

REDEFINING HIGH
COST-EFFECTIVENESS

Digital structural analysis and design.
Outstanding operational performance with
user-friendly and convenient maintenance design.



SV-110S
SV-85S , SV-130S



SV-1365S
SV-865S , SV-1165S

- The series employs high precision roller type linear guideway.
- The motor mounts on 3 axes are precisely scraped before mounting and carefully pre-tensioned after assembly, enabling the transmission system to achieve lifetime stability.
- The X-axis is equipped with 6 blocks.
- Saddle and table are a box-type construction with an increased height on structural parts, featuring light weight and high rigidity.
- A perfect combination for speed and structural stability.
- Over sized base and column, reinforced column bottom and solid Z-axis structure assure vibration-free cutting.
- Rigid ball screw with double nuts is driven with powerful servo motor.
- Extra wide span between linear guideways effectively upgrades dynamic accuracy.



ERGONOMICS

Thoughtful ergonomic design
for easy use and maintenance



HIGH-RIGIDITY

High-rigidity structural design
for stability beyond imagination



ECO-FRIENDLY

Environmentally friendly design
energy-efficient

SPECIFICATIONS

	Item / Model	SV-85S	SV-110S	SV-130S
Travel	Max. Travel Range of X/Y/Z	850 x 600 x 600 mm	1100 x 600 x 600 mm	1300 x 600 x 600 mm
	Spindle Nose to Table Surface	100 ~ 700 mm		
Work Table	Table Size	1000 x 600 mm	1150 x 600 mm	1400 x 600 mm
	T-Slot (W x No. x P)	18 x 5 x 100 mm		
	Max. Loading Capacity	800 kg	900 kg	1000 kg
Spindle	Spindle Taper	BT- 40		
	Spindle Speed	10,000 rpm		
	Spindle Motor	7.5 / 11 kw		
	Spindle Driven Type	Direct Drive		
Feed Rated	Rapid Traverse Speed of X/Y/Z	36 / 36 / 30 m/min		
	Max. Cutting Feed Rate of X/Y/Z	1 ~ 12 m/min		
	Servo Motor of X/Y/Z	(Mitsubishi) 3.5 / 3.5 / 3.5 B kW / (Fanuc) 4.0 / 4.0 / 4.0 B kW		
	ATC Type	Arm Type		
Automatic Tool Changer	Tool Capacity	24T pcs		
	Max. Tool Diameter / Length / Weight	Ø70 mm / 250 mm / 7 kg		
	Max. Tool Diameter without Adjacent Tool	Ø150 mm		
	Tool Change Time (T to T)	1.8 sec		
Other	Machine Dimension (L x W)	2700 x 2195 mm	2900 x 2195 mm	3450 x 2195 mm
	Machine Height	2900 mm		
	Net Weight	6800 kg	7000kg	7300 kg
	Total Required Power	25 kva		

	Item / Model	SV-865S	SV-1165S	SV-1365S
Travel	Max. Travel Range of X/Y/Z	850 x 650 x 600 mm	1100 x 650 x 600 mm	1300 x 600 x 600 mm
	Spindle Nose to Table Surface	100 ~ 700 mm		
Work Table	Table Size	1000 x 650 mm	1250 x 650 mm	1400 x 600 mm
	T-Slot (W x No. x P)	18 x 5 x 100 mm		
	Max. Loading Capacity	800 kg	900 kg	1000 kg
Spindle	Spindle Taper	BT- 40		
	Spindle Speed	10,000 rpm		
	Spindle Motor	7.5 / 11 kw		
	Spindle Driven Type	Direct Drive		
Feed Rated	Rapid Traverse Speed of X/Y/Z	36 / 36 / 30 m/min		
	Max. Cutting Feed Rate of X/Y/Z	1 ~ 12 m/min		
	Servo Motor of X/Y/Z	(Mitsubishi) 3.5 / 3.5 / 3.5 B kW / (Fanuc) 4.0 / 4.0 / 4.0 B kW		
	ATC Type	Arm Type		
Automatic Tool Changer	Tool Capacity	24T pcs		
	Max. Tool Diameter / Length / Weight	Ø70 mm / 250 mm / 7 kg		
	Max. Tool Diameter without Adjacent Tool	Ø150 mm		
	Tool Change Time (T to T)	1.8 sec		
Other	Machine Dimension (L x W)	2700 x 2595 mm	2900 x 2595 mm	3450 x 2195 mm
	Machine Height	2815 mm		
	Net Weight	6900 kg	7100kg	7300 kg
	Total Required Power	25 kva		



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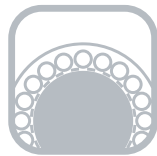
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MORE INFO



Vertical Machining Center

SV Series +

85S / 110S / 130S

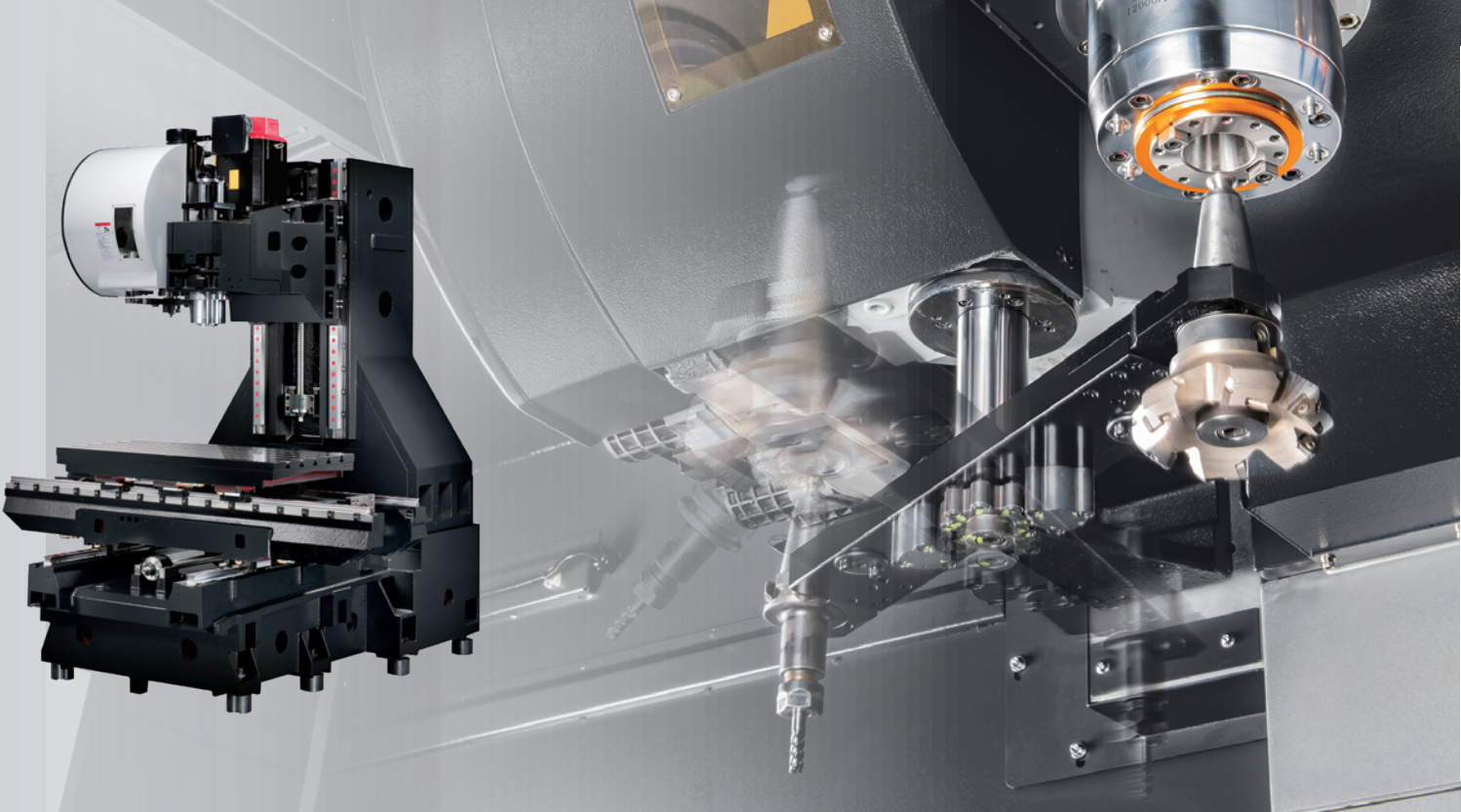
865S / 1165S / 1365S



REINFORCED
STRUCTURAL DESIGN

Exceptional Cutting Efficiency & Stability

SV
S E R I E S

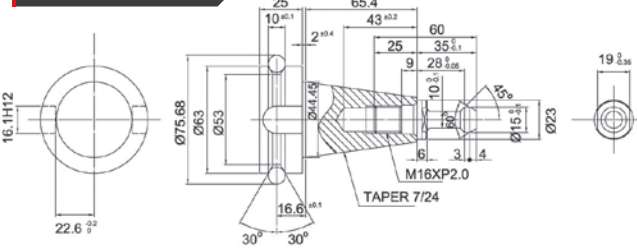


ARM TPYE ATC

Fast, simple, dependable and durable ATC provides stable and dependable tool change motions.The automatic tool changer is subject to a running test of one million times to guarantee maximum dependability.

The absolute encoder is used on the cam box for detecting errors, which also makes the signal transmission much quicker and more stable. The PLC's of our own logic design, when errors happened during the tool chaging the PLC will command the ATC to re-try in order to reduce the possibility of shutdown.

BT-40 TOOL SHANK

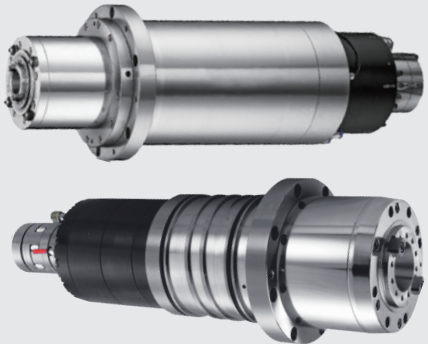


STANDARD & OPTIONAL ACCESSORIES CHART

Spindle	Spindle Speed: 10000 RPM	●	Measure System	Infrared Detector of Tool Breakage	○	Controller	Mitsubishi M80	●	
	Spindle Speed: 12000 RPM	○		Tool length Measurement	○		Fanuc 0i-MF	○	
	Spindle Speed: 15000 RPM	○		Workpiece Measurement	○		Siemens 828D	○	
	Spindle Speed: 20000 RPM (Built-In)	○		Charge Coupled Device Measurement	⬇		Heidenhain TNC 620	○	
	Spindle Oil Cooler	●	Oil Skimmer	Disk Type Oil Skimmer	○	Electrical Unit	Work Lamp	●	
	Spindle Air Sealing	●		Oil Mist Collector	○		3-Color Alarm Lamp	●	
Cooling System	The Flushing Nozzles Near the Spindle (Controlled by NC Program)	●	ATC System	Automatic Tool Changer (ATC)	●	M30 Function-for Cutting Off the Electricity Automatically (No need to wait & switch off the power when NC program is completed.)	●		
	Spindle Coolant Ring (Arm Type Tool Magazine Only)	⬇		Spindle Taper : BBT-40	○				
	Coolant Flush System	○		Armless/Geneva Drive Type Tool Magazine 20T	○				
Chip Removal System	Screw Type Chip Conveyor	●	Transmission System	Arm Type Tool Magazine 24T	●			Heat Exchanger	●
	Link/Chain Type Chip Conveyor	○		Coolant Through Ballscrew (CTB)	⬇			Air Conditioner for Electrical Cabinet	○
	Chip Cart	●		Roller Type Linear Guideways on 3-Axes	●	Rigid Tapping	●		
	Water Gun	●		Linear Scales on 3-Axes	○	4th Axis Rotary Table (Rotary Axis)	○		
	Air Gun	●		Z-Axis Motor with Brake	●	CE Conformity	○		
	Chip Flushing Device	○		Automatic Lubrication System	●	Transformer	○		
	Fully Enclosed Splash Guard	●							
	○ Standard ● Optional ⬇ Need to Inquire								

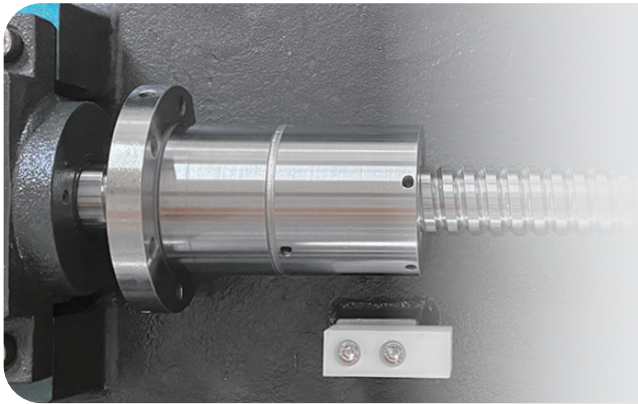
○ Standard ● Optional ⬇ Need to Inquire

FEATURES



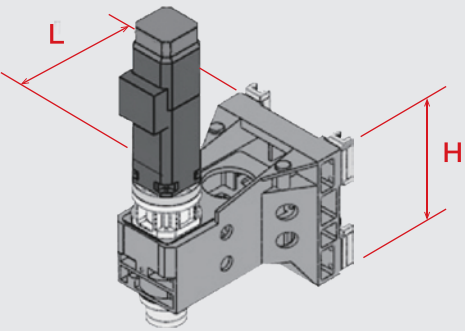
01 High Speed
High Precision Spindle

The SV series provides a choice of various built-In and direct-drive spindles, as well as various motors. Each spindle is carefully machined, inspected and precision scraped prior to being attached to the spindle headstock. This assures superior accuracy, stability and speed.



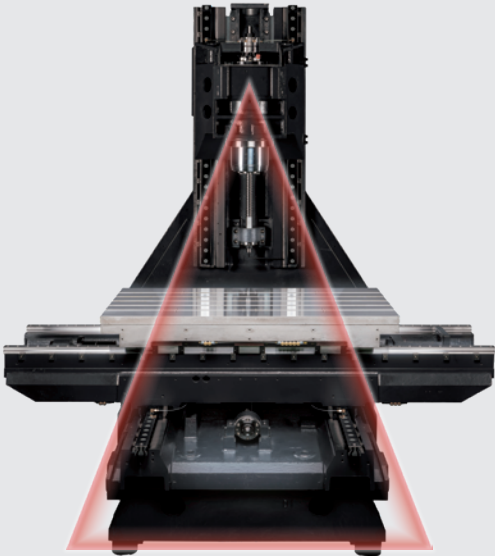
02 Anchored Ball Screws

Both ends of ball screws are anchored on the machine by angular contact ball bearings, that features higher rigidity and stability. Pretensioned ball screws remove backlash and increase positioning accuracy.



03 Cutting Performance
Best Choice

Extra wide, rugged, low gravity base combined with optimal ratio of spindle headstock results in excellent cutting capacity. The length-to-height ration is (L/H) 1:1.



04 High-Efficiency and
High-Rigidity Structure Design

The Delta-shape structure design of the column with 1,200 mm wide column span and the enlarged angle slope of both lateral structures ensures the machine rigidity, which makes the axial/radial force from spindle, and the weight of ATC can be conducted adequately.

COLUMN'S WIDTH
1200mm

delta
system +

HIGH-RIGIDITY

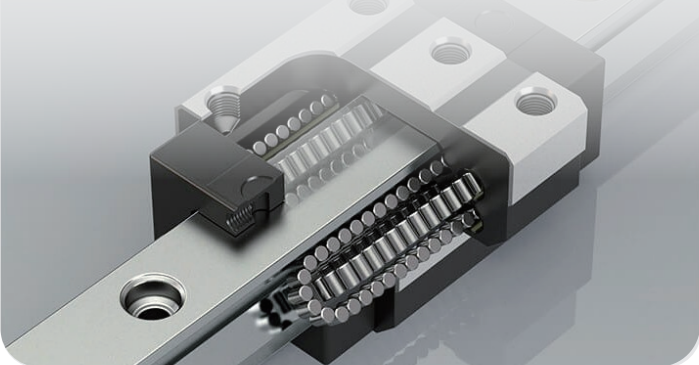
05 Servo Drive

Increases overall performance to achieve outstanding result of high speed high precision cutting.



06 Linear Guide Equipment

The series employs high precision roller type linear-guides.



ERGONOMICS

ERGONOMIC DESIGN &
COMPACT ALLOCATION

The height of the control panel is ergonomically designed and the control panel could be swiveled from 0°-85°, which makes the operation more smoothly.

Pneumatic/hydraulic units and their cables are allocated on side panels and covered into modular shape, which is not only an aesthetic design but more convenient for visual management and maintenance.

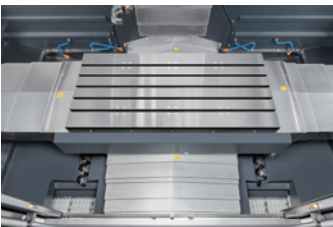
The water tank is multi-filter designed which could filter out chips more efficiently and easy for washing as well.



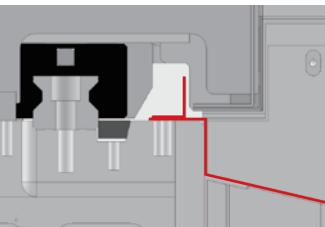
TILTED GUARD DESIGN &
LABYRINTH STRUCTURE

The X/Y axes are specially designed with a labyrinth structure for dust and leak prevention. This design effectively prevents dust and return flow for coolant.

The spacious working space combined with tilted guard design and powerful chip flushing system permits fast removal of chips to reduce thermal growth.

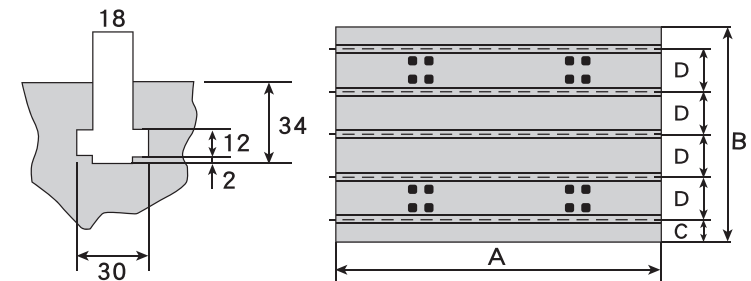


Y-axis left and right chip conveyor (optional)



X/Y-axis unique labyrinth design for chip

TABLE DIMENSIONS



Model	A	B	C	D	No. of T-Slot
SV-85S	1000	600	100	100	5
SV-865S	1000	650	125	100	5
SV-110S	1150	600	100	100	5
SV-1165S	1250	650	125	100	5
SV-130S	1400	600	100	100	5
SV-1365S	1400	650	125	100	5

SHINZAWA 

SV

S E R I E S

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