# SURFCOM TOUCH 35/40/45

## Portable-type entry model in the SURFCOM TOUCH series useful in any measurement situation

Small and light tracing drivers selectable for application.
In addition to horizontal surface, measurement on vertical surface with the driver and in narrow areas with transverse trace can be performed.
Skid-measurement-type for measurement with different attitudes.

### Palm-sized tracing drivers selectable for workpieces and measurement areas

**35 (Standard type)**

The standard-type with different attitudes to measure horizontal, inclined, vertical and ceiling surfaces.

**40 (Retraction 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 (Horizontal tracing 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.

### Optional pickups allow for various types of measurement (See next page)

The pickup, that comes in contact with the workpiece is replaceable.
Various types of workpieces can be measured by using optional pickups such as those for small or extremely small holes, deep grooves, etc.

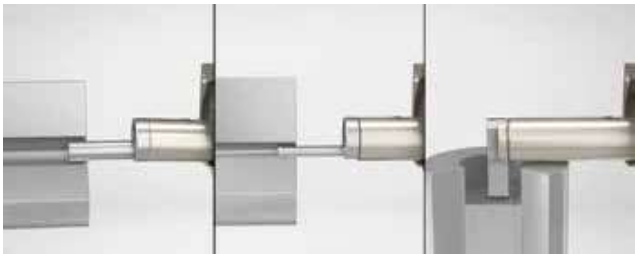
Replaceable Displacement Pickup

Usage example of dedicated calibration plate

### A calibration plate provided as standard accessory makes calibration work easy

A roughness specimen for surface texture and a driver selected above are set to the standard calibration plate. Calibration can be conducted easily without need of height and inclination adjustment of the driver as before.

## Usage example of various pickup (Option)



Pickup for fine hole
E-DT-SM11B / SM50B

Pickup for extra fine hole
E-DT-SM12A / SM51B

Pickup for deep groove
E-DT-SM13A / SM52B

## Usage example of various adapter (Option)

Long Hole Extension Adapter
DM57506

Adapter for horizontal measurement
DM57507

Adapter for bore measurement
E-WJ-S86A

## Usage example of magnetic stand (Option)


## Nose Piece for Flat Surfaces / Cylinders (Option)

For Flat Surfaces E-WJ-S88A
For Cylinders E-WJ-S85A

Enables handheld measurement of planes and cylinders with very small surfaces to be measured.

# SURFCOM TOUCH 35/40/45 Specifications

| Model | | | SURFCOM TOUCH | | | | |
|---|---|---|---|---|---|---|---|
| | | | 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 16 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 | 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 | | | | |
| | | 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 | | Abbot curve, Amplitude density function, Power graph | | | | |
| 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, 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 80VA | | | | |
| | External dimensions (W x D x H)/Weight | Printer-Equipped Model | Amplification indicator: 320 x 167 x 44 mm/about 2 kg for the entire system | | | | |
| | | Models without printer | Amplification indicator: 252 x 167 x 44 mm/about 1.6 kg for the entire system | | | | |
| Standard accessories | | | Roughness specimen (E-MC-S109A: For Japan (indication in millimeters), E-MC-S24D: For outside Japan (indication in millimeters / inches)), calibration table (E-WJ-S1045B), touch pen (E-MA-S112A), printing paper (E-CH-S25A)*1, instruction manuals, SupportWare II, nosepiece (V-type) (E-WJ-S536A)*2 | | | | |

*1 For models with printer only
*2 For SURFCOM TOUCH 45 only