



Linear Series

SURFCOM**1910DX3/SD3**

**Roughness and Contour Detectors Provided as Standard Measurement,
Evaluation, Analysis and Printout for Roughness and Contour in One Machine**
Improves Work Efficiency Space-Saving DX model Allows Efficient
Use of a Measuring Room



SURFCOM 1910DX3



SURFCOM 1910SD3

Printer is optional

2-in-1 High-accuracy Measuring Instrument

- Indication accuracy of contour detector: $\pm(1.8+|2H|/100)$ μm
- Resolution: 0.1 μm (full range)
- Measuring magnification of roughness pickup: 500000 times max.
- This detector allows high-accuracy roughness and contour measurements and evaluation of precision processing components.

High-speed Measurement Dramatically Enhances Productivity

- Roughness Measurement: 3 mm/s max.
- Contour Measurement: 20 mm/s max.
- Moving Speed: 60 mm/s max.
- Measurement Efficiency: 10 times better (compared to previous models)

Linear Motor Drive patented

- A linear motor drive ensures high accuracy and high-speed movement.
- Low vibration ensures more stable measurement at high magnifications.

*See page 8 for the details of the linear drive.

Specifications

Model			SURFCOM 1910DX3/SD3							
			-12	-13	-14	-15	-22	-23	-24	-25
Measuring range		Z-axis (vertical)	50 mm							
		X-axis (horizontal)	100 mm				200 mm			
Accuracy	Roughness detector	Resolution	0.01 μm/1000 μm range to 0.0001 μm/6.4 μm range							
	Contour detector	Z-axis indication accuracy (vertical)	± (1.8 + 2H /100) μm (H: Measuring height mm)							
		Resolution	0.1 μm/Full range							
	Roughness tracing driver	X-axis resolution	0.04 μm or 32000 points (300000 data uptake points)							
	Contour tracing driver	X-axis indication accuracy (horizontal)	± (1.0+L/100) μm (L: Measuring length (mm)), Measuring pitch: 0.1 μm min.							
		Resolution	0.016 μm							
Straightness accuracy			Roughness system: (0.05 + L/1000) μm (L: Measuring length mm), Contour system: 1 μm/100 mm , 2 μm/200 mm							
Sensing method		Z-axis (vertical)	Roughness detector	Differential inductance						
		Contour detector	Laser optical diffraction scale							
		X-axis (horizontal)	Linear scale							
Speed		Column up/down speed (Z-axis)	10 mm/s							
		Measuring speed (X-axis)	0.03 mm/s to 20 mm/s							
		Moving speed (X-axis)	60 mm/s max.							
Detector	Roughness	Stylus, measuring force	Replaceable, 0.75 mN							
		Stylus radius (stylus material)	2 μmR (60° conical diamond), one piece equipped as standard							
	Contour	Stylus, measuring force	Replaceable, 10 mN to 30 mN, and stepless(retract) function							
		Stylus radius (stylus material)	25 μmR (24° conical carbide), one piece equipped as standard							
		Measuring direction, position	Pull/push and Up/down directions, Max. following angle: 77°							
Operation range		Tracing driver stroke	100 mm				200 mm			
		Column up/down stroke	226 mm	426 mm		626 mm	226 mm	426 mm		626 mm
Granite table		Dimensions	600 x 317 mm		1000 x 450 mm		600 x 317 mm		1000 x 450 mm	
		Permissible loading weight *	37 kg	28 kg	93 kg	84 kg	31 kg	22 kg	87 kg	78 kg
Other	Installation dimensions *	Width	1250 mm		1650 mm		1250 mm		1650 mm	
		Depth	800 mm		900 mm		800 mm		900 mm	
		Height	1480 mm	1680 mm		1880 mm	1480 mm	1680 mm		1880 mm
	Weight *		225 kg	235 kg	420 kg	430 kg	230 kg	240 kg	425 kg	435 kg
Power supply, frequency, consumption			Single phase AC 100 V ±10% (grounding required), 50 Hz/60 Hz, 670 VA							

* Dimensions and weight are for the DX type.