

# SJ-210 Series Specifications

Type of detector		Standard drive unit type		Retractable drive unit type		Transverse tracing drive unit type	
Model No.		SJ-210 (0.75 mN type)	SJ-210 (4 mN type)	SJ-210 (0.75 mN type)	SJ-210 (4 mN type)	SJ-210 (0.75 mN type)	SJ-210 (4 mN type)
Order No.	mm	178-560-11	178-560-12	178-562-11	178-562-12	178-564-11	178-564-12
	inch/mm	178-561-11	178-561-12	178-563-11	178-563-12	178-565-11	178-565-12
X axis		16.0 mm				5.6 mm	
Measuring range	Z axis (Detector)	Range		360 μm (-200 μm to +160 μm)			
		Range/Resolution		360 μm/0.02 μm 100 μm/0.006 μm 25 μm/0.002 μm			
Measuring speed		When measuring: 0.25 mm/s, 0.5 mm/s, 0.75 mm/s When returning: 1 mm/s					
Measuring force/Stylus tip		0.75 mN type: 0.75 mN/2 μmR 60°, 4 mN type: 4 mN/5 μmR 90°					
Skid force		400 mN or less					
Applicable standards		JIS '82/JIS '94/JIS '01/ISO '97/ANSI/VDA					
Assessed profiles		Primary profile, Roughness profile, DF profile, Roughness profile-Motif					
Parameters		Ra, Rc, Ry, Rz, Rq, Rt, Rmax <sup>*1</sup> , Rp, Rv, R3z, Rsk, Rku, Rc, RPl, Rsm, Rz1max <sup>*2</sup> , S, HSC, RzJIS <sup>*3</sup> , Rppl, RΔa, RΔq, Rlr, Rmr, Rmr(c), Rδc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, Rpm, tp <sup>*4</sup> , Htp <sup>*4</sup> , R, Rx, AR, Possible Customize					
Graph analysis		Bearing area curve, Amplitude distribution curve					
Filters		Gaussian, 2CR75, PC75					
Cut off length	λc	0.08, 0.25, 0.8, 2.5 mm					
	λs <sup>*5</sup>	2.5, 8 μm					
Sampling length		0.08, 0.25, 0.8, 2.5 mm					
Number of sampling lengths		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)	
LCD dimensions		36.7x48.9 mm					
Display languages		Japanese, English, German, French, Italian, Spanish, Portuguese, Korean, Traditional Chinese, Simplified Chinese, Czech, Polish, Hungarian, Turkish, Swedish, Dutch					
Measurement result display		Vertical display: 1-parameter display/3-parameter display/Trace display Horizontal display: 1-parameter display/4-parameter display/Trace display (Horizontal display is invertable)					
Printing function <sup>*6</sup> (Dedicated printer is required separately)		Measurement conditions/Calculation results/GO/NG judgement result/Calculation results for each sampling length/ Assessed profile/Bearing area curve/Amplitude distribution curve/Environment setting information					
External I/O		USB I/F, Digimatic Output, Printer Output, RS-232C I/F, Foot SW I/F					
Functions	Customization	Desired parameters can be selected for calculation and display					
	GO/NG judgment <sup>*7</sup>	By max value/16 %/Standard deviation					
	Storage of measurement condition	Save the conditions at power OFF					
	Storage	Internal memory: Measurement condition (10 sets) Memory card (optional): 500 measurement conditions, 10000 measured profiles, 500 display images Text file (Measurement conditions/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						
Power-saving function		Auto-sleep off function (10-600 sec) <sup>*8</sup>					
Power supply		Two-way power supply: battery (rechargeable Ni-MH battery) and AC adaptor Note 1: Charging time: about 4 hours (may vary due to ambient temperature) Note 2: Endurance: about 1000 measurements (differs slightly due to use conditions/environment)					
Size (WxDxH)	Display unit	52.1x65.8x160 mm (sliding cover closed, detector not mounted)					
	Drive unit	115x23x26 mm (detector not mounted)					
Mass		About 500 g (Display unit + Drive unit + Standard detector)					
Standard accessories		<b>12BAA303</b> Connecting cable <sup>*9</sup> <b>178-601</b> Roughness specimen (Ra 3 μm) <b>12BAR344</b> Carrying case <b>12BAK700</b> Calibration stage Protective sheets for display, AC Adapter, Operation manual, Quick reference manual, Warranty				<b>12BAA303</b> Connecting cable <sup>*9</sup> <b>178-605</b> Roughness specimen (Ra 1 μm) <b>12AAE643</b> Point-contact adapter <b>12AAE644</b> V-type adapter <b>12BAR344</b> Carrying case <b>12BAK700</b> Calibration stage Protective sheets for display AC Adapter, Operation manual Quick reference manual, Warranty	

\*1 Calculation is available only when selecting the VDA, ANSI, or JIS '82 standard.

\*2 Calculation is available only when selecting the ISO '97 standard.

\*3 Calculation is available only when selecting the JIS '01 standard.

\*4 Calculation is available only when selecting the ANSI standard.

\*5 Not available when selecting the JIS '82 standard.

\*6 Order the **SJ-210** printer (**178-421**, optional accessory) separately.

\*7 Standard deviation only can be selected in ANSI. 16 % rule cannot be selected in VDA.

\*8 Auto-sleep function is invalid when AC adaptor is used.

\*9 For connecting the calculation display unit and drive unit.

Note 1: Refer to pages 18 to 19 for details about consumables and options.

Note 2: To denote your AC line voltage add the following suffixes (e.g. **178-560-11A**).

A for 120 V, C for 100 V, D for 230 V, E for 230 V (for UK), DC for 220 V (for China), K for 220 V (for Korea)