

# Handysurf The Small, Portable Surface Measuring Unit



- Easy operation
- Instant data processing and display
- Data memory



We make it visible.

# Handysurf: Extremely versatile surface inspection

Whether used in the receiving inspection, production or final inspection, Handysurf makes quality assurance incredibly flexible. Because you take this compact, hand-held surface tester to where the part is. There is no easier way of measuring, evaluating and documenting surface roughness than with Handysurf. Why not try for yourself.



*A range of easily exchangeable pick-up systems is available for different applications.*

### **AI function for convenient operation**

Automatic, standardized setting of measuring range, evaluation length and cut-off value, optimized for the surface to be measured.

### **Complies with all customary surface standards**

Standards: ISO, DIN, CNOMO, JIS and ASME. Select any one of the following seven languages: German, English, French, Italian, Spanish, Portuguese, Japanese.

### **Data memory / battery operation**

Ten complete data records can be stored in the built-in memory and recalled at any time. Battery operation (rechargeable) provides versatile use independent of the line supply.

### **Measuring in different positions**

The small and light Handysurf measures not only flat, horizontal, but also vertical and overhead surfaces. In addition, the traversing unit can be separated from the display unit and used with optional holding devices for more flexible operation.

### **Direct data transfer to the PC**

The RS 232C serial interface is used to transfer measured data, parameters and profile points directly to the PC.

**Übersetzung fehlt!**



*Integration der Rauheits-Messergebnisse in Zeiss CALYPSO-Software*

### **E-ST-MAC magnetic stand**

Mount for 6 mm dia.

0102050:

Permits measurement at different levels and angles.

Granite measuring stand 625006-3403

### **DT57506 extension**

The pick-up arm can be extended by 50 mm, e.g. for the measurement of deep bores.

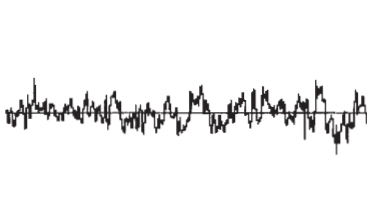
### **DT57507 extension adapter**

The extension offset by 90° permits lateral probing.



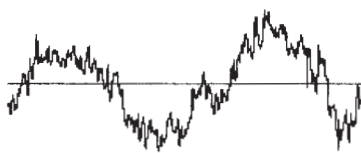
# Easy operation

*Thermal printer  
(high-speed) with  
high resolution*



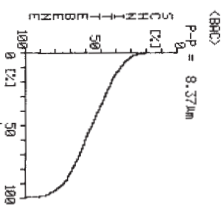
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H-LEBENS = 2000(AU/TO)
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P-P = 8.571um
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**Surface attachment E-WJ-S88A**  
The attachment permits freehanded measurement of flat surfaces.

**Shaft attachment E-WJ-S85A**  
The attachment permits freehanded measurement of shafts and cylinders.

**Orthogonal attachment E-WJ-S86A**  
This device permits reliable alignment at right angles to the seating surface.

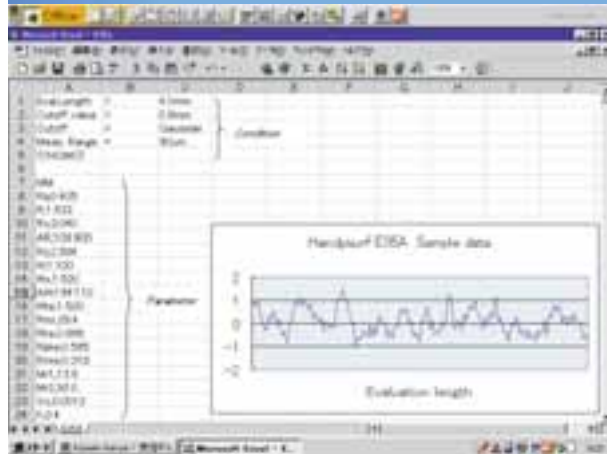


*Direct data output  
on laptop/PC*



*Data processing:*

- Excel
- TIMS roughness software



#### **E-35A Drive: Standard Type**

Popular standard type for on-site measuring.  
Power functions in a compact design.  
Large memory capacity holds data for 10 measurements.  
Max. measuring range: 12.5 mm



#### **E-40A Drive: Retraction Type**

Detector retracts during measuring standby and after measuring is complete.  
Reduces the risk of probe and pickup damage.  
Supports use of pickup with automated devices built-in.  
Retraction amount: 1.5 mm  
Max. measuring range: 12.5 mm



#### **E-45A Drive: Horizontal Tracing Type**

Tight location type for crankshaft pins, journals, etc.  
Allows highly efficient axial direction measuring using tight location horizontal tracing, which is difficult to accomplish using conventional measuring methods.

Max. measuring range: 4.0 mm

Measuring speed: 0.3 mm/s

\*E-45 cannot be built-in to the main unit.

# Specifications

Model	Handysurf E-35B Handysurf E-40A Handysurf E-45A		
<b>Measuring Range</b>	Z-axis (vertical) X-axis (horizontal)		± 160 µm X-axis 12.5 mm Y-axis 4.0 mm
<b>Resolution</b>	Z-axis (vertical)		0.01 µm/± 20 µm – 0.08 µm/± 160 µm
<b>Analysis items</b>	Standards	Complies with JIS-2001, JIS-1994, JIS-1982, ISO-1997, ISO-1984, DIN-1990, ASME-1995, CNOMO	
<b>Parameters</b>	JIS-2001	Pt, Ra, Rq, Rz, Rzmax, Rp, Rt, R3z, RSm, Pc, Rk, Rpk, Rvk, Mr1, Mr2, VO, K, Rmr	
	Motif	R, Rx, AR, W, Wx, AW, Wte	
<b>Evaluation curves</b>		Section profile curve, roughness curve, ISO 13565 special curve, roughness motif curve, waviness motif curve, envelope waviness curve	
<b>Filter</b>	Cutt-off Cut-off values	Gaussian filter, 2RC filter λc: 0.08, 0.25, 0.8, 2.5 mm, λs: 2.5, 8 µm	
<b>Evaluation length</b>	Fixed mode Arbitrary mode	Cut-off value X 5 0.4 to 12.5 mm (unit: 0.1 mm) 0.4 to 6.1 mm (unit: 0.1 mm)	
<b>Drive speed</b>		0.6 mm/s (return speed 1 mm/s)	0.3 mm/s (return speed 0.5 mm/s)
<b>Pickup</b>	Movement system Sensing method Stylus Measuring Force Skid	Standard type  Differential inductance (displacement type) Diamond, 90° cone, 5 µmR 4 mN or less Sapphire, 32 mmR (trace direction)	Retraction type Horizontal tracing type
<b>Dimensions and weight</b>	Power source Power consumption Weight External dimensions	Built-in rechargeable battery (charged with AC adapter) Approx. 1 VA Approx.. 600 g 210 (W) x 70 (D) x 60 (H) mm	
<b>Standard accessories</b>		Reference specimen (E-MC-S24B), rear adjustment piece (E-WJ-S64A), extension cable (E-SC-S255A), handy case (E-MA-S35A), AC adapter, instruction manual	

## Printer (Option)

<b>Name</b>	Compact Printer II		
<b>Model</b>	E-RC-S25A (DPU-H245)		
<b>Printing method</b>	Thermal line dot		
<b>Recording curves</b>	Section profile curve, roughness curve, load curve, roughness motif curve, waviness motif curve, envelope waviness curve		
<b>Recording magnification</b>	Vertical direction (V) Horizontal direction (H)	100, 200, 500, 1 K, 2 K, 5 K, 10 K, AUTO 1, 2, 5, 10, 20, 50, 100, 200, AUTO	
<b>Dimensions and weight</b>	Weight External dimensions	Approx. 390 g 140 (W) x 100 (D) x 40 (H) mm	
<b>Accessories</b>	Recording paper: E-CH-S25A, Connection cable: E-SC-S245A		

## Pickups Specifications

Model	E-DT-SM10A	E-DT-SM11A	E-DT-SM12A	E-DT-SM13A
<b>Application</b>	General measuring (standard)	Small hole (minimum i.d. Ø 6 mm)	Extra small hole (minimum i.d. Ø 3 mm)	Depth grooves (maximum depth 7 mm)
<b>Measuring force</b>	4 mN or less	4 mN or less	4 mN or less	4 mN or less
<b>Probe configuration</b>	5 µmR Diamond, 90° cone	5 µmR Diamond, 90° cone	5 µmR Diamond, 90° cone	5 µmR Diamond, 90° cone
<b>Skid</b>	Sapphire Trace direction: 32 mmR	Sapphire Trace direction: 32 mmR	Sapphire Trace direction: 32 mmR	Sapphire Trace direction: 32 mmR

External dimensions



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