Portable roughness gauge TESA TWIN-SURF

The TESA TWIN-SURF is a compact, portable roughness tester, compatible with any articulated support and powered by a rechargeable battery that enables long-term self-sufficiency.

Its monochrome OLED display optimises power consumption and ensures high contrast for clear reading.

Simplified ergonomics with 3 buttons on the top allows the easy definition of measurement parameters, adjustment of tolerances and starting of the measurement.

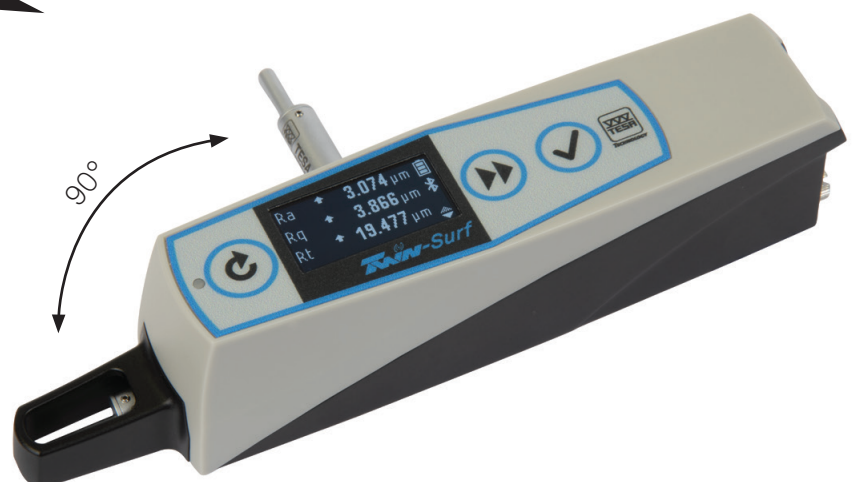Each configuration is automatically saved in the internal memory.

The probe can be rotated by 90° to enable transverse measurement and increase the measurement options.

The TESA TWIN-SURF can be connected to a PC via a USB cable to use the free TESA DATA-STUDIO software.

The Bluetooth® version allows wireless communication with a PC, tablet or smartphone equipped with the same software.

Key features:

- **Compact, light and robust (200 g)**
- **90° probe orientation for transverse measurements**
- **Storage of the measured parameters**
- **Wireless model available**
- **Free software included for creating measurement reports**

- Each measurement parameter can be activated/deactivated individually
- Adjustable upper and lower tolerance for each parameter
- Storage of the measured parameters
- Probe can be automatically returned to the starting position after each measurement
- Menu available in 9 languages: English, French, German, Italian, Spanish, Portuguese, Chinese, Japanese, Korean

TESA DATA-STUDIO software

Delivered free of charge with each TESA TWIN-SURF, the ergonomic and intuitive interface of this software integrates numerous functions.
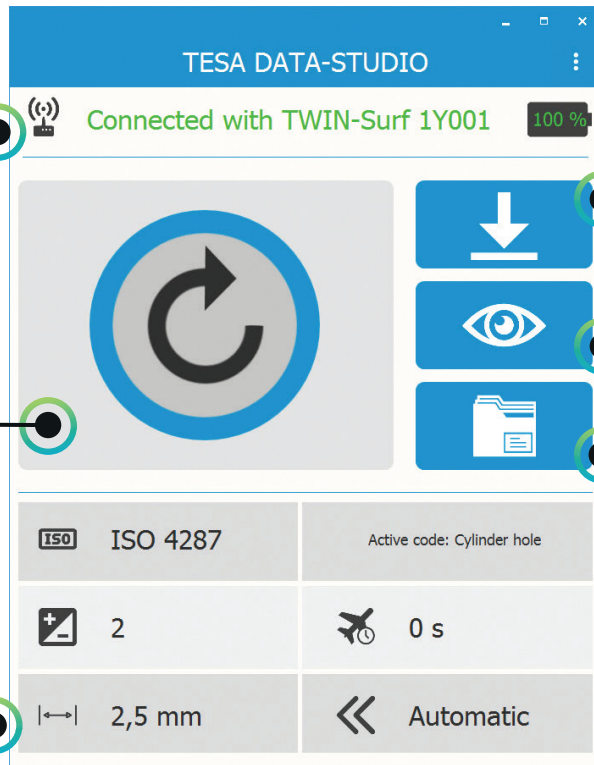
Programs (called codes) make it possible to save measurement settings that can be loaded into the instrument. Once the measurements are complete, the connected TESA TWIN-SURF enable the export of the last measurements taken. Connection to the software by USB cable or Bluetooth® (depending on the model) provides access to the following functions:

- Display of roughness profiles
- Storing of values
- Storage of codes with custom measuring settings
- Customized report in Excel or PDF with company logo
- 51 parameters available with the Premium version
- Menu available in 9 languages: English, French, German, Italian, Spanish, Portuguese, Chinese, Japanese, Korean

A Premium version with licence key is required for additional features.

TESA DATA-STUDIO	Basic version (no licence)	Premium version (with licence) Item no. 06960091
Parameters	13	51
Graphics	Roughness R	R, P, Rk
Code management	Max. 10 codes	Unlimited
Statistics	Max. 10 measurements	Unlimited

Connection status with TESA TWIN-SURF

Remote start of the measurement

Display of current settings

TESA DATA-STUDIO

Connected with TWIN-Surf 1Y001 100 %

ISO 4287   Active code: Cylinder hole

± 2   ✈ 0 s

↦ 2,5 mm   « Automatic

Download of the last measurement

Viewing of the last measurement

Library of stored measurements

Insert new Code   Save

Code name		CodeName
Picture		📁
Save profile		Don't save ⬤
Return		Automatic ⬤
Delay		2 sec
Standard		ISO4287
Unit		mm
Cutoff number		5
Cutoff length		2,5 mm
Parameters		

Export   📊 📄

Logo	TESA TECHNOLOGY ✖ 📁
Description:	Cylinder hole
Notes:	Part 21
Operator:	Fabrice
Customer:	TESA
Drawing number:	Drawing 064311
Lot:	Lot 4
Data to print	P R Rk
Charts and tables	
Picture	✖ 📁

Window for creating a new program (code) with many settings:

- Saving of roughness profile
- Delayed start of the measurement
- Selection of the standard and the unit of measurement
- Selection of roughness parameters

Window for creating a measurement report with extensive customised information:

- Excel or PDF format
- Display of company logo and application photo
- Printout of roughness parameters and profiles
- Variety of pre-configured layouts

The TESA DATA-STUDIO software allows you to download the measurement reports and view them in Excel using your tablet or Smartphone (version 06930015)

PDF report sample
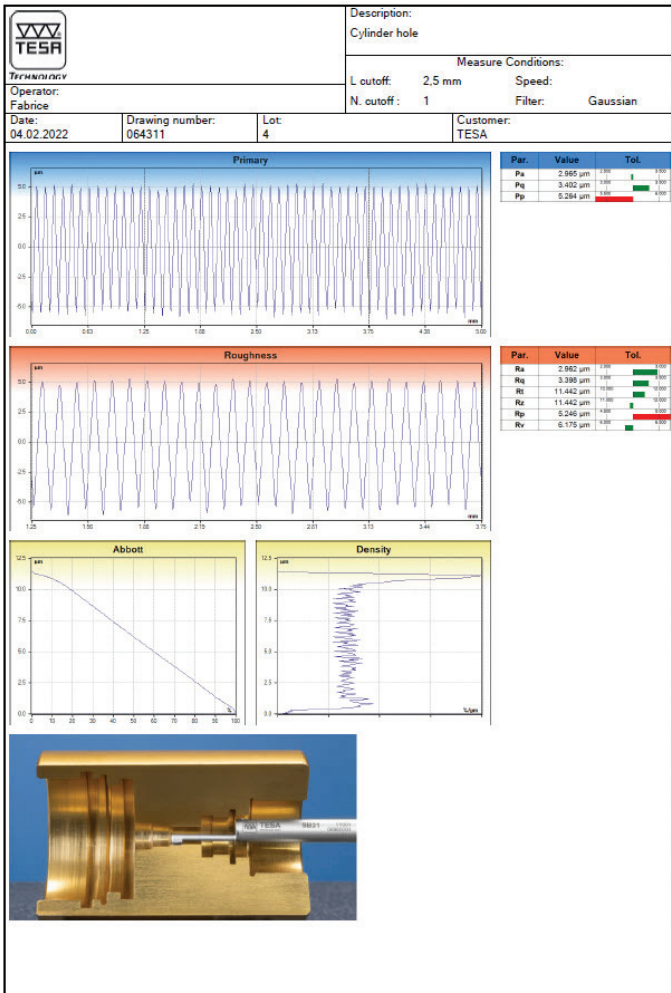
Excel report sample

	A	B	C	D	E	F
1						
2	**Measure_4372**					
3	Date:	04.02.2022				
4	Description:	Cylinder hole				
5	Operator:	Fabrice				
6	Customer:	TESA				
7	Drawing number:	064311				
8	Lot:	4				
9						
10	**Measure Conditions**					
11	Time:	14:02				
12	Standard:	ISO 4287				
13	Length:	5	mm			
14	L cutoff:	2.5	mm			
15	N. cutoff :	1				
16	Pre-post run:	Enabled				
17	Speed:					
18						
19	**Parameter**	**Value**	**Unit**	**Tol -**	**Tol +**	**Status**
20	Ra	2.962	µm	2	3	●
21	Rz	11.442	µm	11	12	●
22	Rq	3.398	µm	3	3.5	●
23	Rp	5.246	µm	4.5	5	▲
24	Rv	6.175	µm	6	6.5	●
25	Rt	11.442	µm	10	12	●
26	Pa	2.965	µm	2.5	3.5	●
27	Pq	3.402	µm	3	3.5	●
28	Pp	5.264	µm	5.5	6	▼

Scope of delivery

	TESA TWIN-SURF	TESA TWIN-SURF BT
Item no.	06930014	06930015
Bluetooth® integrated		●
TWIN-SURF portable roughness gauge	●	●
SB 51 probe (see information in 'Accessories' chapter)	●	●
Main charger with EU and US charger adaptors	●	●
Etalon de rugosité Ra = 2,97 µm	●	●
Adapter for 8-mm diameter holder	●	●
Key to remove the probe protection	●	●
USB A-C cable	●	●
USB key including: User manual, measuring report, declaration of conformity and TESA DATA-STUDIO software basic version	●	●

Technical specifications

Measured parameters	Measured parameters according to ISO 4287: Ra – Rq – Rt – Rz – Rc - Rmax - RSm - RPc Measured parameters according to ISO 12085: Pt – R – AR – Rx – PPc **Additional measured parameters with TESA DATA-STUDIO Premium software (with licence):** Measured parameters according to ISO 4287: Rp – Rv – Rsk – Rku – RΔq – RΔa – Rmr rel – Rδc – Rmr(c) Pa - Pq - Pp – Pv – Pt – Pc – RPc - R3z Psk – Pku - PSm- PΔq - Pmr rel – Pδc – Pmr (c) Rk – Rpk – Rvk - A1 – A2 - Mr1 – Mr2 Measured parameters according to ISO 12085: Rke – Rpke – Rvke - A1e – A2e – Mr1e – Mr2e
Measuring range (Z)	Ra 0 à 50 µm - Rt 0,05 à 200 µm
Total length (X)	(number of cut-offs + 1) x Lc (maximum 17,5 mm)
Traverse length (X)	Number of cut-offs x Lc
Filter λs	Λc/ λs: 30 – 100 – 300 (acc. to ISO 3274)
Resolution	0,001 µm / 0,01 µinch
Cut-off length	0,25 – 0,8 – 2,5 mm (acc. to ISO 4287) 1,5 – 2,5 – 4 – 8 – 12 – 16 mm (acc. to ISO 12085)
Number of cut-offs	1 to 5
Electronic filter	GAUSS according to ISO 11562
Maximum permissible error	0,05 µm + (5 % R), R = roughness in µm
Diamond-like stylus	R = 2 µm, 90°
Measuring force	0,75 mN (acc. to ISO 3274)
Displacement speed	0,5 – 1 mm/s (in measuring and positioning mode)
Keyboard	Three-key tactile keyboard protected against dust particles and oil splashes IP67
Time until battery fully charged	50 minutes
Power supply, battery	USB-C charger Battery 2.4 V, 750 mAh, NiMh type Main power supply 100–240 V, 50/60 Hz, maximum USB voltage 5 V
Battery life	Up to 300 measurements (depending on length of assessment)
Internal memory	< 18,000 roughness parameters (with 0.8x5 length of assessment) or 30 measurements with graphical representation
Dimensions, weight	160 x 34 x 34 mm, 200 g
Countries for which the wireless transmitter is approved (for TWIN-SURF BT 06930015)	EU, USA, Canada, Japan, Taiwan, South Korea, Brazil, Australia and New Zealand For other countries, please contact us
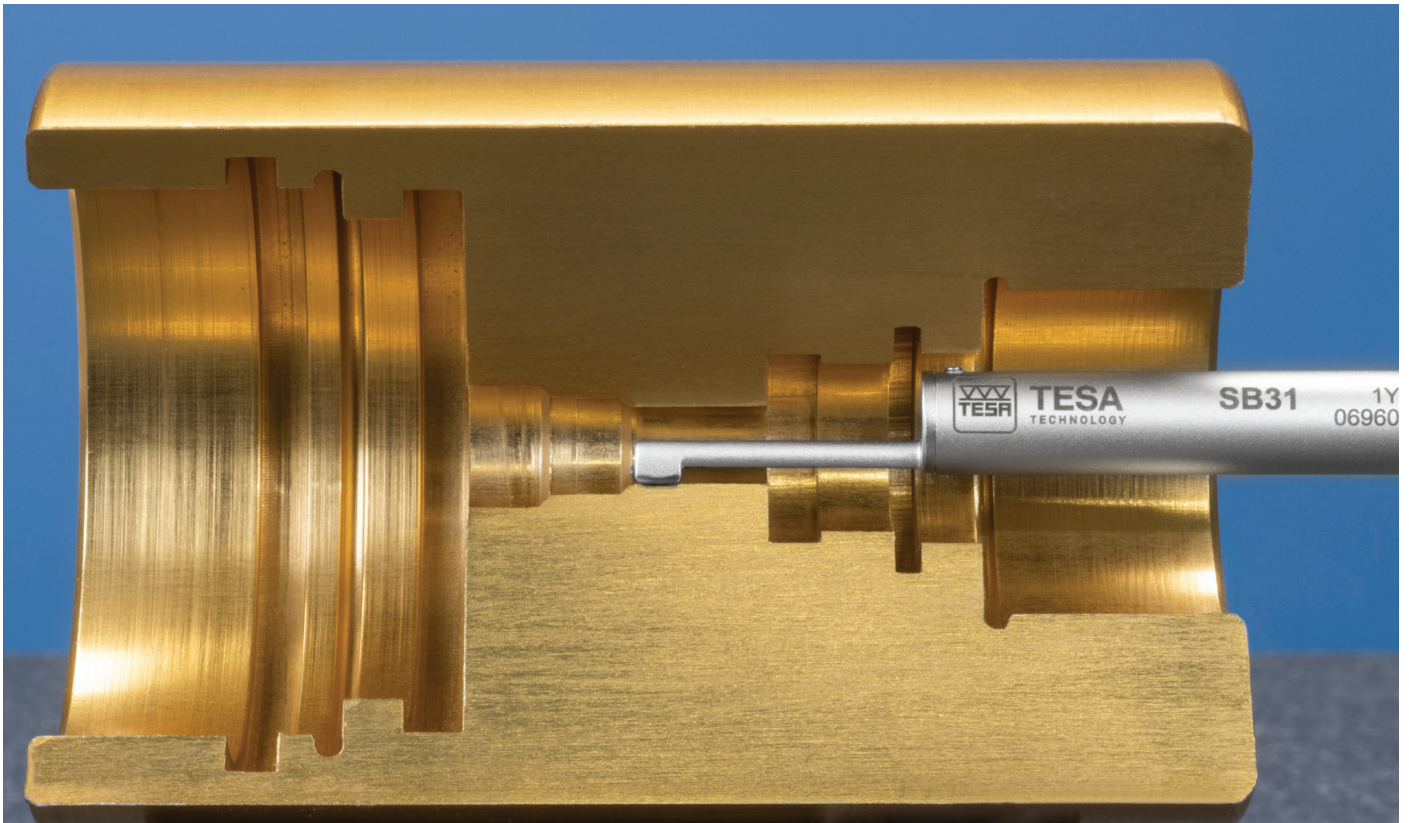
SB31 probe
Item no. 06960093

For planes and holes
For small bores Ø > 4 mm
Max. depth 20 mm

SB121 probe
Item no. 06960095

For groove of depth < 20 mm

Measuring application for height position with a TESA-HITE measuring column.

Use of the 8-mm diameter holder adapter (00760222), included with the TESA TWIN-SURF.

100 mm extension
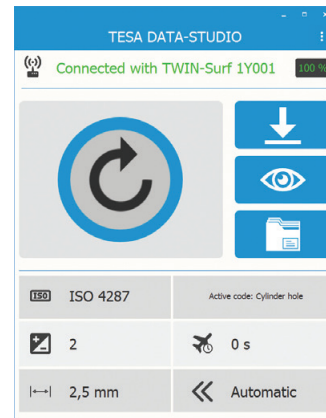Item no. 06960096

Printer for TWIN-SURF
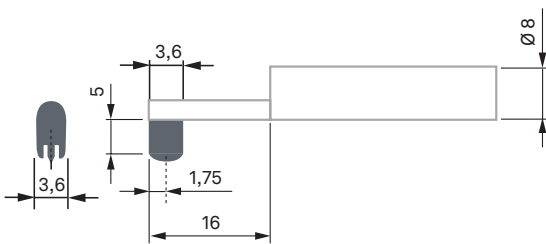Only compatible with TWIN-SURF BT
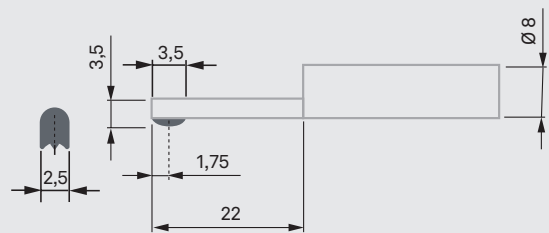
06960090

TESA DATA-STUDIO software
Premium version (with licence)

06960091
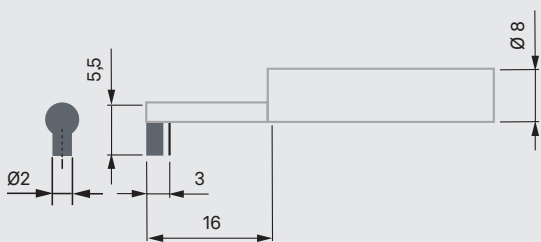
SB21 probe
For groove of depth < 5 mm

06960092

SB31 probe
For planes and holes
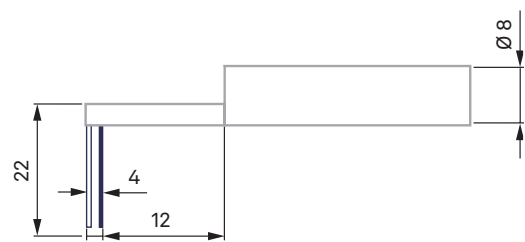For small bores Ø > 4 mm
Max. depth 20 mm

06960093

SB51 probe
For concave surfaces and for measuring at 90°
For groove of depth < 5 mm

06960094

SB121 probe
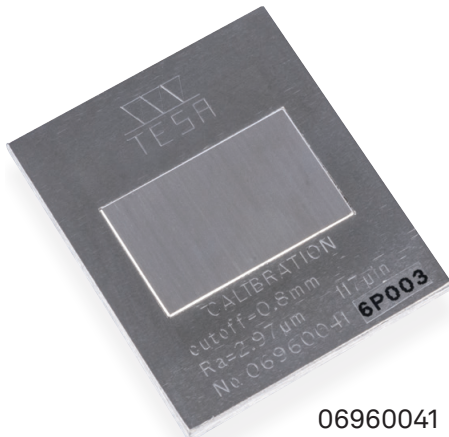For groove of depth < 20 mm

06960095

100 mm extension

06960096

Main power supply
EU and US adaptor included

04760150

Roughness standard
Ra = 2,97 µm

06960041

USB A-C cable

04760152

About Hexagon and TESA

Hexagon is a global leader in sensors, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

TESA Technology, part of Hexagon's Manufacturing Intelligence division, is a leading innovator and manufacturer of precision measuring instruments, long established in Switzerland. For more information, visit tesatechnology.com. Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter.

For more information on Hexagon (Nasdaq Stockholm: HEXA B) visit hexagon.com and follow us @HexagonAB.