

Surftest SV-2100

SERIES 178 – Surface Roughness Tester with Dedicated Control/Display Unit

- High-precision/performance surface roughness tester with a dedicated control unit, achieving user-friendly display and simple operation.
- Equipped with a 7.5-inch, colour TFT LCD with backlight, large colour icons and touch panel controls, the display unit is easy to read and simple to operate.
- 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.
- Built-in thermal printer.



SPECIFICATIONS

Model	SV-2100M4		SV-2100S4	
Code No. (mm)	178-636-01E	178-636-02E	178-680-01E	178-680-02E
Code No. (inch/mm)	178-637-01E	178-637-02E	178-681-01E	178-681-02E
Measuring range	100 mm			
Stylus tip	Angle	60°	90°	60°
	Radius	2 µm	5 µm	2 µm
Detector measuring force	0.75 mN	4 mN	0.75 mN	4 mN
Vertical travel	350 mm manual column			
Granite base size (WxD)	600 x 450 mm			
Dimensions (main unit, WxD x H)	716 x 450 x 863 mm		766 x 482 x 966 mm	
Mass	144 kg		147 kg	

Model	SV-2100H4		SV-2100W4	
Code No. (mm)	178-682-01E	178-682-02E	178-684-01E	178-684-02E
Code No. (inch/mm)	178-683-01E	178-683-02E	178-685-01E	178-685-02E
Measuring range	100 mm			
Stylus tip	Angle	60°	90°	60°
	Radius	2 µm	5 µm	2 µm
Detector measuring force	0.75 mN	4 mN	0.75 mN	4 mN
Vertical travel	550 mm manual column			
Granite base size (WxD)	600 x 450 mm		1000 x 450 mm	
Dimensions (main unit, WxD x H)	766 x 482 x 1166 mm		1166 x 482 x 1176 mm	
Mass	157 kg		227 kg	

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 µm/100 mm
Z2 axis (column)	
Type:	Manual operation or power drive
Resolution*:	1 µm
Scale type*:	Rotary encoder
Drive speed*:	0 - 20 mm/s
*Only for power drive type	
Detector	
Range / resolution:	800 µm/0.01 µm, 80 µm/0.001 µm, 8 µm/0.0001 µm
Measurement method:	Skidless
Type:	Differential inductance
Control unit	
Magnification:	Horizontal: X0.5 to X10,000, Auto Vertical: X10 to X500,000, Auto
Drive unit control:	Joystick operation with manual adjustment knob

Evaluation Capability

Assessed profiles:	P (primary profile), R (roughness profile), WC, WCA, WE, WEA, envelope residual profile, roughness motif, waviness motif
Evaluation parameters:	Ra, Rc, Ry, Rz, Rq, Rt, Rmax, Rp, Rv, R3z, Sm, S, Pc, mr(c), δc, mr, tp, Htp, Lo, Ir, Ppi, HSC, Aa, Aq, Ku, Sk, Rpk, Rvk, Rk, Mr1, Mr2, A1, A2, Vo, λa, λq
Roughness motif parameters:	R, AR, Rx
Waviness motif parameters:	W, AW, Wx, Wte
Analysis graphs:	ADC, BAC, power spectrum chart
Digital filter:	2CR-75%, PC-75%, Gaussian, Robust Spline
Cutoff length:	λs: 0.25 µm, 0.8 µm, 2.5 µm, 8 µm, 25 µm, 80 µm, 250 µm, no filter λc*: 0.025 mm, 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm, 80 mm λf: 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm, 80 mm, no filter
Sampling length*:	0.025 mm, 0.08 mm, 0.25 mm, 0.8 mm, 2.5 mm, 8 mm, 25 mm, 80 mm
Data compensation functions:	Parabola compensation, hyperbola compensation, ellipse compensation, R-plane (curved surface) compensation, conic compensation, tilt compensation

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



Optional Accessory

12AAA876: Durable printer paper (25 m, 5 rolls/set)
£17.00