



JOHNFORD

Vertical Machining Centers



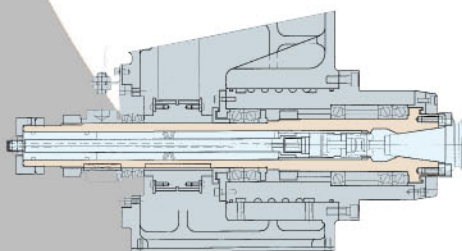
VMC-850 / 1050
JET-32 / 40

Vertical Machining Center



VMC-850 / 1050

Rigid with Excellent Static
Rapid Traverse : X/Y/Z 30 /



Cartridge Spindle

Spindle taper: BT / CAT 40

Spindle Speed: Std. 8000 rpm

Opt. 10000 rpm / 12000 rpm / 14000 rpm

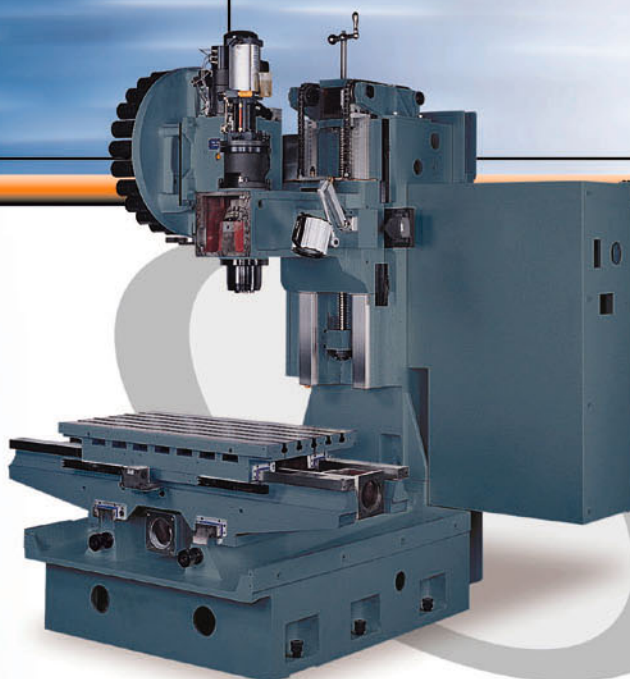
Item	Model	VMC-850	VMC-1050
Table working surface (mm)		1000 x 500 (39.4" x 19.7")	1200 x 500 (47.2" x 19.7")
Longitudinal travel (X) (mm)		800 (31.5")	1050 (41.3")
Cross travel (Y) (mm)		500 (19.7")	
Vertical travel (Z) (mm)		610 (24")	
Spindle motor (kW)		7.5 / 5.5 P motor (Std.) 7.5 / 5.5+ZF Gear box (Opt.)	
Table load capacity (kg)		400 (880 lb)	
Machine dimensions (LxWxH) (mm)		2350 x 2200 x 2698 (92.5" x 86.6" x 106.2")	2920 x 2200 x 2698 (115" x 86.6" x 106.2")
Machine weight (kg)		5500 (12100 lb)	6000 (13200 lb)



and Dynamic Accuracy
30/20 m/min Turcite-B on 3 Axes

➔ Advanced Features

- Zero table overhang
- Super wide base arrangement provides rigidity and accuracy of machining.

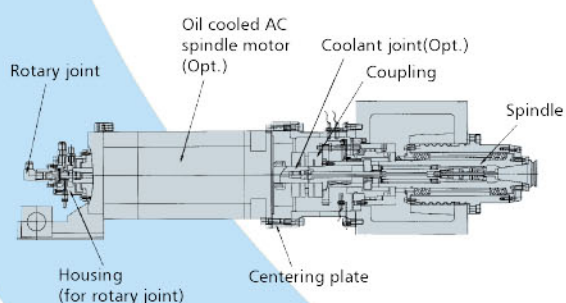


Vertical Machining Center



Linear Ways on X, Y Axes

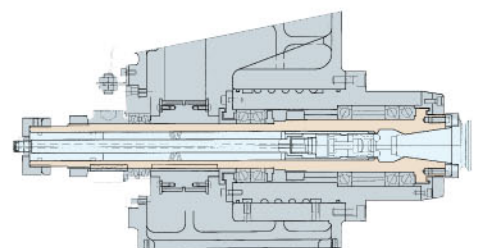
JET-32 / 40



Direct Driving Spindle

Spindle taper: BT / CAT 40

Spindle Speed: 12000 rpm / 15000 rpm



Cartridge Spindle

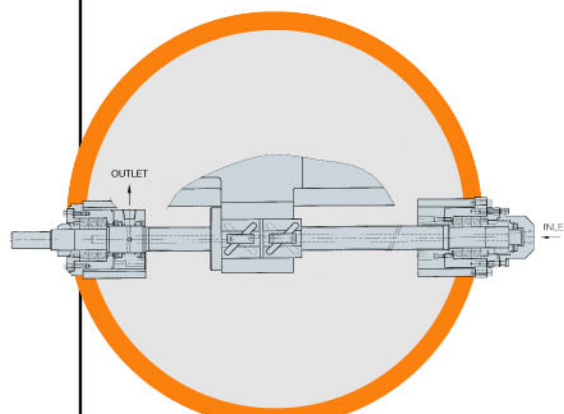
Spindle taper: BT / CAT 40

Spindle Speed: Std. 8000 rpm

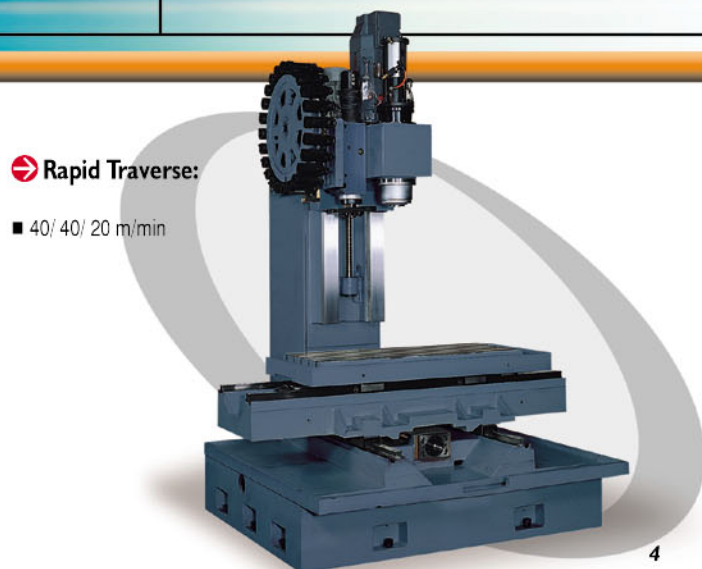
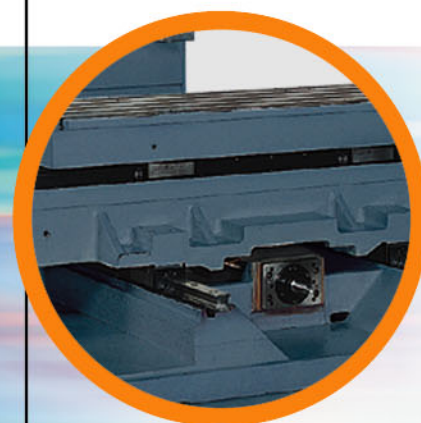
Opt. 10000 rpm / 12000 rpm / 14000 rpm



↑ The high-rigidity and high-precision linear guides are used on X and Y axes



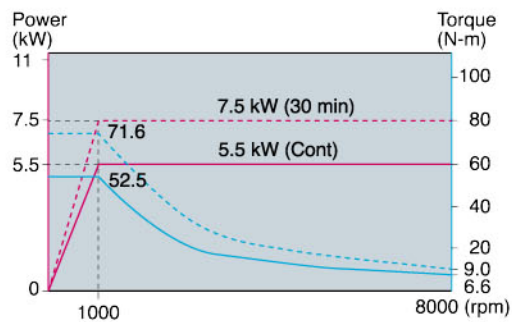
↑ Internal Cooling Ballscrew (Opt.)



➔ Rapid Traverse:

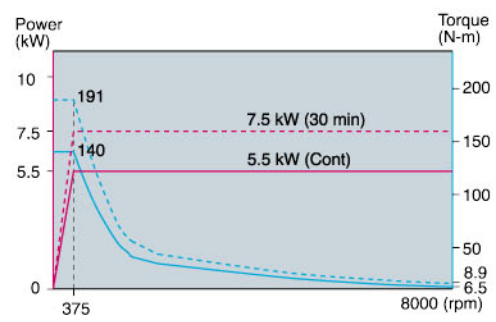
■ 40/ 40/ 20 m/min

Item	Model	JET-32	JET-40
Table working surface (mm)		1000 x 500 (39.4" x 19.7")	1200 x 500 (47.2" x 19.7")
Longitudinal travel (X) (mm)		820 (32.3")	1050 (41.3")
Cross travel (Y) (mm)		500 (19.7")	500 (19.7")
Vertical travel (Z) (mm)		610 (24")	610 (24")
Spindle motor (kW)		7.5 / 5.5 P motor (Std.) 7.5 / 5.5 Hi-Lo Gear (Opt.)	7.5 / 5.5 P motor (Std.) 7.5 / 5.5 Hi-Lo Gear (Opt.)
Table load capacity (kg)		400 (880 lb)	400 (880 lb)
Machine dimensions (LxWxH) (mm)		2600 x 2200 x 2760 (102.4" x 86.6" x 108.7")	3200 x 2250 x 3110 (126" x 88.6" x 122.4")
Machine weight (kg)		5000 (11000 lb)	6000 (13200 lb)



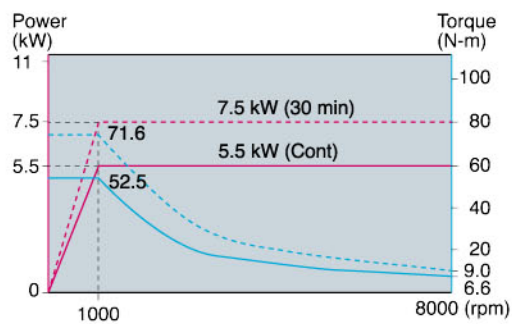
VMC-850 / 1050

■ 8000 rpm cartridge spindle (Std.)



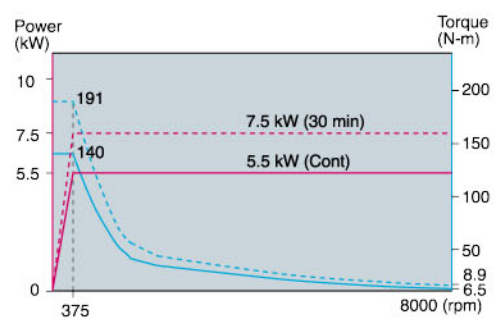
VMC-850 / 1050

■ 8000 rpm ZF 2-step gear box (Opt.)



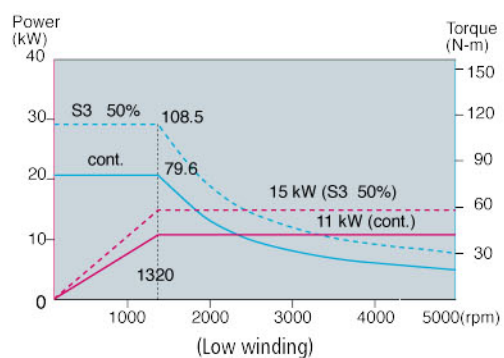
JET-32 / JET-40

■ 8000 rpm cartridge spindle (Std.)



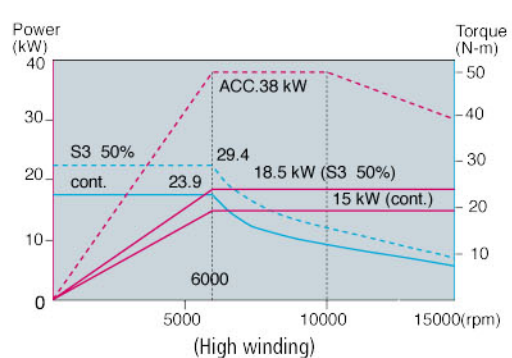
JET-32 / JET-40

■ 8000 rpm ZF 2-step gear box (Opt.)



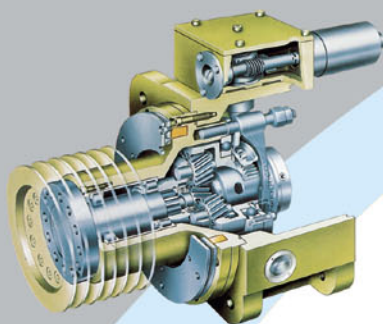
JET-32 / JET-40

■ 15000 rpm direct driving spindle (Opt.)



Different Accessories for Your Choice

Gear Box



- Delivers high torque.
- ZF 2 speed automatic gear box,
- No noise generated,
- No heat transmitted,
- No gear vibration,
- High efficiency (over 95%)

Cooler



- High efficiency.
- Powerful cooling performance.

ATC Units



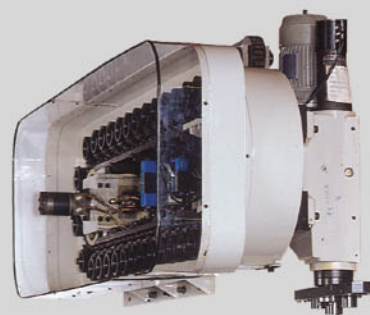
Armless Type

- 24 tools for BT/CAT-40



Arm Type

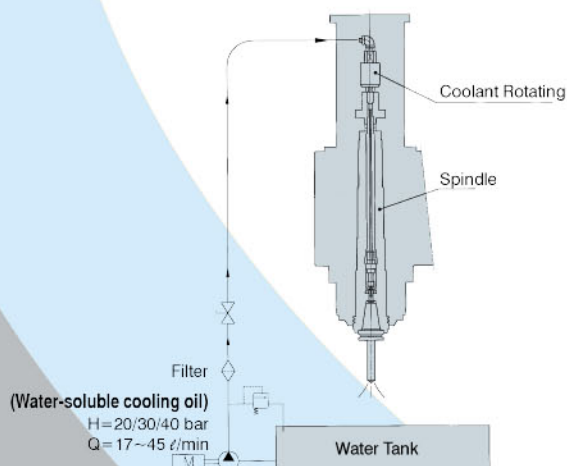
- 24 tools for BT/CAT-40, HSK A63



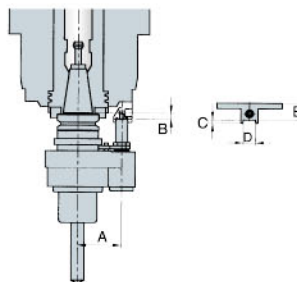
Arm Type

- 32 tools for BT/CAT-40, HSK A63

Coolant Thru Spindle



Coolant Thru Tool Tip



Model	Item	Taper No.	A	B	C	D	E
VMC-850 / 1050	No.40		65	8	5	18	18

Automatic Pallet Changer

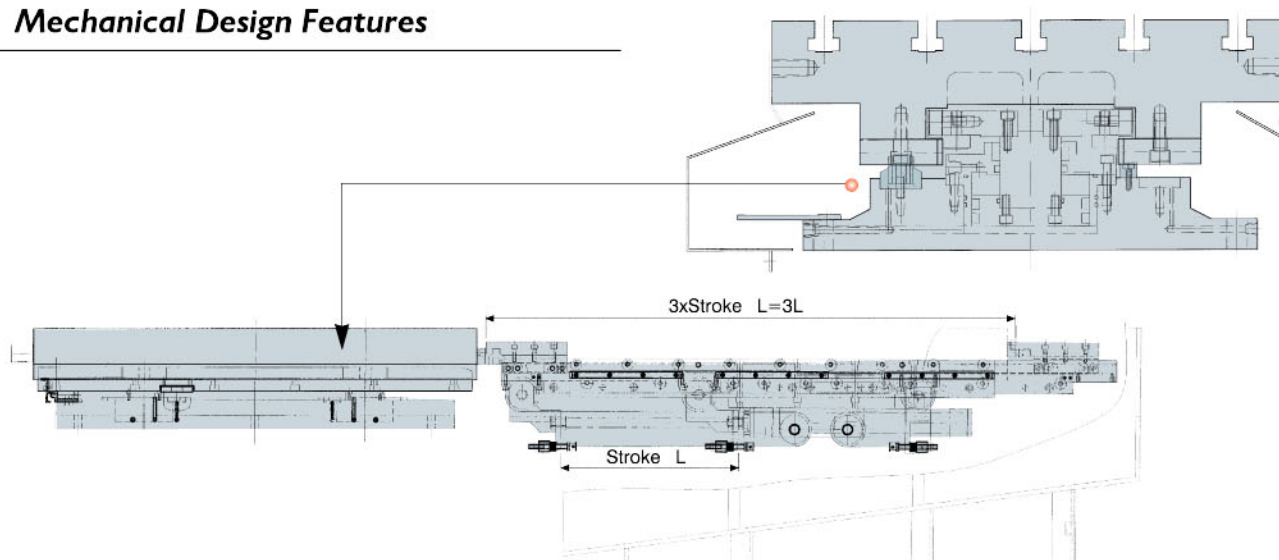
Chain Type (Patented)

- Simplified construction. Maximum dependability.
- Suitable for long pallet change for space saving.
- Rigid and accurate positioning mechanism.
- Safe and fast motions.



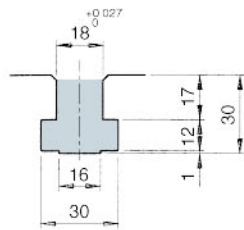
➔ VMC-850 / JET-32+APC

Mechanical Design Features

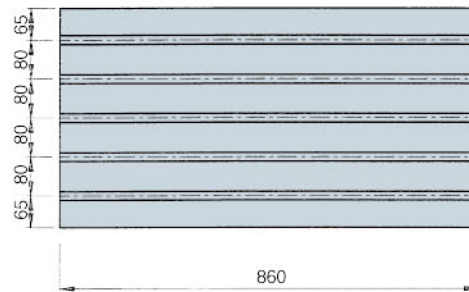


Dimensions

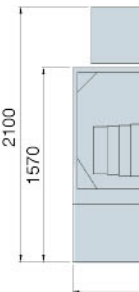
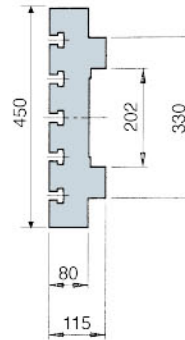
VMC-850 / JET-32+APC



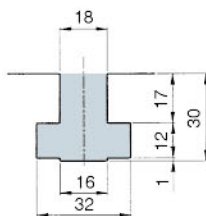
T-Slot



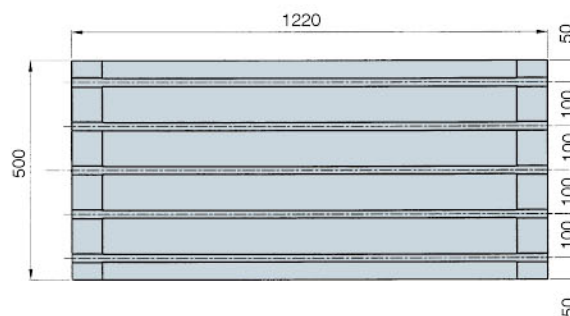
Table



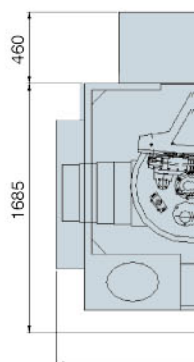
VMC-1050+APC

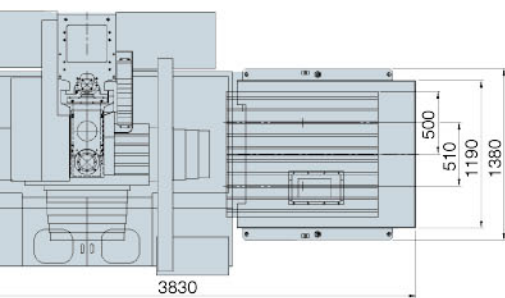


T-Slot

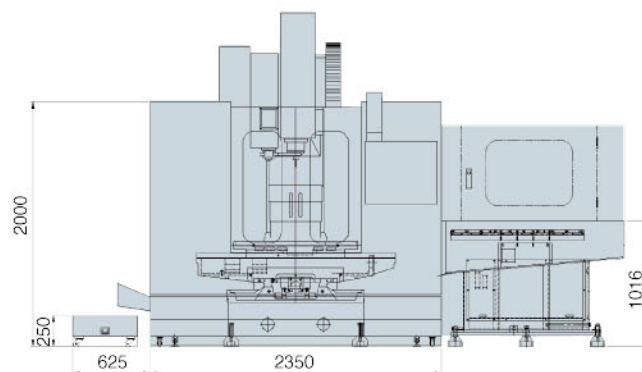


Table

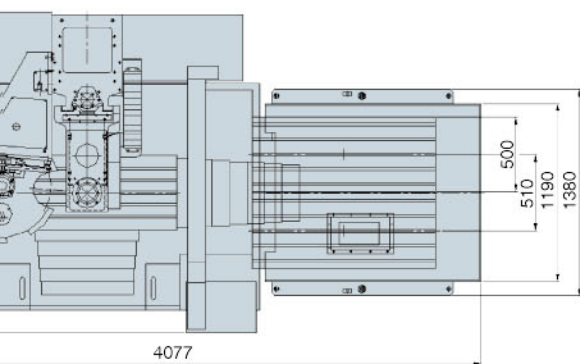




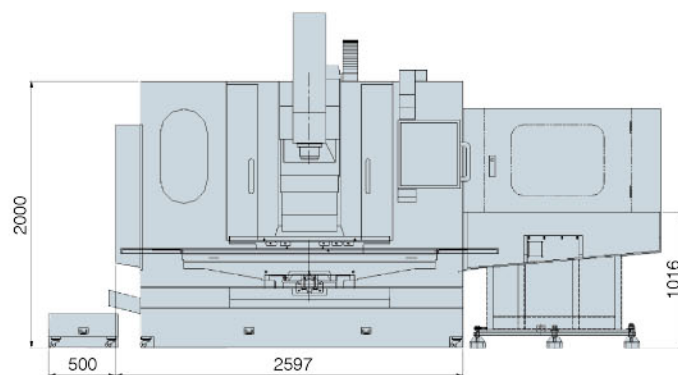
Top View (floor space required)



Front View



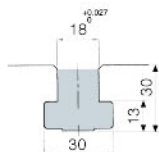
Top View (floor space required)



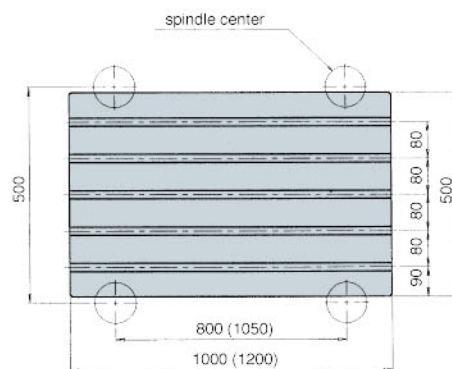
Front View

Dimensions

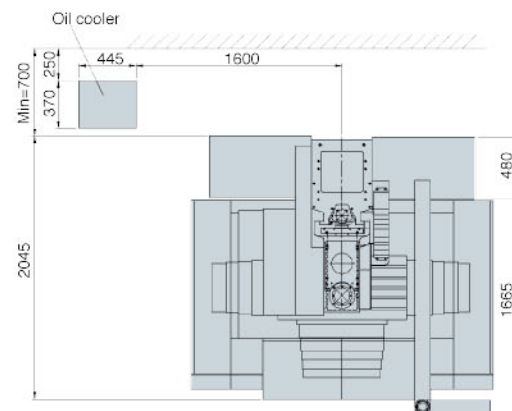
VMC-850 / 1050



T-Slot

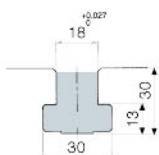


Table

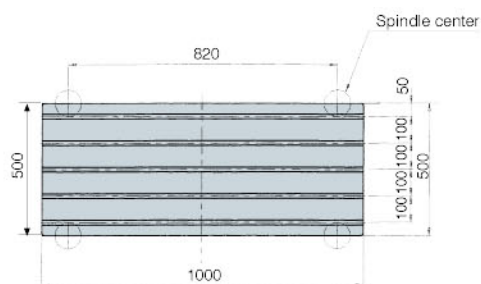


Top View (floor space required)

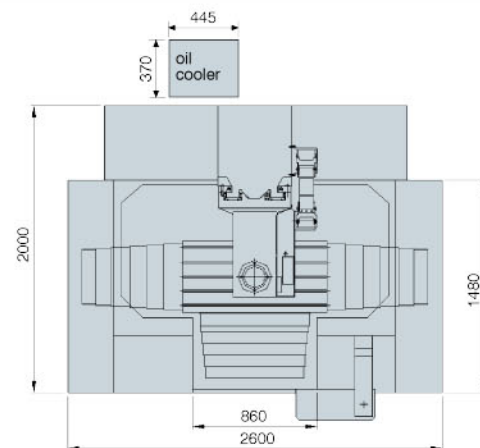
JET-32



T-Slot

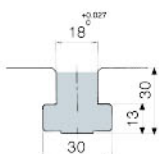


Table

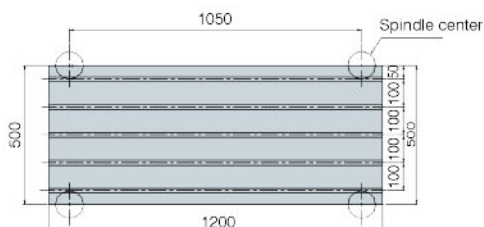


Top View (floor space required)

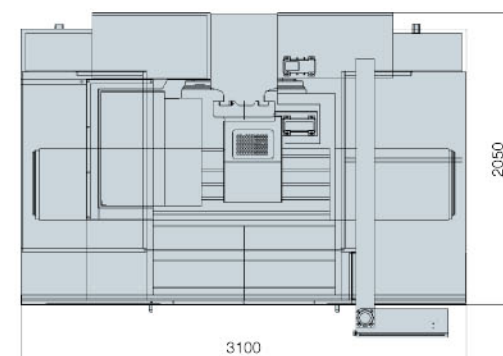
JET-40



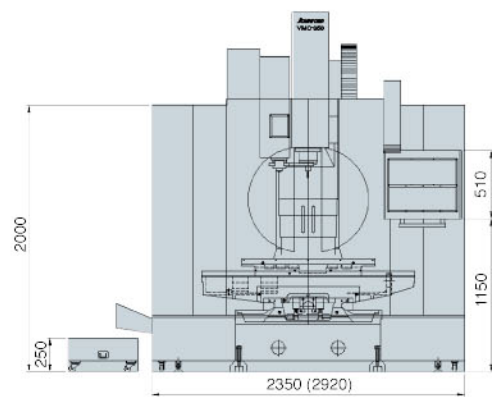
T-Slot



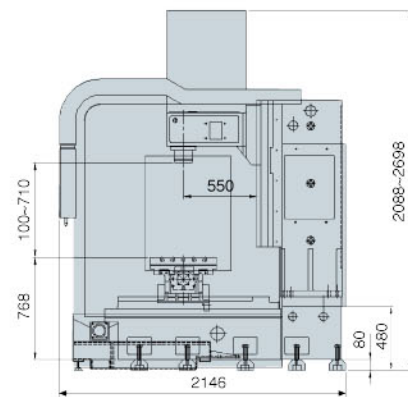
Table



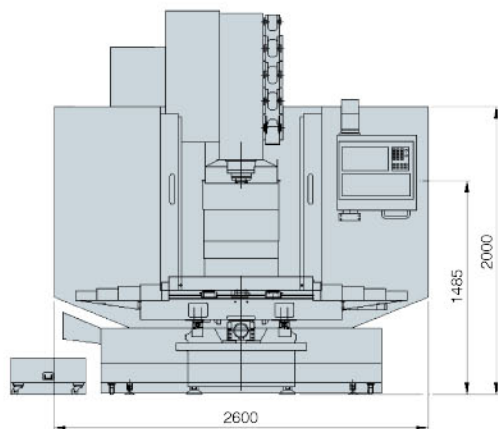
Top View (floor space required)



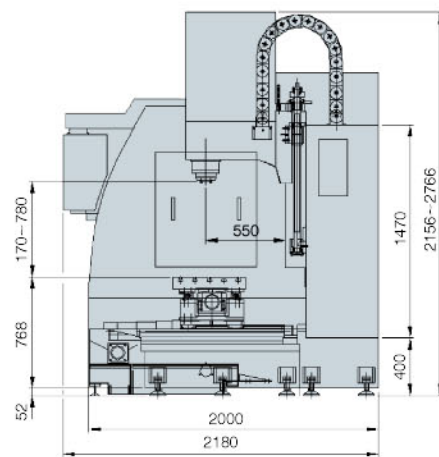
Front View



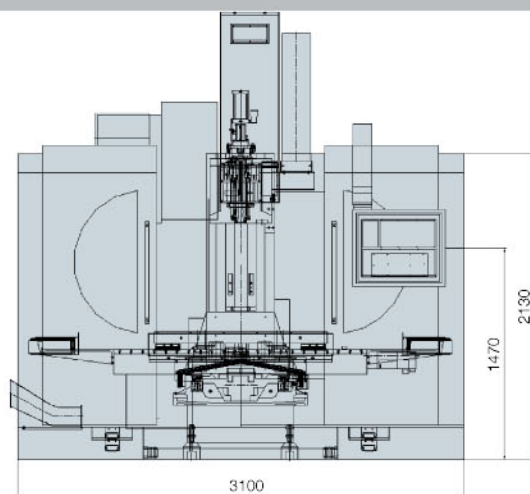
Side View



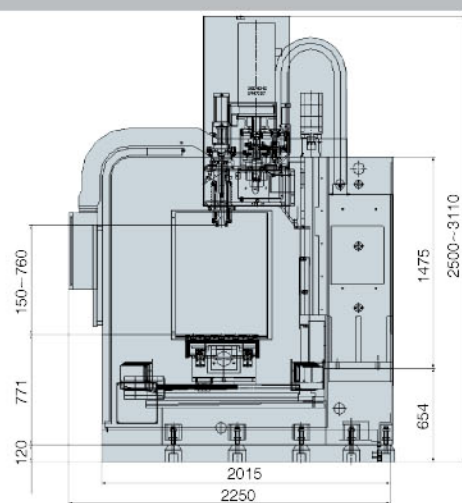
Front View



Side View



Front View



Side View

Specifications

Model		VMC-850	VMC-1050	JET-32	JET-40
Item					
Table working surface (mm)		1000 x 500 (39.4" x 19.7")	1200 x 500 (47.2" x 19.7")	1000 x 500 (39.4" x 19.7")	1200 x 500 (47.2" x 19.7")
Longitudinal travel (X) (mm)		800 (31.5")	1050 (41.3")	820 (32.3")	1050 (41.3")
Cross travel (Y) (mm)		500 (19.7")			
Vertical travel (Z) (mm)		610 (24")			
Spindle nose to table (mm)		100~710 (3.94"~28")		150~760 (5.9"~29.9")	
Spindle to column (mm)		550 (21.7")			
Spindle taper		BT-40, CAT-40 / BBT-40, HSK A63 (Opt.)			
Spindle speed (rpm)		60~8000			
Spindle motor (kW)		7.5 / 5.5 P motor (Std.) 7.5 / 5.5 Hi-Lo Gear (Opt.)			
X-Y-Z Rapid traverse (m/min)		30 / 30 / 20		40 / 40 / 20	
Cutting feed (mm/min)		1~12000			
Tool selection		Bi-direction random type, Shortest path			
No.of tools		Armless 24 Arm type 24 / 32 (Opt.)			
Adjacent pockets Max. tool dia.		75 (ϕ 3")			
Max. tool diameter (mm)		100 (ϕ 4")			
Max. tool length (mm)		300 (12")			
Max. tool weight (kg)		10 (22 lb)			
Table load capacity (kg)		400 (880 lb)			
Machine weight (kg)		5500 (12100 lb)	6000 (13200 lb)	5000 (11000 lb)	6000 (13200 lb)
Machine dimensions (LxWxH) (mm)		2350 x 2200 x 2698 (92.5" x 86.6" x 106.2")	2920 x 2200 x 2698 (115" x 86.6" x 106.2")	2600 x 2200 x 2760 (102.4" x 86.6" x 108.7")	3200 x 2250 x 3110 (126" x 88.6" x 122.4")
X-Y-Z Ball screw dia.		ϕ 40, ϕ 40, ϕ 40			
Cutting capacity (S45C)	Milling	120 cc/min			
	Drilling	ϕ 30 mm			
	Tapping	M30 x P3.5			

■ All data subject to change without notice.

■ All the specifications are listed with the FANUC CNC system.

Standard Accessories:

1. Coolant system
2. Spindle air blast
3. Auto lubrication with alarm
4. Tools, tool box and various manuals
5. Halogen working lamp and leveling pads
6. Screw type chip conveyor
7. Chip flushing coolant
8. Full enclosure splash guard
9. FANUC Oi-MC controller

Optional Accessories:

1. Contact / Non-contact tool setting system
2. CNC Rotary table
3. Automatic pallet changer (A.P.C.)
4. High pressure coolant thru tool tip
5. High pressure coolant thru spindle (20 bar / 30 bar or more)
6. Arm type ATC 24/32 tools (No.40, No.50, HSK)
7. Chain type chip conveyor
8. Cartridge spindle (10000 / 12000 / 14000 rpm for BT / CAT-40 spindle)
9. Direct driving spindle.
(12000/15000 rpm for BT / CAT-40 spindle)
10. High-speed built-in spindle (15000 rpm for BBT-40 spindle;
15000 / 18000 / 24000 rpm for HSK A63 spindle)
11. Internal cooling ballscrew
12. Manual guide i / Oi (OiMC) ; Manual guide i (18iMB/21iMB)
13. Electronic compensation of thermal expansion

CNC Control Specs

O: Std. △: Opt. -: Nil

Item	Function	Specifications	HEIDENHAIN		FANUC			SIEMENS	
			TNC410	iTNC530	i8iMB	21iMB	0iMC	810D	840D
Control axes	Standard number of control axes	axes	4	3	3	3	3	4	4
	No. of simultaneously controlled axes	axes	3	3	3	3	3	4	4
Input commands	Least detection increment	1μ	1μ	0.1μ	1μ	1μ	1μ	1μ	1μ
	Least programmable increment	1μ	1μ	0.1μ	1μ	1μ	1μ	1μ	1μ
	Inch/metric conversion	1	0	0	0	0	0	0	0
	Absolute/incremental command	G90/G91	0	0	0	0	0	0	0
	Input buffer	word/characters	1024	unlimited	6	6	1	unlimited	unlimited
	Pre-read buffer (No-of block)	block	30	256	180	80	20	100	300
	ISO/EIA automatic identification		0	0	0	0	0	0	0
Interpolation	RS232-C interface		0	0	0	0	0	0	0
	Positioning (interpolation)	G00	0	0	0	0	0	0	0
	Linear interpolation	G01	0	0	0	0	0	0	0
	Circular interpolation	G02/G03	0	0	0	0	0	0	0
	Helical interpolation		0	0	0	0	0	0	0
Program	Rigid Tapping		0	0	0	0	0	0	0
	Memory capacity		256 KB	6 GB	640M	640M	640M	1.5MB	2.5MB
	No. of programs stored		100	unlimited	200	200	200	unlimited	unlimited
	Background editing		0	0	0	0	0	0	0
Spindle functions	S code output 4-digit BCD-binary	S4BCD	0	0	0	0	0	0	0
	Spindle rate	%	0-150		50-150			50-200	50-200
Feed	Per-minute		0	0	0	0	0	0	0
	Rapid traverse rate	low25%,50%,100%	-	-	0	0	0	0	0
	Cutting feed rate	0%-150%	0	0	0-200			0	0
	Handle feed rate	x1,x10,x100	-	-	0	0	0	0	0
Miscellaneous function	M-code	M2(BCD)	0	0	0	0	0	0	0
Coordinate system	Automatic coordinate system setting		-	-	0	0	0	0	0
	Machine coordinate system		0	0	0	0	0	0	0
	Work coordinate system	G54-G59	0	0	0	0	0	0	0
	Coordinate system setting	G92	0	0	0	0	0	0	0
	Manual reference point return		0	0	0	0	0	0	0
	Automatic reference point return	G28/G29	-	-	0	0	0	0	0
	2nd reference point return	G30	-	-	0	0	0	0	0
Tool function	Reference point return verify	G27	-	-	0	0	0	0	0
	Tool command	T2 BCD	0	0	0	0	0	0	0
	Tool length offset	G43/G44/G49	-	-	0	0	0	0	0
	Cutter compensation C	G40/G41/G42	0	0	0	0	0	0	0
Operation	Number of offset sets		999	999	400	400	400	unlimited	unlimited
	Single block		0	0	0	0	0	0	0
	Block skip		0	0	0	0	0	0	0
	Dry run		0	0	0	0	0	0	0
	Machine lock		△	△	0	0	0	△	△
	Option stop	M01	0	0	0	0	0	0	0
	Miscellaneous function lock	M.S.T.lock	0	0	0	0	0	0	0
	Manual/Absolute ON/OFF		0	0	0	0	0	0	0
	PLC switch		0	0	0	0	0	0	0
Programming support function	Sub-program control	M98, M99	0	0	0	0	0	0	0
	Corner chamfering/corner rounding		0	0	△	△	0	0	0
	Canned cycle for drilling	G80-G89	0	0	0	0	0	0	0
	Automatic corner override		0	0	△	△	0	0	0
	User macro		0	0	0	0	0	0	0
	No. of variable command sets		unlimited	unlimited	500	500	500	unlimited	unlimited
	Backlash compensation		0	0	0	0	0	0	0
	Memory-type pitch error compensation		0	0	0	0	0	0	0
	Coordinate system rotation	G68/G69	0	0	△	△	0	0	0
Measurement function	Scaling	G50/G51	0	0	△	△	0	0	0
	Polar coordinate command	G15/G16	0	0	△	△	0	0	0
	Skip function		0	0	0	0	0	0	0
Safe protect	Tool length automatic measurement		0	0	△	△	△	0	0
	Emergency stop		0	0	0	0	0	0	0
	Travel protected		0	0	0	0	0	0	0
Other	Program protected		0	0	0	0	0	0	0
	CRT		10.4" LCD	15" LCD	10.4"LCD	10.4"LCD	7.2"MON LCD	10.4"LCD	10.4"LCD
	MDI	Full key	0	0	0	0	Small type	0	0
	Languages	English/Japaness	10	10	7	7	7	7	7
	Parts count		0	0	0	0	0	-	-
	Run hour display and parts count		0	0	0	0	0	-	-
	Graphic display		0	0	0	0	0	0	0
	4th axis interface		0	△	0	0	0	0	0
	Menu programming		0	0	0	0	0	0	0
	Conversational programming with graphic function	Manual guide	0	0	△	△	△	△	△
	Mirror function		0	0	0	0	0	0	0
	Chinese, French, German, Italian, Spanish		0	0	0	0	0	0	0
	High-precision contour control	64 bit RISC	-	△	△	-	-	△	△
	Data server (HD)		-	0	△	△	△	△	△
	ETHERNET		-	0	0	0	△	△	△

■ All data subject to change without notice.



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