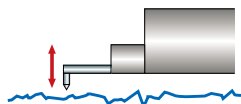


Surftest SJ-410

SERIES 178 – Portable Surface Roughness Tester

- Both skidded and skidless measurement are possible with this series. Measures 46 roughness parameters that conform to the latest ISO, DIN, ANSI, and JIS standards.
- A wide-range, high-resolution detector and efficient drive unit provide superior high-accuracy measurement.
- A skidless detector and a curved surface compensation function provide efficient evaluation of cylinder surface roughness.
- Ultra-fine steps, straightness and waviness can be measured by using the skidless measurement function.
- The handheld data processing unit and the 5.7-inch colour graphic LCD touch-panel provides superior readability and operability. The LCD also includes a backlight for improved visibility in dark environments.
- The excellent user interface provides intuitive and easy-to-understand operability.
- Measured data can be output to a PC with an optional RS-232C or USB cable.
- Digital filter function for accurate roughness profiles.
- GO/NG judgement function.
- Auto-calibration function.
- The display interface supports 16 languages, which can be freely switched.
- Simplified contour analysis function supports four types of measurement: step, level change, area and coordinate difference.
- Access to each feature can be password protected, which prevents unintended operations and allows you to protect your settings.
- The optional attachments for mounting on a column stand significantly increase the operability.

Skidless measurement



Surftest SJ-411

SPECIFICATIONS

Model	SJ-411		SJ-412		
Code No. (inch/mm)	178-581-01E	178-581-02E	178-583-01E	178-583-02E	
Measuring range	25 mm		50 mm		
Speed	Measuring: 0.05, 0.1, 0.2, 0.5, 1.0 mm/s, Returning: 0.5, 1, 2, 5 mm/s				
Range/resolution	800 μm/0.0125 μm, 80 μm/0.00125 μm, 8 μm/0.000125 μm (up to 2400 μm with an optional stylus)				
Measurement method	Skidless/skidded				
Stylus tip	Angle	60°	90°	60°	90°
	Radius	2 μm	5 μm	2 μm	5 μm
Detector measuring force	0.75 mN	4 mN	0.75 mN	4 mN	
Assessed profiles	P (primary profile), R (roughness profile), DF (DF profile), W (filtered waviness profile), roughness motif, waviness motif				
Evaluation parameters	Ra, Rq, Rz, Ry, Rp, Rv, Rt, R3z, Rsk, Rku, Rc, RPa, RSm, Rmax(VDA, ANSI), Rz1max(ISO'97), S, HSC, RzJIS(JIS'01), Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(c), Rδc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, δq, Lo, Rpm, tp(ANSI), Htp(ANSI), R, Rx, AR, W, AW, Wx, Wte				
Analysis graphs	Bearing Area Curve (BAC), Amplitude Distribution Curve (ADC)				
Power supply	Via AC adapter or rechargeable battery				
Rechargeable battery	Recharge time: 4 hours (for a maximum 1000 measurements without printing)				
Price	£5140.00	£5140.00	£6180.00	£6180.00	

Technical Data

X axis (drive unit)	
Traverse direction:	Backward
Traverse straightness:	0.3 µm / 25 mm (SJ-411), 0.5 µm / 50 mm (SJ-412)
Positioning:	±1.5° (tilting), 10 mm (up/down)
Detector	
Skid radius of curvature:	40 mm
Type:	Differential inductance
Storage	
Internal memory:	Setups (10 sets)
Memory card (option):	500 setups, 10000 measured profiles, 500 display images, text file (setups / measured profile / assessed profile / bearing area curve / amplitude distribution curve), 500 statistical data, etc.
Dimensions (WxDxH)	
Display unit:	275 x 109 x 198 mm
Height-tilt adjustment unit:	131 x 63 x 99 mm
Drive unit:	128 x 36 x 47 mm (SJ-411), 155 x 36 x 47 mm (SJ-412)
Control unit mass:	Approx. 1.7 kg
Height-tilt adjustment unit:	Approx. 0.4 kg
Drive unit:	0.6 kg (SJ-411), 0.7 kg (SJ-412)

Evaluation Capability

Applicable standards:	JIS'82, JIS'94, JIS'01, ISO'97, ANSI, VDA, Free
Digital filter:	2CR, PC75, Gaussian
Cutoff length:	λc: 0.08, 0.25, 0.8, 2.5, 8 mm λs: 2.5, 8, 25 µm (availability of switching depends on the selected standard.)
Sampling length:	0.08, 0.25, 0.8, 2.5, 8, 25*mm; or arbitrary length in range 0.1 to 25 mm (0.1 to 50 mm: SJ-412) in 0.01 mm increments
Number of sampling lengths:	1, 2, 3, ~20 (limited by traverse range)
Printer:	Thermal type
Printing width:	48 mm (paper width: 58 mm)
Recording magnification	
Vertical:	10X to 100,000X, auto
Horizontal:	1X to 1,000X, auto
Function	
Customize:	Selection of display/evaluation parameter
Data compensation:	R-surface, tilt compensation
Ruler function:	Step, level change, area and coordinate difference
DAT function:	Helps to level workpiece prior to skidless measurement. Displacement detection mode enables the stylus displacement to be input while the drive unit is stopped.
Statistical processing:	Max. value, min. value, mean value, standard deviation (s), pass ratio, histogram
GO/NG judgement:	Maximum value rule, 16% rule, average value rule, standard deviation (1σ, 2σ, 3σ)
Calibration:	Auto-calibration with the entry of numerical value / average calibration with multiple measurement (max. 12 times) is available.
Power saving function:	Auto-sleep-function, auto shutdown of backlight by ECO mode.

*Only for SJ-412