English

Portable Surface Texture
Measuring Instrument

HANDYSURF+
35 | 40 | 45

ACCRETECH | EUROPE

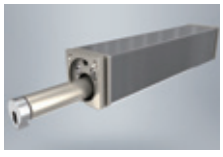
New HANDYSURF+, reborn with sophisticated design
Portable surface texture measuring instrument for global use responding to diverse everyday needs

HANDYSURF+ NEW

High resolution with wide measuring range
No need to set up measuring range

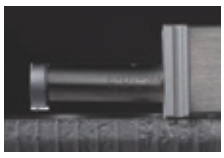
The previous HANDYSURF required setting of a narrow measuring range when measuring with a high resolution, but HANDYSURF+has evolved! The instrument has the Z direction measuring range of 370 µm, which is the widest in class, and achieved a resolution as high as 0.0007 µm over the entire range.

Select from 3 HANDYSURF+ driver units, according to workpiece and measurement location



35 (Standard type)

The standard-type measurable with different attitudes including horizontal, inclined, vertical and ceiling surfaces.



40 (Retract type)

Retract-type that reduces damage to the stylus and pickup by raising the pickup while waiting for measurement or at ending.
It can be used as a detector incorporated into an automatic machine.

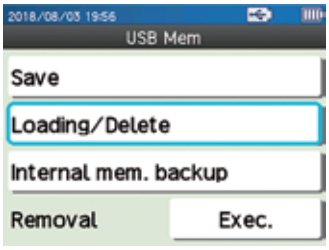
45 (transverse trace-type)

The transverse trace-type where the pickup moves sideways. Narrow areas, such as crankshaft pins and journals, that were difficult to measure before can now be measured.

Connectable to the compact printer, USB memory stick and PC with built-in USB connector

With the USB connector, it is possible to print measurement results to the optional compact printer, save measurement conditions and results on USB memory sticks and recharge the instrument from the USB port of a PC or with a USB battery.

Compact Printer (Option)



By connecting to the USB memory stick (option), it is possible to save and read measurement conditions and results.

Superior Operability

2.4 inch color LCD has significantly improved the visibility.
Moreover, 6 buttons and newly developed UI have achieved simple and intuitive operations.

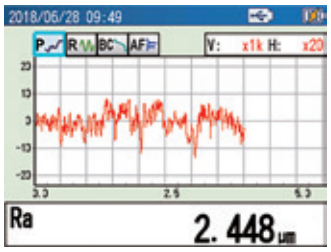
Home screen

Menu screen

Measurement condition setting display

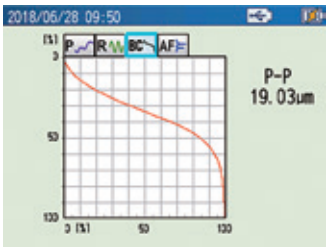
Multiple analysis capabilities

Graphic representation of measurement results enables their on-site verification with parameter and waveform. Moreover, despite being a portable instrument, it is capable of a variety of analyses including analyses of BAC, ADC, peak count and motifs. By setting the conditions in advance, OK/NG judgment can be performed automatically.

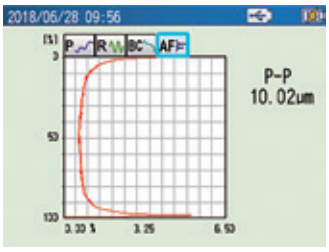


Example of surface roughness (Ra) measurement

Example of OK/NG judgment of measurement result



Example of BAC analysis

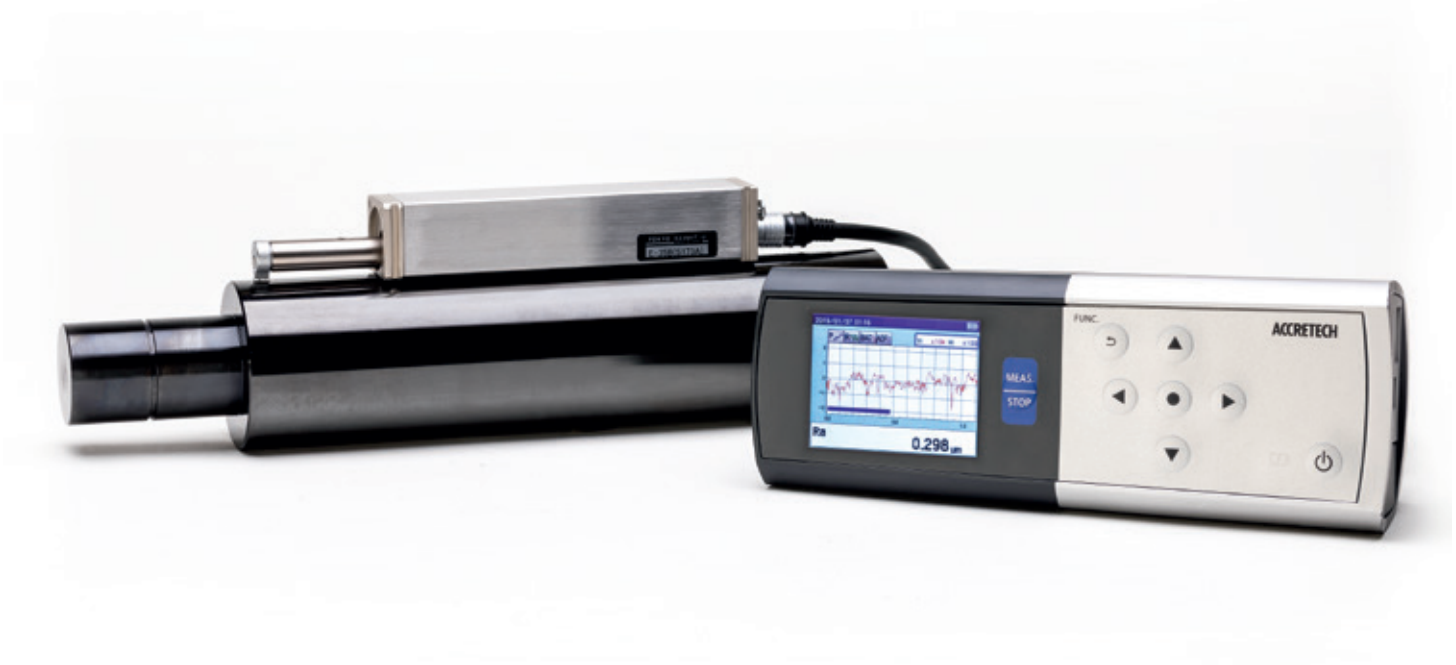


Example of ADC analysis

Display availible in 20 languages
Multi-language support available worldwide

20 European and Asian languages including English, German and French are provided as standard. Display language can be easily and quickly changed by menu options.

English
German
French
Italy
Spanish
Portuguese
Czech
Polish
Hungarian
Turkish
Swedish
Dutch
Japanese
Chinese
Traditional Chinese
Simplified Chinese
Korean
Thai
Malay
Vietnamese
Indonesian



Specifications

Model			HANDYSURF+				
			35		40		45
			Tip radius 5 µm	Tip radius 2 µm	Tip radius 5 µm	Tip radius 2 µm	Tip radius 5 µm
Measurement range	Z direction		-210 to +160 µm				
	Drive axis		X direction 16 mm				Y direction 4 mm
Tracing Driver	Movement type		Standard type		Retraction type		Horizontal tracing type
	Evaluation Length		0.2 to 16 mm				0.2 mm to 4.0 mm
	Measurement speed		0.5, 0.6, 0.75, 1.0 mm/s				0.6 mm/s
Pickup	Sensing type		Differential inductance				
	Measurement Method		Skid				
	Z direction resolution		0.0007 µm/-210 to +160 µm				
	Model		E-DT-SM10A	E-DT-SM49A	E-DT-SM10A	E-DT-SM49A	E-DT-SM39A
	Stylus	Measurement force	4 mN	0.75 mN	4 mN	0.75 mN	4 mN
		Tip radius	r_{tip} = 5 µm	r_{tip} = 2 µm	r_{tip} = 5 µm	r_{tip} = 2 µm	r_{tip} = 5 µm
		Tip angle	90°cone	60°cone	90°cone	60°cone	90°cone
		tip material	Diamond				
Analysis item	Calculation Standards		Comply with JIS2013/2001, JIS1994, JIS1982, ISO1997/2009, ISO13565, DIN1990, ASME2002/2009, ASME1995, CNOMO				
	Parameter	Profile Curve	Pt, Rmax, Rz, Rk, Rpk, Rvk, Mr1, Mr2, Vo, K, tp				
		Roughness Curve	Ra, Rq, Rz, Rv, Rc, Rt, RSm, RΔq, Rsk, Rku, Rmr(c), Rmr, RδcRz94, R3z, RΔa, Ry, Sm, S, tp, PC, RPc JIS, RPc ISO, RPc EN, Pc, PPI, Rp, Rmax, Mr1, Mr2, Rpk, Rvk, Rk, Vo, K, A1, A2, Rpm, Δa, Δq, Htp				
		Motif	R, Rx, AR, W, Wx, AW, Rke, Rpke, Rvke, NCRX, NR, CPM, SR, SAR, Wte, NW, SAW, SW, Mr1e, Mr2e, Vo, K				
	Evaluation Curve		Profile Curve, Roughness Curve, ISO13565Special Roughness Curve, Roughness motif curve, Waviness motif curve, Upper envelope waviness curve				
	Characteristics graph		Bearing area curve, Amplitude distribution curve				
Filter	Filter type		Gaussian, 2RC (phase compensation), 2RC (non-phase compensation)				
	Cutoff value	λc	0.08, 0.25, 0.8, 2.5 mm				
		λs	None, 2.5, 8 µm				
Amplification indicator	Display		2.4-inch color liquid crystal panel				
	Data output		USB connectors for USB memory/printer connection x 1, Micro USB connector for USB communication x 1				
	Print output		Optional (external printer unit) / Thermal recording paper width: 58 mm (recording width: 48 mm)				
	Language		English, German, French, Italian, Spanish, Portuguese, Czech, Polish, Hungarian, Turkish, Swedish, Dutch, Japanese, Chinese (Traditional Chinese/Simplified Chinese), Korean, Thai, Malay, Vietnamese, Indonesian,				
Specifications	Power Supply	Charging	Built-in battery (to be charged using AC adaptor, PC USB port, USB battery), charging period: 4 hours (about 1000 measurements can be take when fully charged)				
		Voltage, frequency	AC100 to 240 V ±10%, 50/60 Hz, Single phase (Included AC adapter)				
		Power consumption	Maximum 10 W				
	External dimensions (W x D x H) / Weight		Amplification indicator: 184.5 x 68 x 57.4 mm/about 500 g for the entire system				