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VERTICAL MACHINING CENTER
DOUBLE COLUMN
MACHINING CENTER

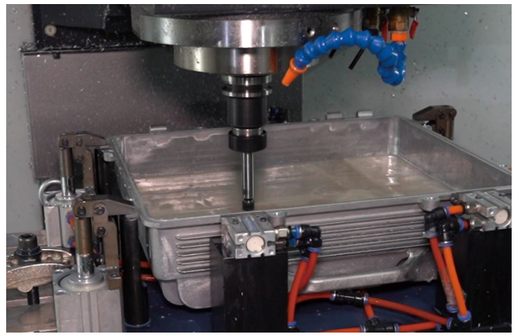
V180 / VMCII / GU(e)II PLUS

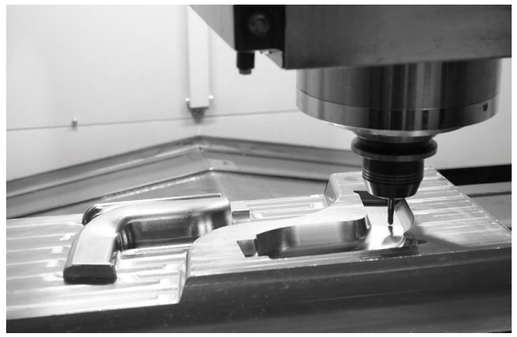
HISION

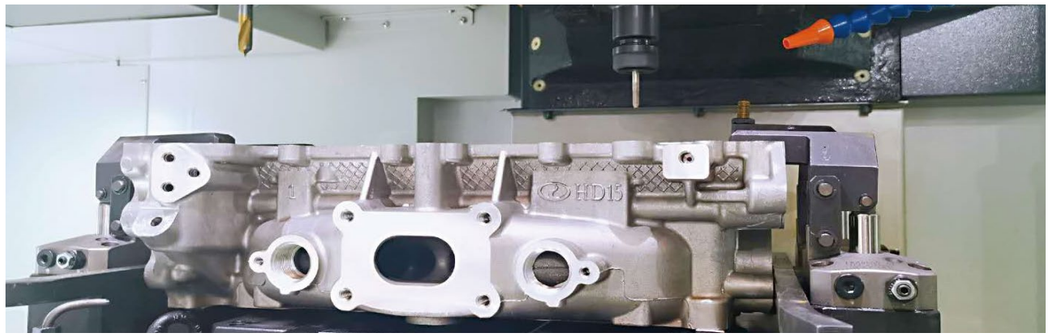
PRODUCT INTRODUCTION

VMCII series vertical machining center is a new upgrade on the basis of VMC, designed to create a cost-effective classic products. The products are widely used in auto parts, construction machinery and other general industry .

GUII products inherit the advantages of gantry structure and market demand on the basis of a new hard rail ram structure, so that the advantages of Gantry vertical machining center and traditional C-type vertical machining center further expand, to bring new experience for customers. The product is suitable for construction machinery, auto parts, molds, plastic machinery , etc.



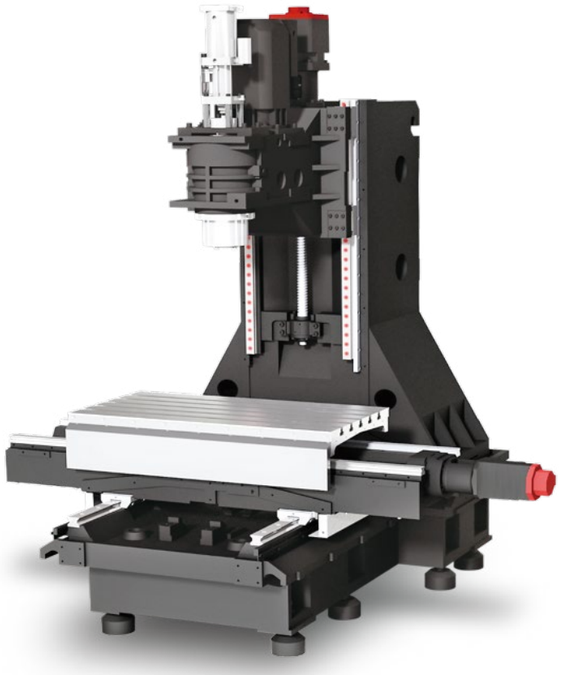




VERTICAL MACHINING CENTER
DOUBLE COLUMN MACHINING CENTER

VMCII

The new generation of VMC II series uses high-strength cast iron materials and adopts the large-span bed base and column structure to provide a solid foundation and stable performance for the machining tools. Equipped with mature spindle system and feed system, ensure the stability and reliability of the machine tool. Fully closed and capped protection, providing a good environment for operation.



High Rigidity Design

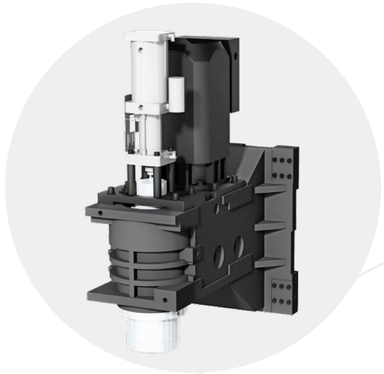
The bed and column has a large span, and all parts are made of high-quality cast iron to achieve superior shock absorption performance, support rigidity and excellent stability.

Full Enclosure

Full enclosure with the top cover:
optimized and upgraded, no oil leakage, water leakage, leakage chips.

Tool magazine protection:
Equipped with tool magazine protection, reduce the risk of iron filings entering the tool sleeve, improve the stability of the machine tool.

VMCII



More Intelligent Design

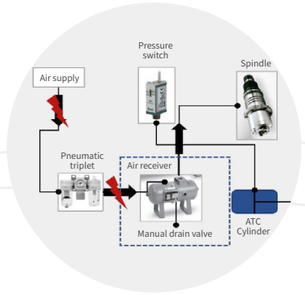
Gravity axis power-off & emergency stop lifting:
the gravity axis lifting protection function is added to prevent the spindle from colliding with the workpiece under the power-off&emergency stop condition.

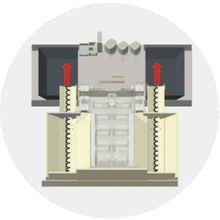
Abnormal load detection function:
anti-collision protection function is added to the machine tool to reduce the damage to the spindle.

Intelligent tool preparation mode:
the tool magazine has the function of tool preparation in advance, preparing the next tool while processing, shortening the non processing time and improving the processing efficiency.

Tool Change Stability

Standard gas storage tank, so that the machine's gas path is not affected by the factory's external air source, so as to improve the stability of spindle tool change.





Diversified Chip Removal

Diversified chip removal methods to meet the different needs of customers.

GU(e)II PLUS

The product inherits the strong rigidity, symmetrical structure and high stability of traditional gantry machine tools. Through finite element analysis, it optimizes the structure of basic components, improves the dynamic performance of the product, and obtains the perfect combination of high power, high torque, high efficiency and high precision.

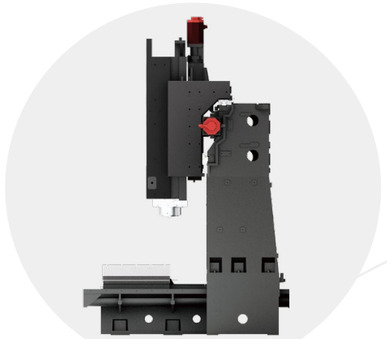
Integrated Gantry Frame

Integrated gantry frame structure, the whole workbench is always moving within the gantry frame, with symmetrical structure, strong rigidity and high accuracy and stability.

Built In Motor Spindle Unit (GUeII PLUS)

The built-in spindle is directly driven by the built-in motor to achieve "zero transmission" of the machine tool. Star delta automatic switching is adopted to realize low speed, high torque and high speed, high power.

GU(e)II PLUS

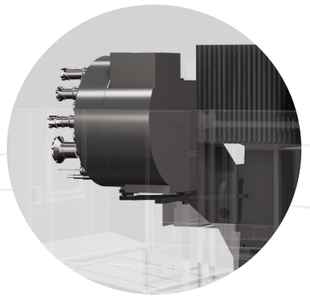


Small Extension Of Spindle Head

The cross section of the beam adopts a stepped structure. The extension from the spindle center to the Z-axis guide rail is small, and the accuracy and stability are good.

Arm Type Magazine (Option)

It is equipped with 24T tool magazines, which are stable in action and fast in tool change, so as to prevent the risk of iron filings entering the tool sleeve and improve the stability of the machine tool.



Centralized Maintenance

Pneumatic and lubrication are centrally configured externally for daily observation, management and maintenance.

V-180 / VMCII

Items	Unit	V-180	VMC760II	VMC850II	VMC1000II	VMC1200II	VMC1300II
» Machining Capacity							
X travel	mm	500	760	850	1000	1200	1300
Y travel	mm	400	400	500	600	600	650
Z travel	mm	330	500	500	600	600	650
Spindle nose to table surface	mm	150-480	150-650	150-650	150-750	150-750	150-800
» Table							
Table size	mm	650×400	900×400	1000×500	1200×600	1300×600	1500×650
Table load	kg	255	300	600	800	600	1200
T slot	mm	14×125×3	3×18×125	5×18×80	5×18×100	5×18×100	5×18×125
» Spindle							
Drive type		Direct drive	Belt drive	Belt drive	Belt drive	Belt drive	Belt drive
Max Spindle speed	rpm	20000	8000	8000	8000	8000	8000
Spindle power	kW	3.7/5.5	5.5/7.5	7.5/11	7.5/11	7.5/11	7.5/11
Spindle torque	N.m	11.7/17.5	35/47.7	35.8/70	35.8/70	35.8/70	35.8/70
Spindle taper		BT30	BT40	BT40	BT40	BT40	BT40
Pull stud		MAS-P30T-1	P40T - I -MAS403	P40T - I -MAS403	P40T - I -MAS403	P40T - I -MAS403	P40T - I -MAS403
» Feed Rate							
Rapid traverse (X/Y/Z)	m/min	48/48/48	36/36/36	36/36/36	36/36/36	36/36/36	30/30/20
Cutting feedrate (X/Y/Z)	m/min	30/30/30	15/15/15	15/15/15	15/15/15	15/15/15	12/12/10
» Tool Magazine							
Tool magazine capacity	T	16	24	24	24	24	24
Tool magazine type	-	-	Arm type	Arm type	Arm type	Arm type	Arm type
Max.tool dia. (Adjacent vacant)	mm	Φ60 / Φ80	Φ80 / Φ150	Φ80 / Φ150	Φ80 / Φ150	Φ80 / Φ150	Φ80 / Φ150
Max.tool length	mm	250	300	300	300	300	300
Max.tool weight	kg	3	8	8	8	8	8
Tool change time	s	1.6	2.5	2.5	2.5	2.5	2.5
» Other							
Power capacity	kVA	15	25	30	30	30	30
Machine weight	t	2.5	5.5	6	6.5	7	9
Machine size(L×W×H)	cm	162×208×238	230×325×255	250×340×255	280×355×270	315×355×270	335×370×295

Standard Configuration

V180

1. Controller:M80B
2. Spindle air blow
3. Spindle air seal
4. Spindle oil chiller
5. Pneumatic and lubrication system
6. Coolant system
7. Rigid tapping
8. Direct drive spindle 20000rpm
9. 16T disc type ATC
10. 3-color signal lamp,working light

VMC II

1. Controller: Mitsubishi M80B
2. 8000rpm belt drive spindle
3. 24T ATC
4. Pneumatic and lubrication system
5. Cutting cooling
6. Internal water flooding chip conveyor
7. Full enclosure with top cover
8. Air gun
9. 3-color signal lamp, working light
10. Standard accessories

GU(e)II PLUS

Items	Unit	GU5II PLUS	GUe5II PLUS	GU6II PLUS	GUe6II PLUS
» Machining Capacity					
X travel	mm	1300	1300	1500	1500
Y travel	mm	700	700	850	850
Z travel	mm	700	700	700	700
Distance between columns	mm	1570	1570	1670	1670
Spindle nose to table surface	mm	205-905	150-850	205-905	150-850
» Table					
Table size	mm	1400×700	1400×700	1500×850	1500×850
Table load	kg	2000	2000	3000	3000
T slot	mm	5×18×150	5×18×150	5×18×160	5×18×160
» Spindle					
Drive type		Gear box	Built-in spindle	Gear box	Built-in spindle
Max Spindle speed	rpm	6000	6000	6000	6000
Spindle power	kW	15/18.5	15/18.5	15/18.5	15/18.5
Spindle torque	N.m	316/522	182/224	316/522	182/224
Spindle taper		BT50	BT50	BT50	BT50
Pull stud		P50T-II-MAS403	P50T-II-MAS403	P50T-II-MAS403	P50T-II-MAS403
» Feed Rate					
Cutting feedrate (X/Y/Z)	m/min	24/24/15	24/24/15	24/24/15	24/24/15
Rapid traverse (X/Y/Z)	m/min	12/12/10	20/20/10	12/12/10	20/20/10
» Tool Magazine (Option)					
Tool magazine capacity	T	24	24	24	24
Tool magazine type	-	Arm type	Arm type	Arm type	Arm type
Max.tool dia. (Adjacent vacant)	mm	Φ110 / Φ200	Φ110 / Φ200	Φ110 / Φ200	Φ110 / Φ200
Max.tool length	mm	300	300	300	300
Max.tool weight	kg	20	20	20	20
» Other					
Power capacity	kVA	40	40	40	40
Machine weight	t	13	13	14.6	14.6
Machine size(L×W×H)	cm	390×400×430	390×400×430	400×420×430	400×420×430

Standard Configuration

1. Controller:Controller: FANUC 0i MF PLUS
2. Spindle oil chiller
3. Pneumatic,hydraulic and lubrication system
4. Cutting cooling
5. Internal helix chip conveyor
6. External chain type chip conveyor and trolley
7. Full enclosure without top cover
8. 3-color signal lamp, working light
9. Standard accessories
10. Z axis hydraulic balancing system(only for GUII PLUS)
11. 6000rpm HISION built-in spindle(only for GUeII PLUS)

MORE THAN PRECISION

Ningbo Haitian Precision Machinery Co., Ltd. is a listed company specializing in machine tooling industry. It has developed Ningbo Dagang production base, Ningbo Yanshan production base and Dalian production base. It has a modern constant temperature processing and assembly plant of over 300,000 square meters with nearly 1900 employees. It is awarded honors such as “national major technical equipment enterprise”, “national high-tech enterprise”, and “provincial high-tech research and development center”.