MarSurf PS 10 Set

Entry Level Device in Surface Measurement Technology

Mahr's entry-level surface metrology instrument is intuitive and simple to use. The **4.3" TFT touch display** can be turned in any direction.

The **removable drive unit** makes the MarSurf PS 10 flexible in production and manufacturing. One new feature is the integrated but **removable calibration standard.**

Measuring records can be saved in the instrument itself as PDF files. Alternatively, they can be **transferred using MarCom.**

On-site roughness measurement.
Measuring in production with the MarSurf PS 10

Other practical examples using the MarSurf PS 10

MarSurf PS 10 Set

Extremely easy to operate with detailed profile display

The large 4.3" high-resolution and backlit TFT touch display allows intuitive operation (just like a smartphone) and precise representation of the measuring profile.

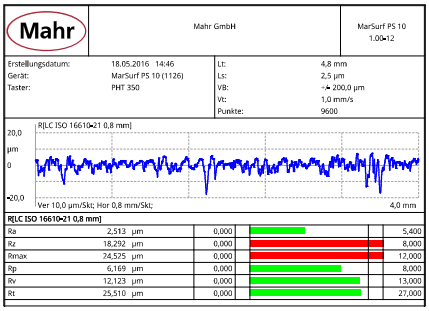
Flexible use

The removable drive unit, in conjunction with the optional hand-held support, lends this instrument added versatility where space is limited, e.g. in holes or when measuring small parts.

Perfect evaluation and documentation

The PS 10 automatically creates a PDF measuring record without the need for any additional software. The measuring record can be easily transferred to a PC via the USB port.

Alternatively, measuring data can be evaluated in the MarSurf XR 1 and XR 20 roughness software or the measurements can be sent to Excel or SPC programs using the MarCom software.



Always at hand

The calibration standard stays in the instrument and can be checked at any time.

MarSurf PS 10 "SMAHRT Surf"

Easy, smart and mobile

Applications

- On-site surface roughness measurement
- Measuring during the production process
- Universal use on processing machinery
- For incoming goods inspection

Additional version with transverse drive unit MarSurf PS 10 C2 available.

Features

- Small and lightweight; ideal as mobile surface roughness measuring instruments
- Large illuminated 4.3" TFT touch display
- Display can be rotated
- Simple to operate (smartphone!)
- Increased flexibility due to the removable drive unit
- Start button is simultaneously the home button for direct access to the start screen
- Direct access to your customized functions with favorites
- 31 parameters: offer the same range of functions as a laboratory instrument
- Data is saved in the device, e.g. TXT, X3P, CSV and PDF file
- Evaluation of most common parameters conforming to standards and in accordance to ISO /JIS as well as parameter lists
- Integrated, removable roughness standard for the standard pick-up PHT 6-350
- Dynamic calibration function
- Select standards (DIN-ISO/JIS/ASME /MOTIF)
- Automatic cutoff selection (patented) to ensure correct measuring results
- Individual sampling lengths and shortened cutoff can be selected
- Setting of unsymmetric intersection lines for peak count calculation
- Phase-correct profile filter (Gaussian filter) acc. to DIN EN ISO 16610-21 (before DIN EN ISO 11562), special filter acc. to DIN EN ISO 13565-1, ls-filter acc. to DIN EN ISO 3274 (disengageable)
- Tolerance monitoring
- Lock settings and/or password protection
- Date and/or time of measurement
- Integrated memory to store approx. 500000 results, 3900 profiles and 1500 PDF files
- Data transmission via the USB interface to a PC or via microSD-Card
- MarConnect interface, to connect e.g. a PC via the MarCom Software
- Main free operation: the built-in rechargeable battery can used for up to 1200 measurements before being recharged

Supplied with:

- MarSurf PS 10 base unit
- Drive unit (removable)
- 1 standard pick-up PHT 6-350 (conforming to standards)
- Built-in battery
- Roughness standard integrated (removable) into base unit incl. Mahr calibration certificate
- Pick-up protection
- Charger / mains adapter with 3 mains power adapters
- Operating instructions
- Carrying case with shoulder strap
- USB cable
- Extension cable drive unit
- Height adjustment accessory (integrated)

MarSurf PS 10 "SMAHRT Surf"

Technical Data

MarSurf PS 10		
Unit of measurement		Metric / inch
Measuring principle		Stylus method
Pick-up		Inductive skidded pick-up, 2 µm (80 µin) stylus tip, measuring force ca. 0.7 mN
Parameters	DIN / ISO	Ra, Rq, Rz, Rmax, Rp, Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RPc, Rmr, RSm, Rsk, CR, CF, CL, R, AR, Rx, R3z
	JIS	Ra, Rq, Ry (equiv. to Rz), RzJIS, tp (equiv. to Rmr), RSm, S
	ASME	Rp, Rpm, RPc, Rsk, tp (enquir. to Rmr)
	MOTIF	R, AR, Rx, CR, CF, CL
Languages		English, German, French, Italian, Spanish, Portuguese, Dutch, Swedish, Czech, Polish, Russian, Japanese, Chinese, Korean, Turkish, Hungary, Romanian
Measuring range		350 µm
Profile resolution		8 nm
Filter*		Phase-correct profile filter (Gaussian filter) according to DIN EN ISO 16610-21 (before ISO 11562) Special filter according to DIN EN ISO 13565-1, ls filter according to DIN EN ISO 3274 (can be disabled)
Cutoff lc*	mm (inch)	0.25 / 0.8 / 2.5 (0.010" / 0.030" /0.100"); automatic
Traversing length Lt*	mm (inch)	1.5/ 4.8 /15 (0.06" / 0.192" / 0.6"); automatic
Traversing length (according to MOTIF)	mm (inch)	1 / 2 / 4 / 8 / 12 / 16 (0.040" / 0.080" / 0.160" / 0.320" / 0.480" / 0.640")
Short cutoff*		Selectable
Evaluation length ln*	mm (inch)	1.25 / 4.0 / 12.5 (0.050", 0.15", 0.50")
Number n of sampling lengths*		Selectable: 1 to 16
Calibration function		Dynamic
Memory		3900 profiles, 500000 results, 1500 pdf-files, memory can be extended with microSD-Card up to 32 GB
Additional functions		Lock settings / password potection, Date/Time
Dimensions	mm (inch)	160 × 77 × 50 (6.29" × 3.03" × 1.97")
Weight		500 g (1.10 lbs)
Rechargeable battery		Li-ion battery, 3,7 V, rating 11,6 Wh
Interfaces		USB-Device, MarConnect (RS232, USB), micro SD Slot for SD™ / SDHC-Cards up to 32 GB
Long-range power supply		100 V to 264 V
Order no.	**PS 10 Set**	**6910230**
Order no.	**PS 10 (5 µm probe tip)**	**6910232**
Order no.	**PS 10 C2 Set**	**6910235**

* in accordance with ISO/JIS

MarSurf XR 1

with Drive Unit MarSurf SD 26

Measuring station for the measurement of roughness depths, P profile and waviness with the drive unit MarSurf SD 26 and the skidless probe system BFW 250.

Special features of this measuring station include:
- Automatic zero setting
- Fast probe arm change without tools

Drive Unit MarSurf SD 26 incl. Probe System

- The **MarSurf SD 26** drive unit with built-in datum plane for precise measurement over up to 25.4 mm (1 inch)
- Rz residual values < 30 nm when tracing speed 0.1 mm/s
- Can be used horizontally, vertically and upside down
- Motorized height adjustment of the drive unit with automatic zero setting
- Measuring length 26 mm
- Measuring speed in 0.1 up to 1 mm/s
- Positioning speed in X 5 mm/s
- Height adjustment Z 7.5 mm, motorized
- Positioning speed in Z 2 mm/s
- **Skidless probe system BFW Set**
  Measuring range ± 250 µm
  ± 500 µm (with double probe arm length)
  Low tracing force of approx. 0.7 mN
  High probe linearity < 1 %
  Fast probe arm change due to magnetic probe arm holder

Measuring Station Components

Set "MarSurf XR 1" - Software and license - Drive unit adapter - USB cable	**Order no. 6268390**
Set "MarSurf SD 26" - Drive unit MarSurf SD 26 - Probe BFW-250	**Order no. 6910415**
All-In-one-PC	**Order no. 9058327**
May optionally be provided by customer according to Mahr specification	
Mount for MarSurf SD 26 on ST-G	**Order no. 6910436**
XY table CT 120	**Order no. 6710529**
Measuring stand ST-G	**Order no. 6710807**

- Granite plate 500 mm x 300 mm (L x W) with centered 10 mm T-groove
- Measuring column with manual height adjustment range of 300 mm for the drive unit