



Manufacturer

**Litz Hitech Corp.**

No. 18, Yu 9 Road, Yu-Shih Industrial Park,  
Tachia District, Taichung City, Taiwan  
TEL: +886-4-26815711  
FAX: +886-4-26815108  
E-mail: sales@litzhitech.com  
<http://www.litzhitech.com>



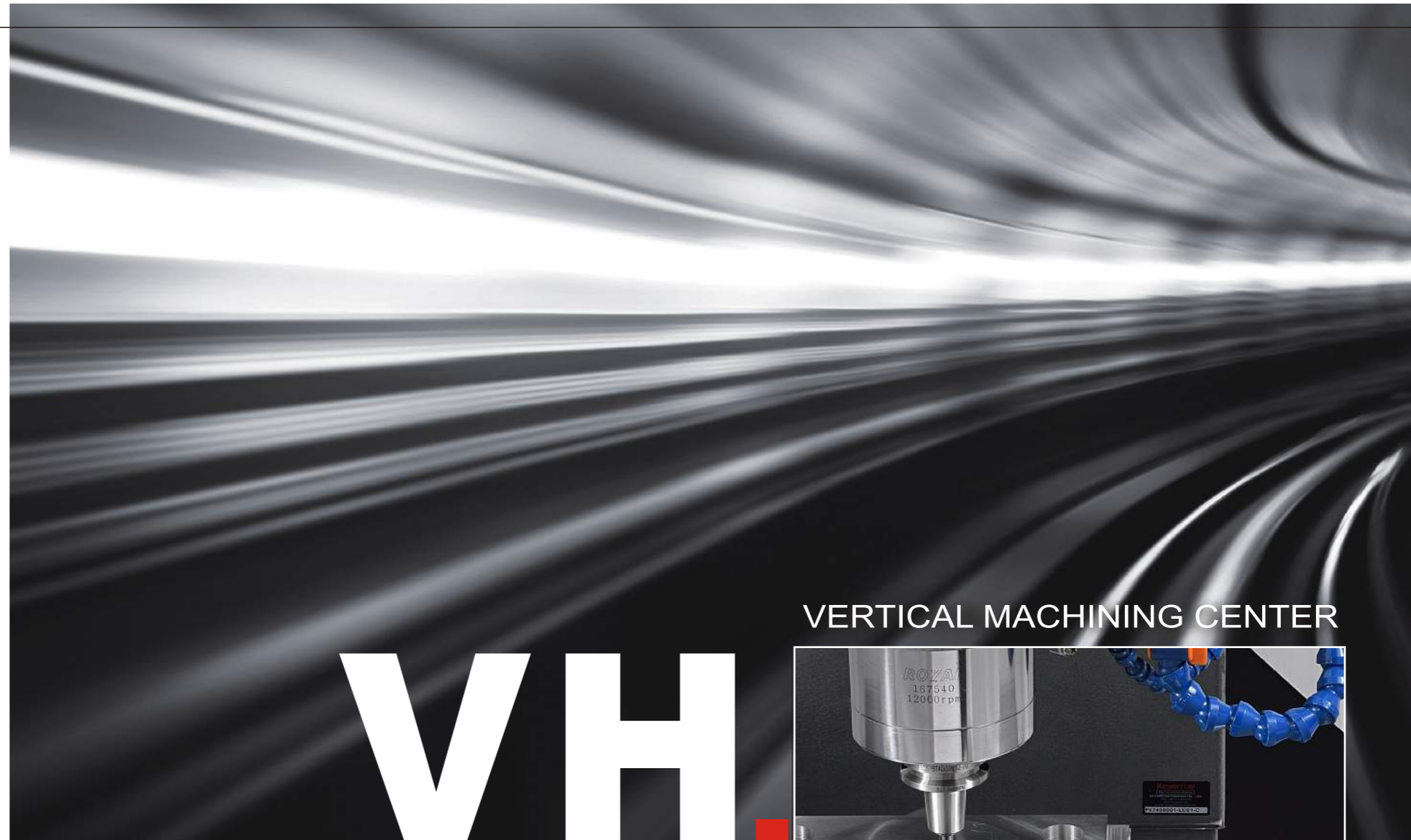
**Litz Machine Tools (JiaXing) Corp.**

No. 1398 Hefeng Road, Jiaxing, Zhejiang  
TEL: +86-573-82222735  
FAX: +86-573-82222739  
E-mail: sales.jl@litzhitech.com  
<http://www.litzchina.cn>



Welcome to Litz website for more information

Dealer



VERTICAL MACHINING CENTER



**VH- 800A    VH-1000A**  
**VH-1100A    VH-1300A**

High Performance Machining Center



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

VH-800A



VH-1100A



design for increasing your productivity

VH-1000A



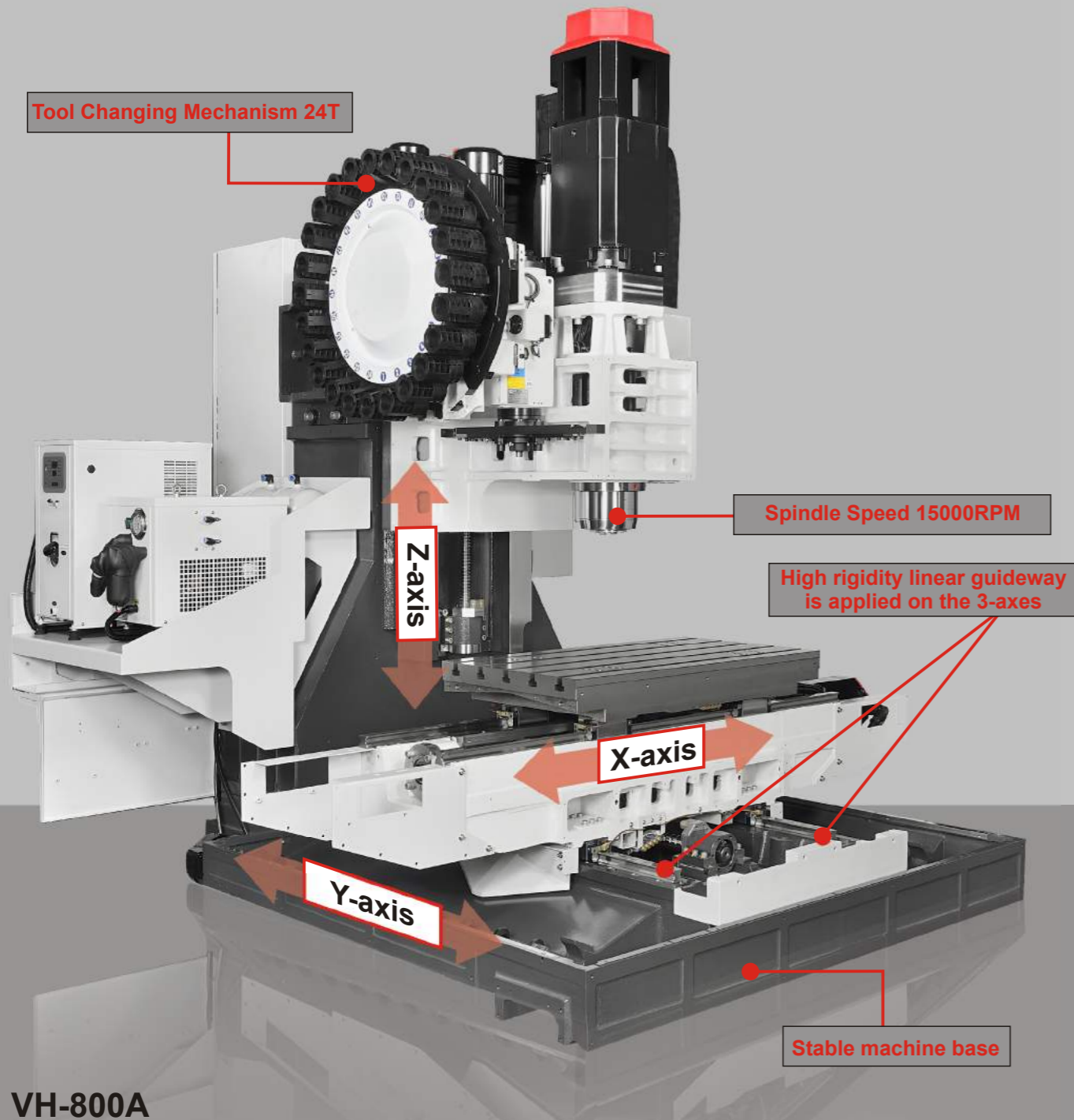
VH-1300A



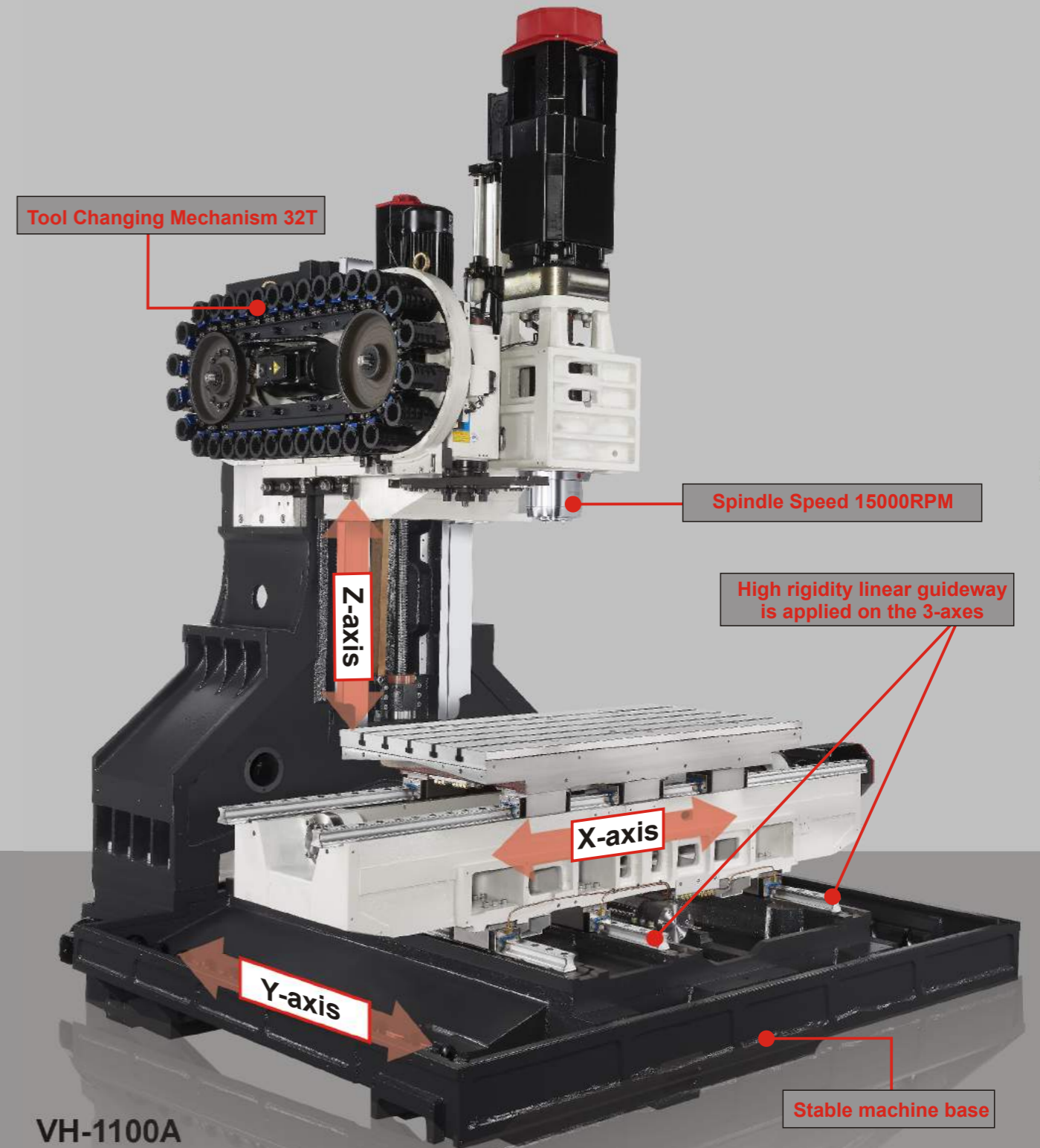
## High rigidity, high-precision structure design

- The major construction parts are based on Meehanite cast 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.

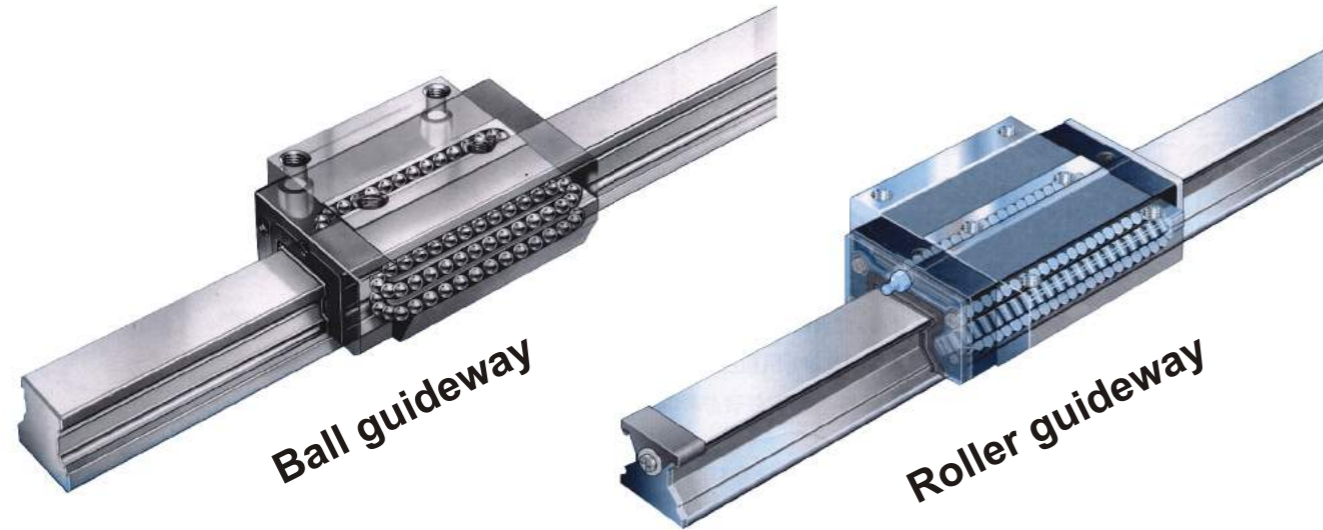


VH-800A



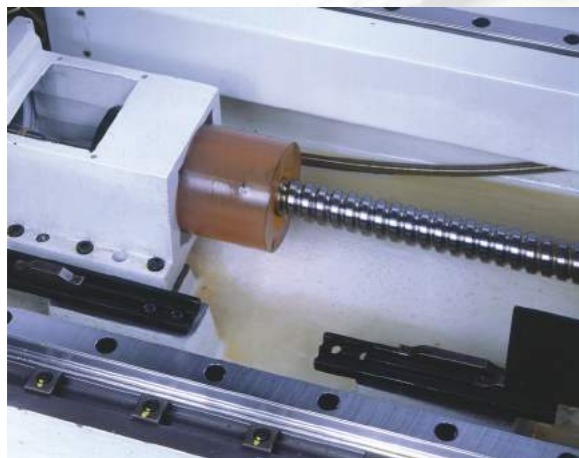
VH-1100A

## Linear Guideway with High Speed and High Precision



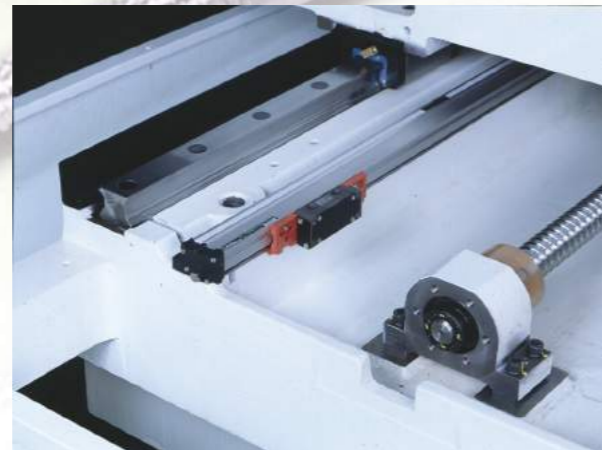
- A linear guideway with zero backlash ensures a consistent cutting surface on curved or tilted surfaces.
- Suitable for high speed operation and the horsepower requirement is minimized.
- By using rolling contact instead of sliding contact, the linear guide reduces the friction loss and increases the sensitivity and positioning precision.
- Capable of taking loads from all directions simultaneously. Multiple point contacts of the rail contact surface under loads, the cutting rigidity will not be compromised.
- Easy to assemble with interoperability. The lubrication mechanism is simple.
- Tiny wear and tear of linear guideways, long service time.

### Collision Protection Device



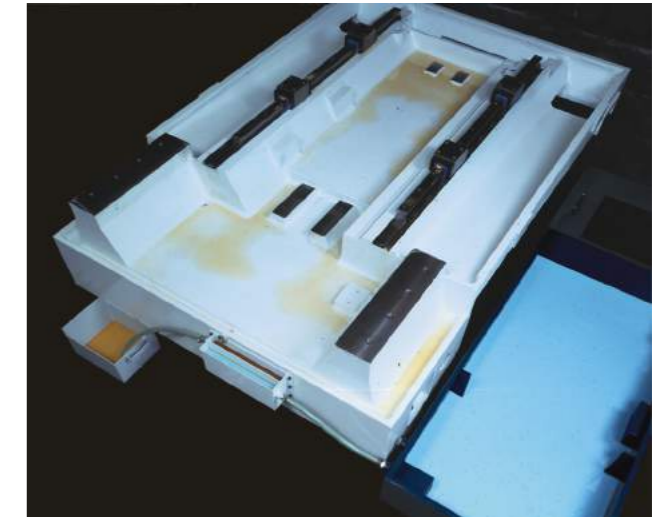
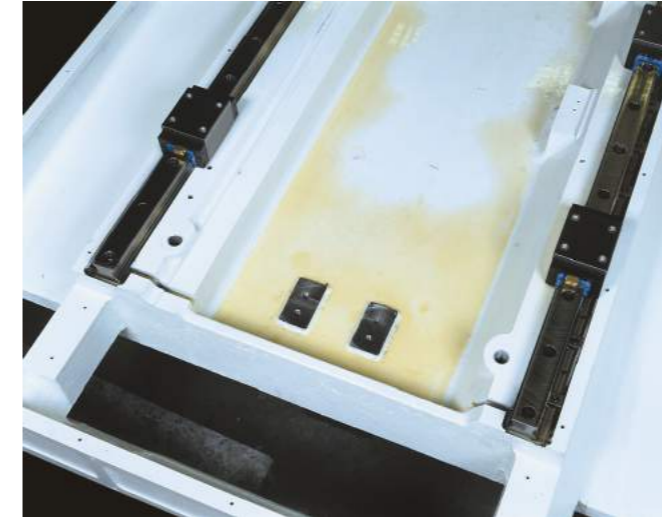
- The machine is equipped with a collision protection device which can absorb collisions due to machine malfunctions or mistakes made by operators. The damage caused by the collision can be minimized and still maintain the design precision.

### 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.
- 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.

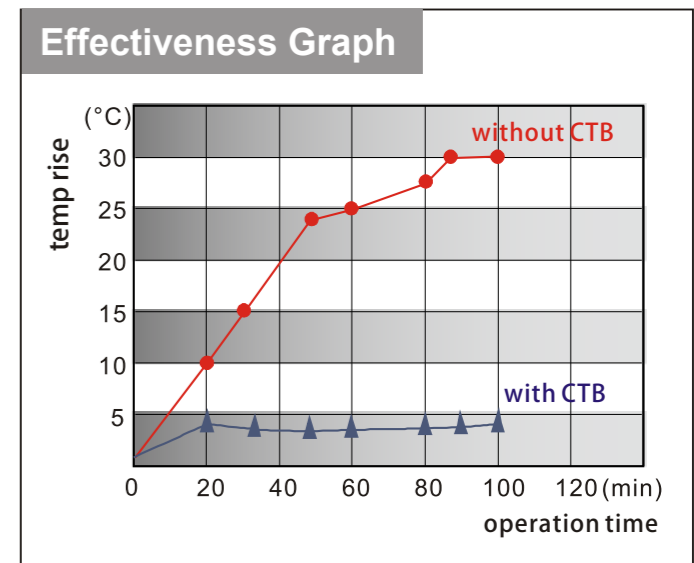
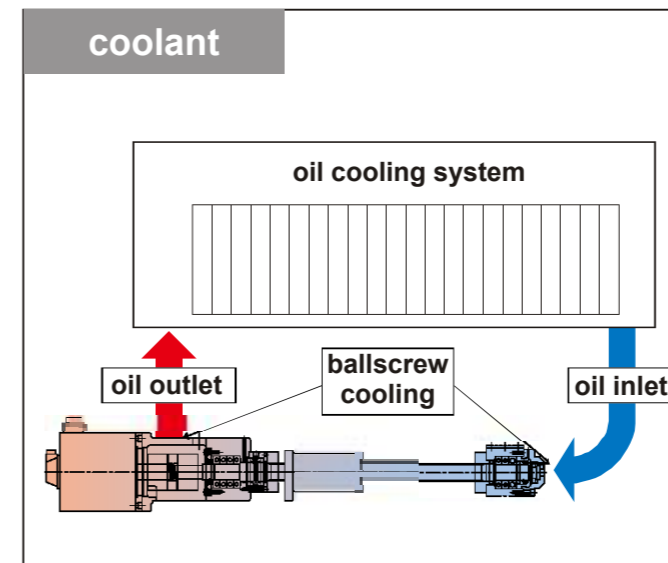
## Oil/Coolant Separating Design



- 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.



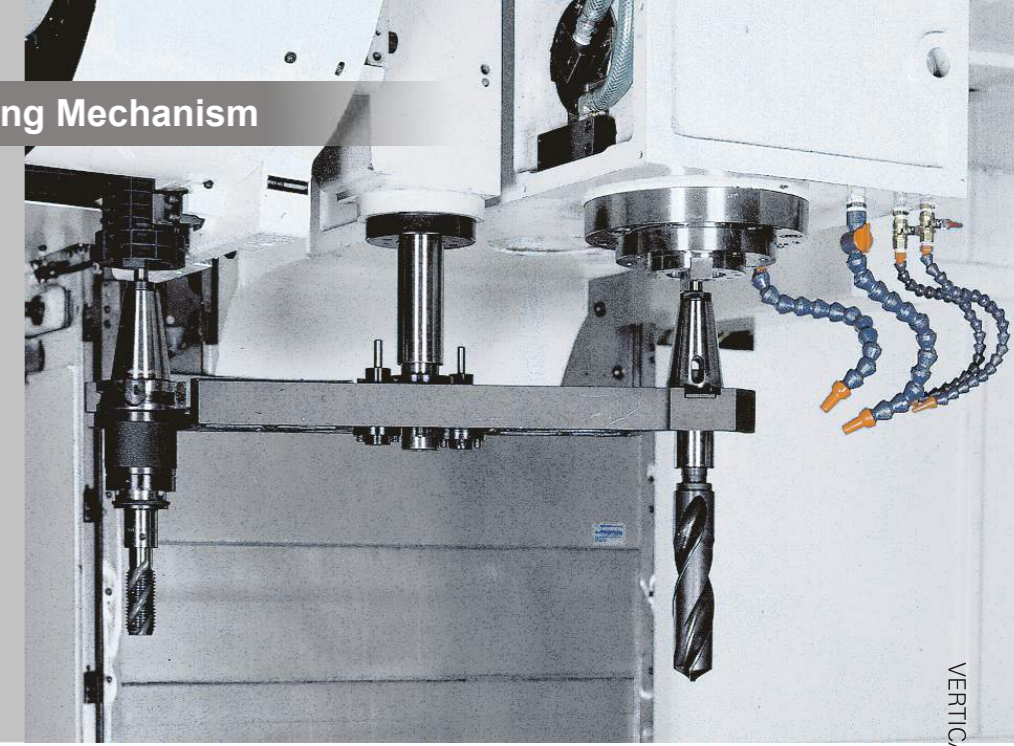
## Spindle features

15,000 RPM with BBT40 spindle taper, provides high performance and better service life.

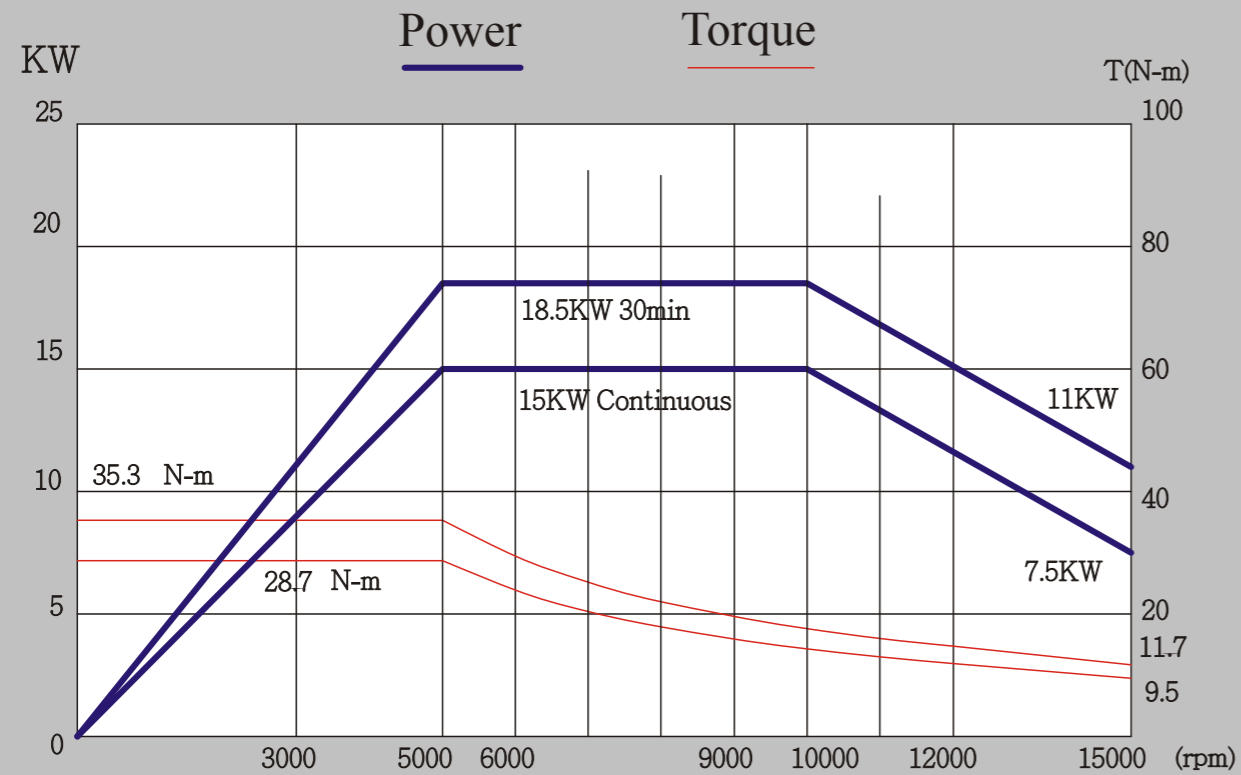


## Arm-type Tool Changing Mechanism

- 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.



## Torque Chart

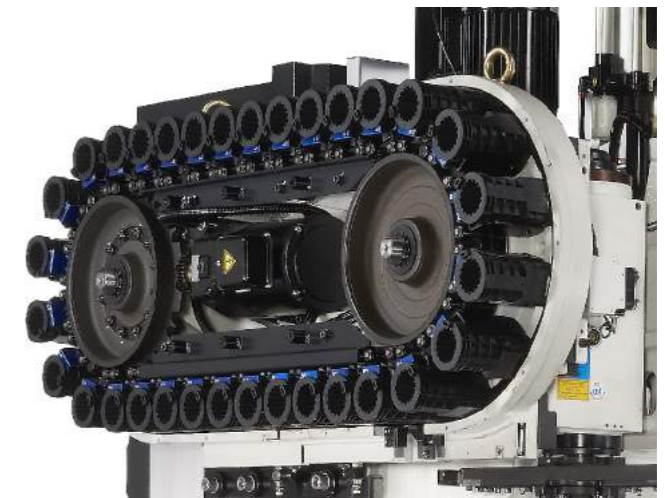


αiIT 15/15000  
Spindle Power-Torque Chart

## 24 tools



## 32 tools



Mode	Number of Tools	Tool specification	Max. tool length (mm)	Max. tool dia. (mm)
VH-800A	24T	BBT-40	300	80/150
VH-1000A	30T	BBT-40	300	80/150
VH-1100A	32T	BBT-40	300	76/125
VH-1300A	32T	BBT-40	305	76/125

# Standard Function - Optional Function

## Machine



### 1 Lighting System

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

### 2 Portable MPG

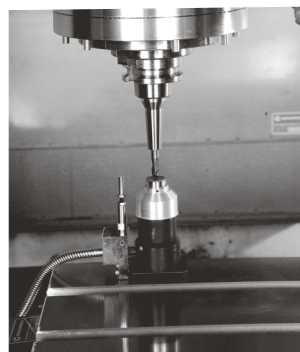


Portable hand wheel beneficial to operation flexibility.

### 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 IR tool damage detector OP



The IR tool damage detector is aimed to identify any damages to mini tools before machining and signal the NC controller to hold the next machining process.

### 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.

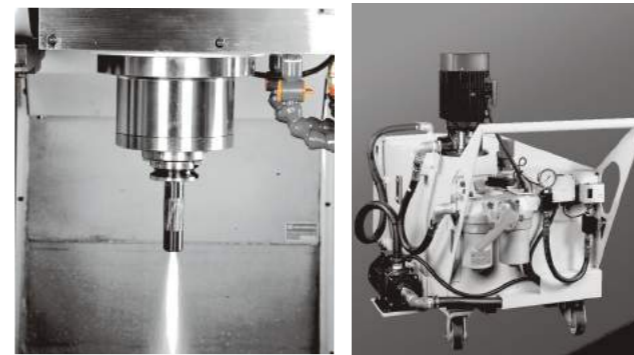
## Coolant

### 10 Programmable nozzle adjusting device OP



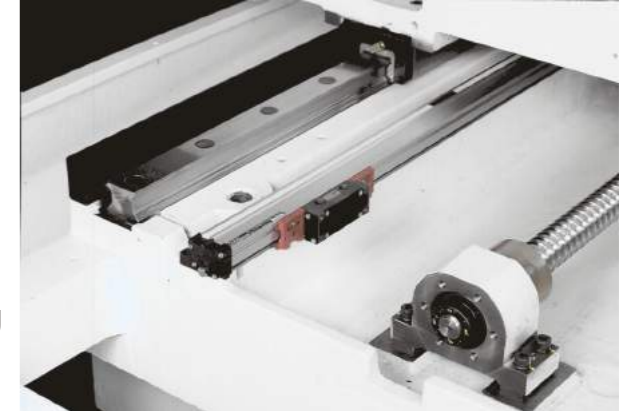
Programmable nozzle adjusting device: you may add M code in machining scripts to change nozzle angle according to tool length during machining.

### 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

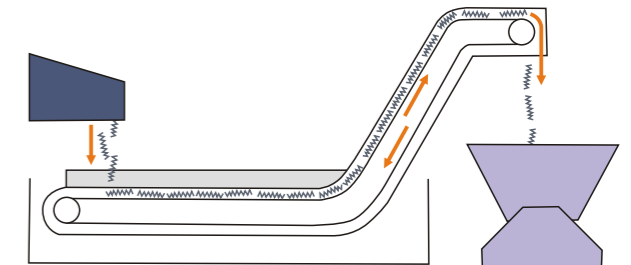


The X/Y/Z-axis can be equipped with a linear scale system to detect thermal displacement due to rapid movement of the machine. The thermal displacement result will be sent to the controller for compensation, suitable for high precision parts machining.

## Chip Management

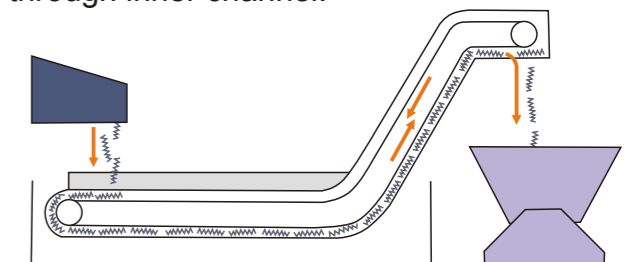
### 13 chain tynechip conveyor OP

Suitable for chip length from 30-150mm



### 14 scraper tynechip conveyor OP

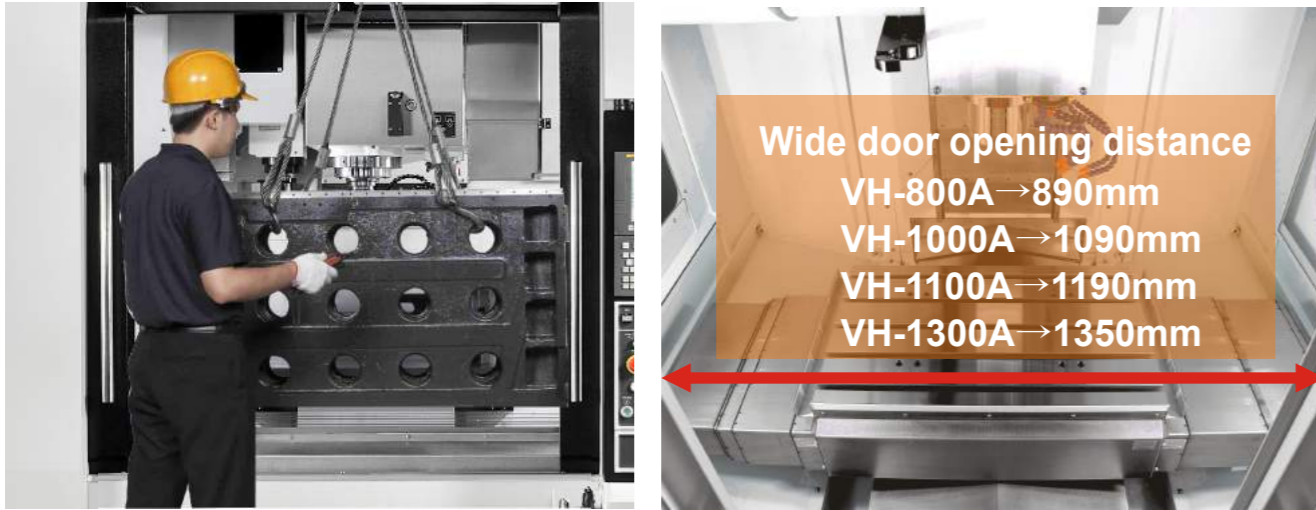
scraper tynechip conveyor can remove the long and curl chips through outer channel; and remove the coolant and small chips through inner channel.



# Standard Function - Optional Function

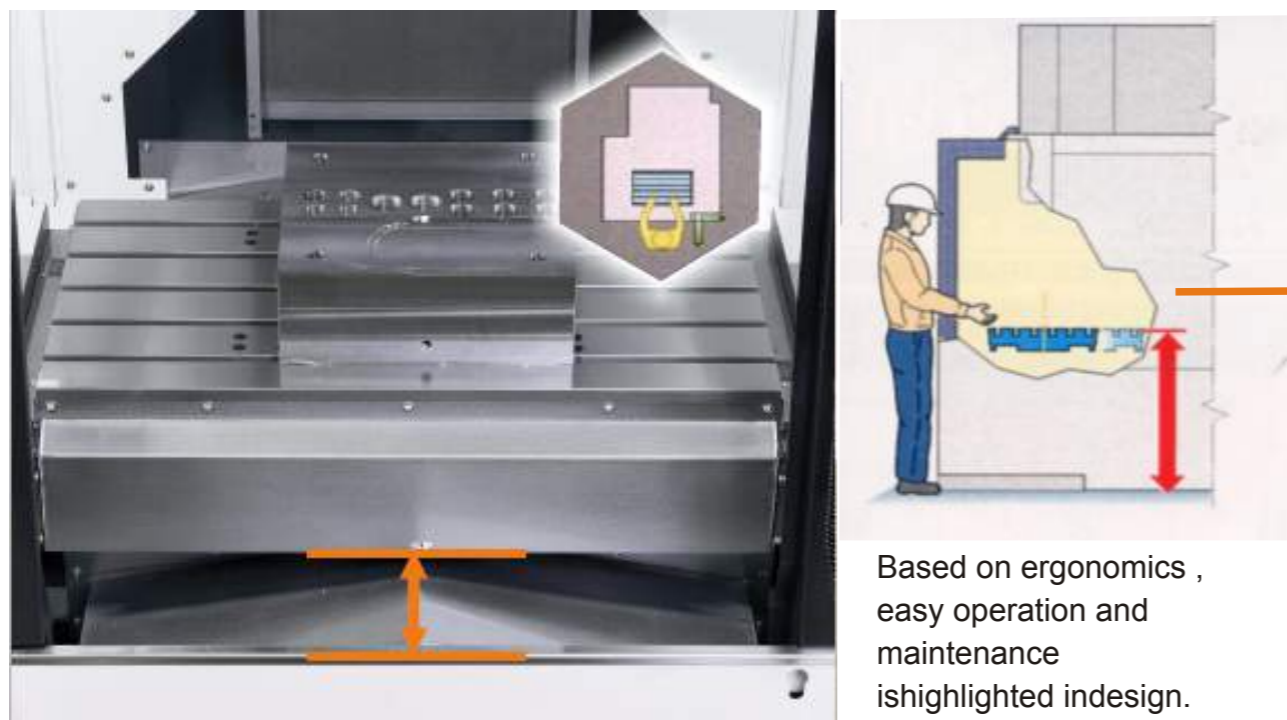
## Front and top door in one piece.

Wide opened front for easier loading/unloading.

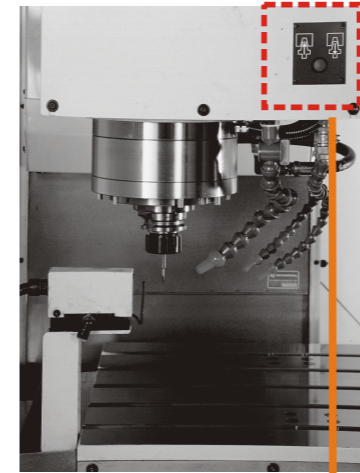


## Operator close to table and spindle.

Operator can easily approach workpiece.



## 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.

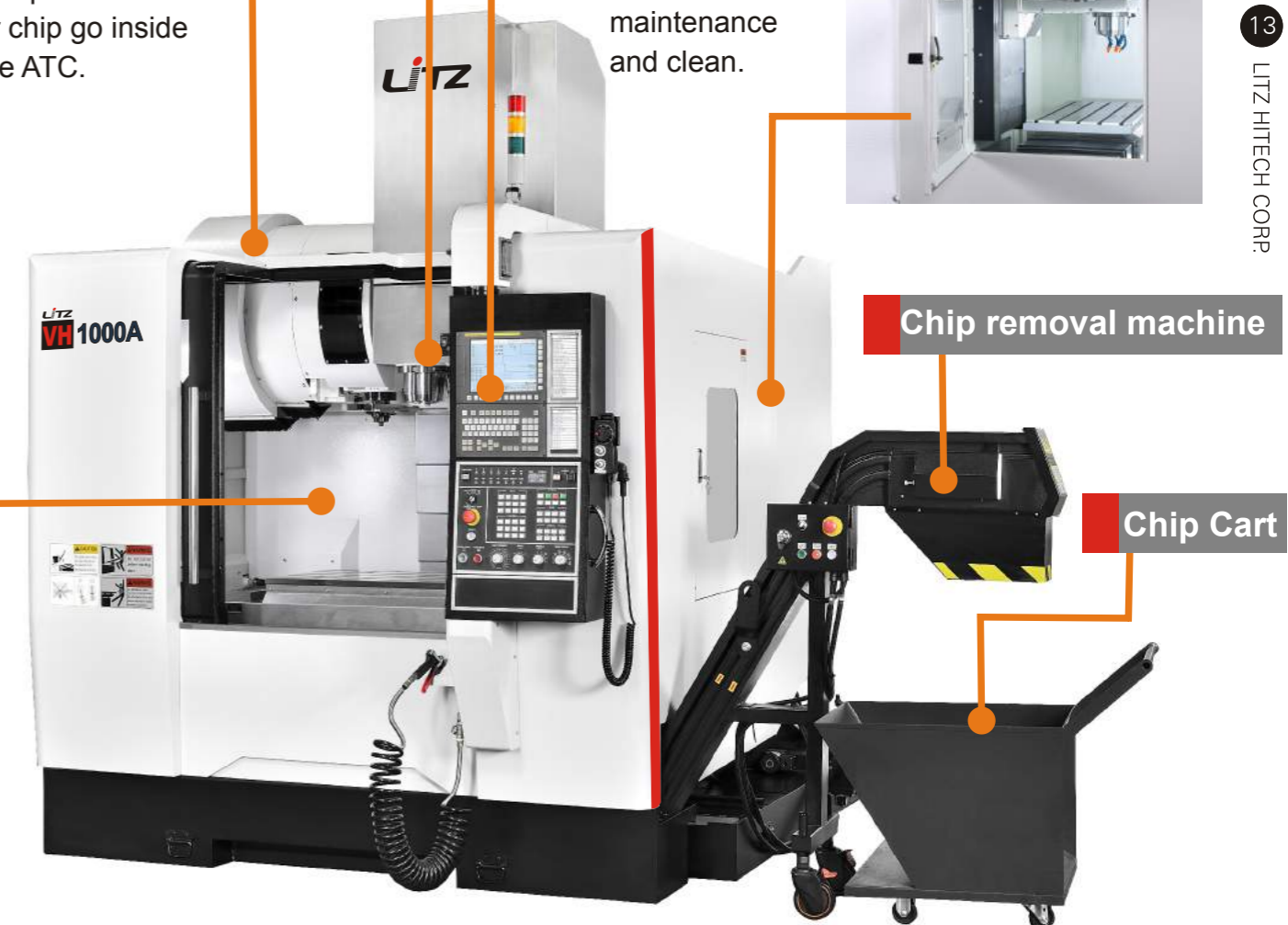
## Removable side doors.

Removable side doors help easier maintenance and clean.



## Chip removal machine

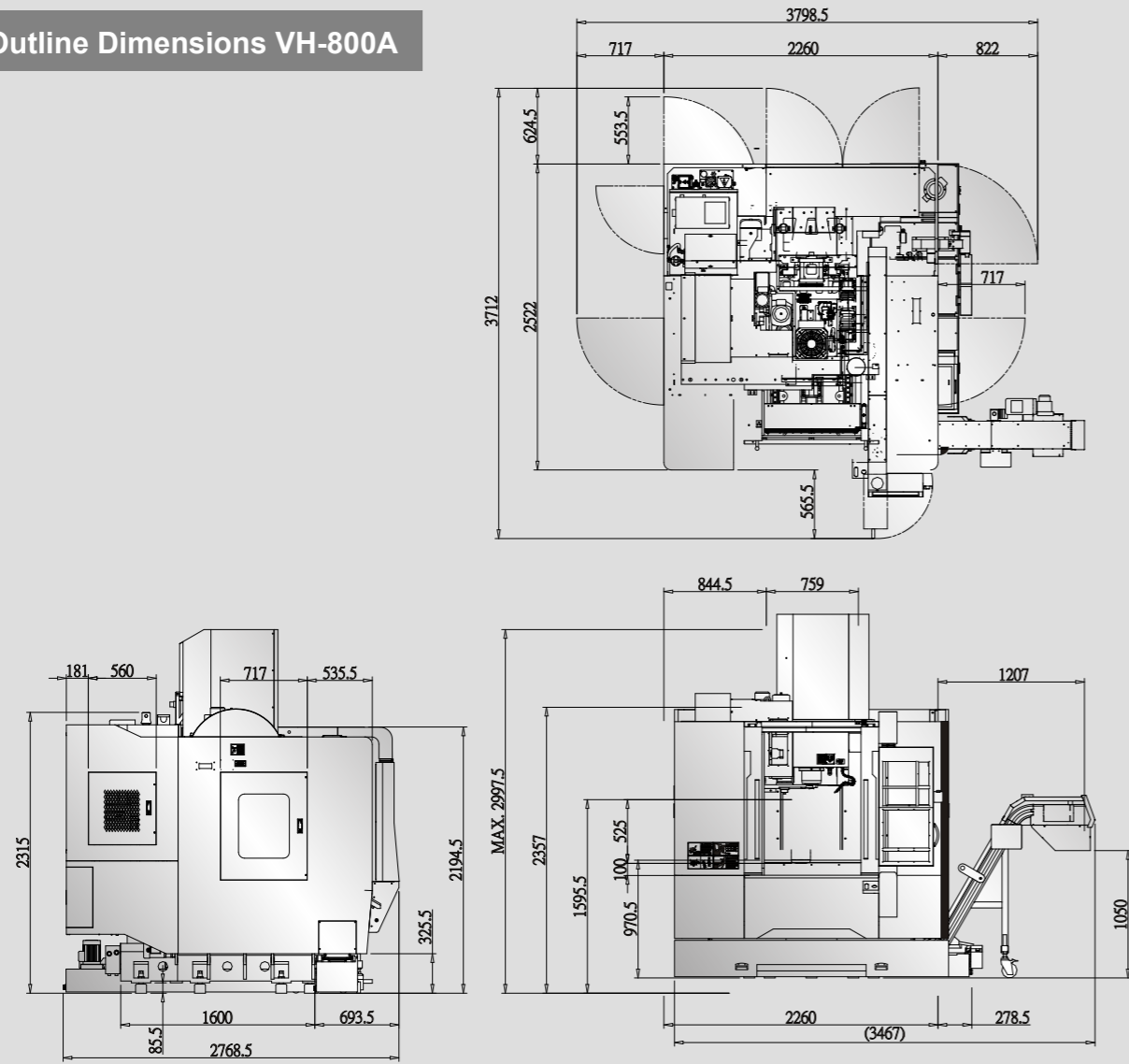
## Chip Cart



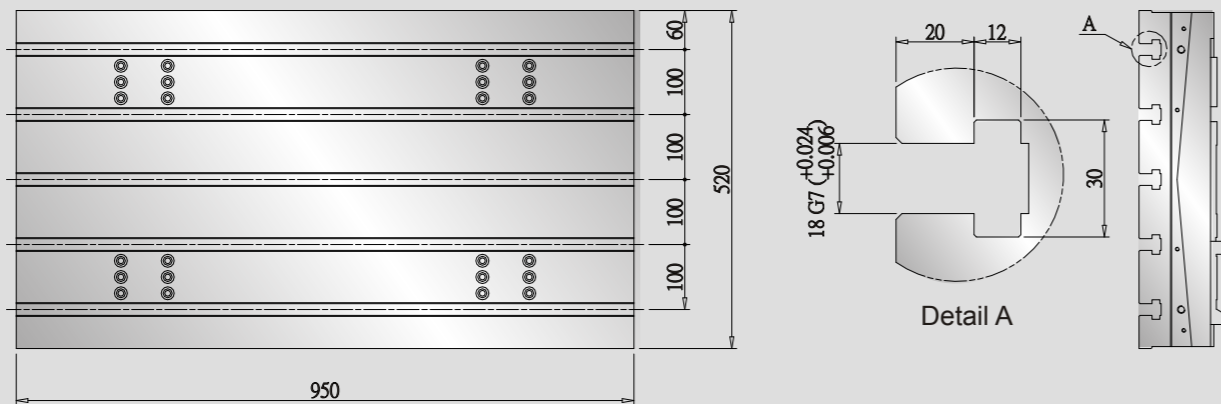
# Machine Layout

## Outline Dimensions VH-800A

Unit: mm

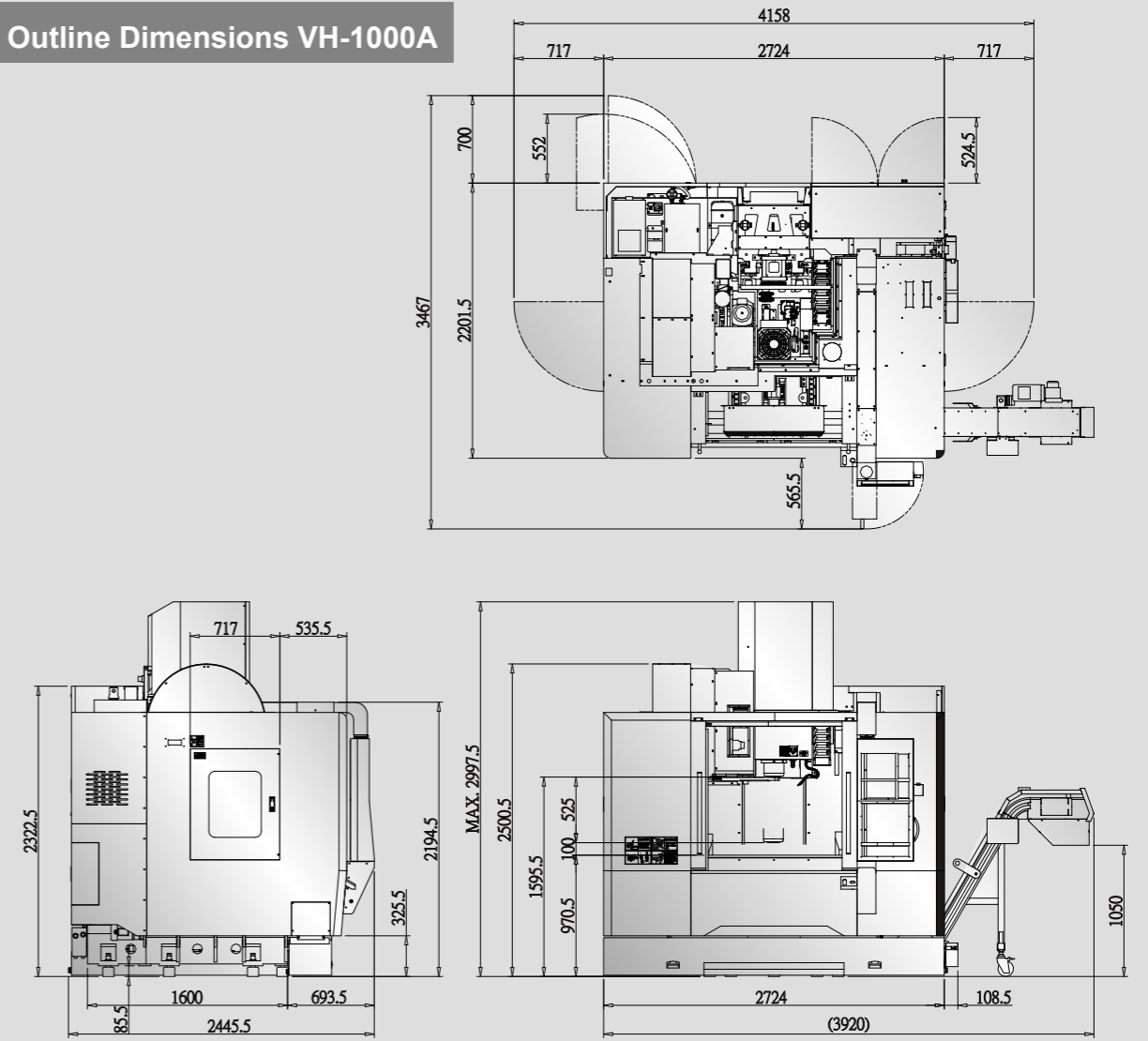


## Worktable Dimensions

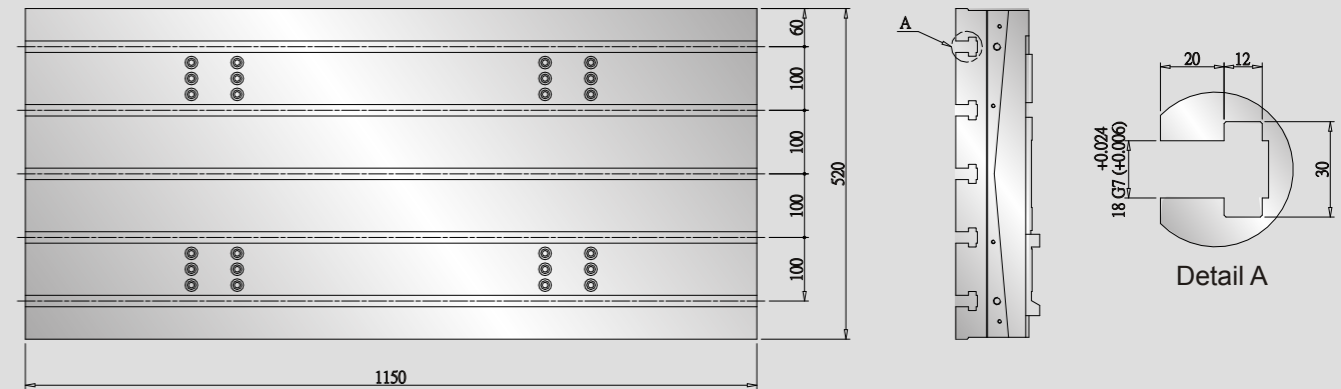


## Outline Dimensions VH-1000A

Unit: mm



## Worktable Dimensions

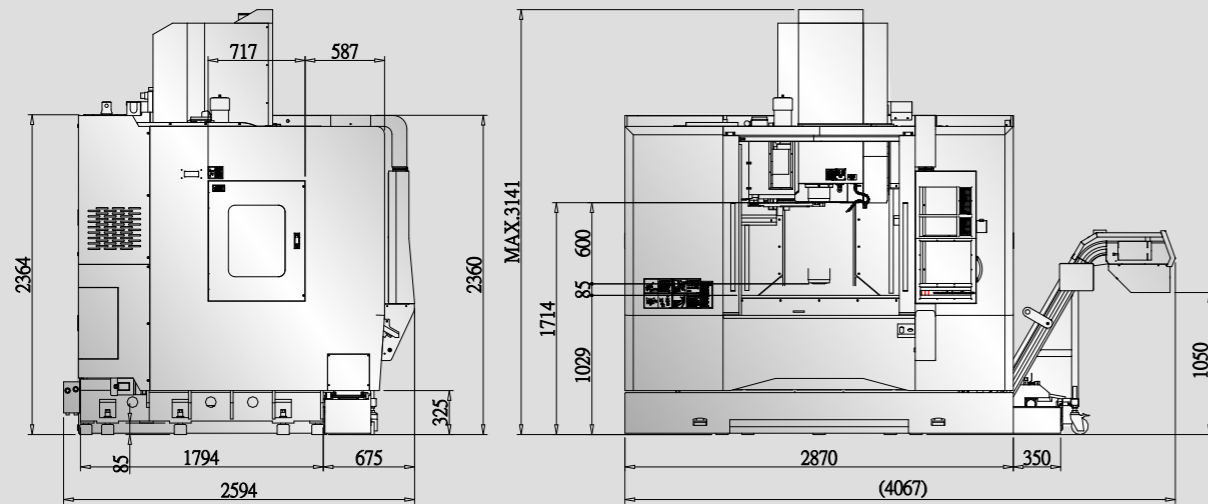
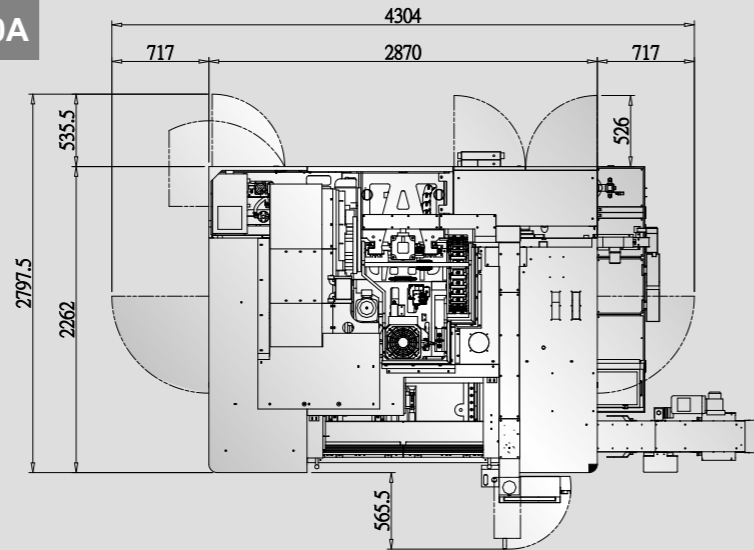




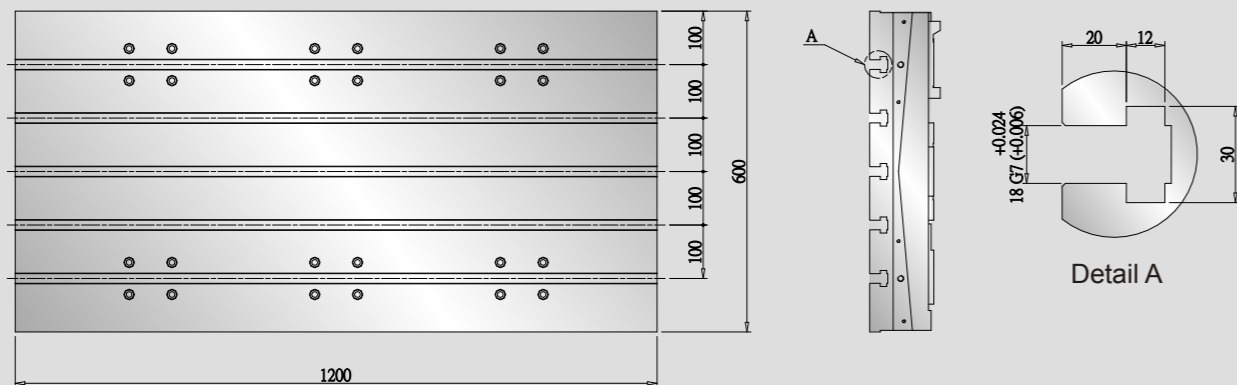
# Machine Layout

Unit : mm

## Outline Dimensions VH-1100A

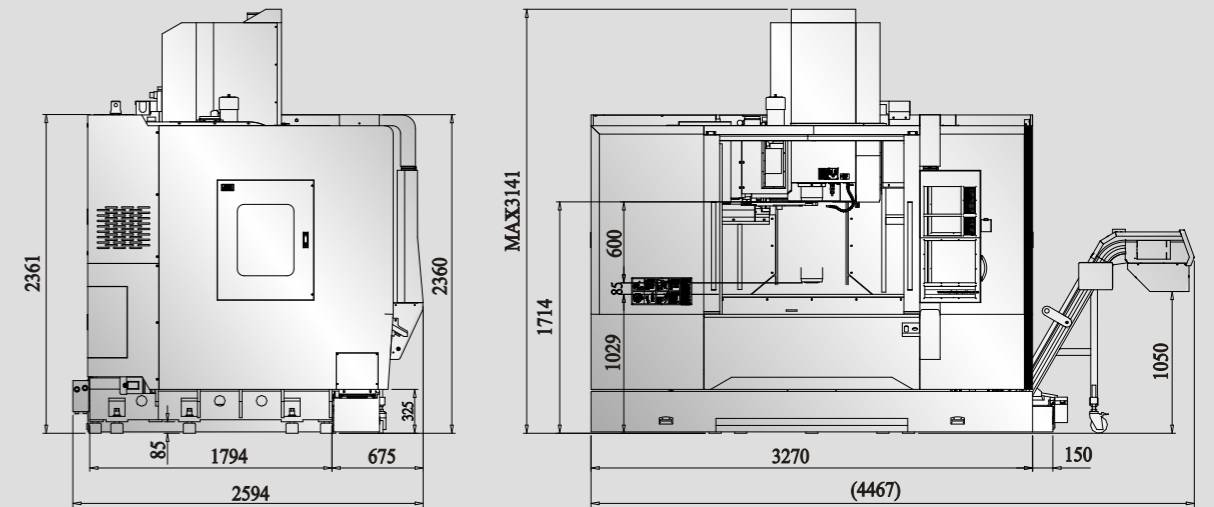
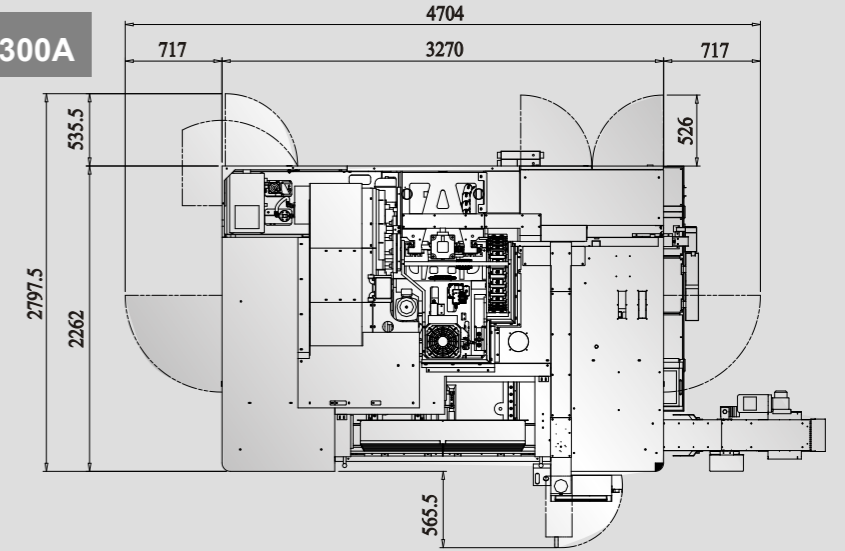


## Worktable Dimensions

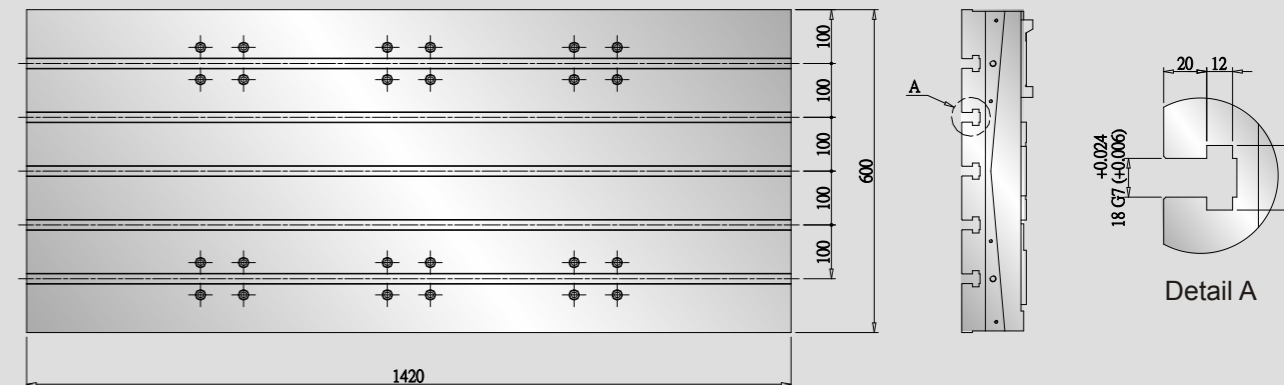


Unit : mm

## Outline Dimensions VH-1300A



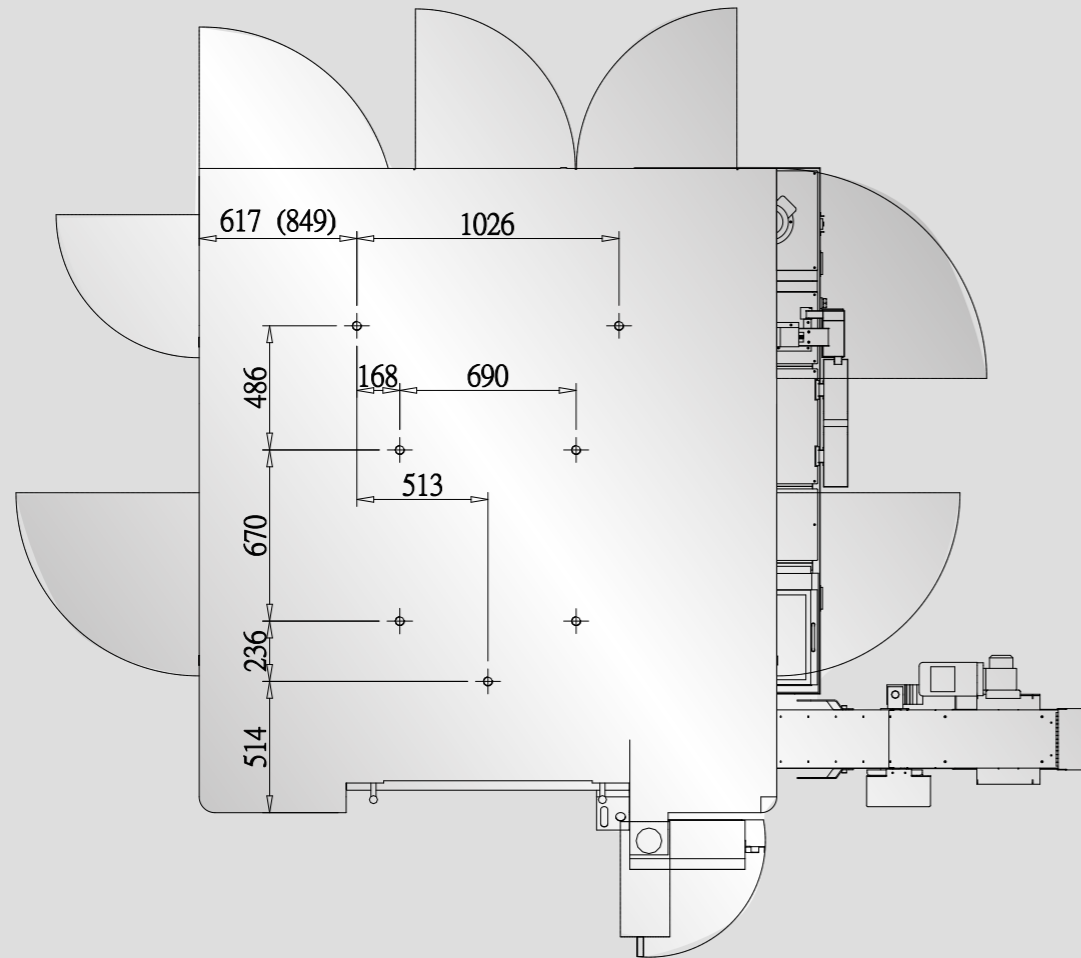
## Worktable Dimensions



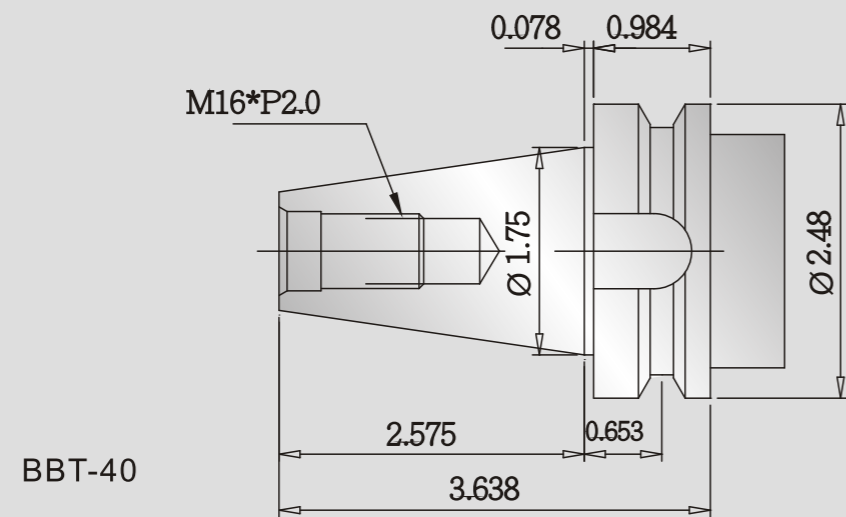
# Machine Layout

Unit: mm

Foundation drawing VH-800A (VH-1000A)



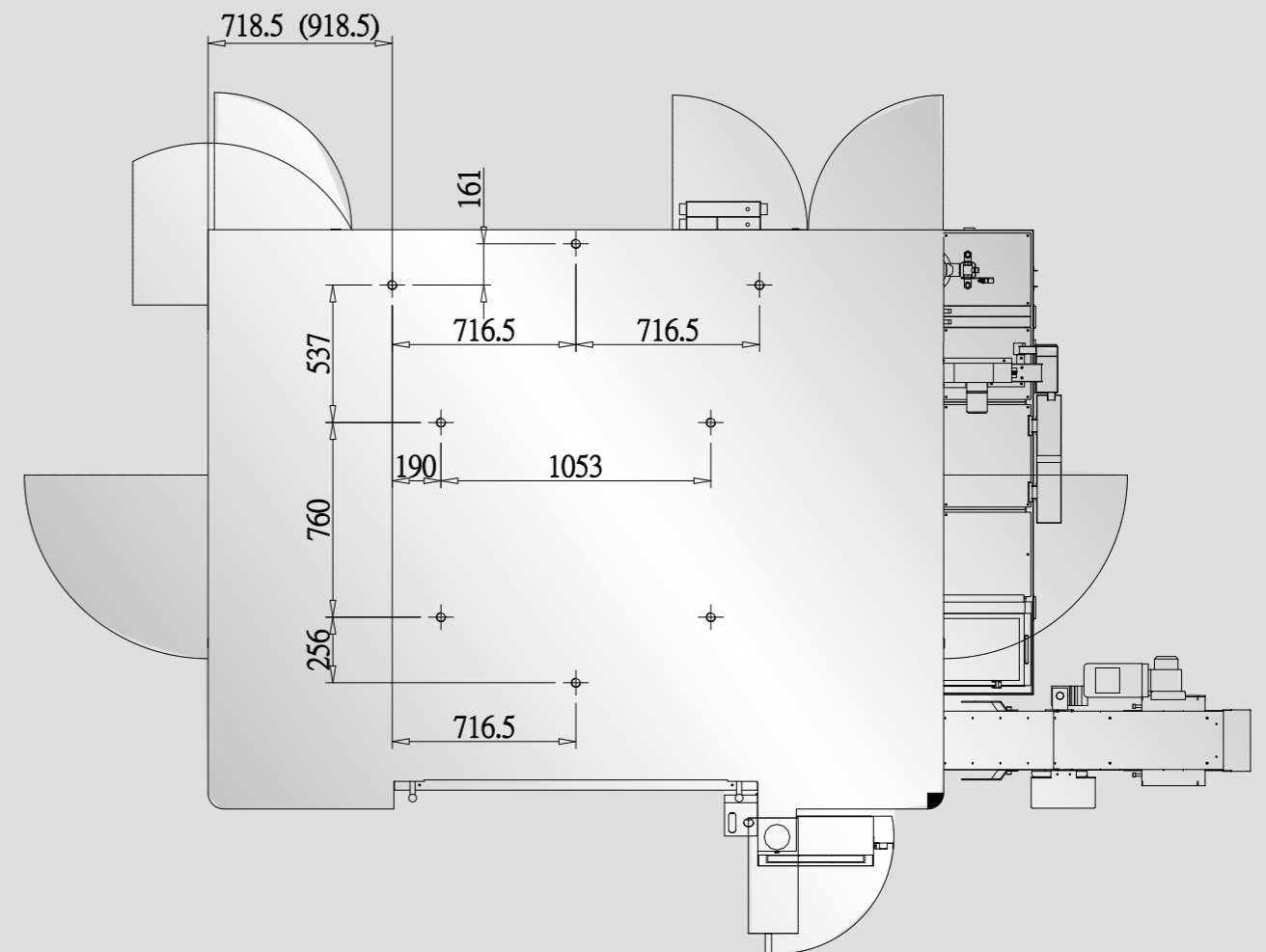
Tool Shank



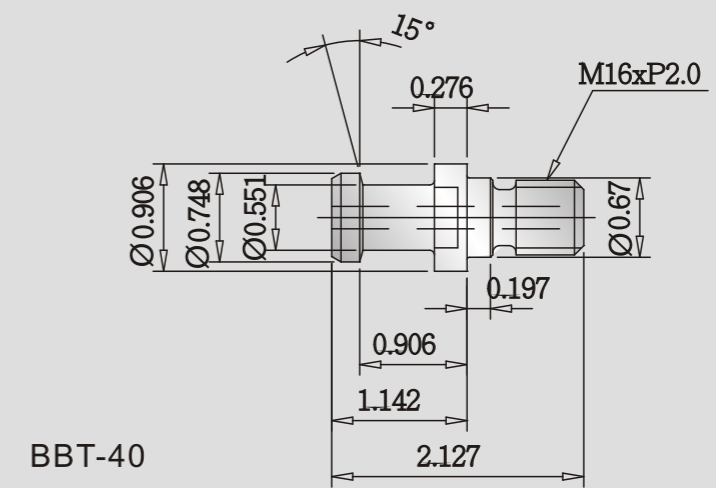
BBT-40

Unit: mm

Foundation drawing VH-1100A (VH-1300A)



Pull Stud



BBT-40

## Machine Specifications

		VH-800A	VH-1000A	VH-1100A	VH-1300A	
<b>Travels for 3-axes</b>	X-axis Travel	mm	800	1000	1100	1300
	Y-axis Travel	mm	520	520	610	610
	Z-axis Travel	mm	525	525	600	600
	Spindle nose to worktable surface	mm	100~625	100~625	85~685	85~685
	Spindle center to Z rail surface	mm	570	570	655	655
	Table surface to floor	mm	970	970	1030	1030
<b>Spindle</b>	Spindle Speed	RPM	15000	15000	15000	15000
<b>Automatic Tool Changing System</b>	Number of Tools	T	24	30	32	32
	Max. tool length	mm	300	300	300	300
	Max. tool weight	kg	7	7	7	7
	Tool changing method		ARM	ARM	ARM	ARM
	Tool specification		BBT-40	BBT-40	BBT-40	BBT-40
<b>Worktable</b>	Worktable area	mm	950x520	1150x520	1200x600	1420x600
	Worktable max. load capacity	kg	500	500	1000	1000
	Working area	mm	800x520	1000x520	1100x610	1300x610
	T-slot Width	mm	18	18	18	18
	T-slot No.	mm	5	5	5	5
	T-slot Distance from the center	mm	100	100	100	100
<b>Rapid Speed</b>	X-axis rapid speed	M/min	60	60	48	48
	Y-axis rapid speed	M/min	60	60	48	48
	Z-axis rapid speed	M/min	30	30	24	24
<b>Controller</b>	FANUC 0i-MF					
<b>Miscellaneous</b>	Machine Weight	Kg	6850	7150	7450	9000
	Coolant Tank Capacity	L	355	370	440	460
	Power Consumption	KVA	25	25	25	25
	Compressed air source	kg/cm <sup>2</sup>	6	6	6	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

<b>Spindle</b>	Spindle speed: 15000RPM	●
	Spindle oil cooling system	●
	Coolant through the spindle system (CTS)	○
	Spindle dust-proof air-sealing system	●
<b>Cooling System</b>	Spindle external programmable air blow system	●
	Stop block for oil feed tool holder	○
	Programmable coolant nozzle	○
	Splash ring(arm type only)	●
	Coolant cooling system	●
<b>Chip Removal System</b>	Chip auger inside the machine	●
	Chip conveyor	●
	Chip cart	●
	Coolant gun for machine cleaning	●
	Air gun for machine cleaning	●
	Wash down device	●
	Fully-covered sheet metal	●
<b>Measurement System</b>	Tool length measurement system	☆○
	Workpiece measurement system	☆○
<b>Miscellaneous</b>	Oil Mist Collector(AE-20S)	○
<b>Oil/coolant separator</b>	Disc type oil/coolant separator	○
<b>ATC System</b>	Automatic Tool Changer Mechanism (ATC)	●
	BBT-40 tool specification	●
Arm type	24T (VH-800)	●
tool magazine	30T(VH-1000)	●
	32T(VH-1100/1300)	●
<b>3-Axes Transmission System</b>	3-axes linear scale	○
	Counter weight central guide device	●
<b>Controller</b>	Mitsubishi M80	○
	FANUC 0iMF	●
	Siemens 828D	○
<b>Electrical Parts</b>	Work light	●
	Alarm indicator	●
	M30 automatic power off system	●
	Heater exchanger for electrical cabinet	●
	Air-conditioner for electrical cabinet	○
<b>Miscellaneous</b>	4th Axis (rotating table)	☆○

● 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.

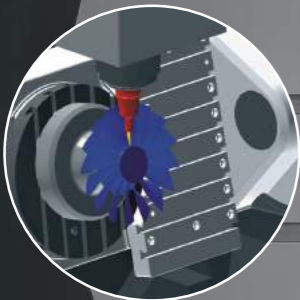


## Heidenhain & Siemens Control System

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



# Total Solution

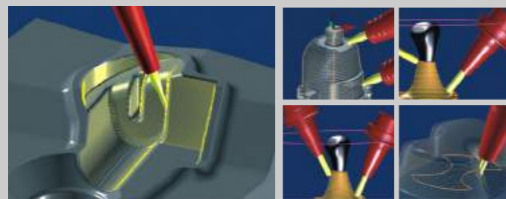


## MST Tools (Japan)



## 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



www.litzhitech.com