

# Z-MaT



## Smart CNC Solutions

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General Catalogue

// 2021 Edition 05 English //





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.

**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.
- 2020** In 2020 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.



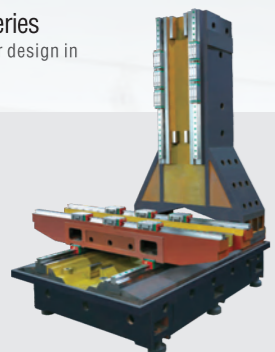
## CNC Milling

### Vertical Machining Center

- 06** High Speed F Series  
48m/min fast traverse to increase productivity
- 07** Medium & Small Series  
Conventional mill & drill is past, VMC is better for production of parts
- 08** Large and Giant Series  
Popular model, heavier design in Z-MaT spirit

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Power V Series  
Same size, higher rigidity!



### Gantry Machining Center

- 14** 4 rails large-size cylindrical roller linear guideways under "U" embrace structure

### Horizontal Machining Center

- 16** Upright t-base structure

### Twin Spindle Machining Center

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



**19**

### Tapping Center

- 20** Design for volume parts with holes processing

## Turning Center

### Star Family Turning Centers

- 30** Star STL Series  
Slant bed, tailstock, linear guideway
- 32** Star SL Series  
Slant bed, linear guideway, compact design – without tailstock
- 34** Star TN/TS Series  
X.Z.C. 3-axis turning centers
- 35** Star DT Series  
X.Z.C.Y. 4-axis turning centers

### Turn-Mill

- 38** CTX750  
X.Y.Z.B.C. 5-axis integrated turn-mill center
- 40** TF01  
Turning center transform into VMC like "transformer"

### Multi Turrets

Double Turret GT260V  
Multiple turrets multiply your production



**44**

# Contents

### Dual Spindle

TC500  
Advanced 45 degree cross Y axis

**46**



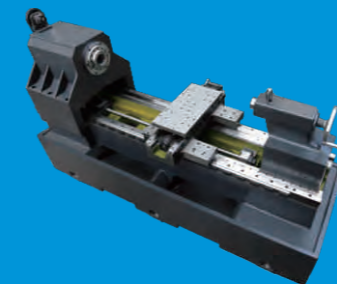
- 47** STL/TN/DT-S Series  
Handle maximum capacities with ease.
- 48** SA28-S  
Single automation option you can use - and price justify.
- 49** DA Series  
Two channels machining, a complete advanced automation on one single machine.

### Flash Family Turning Center

- 52** Flash SL Series  
The beauty of speed and accuracy
- 57** Flash FL Series  
Center mounted ballscrew with heavy duty linear motion guideway

Flash FTL Series  
The world's first and best design

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### Rigid Series Power A

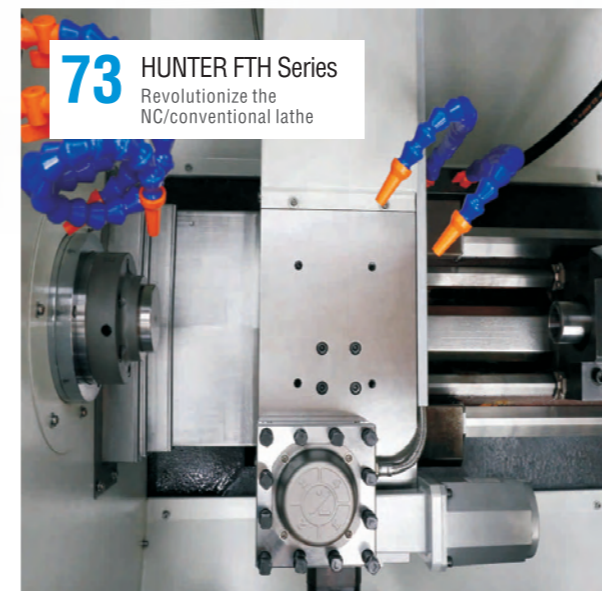
- 65** 60° slant bed, greater rigidity and fast speed

### Super Precision

- 69** High precision and compact size

### Hunter Family Turning Center

**73** HUNTER FTH Series  
Revolutionize the NC/conventional lathe



- 75** HUNTER STH Series  
Cost-effective slant bed hard guideway cnc lathe from original design of Z-MaT
- 76** HUNTER SH Series  
Slant bed, Hard guideway
- 77** HUNTER FH Series  
Flat bed, Hard guideway
- 78** HUNTER CK Series  
Old design stem from conventional lathe

### Multi-Tasking Machine

- 81** Unique structure turn-mill center

### Automation & Production Line

- 83** Machine with robot

### Vertical Lathe

- 87** Excellent option for large, heavy, thin-walled and irregular disk parts

### Tool Room CNC Machine

- 89** Innovative, heavy cast base-with narrow footprint

## Special Purpose Machine

- 92** Increase Productivity-Beyond Expectations  
Spherical Cutting CNC lathe Q50, Big Head, Multi-Tool, Double End Milling, Car Wheel Repairing, Steering Rod.



**97** Professional Manufacturer Broad Production Line

## Service Network

- 101** The pursuit of the fastest response is our promise



# The Latest - MILLING & DRILLING TAPPING TECHNOLOGY

- Vertical Machining Center
- Gantry Machining Center
- Horizontal Machining Center
- Tapping Center

## Steadfast In Our Faith

Recently, the VMC industry are playing a price game, manufacturers are pushing VMC 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, CF card)
  - 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.

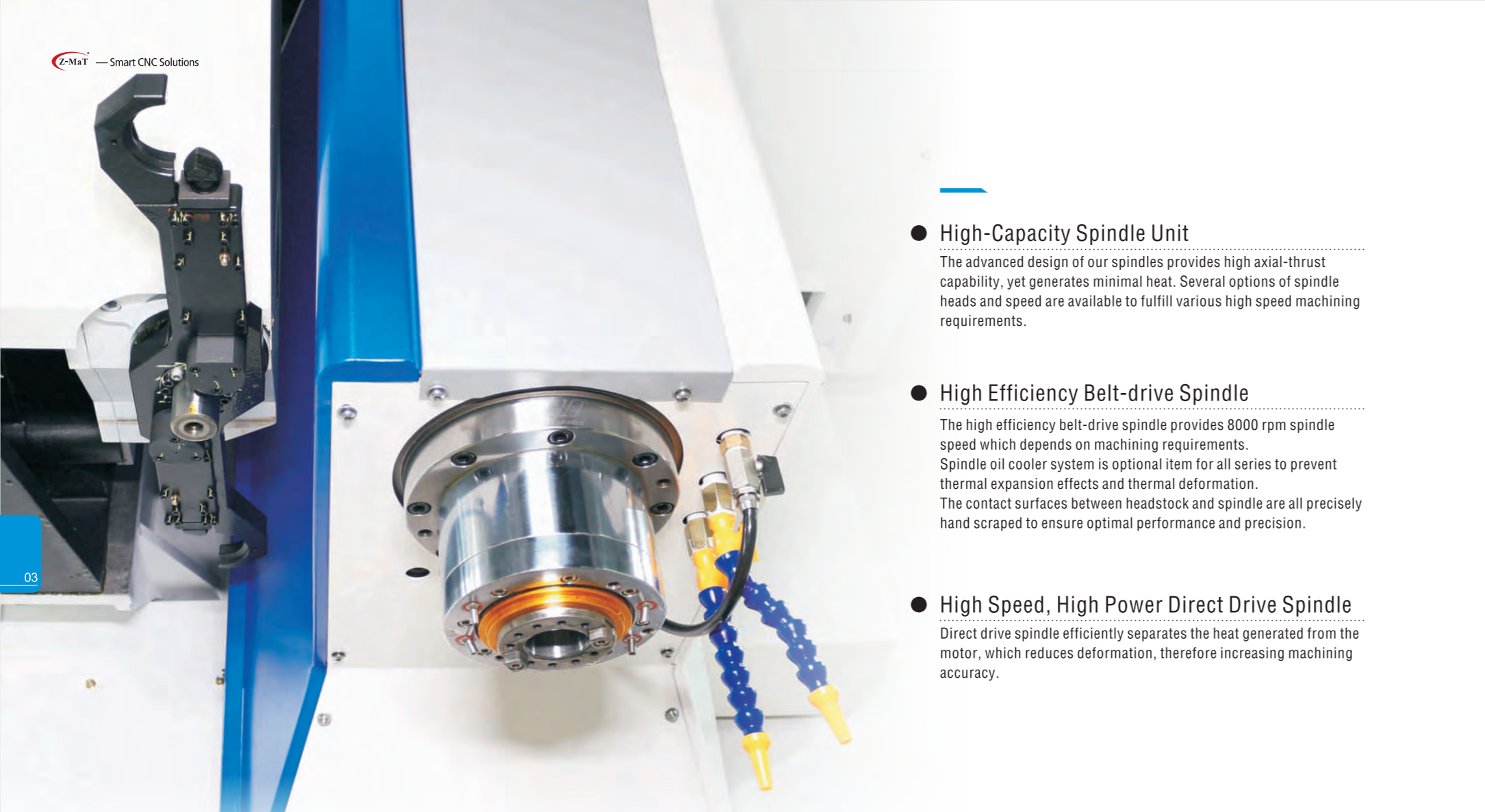


### Fanuc Oi MF Plus for CNC Milling

As a successor to the Series Oi-MF, the FANUC Series Oi-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





## 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

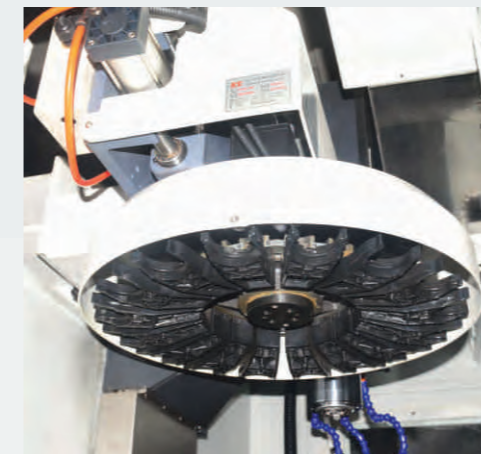
The high efficiency belt-drive spindle provides 8000 rpm spindle speed which depends on machining requirements. Spindle oil cooler system is optional item for all series to prevent thermal expansion effects and thermal deformation. The contact surfaces between headstock and spindle are all precisely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

### ● High Speed, High Power Direct Drive Spindle

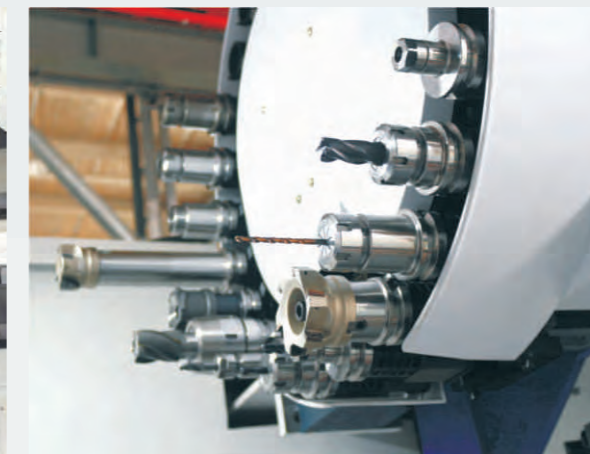
Direct drive spindle efficiently separates the heat generated from the motor, which reduces deformation, therefore increasing machining accuracy.

## 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.



Carousel ATC



Disk Arm ATC

## 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.



# 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.



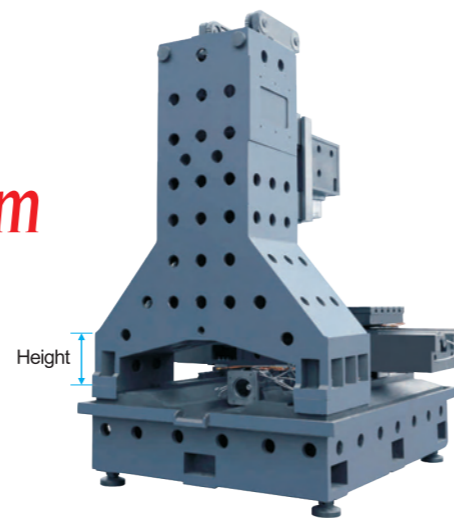
**Coolant through spindle center**  
Coolant to be supplied to the tip through the holes of the spindle and tool.



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



Height raised  
**100-300mm**



### 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.

# 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 military 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

### Optional Features

- CNC Controlled 4th Axis Rotary Table
- Different CNC Control System
- Spindle Center Coolant
- Chip Conveyor

## Specifications

	Unit	F855	F1055
<b>Table</b>	Table size	mm 950×550	1200×550
	Max.load	Kg 500	600
	T slot(width×nos.×distance)	mm 18×5×90	18×5×90
<b>Travel</b>	X Travel	mm 800	1000
	Y Travel	mm 550	550
	Z Travel	mm 550	550
	Spindle center to column	mm 570	580
<b>Spindle</b>	Spindle nose to table	mm 130-680	130-680
	Guideway type	LM (Roller)	LM (Roller)
	Spindle speed	rpm 8000,*12000	12000,*8000
	Spindle type	BT40	BT40
<b>Feed &amp; Magazine</b>	Main servo motor	kW 7.5/11	7.5/11,*11/15
	XYZ/Z axis rapid traverse	m/min 48	48
	ATC capacity/type	No./type 24/Disk	24/Disk
<b>Dimension &amp; Weight</b>	Max. weight of tool	kg 8	8
	Power capacity	kVA 24	24
	Dimension	mm 2500×2100×2300	3000×2300×2680
Weight (about)	kg 6000	6500	





# 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
- Spindle Center Coolant
- Chip Conveyor
- Air Conditioner (Except VMC500/VMC700E)



## Specifications

	Unit	VMC320	VMC420E	VMC550E	VMC400	VMC600E	VMC500	VMC700E
<b>Table</b>	Table size	mm	600x305	720x305	800x305	600x380	800x380	700x400
	T slot(width×nos.×distance)	mm	14x3x85	14x3x85	14x3x85	14x3x110	14x3x110	18x3x110
	Max.load	kg	260	260	260	350	350	400
<b>Travel</b>	X/Y/Z Travel	mm	320/240/450	420/240/450	550/240/450	400/350/450	600/350/450	500/400/450
	Spindle nose to table	mm	50-500	50-500	50-500	50-500	90-540	700-540
	Spindle center to column	mm	380	380	380	450	450	450
	Guideway type		LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ
<b>Spindle</b>	Spindle type		BT30	BT30	BT30	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,*7.5/11	5.5/7.5,*7.5/11
	Spindle speed	rpm	8000	8000	8000	8000,*12000	8000,*12000	8000,*12000
<b>Feed &amp; Magazine</b>	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
	ATC capacity/type	No./type	12/Carousel	12/Carousel	12/Carousel	24/Disk,*16/Carousel	24/Disk,*16/Carousel	24/Disk,*16/Carousel
	Max. weight of tool	kg	3	3	3	8	8	8
<b>Dimension &amp; Weight</b>	Power capacity	kVA	14	14	14	15	17	17
	Dimension	mm	2250x2000x2200	2250x2000x2200	2250x2000x2200	2350x2300x2350	2350x2300x2350	2350x2300x2450
	Weight (about)	kg	2400	2500	2600	3300	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
- Spindle Center Coolant
- Chip Conveyor



## Specifications

	Unit	VMC840	VMC850	VMC1050E	VMC1200E	VMC1300E	VMC1375	VMC1580
<b>Table</b>	Table size	mm	1000x470	1200x520	1300x520	1400x520	1600x650	1700x800
	T slot(width×nos.×distance)	mm	18x3x120	18x5x90	18x5x90	18x5x90	18x5x100	18x5x150
	Max.load	kg	700	800	800	800	1000	1300
<b>Travel</b>	X/Y/Z Travel	mm	800/400/530	850/500/570	1050/500/570	1200/500/570	1300/650/600	1300/750/700
	Spindle nose to table	mm	130-660	130-700	130-700	130-700	120-720	130-830
	Spindle center to column	mm	450	580	580	580	670	760
	Guideway type		LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ	LM:XYZ
<b>Spindle</b>	Spindle type		BT40	BT40,*BT50	BT40,*BT50	BT40,*BT50	BT40,*BT50	BT40,*BT50
	Main servo motor	kW	7.5/11	11/15	11/15	11/15	11/15,*15/18.5	11/15,*15/18.5
	Spindle speed	rpm	8000,*12000	8000,*12000	8000,*12000	8000,*12000	8000,*12000	8000,*12000,*6000
<b>Feed &amp; Magazine</b>	X/Y/Z axis rapid traverse	m/min	30/30/30	30/30/30	30/30/30	30/30/30	30/30/30	24/24/20
	ATC capacity/type	No./type	24/Disk	24/Disk	24/Disk	24/Disk	24/Disk	24/Disk
	Max. weight of tool	kg	8,*15	8,*15	8,*15	8,*15	8,*15	15
<b>Dimension &amp; Weight</b>	Power capacity	kVA	21	21	21	21	25	30
	Dimension	mm	2400x2150x2300	3000x2200x2350	3000x2200x2350	3100x2200x2350	3600x2500x2450	3600x2800x3000
	Weight (about)	kg	5500	6800	7000	7200	9200	13000

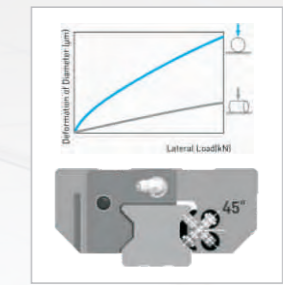
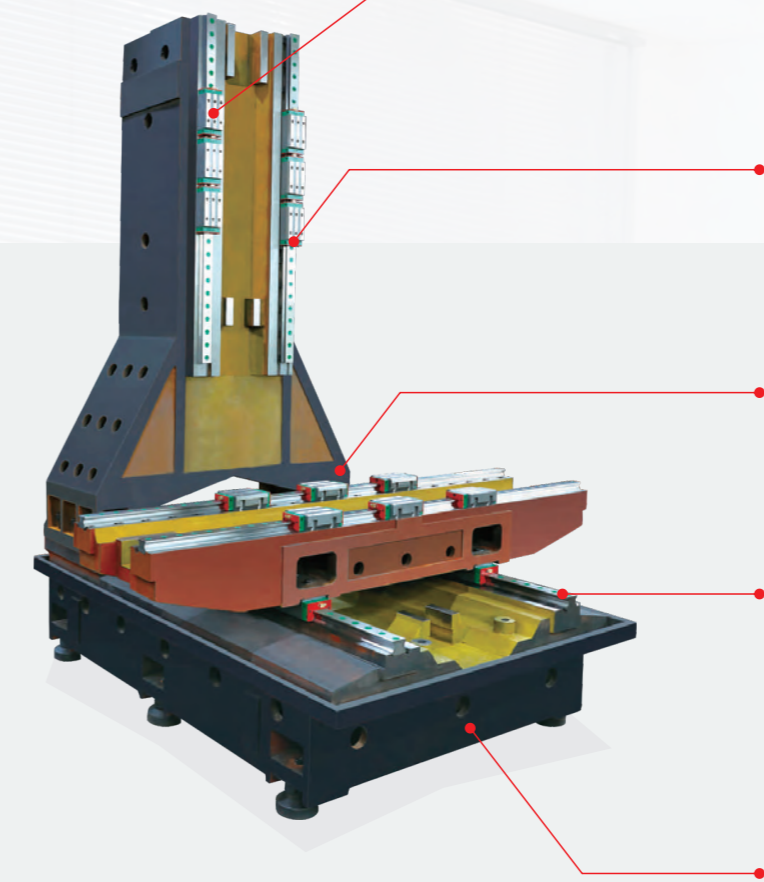
Note: "\*" means optional, "LM" means linear motion guide way.





# POWER V SERIES VERTICAL MACHINING CENTER

## Rigidity Features 5-Combo!



### 4x45°-Roller

Longer running life higher rigidity roller LM

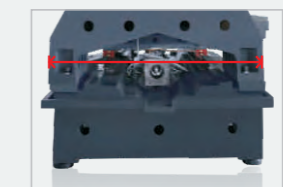
With 4-rows of rollers arranged at a contact angle of 45 degrees, the guideway has equal load ratings in the radial, reverse radial and lateral directions. The contact pressure of the rolling element is distributed on the line region, rollers have a greater contact area than balls, this provides the 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

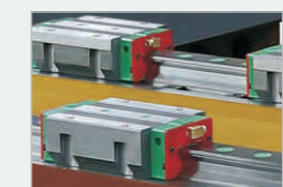
More slide blocks

**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.

# 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.

Note: The picture is the frame of Power V10.



# POWER V SERIES

## SAME SIZE MORE POWER!

- Heavy duty LM guideway support bearing
- Larger motor power
- Large guideway span
- Heavier machine weight
- BT40-150 type big spindle with 8000RPM



### 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
- Spindle Center Coolant
- Chip Conveyor

## Specifications

	Unit	Power V6	Power V10
<b>Table</b>	Table size	1000×450	1400×650
	Max.load	750	1000
	T slot(width×nos.×distance)	18×3×130	18×5×100
<b>Travel</b>	X Travel	600	1050
	Y Travel	400	650
	Z Travel	530	600
	Spindle center to column	450	670
	Spindle nose to table	130-660	120-720
<b>Spindle</b>	Guideway type	LM (Roller)	LM(Roller)
	Spindle speed	rpm	8000, *12000
	Spindle type		BT40, *BT50
	Main servo motor	kW	7.5/11, *11/15
	X/Y/Z axis rapid traverse	m/min	30
<b>Feed &amp; Magazine</b>	ATC capacity/type	No./type	24/Disk Arm
	Max. weight of tool	kg	8
	Power capacity	kVA	21
<b>Dimension &amp; Weight</b>	Dimension(L×W×H)	mm	2600×2150×2300
	Weight (about)	kg	5200

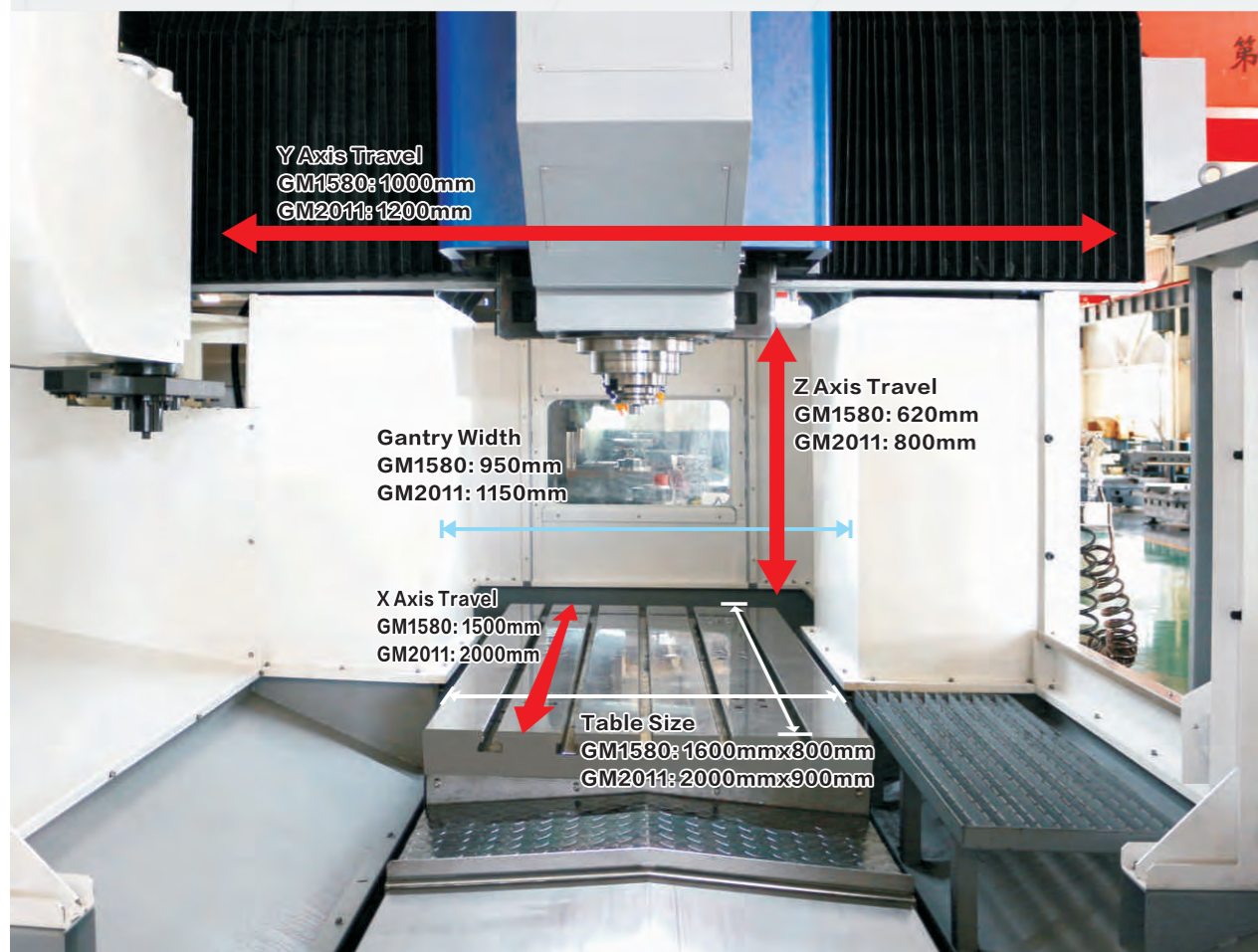
Note: "\*" means optional, "LM" means linear motion guide way.



# 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 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
<b>Table</b>	Table size	mm	1600×800
	Max. load	kg	2000
	T slot(width×nos.×distance)	mm	22×5×140
<b>Capacity</b>	X Travel	mm	1500
	Y Travel	mm	1000
	Z Travel	mm	620
	Spindle nose to table	mm	180-800
	Gantry width	mm	950
<b>Spindle</b>	Guideway type		LM (Roller)
	Spindle speed	rpm	8000, *6000
	Spindle type		BT50-155, *BT50-190
<b>Feed</b>	Main servo motor	kW	15/18.5
	X/Y/Z axis rapid traverse	m/min	20
	Max. feedrate	mm/min	10000
<b>ATC</b>	ATC capacity/type	No./type	24/Disk Arm
	Max. weight of tool	kg	18
<b>Others</b>	Power capacity	kVA	40
	Dimension	mm	4650×2850×3550
	Weight (about)	kg	15000

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

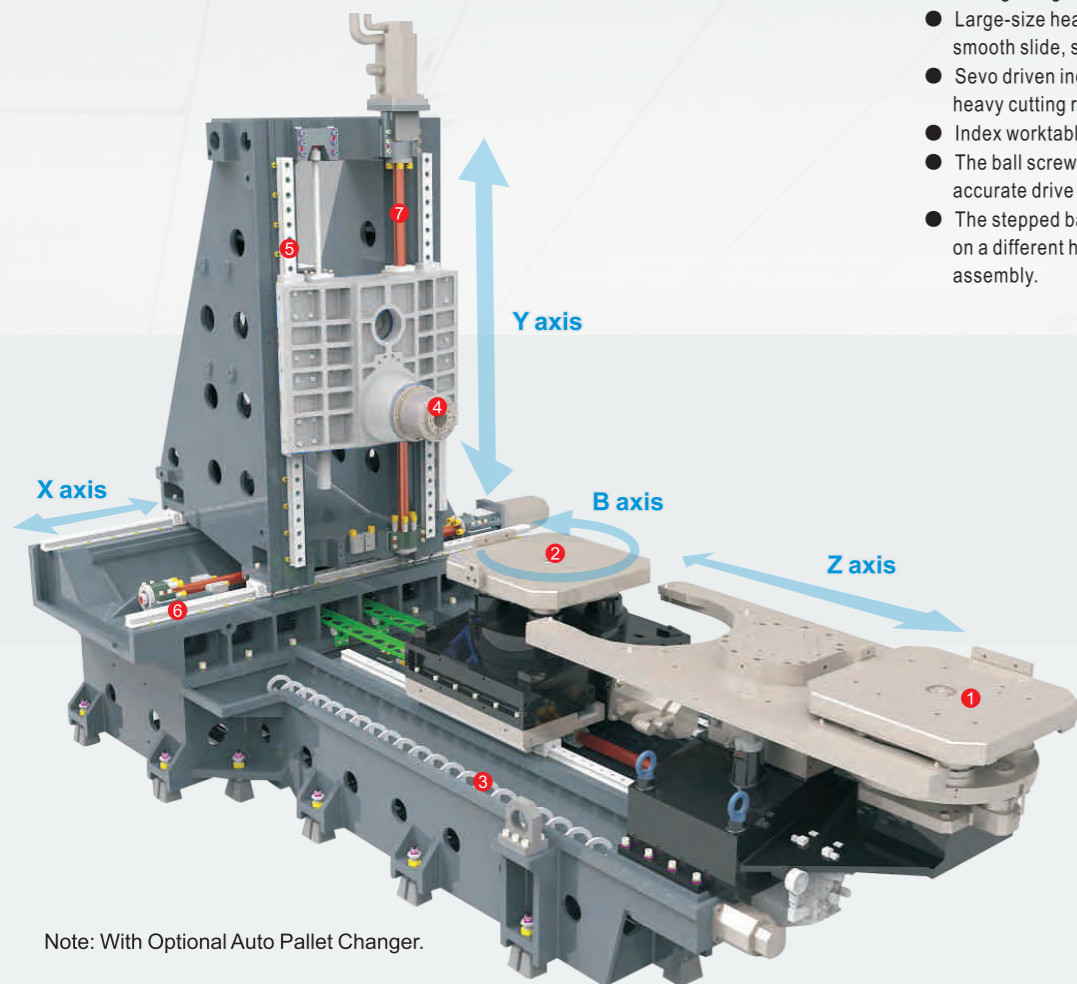


# HORIZONTAL MACHINING CENTER

**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.

## 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.



Note: With Optional Auto Pallet Changer.

- 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

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



## Specifications

	Unit	MC630H	MC800H
<b>Table</b>	Table size	mm	630x630
	T slot (Nos.-width-distance)	mm	5-18T-100
	Max.load	kg	1500
	Table quantities	pc	1, *APC
<b>Travel</b>	Table indexing degree	degree	1, *0.001
	Max. swing dia. of workpiece	mm	950
	X/Y/Z Travel	mm	1100/800/1100
	Spindle center to table	mm	50-850
<b>Spindle</b>	Spindle end to table center	mm	125-1225
	Spindle type		BT50-190
	Main servo motor	kW	18.5/15
	Spindle speed	rpm	6000
<b>Feed &amp; Magazine</b>	X/Y/Z axis rapid traverse	m/min	24/24/24
	ATC capacity/type	No./type	40, *30/Chain type
	Max.weight of tool	kg	25
	Max.dia. of tool	mm	125/225
<b>Dimension &amp; weight</b>	Max. length of tool	mm	600
	Power capacity	kVA	65
	Dimension	mm	4800x3500x3500
	Weight(about)	kg	16000

Note: "\*" means optional. APC: Auto Pallet Changer.





# TWIN-SPINDLE MACHINING CENTER

## 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.

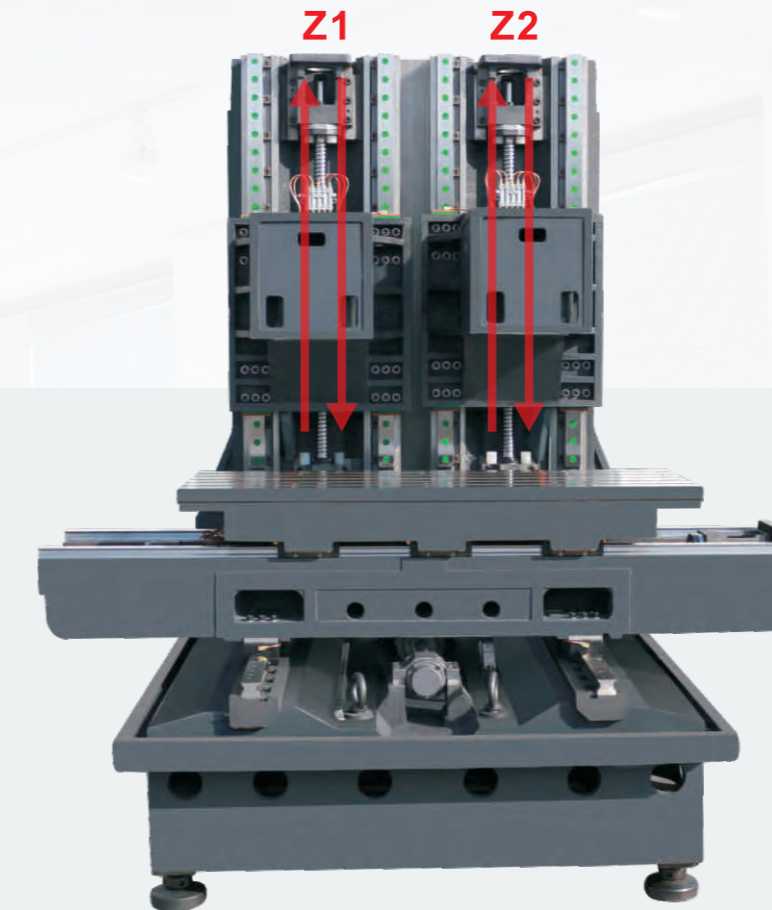
### + Less electricity consumption, Eco-friendly.

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.



## 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.



## 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.





# TWIN-SPINDLE VMC

## 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
- Spindle Center Coolant
- Chip Conveyor
- Spindle Oil Coolant
- Automatic Tool Setter
- Automatic Workpiece Measurement
- Water Gun



POWER WZ8 VIDEO



POWER W6 VIDEO

## Specifications

	Unit	Power W6	Power W8	Power WZ8
<b>Table</b>	Table size	mm	1200x450	1300x520
	T slot(width*no.s.*distance)	mm	18x3x130	18x5x90
	Max.load	kg	700	800
<b>Travel</b>	X/Y/Z1/Z2 Travel	mm	450/400/550	650/500/550
	Spindle nose to table	mm	130-680	150-700
	Spindle center to column	mm	450	580
	Distance between two spindle centers	mm	400	550
<b>Spindle(1, 2)</b>	Guideway type	mm	LM (Roller)	LM (Roller)
	Spindle type		BT40-150	BT40-150
	Main servo motor	kW	11/7.5, *15/11	11/7.5, *15/11
	Spindle speed	rpm	8000, *12000	8000, *12000
<b>Feed &amp; Magazine</b>	X/Y/Z axis rapid traverse	m/min	30/30/30	30/30/30
	ATC capacity/type	Nos./type	2X 24/Disk Arm	2x24/Disk Arm
	Max.weight of tool	kg	8	8
<b>Dimension &amp; Weight</b>	Power capacity	kVA	33	46
	Dimension	mm	2200x2400x2500	3300x2200x2450
	Weight(about)	kg	5500	7500

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

# 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	600X400
Max. load of table	kg	250
T slot(width x nos.x distance)	mm	14X3X100
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
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	1900X2100X2500
Weight(about)	kg	2600

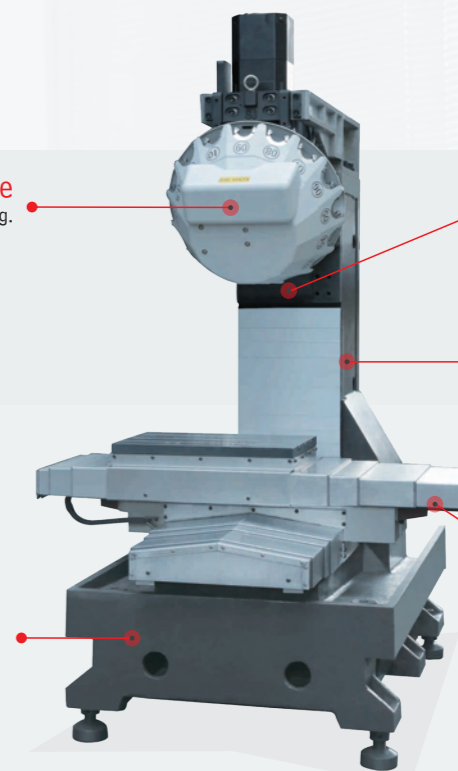
**ATC Tool Magazine**  
Gripper arm type magazine, fast tool changing.

**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.





# STAR FAMILY TURNING CENTERS

## STAR STL/ SL/ TN/ TS/ DT SERIES

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

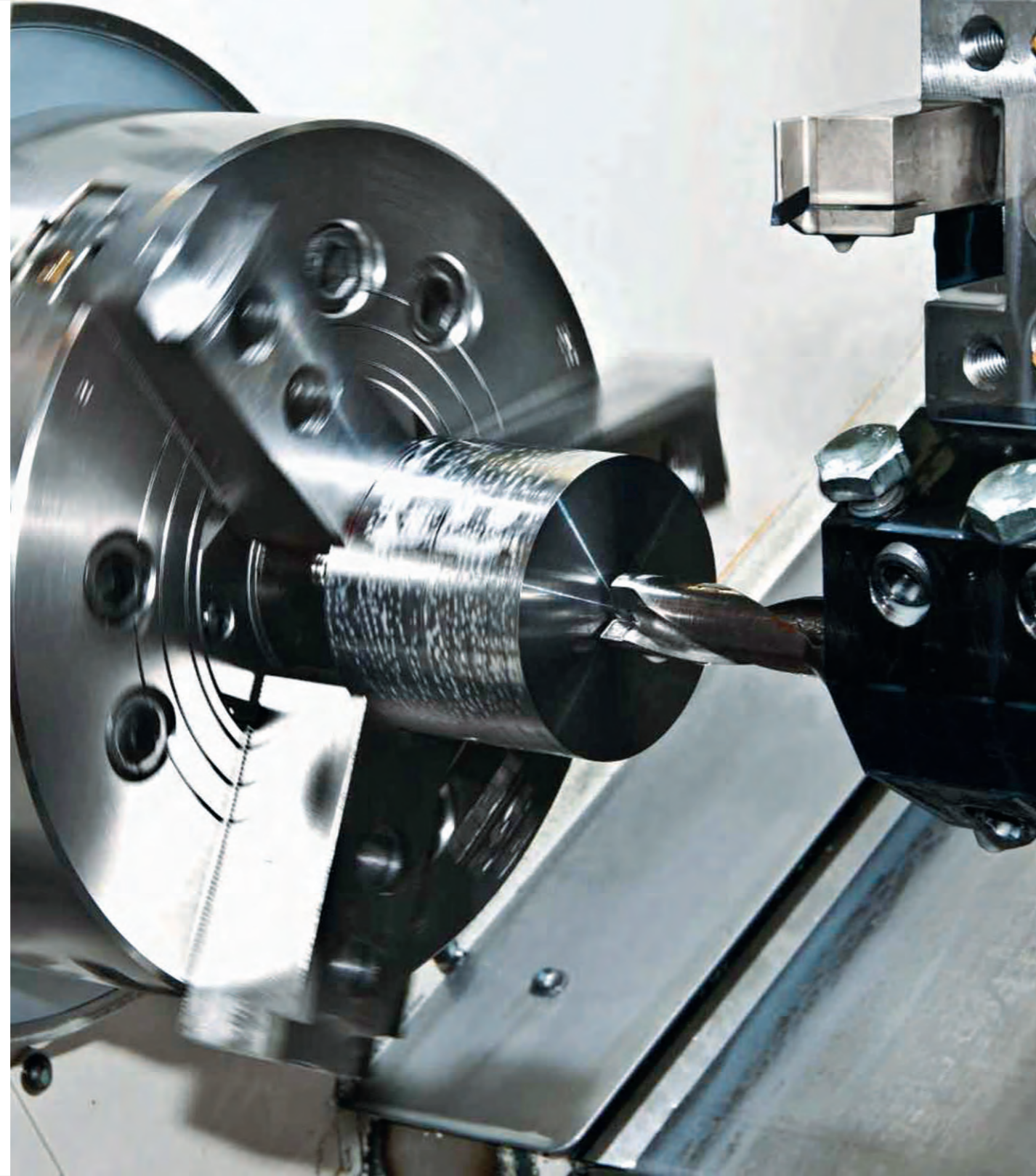
The SL Series lathes are typically equipped with a high-speed bi-directional indexing turret and a hydraulic chuck.

The STL series adds a tailstock to the lathe features.

The TN series are equipped 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

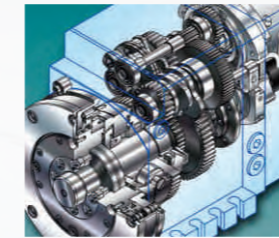
## Heavy-Duty Cast Iron Base – PLUS, Quality Components

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



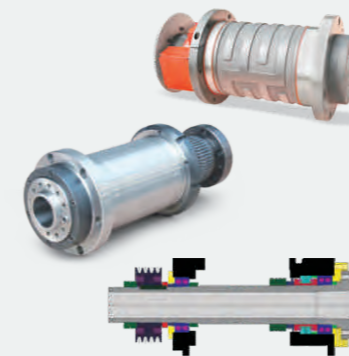
### Turret Features

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.



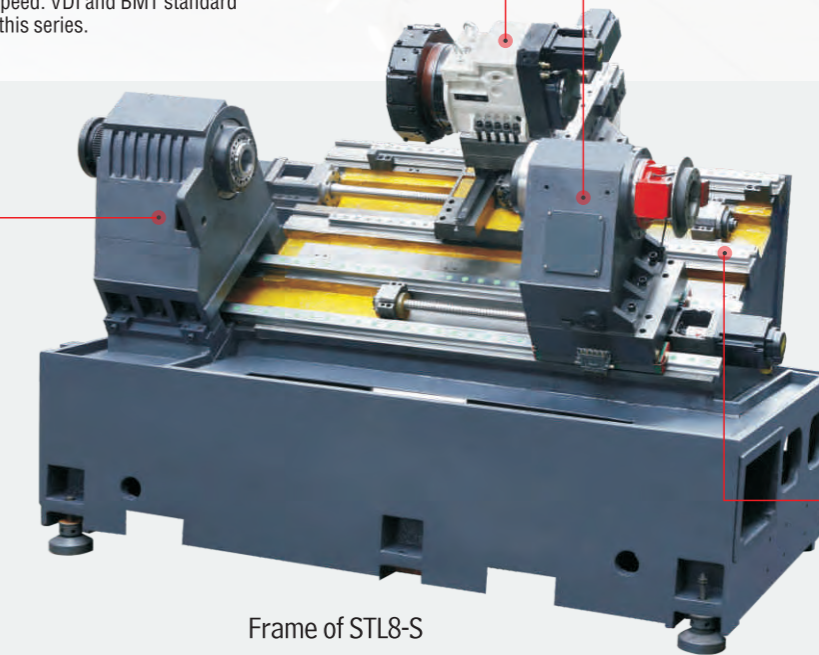
### Sub-spindle & Automatic Tailstock

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



### 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.

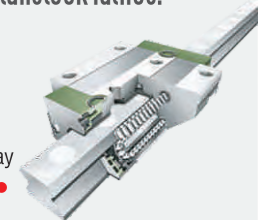


Frame of STL8-S

**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





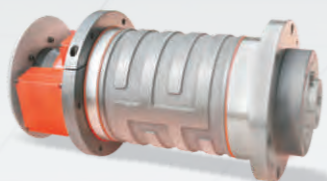
# SPINDLE & TURRET FEATURES

## 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.

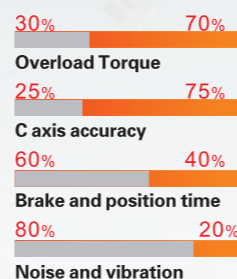
### Built-in Motor Spindle



### 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.

Legend:   
 Belt driven Spindle   
 Direct Driven Spindle



### Direct Driven Spindle

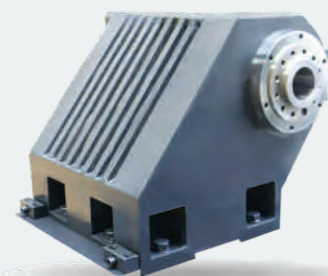
Electrical spindle (Built-in motor) offers higher torque, better overload capability and high speed acceleration which shortens cycle time and increases productivity better than a traditional belt driven spindle. The machine is running with less vibration and less noise, together with better accuracy.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

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

### Cartridge Type Spindle

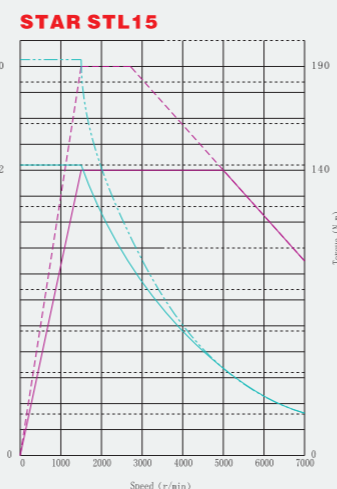
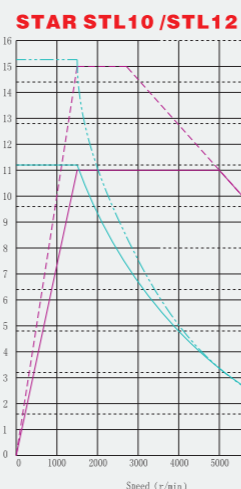
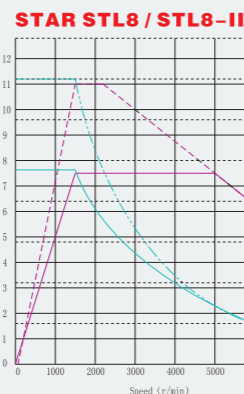
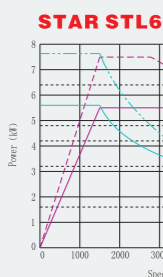


### Direct Mount Spindle



## SPINDLE MOTOR TORQUE DIAGRAM

Max. Torque   
 Continuous Torque of Drive   
 Max. Power   
 Continuous Power of Drive



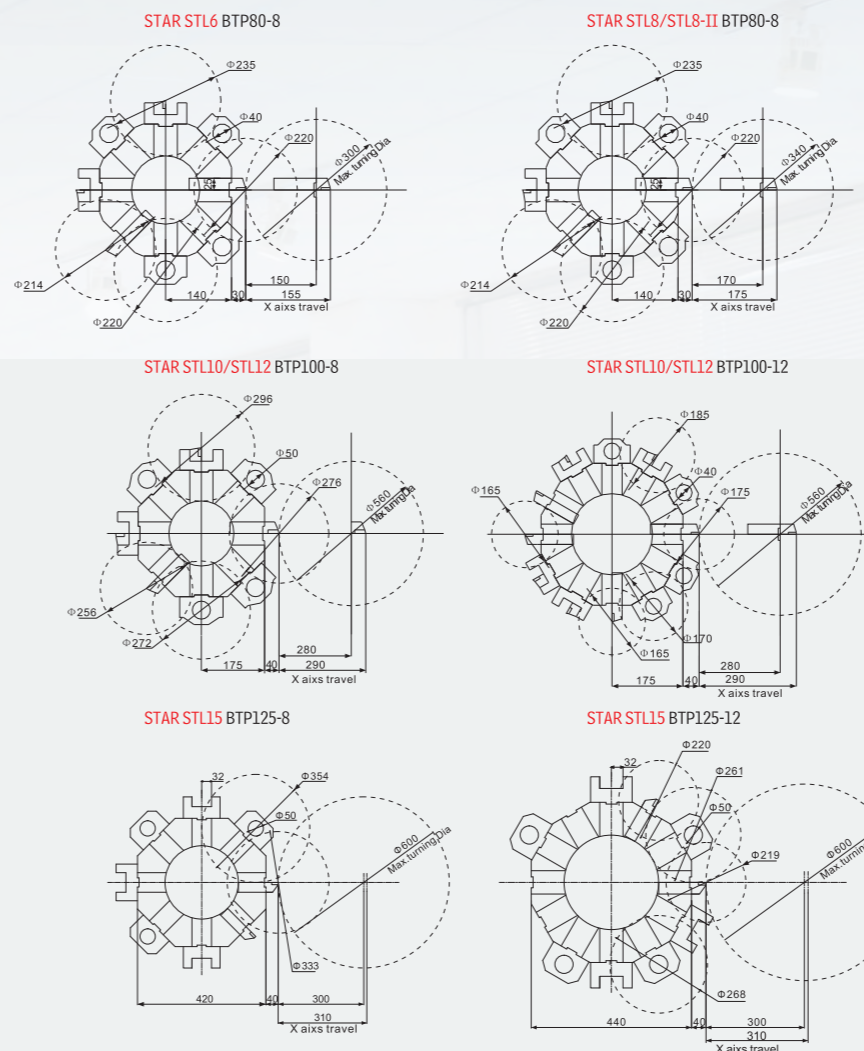
Note: The real spindle output torque are converted by actual belt pulley ratio, please contact sales representative to get more technical details.

# VARIOUS HIGH CLASS TURRET

## Increase efficiency and reliability

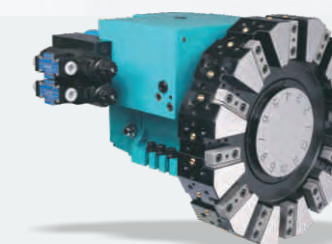
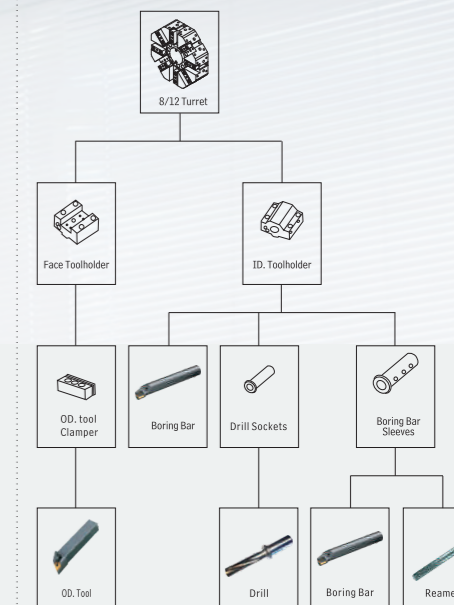
8-station turret is standard on 2 axes cnc lathes. 12-station driven tool turret is standard for 3 and 4 axes turning centers. High quality, high speed bi-directional indexing turret provides optimal tool change efficiency and speed.

## Tool Interference Diagram



## Tooling System

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



Hydraulic



Servo

	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

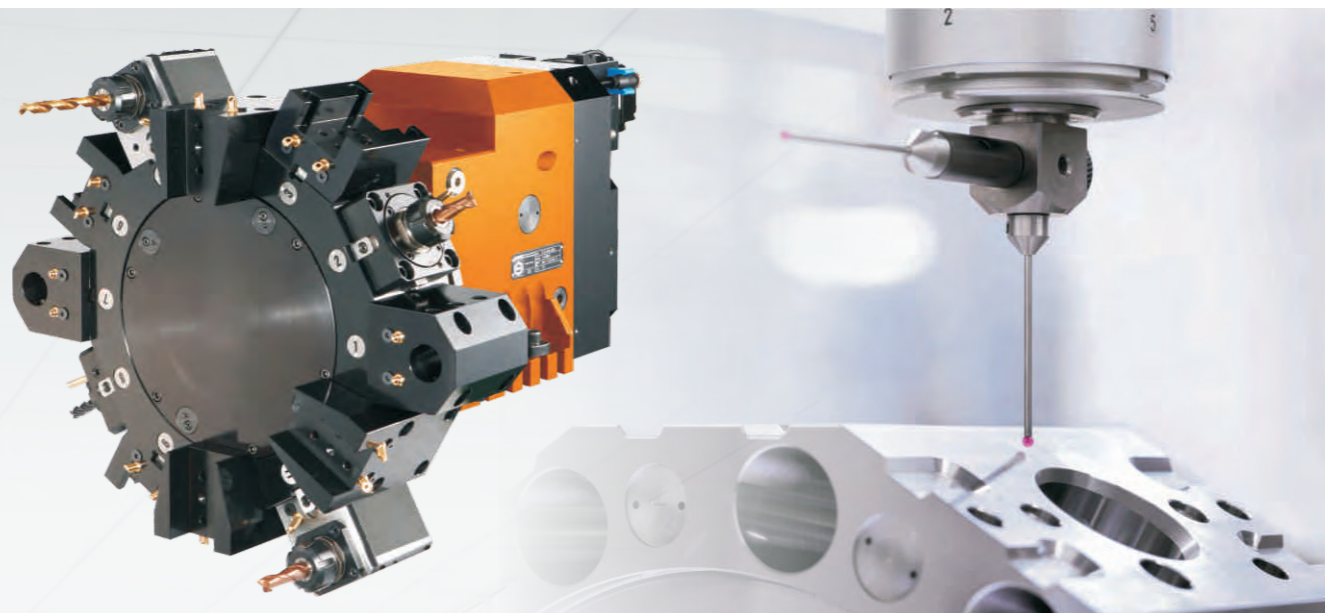
## Powerful Driven Tool Turret

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.



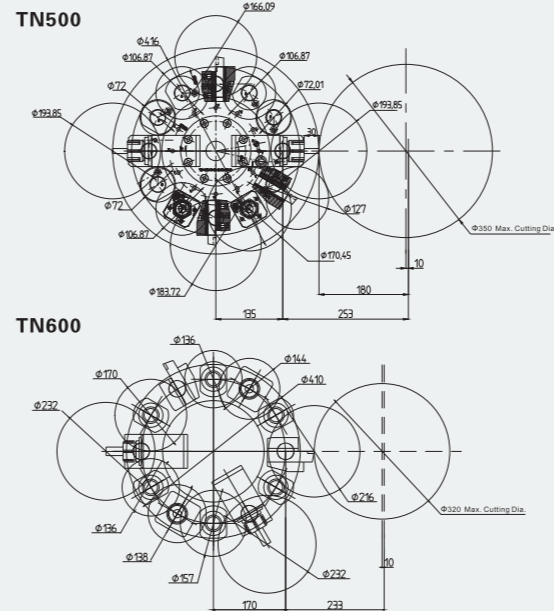
# BMT AND VDI TECHNOLOGY

## VDI Technology

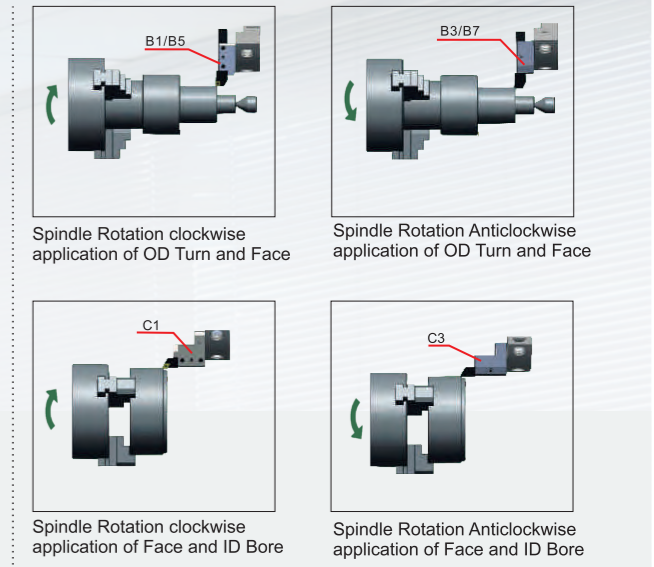
The VDI system is a quick change clamping system for each tool holder within the tool disc. Tool changes can therefore be performed within seconds, rather than minutes as with the traditional Block Bolt on system.



## Tool Interference Diagram

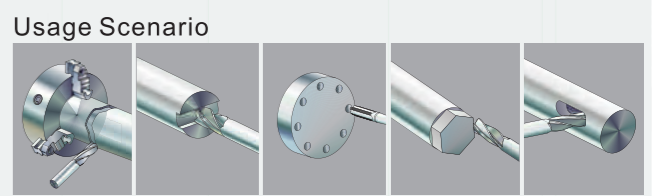


VDI30/12-STATION	VDI40/12-STATION
<ul style="list-style-type: none"> <li>★ [ATH-30ER25-80] ER25</li> <li>★ [ATH-40ER32-80] ER32</li> <li>* Compact size is option</li> </ul>	<ul style="list-style-type: none"> <li>★ [ATH-30ER25-80] ER25</li> <li>★ [ATH-40ER32-80] ER32</li> <li>* Compact size is option</li> </ul>
<ul style="list-style-type: none"> <li>★ [RTH-30ER25-80] ER25</li> <li>★ [RTH-40ER32-80] ER32</li> <li>* Compact size is option</li> </ul>	<ul style="list-style-type: none"> <li>★ [B1 (30 20 40)] [B5 (30 20 40)] □20</li> <li>★ [B1 (40 25 44)] [B5 (40 25 44)] □25</li> <li>*B5 is extra length design</li> <li>Application of OD turn and face</li> </ul>
<ul style="list-style-type: none"> <li>★ [C1 (30 20)] □20</li> <li>★ [C1 (40 25)] □25</li> </ul>	<ul style="list-style-type: none"> <li>★ [C1 (30 20)] □20</li> <li>★ [C1 (40 25)] □25</li> </ul>
<ul style="list-style-type: none"> <li>★ [Z2 30]</li> <li>★ [Z2 40]</li> </ul>	<ul style="list-style-type: none"> <li>★ [Z2 30]</li> <li>★ [Z2 40]</li> </ul>
<ul style="list-style-type: none"> <li>★ [E2 (30x32)] Φ32</li> <li>★ [E2 (40x32)] Φ32</li> <li>*Other sizes option</li> </ul>	<ul style="list-style-type: none"> <li>★ [E2 (30x32)] Φ32</li> <li>★ [E2 (40x32)] Φ32</li> <li>*Other sizes option</li> </ul>
<ul style="list-style-type: none"> <li>☆ [E1 (30x32)] Φ32</li> <li>☆ [E1 (40x32)] Φ32</li> <li>*Other sizes option</li> </ul>	<ul style="list-style-type: none"> <li>☆ [E1 (30x32)] Φ32</li> <li>☆ [E1 (40x32)] Φ32</li> <li>*Other sizes option</li> </ul>
<ul style="list-style-type: none"> <li>☆ [E4 (30x25)] ER25 ☆[E4 (40x25)] ER25</li> <li>☆ [E4 (30x32)] ER32 ☆[E4 (40x32)] ER32</li> <li>☆ [E4 (30x40)] ER40 ☆[E4 (40x40)] ER40</li> </ul>	<ul style="list-style-type: none"> <li>☆ [E4 (30x25)] ER25 ☆[E4 (40x25)] ER25</li> <li>☆ [E4 (30x32)] ER32 ☆[E4 (40x32)] ER32</li> <li>☆ [E4 (30x40)] ER40 ☆[E4 (40x40)] ER40</li> </ul>
<ul style="list-style-type: none"> <li>☆ [B3 (30 20 40)] [B7 (30 20 40)] □20</li> <li>☆ [B3 (40 25 40)] [B7 (40 25 40)] □25</li> <li>*B7 is extra length design</li> <li>Application of OD turn and face</li> </ul>	<ul style="list-style-type: none"> <li>☆ [B3 (30 20 40)] [B7 (30 20 40)] □20</li> <li>☆ [B3 (40 25 40)] [B7 (40 25 40)] □25</li> <li>*B7 is extra length design</li> <li>Application of OD turn and face</li> </ul>
<ul style="list-style-type: none"> <li>☆ [C3 (30 20)] □20</li> <li>☆ [C3 (40 25)] □25</li> </ul>	<ul style="list-style-type: none"> <li>☆ [C3 (30 20)] □20</li> <li>☆ [C3 (40 25)] □25</li> </ul>



**Note:**

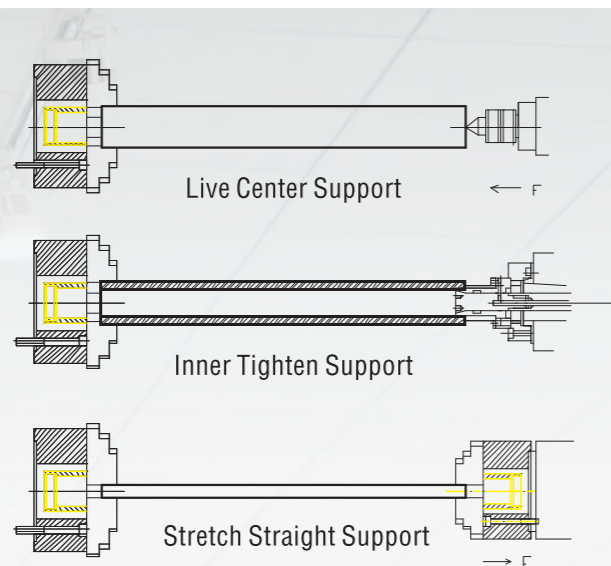
- I .The codes in [ e.g. C1 (30 20) ] is purchasing codes. **Written in Blue color is for VDI30, written in red color is for VDI40.**
- II .★ mark means that the tool holders often used for general workpiece, we recommend customer to buy together with machine.
- III .☆ mark means that the tool holders 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.





## VARIOUS TAILSTOCK FEATURES

Typical Application Diagram of Spindle Type & Servo Programmable Tailstock



## VARIOUS SUPERB ACCESSORIES

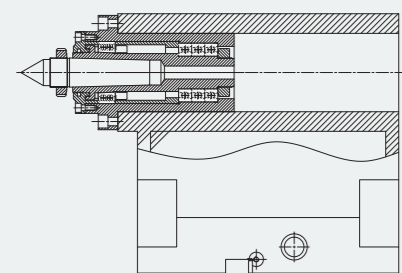


2/3/4 Jaws Chuck

DIN Standard Collet

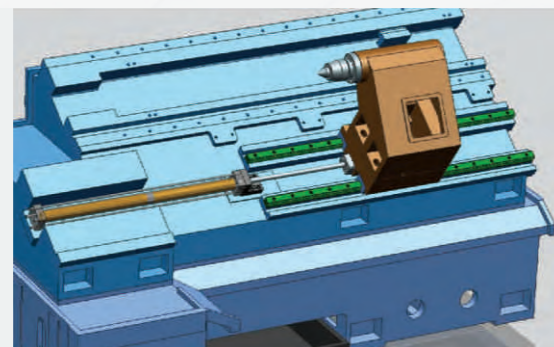
Hollow Hydraulic Cylinder

Solid Hydraulic Cylinder



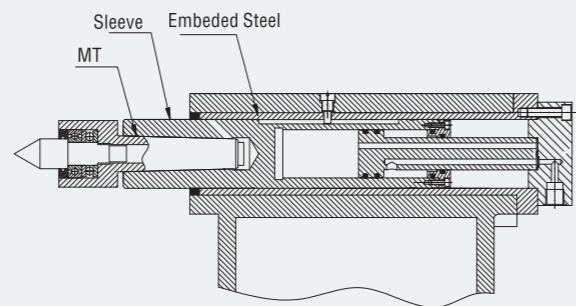
### Small Spindle Type Tailstock

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



### 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.

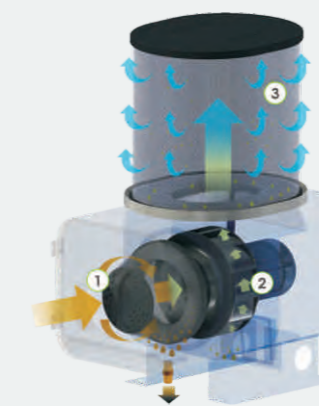


### Embedded Steel Tailstock

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



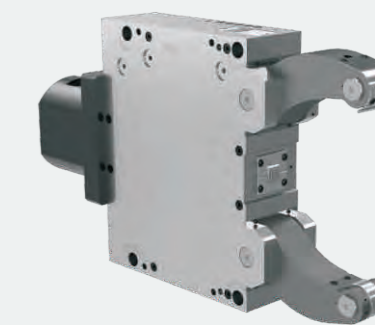
Bar Feeder



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
- Steady Rest



## Specifications

Unit	STL8	STL8-II	STL8 Plus	STL8-750	STL8-1100
<b>Capacity</b>					
Chuck size	inch 8", *10"	8", *10"	8", *10"	8", *10"	8", *10"
Max. swing dia. over bed	mm Φ450	Φ450	Φ550	Φ600	Φ600
Max. length of workpiece	mm 450	500	400,*550	750	1100,*1700
Max. swing dia. over slide	mm Φ220	Φ220	Φ320	Φ360	Φ360
<b>Spindle</b>					
Spindle bore	mm Φ62	*Φ75	Φ62	*Φ75	Φ62
Max. dia. of through-hole	mm Φ52	*Φ65	Φ52	*Φ65	Φ52
Spindle nose	type A2-6	*A2-8	A2-6	*A2-8	A2-6
Spindle speed	rpm 4000	*1600	4000	*1600	4000
		*2000	*2000	*3500	*2000
Main motor power	kW 7.5/11, * 11/15	7.5/11, *11/15	7.5/11, *11/15	7.5/11, *11/15	7.5/11, *11/15
<b>Axis</b>					
X axis travel	mm 170	170	260	260	260
Z axis travel	mm 450	500	400,*550	750	1100,*1700
X/Z rapid traverse	m/min 20/20	20/20	20/20	20/20	20/20
<b>Turret</b>					
Center height	mm 80	80	100	100	100
No. of tool stations	nos 8, *12	8, *12	8, *12	8, *12	8, *12
Tool shank size	mm 25x25, *20x20	25x25, *20x20	25x25	25x25	25x25
<b>Tailstock</b>					
Type of tailstock	Hydraulic, *SST, *HPT	HPT, *Hydraulic, *SST	Hydraulic, *HPT, *SST	SST, *SPT	SST, *SPT
Taper of tailstock quill	MT4	MT4	MT4	MT3	MT3
Travel of tailstock quill	mm 90	0	90	0	0
Travel of tailstock	mm 100-450	100-500	100-400,*550	100-750	100-1100,*1500
<b>Structure</b>					
Slant bed degree	35°	35°	35°	35°	35°
Guideway type	LM	LM	LM	LM	LM
<b>Others</b>					
Power capacity	kVA 15	15	16	16	18
Overall dimension (LxWxH)	mm 2650x2000x2050	2650x2000x2050	2650x2000x2050	3080x2000x2350	3380x2000x2350
Weight (about)	kg 3700	3800	4500	5200	5600

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. "STL8-1700" is special purpose design for slim shaft workpiece standard with programmable steady rest and servo programmable tailstock.



## Specifications

Unit	STL6	STL10	STL12	STL12-2000	STL15	STL18
<b>Capacity</b>						
Chuck size	inch 6", *8"	10"	12", *15"	12", *10", *15"	15", *12"	18", *15"
Max. swing dia. over bed	mm Φ400	Φ500	Φ550	650	Φ650	Φ800
Max. length of workpiece	mm 300,*380	750,*900,*1400(C2C *1000,*1500)	750,*900,*1400(C2C *1000,*1500)	1820 (C2C 2000)	1320,*1820 (C2C 1500,*2000)	750
Max. swing dia. over slide	mm Φ220	Φ300	Φ300	Φ350	Φ500	Φ550
<b>Spindle</b>						
Spindle bore	mm Φ55	*Φ62	Φ86	*Φ75	Φ105	*Φ120
Max. dia. of through-hole	mm Φ46	*Φ52	Φ75	*Φ65	Φ91	*Φ110
Spindle nose	type A2-5	*A2-6	A2-8	A2-8	A2-11	*A2-11
Spindle speed	rpm 4500	*4000	3000	*3500	2000	*1000
					2000	*1000
Main motor power	kW 7.5/11	11/15, *15/18.5	11/15, *15/18.5	11/15,*15/18.5	15/18.5	15/18.5, *18.5/22
<b>Axis</b>						
X axis travel	mm 150	280	280	280	300	380
Z axis travel	mm 300,*380	750,*1000,*1500	750,*1000,*1500	2000	1500,*2000	750
X/Z rapid traverse	m/min 20/20	15/20	15/20	15/20	15/20	15/20
<b>Turret</b>						
Center height	mm 80	100	100	100	125	125
No. of tool stations	nos 8, *12	8, *12	8, *12	8, *12	8, *12	8, *12
Tool shank size	mm 25x25, *20x20	25x25	25x25	25x25	32x32	32x32
<b>Tailstock</b>						
Type of tailstock	Hydraulic, *HPT	Hydraulic, *HPT, *SST	Hydraulic, *HPT, *SST	SST, *SPT	SST-HPT	SST
Taper of tailstock quill	MT4	MT5	MT5	MT4	MT5	MT6
Travel of tailstock quill	mm 90	150	150	0	0	0
Travel of tailstock	mm 80-300	100-750/*1000, 1500	100-750/*1000, *1500	100-1800	100-1320	100-750
<b>Structure</b>						
Slant bed degree	35°, *45°	35°	35°	35°	45°	45°
Guideway type	LM	LM	LM	LM	LM	LM
<b>Others</b>						
Power capacity	kVA 14	18	20	20	25	32
Overall dimension (LxWxH)	mm 2450x1530x1740	3350x2000x2350	3350x2000x2350	5150x2070x2010	4550x2270x2550	3350x2200x2550
Weight (about)	kg 2900	5850	5850	8000	10500	6800

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

### Standard Features

- Hydraulic 3-jaw Chuck
- 8-station Turret
- Automatic Lubrication System
- Automatic Coolant System
- 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
- Chip Conveyor
- Tool Setter
- Bar Feeder
- Oil Mist Collector
- Air Conditioner Of Electric Cabinet
- Extra Gang Tool Holder (SL6, SL10E)



## 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
- Adjustable “Ergonomic” Operator Control Panel
- Servo Spindle Motor – High Speed with Low Speed Constant Torque
- Handheld Electronic Hand Wheel
- Highly Efficient Turret – Indexing, Bi-Directional, Non-Lifting
- Schneider Superior Quality Electrical Components
- Cylindrical Roller LM and Cylindrical Roller Spindle Bearings are standard for big models and also available for small model as an option to increase rigidity
- Star SL6 and SL10E are designed with extra gang static or live tool holder options under the turret.



## Specifications

	Unit	SL6	SL8	SL10E	SL10	SL12		
<b>Capacity</b>	Chuck size	inch	6", *8", *10"	8"	8", *10"	12", *15"		
	Max. swing dia. over bed	mm	Φ400	Φ450	Φ500	Φ550		
	Max. length of workpiece	mm	250, *350	320	300, *400	450, *600		
	Max. swing dia. over slide	mm	Φ210	Φ220	Φ210	Φ300		
<b>Spindle</b>	Spindle bore	mm	Φ55 *Φ62 *Φ81	Φ62	Φ62 *Φ75	Φ105 *Φ120		
	Max. dia. of through-hole	mm	Φ46 *Φ52 *Φ70	Φ52	Φ52 *Φ65	Φ91 *Φ110		
	Spindle nose	type	A2-5 *A2-6 *A2-8	A2-6	A2-6 *A2-8	A2-8 *A2-8		
	Spindle speed	rpm	4500 *2000 *1600	4000	4000 *3500	3000 *3500		
	kW	*5000 *4000 *2500	*2000	*2000		2000 *1000		
			Main motor power	5.5/7.5	7.5/11	7.5/11	11/15	11/15
<b>Axis</b>	X axis travel	mm	250	250	280	280		
	Z axis travel	mm	250, *350	320	300, *400	450, *600		
	X/Z rapid traverse	m/min	20/25	20/20	20/20	20/20		
<b>Turret</b>	No. of tool stations	nos	8, *12	8, *12	8, *12	8, *12		
	Tool shank size	mm	20x20, *25X25	25x25, *20x20	25x25, *20x20	25x25		
<b>Structure</b>	Slant bed degree		35°	45°	60°	35°		
	Guideway type		LM	LM	LM	LM		
<b>Others</b>	Power capacity	kVA	13	15	15	18		
	Overall dimension (LxWxH)	mm	2520x2050x1960	2290x1600x1810	2520x1750x2050	2800x1790x2130		
	Weight (about)	kg	2500	3300	4000	4800		

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



# STAR TN & TS SERIES

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

Turning Center  
Turning Center For Short Parts

### 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
- Different CNC Systems
- Bar Feeder
- Steady Rest
- Static or Live tools under Turret (TS400, TS500)

TS Feature a Compact Design  
– Without Tailstock

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



TN500



## Specifications

	Unit	TN500	TN500-650	TN600	TN700	TS400	TS500	TS600
<b>Capacity</b>	Chuck size	inch	8	8	10,*12	15	6	10
	Max. length of workpiece	mm	370,*500	650,*1000,*1600	700,*850,*1350	1300	320	400
	Max. swing dia. over bed	mm	Φ500	Φ600	Φ600	Φ650	Φ400	Φ600
	Max. swing dia. over slide	mm	Φ280	Φ460	Φ350	Φ500	Φ200	Φ400
<b>Spindle</b>	Spindle bore	mm	Φ66	Φ66	Φ86	Φ105	Φ55	Φ86
	Max. dia. of through-hole	mm	Φ52	Φ52	Φ75	Φ91	Φ46	Φ75
	Spindle nose	-	A2-6	A2-6	A2-8	A2-8	A2-5	A2-6
	Max. spindle speed	rpm	4000	4000	3000	1800	5000	4000
	Main motor power	kW	22/30	22/30	37/45	Belt: 22/18.5	11/15	22/30
<b>Axis</b>	X axis travel	mm	260	230	280	280	280	280
	Z axis travel	mm	400,*550	650,*1000	750,*1000,*1500	1300	320	400
	X/Z axis rapid traverse	m/min	20/20	20/20	15/20	15/20	20/20	20/20
<b>Turret</b>	No. of tool stations	pcs	12	12	12	12	12	12
	Tool shank size	-	VDI30,*BMT45	BMT45	BMT55,*VDI40	BMT65	VDI30,*BMT40	VDI30,*BMT45
	Max. speed of driving tool	rpm	4000,*6000	4000,*6000	4000,*5000	4000,*5000	4000,*6000	4000,*6000
<b>Tailstock</b>	Type of tailstock	-	Hydraulic,*HPT	SST,*SPT	Hydraulic,*SPT,*HPT	SST-LM,*SPT	-	-
	Taper of tailstock quill	-	MT4	MT3	MT5	MT5	-	-
	Travel of tailstock	mm	100-500	100-650,*1000	100-750,*1000	100-1300	-	-
<b>Others</b>	Power capacity	kVA	28	28	45	45	25	40
	Overall dimension(L×W×H)	mm	2500×1700×1850	3100×1900×2300	3200×1920×2130	4550×2270×2550	2500×1600×1900	2600×1750×2050
	Weight(about)	kg	4500	5200	5900	10500	2500	4800

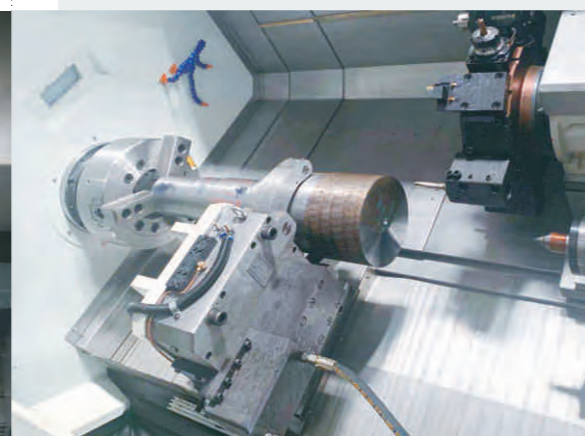
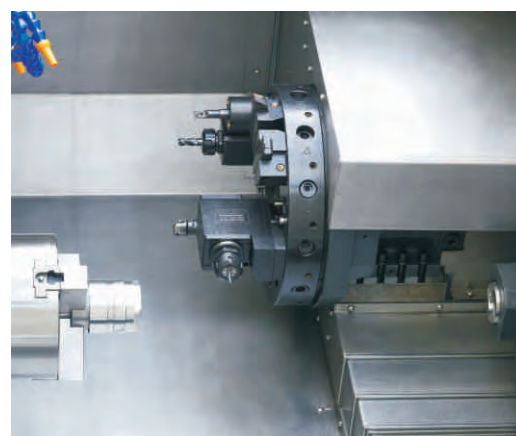
Note: "\*" means optional. "LM" means linear motion guideway. Tailstock: "Hydraulic" means automatic hydraulic driven tailstock sleeve. "HPT" means linear motion guide way, automatic hydraulic driven body move tailstock. "SST" means small spindle hydraulic tailstock. "SPT" means servo programmable tailstock.

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

The models can satisfy a wide range of users from beginners of shop production to group corporation with experienced technicians.





# STAR DT SERIES

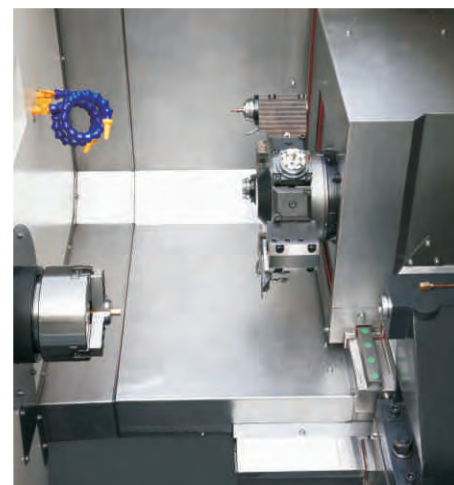
## Dual Processes Turning Center With Y Axis

### 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
- Bar Feeder



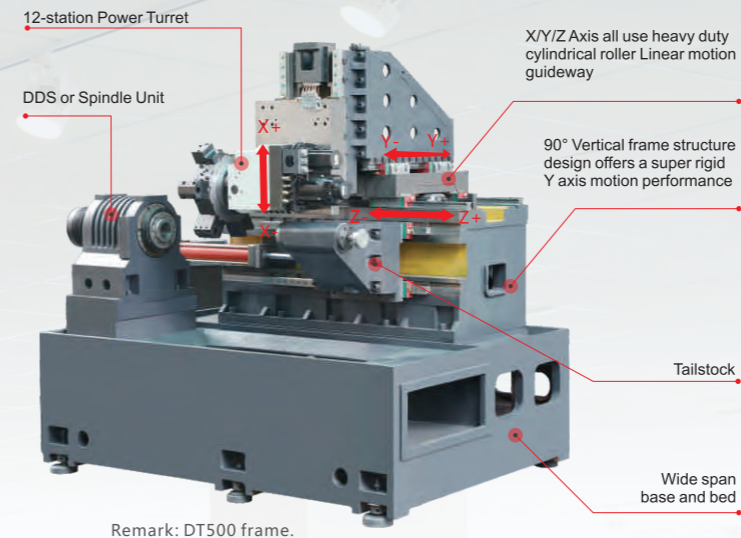
## FULL RANGE OF X.Z.C.Y. 4-AXIS TURNING CENTERS



### 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.

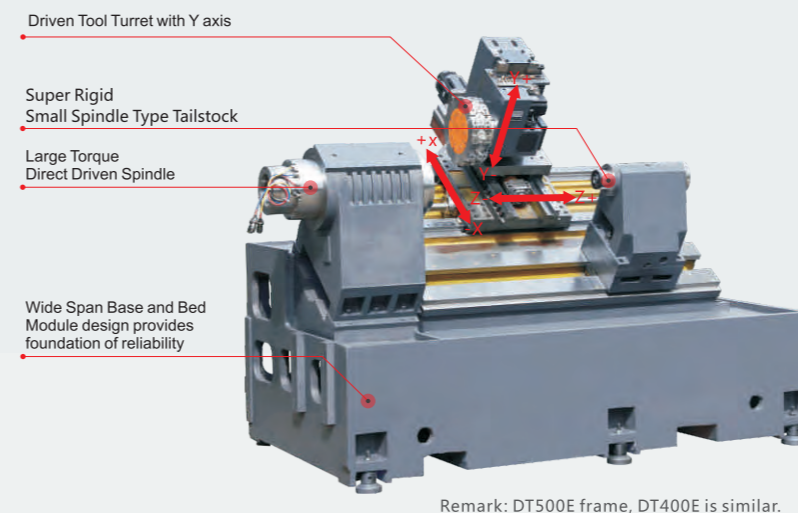
Thanks for mass production, Z-MaT work hard to make every customer own an excellent turning center at an affordable price. You don't need 1 CNC lathe and 1 milling/drilling/tapping machine any more. In most instances, one unit of DT series turning center solves all your problems in one setup.



### Specifications

	Unit	DT400E	DT500E	DT500
Capacity	Max. turning diameter	mm 160	320	280
	Max. length of workpiece	mm 320	650, *1000, *1500	400
	Max. swing dia. over bed	mm 500	600	550
Spindle	Max. swing dia. over slide	mm 350	430	250
	Hydraulic chuck	Inch 6	8	8
	Dia. of spindle bore	mm Φ55	Φ66	Φ66
	Max. dia. of through-hole	mm Φ46	Φ52	Φ52
Structure	Spindle nose	A2-5	A2-6	A2-6
	Max. spindle speed	rpm 5000	4000	4000
	Main motor	kW 11/15	22/30	22/30
	Slant bed degree	degree 30°	35°	90°
Axis	Guideway type	mm LM	LM	LM
	X axis travel	mm 230	250	160
	Z axis travel	mm 320	650, *1000, *1500	400
	Y axis travel	mm 70 (±35)	100 (±50), *140 (±70)	100 (±50)
Turret	X/Z/Y axis rapid traverse	m/min 20/20/12	20/20/12	20/20/20
	Type of turret	BMT40	BMT45,*BMT55	BMT45
	No. of tool	12	12	12
	OD tool shank size	mm 16×16	20×20 *25×25	20×20
Tailstock	Boring tool shank size	mm Ø25	Ø32	Ø32
	Max. speed of live tooling	rpm 4000, *6000	4000, *6000	4000, *6000
	Type of tailstock	*Hydraulic	SPT, *SST	HPT
Others	Taper of tailstock quill	*MT4	MT3(spindle unit type)	MT4
	Travel of tailstock	mm *320	100-650	400
	Weight (about)	kg 4000	4800	5800
	Overall dimension (L×W×H)	mm 2730×2050×2280	3000×1780×2050	2450×1850×2200

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.





# TURN-MILL CTX 750

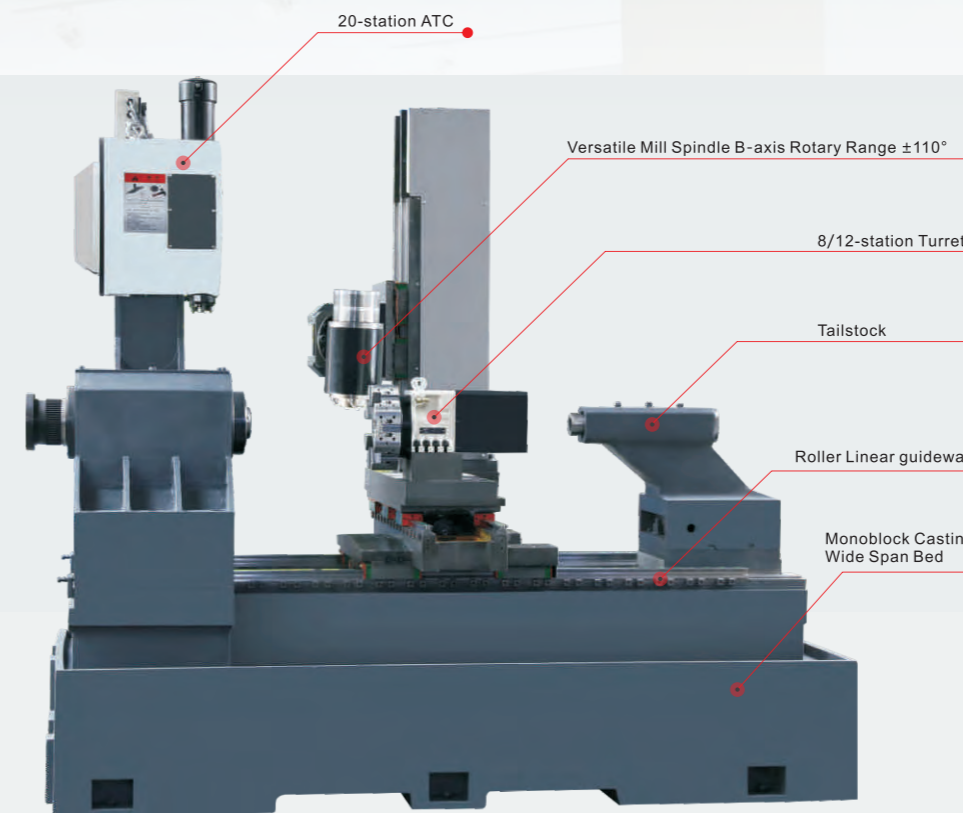
X.Y.Z.B.C. 5-AXIS INTEGRATED TURN-MILL CENTER

Complete Machining  
Turning Center  
X Swing Milling Spindle B-axis



## Machine Characteristics

Super rigid bed width upto 650mm, combined with a versatile BT30 mill spindle, 20-station ATC and 8-station turret, CTX is designed to provide maximum value, an option for increasing processing flexibility while offering a cost-effective alternative for those seeking accurate turning and angular milling capability. In addition to automatic tool changing, and convenient operation – the CTX fills the demand for a robust, multi-tasking machine to deliver on a wide variety of production requirements.



## Specifications

	Unit	CTX750	
<b>Capacity</b>	Max. swing dia. over bed	mm	Φ700
	Max. swing dia. over slide	mm	Φ350
	Max. turning diameter	mm	Φ250
	Max. length of workpiece	mm	750
<b>Axis</b>	X axis travel	mm	300
	Z axis travel	mm	600
	Y axis travel	mm	900
	X axis rapid traverse	mm/min	15000
	Y axis rapid traverse	mm/min	10000
	Z axis rapid traverse	mm/min	15000
<b>Mill Spindle</b>	B axis rotation range	°	±110°
	Mill spindle speed	rpm	8000
	Mill spindle torque	Nm	18
	B axis rotating speed	s	0-90° 1s
	Mill spindle type		BT30
	Mill ATC station	nos	20
	<b>Spindle</b>	Main spindle stype	
Dia. of spindle bore		mm	Φ62, *Φ75
Dia. of bar capacity		mm	Φ52, *Φ65
Max. spindle speed		rpm	4000, *3500
Main motor		kW	7.5/11
Hydraulic chuck size		inch	8
<b>Turret &amp; Tailstock</b>	Stations of turret	nos	8, *12
	Taper of tailstock quill	type	MT5
	Travel of tailstock quill	mm	100
<b>Others</b>	Overall dimension (L×W×H)	mm	3350x1950x2480
	Weight (about)	kg	5300

Note: "\*" means optional



# DUAL-USE TECHNOLOGY SERIES TF01

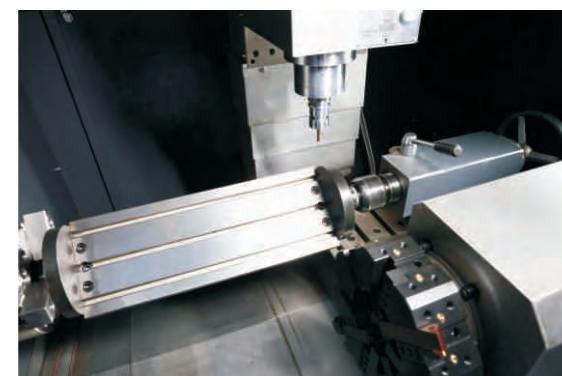
## Turning Center Transform into VMC Like “TransFormer”

### 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

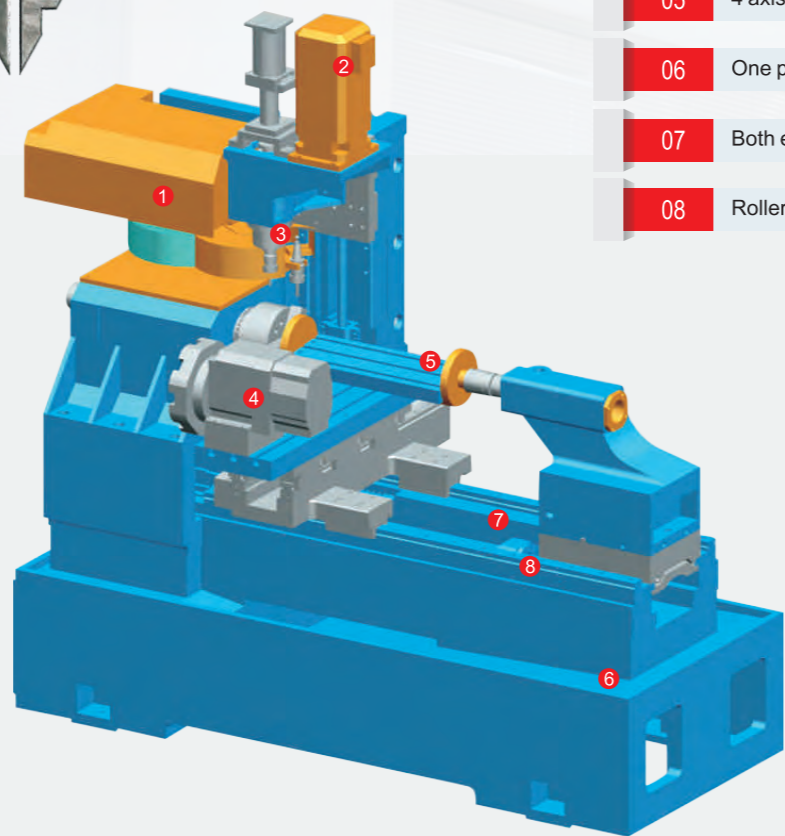
### Optional Features

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



## Transformer Turn-mill

- Ideal machine created by Z-MaT cutting-edge technology serving for mass production complex turned workpieces with secondary milling tapping or drilling processes.
- Creative design for a wide range of different workpieces.
- Toolroom CNC, extended capability and reduced investment and workshop space at reduction.



- 01 Automatic tool change magazine
- 02 Milling spindle motor
- 03 BT30 high rigid spindle
- 04 8/12-station turret in the front
- 05 4 axis rotary table function
- 06 One piece monoblock casting
- 07 Both ends anchored ballscrew
- 08 Roller type 45mm linear guideway

## CNC Turning Center With Y Axis VMC With 4th Axis Integrated In One

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



## 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	φ 62mm	Spindle Nose to Table	350mm
Max. Diam. of Through Hole	φ 52mm	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
Turning Turret Stations	8	Turning 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(LxWxH)			3000/*3300/*3800/*4300X1750X2400mm
Weight(About)			3500/*4200/*5200/*6200kg

Note: “\*” means optional. “” means equal to.



# 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

# GT260V 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.

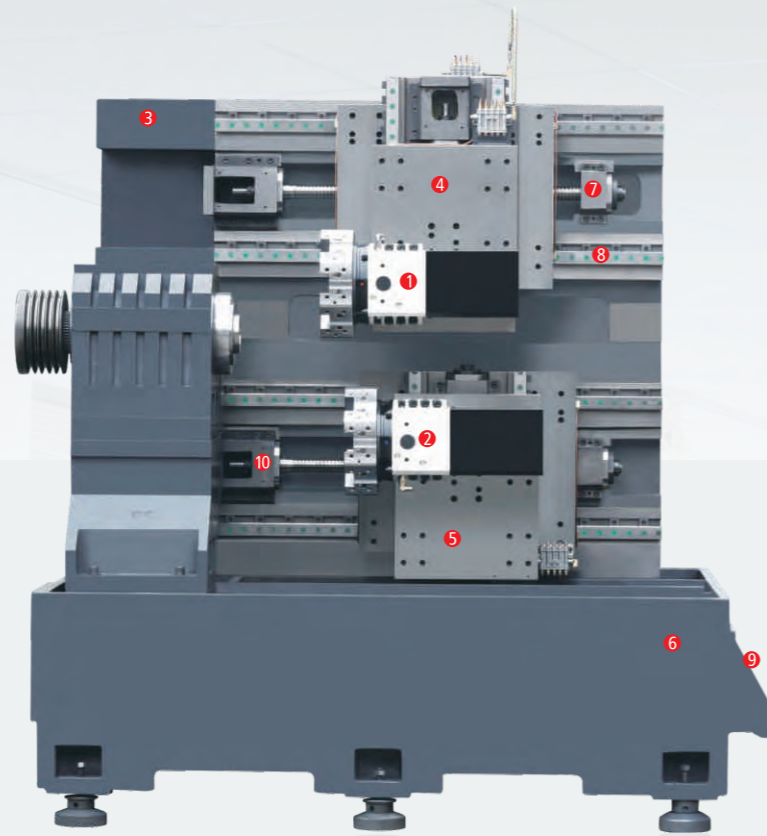
The automatic lubrication pump is located in an enclosure near the operator. It has a clear glass door for easy observation. Enclosing the pump keeps away chips and other contaminants. Hydraulic Dashboards are in the left and front side, chuck, turrets and general hydraulic pressure are all observed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



# GT260V DOUBLE TURRETS TURNING CENTER

## Scientific Design Structure

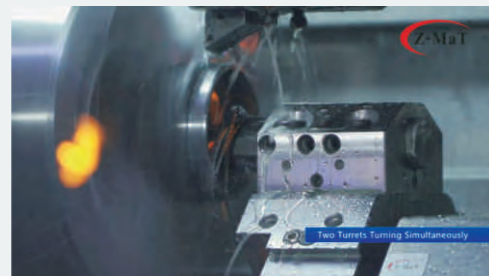
By centering the machine symmetrically from the spindle, heat is distributed evenly and accurately during continuous machining. Overall machining efficiency is increased. As GT260V-650 is standard with a spindle unit type tailstock, A slim shaft workpiece can be ideally made with straight stretch and 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



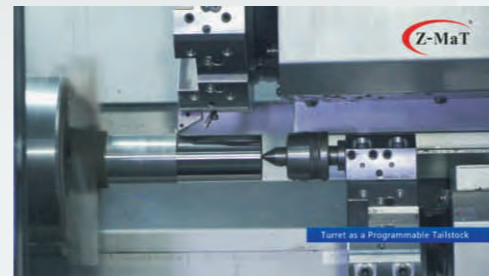
GT260V



Two Turrets Turning Simultaneously



Rough and Finish Turning Synchronization



Turret as a Programmable Tailstock

## Specifications

	Unit	GT260V		GT260V-650	
<b>Capacity</b>	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	
<b>Spindle</b>	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 *3500	4000 *3500	
	Main Motor Power	kW	11/15	11/15	
	<b>Axis</b>	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	
<b>Turret</b>	Turret1 Stations		8	8	
	Turret2 Stations		8	8	
	OD Tool Shank size	mm	25x25	25x25	
	Boring Bar Size	mm	Φ40	Φ40	
<b>Tailstock</b>	Type of tailstock		N/A	SST	
	Taper of tailstock quill		N/A	MT4(Spindle unit type)	
<b>Others</b>	Travel of tailstock	mm	N/A	550	
	Slant Bed Degree		90°	90°	
	Guideway Type		Linear Motion Guideway	Linear Motion Guideway	
<b>Others</b>	Power Capacity	kVA	20	25	
	Overall Dimension(LxWxH)	mm	2850x1850x2300	3300x1850x2350	
	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



# 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.

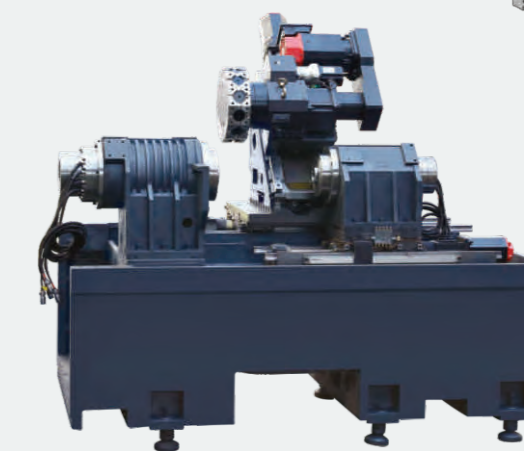
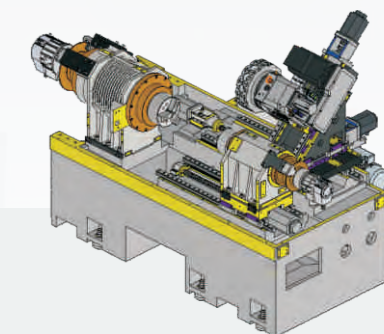
The combination of driven live tools and Y-axis function enables integrated machining from turning to secondary/back face machining, and multi-axis interpolation machining, allowing for process integration. The model provides the 2-axis turning, the milling and the Y axis specification with various spindle and turret options. Customers can choose a “one-of-a-kind machine” that flexibly meets their own needs.



### Specifications

	Unit	TC500
<b>Capacity</b>	Max. turning diameter	mm Φ320
	Max. length of workpiece	mm 430
	Max. swing dia. over slide	mm Φ400
	Max. swing dia. over bed	mm Φ510
<b>Spindle</b>	Hydraulic chuck / Collet chuck	Inch 8
	Diam. of spindle bore	mm Φ66
	Max. diam. of through-hole	mm Φ52
	Spindle nose	A2-6
	Max. spindle speed	rpm 4000
	Main motor	kW 22/30
<b>Sub-Spindle</b>	Hydraulic chuck	inch 6
	Diam. of spindle bore	mm Φ55
	Max. diam. of through-hole	mm Φ46
	Spindle nose	A2-5
	Max. spindle speed	rpm 5000
<b>Axis</b>	Main motor	kW 11/15
	X axis travel	mm 180
	Z1 axis travel	mm 400
	Z2 axis travel	mm 430
<b>Feed Rate</b>	Y axis travel	mm 100 (±50)
	X/Z1/Z2/Y axis rapid traverse	m/min 24/30/30/10
	X/Z1/Z2/Y axis ballscrew	mm 32×P08 / 32×P10 / 32×P10 / 32×P06
	Cutting feed rate	m/min 10
<b>Turret</b>	Type of turret	BMT55
	No. of tool	12
	OD tool shank size	mm 25×25
	Boring tool shank size	mm Ø32
	Live tooling motor	kW 2.23.7
	Max. speed of live tooling	rpm 5000
<b>*Tailstock</b>	Type of tailstock	Servo programmable
	Taper of tailstock quill	MT5
	Travel of tailstock	mm 80-430
<b>Others</b>	Weight (about)	kg 5900
	Overall dimension (L×W×H)	mm 2900×1850×2250

Note: “\*” means optional



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

## Specifications

	Unit	STL8-S	TN500-S	DT500E-S
<b>Capacity</b>	Max. turning diameter	mm	320	320
	Max. length of workpiece	mm	650, *1000	650, *1000
	Max. swing dia. over bed	mm	600	600
	Max. swing dia. over slide	mm	360	430
<b>Spindle</b>	Hydraulic chuck	Inch	8	8
	Dia. of spindle bore	mm	Φ66	Φ66
	Max. dia. of through-hole	mm	Φ52	Φ52
	Spindle nose		A2-6	A2-6
	Max. spindle speed	rpm	4000	4000
<b>Sub Spindle</b>	Main motor	kW	22/30	22/30
	Hydraulic chuck		6	6
	Dia. of spindle bore	mm	Φ55	Φ55
	Max. dia. of through-hole	mm	Φ46	Φ46
	Spindle nose		A2-5	A2-5
<b>Axis</b>	Max. spindle speed	rpm	5000	5000
	Main motor	kW	11/15	11/15
	X axis travel	mm	250	250
	Z1/Z2 axis travel	mm	650, *1000	650, *1000
	Y axis travel	mm	N/A	100 (±50), *140 (±70)
	X axis rapid traverse	m/min	20	20
	Z axis rapid traverse	m/min	20	20
Y axis rapid traverse	m/min	N/A	12	
<b>Turret</b>	Type of turret		BMT55	BMT55
	No. of tool		12	12
	OD tool shank size	mm	25×25	25×25
	Boring tool shank size	mm	Φ32	Φ32
	Max. speed of live tooling	rpm	N/A	4000, *6000
<b>Structure</b>	Boring depth of sub spindle	mm	115, *145	115, *145
	Slant bed degree	degree	35°	35°
	Guideway type	mm	LM	LM
<b>Others</b>	Weight (about)	Kg	5200	5300
	Overall dimension (L×W×H)	mm	2900×1780×2050	2900x1780x2050

Note: "\*" means optional



DT500E-S



STL8-S



# 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



## Specifications

	SA28-S	SUB-SPINDLE
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	
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)	1990X1480X1830mm	
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

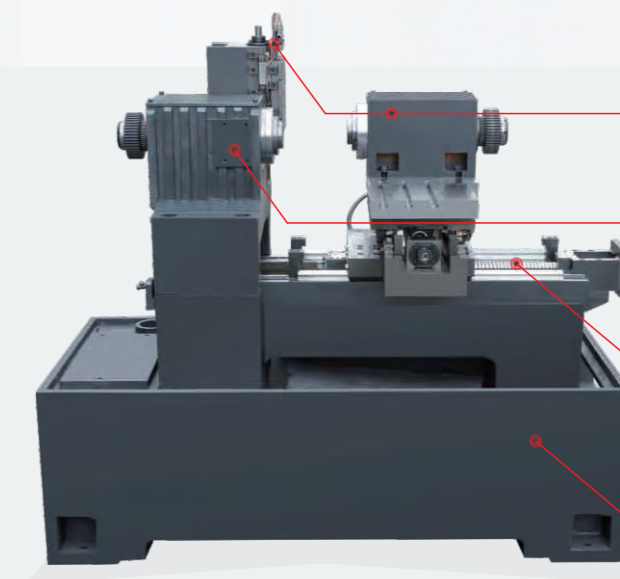
Highly rigid frame structure with wide span provides high stability and heavy carrying capacity.

### 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.





# DOUBLE-SPINDE DA SERIES

## Dual Spindle Automation

## DA66-G Moveable Spindle + Moveable Spindle

### Center-Mounted Ball Screw

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

### Heavy Linear Guideways

Extra heavy linear guides and rails, couples with wide way spacing producing superior rigidity.

## Design and Build for Mass Production

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.

### Main and Sub-Spindles

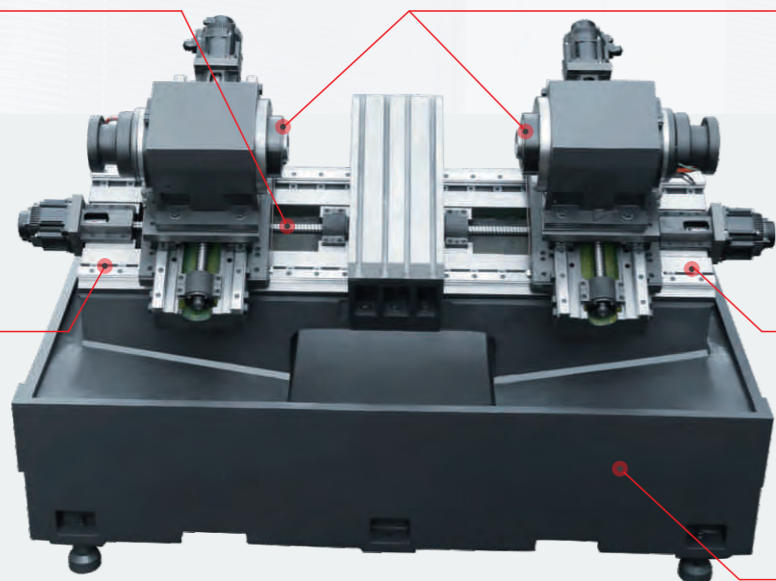
Both spindles adapt servo high-speed motors or DDS spindle options. This level of speed and synchronization assures total process accuracy and efficiency.

### 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.

### 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.



Note: DA66-G Frame

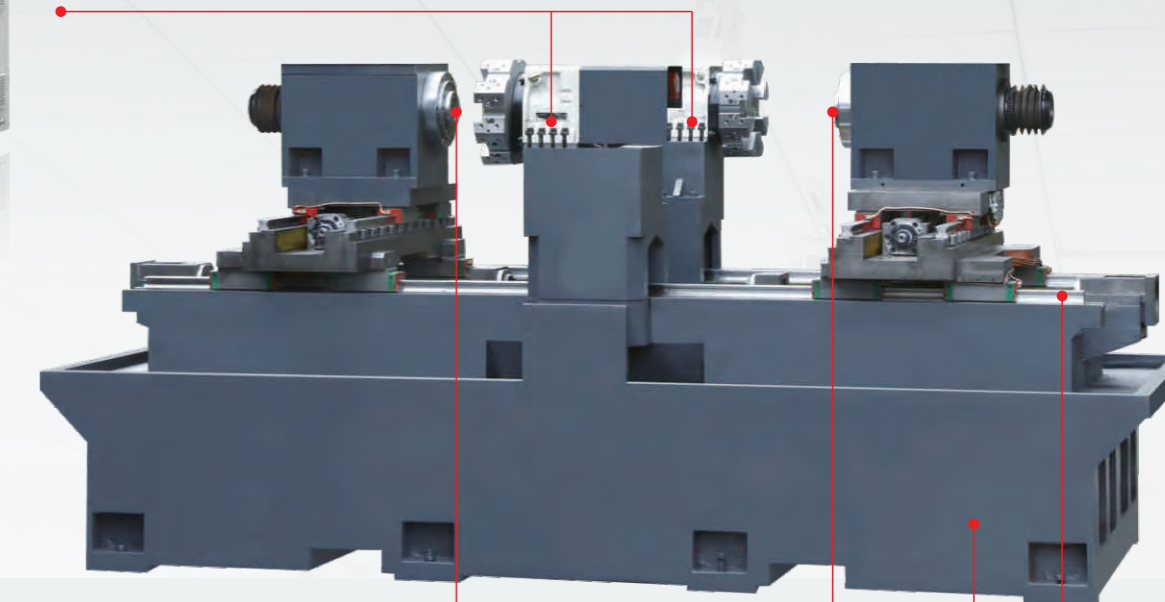


## Specifications

	DA66-G	DA88-T
Bed structure	30°	0° Flat
Max. machining dia.	Φ 160mm	Φ 320mm
Standard machining dia.	Φ 100mm	Φ 200mm
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	Φ 55mm	Φ 62mm
2 spindles bar capacity	Φ 46mm	Φ 52mm
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(LXWXH)	2520X1720X1850	3850X1850X2050
Weigh (about)	4200kg	5600kg

### Double Turrets

Dual 8/12 stations Turrets provide sufficient tools.



Note: DA88-T Frame

### Main and Sub-Spindles

Workpieces are exchanged from main to sub spindle and work in two separate working channels, which tremendously increases productivity.

### Base and Bed

Wide span base and bed are in a one piece casting. This solid base guarantees great reliability.

### Ballscrews and Guideways

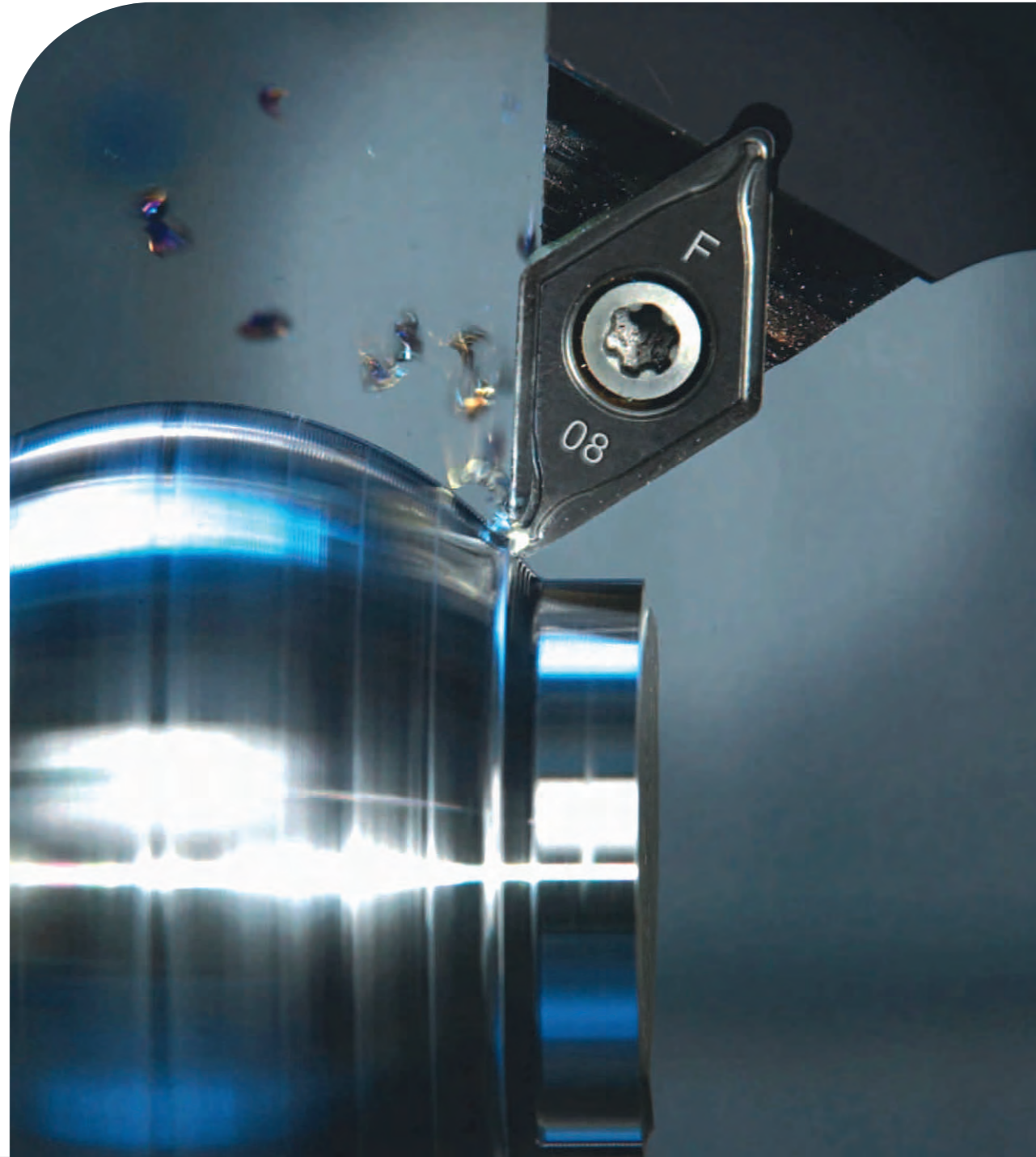
Two crossed slides and symmetry structure design meet both rigidity and efficiency.



# 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*

### 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.

### Slant Bed

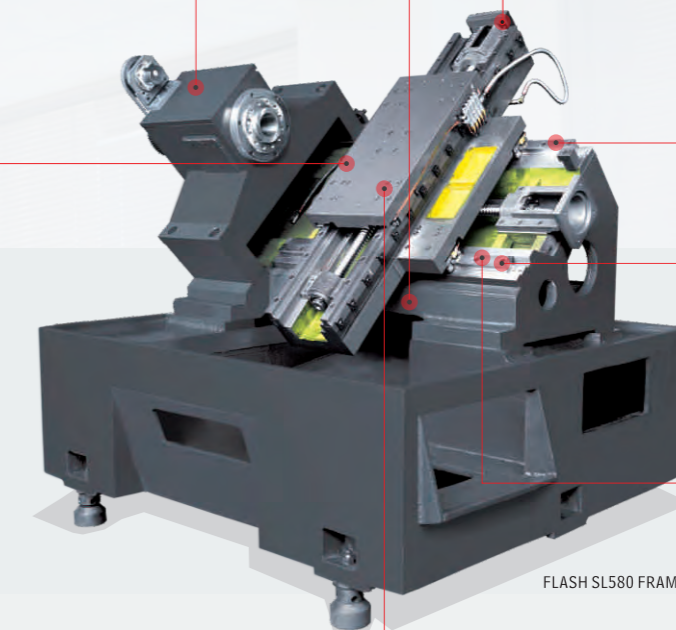
"True Align" slant bed design increases machine accuracy. Slant bed design increases operator efficiency during tooling set-ups and optimizes the flow of chips and coolant.

**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.

### Wide Spaced Linear Guideways

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



FLASH SL580 FRAME



### 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.



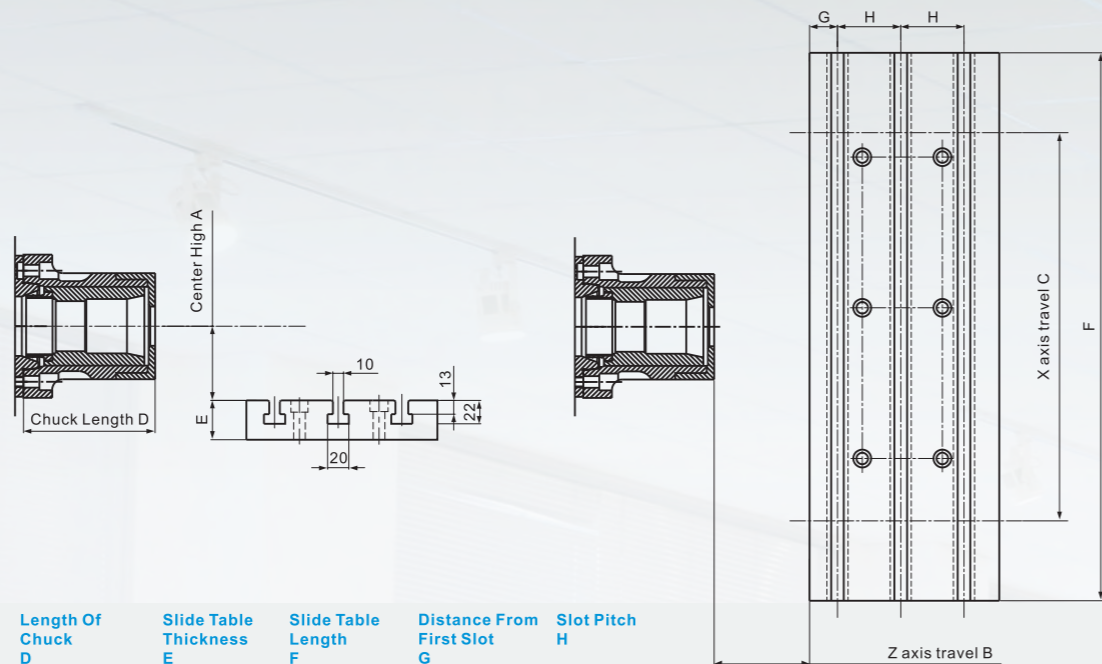
**Note:** SL280, SL340, SL350, SL400, SL450' s base and bed are one-piece casting, monoblock design.



# 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 High 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

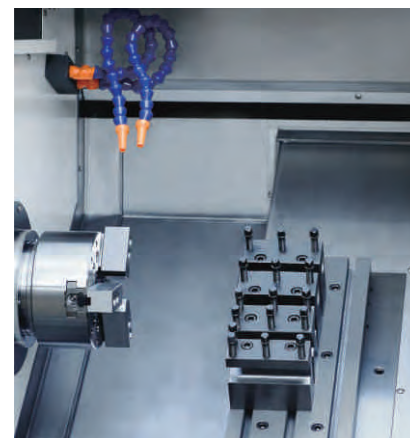
Slant bed, Linear guideway

## 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	SL350
<b>Capacity</b>	Chuck/collet		Hydraulic Collet *Hydraulic Chuck 6", *8"		
	Max. swing dia. over bed	mm	Φ420	Φ420	Φ420
	Max. length of workpiece	mm	Collet 240, * Chuck 210	Collet 200, * Chuck 170	Collet 300, * Chuck 235
	Max. swing dia. over slide	mm	Φ140	Φ112	Φ140
<b>Spindle</b>	Spindle bore	mm	Φ48	Φ48	Φ48
	Max. dia. of through-hole	mm	Φ40	Φ40	Φ40
	Spindle nose		A2-5	A2-5	A2-5
	Max. Spindle speed	rpm	3000	3000	3000
	Main motor power	kW	3.7/5.5, *5.5/7.5	3.7/5.5, *5.5/7.5	3.7/5.5, *5.5/7.5
<b>Axis</b>	X travel	mm	280	340	350
	Z travel	mm	240	200	300
	X/Z rapid traverse	m/min	28/28	28/28	28/28
<b>Toolpost</b>	Type		Gang type		
	No. of tool stations	No.	4-6	4-7	5-8
	OD tool and bore tool shank	mm	20x20 / Φ25	20x20 / Φ25	20x20 / Φ25
<b>Structure</b>	Inclined bed degree		35°	35°	35°
	Guideway type		LM	LM	LM
<b>Others</b>	Power capacity	kVA	11	11	12
	Dimensions (LxWxH)	mm	1750x1320x1500	2000x1600x1800	1900x1500x1800
	Weight(about)	kg	2000	2100	2100

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

## Full Range of Turning Machines



## Specifications

		Unit	SL400	SL450	SL580
<b>Capacity</b>	Chuck/collet		Hydraulic Collet *Hydraulic Chuck 6", *8"		
	Max. swing dia. over bed	mm	Φ400	Φ400	Φ380
	Max. length of workpiece	mm	Collet 250, * Chuck 215	Collet 430, * Chuck 400	Collet 320, * Chuck 290
	Max. swing dia. over slide	mm	Φ124	Φ160	Φ106
<b>Spindle</b>	Spindle bore	mm	Φ55	Φ55	Φ48
	Max. dia. of through-hole	mm	Φ46	Φ46	Φ40
	Spindle nose		A2-5	A2-5	A2-5
	Max. Spindle speed	rpm	4500	4500	3000
	Main motor power	kW	5.5/7.5	5.5/7.5	5.5/7.5
<b>Axis</b>	X travel	mm	400	450	580
	Z travel	mm	250	410	320
	X/Z rapid traverse	m/min	10/14	25/25	20/20
<b>Toolpost</b>	Type		Gang type		
	No. of tool stations	No.	5-8	5-9	6-10
	OD tool and bore tool shank	mm	20x20 / Φ25	20x20 / Φ25	20x20 / Φ25
<b>Structure</b>	Inclined bed degree		45°	45°	45°
	Guideway type		LM	LM	LM
<b>Others</b>	Power capacity	kVA	12	12	13
	Dimensions (LxWxH)	mm	2000x1300x1710	2000x1800x1950	2300x1820x1900
	Weight(about)	kg	2400	2800	3200

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



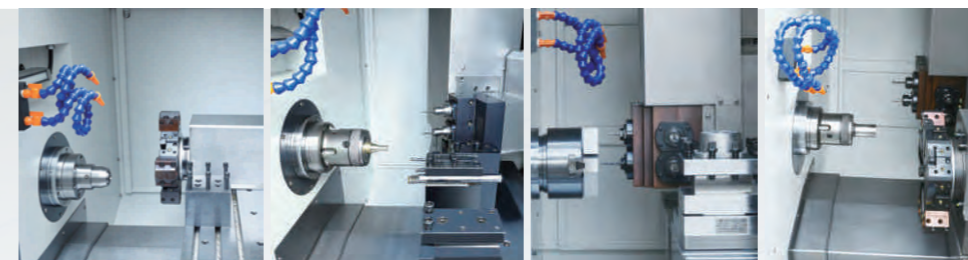
# FLASH FL SERIES

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.



## 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 longevity.

### 1-Piece Mono-Block Casting

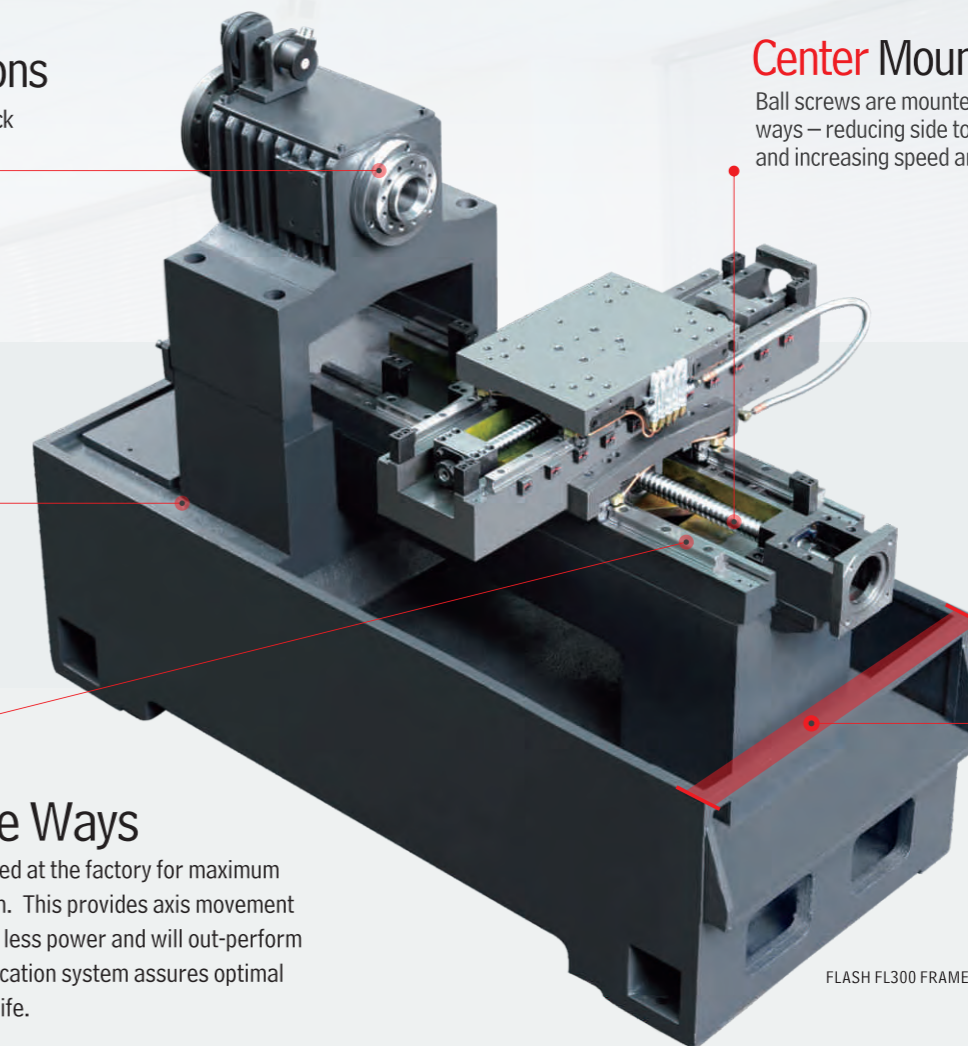
### “Bi-Laterally Symmetrical”

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.

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



FLASH FL300 FRAME



# FLASH FL SERIES

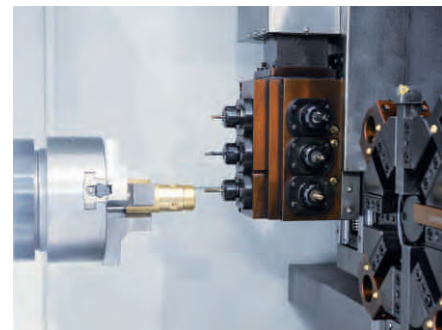
Flat bed, Linear guideway

## 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



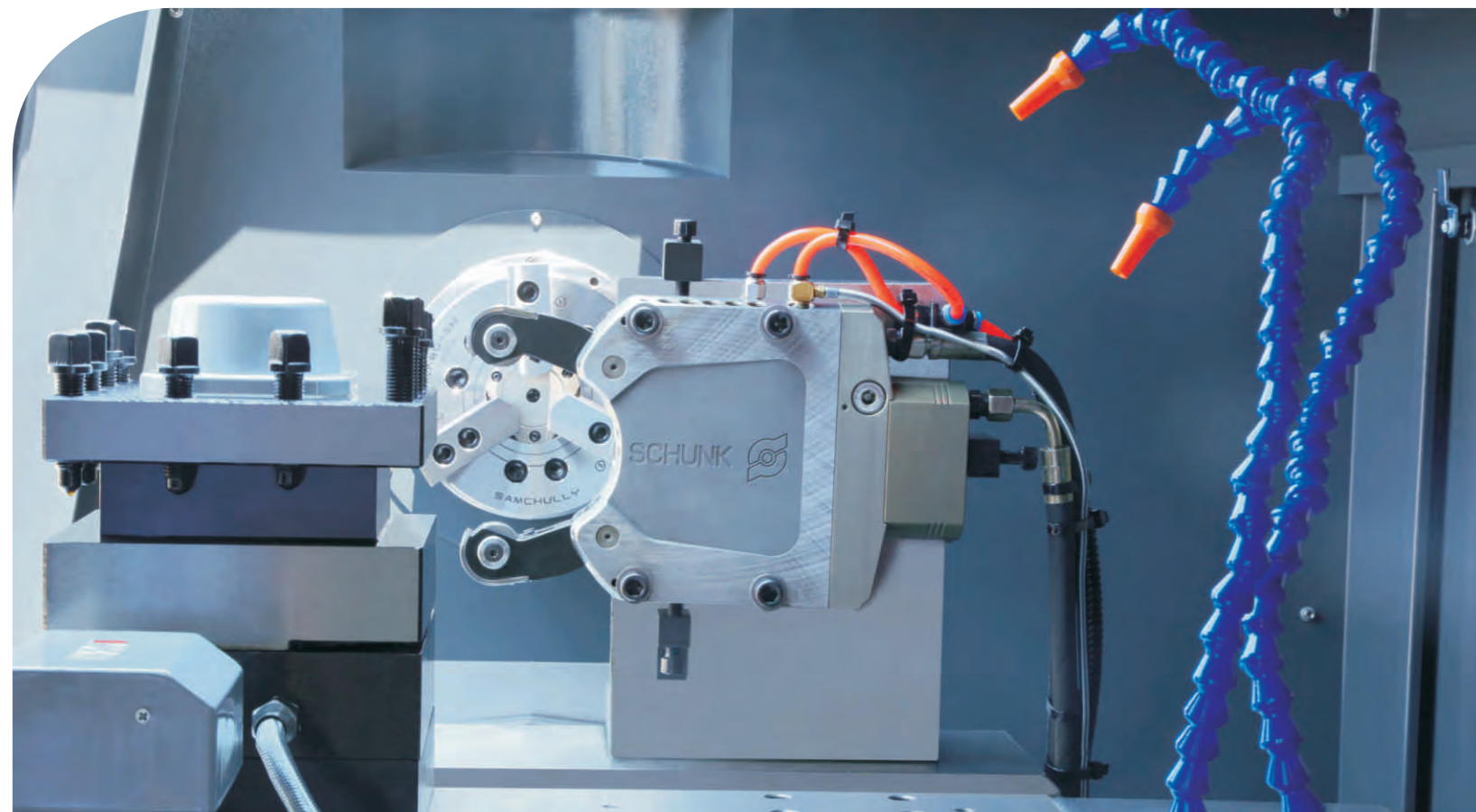
## Specifications

	Unit	FL280	FL300	FL400	FL500	FL550	FL630
<b>Capacity</b>	Chuck/collet	type	Pneumatic collet * Hydraulic collet	Pneumatic collet *Hydraulic collet, *chuck 6"	Manual chuck 8" *Hydraulic chuck 8", *6"	Manual chuck 10" *Hydraulic chuck 10", *8"	Manual chuck 12" *Hydraulic chuck 12"
	Bed type/ guideway		Flat/LM	Flat/LM	Flat/LM	Flat/LM	Flat/LM
	Max. swing dia. over bed	mm	Φ300	Φ300	Φ400	Φ500	Φ550
	Max. length of workpiece	mm	180	300, 180(chuck) *260 (chuck)	320	500	500
	Max. swing dia. over slide	mm	Φ135	Φ120	Φ180	Φ360	Φ360
<b>Spindle</b>	Spindle bore	mm	Φ37	Φ48	Φ62	Φ81	Φ105
	Max. dia. of through hole	mm	Φ32	Φ40	Φ40	Φ70	Φ91
	Spindle nose		Φ68 1:4	A2-5	*A2-5	*A2-6	A2-8
	Spindle speed	rpm	3000	3000	*2500	2000	1600
<b>Axis</b>	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
	X/Z travel	mm	250/180	350/300	380/350	260/500, *350/500	260/500, *350/500
	X/Z rapid traverse	mm/min	15/15	25/15, *25/25	20/20	15/15	15/15
<b>Toolpost</b>	Type		Gang type	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
	No. of tool stations	No.	4-6	4-10	4-10	4-10	4-10
<b>Others</b>	Power capacity	kVA	8	9	11	12	15
	Dimensions (LxWxH)	mm	1700x1200x1550	1700x1200x1550	1950x1250x1620	2650x1360x1800	2650x1360x1800
	Weight(about)	kg	1300	1800	2000	2700	2800

Note: "\*" means optional, "N/A" means not available, "LM" means linear motion guideway.



# FLASH FTL SERIES

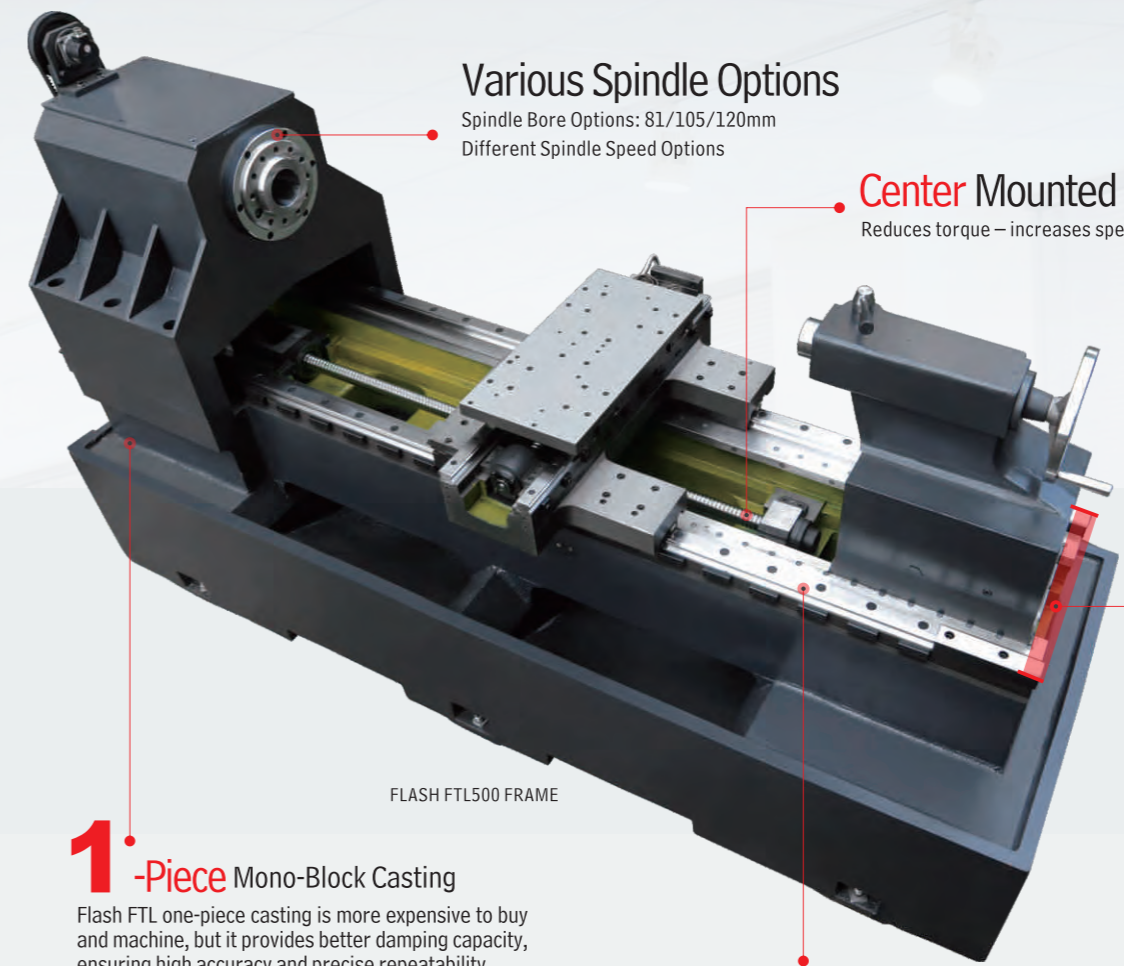


## Machine Characteristics

- 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.



### 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

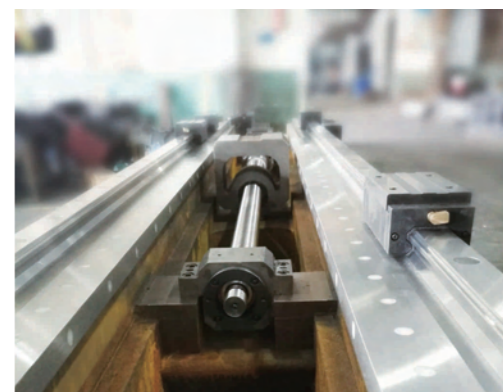
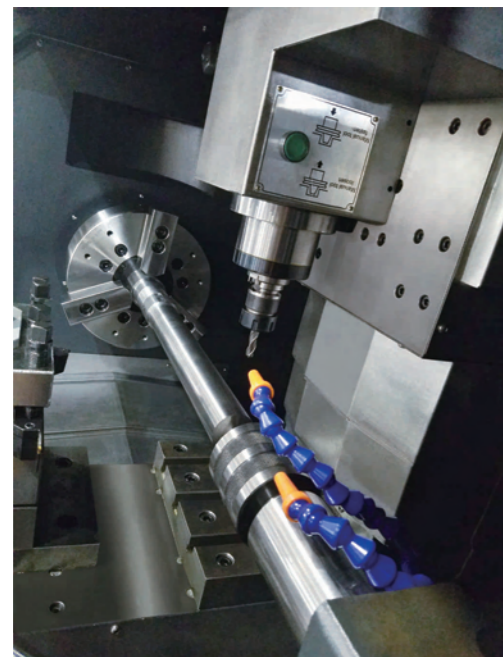


Manual operation box



# 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 (*T)	FTL400 (*T)	FTL500 (*T)	FTL550 (*T)	FTL660 (*T)	
<b>Capacity</b>	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	650(C2C) *300(8 station turret)	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)	
<b>Spindle</b>	Max. swing dia. over slide	mm	Φ135	Φ140	Φ250	Φ350	Φ350	Φ480	
	Spindle bore	mm	Φ48	*Φ55	Φ55	*Φ62	Φ62	*Φ105	*Φ120
	Max dia. of through hole	mm	Φ40	*Φ46	Φ46	*Φ52	Φ52	*Φ91	*Φ110
	Spindle nose		A2-5	*A2-5	A2-5	*A2-6	A2-6	*A2-8	*A2-11
<b>Axis</b>	Spindle speed	rpm	3000 *4500	*2500 *4500 *5000	2500 *4500 *4000	2000 *4000	1600 *2500	2000 *4000	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	
<b>Tool post</b>	X/Z travel	mm	300/200	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	
<b>Tailstock</b>	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	
<b>Structure</b>	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	
<b>Others</b>	Bed type /guideway		Flat/LM	Flat/LM	Flat/LM	Flat/LM	Flat/LM	Flat/LM	
	Bed width	mm	300	400	405	500	500	680	
	Power capacity	kVA	9	13	13	15	18	18	
	Dimensions (LxWxH)	mm	1800x1580x1600	2200x1500x1600	2500x1400x1500	3200x1600x2010 (shortest)	3200x1600x2010 (shortest)	3400x1900x2010(shortest)	
	Weight (about)	kg	1800	2400	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. "T" means configured with turret and other higher configuration. 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

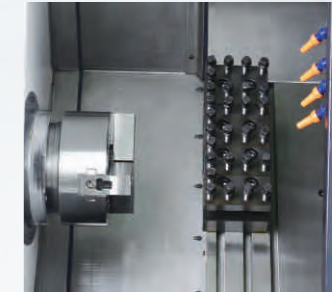
The result is a machine that will take heavy cuts and still assure minimal tool tip vibration. Finer surface finish is the result – even when making heavy cuts.

# POWER A SERIES

A6 / A8L

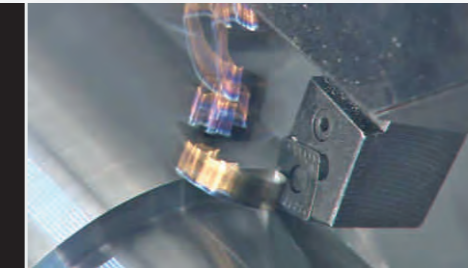
- 60°** steep inclined bed, closer to operator
- 300%** double size chip tank larger than Flash SL series
- 280%** sized linear guide way slide block
- 45mm** width heavy duty linear guideway
- 40mm** ballscrew diameter

## 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

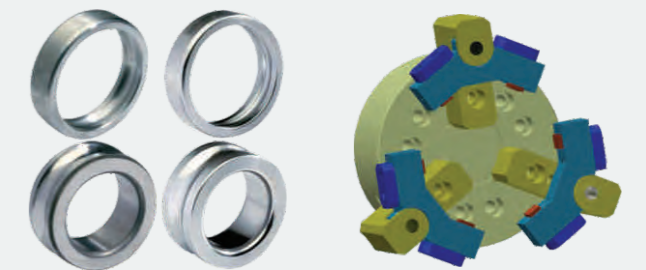


- **Depth of cut**  
**9mm (0.35in)**

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.

### 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.

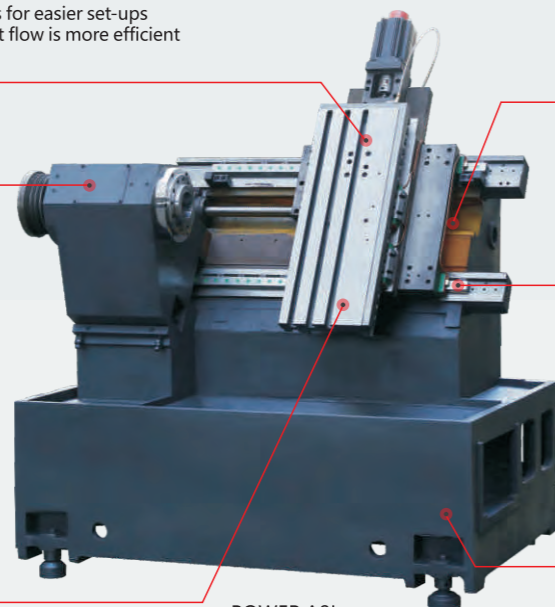
### Heavier Linear Guideways

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



POWER A8L

## FULL RANGE OF TURNING MACHINE



## Specifications

	Unit	POWER A6	POWER A8L		
<b>Capacity</b>	Collet/Chuck size	inch	6" * 8"		
	Max. swing dia. over bed	mm	Φ400		
	Max cutting length	mm	320		
	Max. swing dia. over slide	mm	Φ150		
<b>Spindle</b>	Spindle bore	mm	Φ48		
	Max dia. of through hole	mm	Φ40		
	Spindle nose		A2-5	*A2-5	A2-5
	Spindle speed	rpm	3000	*1600	1600, *4500
	Main motor power	kW	7.5, *11		*2000
					11
<b>Axis</b>	X axis travel	mm	260		
	Z axis travel	mm	320		
	X/Z rapid traverse	m/min	15/15		
<b>Toolpost</b>	Type of toolpost		Gang type		
	No. of tool stations	nos	4-6		
	OD tool shank size	mm	32X32		
<b>Structure</b>	Slant bed degree		60°		
	Guideway type		Linear Motion		
<b>Others</b>	Power capacity	kVA	14		
	Overall dimension (LxWxH)	mm	2100X1600X1750		
	Weight (about)	kg	3000		
			18		
			2520X1750X2050		
			3900		

Note:"\*" means optional.



# SUPER P SERIES

## Super Precision CNC Turning Center

### Standard Features

- Hydraulic 3-Jaw Chuck
- 8-Station Servo Turret
- Automatic Lubrication System
- Automatic Coolant System
- Work Light and Alarm Light
- Ergonomic Operator Panel

### Optional Features

- 12-Station Servo Turret
- Different Chucks and Collets
- Different CNC Control Systems
- Different Spindle Bore Diameter
- Chip Conveyor
- Tool Setter
- Bar Feeder
- Automatic Hydraulic Tailstock



## Specifications

	Unit	Super M06
<b>Capacity</b>	Chuck size	inch 6", *8"
	Max. swing dia. over bed	mm $\phi$ 360
	Max. length of workpiece	mm 300
	Max. swing diam. over slide	mm $\phi$ 160
<b>Spindle</b>	Spindle bore	mm $\phi$ 55 * $\phi$ 62
	Max. dia. of through-hole	mm $\phi$ 46 * $\phi$ 52
	Spindle nose	type A2-5 *A2-6
	Spindle speed	rpm 4500 *4000
Main motor power	kW 5.5/7.5, *7.5/11	
<b>Axis</b>	X axis travel	mm 160
	Z axis travel	mm 320
	X/Z rapid traverse	m/min 25/25
<b>Turret</b>	Center height	mm 80
	No. of tool stations	nos 8, *12
	Tool shank size	mm 25x25
<b>*Tailstock</b>	Type of tailstock	*Hydraulic, *LM
	Taper of tailstock quill	*MT4
	Travel of tailstock quill	mm *80
	Travel of tailstock	mm *80
<b>Structure</b>	Slant bed degree	30°
	Guideway type	LM
<b>Others</b>	Power capacity	kVA 13
	Overall dimension (LxWxH)	mm 1850x1880x1780
	Weight (About)	kg 3000

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

### Servo Turret

Fast tool changes with high positioning accuracy. Increases overall machine accuracy and shortens cycle times.

### Superior Spindle Unit

Superior standard spindle unit achieves high spindle runout accuracy - with high speed.

### Slant Carriage

Table carriage is slanted triangle structure – solid and reliable.

### High Accuracy Ball Screw

Ball screw bearing housing is precision ground and hand scraped to maximize bearing assembly accuracy.

### Roller Linear Guideway

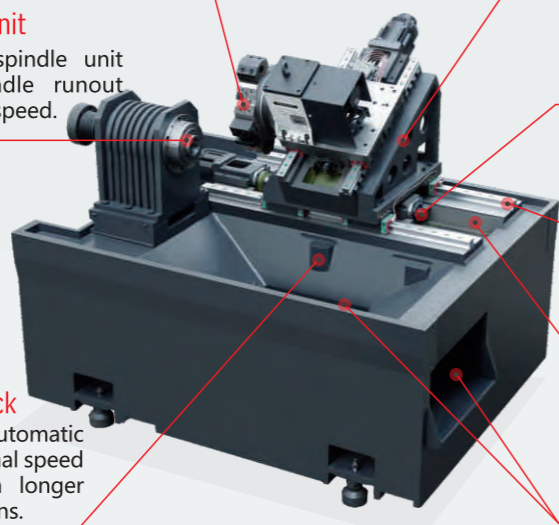
Large diameter cylindrical roller linear guideways – allows for heavy cutting at high accuracy.

### Heavy Base Structure

Heavy, wide base structure provides superior damping and rigidity.

### Automatic Tail Stock

Optional complete automatic tail stock offers optimal speed and convenience in longer part turning operations.



## HIGH PRECISION AND COMPACT SIZE

### Machine Characteristics

- Spindle runout  $\leq 2 \mu m$
- 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



## Specifications

	Unit	SUPER P30H	SUPER SP28
<b>Capacity</b>	Max. swing dia. over bed	mm $\phi$ 300	$\phi$ 300
	Max cutting length	mm 160	180
	Max. swing dia over slide	mm $\phi$ 80	$\phi$ 140
<b>Spindle</b>	Spindle bore	mm $\phi$ 36	$\phi$ 37 * $\phi$ 48
	Bar dia. capacity of hyd. collet	mm $\phi$ 30	$\phi$ 29 * $\phi$ 40
	Nose type	$\phi$ 54mm 1:1	* $\phi$ 40 1:1
	Spindle speed	rpm 5000	*5000
	Main motor power	kW 2.2/3.7, *3.7/5.5	3.7/5.5, *5.5/7.5
<b>Axis</b>	X axis travel	mm 250	290
	Z axis travel	mm 180	180
	X/Z rapid traverse	m/min 20/20	28/28
<b>Toolpost</b>	Type of tool post	Gang type	Gang type
	No. of tool stations	nos 4-6	4-7
	ODTool shank size	mm 16X16	16X16
<b>Others</b>	Power capacity	kVA 6.5	9
	Bed /Guideway type	Flat /Linear motion	35° Slant bed / Linear motion
	Overall dimension (LxWxH)	mm 1420X1200X1550	1540X1470X1640
	Weight (about)	kg 1400	1800

Note:"\*" means optional.



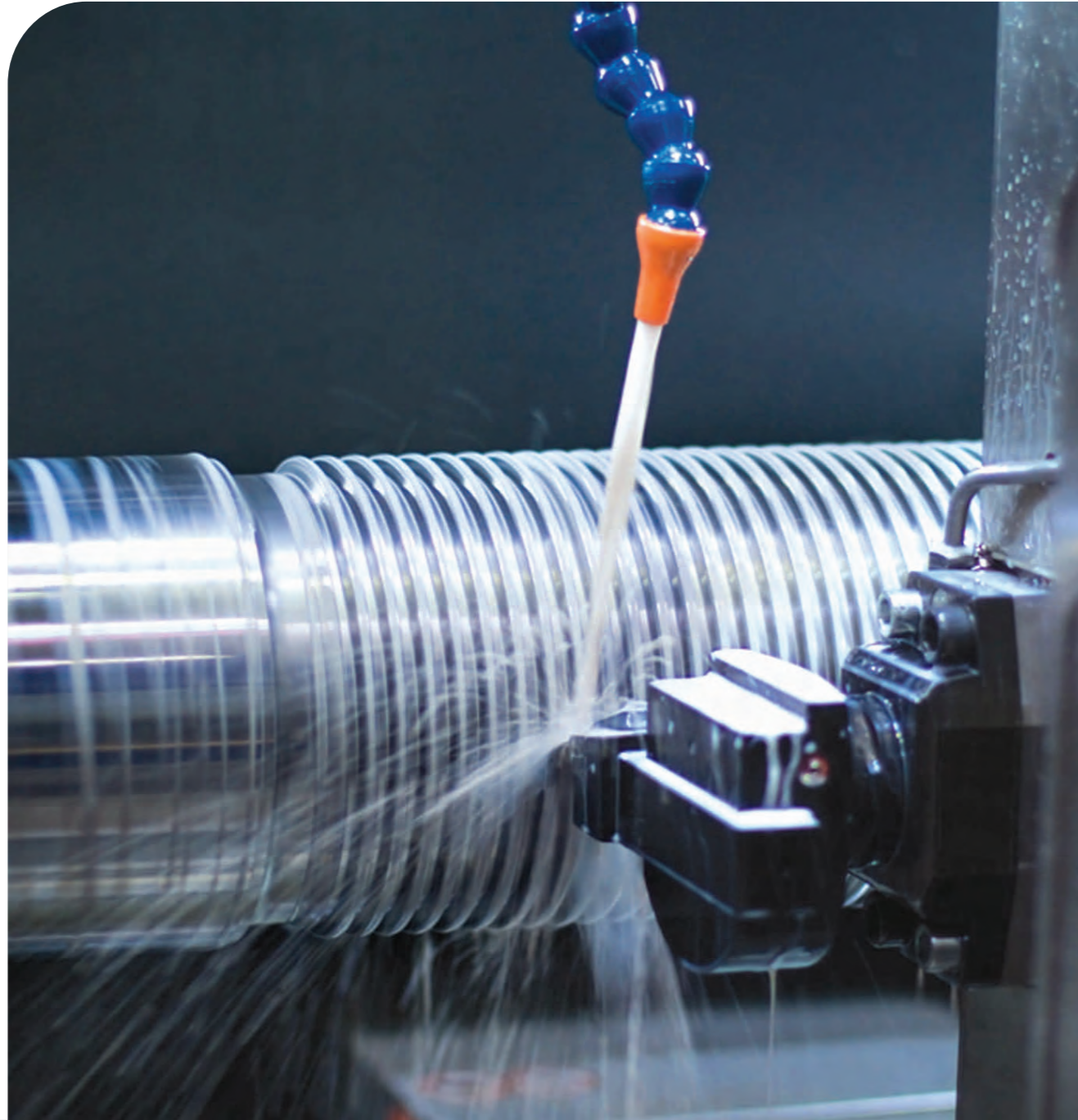
# HUNTER FAMILY TURNING CENTERS

Hunter STH /SH /FTH /FH Series

## Machine Characteristics

The HUNTER Series are a new take on the traditional, economic box 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 and the FH (Flat Bed without Tailstock) lathe series.



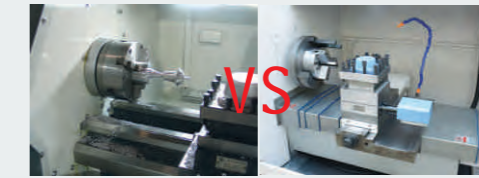
# HUNTER SERIES

STH /SH /FTH /FH

*Constant Research and Ongoing Product Refinement*

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

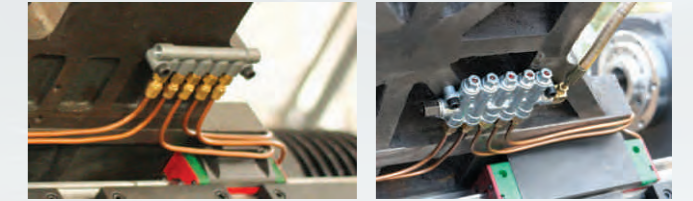
Unlike the old CK CNC lathe design, which has the ball screw mounted on the front side of the lathe bed, the HUNTER Series moved the ball screw to the middle of the lathe bed, between the guideways. This eliminates friction and ball screw torque – increasing efficiency and assuring higher speeds. The 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



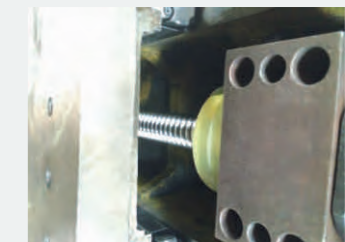
This efficient unit assures all machine components are lubricated evenly – extending machine operating life.

## 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

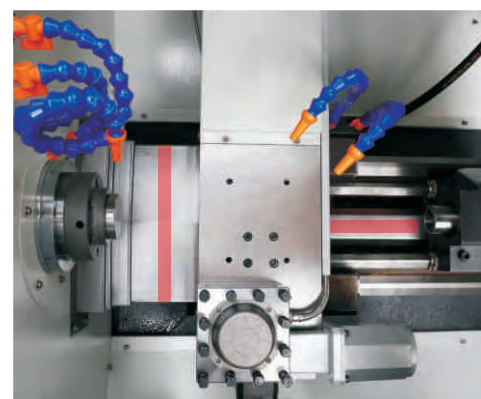
## Smart CNC Solutions

### 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

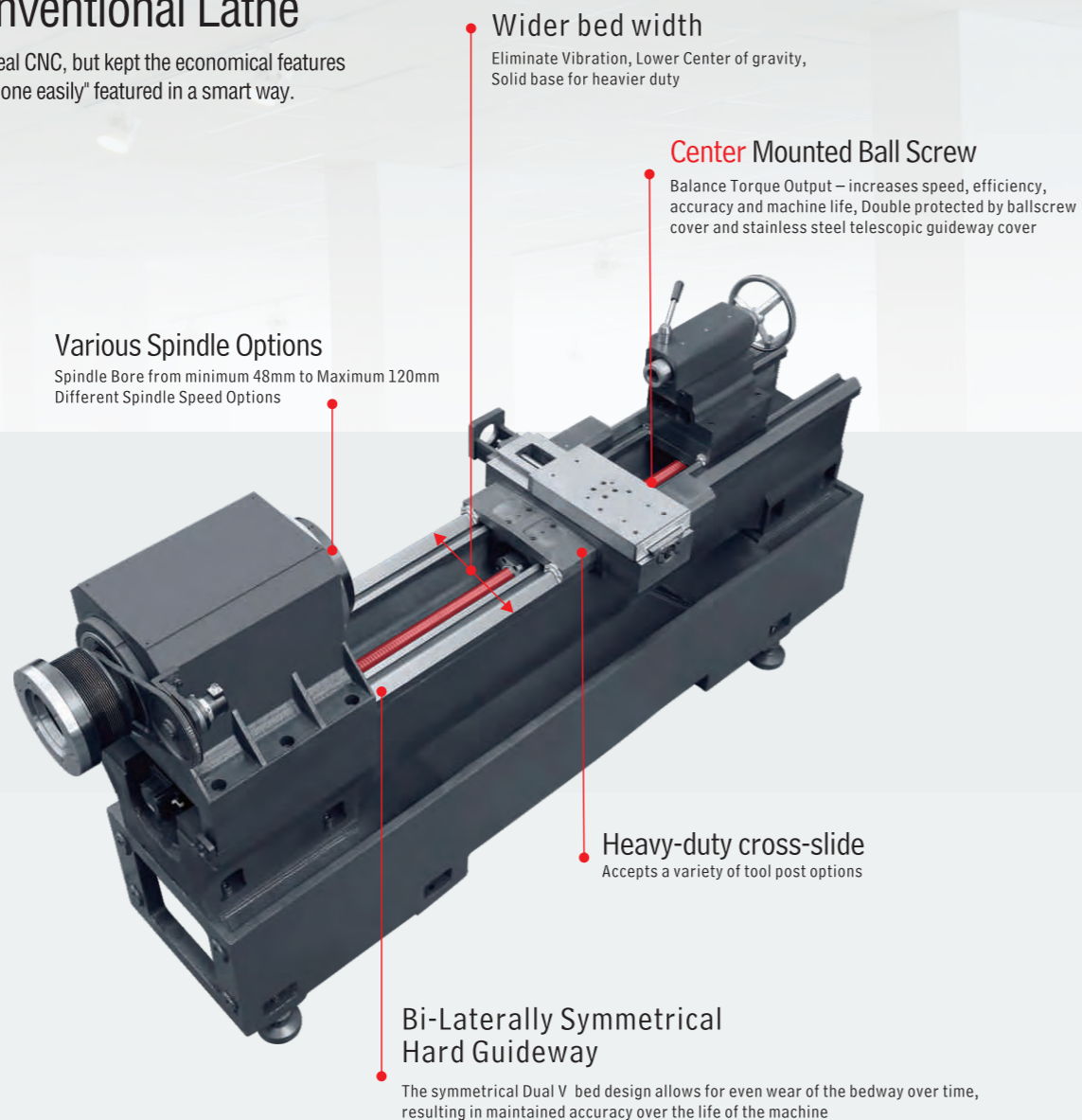


### Stainless Steel Telescopic Cover

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
<b>Capacity</b>	Chuck size	inch 6"	8"	10"	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
<b>Spindle</b>	Spindle bore	mm Φ48	*Φ55 *Φ62	Φ62	*Φ55 *Φ75	*Φ105 *Φ120
	Bar dia. capacity	mm Φ40	*Φ46 *Φ52	Φ46	*Φ52 *Φ65	Φ70 *Φ91 *Φ110
	Spindle nose	mm ΦA2-5 *A2-5 *A2-6	A2-5 *A2-6 *A2-8	A2-6	*A2-5 *A2-8	A2-8 *A2-11 *A2-11
	Spindle speed	rpm 3000	*2500 *2000, *4000	2500	*2000 *1600	1600, *2500 *1000 *1000
Main motor power	kW 3.7, *5.5		5.5, *7.5	7.5, *11	7.5, *11, *15	*2000
<b>Axis</b>	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
<b>Toolpost</b>	Type of toolpost		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	42X42
<b>Tailstock</b>	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
<b>Structure</b>	Bed width	280	340	410	410	600
	Guideway type	Hard way	Hard way	Hard way	Hard way	Hard way
<b>Others</b>	Power capacity	kVA 9	11	14	15	18
	Overall dimension (LxWxH)	mm 1540x1010x1570	2300(2410)x1500x1750	2725(2975)(3475)(3970)x1600x1850	2725(2975)(3475)(3970)x1600x1850	3500(4000)(4500)x1955x2110
	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

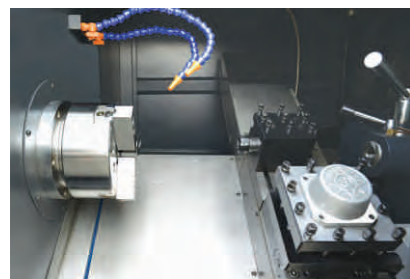
- Manual 3-Jaw Chuck
- 4-Station Tool Post + gang plate
- Manual Tailstock
- Automatic Lubrication System
- Automatic Coolant System

### Optional Features

- Hydraulic Chuck
- Spring Collet System
- Hydraulic Tailstock
- Different CNC Control Systems
- Different Spindle

## 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
<b>Capacity</b>	Chuck size	inch 6"	8"	10"	12", *15"
	Max. swing dia. over bed	mm Φ300	Φ350	Φ450	Φ520
	Max. length of workpiece	mm 280,*350(collet)	300,*400(collet)	750	750
	Max. swing dia. over slide	mm Φ140	Φ200	Φ250	Φ280
<b>Spindle</b>	Spindle bore	mm Φ48	Φ48	Φ62	Φ105
	Max. dia of through hole	mm Φ40	Φ40	Φ52	Φ91
	Spindle nose	A2-5	A2-5	A2-6	A2-11
	Spindle speed	rpm *4500	*4500	*4000	*1800
<b>Axis</b>	Main motor power	kW 4.0	5.5	7.5,*11	11
	X axis travel	mm 300	300	300	300
	Z axis travel	mm 280,*350(collet)	300,*400(collet)	600,750(between two centers)	600,750(between two centers)
	X/Z rapid traverse	m/min 8/12	8/12	9/12	9/12
<b>Toolpost</b>	Type	4-station toolpost + Gang type tooling	4-station toolpost + Gang type tooling	4-station toolpost + Gang type tooling	4-station toolpost + Gang type tooling
	No. of tool stations	nos 4-6	4-6	4-6	4-6
<b>Tailstock</b>	ODTool shank size	mm 20x20	20x20	25x25	32x32
	Type of tailstock	Manual,*Pneumatic,*Hydraulic	Manual,*Pneumatic,*Hydraulic	Manual,*Hydraulic	Manual,*Hydraulic
	Taper of tailstock quill	MT3	MT4	MT5	MT5
	Travel of tailstock quill	mm 100	100	100	100
<b>Structure</b>	Travel of tailstock	mm 300	400	650	650
	Slant bed degree	30°	30°	30°	30°
	Guideway type	Hard	Hard	Hard	Hard
<b>Others</b>	Power capacity	kVA 8	8	11	15
	Overall dimension (LxWxH)	mm 2100x1380x1760	2150x1450x1800	2500X1450X1650	2930X1510X1890
	Weight (about)	kg 1700	2400	3250	3300

Note: "\*" means optional.

# 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



## Specifications

	Unit	SH30B	SH40B	SH52B
<b>Capacity</b>	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
<b>Spindle</b>	Spindle bore	mm Φ37	Φ48	Φ62
	Bar dia. capacity	mm Φ32	Φ40	Φ52
	Spindle nose	Φ68 1:4	Φ90 1:4	A2-6
	Spindle speed	rpm 3000	3000	2000
<b>Axis</b>	Main motor power	kW 3.0	4.0	5.5
	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
<b>Tool post</b>	Type of toolpost	Gang type	Gang type	Gang type
	No. of tool stations	nos 4~6	4~8	4~8
<b>Structure</b>	OD. tool shank size	mm 16X16	20X20	20X20
	Slant bed degree	45°	45°	45°
	Guideway type	Hard	Hard	Hard
<b>Others</b>	Power capacity	kVA 7	8	10
	Overall dimension (LxWxH)	mm 1550X1100X1400	1650X1100X1600	1850X1280X1580
	Weight (about)	kg 1100	1600	2600

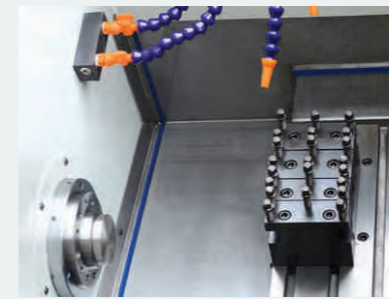
Note: "\*" means optional.

Mark: Chip conveyor can be installed either right side or back side only for SH52B.

## 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.





# HUNTER FH SERIES

## Flat bed, Hard guideway

### Machine Characteristics

Center Mounted Ball Screw Assembly reduces friction and side torque – improving dynamic characteristics and long-term machine stability. Telescoping, stainless steel ball screw/way guards completely protect slide operation from chips, coolant and debris.

Large contact area between bed ways and machine carriage promotes stability and accuracy. Double row, cylindrical roller spindle bearings improve rigidity on larger machines.

### Standard Features

- Manual 3-Jaw Chuck
- 4-Station Tool Post
- Work and Alarm Lights
- Full Enclosure safety guard
- Automatic Lubrication System
- Automatic Coolant System
- Variable Frequency Drive
- Pneumatic Collet (FH30B FH40B)
- Gang type tool (FH30B)

### Optional Features

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



Unique, Efficient Design  
Ball Screw is Mounted  
Between FH Lathe Guideways



## Specifications

		Unit	FH30B	FH40B	FH360	FH400	FH630
<b>Capacity</b>	Collet bar capacity/Chuck size	inch	30mm, *6"	40mm, *6", *8", *12"	8"	8", *10"	12", *15"
	Max. swing dia. over bed	mm	Φ320	Φ380	Φ350	Φ420	Φ630
	Max. length of workpiece	mm	180	300, *450	300	450	450
	Max. swing dia. over slide	mm	Φ75	Φ150	Φ210	Φ290	Φ420
<b>Spindle</b>	Spindle bore	mm	Φ37    *Φ48	Φ48    *Φ62    *Φ70	Φ55    *Φ62	Φ62    *Φ81	Φ105    *Φ120
	Bar dia. capacity	mm	Φ32    *Φ40	Φ40    *Φ52    *Φ60	Φ46    *Φ52	Φ52    *Φ70	Φ91    *Φ110
	Spindle nose	mm	Φ68 1:4    *Φ90 1:4	Φ90 1:4    *A2-6    *A2-8	C6    *A2-6	A2-6    *A2-8	A2-11    *A2-11
	Spindle speed	rpm	3000    *3000	3000    *2000    *2000	1600    *2000	*1600	1000    *1000
	Main motor power	kW	3.0, *4.0	4.0	5.5	*4000    *2500	15
						7.5/11	
<b>Axis</b>	X axis travel	mm	250	280, *340	320	320, *380	380
	Z axis travel	mm	180	300, *450	300(chuck)	450	450
	X/Z rapid traverse	m/min	6/9	6/9	6/9	6/9	9/9
	Type of toolpost		Gang type	4-station toolpost	4-station toolpost	4-station toolpost	4-station toolpost
<b>Tool post</b>		nos	*4-station toolpost	*Gang type	*Gang type	*Gang type	*Gang type
	No. of tool stations	mm	4-5	4-6	4-5	4-5	4-5
	Tool shank size	mm	16X16	20X20	20X20	25X25	32X32
<b>Structure</b>	Bed width	mm	220	240	340	400	400
	Type guideway	type	Hard	Hard	Hard	Hard	Hard
<b>Others</b>	Power capacity	kVA	6	6.5	7	9.5	14
	Overall dimension (LxWxH)	mm	1350X1100X1420	1450X1200X1490	1900X1200X1600	2300X1300X1700	2300X1400X1800
	Weight (about)	kg	1000	1200	1600	2600	3000

Note: "\*" means optional.

# CK SERIES

## Machine Characteristics

Heavy headstock & large spindle bore. Heavy quality cast base & lathe bed, high torque with good spindle speed, hardened & ground bed ways, good for turning long work pieces, centralized lubrication system.

### Standard Features

- 3-Jaw Chuck or Collet
- 4-Station Tool Post
- Manual Tail Stock
- Center Sleeve
- Automatic Lubrication System
- Automatic Coolant System

### Optional Features

- Different Chucks
- Different CNC Control Systems
- Hydraulic Tail Stock
- Higher Spindle Speed
- Larger Diameter Spindle Bore



## Specifications

		Unit	CK6125	CK6130	CK6136	CK6140	CK6150
<b>Capacity</b>	Chuck size	inch	collet, *5	6"	8"	10"	12"
	Max. swing dia. over bed	mm	Φ250	Φ300	Φ350, *Φ400	Φ420	Φ500
	Max. length of workpiece	mm	270(collet), 170(chuck)	400(collet), 300(chuck)	500	750/1000/1500	750/1000/1500
	Max. swing dia. over slide	mm	Φ130	Φ150	Φ160, *Φ200	Φ210	Φ290
<b>Spindle</b>	Spindle bore	mm	Φ37	Φ48    *Φ62	Φ55    *Φ75	Φ62    *Φ55    *Φ75	Φ81    *Φ105    *Φ120
	Bar dia. capacity	mm	Φ32	Φ40    *Φ52	Φ46    *Φ65	Φ52    *Φ46    *Φ65	Φ70    *Φ91    *Φ110
	Spindle nose	mm	Φ68 1:4	Φ90 1:4    *A2-6	C6    *A2-8	A2-6    *C6    *A2-8	A2-8    *A2-11    *A2-11
	Spindle speed	rpm	3000	3000    *2000, *4000	1600    *1600	2000, *4000    *1600    *1600	1600, *2500    *1000    *1000
	Main motor power	kW	3.0	3.0, *4.0	5.5	*7.5	7.5
<b>Axis</b>	X axis travel	mm	220	250	320	320	320
	Z axis travel	mm	270	400	500	750/1000/1500	750/1000/1500
	X/Z rapid traverse	m/min	6/9	6/9	6/9	6/9	6/9
	Type of toolpost		4-station toolpost, *gang type	4-station toolpost, *gang type	4-station toolpost, *gang type	4-station toolpost, *gang type	4-station toolpost, *gang type
<b>Toolpost</b>	No. of tool stations	nos	4	4	4	4	4
	Tool shank size	mm	16X16	20X20	20X20	25X25	25X25
	Type of tailstock		Manual, *Pneumatic, *hydraulic	Manual, *Pneumatic, *Hydraulic	Manual, *Hydraulic	Manual, *Hydraulic	Manual, *Hydraulic
<b>Tailstock</b>	Taper of tailstock quill		MT3	MT3*MT4	MT4	MT5	MT5
	Travel of tailstock quill	mm	80	100	100	130	130
	Travel of tailstock	mm	220	350	400	600	600
<b>Structure</b>	Bed width	mm	260	260	300	400	400
	Guideway type		Hard way	Hard way	Hard way	Hard way	Hard way
<b>Others</b>	Power capacity	kVA	5.8	9	11	14	15
	Overall dimension (LxWxH)	mm	1500X1250X1450	1540X1010X1570	1950X1220X1620	2430X1200X1600	2430X1200X1600
	Weight (about)	kg	1100	1300	1800	2800	3000

Note: "\*" means optional.



# LIVE TOOLING & MULTI-TASKING MACHINE

## Secondary Machining Operations

### Powerful Solution for Secondary Machining of Turned Parts

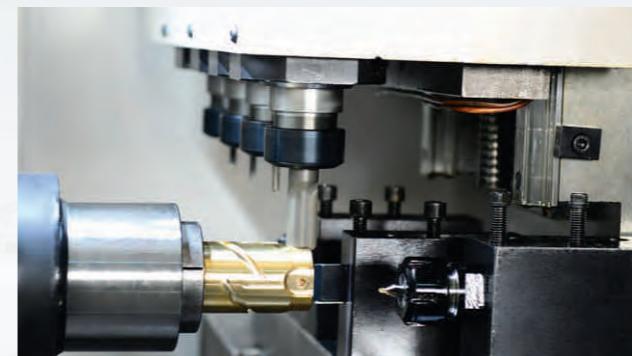
Z-MaT is a recognized leader in C Axis and live tooling technology. This strong core competence makes Z-MaT the go-to source for secondary machining operations.

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.



### Driven Toolholders List

Form	Position	Group tool nos	Max dia. of live tool	Max. speed
ER20	Radial, Axial, Vertical	1, 2, 3	φ 13mm	5000rpm
ER25	Radial, Axial, Vertical	1, 2, 3	φ 16mm	5000rpm
ER32	Radial, Axial, Vertical	1, 2, 3	φ 20mm	5000rpm

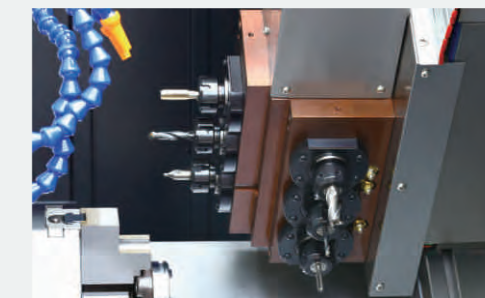
Able to fit for most existing Z-MaT models.



Polygon turn-mill driven toolholder, Axial and Radial elevation adjustable driven toolholder, Axial and radial index adjustable driven toolholder, Double lifting vertical driven toolholder, Double 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

### 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.





# MULTI-TASKING MACHINE

## Turn-Mill Machining Center

### 580mm 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 SL580M 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. SL580M owners report they have gained a competitive advantage with the addition of these machines to their production system.



## 4-Axis Simultaneous Multitasking Turning Centers



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

## Tooling Options

Option #	Tooling Included
1	Gang Tools
2	Gang Tools + (3) ER25 Axial Live Tools
3	Gang Tools + (4) ER25 Axial Live Tools
4	Gang Tools + (3) ER25 Radial Live Tools w/ Y Axis
5	Gang Tools + (3) ER25 Axial Live Tools & (3) ER25 Radial Live Tools w/ Y Axis
6	8-Station Turret + (3) ER25 Axial Live Tools
7	8-Station Turret + (4) ER25 Axial Live Tools
8	8-Station Turret + (3) ER25 Radial Live Tools w/ Y Axis
9	8-Station Turret + (3) ER25 Axial & (3) ER25 Radial w/ Y Axis
10	8-Station Turret + (3) ER25 Axial and (3) ER25 Radial Live Tools on Single Motor Driven Y Axis Unit
11	8-Station Turret + (4) ER20 Axial and (4) Radial Live Tools on Single Motor Driven Y Axis Unit



SL580-MT

**Warning:** Carefully consider your specific machining requirements and choose the best tooling combination for your application from the options listed above.

**Tooling Option Labels:**

- Gang Tools
- (3) ER25 Axial Live Tools
- (4) ER25 Axial Live Tools
- (3) ER25 Radial Live Tools w/ Y Axis
- (3) ER25 Axial and (3) Radial Live Tools w/ Y Axis
- 8-Station Turret
- (4) ER20 Axial and (4) Radial Live Tools w/ Y axis



## 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	SL580-MG	SL580-MT	TMC400Y	TMC40V
<b>Structure</b>	Bed incline degree	45°	45°	0°	90°
	Guideway type	Linear motion	Linear motion	Linear motion	Linear motion
<b>Capacity</b>	Chuck/Collet	6" Hydraulic chuck/Hydraulic collet	6" Hydraulic chuck/Hydraulic collet	Hydraulic collet, *6", *8"	Hydraulic collet, *6", *8"
	Max. swing dia. over bed	mm Φ380	Φ380	Φ400	Φ400
	Max. length of workpiece	mm Chuck 280, *Collet 320	Chuck 220, *Collet 250	200	250
<b>Spindle</b>	Max. swing dia. over slide	mm Φ90	Φ90	Φ120	Φ250
	Spindle type	A2-5	A2-5	A2-5	*A2-6
	Spindle bore	mm Φ48	Φ48	Φ48	*Φ62
<b>Axis</b>	Max. dia. of through hole	mm Φ40	Φ40	Φ40	*Φ55
	Spindle speed	rpm 3000, *4500	3000 *4500	3000, *4500	*2000, *4000
	Main motor power	kW 5.5/7.5	5.5/7.5	3.7/5.5, *5.5/7.5	4500
<b>Toolpost</b>	X axis travel	mm 580	350	400	220
	Z axis travel	mm 320	250	250	320
	Y axis travel	mm 150	150	90	300
	X/Z/Y rapid traverse	m/min 20/20/15	20/20/15	7/10/10	12/12/12
<b>Tailstock</b>	Toolpost type	Gang type tools mixed with livetoolings	8-Station turret mixed with livetoolings	Gang type tools mixed with livetoolings	Gang type tools mixed with livetoolings
<b>Others</b>	Taper of tailstock	No	No	No	MT4
	Travel of tailstock quill	No	No	No	100
	Power capacity	kVA 13	15	14	14KVA
<b>Others</b>	Overall dimension(LXWXH)	mm 2320X1820X1900	2320X1820X1900	2020X1450X1850	2350X1800X2300
	Weight (about)	kg 3600	3600	2500	3500

Note: "\*" means optional, "N/A" means not available.

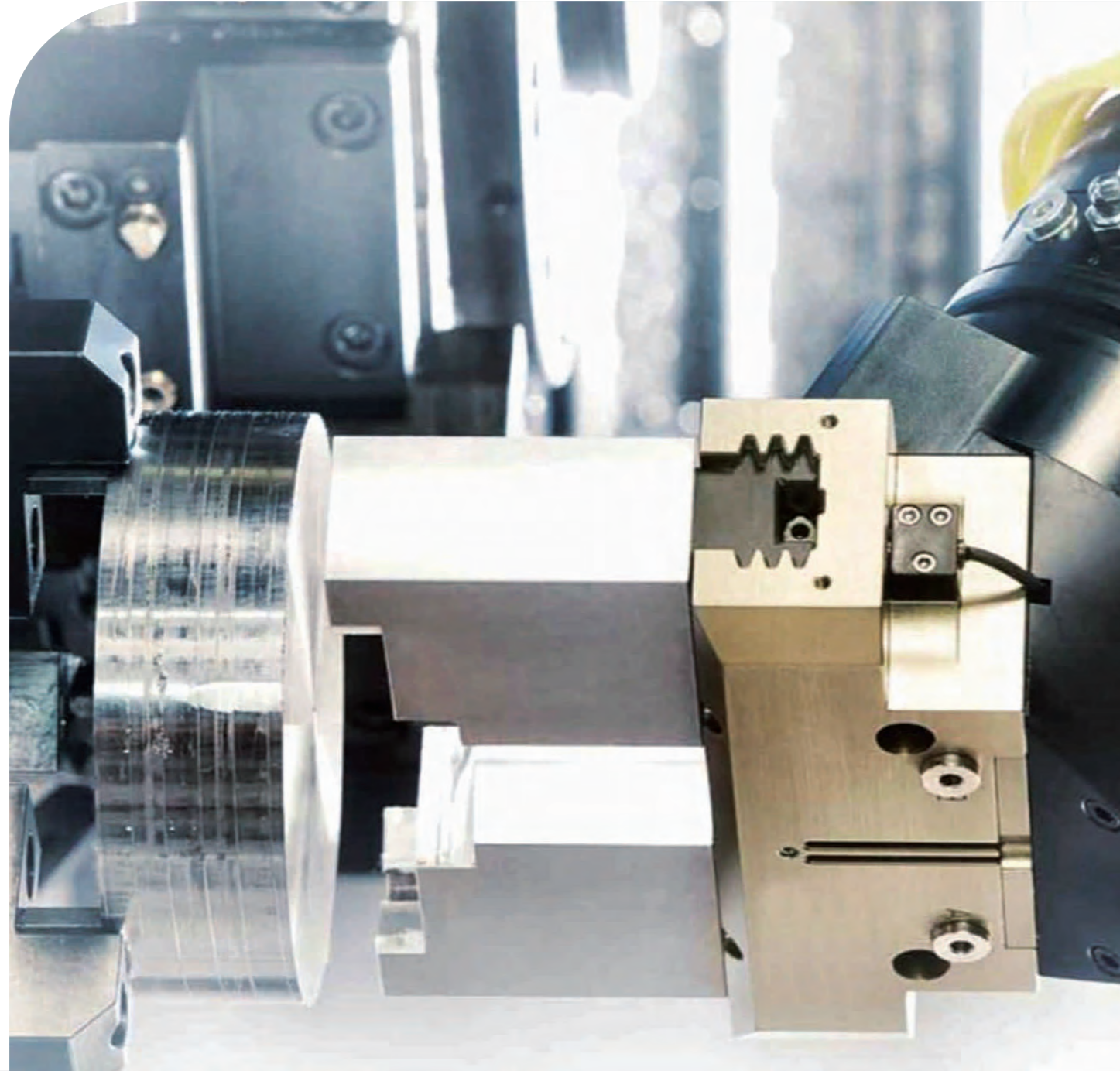


# AUTOMATION & PRODUCTION LINE

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.



# 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.



STL8-S



SL8-R



## Procedures of Automation Solution

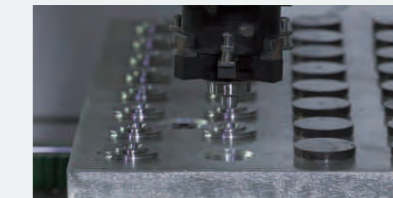
1. Sales representatives confirm the demand of reducing labors for mass production parts.
2. Discuss all the details with Z-MaT engineers.
3. Find the most reliable way to realize the production target.
4. Gantry loading equipment was developed and manufactured by Z-MaT with world class functioning parts, matching the individual components, stability and after sales service are all guaranteed.



Different Grippers



8-station Turret with Gang Tooling



Work Feeder Station



Gang Tooling with Live Tooling



# CNC MACHINE -R SERIES

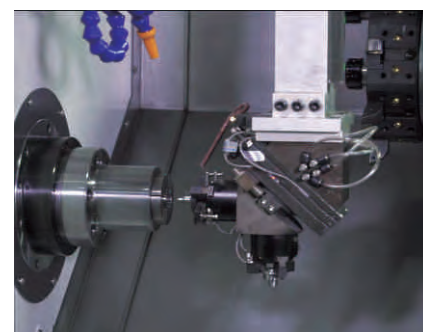
## AUTOMATION WITH GANTRY ROBOT

### Standard Features

- 8-Station Turret (SL6-R)
- Gang Type(FL300-R)
- Automatic Air Blow
- Hydraulic 3-Jaw Chuck 6"
- SYNTEC Robot Controller
- Factory Integrated Gantry
- Swivel Head Robot Chuck
- Dot Matrix Feeder Station

### Optional Features

- Tool Setter
- Live Tooling
- Different Turret
- Oil Mist Collector
- Automatic Chip Conveyor
- Customized Automatic Gripper
- Different Spindle Bore Diameters
- Customized Work Feeder Station



## 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



SL6-R



FL300-R

We only list two models as referenced below,  
Numerous other models are available  
With gantry robot solutions.

## Specifications

	Unit	SL6-R			FL300-R			
<b>Capacity</b>	Chuck/Collet	inch	Hydraulic collet *hydraulic chuck 6		Hydraulic collet *hydraulic chuck 6			
	Max. Length of Workpiece	mm	80		80			
	Max. Swing Dia. over Bed	mm	Φ400		Φ300			
	Max. Swing Dia. over Slide	mm	Φ210		Φ135			
<b>Spindle</b>	Spindle Bore	mm	Φ48,	*Φ55	*Φ62	Φ48	*Φ55	*Φ62
	Max. Dia. of Through-Hole	mm	Φ40	*Φ46	*Φ52	Φ40	*Φ46	*Φ52
	Spindle Nose	type	A2-5	A2-5	A2-6	A2-5	A2-5	A2-6
	Max. Spindle Speed	rpm	3000	2500	2000	3000	2500	2000
			*4500	*4500	*4000	*4500	*4500	*4000
	Main Motor Power	kW	5.5/7.5			5.5/7.5		
<b>Axis</b>	X Axis Travel	mm	250			350		
	Z Axis Travel	mm	250,*350			300		
	X/Z Axis Rapid Traverse	m/min	20/20			25/25		
	Max. Feed Speed	m/min	8			8		
<b>Turret</b>	No. of Tool Stations	Nos	8, *12			4-6		
	Tool Shank Size	mm	20 × 20, *16 × 16			20×20		
<b>Gantry Robot</b>	Controller	-	Syntec			Syntec		
	Lift Capacity	Kg	6			6		
	Workpiece Capacity	Kg	1, *2.5			1, *2.5		
	Rapid Traverse	m/min	80			80		
	Transmission Type	-	Gear type			Gear type		
	Guideway	-	Linear guideway			Linear guideway		
Repeatability Position	mm	±0.05			±0.05			
<b>Others</b>	Power Capacity	kVA	12			10		
	Overall Dimension(L×W×H)	mm	3310 × 1750 × 2530			3010 × 1750 × 2430		
	Weight(about)	kg	3000			2500		

NOTE: "\*" means optional.



# 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



VT600

## 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.



### Specifications

	Unit	VT400	VT600
<b>Capacity</b>	Max. swing dia.	mm	Φ550
	Max. cutting dia.	mm	Φ450
	Max. cutting height	mm	420
<b>Chuck</b>	Chuck type	Hydraulic chuck	
	Chuck size	inch	12"
<b>Spindle</b>	Spindle speed	rpm	2500
	Main motor power	kW	15/18
	Spindle nose		A2-8
<b>Turret</b>	Turret center height	mm	125
	No. of tools	nos	8-station
	Tool shank size	mm	32X32
			40X40
<b>Axis</b>	X/Z axis travel	mm	350(+300/-50)/450
	X/Z axis rapid traverse	m/min	15/18
<b>Accuracy</b>	Positioning X/Z	mm	0.015/0.015
	Repeatability X/Z	mm	0.005/0.008
	Machining	IT	IT6
<b>Others</b>	Power consumption	kVA	22
	Dimension (LxWxH)	mm	1850X1700X2500
	Weight (About)	kg	7500

Note: "\*" means optional.





# 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	Gang type tool, *Quick change
		toolpost	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 (LxWxH)	mm	1650X820X1800	1300X820X1650
Weight (about)	kg	1300	1500

Note: " \* " means optional.

## Tool Room Functionality

These versatile, universal use machines were designed for customers around the world who need machines for general use – or small space production. With their compact design and “easy-to-use” functionality these accurate but heavy-duty small-sized production quality machines will fit a wide range of applications – from tool room settings, to lab room R & D, small shop production or personal use in the family garage.



Full guarded type

### Specifications

	Unit	ZM400
Table size	mm	1000X250
T slot(widthXnos.Xdistance)	mm	14X3X55
Max. load	kg	250
X/Y/Z axis travel	mm	400/250/300
X/Y/Z axis rapid traverse	m/min	9/9/9
Spindle nose to table	mm	210
Spindle center to column	mm	375
Guideway type	N/A	Box: X/Y/Z
Spindle type	N/A	BT30
Main servo motor	kW	2.2
Spindle speed	rpm	100-3000
Overall dimension (LxWxH)	mm	1500X1500X2200
Weight (about)	kg	1700



Semi-guarded type



### Specifications

	Unit	VMC550E
Table size	mm	800X305
T slot(widthXnos.Xdistance)	mm	14x3x85
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 (LxWxH)	mm	2250x2000x2200
Weight (about)	kg	2600

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



# 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
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(LXWXH)	mm	1900X1210X1600
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

The large swing radius on the CK62110 lathe provides an efficient option for turning rocker arms, or other long, narrow diameter parts.



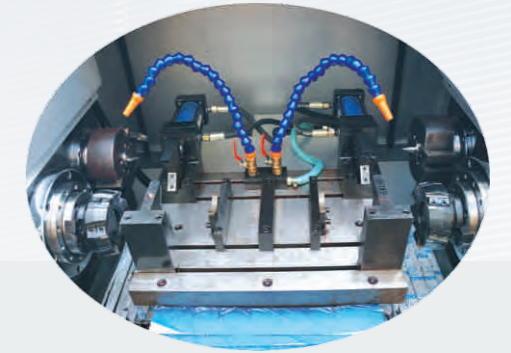
### Specifications

Gap-Bed Lathe	Unit	CK62110
Chuck	inch	Manual 10", *12", *15"
Max. swing dia. in the gap	mm	Φ1100
Max. swing dia. over bed	mm	Φ400
Max. length in the gap	mm	250
Max. length of workpiece	mm	400
Spindle bore	mm	Φ55, *Φ81, *Φ105
Spindle speed	rpm	1600, *800
Main motor power	kW	5.5, *7.5
X/Z axis travel	mm	320/400
X/Z rapid traverse	m/min	6/9
Turret type		4-station toolpost
Guideway type		Hard
Overall dimension(LXWXH)	mm	2100X1350X1800
Weight(about)	kg	2300

Note: "\*" means optional.

## 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.



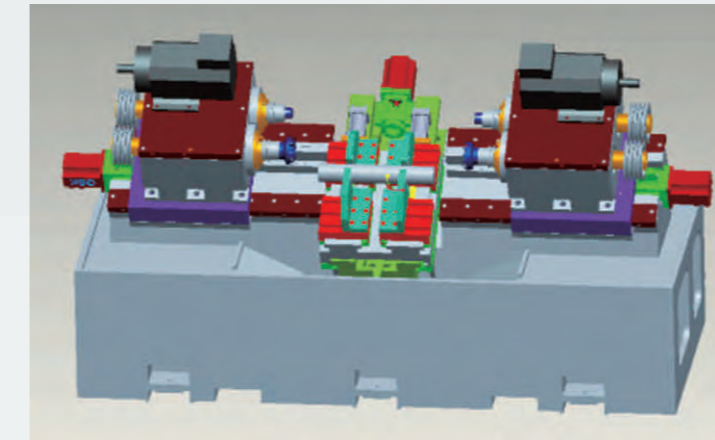
## Multi-tool FL300-MT



### Specifications

	Unit	FL300-MT	
<b>Capacity</b>	Chuck/collet type	Hydraulic collet	
	Bed type/ guideway	Flat/LM	
	Max. swing dia. over bed	mm	Φ300
	Max. length of workpiece	mm	300
<b>Spindle</b>	Max. swing dia. over slide	mm	Φ135
	Spindle bore	mm	Φ48
	Max. dia. of through hole	mm	Φ40
	Spindle nose		A2-5
<b>Axis</b>	Spindle speed	rpm	3000
	Spindle motor power	kW	*4500
	Spindle motor power	kW	*4500
<b>Toolpost</b>	X/Z travel	mm	3.7/5.5, *5.5/7.5
	X/Z rapid traverse	mm/min	350/300
	X/Z rapid traverse	mm/min	25/25
<b>Sub-tools</b>	Type		Gang type
	No. of tool stations	No.	*4-station toolpost
	X2/Z2 travel	mm	4-10
	X2/Z2 rapid traverse	m/min	60/90
<b>Others</b>	Toolpost type		Gang type
	No. of sub tools	nos	2
	Sub-tool distance	mm	55mm
<b>Others</b>	Power capacity	kVA	9
	Dimensions (LxWxH)	mm	1700x1200x1550
	Weight(about)	kg	1800

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



### Specifications

	Unit	STK50	
<b>Capacity</b>	Machining Dia. Range	mm	Φ20-70
	Machining length Range	mm	200-700
	Size of Centering	mm	Φ2.5-6.3
	Max Milling Depth.(one Side)	mm	5
<b>Spindle</b>	Speed Spindle	m/min	200-2000
	Spindle Motor	kW	5.5/7.5x2
	Spindle Nose	Type	BT50
<b>Axis</b>	Turning Tool		Special Toolholder
	Center Collet		Milling Collet
<b>Clamping</b>	X/Y/Z travel	mm	250/280/280
	X/Y/Z rapid traverse	mm/min	10
<b>Others</b>	Structure		Double V support self-positioning
	Driven		Hydraulic
	Clamping force	kN	15
<b>Others</b>	Bed degree	mm	30°
	Machine weight (about)	kg	3500



# SPM SERIES Special Purpose Machine



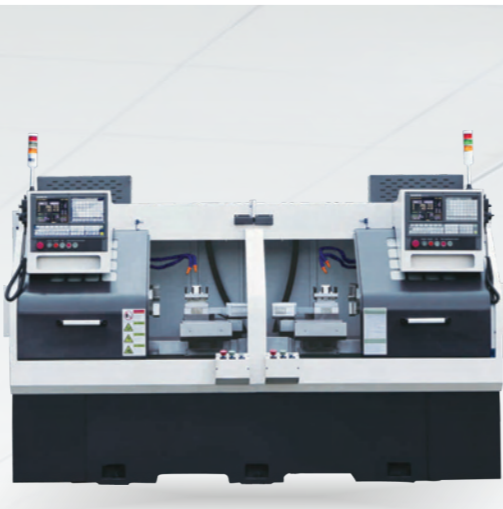
CK6163-F



SPM CK6163-F For Steering Rod



Two Directional Center Spindle Machine



Mirror Structure CNC lathe S-CK350



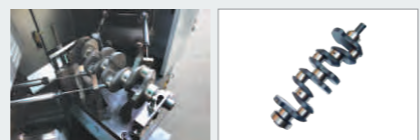
FL630



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.



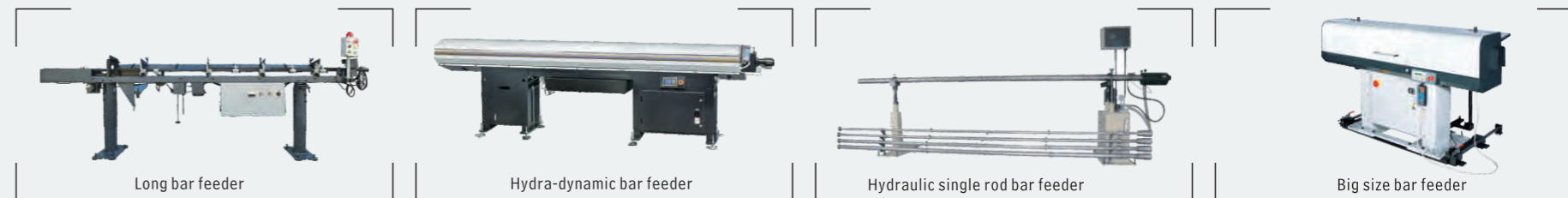
## Always Innovating & Providing Solutions

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.

## Bar Feeders

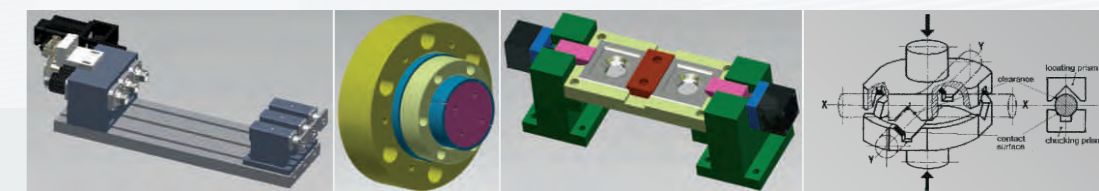


## High Value Human Resources

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





# Workpiece Samples

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



## Partners & Quality Components

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



## 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.



### 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.



### 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
- Overseas existing or planned service center