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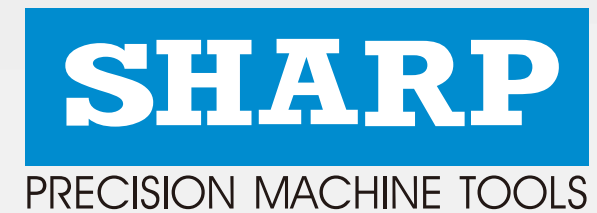
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VERTICAL MACHINING CENTER
SVG Gear Head Series

50 Taper with 2-speed Gear head Box High power Vertical machining Center

The Sharp SVG series was engineered from the ground up for hard metal machining. This is an extremely rigid "C" frame design using hardened and ground box ways. All structural components are made of Meehanite casting with internal ribs running throughout each section. Precision hand scraping of each section provides near perfect alignment assuring long term accuracies.



Extra Heavy High Quality Casting Components

Model SVG-6336A-F

4 box ways

63" x 35.4" x 27.6" travel
 Gear Head CAT 50 Spindle
 Hardened and Ground Box Ways (4)
 double screw type chip auger



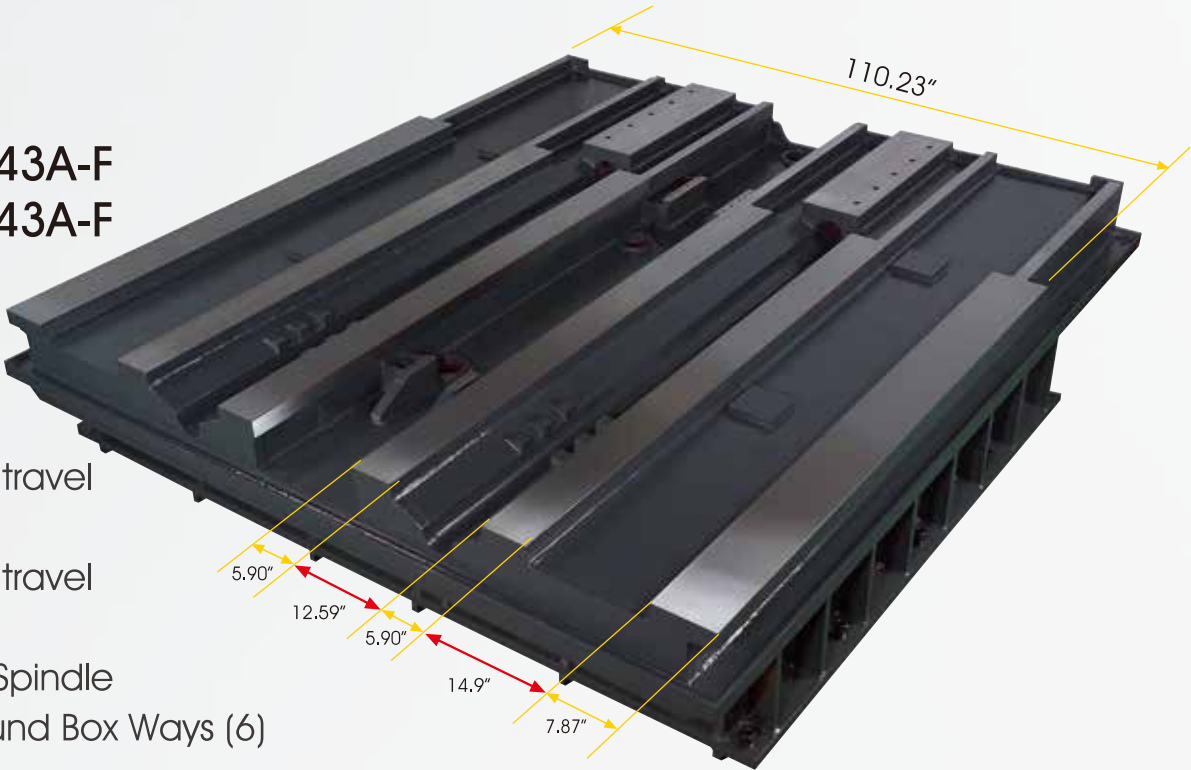
Model SVG-8743A-F

Model SVG-9943A-F

6 box ways

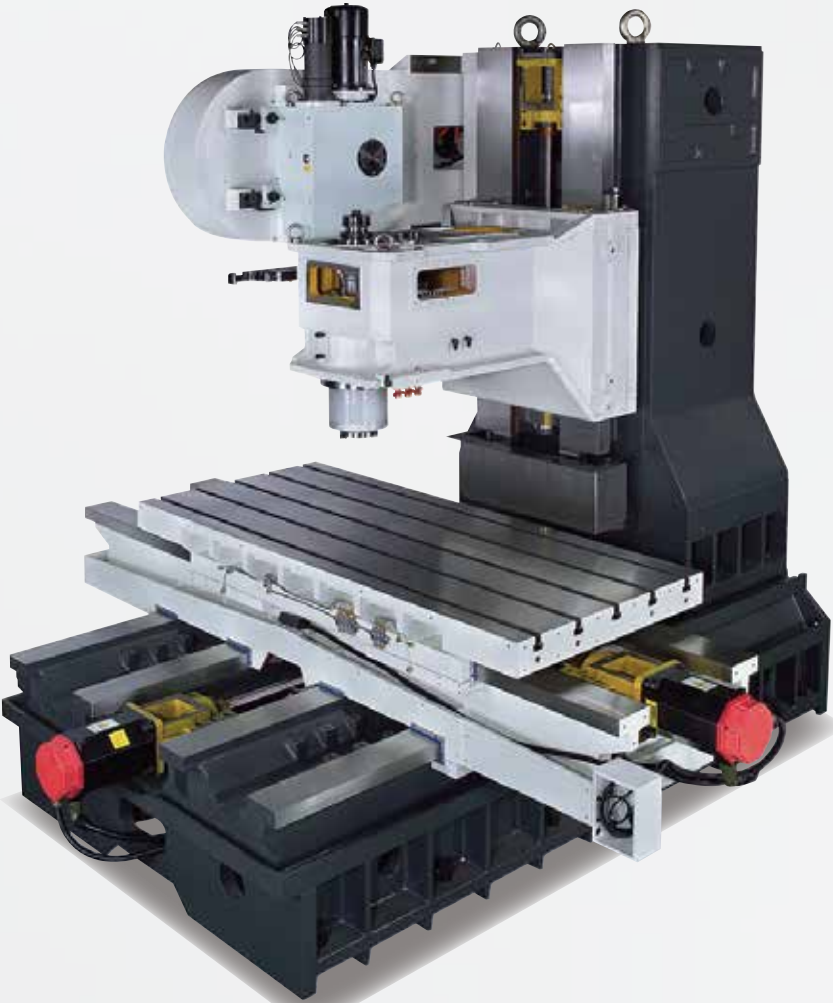
Model SVG-8743A-F
 86.6" x 43.3" x 35.4" travel
 Model SVG-9943A-F
 98.4" x 43.3" x 35.4" travel

Gear Head CAT 50 Spindle
 Hardened and Ground Box Ways (6)
 7,700 lbs table load
 41" throat distance



STRUCTURAL COMPONENTS FEATURES:

- MEEHANITE castings are used on all major components for its vibration dampening and stability properties
- The base designed with 4 box ways offers extra support to the entire machine structure under heavy cutting conditions
- High precision ballscrews are preloaded and axial adjusted to prevent noise, vibration and thermal expansion in order to achieve high accuracy and repeatability. They are assembled in a modular operation to achieve uniformity. The parallelism and squareness are calibrated to within 0.0004" in full travel.
- "Trap-Z" design of the vertical head allows precise and firm vertical movement of the head along the two hardened and ground box ways of the column.



STRUCTURAL COMPONENTS FEATURES:

- The 6 box ways design base gives the ultimate support to the saddle and table for heavy cutting operations
- The MEEHANITE castings are box type structures with extensive ribbings on the vertical head,table, saddle, base and columns.
- Structural parts are analyzed by "Finite Element Analysis" to detect areas of weakness and stress. Designs are made to strengthen these areas to achieve maximum rigidity and stability for the entire machine
- Large C frame Vertical Machining Centers compares with Double Column machines, offers a more economical way to work on large parts.





Detail Craftsmanship Produce High Precision Work

Turcite B is bonded to all sliding surfaces and hand scraped to produce an excellent bearing surface.

Precision Hand Scraping

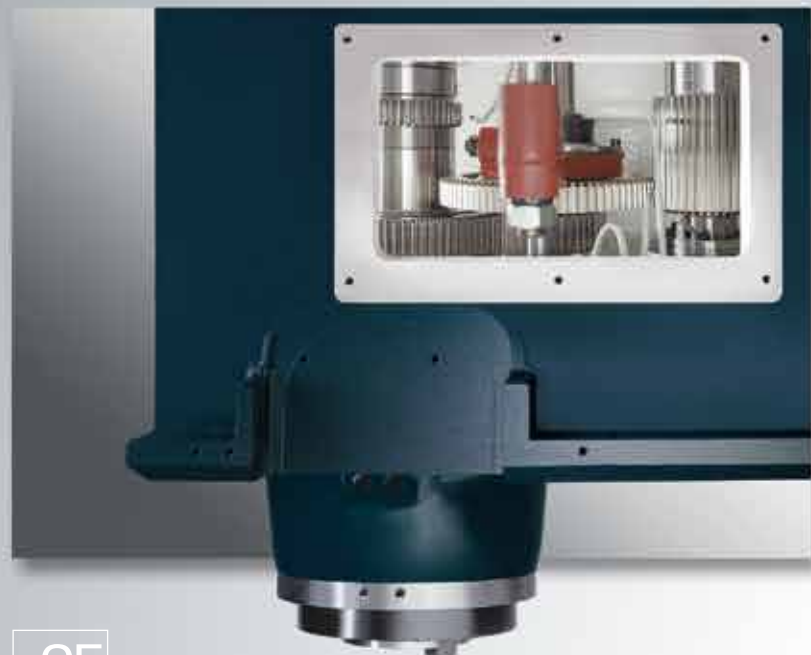
All mating surfaces are precision hand scraped to increase the flatness and improve geometric accuracy (straightness and squareness) of the whole assembly. ▼



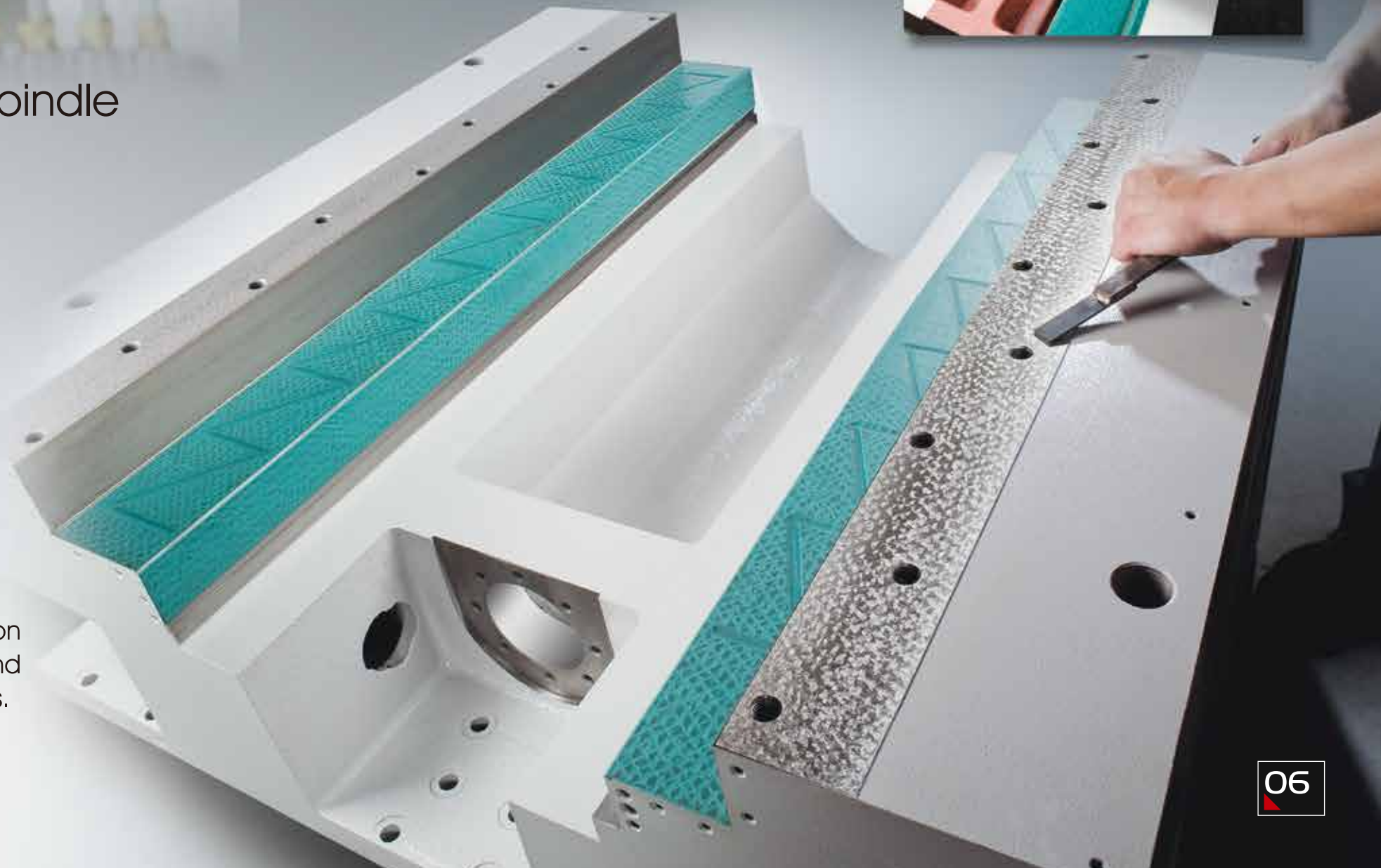
Direct Gear Drive Delivers More Power To Spindle

2 SPEED DIRECT DRIVE GEARBOX

The CAT 50 spindle uses 8,000 rpm, 2 speed (programmable) direct drive gearbox, where the spindle motor directly drives the gear transmission which drives the spindle. There are no drive belts.



The spindle transmission uses only hardened and precision ground gears.

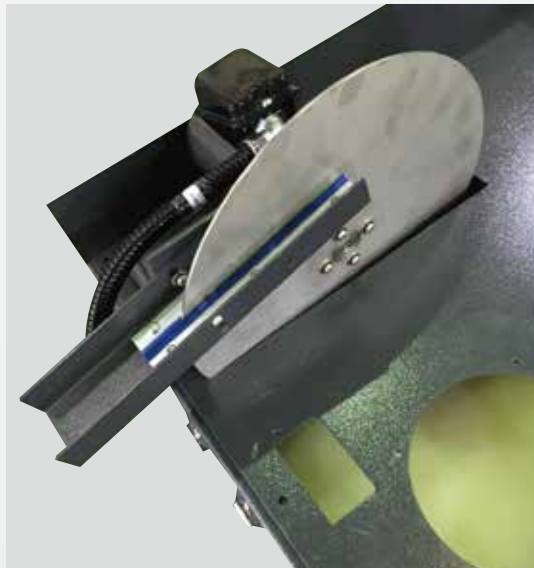




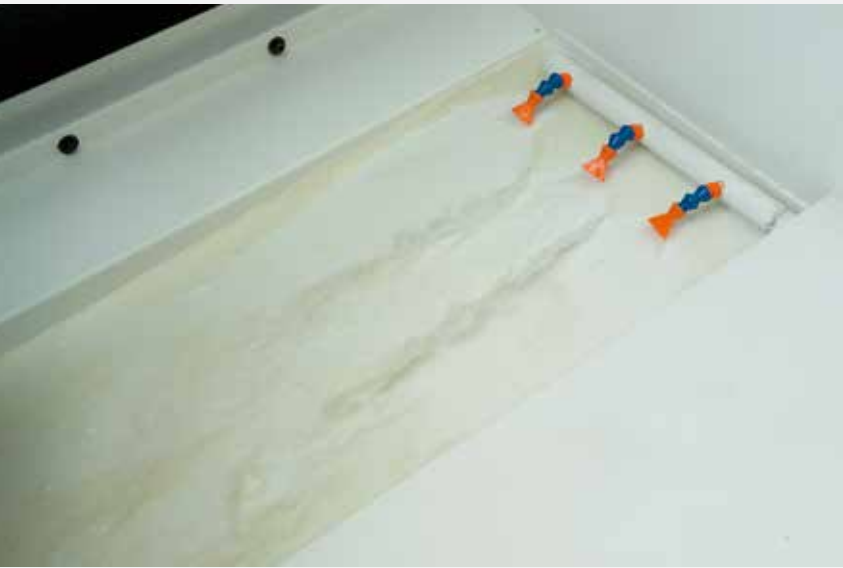
A convenient hand held coolant nozzle is provided for washing the work piece and the inside of the machine enclosure.



Air gun is conveniently located at front of machine for clearing small chips.



Tramp oils (petroleum products, such as guideways oils) are continuously skimmed from the coolant tank. This reduces bacteria growth and greatly extends coolant life.



Chip flushing system
High pressure coolant nozzles located at side of machine base are installed to flush out chips to augers for fast removal. Extra large coolant tank are used to provide sufficient liquid for flushing chips and cutting work piece.

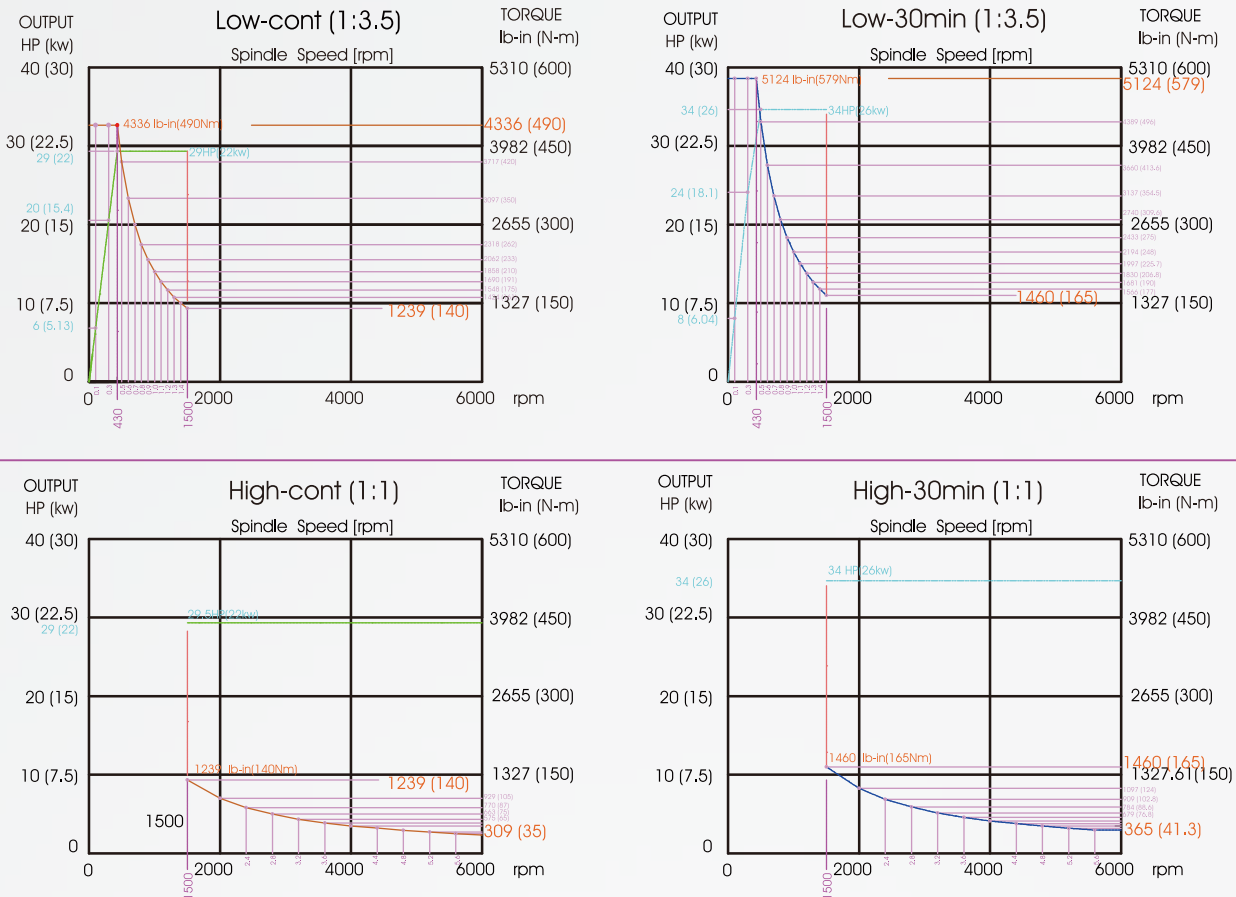
Spindle



CAT-50 6,000 rpm

- The spindle is supported by matching pair of P-4 grade angular contact bearings with superior radial and axial load capacity.
- Refrigerated oil is circulated around the spindle to draw heat from it. This helps to control thermal expansion which can effect accuracy and also the preload on the spindle bearings. Since the temperature is better controlled, a tighter bearing preload can be used. This makes for a stiffer and more rigid spindle assembly that can take heavier cut and maintain better accuracy throughout the operation.
- The spindle has built-in air blast to blow out chips at each tool change.

a22i Spindle torque map 6000 RPM (gear)



Standard Accessories:

- FANUC OiM-F control and drive
- 10.4" display
- Manual Guide 1
- AICC II, 200 blocks look ahead
- 40 tools ATC
- Geared Head CAT 50 spindle (Big Plus)
- 35 HP FANUC spindle motor
- M code spindle air blast
- Spindle oil cooler
- Heat exchange for electric cabinet
- Chip conveyor (chain type) with cart
- Chip flushing system
- Coolant Through Spindle (CTS) prepped
- 4 axis (rotary table) prepped
- Manual Pulse Generator (MPG) with E button
- Oil skimmer
- Coolant gun
- Air gun
- Full metal enclosure

Optional Accessories:

- Coolant Through Spindle complete with pump
- Rotary table (different sizes) installed
- Scraper type chip conveyor
- Linear scales
- 60 Tools ATC
- Too length probe
- Work piece measurement probe
- CE standard

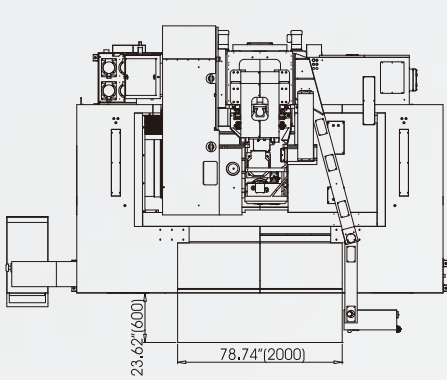
Specifications

Model		SVG-6336A-F	SVG-8743A-F	SVG-9943A-F
CNC Cntrol		Fanuc 0i-MF with 10.4" color LCD		
Guideway Type (quantity)		boxway (4)	boxway (6)	boxway (6)
Table	Unit			
Work Table	in(mm)	70.86x31.49 (1800x800)	94.48x39.37 (2400x1000)	106.29x39.37(2700x1000)
T-slot	in(mm)	6.29x0.86x5T (160x22x5T)	6.29x0.86x6T (160x22x6T)	6.29x0.86x6T (160x22x6T)
Max. Loading	lbs (kg)	5511.55 (2500)	7716.17 (3500)	7716.17 (3500)
Travel				
Three Axes Travel	in(mm)	62.9x35.4x27.5 (1600x900x700)	86.1x43.3x35.4 (2200x1100x900)	98.4x43.3x35.4 (2500x1100x900)
Spindle Nose to Table Surface	in(mm)	7.87~35.43(200~900)	9.44~44.88 (240~1140)	9.44~44.88 (240~1140)
Spindle Center to Column Slide Ways	in(mm)	33.46 (850)	41.33 (1050)	41.33 (1050)
Spindle				
Spindle Taper		CAT-50		
Spindle Diameter	in(mm)	Ø3.93 (Ø100)		
Spindle Speed	rpm	6000 rpm		
Feedrate				
3 axes Slide Ways		Box Way		
3 axes Rapid Feedrate	ipm (M/min)	590.55/590.55/472.44 (15/15/12)	472.44/314.96/314.96 (12/8/8)	314.96/314.96/314.96(8/8/8)
3 axes Cutting Feedrate	ipm (M/min)	236.22 (6)	196.85 (5)	196.85 (5)
ATC				
Tool Magazine type		Arm type (chain)	Arm type (chain)	Arm type (chain)
Tool Selection		Bi-direction shortest path		
Max. Tool Diameter x Length	in(mm)	Ø5.74x11.81 (Ø146x300)	Ø5.0x11.81 (Ø127x300)	Ø5.0x11.81 (Ø127x300)
Max. Tool Weight	lbs (kg)	33.06 (15)	33.06 (15)	33.06 (15)
Tool Shank		CAT-50	CAT-50	CAT-50
ATC Capacity		40T	40T	40T
Accuracy				
X/Y/Z Axes Position Accuracy	in(mm)	0.00024 (0.006)		
X/Y/Z Axes Repeatability Accuracy	in(mm)	0.00039 (0.01)		
Motor				
Spindle Motor (cont./30 min.)	hp (kw)	30/35 (22/26)		
Coolant Pump	hp (kw)	0.90 (0.67)	1.00 (0.75)	
Miscellaneous				
External Dimensions (L x W x H)	in(mm)	210x151x137 (5350x3850x3500)	244x198x136 (6220x5050x3470)	273x200x136 (6950x5080x3460)
N.W. / G.W. (approx)	lbs (kg)	39682 / 41887 (18000 / 19000)	55115 / 59524 (25000 / 27000)	61728/ 66138 (28000 / 30000)
Splash Guard		Fully Splash guard		
Coolant Tank Capacity	gal (L)	132.08 (500)	147.93 (560)	147.93 (560)

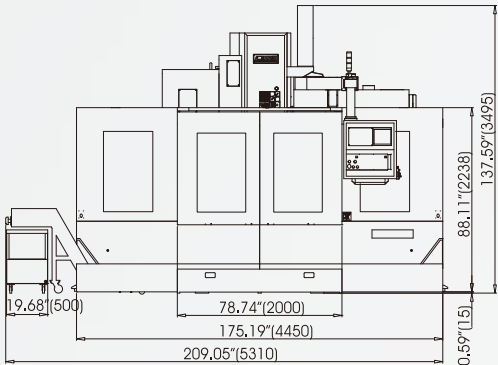
* Power Foundation and environmental controls are required.

SVG-6336A-F

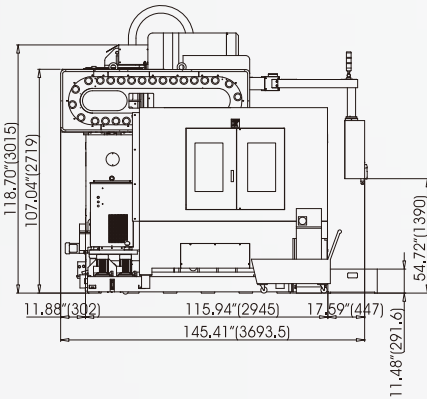
Top View



Front View

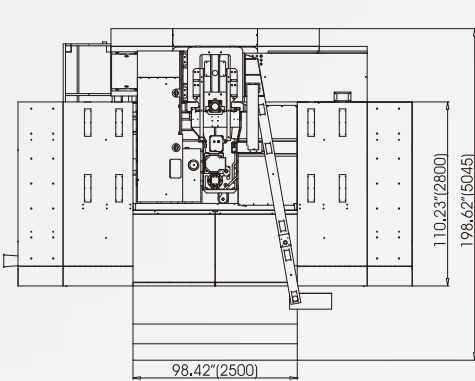


Side View

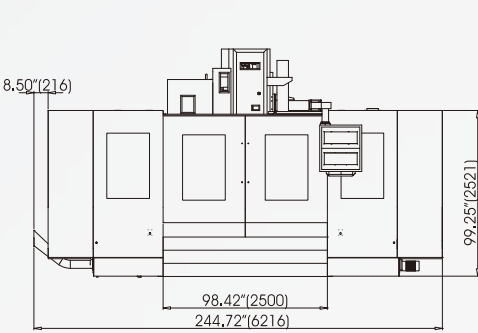


SVG-8743A-F

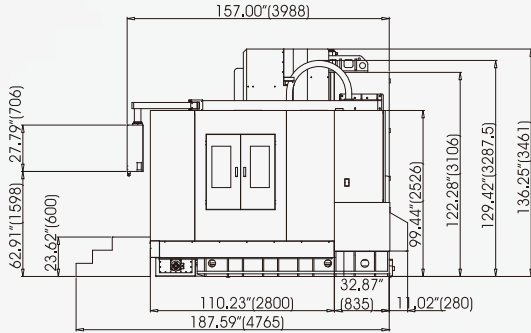
Top View



Front View

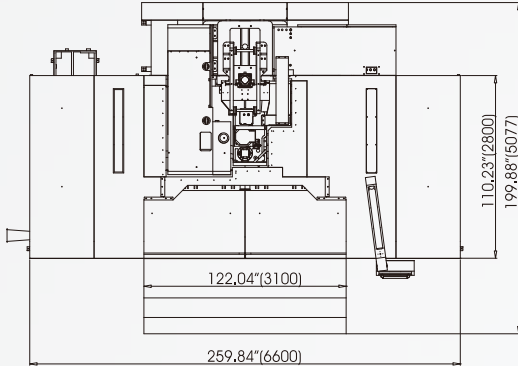


Side View

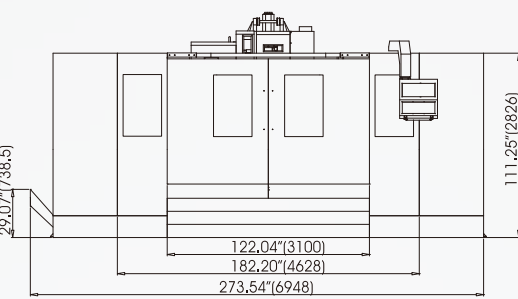


SVG-9943A-F

Top View



Front View



Side View

