HOMMEL-ETAMIC W5
The benchmark in mobile roughness measurement

Precision is our business.
Surface roughness measurement on the production line - mobile and highly capable.

- **Large color display**
  - Easy viewing of results, including tolerance evaluation.
- **Parameter selection**
  - Intuitive handling with click wheel for parameter selection and all other device operations.
- **USB interface**
  - Windows-compatible data format and built-in battery.
- **Central start push button**
  - Suitable for right or left handed users.
- **Handy, portable and long-lasting**
  - Compact and light in design, the W5 offers up to 800 measurements with one battery charge.
- **Roughness probe**
  - Easy to change.
  - Extensive range of roughness probes available for specific measuring tasks.
- **Lighting**
  - For better visibility of the measurement position.
- **High storage capacity**
  - For 5 measuring programs including measuring conditions.
- **Wireless printing**
  - The optional printer HOMMEL-ETAMIC P5 uses Bluetooth® technology for wireless printing.
Hommel-Etamic, the Industrial Metrology Division of
the Jenoptik Group, is a leading manufacturer and
system provider of high-precision, tactile and non-tac-
tile production metrology. The range of products
provided include total solutions for a wide range of
measurement tasks such as testing surfaces, form, and
determining dimensional tolerances – throughout all
phases of the production process, for final inspection
or in a metrology lab. Our product portfolio is rounded
off by a wide range of services in consulting, training
and service, including long-term maintenance con-
tacts.

Hommel-Etamic. Precision is our business!

Flexible surface measurement
We have the right system for any measuring task.
Our product line includes mobile compact roughness
measuring devices, as well as standard and custom
stationary systems for roughness, topography and
contour measurement.

The W5 is the ideal roughness measuring system for
precise and portable surface measurement on the
production line. Comprised of a functional, ergonomic
design, the device fits easily into the user’s hand ma-
k ing it simple to precisely position on the workpiece.

The W5 is capable of a wide range of measurement
tasks using an extensive array of probes and accesso-
ries. This allows the W5 to match the performance of
more expensive stationary systems with its accuracy
and precision.

Portable and reliable
surface roughness measurement

The benefits of the W5 at a glance
Compact and easy to handle.
• Portable and battery-supplied
• Compact and light in design (270g)
• Easy, intuitive handling with click wheel and gra-
phical user interface
• Large color display for easy viewing of the results,
including tolerance evaluation
• High storage capacity
• 5 measuring programs, 100 profiles for
10,000 measurements
• Bluetooth for wireless printing
• USB interface
• Height adjustment integrated from factory
• Precise positioning on workpiece
• No calibration necessary

Simple operation.
The color display with the graphic interface makes
operating it especially simple and transparent. The
click wheel enables the device functions to be selected
intuitively.

Long-lasting and wireless.
More than 800 measurements with one battery charge
make a high level of availability even when the
measuring instrument is in frequent use. And if the
measurement results need printing out on the optional
printer, this can be done wirelessly via Bluetooth®.

Permanently calibrated from factory.
The roughness probes and measuring instrument elec-
trons are calibrated independently from each other.
The roughness probes from Hommel-Etamic are stable
over the long term due to an inductive full-bridge. The-
re is therefore no need to make regular adjustments to
the amplification. An invaluable advantage in everyday
measurement.

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Versatile and easy surface measurement

Mobile measurement
Portable, easy to operate and long-lasting, the W5 is ideally suited for measurements on big workpieces. Working in all possible measuring positions, including on perpendicular surfaces or overhead, the W5 is a universal roughness measuring device for use on the production line.

Height adjustment integrated from factory
The extendable tripod legs can be used to adjust the measuring instrument to the height of small workpieces. This allows such measuring applications to be implemented without an additional means of holding.

Measurement on small shafts
The support prism centers workpieces like small shafts from 10 mm diameter reliably on the correct measuring position and protects the probe for measurements in bores from 12 mm diameter.

Precise workpiece support
The contact to the workpiece is made by precisely polished support shafts. This guarantees permanent, stable workpiece support.

Stationary measurement
The HS300 height measuring stand turns the small, mobile W5 into a complete measuring station. For measuring tasks that demand precise positioning or when the measuring accuracy has to fulfill especially high specifications.

Intuitive operation
The logically structured user guidance holds no mysteries. The graphic user interface combined with the click wheel allows the instrument to be operated reliably. Self-explanatory and no time-consuming training required.

Measurement position lighting
The transparent probe cover combined with the measurement position lighting makes the exact measurement position of the roughness probe very easy to see. This makes the positioning of the measurement easier when it counts.

Tolerance evaluations at a glance
The colored display of the measurement results depending on the tolerance evaluation allows the measurement results to be assessed at a glance.

One connection — many functions
No risk of confusion: all the necessary functions are covered with just one USB port:
- Battery charging function or permanent power supply
- USB connection to PC to transfer parameters and profile data
- External controls via foot switch
- Remote controls via TURBO DATAWAVE

The HOMMEL-ETAMIC W5 scope of delivery
Art. 1005 0286
- W5
- Roughness probe T1E
- Charging device/mains adapter
- Built-in lithium-ion battery
- USB cable
- Probe cover
- Support prism for small shafts
- Factory calibration certificate
- Operating instructions
- Case

The W5 comes as a complete set in a sturdy case and is immediately ready to use.
Mobile printer
HOMMEL-ETAMIC P5

Ideal for mobile use.
The compact thermal printer documents the measurement results on the spot — using Bluetooth® without awkward cables. The roughness measuring instrument thus remains mobile, even if the measurements need to be documented.

Simple operation.
Easy to insert paper thanks to “Easy Paper Loading” technology: insert roll of paper, close cover, done. The printer is controlled from the roughness measuring instrument.

Robust and long-lasting.
The robust, fiber glass-reinforced plastic casing is designed for industrial use. Up to five rolls of paper can be printed with one battery charge. The printer therefore stays ready for use for a long time.

Everything at a glance.
Measuring conditions, parameters, tolerance evaluation, roughness profile and Abbott curve: depending on the measuring program, this information can be printed off individually or in combinations.

The HOMMEL-ETAMIC P5 scope of delivery
Art. 1005 4262

The P5 mobile printer comes as a complete set in a sturdy case and is ready for immediate use.

- P5 with Bluetooth® interface
- Charging device/mains adapter
- Battery pack
- 5 rolls of paper
- Operating instructions

TURBO DATAWAVE basic for importing measurement results into an Excel-sheet

With the optional TURBO DATAWAVE basic software the measurement results from the WS can be transferred into an Excel-sheet on a PC for further individual processing and documentation.

TURBO DATAWAVE basic
Art. 1003 6645

TURBO DATAWAVE expert – professional evaluation software with a simple menu guide

TURBO DATAWAVE expert is an optional evaluation software for PC-controlled programming and parameter analysis. This software contains a simple menu guide that is easy to use – even without prior knowledge of Windows.

TURBO DATAWAVE expert gives you the capability for remote control of the WS. The parameters are automatically transferred to the computer, where profile diagrams and measurement values can then be stored.

Extensive stationary evaluation and archiving of measuring data with TURBO DATAWAVE expert

- Simple to use via function keys or mouse
- Graphics and parameters can be imported into other applications (Excel, Word etc.)
- Evaluation of all relevant roughness parameters
- Interactive profile analysis
- Administration of any number of measuring programs
- Data export in ASCII format
- Statistical evaluations

TURBO DATAWAVE expert
Art. 1001 6998
Accessories and probes

**Accessories**

- **Height measuring stand H300**
  Art. 1004 7611
  Height measuring stand for reception of mobile measuring devices.
  Height adjustment: 350 mm
  Tilting device ±180°

- **WS adapter for H300**
  Art. 1004 4893
  For mounting of the WS on the H300.

- **Tilt module Y16/WS for H300**
  Art. 1000 5140
  For fast tilting in and out of the measuring device on the H300. Automatic detent at end stop.

**Probe extension for AZZ55**
Art. M 355041
Length: 55 mm, shaft diameter: 11 mm

**Roughness standards**
- Art. 256318 RNDX I: Ra 0.5 µm/Rz 1.6 µm
- Art. 256325 RNDX II: Ra 1.0 µm/Rz 3.3 µm
- Art. 253213 RNDX III: Ra 2.5 µm/Rz 10 µm
- Art. 1000 7581 DKD calibration certificate
- Art. 1000 7482 Inspection report

**Printer paper**
Art. 1005 4263
Set of 10 rolls of thermal paper.
Paper width: 57 mm
Paper length: approx. 11 m

**Sheet measurement with TKPK 100 probe**
Art. 256 730
Special two-skid probe for the surface measurement on cold-rolled sheets according to EN 10049. Skid radius 50 mm, stylus tip radius 5 µm.

**Probes**

**TKD 50 probe**
With offset skid for bores from 2 mm diameter.
Stylus tip 5 µm/90°, measuring range -50 µm.
Art. 224 114

**TK1 probe**
For measurement on concave and convex surfaces.
Stylus tip 5 µm/90°, measuring range ±100 µm.
Art. 258 708

**TK0 50 probe**
With offset skid for bores from 2 mm diameter.
Stylus tip 5 µm/90°, measuring range -50 µm.

**Technical Data**

**HOMMEL-ETAMIC W5**

- **Total deviation acc. to DIN 4772**
  Class 1
  320 µ (210+110)/5 nm

- **Measurement range/resolution**
  Probe
  Measurement display
  Max. traverse length
  Traverse length according to ISO/JIS
  1.5 / 4.8 / 15 mm
  0.64 / 3.2 / 16 mm
  0.25 / 0.8 / 2.5 mm
  1 to 5 selectable

- **Individual traverse lengths**
  Phase-correct profile filter (Gauss), in accordance with ISO 11562
  Filter in accordance with ISO 13565-1
  λ filter in accordance with ISO 3274

- **Traverse speed vt**
  0.15 / 0.5 / 1 mm/sec; return: 3 mm/sec

- **Data point interval**
  Min. 0.5 µm (9600 points when lt = 4.8 mm)

- **Parameters ISO 4287**
  Ra, Rz

- **Parameters ISO 13565**
  Rk, Rpk, Rvk, Mr1, Mr2, A1, A2

- **Parameters MOTIF ISO 12085**
  R, AR, Rx

- **Parameters ASME B46**
  Rp, Rpm

- **Parameters JIS B601**
  Rz-JIS, Ry (corresponds to Rz), tp (corresponds to Rmr)

- **DIN EN 10049**
  RPc

- **Daimler DB N 31007**
  R3z

- **W5 battery capacity**
  800 measurement cycles, lithium-ion battery
  4 h

- **Data memory**
  5 measuring programs
  Offline storage of max. 100 profiles, max 10,000 measurements

- **Working/operating temperature**
  +5°C to +40°C
  Approx. 50 mm x 63 mm x 127.5 mm
  270 g
  USB, Bluetooth
  100 V to 264 V

**Printers**

- **Printing method**
  Completely fixed thermal print lines

- **Paper printing width**
  57 x 0.5 mm/4 mm

- **Paper roll Ø**
  31 mm

- **Resolution**
  8 dots/mm, 384 dots/inch

- **Print speed**
  Max. 50 mm/sec, 16 lines/sec

- **Print functions**
  Measuring conditions, parameters, primary profile, Abbott curve

- **Battery pack**
  1,500 mAh

- **Working/operating temperature**
  +4°C to +50°C
  76.8 mm x 77.4 mm x 39.3 mm
  Approx. 360 g

- **Charging device**
  Wide range power supply

- **100 V to 264 V**

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- **100 V to 264 V**
Our global presence.

Germany
France
Switzerland
Spain
Czech Republic
United States
Mexico
China
South Korea
India

Group companies, affiliates and representation worldwide

www.hommel-etamic.com