RUGOSURF 20
PORTABLE ROUGHNESS TESTER

### RUGOSURF 20 THE ROUGHNESS TESTER FOR EVERY WORKSHOP

Robust and easy to use

The RUGOSURF 20 is popular thanks to its ergonomic design and intuitive graphic user interface.

Suitable for intensive use close to the production line thanks to its autonomy and robust construction: powerful and reliable probe drive mechanism, keyboard with IP67 rating and measurement probe protected against shocks and projections.

The measurement directly on the work piece is facilitated thanks to a pin Ø 8 mm for magnetic support or with the extension of the probe by 100 mm.

The RUGOSURF 20 is connected to a computer via the USB connector like a smartphone.
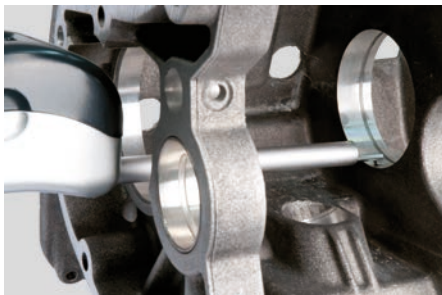
RUGOSURF 20 with 100 mm probe extension to measure zones of difficult access

KEY POINTS:
- ROBUST – COMPACT – EASY TO USE
- 400 μm MEASUREMENT ON Z AXIS
- VISUAL REPRESENTATION OF RESULTS WITH BEARING AREA CURVE AND ROUGHNESS PROFILE
- INTEGRATED MEMORY OF MEASUREMENTS

FEATURES

MAIN FEATURES	
Cut-off	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 4287 or ISO 12085 (CNOMO) and of mm or inch
Calibration	Roughness calibration standard (included)
Measurement delay	None or choice of 6 time-delays
Stand-by mode	Automatic for optimum battery life
Clock	Time and date settings

Ergonomic design

"Measure" key

Intuitive interface

USB port for PC connection

Interchangeable probe

Diamond stylus tip R= 5 µm, 90°

Internal thread for positioning pin (Ø 8 mm)

CONTENTS OF DELIVERY

	TESA RUGOSURF 20 roughness tester (No. 06930013) supplied with
06960081	SB10 probe with stylus tip R = 2 µm, 90°
06960041	Roughness calibration standard 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

US plug adapter

Positioning support

Charger + EU plug

Positioning pin

Roughness specimen

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 : RPc - Ppc

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= 2 µm, 90° (06960081 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

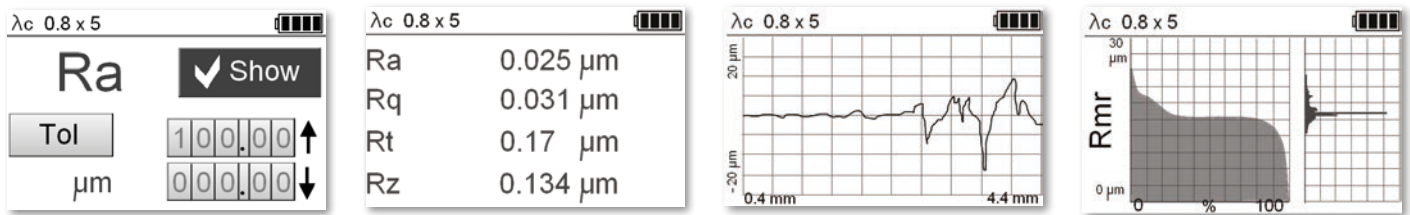Power supply: Internal battery (7.2V, 300 mAh, NiMH PP3)

Battery autonomy: Approximately 1000 measurements

Ports: Micro USB (PC)

Operating temperature: 10°C to 40°C

Storage temperature: -10°C to 50°C

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

Results display

ACCESSORIES

RUGOSOFT software

– Archiving of data and measurement parameters for quality control or for database

– Remote 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

USB
04760099
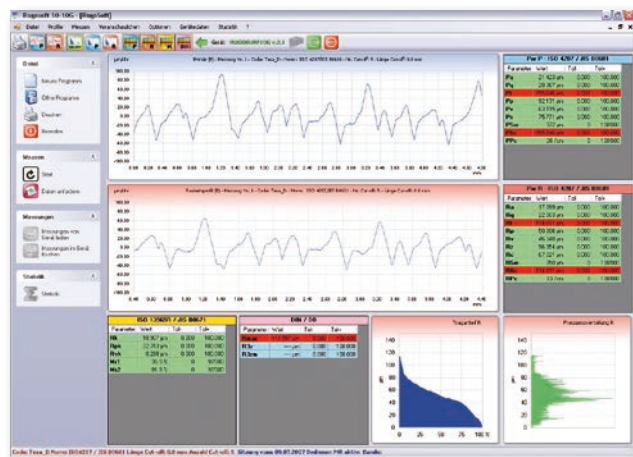
download tool

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http://go.HexagonMI.com/DataConnectionTool

PROBES AND OTHER ACCESSORIES

| Probe (stylus tip R = 5 µm, 90° unless stated otherwise)	
06960081 (standard)	SB10 probe with stylus tip R = 2 µm, 90°
06960036	SB10 probe – For surfaces, bores and shafts with diameter >10 mm
06960037	SB20 probe – For grooves with a depth <5 mm
06960038	SB30 probe – For small bores of diameter >4 mm
06960039	SB40 probe – V-shaped for cylinders of diameter >1 mm
06960040	SB50 probe – For concave surfaces
06960057	SB110 probe - For concave or convex surfaces with radius >5 mm
06960056	100 mm probe extension
Roughness calibration specimen	
06960041	Roughness specimen Ra = 2,97 µm (117 µin)
06960064	Roughness specimen Ra = 0,1 µm (4 µin)
06960065	Roughness specimen Ra = 0,5 µm (20 µin)
06960066	Roughness specimen Ra = 1 µm (40 µin)
Software and cable	
06960034	RUGOSOFT Software
04760099	USB cable for RUGOSURF 20 to PC connection
Autres	
06960035	Granite base, 400 x 250 mm with measurement stand H=150 mm
01639024	Suction-mounted articulated-arm, dovetail clamp with tightening screw Ø 8 mm
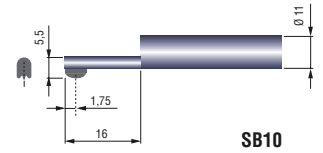
SB10
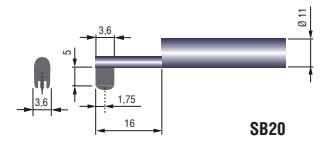
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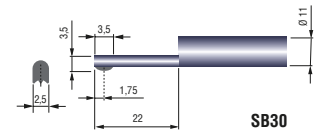
SB30
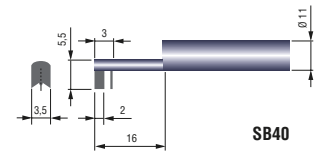
SB40
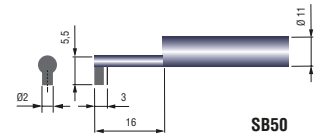
SB50
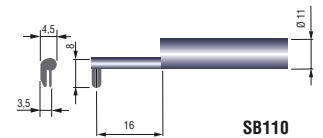
SB110

100 mm probe extension

Roughness specimen Ra = 2.97 µm (117 µin)
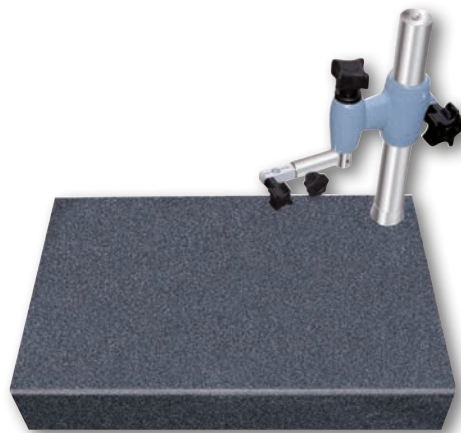
Granite base with measurement stand

Suction-mounted articulated arm

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