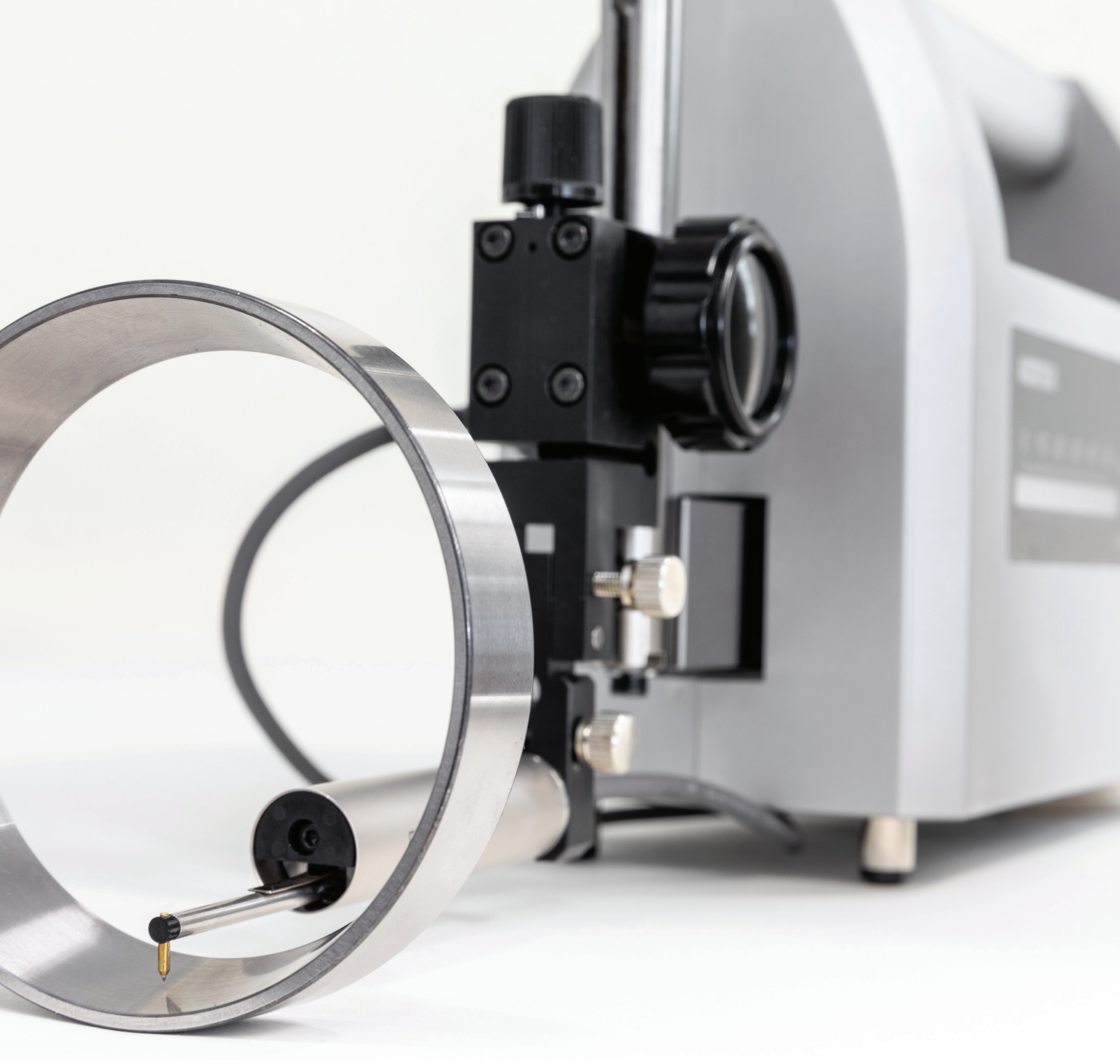

SURFCOM TOUCH

Intuitively Operated Surface Texture Measuring Instruments

ZEISS

SURFCOM TOUCH 50

Surface roughness and straightness in one compact machine

Skidless measurement with a high performance pickup while having high resolution and with a wide measuring range. Various types of workpieces can be measured by changing the stylus for deep, long, or small holes or a round surface.

Extended Z-axis measurement range from 800 to 1,000 µm

The high performance pickup with a measurement range of 1,000 µm and a Z-axis minimum resolution of 0.0001 µm allows for wide-range and high resolution skidless measurement. In addition to a flat surface, the roughness or waviness on an undulating surface such as a stepped or round surface can be evaluated with one trace.

A compact high performance tracing driver

Retract-type that reduces damage to the stylus and pickup by raising the pickup while waiting for measurement or at the end.

A handy-type driver can be attached

SURFCOM TOUCH 50 can be connected with a handytype tracing driver*.

Advantages

Suited for measuring cylindrical workpieces, a tracing driver can be placed on workpieces by using an optional roll footing.

Technical data summary	SURFCOM TOUCH 50
Z direction	±500 µm
X direction	50 mm
Evaluation length	0.1 to 50 mm
Straightness accuracy	0.3 µm/50 mm
Detector vertical movement range	50 mm
Measurement Speed	0.15, 0.3, 0.6, 1.5, 3 / 0.05, 0.1, 0.2, 0.5, 1 mm/s (Switching)

* Tracing driver attached to SURFCOM TOUCH 35/40/45, HANDYSURF E-35B/40A/45A, and SURFCOM FLEX-35B/40A/45A.
An optional dedicated cable is required for connection.

SURFCOM TOUCH COMMON FUNCTIONS

Intuitive and easy-to-use screen for condition setting, calibration, measurement and analysis

An amplifier with a 7-inch wide touch panel and a new interface provides higher operability. Easy-to-use operation eliminates the need of instructions.

Main Screen

- Settings can be performed such as language, icon layout, management of internal/USB memories.

Advantages

- Multi-language support available worldwide
- Easy-to-follow user's guide/quick reference guide
- USB/micro USB ports as standard equipment
- Measurement results can be printed quickly

Control screen of the driver

- It shows the level meter (Z) (contact level of the stylus with the workpiece), and horizontal (X) and vertical (C) positions of the tracing driver. (Z is shown on all models, X on TOUCH 50/550, C on TOUCH 550)
- The pickup can be moved horizontally and the tracing driver can be moved vertically from the screen. (TOUCH 50 can move the pickup, and TOUCH 550 can move the pickup and tracing driver) Two moving speeds are available for selection.

Setting Condition Screen
Parameter Selection Screen
Output Item Screen

- Output items can be set for printing with the small printer attached to SURFCOM TOUCH*.

**Some TOUCH 35, 40, 45 and 50 types have no printer.*

Calibration Screen

- Calibration can be performed before measurement.
- Any wear or chip of the stylus tip can be checked with the waveform and values.

Measurement Result Screen

- Measurement results are shown in waveform and selected parameters. Horizontal and vertical display magnification for waves can be changed intuitively with pinch-in or pinchout. No need to specify magnification in number (although it is also possible).
- OK/NG is easily identified by setting acceptance/rejection criteria in advance.

Technical Data

SURFCOM TOUCH 50

Model			SURFCOM TOUCH 50
Measurement range			
Z direction			±500 µm
X direction			50 mm
Tracing Driver			
Evaluation Length			0.1 to 50 mm
Straightness accuracy			0.3 µm/50 mm
Detector vertical movement volume			50 mm
Measurement Speed			0.15, 0.3, 0.6, 1.5, 3 / 0.05, 0.1, 0.2, 0.5, 1 mm/s (Switching)
Pickup			
Sensing type			Differential inductance
Measurement Method			Skidless/Skid (optional)
Z direction resolution			0.0001 µm/±40 µm, 0.00125 µm/±500 µm
Model			DM43801
Stylus (standard accessory)	Measurement force		0.75 mN
	Radius		rtip = 2 µm
	Angle		60°cone
	Material		Diamond
Analysis item			
Calculation Standards			Comply with ISO 4287-1997/2009, ISO 13565, ASME B46.1-2002/2009, JIS2013/2001, JIS1994, JIS1982, CNOMO and further standards
Characteristics graph	Parameter		
		Profile Curve	Pa, Pq, Pp, Pv, Pc, PSm, PΔq, PPc, Psk, Pku, Pt, Pmr(c), Pmr, Pδc, Rz82, TILTA, AVH, Hmax, Hmin, AREA, Rmax, Rz, Sm, Δa, Δq, λa, λq, Lr, Rsk, Rku, Rk, Rpk, Rvk, Mr1, Mr2, Vo, K, tp, tp2, Hp
		Roughness Curve	Ra, Rq, Rz, Rv, Rc, Rt, RSm, RΔq, Rsk, Rku, Rmr(c), Rmr, Rδc, Rz94, R3z, RΔa, Rλa, Rλq, Ry, Lr, Sm, S, tp, tp2, PC, RPc JIS, RPc ISO, RPc EN, Pc, PPI, Rp, Rmax, Rz.I, RS, Rmr2, Mr1, Mr2, Rpk, Rvk, Rk, Vo, K, A1, A2, Rpm, Δa, Δq, Htp
		Waviness Profile Curve	Wa, Wq, Wt, Wp, Wv, WSm, WPc, Wsk, Wmr(c), Wmr, Wδc, Wz, Wc, Wku, WΔq, WEM, WEA, WE-a, WE-q, WE-p, WE-v, WE-Sm, WEC-q, WEC-m, WEC-p, WEC-v, WEC-Sm
		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, Filtered Waviness Curve, Waviness Profile Curve, ISO13565 Special Roughness Curve, Roughness motif curve, Waviness motif curve, Upper envelope waviness curve, Rolling Circle Waviness Curve
Characteristics graph			Abbot curve, Amplitude density function, Power graph
Filter type			
Filter type			Gaussian, 2RC (phase compensation), 2RC (non-phase compensation)
Cutoff value	λc		0.08, 0.25, 0.8, 2.5, 8, 25 mm
	λs		None, 2.5, 8, 25 µm
Amplification indicator			
Display			7-inch color liquid crystal touch panel
Data output			USB connectors for USB memory x 2 (model without printer) x 1 (model with printer), Micro USB connector for USB communication x 1
Print output			Standard function for models with printer and optional for models without printer (external printer unit)/Thermal recording paper width: 58 mm (recording width: 48 mm)
Language			Japanese, English, Chinese (Traditional Chinese/Simplified Chinese), Korean, Thai, Malay, Vietnamese, Indonesian, German, French, Italian, Czech, Polish, Hungarian, Turkish, Swedish, Dutch, Spanish, Portuguese
Specifications			
Power Supply	Charging		Built-in battery (to be charged using AC adaptor), charging period: 3 hours (about 600 measurements can be take when fully charged)
	Power Supply		AC100 to 240 V ±10%, 50/60 Hz, Single phase
	Power consumption		Maximum 80 VA
External dimensions (W x D x H)/Weight			
Printer-Equipped Model			Amplification indicator : 320 x 167 x 44 mm/about 4.2 kg for the entire system
Models without Printer			Amplification indicator : 252 x 167 x 44 mm/about 3.8 kg for the entire system
Standard accessories			Roughness specimen (E-MC-S24C), touch pen (E-MA-S112A), printing paper (E-CH-S25A)*1, instruction manuals, SupportWare II

*1 For models with printer only