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SHARP SVL 4525 LINEAR WAY VERTICAL MACHINING CENTER





SVL Linear Roller Way VMC (Extra Heavy Duty)

This model is built with Linear Roller Guideways that can produce high precision products under heavy machining conditions. All structural components are made of Meehanite casting with excellent vibration dampening properties. Internal ribs running throughout each section of the casing ensures machine stability under various cutting conditions. Precision hand scraping of each section provides near perfect alignment assuring long term accuracy. The machines are equipped with FANUC or Siemens controls and drives that are world renowned for their reliability and state-of-the art technology.

Model SVL-4525

51.2" x 25" Table / 1,300 x 635 mm 45" x 25" x 20.1" Travel / 1,150 x 635 x 510 mm Net weight: 18,260 lbs / 8,300 kg Spindle: Up to 15,000 rpm, CAT 40



The linear guide way VMC is widely used for manufacturing in the aerospace industry.



The linear guide way VMC is ideal for manufacturing automotive parts.



Model SVL-4525 Features

• Rapid Traverse up to 1,417 inch per minute / 36 M/mm

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THE PARTY

- Standard spindle speed of 15,000 rpm (SX Model)
- Arm Type 30-Tool (SX Model)

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- Fan<u>uc Oi-MD</u>
- 4 box way support





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Precision Hand Scraping

All structural mating surfaces are precision hand scraped to increase the flatness and improve the geometric accuracy (straighness or squareness) of the whole assembly. This provides near perfect alignment assuring long term accuracy.

Meehanite Cast Iron

Meehanite cast iron is used on all structural components.



MONORAIL MR Profiled Linear Roller Guideways for maximum precision and rigidity.



- Optimum adaptation to the particular construction and lubrication system through different connecting positions (front, side and top)
- Independent lubrication of both carriage sides with special installation positions.

The high speed spindle delivers a smooth machining process with a superb finish on the machines work pieces.



Roller with convex 'barrel' profile

• Far higher load-carrying capacity and rigidity compared to a ball, due to the large elliptical contact surface.

• Reduced wear with minimal roller friction.









Fanuc Oi-MD CNC Control

The new Fanuc-Oi-MD CNC system comes with a 8.4" color LCD, a new user interface, more memory, high speed look ahead functions and a faster processor. In addition, it is now equipped with a USB port, embedded Ethernet, beside the RS232 interface. These features greatly increase the ease and speed in transfer of data for the control.

4 Spare M Codes

4 spare (user definable) M codes are included. They can be used for auxiliary equipment such as an indexer that requires communication with the CNC control.

Spindle Chiller (SX models)

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 cuts and maintain better accuracy throughout the day.



The Air Gun and Coolant Gun are conveniently located below the control panel, they are provided for washing the work piece and the inside of the machine enclosure.

is standard on all models for machine.





Electric cabinet heat exchanger dissipation of heat generated around the cabinet. This helps to control thermal expansion which can effect the accuracy of the



An air reservoir tank with alarm is used to stabilize the incoming air pressure and volume. It ensures safe and reliable operation of the tool change system, the draw bar and the air gun.



SHARP SVL-4525 LINEAR WAY VMC Standard machine specifications

Model	units	SVL-4525SE-F	SVL-4525SX-F	
CNC		Fanuc Oi-MD	Fanuc 0i-MD	
Linear system roller guideway	mm	Yes	Yes	
Travel				
X axis travel	inch (mm)	45.3" (1,150)		
Y axis travel	inch (mm)	25" (635)		
Z axis travel	inch (mm)	20.1" (510)		
Spindle nose to table	inch (mm)	5.1"-25.2" (130-640)		
Spindle center to column	inch (mm)	31.5" (800)		
Table				
Table area	inch (mm)	51.2" x 25" (1,300 x 635)		
Max. work piece weight	lb.(kg)	1,760 (800)		
T-Slot (number x width x pitch)		5 x 0.7" x 3.9" (5 x 18 x 100)		
Spindle				
Speed	rpm	10,000	15,000	
Taper		CAT40	CAT40	
Bearing		Steel bearing	Ceramic bearing	
Туре		Belt drive	Direct drive	
Spindle oil chiller		Option	Standard	
Feed rate				
Rapid traverse X/Y axis	ipm (mm/min)	1.417.3	(36,000)	
Rapid traverse 7 axis	ipm (mm/min)	1,417.3 (36,000)		
Cutting feed rate	ipm (mm/min)	0.04~1.417.3	3 (1~36.000)	
Transmission	4	Direct Drive		
Motor		2:001		
Spindle motor	hp (kw)	10/15 (7.5 / 11)	20 /25 (15 / 18 5)	
		X : A(3) / X : 5 A(A)	X : A (3) / X : 5 A (A)	
Feed motor	hp (kw)	7:8(6)	7:8(6)	
Automatic tool changer		2 * 0 (0)	2 • 0 (0)	
ATC capacity (Arm type)		24	30	
Method of tool selection		Pandom	Random	
AIC type		Side Mount	Side Mount	
Max tool diameter	inch (mm)	3 1" (80)	2.95" (75)	
Max. tool length	inch (mm)	11.8" (300)	11.8" (300)	
Max tool weight	lb.(kg)	15.4.(7)	15 4 (7)	
Without adjacent tool	inch (mm)	10.4 (7)	5.9" (150)	
Air blast when making tool change		4.7 (120) Voc	Voc	
Accuracy		105	100	
Position accuracy	+/- inch (mm)	+0.0002" (0.005)	+0.0002" (0.005)	
Repeatability	+/- inch (mm)	$\pm 0.0002 (0.003)$	±0.0002 (0.003)	
Machine size	.,	±0.00012 (0.003)	±0,00012 (0,003)	
Floor space (with chip conveyor)	inch (mm)	W/· 171 5" (A 356)	$D \cdot 1343'' (3410)$	
Height	inch (mm)			
Weight				
Door opening	inch (mm)	10,200 (0,300)		
		40.0 (
Number of flood coolant pozzlec		6	6	
		52.8 (200)	52.8 (200)	
	gor (L)	Standard	Standard	
			1	
Power requirements		1		
	2201/ /60 47	3 Phase /2014/4	3 Dhana /251/2/4	
	2200700112	6 CEM CREA		
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Top View





Nodel	А	В	С
VL-4525SE	118.1 in. (3,000 mm)	171.5 in. (4,356 mm)	126.0 in. (3,200mm)
VL-4525SX	118.1 in. (3,000 mm)	171.5 in. (4,356 mm)	126.0 in. (3,200 mm

* Power foundation and environmental controls are required

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