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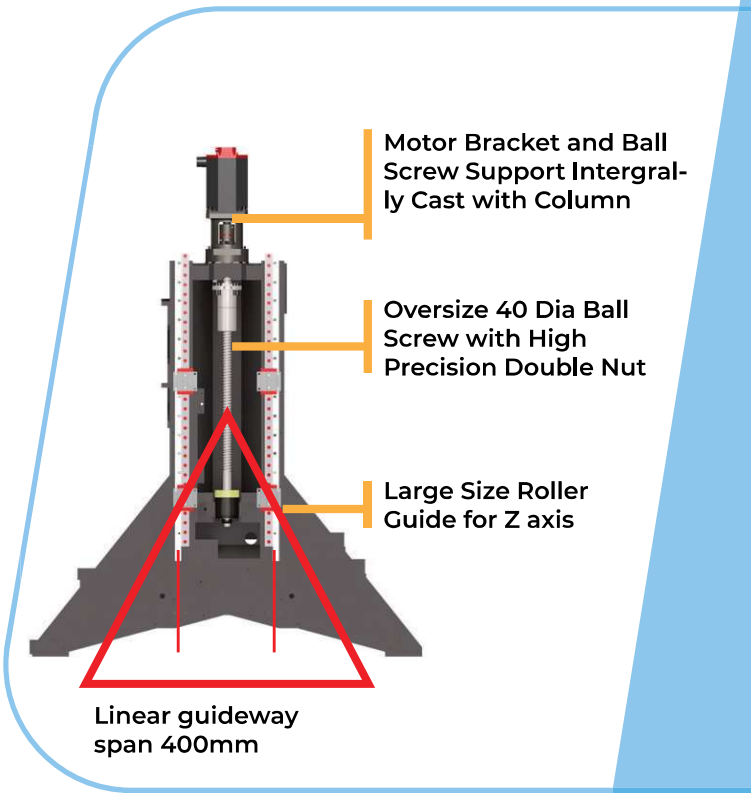
HAITIAN
PRECISION

Powerful Precise &
Profitable Machining Solution



HAITIAN PRECISION VERTICAL MACHINING CENTER VMC II SERIES

HT300 Casting Equivalent to Japan FC300
Highly Rigid Base and Column Structure.
Width of Base Keeps Table within CG



Gravity Axis Power-off & Emergency Stop Lifting:

The gravity axis lifting protection function is added to prevent the spindles 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 spindle.

Intelligent Tool Preparation Mode:

The tool magazine has the function to tool preparation in advance, preparing the next tool while processing shortening the non processing time and improving the processing efficiency.

More Intelligent Design

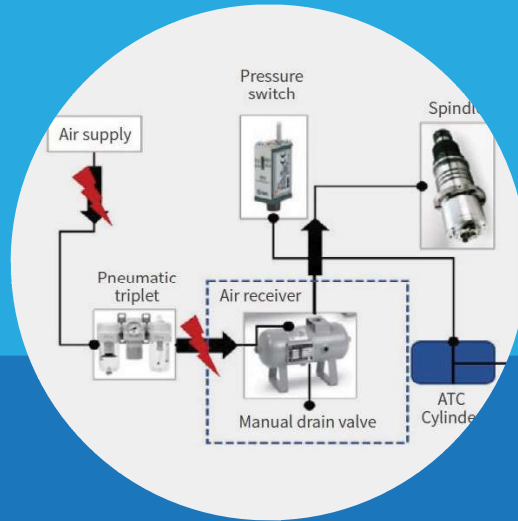


Full Enclosure

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

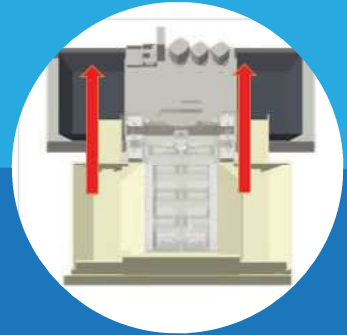
Tool magazine protection:

Equipped with tool magazine protection, reduce the risk of metal chips entering the tool sleeve, improve the stability of the machine tool.



Tool Change Stability

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



Diversified Chip Removal

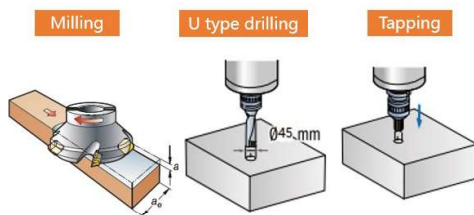
Diversified chip removal methods to meet the different needs of customers.

Spindle-process Ability FOR 8000 RPM SPINDLE

Test Data:
M80 7.5/11kw
FANUC 7.5/11kw

Face Milling

Tool	-	80x6z	80x6z	80x6z
Material	-	Aluminium AL6061	Cast Iron HT250	45# Steel SM45C
Spindle Speed	rpm	3000	990	990
Deep	mm	4.5	4.1	2.7
Width	mm	60	65	60
Feed	mm/min	6000	2780	2510
Metal Removal Rate	cm ³ /min	1620	688	407



Tapping

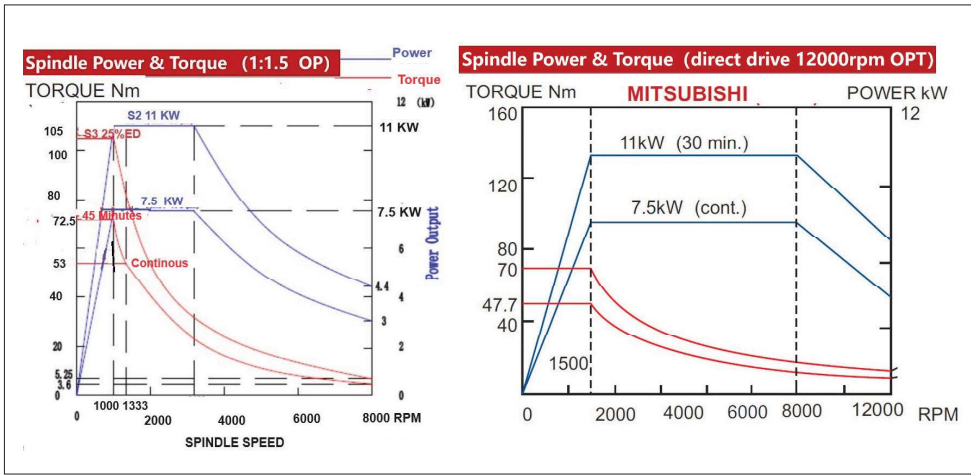
Tool	-	M24 (Max)	M2x0.4 (Min)
Material	-	45 #Steel (SM45C)	Aluminium (AL6061)
Spindle Speed	rpm	600	1400
Depth	mm	55	5
Feed	mm/min	1800	560

Drilling

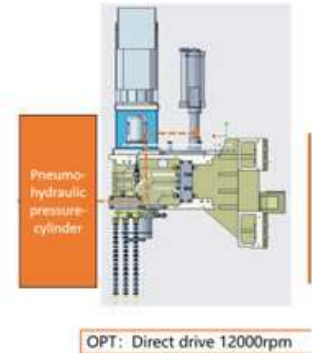
Tool	-	42U Drill	1.2 Drill (Min)
Material	-	45# Steel (SM45C)	Aluminium (AL6061)
Spindle Speed	rpm	800	1500
Depth	mm	80	8
Feed	mm/min	90	30

* Tests done in Temperature controlled environment with Recommended Lubricants used

Important Standard and Optional Features



Various Rpm options available.
 8000 Rpm Spindle with 10000 rpm Spindle motor providing High Torque
 12000 and 15000 RPM Option



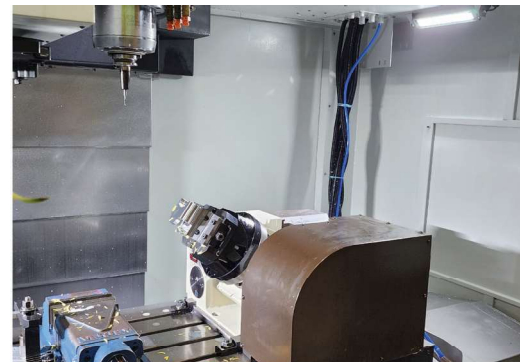
Cylindrical CAM Mechanism, causes high positioning accuracy, low failure rate

- Long service life, simple structure, convenient maintenance.
- Double bearing separated tool arm, allows perfect alignment with low noise
- The quality guarantee due to advanced electronics used

Standard 24 Positions and Option 30

- Advanced Optical and Radio Probes are available as Option for Work Piece measurement
- Automatic Tool Measurement system with Laser or Touch system as Option

- Optional Direct Drive Spindle is available for 12000 Rpm.
- Balanced additionally on the machine at assembly aids to machining accuracy, spindle life and good finish on component



- Various Options in Rotary Table,
- Fixture interface for Hydraulic and Pneumatic systems
- Options like Tailstock , cradle available

Tilting Table Option for 5 axis machining also available



Chip screw conveyor

Chip Screw Conveyor is compact in size.



Chain type chip conveyor

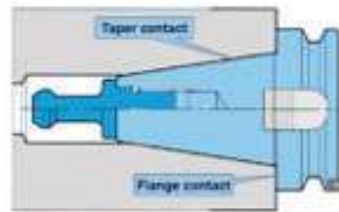
Chain Type and Scraper Type conveyors are available for evacuation of chips on Right, Left, Backside Left or Right.



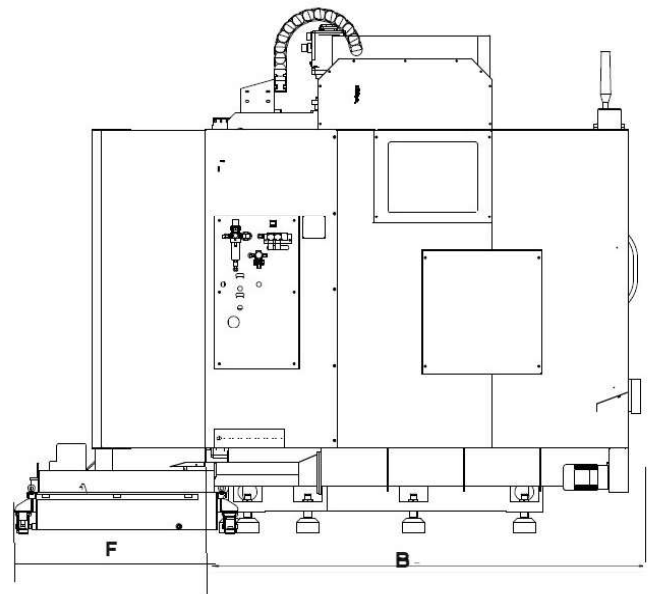
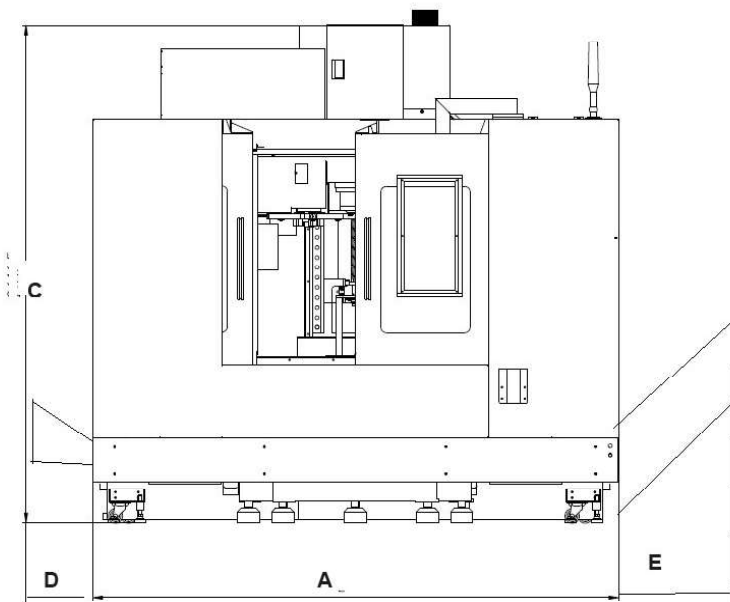
OPTION CENTRALISED GREASE LUBRICATION

Advantage

- Reduce oil cost
- Reduce cutting fluid Pollution
- Improve the service life of cutting Fluid
- Good for environmental protection



Face Contact Tool Interface BBT which offers unmatched rigidity at Low and High offered as Option. BBT also eliminates corrosion due to fretting.



M/c Model	Width A	Depth B	Height C	Std Tank F	Chip Screw D	Chip Conv E
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VMC850 II	2500	2041	2526	1000	460	1100
VMC1000 II	2760	2223	2617	1000	500	1100
VMC1200 II	3150	2223	2617	1000	500	1200
VMC1300 II	3350	2500	2950	1100	600	1300

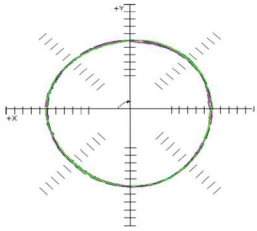
* All Dimensions in mm

High Precision

Our Machines are Built in Temperature Controlled Dust Free Environment. This allows our Customers to Achieve Accuracy and Reliability and be Highly Profitable in the Long Run.

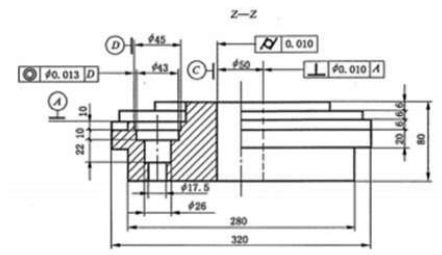
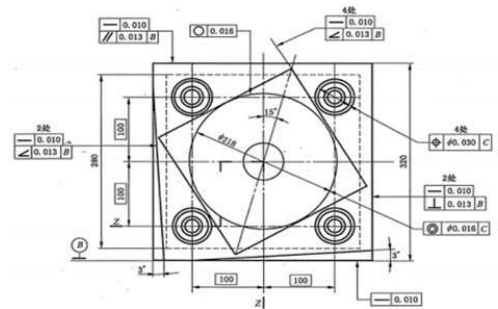


Ballbar Diagnostics (%) XY Plane Front

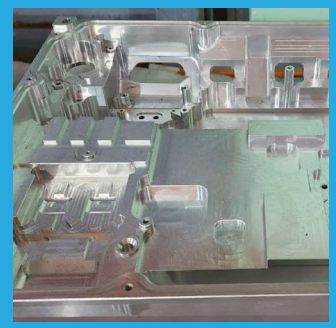


18% Straightness Y	-5.6μm	Positional tolerance	113.4μm
16% Servo Mismatch	-0.23ms	Best fit radius	150.0197mm
15% Backlash X		Circularity	5.6μm
	↳ 2.1μm		
	↳ 2.7μm		
13% Reversal Spikes X			
	↳ -3.1μm		
	↳ 0.5μm		
11% Backlash Y			
	↳ -2.7μm		
	↳ -1.4μm		

	Item	Allowable Error (mm)	Real Error (mm)
Center Hole	a) Cylindricity	0.010	0.0035
	b) The perpendicularity of the hole axis to the base A	0.010	0.0022
Square	c) Straightness of the edge	0.010	0.0018
	d) The perpendicularity of the adjacent edge to the base B	0.012	0.0081
	e) Parallelism of the opposite side to the base B	0.012	0.0112
Rhombus	f) Straightness of the edge	0.010	0.003
	g) The inclination of the four sides to the reference B	0.013	0.0042
Circle	h) Roundness	0.016	0.0047
	i) Concentricity of the outer circle and the center hole C	0.016	0.0054
Bevel	j) Straightness of the face	0.010	0.0011
	k) inclined to the inclination of the base B	0.013	0.0087
Boring	l) Position of the hole relative to the center hole C	0.030	0.014
	m) Concentricity of inner and outer holes D	0.013	0.0037



* Tests done in Temperature controlled environment with Recommended Lubricants used



VMC II

* Product specifications are subject to change without notice

Items	Unit	VMC850II	VMC1000II	VMC1200II	VMC1300II
Machining Capacity					
X Travel	mm	850	1000	1200	1300
Y Travel	mm	500	600	600	650
Z Travel	mm	500	600	600	650
Spindle nose to table surface	mm	150-650	150-750	150-750	150-800
Table					
Table Size	mm	1000x500	1200x600	1300x600	1500x650
Table Load	kg	600	800	600	1200
T Slot	mm	5x18x80	5x18x100	5x18x100	5x18x125
Spindle					
Drive Type		Belt Drive	Belt Drive	Belt Drive	Belt Drive
Max Spindle Speed	rpm	8000	8000	8000	8000
Spindle Power	kW	7.5/11	7.5/11	7.5/11	7.5/11
Spindle Torque	Nm	35.8/70	35.8/70	35.8/70	35.8/70
Spindle Taper		BT40	BT40	BT40	BT40
Feed Rate					
Rapid Traverse (X/Y/Z)	m/min	36/36/36	36/36/36	36/36/36	30/30/20
Cutting Feedrate (X/Y/Z)	m/min	15/15/15	15/15/15	15/15/15	12/12/10
Tool Magazine					
Tool Magazine Capacity	T	24	24	24	24
Tool Magazine Type	-	Arm Type	Arm Type	Arm Type	Arm Type
Max Tool Dia (Adj. Vacant)	mm	80/150	80/150	80/150	80/150
Max Tool Length	mm	300	300	300	300
Max Tool Weight	kg	8	8	8	8
Tool Change Time	s	2.5	2.5	2.5	2.5
Other					
Power Capacity	kVA	30	30	30	30
Machine Weight	t	6	6.5	7	9

VMC II

STANDARD FEATURES

1. Controller: Mitsubishi M80B
2. 8000 rpm 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

OPTIONAL FEATURES

1. Controller: FANUC Oi
2. Controller: M80A
3. Air Conditioner
4. Spindle ring spray
5. CTS (2/3-6Mpa)
6. Tool auto prob (2D)
7. Workpiece auto probe
8. 8000 rpm spindle with 1000 rpm motor
9. 10000 rpm belt drive spindle
10. 12000 rpm direct drive spindle
11. 15000 rpm Spindle HSK A63 Spindle
12. Tool and Work Probes
13. External Chip Screw Conveyor
14. External Chip Chain or Scraper
15. Conveyor with Tolley
16. CNC Rotary table
17. Column Raiser 200mm
18. ATC protection door
19. Auto door
20. Oil mist collector
21. Oil Skimmer
22. Coolant gun
23. Spindle oil chiller
24. BT 50 Spindle



1. Customer premises in Bangalore using large number of Haitian VMC Series Machine

2. Bangalore Customer using 6.5m Double column machine for Aerospace Precision Parts



3. Haitian Machine Tools factory under Construction in Sri City near Chennai

4. Haitian Group Factory near Ahmedabad with capacity to Machine Bed, Column etc.



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Andhra Pradesh

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