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The explanation, diagram and technical parameter are varying with continuous technology development without further notice. (20130410-FT13-0108)



VMC^B
VERTICAL MACHINING CENTER

The Standard for Comprehensive Performance



HIGH EFFICIENCY



HIGH SPEED



HIGH PRECISION

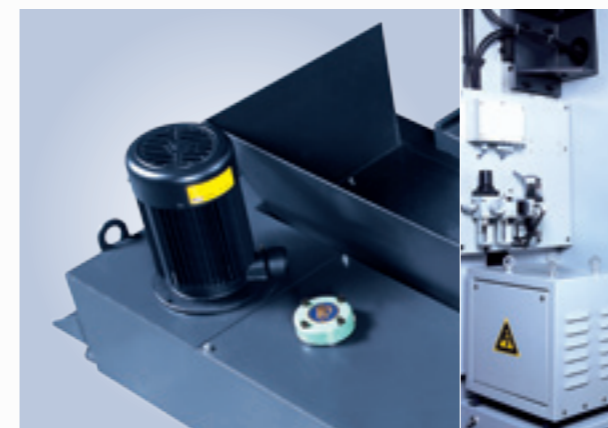


STABILITY



500 Hours Continuous Operation
Prompt Service, Always Ready

The VMC850B represents the distillation of decades of vertical machining experience into a well-rounded, affordable, reliable package. A wide range of customization options are available to make these already flexible machines even more versatile.



High Quality Components

Automatic oil lubricator for linear guideway and ball screw; high-lift and large-flow coolant pump; pneumatic system with high dilution precision; closed protective device to maintain a safe and long service life; high capacity tool magazine



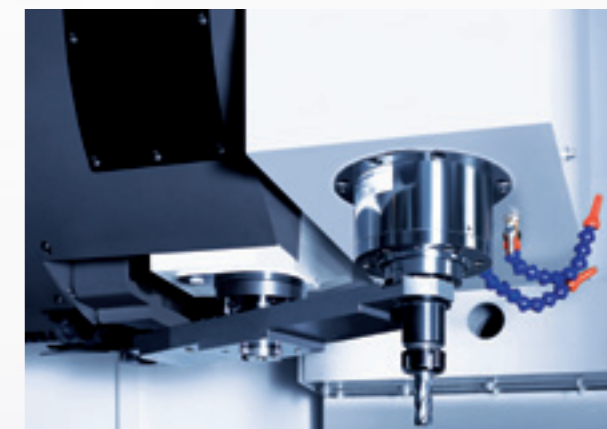
Optimized Structure

Main components such as the bed and column are in a thermally symmetric box-shaped structure. This allows for high speed, high efficiency, high accuracy machining. The overall footprint is smaller while maintenance is easier. Controls are positioned to maximize ease of use.



Powerful CNC System

Compact and powerful, the Fanuc and Seimens controls integrate CNC, PLC, operation interface and axis control. They are capable of many advanced NC functions such as coordinate transformation and tool management. With easy-to-use graphical user interfaces, these controls are the leaders in CNC machining. The controls offer built-in functions to assist in debugging, maintenance and programming.



Super Efficient

Three Axis Rapid Traverse: 32/32/30 (m/min)
Spindle Speed: 8000 RPM
Fast Tool Changer: 2.5s per changing

Workpiece Sample: Fuel Tank Cup



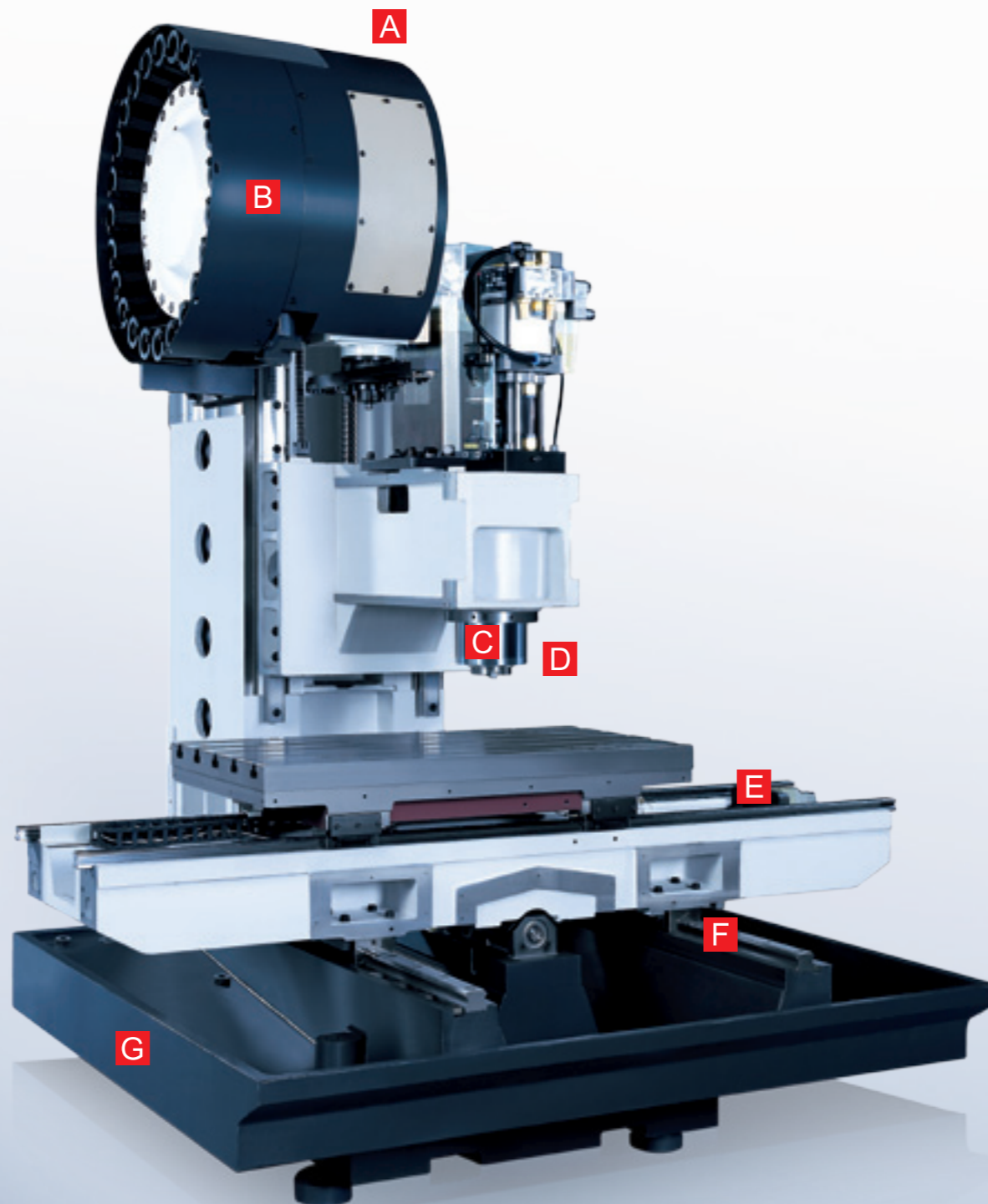
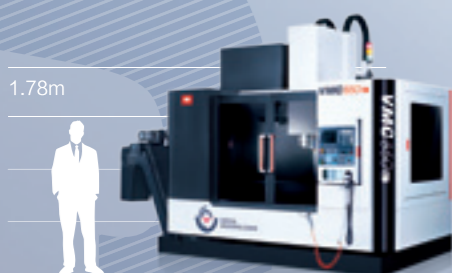
High Quality High Efficiency



A
Electric Motor All axes are equipped with servomotors featuring smooth rotation, excellent acceleration, and high reliability. The built-in encoder achieves high positioning accuracy. Without needing a counterweight, positioning accuracy and dynamic performance are further improved.



B
Tool Magazine The disc-type tool magazine is mounted on the side of the column. The tool pan is driven and positioned by a roller cam. The ATC runs accurately and nearly silently at high speed.



C
Spindle Sourced from a leading Taiwanese firm, these spindles feature P4 bearings. All have been carefully balance-adjusted and run-in. Main transmission uses a synchronous belt drive to ensure the rotating precision of the spindle. Long and stable service life can be expected.



E
Lead Screw X, Y, and Z axes feature roller linear guideways, which have low kinetic and static friction, high sensitivity, minimal vibration at high speeds, no crawling at low speeds, accurate positioning, and servos with excellent drives. All these features improve the machining accuracy and stability.



D
Coolant System A mass-flow cooling pump and large capacity tank guarantee excellent cooling. The spindle surface coolant nozzle supports both liquid and air cooling controlled via M-Code or directly via the control panel. Airgun is included.



F
Guideway The high precision linear guideway, ball screw, and electric motor system guarantee workpiece accuracy and repeatability.



G
Bed The super-wide bed base design provides optimal supporting capacity and stability.



VMC 580B



VMC 700B



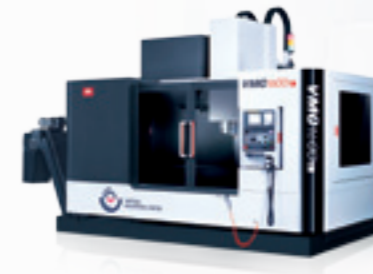
VMC 1000B



VMC 1100B



VMC 1300B



VMC 1600B



VMC 2100B

MAIN SPECIFICATIONS

Item		Unit	VMC580B	VMC700B	VMC850B	VMC1000B	VMC1100B	VMC1300B			VMC1600B	VMC2100B
Worktable	Dimensions	mm	650×430	800×420	1000×500	1200×500	1300×610	1400×700			1700×800	2200×800
	T-slot Sizes	mm×N	14×3	18×3	18×5	18×5	18×5	18×5			22×5	22×5
	Max Load	kg	300	600	600	600	1000	1000			2000	3000
Machining Range	X Axis Travel	mm	580	700	850	1000	1100	1300			1600	2100
	Y Axis Travel	mm	420	440	560	610	610	700			800	800
	Z Axis Travel	mm	520	530	650	650	650	700			800	800
	Max Distance from Spindle Nose to Worktable	mm	620	660	800	800	800	850			940	1000
	Min Distance from Spindle Nose to Worktable	mm	100	130	150	150	150	150			140	200
Spindle	Taper		BT40	BT40	BT40	BT40	BT40	BT40	BT50	BT50	BT50	BT50
	Speed	rpm	10000	8000 direct connection	8000	8000	8000	8000	6000	6000	6000	6000
	Main Motor Torque	Nm	35.8	35.8	52.5	52.5	52.5	52.5	71.7	95.4	95.4	380
	Main Motor Power	kW	7.5/11	7.5/11	11/15	11/15	11/15	11/15	15/18.5	15/18.5	15/18.5	15/18.5
Feed	X/Y/Z Axis Rapid Traverse	m/min	48/48/48	32/32/32	32/32/30	32/32/30	32/32/30	24/24/20	24/24/20	24/24/20	24/24/20	18/18/18
	Feed Speed	m/min	20	20	20	20	20	10	10	10	10	10
Tool Magazine	Type		mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm	mechanical arm
	Stations	number	20	24	24	24	24	24	20	20	20	20
	Changing Time	s	1.8	2.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5
Positioning Accuracy	JISB6300	mm	±0.005/300	±0.005/300	±0.005/300			±0.005/300			±0.008/300	
	JB/T8771.4	mm	0.012	0.012	0.016/0.012/0.012			0.020/0.012/0.012			0.022/0.012/0.012	
Repositioning Accuracy	JISB6300	mm	±0.003	±0.003	±0.003			±0.003			±0.003	
	JB/T8771.4	mm	0.008	0.008	0.010/0.008/0.008			0.012/0.010/0.008			0.013/0.008/0.008	
General Power Capacity		KVA	18	18	25	25	25	25	37	37	37	37
Air-supply Pressure		Mpa	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7			0.5-0.7	0.5-0.7
Dimensions & Weight	Footprint (L x W)	mm	2510×1980	2590×2050	3000×2565	3000×2565	3000×2565	3500×3232			4212×3340	6705×3500
	Height	mm	2411	3000	2944	2944	2944	3361			3715	3910
	Weight	kg	3500	5600	6800	7000	8000	11000			13500	17500
CNC System			FANUC	FANUC	FANUC	FANUC	FANUC	FANUC			FANUC	FANUC

Note: The parameters in the above list are just for reference, actual values may differ.

Suitable for Machining in Multiple Fields

STANDARD/OPTIONAL ACCESSORIES

Accessories		VMC580B	VMC700B	VMC850B	VMC1000B	VMC1100B	VMC1300B	VMC1600B	VMC2100B
Three-axis Ball Screw		●	●	●	●	●	●	●	●
Three-axis guideway	X	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail
	Y	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	4linear guide rail	4linear guide rail
	Z	linear guide rail	linear guide rail	linear guide rail	linear guide rail	linear guide rail	box guideway	box guideway	box guideway
Stainless-steel Guideway Protection		●	●	●	●	●	●	●	●
Full Enclosure		●	●	●	●	●	●	●	●
Chip Conveyors	Screw-type & Water Tank		●						
	Water Tank	●		●	●	●	●	●	
	Chain-type	▲	▲	▲	▲	▲	▲	▲	●
	Scraper-type	▲	▲	▲	▲	▲	▲	▲	▲
	Magnetic	▲	▲	▲	▲	▲	▲	▲	▲
Lubricating System		●	●	●	●	●	●	●	●
Pneumatic System		●	●	●	●	●	●	●	●
Air Gun		●	●	●	●	●	●	●	●
Heat Exchanger		●	●	●	●	●	●	●	●
CNC System	FANUC	●	●	●	●	●	●	●	●
	SIEMENS	●	●	●	●	●	●	●	●
	FIYANG	▲	▲	▲	▲	▲	▲	▲	▲
Thru-Spindle Coolant				▲	▲	▲	▲	▲	▲
Reduction Gearbox							▲	▲	●
Tool Detection	Renishaw NC4	▲	▲	▲	▲	▲	▲	▲	▲
	Renishaw TS27R	▲	▲	▲	▲	▲	▲	▲	▲
	Marposs ML75P	▲	▲	▲	▲	▲	▲	▲	▲
	Marposs TS30	▲	▲	▲	▲	▲	▲	▲	▲
Workpiece Detection	Renishaw OMP60	▲	▲	▲	▲	▲	▲	▲	▲
	Marposs E83Wa	▲	▲	▲	▲	▲	▲	▲	▲
Linear Scale			▲	▲	▲	▲	▲	▲	▲
Hydraulic Monitor		▲	▲	▲	▲	▲	▲	▲	▲
Rotary Table		▲	▲	▲	▲	▲	▲	▲	▲
Air Conditioner		▲	▲	▲	▲	▲	▲	▲	▲
CE Standard		▲	▲	▲	▲	▲	▲	▲	▲
Ethernet		●	●	●	●	●	●	●	●
Tool Magazine	BT40 20T Umbrella			▲	▲	▲	▲		
	BT40 20T Mechanical Arm	●							
	BT40 24T Mechanical Arm		●	●	●	●	▲		
	BT50 16T Umbrella						▲	▲	▲
	BT50 20T Mechanical Arm			▲	▲	▲	●	●	●
	BT50 32T Chain								▲
Spindle	BT40 8,000RPM		●	●	●	●	▲		
	BT40 10,000RPM	●		▲	▲	▲	▲	▲	
	BT50 6,000RPM					▲	●	●	●

● standard accessories, ▲ optional accessories