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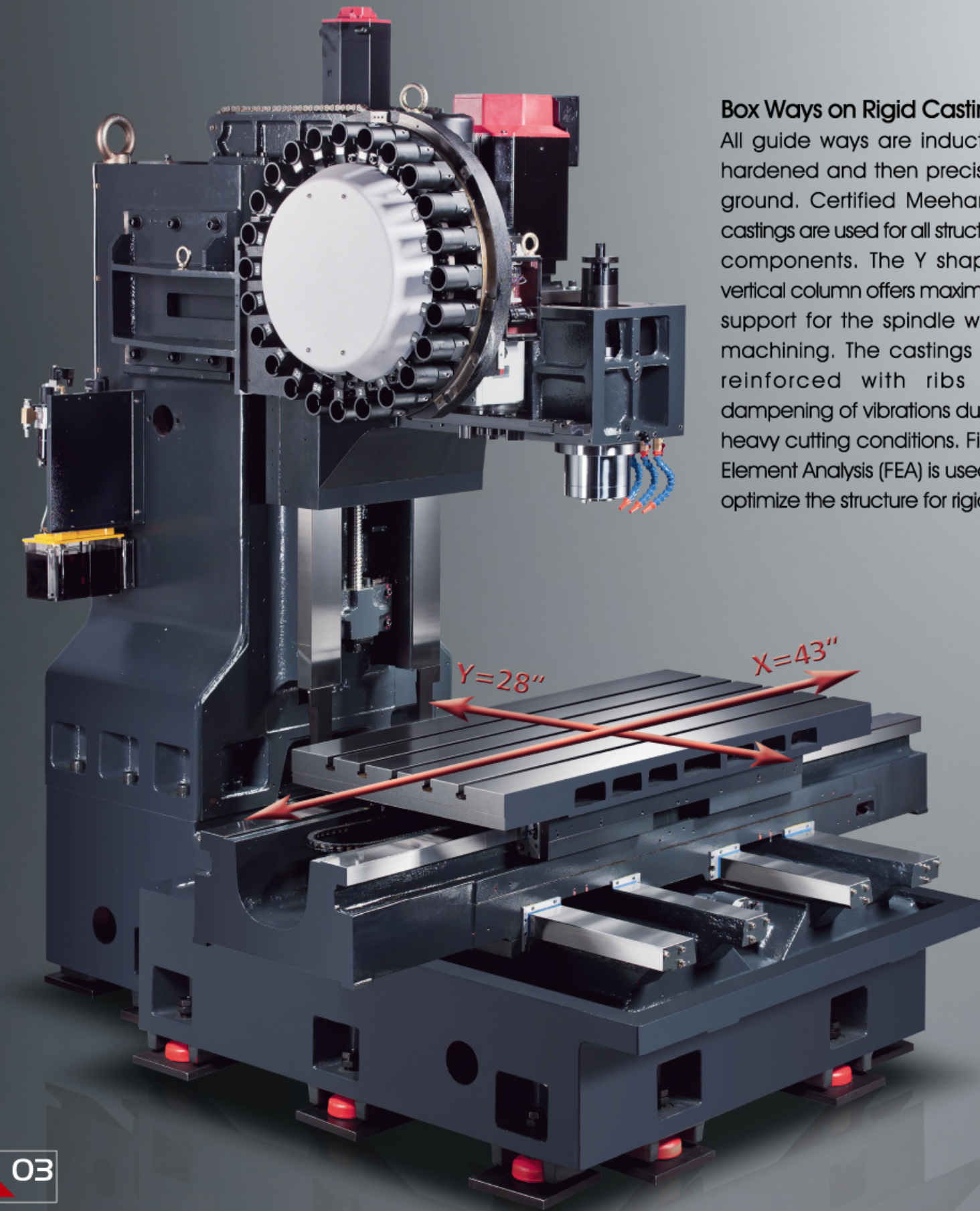


SHARP MODEL SV-4328ST BOX WAY VERTICAL MACHINING CENTER



The SHARP SV-4328ST Vertical Machining Center is built on proven technology with a reliable and user-friendly CNC control. The machine offers a large working area for a wide range of applications. The 43" X travel, and 28" Y travel, is unique in the industry. It allows large work piece machining in one set up. The hardened and ground box ways ensure maximum rigidity.





Box Ways on Rigid Castings

All guide ways are induction hardened and then precision ground. Certified Meehanite castings are used for all structural components. The Y shaped vertical column offers maximum support for the spindle while machining. The castings are reinforced with ribs for dampening of vibrations during heavy cutting conditions. Finite Element Analysis (FEA) is used to optimize the structure for rigidity.



Four Box Ways

The base has 4 box ways on the Y axis to ensure rigidity and stability during heavy machining conditions. It offer a generous 28 inch Y axis travel, the largest in this category of machining centers. To reduce backlash, all axes are connected directly to the Fanuc AC Digital Servo Drive Motor, without the use of gears or belts.



No Overhang Table

The X-axis box ways have wide spacing and are extra long to fully support the worktable throughout travel.

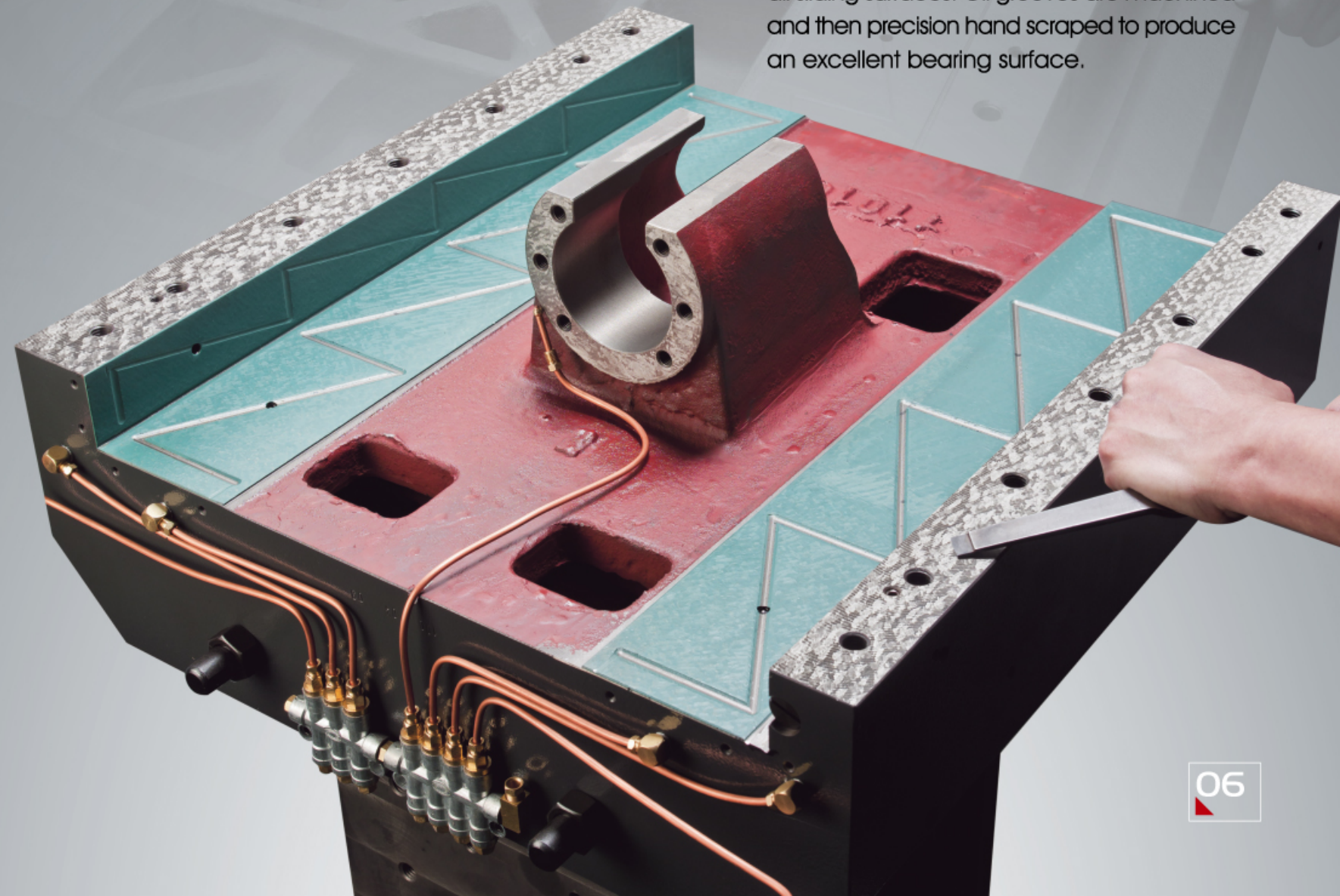


Model SV-4328ST

Rigid Vertical Column

The vertical one-piece column has a Y-shaped base design that offers up to 30% more rigidity than a conventional straight column design.

Ribs run throughout the column to further increase the stiffness. The Z-axis uses a pretensioned double anchored ballscrew, to transfer more power to the cut with less chatter and longer tool life.



Precision Hand Scraping

All structural mating surfaces are precision hand scraped to increase the flatness and to improve geometric accuracy (straightness and squareness) of the whole assembly. This provides near perfect alignment, assuring long term accuracy. Turcite B is bonded to all sliding surfaces. Oil grooves are machined and then precision hand scraped to produce an excellent bearing surface.



Fanuc CNC Control

The new Fanuc 0i-MD CNC control comes with a 10.4" color LCD screen, new user interface, more memory, 20 blocks of high speed look ahead function, faster processor and NANO interpolation. An RS232 port and Ethernet are also included. A remote jog handle (MPG) comes standard with the machine.

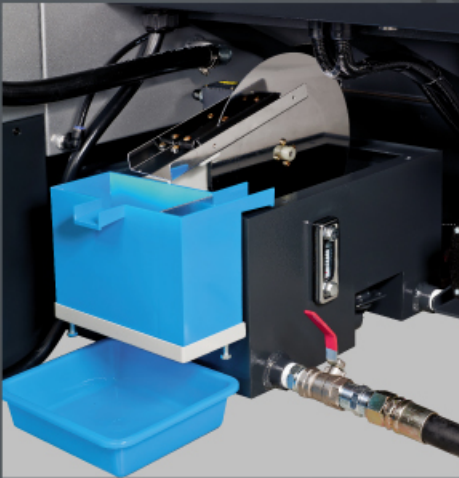
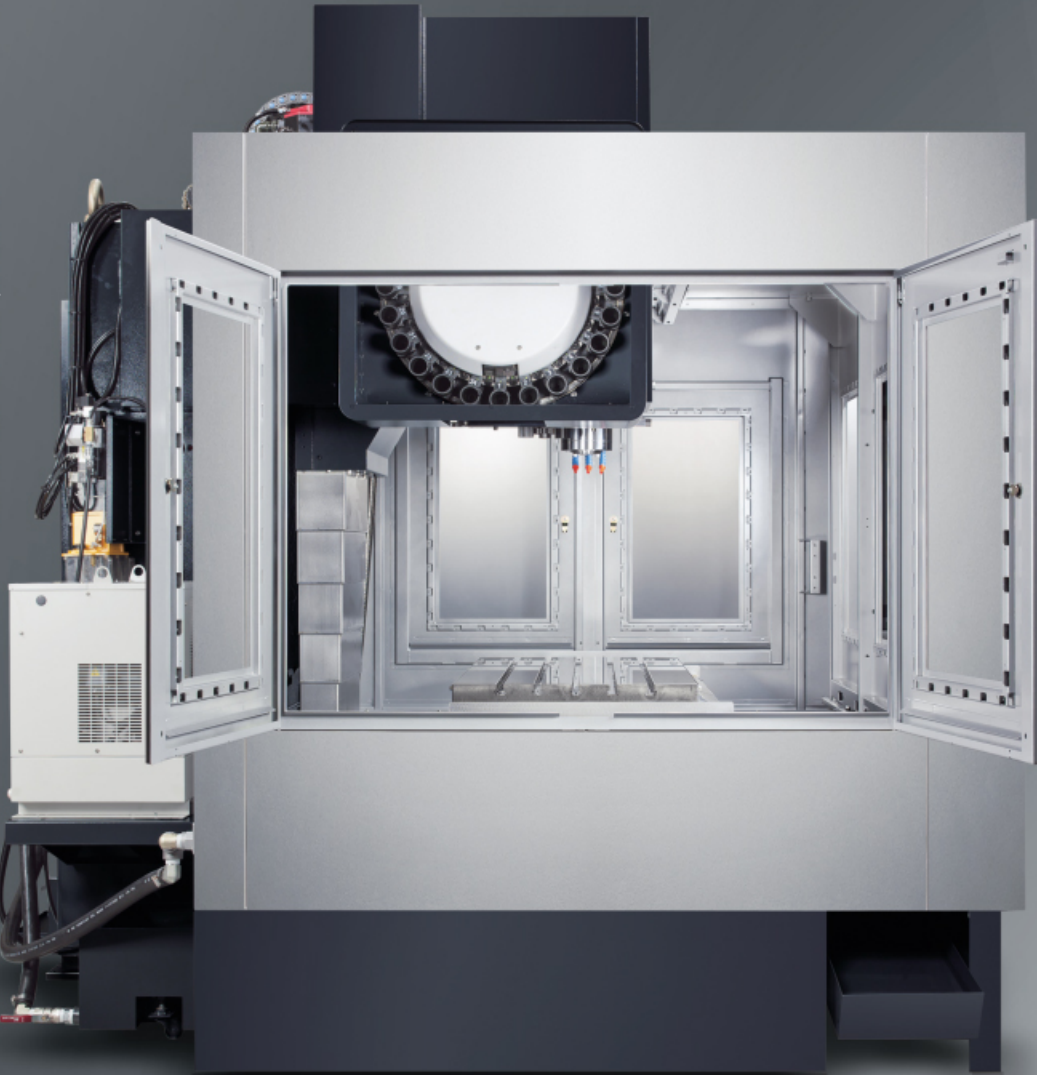


Chip Flushing System

To prevent chips from building up inside the machine enclosure, coolant is pumped from the side through nozzles to flush the chips onto the chip conveyor.

Large Side Door

Both sides of the machine enclosure have large removable doors. Long work pieces can be loaded through the sides. The door openings are large enough to allow full “Y” axis travel with long work pieces extending through the sides.



Oil Skimmer

Tramp oils are continuously skimmed from the coolant tank. This reduces bacteria growth and greatly extends coolant life.

Spindle Chiller (10,000 RPM spindle)

Refrigerated oil is circulated around the spindle to draw heat away from it. This helps control thermal expansion that may effect accuracy.



Specifications		SV-4328ST		SV-4328SX
Work Capacity				
X axis travel	inch (mm)	43.3 (1100)		
Y axis travel	inch (mm)	27.56 (700)		
Z axis travel	inch (mm)	24 (610)		
Spindle nose to table	inch (mm)	5.1 ~29.1 (130~740)		
Spindle center to column	inch (mm)	28.7 (730)		
Worktable				
Table area	inch (mm)	51.2 x 25.6 (1300 x 650)		
Floor to table	inch (mm)	33.5 (850)		
Max. workpiece weight	lb. (kg)	2200 (1000)		
T-Slot (Number x Width x Pitch)		5 x 0.7 x 3.9 (5 x 18 x 100)		
Spindle				
Spindle taper		CAT-40		
Spindle speed (max)	rpm	10,000 (steel bearings)	12,000 (ceramic bearings)	
Spindle motor: cont. / 30 min	hp (kw)	20 / 25 (15 / 18.5)		
Spindle torque: 30 minute rating	ft-lb. (nm)	86.8 (117.7) @1500 rpm		
Transmission		Belt		
Automatic Tool Changer				
ATC type		Arm Type		
Tool capacity		24		
Max. tool diameter	inch (mm)	2.99 (76)		
Without adjacent tool	inch (mm)	5.9 (150)		
Max. tool length	inch (mm)	11.8 (300)		
Max. tool weight	lb. (kg)	15.4 (7)		
Tool change time (tool to tool)		4.6 sec		
Tool change time (chip to chip)		6 sec		
Method of tool selection		Random		
Motion				
Rapid traverse	ipm (mm/min)	X/Y: 945 (24,000), Z: 590 (15,000)		
Cutting feed rate	ipm (mm/min)	0.04~393.7 (1~10,000)		
Transmission		Direct Drive		
Ball screw diameter / pitch	inch (mm)	1.57 / 0.4 (40 / 10)	1.8 / 0.4 (45 / 10)	
Feed motor (Fanuc)	lb. (kgf)	X/Y: 8.5 (12), Z: 16 (22)		
Positioning accuracy*	inch (mm)	0.0002 (+/-0.005)		
Repeatability accuracy*	inch (mm)	0.0001 (+/-0.003)		
Coolant System				
Coolant tank capacity	gal (L)	132 (500)		
Flood coolant flow volume	gal/min (L/min)	28 (105)		
Number of flood coolant nozzles		3		
Machine Size				
Floor space (w/o chip conveyor)	inch (mm)	W: 114 (2900) x D: 114 (2895)		
Height	inch (mm)	122 (3100)		
Weight	lb. (kg)	15,840 (7,200)		
Door opening	inch (mm)	47.64 (1210)		
Power Requirements				
Electrical	220V / 60 Hz	3 Phase / 20 KVA		
Air		6 CFM @ 88 psi		

* Proper foundation and environmental controls are required.