



Standard series

# SURFCOM 1400G

**Superior Operability & Automation  
from Measurements to Inspection Report Creation**



SURFCOM 1400G



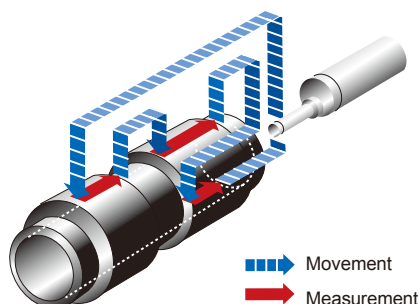
Printer is optional

## AI Function Simplifies Measurements (Patented)

- The unit automatically selects the measuring conditions without setting them in advance (roughness measurement).
- A lesson mode is available to teach the user the operation procedures. This is a reflection of ACCRETECH's commitment to create measuring instruments that anyone can use.

## Automation Enhances Measurement Efficiency

The teaching function can be used to automate a series of operations, from measurement at multiple locations to generation of an inspection report by pasting the data.



## Evaluation Functions Dramatically Strengthened

Reflecting customer requests for more evaluation functions, this unit includes standards for film thickness measurement (step/area), wear volume calculation (superimposed profile area) and LCD glass substrate (special waviness).

## Complies with World Standards

- This model complies with the latest ISO, JIS, DIN, ASME, CNOMO and other standards, and has cleared the requirements for the European safety standard CE marking.
- It supports operation using Japanese, Chinese, Korean English, German, French, Italian and Spanish.

## Freedom to Re-Analyze

Re-analysis can be performed easily after changing the measurement standard (linear, first half, latter half, round surface, both end), configuring the evaluation range, and removing defective data from a notch.

## Outstanding Expandability

The unit can be easily and efficiently upgraded to meet evolving needs. This includes upgrading from two-dimensional to three-dimensional roughness, or adding profile capability.

## Availability of a Variety of Pickups (Detectors)(Option)

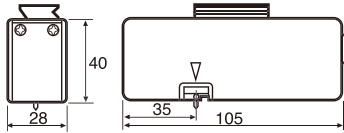
A wide variety of detectors are available in accordance with the measurement needs of customers.

\*Provision of custom-made pickups will be considered upon customer request.

### ●High-magnification pickup

Low measuring pressure and stylus with a tip radius of 1μm enable roughness measurement at a higher accuracy.

\*Low measuring pressure allows measurement of easily scratched or soft materials.

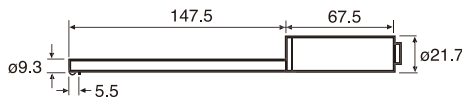


E-DT-SH01A	<ul style="list-style-type: none"> <li>• Max. magnification: x500000</li> <li>• Measuring force 0.2 mN</li> <li>• With 0162854 stylus</li> </ul>
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### ●Pickup for measurement of ultra-long holes

Able to perform internal diameter roughness measurement of long holes of about 150 mm.

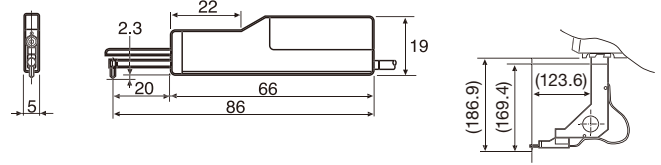
\*Pickup and stylus integrated type



E-DT-S08A	5μmR, 90° conical diamond, 4 mN	• Stylus cannot be replaced
E-DT-S137A	2μmR, 60° conical diamond, 4 mN	• Max. magnification: x500000
		• Sensitivity 1/5

### ●Thin pickup

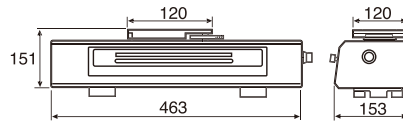
Can be used for horizontal trace measurement of crankshaft pins, journals, etc.



DM42001 DM42011 DM42012	5μmR, 90° conical diamond, 10 mN, Horizontal tracing possible, Magnification: x5000 or less	<ul style="list-style-type: none"> <li>• With 0102501 dedicated stylus</li> <li>DM42001: for S1400, S1800, S2800</li> <li>DM42011: for S480A</li> <li>DM42012: for models preceding S590A</li> </ul>
E-DH-S60A		<ul style="list-style-type: none"> <li>• Used for horizontal trace measurement of crankshaft pins, journals, etc.</li> </ul>

### ●Workpiece movement tracing driver

Depending on kinds, available types vary between 50 mm drive and 300 mm drive. With leveling adjustment function in the standard specifications, this product has been used for high accuracy waviness measurement of glass plates, etc. by many customers.



E-RM-S76A	Drive distance: 150 mm Driving speed: 0.03 mm/s to 6.0 mm/s, 8 speeds Straightness accuracy: (0.05 + 1.5L/1000) μm Weight: about 20 kg Load weight: 5 kg Leveling range: ±1°	Cannot be used for Linear Series. Requires pickup holder
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## Specifications

Model			SURFCOM 1400G									
			-11	-12	-13	-14	-21	-22	-23	-24		
Measuring range	Z-axis (vertical)		800 μm									
	X-axis (horizontal)		100 mm				200 mm					
Accuracy	Measuring range		800 μm range to 25 μm range (6.4 μm range)* <sup>3</sup>									
	Resolution		0.02 μm to 0.0004 μm (0.0001 μm)* <sup>3</sup>									
	X-axis indication accuracy (horizontal)		± (1 + 2L/100) μm (L: Measuring length mm)									
	Resolution		0.1 μm									
Tracing driver	Straightness accuracy		0.05 + 1.5L/1000 μm (L: Measuring length mm)									
	Sensing method		Moire striped scale				Linear scale					
	Measuring speed		0.03, 0.06, 0.15, 0.3, 0.6, 1.5, 3, 6 mm/s (8 speed)									
	Colum up/down speed (Z-axis)		—	10 mm/s (3 mm/s)* <sup>1</sup>			—	10 mm/s (3 mm/s)* <sup>1</sup>				
Detector	Sensing method		Differential transducer									
	Roughness measurement	Stylus, measuring force	Replaceable, 0.75 mN									
		Stylus radius (material)	Roughness: 2 μmR (60° conical diamond) Waviness: 800 μmR (Ruby ball) Each stylus equipped as standard									
Operation range		Tracing driver stroke		100 mm				200 mm				
		Column up/down stroke		250 mm		450 mm		250 mm		450 mm		
		Dimensions		600 × 317 mm		1000 × 450 mm		600 × 317 mm		1000 × 450 mm		
Grinate table	Permissible loading weight	In use of desktop anti-vibration table (E-VS-S57B/S58B)		48 kg	42 kg	33 kg	-	43 kg	37 kg	28 kg	-	
		In use of large-size desktop anti-vibration table (E-VS-S45A)		50 kg	40 kg	30 kg	98 kg	50 kg	40 kg	30 kg	93 kg	
		In use of anti-vibration table (E-VS-R16 B)		50 kg	40 kg	30 kg	48 kg	50 kg	40 kg	30 kg	43 kg	
		In use of anti-vibration table (E-VS-R21 B)		50 kg	40 kg	30 kg	100 kg	50 kg	40 kg	30 kg	100 kg	
Other		Installation dimensions* <sup>2</sup>	Width	2000 mm			2300 mm		2000 mm			2300 mm
			Depth	1000 mm				1000 mm				
			Height	1700 mm		1900 mm		1700 mm		1900 mm		
		Weight		115 kg	120 kg	130 kg	235 kg	120 kg	125 kg	135 kg	240 kg	
Power supply, frequency, consumption			Single-phase AC 100 V ±10% (arounding required), 50 Hz/60 Hz, 710 VA									

\*1: For joystick operation.

\*2: The dimensions of -11,-12,-13,-21,-22,-23 include the optional stand (E-VS-S13A) and desktop anti-vibration table (E-VS-S57B) and computer rack (E-DK-S24A). The dimensions of -14,-24 include the optional large anti-vibration table (E-VS-R16B) and computer rack (E-DK-S24A).

\*3: The value is in use of high magnification pickup.