

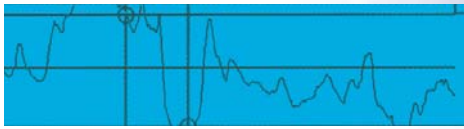
Precision is our business.



## HOMMEL TESTER T500

The benchmark for portable  
and precise in-process  
measurement of surface  
roughness





## Portable and Reliable Roughness In-Process Measurement

### A leader in production and technology

Hommelwerke GmbH has a long history of tradition in the field of precision. The products manufactured by the company's founder, Hermann Hommel, were already setting standards and revolutionising measurement systems at the turn of the 20th century. And it's this innovative capacity, perfected over a period of more than 125 years that enables Hommelwerke to repeatedly set the benchmark for precision and quality. The numerous awards for performance, innovation and user friendliness speak for themselves.

The Hommelwerke factories work to create a competitive edge for its customers as precision measurement and consequently product optimisation has become the central factor in success.

We take a more precise approach. In development, quality and uncompromising accuracy coupled with our after-sales and training services.

Hommelwerke is one of the leaders in measurement systems. These include its smallest product, the portable HOMMEL TESTER T500. This guarantees mobile and reliable surface roughness measurement in the workshops or on the production line.

The HOMMEL TESTER T500 is the ideal partner for precise and reliable measurements.

It sets the standard in portable roughness measurement thanks to the easy handling, ergonomic design and its robust measurement qualities. With its functional design, the device fits easily in the user's hand making it simple to precisely position on the workpiece.

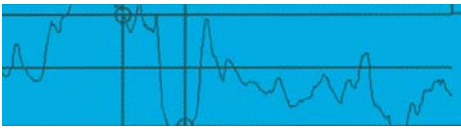
The HOMMEL TESTER T500 easily copes with the wide range of measurement tasks with the help of the various keys and extensive accessories. This allows the HOMMEL TESTER T500 to match the performance of many stationary measurement devices with its accuracy and precision.



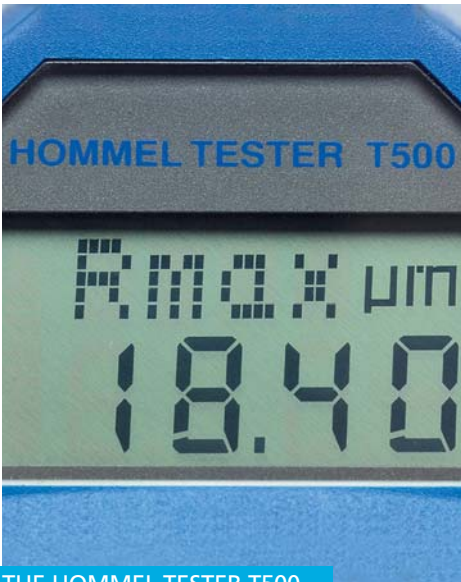
RAPID MEASUREMENT

### HOMMEL TESTER T500

- Portable, works independently using rechargeable batteries
- Rapid and precise measurements
- Easy and simple to use
- Roughness parameters in accordance with DIN/ISO/JIS standards
- Gaussian digital filter (M1)
- RS232 interface for connection to PC and remote control
- Robust and clever design protects the measuring stylus
- Datasave for 125 measurements
- Extendable support legs
- No calibration required



## Mobile and Rapid Measurement at the Workplace



THE HOMMEL TESTER T500

The advantages of the HOMMEL TESTER T500 at a glance

### Portability

The small device, which operates independently, guarantees to provide perfect measurements in all types of operating environments.

### Use

With just integral keys and one knurled wheel the HOMMEL TESTER T500 is easy and simple to use.

### Clearness of Display

The large LC-display enables the results to be read easily, even under poor lighting conditions.

### Functionality

The device can store up to 125 measurement values which can be analysed via a printout on the separate HOMMEL PRINTER P510 or via the TURBO DATAWIN PC software.

### Precision

The parameters approved under DIN/ISO/JIS and the calibrated measuring elements make the HOMMEL TESTER T500 a versatile roughness measurement device.

### Design

Minimal weight, ergonomic design and easy handling provide for unparalleled mobility.



LC-DISPLAY



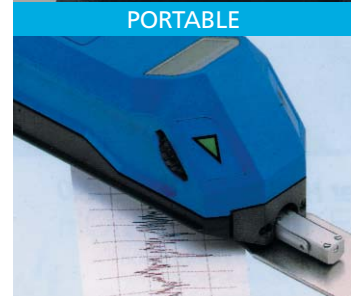
EASY TO USE



VARIABLE STABILIZERS

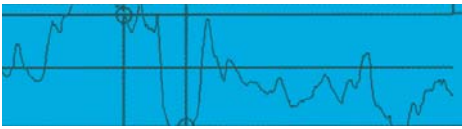


PORTABLE



SEP 1940 STANDARD





# Rapid and Precise Measurement Evaluation

## Flexible measurement and evaluation

The HOMMEL PRINTER P510 is a handy thermal printer for mobile use in conjunction with the HOMMEL TESTER T500 roughness measurement device. The compact HOMMEL PRINTER P510 prints out its measurement results quickly and simply, in situ. In addition to providing clear and unambiguous results the HOMMEL PRINTER P510 provides power to the HOMMEL TESTER T500.

The device is so easy to use: to print out your test results just connect the HOMMEL TESTER T500 and press the results key on the HOMMEL PRINTER P510. A few seconds later you will have a printout of your measurements.

The HOMMEL PRINTER P510 offers you the facility for printing out your roughness parameters, profile measurements and also the measurement conditions that were applied.

In this respect you can choose between a simple printout of the parameters only or the extended printout to include the parameters, the measurement conditions applied and the R profile. There is space in the printout header for your manual entries on the measurement detail. The HOMMEL PRINTER P510 is powered by the mains supply or its built-in battery.

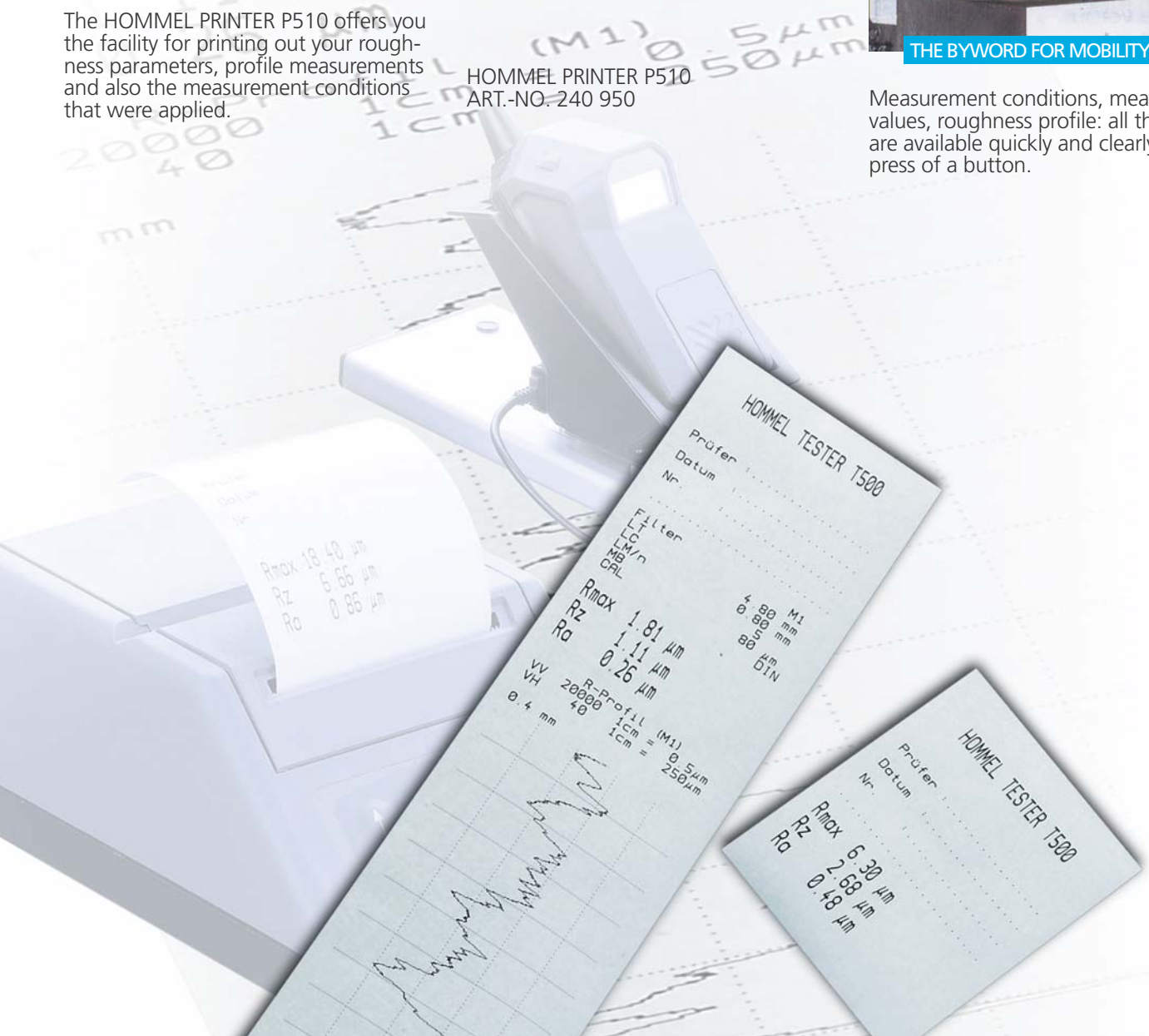
For measurements which demand precise positioning use the HOMMEL TESTER T500 together with the HOMMEL PRINTER P510 and the HS 305S measurement stand: this turns the small, mobile HOMMEL TESTER T500 into the complete measurement station.

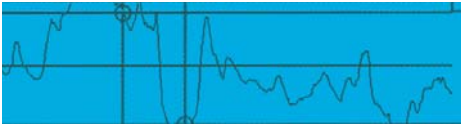


THE BYWORD FOR MOBILITY

Measurement conditions, measurement values, roughness profile: all these results are available quickly and clearly at the press of a button.

HOMMEL PRINTER P510  
ART.-NO. 240 950





**HOMMEL TESTER T500 AND TURBO DATAWIN FOR STATIONARY MEASUREMENT EVALUATION AND DATA STORAGE**

- 32-bit application
- Simple to use via function keys or mouse
- Data structure compatible with all HOMMEL TURBO programs
- Graphics and parameters can be imported into other applications (Excel, Word etc.)
- Facilities for connecting the HOMMEL TESTER T500 to COM1 or COM2
- Storage of all statistics in ASCII format either on diskette or hard disc drive
- Statistics and bearing ratio calculations available

Hardware requirements:  
PC from Pentium, min. 32 MB RAM,  
Windows 95/98 and NT

**The software with simple menu guide**

In addition to the HOMMEL PRINTER P510, Hommelwerke also offers you the matching software package: TURBO DATAWIN makes full use of all the facilities offered by the HOMMEL TESTER T500 measurement device, making your work easier. The Windows roughness program is simple to use and provides parameter evaluation in a user friendly way – even without any prior knowledge of Windows. This is thanks to its clearly defined menu guide. TURBO DATAWIN gives you the facility for remote control on the HOMMEL TESTER T500. The parameters are automatically transferred to the computer. Profile diagrams and measurement values can then be stored.

TURBO DATAWIN  
ART.-NO. 256 806



**HOMMEL TESTER T500**

Ro µm

0.86

**LC-DISPLAY**

**HOMMEL TESTER T500**

Prüfer: .....

Datum: .....

Nr.: .....

Rmax 6.30 µm

Rz 2.68 µm

Ra 0.48 µm

**P510 PRINT OUT**

**TURBO DATAWIN**

Uhrzeit	G	Text	Ra	Rz	Rmax	SET
24:43:00	1	P78 2	10.47	47.12	48.10	*
10:11:11	2	000 Messung	01.10	39.47	48.64	*
10:11:10	2	000 Messung	2.34	3.20	1.39	A
04:40:00	1	P78 2	10.47	47.12	48.10	*
10:11:11	2	000 Messung	01.10	39.47	48.64	*
10:11:10	2	000 Messung	2.34	3.20	1.39	A
24:40:00	1	P78 2	10.47	47.12	48.10	*
10:11:11	2	000 Messung	01.10	39.47	48.64	*
10:11:10	2	000 Messung	2.34	3.20	1.39	A
10:11:11	2	000 Messung	01.10	39.47	48.64	*
10:11:10	2	000 Messung	2.34	3.20	1.39	A
04:40:00	1	P78 2	10.47	47.12	48.10	*

Prüfer: Herr Remy      Bemerkung: Alle Werte liegen innerhalb der zulässigen Toleranz!

Abteilung: NW/P 1708      Bemerkung: Infolge Toleranz!

Werkstück: Zylinderlaufbohrer      Bemerkung:

Zusammenfassung: A31-713      Bemerkung:

Datum: 03.05.2000      Bemerkung:

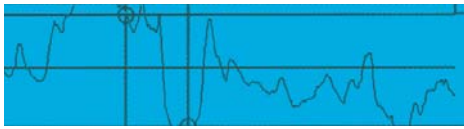
File: C:\A\_DATEN\FunkFAR

Filter: 003 Filter

Le = 4.00mm    Lc = 0.80mm    Mb = 10µm    C1 = 0.8µm    C2 = 0.5µm

Datum:	03.05.2000	Rmax	Rz	Ra
TEXT	1	12.72	13.68	1.54
Datum:	03.05.2000	Rmax	Rz	Ra
TEXT	3	11.68	8.82	1.24

**A4 PRINT OUT**



# The Complete Range of Equipment and Optimum Accessories Program

## HOMMEL TESTER T500

Surface evaluation parameters \_\_\_\_\_

$R_{ar}$ ,  $R_z$ , DIN,  $R_{max}$  DIN 4768 and ISO 4287/1  
 $R_{ar}$ ,  $R_z$ , ISO,  $R_t$ , as per ISO 4287/1  
 $R_{ar}$ ,  $R_z$ , JIS,  $R_{max}$  JIS as per Japanese standard JIS B601  
 $P_c$  as per Euro standard 49 ANS/ASME B 46.1  
 OPTION:  $R_{pk}^*$ ,  $R_k$ ,  $R_{vk}$ ,  $R_{vk}^*$ ,  $Mr_1$ ,  $Mr_2$   
 as per DIN 4776/ISO 13565  
 \*Note: Option applicable for devices without Datasave function!

Specially for the roughness measurement of sheet metal in accordance with SEP 1940 utilizing the HOMMEL TESTER T500S

ART.-NO. 999 505

Tolerance display for  $R_{ar}$ ,  $R_z$ ,  $R_{max}$  or  $R_t$

Cut-off lengths  $\lambda_c$  \_\_\_\_\_  $\lambda_c$  (mm) 0.25 0.8 2.5

Scanning distances  $l_t$  \_\_\_\_\_  $l_t$  (mm) 1.5 4.8 15.0  
 as per DIN 4768 and ISO 4287/1

Individual measurement distances  $l_R$  \_\_\_\_\_ 1-5 selectable

Scanning speed  $v_t$  \_\_\_\_\_  $v_t$  (mm/s) 0.15 0.5 1.0

The 0.25 mm and 0.8 mm cut-offs can be freely assigned to any scanning distance.

Digital filter \_\_\_\_\_ Profile filter M1 phase corrector as per DIN 4777/ISO 11562

Measurement range _____	MB	Measurement travel	Resolution
	1	+ 20/- 20 $\mu$ m	10 nm
		+ 20/- 60 $\mu$ m	20 nm
	2	+ 40/- 40 $\mu$ m	20 nm
		+ 40/- 120 $\mu$ m	40 nm

Precision category \_\_\_\_\_ Category 1, as per DIN 4772

Smallest display value \_\_\_\_\_ 0.01  $\mu$ m

Probe position indicator \_\_\_\_\_ bar indicator and numerical value

Measurement system \_\_\_\_\_  $\mu$ m and  $\mu$ inch

Interface \_\_\_\_\_ Standard V24 (RS 232), serial

Power supply \_\_\_\_\_ 9 V replaceable battery with plug-in mains adapter

Measurement capacity \_\_\_\_\_ approx. 300 measurements at  $l_t = 4.8$  mm (per battery charge)

Dimensions (length x width x height) \_\_\_\_\_ 118 mm x 56 mm x 62 mm

Weight \_\_\_\_\_ 330 g

## T5E STANDARD STYLI

Measurement principal \_\_\_\_\_ Induction, carrier frequency 10 kHz

Diamond scanning tip \_\_\_\_\_ Radius 5  $\mu$ m as per DIN 4772

Support strength in 0 position \_\_\_\_\_ 1.6 mm

Tip angle \_\_\_\_\_ 90 degrees as per DIN 4772

Skid radius \_\_\_\_\_ length 30 mm, transverse 1.9 mm

From hole diameter \_\_\_\_\_ 4.0 mm, depth 20.0 mm

## HOMMEL PRINTER P510

Printer type \_\_\_\_\_ Thermal graphics printer

Print speed \_\_\_\_\_ 30 mm/s

Font size \_\_\_\_\_ 2.4 x 1.3 mm

Print width \_\_\_\_\_ 46 mm

Paper size \_\_\_\_\_ Paper roll diameter 30 mm (paper length approx. 10 m), width 57 mm

Keyboard \_\_\_\_\_ Touch sensitive keyboard with 3 keys (oil resistant)

Interface \_\_\_\_\_ T500 connector cable, mains connection adapter

Paper feed \_\_\_\_\_ Via roller in paper shaft

Recommended operating temperature (for optimum print quality) \_\_\_\_\_ + 10... + 35°C

Dimensions (width x height x depth) \_\_\_\_\_ 42 mm x 48 mm x 135 mm

Weight \_\_\_\_\_ approx. 600 g

Supply Voltage \_\_\_\_\_ 100-240 V

Battery load cycle \_\_\_\_\_ approx. 2.5 hrs. discharge and over-charge

Battery capacity \_\_\_\_\_ 1500 mAh



ART.-NO. 235 730

TKPK 100 STYLUS



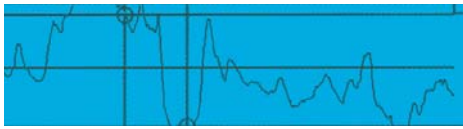
ART.-NO. 231 735

PRTK ATTACHMENT PRISM

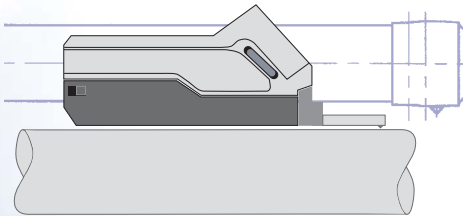


ART.-NO. 504 115

WA500 ROLLER ATTACHEMENT

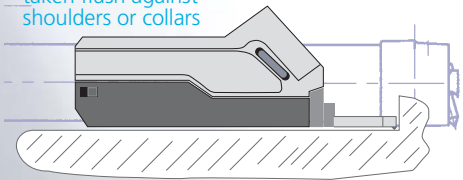


– Flat surfaces and shafts      ART.-NO. 240 050



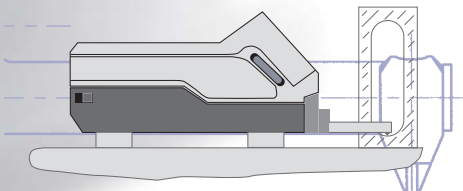
**T5E**

– As per T5E – particularly useful for measurements taken flush against shoulders or collars      ART.-NO. 241 767



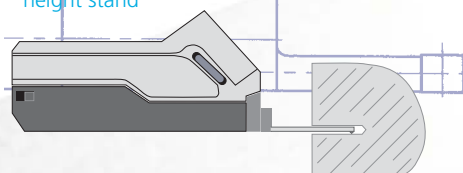
**T5D**

– Specially for measuring on concave or convex surfaces      ART.-NO. 240 085



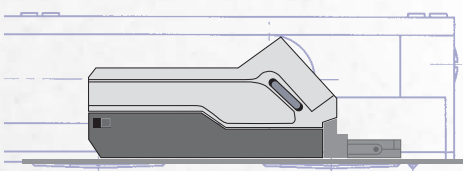
**T5KK**

– For small bores from 2 mm diameter  
– Only recommended utilizing a height stand      ART.-NO. 240 087



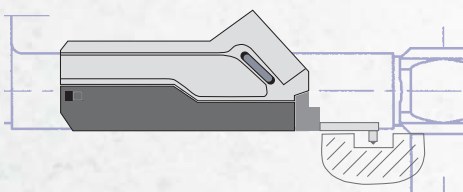
**T5KO**

– For flat surfaces as per SEP 1940      ART.-NO. 235 730



**TKPK**

– For recessed surfaces      ART.-NO. 240 080



**T5ET**

Attachment prism for small shafts

ART.-NO. 191 838

Stylus extension T5AZZ (50 mm) for all T5 styli

ART.-NO. 226 805

Desktop power unit T500 TN with charger for replaceable battery and remote start key

ART.-NO. 229 345



ART.-NO. 999 016

**HS 3055 HEIGHT STAND**



ART.-NO. 023 784

**REPLACEABLE BATTERIE**



ART.-NO. 233 232

**RNDH/DKD ROUGHNESS STANDARD**



ART.-NO. 999 500

**DELIVERY SET**

**HOMMEL TESTER T500**

T5E STYLUS

BATTERY CHARGER

RECHARGEABLE BATTERY

OPERATING INSTRUCTIONS

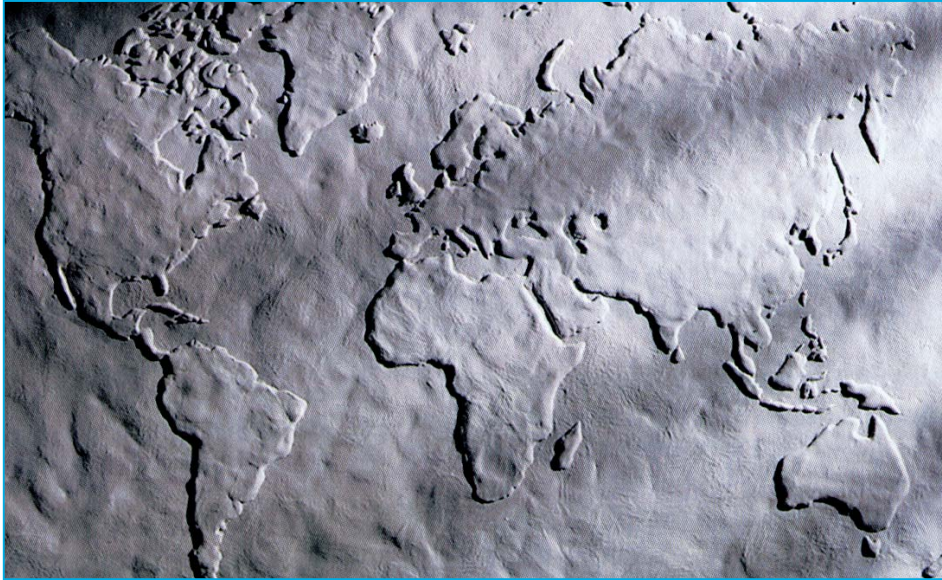
CARRYING CASE

STYLUS COVER

(including small screwdriver)

CALIBRATION CERTIFICATE

Precision is our business.



## Precision – world-wide

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Like to know more about precision ?  
A fax, phone call, e-mail or letter will suffice,  
we will then be happy to provide  
you with more precision highlights.

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## Product Programme

ROUGHNESS MEASURING  
CONTOUR MEASURING  
OPTICAL SHAFT MEASURING  
FORM MEASURING  
GEAR MEASURING  
CRANKSHAFT AND CAMSHAFT MEASURING  
DIMENSIONAL MEASURING MACHINES  
STANDARD COMPONENTS  
MEASURING SOLUTIONS  
DKD CALIBRATION SERVICE  
CONSULTATION, TRAINING AND SERVICE

JENOPTIK-Group.