

Shaft Measurement Solution

SV-M3000CNC

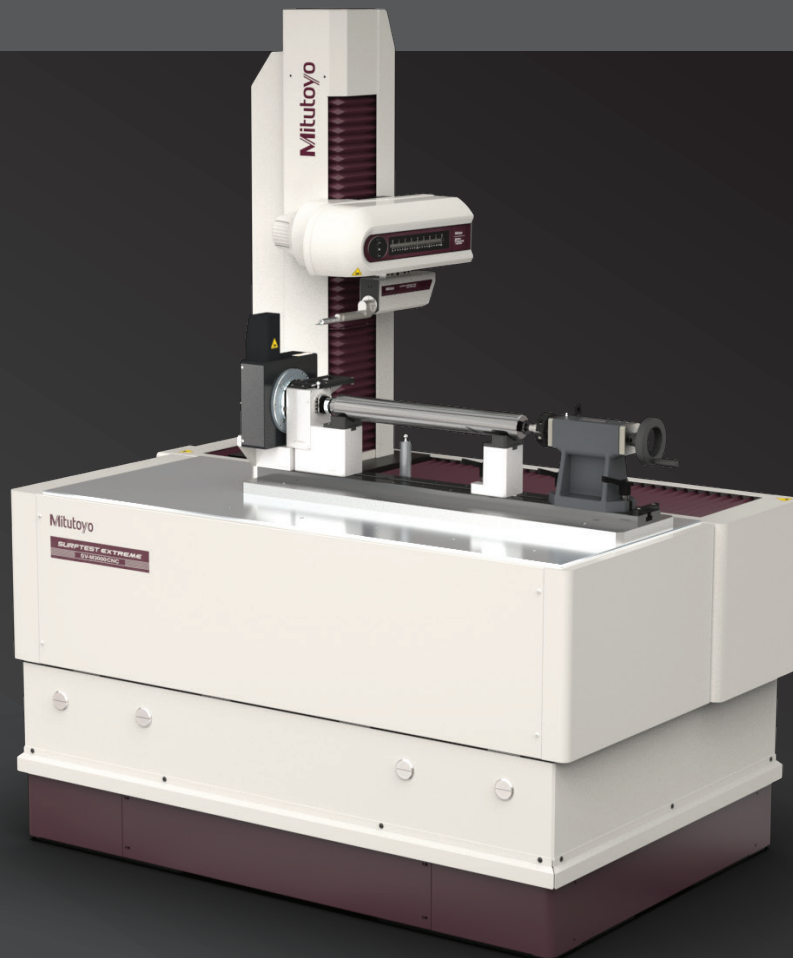


Surface roughness



Contour

FORM MEASUREMENT



Camshaft



Crankshaft



Threads



Ball Screw



1 Flexible Shaft Fixture

2 Maximized Inspection Speed

3 Automated Data

4 Day-one Ready

1 Flexible Shaft Fixture

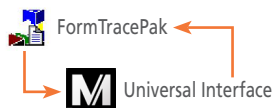
The flexible shaft fixture is designed to accommodate various shafts, including camshafts, crankshafts, ball screws, and more.

2 Maximized Inspection Speed

The sturdy structure of the X, Y, and Z axes allows traverse speeds of up to 7.78"/s (200 mm/sec). This high-speed positioning helps reduce overall cycle time.

3 Automated Data

FormTracePak generates raw data, plots, and PDF reports after measurement. Additionally, the Universal Interface (UI) further automates operations from scanning part information, running programs, and outputting results, including SPC data compliant with AQDEF standards.

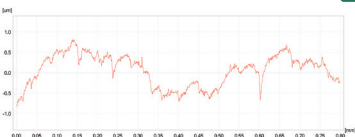


4 Day-one Ready

Mitutoyo's available services, including part programming, training, installation, calibration, and maintenance, ensure that the equipment is fully operational and ready to run immediately after installation.

Application Example

Camshaft surface finish



Measurement location example

•Journal •Base circle and lobe •Others | Front face, rear face, thrust face, etc.

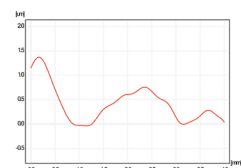
Thread pitch



Measurement location example

•Thread pitch •Other | surface finish

Crankshaft surface finish and waviness



Measurement location example

•Main journal •Pin •Thrust face

Tailored for Shafts

Shaft Measurement System automates the measurement of fine-contour, roughness, and waviness, on shaft-type parts such as camshaft, crankshaft, e-mobility rotor shafts, transmission shafts, spindles, gas turbine shafts, etc.

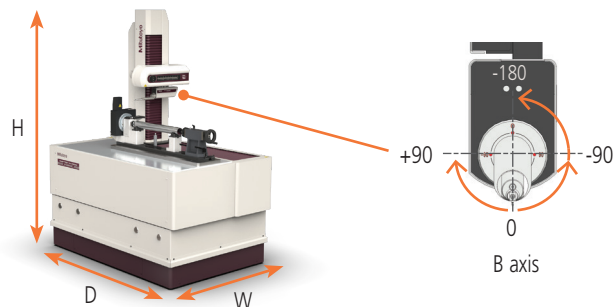
Utilizing a **SV-M3000CNC** at its core, this machine adds a part handling system for speed and flexibility.

System Data

Base Model | **SV-M3000CNC** & Theta 1 Table

X, Y & Z axes	Measuring range	X: 7.78" (200) Y: 19.7" (800) Z: 31.5" (500) (mm)
	Resolution	0.05 μ m
	Drive speed	CNC: 7.78"/s (200 mm/s) I/S mode: 0 - 1.97"/s (0 - 60 mm/s)
	Measuring speed	Up to 0.08"/s (2 mm/s)
	System noise Rz*1	UP/down: -> X up/down: < 0.2 μ m Front/back: -> X front/back: < 0.4 μ m
A axis	Inclination angle	-45 to +10 degrees
	Resolution	0.000225 degrees
B axis	Inclination angle	+90, 0, -90, and -180 degrees
Theta 1	Resolution	0.004 degrees
Dimension	W x D x H	42.7" x 66.7" x 75.7" (1085 x 1695 x 1922 mm)

*1 When using rotary type detector head

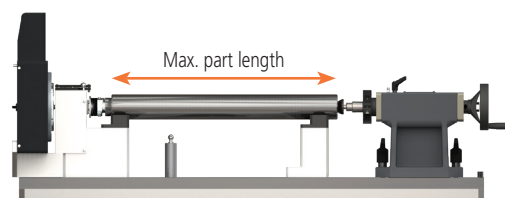


Fixture | Flexible Shaft holder

Max. part length 24" (625 mm)

Max. part weight To be determined with part prints

† Customized fixture is available upon request.



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