

CHIAH CHYUN

No Secondary Setups!

No Additional Parts Handling!

A machine that combines various tooling systems and sub-spindle offers exceptional versatility and high efficiency.

CB-32M SLIDING HEAD CNC LATHE



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Make Complicated Parts Machining in One Operation!

A Most Versatile CNC Lathe

When it comes to versatility, the CB-32M from CHIAH CHYUN will fully meet your expectations. No matter what operation - turning, milling, drilling, tapping, cutting, side turning and back machining, the CB-32M does it all in one operation. This means you get higher efficiency and greater profitability.

CB

CHIAH CHYUN CB-32M

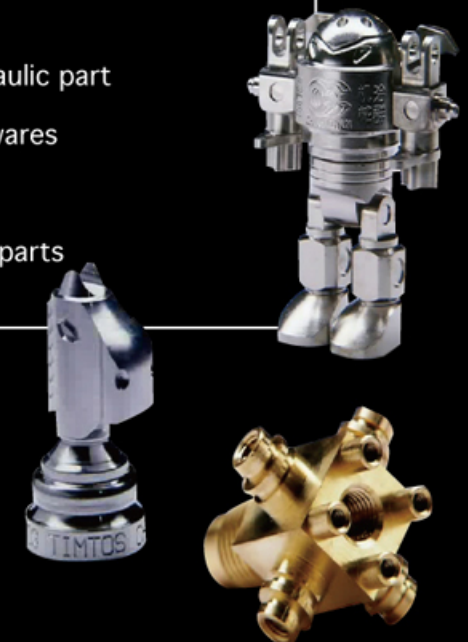
Dramatically Reduced Machining Time and Improved Quality

- Sliding headstock design.
- A combination of main and sub-spindle.
- $\varnothing 32$ mm bar capacity.
- X, Y, Z-axis rapid traverses 30m/min.
- Linear ways on 5 axes.
- PC-based control.
- Collet chucking system.
- Finished parts catcher and conveyor.

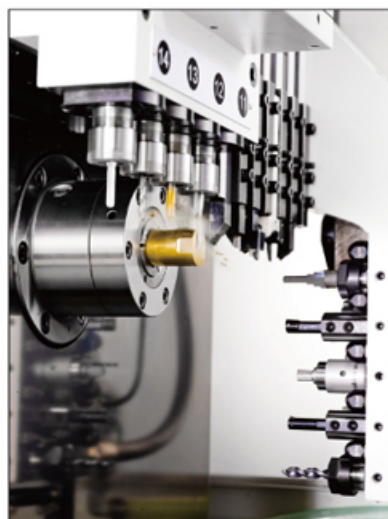
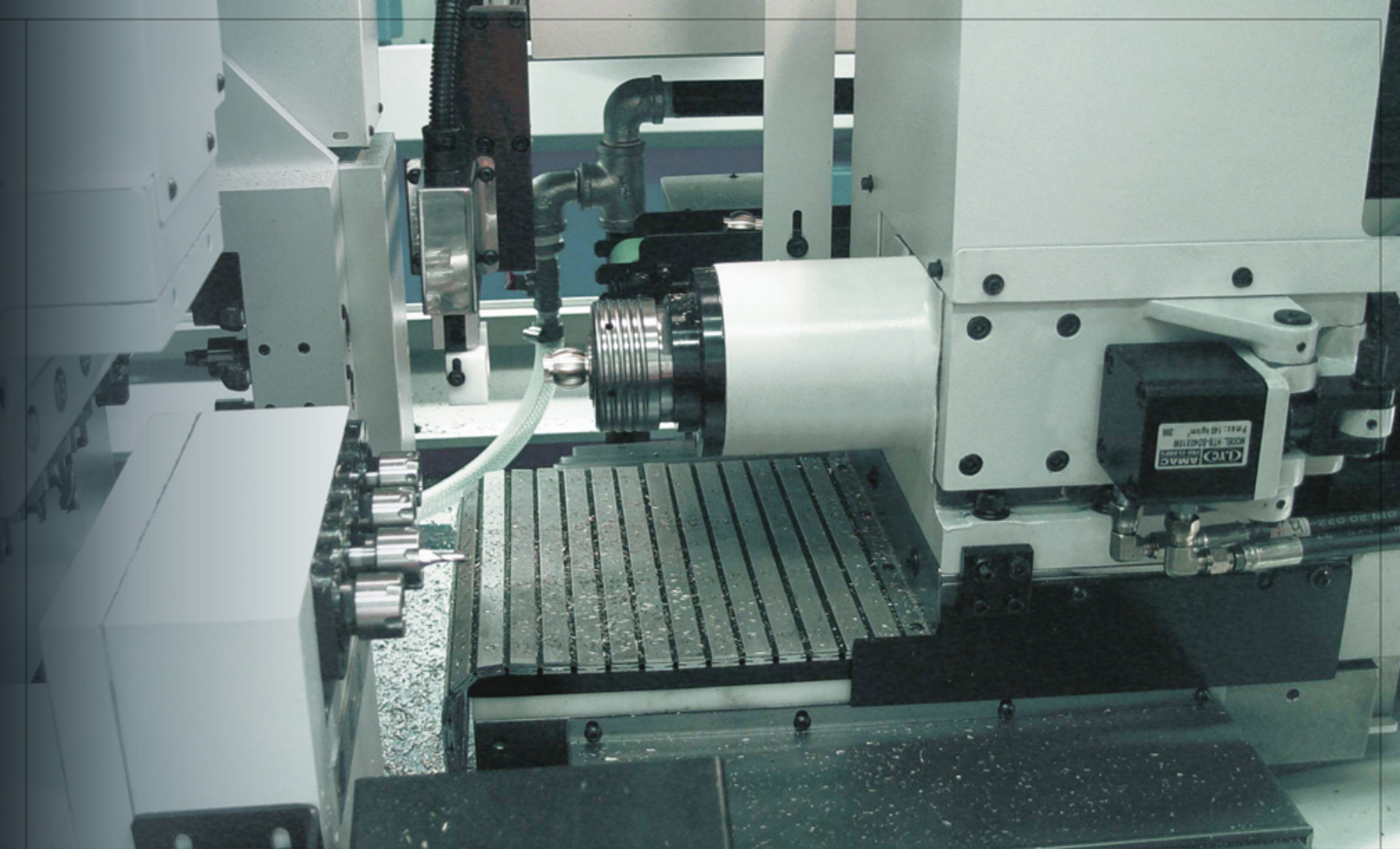
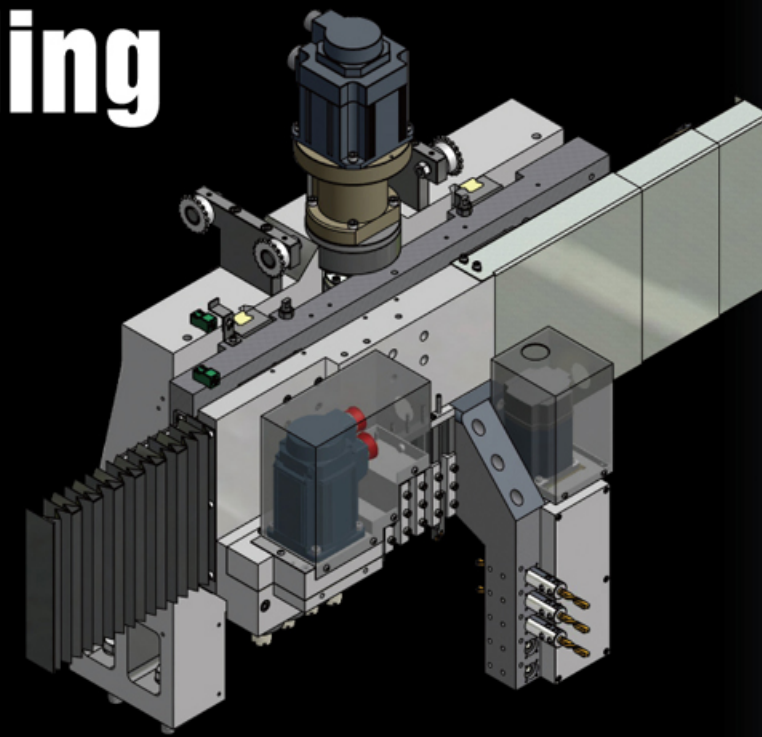
Applications:

Designed for various precision parts machining, such as:

- Automotive, motorcycle and bicycle parts
- Electronic and electrical parts
- Instrument parts
- Pneumatic and hydraulic part
- Sanitary and toilet wares
- Hardware
- Any other precision parts



Multiple Tooling Systems for Versatile Cutting Applications



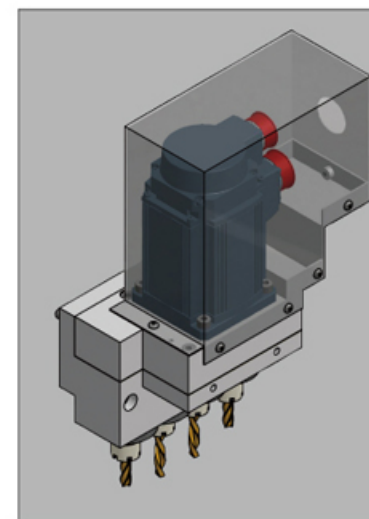
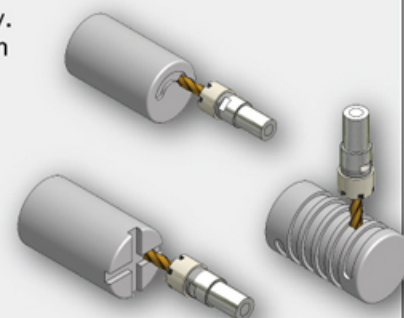
Main Tool Slide (Standard)

- The main tool slide is mounted at top of the headstock.
- It can be fitted with 6 O.D. tools with 12mm tool shank.
- The main tool slide is suitable for turning outside diameter of workpiece.



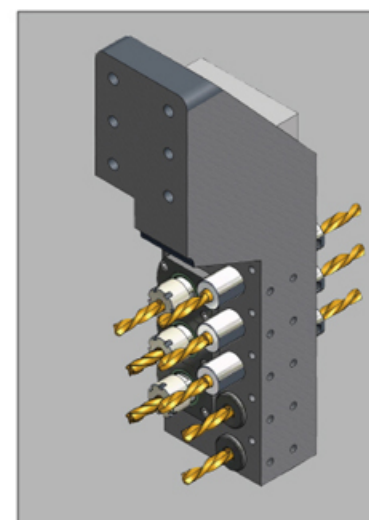
C-axis Contouring Capability (Standard)

- The C-axis features contouring capability.
- Employs a 12-person power turret driven by a servo motor.
- Rotating tool holders and tools are optional.
- 0.0001 mm extra high indexing resolution ensures high precision contouring and indexing.



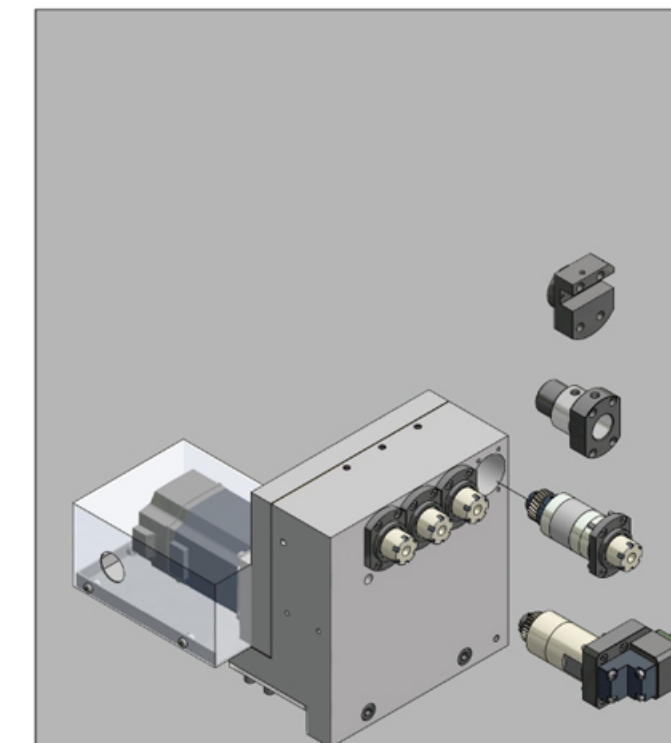
Side Milling Device (Standard)

- The side milling device is mounted at left side of the headstock.
- The device is suitable for side milling, drilling and tapping operations.
- Total 4 powered tools driven by a servo motor.
- Max. tool speed is 6,000 rpm.



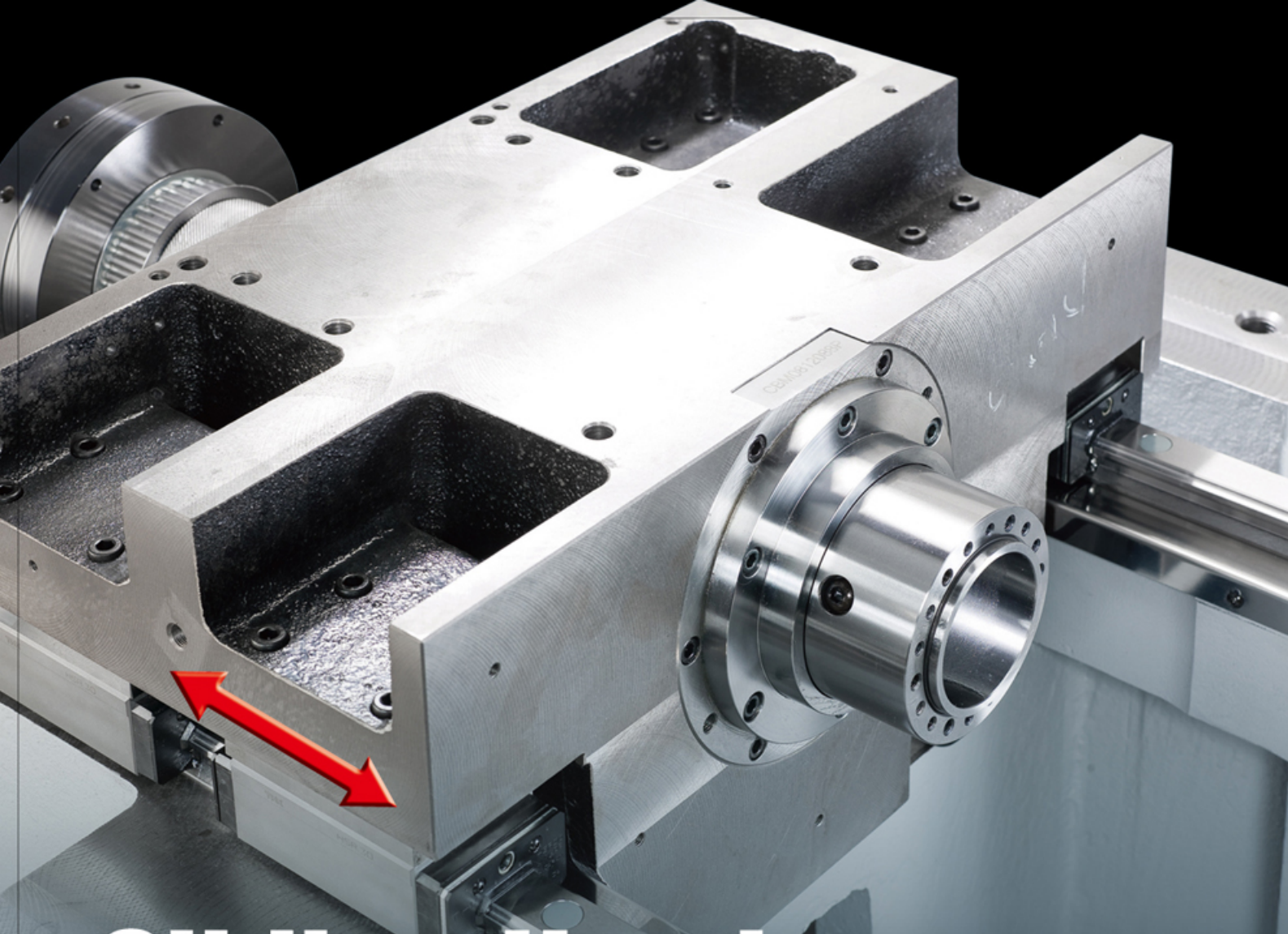
End Milling Device

- The end milling device is mounted in front of the head stock.
- The device is suitable for front end milling, drilling and tapping operations.
- Total 8 tools, among which 3 tools are powered and 5 tools are static.
- Powered tools are driven by a servo motor.
- Max. tool speed is 6,000 rpm.



Maximum Versatility of Back Milling Device (Back Milling Device)

- Upon request, the back milling device is available to mount with an O.D. or I.D. tool.
- Changing tool holder is done easily by simply loosening 4 lock screws.
- Axial machining device.
- Radial machining device (optional).
- All machining devices can be change with ease.



Sliding Head without Guide Bush

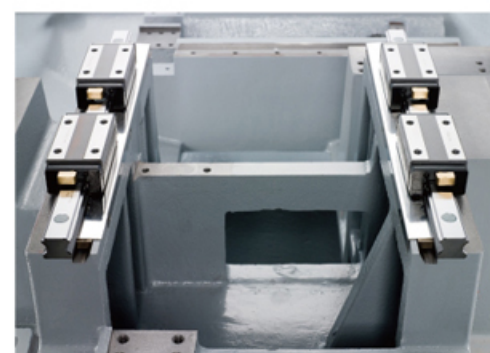
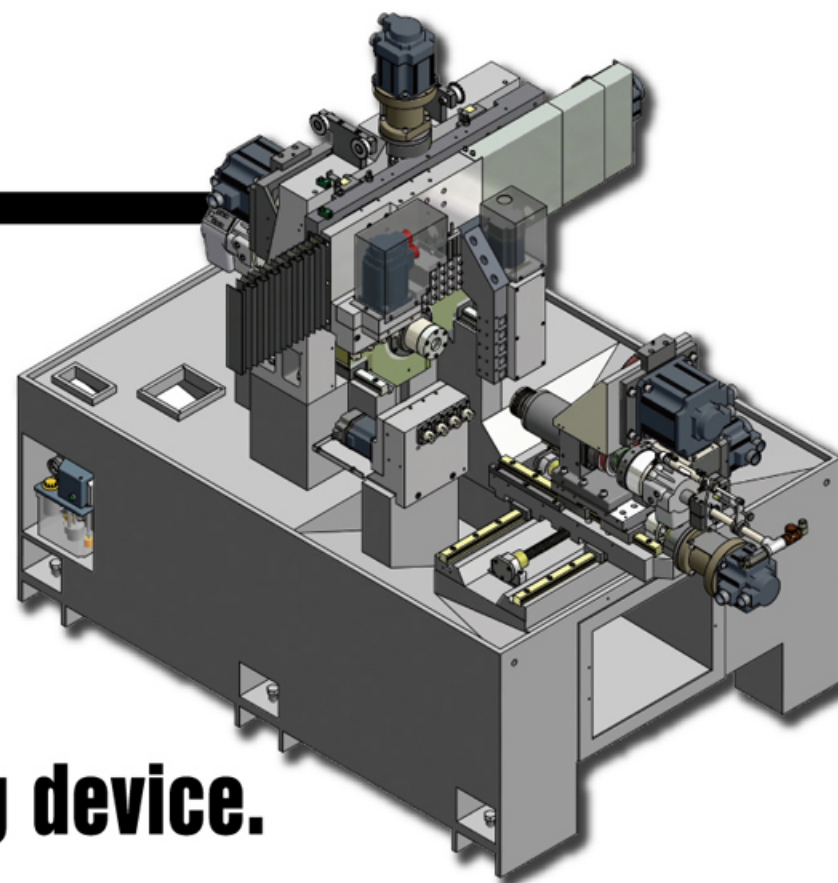
**Increased Efficiency!
Lower Production Cost!
Greater Profitability!**

Spindle head moves on two precision linear ways combined with extra large span between ways, exhibiting outstanding stability and high positioning accuracy.

Provides additional costs saving, unlike like swiss-style machines. Savings include:

- Faster Setups (No guide bushing to setup)
- Shorter Remnants (No guide bushing, remnant limited to collet length)
- No ground stock needed (No guide bush)

The back side machining mechanism consists of a sub-spindle head and a back milling device.



Precision Linear Ways

- The sub-spindle head moves on two THK precision ball type linear ways, that are combined with extra large span between linear ways for outstanding stability and positioning accuracy.
- Roller type linear ways are optional.

Main Spindle

Belt-drive Type Spindle (standard)



- Motor: 5.0kW (standard)
- Spindle speed: 4,000 rpm (standard)
6,000 rpm (optional)
- Clamping system: TRB-32 collet

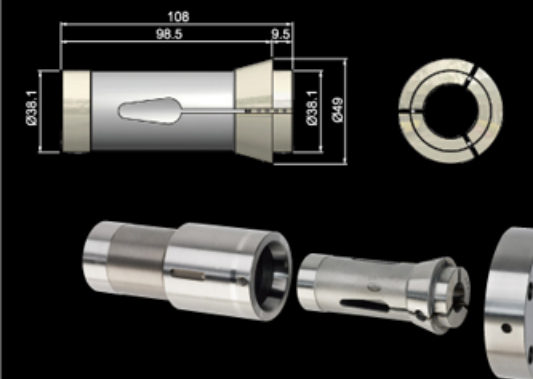
Built-in Type Spindle (optional)



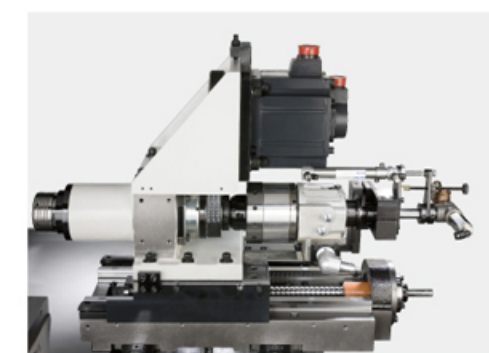
- Motor: 5.5/7.5 kw
- A2-4 Spindle nose
- Spindle speed: 6,000 rpm
- Clamping system: TRB-32 collet

Collet Chucking System for main Spindle

The collet chucking system provides a choice of 164E or 171E collet.



Back Side Machining Mechanism

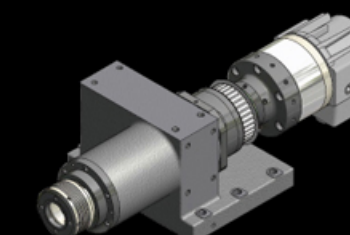


Back Milling Device

- The back milling device is mounted between the main and sub-spindle.
- The device is capable of performing milling, drilling and tapping operations for the back side of a part.
- Total 4 powered tools driven by a servo motor.
- Max. tool speed is 6,000 rpm.

Sub-Spindle Belt-drive Type Spindle

- Motor: 3.5kW
- Spindle speed: 4,000 rpm (standard)
6,000 rpm (optional)
- Clamping system: collet



Collet Chucking System for Sub-spindle

- The collet chucking system provides a choice of 164E or 171E collet.



Various Controller Interfaces



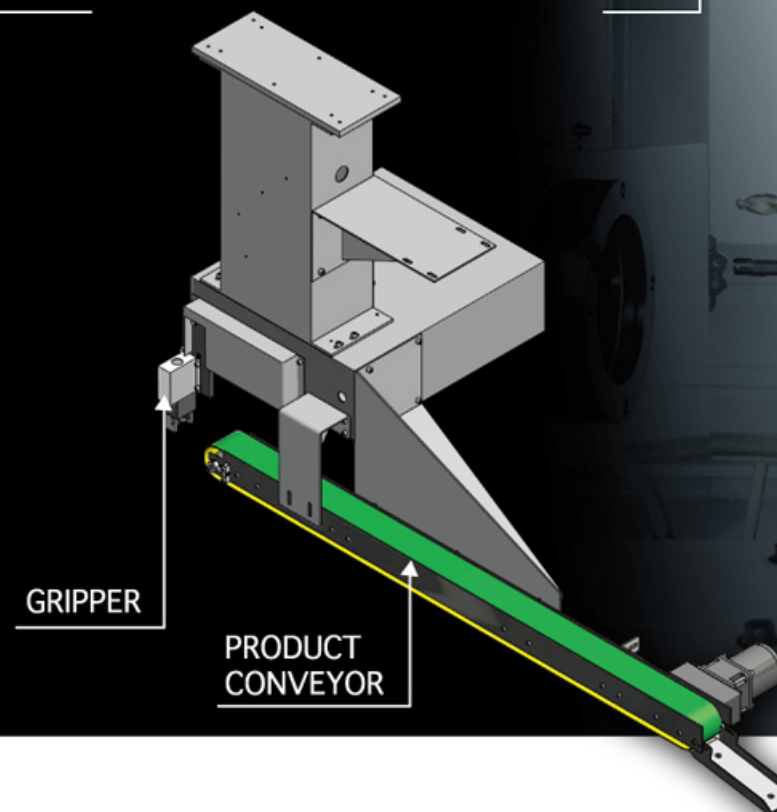
The controller is provided with various interfaces for program saving, loading and software updating, including:

- CF memory card
- RS-232C
- Ethernet



Gripper (Optional)

- Once part machining is finished, the gripper picks the finished product and moves it to a conveyor to be delivered out of the machine.
- It prevents scratching on product surface while ensuring high quality of product.



Chip Conveyor

(Optional)



- Screw type chip conveyor with cart
- Steel belt chip conveyor with cart

Auto Bar Feeder

(Optional)



When an auto bar feeder (optional) is used together with the machine, it may perform fully automatic operation. The bar feeder dramatically upgrades production efficiency, while saving labor costs.

Hydraulic Power Unit



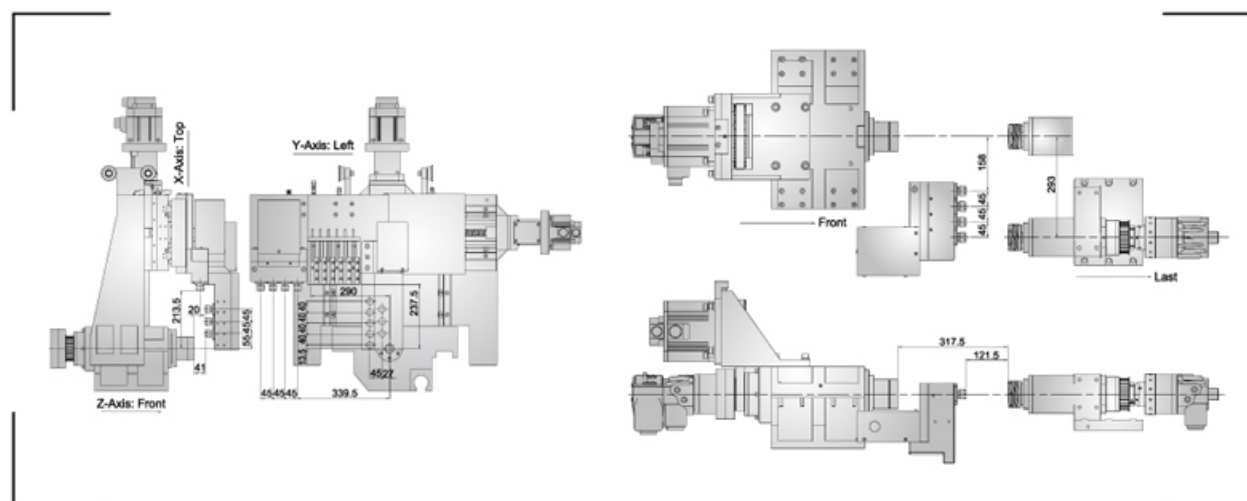
- The hydraulic power unit provides fast and stable workpiece clamping.
- The hydraulic power unit is fan cooled to maintain a constant temperature.

Heat Exchanger for Electrical Cabinet

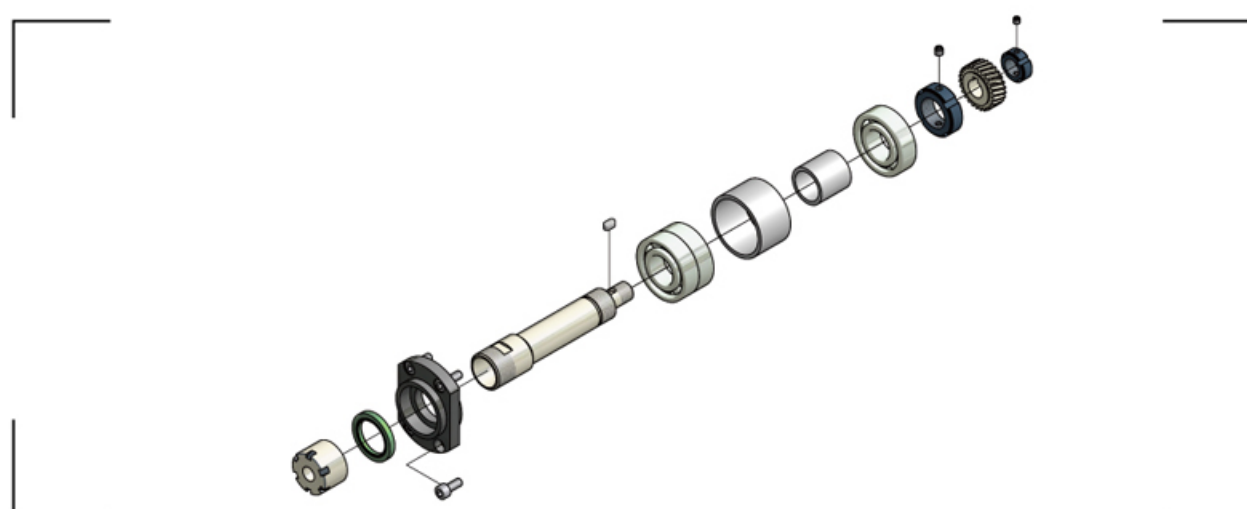


The heat exchanger is provided to maintain a constant temperature in the electrical cabinet. This ensures stable control performance, and long service life of electronic parts.

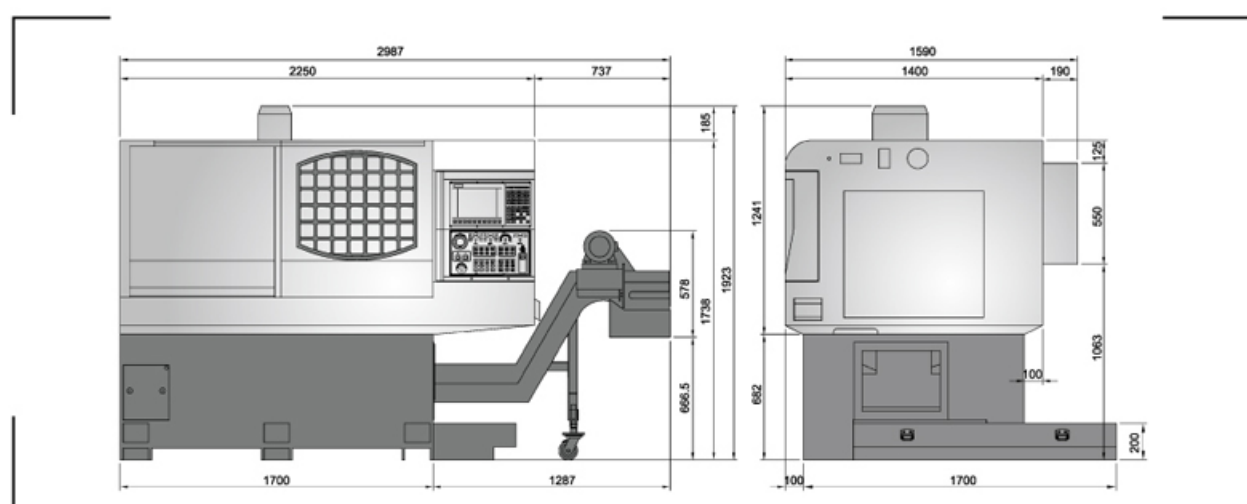
INTERFERENCE DIAGRAM



TOOLING SYSTEM



MACHINE DIMENSIONS



MACHINE SPECIFICATIONS

Main spindle	
Max. manu. dia.	Ø32
Spindle max. rpm	4000 rpm (Option 6000 rpm)
X-axis travel (vertical)	185
Y-axis travel (longitudinal)	490
Z-axis travel (cross)	165
Max. bar feeding dia.	Ø32
Collet of spindle	TRB-32
X rapid travel speed	30 m/min
Y,Z rapid travel speed	30 m/min
Min. input unit	0.001
No. of O.D. turning tool	6
O.D. turning tool size	12 (Option 16)
No. of I.D. turning tool	5
I.D. turning tool size	Ø25
Spindle servo motor	5.0 kw (Option 7.0 kw)
X-axis servo motor	1.5 kw
Y, Z-axis servo motor	1.0 kw
Center height	965
Sub spindle	
Max. manu. dia.	Ø32
Sub spindle max. rpm	4000 rpm (Option 6000 rpm)
X-axis travel	293
Z-axis travel	295
Collet of spindle	TRB-32
X,Z-axis rapid travel	30 m/min
Min. input unit	0.001
No. of turning tool	4
I.D. turning tool size	Ø25
Sub spindle servo motor	3.5 kw
Y,Z-axis servo motor	1.0 kw
Spindle live tooling	
No. of radial live tooling	4
Radial tooling size	ER-20
Radial live tooling servo motor	1.5 kw
Radial live tooling max. speed	6000 rpm
No. of axial live tooling	3
Axial tooling size	ER-20
Axial live tooling servo motor	0.75 kw
Axial live tooling max. speed	6000 rpm
Sub spindle live tooling (option)	
No. of axial live tooling	4
Axial live tooling servo motor	0.75 kw
Axial live tooling max. speed	6000 rpm
Appearance	
Machine size (L x W x H)	2420 x 1500 x 1935
N.W	3800 kgs
Coolant pump (for spindle)	3/4 HP
Coolant pump (for sub-spindle)	1/4 HP
Auto lubricator capacity	3~6 cc / 15 min

STANDARD ACCESSORIES

- Tool kit & box
- Drilling shaft ER20 × 6
- Collet chuck device
- Auto bar feeder interface
- Finished parts catcher & conveyor
- Cutting fluid device
- Auto power breaker
- Hydraulic cylinder stroke inspection device
- Cutting fluid inspection device
- Cross side live tooling device
- Front side live tooling device
- Sub spindle device
- Sub spindle air-blowing device & finished parts ejecter
- Air-conditioner

OPTIONAL ACCESSORIES

- Auto screw chip conveyor & cart
- Steel belt chip conveyor & cart
- Voltage stabilizer / Transformer