HOMMEL TESTER T500

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

Precision is our business.
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 pick-ups and extensive accessories. This allows the HOMMEL TESTER T500 to match the performance of many stationary measurement devices with its accuracy and precision.

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
The advantages of the HOM M EL 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 HOM M EL 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 HOM M EL PRINTER P510 or via the TURBO DATAWIN PC software.

**Precision**
The parameters approved under DIN/ISO/JIS and the calibrated measuring elements make the HOM M EL TESTER T500 a versatile roughness measurement device.

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

HOMMEL PRINTER P510
ART.-NO. 240 950

Measurement conditions, measurement values, roughness profile: all these results are available quickly and clearly at the press of a button.
HOMMEL TESTER T500 AND TURBO DATAWIN FOR STATIONARY MEASUREMENT EVALUATION AND DATA STORAGE

- 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 COM 1 or COM 2
- 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 XP

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. 1001 6998
The Complete Range of Equipment and Optimum Accessories Program

HOMMEL TESTER T500
Surface evaluation parameters

\[ R_a, R_z, R_{\text{max}/R_t}, R_q, R_{3z}, R_{\text{Sm}} \]
(with \( C_1, C_2 \))
acc. to DIN 4777 and ISO 4287
or Japanese standards JIS B601
as well as parameters of the
material ratio curve (\( M_{r1}, M_{r2}, R_{pk}, R_{pk^*}, R_{vk}, R_{vk^*} \)) acc. to DIN 4776/
ISO 13565 (DIN EN ISO 13565)

*Note: Option applicable for devices without Datasave function!

Tolerance display for \( R_a, R_z, R_{\text{max}} \) or \( R_t \)
Cut-off lengths \( \lambda_c \)
Traverse lengths \( \lambda_t \)
as per DIN 4768 and ISO 4287/1
Individual traverse lengths \( \lambda_i \)
Traverse speed \( v_t \)
The 0.25 mm and 0.8 mm cut-offs can be
freely assigned to any scanning distance.

Digital filter
Profile filter M1 with phase compensation

Measurement range/Resolution

MB
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

Category 1, as per DIN 4772
0.01 \( \mu \)m
bar indicator and numerical value
\( \mu \)m and \( \mu \)inch
Standard V24 (RS232), serial
9.6 V replaceable battery with plug-in
mains adapter
approx. 300 measurements at \( \lambda_t = 4.8 \) mm
(per battery charge)
118 mm x 56 mm x 62 mm
330 g

T500 STANDARD STYLI
Measurement principle
Inductive, carrier frequency 10 kHz
Sylus tip
5 \( \mu \)m / 90°
Skid radius
1.6 mN
Min. bore diameter
length 30 mm, transverse 1.9 mm
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
Touch sensitive keyboard with 3 keys
(gloss resistant)
Interface
T500 connector cable, mains connection
adapter
Paper feed
Via roller in paper shaft
Operating temperature
+10...+35°C
Dimensions (width x height x depth)
42 mm x 48 mm x 135 mm
Weight
approx. 600 g
Power supply
100-240 V
Battery capacity
1500 mAh

Specially for the roughness measurement of sheet metal in accordance with
SEP 1940 utilizing the
HOMMEL TESTER T500S
ART.-NO. 999 505

ART.-NO. 235 730
TKPK 100 STYLS

ART.-NO. 231 735
PRTK ATTACHMENT PRISM

ART.-NO. 504 115
WA500 ROLLER ATTACHMENT
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

- 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

TSET

HOMMEL TESTER T500
T5E STYLUS
BATTERY CHARGER
RECHARGEABLE BATTERIES
OPERATING INSTRUCTIONS
CARRYING CASE
STYLUS COVER
(including small screwdriver)
CALIBRATION CERTIFICATE
Precision is our business.

Product Programme

ROUGHNESS MEASURING
CONTOUR MEASURING
OPTICAL SHAFT MEASURING
FORM MEASURING
GEAR MEASURING
CRANKSHAFT AND CAM SHAFT MEASURING
OPTICAL SURFACE INSPECTION
DIMENSIONAL MEASURING MACHINES

Precision – worldwide

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