

Surftest SJ-310

SERIES 178 – Portable Surface Roughness Tester

- The handheld data processing unit and the 5.7-inch colour graphic LCD touch-panel provide 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.
- Complies with the following standards: JIS (JIS-B0601-2001, JIS-B0601-1994, JIS B0601-1982), VDA, ISO- 1997, and ANSI.
- The Measure-Start and other frequently used buttons are strengthened to resist wear and the detrimental effects of workshop contaminants.
- Equipped with a large-capacity battery allowing approximately 1500 measurements when fully charged.
- Includes convenient carrying case for protection in the field.
- A high-speed printer is built into the main unit. Either landscape or portfolio mode can be selected according to the application. Paper saving mode is supported.
- The display interface supports 16 languages, which can be freely switched.
- 10 setups can be saved in the measurement unit. An optional memory card can save setups and the measured profile.



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SPECIFICATIONS / CONFIGURATION

Model	SJ-310					
Code No. (inch/mm)	178-571-01E	178-571-02E	178-573-01E	178-573-02E	178-575-01E	178-575-02E
Drive unit	Standard type (178-230-2)		Retractable type (178-235)		Transverse tracing type (178-233-2)	
Detector	0.75 mM type (178-296)	4 mM type (178-390)	0.75 mM type (178-296)	4 mM type (178-390)	0.75 mM type (178-387)	4 mM type (178-386)
Display unit	Standard type with printer					
Detector: Conical taper angle	60°	90°	60°	90°	60°	90°
Stylus tip radius	2 µm	5 µm	2 µm	5 µm	2 µm	5 µm
Detector measuring force	0.75 mN	4 mN	0.75 mN	4 mN	0.75 mN	4 mN
Price	£2600.00	£2600.00	£2500.00	£2500.00	£3650.00	£3650.00

Technical Data

X axis (drive unit)	
Measuring range:	17.5, 5.6 mm (Transverse tracing drive unit type)
Measuring speed:	0.25, 0.5, 0.75 mm/s 1 mm/s (Returning)
Detector	
Range:	360 µm (-200 µm to +160 µm)
Measuring method:	Skidded
Measuring force:	0.75 mN or 4 mN
Stylus tip:	Diamond, 90° / R5 µm (60° / R2 µm)
Skid radius of curvature:	40 mm
Skid force:	Less than 400 mN
Type:	Differential inductance
Power supply:	Two-way power supply: battery (rechargeable Ni-MH battery) and AC adapter
Battery	
Charging time:	4 hours maximum
Recharge cycles:	Approximately 1500 times (slightly varies with the usage and environmental conditions)
External I/O:	USB I/F, Digimatic Output, RS-232C I/F, External SW I/F
Data storage:	Memory card (option 12AAL069)
Dimensions (W x D x H)	
Control unit:	275 x 109 x 198 mm
Drive unit:	115 x 23 x 26 mm
Mass	
Display unit:	Approx. 1.7 kg
Drive unit:	0.2 kg

Evaluation Capability

Applicable standards:	JIS'82, JIS'94, JIS'01, ISO'97, ANSI, VDA
Assessed profiles:	P (primary profile), R (roughness profile), DIN4776, roughness motif, waviness motif
Evaluation parameters:	Ra, Ry, Rz, Rt, Rp, Rq, Rv, Rsk, Rku, Rc, RSm, S, R _{Pc} , R _{3z} , R _{mr} (c), R _{pk} , R _{vk} , R _{dc} , R _k , Mr1, Mr2, Lo, R _{ppi} , R, AR, Rx, A1, A2, Vo, HSC, R _{mr} , SK, Ku, R _{Δa} , R _{Δq} , R _{lr} , λ _a , λ _q , R _{pm} , R _z JIS (JIS'01), tp (ANSI), H _{tp} (ANSI), W _{te} , W _x , W, AW, R _{z1max} (ISO), R _{max} (VDA, ANSI, JIS'82), possible to customize
Analysis graphs:	Bearing Area Curve (BAC), Amplitude Distribution Curve (ADC)
Digital filter:	2CR, PC75, Gaussian
Cutoff length:	l _c : 0.08, 0.25, 0.8, 2.5, 8 mm l _s : 2.5, 8 µm
Sampling length:	0.08, 0.25, 0.8, 2.5, 8 mm
Number of sampling lengths (x n):	x1, x2, x3, x4, x5, x6, x7, x8, x9, x10 arbitrary length (0.3 to 16.0 mm: 0.01 mm interval) x1, x2, x3, x4, x5, x6, x7, x8, x9, x10 arbitrary length (0.3 to 5.6 mm: 0.01 mm interval)*
Printer:	Thermal type
Printing width:	48 mm (paper width: 58 mm)
Recording magnification	
Vertical magnification:	10X to 100,000X, Auto
Horizontal magnification:	1X to 1,000X, Auto

* Only for Transverse tracing drive unit type