

Technical Data

X1 axis (drive unit)	
Resolution:	0.05 μm
Scale:	Linear encoder
Drive speed:	0 - 40 mm/s
Measuring speed:	0.02 - 5 mm/s
Traverse direction:	Backward
Traverse straightness:	0.15 $\mu\text{m}/100\text{ mm}$
Z2 axis (column)	
Type:	Manual operation
Detector	
Range / resolution:	800 $\mu\text{m}/0.01\text{ }\mu\text{m}$, 80 $\mu\text{m}/0.001\text{ }\mu\text{m}$, 8 $\mu\text{m}/0.0001\text{ }\mu\text{m}$
Measurement method:	
	Skidless/skidded
Type:	Differential inductance
Drive unit control:	PC

MiCAT

Mitutoyo Intelligent Computer Aided Technology

the standard in world
metrology software

FORM

Evaluation Capability: FORMTRACEPAK

Assessed profiles:	P (primary profile), R (roughness profile), WC, WCA, WE, WEA, DIN4776 profile, envelope residual profile, roughness motif, waviness motif
Evaluation parameters:	Ra, Rq, Rz, Ry, Rz(JIS), Ry(DIN), Rc, Rp, Rpmx, Rpi, Rv, Rvmax, Rvi, Rt, Rti, R3z, R3zi, R3y, S, Pc (Ppi), Sm, HSC, mr, δc , plateau ratio, mrd, Rk, Rpk, Rvk, Mr1, Mr2, Δa , Δq , λa , λq , Sk, Ku, Lo, Lr, A1, A2
Roughness motif parameters:	Rx, R, AR, SR, SAR, NR, NCRX, CPM
Waviness motif parameters:	Wte, Wx, W, AW, SW, SAW, NW
Analysis graphs:	ADC, BAC1, BAC2, power spectrum chart, autocorrelation chart, Walsh power spectrum chart, Walsh auto-correlation chart, slope distribution chart, local peak distribution chart, parameter distribution chart
Digital filter:	2CR-75%, 2CR-50%, 2CR-75% (phase corrected), 2CR-50% (phase corrected), Gaussian-50%
Cutoff length*:	λc : 0.025 mm, 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm fl: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm fh: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm
Sampling length*:	0.025 mm, 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm
Data compensation functions:	Tilt compensation, R-plane (curved surface) compensation, ellipse compensation, parabola compensation, hyperbola compensation, quadric curve automatic compensation, polynomial compensation, polynomial automatic compensation

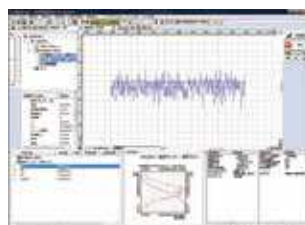
*An arbitrary length can also be specified in the range from 0.025 mm to the maximum traverse length.

SERIES 178 – Surface Roughness Tester with PC

- High-precision/performance surface roughness tester that runs under the FORMTRACEPAK sophisticated analysis software package.
- A built-in joystick in the control unit allows quick and easy positioning. The manual knob allows fine positioning of a small stylus for measuring small holes.
- Simple setup for surface roughness measuring conditions.
- A simple input function is used to calculate according to ISO/JIS roughness standard drawing instruction symbols. Complicated setups can easily be entered by selecting a drawing instruction symbol from the surface roughness menu.



Surftest SV-2100M4 (PC type)



SPECIFICATIONS

Model	SV-2100M4 (PC type)	
Code No. (mm)	178-634-01E	178-634-02E
Code No. (inch/mm)	178-635-01E	178-635-02E
Measuring range	100 mm	
Stylus tip	Angle	60°
	Radius	2 μm
Detector measuring force	0.75 mN	4 mN
Vertical travel	350 mm manual column	
Granite base size (WxD)	600 x 450 mm	
Dimensions (main unit, WxDxH)	716 x 450 x 863 mm	
Mass	144 kg (main unit 140 kg; PC I/F unit 3.8 kg)	