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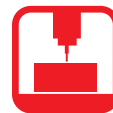


Welcome to Litz website for more information

Dealer



2023.A



VC

Series

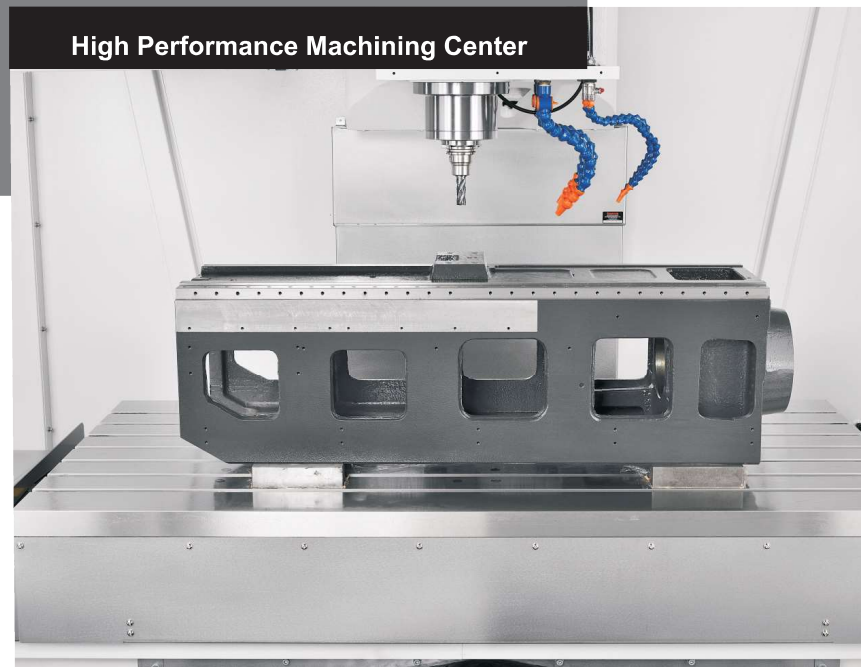
1400
1600
2000



Vertical machining center



High Performance Machining Center

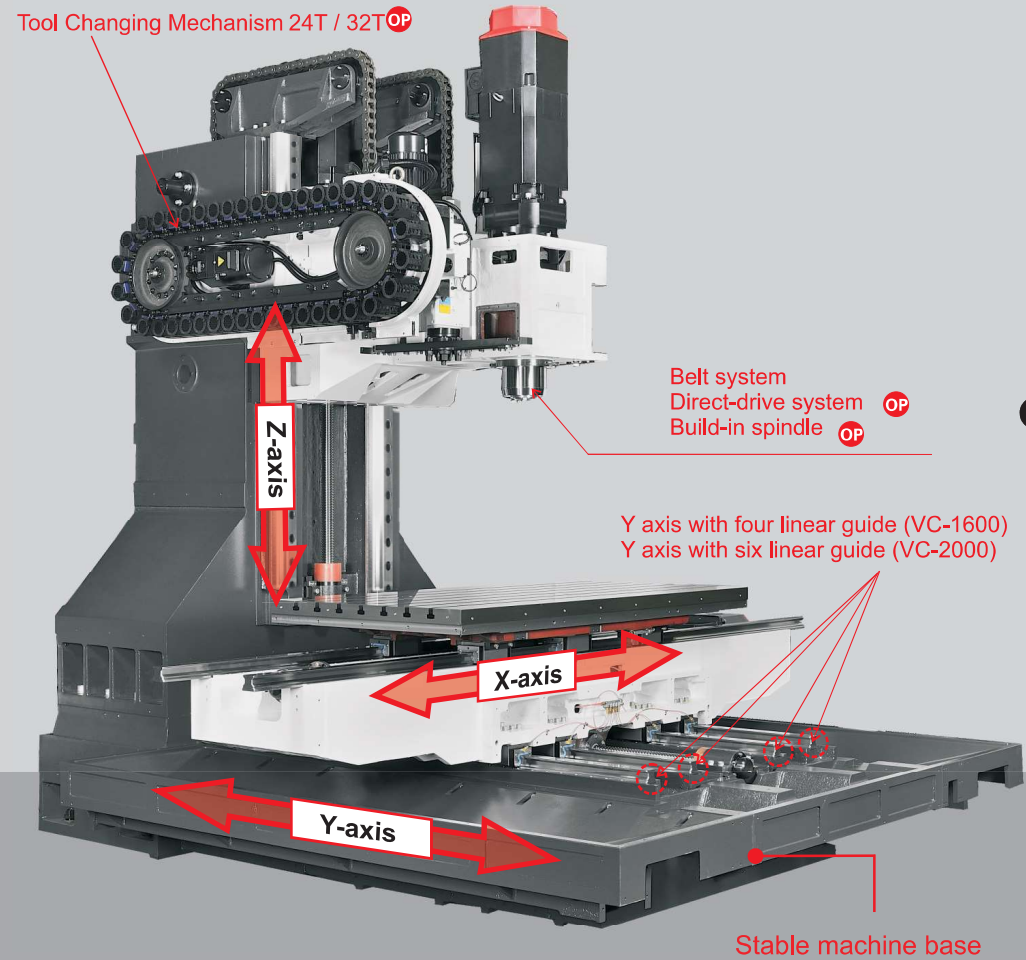


Litz Hitech Corp. | Litz Machine Tools (JiaXing) Corp.

High rigidity, high-precision structure design

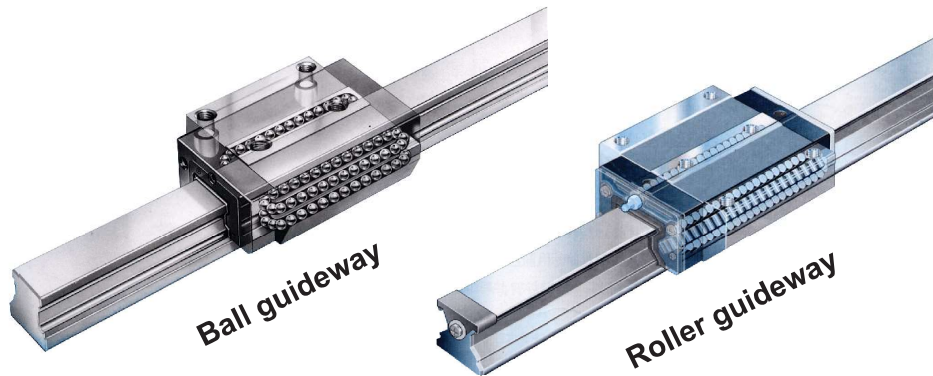
- The major construction parts are based on Meehanite cast iron, which is stable in structure and long-term quality is assured.
- Casting parts are calculated and analyzed by the finite element method. Proper structure strength combined with enhanced ribs provides high rigidity for the machine.
- A linear 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.



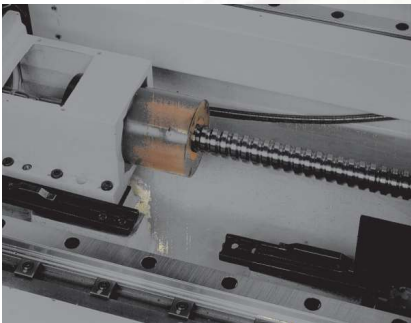
VC-1600A/B

Linear Guideway with High Speed and High Precision



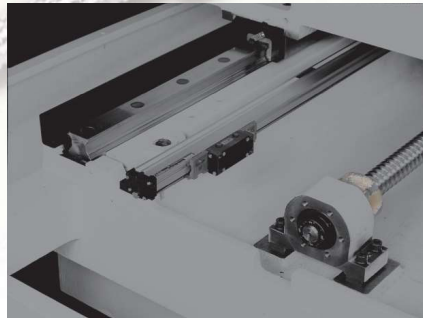
- A linear guideway with zero backlash ensures a consistent cutting surface on curved or tilted surfaces.
- Suitable for high speed operation and the horsepower requirement is minimized.
- By using rolling contact instead of sliding contact, the linear guide reduces the friction loss and increases the 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



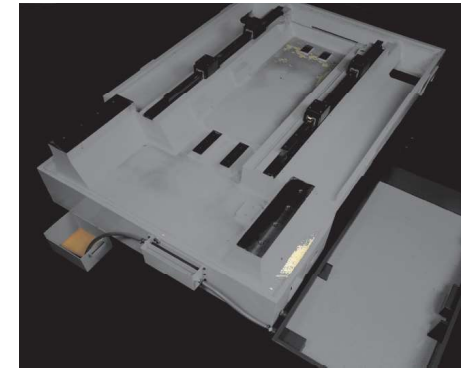
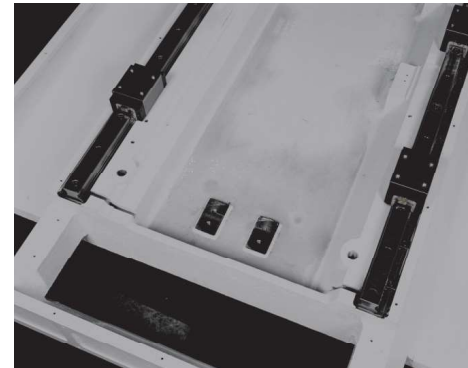
- The machine is equipped with a collision protection device which can absorb collisions due to machine malfunctions or mistakes made by operators. The damage caused by the collision can be minimized and still maintain the design precision.

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.

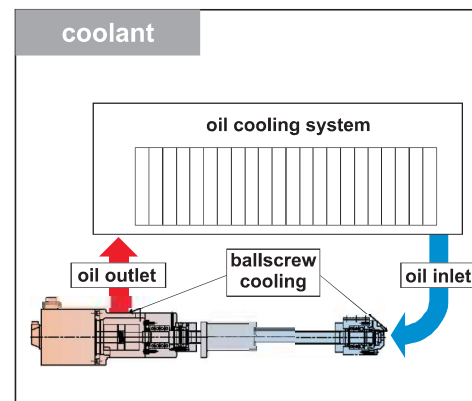
Oil/Coolant Separating Design



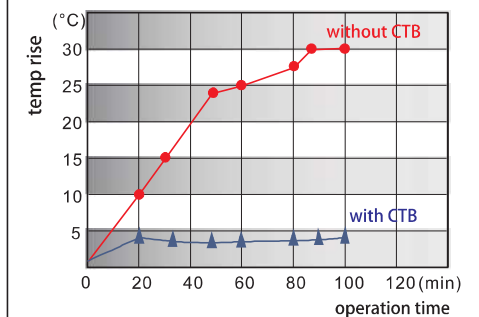
- The oil/coolant separating design can separate lubricating oil and coolant effectively. Coolant quality will not be reduced due to mixing and the machining quality can be assured.

3-axis coolant through the ballscrew 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.

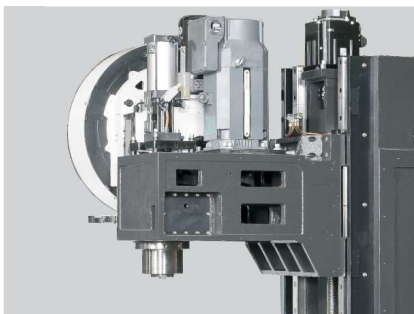


Effectiveness Graph

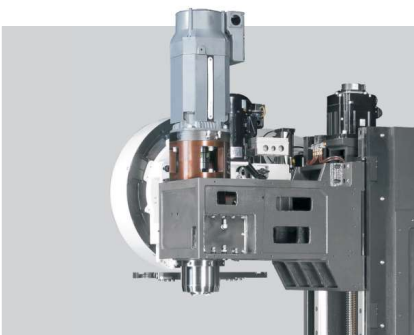


Spindle Transmission

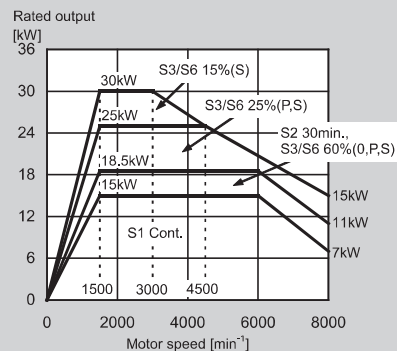
belt drive system



Direct-drive system OP



belt drive system Power graph



VC-1400A/1600A/2000A

Machine Specifications

Machine : VC-1400A/1600A/2000A

Spindle Speed: 10000rpm

Spindle Power: 15/18.5kw

Spindle Torque: 70/95.5/118 N-m

Tool specification: BT-40

Machine Specifications

Machine : VC-1400A/1600A/2000A

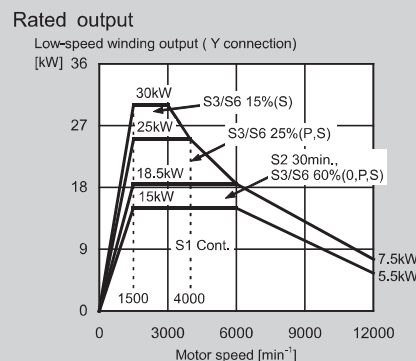
Spindle Speed: 10000rpm

Spindle Power: 15/18.5kw

Spindle Torque: 70/95.5/127 N-m

Tool specification: BT-40

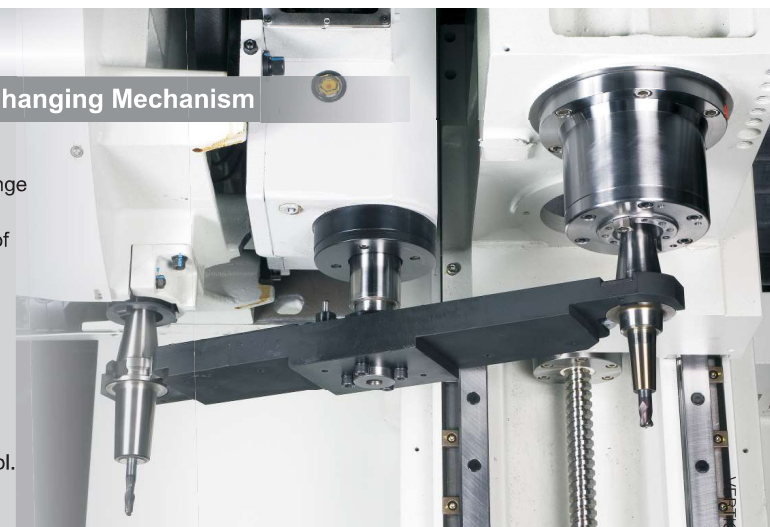
Direct-drive system Power graph



VC-1400A/1600A/2000A

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 tools (With barrel)



32 tools (With barrel) OP



Max. tool length
(mm)

Max. tool dia.
(mm)

VC-1400=300

VC-1600=350

VC-2000=350

85/150

125/225

125/225

Max. tool length
(mm)

Max. tool dia.
(mm)

VC-1400=300

VC-1600=350

VC-2000=350

85/150

125/225

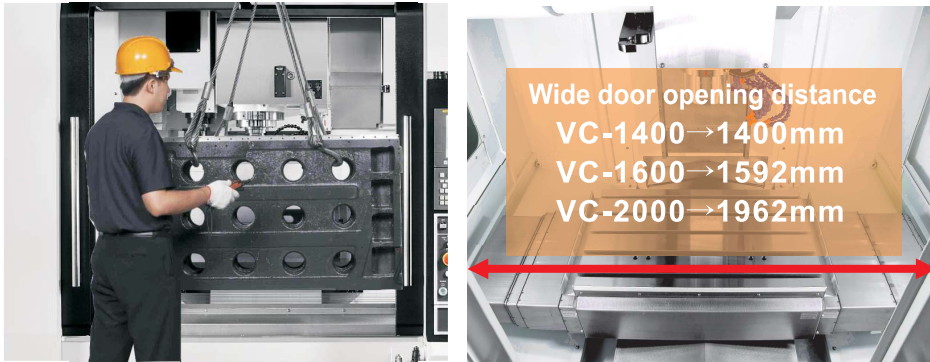
125/225

- The tool changer mechanism has been subject to a million times of operating tests to satisfy the requirements of high reliability.
- The rapid tool changer mechanism saves non-cutting time, and therefore increases production efficiency.
- The cam drive mechanism of the magazine ensures precise rotation and smooth operation of the magazine, even for heavy tools.
- Tool magazines with 24 stations and 32 stations are available for selection.

Standard Function - Optional Function

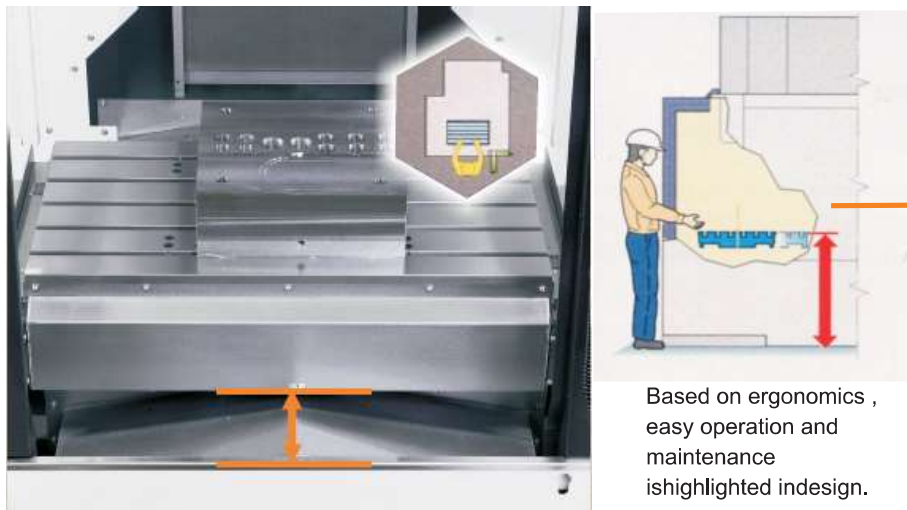
Front and top door in one piece.

Wide opened front for easier loading/unloading.

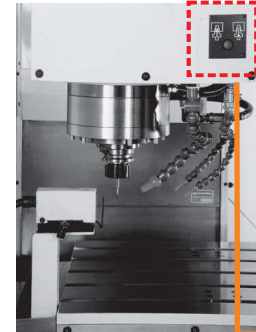


Operator close to table and spindle.

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.

Removable side doors.



Removable side doors help easier maintenance and clean.

Full ATC guard

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



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

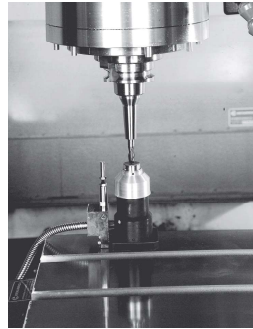


Portable hand wheel beneficial to operation flexibility.

3 Full enclosed ATC

Full enclosed ATC design to prevent dust 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



Select Renishaw Workpiece Measurement System for use
•MP10 is used for workpiece coordinate setting and processing machine workpiece inspection.
•0MM module is able to send CNC message and receive from M12 interface

System characteristics

- Signal transmission range: MP10 is used for 3degree or 70 degree, minimum at 130 degree
- 360-degree inspection is limited to a maximum length of 6m.
- Battery lifetime allows continuous use for 140 hours.
- Repeatability 1µm, Measurement speed: 480 mm/min.
- Measurement can use M code or automatic measurement
- Waterproof at IP68 level.
- Equipped with over-stroke probe damage protection.

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 Spindle oil cooling system OP



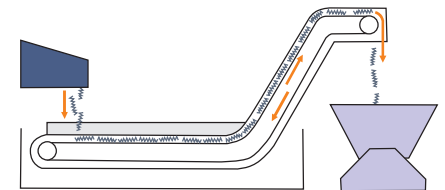
- In order to reduce the footprint, we placed the oil chiller onto bracket.
- Oil chiller can efficaciously control the spindle at a consistent temperature

11 Oil MistCollector OP



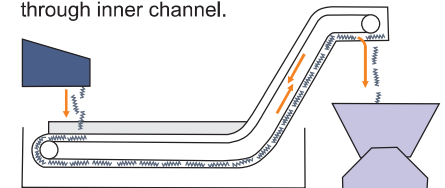
12 Chain type chip conveyor OP

Suitable for chip length from 30-150mm



13 Scraper type chip conveyor OP

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

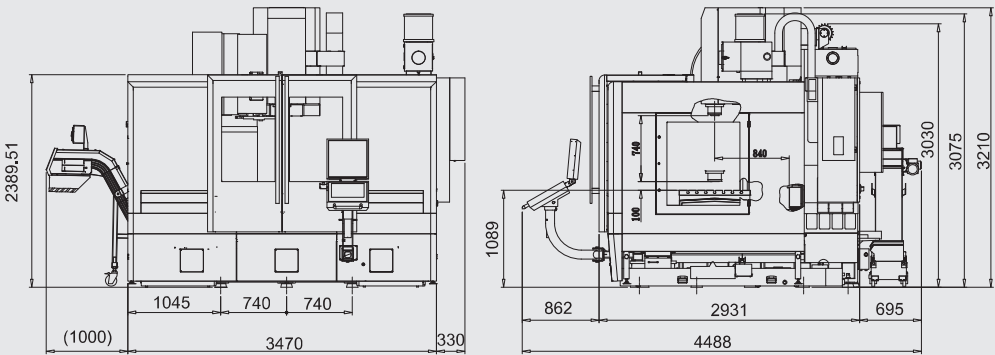


Machine Layout

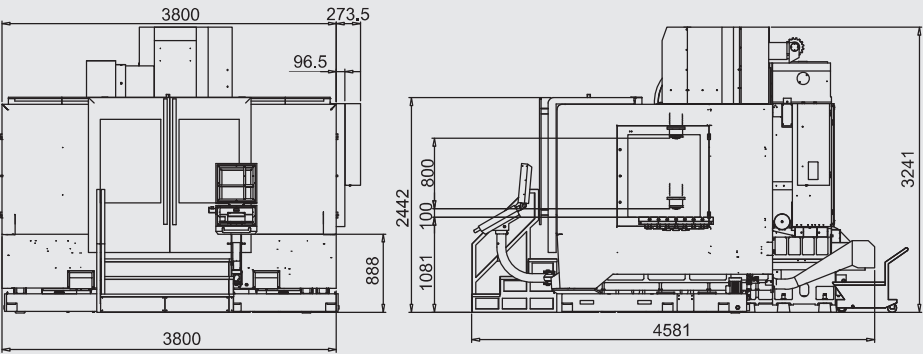
外型尺寸圖

Unit:mm

VC-1400

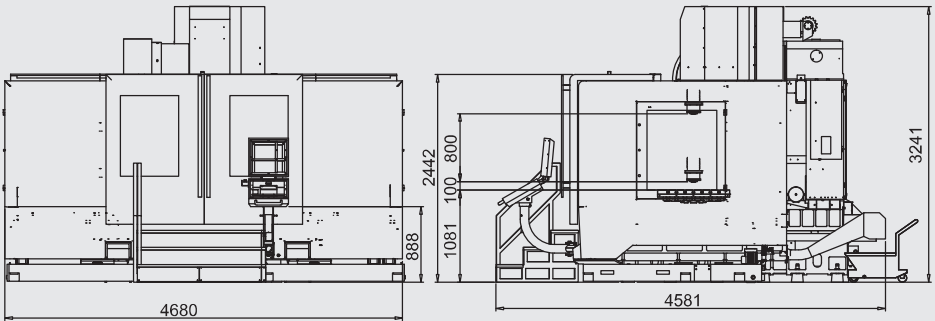


VC-1600



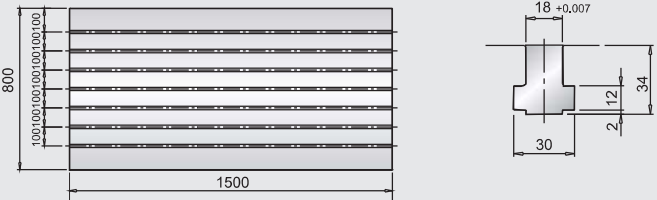
VC-2000

Unit:mm

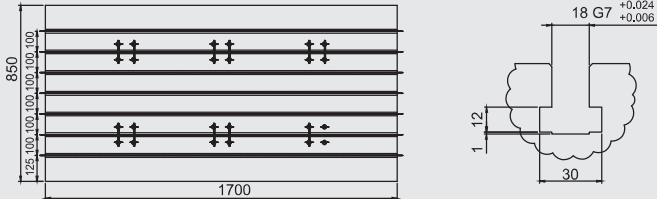


Worktable Dimensions

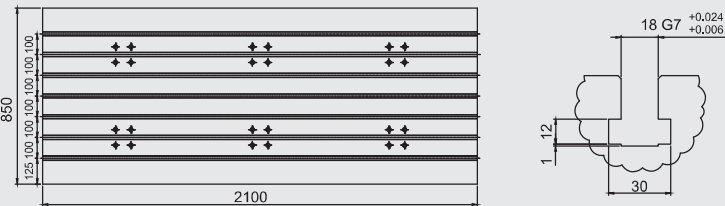
VC-1400



VC-1600



VC-2000



Machine Specifications

Machine Specifications

Model		VC-1400A(B)	VC-1600A(B)	VC-2000A(B)
Travel				
X Axis Travel	mm	1400	1600	2000
Y Axis Travel	mm	800	900	900
Z Axis Travel	mm	740	800	800
Spindle Nose to Table Surface	mm	100~840	100~900	100~900
Spindle				
Spindle Speed	rpm	10000(6000)	10000(6000)	10000(6000)
Automatic Tool Change (ATC) System				
Magazine Capacity	T	30(24)	30(24)	30(24)
Maximum Tool Diameter	mm	85/150	125/225	125/225
Maximum Tool Length	mm	300	350	350
Maximum Tool Weight	kg	7(15)	15	15
Tool Changing Type		ARM	ARM	ARM
Tool Shank		BT-40 (BT-50)	BT-40 (BT-50)	BT-40 (BT-50)
Motor				
Spindle Motor	kw	15/18.5	15/18.5	15/18.5
X/Y/Z Axes Motor	kw	4 / 4 / 4	4 / 4 / 4	4 / 4 / 4
Work Table				
Work Table Size	mm	1500x800	1700x850	2100x850
Work Table Maximum Loading	kg	1600	2000	3000
T Slot (Slot x Width x Center Distance) mm		7x18x100	7x18x100	7x18x100
Rapid Speed				
X Axis Rapid Speed	M/min	20	20	20
Y Axis Rapid Speed	M/min	20	20	20
Z Axis Rapid Speed	M/min	18	hard rail 15	hard rail 15
Cutting Feedrate	mm/min	1-20000	1-8000	1-20000
Controller				
FANUC		0i-MF PLUS	0i-MF PLUS	0i-MF PLUS
Miscellaneous				
Machine Weight	kg	14500(15000)	19000(19500)	21000(26000)
Power Consumption	KVA	42	42	42
Coolant Tank Capacity	L	500	500	550
Pneumatic Supply	kg/cm ²	6	6	6

All pictures of this catalog are for reference only, in case of inconsistent with the actual machine, the actual machine shall prevail.
The Company reserves the rights of the product specifications, appearance, equipment change or suspension of use.

List of Accessories

	VC-1400A	VC-1400B	VC-1600A	VC-1600B	VC-2000A	VC-2000B
Spindle						
Spindle Speed:6000RPM(belt)	—	●	—	●	—	●
Spindle Speed:8000RPM(belt)	—	○	—	○	—	○
Spindle Speed:10000RPM(belt)	●	—	●	—	●	—
Spindle Speed:12000RPM(belt)	○	—	○	—	○	—
Spindle Speed:8000RPM(Direct-drive)	—	○	—	○	—	○
Spindle Speed:10000RPM(Direct-drive)	—	○	—	○	—	○
Spindle Speed:12000RPM(Direct-drive)	○	—	○	—	○	—
Spindle Speed:15000RPM(Direct-drive)	○	—	○	—	○	—
Spindle Speed:15000RPM(Build-in)	○	—	○	—	○	—
Spindle Speed:20000RPM(Build-in)	○	—	○	—	○	—
Spindle dust-proof air-sealing system	●	●	●	●	●	●

Cooling System

Spindle Programmable Air Blow System	●	●	●	●	●	●
Stop block for oil feed tool holder	○	○	○	○	○	○
Splash ring(arm type only)	○	○	○	○	○	○
Coolant Cooling System	○	○	○	○	○	○

Chip Removal System

Chip auger inside the machine	●	●	●	●	●	●
Water debris in the same direction	○	○	○	○	○	○
Chip conveyor	○	○	○	○	○	○
Chip cart	○	○	○	○	○	○
Coolant gun for machine cleaning	●	●	●	●	●	●
Air gun for machine cleaning	●	●	●	●	●	●
Wash down device	○	○	○	○	○	○
Fully-covered sheet metal	●	●	●	●	●	●

Measurement System

Tool Length Measurement System	○	○	○	○	○	○
Workpiece Measurement System	○	○	○	○	○	○

	VC-1400A	VC-1400B	VC-1600A	VC-1600B	VC-2000A	VC-2000B
Oil Separator Oil/coolant separator						
Disc type oil/coolant separator	○	○	○	○	○	○
Machine oil/coolant separation System	●	●	●	●	●	●

ATC Tool Change

Automatic Tool Change (ATC) System						
BT-40 tool specification	●	—	●	—	●	—
BT-50 tool specification	—	●	—	●	—	●
Arm type tool magazine 24T	—	●	—	●	—	●
Arm type tool magazine 30T	●	—	●	—	●	—
Arm type tool magazine 32T	—	○	—	○	—	○
Arm type tool magazine 40T	○	—	○	—	○	—

3-Axes Transmission System

3-axes coolant thru ballscrew (CTB)	○	○	○	○	○	○
3-axes linear roller guideway	○	○	○	○	○	○
3-axes linear scale	○	○	○	○	○	○
Z-axis brake motor system	●	●	●	●	●	●

Controller

FANUC 0iMF-Plus	●	●	●	●	●	●
Mitsubishi M80	○	○	○	○	○	○
Siemens 828D	○	○	○	○	○	○

Electrical

Working Light	●	●	●	●	●	●
Alarm Light	●	●	●	●	●	●
M30 automatic power off system	●	●	●	●	●	●
Heat exchanger for electric cabinet	●	●	●	●	●	●
Air-conditioner for electrical cabinet	○	○	○	○	○	○

Others Miscellaneous

4th Axis(Rotating Axis)	○	○	○	○	○	○
Oil Mist Collector	○	○	○	○	○	○

● Standard Accessories ○ Optional Accessories