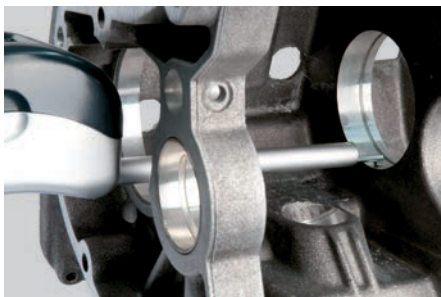
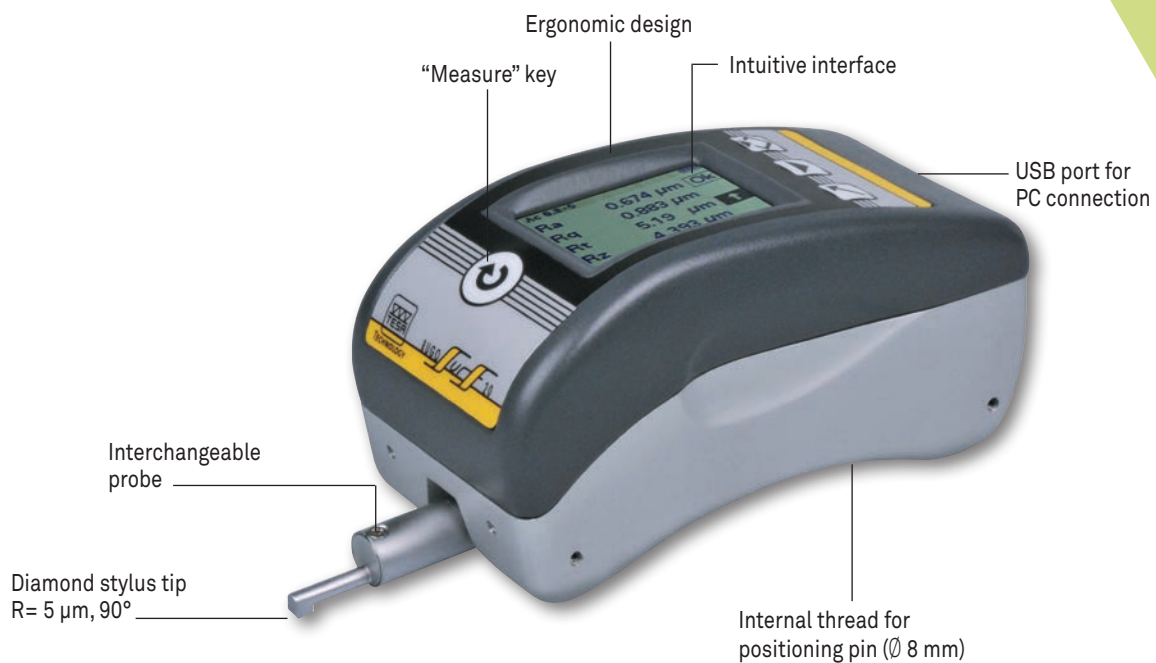


Portable  
roughness tester

# RUGOSURF 20

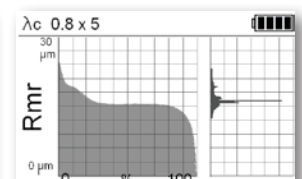
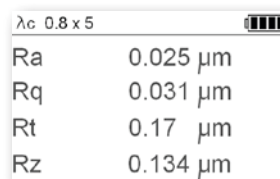


RUGOSURF 20 with 100 mm probe extension

**KEY POINTS:**

- **ROBUST – COMPACT – EASY TO USE**
- **400  $\mu\text{m}$  MEASUREMENT IN Z DIRECTION**
- **ISO 3247 CLASS 1 PRECISION**
- **VISUAL REPRESENTATION OF RESULTS WITH BEARING AREA CURVE AND ROUGHNESS PROFILE**
- **MEMORY OF 20 COMPLETE MEASUREMENTS WITH GRAPHS**

Results display



## RUGOSURF 20 THE ROUGHNESS TESTER FOR EVERY WORKSHOP

### Robust and easy to use

The powerful and reliable probe drive mechanism is housed in an aluminium alloy base. Operating keys are protected against liquid and dust ingress. The diamond tip provides excellent wear resistance. The RUGOSURF 20 is easy to use and popular thanks to

its ergonomic design and intuitive interface. A wide range of applications are facilitated by the standalone vertical adjustment holders (of up to 35 mm) and by the positioning pin that means it is compatible with any standard 8-mm-diameter measurement stand.



RUGOSURF 20 and suction-mounted articulated arm\*

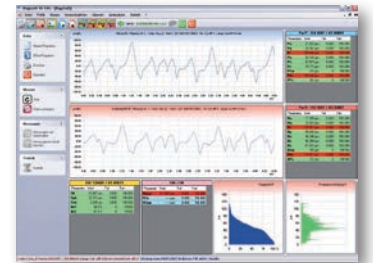
## FEATURES

Main features	
Cut-off length	Choice of 3
Number of cut-offs	1 to 5
Parameters	Customised activation of roughness parameters
Tolerances	Tolerances can be selected for all parameters
Results display	Parameters, graphs and bearing area curve (Abbott) are displayed on the device
Memory	Previous measurements are recorded
Return of probe to measurement position	Automatic after each measurement
Standards and units of measurement	Choice of ISO 3287 or ISO 12085 (CNOMO) and of mm or inches
Calibration	Standard roughness calibration specimen (included)
Measurement delay	None or choice of 6 time-delays
Stand-by mode	Automatic for optimum battery life
Clock	Time and date settings

## ACCESSORIES

### RUGOSOFT software

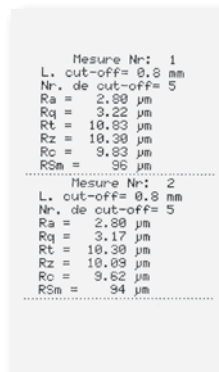
- Archiving of data and measurement parameters for quality control or for database
- Software control of the RUGOSURF 20: parameters, tolerances, settings and measurements
- Traceability of results, tolerances, statistics, roughness profiles and Abbott curve in inspection reports
- Data export
- Supplied with a software licence dongle (USB stick).



RUGOSOFT software

### Matrix printer

- Portable printer with internal battery
- Immediate printing of measurement results with roughness profile
- Printing of measurements from the RUGOSURF 20's memory
- Supplied with:
  - Charger with EU/US adapter
  - Roughness tester connecting cable
  - 1 roll of paper and battery (pre-installed)



Examples of printing



Matrix printer

## PROBES AND OTHER ACCESSORIES

Probe (stylus tip R = 5 µm, 90° unless stated otherwise)

<b>06960036</b>	SB10 probe – For surfaces, bores and shafts with diameter >10 mm
<b>06960037</b>	SB20 probe – For grooves with a depth <5 mm
<b>06960038</b>	SB30 probe – For small bores of diameter >4 mm
<b>06960039</b>	SB40 probe – V-shaped for cylinders of diameter >1 mm
<b>06960040</b>	SB50 probe – For concave surfaces
<b>06960057</b>	SB110 probe - For concave or convex surfaces with radius >5 mm
<b>06960056</b>	100 mm probe extension
<b>06960081</b>	SB10 probe with stylus tip R = 2 µm, 90°

Roughness calibration specimen

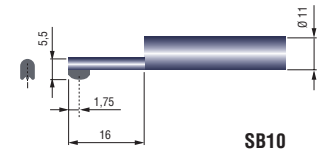
<b>06960041</b>	Roughness specimen Ra = 2.97 µm (117 µin)
<b>06960064</b>	Roughness specimen Ra = 0.1 µm (4 µin)
<b>06960065</b>	Roughness specimen Ra = 0.5 µm (20 µin)
<b>06960066</b>	Roughness specimen Ra = 1 µm (40 µin)

Software and printer

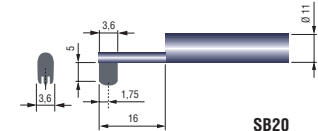
<b>06960034</b>	RUGOSOFT Software
<b>04760099</b>	USB cable for RUGOSURF 20 to PC connection
<b>06960033</b>	Matrix printer
<b>04760043</b>	Ink ribbons for printer (set of 3 ribbons)
<b>04760044</b>	Roll of paper, 57 mm wide (10-pack)

Other

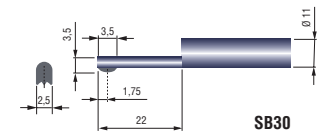
<b>06960035</b>	Granite base, 400 x 250 mm with measurement stand
<b>01639024</b>	Suction-mounted articulated-arm



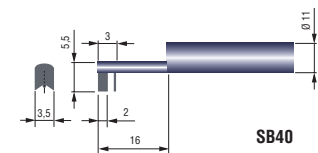
**SB10**



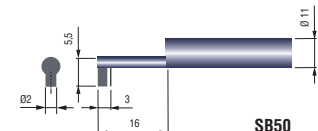
**SB20**



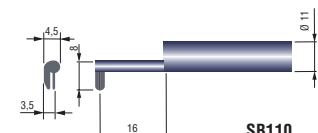
**SB30**



**SB40**



**SB50**



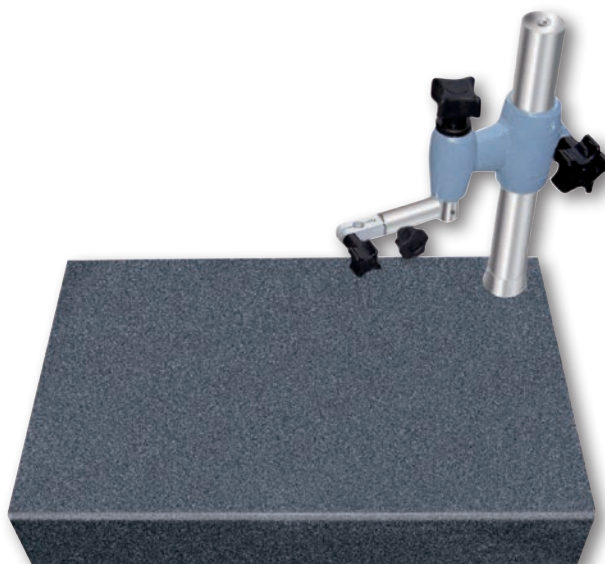
**SB110**



100 mm probe extension



Roughness specimen Ra = 2.97 µm (117 µin)



Granite base with measurement stand



Suction-mounted articulated arm

## CONTENTS OF DELIVERY OF THE RUGOSURF 20

TESA RUGOSURF 20 roughness tester (No. 06930013) supplied with:	
06960036	SB10 probe (with stylus tip R = 5 µm, 90°)
06960041	Roughness specimen Ra = 2.97 µm (117 µin)
056633	Positioning pin (8-mm diameter)
057655	Vertical V-shaped support for diameter > 80 mm
057653	Removable probe protector
06960045	Rechargeable battery (7.2V, 300 mAh)
06960046	Mains charger (240/110V, 50/60 Hz) with EU/US adapter
056632	Knurled screw (set of 4) for vertical support
-	User manual
-	Carrying case



## TECHNICAL SPECIFICATIONS

Part number: 06930013

Roughness parameters:

ISO 4287-1997/JIS B0601/ASME B46-2002:

Ra - Rq - Rt - Rz - Rc - Rsm - Rmr - Pt - Pmr

DIN 4768: Rmax - EN 10049: R<sub>Pc</sub> - P<sub>Pc</sub>

ISO 12085 (CNOMO): R - Rx - AR

Graphs: bearing area curve, roughness profile

Measurement range: X-axis = 16 mm, Z-axis = 400 µm

Display range: Ra 0 ÷ 100 µm, (0 ÷ 3937 µin)

Rt 0.05 ÷ 400 µm (1.97 ÷ 15748 µin)

Resolution: 0.001 µm

Precision: ISO 3274, Class 1

Units of measurement: mm / inches

Display: 2" black and white LCD (160 x 100 pixels)

Delay before measurement: 0 - 1 - 2 - 4 - 6 - 8 - 10 s

Cut-off length:

0,25 - 0,8 - 2,5 mm (0.010 - 0.030 - 0.100 in)

Number of cut-offs: 1 to 5

Electronic filters:

Gaussian filter as per ISO 11562 and

λs filter as per ISO 3274

Probe type: inductive probe with skid

Diamond stylus tip:

R = 5 µm, 90° (06960036 SB10 standard probe)

Measurement force: 0.75 mN (ISO 3274)

Speed of travel: 0.5 - 1 mm/s (measurement and positioning)

Languages:

English, Spanish, Portuguese, German, French, Italian, Dutch, Slovakian, Chinese, Japanese

Internal memory:

20 measurements with profile and graphs or

> 1000 measurements with parameters only

Power supply: Internal battery (7.2V, 300 mAh, NiMH PP3)

Battery autonomy: Approximately 1000 measurements

Full recharge: 8 hours

Ports: Micro USB (PC) and Special (printer)

Operating temperature: +10 to +40°C

Storage temperature: -10 to +50°C

Dimensions and weight: 122 x 60 x 62 mm, 650g



Carrying case

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