

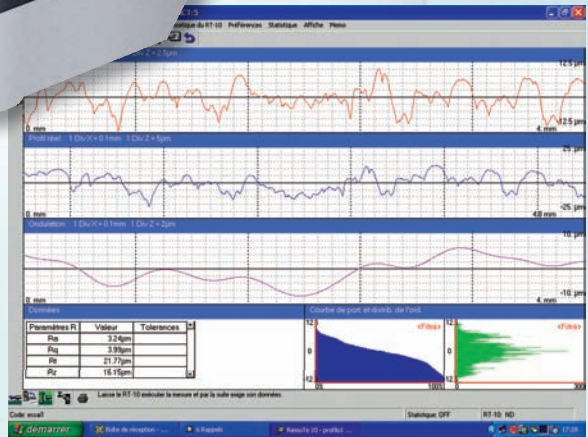
Authorized Distributor: Willrich Precision  
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## TESA RUGOSURF 10G Surface roughness gage



## TESA –TECHNOLOGY Genuine Swiss Made Quality

RUGOSURF 10G is a portable and versatile roughness gage that can be used in the workshop, for incoming inspection or in the laboratory. This heavy-duty hand-held tool offers a wide range of accessories and can be used in a number of applications that's virtually unlimited.



### Technical Data

Table of measured roughness parameters

International Standards

ISO 4287	Ra	Rq	Rt	Rz	Rp	Rv	Rc	RSm	Rðc	Rpc
1997	Rk	Rpk	Rvk	Mr1	Mr2					
	Pa	Pq	Pt		Pp	Pv	Pc	Psm	Pðc	Ppc
Din	Rmax	R3z	R3zm							
ISO 12085	R	AR	Rx	Rke	Rpke	Ryke				

Measuring range	0 + 300 µm / 0 + 12 µin
Resolution	0.005 µm / 0.02 µin
Cut-offs (lc in in)	0.01 in      0.03 in      0.1 in
Total length	
(lm in in)	0.05 in      0.15 in      0.5 in
Traversing length	
(lc in in)	0.06 in      0.18 in      0.6 in

Possible selection of 2,3,4 or 5 cut-offs  
 for the measurement (length from 0.75 to 16 mm)



## TESA RUGOSOFT 10G

Order No. EDP No.

06930011 24720

## TESA RUGOSOFT Software

Complete with:

- CD ROM for installation in 5 languages
- RS 232 Connection Cable
- On-line instruction Manual (included on installation CD)

Order No. EDP No.

06960034 23126

## Optional Probes

SB10 - For regular surface finish and bores.

External diameters > .4"/10mm and internal diameters from 25"/6mm

Order No. EDP No.

06960036 23128

SB20 - For slots with depths up to .2"/5mm max.

Order No. EDP No.

06960037 23129

SB30 - For small bores with a 15"/4mm minimum diameter,  
.8"/20mm in depth.

Order No. EDP No.

06960038 23130

SB40 - With a prismatic contact skid for  
measuring cables. External diameters > 04"/1mm.

Order No. EDP No.

06960039 231331

SB50 - With front mounted contact skid for inspecting  
concave surfaces.

Ideal for measuring through to 90°.

Order No.	EDP No.	Price
06960040	23132	\$719.00

## Standard Accessories

Support with Granite Base, 15.75" x 9.85" (400mm x 200mm)

Order No. EDP No.

06960035 23127

Roughness Specimen, Ra = 117 µin/2.97 µm

Order No. EDP No.

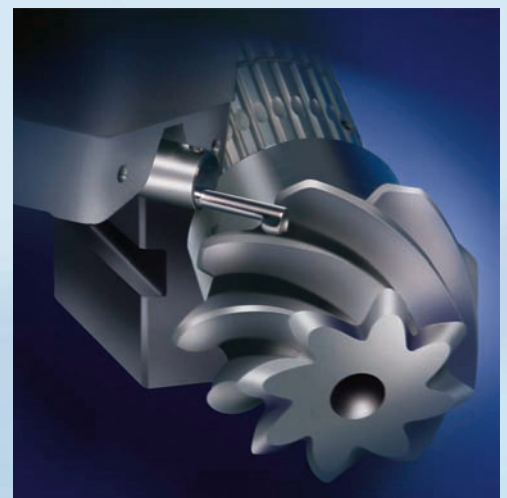
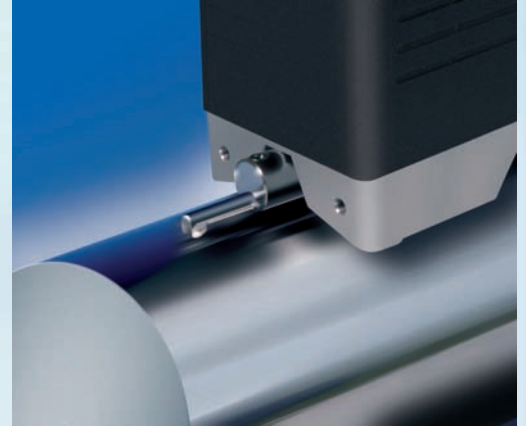
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## External Control Switch

Order No. EDP No.

06960042 23134

*Additional accessories available upon request*



## Summary of Roughness Parameters Commonly Used

Arithmetical mean deviation of the profile  $R_a$  (ISO 4287, DIN 4768)

The arithmetical mean deviation  $R_a$  is the mean value of the absolute value of the profile departure  $y$  within the reference length  $l$ .

Max. profile valley depth  $R_{max}$  (DIN 4768)

Among the existing single roughness depths  $Z_i$ , the max. profile valley depth  $R_{max}$  counts for the most significant within the total measuring length  $l_m$ .

According to ISO 4288 and DIN 4287 - Part 1, this parameter is also specified as  $R_{y\ max}$ .

Mean roughness depth  $R_{z\ DIN}$  (DIN 4768)

The mean roughness depth  $R_z$  is the arithmetical mean of the single roughness depths of successive sampling lengths  $l_e$ .

According to ISO 4287 and DIN 4762, the parameter  $R_{z\ DIN}$  is also specified as  $R_{y5}$ .

Because  $R_z$  is named differently in DIN 4768 and ISO 4287, this parameter is also specified as  $R_{z\ DIN}$  or  $R_{z\ ISO}$ .

When the parameter  $R_z$  is measured according to DIN, it is generally admitted that the extreme value ISO is also matched providing that  $R_{z\ ISO}$  is not exceeding  $R_{z\ DIN}$ .

## Application of Roughness Comparison Specimens

These specimens for testing the surface finish quality have long proven their value in practical use.

They serve for touch and/or sight comparisons with the surface of the workpieces that are manufactured using the same method. Condition is that materials have to be comparable.

The comparison of the roughness of the workpiece surface is not quantitatively expressed. The extent to which the surfaces of both the specimen and the workpiece are matched is appreciated subjectively only.

Sight comparison requires optimum light source angle. For small surfaces, the use of a magnifying glass with up to 8x magnification is recommended.

Touch comparison is made using the finger nail or a small copper piece like a coin, for instance.

