		
Max. swing dia. over bed	mm	Φ300		Φ400		Φ450		Φ550		
Max. length of workpiece	mm	300, *400		380		500		550		
Max. swing dia. over slide	mm	Φ180		Φ220		Φ220		Φ360		
Spindle										
Spindle bore	mm	Φ48	*Φ55	Φ55	*Φ62	Φ62	*Φ75	Φ62	*Φ75	*Φ86
Max. dia. of through-hole	mm	Φ40	*Φ46	Φ46	*Φ52	Φ52	*Φ65	Φ52	*Φ65	*Φ75
Spindle nose	type	A2-5	*A2-5	A2-5	*A2-6	A2-6	*A2-8	A2-6	*A2-8	*A2-8
Spindle speed	rpm	4500	*4500	4500	*4000	4000 *2000	*1600 *3200	4000	*3200	*3000
Main motor power	kW	3.7/5.5, *5.5/7.5		7.5/11		7.5/11, *11/15		11/15		
Axis										
X axis travel	mm	150		150		170		250		
Z axis travel	mm	300,*400		400		500		550		
X/Z rapid traverse	m/min	20/20		20/20		20/20		20/20		
Turret										
Center height	mm	63		80		80		100		
No. of tool stations	nos	8, *12		8, *12		8, *12		8, *12		
Tool shank size	mm	20×20		25×25, *20×20		25×25, *20×20		25×25		
Tailstock										
Type of tailstock		HPT, *SPT		Hydraulic, *HPT		Hydralic, *HPT, *SST		HPT, *SPT		
Taper of tailstock quill		MT4		MT4		MT4		MT4		
Travel of tailstock quill	mm	0		90		90		150		
Travel of tailstock	mm	300,*400		80-400		100-500		550		
Structure										
Slant bed degree		45°		45°		35°		35°		
Guideway type		LM		LM		LM		LM		
Others										
Power capacity	kVA	12		14		15		16		
Overall dimension (L×W×H)	mm	2400×1640×2050		2510,*2650×1910×2010		2700×1800×2000		2860×1950×2200		
Weight (about)	kg	2500		2900		3800		4800		

Note: “*” means optional. “LM” means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
“ HPT” means linear motion guide way, automatic hydraulic driven body move tailstock. “SST” means small spindle hydraulic tailstock.
“ SPT” means servo programmable tailstock. Programmable taistock is available on STL5 for slim bar machining.

Specifications

	Unit	STL8-750		STL8-1100		STL10		STL10-1600		STL10-2000	
Capacity											
Chuck size	inch	8", *10"		8", *10"		10"		10"		10"	
Max. swing dia. over bed	mm	Φ550		Φ600		Φ520, *Φ620		Φ600		Φ570	
Max. length of workpiece	mm	750		1100		750,*1000		1600		1800(C2C 2000)	
Max. swing dia. over slide	mm	Φ360		Φ360		Φ280, *380		Φ400		Φ360	
Spindle											
Spindle bore	mm	Φ62	*Φ75	Φ62	*Φ75	Φ86	*Φ75	Φ86	*Φ75	Φ86	*Φ75
Max. dia. of through-hole	mm	Φ52	*Φ65	Φ52	*Φ65	Φ75	*Φ65	Φ75	*Φ65	Φ75	*Φ65
Spindle nose	type	A2-6	*A2-8	A2-6	*A2-8	A2-8	*A2-8	A2-8	*A2-8	A2-8	*A2-8
Spindle speed	rpm	4000 *2000	*1600 *3200	4000 *2000	*1600 *3200	3000 *Gear box	*3200 *Gear box	3000 *Gear box	*3200 *Gear box	3000 *Gear box	*3200 *Gear box
Main motor power	kW	7.5/11, *11/15		7.5/11, *11/15		11/15, *15/18.5		15/18.5		15/18.5	
Axis											
X axis travel	mm	250		250		280		250		280	
Z axis travel	mm	750		1100		750,*1000		1600		2000	
X/Z rapid traverse	m/min	20/20		20/20		15/20		15/20		15/20	
Turret											
Center height	mm	80, *100		80, *100		100, *125		100		100	
No. of tool stations	nos	8, *12		8, *12		8,*12		8,*12		8,*12	
Tool shank size	mm	25×25		25×25		25×25		25×25		25×25	
Tailstock											
Type of tailstock		SST, *SPT		SST, *SPT		Hydraulic, *HPT, *SST		SST,*SPT		SST, *SPT	
Taper of tailstock quill		MT3		MT3		MT5		MT4		MT4	
Travel of tailstock quill	mm	150		150		150		150		150	
Travel of tailstock	mm	750		1100		100-750/*1000		1600		1800	
Structure											
Slant bed degree		35°		35°		35°		35°		35°	
Guideway type		LM		LM		LM		LM		LM	
Others											
Power capacity	kVA	16		18		20		22		22	
Overall dimension (L×W×H)	mm	2960×1950×2200		3500×1950×2200		3350×2000×2350		4100×2000×2250		5150×2070×2350	
Weight (about)	kg	5200		6000		5850		7000		8000	

Note: "*" means optional. "LM" means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
" HPT" means linear motion guide way, automatic hydraulic driven body move tailstock. "SST" means small spindle hydraulic tailstock.
" SPT" means servo programmable tailstock. "C2C", Spindle Center to tailstock Center Distance.

STAR STL SERIES

Slant bed, Tailstock, Linear Guideway

STL12

Specifications

	Unit	STL12		STL12-1600		STL12-2000		STL12-3000		STL15-1500	
Capacity											
Chuck size	inch	12", *15"		12", *15"		12", *10",*15"		12", *15"		15",*12"	
Max. swing dia. over bed	mm	Φ530		Φ600		Φ620		Φ460		Φ650	
Max. length of workpiece	mm	750,1000		1600		1820 (C2C 2000)		3000		1320 (C2C 1500)	
Max. swing dia. over slide	mm	Φ280		Φ400		Φ360		Φ460		Φ500	
Spindle											
Spindle bore	mm	Φ105	*Φ120	Φ105	*Φ120	Φ105	*Φ120	Φ105	*Φ120	Φ105	*Φ120
Max. dia. of through-hole	mm	Φ91	*Φ110	Φ91	*Φ110	Φ91	*Φ110	Φ91	*Φ110	Φ91	*Φ110
Spindle nose	type	A2-8	*A2-11	A2-8	*A2-11	A2-8	*A2-11	A2-8	*A2-11	A2-8	*A2-11
Spindle speed	rpm	1800 *Gear box	*1000 *Gear box	1800 *Gear box	*1000 *Gear box	1800 *Gear box	*1000 *Gear box	1800 *Gear box	*1000 *Gear box	1800 *Gear box	*1000 *Gear box
Main motor power	kW	11/15, *15/18.5		15/18.5		15/18.5		18.5		15/18.5	
Axis											
X axis travel	mm	280		250		280		280-320		300	
Z axis travel	mm	750, *1000		1600		2000		3300		1500	
X/Z rapid traverse	m/min	15/20		15/20		15/20		15/20		15/20	
Turret											
Center height	mm	100		100		100		100, *125		125	
No. of tool stations	nos	8*12		8, *12		8*12		12		8*12	
Tool shank size	mm	25×25		25×25		25×25		25×25, 32×32		32×32	
Tailstock											
Type of tailstock		Hydraulic, *HPT, *SST		SST,*SPT		SST, *SPT		SPT		SST-LM	
Taper of tailstock quill		MT5		MT4		MT4		MT5		MT5	
Travel of tailstock quill	mm	150		150		150		/		0	
Travel of tailstock	mm	100-750/*1000		1600		100-1800		3200		100-1320	
Structure											
Slant bed degree		35°		35°		35°		35°		45°	
Guideway type		LM		LM		LM		LM		LM	
Others											
Power capacity	kVA	20		22		22		25		25	
Overall dimension (L×W×H)	mm	3350×2000×2350		4100×2000×2250		5150×2070×2150		6128×2100×2220		4550×2270×2550	
Weight (about)	kg	5900		7100		8100		10000		10500	

Note: “*” means optional. “LM” means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
“ HPT” means linear motion guide way, automatic hydraulic driven body move tailstock. “SST” means small spindle hydraulic tailstock.
“ SPT” means servo programmable tailstock.

Specifications

	Unit	STL15-2000		STL18-750		STL18-1000		STL18-1500		STL18-2000	
Capacity											
Chuck size	inch	15",*12"		18", *15"		18", *15"		18", *15"		18", *15"	
Max. swing dia. over bed	mm	Φ650		Φ800		Φ800		Φ800		Φ800	
Max. length of workpiece	mm	1820 (C2C 2000)		750		1000		1500		2000	
Max. swing dia. over slide	mm	Φ500		Φ600		Φ600		Φ600		Φ600	
Spindle											
Spindle bore	mm	Φ105	*Φ120	Φ110	*Φ120	Φ110	*Φ120	Φ110	*Φ120	Φ110	*Φ120
Max. dia. of through-hole	mm	Φ91	*Φ110	Φ95	*Φ110	Φ95	*Φ110	Φ95	*Φ110	Φ95	*Φ110
Spindle nose	type	A2-8	*A2-11	A2-11	*A2-11	A2-11	*A2-11	A2-11	*A2-11	A2-11	*A2-11
Spindle speed	rpm	1800 *Gear box	*1000 *Gear box	1500 *Gear box	*1000 *Gear box	1500 *Gear box	*1000 *Gear box	1500 *Gear box	*1000 *Gear box	1500 *Gear box	*1000 *Gear box
Main motor power	kW	15/18.5		15/18.5, *18.5/22		15/18.5, *18.5/22		15/18.5, *18.5/22		15/18.5, *18.5/22	
Axis											
X axis travel	mm	300		380		380		380		380	
Z axis travel	mm	2000		750		1000		1500		2000	
X/Z rapid traverse	m/min	15/20		15/20		15/20		15/20		15/20	
Turret											
Center height	mm	125		125		125		125		125	
No. of tool stations	nos	8*12		8*12		8*12		8*12		8*12	
Tool shank size	mm	32×32		32×32		32×32		32×32		32×32	
Tailstock											
Type of tailstock		SST, *SPT		Hydraulic,* HPT, *SST, *SPT		Hydraulic,* HPT, *SST, *SPT		Hydraulic, *SST, *SPT		Hydraulic, *SST, *SPT	
Taper of tailstock quill		MT5		MT6		MT6		MT6		MT6	
Travel of tailstock quill	mm	150		150		150		150		150	
Travel of tailstock	mm	100-1820		100-750		200-1000		200-1500		200-2000	
Structure											
Slant bed degree		45°		45°		45°		45°		45°	
Guideway type		LM		LM		LM		LM		LM	
Others											
Power capacity	kVA	25		32		32		32		32	
Overall dimension (L×W×H)	mm	5000×2270×2550		3900×2200×2550		4200×2200×2550		4700×2200×2550		5200×2200×2550	
Weight (about)	kg	11500		9100		10000		11000		12000	

Note: "*" means optional. "LM" means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
" HPT" means linear motion guide way, automatic hydraulic driven body move tailstock. "SST" means small spindle hydraulic tailstock.
" SPT" means servo programmable tailstock. "C2C", Spindle Center to tailstock Center Distance.

STAR SL SERIES

Slant bed, Linear Guideway

Compact Design – Without Tailstock

For disc and short parts, SL has the Same Performance as the STL
– At a Lower Price Point, Perfect for Automation Options

Cast Mono-Block, “True Align” Slant Bed Structure.
Star SL6 and SL10E are designed with extra gang static or live tool holder options under the turret.

SL8

Standard Features

- Hydraulic 3-jaw Chuck
- 8-station Turret
- Automatic Lubrication System
- Automatic Coolant System
- Heat Exchanger Of Electric Cabinet

Optional Features

- 12-Station Turret
- Chip Conveyor
- Tool Setter
- Bar Feeder
- Air Conditioner Of Electric Cabinet

Specifications

		Unit	SL6			SL8	SL10E		SL10		SL12	
Capacity	Chuck size	inch	6", *8",*10"			8"	8", *10"		10"		12", *15"	
	Max. swing dia. over bed	mm	Φ480			Φ450	Φ500		Φ550		Φ550	
	Max. length of workpiece	mm	250, *350			320	300, *400		450, *600		450, *600	
	Max. swing dia. over slide	mm	Φ210			Φ300	Φ210		Φ300		Φ300	
Spindle	Spindle bore	mm	Φ55	*Φ62	*Φ81	Φ62	Φ62	*Φ75	Φ86	*Φ75	Φ105	*Φ120
	Max. dia. of through-hole	mm	Φ46	*Φ52	*Φ70	Φ52	Φ52	*Φ65	Φ75	*Φ65	Φ91	*Φ110
	Spindle nose	type	A2-5	*A2-6	*A2-8	A2-6	A2-6	*A2-8	A2-8	*A2-8	A2-8	*A2-11
	Spindle speed	rpm	4500	*2000	*1600	4000	4000	*3200	3000	*3200	1800	*1000
		kW	*5000	*4000	*2500	*2000	*2000					
	Main motor power		5.5/7.5			7.5/11	7.5/11		11/15		11/15	
Axis	X axis travel	mm	200			250	280		280		280	
	Z axis travel	mm	250, *350			300	300, *400		450, *600		450, *600	
	X/Z rapid traverse	m/min	20/25			20/20	20/20		20/20		20/20	
Turret	Center height	mm	63,*80			80	80		80,*100		80,*100	
	No. of tool stations	nos	8, *12			8, *12	8, *12		8, *12		8,*12	
	Tool shank size	mm	20×20, *25×25			25×25, *20×20	25×25, *20×20		25×25		25×25	
Structure	Slant bed degree		35°			45°	60°		35°		35°	
	Guideway type		LM			LM	LM		LM		LM	
Others	Power capacity	kVA	13			15	15		18		18	
	Overall dimension (L×W×H)	mm	2450×1800×1950			2200×1700×2000	2550×1750×2250		3000×1900×2130		2800×1900×2130	
	Weight (about)	kg	2500			3300	4000		4800		4900	

Note: “*” means optional, "LM" means linear motion guideway.

STAR STH-B SERIES

Slant bed, Turret, Hard-Box guideway

Machine Characteristics

- 45° slant bed ---efficient chip flow and optional for chip conveyor(Right or Rear side)
- The machine tool castings are designed by finite element analysis, and the structure is reasonable. The machine tool guideways adopt rectangular plastered sliding guide, with large span and high rigidity, which can meet the heavy cutting requirements of the machine tool;
- The X/Z axis ball screw is a pre-load structure, which can effectively reduce the influence of temperature on accuracy and keep the machine high precision for a long time;
- The tailstock adopts Box guideway with high rigidity with two modes of programming and manual option.

Standard Features

- Hydraulic 3-jaw -Chuck
- 8-station Turret
- Automatic Lubrication System
- Automatic Coolant System
- Heat Exchanger Of Electric Cabinet
- Hydraulic tailstock

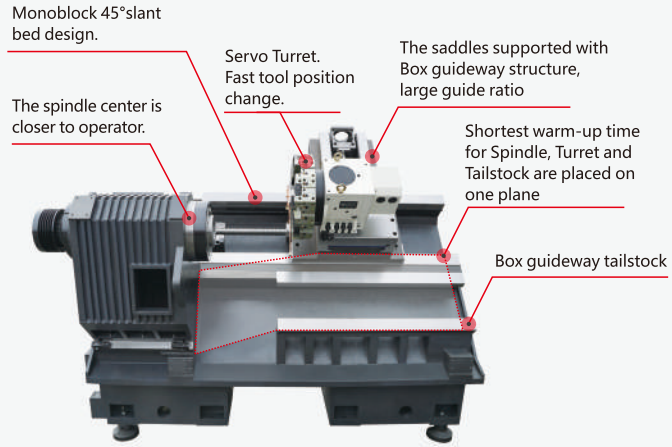
Optional Features

- 12-Station Turret
- Chip Conveyor
- Tool Setter
- Manual/Hydraulic Steady Rest
- Air Conditioner Of Electric Cabinet

Specifications

		Unit	STH10-420B	STH12-420B	STH10-750B	STH12-750B
Capacity	Max.turning diameter	mm	Φ320	Φ320	Φ320	Φ320
	Max.length of workpiece	mm	420	420	750	750
	Max.swing dia. over bed	mm	Φ500	Φ500	Φ500	Φ500
	Max.swing dia. over slide	mm	Φ210	Φ210	Φ210	Φ210mm
Spindle	Max.spindle speed	rpm	3200	3000 *2000, *Gear box	3200	3000 *2000, *Gear box
	Max.dia.of through-hole	mm	Φ75	Φ86 *Φ105	Φ75	Φ86 *Φ105
	Spindle nose		A2-8	A2-8 *A2-8	A2-8	A2-8 *A2-8
	Max. dia. of through hole	mm	Φ65	Φ75 *Φ91	Φ65	Φ75 *Φ91
	Main motor power	kw	11/15, *15/18.5	11/15, *15/18.5	11/15, *15/18.5	11/15, *15/18.5
Structure	Slant bed degree	degree	45°	45°	45°	45°
	Guideway type		Hard-Box	Hard-Box	Hard-Box	Hard-Box
Axis	X axis travel	mm	220	220	220	220
	Z axis travel	mm	560 (Chuck-Turret:420)	560 (Chuck-Turret:400)	750 (claping claw-Turret disk)	750 (claping claw-Turret disk)
	X/Z axis rapid traverse	mm	15/15	15/15	15/15	15/15
Feed rate	Max. Cutting feed rate	m/min	8	8	8	8
Tailstock	Travel of tailstock quill	mm	100mm	100	100	100
	Taper of tailstock quill		MT5	MT5	MT5	MT5
others	Overall dimension	mm	3000×1700×2200	3000×1700×2200	3300×1700×2200	3300×1700×2200
	Weight(about)	kg	4300	4500	4800	5000

Note: "*" means optional.



Remark:STH10-B frame

STAR TN & TS SERIES

FULL RANGE OF X.Z.C. 3-AXIS TURNING CENTERS

Turning Center
Turning Center For Short Parts

TS Feature a Compact Design – Without Tailstock

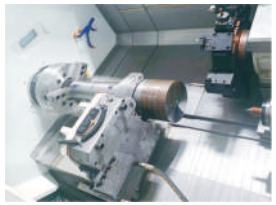
TS has the Same Performance as TN – At a Lower Price Point

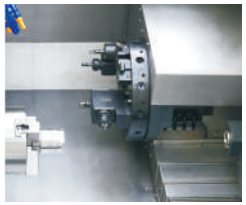
Standard Features

- Hydraulic 3-jaw Chuck
- 12-station Power Turret
- Automatic Lubrication System
- Automatic Coolant System
- Tailstock (TN Series)
- Work and Alarm Light

Optional Features

- Tool Setter
- Chip Conveyor
- Live Tool Holders
- Different Chucks and Collets
- Servo Tailstock
- Bar Feeder
- Servo/Hydraulic Steady Rest
- Static or Live tools under Turret (TS400, TS500)





Machine Characteristics

TN and TS are turning centers able to flexibly handle various workpieces. The models feature Belt-Driven or Direct Driven Spindle (Built-in Motor) that achieves high speed with great rigidity, and outstanding C axis accuracy. 12-station Power turret enables operators to perform machining of workpieces from simple to complex shaped components with one set up operation.

TS are models are without a tailstock for a more compact and economic design to satisfy short or disc type workpiece.

Specifications

		Unit	TN500	TN500-450	TN500-650	TN500-1000	TN500-1600
Capacity	Chuck size	inch	8	8	8	8, *10	8,*10
	Max. length of workpiece	mm	500	450	650	1000	1600
	Max. swing dia. over bed	mm	Φ540	Φ550	Φ600	Φ600	Φ600
	Max. swing dia. over slide	mm	Φ280	Φ360	Φ380	Φ380	Φ460
Spindle	Spindle bore	mm	Φ66	Φ66	Φ66	Φ66	Φ66
	Max. dia. of through-hole	mm	Φ52	Φ52	Φ52	Φ52	Φ52
	Spindle nose	-	A2-6	A2-6	A2-6	A2-6	A2-6
	Max. spindle speed	rpm	4000	4000	4000	4000	4000
	Main motor power	kW	22/30	22/30	22/30	22/30	22/30
Axis	X axis travel	mm	260	260	230	230	230
	Z axis travel	mm	500	450	650	1000	1600
	X/Z axis rapid traverse	m/min	20/20	20/20	20/20	20/20	20/20
Turret	No. of tool stations	pcs	12	12	12	12	12
	Tool shank size		VDI30, *BMT45	BMT45, *BMT55	BMT45, *BMT55	BMT55	BMT55
	Max. speed of driving tool	rpm	4000, *5000	4000, *5000	4000, *5000	4000, *5000	4000, *5000
Tailstock	Type of tailstock	—	Hydraulic, *HPT	Hydraulic, *HPT, *SPT	SST, *SPT	SST, *SPT	SST, *SPT
	Taper of tailstock quill	—	MT4	MT5, *MT3	MT5, *MT3	MT5, *MT3	MT5, *MT3
	Travel of tailstock	mm	100-500	100-500	100-650	100-1000	100-1600
Others	Slant bed degree	—	35°	35°	35°	35°	35°
	Guideway type	—	LM	LM	LM	LM	LM
	Power capacity	kVA	28	28	28	28	30
	Overall dimension(L×W×H)	mm	2750×1950×2200	2860×1900×2200	3200×2000×2200	3500×1950×2200	4000×2200×2200
	Weight(about)	kg	4600	4800	5200	6200	7500

Note: "*" means optional. "LM" means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
" HPT" means linear motion guide way, automatic hydraulic driven body move tailstock. "SST" means small spindle hydraulic tailstock.
" SPT" means servo programmable tailstock.

TN500

Specifications

		Unit	TN600	TN600-3000	TN700	TN800	TS400	TS500	TS600
Capacity	Chuck size	inch	10,*12	10,*12	15	18", *15"	6	8	10
	Max. length of workpiece	mm	700, *900, *1700	3000	1250,*1700	650,*900,*1400, *1900	320	320	400
	Max. swing dia. over bed	mm	Φ620	Φ620	Φ620	Φ800	Φ400	Φ550	Φ600
	Max. swing dia. over slide	mm	Φ360	Φ360	Φ360	Φ600	Φ200	Φ320	Φ400
Spindle	Spindle bore	mm	Φ86	Φ86 *105	Φ105	Φ110 *Φ120	Φ55	Φ66	Φ86
	Max. dia. of through-hole	mm	Φ75	Φ75 *91	Φ91	Φ95 *Φ110	Φ46	Φ52	Φ75
	Spindle nose	-	A2-8	A2-8 *A2-8	A2-8	A2-11 *A2-11	A2-5	A2-6	A2-8
	Max. spindle speed	rpm	3000	3000 *2000	2000	1500 *1000	5000	4000	3000
	Main motor power	kW	37/45,*Belt	37/45,*Belt,*18.5/22	Belt: 18.5/22	15/18.5, *18.5/22	11/15	22/30	37/45,*Belt
Axis	X axis travel	mm	280	280-320	300	380	250	250	280
	Z axis travel	mm	700, *900,*1800	3300	1250, *1700	650,*900,*1400, *1900	320	320	400
	X/Z axis rapid traverse	m/min	20/20	20/20	15/20	15/20	20/20	20/20	20/20
Turret	No. of tool stations	pcs	12	12	12	12	12	12	12
	Tool shank size		BMT55, *VDI40	BMT65	BMT65	BMT65	VDI30, *BMT45	VDI30, *BMT45	VDI40, *BMT55
	Max. speed of driving tool	rpm	4000, *5000	4000, *5000	4000, *5000	4000, *5000	4000, *6000	4000, *6000	4000, *5000
Tailstock	Type of tailstock	—	Hydraulic, *SPT,*HPT	Hydraulic, *SPT	SST-LM, *SPT	SST-LM, *SPT	—	—	—
	Taper of tailstock quill	—	MT5	MT5	MT5	MT5	—	—	—
	Travel of tailstock	mm	100-750, *1000, *1700	3000	100-1250, *1700	100-650,*900,*1400, *1900	—	—	—
Others	Slant bed degree	—	35°	35°	45°	45°	35°	60°	35°
	Guideway type	—	LM	LM	LM	LM	LM	LM	LM
	Power capacity	kVA	45	45	45	48	25	25	40
	Overall dimension(L×W×H)	mm	3200×1920×2130	6128×2100×2220	4550×2270×2550	3900×2200×2550	2500×1600×1900	2600×1750×2050	2700×2000×2120
	Weight(about)	kg	6000,*7000,*8100	10000	10700,*11700	9300,*10200,*11200, *12200	2600	4100	4900

Note: “*” means optional. “LM” means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve. “ HPT” means linear motion guide way, automatic hydraulic driven body move tailstock.
“SST” means small spindle hydraulic tailstock.“ SPT” means servo programmable tailstock. Programmable steady rest is available on TN500-1600. Ts500 is able to put BT30/40 spindle type live tool below turret to realize heavy miiling.
37/45kW Motorized Spindle is N/A for Fanuc, belt driven spindle is an option for all machine model standard with motorized spindle.

STAR DT SERIES

FULL RANGE OF X.Z.C.Y. 4-AXIS TURNING CENTERS

Dual Processes Turning Center With Y Axis

Standard Features

- Hydraulic 3-Jaw Chuck
- 12 station BMT Power Turret
- Y axis
- Hydraulic Tailstock
- Work Light
- Tri-Color Alarm Light
- Automatic Lubrication System
- Automatic Coolant System

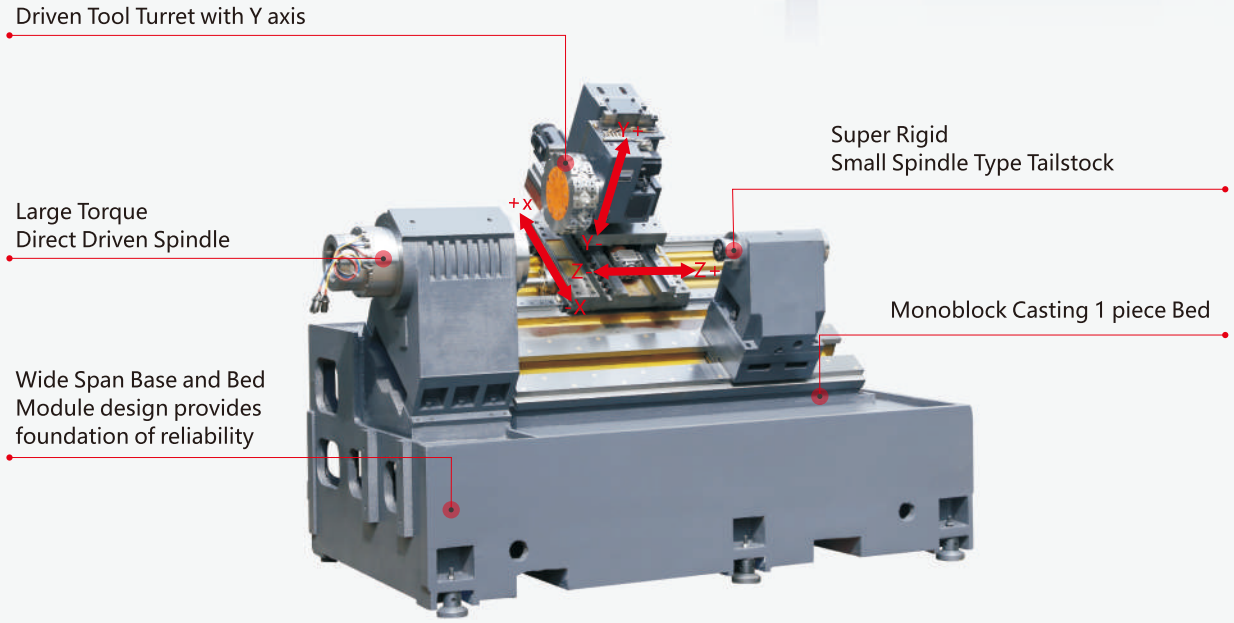
Optional Features

- Different Chucks and Collets
- Different CNC Control Systems
- Different Spindle Bore Diameters
- Chip Conveyor
- Tool Setter
- Servo Tailstock
- Servo/Hydraulic Steady Rest

Machine Characteristics

Z-MaT DT series turning centers provide DDS spindle or Belt spindle units, Driven tool turret and Y axis features. This Series extremely extends machining capability for combining turning and off center milling. With Y axis, customers can replace more than 90% secondary machining process by milling machine for turned parts. It will save the labor time, increase accuracy and efficiency.

Thanks for mass production, Z-MaT work hard to make every customer own an excellent turning center at an affordable price. You don't need 1 CNC lathe and 1 milling/drilling/tapping machine any more. In most instances, one unit of DT series turning center solves all your problems in one setup.



Remark: DT500E frame, DT350E/DT400E/DT450E is similar.

DT450E

Specifications

		Unit	DT300E	DT350E	DT400E	DT450E	DT500E-450	DT500E	DT500E-1000	DT500E-1500
Capacity	Max. turning diameter	mm	160	160	160	200	320	320	320	320
	Max. length of workpiece	mm	250	320	320	450	450	650	1000	1500
	Max. swing dia. over bed	mm	Φ500	Φ500	Φ500	Φ600	Φ600	Φ600	Φ600	Φ600
	Max. swing dia. over slide	mm	Φ250	Φ300	Φ350	Φ380	Φ430	Φ430	Φ430	Φ430
Spindle	Hydraulic chuck	Inch	6	6	6	8	8	8	8	8
	Dia. of spindle bore	mm	Φ55	Φ55	Φ55	Φ66	Φ66	Φ66	Φ66	Φ66
	Max. dia. of through-hole	mm	Φ46	Φ46	Φ46	Φ52	Φ52	Φ52	Φ52	Φ52
	Spindle nose		A2-5	A2-5	A2-5	A2-6	A2-6	A2-6	A2-6	A2-6
	Max. spindle speed	rpm	5000	5000	5000	4000	4000	4000	4000	4000
	Main motor	kW	11/15	11/15	11/15	22/30	22/30	22/30	22/30	22/30
Structure	Slant bed degree	degree	35°	45°	35°	35°	35°	35°	35°	35°
	Guideway type	mm	LM	LM	LM	LM	LM	LM	LM	LM
Axis	X axis travel	mm	300 (+200 -100)	150	230	220	250	250	250	250
	Z axis travel	mm	250	320	320	450	450	650	1000	1500
	Y axis travel	mm	±35	70 (±35)	70 (±35)	100 (±50)	100 (±50), *140 (±70)	100 (±50), *140 (±70)	140 (±70)	140 (±70)
	X/Z/Y axis rapid traverse	m/min	20/12/20	20/20/12	20/20/12	20/20/12	20/20/12,*7	20/20/12,*7	20/20/12,*7	20/20/12,*7
Turret	Type of turret		BMT40	BMT40	BMT40	BMT45	BMT45,*BMT55	BMT45,*BMT55	BMT55, *BMT65	BMT55, *BMT65
	No. of tool		12	12	12	12	12	12	12	12
	OD tool shank size	mm	16×16	16×16	16×16	20×20	20×20 *25×25	20×20 *25×25	20×20 *25×25	20×20 *25×25
	Boring tool shank size	mm	Φ25	Φ25	Φ25	Φ32	Φ32, *Φ40	Φ32, *Φ40	Φ32, *Φ40	Φ32, *Φ40
	Max. speed of live tooling	rpm	4000	4000	4000	4000, *6000	4000, *6000	4000, *6000	4000, *6000	4000, *6000
Tailstock	Type of tailstock		-	Hydraulic, *SST	*Hydraulic	Hydraulic	SPT, *SST	SPT, *SST	SPT, *SST	SPT, *SST
	Taper of tailstock quill		-	MT4	*MT4	MT4	MT3(spindle unit type)	MT3(spindle unit type)	MT3(spindle unit type)	MT3(spindle unit type)
	Travel of tailstock	mm	-	320	*350	450	100-450	100-650	100-1000	100-1500
Others	Weight (about)	kg	2100	2700	4000	4000	4800	4800	5200	5800
	Overall dimension (L×W×H)	mm	2370×1615×2205	2400×1665×2220	2730×2050×2280	2750×1890×2200	3000×1780×2050	3000×1780×2050	3600×2100×2300	4000×2100×2300

Note: “*” means optional. “LM” means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve.
“ HPT” means linear motion guide way, automatic hydraulic driven body move tailstock. “SST” means small spindle hydraulic tailstock.
“ SPT” means servo programmable tailstock.
“ DT500E-1500” is special purpose design for slim shaft workpiece standard with programmable steady rest and servo programmable tailstock.

MULTI-TURRET SERIES

MULTIPLE TURRETS MULTIPLY YOUR PRODUCTION

Expanded machine functionality promises reduced cycle times. Suitable for a broad range of production processes.
This machine's development was driven by the demands of entrepreneurial manufacturers.
The Z-MaT GT260V combines the highest levels of reliability, accuracy and efficiency.
As a result of large production volume and well managed supply chain,
Z-MaT has produced a machine that operates at the highest levels of performance
- providing you with a powerful weapon for improving your competitive advantage

DOUBLE TURRETS TURNING CENTER

Experience The Real Power

High Speed Tool Change Turret; Heavy Cast Body;
Cylindrical Roller Linear Guideway; Large-Sized Ball Screws

This combination of rigid and agile hardware combines seamlessly with Double Channel Control System – offering two times the productivity and broadly expanded machine work capabilities and options.

1. Hydraulic Dashboards
2. Accessories & Tool Box
3. Alarm Lamp
4. Coolant Tank
5. Central Auto Lubrication System
6. Adjustable Control System Panel

User-friendly Operability

The ergonomically designed operator interface is situated at an optimal height and has a swing arm to allow the operator to adjust the interface angle for ease and convenience. Frequently used buttons are conveniently located and easy to press. The MPG is a standard option and provides optimal visibility.

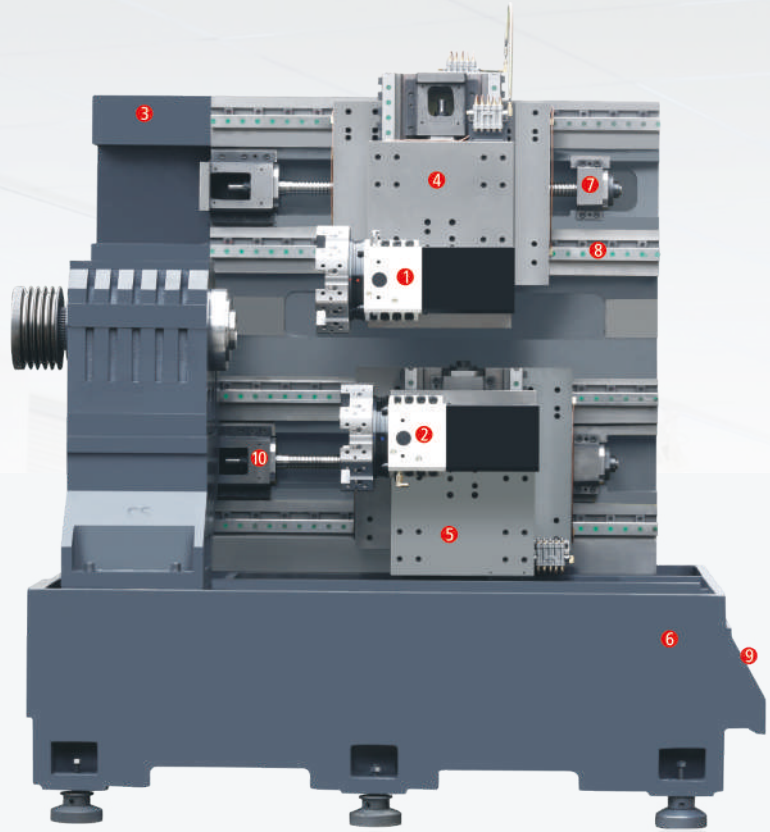
The difference in height of operators was considered in the design of the door handles. The door handle is elongated for easier opening and closing of the door. An enclosure for tooling and supplies is located just under the control panel. A separate coolant tank makes clean-up easy.

The automatic lubrication pump is located in an enclosure near the operator. It has a clear glass door for easy observation. Enclosing the pump keeps away chips and other contaminants. Hydraulic Dashboards are in the left and front side, chuck, turrets and general hydraulic pressure are all observed clearly and neatly.

DOUBLE TURRETS TURNING CENTER GT260V / GT260V-650

Scientific Design Structure

By centering the machine symmetrically from the spindle, heat is distributed evenly and accurately during continuous machining. Overall machining efficiency is increased. As GT260V-650 is standard with a spindle unit type tailstock, A slim shaft workpiece can be ideally made with straight stretch and lower turret support process by selecting a hydraulic clamping chuck and servo driven axis.



1 | Upper Turret
Gang Type Tools As Option

2 | Sub Turret
Gang Type Tools As Option

3 | 90 Degree Robust
Bed Offers Super Rigidity

4 | Upper
X1/Z1 Slides

5 | Sub
X2/Z2 Slides

6 | Large Span Solid Casting
Base Provides Perfect Anti-vibration Performance

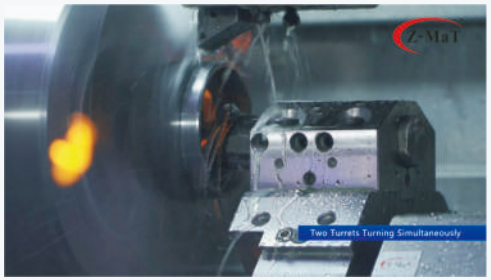
7 | Double End Support and
Pre-load Super Precision Ballscrew.

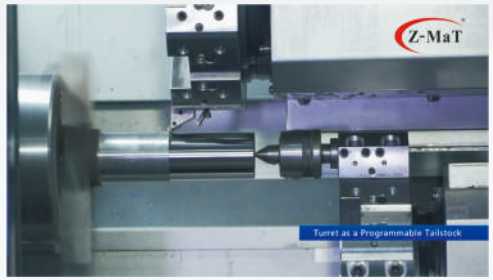
8 | Cylindrical Roller Type Heavy Duty
Linear Guideway.

9 | Big Capacity Right Removal
Chip Tank

10 | Direct Transmission Servo Motor
With Backlash Free Couplings

GT260V





Specifications

		Unit	GT260V		GT260V-650	
Capacity	Chuck Size	inch	8"		8"	
	Max Swing Dia. Over Bed	mm	Φ580		Φ580	
	Max. Length of Workpiece	mm	340		650	
	Max. Swing Dia. Over Slide	mm	Φ200		Φ200	
Spindle	Spindle Bore	mm	Φ62	*Φ75	Φ62	*Φ75
	Max Dia. of Through Hole	mm	Φ52	*Φ65	Φ52	*Φ65
	Spindle Nose	type	A2-6	*A2-8	A2-6	*A2-8
	Spindle Speed	rpm	4000	*3200	4000	*3200
	Main Motor Power	kW	11/15		11/15	
Axis	X1 Axis Travel	mm	160		160	
	Z1 Axis Travel	mm	340		650	
	X2 Axis Travel	mm	160		160	
	Z2 Axis Travel	mm	340		650	
	X1/Z1 Rapid Traverse	m/min	25		20	
	X2/Z2 Rapid Traverse	m/min	25		20	
Turret	Turret1 Stations		8		8	
	Turret2 Stations		8		8	
	OD Tool Shank size	mm	25×25		25×25	
	Boring Bar Size	mm	Φ40		Φ40	
Tailstock	Type of tailstock		N/A		SST	
	Taper of tailstock quill		N/A		MT4(Spindle unit type)	
	Travel of tailstock	mm	N/A		550	
Others	Slant Bed Degree		90°		90°	
	Guideway Type		Linear Motion		Linear Motion	
	Power Capacity	kVA	20		25	
	Overall Dimension(L×W×H)	mm	2850×1850×2300		3300×1850×2350	
	Weight (About)	kg	7000		9000	

Note: "*" means optional. "SST" means Spindle unit type Servo programmable Tailstock.

Standard Features

- Hydraulic 3-Jaw Chuck
- 8-station Turret
- Full Guard
- Work Light
- Tri-Color Alarm Light
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Different Chucks and Collets
- Different Control Systems
- Different Spindle Speed and Bore Dia
- Chip Conveyor
- Bar Feeder
- Gang Type Tool Holders

DOUBLE TURRETS DOUBLE SPINDLES TURNING CENTER GT500 / GT500-M

Ideal for Complex Workpieces and Bar Machining

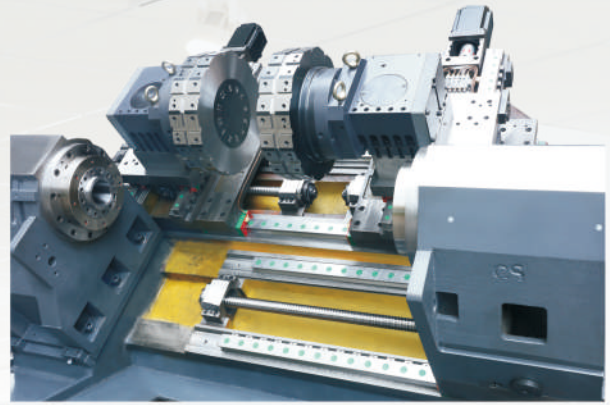
Dual channel machining allows for 2 turrets and 2 spindles to simultaneously machine components. It machines parts from raw material to a finished component in a single setup. The machines symmetrical structure kinematics allows for even heat distribution and helps to provide continuous machining accuracy. In addition the machine is standard with motorized spindle and servo turret. it opens up new opportunities for high-speed production of bar parts.

Standard Features

- Hydraulic 3-Jaw Chuck
- 12-station BMT Turret
- Full Guard
- Work Light
- Tri-Color Alarm Light
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Different Chucks and Collets
- Different Control Systems
- Different Spindles and Bore Dia
- Chip Conveyor
- Bar Feeder
- Gang Type Tool Holders



Specifications

		Unit	GT500	GT500-M
Capacity	Chuck Size	inch	8"	8"
	Max Swing Dia. Over Bed	mm	Φ260	Φ260
	Max. Length of Workpiece	mm	300	300
	Max. turning Dia.	mm	Φ210	Φ210
Spindle & Sub Spindle	Spindle Bore	mm	Φ66	Φ66
	Max Dia. of Through Hole	mm	Φ52	Φ52
	Spindle Nose	type	A2-6	A2-6
	Spindle Speed	rpm	4000	4000
	Main Motor Power	kW	22/30	22/30
Axis	X1/X2 Axis Travel	mm	190	190
	Z1/Z2 Axis Travel	mm	300	300
	B Axis Travel (sub spindle)	mm	720	720
	B Axis Rapid Traverse	mm	25	25
	X1//X2 Rapid Traverse	m/min	20	20
	Z1/Z2 Rapid Traverse	m/min	25	25
Turrets	Turret1&2 Stations		BMT55/12 stations	BMT55/12 stations
	DrivenTool Function		N/A	ER32
	OD Tool Shank size	mm	25×25	25×25
	Boring Bar Size	mm	Φ40	Φ40
	Y Axis Function		N/A	Option
Structure	Slant Bed Degree		45°	45°
	Guideway Type		Linear Motion	Linear Motion
Others	Power Capacity	kVA	40	42
	Overall Dimension(L×W×H)	mm	3100×2000×2200	3100×2000×2200
	Weight (About)	kg	6000	6200

Note: "*" means optional.

GT500

CENTER DRIVE DOUBLE TURRETS TURNING CENTER

Center Drive Turning Center

Single Holding Spindle
Hydraulic collets are built into the spindle which is placed in the center of the machine bed, and two independent Cross slides(X1/Z1, X2/Z2) carry tooling systems to turn the two ends of workpiece simultaneously. Hence, the best concentricity accuracy are achieved by using Z-MaT center drive lathe.

Standard Features

- Hydraulic Collet
- Double Turrets or Gang tools
- Oil Spindle Cooler
- Automatic Coolant
- Automatic Lubrication

Optional Features

- Driven Tool Turrets
- Chip Conveyor (Standard for ATB500)
- Different Center Drive Spindles

ATB500

Specifications

		Unit	ATB300E	ATB500	ATB600E
Capacity	Max. swing dia.	mm	Φ300	Φ300	Φ300
	Max. shaft Through hole dia.	mm	Φ32	Φ20-72	Φ20-72
	Spindle speed	rpm	3000	2000	2000
	Main motor power	kW	3.7/5.5, *5.5/7.5	7.5/11	7.5/11
Axis	X1/X2 axis travel	mm	290	200	370
	Z1/Z2 axis travel	mm	180	350	250
	X1/X2 rapid traverse	m/min	15	15	20
	Z1/Z2 rapid traverse	m/min	20	20	20
Turrets & Toolposts	Type		Square toolpost, *Gang type	12-station turret(two)	Gang type
	OD Tool Shank size	mm	20×20	25×25	25×25
	Boring Bar Size	mm	Φ32	Φ40	Φ40
Others	Slant bed degree		Flat	45°	30°
	Guideway type		LM	LM	LM
	Overall dimension(L×W×H)	mm	2240×1530×1950	3150×2050×2200	2520×1720×1850
	Weight	Kg	3000	5000	4200

Note: "*" means optional.

DUAL-SPINDLE SERIES

TURNING CENTER TC500

Advanced 45 Degree Cross Y Axis

The TC500 adopts an advanced 45 degree Y axis structure which is the fundamental performance of rigidity and compactness.
The TC500 offers a standard chuck size of 8 inches for spindle 1 and 6 inches for spindle 2. The sub spindle specification enables continuous machining of both surfaces.
The combination of driven live tools and Y-axis function enables integrated machining from turning to secondary/back face machining, and multi-axis interpolation machining, allowing for process integration.
The model provides 2- axis turning, and Y axis milling with various spindle and turret options. Customers can choose a “one-of-a-kind machine” that flexibly meets their own needs.

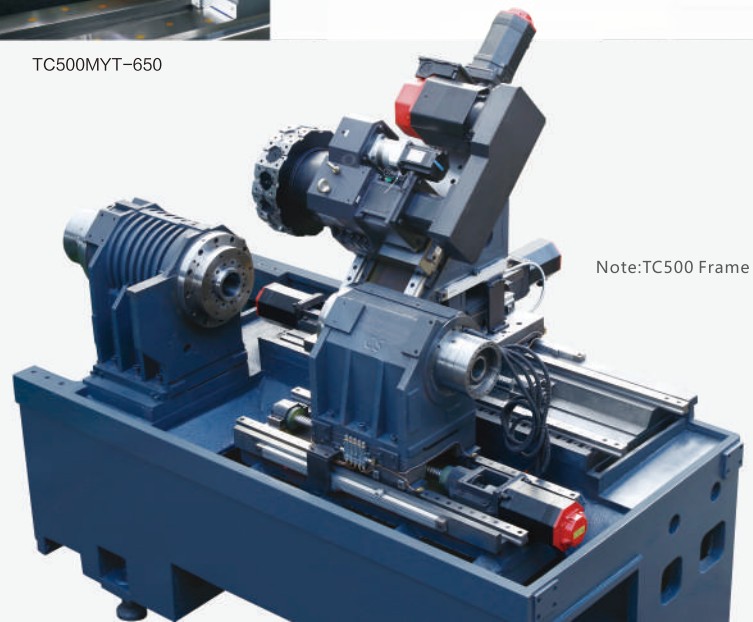
Specifications

		Unit	TC500	TC500MYT-650
Capacity	Max. turning diameter	mm	Φ320	Φ320
	Max. length of workpiece	mm	400	650
	Max. swing dia. over slide	mm	Φ400	Φ400
	Max. swing dia. over bed	mm	Φ460	Φ460
Spindle	Hydraulic chuck / Collet chuck	Inch	8	8
	Diam. of spindle bore	mm	Φ66	Φ66
	Max. diam. of through-hole	mm	Φ52	Φ52
	Spindle nose		A2-6	A2-6
	Max. spindle speed	rpm	4000	4000
	Main motor	kW	22/30	22/30
Sub-Spindle	Hydraulic chuck	inch	6	N/A
	Diam. of spindle bore	mm	Φ55	N/A
	Max. diam. of through-hole	mm	Φ46	N/A
	Spindle nose		A2-5	N/A
	Max. spindle speed	rpm	5000	N/A
	Main motor	kW	11/15	N/A
Axis	X axis travel	mm	180	180
	Z axis travel	mm	400	650
	B axis travel	mm	400	N/A
	Y axis travel	mm	100 (±50)	100 (±50)
Feed Rate	X/Z1/Z2/Y axis rapid traverse	m/min	18/30/30/10	18/30/N/A/10
	X/Z1/Z2/Y axis ballscrew	mm	32×P08 / 32×P10 / 32×P10 / 32×P06	32×P08 / 32×P10 / N/A / 32×P06
	Cutting feed rate	m/min	10	10
Turret	Type of turret		BMT55	BMT55
	No. of tool		12	12
	OD tool shank size	mm	25×25	25×25
	Boring tool shank size	mm	Φ40	Φ40
	Live tooling motor	kW	3.7/5.5	3.7/5.5
	Max. speed of live tooling	rpm	5000	5000
***Tailstock**	Type of tailstock		Servo programmable	Hydraulic
	Taper of tailstock quill		MT5	MT5
	Travel of tailstock	mm	80-400	80-650
Others	Weight (about)	kg	5900	6000
	Overall dimension (L×W×H)	mm	2900×1850×2250	3000×1850×2250

Note: “*” means optional

TC500MYT-650

TC500



Note:TC500 Frame

DUAL-SPINDLE DT500E-S/TN500-S/STL8-S SERIES

Machine Characteristics

Standard with cylindrical roller heavy duty linear motion guideways, pre-loaded high class ballscrew, NSK Bearings, DDS spindle, centralized oil lubrication, DT500E-S/TN500-S/STL8-S are modular designed and manufactured using only the best parts and materials to handle maximum capacities with ease.

Standard Features

- Hydraulic 3-Jaw Chuck
- 12 Stations BMT Turret
- Sub Spindle
- Work Light
- Tri-Color Alarm Light
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Different Chucks and Collets
- Different CNC Control Systems
- Different Spindle Bore Diameters
- Chip Conveyor(Right or Rear side)
- Tool Setter
- Bar Feeder
- Gantry Robot

Integrated Automation Option

Double spindles offer capacity to machine from raw material to finished parts in one set-up. Together with automatic loading system-gantry arm or industry robot, this series machines are able to realize single machine integrated automation with great reliability and super efficiency.

STL8-S

DT500E-S

Specifications

		Unit	STL8-S	TN500-S	TN500S-900	TN500S-1500	DT500E-S	DT500ES-900	DT500ES-1500
Capacity	Max. turning diameter	mm	Φ320	Φ320	Φ320	Φ320	Φ320	Φ320	Φ320
	Max. length of workpiece	mm	620	620	900	1500	550, *620	900	1500
	Max. swing dia. over bed	mm	Φ600	Φ600	Φ600	Φ600	Φ650	Φ650	Φ650
	Max. swing dia. over slide	mm	Φ360	Φ360	Φ360	Φ360	Φ460	Φ460	Φ460
Spindle	Hydraulic chuck	Inch	8	8	8	8	8	8	8
	Dia. of spindle bore	mm	Φ66	Φ66	Φ66	Φ66	Φ66	Φ66	Φ66
	Max. dia. of through-hole	mm	Φ52	Φ52	Φ52	Φ52	Φ52	Φ52	Φ52
	Spindle nose		A2-6	A2-6	A2-6	A2-6	A2-6	A2-6	A2-6
	Max. spindle speed	rpm	4000	4000	4000	4000	4000	4000	4000
	Main motor	kW	22/30	22/30	22/30	22/30	22/30	22/30	22/30
Sub Spindle	Hydraulic chuck		6	6	6	6	6	6	6
	Dia. of spindle bore	mm	Φ55	Φ55	Φ55	Φ55	Φ55	Φ55	Φ55
	Max. dia. of through-hole	mm	Φ46	Φ46	Φ46	Φ46	Φ46	Φ46	Φ46
	Spindle nose		A2-5	A2-5	A2-5	A2-5	A2-5	A2-5	A2-5
	Max. spindle speed	rpm	5000	5000	5000	5000	5000	5000	5000
	Main motor	kW	11/15	11/15	11/15	11/15	11/15	11/15	11/15
Axis	X axis travel	mm	250	250	250	250	200	200	200
	Z/B axis travel	mm	620	620	900	1500	550,*620	900	1500
	Y axis travel	mm	N/A	N/A	N/A	N/A	140 (±70)	140 (±70)	140 (±70)
	X axis rapid traverse	m/min	20	20	20	20	20	20	20
	Z axis rapid traverse	m/min	20	20	20	20	20	20	20
	Y axis rapid traverse	m/min	N/A	N/A	N/A	N/A	12,*7	12,*7	12,*7
Turret	Type of turret		BMT55	BMT55	BMT55	BMT55	BMT55	BMT55	BMT55
	No. of tool		12	12	12	12	12	12	12
	OD tool shank size	mm	25×25	25×25	25×25	25×25	20×20, *25×25	20×20, *25×25	20×20, *25×25
	Boring tool shank size	mm	Φ40	Φ40	Φ40	Φ40	Φ40	Φ40	Φ40
	Max. speed of live tooling	rpm	N/A	4000,*6000	4000,*6000	4000,*6000	4000,*6000	4000,*6000	4000,*6000
	Boring depth of sub spindle	mm	120	120	120	120	120, *90	120, *90	120, *90
Structure	Slant bed degree	degree	35°	35°	35°	35°	35°	35°	35°
	Guideway type	mm	LM	LM	LM	LM	LM	LM	LM
Others	Weight (about)	Kg	5200	5200	6300	7300	5300	6500	7500
	Overall dimension (L×W×H)	mm	3020×1950×2200	3020×1950×2200	3500×1950×2200	4000×1950×2200	3100×2000×2250	3600×2000×2250	4200×2000×2250

Note: "*" means optional

DOUBLE-SPINDE DA SERIES

Dual Spindle Automation
Design and Build for Mass Production

DA66-G

Moveable Spindle + Moveable Spindle

Together with robot or auto loading system, Z-MaT dual-spindle turning machine could realize two channels machining, a complete advanced automation on one single machine.

1 Main and Sub-Spindles

Both spindles adapt servo high-speed motors or DDS spindle options. This level of speed and synchronization assures total process accuracy and efficiency.
Workpieces are exchanged from main to sub spindle and work in two separate working channels, which tremendously increases productivity.

2 Center-Mounted Ball Screw

Center mounted ball screws along with quality pre-loaded bearing assemblies assures optimal power transmission, speed and accuracy.

3 Heavy Linear Guideways

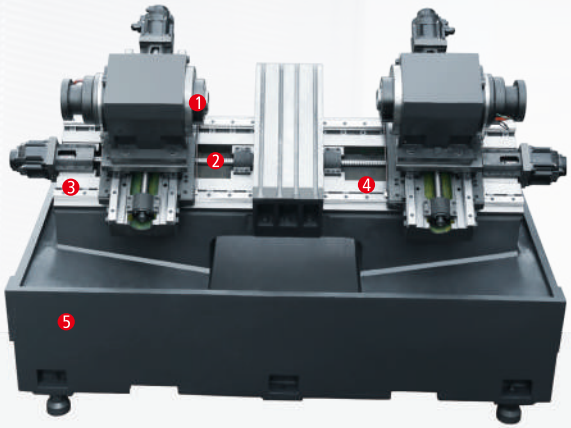
Extra heavy linear guides and rails, couples with wide way spacing producing superior rigidity. Two crossed slides and symmetry structure design meet both rigidity and efficiency.

4 Slant Bed Design

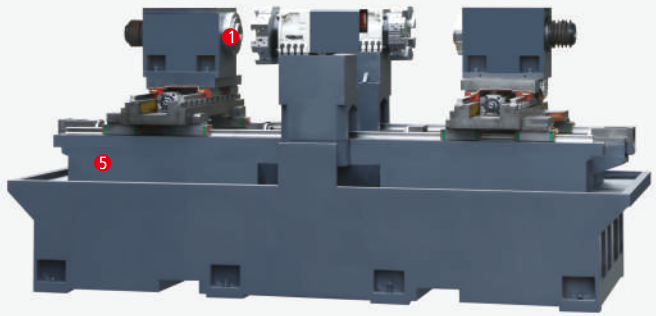
30° slant bed layout provides a reliable, efficient structure. Optimal chip removal is accomplished. Provides easy operator access – an important consideration for dual spindle set-ups and operation.

5 Mono-Block Casting

Lathe bed and machine base are produced in a single cast unit. This heavy, quality cast structure provides a strong foundation for operations that require high-speed yet smooth, multiple axis movements and direction changes.
Wide span base and bed are in a one piece casting.
This solid base guarantees great reliability.



Note: DA66-G Frame



Note: DA88-T Frame

Specifications

	DA66-G	DA88-T
Bed structure	30°	0° Flat
Max. machining dia.	Φ160mm	Φ320mm
Standard machining dia.	Φ100mm	Φ200mm
2 spindles type	A2-5	A2-6, *A2-8
2 spindles taper	MT6	1:20
2 spindles X/Z axis travel	370mm/200mm	280mm/300mm
2 spindles X/Z rapid traverse	15/15 m/min	15/15 m/min
2 spindles bore	Φ55mm	Φ62mm
2 spindles bar capacity	Φ46mm	Φ52mm
2 spindles speed	4500rpm	2000, *4000rpm
2 spindles chuck/collet	6" Hydraulic chuck/ Hydraulic collet	Left: 8" Hydraulic chuck/ Right: Hydraulic collet
2 spindles motor power	7.5/11 kW	7.5/11 kW
2 turrets type	Gang type	8-Station turret
Overall dimension(L×W×H)	2520×1720×1850	3850×1850×2050
Weigh (about)	4200kg	5600kg

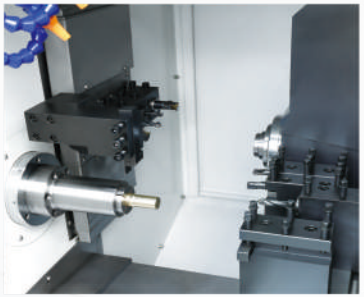
DUAL-SPINDLE AUTOMATION SA28-S SERIES

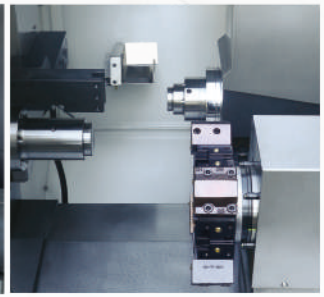
SA28-S Fixed Spindle & Movable Spindle

Meet the new low cost option for dual-spindle machining. Advantages of dual-spindle/turret machining centers include:

- One machine is cheaper than two
- More accurate when a machining process is accomplished on a single machine, rather than moving the part from machine to machine.
- Lower labor cost due to reduced set-up requirements.

In the past, the problem with dual-spindle machines has been the price – too high to justify.
Z-MaT has now introduced the SA28-S Dual-spindle Turning Center. This high quality machine has the capabilities of traditional dual-spindle machines – at a much lower price tag. Finally, here is an automation option you can use - and price justify.



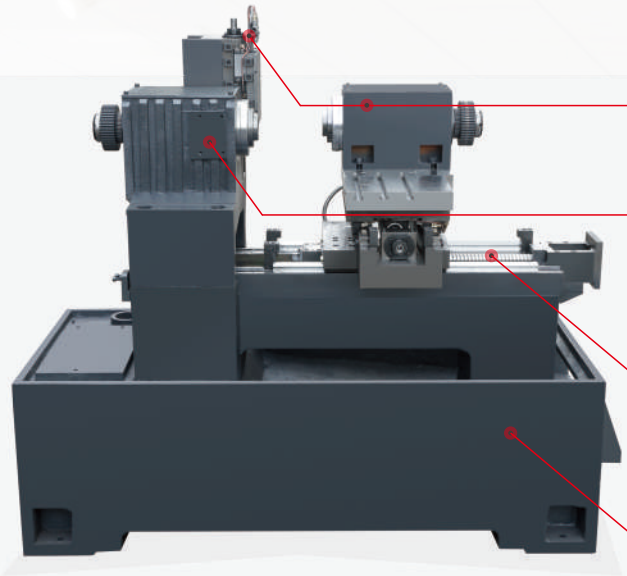


Note: 8-station turret is option for SA28-S

SA28-S

Specifications

	SA28-S	
Standard machining dia.	Φ40mm	
Max. rod dia.	Φ28mm	
X axis travel	350mm	
Z axis travel	200mm	
Y axis travel	80mm	
X/Z rapid traverse	15/15 m/min	SUB-SPINDLE
Spindle bore	Φ37mm, *Φ48mm	Φ37mm
Spindle bar capacity	Φ28mm, *Φ40mm	Φ28mm
Spindle speed	3000rpm	3000rpm
Spindle chuck/collet	Hydraulic collet	Hydraulic collet
Spindle turret type	Gang type tools, *8-Station turret	Gang type tool
Spindle motor power	3.7/5.5kW	2.2/3.7kW
Spindle type	Φ68mm	
Spindle taper	39°, *42°	
Dimension(L×W×H)	2220×1480×1830mm	
Weight	1900kg	



Secondary Spindle Options

X axis secondary spindle is mounted on the machine carriage.
Y axis spindle is mounted on the side of headstock.

Main Spindle Options

Highly rigid frame structure with
wide span provides high stability and heavy carrying capacity.

Center-Mounted Ball Screw

Center mounted ball screw eliminates torque – increasing speed and efficiency. Dual, pre-loaded bearing structures support ball screw for optimal transmission accuracy.

Stable Base Structure

Machine base and bed are one-piece casting, mono-block design. This provides optimal rigidity and accuracy.

DUAL SPINDLE TURNING CENTER TN400-SX

Sub-Spindle Coupling Machining Function

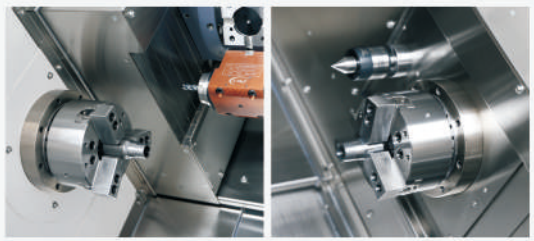
The TN400-SX use its sub-spindle to follow the movements of the main spindle, in order to perform on both sides of a workpiece simultaneously, while also using the program coupling between X1/Z1 and X2/Z2 Coordinate system to synchronize their movements.

TN400-SX

Machine Characteristics

45 ° overall inclined bed layout, main and sub spindle single power turret, dual spindle automatic docking turning and milling composite function, sub spindle with X-axis function. The system adopts the load-bearing coupling function programming to achieve the positive and vice spindle simultaneous machining. It significantly shorten the time of the product left and right end of the machining, with a strong integrated machining to solve the problem.

- One-piece moulding 45° inclined bed, precision large specification linear roller guide rail, large span layout, stable structure and strong rigidity, good accuracy retention.
- Precision high-speed electric main and sub spindle A2-5 with NSK bearings can get the optimal combination of high precision, high load capacity, high speed and long-lasting durability.
- 12 station power turret-BMT55 turret is used on left drag plates of the machine. The turret has short tool change time and high positioning accuracy, which is conducive to the improvement of machining accuracy.



Specifications

		Unit	TN400-SX
Capacity	Standard turning diameter	mm	160
	Maximum turning length	mm	400
	Max swing diameter over bed	mm	240(Effective rotating diameter of turret and workpiece)
	Max swing diameter over slide	mm	240(Effective rotating diameter of turret and workpiece)
Spindle	Maximum speed of main spindle and sub-spindle	rpm	5000/5000
	Taper hole of main spindle and sub-spindle		MT6
	Spindle bore of main spindle and sub-spindle	mm	55/55mm
	Spindle nose		A2-5/A2-5
	Bar capacity of main spindle and sub-spindle	mm	46/46
	Bearing of main spindle and sub spindle		3-7018/NN3015
Axis	X1/Z1-axis travel	mm	170/400
	X2/Z2-axis travel	mm	300/400
	Rapid traverse of the X1/X2/Z1/Z2 axis	m/min	20
	Maximum cutting feed speed	m/min	8
Turret	No. of tool stations	nos	12
	Tool shank size		BMT55
	Max. speed of driving tool	rpm	4000, *6000
Others	Rated power	kW	11 /11
	Overall dimensions (L×W×H)	mm	2700×2000×2220mm
	Weight of machine tool (net)	kg	4500

Note:"*" means optional.

SUPER P SERIES

Super Precision CNC Lathe

High Precision and Compact Size

Machine Characteristics

- Spindle runout ≤2 μm
- Space saving, compact footprint
- Smooth, efficient chip removal
- Built-In spring collets – low vibration, high accuracy
- Servo spindle motor, Bosch Rexroth linear guideway, THK ballscrew

Standard Features

- Hydraulic Collet (SP28)
- Pneumatic Collet (P30H)
- Work & Alarm Light
- Automatic Coolant System
- Automatic Lubrication System
- Gang Plate Work Table
- Tools & Tool Box

Optional Features

- ☐ Different Collets
- ☐ Different CNC Control Systems
- ☐ Parts Counter
- ☐ C Axis and Live Tooling
- ☐ Bar Feeder

SP28

Specifications

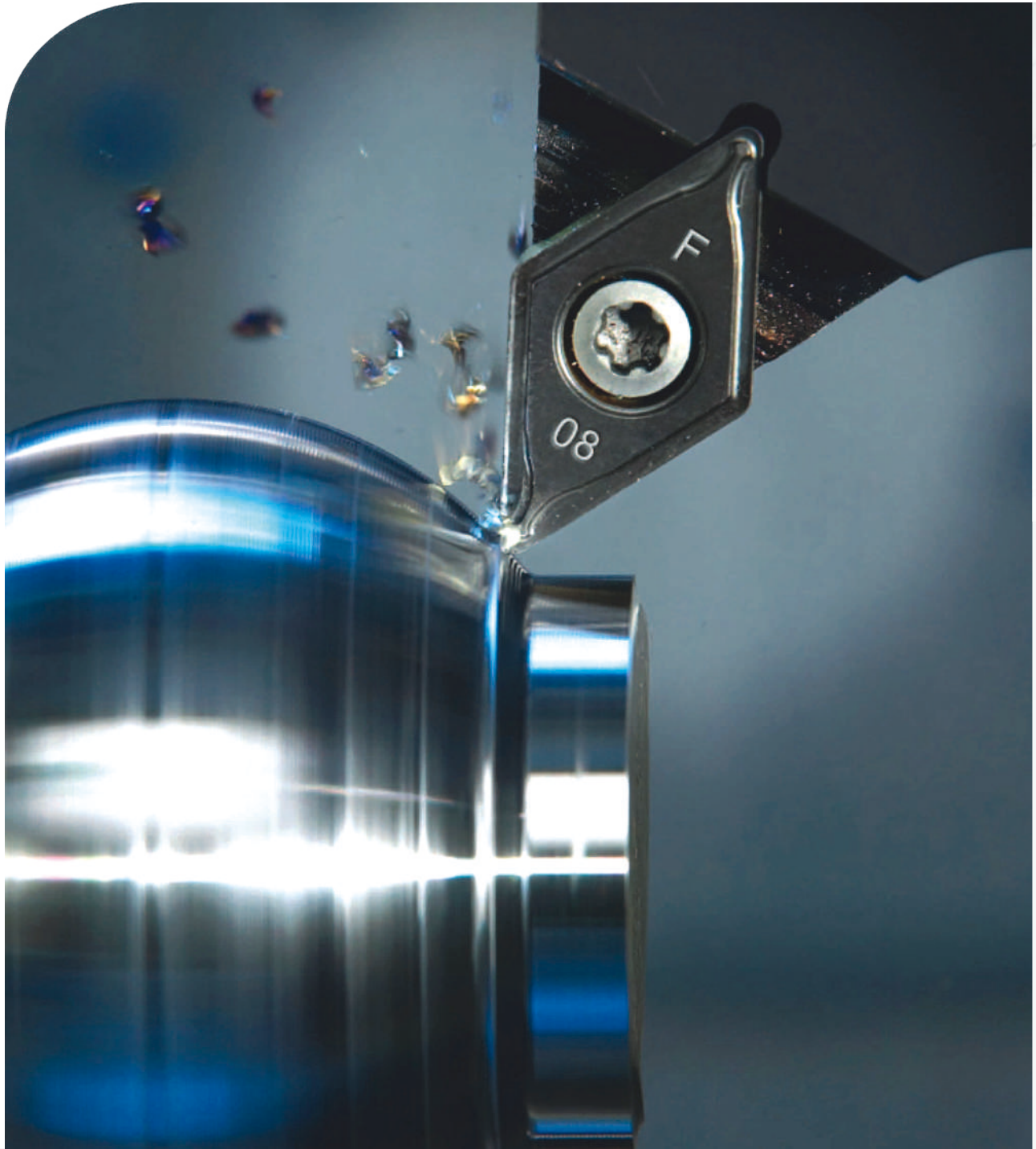
		Unit	SUPER P30H	SUPER SP28	
Capacity	Max. swing dia. over bed	mm	Φ300	Φ300	
	Max cutting length	mm	160	180	
	Max. swing dia over slide	mm	Φ80	Φ140	
Spindle	Spindle bore	mm	Φ36	Φ37	*Φ48
	Bar dia. capacity of hyd. collet	mm	Φ30	Φ29	*Φ40
	Nose type		Φ54mm 1:1	Φ68 1:4	*ΦA2-5
	Spindle speed	rpm	5000	5000	*5000
	Main motor power	kW	3.7/5.5, *5.5/7.5	3.7/5.5, *5.5/7.5	
Axis	X axis travel	mm	250	290	
	Z axis travel	mm	180	180	
	X/Z rapid traverse	m/min	20/20	28/28	
Toolpost	Type of tool post		Gang type	Gang type	
	No. of tool stations	nos	4-6	4-7	
	ODTool shank size	mm	16×16	16×16	
Others	Power capacity	kVA	6.5	9	
	Bed /Guideway type		Flat /Linear motion	35° Slant bed / Linear motion	
	Overall dimension (L×W×H)	mm	1420×1200×1550	1540×1470×1640	
	Weight (about)	kg	1400	1800	

Note:"*" means optional.

FLASH FAMILY TURNING CENTERS

FLASH SL/ FL/ FTL SERIES

The FLASH family of CNC lathes were designed with speed and accuracy in mind. FLASH CNC lathes feature both slant bed and flat bed designs. The SL and FL series lathes are typically set-up for gang tool operations – optimal for high speed, low-cost turning requirements. Live tooling, turrets and various chuck options are easily added. The FTL series includes a tailstock for added functionality.



FLASH SL SERIES

Slant Bed with Linear Guideway

SL280/ SL340/SL350/ SL400/SL450/ SL580

The Beauty of Speed and Accuracy

Slant Bed

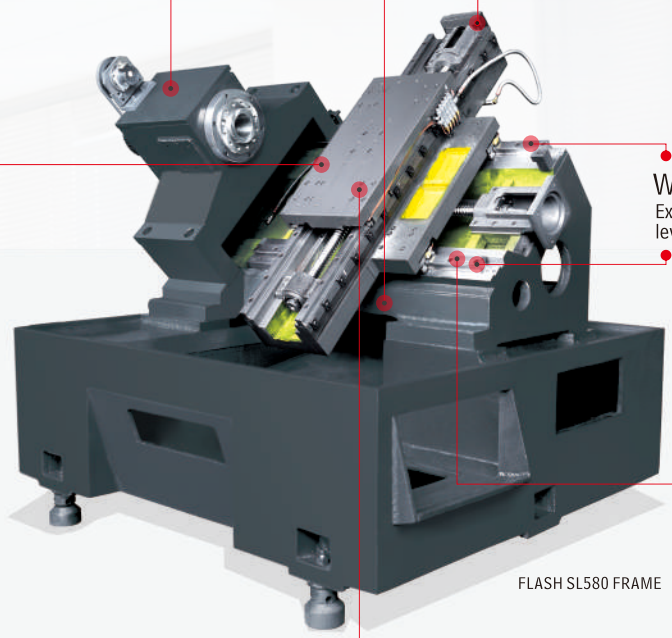
"True Align" slant bed design increases machine accuracy. Slant bed design increases operator efficiency during tooling set-ups and optimizes the flow of chips and coolant.

Symmetrical Headstock

The main spindle design is based on the concept of "Bilateral Symmetry". The major benefit of this design is the elimination of heat expansion at higher speeds. This assures high accuracy and rigidity on all SL turning centers – while performing both forward and reverse turning operations.

580mm X Axis Travel

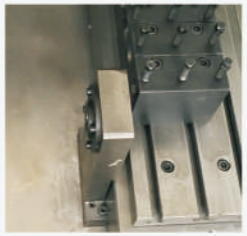
Generous X axis travel, coupled with an extra-large work table allows for maximum tooling options – including live tooling or high-speed turret.



FLASH SL580 FRAME

Wide Spaced Linear Guideways

Extra wide spacing between linear guideways adds leverage – even during heavy cuts. This assures greater rigidity and accuracy.



28M/M Rapid Feed Rate (Model SL280/SL340)

High quality components like Bosch Rexroth linear guideways and PMI ball screws assure extra high rapid feed speeds. Quality components also provide for higher accuracy, lower operating costs and minimal maintenance requirements.

Sleeve-Type Follow Rest

Longer parts requiring only simple turning operations can be machined accurately with good repeatability using the optional table-mounted follow rest. This option supports small shaft parts working like a Swiss-type CNC lathe - with the assurance of comparable, or better accuracy and repeatability.

Gang Plate and Tooling

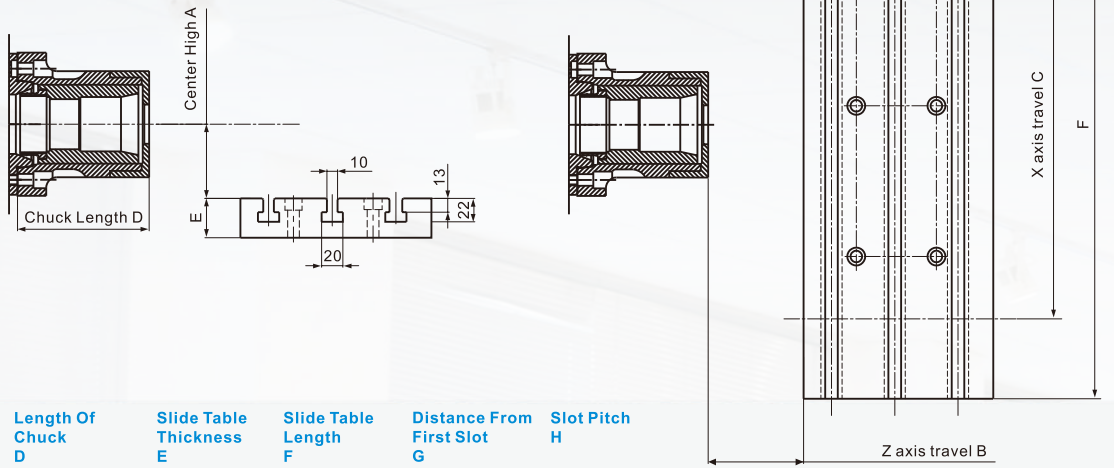
Gang type tools allow for a broad selection of tooling – allowing for more turning operations and reduced cycle time. The results often mean more parts made at the lowest price possible.

Note: SL280, SL340, SL350, SL400, SL450's base and bed are one-piece casting, monoblock design.

FLASH SL FEATURES

Chuck/Table Interface Diagrams

Flash SL series are standard with gang type tools and collet chuck, which offers infinite space for the creative application engineers. Users can design their own type tool holders and fixtures to optimize their production. The chuck/table interference diagrams will help you to calculate the machining capacity after changing different clamping and holding systems.



Model	Spindle Nose	Clamping Type	Center Hight A	Z Axis Travel B	X Axis Travel C	Length Of Chuck D	Slide Table Thickness E	Slide Table Length F	Distance From First Slot G	Slot Pitch H
SL280	A2-5	Z-MaT collet	72mm	240mm	280mm	113.5mm	37mm	520mm	26mm	60mm
		173E collet	72mm	225mm	280mm	127mm	37mm	520mm	26mm	60mm
		6" chuck	72mm	210mm	280mm	137mm	37mm	520mm	26mm	60mm
SL340	A2-5	Z-MaT collet	56mm	200mm	340mm	113.5mm	37mm	520mm	26.5mm	60mm
		173E collet	56mm	185mm	340mm	127mm	37mm	520mm	26.5mm	60mm
		6" chuck	56mm	170mm	340mm	137mm	37mm	520mm	26.5mm	60mm
SL350	A2-5	Z-MaT collet	72mm	300mm	350mm	87.5mm	37mm	520mm	26.5mm	60mm
		173E collet	72mm	250mm	350mm	127mm	37mm	520mm	26.5mm	60mm
		6" chuck	72mm	235mm	350mm	137mm	37mm	520mm	26.5mm	60mm
SL400	1:4, Ø90	Z-MaT collet	62mm	250mm	400mm	113.5mm	40mm	560mm	26.5mm	65mm
		173E collet	62mm	225mm	400mm	137mm	40mm	560mm	26.5mm	65mm
		6" chuck	62mm	215mm	400mm	147.5mm	40mm	560mm	26.5mm	65mm
SL450	A2-5	Z-MaT collet	80mm	450mm	450mm	113.5mm	40mm	610mm	35mm	60mm
		173E collet	80mm	435mm	450mm	127mm	40mm	610mm	35mm	60mm
		6" chuck	80mm	420mm	450mm	137mm	40mm	610mm	35mm	60mm
SL580	A2-5	Z-MaT collet	53mm	320mm	580mm	113.5mm	48mm	700mm	26mm	60mm
		173E collet	53mm	305mm	580mm	127mm	48mm	700mm	26mm	60mm
		6" chuck	53mm	290mm	580mm	137mm	48mm	700mm	26mm	60mm

Reconsidering the Obvious

Perfect Combination
Unsurpassed Productivity

Linear Guideway

- Higher accuracy and faster speeds than ordinary box ways.
- No adjusting –Maintenance free and very accurate.

Gang Type Tooling

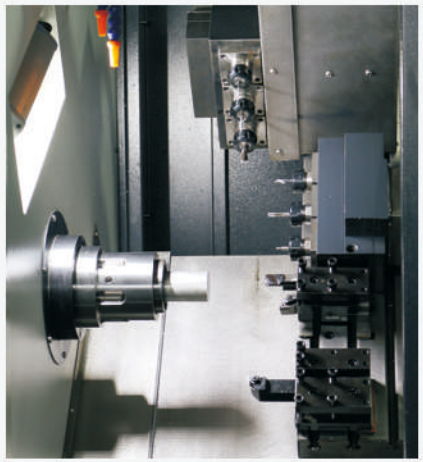
- No indexing - Direct contact with individual tool during each turning operation. Solid and Highly Accurate. Turrets and toolpost may lose accuracy each time a tool changes .
- Low failure rate – low maintenance compared to turret or tool post.

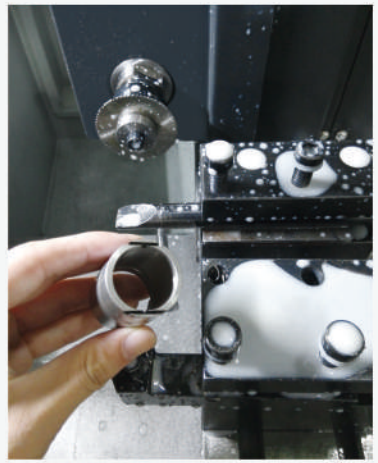
Linear guideway
+
Gang type tools
↓

The machining accuracy can easily reach **<0.01mm**

Machining productivity **Increase by 20-90%** than traditional Box guideway + Toolpost CNC lathe!

Most Flash Series models are standard with this perfect match





Linear guideway
+
Gang type tools
+
C axis & live tooling
→

An Even Better Option!

Reliable and Economical
Turning – PLUS,
Milling,
Drilling & Tapping
True Multi-Task,
Multi-Operation Machining

C Axis, Y Axis, and Live Tooling Options are Available on Most FLASH Series Lathes

FLASH SL SERIES

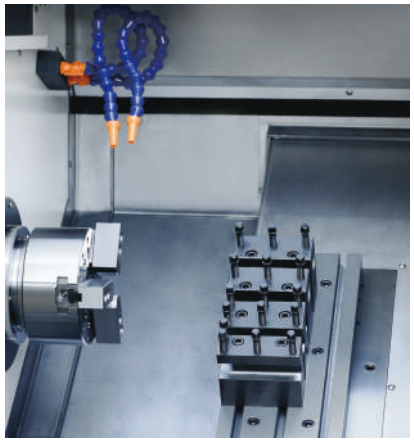
Slant bed, Linear guideway

Standard Features

- Hydraulic Collet
- Gang Type Tooling
- Ergonomic Operator Panel Design
- Automatic Lubrication System
- Automatic Coolant System
- Built-In Safety Features

Optional Features

- Different Chucks and Collets
- Different Control Systems
- Live Tooling
- Bar Feeder



Machine Characteristics

- Heat treated and annealed high quality cast iron base – provides a strong foundation for the high speed, highly accurate SL Series of CNC Lathes.
- True Slant Bed design is highly rigid and withstands heavy cutting forces
- Slant bed also allows for easy operator access and efficient chip removal.
- The combination of high X/Z rapid speeds and gang tool set-up increases productivity tremendously. Highly accurate parts at the lowest cost.
- Quality machine at a value price – High volume production and good QC.

Specifications

		Unit	SL280				SL340		
Capacity	Chuck/collet		Hydraulic Collet *Hydraulic Chuck 6", *8"				Hydraulic Collet *Hydraulic Chuck 6", *8"		
	Max. swing dia. over bed	mm	Φ420				Φ420		
	Max. length of workpiece	mm	Collet 240, * Chuck 210				Collet 200, * Chuck 170		
	Max. swing dia. over slide	mm	Φ140				Φ112		
Spindle	Spindle bore	mm	Φ48	*Φ55	*Φ62	*Φ81	Φ48	*Φ55	*Φ62
	Max. dia. of through-hole	mm	Φ40	*Φ46	*Φ52	*Φ70	Φ40	*Φ46	*Φ52
	Spindle nose		A2-5	*A2-5	*A2-6	*A2-8	A2-5	*A2-5	*A2-6
	Max. Spindle speed	rpm	3000 *4500	*2500 *4500 *5000	*2000 *4000	*1600	3000 *4500	*2500 *4500 *5000	*2000 *4000
	Main motor power	kW	3.7/5.5, *5.5/7.5				3.7/5.5, *5.5/7.5		
Axis	X travel	mm	280				340		
	Z travel	mm	240				200		
	X/Z rapid traverse	m/min	28/28				28/28		
Toolpost	Type		Gang type				Gang type		
	No. of tool stations	No.	4~6				4~7		
	OD tool and bore tool shank	mm	20×20 / Φ25				20×20 / Φ25		
Structure	Inclined bed degree		35°				35°		
	Guideway type		LM				LM		
Others	Power capacity	kVA	11				11		
	Dimensions (L×W×H)	mm	1750×1320×1500				2175×1550×1930		
	Weight(about)	kg	2000				2100		

Note: “*” means optional, "N/A" means not available, "LM" means linear motion guide way.

Full Range of Turning Machines

Specifications

		Unit	SL350		SL450		SL580			
Capacity	Chuck/collet		Hydraulic Collet *Hydraulic Chuck 6", *8"		Hydraulic Collet *Hydraulic Chuck 6", *8"		Hydraulic Collet *Hydraulic Chuck 6", *8"			
	Max. swing dia. over bed	mm	Φ420		Φ400		Φ380			
	Max. length of workpiece	mm	Collet 300, * Chuck300		Collet 430, * Chuck 400		Collet 320, * Chuck 290			
	Max. swing dia. over slide	mm	Φ140		Φ160		Φ106			
Spindle	Spindle bore	mm	Φ48	*Φ55	Φ55	*Φ62	Φ48	*Φ62	*Φ55	*Φ75
	Max. dia. of through-hole	mm	Φ40	*Φ46	Φ46	*Φ52	Φ40	*Φ52	*Φ46	*Φ65
	Spindle nose		A2-5	*A2-5	A2-5	*A2-6	A2-5	*A2-6	*A2-5	*A2-6
	Max. Spindle speed	rpm	3000 *4500	*2500 *4500 *5000	4500	*2000 *4000	3000 *4500	*2000 *4000	*2500 *4500 *5000	*2500
	Main motor power	kW	3.7/5.5, *5.5/7.5		5.5/7.5		5.5/7.5			
Axis	X travel	mm	350		450		580			
	Z travel	mm	300		410		320			
	X/Z rapid traverse	m/min	28/28		25/25		20/20			
Toolpost	Type		Gang type		Gang type		Gang type			
	No. of tool stations	No.	5~8		5~9		6~10			
	OD tool and bore tool shank	mm	20×20 / Φ25		20×20 / Φ25		20×20 / Φ25			
Structure	Inclined bed degree		35°		45°		45°			
	Guideway type		LM		LM		LM			
Others	Power capacity	kVA	12		12		13			
	Dimensions (L×W×H)	mm	2070×1550×1870		2350×1770×2100		2400×1810×1830			
	Weight(about)	kg	2100		2800		3200			

Note: “*” means optional, "N/A" means not available, "LM" means linear motion guide way.

FLASH FL SERIES

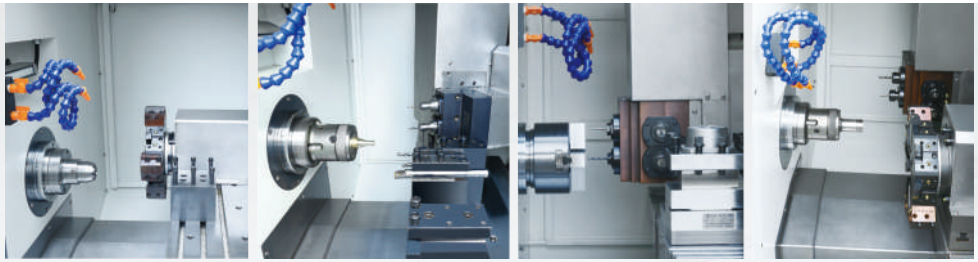
Flat Bed with Linear Guideways

Machine Characteristics

- Linear Guideways are protected by stainless steel telescoping guards – provides maximum protection from chips and coolant and extended machine life.
- Center mounted ball screws are placed between the bed ways, minimizing side torque and friction. Provides cooler operation, better dynamic efficiency and longer life.
- Servo motors and drives on X/Z axes. Spindle can be driven by VFD or Servo.
- Various control systems, chucks and tool posts are available. Highly configurable to fit your needs.

The FL Series is produced at high volume in our factory - using world standard quality control processes. These facts contribute to the FL lathe's reputation in the world market for excellent quality at a reasonable price. We produce a great machine at a great price, and pass the savings on to you.

Customers report high satisfaction and high productivity with their FL Series CNC Turning Centers. That's why it's one of our best selling lathes!



Smart Design – and Powerful

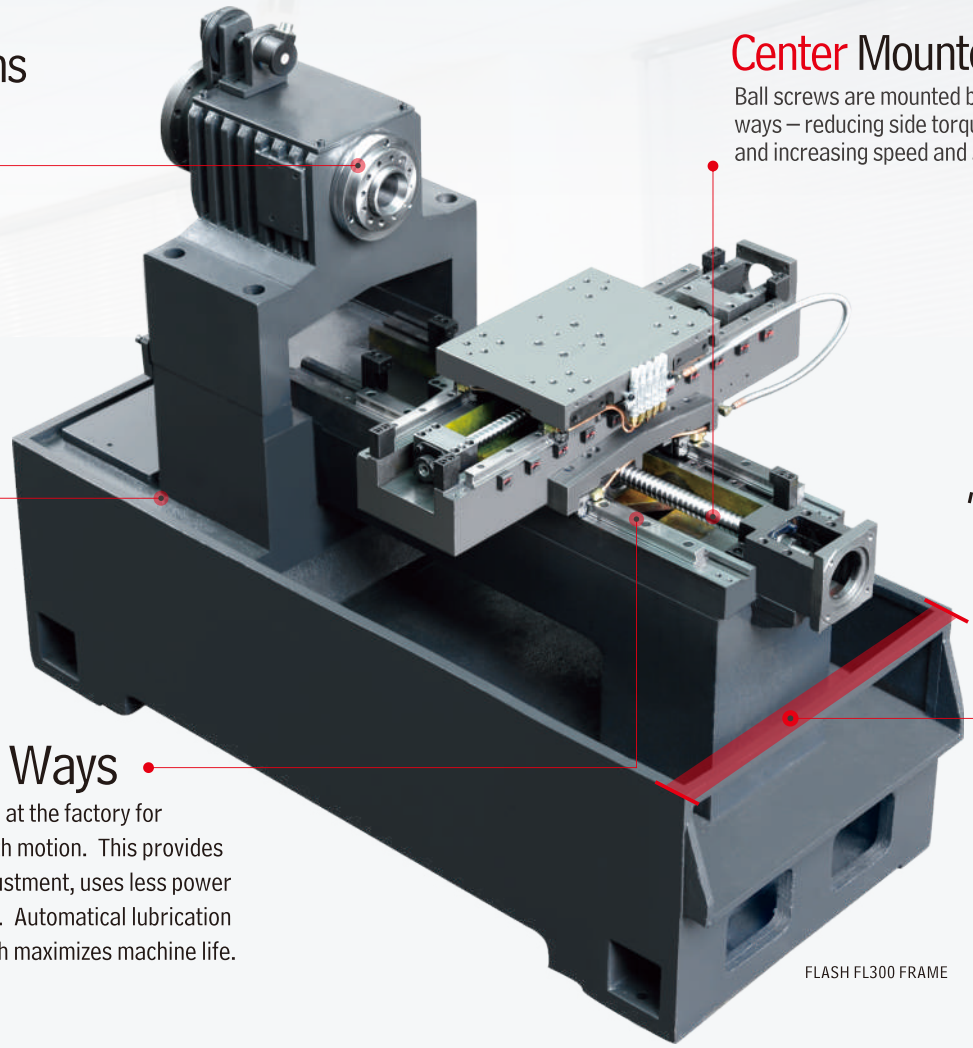
This series allows high flexibility in tooling configurations. A wide range of gang type, turret, milling, and polygon tools can be combined to fit your specific part production task.

Various Spindle Options

Different speeds, spindle bore and chuck options to match your needs

Center Mounted Ball Screws

Ball screws are mounted between the ways – reducing side torque and friction and increasing speed and service life.



FLASH FL300 FRAME

1-Piece

Mono-Block Casting

" Bi-Laterally Symmetrical "

Complete bi-laterally symmetrical machine body and head stock design increases rigidity and stiffness in all movements of the machine. An added feature bonus is the compact dimensional casting, which keeps advanced performance in a smaller footprint.

Linear Motion Guide Ways

Linear guideway bearings are pre-loaded at the factory for maximum balance of accuracy and smooth motion. This provides axis movement that does not require adjustment, uses less power and will out-perform standard hard ways. Automatical lubrication system assures optimal lubrication, which maximizes machine life.

FLASH FL SERIES

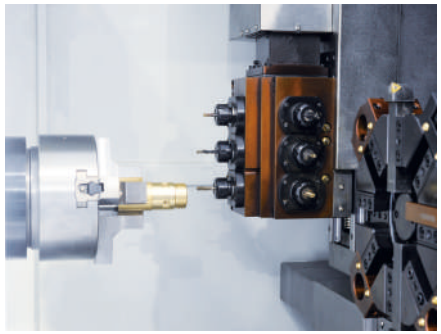
Flat bed, Linear guideway

Standard Features

- Manual 3-Jaw Chuck (For Swing ＞400mm)
- Hydraulic Collet (For Swing ＜400mm)
- Gang Type Tooling (For Swing ＜400mm)
- 4-Station Tool Post ＋ Gang Plate (For Swing ＞400mm)
- Ergonomic Operator Panel Design
- Automatic Lubrication System
- Automatic Coolant System
- Built-In Safety Features

Optional Features

- Hydraulic Chucks
- Different Spring Collets
- Different Control Systems
- Live Tooling
- Bar Feeder
- 8-Station Turret (Available on FL300/ FL400/ FL500/ FL550/ FL630)



FL400

Full Range of Turning Machines

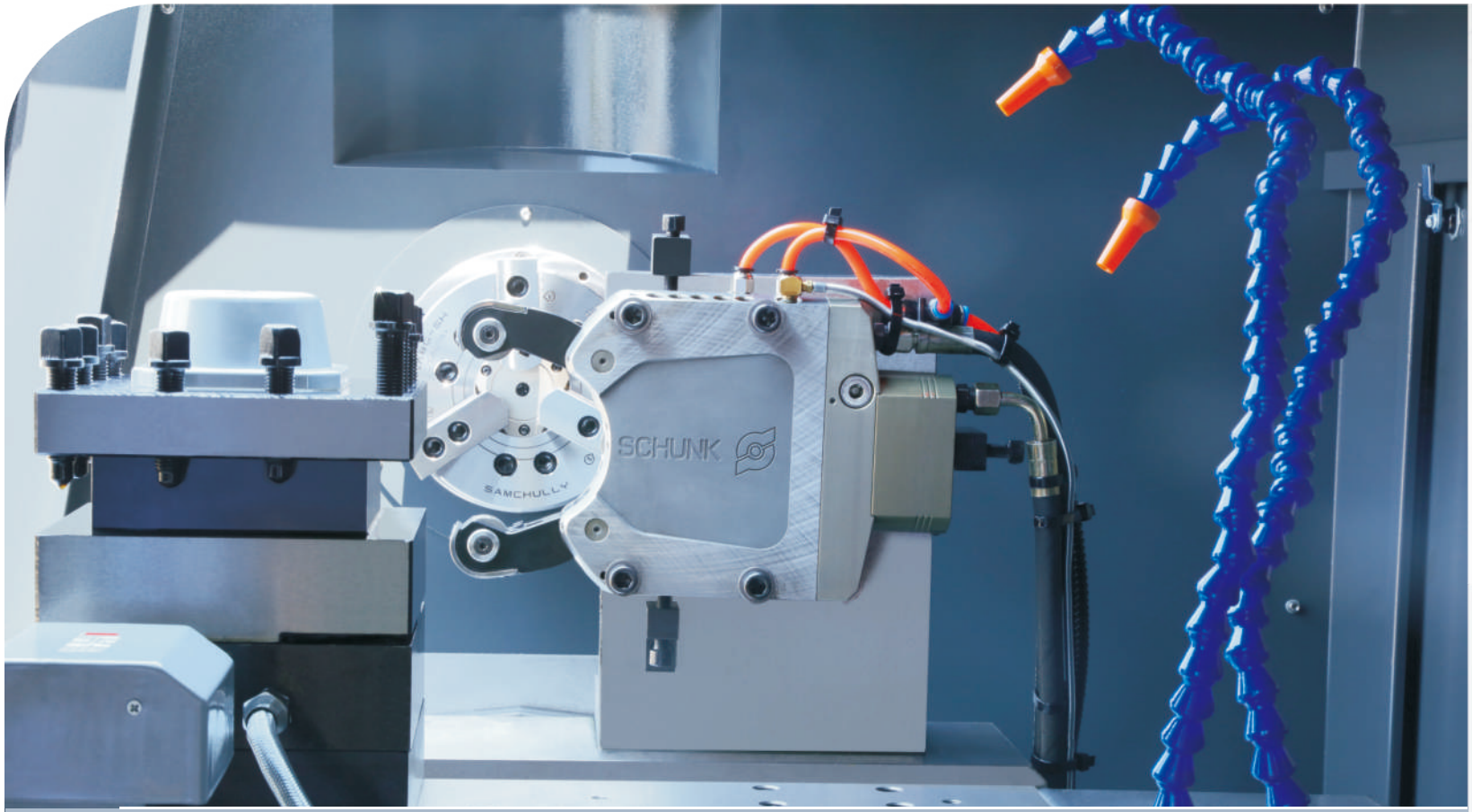
FL300

Specifications

		Unit	FL280	FL300			FL400		FL500		FL550	FL630
Capacity	Chuck/collet	type	Pneumatic collet * Hydraulic collet	Pneumatic collet *Hydraulic collet, *chuck 6"			Manual chuck 8" *Hydraulic chuck 8", *6"		Manual chuck 10" *Hydraulic chuck10", *8"		Manual chuck 12" *Hydraulic chuck 12"	Manual chuck 15" *Hydraulic chuck 15"
	Bed type/ guideway		Flat/LM	Flat/LM			Flat/LM		Flat/LM		Flat/LM	Flat/LM
	Max. swing dia. over bed	mm	Φ300	Φ300			Φ400		Φ500		Φ550	Φ650
	Max. length of workpiece	mm	250(collet),*165 (chuck)	300, 180(chuck) *260 (chuck)			320		500		500	430
	Max. swing dia. over slide	mm	Φ135	Φ120			Φ180		Φ360		Φ360	Φ380
Spindle	Spindle bore	mm	Φ48	Φ48	*Φ55	*Φ62	Φ62	Φ48	Φ81	*Φ62	Φ105	Φ120
	Max. dia. of through hole	mm	Φ41	Φ40	*Φ46	*Φ52	Φ52	Φ40	Φ70	*Φ52	Φ91	Φ110
	Spindle nose		A2-5	A2-5	*A2-5	*A2-6	A2-6	A2-5	A2-8	*A2-6	A2-8	A2-11
	Spindle speed	rpm	3000 *4500	3000 *4500	*2500 *4500 *5000	*2000 *4000	2000 *4000	3000 *4500	1600 *2500	*2000 *4000	1000 *2000	1000
	Spindle motor power	kW	3.7/5.5	3.7/5.5, *5.5/7.5			5.5/7.5		5.5/7.5,*7.5/11		7.5/11, *11/15	11/15, *15/18.5
Axis	X/Z travel	mm	280/250	350/300			380/350		260/500,*350/500		260/500, *350/500	350/500
	X/Z rapid traverse	mm/min	15/15,*25/25	25/15,*25/25			20/20		15/15		15/15	20/20
Toolpost	Type		Gang type *4-station toolpost	Gang type *4-station toolpost *8-station turret			4-station toolpost *8-station turret *Gang type tooling		4-station toolpost *8-station turret *Gang type tooling		4-station toolpost *8-station turret *Gang type tooling	4-station toolpost *8-station turret *Gang type tooling
	No. of tool stations	No.	4-6	4-10			4-10		4-10		4-10	4-10
Others	Power capacity	kVA	8	9			11		12		15	18
	Dimensions (L×W×H)	mm	1700×1200×1550	2150×1600×1850			1950×1250×1620		2650×1360×1800		2650×1360×1800	2650×1360×1800
	Weight(about)	kg	1300	1800			2000		2700		2800	3000

Note: “*” means optional, "N/A" means not available, "LM" means linear motion guide way.

FLASH FTL SERIES

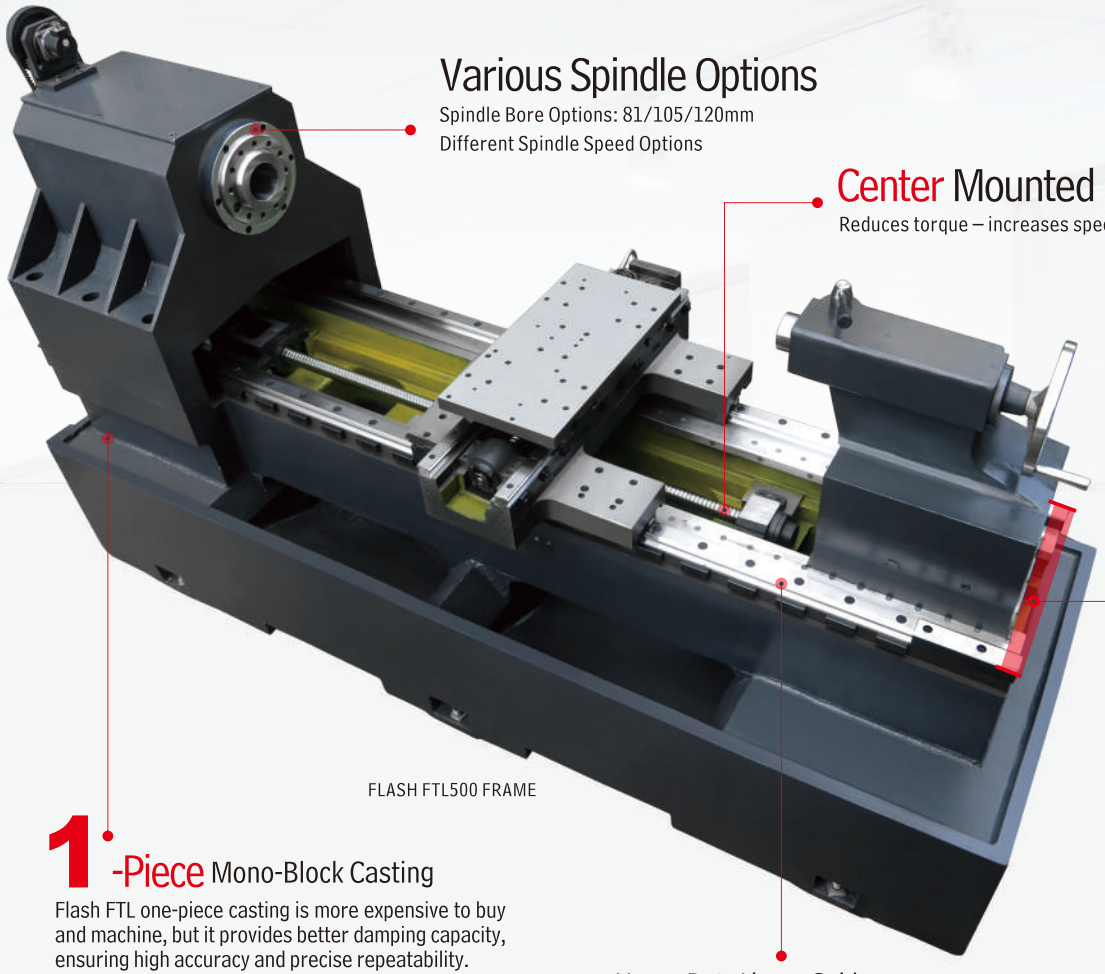


Machine Characteristics

- The tailstock is set on its own guide way, parallel to the main bed ways. This structure is highly rigid and accurate.
- Linear guideways are protected by telescoping stainless steel covers – maximizing ball screw protection and extending tool life.
- Center mounted ball screws eliminate torque – providing better dynamic properties and greater stability over the life of the machine.
- Servo drives on X/Z axes. Spindle can be driven by VFD or Servo.
- Various control systems, chucks and tool mounting systems are available.

The World's First and Best Design

You will be hard pressed to find another linear guide way type CNC lathe that has a center mounted ball screw and stainless covers over the full length of the ball screw and guide ways. This unique, Z-MaT patented design provides the perfect combination of long-term speed, accuracy and repeatability for a CNC lathe of this size and design.



FLASH FTL500 FRAME

Various Spindle Options

Spindle Bore Options: 81/105/120mm
Different Spindle Speed Options

Center Mounted Ball Screw

Reduces torque – increases speed, efficiency, accuracy and machine life.

1-Piece Mono-Block Casting

Flash FTL one-piece casting is more expensive to buy and machine, but it provides better damping capacity, ensuring high accuracy and precise repeatability.

Heavy-Duty Linear Guideways

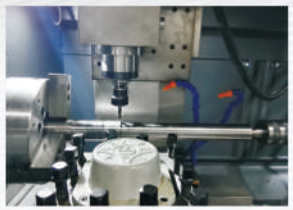
Heavy roller and ball-type linear guideways were selected for this heavy duty machine – so it has the efficiency advantages of linear guides, but also can compete with box ways for stability during heavy cutting operations.

500mm Wide Machine Base

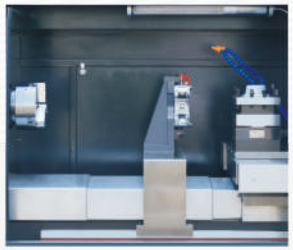
Extra wide machine base adds mass and stability to this heavy-duty lathe designed for heavy-duty turning operations.

Various option features

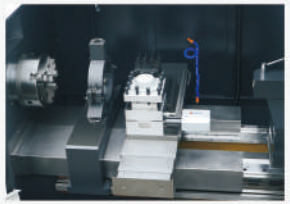
8/12 stations turret



Vertical live tool (Y axis)



Hydraulic steady rest

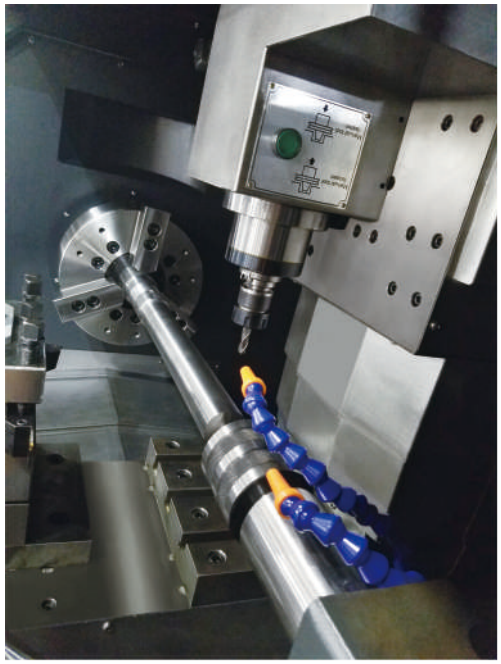


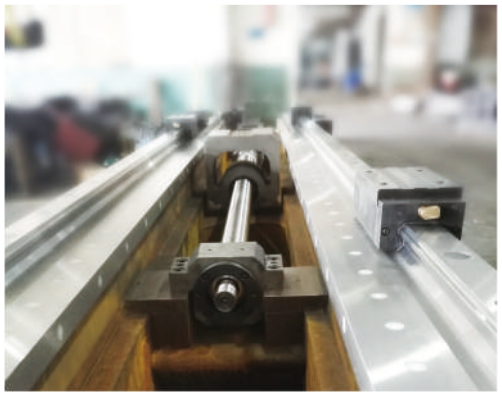
Manual steady rest

Manual operation box

FLASH FTL SERIES

Flat bed, Tailstock, Linear guideway





Standard Features

- Manual 3-Jaw Chuck
- 4-Station Tool Post Plus Gang Tool Plate
- Manual Tailstock
- Ergonomic Operator Panel Design & MPG
- Automatic Lubrication System
- Automatic Coolant System
- Work Lamp & Built-In Safety Features

Optional Features

- Different Chucks
- Different Control Systems
- 8-Station Turret (except FTL300)
- Hydraulic Tailstock
- Bar Feeder
- C Axis & Live Tooling
- C Axis & 12 station Power Turret (for big model)

Full Range of Turning Machines

FTL550

Specifications

		Unit	FTL300		FTL320		FTL400	FTL500		FTL550			FTL660
Capacity	Chuck size	inch	6"		6",*8"		8"	10", *8"		12" , *15"			15",*18"
	Max. swing dia. over bed	mm	Φ300		Φ400		Φ400	Φ500		Φ550			Φ700
	Max. length of workpiece	mm	180		Collet: 380, Chuck: 320 *300(8 station turret)		650(C2C) 500(chuck) 450(turret)	700/1000/1500/2000(C2C) 550/850/1350/1850(chuck) *450/750/1250/1750 (turret)		700/1000/1500/2000(C2C) 550/850/1350/1850(chuck) *450/750/1250/1750 (turret)			1000/1500/2000(C2C) 800/1300/1800(chuck) *700/1200/1700 (turret)
	Max. swing dia. over slide	mm	Φ135		Φ140		Φ250	Φ350		Φ350			Φ480
Spindle	Spindle bore	mm	Φ48	*Φ55	Φ55	*Φ62	Φ62	Φ83	*Φ62	Φ105	*Φ105	*Φ120	Φ120
	Max dia. of through hole	mm	Φ40	*Φ46	Φ46	*Φ52	Φ52	Φ75	*Φ52	Φ91	*Φ91	*Φ110	Φ110
	Spindle nose		A2-5	*A2-5	A2-5	*A2-6	A2-6	A2-8	*A2-6	A2-11	*A2-8	*A2-11	A2-11
	Spindle speed	rpm	3000 *4500	*2500 *4500 *5000	2500 *4500 *5000	*2000 *4000	2000 *4000	1600 *2500	*2000 *4000	1000	*2000	*1000	1000
	Main motor power	kW	3.7/5.5, *5.5/7.5		3.7/5.5, *5.5/7.5		5.5/7.5, *7.5/11	7.5/11, *11/15,*15/18.5		11/15, *15/18.5			11/15, *15/18.5
Axis	X/Z travel	mm	250/200		280/380		280/650	280/700,1000,1500,2000		280/700,1000,1500,2000			370/1000, 1500, 2000
	X/Z rapid traverse	m/min	15/15,*25/25		25/15,*25/25		15/15, *20/20	15/15, *20/20		15/15, *20/20			15/15, *20/20
Tool post	Type		4-station toolpost *gang type tooling		4-station toolpost *8-station turret *gang type tooling		4-station toolpost *8-station turret *gang type tooling	4-station toolpost *8-station turret *gang type tooling		4-station toolpost *8-stations turret *gang type tooling			4-station toolpost *8-stations turret *gang type tooling
	No. of tool stations	nos	4+2		4+2, *8+2		4+2, *8+2	4+2, *8+2, * Driven 12		4+2, *8+2, *Driven 12			4+2, *8+2
Tailstock	Tailstock type		Manual,* Hydraulic		Manual,* Hydraulic		Manual, *Hydraulic	Manual, *Hydraulic		Manual, *Hydraulic			Manual, *Hydraulic
	Taper of quill	MT	MT4		MT4		MT4	MT5		MT5			MT5
	Travel of tailstock quill	mm	80		80		100	100		100			100
Structure	Bed type /guideway		Flat/LM		Flat/LM		Flat/LM	Flat/LM		Flat/LM			Flat/LM
	Bed width	mm	300		400		405	500		500			680
Others	Power capacity	kVA	9		13		13	15		18			18
	Dimensions (L×W×H)	mm	1800×1580×1600		2310×1420×1700		2500×1400×1500	3200×1600×2010 (shortest)		3200×1600×2010 (shortest)			3400×1900×2010(shortest)
	Weight (about)	kg	1800		2600		2800	4000/4300 / 4800/5300		4200/4500/5000/5300			4800 /5600/6400

Note: "*" means optional, "N/A" means not available, "LM" means linear motion guide way. Dimensions are only list the shortest length model.
Different chucks and toolposts will affect the real Max. cutting length capacity-
C2C: Spindle center to Tailstock center; Chuck: Spindle 3 jaws chuck to tailstock; Turret: 3 jaws chuck to tailstock while configured with 8/12 stations turret.

POWER A SERIES TURNING CENTERS

A6 / A8L

When we set out to build a heavy duty cutting (hogging) machine we did a number of things:

- Increased spindle rigidity
- Widened guideway spacing
- Increased bed casting weight
- Increased spindle torque

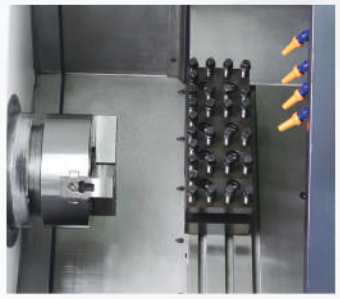
The result is a machine that will take heavy cuts and still assure minimal tool tip vibration. Finer surface finish is the result – even when making heavy cuts.

POWER A SERIES

A6 / A8L

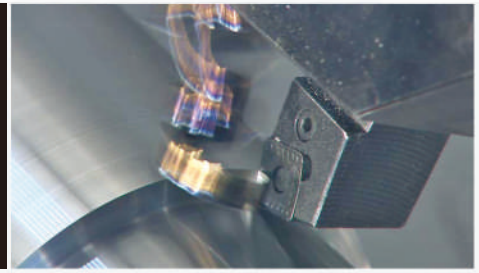
60° steep inclined bed, closer to operator
300% size chip tank larger than Flash SL series
280% sized linear guide way slide block
45mm width heavy duty linear guideway
40mm ballscrew diameter

Greater Rigidity and Faster Speed



By using German-made BOSCH Rexroth heavy-duty linear guides, over-sized ball screws, thicker head stock ribs and wider bed ways we have created a highly rigid, high speed lathe. The POWER A Series is a true 60° slant bed lathe – significantly increasing machine accuracy and capacity. The steep slant bed and over-sized chip tanks allow efficient chip removal, even during "heavy cut" turning operations. An optional chip conveyor is available.

Power A8L rough cutting parameter



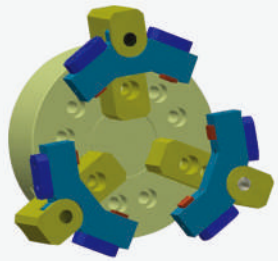
■ ***Depth of cut***

9mm(0.35in)

Material:	S45C (Carbon steel)
Cutting speed:	220m/min (721.8 ipm)
Feedrate:	0.4mm/rev (0.016ipr)

Bearing Ring Solution

Power A machines are widely used in bearing industry. And Z-MaT has mature solutions for inner ring and outer ring machining.



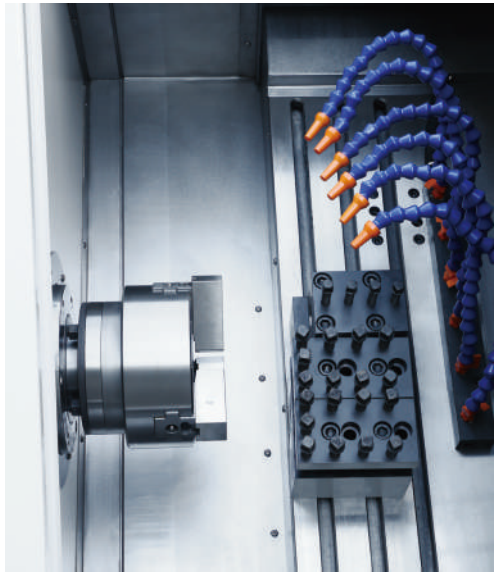
Floating jaws

POWER A SERIES

A for 60 Degree Rigid Structure

Machine Characteristics

- German-made BOSCH Rexroth Linear Guideways
- High speed with heavy torque – suitable for machining hard materials
- 60° slant bed makes for easy chip removal
- Optional floating jaws for securely holding hard, thin-walled pipe



Standard Features

- Hydraulic Chuck
- Gang Type Tooling
- Frequency Inverter
- Work and Alarm Light
- Foot Pedal & Safety Features
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Different Chucks & Collets
- Different Control Systems
- Larger Spindle
- Servo Spindle Motor
- Chip Conveyor
- Bar Feeder
- C Axis & Live Tooling

Built for High Speed Heavy Cutting

60° (Degree) Slant Bed

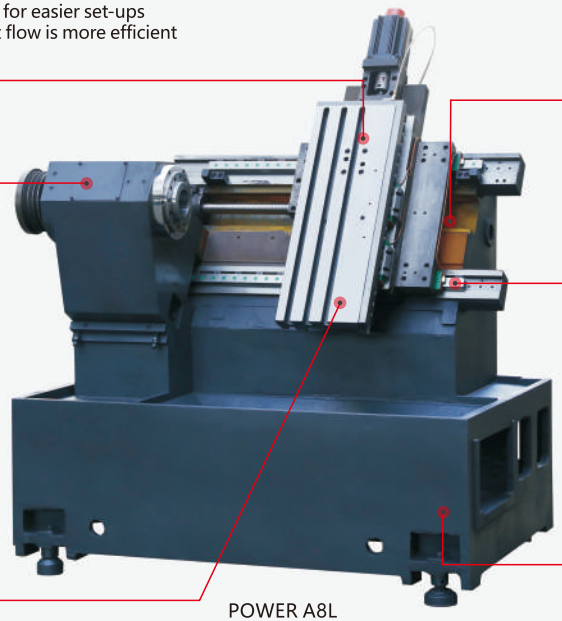
Operator is close to tooling stations for easier set-ups and tool changes. Chip and coolant flow is more efficient with the steeper table incline.

Heavy Duty Spindle

Extra built-in ribbing on the headstock and higher torque spindle drive provides a spindle ready and willing to handle all-day heavy cutting.

Extended X Axis Travel

X Axis travel up to 380mm. Allows for a large number of gang, live tooling and turret mounted tools to be mounted on the table and sequentially moved to the point of tool tip turning contact.



POWER A8L

Larger Ball Screw Diameter

40mm diameter ball screw supports heavy machining operations. Pre-loaded bearings are mounted on both ends of the ball screw assembly for optimal support.

Heavier Linear Guideways

Heavy duty ball linear guideways are necessary for heavy cutting. These heavy duty linear guides will hold up and maintain accuracy for the long-term.

High Volume Chip Collection

Standard feature includes extra-large chip collection tank. POWER A Series chip tanks are three times larger than chip tanks used on the FLASH Series. Chip conveyor optional.

One-Piece Mono-Block Casting

FULL RANGE OF TURNING MACHINE

POWER A8L

Specifications

		Unit	POWER A6		POWER A8L		
Capacity	Collet/*Chuck size	inch	6", * 8"		8", * 10"		
	Max. swing dia. over bed	mm	Φ400		Φ550		
	Max cutting length	mm	320		300		
	Max. swing dia. over slide	mm	Φ150		Φ210		
Spindle	Spindle bore	mm	Φ48	*Φ55	Φ55	*Φ62	*Φ75
	Max dia. of through hole	mm	Φ40	*Φ45	Φ46	*Φ52	*Φ65
	Spindle nose		A2-5	*A2-5	A2-5	*A2-6	*A2-8
	Spindle speed	rpm	3000	*1600	1600, *4500	*2000	*1600
	Main motor power	kW	7.5, *11		11		
Axis	X axis travel	mm	260		380		
	Z axis travel	mm	320		300		
	X/Z rapid traverse	m/min	15/15		20/20		
Toolpost	Type of toolpost		Gang type		Gang type		
	No. of tool stations	nos	4-6		4-8		
	OD tool shank size	mm	32X32		32X32		
Structure	Slant bed degree		60°		60°		
	Guideway type		Linear Motion		Linear Motion		
Others	Power capacity	kVA	14		18		
	Overall dimension (L×W×H)	mm	2100×1600×1750		2520×1750×2250		
	Weight (about)	kg	3000		3900		

Note:"*" means optional.

HUNTER FAMILY TURNING CENTERS

FTH /STH /SH Series

Machine Characteristics

The HUNTER Series are a new take on the traditional, economic hard way CNC lathe. The new HUNTER lathe series offer outstanding acceleration, low friction guideways, precision ball screws – and a lower price point.

The series of HUNTER CNC lathes include the STH(Slant Bed with Tailstock), the SH (Slant Bed without Tailstock), the FTH (Flat Bed with Tailstock) lathe series.

HUNTER SERIES

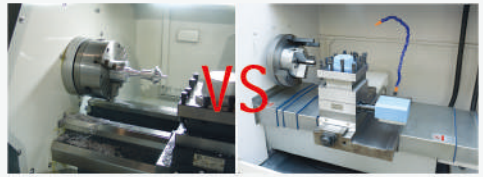
FTH /STH /SH

Constant Research and

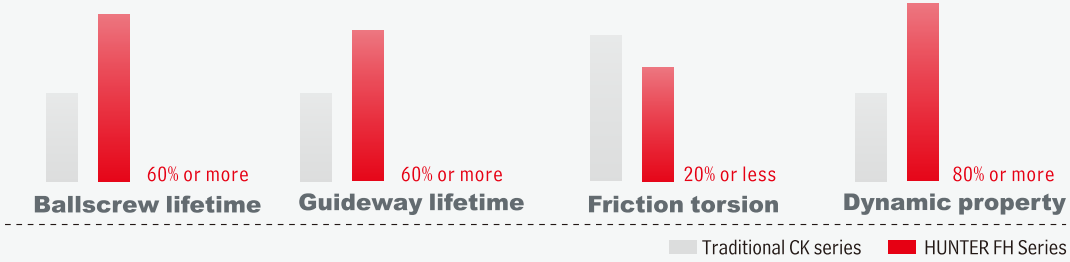
Ongoing Product Refinement

Evolving a Lathe Tradition: Improving the Flat Bed Box Way Design for CNC Turning

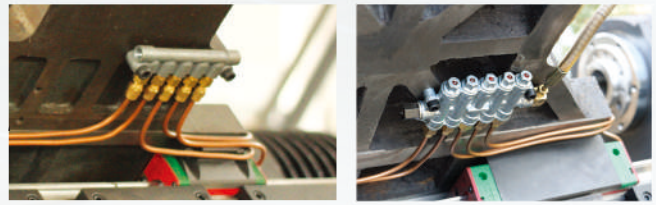
Unlike the old CK CNC lathe design, which has the ball screw mounted on the front side of the lathe bed, the HUNTER Series moved the ball screw to the middle of the lathe bed, between the guideways. This eliminates friction and ball screw torque – increasing efficiency and assuring higher speeds. The HUNTER lathes also have telescoping stainless steel guards that cover the ball screw along its entire length. This assures smooth operation and long machine life.



Comparison of tradition CK type CNC lathe



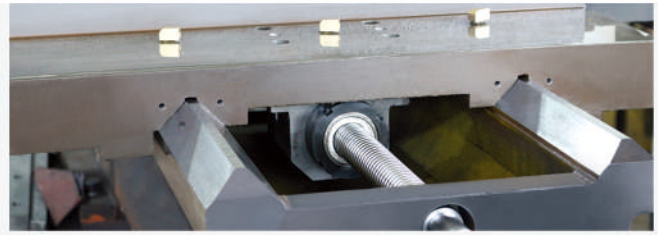
Reliable and Efficient Lubrication Oil Distribution



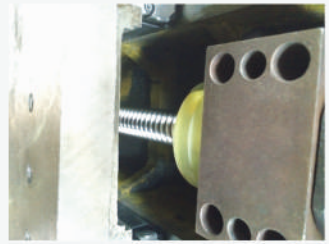
This efficient unit assures all machine components are lubricated evenly – extending machine operating life.

Double "V" Machine Bed Ways

Lathe carriage is continually aligned for torque-free, smooth operation and increased accuracy. The center-mounted, covered ball screws increase the smoothness and speed of carriage movement along the V ways.



Pre-Loaded Ball Screws With Bumpers



A pre-loaded ball screw reduces thermal distortion. The ball screw bumper helps protect the ball screw in case of operator error or machine malfunction.

HUNTER FTH SERIES

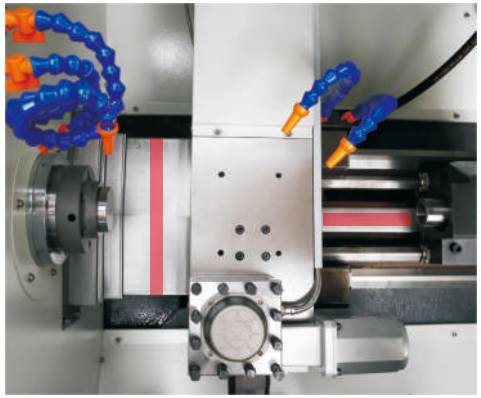
Smart CNC Solutions

Standard Features

- Manual 3-Jaw Chuck
- 4-Station Tool Post
- Manual Tailstock
- Ergonomic Operator Panel Design & MPG
- Automatic Lubrication System
- Automatic Coolant System
- Work Lamp & Built-In Safety Features

Optional Features

- Different Chucks
- 8-Station Turret
- Different Control Systems
- Hydraulic Tailstock
- Bar Feeder
- C Axis & Live Tooling
- Steady Rest &Hydraulic follow rest
- Gear Box



Stainless Steel Telescopic Cover

Provide excellent chip-proofing and protect guide way to extend long life span time

Revolutionize the NC/Conventional Lathe

Structured to real CNC, but kept the economical features "Get the work done easily" featured in a smart way.

Wider bed width

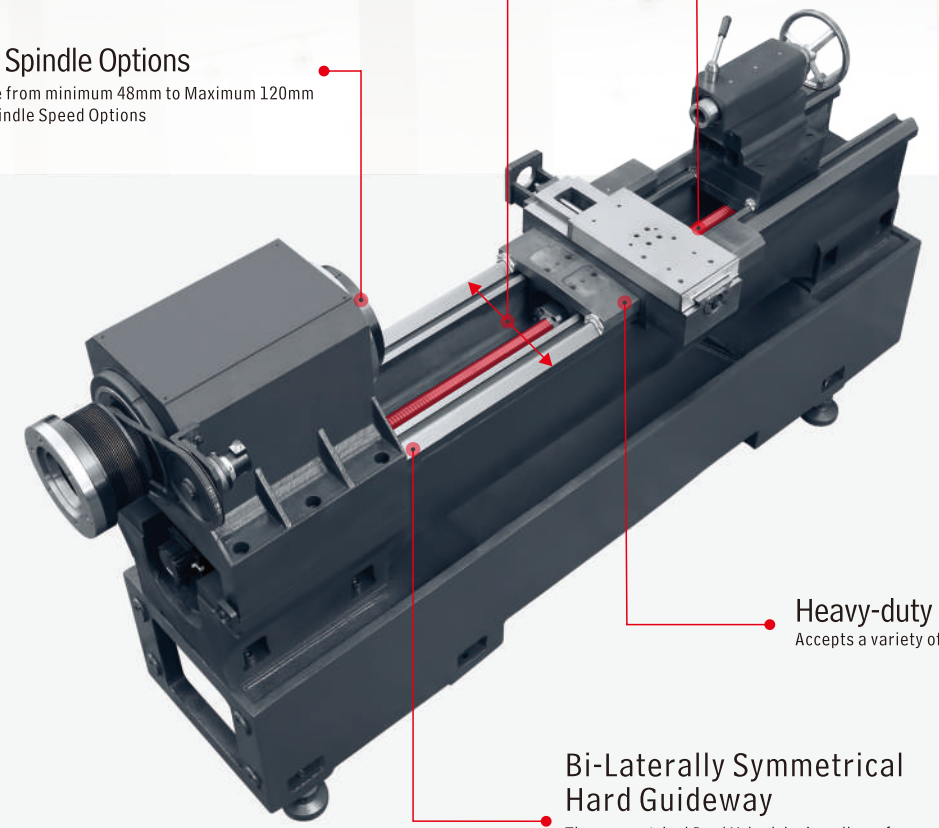
Eliminate Vibration, Lower Center of gravity, Solid base for heavier duty

Center Mounted Ball Screw

Balance Torque Output – increases speed, efficiency, accuracy and machine life, Double protected by ballscrew cover and stainless steel telescopic guideway cover

Various Spindle Options

Spindle Bore from minimum 48mm to Maximum 120mm
Different Spindle Speed Options



Heavy-duty cross-slide

Accepts a variety of tool post options

Bi-Laterally Symmetrical Hard Guideway

The symmetrical Dual V bed design allows for even wear of the bedway over time, resulting in maintained accuracy over the life of the machine

Specifications

		Unit	FTH6130	FTH6136	FTH6140	FTH6150	FTH6166
Capacity	Chuck size	inch	6"	8"	10", *15"	12"	15"
	Max. swing dia. over bed	mm	Φ300	Φ350,*Φ400	Φ500	Φ500	Φ700
	Max. length of workpiece	mm	400(collet), 300(chuck)	500, *650 Centers	750/1000/1500/2000 Centers	750/1000/1500/2000 Centers	1000/1500/2000 Centers
	Max. swing dia. over slide	mm	Φ150	Φ200	Φ290	Φ290	Φ480
Spindle	Spindle bore	mm	Φ48 *Φ55 *Φ62	Φ55 *Φ62 *Φ75	Φ62 *Φ55 *Φ75	Φ83 *Φ105 *Φ120	Φ120
	Bar dia. capacity	mm	Φ40 *Φ46 *Φ52	Φ46 *Φ52 *Φ65	Φ52 *Φ46 *Φ65	Φ75 *Φ91 *Φ110	Φ110
	Spindle nose		A2-5 *A2-5 *A2-6	A2-5 *A2-6 *A2-8	A2-6 *A2-5 *A2-8	A2-8 *A2-11 *A2-11	A2-11
	Spindle speed	rpm	3000 *2500 *2000, *4000	2500 *2000 *1600	2000, *4000 *2500 *1600	1600, *2500 *1000,*2000 *1000	1000
	Main motor power	kW	3.7, *5.5	5.5,*7.5	7.5,*11	7.5,*11,*15	15
Axis	X axis travel	mm	280	320	320	320	380, *450
	Z axis travel	mm	400	500,*650	750/1000/1500/2000	750/1000/1500/2000	1000/1500/2000
	X/Z rapid traverse	m/min	9/12	9/12	9/15	9/15	9/15
Toolpost	Type of toolpost		4-station toolpost, *gang type	4-station toolpost, *gang type	4-station toolpost, *gang type, *8-station turret	4-station toolpost, *gang type, *8-station turret	4-station toolpost, *gang type, *8-station turret
	No. of tool stations	nos	4	4	4	4	4
	Tool shank size	mm	20X20	25X25	25X25	32X32	40X40
Tailstock	Type of tailstock		Manual,*Hydraulic	Manual, *Hydraulic	Manual, *Hydraulic	Manual, *Hydraulic	Manual, *Hydraulic
	Taper of tailstock quill		MT3*MT4	MT4	MT5	MT5	MT5, *MT6
	Travel of tailstock quill	mm	100	100	130	130	150
	Travel of tailstock	mm	350	400/550	600/850/1350/1850	600/850/1350/1850	850/1350/1850
Structure	Bed width		280	340	410	410	600
	Guideway type		Hard way	Hard way	Hard way	Hard way	Hard way
Others	Power capacity	kVA	9	11	14	15	18
	Overall dimension (L×W×H)	mm	1540×1010×1570	2350(2410)×1600×1750	2725(2975)(3475)(3970)×1760×1910	2725(2975)(3475)(3970)×1760×1910	3500(4000)(4500)×1955×2110
	Weight (about)	kg	1500	2050/2300	3100/3350/3850/4400	3300/3550/4050/4650	5000/5600/6400

Note:"*" means optional. “Centers” means the distance between spindle center to tailstock Center, chuck to center distance will be less around 120~200mm.

HUNTER STH SERIES

Slant Bed Tailstock Hard Guideways

Standard Features

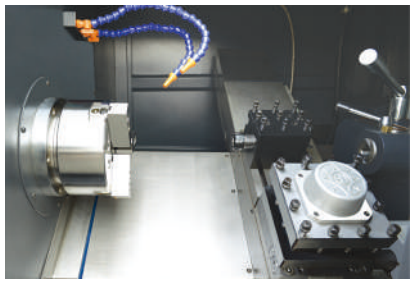
- Manual 3-Jaw Chuck
- 4-Station Tool Post + gang plate
- Manual Tailstock
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Hydraulic Chuck
- Spring Collet System
- Hydraulic Tailstock
- Different CNC Control Systems
- Different Spindle
- 8 Position turrets
- Gear Box Spindle

Machine Characteristics

- 30 degree slant bed – efficient chip flow and easier operator access
- Ergonomically designed adjustable panel
- Center-mounted ball screw – less torsion and better accuracy
- STH10 and STH12 have cylindrical roller spindle bearings
- The most economical slant bed with tailstock in the market



There's only one place you'll find this Unique CNC lathe design - Z-MaT!

STH CNC Lathes are designed to provide a cheaper and easier machining option – while providing real production capacity and accuracy. Perfect for R & D, education, manufacturing or just getting a business started. STH Series CNC Lathes are a very affordable option that will allow you to accomplish your machining tasks easier and faster.

Z-MaT Original Design

Cost-Effective,
Full Production Capable Slant Bed CNC Lathe

Specifications

		Unit	STH6		STH8		STH10		STH12		STH15
Capacity	Chuck size	inch	6"		8"		10"		12",*15"		15", *18
	Max. swing dia. over bed	mm	Φ300		Φ350		Φ450		Φ520		Φ700
	Max. length of workpiece	mm	280,*350(collet)		300, *400(collet)		600		600		750(C to C)
	Max. swing dia. over slide	mm	Φ140		Φ200		Φ250		Φ280		Φ500
Spindle	Spindle bore	mm	Φ48	*Φ55	Φ48	*Φ62	Φ62	*Φ83	Φ83	*Φ105	Φ120
	Max. dia of through hole	mm	Φ40	*Φ46	Φ40	*Φ52	Φ52	*Φ75	Φ75	*Φ91	Φ110
	Spindle nose		A2-5	*A2-5	A2-5	*A2-6	A2-6	*A2-8	A2-8	*A2-11	A2-11
	Spindle speed	rpm	3000 *4500	*2500 *4500 *5000	3000 *4500	*2000 *4000	2000 *4000	1600 *2500	1600 *2500	*1000 *1800	1000
	Main motor power	kW	4.0		5.5		7.5, *11		11, *15		15, *18.5
Axis	X axis travel	mm	300		280		300		300		380
	Z axis travel	mm	280,*350(collet)		300,*400(collet)		750 (C to C)		750 (C to C)		750
	X/Z rapid traverse	m/min	8/12		8/12		9/12		9/12		9/12
Toolpost	Type		4-station toolpost + Gang type tooling * 8-station turret		4-station toolpost + Gang type tooling * 8-station turret		4-station toolpost+ Gang type tooling, * 8-station turret		4-station toolpost + Gang type tooling, * 8-station turret		4-station toolpost + Gang type tooling, * 8-station turret
	No. of tool stations	nos	4-8		4-8		4-8		4-8		4-8
	ODTool shank size	mm	20×20		20×20		25×25		32×32		32×32
Tailstock	Type of tailstock		Manual,*Hydraulic		Manual,*Hydraulic		Manual,*Hydraulic		Manual,*Hydraulic		Manual,*Hydraulic
	Taper of tailstock quill		MT3		MT4		MT5		MT5		MT6
	Travel of tailstock quill	mm	100		100		100		100		150
	Travel of tailstock	mm	300		400		650		650		750
Structure	Slant bed degree		30°		30°		30°		30°		30°
	Guideway type		Hard		Hard		Hard		Hard		Hard
Others	Power capacity	kVA	8		8		11		15		16
	Overall dimension (L×W×H)	mm	2100×1380×1760		2150×1450×1800		2500×1450×1650		2930×1510×1890		3200×1810×1950
	Weight (about)	kg	1700		2400		3250		3300		5000

Note: "*" means optional. "C to C" means spindle Center to tailstock Center.

HUNTER SH SERIES

Slant bed, Hard guideway

Standard Features

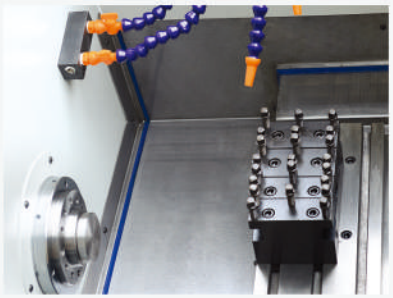
- Pneumatic Spring Collet
- Gang Type Tools
- Frequency Inverter
- Work and Alarm Lights
- Full Enclosure safety guard
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- Hydraulic Chuck/Collet
- Servo Spindle Drive
- Different CNC Control Systems
- High Speed Spindle Unit
- C Axis and Live Tooling

Machine Characteristics

Low Friction Turcite-B Plastic Way Coating, Optional C Axis and Live Tooling, Large contact area between ways and carriage – optimized for interrupted cutting cycles.
45 degree slant bed structure offers efficient chip removal and easy operator access.
Compact structure, modular design and high performance to cost ratio.



Specifications

		Unit	SH30B	SH40B	SH52B		
Capacity	Bar dia. capacity/*Chuck size	inch	30mm	40mm, *6"	52mm, *8", *6"		
	Max. swing dia. over bed	mm	Φ250	Φ300	Φ300		
	Max. length of workpiece	mm	200	250	320		
	Max. swing dia. over slide	mm	Φ80	Φ90	Φ140		
Spindle	Spindle bore	mm	Φ37	Φ48	Φ62	*Φ48	*Φ55
	Bar dia. capacity	mm	Φ32	Φ40	Φ52	*Φ40	*Φ46
	Spindle nose		Φ68 1:4	Φ90 1:4	A2-6	*A2-5	*A2-5
	Spindle speed	rpm	3000	3000	2000 *4000	*3000 *4500	*2500 *4500 *5000
	Main motor power	kW	3.0	4.0	5.5		
Axis	X axis travel	mm	300	300	280,*340		
	Z axis travel	mm	200	250(collet),160(chuck)	320(collet), 240(chuck)		
	X/Z rapid traverse	m/min	8/9	8/12	15/15		
Tool post	Type of toolpost		Gang type	Gang type	Gang type		
	No. of tool stations	nos	4~6	4~8	4~8		
	OD. tool shank size	mm	16×16	20×20	20×20		
Structure	Slant bed degree		45°	45°	45°		
	Tailstock		N/A	N/A	N/A		
	Guideway type	type	Hard	Hard	Hard		
Others	Power capacity	kVA	7	8	10		
	Overall dimension (L×W×H)	mm	1550×1100×1400	1650×1100×1600	1850×1280×1580		
	Weight (about)	kg	1100	1600	2600		

Note: "*" means optional.
Mark: Chip conveyor can be installed either right side or back side only for SH52B.

LIVE TOOLING & MULTI-TASKING MACHINE

Secondary Machining Operations

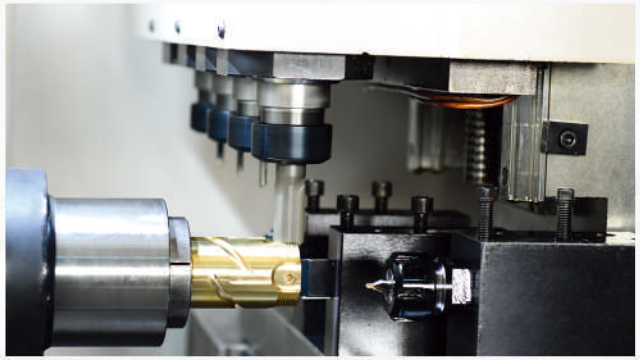
Powerful Solution for Secondary Machining of Turned Parts

Z-MaT is a recognized leader in C Axis and live tooling technology. This strong core competence makes Z-MaT the go-to source for secondary machining operations.

In addition to standard turning operations, with Z-MaT you can perform additional machining operations on a single machine – like milling, drilling, surface finishing and tapping on all surfaces. A Y axis unit is also available on many lathe models.

LIVE TOOLING

High Torque Secondary System



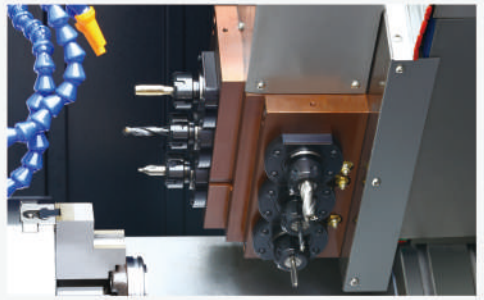
Z-MaT live tooling units feature a robust gear drive system that provides efficient power transmission and maximum continuous torque. An extra-large servo motor drive provides 50% more torque than comparable units on the market. Also, the use of quality ground transmission gears reduces noise levels at high speed.

C Axis Motion

C Axis drive units provide high precision bi-directional spindle motion that is fully interpolated with X and Z axis movements. The unit is servo driven with a timing pulley and belt, and a powerful hydraulic brake locks the main spindle during secondary operations.

Y Axis Motion

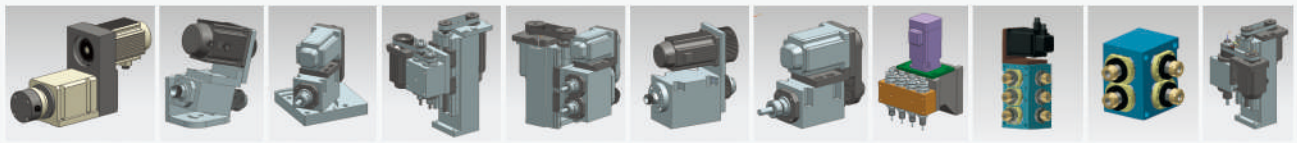
Z-MaT Y axis drive units are used for off center milling, drilling and tapping. Each Y axis model comes standard with C axis and live tooling capabilities and fully interpolates with C axis, X axis and Z axis movement. This combination provides a powerful, efficient solution for secondary machining of turned parts.



Driven Toolholders List

Form	Position	Group tool nos	Max dia. of live tool	Max. speed
ER20	Radial, Axial, Vertical	1、2、3	ϕ13mm	5000rpm
ER25	Radial, Axial, Vertical	1、2、3	ϕ16mm	5000rpm
ER32	Radial, Axial, Vertical	1、2、3	ϕ20mm	5000rpm

Able to fit for most existing Z-MaT models.



Polygon turn-mill driven toolholder

Axial and Radial elevation adjustable driven toolholder

Axial and radial index adjustable driven toolholder

Double lifting vertical driven toolholder

Doulbe lifting axial driven toolholder

ER20 single driven toolholder

ER32 single driven toolholder

Group 4 vertical driven toolholder

Group 3 lifting axial and 3 radial driven toolholder

Group 2 lifting axial and 2 radial driven toolholder

Single lifting vertical driven toolholder

MULTI-TASKING MACHINE

4-Axis Simultaneous Multitasking Turning Centers

Turn-Mill Machining Center

Long X Axis Travel

PLUS, an extra-long work table provides a large tool mounting area. This allows for a large number and variety of table mounted tooling options. This capacity makes the Series a powerful, “single set-up” turning center for turning, milling, tapping and drilling operations in a single part production cycle.

Smart operators can combine operations into a single machining center – saving on capital input and operating costs. The series machine owners report they have gained a competitive advantage with the addition of these machines to their production system.

TMC400Y

SL580-MT

Specifications

		Unit	SL450-MT		SL580-MT	TMC400Y	
Structure	Bed incline degree		45°		45°	0°	
	Guideway type		Linear motion		Linear motion	Linear motion	
Capacity	Chuck/Collet		6" Hydraulic chuck/Hydraulic collet		6" Hydraulic chuck/Hydraulic collet	Hydraulic collet, *6",*8"	
	Max. swing dia. over bed	mm	Φ450		Φ380	Φ400	
	Max. length of workpiece	mm	Chuck 180, *Collet 210		Chuck 220, *Collet 250	200	
	Max. swing dia. over slide	mm	Φ150		Φ90	Φ120	
Spindle	Spindle type		A2-5	*A2-6	A2-5	A2-5	*A2-6
	Spindle bore	mm	Φ55	*Φ62	Φ48	Φ48	*Φ62
	Max. dia. of through hole	mm	Φ46	*Φ52	Φ40	Φ40	*Φ52
	Spindle speed	rpm	4500	*4000	3000 *4500	3000,*4500	*2000, *4000
	Main motor power	kW	5.5/7.5, *7.5/11		5.5/7.5	3.7/5.5, *5.5/7.5	
Axis	X axis travel	mm	450		580	400	
	Z axis travel	mm	210		270	250	
	Y axis travel	mm	150		150	90	
	X/Z/Y rapid traverse	m/min	20/20/15		20/20/15	7/10/10	
Toolpost	Toolpost type		8-Station turret mixed with livetoolings		8-Station turret mixed with livetoolings	Gang type tools mixed with livetoolings	
Tailstock	Taper of tailstock		No		No	No	
	Travel of tailstock quill		No		No	No	
Others	Power capacity	kVA	13		15	14	
	Overall dimension(L×W×H)	mm	2415×1830×2300		2400×1810×2050	2020×1450×1850	
	Weight (about)	kg	3000		3600	2500	

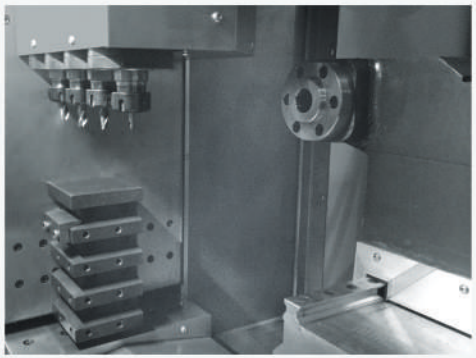
Note: “*” means optional, "N/A" means not available.
Chip conveyor is available as option for SL450-MT

MULTI-TASKING MACHINE TMC40V

X, Y, Z axes are interpolated with C axis.
Milling, drilling and tapping of complex shapes can be accomplished in one setup.

Machine Characteristics

- High quality castings provide optimal damping – reducing vibration and increasing rigidity. Best assurance of quality surface finishes.
- Advanced 90° vertical machine structure optimizes chip and coolant flow – PLUS, provides easy operator access for work and tool set-up.
- Single Set-up allows for turning, milling, drilling and tapping operations.
- Capable of C axis and 4 axis simultaneous machining.
- Modular design with many available configurations – such as tail stock and tooling combinations.



Specifications

		Unit	TMC40V		
Structure	Bed incline degree		90°		
	Guideway type		Linear motion		
Capacity	Chuck/Collet		Hydraulic collet, *6", *8"		
	Max. swing dia. over bed	mm	Φ400		
	Max. length of workpiece	mm	250		
	Max. swing dia. over slide	mm	Φ250		
Spindle	Spindle type		A2-5	*A2-5	*A2-6
	Spindle bore	mm	Φ48	*Φ55	*Φ62
	Max. dia. of through hole	mm	Φ40	*Φ46	*Φ52
	Spindle speed	rpm	4500	*4500	*4000
	Main motor power	kW	5.5/7.5		
Axis	X axis travel	mm	220		
	Z axis travel	mm	320		
	Y axis travel	mm	300		
	X/Z/Y rapid traverse	m/min	12/12/12		
Toolpost	Toolpost type		Gang type tools mixed with livetoolings		
Tailstock	Taper of tailstock		MT4		
	Travel of tailstock quill		100		
Others	Power capacity	kVA	14KVA		
	Overall dimension(L×W×H)	mm	2660×1840×2250		
	Weight (about)	kg	3500		

Note: "*" means optional, "N/A" means not available.
Chip conveyor is available as option for SL450-MT

TOOL ROOM CNC MACHINES

“ Fit Through a Door ” CNC Lathes

Innovative, Heavy Cast Base – With Narrow Footprint

Perfect for getting through narrow halls and into small spaces. Up and into skyscrapers or down to a basement laboratory – or, maybe even into your garage.

Specifications	Unit	LTF5	LTS5
Chuck/Collet	N/A	Φ160mm Manual chuck	6" Manual chuck, * Hydraulic chuck
Max. swing dia. over bed	mm	Φ250	Φ300
Max. length of workpiece	mm	300	Turret 220, Gang type tool 320
Max. swing dia. over slide	mm	Φ140	Φ150
Spindle type	N/A	A2-4	A2-4
Spindle bore	mm	Φ30	Φ30
Spindle speed	rpm	3000	3000
Main motor power	kW	3.7	2.2
X/Z axis travel	mm	160/300	200/320
X/Z rapid traverse	m/min	8/12	6/9
Turret type	N/A	Quick change toolpost	Gang type tool, *Quick change toolpost, *8-station turret
Tailstock type	N/A	Manual, *Hydraulic	Manual, *Hydraulic
Taper of tailstock	N/A	MT3	MT4
Travel of tailstock quill	mm	80	80
Overall dimension (L×W×H)	mm	1650×820×1800	1300×820×1650
Weight (about)	kg	1300	1500

Note: " * " means optional.

Specifications	Unit	VMC550E
Table size	mm	800×305
T slot(widthXnos.Xdistance)	mm	14×3×85
Max. load	kg	260
X/Y/Z axis travel	mm	550/240/450
X/Y/Z axis rapid traverse	m/min	28/28/28
Spindle nose to table	mm	50-500
Spindle center to column	mm	380
Guideway type	N/A	LM: X/Y/Z
Spindle type	N/A	BT30
Main servo motor	kW	3.7/5.5
Spindle speed	rpm	8000
*ATC capacity/type	No./type	*12/Carousel
Max. weight of tool	kg	3
Overall dimension (L×W×H)	mm	2250×2000×2200
Weight(about)	kg	2600

Note: " * " means optional,
"LM" means linear motion guide way.

DUAL-USE TECHNOLOGY SERIES TF01

Turning Center Transform into VMC Like "TransFormer"

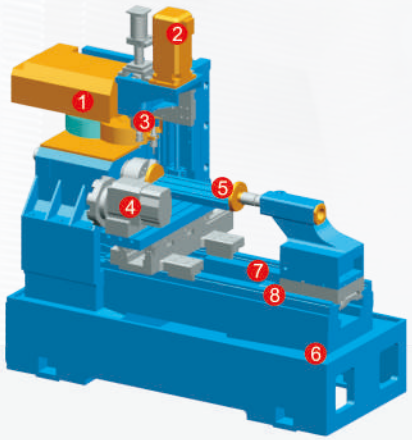
CNC Turning Center With Y Axis
VMC With 4th Axis integrated into One

This machine is designed based on wide span lathe bed, monoblock one-piece casting and large-size linear motion guideway which guarantee the solid foundation for balanced two purposes-turning and milling.

Its basic function is a powerful turning center. However, it can become a 4th axis VMC as long as we add a bridge plate between the 3-Jaw Chuck and Tailstock (Then C axis convert to "A" Axis function in VMC mode). The milling, drilling and tapping processes can be realized through automatic tool change and BT30 high speed VMC spindle.

Basically, this machine can realize two functions: CNC Turning Center with Y axis, or a VMC with 4th axis.

1. Automatic tool change magazine
2. Milling spindle motor
3. BT30 high rigid spindle
4. 8/12-station turret in the front
5. 4 axis rotary table function
6. One piece monoblock casting
7. Both ends anchored ballscrew
8. Roller type 45mm linear guideway

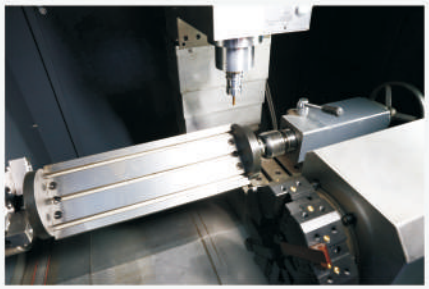


Standard Features

- Manual 3 Jaws Chuck
- PMI/ HIWIN Linear Guideway
- PMI/ HIWIN Ballscrew
- 8-Station Turret
- BT30 Spindle Unit 8000rpm
- Drum Type ATC 8-Station
- Manual Tailstock

Optional Features

- Hydraulic Chuck
- Chip Conveyor
- Quick Bridge Plate for 4th axis VMC Function
- Hydraulic Tailstock



Specifications TF01

4 Axes Turning Center Mode		4 Axes VMC Mode	
Max.Swing Diam. Over Bed	650mm	4th Axis Center Height	145mm
Max.Swing Diam. Over Slide	290mm	Bridge Plate Size	550x45x200mm
Max. Turning Diam.	400mm	T Slot	12x3x70mm
Max. Length of Workpiece	500mm	Spindle Center to Column	210mm
Spindle Bore	Φ62mm	Spindle Nose to Table	350mm
Max. Diam. of Through Hole	Φ52mm	Max. Load	200kg
X Axis Travel	300mm	"Y" Axis Travel	200mm
Y Axis Travel	200mm	"Z" Axis Travel	200mm
Z Travel	500mm	"X" Axis Travel	500mm
X Rapid Traverse	20m/min	"Y" Axis Rapid Speed	20m/min
Y Rapid Traverse	10m/min	"Z" Axis Rapid Speed	10m/min
Z Rapid Traverse	20m/min	"X" Axis Rapid Speed	20m/min
Turning Spindle Nose Type	A2-6	Turning Spindle Nose Type	A2-6
Turning Spindle Motor	7.5/11kW	Turning Spindle Motor Power	7.5/11kW
Max. Turning Spindle Speed	2000, *4000rpm	Max. Turning Spindle Speed	2000,*4000rpm
Milling Spindle type	BT30	Milling Spindle Type	BT30
Max. Milling spindle speed	8000r/min	Max. Milling Spindle Speed	8000r/min
Milling Spindle motor	3.7/5.5kW	Milling Spindle Motor	3.7/5.5kW
Turnning Turret Stations	8	Turnning Turret Stations	8
Turning Tool change time-Adjacent	≦0.45S	Turning Tool Change Time-Adjacent	≦0.45S
*Milling ATC capacity	8	*Milling ATC Capacity	8
*Max. weight of milling tool	3kg	*Max. Weight of Milling Tool	3kg
*Milling Tool change time	≦8s	*Milling Tool Change Time	≦8s
*Air source pressure	0.5-0.8Mpa	*Air Source Pressure	0.5-0.8Mpa
Chuck Size	8"	Rotary Chuck Size	8"
Tailstock	MT5	Tailstock	MT5
Travel Of Tailstock Sleeve	100mm	Travel Of Tailstock Sleeve	100mm
Travel Of Tailstock	100-500mm	Travel Of Tailstock	100-500mm
C Axes Index Resolution	0.001°	4Th Rotary Index Resolution	0.001°
C Axes Machining Accuracy	±0.04°,*±0.02°	4Th Index Accuracy	±0.04°,*±0.02°
Overall Dimension(L×W×H)		3000/*3300/*3800/*4300×1750×2400mm	
Weight(About)		3500/*4200/*5200/*6200kg	

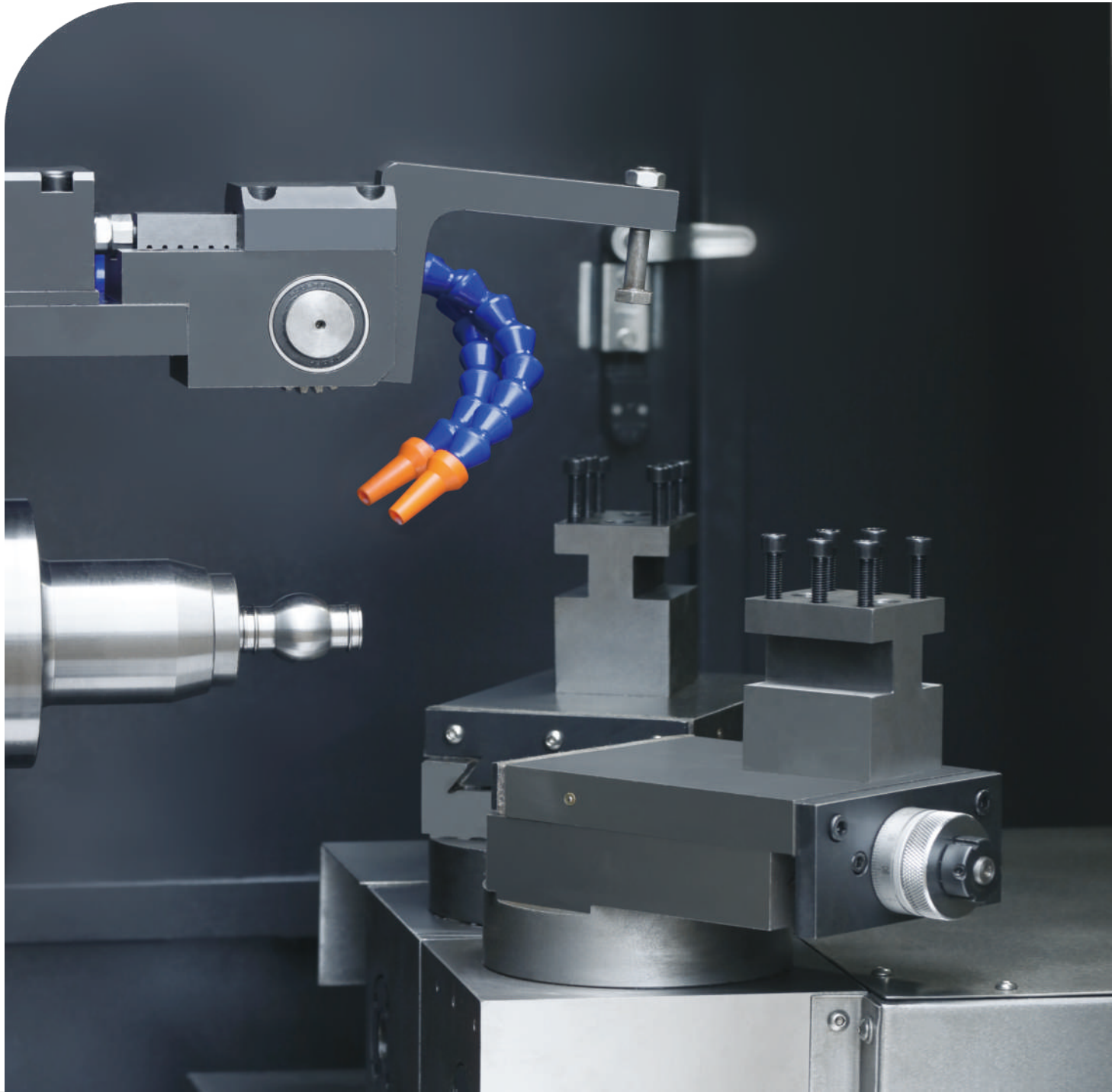
Note: "*" means optional. "" means equal to.

SPM SERIES

Special Purpose Machine

Increasing Productivity – Beyond Expectations

Because your efficiency and profitability are at the core of our mission, Z-MaT does not limit our engineering innovation to just general use CNC lathes and mills. We also design and produce special-purpose machines to meet specific needs that come to us from our diverse customer base.



SPHERICAL CUTTING CNC LATHE

The Q50 is a special design for machining ball-shaped parts. Turning, indexing and finish polishing can be accomplished in a single parts machining cycle.

Machine Description

Traditional spherical cutting CNC lathes used a traditional technology that featured a straight rack drive and hydraulic system. The result was that tolerances were difficult to maintain and surface finishes were not smooth.

The Q50 uses a circular rack and tooth combination, along with a servo motor to control table movement. The improved results include machining results that match programming specifications and mirror-fine finishes.

Machine Features

- Mono-Block single piece cast base and lathe bed. Extra-heavy casting is stabilized using traditional weather aging (an expensive and time consuming process). This helps to optimize lathe bed stability and accuracy.
- High precision, world-class linear motion bearing guideways increase machine accuracy and stability over the life of the machine.
- Center-mounted, high precision ball screw has optimal dynamic motion stability and efficiency.
- Accurate, high-speed cartridge spindle best fits the needs of the application – extra-fine finishes and optimal finish part roundness.
- Three axis simultaneous movement system maximizes felicity of parts accuracy to part design when cutting round or three dimensional shapes.

Specifications

	Unit	Q50
Chuck/Collet	N/A	Hydraulic collet
Max. spherical turning dia.	mm	Φ50
X/Z axis travel	mm	200/150(*320)
X/Z rapid traverse	m/min	9/9
Spindle nose	mm	A2-5
Spindle speed	rpm	4000
Main motor power	kW	3.0, *4.0
Turret type	N/A	Double turret & Hyd. hob
Overall dimension(L×W×H)	mm	2600×1410×1900
Weight(about)	kg	1900

A DIFFERENT SOLUTION

The Power A8L Lathe w/Rotary Table

Besides the Q50 spherical lathe, another option for accurately machining spherical shapes is our highly accurate Power A8L lathe matched with a precision rotary table with servo drive. See this setup on the photo below:

Power A8L

SPM SERIES Special Purpose Machine

Big Head – CK62110 CNC Lathe

Extra-swing turning lathe for extra big diameter parts machining. More over, the machine bed is specially designed with rack and gear pair, which can move forward and backward manually for adapting different jobs' length.

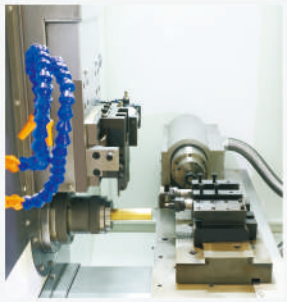
Specifications

Gap-Bed Lathe	Unit	CK62110	CK62130
Chuck	inch	Manual 10'', *12'', *15''	Manual 18''
Max. swing dia. in the gap	mm	Φ1100	Φ1300
Max. swing dia. over bed	mm	Φ400	Φ600
Max. length in the gap	mm	250	450
Max. length of workpiece	mm	400	350
Spindle bore	mm	Φ55, *Φ81, *Φ105	Φ135
Spindle speed	rpm	1600, *800	500
Main motor power	kW	5.5, *7.5	11
X/Z axis travel	mm	320/400	580/350
X/Z rapid traverse	m/min	6/9	15/15
Turret type		4-station toolpost	4-station toolpost
Guideway type		Hard	Roller Linear Motion
Overall dimension(L×W×H)	mm	2100×1350×1800	2500×1650×2000
Weight(about)	kg	2300	4500

Note: "*" means optional.
Manual moving length 450mm,
Gear box spindle is optional.

Multi-tool FL300-MT

FL300-MT



Specifications

		Unit	FL300-MT	
Capacity	Chuck/collet	type	Hydraulic collet	
	Bed type/ guideway		Flat/LM	
	Max. swing dia. over bed	mm	Φ300	
	Max. length of workpiece	mm	300	
	Max. swing dia. over slide	mm	Φ135	
Spindle	Spindle bore	mm	Φ48	*Φ55
	Max. dia. of through hole	mm	Φ40	*Φ46
	Spindle nose		A2-5	*A2-5
	Spindle speed	rpm	3000 *4500	*2500 *4500 *5000
	Spindle motor power	kW	3.7/5.5, *5.5/7.5	
Axis	X/Z travel	mm	350/300	
	X/Z rapid traverse	mm/min	25/25	
Toolpost	Type		Gang type *4-station toolpost	
	No. of tool stations	No.	4-10	
Sub-tools	X2/Z2 travel	mm	60/90	
	X2/Z2 rapid traverse	m/min	15	
	Toolpost type		Gang type	
	No. of sub tools	nos	2	
	Sub-tool distance	mm	55mm	
Others	Power capacity	kVA	9	
	Dimensions (L×W×H)	mm	1700×1200×1550	
	Weight(about)	kg	1800	

Note: “*” means optional, "N/A" means not available, "LM" means linear motion guide way.

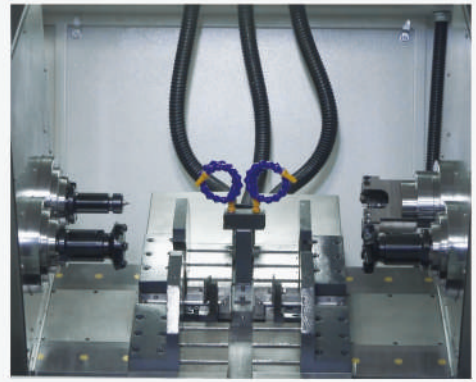
Dual End Milling And Drilling Machine STK Series

The dual end turning machine was developed specifically for the auto industry, and can be applied to other applications. This machine allows for double end cutting of parts that require machining on multiple surfaces of the part. Configurations of two to eight spindles can be configured for differing part turning requirements.

STK50

Specifications

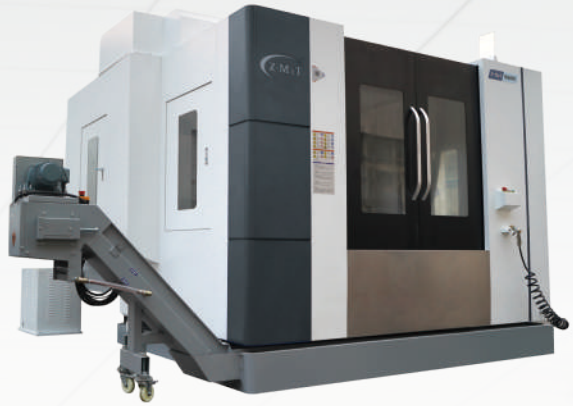
		Unit	STK50	STK200
Capacity	Machining dia. range	mm	Φ20-70	Φ20-100
	Machining length range	mm	200-700	800-1600
	Size of centering	mm	Φ2.5-6.3	Φ2.5-6.3
	Max milling depth.(one side)	mm	5	5
Spindle	Spindle speed	rpm	200-2000	200-2000
	Spindle motor	kW	7.5/11×2	15/18.5×2
	Spindle nose	Type	BT50	BT50
	Tool type		Milling / Drilling	Milling / Drilling
	Tool change type		Manual	Manual
Axis	X/Z1/Z2 travel	mm	250/250/250	320/400/400
	X/Z1/Z2 rapid traverse	m/min	15	15
Clamping	Structure		Double V support self-positioning	Double V support self-positioning
	Driven		Hydraulic	Hydraulic
	Clamping force	kN	15	15
Others	Bed degree	degree	30°	30°
	Dimensions (L×W×H)	mm	3100×1750×2050	4000×1760×2100
	Machine weight (about)	kg	4500	7200



SPM SERIES Special Purpose Machine

CK6163-F

SPM CK6163-F For Steering Rod



SPM For Brake Calipers

HM630TC

Mirror Structure
CNC lathe S-CK350

FL630

Car Wheel Repairing
Machine FL630

Multistation Drilling Machine

Crankshaft Drilling Machine

SOCIAL RESPONSIBILITY

Z-MaT has expanded relationships with educational institutions and community organizations. We have encouraged public discussion about how to develop coordinated plans for addressing the shortage of trained CNC technicians.

A need was expressed for a low-cost training “work-seat” package that schools and companies can use to provide practical training for CNC control operations. The Z-MaT CNC Control Simulator was developed to address this need.

Z-MaT CNC Trainer

It’s Like on the Job Training!

- Closed system
- ISO Standard
- Built-In, Dedicated Keypad
- One-Button Features
- Multi-Function Jog Handle
- Color LCD Screen
- USB Port

Industry Standard CNC Control Program with Operator Station

Capable of 3D Simulation → Industry Standard Hardware & Software → Seamless shift from CNC trainer to real world machine operation

PROFESSIONAL MANUFACTURER – BROAD PRODUCT LINE

Wide Product Line

Z-MaT is one of the few world-wide turning center manufacturers that can claim almost two dozen unique series of lathes with over 200 machine models.

Each machine series was designed to meet a specific target application. Individual machine models have their unique outstanding features that can be applied to the specific needs of individual customers.

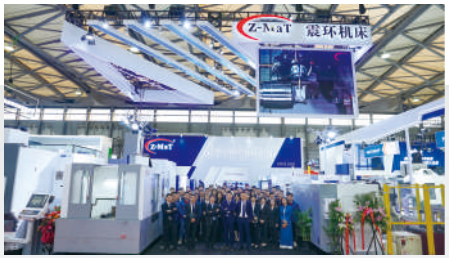
Hand Scraping

Expert Hand Scraping at Z-MaT machines to achieve stable machining accuracy, Every Z-MaT machine conducts strict hand Scraping process by skilled technicians, realizing perfect flatness, squareness and straightness required for all surfaces and axes.

Total Quality Management

No matter how far technology may evolve, the one ongoing concern of CNC customers is, “Will the machine make my parts, with higher productivity and without a hassle-And at a price I can justify?” Customers deserve our best effort towards always providing quality, reliability, efficiency and low cost. We have introduced the concept of TPS-Toyota quality system including TQM-Total Quality Management, which involves integrated control of quality, not just of the products but also service and communication, and all processes.

We are working to provide quality that exceeds customer expectations. Our machine Quality inspection process is far beyond the standard in the industry. We combine scientific process, along with disciplined procedural systems to assure the highest quality total experience for our customers.



Always Innovating & Providing Solutions

The ultimate goal for Z-MaT is to become your Smart CNC Solution provider. We believe continual innovation is the key to accomplishing this goal. Here are a few things we do to increase innovation:

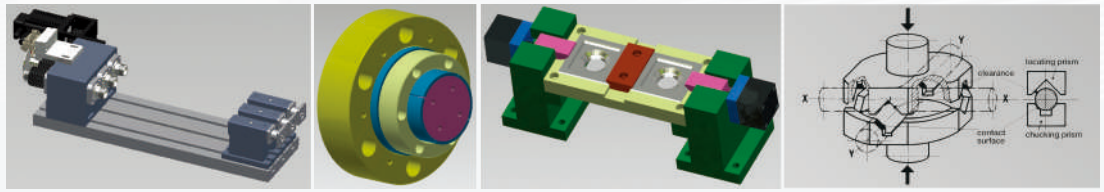
- Every year we invest large amounts of capital in the development of new models of CNC lathes and mills.
- Our advanced applications for live tooling technology provide industry leading capabilities in custom designs and applications for secondary machining operations.
- We are applying world-class quality control standards to our complete manufacturing process.
- Our technicians are recognized by the industry for fast, professional service.
- Our goal is to always get better.
- An entrepreneurial attitude and positive approach to innovation has brought us to the fore front of CNC machine tool design and sales. We will continue to innovate.

Innovation has been a key to our success and we continue to build a culture where ideas are important. Our goal is to practice continual learning, both in terms of technical and professional knowledge and capability. Tell us how we can do better – We're listening.

High Value Human Resources

A key Z-MaT competitive advantage is the quality of our people, and our team approach to delivery of the best possible results. Each member of our team has training and proven expertise, as well as a positive, cheerful, can-do approach to supporting our customers.
Z-MaT supports each team member with training and advanced technology-enabled processes for accomplishing day-to-day tasks. Z-MaT has also created a work environment characterized by mutual trust, recognition for a job well done, and opportunities for personal and professional growth.
Z-MaT works hard to combine individual and combined strengths to generate tangible positive results that exceed customer expectations.

Examples of Fixtures



Bar Feeders

Long bar feeder

Hydra-dynamic bar feeder

Hydraulic single rod bar feeder

Big size bar feeder


Z-MaT
震环机床

Workpiece Samples

Provider of Precision CNC Machines
And Smart CNC Solutions
For The Metal Cutting Industry

SIEMENS SAUTER PRAGATI Partnering Machine Tool Builders Worldwide Rexroth Bosch Group
HEIDENHAIN MITSUBISHI MOTORS Schneider Electric CHANDOX
CENTROID FANUC YASKAWA FAG
NSK PMI THK The Mark of Linear Motion HIWIN Motion Control and System Technology NACHI
GSK KND LNS

Partners & Quality Components

Z-MaT uses only high-quality, precision components in the manufacture of our line of professional-quality and production-grade CNC machines. While this step is more costly, having quality components built into our machines is the only way to achieve the quality results and long service life our customers expect.

INDUSTRY LEADING SERVICE NETWORK

The Pursuit Of The Fastest Response Is Our Promise

"Responding within 18 Hours" is our commitment to client service standards, the cornerstone of service philosophy and a key to our success. We track our service response patterns and apply scientific process. One of the commitments we promise to our customers is to make sure we keep improving.

We know that technical service is important – as important as the physical machine. Our technicians are here to help provide you the most efficient machine process – this includes help in determining optimal cycle time and optimizing machine maintenance. Most of Z-MaT's valuable services are provided free of charge.

Service Center

Our service and sales team are well trained to use English, materials are also updated to international languages, which is critical capability to supply timely service and avoid loss by misunderstandings. In order to recover the normal operation of customers' machines as quickly as possible, we work to resolve problems speedily by the ways (conference apps, WhatsApp, telephone and Email) which customer is convenient, if necessary by dispatching well trained experienced staff from the worldwide technical centers for repairs, or supplying parts from the parts stocks.

Parts Center

We will supply a replacement for parts that prove to be defective for a period of warranty. We build abundant stocks and track our service response patterns, 95% spare parts can be shipped out by air-courier within 1 day after receiving the request from customer.

Pre-Sale Service

To select the most suitable machine with the right configuration and optimized solutions is the first most important step of everything. Machine tools are products that run continuously for many years. This means that machine tools manufacturers have to build very close partnerships with their customers, more so than in any other industries. Integrated with 30 years' experience in auto parts, medical mold and machine tools industries, our application engineers come up with the optimum proposals based on their requirements in regard to machining. Supporting the customer's production activities with greater speed and reliability, as well as cost reduction requirement for improving Z-MaT's client competitive advantage.

The Z-MaT International Warranty – 18 Months

Demonstrates our confidence in the quality of our product, and brings peace of mind to our customers.

We will supply a replacement for parts that prove to be defective for a period of 18 months, starting on the machine's bill of lading date. Extended warranty is available at the time of purchase. Please contact your Z-MaT sales representative for details.

Z-MaT Fast Facts:

- 97%+ Client Retention Rate
- 15,000+ Cooperate Clients
- In business for more than 32 years.
- 100% focus on our clients best interests

China

Direct service in china

- Technical Centers
- Headquarter Plant
- Subsidiaries

Overseas countries

- Head office
- Subsidiaries
- Existing and planned overseas service centers

Z-MaT

Precautions:

- Contact Z-MaT Sales Office for questions regarding catalog content.
- Catalog content is subject to change without notice. Z-MaT is not responsible for typographical errors.
- Images may show base machines with added optional equipment.
- Actual machine standard features may differ in some details from machines shown in catalog images. This includes the size and dimensions of name plates and other labels.
- Z-MaT is not responsible for discrepancies between information in this catalog and actual machines.

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Shandong Precision Spindle Unit Plant:	Weihai Giessen Seiki Co., Ltd.	No. 39-3 Hi-tech Industrial Zone, Weihai, Shandong.
Hong Kong Commercial Center:	Kimway Dragon Holdings limited	701A Caroline Centre, 2-38 Yun Ping Road, Hong Kong.
Taiwan R&D Center:	GreaMaT Machinery Co.,Ltd.	No. 955, Section 4, Wenxin Rd., Beitun District, Taichung, Taiwan.