

Formtracer SV-C3200 / SV-C4500

Series 525 - Surface and Contour Measuring System

Formtracer SV-C3200

- As powerful as 2 separate specialized instruments.
- Economically combined roughness & contour measurement into a single device.
- Expanded contour measuring range of Z=60 mm as standard, Roughness range 800µm as standard.
- Easy exchange of magnetic contour stylus arm gives excellent flexibility.
- The SV-C3200 provides excellent accuracy and resolution in Z1-axis measurement.

Formtracer SV-C4500

- Dual stylus contour measuring unit for upward / downward measurements at double sided contours
- Contour measuring range of Z=60mm, Roughness range of 800µm as standard.
- Measuring force controlled by software Formtracepak.
- Easy exchange of magnetic stylus arm gives excellent flexibility.
- The SV-C4500 provides high accuracy and resolution.

Specifications

Common

Base size (WxD) 600 x 450 mm (S/H model) or 1000 x 450 mm (W model)

Contour measurement

X-axis

Measuring range 100 mm or 200 mm
Resolution 0,05 µm
Scale Reflective type linear encoder
Drive speed 0 - 80 mm/s and manual
Measuring speed 0,02 - 5 mm/s / Forward/backward
Traverse 0,8 µm/100 mm, 2 µm/200 mm
straightness (with the X-axis in horizontal orientation)

Linear displacement accuracy (at 20°C) ±(0,8+0,01L) µm (S4, H4, W4 model)
±(0,8+0,02L) µm (S8, H8, W8 model)
L=Drive length (mm)

Inclining range ±45° (with X-axis inclination unit)

Z2-axis (column)

Vertical travel 300 mm or 500 mm
Resolution 1 µm
Scale ABSOLUTE linear encoder
Drive speed 0 - 30 mm/s and manual

Z1-axis (detector unit)

Measuring range 60 mm
Resolution SV-C3200 : 0,04 µm
SV-C4500 : 0,02 µm
Scale RT detector
Linear displacement accuracy (at 20°C) SV-C3200 : ±(1,6+12HI/100) µm
SV-C4500 : ±(0,8+12HI/100) µm
H = Measurement height from the horizontal position (mm)
Circle movement

Stylus up/down operation

Measuring force SV-C3200 : 30 mN
SV-C4500 : 10, 20, 30, 40, 50 mN
software controlled
Traceable angle Ascending : 77°, descending : 83°
Stylus tip Radius : 25 µm, carbide tip
Surface Roughness

X1-axis

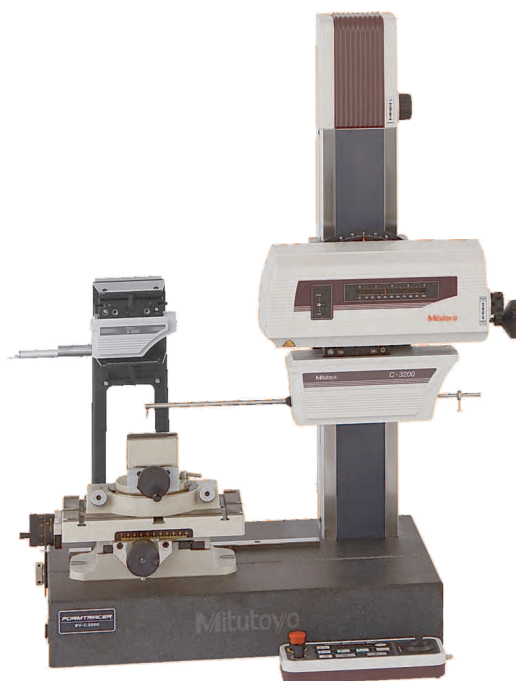
Measuring range 100 mm or 200 mm
Drive speed 0 - 80 mm/s and manual
Traverse direction Backward
Traverse straightness (0,05+0,001L) µm (S4, H4, W4)
0,5 µm/200 mm (S8, H8, W8)

Z2-axis (column)

Vertical travel 300 mm or 500 mm
Resolution 1 µm
Drive speed 0 - 30 mm/s and manual

Detector

Range/resolution 800/0,01 µm, 80/0,001 µm, 8/0,0001 µm (up to 2400 µm with an optional stylus)
Measuring force 4 mN or 0.75 mN
Type Differential inductance



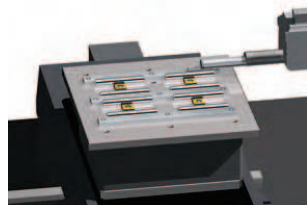
Surface Roughness Measurement
Compliant with DIN EN ISO, VDA, JIS, ANSI and other international surface roughness standards.



Contour drive unit SV-C3200



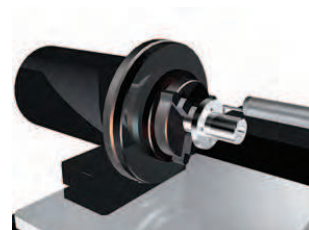
Contour drive unit SV-C4500



Using Y-axis Table



Using Rotary Table 01



Using Rotary Table 02