

SURFACE FINISH TESTER CV-SE3500™

PC controlled surface finish and form measuring instrument

- Surface finish, waviness, straightness and form
- Wide range of pick-ups with interchangeable styli
- Wide range of finish parameters
- Measurement length 0.08mm to 100mm
- Conforms to international standards ISO, DIN, ASME, JIS
- Waviness measurement based on ISO standard

This system can be upgraded with functions for contour and form measurement



Technical specifications

Measuring system	Stylus method using inductive (LVDT) pick-up
Measurement parameter	Ra (Ra75), Rq, Ry, Rmax, Rt, Rz, Rz5, Rz3, R3z, R3zmax, RzmaxD, RzD, Sk, Ku, Pc, HSC, PPI, Rpm, Si, Sm, S, Rp, Rv, θa, θq, Δa, Δq, λa, λq, K, tp, BC, ADC, FFT, Rk, Rpk, Rvk, Mr1, Mr2, Wca, Wcm, Wea, Wem, Straightness, Gap, Coordinates
Measuring range	Vertical 50, 100, 200, 500, 1000, 2000, 5000, 10000, 20000, 50000, 100000, 200000, 500000 Horizontal 1, 2, 5, 10, 100, 200, 500, 1000, 2000, 5000
Measuring range	Vertical: 600 μm, Horizontal: 100mm
Evaluation length	0.25, 0.8, 2.5, 8, 25, 80mm/λc x 1, 2, 3, 4, 5
Traverse speed	0.05, 0.1, 0.2, 0.5, 1, 2mm/sec at measuring, 5, 10mm/sec
Cut off	Finish 0.08, 0.25, 0.8, 2.5, 8mm and un-filtered Waviness f1 0.8, 2.5, 8, 25mm fh 0.08, 0.25, 0.8, 2.5mm
Filter	Gaussian/2CR/Special Gaussian
Sampling number/resolution	Max 32000 points/16 bit
Auto levelling	Least square method, 2 points method, R curve correction, quadratic curve correction
Auxiliary function	Recording of deliberate layout, chart template, mean processing, statistical processing, discontinued measurement, recomputing, resistration of pick-up, recording of comments, calibration of automatic sensitivity, unit changeover between mm/inch, automatic measurement, notch processing, changing of profile size
Bed with column	Bed 600mm x 315mm, maximum load 70kg, auto down stop accuracy ±0.2μm at x100,000 (when using a skid), range of up and down movement of pick-up 250mm
Leveling stand	160mm x 50mm, with V-Shape groove (to the measuring direction), rotation ±3°, vertical tilt ±3°, Y-axis feed ±3mm
Drive unit	Straightness accuracy 0.2μm/100mm ³
Pick up	R2μm, 0.7mN, Diamond
Dimensions	Measurement section 600mm x 400mm x 593mm, 80kg, Computing section 900mm x 600mm x 520mm, 30kg
Power supply	AC90~120V, 50/60Hz, 800VA

Standard delivery

- Pick-up
- Drive unit
- Bed with column
- Remote controller
- Leveling stand
- Controller
- Calibration specimen Ra
- Manual
- CV Instruments certificate

Optional accessories

- PC with monitor
- Pick-ups with interchangeable styli, see following pages
- UKAS certified finish reference standards
- Laser printer

SURFACE FINISH PICK-UPS

A-series for CV-SE1200 and CV-SE1700A and CV-SE3500 (exchangeable)

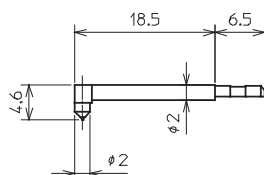
Pick-up body

Type: PU-A (normal force) Pick-up body not including stylus arm and nose piece
 Type: PU-A2 (low force) Pick-up body not including stylus arm and nose piece

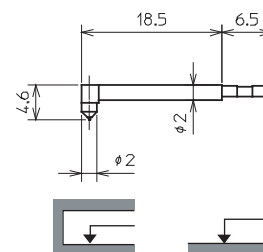
Stylus arms

() = low force to be used with body PU-A2

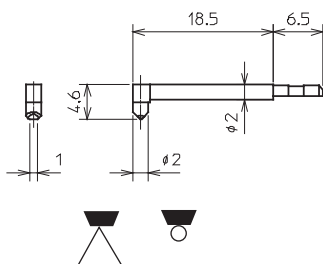
Type: AA2
 Radius: 2µm
 Force: 4mN (0.7mN)
 Nose pc: ANA/ANH
 Range: 600µm
 Use: General use
 Normal bore



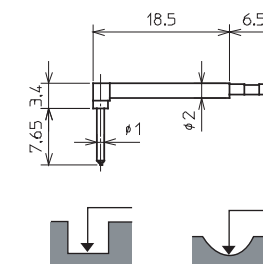
Type: AA5
 Radius: 5µm
 Force: 4mN (0.7mN)
 Nose pc: ANA/ANH
 Range: 600µm
 Use: General use
 Normal bore



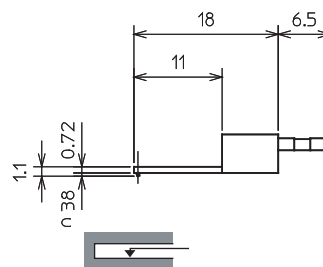
Type: AC5
 Radius: 5µm
 Force: 4mN (0.7mN)
 Nose pc: ANA/ANH
 Range: 600µm
 Use: Knife edge
 Very small wire



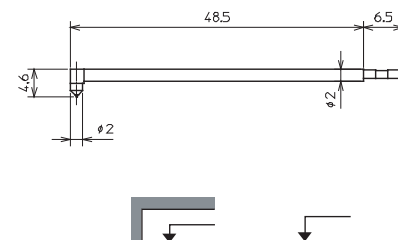
Type: AG5
 Radius: 5µm
 Force: 4mN (0.7mN)
 Nose pc: ANG/ANH
 Range: 600µm
 Use: Curve surface
 Deep grooves



Type: AI5
 Radius: 5µm
 Force: 4mN (0.7mN)
 Nose pc: ANH
 Range: 600µm
 Use: Small bore

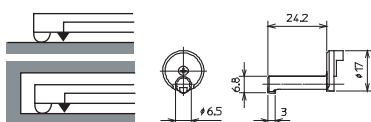


Type: AL10
 Radius: 5µm
 Force: 8mN (5mN)
 Nose pc: ANL/ANH
 Range: 600µm
 Use: Long bore

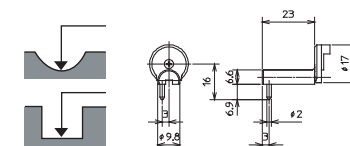


Nose pieces

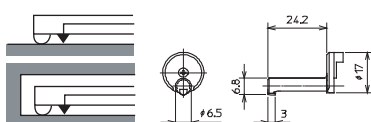
Type: ANA
 R40mmxR2mm
 Skid
 General use



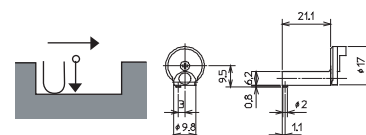
Type: ANG
 R0.5mm Skid
 Curve/Groove



Type: ANH
 Skidless
 measurement
 without Skid



Type: ANK
 R40mm Skid
 Corner end



Type: ANL
 R40mmxR2mm
 Skid
 Long bore

