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Welcome to Litz website for more information

Dealer



2021.C



Vertical machining center

High Performance Machining Center

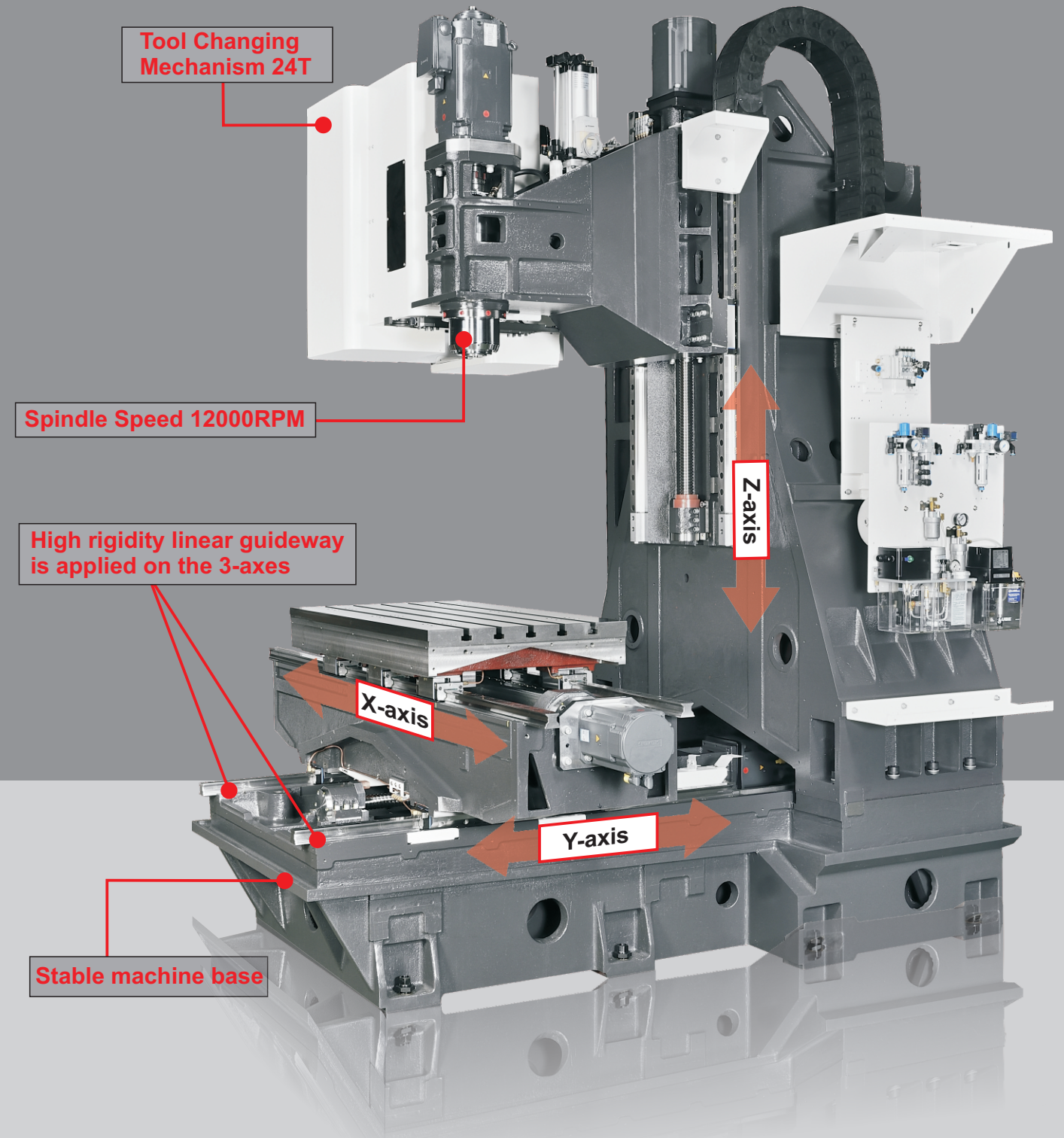


Litz Hitech Corp. | Litz Machine Tools (JiaXing) Corp.

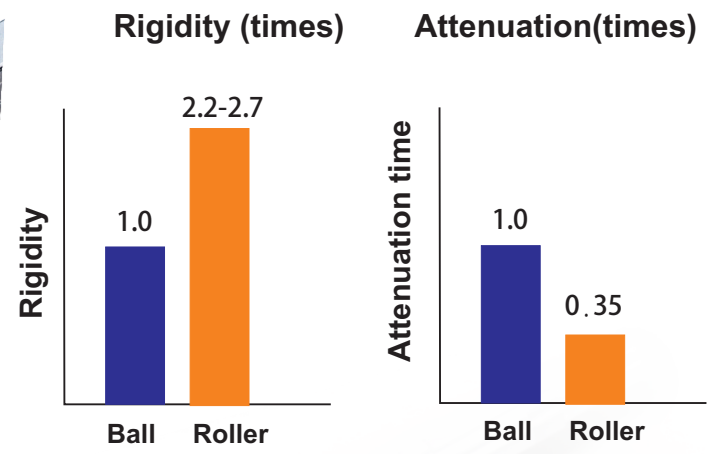
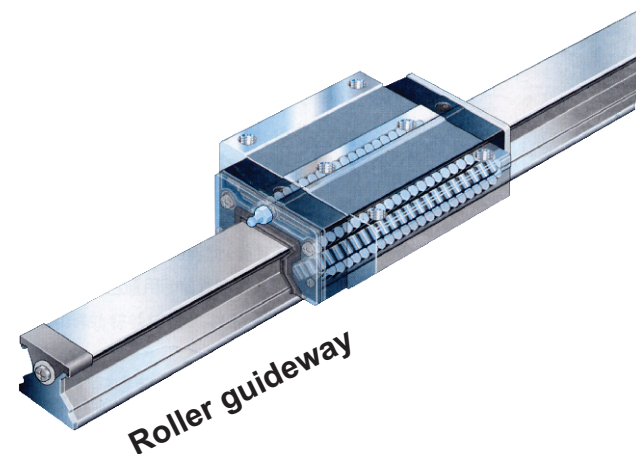
Designed for aluminum rim processing solutions

- The major construction parts are based on Meehanitecast iron, which is stable in structure and long-term quality is assured.
- Casting parts are calculated and analyzed by the finite element method. Proper structure strength combined with enhanced ribs provides high rigidity for the machine.
- A linear guideway is applied on the 3-axes, supporting heavy loads, rapid moving, and assuring precise positioning.

- A wide base, box-shaped column, enhanced saddle, full span supports for heavy loads, and robust structure all contribute to its ability for heavy duty machining.
- Enhanced ribs inside the spindle head and a proper contact length ratio between the spindle head and column provide solid support for the spindle.



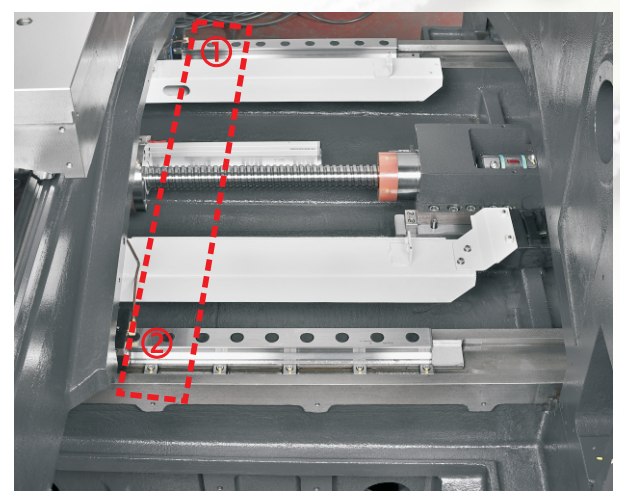
High accuracy linear guide way



Linear guide wayFeatures

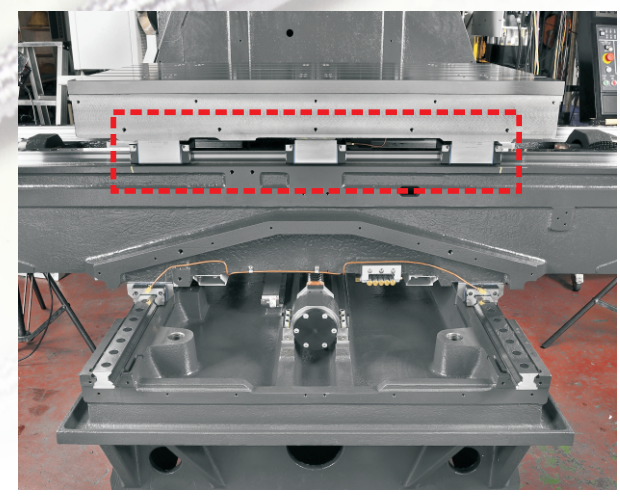
- A linear guideway with zero backlash ensures a consistent cutting surface on curved or tilted surfaces.
- Suitable for high speed operation and the horsepower requirement is minimized.
- Not only maintain the rigidity but also can bear the high speed movements.
- Excellent vibration absorption.
- Compare with ball type linear guide way, the roller guide provides better load capacity and less deformation.

Y axis with two linear guide ways and four linear guide way blocks

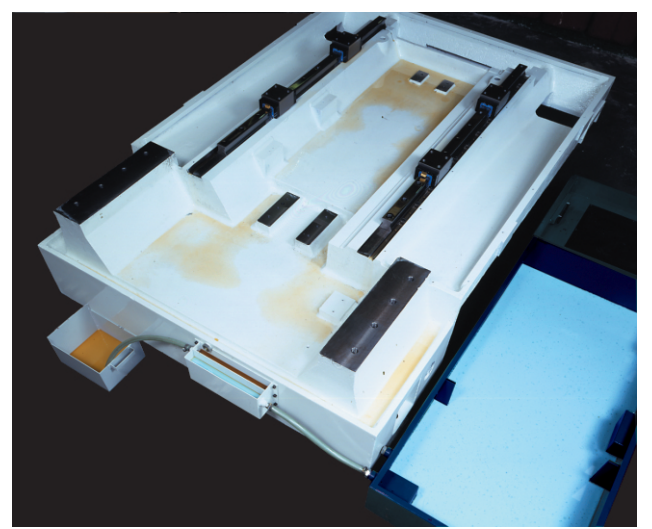
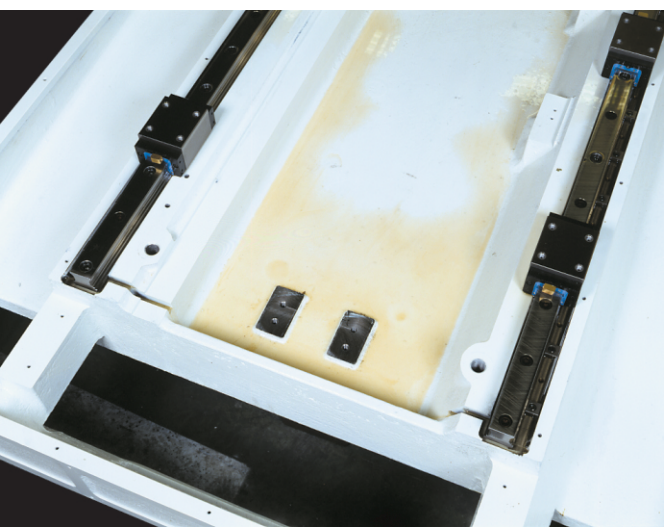


- The machine is equipped with a collision protection device which can absorb collisions due to machine malfunctions or mistakes made by operators. The damage caused by the collision can be minimized and still maintain the design precision.

X axis with two linear guide ways and four linear guide way blocks



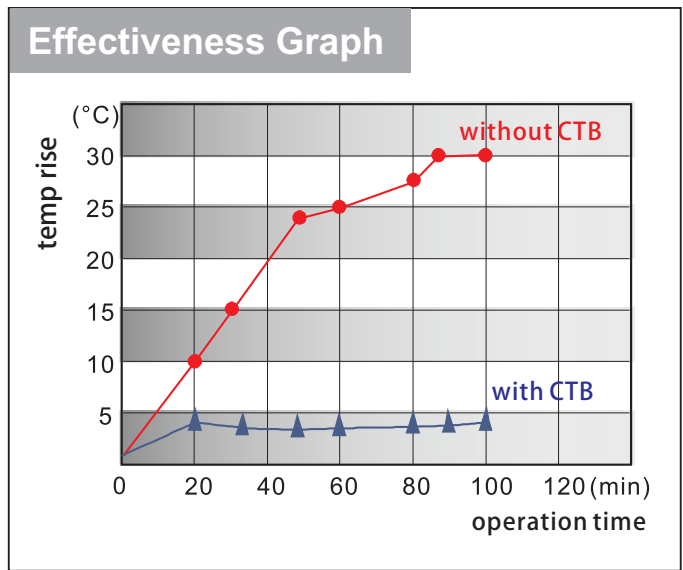
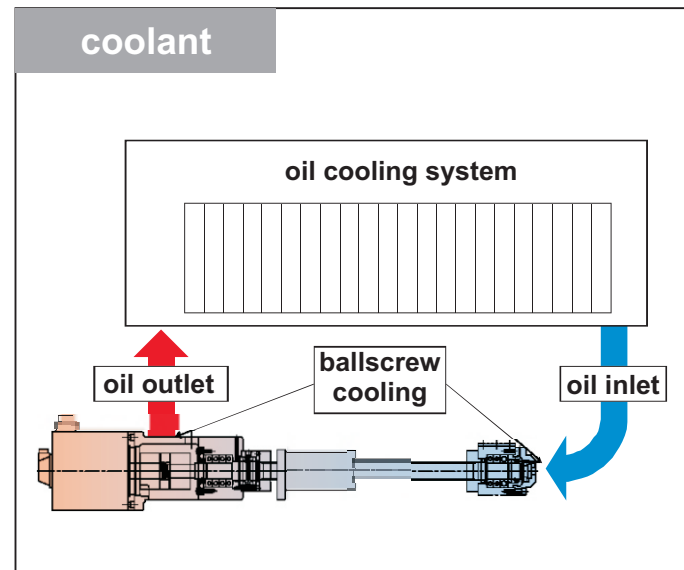
- The X/Y/Z-axis can be equipped with a linear scale system to detect thermal displacement due to rapid movement of the machine. The thermal displacement result will be sent to the controller for compensation, suitable for high precision parts machining.
- The linear scale system is designed with a gas protection device to prevent the linear scale from contamination by dust and oil vapor. The precision of the linear scale is assured and the service time can be extended.

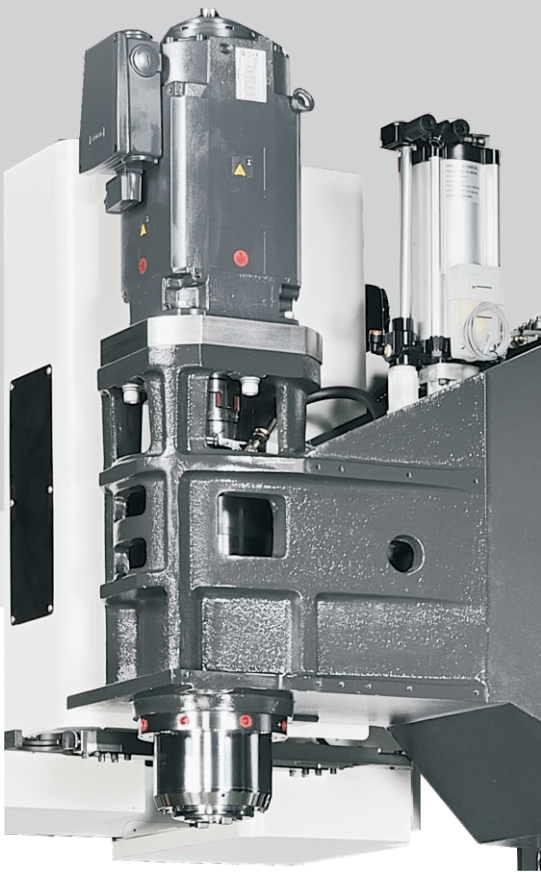


- The oil/coolant separating design can separate lubricating oil and coolant effectively. Coolant quality will not be reduced due to mixing and the machining quality can be assured.

3-axis coolant through OP

The ballscrew transmission system employs hollow cooling design to minimize heat and thermal expansion of ball screw in high-speed operations with coolant oil to balance high speed and high precision at the same time.





Spindle features

12,000 RPM with BBT40 spindle taper, provides high performance and better service life.



Arm-type Tool Changing Mechanism

- A fast, simple, reliable, and durable tool exchange device, providing stable and reliable exchange of tools.
- A unique tool exchange device design, an advanced cam-drive mechanism capable of random tool selection can be achieved using the PLC software control.

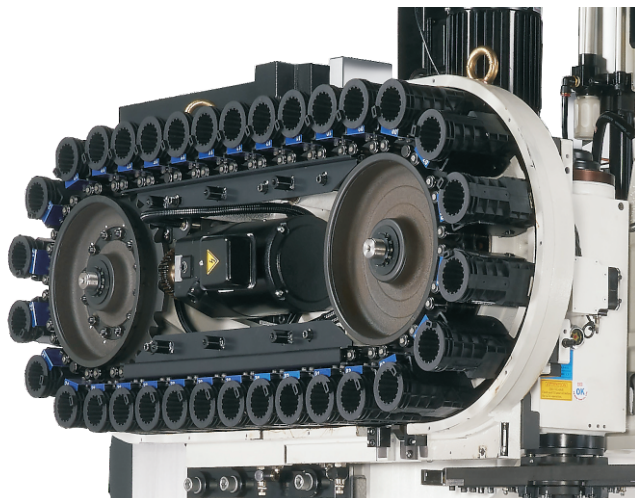
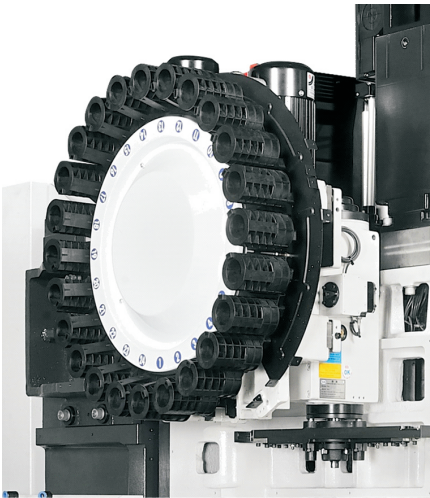


24 / 30 tools

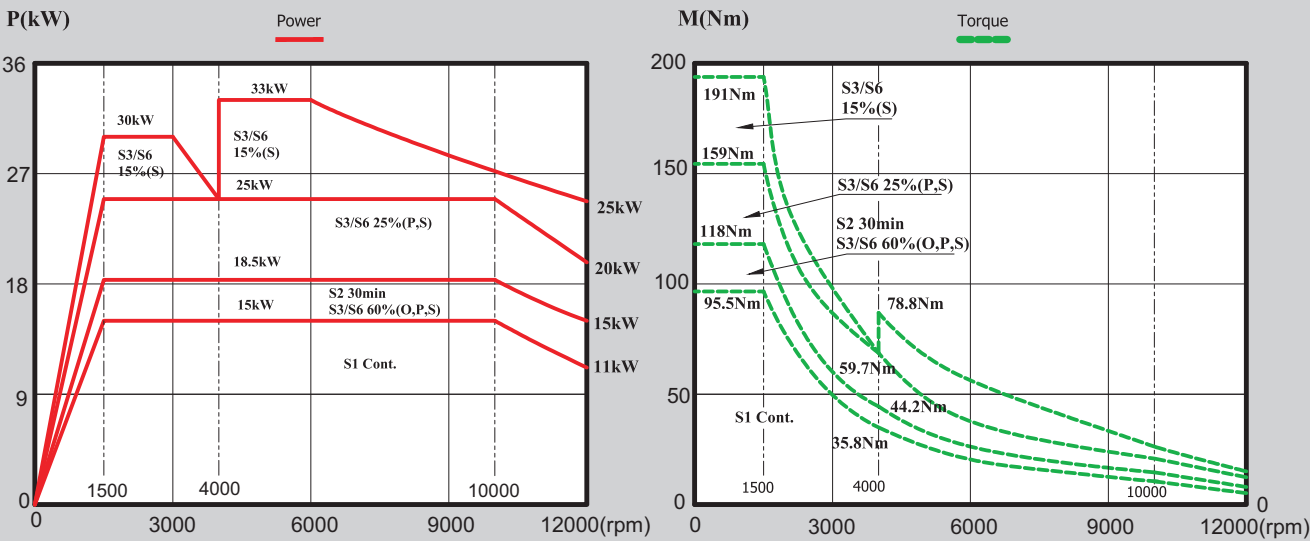
OP

40 tools

OP



Torque Chart



FANUC aiI 15/12000
Spindle Power-Torque Chart

Number of Tools	Tool specification	Max. tool length (mm)	Max. tool dia. (mm)
24T	BBT-40	300	Ø80/Ø150
30T	BBT-40	300	Ø80/Ø150
40T	BBT-40	300	Ø76/Ø125

Standard Function - Optional Function

VERTICAL MACHINING CENTERS 8 LITZ HITECH CORP.

Machine



1 Lighting System

High brightness work light is standard for easy loading and unloading work from the table.

2 Portable MPG

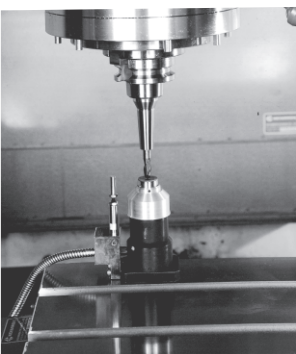


Portable hand wheel beneficial to operation flexibility.

3 Full enclosed ATC

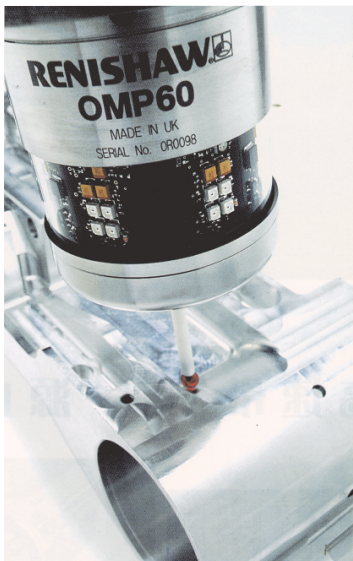
Full enclosed ATC design to prevent duct or oil mist go inside the ATC area.

4 Tool Length Measurement **OP**



The automatic tool measuring system will measure the tool length and input the result into the controller automatically for compensation.

5 Workpiece Measurement System **OP**



The OMP 60 provides simple measurement, which can reduce the time for setting up the machine by up to 90%, reduce the reject rate, and fixture costs and improve the process control

6 Auto power ON for machine warm-up Auto power Off

Operator can set power On timing and activate the warm-up program by timer, as well as power Off.

7 3 color signal light



8 Safety switch (standard)



The machining program starts only when the safety door is closed to ensure operator safety.

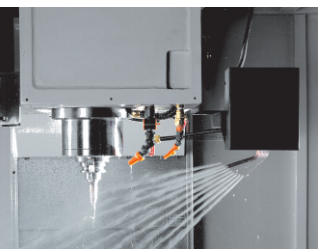
9 DDR Motor **OP**



The embedded rotating 4th axis has the features of high rotating speed, high precision, high maximum torque, high braking torque and zero backlash, suitable for precision parts machining with high performance.

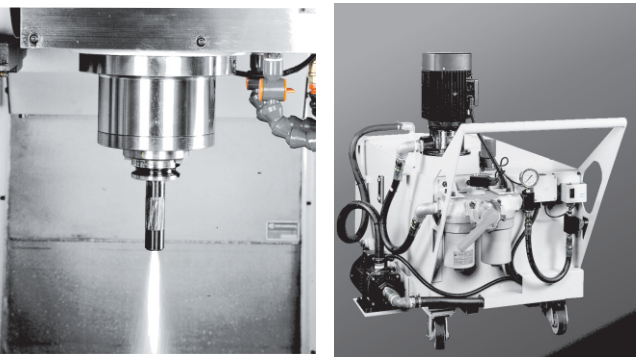
Coolant

10 Programmable nozzle adjustment device **OP**



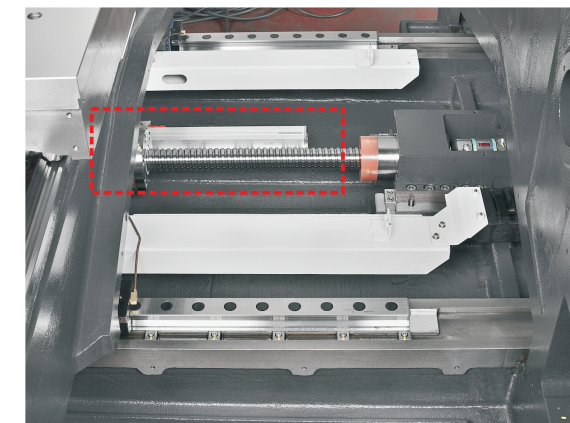
Programmable nozzle adjusting device: you may add M code in machining scripts to change nozzle angle according to tool length during machining.

11 Coolant through spindle device and filter **OP**



With the addition of the coolant through spindle system, the cutting coolant passes through the center of the spindle and is ejected at the tip of cutter to directly cool the workpiece and the cutting blade of the cutter by removing the heat generated from cutting in order to ensure excellent cutting quality, and it is suitable for component parts of deep hole processing.

12 High Precision Linear Scale **OP**

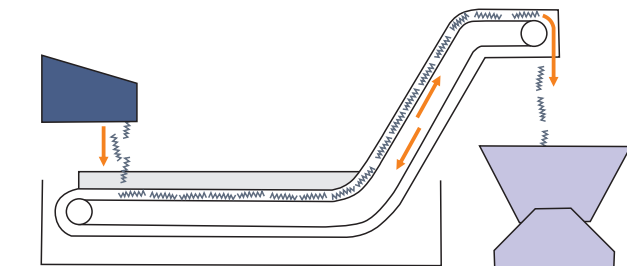


The X/Y/Z-axis can be equipped with a linear scale system to detect thermal displacement due to rapid movement of the machine. The thermal displacement result will be sent to the controller for compensation, suitable for high precision parts machining.

Chip Management

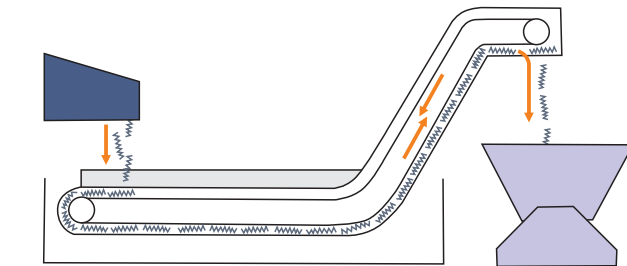
13 chain tynechip conveyor **OP**

Suitable for chip length from 30-150mm



14 scraper tynechip conveyor **OP**

scraper tynechip conveyor can remove the long and curl chips through outer channel; and remove the coolant and small chips through inner channel.



VERTICAL MACHINING CENTERS 9 LITZ HITECH CORP.

Standard Function - Optional Function

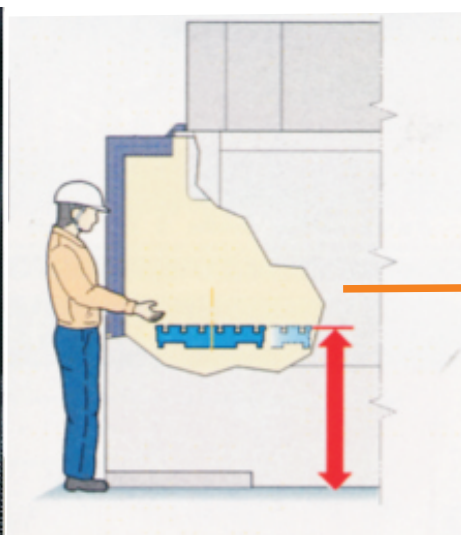
Front and top door in one piece.

Wide opened front for easier loading/unloading.



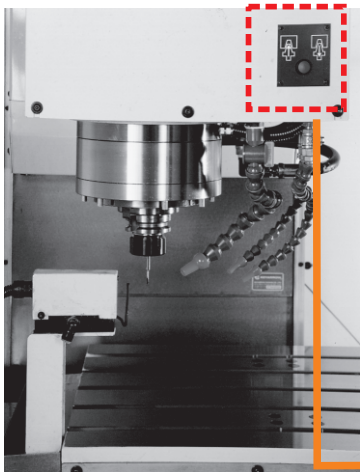
Operator close to table and spindle.

Operator can easily approach workpiece.



Based on ergonomics ,
easy operation and
maintenance
ishighlighted indesign.

Tool clamp/unclamp button



Operator can easily
clamp or unclamp
the tool from the
front.

Rotatable operation panel



Ergonomic operation
panel design.

Full ATC guard

Full ATC guarding
can prevent dust or
chip go inside
the ATC.

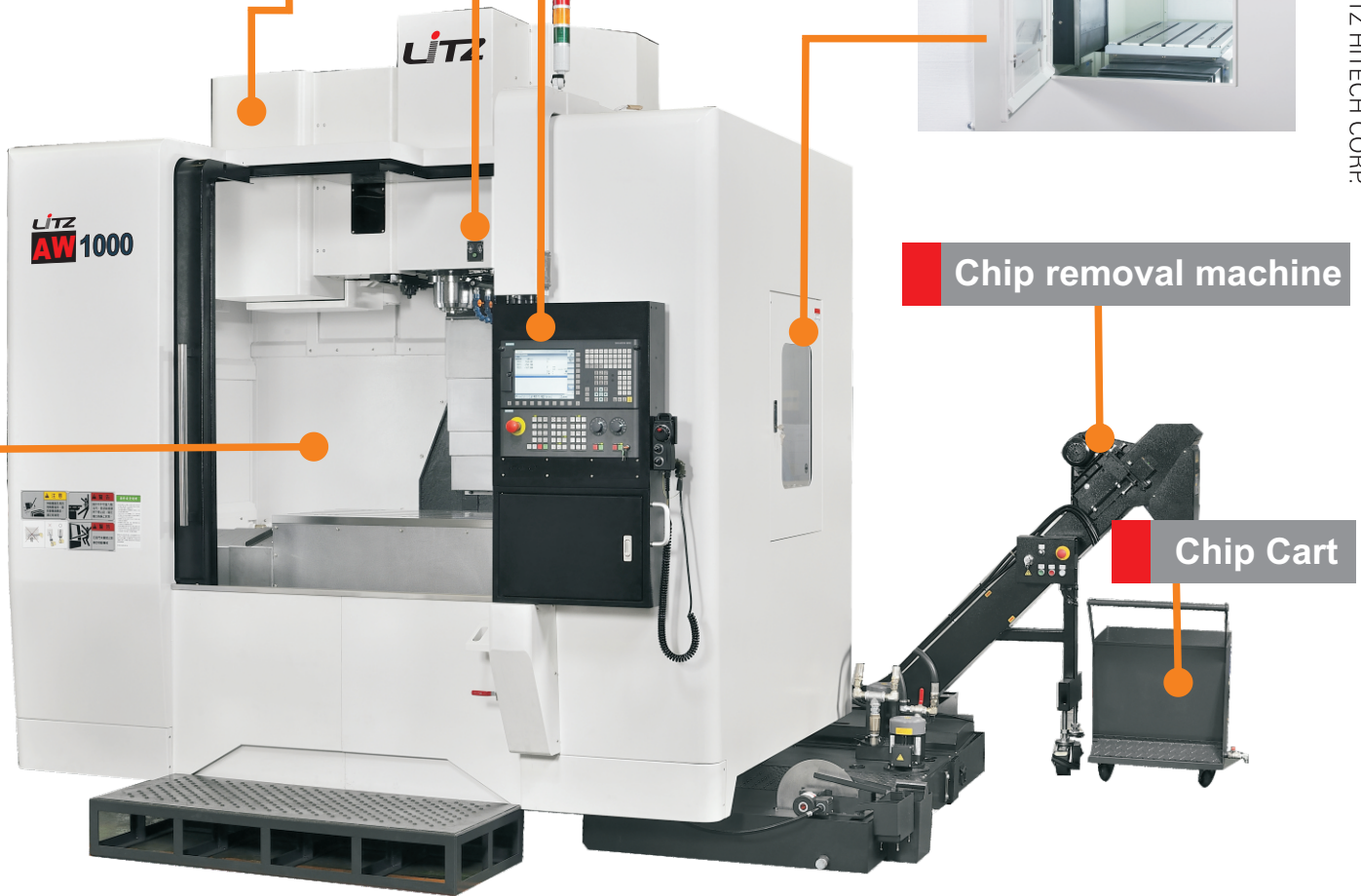
Removable side doors.

Removable side
doors help easier
maintenance
and clean.



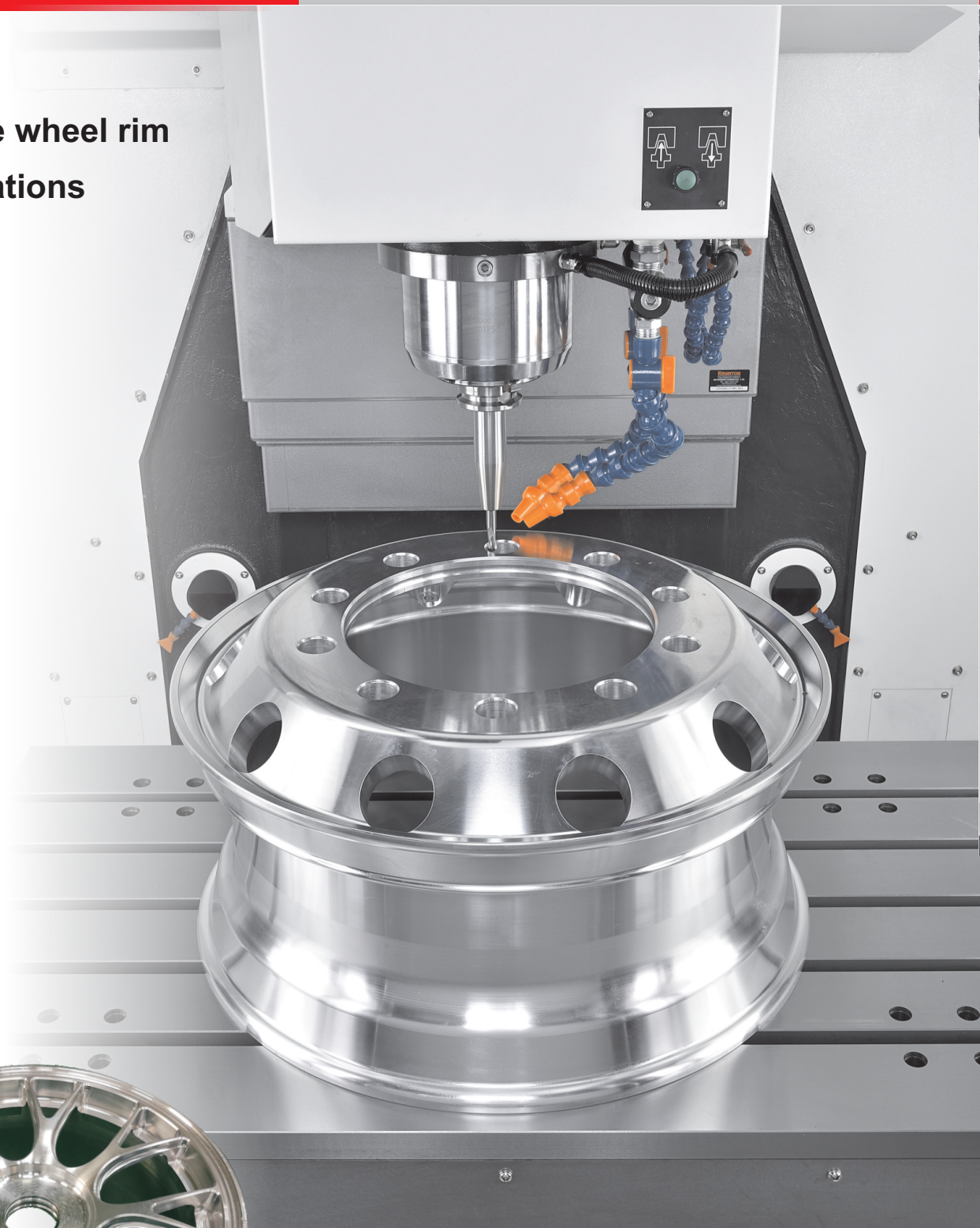
Chip removal machine

Chip Cart



Applications –Wheel Rim

Vehicle wheel rim
applications



Processing conditions

Workpiece : Car wheel
Workpiece size : Ø471.6x253.5mm
Material : Forged aluminum



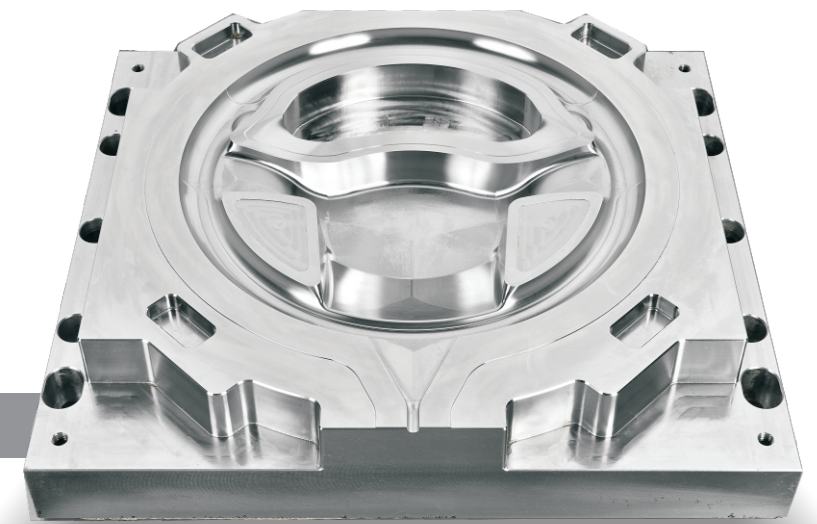
Applications –Mold industry



High performance on
molding industry.

Processing conditions

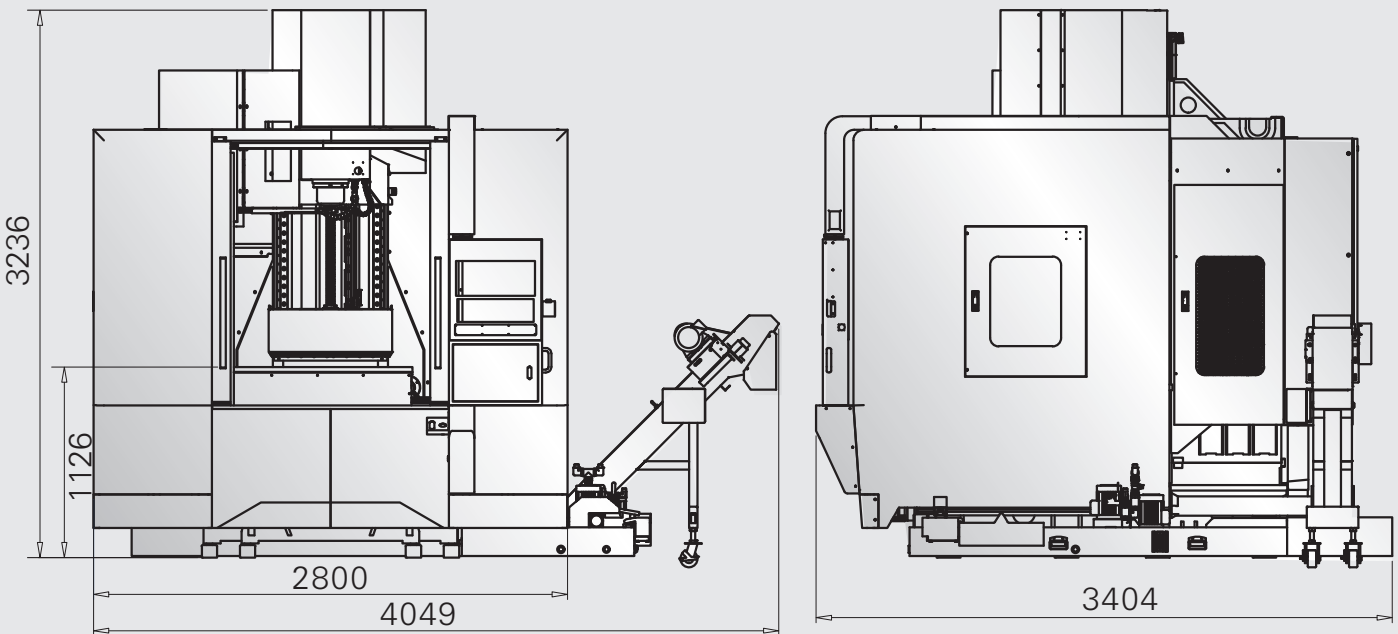
Workpiece : Steering wheel mould
Workpiece size : 510x450x100mm
Material : P20_Die steel



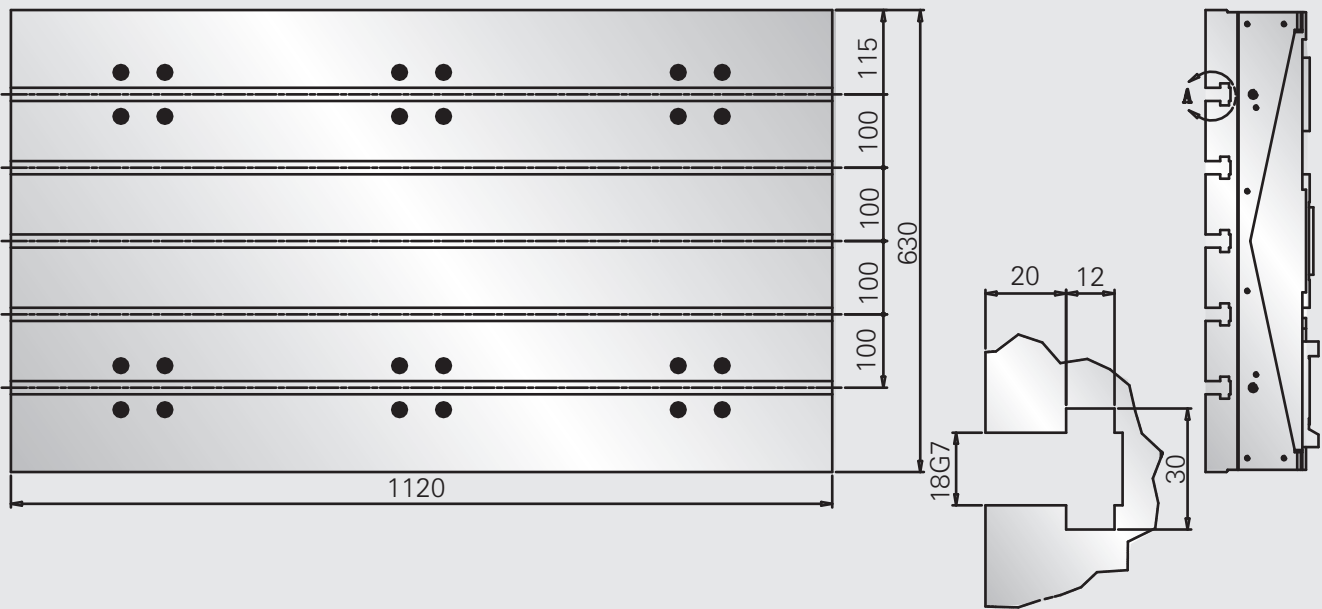
Machine Layout

Outline Dimensions

Unit: mm

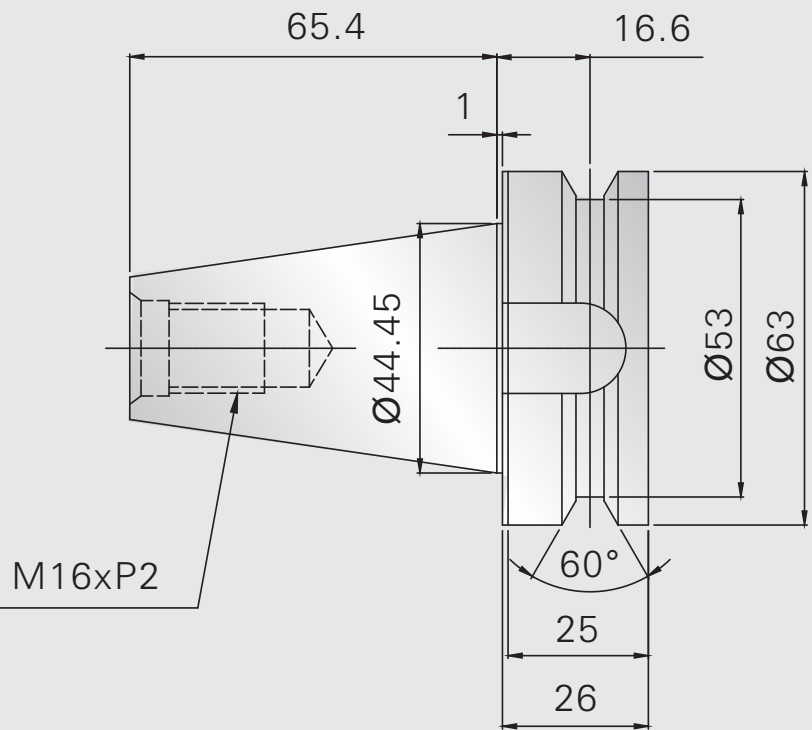


Worktable Dimensions



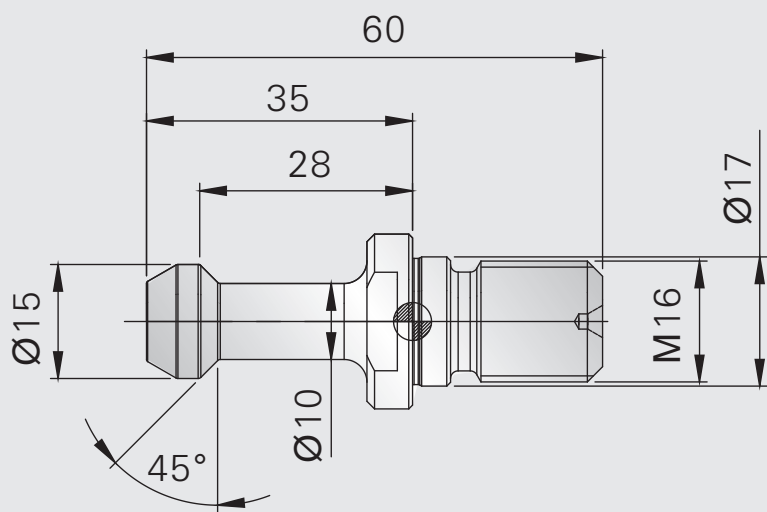
Tool Shank

Unit: mm



BBT-40

Pull Stud



BBT-40

Machine Specifications

		AW-1000A		AW-1000B	
Travels for 3-axes	X-axis Travel	mm	1020		
	Y-axis Travel	mm	650		
	Z-axis Travel	mm	600		
	Spindle nose to worktable surface	mm	100~700(Heighten 250)		
	Spindle center to Z rail surface	mm	780		
	Table surface to floor	mm	1126		
Spindle	Spindle Speed	RPM	12000		
	Spindle power	kW	15/18.5/33		
	Motors on X/Y/Z-axis	kW	4.5/4.5/5.5	4 / 4 / 7	
Automatic Tool Changing System	Number of Tools	T	24		
	Max. tool length	mm	300	350	
	Max. tool weight	kg	7	15	
	Tool changing method	ARM			
	Tool specification	BBT-40		BBT-50	
Worktable	Worktable area	mm	1120x630		
	Worktable max. load capacity	kg	1500		
	Working area	mm	1020x650		
	T-slot Width	mm	18		
	T-slot	No.	5		
	T-slot Distance from the center	mm	100		
Rapid Speed	X-axis rapid speed	M/min	36		
	Y-axis rapid speed	M/min	36		
	Z-axis rapid speed	M/min	30		
	Cutting feed rate	M/Mmin	1-20000		
Controller	FANUC 0iF plus type 1				
Miscellaneous	Machine Weight	Kg	9700	10000	
	Coolant Tank Capacity	L	490		
	Power Consumption	KVA	35		
	Compressed air source	kg/cm²	6		

- All the photos contained herein are for reference only. In case of any discrepancy with the actual machine parts, the actual machine shall prevail.
- LITZ reserves the right to modify the product specifications, appearance, equipment or discontinue the products.

Equipment List

Spindle	
Spindle speed: 12000 RPM (Direct-drive)	<input checked="" type="radio"/>
Spindle speed: 15000 RPM (Direct-drive)	<input type="radio"/>
Spindle speed: 15000 RPM (Build-in)	<input type="radio"/>
Spindle speed: 20000 RPM (Build-in)	<input type="radio"/>
Spindle oil cooling system(Direct-drive)	<input checked="" type="radio"/>
Spindle water cooling system(Build-in)	<input type="radio"/>
Coolant through the spindle system (CTS)	<input type="radio"/>
Spindle dust-proof air-sealing system	<input checked="" type="radio"/>
Cooling System	
Spindle external programmable air blow system	<input checked="" type="radio"/>
Stop block for oil feed tool holder	<input type="radio"/>
Programmable coolant nozzle	<input type="radio"/>
Splash ring(arm type only)	<input type="radio"/>
Coolant cooling system	<input type="radio"/>
Chip Removal System	
Chip auger inside the machine	<input checked="" type="radio"/>
Chip conveyor	<input checked="" type="radio"/>
Chip cart	<input checked="" type="radio"/>
Coolant gun for machine cleaning	<input checked="" type="radio"/>
Air gun for machine cleaning	<input checked="" type="radio"/>
Wash down device	<input checked="" type="radio"/>
Fully-covered sheet metal	<input checked="" type="radio"/>
Measurement System	
Tool length measurement system	<input type="radio"/> ☆
Workpiece measurement system	<input type="radio"/> ☆
Production and Workshop	
Oil Mist Collector	<input type="radio"/>

Oil/coolant separator		
Disc type oil/coolant separator <input type="radio"/>		
ATC System		
Automatic Tool Changer Mechanism (ATC) <input checked="" type="radio"/>		
Tool specification	BBT-40(A)	<input checked="" type="radio"/>
	BBT-50(B)	<input checked="" type="radio"/>
	HSK-63A	<input type="radio"/>
Arm type tool magazine	24T	<input checked="" type="radio"/>
	30T	<input type="radio"/>
	40T	<input type="radio"/>
3-Axes Transmission System		
3-axes coolant thru ballscrew(CTB) <input type="radio"/>		
3-axes linear scale <input type="radio"/>		
Controller		
FANUC 0iF plus type 1 <input checked="" type="radio"/>		
Mitsubishi M80 <input type="radio"/>		
Siemens 828D <input type="radio"/>		
Electrical Parts		
Work light <input checked="" type="radio"/>		
Alarm indicator <input checked="" type="radio"/>		
M30 automatic power off system <input checked="" type="radio"/>		
Heater exchanger for electrical cabinet <input checked="" type="radio"/>		
Air-conditioner for electrical cabinet <input type="radio"/>		
Miscellaneous		
4th Axis (rotating table) <input type="radio"/> ☆		
Operating pedal <input checked="" type="radio"/>		

● Standard ○ Options ☆ Upon request

Total Production Solution

Highly efficient manufacturing fashion, equipped with high performance control system. The high speed contouring capability can achieve best possible surface quality under most demanding machining cycle time. Highly dynamic five axes machining provides solution for complex tasks.



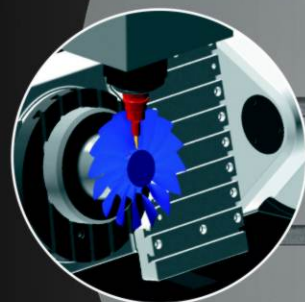
Heidenhain & Siemens Control System

iTNC530 / 840D

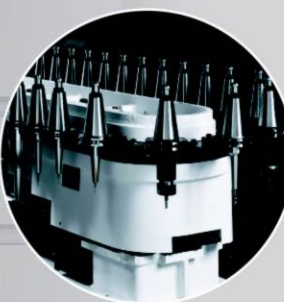
Ideal for high-end application CNC system. Modular, open, flexible operating interfaces are the highlight of the controller. Programming and visual structure can be integrated with network systems.



Litz Hitech & Open Mind, the CAM company
The strategic alliances



The monitoring & collision test within work range

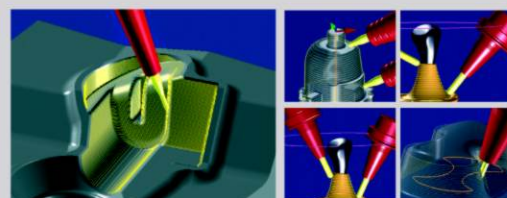


MST Tools (Japan)



Litz Hitech LU Series

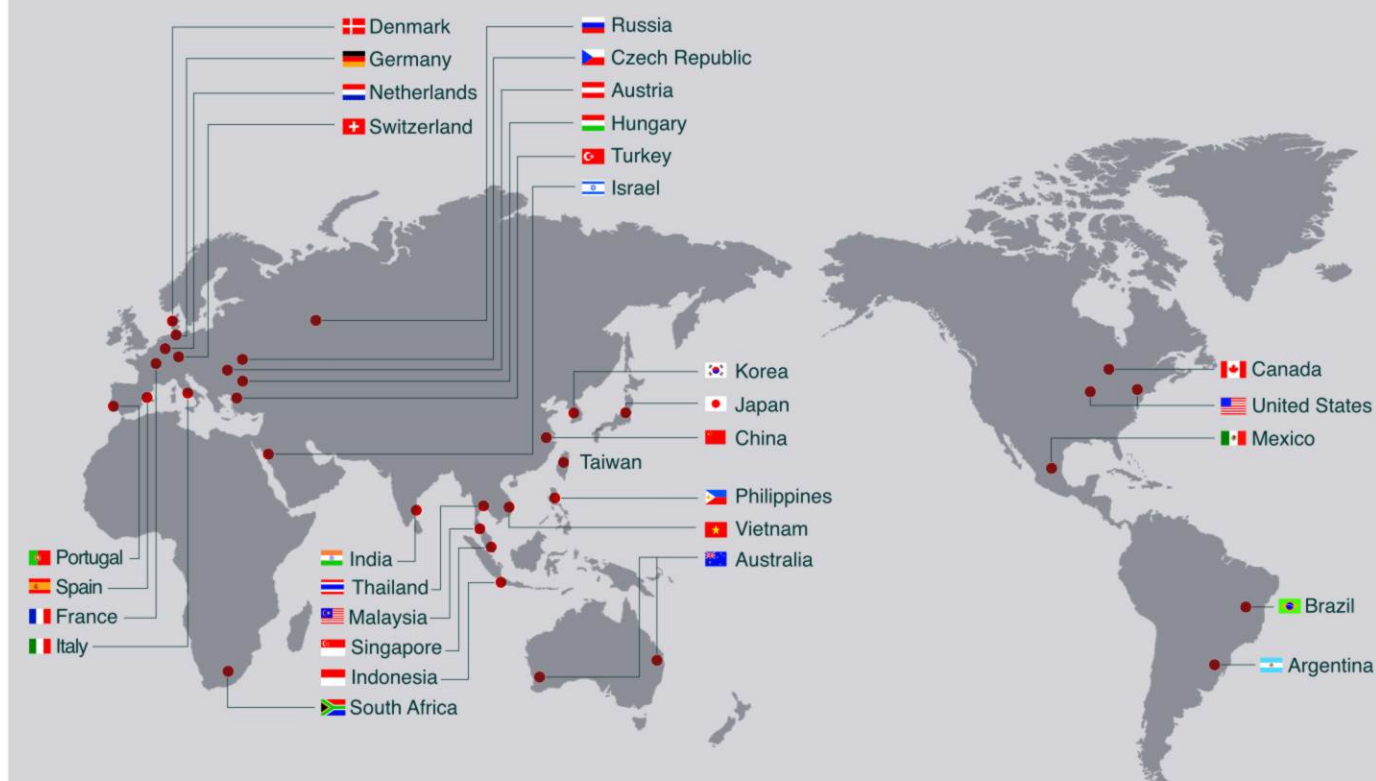
5 Axes Series employs U shape base with dual-support A/C axes rotary worktable's high rigidity mechanism. The machine is equipped with 12000RPM direct-drive high speed spindle. High durable roller type linear guideways, 3 axes high precision linear scales along with other high quality components brings out the excellences of the 5 axes simultaneous control. Mill, drill, tap, spiral, irregular and other complex machining can be easily achieved.



Technical Support Global Presence



SALES & DISTRIBUTION NETWORK



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