

Surfcom 130A

Topflight Performance in Production and Quality Assurance



- Superb straightness accuracy
- Great ease of operation
- Comprehensive evaluation



Surfcom 130A

Topflight Performance in Production

Focusing sharply on the needs of the operator, this compact but powerful surface texture measuring instrument is used in the workshop.

- Easy change of styli
- 50 mm traverse length, built-in datum plane and large measuring range detector
- Selectable "Amplifier" LCD of touch panel
- Prepared for the wide TFT color panel and the low cost monochrome LCD panel
- Handy, compact size
- Suitable for use in workshop environment
- Analysis parameters catering to worldwide requirements
- Free selection of DIN EN ISO/CNOMO/ASME/JIS standards
- Just take your pick: English, French, Spanish, Portuguese, Japanese, German



*Straightness accuracy
0.3 $\mu\text{m}/50\text{ mm}$*



Ergonomic design

*Monochrome LCD panel
TFT color panel*



Surfcom 130A

Great Ease of Operation



Restrict your icons to the ones actually needed
By using the customized function, icons which are frequently needed can be selected and configured for the operator's convenience, making measurement more efficient.



Comprehensive analysis functions
provide an answer to all requirements. 34 analysis parameters for roughness such as Ra, RZ, Rt, Sm and tp, etc., and 24 for waviness are built in. Gaussian and 2RC filter analyses are integrated.



Calibration function
for easy dynamic and static calibration of the measuring station. The instrument comes with a reference testpiece for calibrating the system and controlling stylus wear.



Tilt correction function
for the automatic correction of straight line, first half, second half, both ends, R surface and spline curve.



Guidance function
for displaying the measuring sequence. Beginners are helped by the display of the measuring sequence for smooth operation.



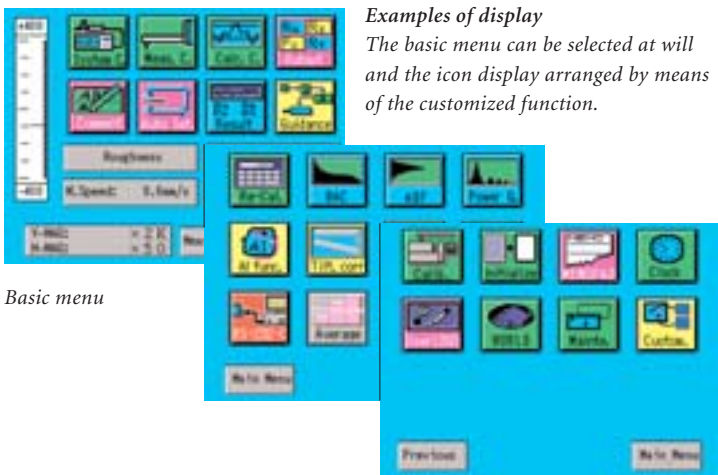
Arbitrary setting of evaluation range
Each parameter can be calculated by setting an arbitrary evaluation area by holding waveform data with two cursors on the screen.



Memo function
for convenient rearranging of data. By using a touch pen, simple pictures and text written in the memo screen can be printed in a record chart.



PC card slots
For the administration of measuring conditions and results, and to make allowance for special, customized programs, 2 PC card slots are available.



Examples of display
The basic menu can be selected at will and the icon display arranged by means of the customized function.

Basic menu



Example of customized display

Accessories

Roll legs

E-MA-S62A

This is an attachment for cylinder measurement with a tracing driver mounted on it. Measurable O.D.: 60 mm or more.

Universal-posture pickup holder

E-DH-S107A

(With roll legs E-MA-S63A in the above picture). This enables measuring surface roughness not only on a horizontal plane but also on a slope plane, vertical plane and ceiling plane.

Pickup holder for lateral tracing

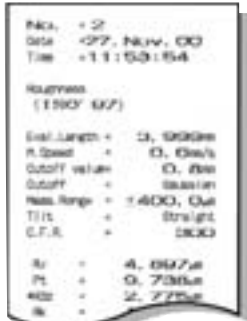
E-DH-S17A

This is an attachment for lateral tracing in the presence of obstacles in forward and backward directions during measurement, as in the case of a crankshaft, for example (used with a two-sided override skid).

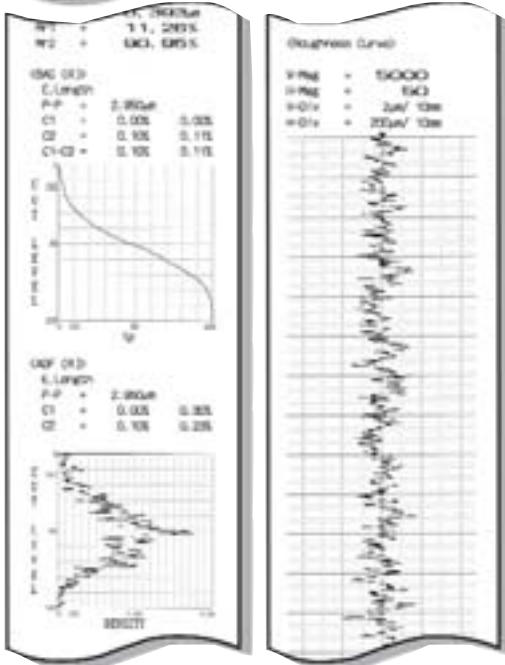


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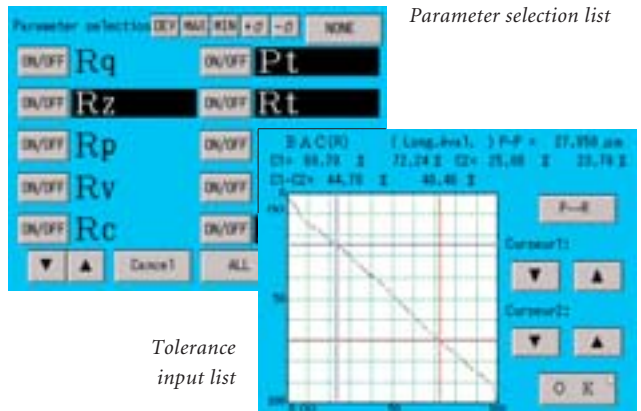
All-inclusive Evaluation



Record printout
Automatic/manual data
printout on high-resolution
thermoprinter

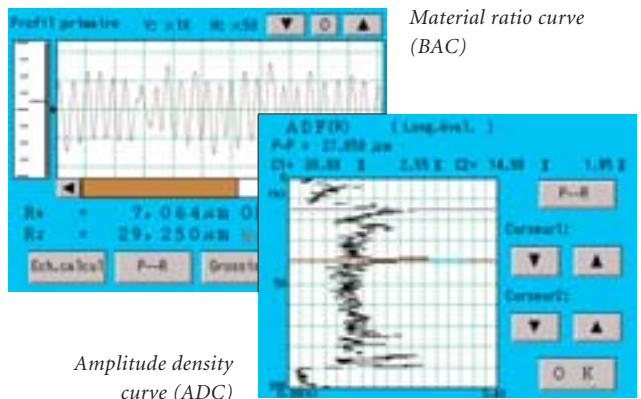


Profile presentation and
parameter results



Parameter selection list

Tolerance
input list



Material ratio curve
(BAC)

Amplitude density
curve (ADC)

Options

Battery set

E-MA-S65A

This permits measurement and recording in an environment without power connection.

- Set: AC adapter, battery, battery charger

PC card

E-MU-S50A

Approximately 500 measuring conditions and 60 important measuring data can be stored.

- Specifications: 15 MB

Small measuring stand

E-ST-S130A

Height and tilt of a tracing driver can be adjusted to suit the workpiece size

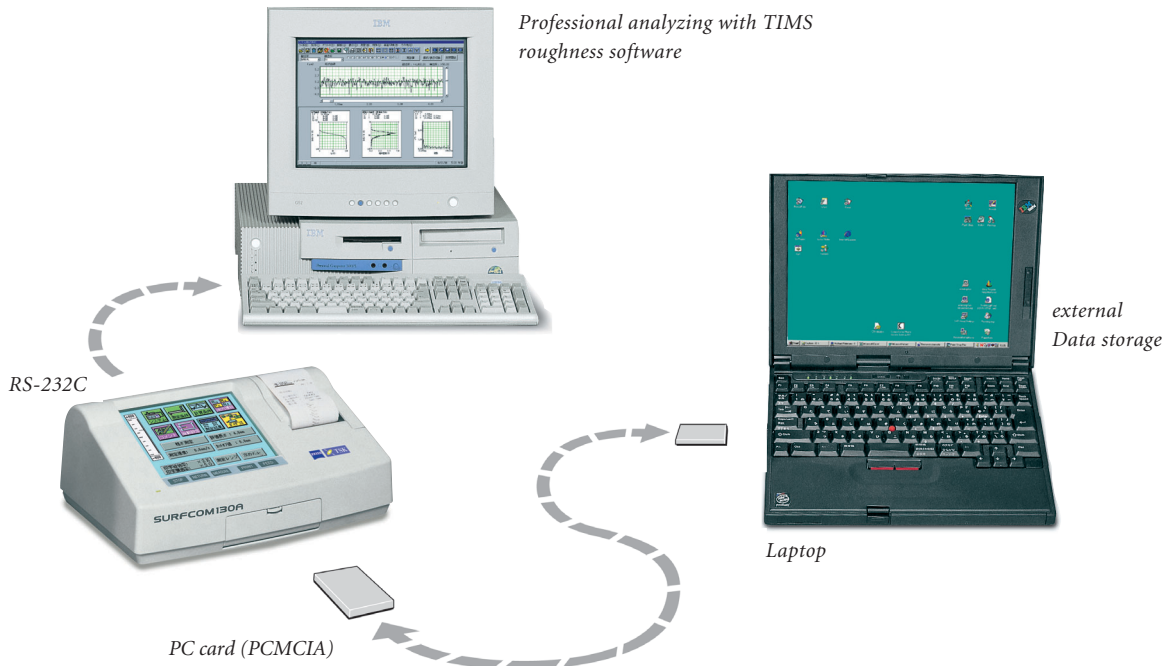
- Table size (granite): 410 x 200 mm
- Maximum measuring height: 200 mm



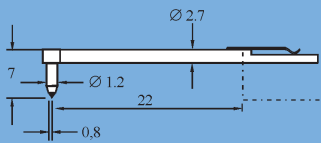
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Versatile Data Management

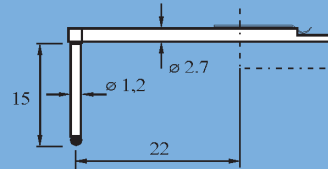
Easy data analysis



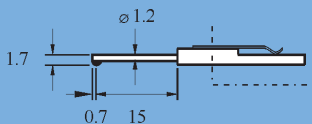
Stylus arms:



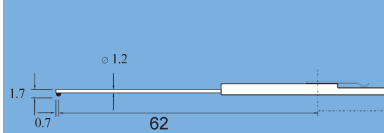
Standard stylus arm, length 22 mm; for bores $\varnothing > 7$ mm and groove depths < 5 mm. Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No. 1059-167



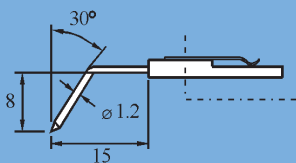
Stylus arm, length 22 mm; for groove depths < 15 mm. Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No.1079-358



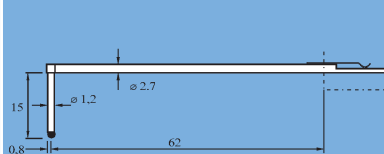
Stylus arm, length 22 mm; for bore $\varnothing > 1.8$ mm. Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No. 10759-356



Stylus arm, length 62 mm; for deep bores $\varnothing > 1.8$ mm. Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No.1084-495



Stylus arm, length 22 mm; with inclined tip; Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No. 1228-388



Stylus arm, length 62 mm; for deep bores $\varnothing > 7$ mm and groove depths < 5 mm. Measuring range $\pm 400 \mu\text{m}$
Stylus tip: $2 \mu\text{m}/60^\circ$, diamond
Cat.No.1054-833

More accessories from our extensive range on request.

Traversing unit	Surfcom 130A
Traversing length, Measuring range	50 mm
Straightness accuracy	0.3 μm / 50 mm (bandwidth)
Tracing speed	0.3 / 0.6 / 1.5 / 3.0 mm/s
Reverse speed	1 mm/s
Adjusting range in sampling direction	50 mm manual
Range of leveling adjustment	$\pm 1^\circ$
Evaluation length	max. 48 mm with 0.1 mm step
Number of sampling lengths	1 to 150, selectable
Number of sampled data points	max. 32767

Pickup system	
Measuring ranges	8, 80, 800 μm
Resolution	Range / 64000
Detection principle	LVDT
Measuring force	0.7 mN
Radius of stylus	2 μm

Data processing	
Profile type	R, P, W, Wc, Wec and DIN 4776
Filter type	Gaussian DIN 4777, DIN 4776, Phase correct 2RC, 2RC
Roughness filter cutoff value λ_c	0.008 / 0.025 / 0.08 / 0.25 / 0.8 / 2.5 / 8 mm
Waviness filter cutoff value λ_t	0.008 / 0.025 / 0.08 / 0.25 / 0.8 / 2.5 / 8 mm
Magnification	Horizontal 1 – 2000, Auto Vertical 50 – 100,000, Auto
Tilt correction method of profile	Flat mean line, First half, Latter half, Beginning & end, Curved mean line, Spline and N.C. (no correction)
Roughness parameters	Ra, Rq, Ry (RzDIN), Rp, Rv, Rc, Rz, RzISO, Rt, RmaxDIN, PC, S, RAA, RAd, RLa, RLq, Ir, RsK, Rku, tp, tp2, Rmr, Rdc, Rk, Rpk, Rvk, Mr1, Mr2, Vo, K, CNOMO-Parameters, ISO, DIN, ASME, JIS
Profile parameters	RzJ, Pt, TILT A, Step height, AVH, Hmax, Hmin, AREA
Waviness parameters	Wt, Wa, Wem, Wea, Wsm, ...
Averaged parameters output	possible for up to 100 times
OK/NG tolerance result	possible
output of parameters	
Measuring graphs	Profile curves, Abbott's bearing curve, Amplitude density curve, Fourier analysis
Interruption interpolation	possible
Teaching / playback function	possible
Units	μm , μinch selectable
Display unit	6.5 in. colour graphic LCD (touch-screen)
Printing	50 mm width graphic print on 60 mm thermal paper
Data output & input	RS-232C
IC memory card storage	measuring conditions & measured data in a card

Miscellaneous	
Power supply	100 / 110 / 120 / 127 / 220 / 240 V ($\pm 10\%$, 50/60 Hz). (Battery: optional)
Power consumption	approx. 35 VA
Dimensions, weight	Width = 650 mm Depth = 410 mm Height = 125 mm Weight approx. 6 kg
Standard accessories	Calibration & stylus check specimen and tools

Subject to modification

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