XYZAX SVA-A

The state-of-the-art CNC machine that carries on the Tokyo Seimitsu tradition of quality

- Volumetric accuracy compensation technology dramatically improves measuring accuracy.
- Temperature compensation function provided as standard for improved environment resistance.
- Versatile software includes AI function as standard.

XYZAX SVA800A-C6

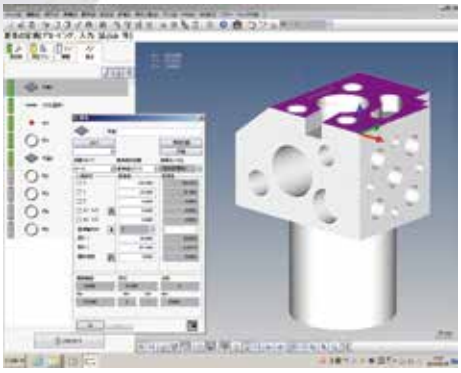
Selectable software; Calypso or XYANA (general-purpose measuring program).

High-Speed Measurement

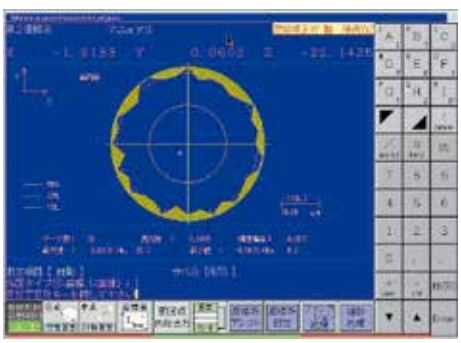
By combining with a high-performance controller, this machine achieves high-speed measurement (Reduces the time required for measurement by approximately 30% compared to our previous models).

AI Function

AI function automatically detects the measured form.
It greatly reduces the number of process item inputs and allows easy operation, even by inexperienced users.

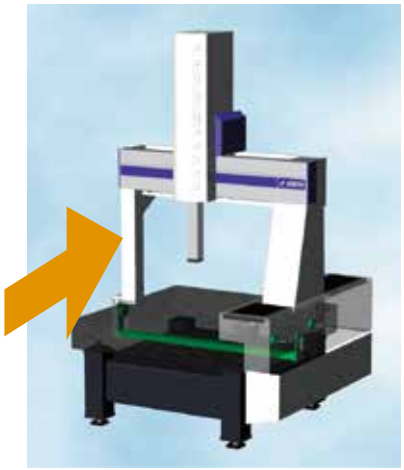


Calypso

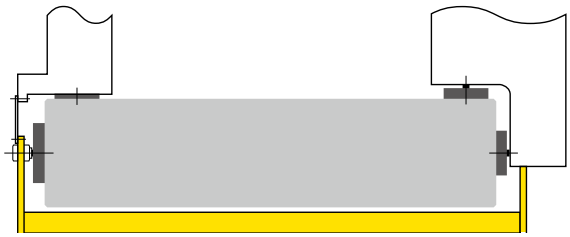


XYANA2000

Maisonette Bridge Structure for Outstanding Dynamic Rigidity



The Y-axis guide surface generally has a second guide surface (sub-guide) on the right side of the table. The maisonette bridge structure provides guide surfaces on both sides of the table, which eliminates the chance of variations in sub-guide connectors (screws, adhesives, etc.) over time. This simplifies the structure, which improves rigidity and simplifies guide plate processes for higher accuracy.



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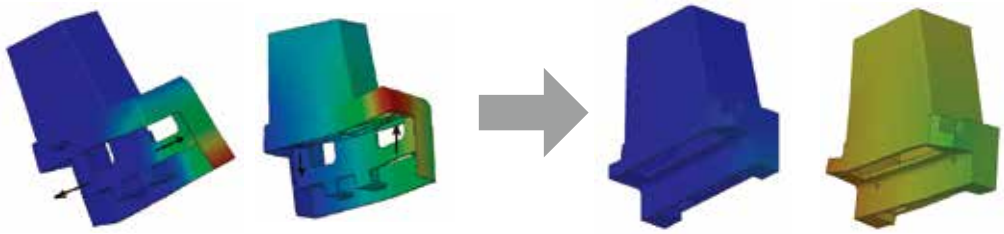
Vibration during Z-axis drive is caused by uneven rotation of the drive motor itself, and a simple friction drive causes motor vibration to be transmitted directly to the Z-axis. The SVA-A machine employs a mechanism whereby the Z-axis is driven via a thin steel belt, which reduces vibration.
An air cylinder balance in the Z-axis weight balance mechanism reduces weight, which produces a new-concept double-pulley system for a more compact configuration.

Image of Z-axis motor configuration
A drive belt minimizes motor vibration transmission to the Z-axis.

CAE Analysis and Monocoque Construction for Improved Mechanical Rigidity* and Lighter Weight *150% better than previous models



The ideal right Y-column design (modularized components, lightweight, improved rigidity) obtained using CAE provides SVA series machines with higher speed characteristic and lower repeatability error for high speed and high accuracy. Compared with previous models, the SVA-A measuring machine provides 1.5 times more rigidity overall.

Compact Operation Panel Controls All Basic Operation Measuring

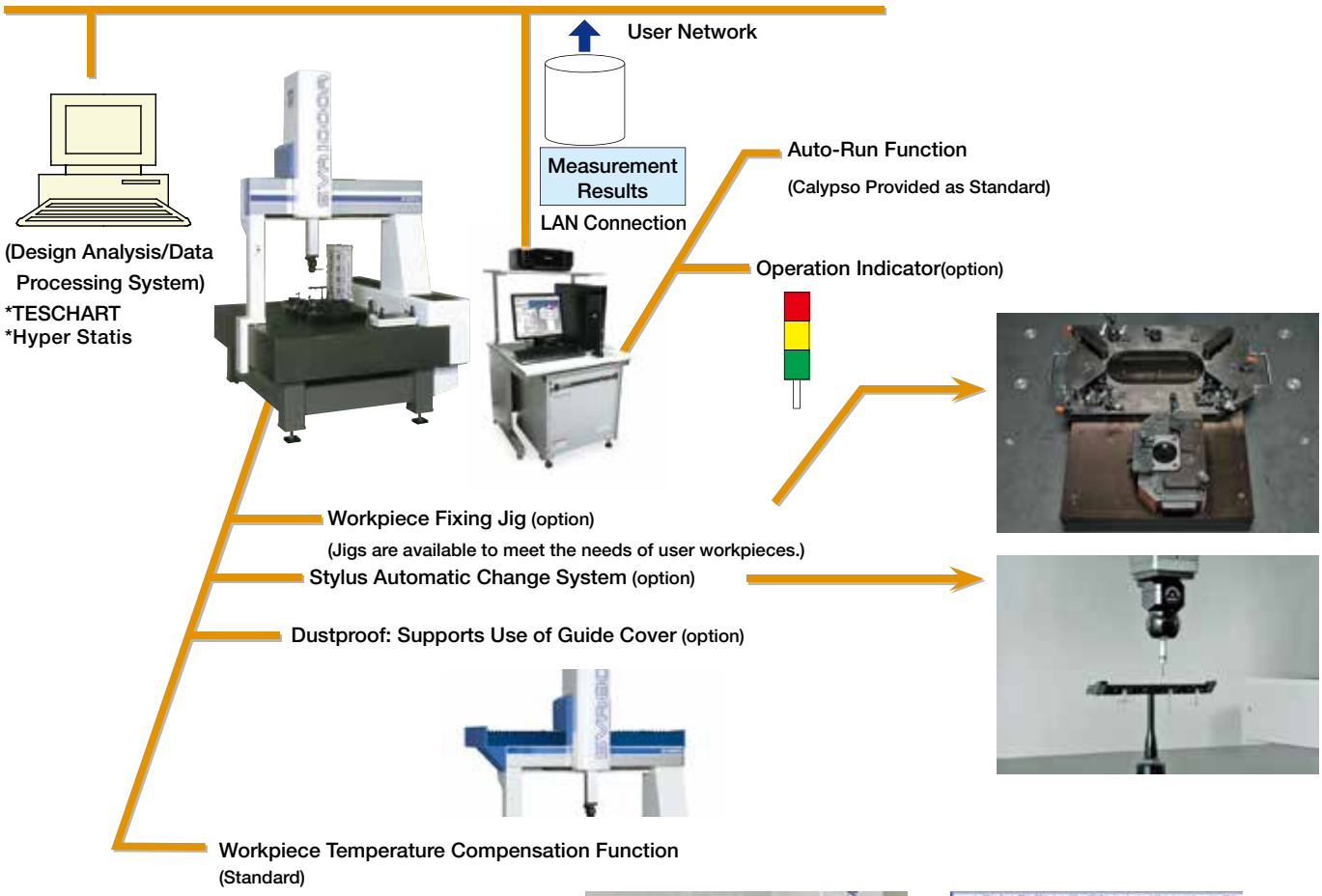
Joystick-based movement of each axis is supported both for mechanical coordinates and workpiece coordinates. Workpiece coordinate-based movement simplifies the approach to slanted surfaces, deep holes, etc.
A movement speed control knob is enabled both for joystick operation and CNC drive operation, providing reliable safety checks and operation in tight locations.

Slanted surface, deep hole approach

Movement speed control knob operation

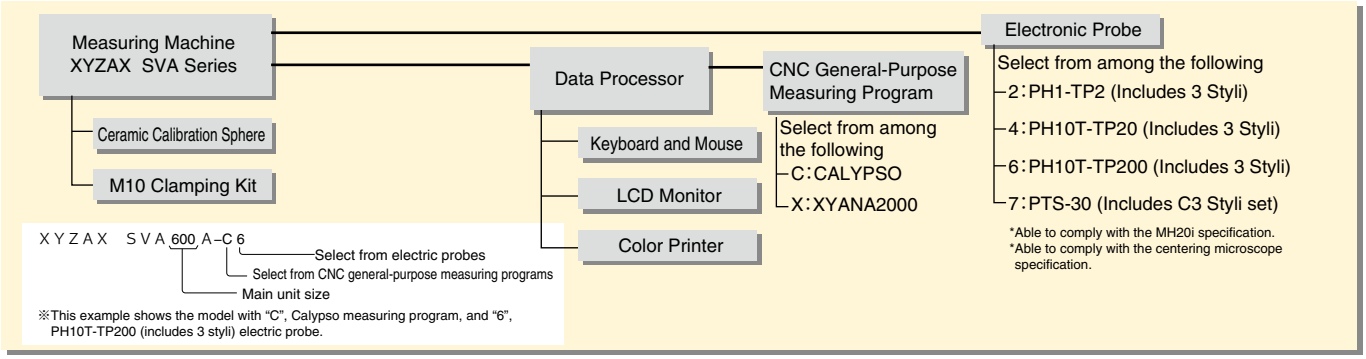
Objective of Implementation

- Enhance production line flexibility — Facilitate multi-item capability (utilizing CNC parts program)
- From measuring room, to production line — Production-floor based quality control
- Reduce costs for special-purpose jigs — Improve jig versatility



The measuring machine and workpiece temperatures are controlled in accordance with the measuring environment's influence on the measuring machine.

Basic System Configuration



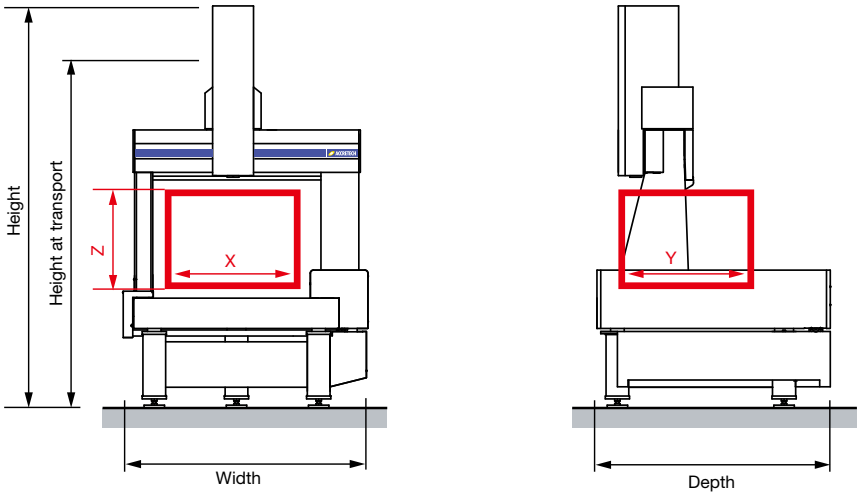
Specifications

Model		SVA600A	SVA800A	SVA1000A	SVA1500A	SVA1010A	SVA1012A	SVA1015A	SVA1215A	SVA1220A	SVA1225
Measuring range	X-axis (mm)	650	850			1000			1200		
	Y-axis (mm)	500	600	1000	1500	1000	1200	1500	1500	2000	2500
	Z-axis (mm)	450	600			600/800			1000		
Measuring length scale		Linear scale									Linear scale
Minimum display value		0.01 µm									0.01
Measuring accuracy With TP200	Max. permissible indication error MPEE L is the distance between any two points (mm)	1.9 + 4 L/1000µm (Temperature condition: A)			2.4 + 4 L/1000 µm (Temperature condition: A)	2.9 + 5 L/1000 µm (Z600) (Temperature condition: B)			3.5 + 5 L/1000 µm (Temperature condition: A only)		4.5 + 5 L/1000 µm (Temperature condition: A only)
		2.4 + 4 L/1000 µm (Temperature condition: B)		2.9 + 4L/1000 µm (Temperature condition: B)		3.2 + 5 L/1000 µm (Z800) (Temperature condition: A only)					
	Max. permissible probing error MPEP	2.2 µm (Temperature condition: A)		2.7 µm (Temperature condition: A)		3.2 µm (Z600) (Temperature condition: B)			3.4 µm (Temperature condition: A only)		4.5 µm (Temperature condition: A only)
		2.7 µm (Temperature condition: B)		3.2 µm (Temperature condition: B)		3.2 µm (Z800) (Temperature condition: A only)					
Table	Material	Gabbro									
	Usable width (X) (mm)	800	1000			1150			1370		1370
	Usable depth (Y) (mm)	1270	1370	1810	2410	1910	2110	2310 (Z600) 2410 (Z800)	2410	3010	3510
	Height from floor (mm)	725				725 (Z600) /600 (Z800)			600	650	
	Flatness	JIS Class 1									
Workpiece	Max. height (mm)	620	770			770 (Z600) /970 (Z800)			1170		
	Max. weight (kg)	400	800	1000	1500	1000	1200	1500	1500		1000
Driving speed	Max. acceleration	1700 mm/s2 (to Z600), 1200 mm/s2 (Z800), 700 mm/s2 (Z1000)									700 mm/s2
	Variable speed range	CNC measurement mode: 0.01 to 425 mm/sec (stepless variable) Joystick mode: 0 to 120 mm/sec (stepless variable)									
Guide system of each axis		Air bearing									
Air supply	Supply pressure/working pressure	0.49 to 0.69 MPa/0.39 MPa									
	Air consumption	40 NL/min				30 NL/min (Z600), 60 NL/min (Z800)			65 NL/min		
Power supply	Voltage, consumption	AC100 V ±10% (grounding required), 1500 VA									

	Temperature condition: A	Temperature condition: B
Ambient temperature (°C)	18 to 22	16 to 26
Temperature change (°C/hour)	1.0	2.0
Temperature change (°C/day)	2.0	5.0
Temperature gradient (°C/m)	1.0	1.0

*MPEE (Maximum Permissible Indication Error) and MPEP (Maximum Permissible Probing Error) are based on the ISO 10360-2:2001 (JIS B 7440-2:2003) evaluation method for 3D coordinate measuring machines.
*Measuring accuracy values when standard stylus (Φ 4 mm, L20 mm) is used.

External View and Dimensions SVA-A



Model		SVA600A	SVA800A	SVA1000A	SVA1500A	SVA1010A	SVA1012A	SVA1015A	SVA1215A	SVA1220A	SVA1225A
Dimensions (mm)	Width	1415	1615			1765			1965		
	Depth	1440	1540	1980	2580	2080	2280	2580	2580	3180	3680
	Height	2455	2655			2655 (Z600) /2930 (Z800)			3330	3380	3380
Machine height at transport (mm)		2050	2200			2200 (Z600) /2260 (Z800)			2460	2510	2510
Weight (kg)		1450	1600	2700	3500	3150 (Z600) 3200 (Z800)	3350 (Z600) 3400 (Z800)	3500 (Z600) 3700 (Z800)	4500	6300	7700

*Be sure to check the height of passageways, and, in particular, the height of doors and other openings to be used when the machine is delivered.The height of openings needs to be the specified each machine height at transport plus about 200 mm to allow for the dollies used to move the machines.
*Controller and computer rack are also included

●Models that can be modified to lower the stand or shorten the Z-axis stroke to reduce the installation height are also available. Contact us for details.