

Z-MaT

Smart CNC Solutions

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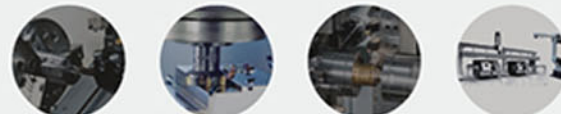


PRODUCTS



Turning
Milling
Turn-mill
Automation

General Catalogue



2018 Edition 04 **English**



Smart CNC Solutions

#1 - Wide Range of Smart CNC Machines

The Z-MaT Advantages

Wide Range of CNC Products

We have a CNC machine tailor-made for your application

Superior Component Quality

All machines are built using quality, precision grade components – including spindles, electrical parts, linear guides and ball screws, turrets and chucks.

Special Fixture Designs

We design and manufacture special fixtures for specific industry applications.

Secondary Machining Operations

Machine Complex Parts in a Single Operation: Z-MaT provides industry leading live tooling design applications. We offer precision bi-directional live tooling and hydraulic brakes. Z-MaT live tooling is capable of Y/C Axis interpolation using axial, radial and vertically driven tool holders.

Special Purpose Machines

Custom designs for purpose built machine tools. This service is provided to customers who need a special machine to produce large quantities of complex parts.

Z-MaT

Professional Technical Team

The Z-MaT technical team members are knowledgeable and well-trained. Each of our technicians has many years of experience handling a wide range of machining applications for customers around the world. Give us a call – let us help you determine which machine best fits your needs.

Flexible Configuration Options

We will configure the machine that most efficiently and profitably fulfills your machining requirements. Our wide range of CNC machines and tooling options can be configured in a variety of combinations.

Attention to Ergonomics

Full consideration is given to designs for operator comfort and productivity. Standard or optional configurations options include adjustable panel, hand-held MPG, auto lube system and operator safety features.

Superior Customer Care

Z-MaT's #1 Promise – We return customer calls within 18 hours. When you contact us, a knowledgeable English speaking sales engineer will be in contact to answer your questions. The same promise applies to service and machine support – we have repair parts in-house and in dealer stock to handle worldwide service requests.



-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, CNC Milling Machines and Special Purpose Machines.

In addition, Z-MaT is recognized for the company's advanced development and technological advantage in the field of live tooling products. Live tooling operations include axial and radial milling, drilling and tapping. These live tooling applications are available on a wide variety of Z-MaT CNC turning machines.

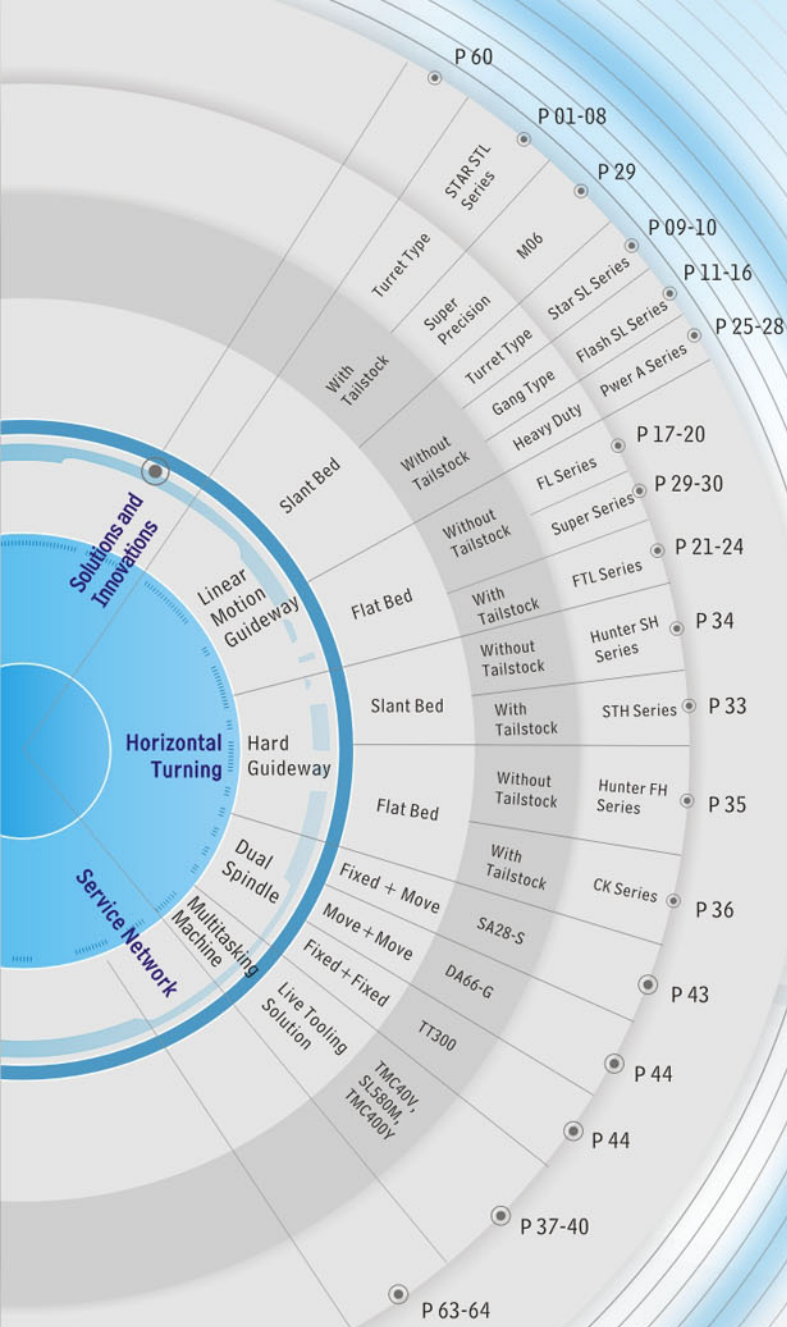
Timeline of Z-MaT Development:

- 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 as a replacement for the domestic Chinese brand and logo. supplying complete smart manufacturing solutions for machining small to medium sized parts.
- 2017** In 2017 Z-MaT established second plant in Nanjing city, 3 times the area of existing headquarter factory. Larger size machine and Gantry Milling will be made in the new Plant. The production capacity will be increased extraordinarily.
- 2018** In 2018 Z-MaT exported CNC machines to over 60 countries and is a recognized pioneer and leader in supplying complete smart manufacturing solutions for machining small to medium sized parts.

As of today, Z-MaT has **More Than 200 Models** of CNC machines in the company product line. This broad line of CNC lathes has brought recognition to Z-MaT as a world-wide leader in precision turning machines.

With distribution around the world, investment from Hong Kong, research and development centered in Taiwan, and manufacturing/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.



Types of Machines

HORIZONTAL TURNING

Linear Motion Guideways

Slant Bed

- With Tailstock
 - Turret Type - Star STL Series01-08
 - Super Precision - M0629
- Without Tailstock
 - Turret Type - Star SL Series09-10
 - Gang Type - Flash SL Series11-16
 - Heavy Duty - Power A Series25-28

Flat Bed

- With Tailstock - FTL Series21-24
- Without Tailstock - FL Series17-20
 - Super Series29-30

Hard Guideways

Slant Bed

- With Tailstock - STH Series33
- Without Tailstock - Hunter SH Series34

Flat Bed

- With Tailstock - CK Series36
- Without Tailstock - Hunter FH Series35

Dual Spindle

- Fixed & Move - SA28-S43
- Move & Move - DA66-G44
- Fixed & Fixed - TT30044

Multi-Tasking Machines

- TMC40V, SL580M, TMC400Y37-40

VERTICAL LATHE45-46

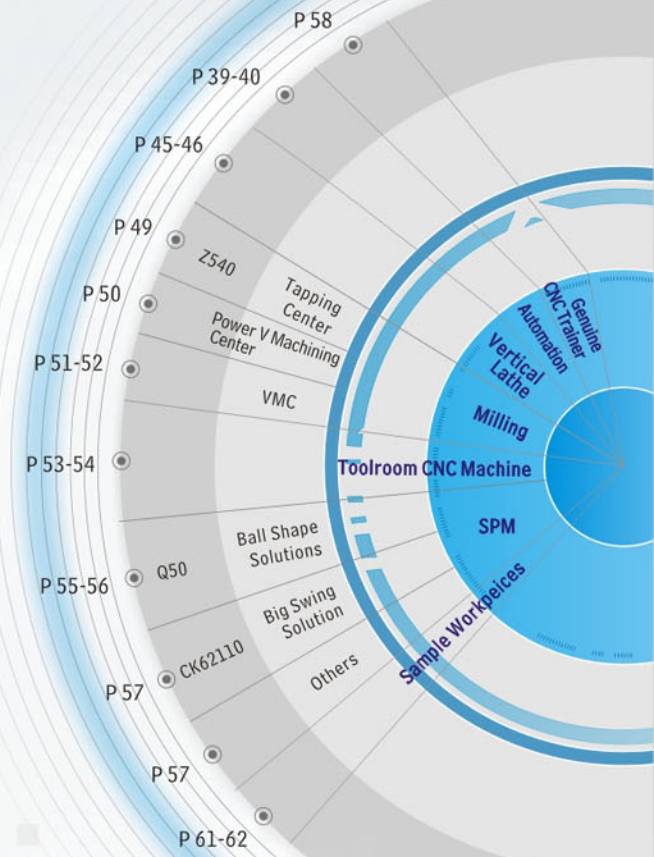
MILLING

- Tapping Center - Z54049
- Power V Machining Center50
- Vertical Machining Center - VMC51-52

TOOLROOM CNC MACHINING53-54

SPM

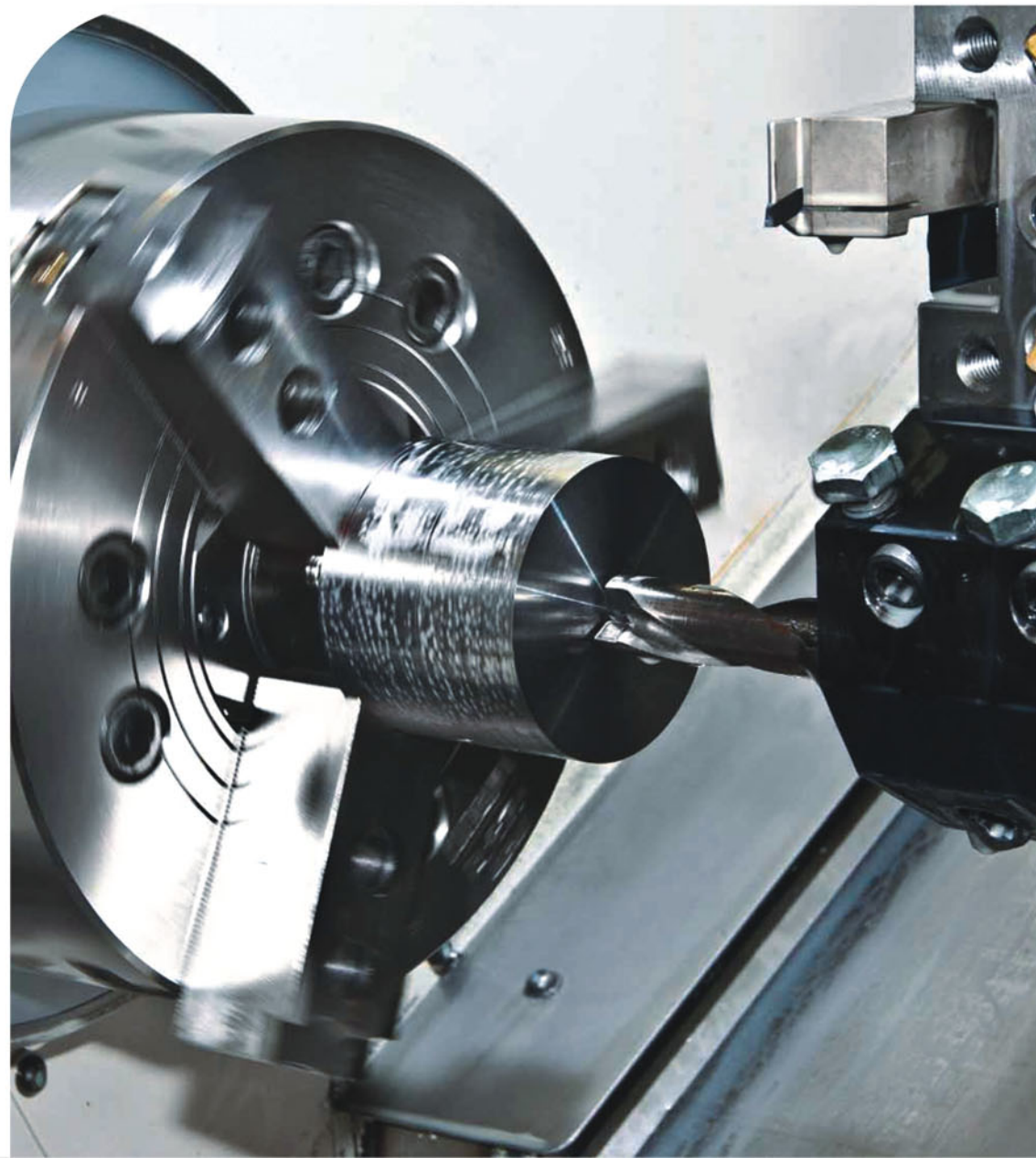
- Ball Shape Solutions - Q5055-56
- Big Swing Solution - CK6211057



STAR FAMILY Turning Centers

STAR STL/ SL/ TN/ TS SERIES

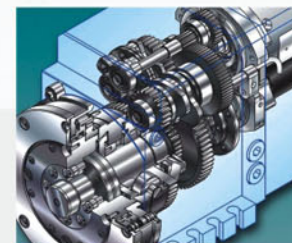
The STAR family of CNC lathes features a cast mono-block, slant bed design and has configurable tooling options. The **SL Series** lathes are typically equipped with a **high-speed bi-directional indexing turret** and a **hydraulic chuck**. The **STL series** adds a **tailstock** to the lathe features. The STAR family is comprised of two series of lathes – SL (**S**lant bed with **L**inear Guideways) and the STL (**S**lant Bed, **T**ailstock and **L**inear Guideways).



STAR STL SERIES The Foundation for Success

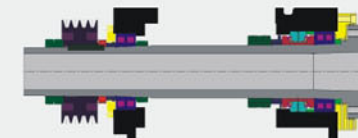
Turret Features

Indexing, bi-directional **8-Station Turret** is standard on the STL. **12-Station Turret** is optional. High quality, high speed turret provides optimal tool change efficiency and speed.



Rigid Headstock and Spindle

Heavy duty spindle nose is supported by a double row of tapered **cylindrical roller** bearings. Back of spindle is supported by angular ball bearings and a double row of cylindrical roller bearings. This combination provides the very best combination of speed and rigidity.

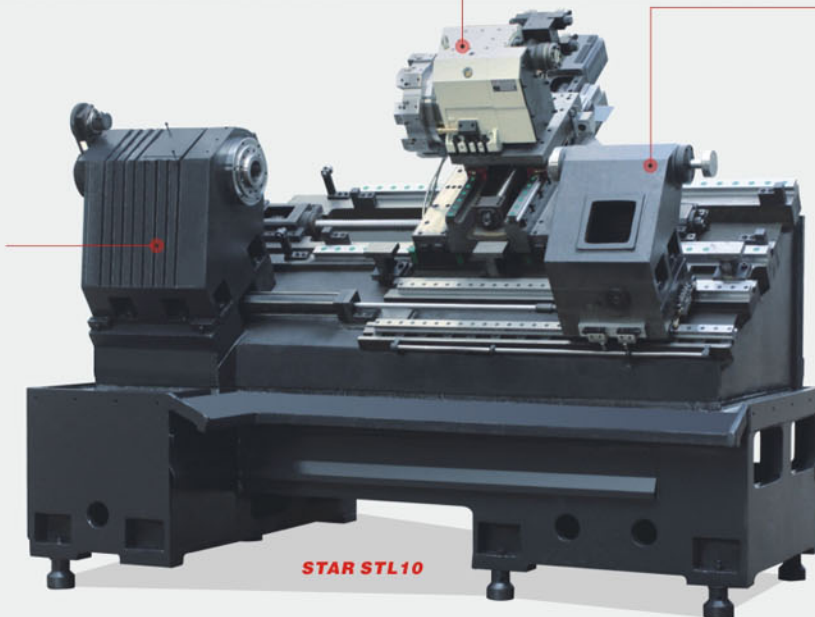


Heavy-Duty Cast Iron Base – PLUS, Quality Components

STL lathes have a heavy-duty cast base with "true align" slant bed design. The machine bed, headstock, 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.



Hydraulic Programmable Tailstock

This efficient tailstock provides a combination of rigidity, accuracy and rapid set-up times. The tailstock body, with cylindrical roller linear guideway is positioned by a hydraulic traction bar. Servo Programmable tailstock is also available as an option on STL10/STL12/TN600.



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

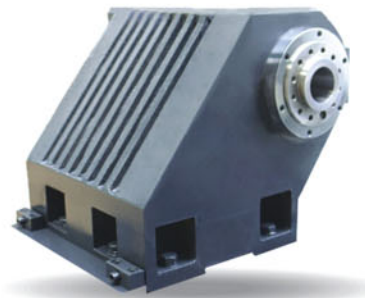


STAR STL6 SL6 STL8 STL8-II TN500 SL8'S base and bed are **One-piece casting** monoblock design.

SPINDLE & TURRET FEATURES

Star Family Turning Center

STL6 / STL8 / STL8-II / STL10 / STL12 / SL6
SL8 / SL10 / SL12



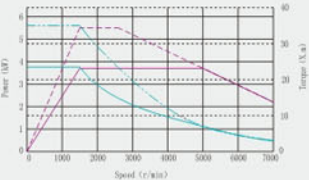
Combined Speed and Rigidity

Machines come standard with a direct mount spindle. Cartridge type spindle units are available as an option.

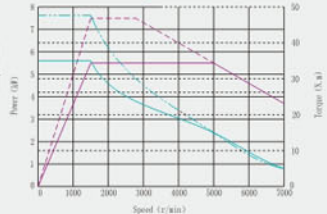
The headstock and main spindle are manufactured then assembled and tested in clean room. Heavy duty type spindle is supported by a double-row tapered **cylindrical roller** bearing plus angular ball bearing and double-row cylindrical roller bearing in the rear. It is a perfect marriage of speed and rigidity.

SPINDLE MOTOR TORQUE DIAGRAM

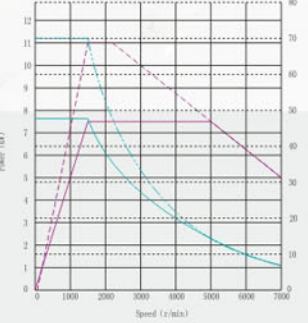
STAR STL6 / SL6



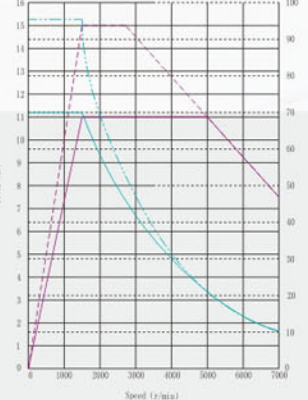
STAR STL8, STL8-II / SL8



STAR STL10 / SL10



STAR STL12 / SL12



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



Cartridge Type Spindle As Optional

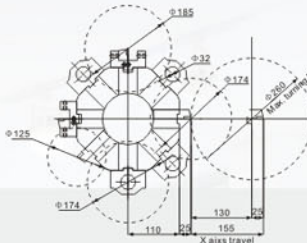
Note: The real spindle output torque are converted by actual belt pulley ratio, please contact sales representative to get more technical details.

Various High Class Turret

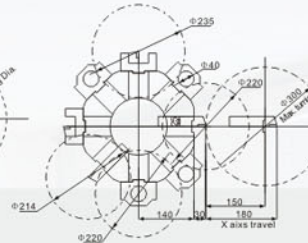
Increase efficiency and reliability

Tool Interference Diagram

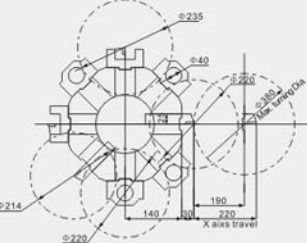
STAR SL6 BTP63-8



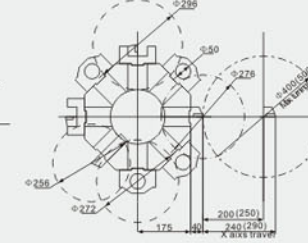
STAR STL8/STL8-II BTP80-8



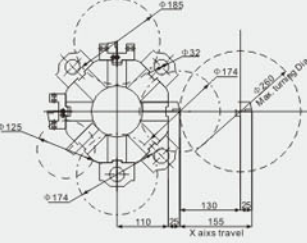
STAR SL8 BTP80-8



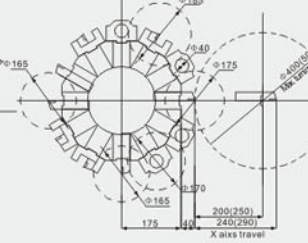
STAR STL10/SL10(STL12/SL12) BTP100-8



STAR STL6 BTP63-8



STAR STL10/SL10(STL12/SL12) BTP100-12



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

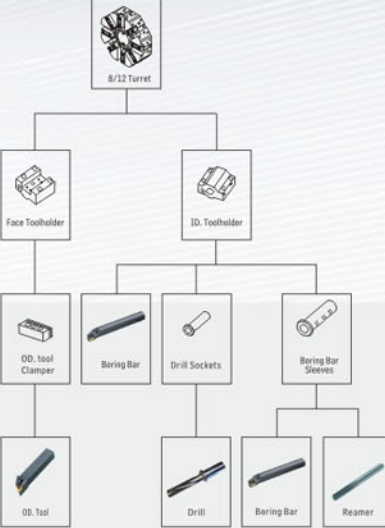
Optional Hydraulic Turret Z-MaT Adopted Standard Turret



Servo

TOOLING SYSTEM

STAR STL6/STL8/STL8-II/STL10/STL12/SL6/SL8
SL10/SL12



Hydraulic

BUILT-IN MOTOR SPINDLE & POWER TURRET FEATURES

TN500/TN600/TS60

Built-in Motor Spindle



C Axis Motion

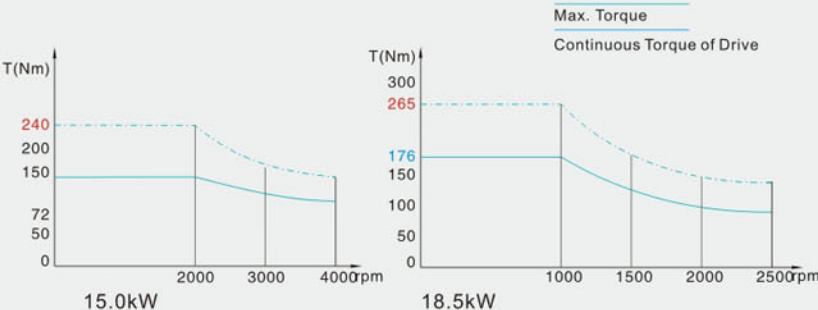
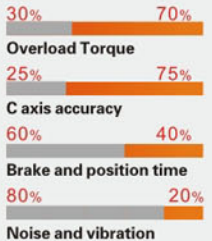
PMSM(spindle permanent magnet synchronous motor) type Direct Driven Spindle provides high-precision C axis motion that is fully interpolated with X and Z Motion.

■ Belt driven Spindle
■ Direct Driven Spindle

Direct Driven Spindle

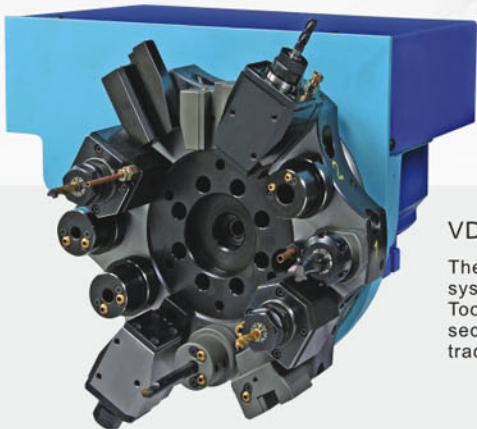
Electrical Spindle (Built-in Motor) offers high torque, better overload capability and high speed accelerate which shorten cycle time and increase productivity than Belt driven traditional spindle. The machining is running with less vibration and less noise, together with better accuracy. It represents New Generation Turning Center.

Overload Protection and **Oil Coolant** are standard features to guarantee long term stability.



Powerful Driven Tool Turret

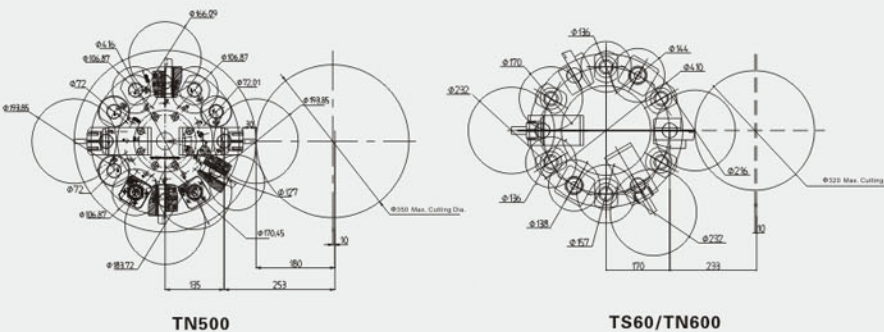
Standard with 12-station driven tool turret, features bi-directional indexing and non-lifting. High quality, high speed power turret provides optimal tool change efficiency and speed. Robust construction of internal elements ensures smooth transmission of high torque and speed. Only tool in position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



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



Tooling System

TN500/TN600/TS60

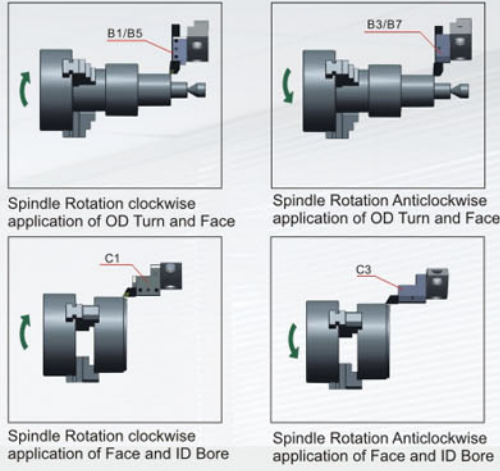
TN500
VDI30/12-STATION



TN600 & TS60
VDI40/12-STATION



| | | |
|---|---|--|
|  | ★[ATH-30ER25-80] ★[ATH-40ER32-80] • Compact size is option | ER25 ER32 |
| 0 degree live tool holder on Axial(Face)direction | | |
|  | ★[RTH-30ER25-80] ★[RTH-40ER32-80] • Compact size is option | ER25 ER32 |
| 90 degree live tool holder on Radial(OD) direction | | |
|  | ★[B1 (30 20 40)] [B5 (30 20 40)] ★[B1 (40 25 44)] [B5 (40 25 44)] *B5 is extra length design | <input type="checkbox"/> 20 <input type="checkbox"/> 25 |
| Application of OD turn and face | | |
|  | ★[C1 (30 20)] ★[C1 (40 25)] | <input type="checkbox"/> 20 <input type="checkbox"/> 25 |
| Application of ID Bore and face | | |
|  | ★[Z2 30] ★[Z2 40] | |
| Plug to seal VDI hole | | |
|  | ★[E2 (30x32)] ★[E2 (40x32)] *Other sizes option | Φ32 Φ32 |
| Boring Bar tool holder | | |
|  | ☆[E1 (30x32)] ☆[E1 (40x32)] *Other sizes option | Φ32 Φ32 |
| Through Coolant Boring tool holder | | |
|  | ☆[E4 (30x25)] ER25 ☆[E4 (40x25)] ER25 ☆[E4 (30x32)] ER32 ☆[E4 (40x32)] ER32 ☆[E4 (30x40)] ER40 ☆[E4 (40x40)] ER40 | |
| Er Collet tool holder | | |
|  | ○[BP 30] 8-60/54-110 ○[BP 40] 8-66/54-110 | |
| Bar Puller | | |
|  | ☆[B3 (30 20 40)] [B7 (30 20 40)] ☆[B3 (40 25 40)] [B7 (40 25 40)] *B7 is extra length design | <input type="checkbox"/> 20 <input type="checkbox"/> 25 |
| Application of OD turn and face | | |
|  | ☆[C3 (30 20)] ☆[C3 (40 25)] | <input type="checkbox"/> 20 <input type="checkbox"/> 25 |
| Application of ID Bore and face | | |



Note:

I .The codes in [e.g. C1 (30 20)] is purchasing codes. Written in Blue color is for TN500, written in red color is for TN600/TS60.

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 . ○ mark means that the tool holders seldom used. Majority of customers don't need to consider it.

VI. There are more different VDI standard toolholders, you may get from your closest local market or consult Z-MaT's sales reps. for further details.

Usage Scenario



STAR STL SERIES

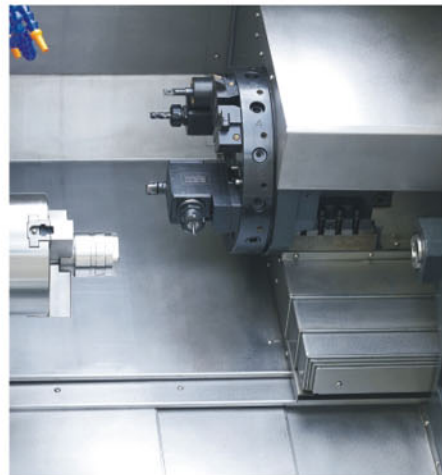
Slant bed, Tailstock, Linear guideway

Standard Features

- Hydraulic 3-Jaw Chuck
- 8-Station Turret (STL series)
- 12-Station Power Turret (TN, TS)
- Automatic Lubrication System
- Automatic Coolant System
- Automatic Tailstock (STL10, STL12, TN600)
- Hydraulic Tailstock (STL6, STL8)

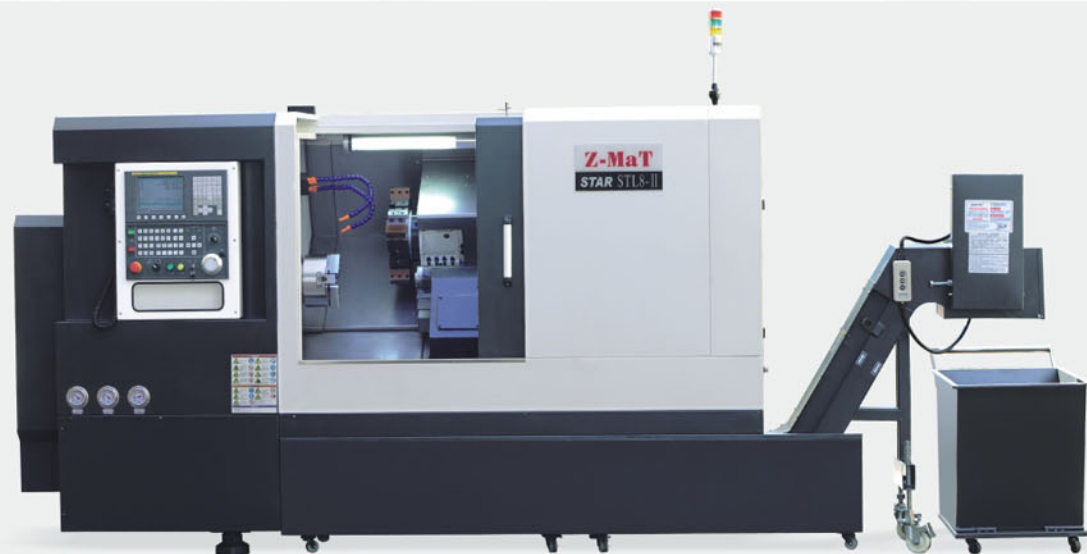
Optional Features

- 12-Station Turret
- Different Chucks and Collets
- Different CNC Control Systems
- Different Spindle Bore Diameters
- Chip Conveyor
- Tool Setter
- Bar Feeder



Machine Characteristics

- Cast Mono-Block, "True Align" Slant Bed Structure
- Adjustable "Ergonomic" Operator Control Panel
- Servo Spindle Motor – High Speed with Constant Torque
- Handheld Electronic Hand Wheel
- Schneider Superior Quality Electrical Components
- Cylindrical Roller Spindle Bearings and LM for STL10/STL12/TN500/TN600



FULL RANGE OF TURNING CENTERS



Specifications

| | Unit | STL6 | STL8 | STL8-II | STL10 | STL12 | TN500 | TN600 |
|-----------|----------------------------|-------------------|----------------|----------------|----------------------|-----------------------|----------------|----------------|
| Capacity | Chuck size | inch 6", *8" | 8", *10" | 8", *10" | 10", *8" | 12", *15" | 8 | 10, *12 |
| | Max. swing dia. over bed | mm Φ 400 | Φ 420 | Φ 420 | Φ 500 | Φ 550 | Φ 500 | Φ 600 |
| | Max. length of workpiece | mm 300 | 400 | 500 | 750 | 750 | 400 | 750 |
| | Max. swing dia. over slide | mm Φ 200 | Φ 210 | Φ 210 | Φ 270 | Φ 290 | Φ 280 | Φ 380 |
| Spindle | Spindle bore | mm Φ 48 | * Φ 55 | * Φ 62 | Φ 62 | * Φ 75 | Φ 62 | * Φ 75 |
| | Max. dia. of through-hole | mm Φ 40 | * Φ 46 | * Φ 52 | Φ 52 | * Φ 65 | Φ 52 | * Φ 65 |
| | Spindle nose | type A2-5 | *A2-5 | *A2-6 | A2-6 | *A2-8 | A2-6 | *A2-8 |
| | Spindle speed | rpm 3000 | *2500 | *2000 | 2000 | *1600 | 1600 | *2000 |
| Axis | Main motor power | kW 5.5/7.5 | 7.5/11.0 | 7.5/11.0 | 7.5/11.0, *11.0/15.0 | 11.0/15.0, *15.0/18.0 | 15 | 15 |
| | X axis travel | mm 155 | 180 | 180 | 280 | 280 | 265 | 280 |
| | Z axis travel | mm 300 | 400 | 500 | 750 | 750 | 400 | 750 |
| | X/Z rapid traverse | m/min 18/20 | 15/20 | 15/20 | 15/20 | 15/20 | 15/20 | 15/20 |
| Turret | Max. speed of driving tool | rpm N/A | N/A | N/A | N/A | N/A | 5000/6000 | 4500/5000 |
| | No. of tool stations | nos 8, *12 | 8, *12 | 8, *12 | 8, *12 | 8, *12 | 12 | 12 |
| | Tool shank size | mm 20x20, *16x16 | 25x25, *20x20 | 25x25, *20x20 | 25x25 | 25x25 | VDI30 | VDI40 |
| Tailstock | Type of tailstock | Hydraulic, *LM | Hydraulic, *LM | LM | LM | LM | Hydraulic, *LM | LM |
| | Taper of tailstock quill | MT4 | MT4 | MT4 | MT5 | MT5 | MT4 | MT5 |
| | Travel of tailstock quill | mm 80 | 80 | 80 | 0 | 0 | 80 | 0 |
| | Travel of tailstock | mm 300 | 400 | 100-500 | 100-750 | 100-750 | 400 | 100-750 |
| Structure | Slant bed degree | 35° | 35° | 35° | 35° | 35° | 35° | 35° |
| | Guideway type | LM | LM | LM | LM | LM | LM | LM |
| Others | Power capacity | KVA 13 | 15 | 15 | 18 | 20 | 24 | 25 |
| | Overall dimension (LxWxH) | mm 2130x1450x1600 | 2600x1720x1775 | 2800x1850x1830 | 3200x1900x2000 | 3200x1900x2000 | 2650x1720x1890 | 3220x1950x2000 |
| | Weight (about) | Kg 2500 | 3300 | 3400 | 5000 | 5200 | 3400 | 5200 |

Note: "*" means optional, "LM" means linear motion guide way, automatic hydraulic driven body move tailstock.

STAR SL SERIES

Slant bed, Linear guideway

Standard Features

- Hydraulic 3-Jaw Chuck
- 8-Station Turret
- 12 station power turret (TS60)
- Work Light
- Tri-Color Alarm Light
- Automatic Lubrication System
- Automatic Coolant System

Optional Features

- 12-Station Turret
- Different Chucks and Collets
- Different CNC Control Systems
- Different Spindle Bore Diameters
- Chip Conveyor
- Tool Setter
- Bar Feeder



SL Turning Centers Feature a Compact Design – Without Tailstock
SL has Same Performance as STL – At a Lower Price Point

Machine Characteristics

- Cast Mono-Block, “True Align” Slant Bed Structure
- Compact Design (No Tailstock) – Perfect for Automation Options
- Adjustable “Ergonomic” Operator Control Panel
- Servo Spindle Motor – High Speed with 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 for SL10/SL12/TS60 with Rigid Upgrade



Specifications

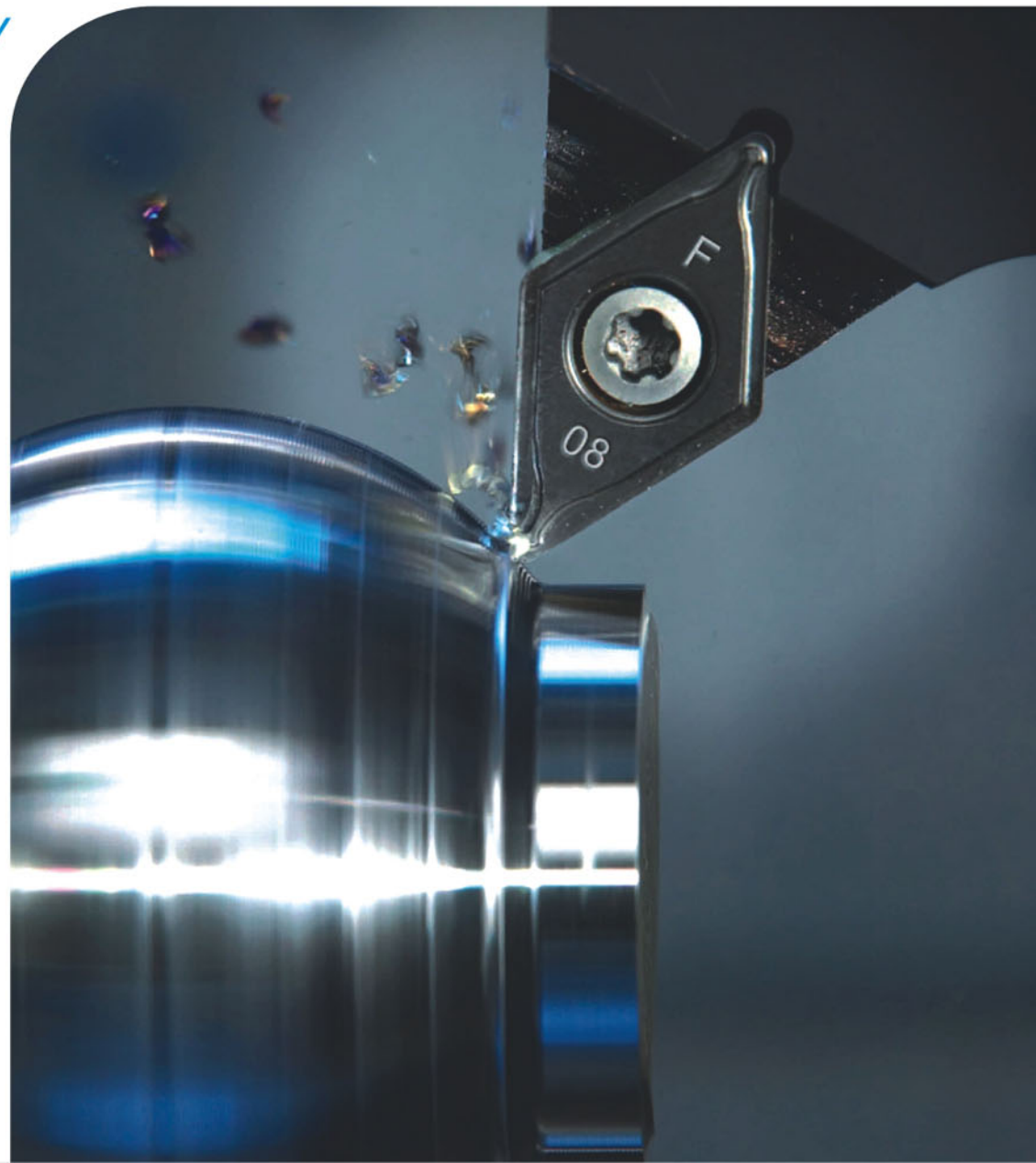
| | Unit | SL6 | SL8 | SL10 | SL12 | TS60 |
|---------------------------|----------------------------|-------------------|----------------|--------------------|----------------------|----------------|
| Capacity | Chuck size | inch 6", *8" | 8" | 10", *8" | 12", *15" | 10", *12 |
| | Max. swing dia. over bed | mm Φ400 | Φ420 | Φ500 | Φ550 | Φ600 |
| | Max. length of workpiece | mm 230 | 320 | 400 | 400 | 400 |
| | Max. swing dia. over slide | mm Φ200 | Φ220 | Φ270 | Φ290 | Φ380 |
| Spindle | Spindle bore | mm Φ48 | *Φ55 | *Φ62 | *Φ81 | *Φ100 |
| | Max. dia. of through-hole | mm Φ40 | *Φ46 | *Φ52 | *Φ70 | *Φ90 |
| | Spindle nose | type A2-5 | *A2-5 | *A2-6 | *A2-8 | *A2-8 |
| | Spindle speed | rpm 3000 | *2500 | *2000 | *1600 | *2500 |
| Axis | Main motor power | kW 3.7/5.5 | *5.5/7.5 | 5.5/7.5, *7.5/11.0 | 7.5/11.0, *11.0/15.0 | 15 |
| | X axis travel | mm 155 | 250 | 280 | 280 | 280 |
| | Z axis travel | mm 230 | 320 | 400 | 400 | 400 |
| | X/Z rapid traverse | m/min 20/25 | 12/20 | 15/20 | 15/20 | 15/20 |
| Turret | Max. speed of driving tool | rpm N/A | N/A | N/A | N/A | 4500/5000 |
| | No. of tool stations | nos 8, *12 | 8, *12 | 8, *12 | 8, *12 | 12 |
| | Tool shank size | mm 20x20, *16x16 | 25x25, *20x20 | 25x25 | 25x25 | VDI40 |
| Others | Slant bed degree | 35° | 45° | 35° | 35° | 35° |
| | Guideway type | LM | LM | LM | LM | LM |
| Power capacity | | KVA 11 | 13 | 16 | 18 | 25 |
| Overall dimension (LxWxH) | | mm 2050x1450x1900 | 2050x1550x1850 | 2700x1730x1900 | 2700x1700x1900 | 2750x1800x1900 |
| Weight (about) | | Kg 2100 | 2650 | 4500 | 4800 | 4500 |

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

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

SL Stands For: Slant Bed with Linear Guideway
SL280/ SL340/ SL400/ SL580

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.

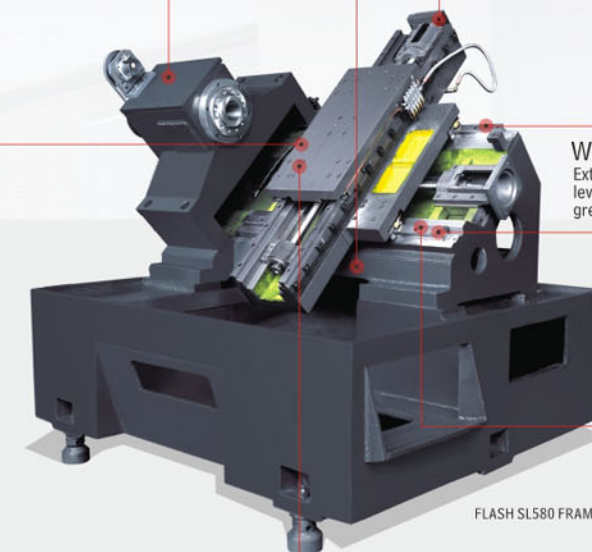


Sleeve-Type Follow Rest

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

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.



FLASH SL580 FRAME

Wide Spaced Linear Guideways

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

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.



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.

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, SL400's base and bed are one-piece casting, monoblock design.

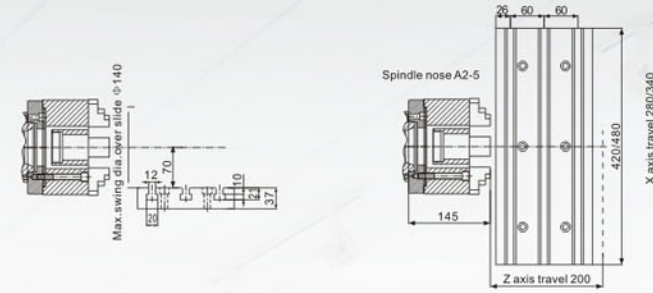
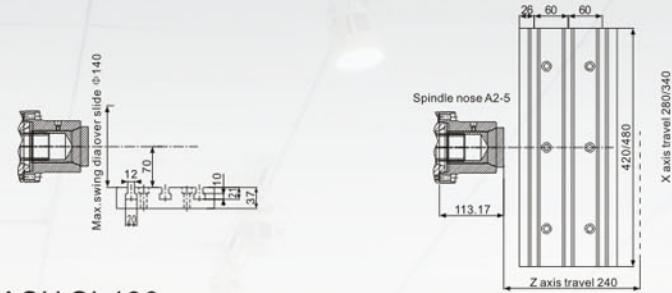
FLASH SL FEATURES

Chuck/Table Interface Diagrams

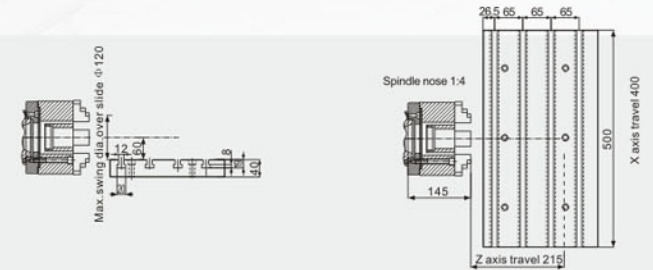
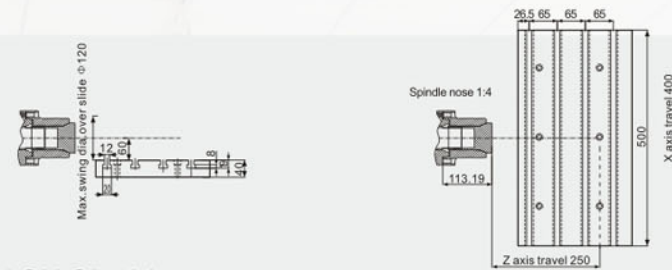
FLASH SL280/ SL340

Collet

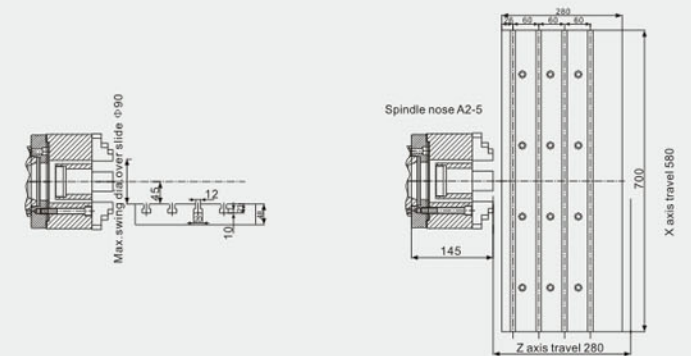
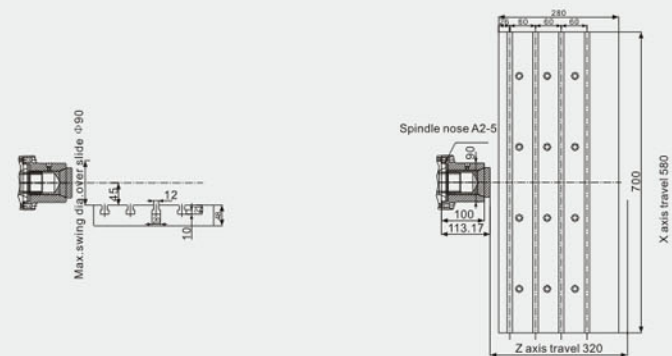
Chuck



FLASH SL400



FLASH SL580



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



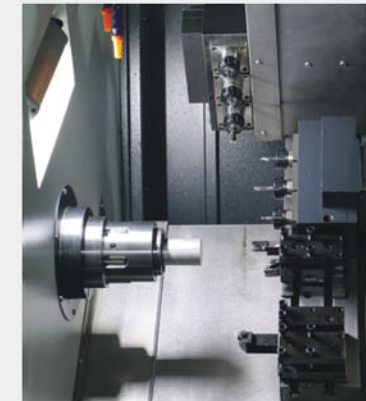
The machining accuracy can easily reach **<0.01mm**

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

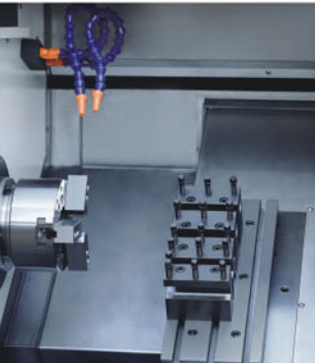
Slant bed, Linear guideway

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 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.



Full Range of Turning Machines



Specifications

| | | Unit | SL280 | SL340 | SL400 | SL580 |
|-----------|-----------------------------|-------|--|--|--|--|
| Capacity | Chuck/collet | | Hydraulic Collet *Hydraulic Chuck 6", *8" | Hydraulic Collet *Hydraulic Chuck 6", *8" | Hydraulic Collet *Hydraulic Chuck 6", *8" | Hydraulic Collet *Hydraulic Chuck 6", *8" |
| | Max. swing dia. over bed | mm | Φ420 | Φ420 | Φ400 | Φ380 |
| | Max. length of workpiece | mm | Collet 240, * Chuck 200 | Collet 240, * Chuck 200 | Collet 250, * Chuck 210 | Collet 320, * Chuck 280 |
| | Max. swing dia. over slide | mm | Φ140 | Φ140 | Φ120 | Φ90 |
| Spindle | Spindle bore | mm | Φ48 | Φ48 | Φ48 | Φ48 |
| | Max. dia. of through-hole | mm | Φ40 | Φ40 | Φ40 | Φ40 |
| | Spindle nose | | A2-5 | A2-5 | A2-5 | A2-5 |
| | Max. Spindle speed | rpm | 3000 | 3000 | 3000 | 3000 |
| Axis | Main motor power | kW | 3.7/5.5, *5.5/7.5 | 3.7/5.5, *5.5/7.5 | 5.5/7.5 | 5.5/7.5 |
| | X travel | mm | 280 | 340 | 400 | 580 |
| | Z travel | mm | 240 | 240 | 250 | 320 |
| | X/Z rapid traverse | m/min | 28/28 | 28/28 | 10/14 | 20/20 |
| Turret | Type | | Gang type | Gang type | Gang type | Gang type |
| | No. of tool stations | No. | 4~6 | 5~8 | 5~8 | 6~10 |
| | OD tool and bore tool shank | mm | 20x20 / Φ25 | 20x20 / Φ25 | 20x20 / Φ25 | 20x20 / Φ25 |
| Structure | Inclined bed degree | | 35° | 35° | 45° | 45° |
| | Guideway type | | LM | LM | LM | LM |
| Others | Power capacity | kVA | 11 | 11 | 12 | 13 |
| | Dimensions (LxWxH) | mm | 1750x1320x1500 | 2000x1600x1800 | 2000x1300x1710 | 2300x1820x1900 |
| | Weight(about) | Kg | 2000 | 2200 | 2400 | 3200 |

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

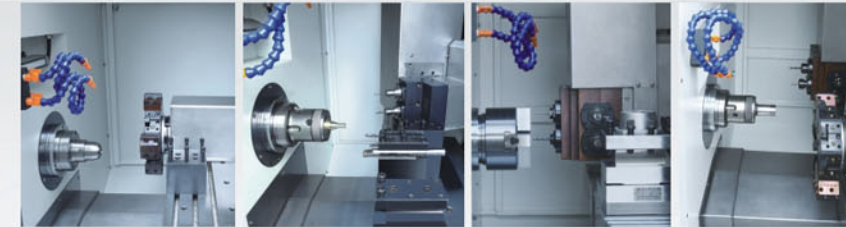
FLASH FL SERIES

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.

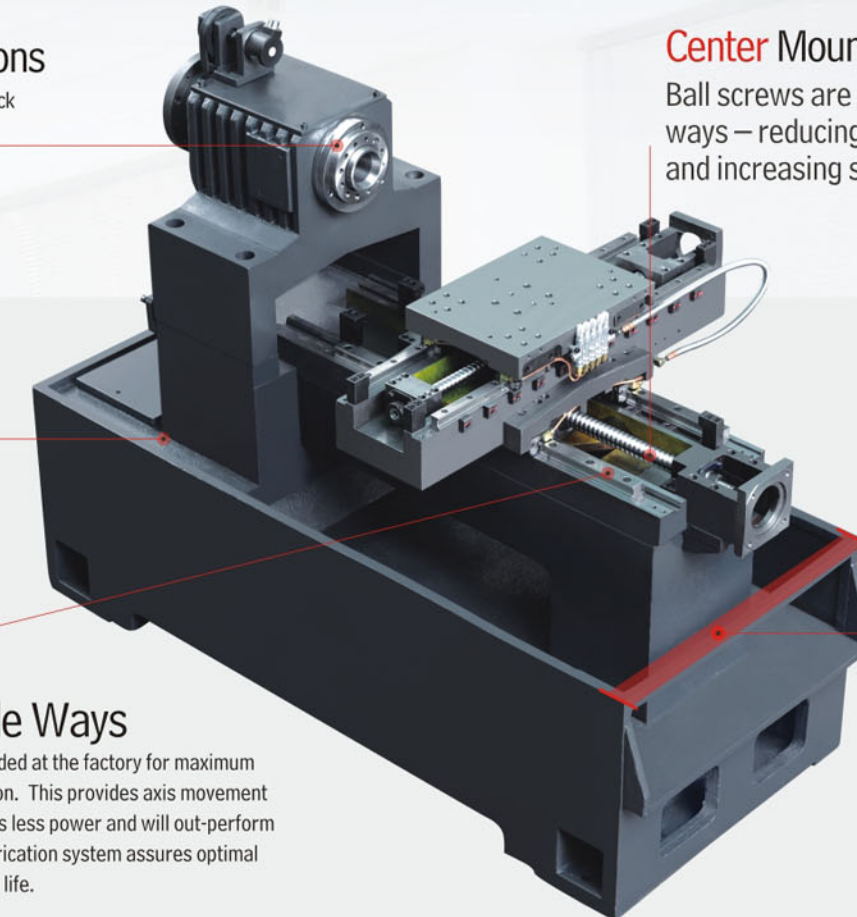
Various Spindle Options

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. Automatic lubrication system assures optimal lubrication, which maximizes machine life.

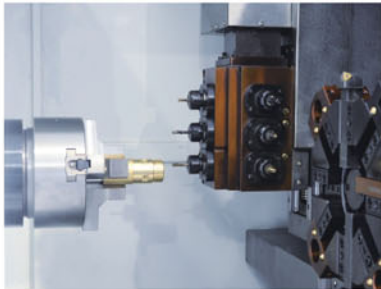
Customers report high satisfaction and high productivity with their FL Series CNC Turning Centers. That's why it's one of our biggest selling lathes!

FLASH FL SERIES

Flat bed, Linear guideway

Optional Features

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



Standard Features

- Manual 3-Jaw Chuck (FL400 and above)
- Pneumatic Collet (FL280, FL300)
- 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



Full Range of Turning Machines



Specifications

| | | Unit | FL280 | FL300 | FL400 | FL500 | FL550 | FL630 |
|-----------|----------------------------|--------|---------------------------------------|---|---|---|---|---|
| Capacity | Chuck/collet | type | Pneumatic collet *Hydraulic collet | Pneumatic collet *Hydraulic collet, "chuck 6" | Manual chuck 8" *Hydraulic chuck 8", "6" | Manual chuck 10" *Hydraulic chuck 10", "8" | Manual chuck 12" *Hydraulic chuck 12" | Manual chuck 15" *Hydraulic chuck 15" |
| | Bed type/ guideway | | Flat/LM | Flat/LM | Flat/LM | Flat/LM | Flat/LM | Flat/LM |
| | Max. swing dia. over bed | mm | Φ300 | Φ300 | Φ400 | Φ500 | Φ550 | Φ650 |
| | Max. length of workpiece | mm | 180 | 300, 180(chuck) *260 (chuck) | 320 | 500 | 500 | 450 |
| Spindle | Max. swing dia. over slide | mm | Φ120 | Φ135 | Φ180 | Φ360 | Φ360 | Φ380 |
| | Spindle bore | mm | Φ37 | Φ48 *Φ55 *Φ62 | Φ62 Φ48 | Φ81 *Φ62 | Φ105 | Φ120 |
| | Max. dia. of through hole | mm | Φ32 | Φ40 *Φ46 *Φ52 | Φ52 Φ40 | Φ70 *Φ52 | Φ91 | Φ110 |
| | Spindle nose | | Φ68 1:4 | A2-5 *A2-5 *A2-6 | A2-6 A2-5 | A2-8 *A2-6 | A2-11 | A2-11 |
| Axis | Spindle speed | rpm | 3000 | 3000 *2500 *4500 *4000 | 2000 *2000 *3500 *4000 | 3000 *2500 *3500 *4000 | 1600 *2000 *1800 | 1000 |
| | Spindle motor power | kW | 3 | 3.7/5.5, *5.5/7.5 | 5.5/7.5 | 5.5/7.5, *7.5/11 | 7.5/11, *11/15 | 11/15, *15/18.5 |
| | X/Z travel | mm | 250/180 | 350/300 | 380/350 | 260/500, *350/500 | 260/500, *350/500 | 350/500 |
| | X/Z rapid traverse | mm/min | 15/15 | 25/15, *25/25 | 20/20 | 12/9 | 12/9 | 20/20 |
| Tool post | 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 | 4-station toolpost *8-station turret *Gang type tooling |
| | No. of tool stations | No. | 4-6 | 4-10 | 4-10 | 4-10 | 4-10 | 4-10 |
| Others | Power capacity | kVA | 8 | 9 | 11 | 12 | 15 | 18 |
| | Dimensions (LxWxH) | mm | 1700x1200x1550 | 1700x1200x1550 | 1950x1250x1620 | 2650x1360x1800 | 2650x1360x1800 | 2650x1360x1800 |
| | Weight(about) | Kg | 1300 | 1800 | 2000 | 2700 | 2800 | 3000 |

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

FLASH FTL SERIES



Machine Characteristics

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

The World's *First* and *Best* Design

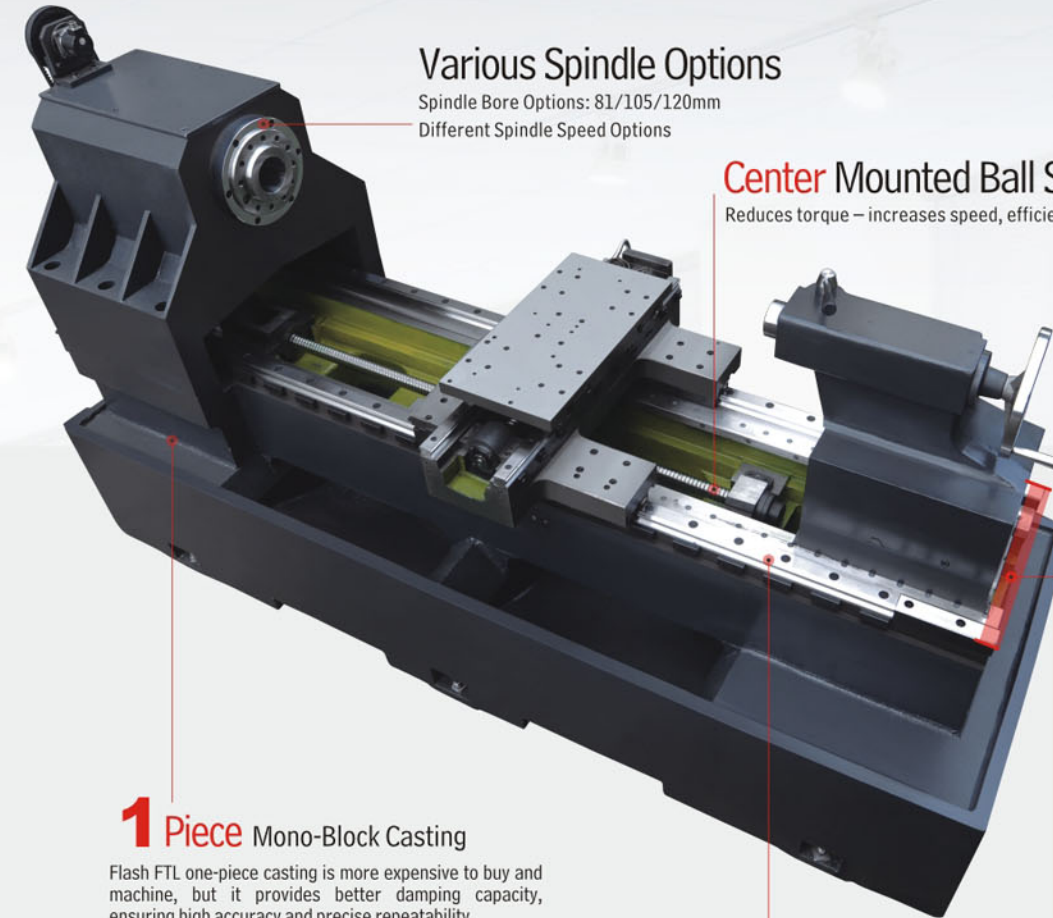
You will be hard pressed to find another linear guide way type CNC lathe that has a center mounted ball screw and stainless covers over the full 1.5 meter length of the ball screw and guide ways. This unique, Z-MaT patented design provides the perfect combination of long-term speed, accuracy and repeatability 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.

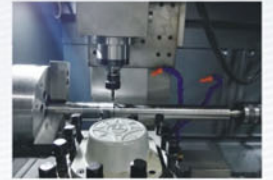
500mm Wide Machine Base

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

Various option features



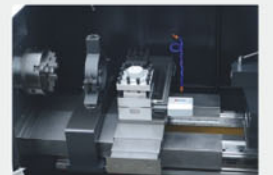
8 stations turret



Vertical live tool (Y axis)



Hydraulic steady rest



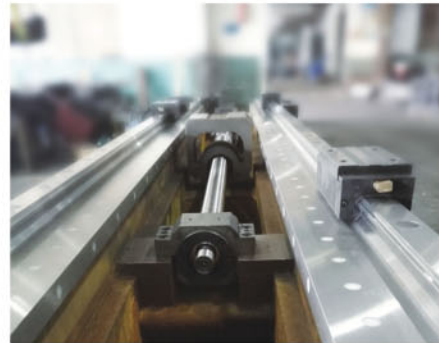
Manual steady rest



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
- Hydraulic Tailstock
- Bar Feeder
- C Axis & Live Tooling
- C Axis & 12 station Power Turret



Full Range of Turning Machines



Specifications

| | | Unit | FTL300 | FTL320 (*T) | FTL400 (*T) | FTL500 (*T) | FTL550 (*T) |
|---------------|----------------------------|-------|--|---|--|--|--|
| Capacity | Chuck size | type | 6", *8" | 6", *8" | 8" | 10", *8" | 12", *15" |
| | Bed type /guideway | | Flat/LM | Flat/LM | Flat/LM | Flat/LM | Flat/LM |
| | Max. swing dia. over bed | mm | Φ 300 | Φ 400 | Φ 400 | Φ 500 | Φ 550 |
| | Max. length of workpiece | mm | 180 | 380(4 toolpost) *300(8 station turret) | 650(center to center) 500(chuck to center) 450(8/12 station turret) | 1000/1500(center to center) 850/1350(chuck to center) *750/1250 (8/12 station turret) | 1000/1500(center to center) 850/1350(chuck to center) *750/1250 (8/12 station turret) |
| Spindle | Max. swing dia. over slide | mm | Φ 135 | Φ 140 | Φ 220 | Φ 260 | Φ 320 |
| | Spindle bore | mm | Φ 48 | *Φ 55 | Φ 55 | *Φ 62 | Φ 62 |
| | Max dia. of through hole | mm | Φ 40 | *Φ 46 | Φ 46 | *Φ 52 | Φ 52 |
| | Spindle nose | | A2-5 | *A2-5 | A2-5 | *A2-6 | A2-6 |
| Spindle speed | | rpm | 3000 | *2500 | 2500 | *2000 | 2000 |
| | | | *4500 | *4000 | *4000 | *3500 | *3500 |
| Axis | | | *5000 | *5000 | *4000 | *4000 | *4000 |
| | Main motor power | kW | 4.0, *5.5 | 4.0, *5.5 | 5.5, *7.5 | 7.5, *11, *15 | 11, *15 |
| | X/Z travel | mm | 300/200 | 280/380 | 280/650 | 280/1000, 280/1500 | 280/1000, 280/1500 |
| | 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 |
| Tool post | Type | | 4-station toolpost *gang type tooling | 4-station toolpost *8-station turret *gang type tooling | 4-station toolpost *8-station turret *gang type tooling | 4-station toolpost *8-station turret *gang type tooling | 4-station toolpost *8-stations turret *gang type tooling |
| | 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 |
| Tailstock | Tailstock type | | Manual, * Hydraulic | Manual, * Hydraulic | Manual, *Hydraulic | Manual, *Hydraulic | Manual, *Hydraulic |
| | Taper of quill | MT | MT4 | MT4 | MT4 | MT5 | MT5 |
| | Travel of tailstock quill | mm | 80 | 80 | 100 | 100 | 100 |
| Others | Power capacity | kVA | 9 | 13 | 13 | 15 | 18 |
| | Dimensions (LxWxH) | mm | 1800x1580x1600 | 2200x1500x1600 | 2500x1400x1500 | 3400x1600x2010 | 3400x1600x2010 |
| | Weight (about) | Kg | 1600 | 2100 | 2600 | 4300 / 4800 | 4500 / 5000 |

Note: "*" means optional, "N/A" means not available, "LM" means linear motion guide way.
**T" means configured with turret and other higher configuration.

Power A Series Turning Centers

A6 / A8 / 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 / A8 / A8L

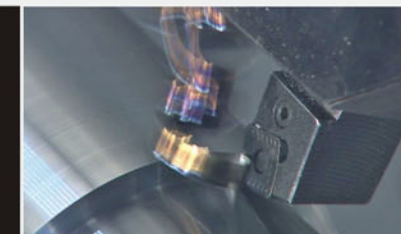
- 60° steep inclined bed, closer to operator
- 300% double size chip tank larger than Flash SL series
- 280% sized linear guide way slide block
- 45mm width heavy duty linear guideway
- 40mm ballscrew diameter

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 A8 rough cutting parameter

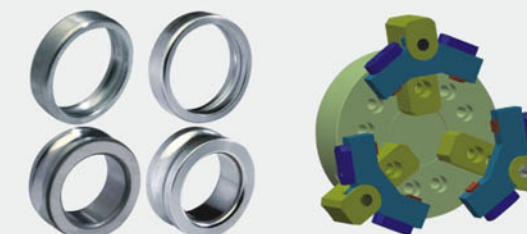


- **Depth of cut**
9mm(0.35in)

| | |
|----------------|---------------------|
| 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.



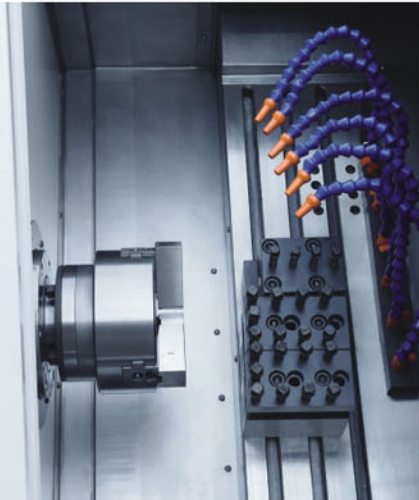
Floating jaws

POWER A SERIES

Built for High Speed Heavy Cutting

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

60° (Degree) Slant Bed

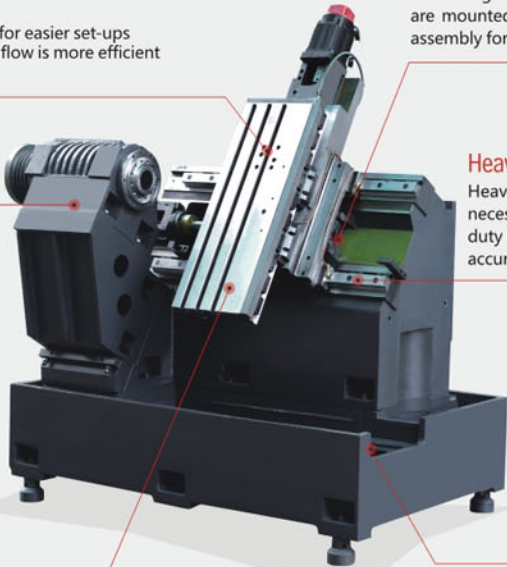
Operator is close to tooling stations for easier set-ups and tool changes. Chip and coolant flow is more efficient with the steeper table incline.

Heavy Duty Spindle

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

Extended X Axis Travel

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



POWER A8L

Larger Ball Screw Diameter

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

Heavier Linear Guideways

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

High Volume Chip Collection

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

FULL RANGE OF TURNING MACHINE



Specifications

| | | Unit | POWER A6 | | POWER A8 | | | POWER A8L | | |
|-----------|----------------------------|-------|----------------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Capacity | Collet/*Chuck size | inch | 6", * 8" | | 8", * 10" | | | 8", * 10" | | |
| | Max. swing dia. over bed | mm | Φ500 | | Φ500 | | | Φ550 | | |
| | Max cutting length | mm | 250 | | 250 | | | 250 | | |
| | Max. swing dia. over slide | mm | Φ160 | | Φ140 | | | Φ200 | | |
| Spindle | Spindle bore | mm | Φ48 | *Φ55 | Φ55 | *Φ62 | *Φ75 | Φ55 | *Φ62 | *Φ75 |
| | Max dia. of through hole | mm | Φ40 | *Φ45 | Φ45 | *Φ52 | *Φ65 | Φ45 | *Φ52 | *Φ65 |
| | Spindle nose | | A2-5 | *A2-5 | A2-5 | *A2-6 | *A2-8 | A2-5 | *A2-6 | *A2-8 |
| | Spindle speed | rpm | 3000 | *1600 | 1600, *4000, *5000 | *2000 | *1600 | 1600, *4000, *5000 | *2000 | *1600 |
| | Main motor power | kW | 7.5 | | 11 | | | 11 | | |
| Axis | X axis travel | mm | 250 | | 280 | | | 380 | | |
| | Z axis travel | mm | 250 | | 250 | | | 250, *300 | | |
| | X/Z rapid traverse | m/min | 12/12 | | 12/12 | | | 12/12, *20/20 | | |
| Tool post | Type of toolpost | | Gang type | | Gang type | | | Gang type | | |
| | No. of tool stations | nos | 4-6 | | 4-6 | | | 4-8 | | |
| | OD tool shank size | mm | 32X32 | | 32X32 | | | 32X32 | | |
| Structure | Slant bed degree | | 60 | | 60 | | | 60 | | |
| | Guideway type | | Linear Motion | | Linear Motion | | | Linear Motion | | |
| Others | Power capacity | kVA | 12 | | 16 | | | 16 | | |
| | Overall dimension (LxWxH) | mm | 2100X1600X1750 | | 2350X1650X1780 | | | 2350X1650X2050 | | |
| | Weight (about) | Kg | 2800 | | 3200 | | | 3500 | | |

Note: "*" means optional.

SUPER 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



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 M06 |
|------------|-----------------------------|--------------------------|
| Capacity | 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 $\Phi 160$ |
| Spindle | 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 |
| Axis | X axis travel | mm 160 |
| | Z axis travel | mm 320 |
| | X/Z rapid traverse | m/min 25/25 |
| | | |
| Turret | Center height | mm 80 |
| | No. of tool stations | nos 8, *12 |
| | Tool shank size | mm 25x25 |
| *Tailstock | Type of tailstock | *Hydraulic, *LM |
| | Taper of tailstock quill | *MT4 |
| | Travel of tailstock quill | mm *80 |
| | Travel of tailstock | mm *80 |
| Structure | Slant bed degree | 30° |
| | Guideway type | LM |
| Others | Power capacity | KVA 13 |
| | Overall dimension (LxWxH) | mm 1850x1880x1780 |
| | Weight | 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

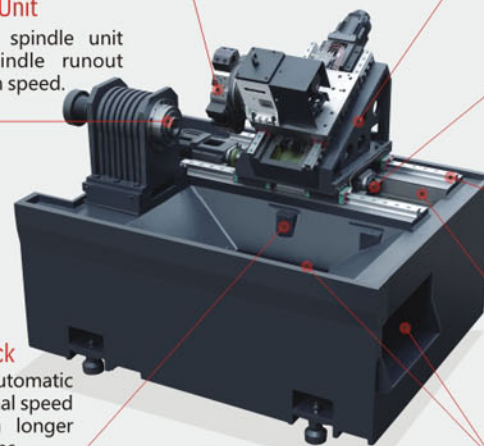
Large diameter cylindrical roller linear guideways – allows for heavy cutting at high accuracy.

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.



Specifications

| | Unit | SUPER P30H | SUPER SP28 |
|----------|----------------------------------|----------------------|-------------------------------------|
| Capacity | Max. swing dia. over bed | mm $\Phi 300$ | $\Phi 300$ |
| | Max cutting length | mm 160 | 180 |
| | Max. swing dia over slide | mm $\Phi 80$ | $\Phi 90$ |
| | | | |
| Spindle | Spindle bore | mm $\Phi 36$ | * $\Phi 26$ $\Phi 37$ |
| | Bar dia. capacity of hyd. collet | mm $\Phi 30$ | * $\Phi 20$ $\Phi 28$ |
| | Nose type | $\Phi 54mm$ 1:1 | * $\Phi 40$ 1:1 $\Phi 68$ 1:4 |
| | Spindle speed | rpm 4000 | *5000 5000 |
| | Main motor power | kW 2.2/3.7, *3.7/5.5 | 3.7/5.5, *5.5/7.5 3.7/5.5, *5.5/7.5 |
| Axis | X axis travel | mm 250 | 290 |
| | Z axis travel | mm 180 | 180 |
| | X/Z rapid traverse | m/min 20/20 | 28/28 |
| | | | |
| Toolpost | Type of tool post | Gang type | Gang type |
| | No. of tool stations | 4-6 | 4-7 |
| | ODTool shank size | mm 16X16 | 16X16 |
| | | | |
| Others | Power capacity | kVA 6.5 | 9 |
| | Bed /Guideway type | Flat /Linear motion | 35° Slant bed / Linear motion |
| | Overall dimension (LxWxH) | mm 1420X1200X1550 | 1500X1660X1760 |
| | Weight (about) | Kg 1400 | 1800 |

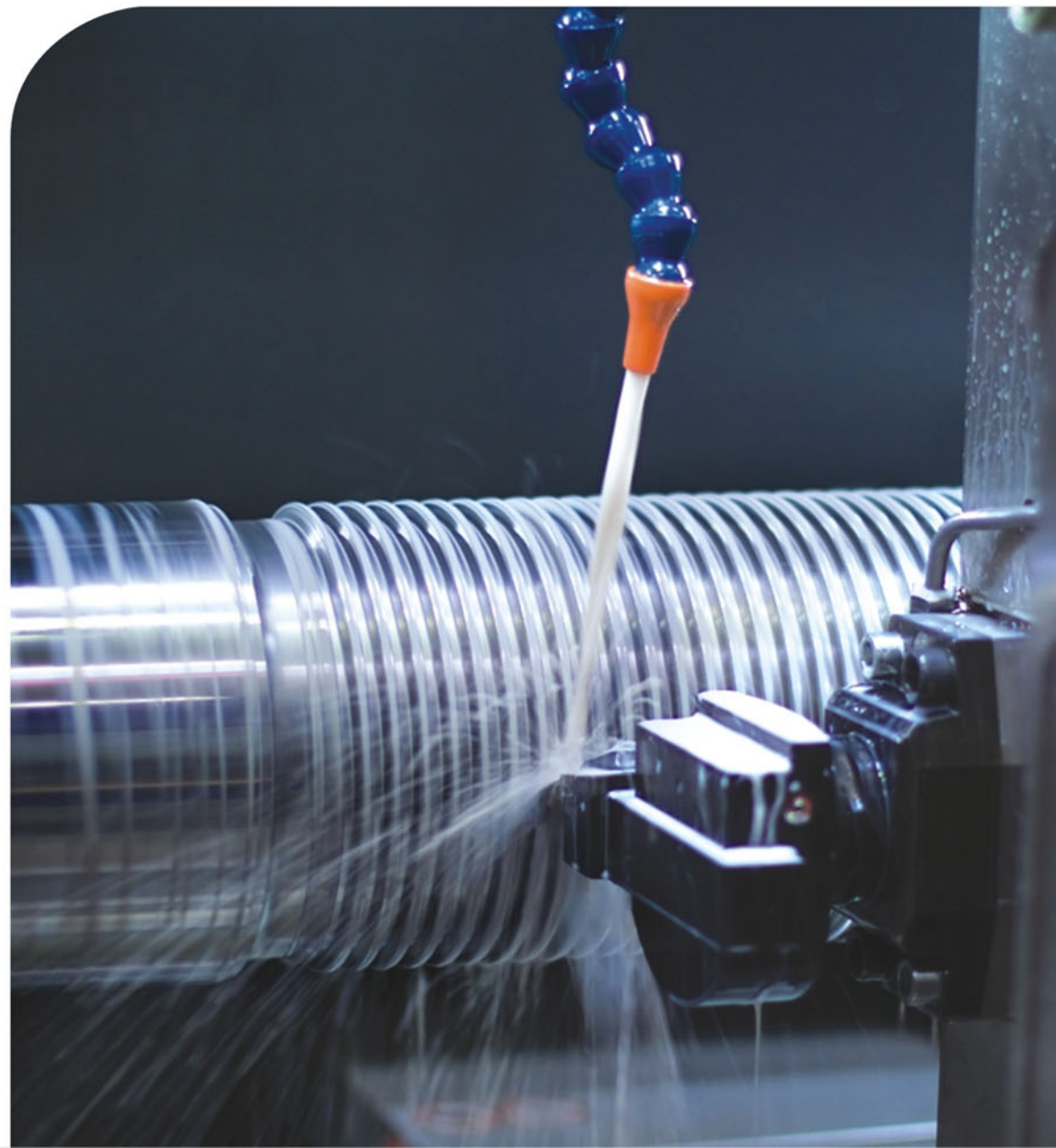
Note:"*" means optional.

Hunter Family Turning Centers

HUNTER STH/ SH/ FH SERIES

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

The three series of HUNTER CNC lathes includes the STH(Slant Bed with Tailstock), the SH (Slant Bed Without Tailstock), and the FH (Flat Bed) lathe series.



HUNTER SERIES

STH / SH / FH

*Constant Research and
Ongoing Product Refinement*

Evolving a Lathe Tradition:

Improving the Flat Bed Box Way

Design for CNC Turning

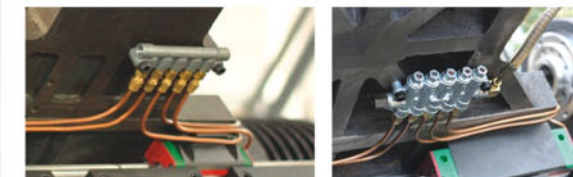
Unlike the old CK CNC lathe design, which has the ball screw mounted on the front side of the lathe bed, the HUNTER Series moved the ball screw to the middle of the lathe bed, between the ways. This eliminates friction and ball screw torque – increasing efficiency and assuring higher speeds. The HUNTER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

Z-MaT Original Design
Slant Bed Tailstock Hard guideways

Cost-Effective, Full Production Capable Slant Bed CNC Lathe

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.

Machine Characteristics

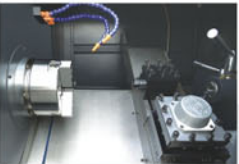
- 30 degree slant bed – efficient chip flow and easier operator access
- Ergonomically designed adjustable panel
- Center-mounted ball screw – less torsion and better accuracy
- STH10 and STH12 have cylindrical roller spindle bearings
- The most economical slant bed with tailstock in the market

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



HUNTER SH SERIES

Slant bed, Hard guideway

Full Range Of Turning Machine

Machine Characteristics

Low Friction Turcite-B Plastic Way Coating Optional C Axis and Live Tooling Large contact area between ways and carriage – allows 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.



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 |
|-----------|-------------------------------|-----------------|-----------------|--|
| Capacity | Bar dia. capacity/*Chuck size | inch 30mm | 40mm, *6" | 52mm, *8", *6" |
| | Max. swing dia. over bed | mm Φ250 | Φ300 | Φ300 |
| | Max. length of workpiece | mm 200 | 250 | 320 |
| | Max. swing dia. over slide | mm Φ80 | Φ90 | Φ140 |
| Spindle | Spindle bore | mm Φ37 | Φ48 | Φ62 |
| | Bar dia. capacity | mm Φ32 | Φ40 | Φ52 |
| | Spindle nose | Φ68 1:4 3000 | Φ90 1:4 3000 | A2-6 2000 |
| | Spindle speed | rpm | 3000 | *Φ48 *Φ40 *A2-5 *2500 *3000 *3500 *4000 *5000 |
| Axis | Main motor power | kW | 3.0 | 4.0 |
| | X axis travel | mm | 300 | 300 |
| | Z axis travel | mm | 200 | 250(collet), 160(chuck) |
| | X/Z rapid traverse | m/min | 8/9 | 8/12 |
| Tool post | Type of toolpost | Gang type | Gang type | Gang type |
| | No. of tool stations | 4-6 | 4-8 | 4-8 |
| | OD tool shank size | mm | 16X16 | 20X20 |
| | OD tool shank size | mm | 16X16 | 20X20 |
| Tailstock | Slant bed degree | 45° | 45° | 45° |
| | Tailstock | N/A | N/A | N/A |
| | Guideway type | type | Hard | Hard |
| | Guideway type | type | Hard | Hard |
| Structure | Power capacity | kVA | 7 | 8 |
| | Overall dimension (LxWxH) | mm | 1550X1100X1400 | 1650X1100X1600 |
| | Weight (about) | Kg | 1100 | 1600 |
| | Weight (about) | Kg | 1100 | 1600 |
| Others | Power capacity | kVA | 7 | 10 |
| | Overall dimension (LxWxH) | mm | 1550X1100X1400 | 1650X1100X1600 |
| | Weight (about) | Kg | 1100 | 1600 |
| | Weight (about) | Kg | 1100 | 1600 |

Note: "*" means optional.

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

Specifications

| | Unit | STH6 | STH8 | STH10 | STH12 |
|-----------|----------------------------|---|---|---|---|
| Capacity | 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 |
| Spindle | Spindle bore | mm Φ48 | *Φ55 | Φ48 | *Φ62 |
| | Max. dia of through hole | mm Φ40 | *Φ46 | Φ40 | *Φ52 |
| | Spindle nose | A2-5 3000 | *A2-5 *2500 | A2-5 3000 | *A2-6 *2000 |
| | Spindle speed | rpm *4500 | *4000 *5000 | *4500 *3500 | *3500 *2500 |
| Axis | Main motor power | kW | 4.0 | 5.5 | 7.5, *11 |
| | X axis travel | mm | 300 | 280 | 300 |
| | Z axis travel | mm | 280, *350(collet) | 300, *400(collet) | 600, 750(between two centers) |
| | X/Z rapid traverse | m/min | 8/12 | 8/12 | 9/12 |
| Toolpost | 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 |
| | OD tool shank size | mm | 20x20 | 20x20 | 25x25 |
| | OD tool shank size | mm | 20x20 | 20x20 | 25x25 |
| Tailstock | 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 |
| | Travel of tailstock | mm | 300 | 400 | 650 |
| Structure | Slant bed degree | 30° | 30° | 30° | 30° |
| | Guideway type | Hard | Hard | Hard | Hard |
| | Guideway type | Hard | Hard | Hard | Hard |
| | Guideway type | Hard | Hard | Hard | Hard |
| Others | Power capacity | kVA | 8 | 11 | 15 |
| | Overall dimension (LxWxH) | mm | 1950x1250x1600 | 2050x1300x1600 | 2500X1450X1650 |
| | Weight (about) | Kg | 1700 | 2200 | 3100 |
| | Weight (about) | Kg | 1700 | 2200 | 3100 |

Note: "*" means optional.

HUNTER FH SERIES

Flat bed, Hard guideway

Unique, Efficient Design – Ball Screw is Mounted Between FH Lathe Bed Ways

Machine Characteristics

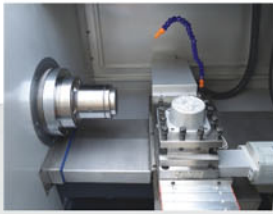
Center Mounted Ball Screw Assembly reduces friction and side torque – improving dynamic characteristics and long-term machine stability.
Telescoping, stainless steel ball screw/way guards completely protect slide operation from chips, coolant and debris.
Large contact area between bed ways and machine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



Specifications

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

Note:**** means optional.

CK SERIES

CK6125 / CK6130 / CK6136 / CK6140 / CK6150

Full Range of Turning Machines

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 |
|-----------|----------------------------|--------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Capacity | Chuck size | inch | collet, *5 | 6" | 8" | 10" |
| | Max. swing dia. over bed | mm | Φ250 | Φ300 | Φ350, *Φ400 | Φ420 |
| | Max. length of workpiece | mm | 270(collet), 170(chuck) | 400(collet), 300(chuck) | 500 | 750/1000/1500 |
| | Max. swing dia. over slide | mm | Φ130 | Φ150 | Φ160, *Φ200 | Φ210 |
| | | | | | | Φ290 |
| Spindle | Spindle bore | mm | Φ37 | Φ48 | *Φ62 | Φ55 |
| | Bar dia. capacity | mm | Φ32 | Φ40 | *Φ52 | Φ46 |
| | Spindle nose | | Φ68 1:4 | Φ90 1:4 | *A2-6 | C6 |
| | Spindle speed | rpm | 3000 | 3000 | *2000, *3500 | 1600 |
| | Main motor power | kW | 3.0 | 3.0, *4.0 | 5.5 | *7.5 |
| Axis | X axis travel | mm | 220 | 250 | 320 | 320 |
| | Z axis travel | mm | 270 | 400 | 500 | 750/1000/1500 |
| | X/Z rapid traverse | m/min | 6/9 | 6/9 | 6/9 | 6/9 |
| | | | | | | 6/9 |
| Toolpost | Type of toolpost | | 4-station toolpost, *gang type | 4-station toolpost, *gang type | 4-station toolpost, *gang type | 4-station toolpost, *gang type |
| | No. of tool stations | nos | 4 | 4 | 4 | 4 |
| | Tool shank size | mm | 16x16 | 20X20 | 20X20 | 25X25 |
| Tailstock | Type of tailstock | | Manual, *Pneumatic, *hydraulic | Manual, *Pneumatic, *Hydraulic | Manual, *Hydraulic | Manual, *Hydraulic |
| | Taper of tailstock quill | | MT3 | MT3*MT4 | MT4 | MT5 |
| | Travel of tailstock quill | mm | 80 | 100 | 100 | 130 |
| | Travel of tailstock | mm | 220 | 350 | 400 | 600 |
| Structure | Bed width | | 260 | 260 | 300 | 400 |
| | Guideway type | | Hard way | Hard way | Hard way | Hard way |
| Others | Power capacity | kVA | 5.8 | 9 | 11 | 14 |
| | Overall dimension (LxWxH) | mm | 1500X1250X1450 | 1540X1010X1570 | 1950X1220X1620 | 2430X1200X1600 |
| | Weight (about) | Kg | 1100 | 1300 | 1800 | 2800 |

Note:**** means optional.

LIVE TOOLING & MULTI-TASKING MACHINE

Secondary Machining Operations

Powerful Solution for Secondary Machining of Turned Parts

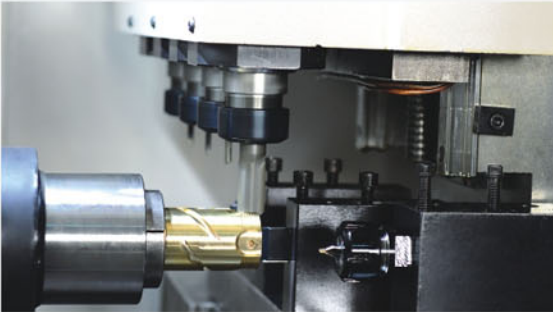
Z-MaT is a recognized leader in C Axis and live tooling technology. This strong core competence makes Z-MaT the go-to source for secondary machining operations.

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

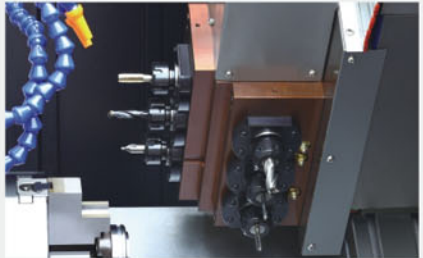
| Form | Position | Group tool nos | Max dia. of live tool | Max. speed |
|------|-------------------------|----------------|-----------------------|------------|
| ER20 | Radial, Axial, Vertical | 1、 2、 3 | φ 13mm | 5000rpm |
| ER25 | Radial, Axial, Vertical | 1、 2、 3 | φ 16mm | 5000rpm |
| ER32 | Radial,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

Able to fit for most existing Z-MaT models.



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 |

Warning:

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

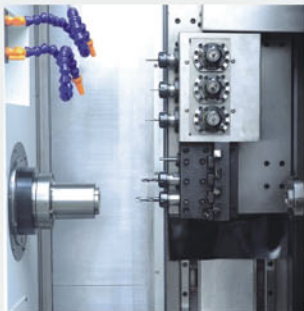
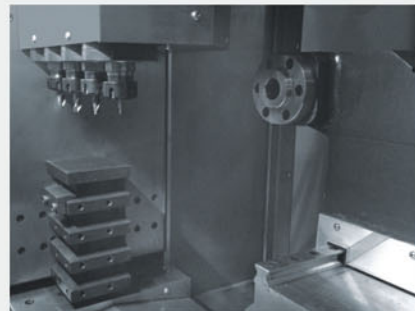
Tooling Option Labels:

- 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 | | | |
|-----------|----------------------------|-------|---|--------------|--|--------------|---|-------------|---|-------|-------|
| Structure | Bed incline degree | | 45° | | 45° | | 0° | | 90° | | |
| | Guideway type | | Linear motion | | Linear motion | | Linear motion | | Linear motion | | |
| Capacity | Chuck/Collet | N/A | 8" Hydraulic chuck/Hydraulic collet | | 8" Hydraulic chuck/Hydraulic collet | | Hydraulic collet, *6" | | Hydraulic collet, *6" | | |
| | 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 | | |
| | Max. swing dia. over slide | mm | Φ90 | | Φ90 | | Φ120 | | Φ250 | | |
| Spindle | Spindle type | N/A | A2-6 | *A2-5 | A2-6 | *A2-5 | A2-5 | *A2-6 | A2-5 | *A2-6 | |
| | Spindle bore | mm | Φ62 | *Φ48 | Φ62 | *Φ48 | Φ48 | *Φ62 | Φ48 | *Φ55 | *Φ62 |
| | Max. dia. of through hole | mm | Φ52 | *Φ40 | Φ52 | *Φ40 | Φ40 | *Φ52 | Φ40 | *Φ46 | *Φ52 |
| | Spindle speed | rpm | 2000 *3500 | *3000, *5000 | 2000 *3500 | *3000, *5000 | 3000, *5000 | 2000, *3500 | 4500 | *4000 | *3500 |
| | Main motor power | KW | 5.5/7.5 | | 5.5/7.5 | | 3.7/5.5, *5.5/7.5 | | 5.5/7.5 | | |
| | | | | | | | | | | | |
| Axis | 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 | | |
| Toolpost | Toolpost type | N/A | Gang type tools mixed with livetoolings | | 8-Station turret mixed with livetoolings | | Gang type tools mixed with livetoolings | | Gang type tools mixed with livetoolings | | |
| Tailstock | Taper of tailstock | N/A | No | | No | | No | | MT4 | | |
| | Travel of tailstock quill | N/A | No | | No | | No | | 100 | | |
| Others | Power capacity | kVA | 13 | | 15 | | 14 | | 14KVA | | |
| | Overall dimension(LXWXH) | mm | 2320X1820X1900 | | 2320X1820X1900 | | 2020X1450X1850 | | 2350X1800X2300 | | |
| | Weight (about) | Kg | 3600 | | 3600 | | 2500 | | 3200 | | |

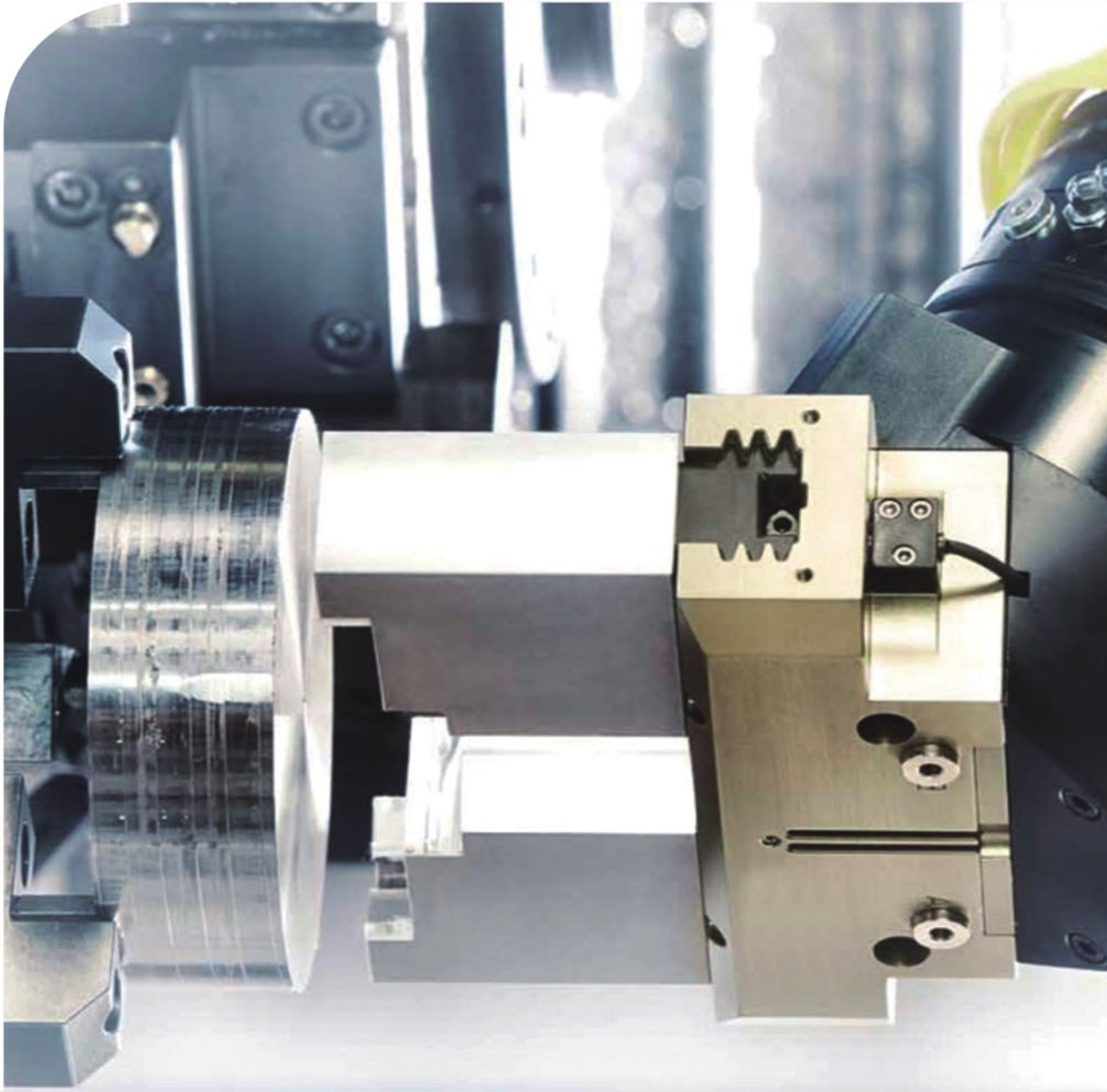
Note: "*" means optional, "N/A" means not available.

AUTOMATION ON A SINGLE MACHINE

SL6-R/SL340-R/SA28-S/DA66-G

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.



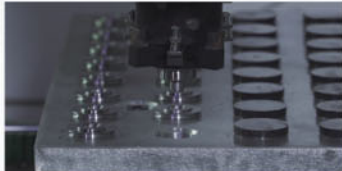
GANTRY LOAD AUTOMATION

- Standard Configuration:
- 8-Station Turret (SL6-R)
 - Gang Type(SL340-R)
 - Automatic Air Blow
 - Hydraulic 3-Jaw Chuck 6"
 - SYNTEC Robot Controller
 - Factory Integrated Gantry
 - Swivel Head Robot Chuck
 - Dot Matrix Feeder Station
- Optional items:
- Tool Setter
 - Live tooling
 - 12-Station Turret
 - Oil Mist Collector
 - Automatic Chip Conveyor
 - Customized Automatic Gripper
 - Different Spindle Bore Diameters
 - Customized Work Feeder Station

SPECIFICATIONS

| Items | | UNIT | SL6-R | | | SL340-R | | |
|--------------|------------------------------|-------|-----------------------|-------|-------|--|-------|-------|
| Capacity | Chuck/Collet | inch | hydraulic chuck 6, *8 | | | Hydraulic collet *hydraulic chuck 6, *8 | | |
| | Max. Length of Workpiece | mm | 80 | | | 50 | | |
| | Max. Swing Dia. over Bed | mm | Φ300 | | | Φ300 | | |
| | Max. Swing Dia. over Slide | mm | Φ210 | | | Φ135 | | |
| Spindle | 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 | *4000 | *3500 | *4500 | *4000 | *3500 |
| Axis | Main Motor Power | kw | 5.5/7.5 | | | 5.5/7.5 | | |
| | X Axis Travel | mm | 280 | | | 340 | | |
| | Z Axis Travel | mm | 250 | | | 200 | | |
| | X/Z Axis Rapid Traverse | m/min | 20/20 | | | 25/25 | | |
| | Max. Feed Speed | m/min | 8 | | | 8 | | |
| Turret | No. of Tool Stations | Nos | 8, *12 | | | 4-6 | | |
| | Tool Shank Size | mm | 20 × 20, *16 × 16 | | | 20×20 | | |
| Gantry Robot | 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 | | |
| Others | Power Capacity | kVA | 12 | | | 12 | | |
| | Overall Dimension(L × W × H) | mm | 3310 × 1750 × 2530 | | | 3310 × 1750 × 2530 | | |
| | Weight(about) | Kg | 2500 | | | 2300 | | |

NOTE: “*” means optional, “N/A” means not available, “LM” means linear motion guide way.
Above content is subject to change without prior notice. Z-MaT is not responsible for typographical errors.



Work Feeder Station



Rotary Actuator And Collet Chuck



8-station Turret with Gang Tooling



Gang Tooling with Live Tooling

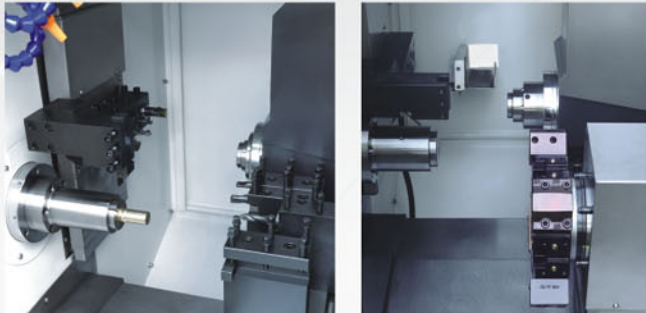
Dual Spindle Automation

SA28-S Fixed Spindle + Moveable Spindle
DA66-G Moveable Spindle + Moveable Spindle
TT300 Both Spindles Fixed

SA28-S Fixed Spindle + Moveable Spindle

Meet the new low cost option for dual spindle machining. Advantages of dual spindle/turret machining centers include: 1) One machine is cheaper than two 2) More accurate when a machining process is accomplished on a single machine, rather than moving the part from machine to machine. 3) 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

Main Spindle Options

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

Secondary Spindle Options

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

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.



Specifications

| SA28-S | | |
|-------------------------|------------------------------------|------------------|
| Standard machining dia. | Φ40mm | |
| Max. rod dia. | Φ28mm | |
| X axis travel | 350mm | |
| Z axis travel | 200mm | |
| Y axis travel | 80mm | |
| X/Z rapid traverse | 15/15 m/min | |
| 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 | 3.7KW | 2.2KW |
| Spindle type | Φ68mm | |
| Spindle taper | 39°, *42° | |
| Dimension(LXWXH) | 1990X1480X1830mm | |
| Weight | 1900Kg | |

Three dual spindle models for different applications

Together with Robot or Bar-feeder, Z-MaT dual spindle Turning machine could realize complete advanced automation on a single machine.

TT300 Both Spindles Fixed



| TT300 | |
|-----------------------------|-------------------------------------|
| Chuck/Collet | 6" Hydraulic chuck/Hydraulic collet |
| Max. swing dia. over bed | Φ300mm |
| Max. length of workpiece | 220mm |
| Spindle bore / through hole | Φ48mm / Φ40mm |
| Spindle speed | 3000rpm |
| Main motor power | 4.0kW, *5.5kW |
| X/Z axis travel | 320mm/220mm |
| X/Z rapid traverse | 25/25 m/min |
| Turret type | Gang type tool, *4-Station toolpost |
| Guideway type | LM |
| Overall dimension(LXWXH) | 2750X1300X1760mm |
| Weight | 2400Kg |

DA66-G Moveable Spindle + Moveable Spindle

Center-Mounted Ball Screw

Center mounted ball screw is inherently more accurate than lower cost machines that use front-mounted ball screws. Lower friction and torque, 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 produces superior rigidity, along with improvements in long-term quality results, with high precision.

Main and Sub-Spindles

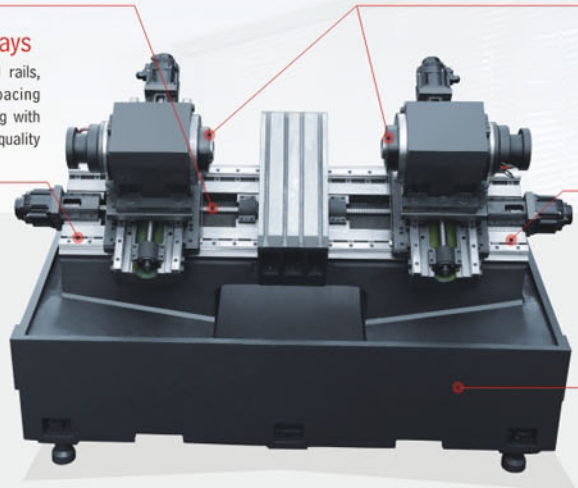
Both spindles adapt servo high-speed motors with high rotation accuracy and fast response. This level of accuracy and synchronization assures total process accuracy as single parts are machined with high precision using two different spindles in a single machining cycle.

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

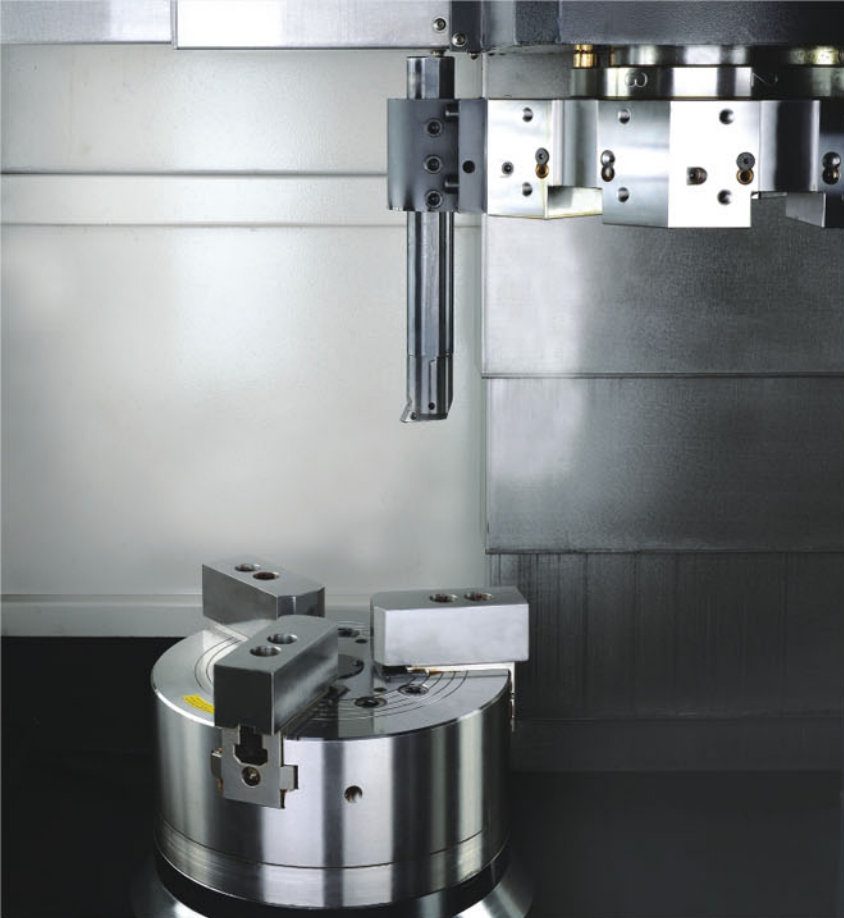
Lathe bed and machine base are produced in a single cast unit. This heavy, quality cast structure provides a strong foundation for operations that require high-speed yet smooth, multiple axis movements and direction changes.



Specifications

| DA66-G | | |
|----------------------------|--------------------------------------|--------------------------------------|
| Slant bed degree | 30°, LM | |
| Max. machining dia. | Φ160mm | |
| Standard machining dia. | Φ100mm | |
| Spindle type | A2-5 | |
| Spindle taper | MT6 | SUB-SPINDLE |
| Spindle X/Z axis travel | 370mm/200mm | 370mm/200mm |
| Spindle X/Z rapid traverse | 15/15 m/min | 15/15 m/min |
| Spindle bore | Φ55mm | Φ55mm |
| Spindle bar capacity | Φ46mm | Φ46mm |
| Spindle speed | 3500rpm | 3500rpm |
| Spindle chuck/collet | 6" Hydraulic chuck/ Hydraulic collet | 6" Hydraulic chuck/ Hydraulic collet |
| Spindle motor power | 7.5KW | 7.5KW |
| Turret type | Gang type tool | |
| Overall dimension(LXWXH) | 2550X1780X1800 | |
| Weight | 3300Kg | |





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 |

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

| | ITEM | Unit | VT400 | VT600 |
|----------|-------------------------|-------|------------------|------------------|
| Capacity | Max. swing dia. | mm | φ 550 | φ 750 |
| | Max. cutting dia. | mm | φ 450 | φ 600 |
| | Max. cutting height | mm | 400 | 600 |
| Chuck | Chuck type | | Hydraulic chuck | Hydraulic chuck |
| | Chuck size | inch | 12" | 15" * 18" |
| Spindle | Spindle speed | rpm | 50-2500 | 50-2000 |
| | Main motor power | kW | 15*18 | 22 |
| | Spindle nose | | A2-8 | A2-11 |
| Turret | Turret type | | Hydraulic turret | Hydraulic turret |
| | No. of tools | nos | 8-station | 8-station |
| | Tool shank size | mm | 40X40 | 40X40 |
| Axis | X/Z axis travel | mm | 380/450 | 480/600 |
| | X/Z axis rapid traverse | m/min | 15/18 | 12/16 |
| Accuracy | Positioning X/Z | mm | 0.015/0.015 | 0.015/0.015 |
| | Repeatability X/Z | mm | 0.005/0.008 | 0.005/0.008 |
| | Machining | IT | IT6 | IT6 |
| Others | Power consumption | kVA | 22 | 28 |
| | Dimension LxWxH | mm | 1850X1700X2650 | 2500X2000X3300 |
| | Weight | Kg | 6300 | 11500 |

Note: *** means optional.



The Latest - MILLING & TAPPING TECHNOLOGY

Tapping Center/VMC

Customers have told us:

"We need shorter machining cycle times and more efficiency in our machining process. It would help to have a mill with a long X axis without the bulk of a larger VMC. Of course, we want a machine at lower cost - that's easy to learn to operate."

In response to customer expectations we have produced a high precision VMC tapping series with its own unique structure and upgraded performance. While the design is based on a standard, this tapping machine has our own science and engineering design ideas added into the mix. This VMC tapping center has common features that fit the unique requirements of a wide range of parts making requirements.

CNC MILLING FAMILY SERIES

SMART MANUFACTURING –Starts Right Here!

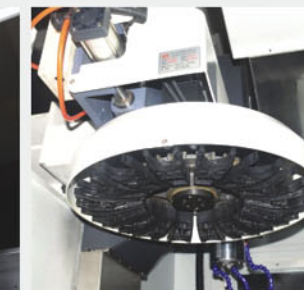
The CNC Milling Series includes specialized machines for milling/tapping/drilling mass products, dies and molds – with high value features that increase your competitiveness.

High Speed ATC

A variety of ATC types with different sizes and capabilities are available options. The drum type ATC is standard on the VMC320, 420E, 400, 600E, 500 and 700E. All (except the 320 and 420E) can be upgraded to arm type ATC units. VMC850 and 1050E having the arm type as the standard ATC.



Arm Type ATC



Drum Type ATC



4th axis or 5th axis can be added as option

Ergonomic Operator Panel Design

User-friendly CNC control system panel swings 0-90° to allow adjustment by machine operator for optimal visibility and performance.



Easy Chip Removal Design

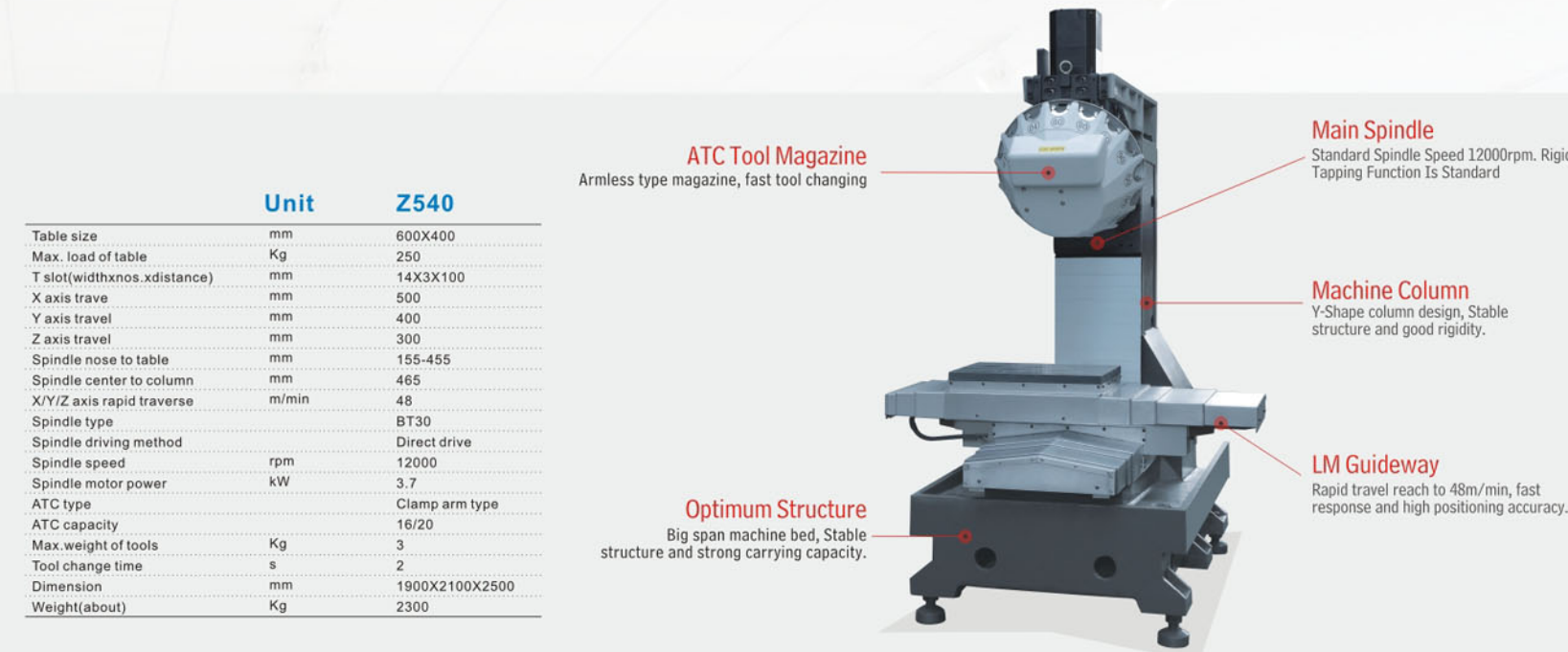


3 axes all linear guideways, high speed and accuracy.

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.
- Sun 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.



| | Unit | Z540 |
|-----------------------------|-------|----------------|
| Table size | mm | 600X400 |
| Max. load of table | Kg | 250 |
| T slot(widthxnos.xdistance) | mm | 14X3X100 |
| X axis trave | 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 |
| ATC type | | Clamp arm type |
| ATC capacity | | 16/20 |
| Max. weight of tools | Kg | 3 |
| Tool change time | s | 2 |
| Dimension | mm | 1900X2100X2500 |
| Weight(about) | Kg | 2300 |

POWER V SERIES

Standard Features

- Arm type ATC
- Ergonomic CNC Panel & MPG
- Automatic Lubrication System
- Full Machine Enclosure
- Operator Door Safety Lock
- Heat Exchanger
- Air Conditioned Electrical Cabinet
- Air System w/ Handheld Air Gun

Optional Features

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

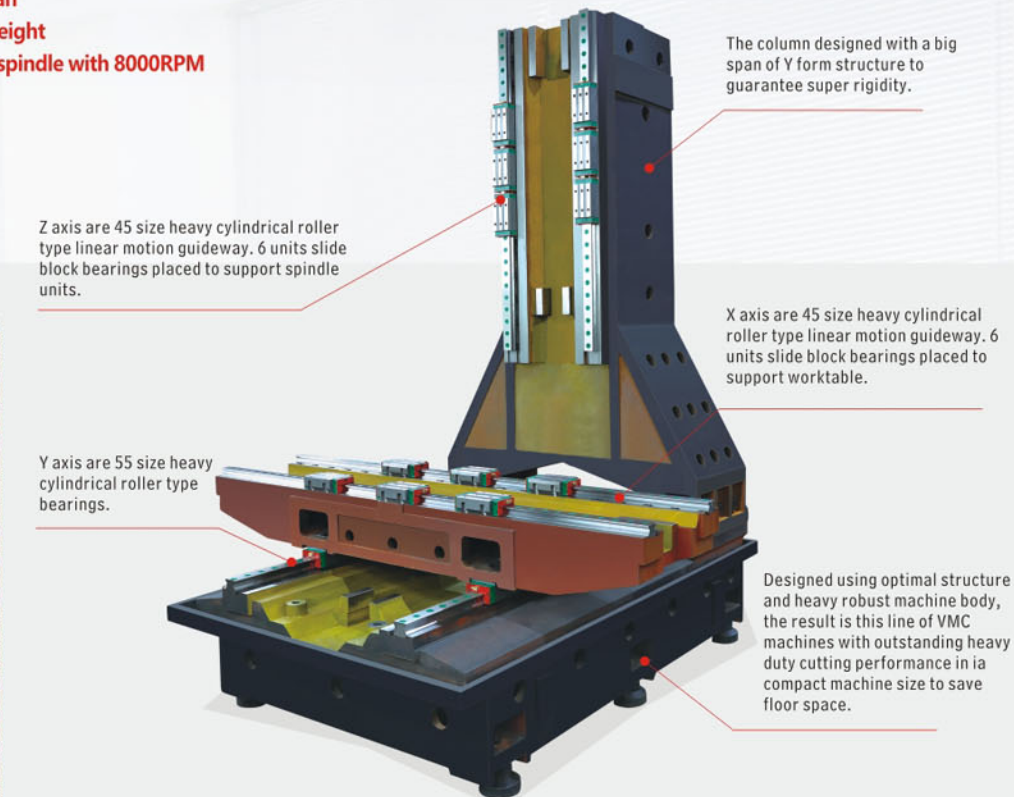
SAME SIZE, HIGHER RIGIDITY!

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

Specifications

| | Power V6 | Power V10 | *Power W6 |
|-----------------------------|-------------------|-------------------|-------------------|
| Table size | 1000X450mm | 1400X650mm | 1200X450mm |
| Max. load | 750Kg | 1000Kg | 750Kg |
| T slot(width×nos.×distance) | 18X3X130 | 18X5X100 | 18X3X130 |
| X Travel | 600mm | 1050mm | 2x 400mm |
| Y Travel | 400mm | 650mm | 400mm |
| Z Travel | 530mm | 600mm | 530mm |
| Spindle center to column | 450mm | 670mm | 450mm |
| Spindle nose to table | 130-660mm | 180-780mm | 130-660mm |
| Guideway type | LM (Roller) | LM(Roller) | LM (Roller) |
| X/Y/Z axis rapid traverse | 30m/min | 30m/min | 25m/min |
| Spindle speed | 8000rpm/*12000rpm | 8000rpm/*12000rpm | 8000rpm/*12000rpm |
| Spindle type | BT40 | BT40 | 2 x BT40 |
| Main servo motor | 7.5kW/*11kW | 11kW/*15kW | 2 x 7.5kW |
| ATC capacity/type | 24/Arm | 24/Arm | 2 x 24/Arm |
| Max. weight of tool | 8kg | 8kg | 8kg |
| Power capacity | 21kVA | 25kVA | 40kVA |
| Dimension | 2000x2100x2300mm | 3200x2550x2800mm | 2200x2100x2300mm |
| Weight (about) | 5000Kg | 8000Kg | 5500Kg |

Note: " * " means optional, "LM" means linear motion guide way.
-Power W6 is designed from Power V6 with twin spindles to increase productivity, 400mm distance between two spindles.



Note: The picture is the frame of Power V10.

VMC SERIES

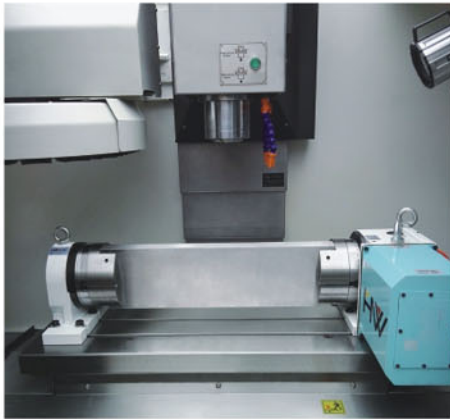
Vertical Machining Center

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/ VMC850/VMC1050E)
- Air System w/ Handheld Air Gun

Optional Features

- CNC Controlled 4th Axis Rotary Table
- Different CNC Control System
- Higher Speed Spindle
- Spindle Center Coolant
- Chip Conveyor
- Air Conditioner (Except VMC500/VMC700E/ VMC850/VMC1050E)



Machine Characteristics

- Precision linear guideways on X/Y/Z axes – provide high speed rapids
- High quality castings provide a solid structure and foundation
- Full enclosed way covers
- Direct drive servo motors on all axes
- Drum or arm type ATC available
- High speed rapids standard – higher speeds available on axes and spindle



FULL RANGE OF VERTICAL MACHINING CENTERS



Specifications

| | | Unit | VMC320 | VMC420E | Mega Y VMC400 | VMC600E | VMC500 | VMC700E | Mega Z VMC850 | VMC1050E |
|----------------------|-----------------------------|----------|----------------|----------------|-------------------|-------------------|-----------------|-----------------|------------------|----------------|
| Table | Table size | mm | 600x305 | 720x305 | 600×380 | 800x380 | 700x400 | 800x400 | 1200×520 | 1300×520 |
| | T slot(width×nos.×distance) | mm | 14x3x85 | 14x3x85 | 14×3×110 | 14×3×110 | 18x3x110 | 18x3x110 | 18×5×90 | 18×5×90 |
| | Max.load | Kg | 260 | 260 | 350 | 350 | 350 | 400 | 750 | 750 |
| Travel | X/Y/Z Travel | mm | 320/240/450 | 420/240/450 | 400/350/450 | 600/350/450 | 500/400/450 | 700/400/450 | 850/500/600 | 1050/500/600 |
| | Spindle nose to table | mm | 50-500 | 50-500 | 50-500 | 50-500 | 90-540 | 90-540 | 130-700 | 130-700 |
| | Spindle center to column | mm | 380 | 380 | 450 | 450 | 450 | 450 | 580 | 580 |
| | Guideway type | | LM: XYZ | LM: XYZ | LM: XYZ | LM: XYZ | LM: XYZ | LM: XYZ | LM: XYZ | LM: XYZ |
| Spindle | Spindle type | | BT30 | BT30 | BT40 | BT40 | BT40 | BT40 | BT40 | BT40 |
| | Main servo motor | KW | 3.7/5.5 | 3.7/5.5 | 3.7/5.5,*5.5/7.5 | 3.7/5.5,*5.5/7.5 | 5.5/7.5,*7.5/11 | 5.5/7.5,*7.5/11 | 7.5/11.0 | 7.5/11.0 |
| | Spindle speed | rpm | 6000,*8000 | 6000,*8000 | 6000,*8000,*12000 | 6000,*8000,*12000 | 8000,*12000 | 8000,*12000 | 8000,*12000 | 8000,*12000 |
| Feed &Magazine | X/Y/Z axis rapid traverse | m/min | 20/20/20 | 20/20/20 | 20/20/20 | 20/20/20 | 20/20/20 | 20/20/20 | 30/30/30 | 30/30/30 |
| | ATC capacity/type | No./type | 12/Drum | 12/Drum | 16/Drum,*20/Arm | 16/Drum,*20/Arm | 16/Drum,*24/Arm | 16/Drum,*24/Arm | 24/Arm | 24/Arm |
| | Max. weight of tool | Kg | 3 | 3 | 8 | 8 | 8 | 8 | 8 | 8 |
| Dimension &Weight | Power capacity | kVA | 14 | 14 | 15 | 15 | 17 | 17 | 21 | 21 |
| | Dimension | mm | 2080x1900x2300 | 2080x1900x2300 | 2400x2000x2320 | 2400x2000x2320 | 2300x2100x2200 | 2300x2100x2320 | 3000×2200×2350 | 3000×2200×2350 |
| | Weight (about) | Kg | 2000 | 2300 | 2400 | 2500 | 2900 | 3200 | 6500 | 6800 |

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

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.



820mm

| | 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 | America Quick Change Toolpost | Gang type tool, *Quick change toolpost, *8-station turret |
| Tailstock type | N/A | Manual, *Hydraulic | Manual, *Hydraulic |
| Taper of tailstock | N/A | MT3 | MT4 |
| Travel of tailstock quill | mm | 80 | 80 |
| Overall dimension (LxWxH) | mm | 1650X820X1800 | 1300X820X1650 |
| Weight (about) | Kg | 1300 | 1500 |

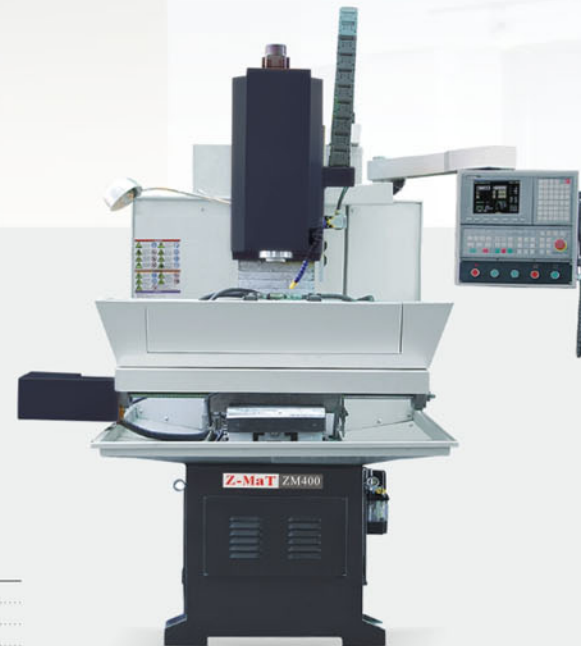
Note: "*" means optional.

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



Semi-guarded type

| | 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 |



| | Unit | TRX550 |
|-----------------------------|----------|----------------|
| Table size | mm | 1050X280 |
| T slot(widthXnos.Xdistance) | mm | 14x3x60 |
| Max. load | Kg | 200 |
| X/Y/Z axis travel | mm | 550/280/450 |
| X/Y/Z axis rapid traverse | m/min | 15/15/15 |
| Spindle nose to table | mm | 50-500 |
| Spindle center to column | mm | 300 |
| Guideway type | N/A | LM: X/Y/Z |
| Spindle type | N/A | BT30 |
| Main servo motor | kW | 2.2 |
| Spindle speed | rpm | 6000 |
| *ATC capacity/type | No./type | *12/Drum |
| Max. weight of tool | Kg | 3 |
| Overall dimension (LxWxH) | mm | 1800x1700x2100 |
| Weight(about) | Kg | 1500 |

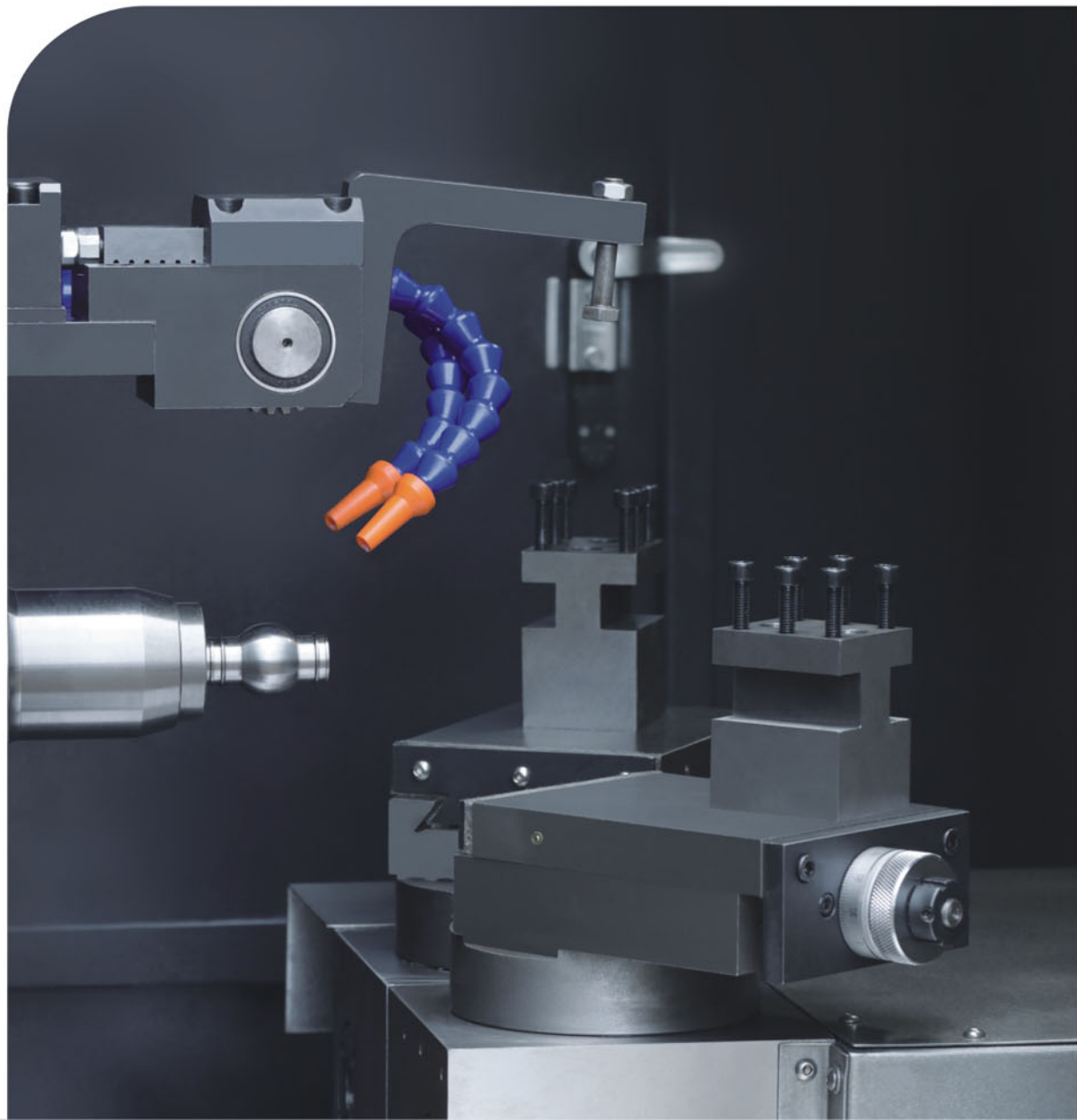
Note: "*" means optional, "LM" means linear motion guide way.

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.

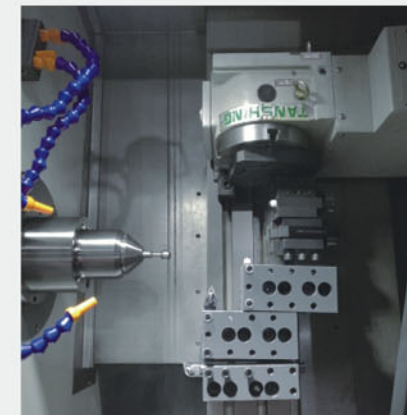
Unit Q50

| | | |
|-----------------------------|-------|--------------------------|
| 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 (see page 26) matched with a precision rotary table with servo drive. See this setup on the photo below:



SPM SERIES

SPECIAL PURPOSE MACHINE

Smart Manufacturing Solutions - Strengthen Your Competitive Advantage

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 |

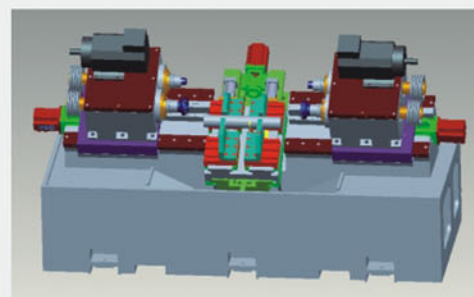
Note:*** means optional.

Two Directional Center Spindle Machine



Dual End Milling And Drilling Machine STK50

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.



Crankshaft Drilling Machine



Multistation Drilling Machine



SOCIAL RESPONSIBILITY

In recent years 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.



Strict Quality Control

No matter how far technology may evolve, the one ongoing concern of CNC machine users is, "Will this machine make my part, with good precision and without a hassle – AND at a price I can justify?" Customers deserve our best effort toward always providing quality, reliability, efficiency and low cost.

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. Not just with our machines, but with our level of service and response to customer questions. We work to exceed customer expectations.



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.

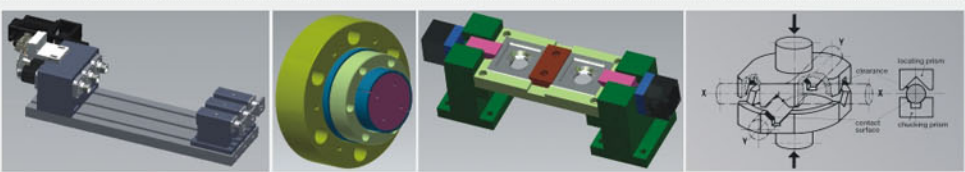
Z-MaT works hard to combine individual and combined strengths to generate tangible positive results that exceed customer expectations.



Automation



Examples of Fixtures



Bar Feeders



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.



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

"Call Back within 18 Hours" is our Promise

Our commitment to client service standards is the cornerstone of service philosophy and a key to our success. We track our service response patterns and apply scientific process and a commitment to our customers to make sure we keep improving.



The Z-MaT International Warranty –

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 12 months, starting on the machine's bill of lading date. Extended warranty is available at the time of purchase. Please contact your Z-MaT sales representative for details.

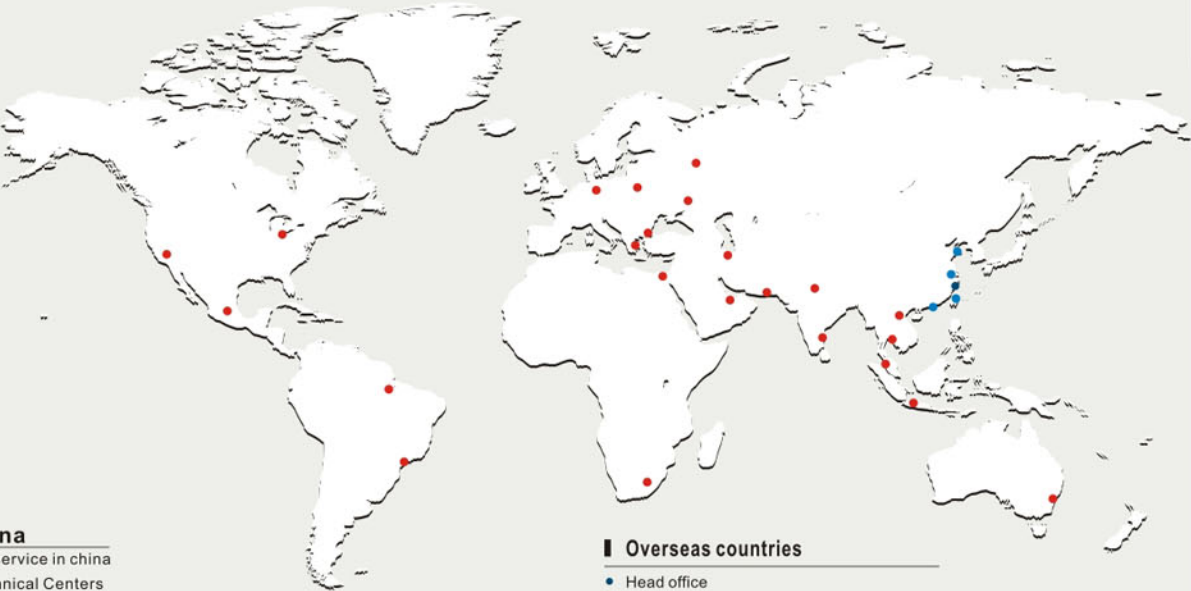


- Z-MaT Fast Facts:**
- 97%+ Client Retention Rate
 - 10,000+ Cooperate Clients
 - In business for more than 18 years.
 - 100% focus on our clients best interests

- **Z-MaT Headquarters and Plant:**
Mechanical & electrical industrial zone, Yuhuan, Zhejiang, 317600 China.
- **Jiangsu Z-MaT No.2 Plant:**
No.1 Tuqiao Industrial Zone, Jiangning District, Nanjing, Jiangsu.
- **Shandong Precision Spindle unit Plant:**
No. 39-3 Hi-tech industrial zone, Weihai, Shandong.
- **Hong Kong Commercial Center:**
701A Caroline Centre, 2-38 Yun Ping Road, Hong Kong.
- **Taiwan R&D Center**
No. 955, Section 4, Wenxin Rd., Beitun District, Taichung, Taiwan.



China
Direct service in china
● Technical Centers
● Headquarter Plant
● Subsidiaries



Overseas countries
● Head office
● Subsidiaries
● Overseas existing or planned service center