



# 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.

## Central start push button

Suitable for right or left handed users.

## Roughness probe

Easy to change.  
Extensive range of roughness probes available for specific measuring tasks.

## Lighting

For better visibility of the measurement position.

## 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.

## Handy, portable and long-lasting

Compact and light in design, the W5 offers up to 800 measurements with one battery charge.

## High storage capacity

For five measuring programs including measuring conditions.

## Wireless printing

The optional printer HOMMEL-ETAMIC P5 uses *Bluetooth*® technology for wireless printing.



# Your partner for industrial metrology

Hommel-Etamic, the Industrial Metrology Division of the Jenoptik Group, is a leading manufacturer and system provider of high-precision, tactile and nontactile 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 contracts.

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 making 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 accessories. This allows the W5 to match the performance of more expensive stationary systems with its accuracy and precision.

**hommel**  
**etamic** W5



Compact and easy to handle.

- Portable and battery-supplied
- Compact and light in design (270 g)
- Easy, intuitive handling with click wheel and graphical user interface
- Large color display for easy viewing of the results, including tolerance evaluation
- Precise positioning on workpiece
- High storage capacity: five measuring programs with max. 2,000 measurements incl. profile data per measuring program
- Features *Bluetooth*® technology for wireless printing
- USB interface
- Height adjustment integrated from factory
- No calibration necessary



# Portable and reliable surface roughness measurement

## The benefits of the W5 at a glance

### Compact and easy roughness measurement.

The mobile HOMMEL-ETAMIC W5 roughness measuring instrument provides a high level of performance and operating convenience for roughness measurement in production. The functional design makes it incredibly easy to use and allows the device to fit nice and securely in your hand when it comes to mobile measurement.

### 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 guarantee 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*® technology.

### Permanently calibrated from factory.

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

# 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 on the bottom side of the W5 in order to guarantee a permanent and stable positioning on the workpiece.



## 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.



#### 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                            | • USB cable                       |
| • Roughness probe T1E           | • Probe cover                     |
| • Charging device/mains adapter | • Support prism for small shafts  |
| • Built-in lithium-ion battery  | • 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*® wireless technology 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*® wireless technology
- Charging device/mains adapter
- Battery pack
- Five rolls of paper
- Operating instructions





# Accessories and probes

## Accessories

Height measuring stand HS300

Art. 1004 7611

300 mm height measuring stand with  $\pm 180^\circ$  tilting unit for reception of mobile measuring devices.



W5 adapter for HS300

Art. 1004 4893

For mounting of the W5 on the HS300.

W5 adapter/tilt module for HS300

Art. 1005 1140

For mounting and fast tilting in and out of the W5 on the HS300. Automatic detent at end stop.

Probe extension AZZ55

Art. M0 435041

Length: 55 mm, shaft diameter: 11 mm

Roughness standards

Art. 256318 RNDX I: Ra 0.5  $\mu\text{m}$ /Rz 1.6  $\mu\text{m}$

Art. 256125 RNDX II: Ra 1.0  $\mu\text{m}$ / Rz 3.3  $\mu\text{m}$

Art. 233213 RNDX III: Ra 3.2  $\mu\text{m}$ /Rz 10  $\mu\text{m}$

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. 235 730

Special two-skid probe for the surface measurement on cold-rolled sheets according to EN 10049. Skid radius 50 mm, stylus tip radius 5  $\mu\text{m}$ .



## Probes

T1E/T3E/T1ET probe

For measurement on flat surfaces, on shafts and in bores. Stylus tip 2  $\mu\text{m}/90^\circ$ .

T1E, measuring range  $\pm 100 \mu\text{m}$

Art. 240 005

T1E, oil-resistant version

Art. 1000 8327

T3E, measuring range  $\pm 300 \mu\text{m}$ , stylus tip 5  $\mu\text{m}/90^\circ$

Art. 243 961

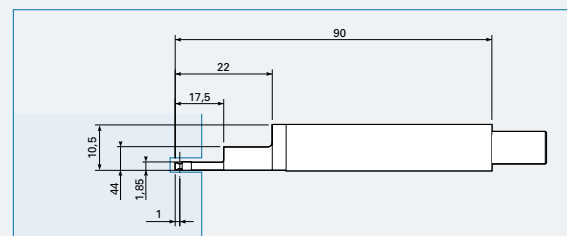


TKO 50 probe

With offset skid for bores from 2 mm diameter.

Stylus tip 2  $\mu\text{m}/90^\circ$ , measuring range -50  $\mu\text{m}$ .

Art. 224 444

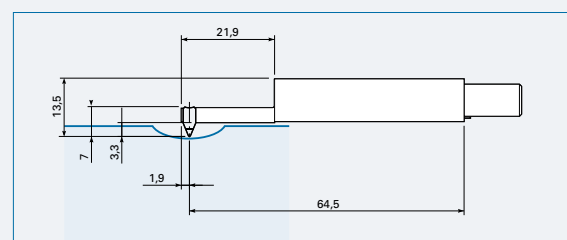


T1K probe

For measurement on concave and convex surfaces.

Stylus tip 2  $\mu\text{m}/60^\circ$ , measuring range  $\pm 100 \mu\text{m}$ .

Art. 257 413



# Technical Data

## HOMMEL-ETAMIC W5

Total deviation acc. to DIN 4772	Class 1
Measurement range/resolution	320 $\mu$ (-210/+110)/5 nm
Probe	Inductive skid probe, 2 $\mu$ m/90°
Measurement display	$\mu$ m/ $\mu$ inch selectable
Max. traverse length	17.5 mm
Traverse length according to ISO/JIS	1.5 / 4.8 / 15 mm
Traverse length according to MOTIF	0.64 / 3.2 / 16 mm
Cut off (ISO/JIS)	0.25 / 0.8 / 2.5 mm
Individual traverse lengths	1 to 5 selectable
Filter	Phase-correct profile filter (Gauss), in accordance with ISO 11562 Filter in accordance with ISO 13565-1 $\lambda$ s 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 $\mu$ m (9600 points when $l_t = 4.8$ mm)
Parameters ISO 4287	Ra, Rz, Rmax, Rt, Rq, RSm, Rmr(c)[%], Rmr(c)[ $\mu$ m], Rp
Parameters ISO 13565	Rk, Rpk, Rvk, Mr1, Mr2, A1, A2
Parameters MOTIF ISO 12085	R, AR, Rx
ASME B46	Rpm
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
Battery charging time	4 h
Data memory	5 measuring programs Offline storage per measuring program: max. 2,000 measurements incl. profile data
Working/operating temperature	+5°C to +40°C
Dimensions	Approx. 50 mm x 63 mm x 127,5 mm
Weight	270 g
Interfaces	USB, <i>Bluetooth</i> ® wireless technology
Wide range power supply	100 V to 240 V

## HOMMEL-ETAMIC P5

Printing method	Completely fixed thermal print lines
Paper/printing width	57 $\pm$ 0.5 mm/48 mm
Paper roll - $\emptyset$	Max. 31 mm
Resolution	8 dots/mm; 384 dots/line
Print speed	Max. 50 mm/s; 16 lines/s
Print functions	Measuring conditions, parameters, primary profile, Abbott curve
Battery	Battery pack, 1500 mAh
Working/operating temperature	+5°C to +40°C
Dimensions	76.8 mm x 77.4 mm x 39.3 mm
Weight	Approx. 350 g
Interfaces	<i>Bluetooth</i> ® wireless technology
Charging device/ wide range power supply	100 V to 264 V



## Our global presence.

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

Group companies, affiliates and representation worldwide

[www.hommel-etamic.com](http://www.hommel-etamic.com)