

# 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

Used for the inspection of incoming goods, in production or in final assembly, Handysurf makes quality assurance incredibly flexible. You take this compact, hand-held surface tester to the part, and not vice versa. There is no easier way to measure, evaluate and document surface roughness than with Handysurf. See for yourself.

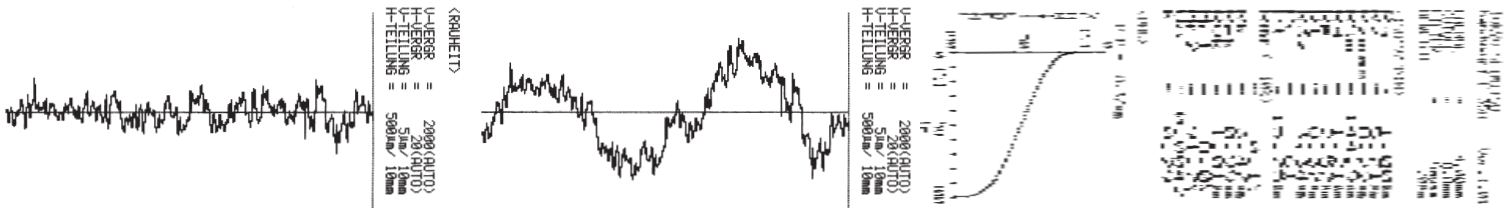


*A range of easily exchangeable pick-up systems is available for different applications.*



# Easy operation

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



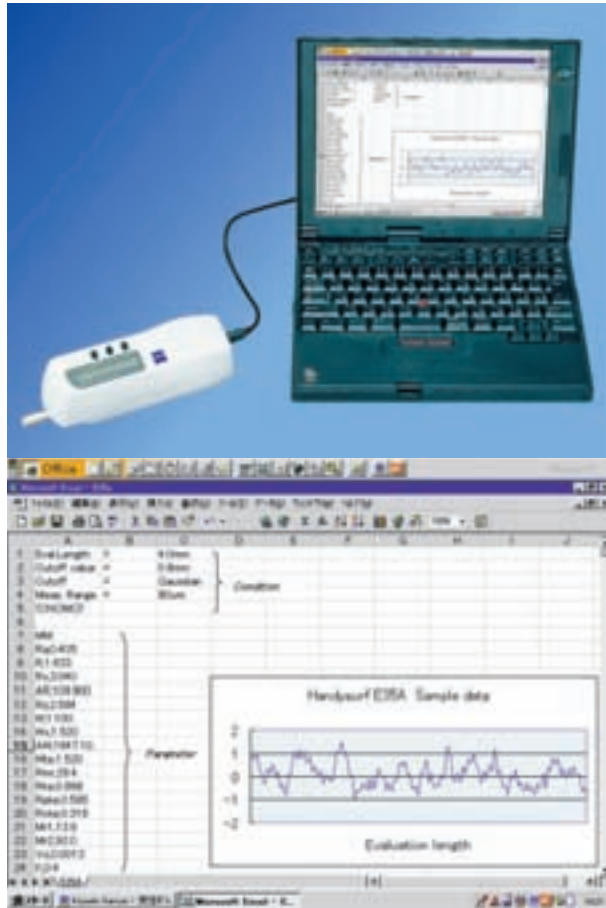
*E-WJ-S88A surface attachment  
Permits freehand measurement of flat  
surfaces.*

*E-WJ-S85A shaft attachment  
Permits freehand measurement of shafts  
and cylinders.*

*E-WJ-S86A orthogonal attachment  
Permits reliable alignment at right angles  
to the seating surface.*



*Direct data output  
to a 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 standby and after measuring is complete.  
Reduces the risk of probe and pickup damage.  
Supports use of pickup with automated, integrated devices.  
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 measurements 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 integrated into 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>	Cut-off	Gaussian filter, 2RC filter	
	Cut-off values	λc: 0.08, 0.25, 0.8, 2.5 mm, λs: 2.5, 8 µm	
<b>Evaluation length</b>	Fixed mode	Cut-off value X 5	
	Arbitrary mode	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	Standard type	Retraction type Horizontal tracing type
	Sensing method	Differential inductance (displacement type)	
	Stylus	Diamond, 90° cone, 5 µmR	
	Measuring force	4 mN or less	
	Skid	Sapphire, 32 mmR (trace direction)	
<b>Dimensions and weight</b>	Power source	Integrated rechargeable battery (charged with AC adapter)	
	Power consumption	Approx. 1 VA	
	Weight	Approx. 600 g	
	External dimensions	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)	100, 200, 500, 1 K, 2 K, 5 K, 10 K, AUTO	
	Horizontal direction (H)	1, 2, 5, 10, 20, 50, 100, 200, AUTO	
<b>Dimensions and weight</b>	Weight	Approx. 390 g	
	External dimensions	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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