



VERTICAL MACHINING CENTERS

TECHNOLOGY

CREATIVITY

RELIABILITY

MACHINE YOUR WAY TO SUCCESS

JM450
610
850
1100
1600



High Performance VMC

It all starts with a solid and rigid foundation. Follow up with proven structural design and quality components in our manufacturing process. The result is a high performance VMC with consistent machining accuracy year after year- precision and quality built by design.



Model:JM450

Compact Machining Center

"Maximum performance within minimum floor space"

Outstanding Features to



Arm-type ATC (Optional)

- ▶ Fast tool change in 1.5 seconds.
- ▶ Bi-directional random tool selection.
- ▶ 20, 24, or 32 stations magazine.



CT or BT-30 Spindle

- ▶ High precision angular contact bearings for outstanding radial and axial cutting performance.
- ▶ Excellent for high spindle speed applications.



CT-40 Spindle

- ▶ High precision angular contact bearings for outstanding radial and axial cutting performance.
- ▶ Most popular standard tooling size on market.
- ▶ Good balance of speed and heavy cutting requirements.



Carousel-type ATC (Standard)

- ▶ Bi-direction tool selection.
- ▶ Proven trouble-free tool change mechanism makes tool loading easy and safe.
- ▶ 10, 20, or 24 pockets magazine.



Way Guards and Linear Guide ways (Standard)

- ▶ Metal telescoping way covers on X, Y and Z-axis protects all guide ways and ball screws from chips and coolant.
- ▶ Precision linear guide ways are well suited for high precision machining requiring both smooth contours and sharp edges.



Precision Ball Screws on all Axes

- ▶ High precision ground ball screws with double nuts and preloaded end bearing support maximizes accuracy and repeatability over a wide range of machining conditions.
- ▶ Direct servo motor to ball screw with keyless zero backlash coupling enhances positioning accuracy and machining performance.



High Performance Control

- ▶ CNC systems with AC digital servo drives and motors maximize system response and performance with factory optimized absolute tuning parameters.
- ▶ Aniam 6000i CNC with USB connection, Ethernet RJ-45 networking, serial RS-232 port, and 20G hard drive all built-in as standard features.

Enhance your Productivity



Lubrication System

- ▶ Metered lubrication points at all key components deliver proper amount of lubrication to maintain optimum performance of ball screws and guide ways.
- ▶ Brass tubing for corrosion resistant distribution lines ensures long lasting trouble free operation.



Chip Auger (Optional)

- ▶ Front mounted screw-type chip auger efficiently removes chips out of machine to reduce operator clean up and maintenance time.
- ▶ Simple to use and maintain for easy trouble free operation.



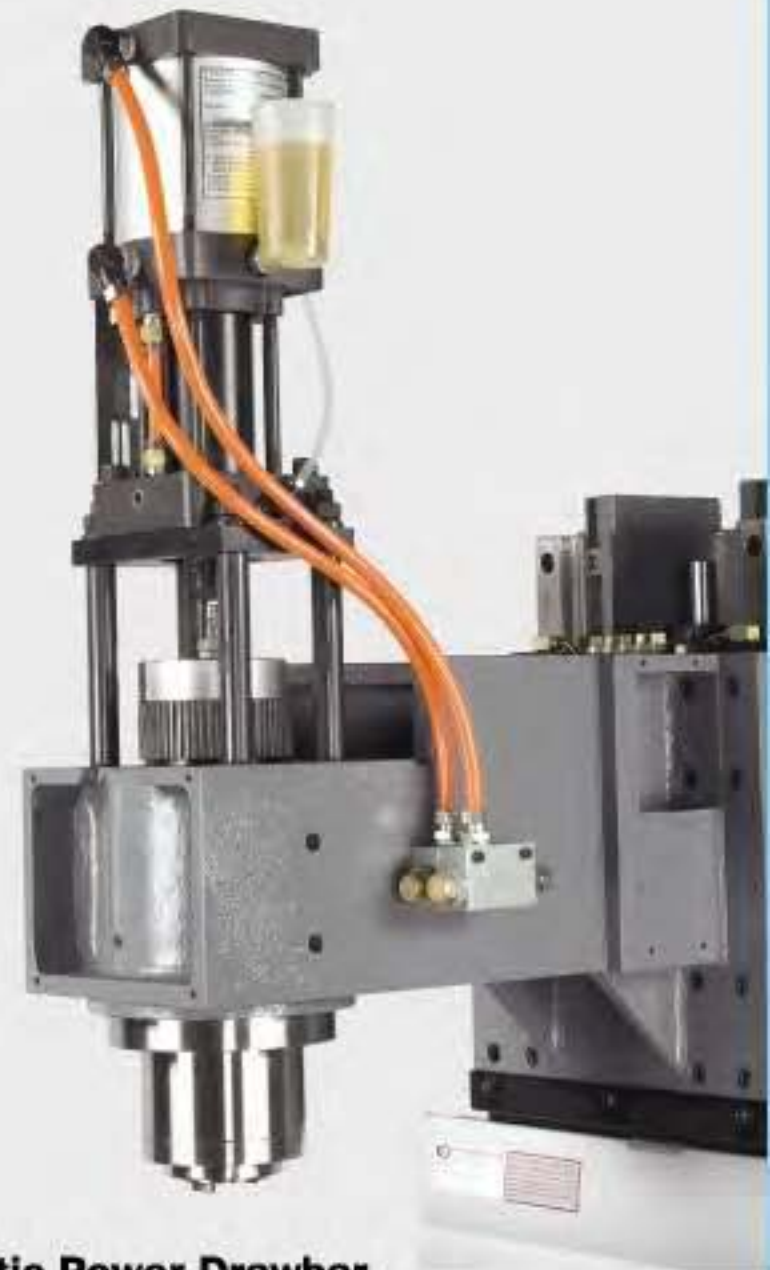
High Speed Spindle (Optional)

- ▶ 12,000 to 30,000 rpm spindle.
- ▶ BT-30 or ISO-25 spindle.
- ▶ Other configurations available upon request.



Spindle Cooler (Optional)

- ▶ Spindle oil chiller unit for continuous machining operation at spindle rpm speeds above 6000.
- ▶ Controlled spindle temperature increases machining accuracy and repeatability with longer sustained run time.



Pneumatic Power Drawbar

- ▶ Air powered drawbar system with floating impact head mounting perform consistently while reduces spindle bearing impact to prolong spindle service life.



Flood Coolant System

- ▶ Dual pump system with a high pressure pump for rear and front-side chip flush to remove chips efficiently out front left corner of machine base.



5-axis machining Option

- ▶ Dual axis trunnion for 5-axis machining.
- ▶ Compact and economic design.



FANUC CONTROL



MITSUBISHI CONTROL



SYNTEC 900M CONTROL



ANILAM CONTROL

Precision by Design, and Quality by Craftsmanship



- ▶ Ball bar test for geometric accuracy
- ▶ Laser calibration for positioning accuracy
- ▶ Verified by inspection

VERTICAL MACHINING CENTER



JM450



JM610



JM850 / 850S

SPECIFICATIONS:

MODEL		JM450	JM610
Table	Table size (X/Y)	21.7" x 13.8" (550 x 350 mm)	27.6" x 20" (700 x 510 mm)
	T-slot (size * number)	0.62" x 3 (15.8 x 3)	0.71" x 4 (18 x 4)
	Max. table loading	330 lb (150 kg)	770lb (350 kg)
Travel	Longitudinal travel (X)	17.7" (450 mm)	24" (610 mm)
	Cross travel (Y)	13.8" (350 mm)	20" (510 mm)
	Vertical travel (Z)	13.8" (350 mm)	20" (510 mm)
	Distance of spindle nose to table surface	3.9" - 17.7" (100 - 450 mm)	5.9" - 26" (150 - 660 mm)
	Distance of spindle center to Z axis cover	14.8" (375 mm)	21.3" (540 mm)
Spindle	Spindle taper	Optional #30 taper BT 40 / CAT 40 / SK 40	BT 40 / CAT 40 / SK 40
	Spindle speed (standard)	9,000 rpm	8,000 rpm
Feed	Rapid traverse	1181" / 1181" / 1181" (30 / 30 / 30 M/min.)	1181" / 1181" / 1181" (30 / 30 / 30 M/min.)
	Min. input increment	0.00004" (0.001 mm)	0.00004" (0.001 mm)
ATC	Tool holder	CAT 40 (OPT. BT30)	CAT 40
	Tool storage capacity	10 pcs Armless / 20 pcs Armtype	20 pcs Armless / 24 pcs Armtype
	Tool change time	6 sec. / 1.8 sec.	6 sec. / 2.5 sec.
	Max. tool diameter	2.5" (63 mm)	3.2" (80 mm)
	Max. tool length	5.9" (150 mm)	9.8" (250 mm)
Motor	Max. tool weight	3 kg	7 kg
	Spindle motor	10HP (5.5 / 7.5 kW)	15HP (7.5 / 11 kW)
	X servo motor	1.45 kW	1.85 kW
	Y servo motor	1.45 kW	1.85 kW
	Z servo motor	2.42 kW	2.3 kW
	Lub. Motor	105 / 125 W	105 / 125 W
Machine weight and space	Coolant pump	1/4 HP	1/2 HP
	Floor space	66.5" x 82" x 81.5" (1,690 x 2,085 x 2,070 mm)	78.7"x104.2"x96.7" (2,000x2,647x2,455 mm)
	Net weight	3960 lb (1800 kg)	9900lb (4500 kg)

■ Specifications are subject to change without notice

* S : Solid box way

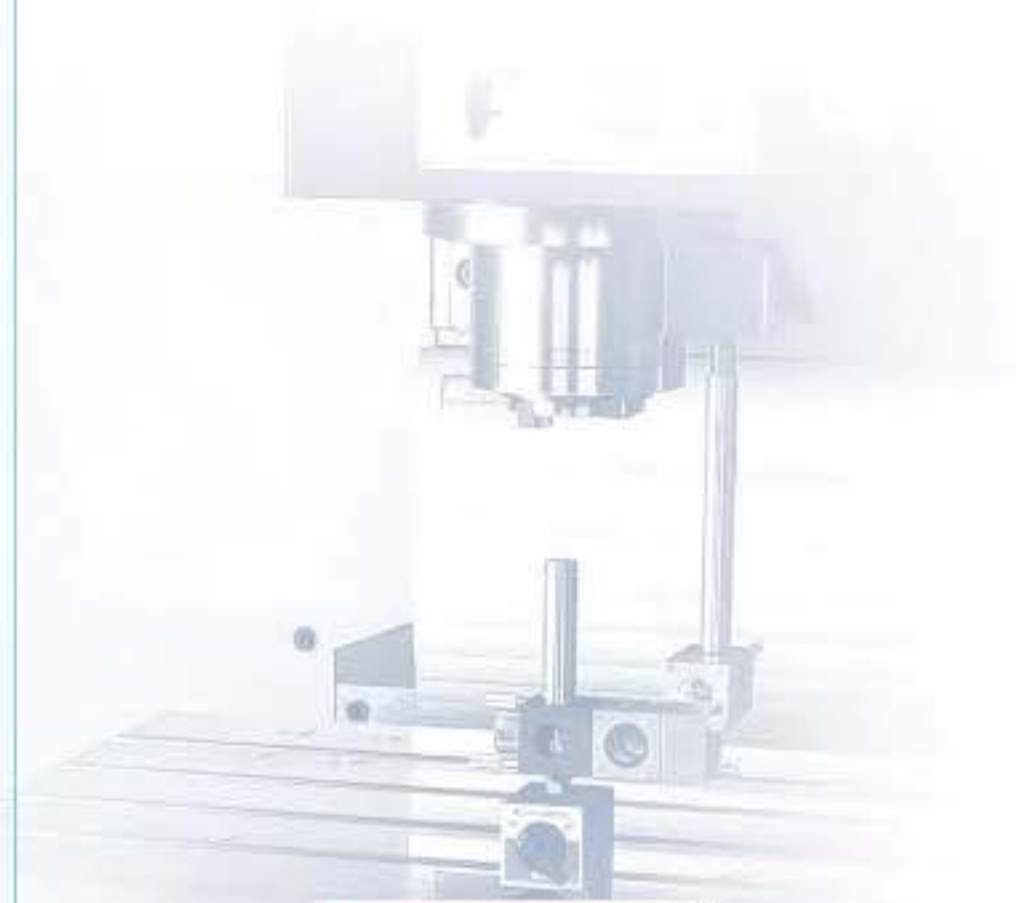


JM1100 / 1100S

JM1600 / 1600S

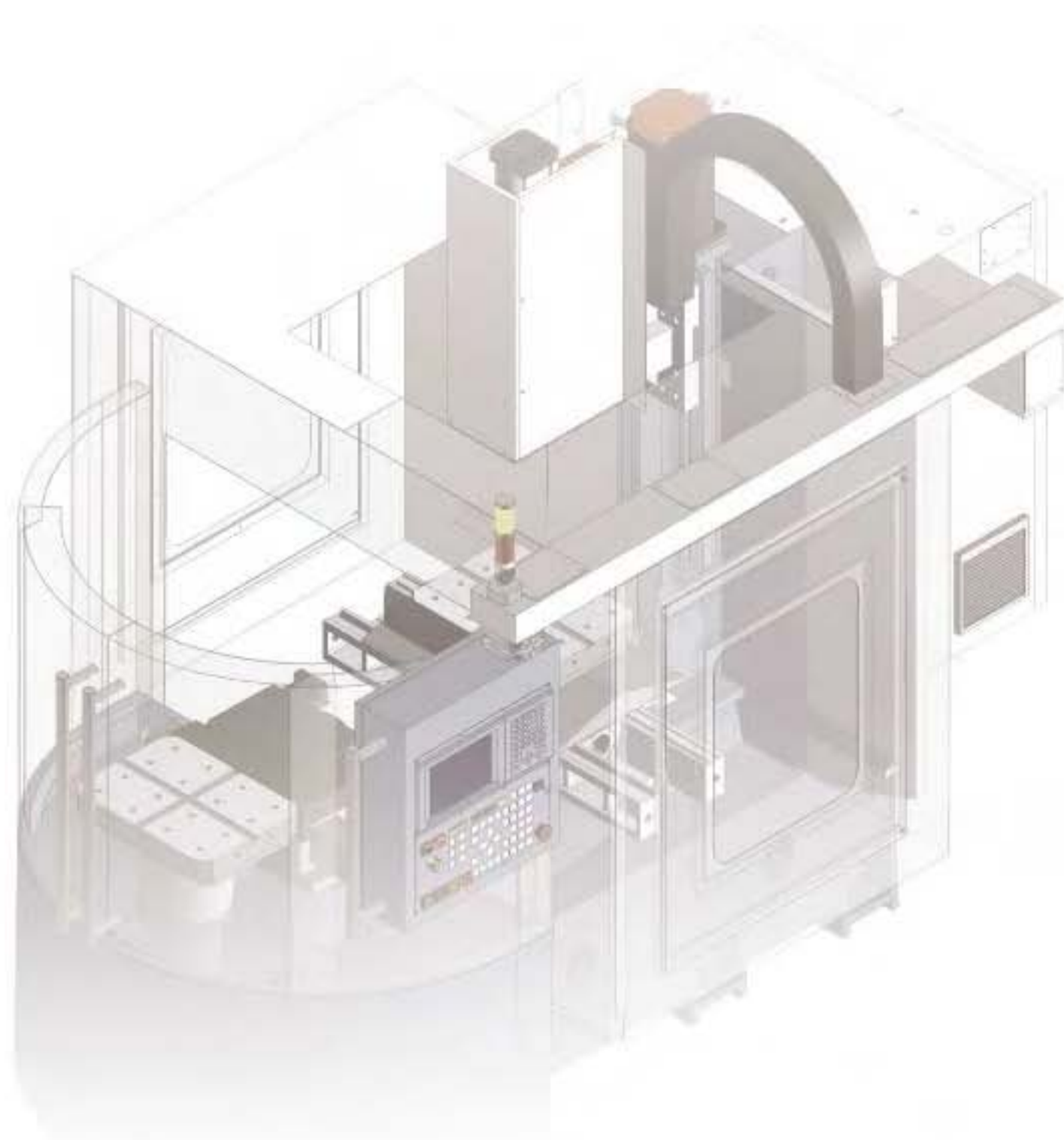
Unit: inch (mm)

JM850 / 850S *	JM1100 / 1100S *	JM1600 / 1600S *
39.4" x 20" (1000 x 510 mm)	49.2" x 25.6" (1250 x 650 mm)	66.9" x 32" (1700 x 815 mm)
0.71" x 4 (18 x 4)	0.71" x 6 (18 x 6)	0.87" x 5 (22 x 5)
990lb (450 kg)	1870lb (850 kg)	4620lb (2100 kg)
33.5" (850 mm)	43.3" (1100 mm)	63" (1600 mm)
20" (510 mm)	24" (610 mm)	31.5" (800 mm)
20" (510 mm)	24" (610 mm)	27.6" (700 mm)
5.9" - 26" (150 - 660 mm)	5.9" - 29.9" (150 - 760 mm)	7.9" x 35.4" (200 - 900 mm)
21.3" (540 mm)	25.6" (650 mm)	35" (890 mm)
BT 40 / CAT 40 / SK 40	BT 40 / CAT 40 / SK 40	BT 50 / CAT 50 / SK 50
8,000 rpm	8,000 rpm	5,500 (6,000 opt.) rpm
1181" / 1181" / 1181"	1181" / 1181" / 945"	590" / 590" / 473"
(30 / 30 / 30 M/min.)	(30 / 30 / 24 M/min.)	(15 / 15 / 12 M/min.)
0.00004" (0.001 mm)	0.00004" (0.001 mm)	0.00004" (0.001 mm)
CAT 40	CAT 40	CAT 50
20 pcs Armless / 24 pcs Armtype	24 pcs Armless / 24 pcs Armtype	24 pcs Armless / 32 pcs Armtype
6 sec. / 2.5 sec.	6 sec. / 2.5 sec.	6 sec.
3.2" (80 mm)	3.2" (80 mm)	4.9" x 7.9" (125 / 200 mm)
9.8" (250 mm)	9.8" (250 mm)	11.8" (300 mm)
7 kg	7 kg	15 kg
15HP (7.5 / 11 kW)	20HP (11 / 15 kW)	20HP (11 / 15 kW)
1.85 kW	2.3 kW	2.3 kW
1.85 kW	2.3 kW	2.3 kW
2.3 kW	2.3 kW	2.3 kW
105 / 125 W	105 / 125 W	105 / 125 W
1/2 HP	1/2 HP	1/2 HP
86.6"x104.2"x96.7"	126"x95.7"x103.4"	163.4"x126"x132"
(2,200x2,647x2,455 mm)	(3,200x2,430x2,626 mm)	(4,150 x 3,200 x 3,350 mm)
12100lb (5500 kg)	14300lb (6500 kg)	34100lb (15500 kg)



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