

# Surftest SJ-210

## SERIES 178 – Portable Surface Roughness Tester

- The 2.4-inch colour graphic LCD provides excellent readability and an intuitive display that is easy to navigate. The LCD also includes a backlight for improved visibility in dark environments.
- The Surftest SJ-210 can be operated easily using the buttons on the front of the unit and under the sliding cover.
- Up to 10 setups and one measured profile can be stored in the internal memory.
- An optional memory card can be used as an extended memory to store large quantities of measured profiles and conditions.
- Access to each feature can be password-protected, which prevents unintended operations and allows you to protect your settings.
- The display interface supports 16 languages, which can be freely switched.
- An alarm warns you when the cumulative measurement distance exceeds a preset limit.
- The Surftest SJ-210 complies with the following standards: JIS (JIS-B0601-2001, JIS-B0601-1994, JIS B0601-1982), VDA, ISO-1997, and ANSI.
- In addition to calculation results, the Surftest SJ-210 can display sectional calculation results and assessed profiles, load curves, and amplitude distribution curves.



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### SPECIFICATIONS / CONFIGURATION

Model	SJ-210						
	Code No. (inch/mm)	178-561-01E	178-561-02E	178-563-01E	178-563-02E	178-565-01E	178-565-02E
Drive unit		Standard type (178-230-2)		Retractable type (178-235)		Transverse tracing type (178-233-2)	
Detector		0.75 mN type (178-296)	4 mN type (178-390)	0.75 mN type (178-296)	4 mN type (178-390)	0.75 mN type (178-387)	4 mN type (178-386)
Display unit		Compact type (178-253*)					
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		£1280.00	£1280.00	£1520.00	£1520.00	£2380.00	£2380.00

### 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
Charging time:	About 4 hours (may vary due to ambient temperature)
Endurance:	About 1000 measurements (differs slightly due to use conditions/ environment)
External I/O:	USB I / F, Digimatic Output, Printer Output, RS-232C I / F, Foot SW I / F
Data storage:	Memory card (option 12AAL069)
Dimensions (WxDxH)	
Display unit:	52.1 x 65.8 x 160 mm
Drive unit:	115 x 23 x 26 mm
Mass:	About 0.5 kg (Display unit + Drive unit + Standard detector)

### Evaluation Capability

Applicable standards:	JIS'82, JIS'94, JIS'01, ISO'97, ANSI, VDA
Assessed profiles:	Primary profile, Roughness profile, DF profile, Roughness profile-Motif
Evaluation parameters:	Ra, Rc, Ry, Rz, Rq, Rt, Rmax, Rp, Rv, R3z, Rsk, Rku, Rc, Rpc, Rsm, Rz1max, S, HSC, Rz1S, Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(c), Rdc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, Rpm, tp, Htp, R, Rx, AR, possible to customize
Analysis graphs:	Bearing area curve / Amplitude distribution curve
Digital filters:	Gaussian, 2CR75, PC75
Cutoff length:	lc: 0.08, 0.25, 0.8, 2.5 mm ls: 2.5, 8 µm
Sampling length:	0.08, 0.25, 0.8, 2.5 mm
Number of sampling lengths (x n):	x1, x2, x3, x4, x5, x6, x7, x8, x9, x10 arbitrary length (0.3 to 16 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)*

\*Only for Transverse tracing drive unit type

## Functions

- Customization: Desired parameters can be selected for calculation and display.
- GO/NG judgement: By max value / 16% / Standard deviation
- Storage of setups: Save the setup at power OFF
- Storage  
Internal memory: Setups (10 sets),  
Measured profile (1 set)
- Memory card  
(option): 500 setups, 10000 measured profiles,  
500 display images, text file (setups /  
measured profile / assessed profile /  
bearing area curve / amplitude  
distribution curve)
- Calibration: Auto-calibration with the entry of  
numerical value / average calibration  
with multiple measurement (max.5  
times) is available



## DIMENSIONS: Display unit, drive unit

