

Precimar

ICM 100 IP



Automated and economical testing of dial indicators and comparators

With the Precimar ICM 100 IP, the testing of indicators and comparators has become automated and efficient. The simple, one-handed usability and the clever operating software make the Precimar ICM 100 IP the perfect measurement solution for inspection rooms, calibration labs, and routine series testing.

Automated and Efficient Testing of Gages

The manual reading of the pointer position on an analog indicator or comparator can be an exhausting and monotonous task, which can easily lead to measurement errors in the testing process. With the Precimar ICM 100 IP, Mahr offers you a practical solution for the fully-automated, cost-effective, and efficient testing of digital & dial indicators and comparators.

The innovative design of the Precimar ICM 100 IP makes the measurement process simple and straightforward with minimal effort; you can easily bring all of the necessary components into position to perform the measurement. With the well-designed software system, the measurement process is fast and reliable.

- Reduce measurement time by over 60 %
- Easy handling and tool-free operation
- Flexible usage for a variety of dial & digital indicators
- Intuitive, software-supported operation
- Wide variety of supported measurement standards
- Fatigue-free work without loss of concentration



1 hand

sufficient for operation

60 %

Time-saving
compared to manual
measurement

266 Pre-Loaded Test Specimen
Measurement Modules

For testing of:



Dial Indicators



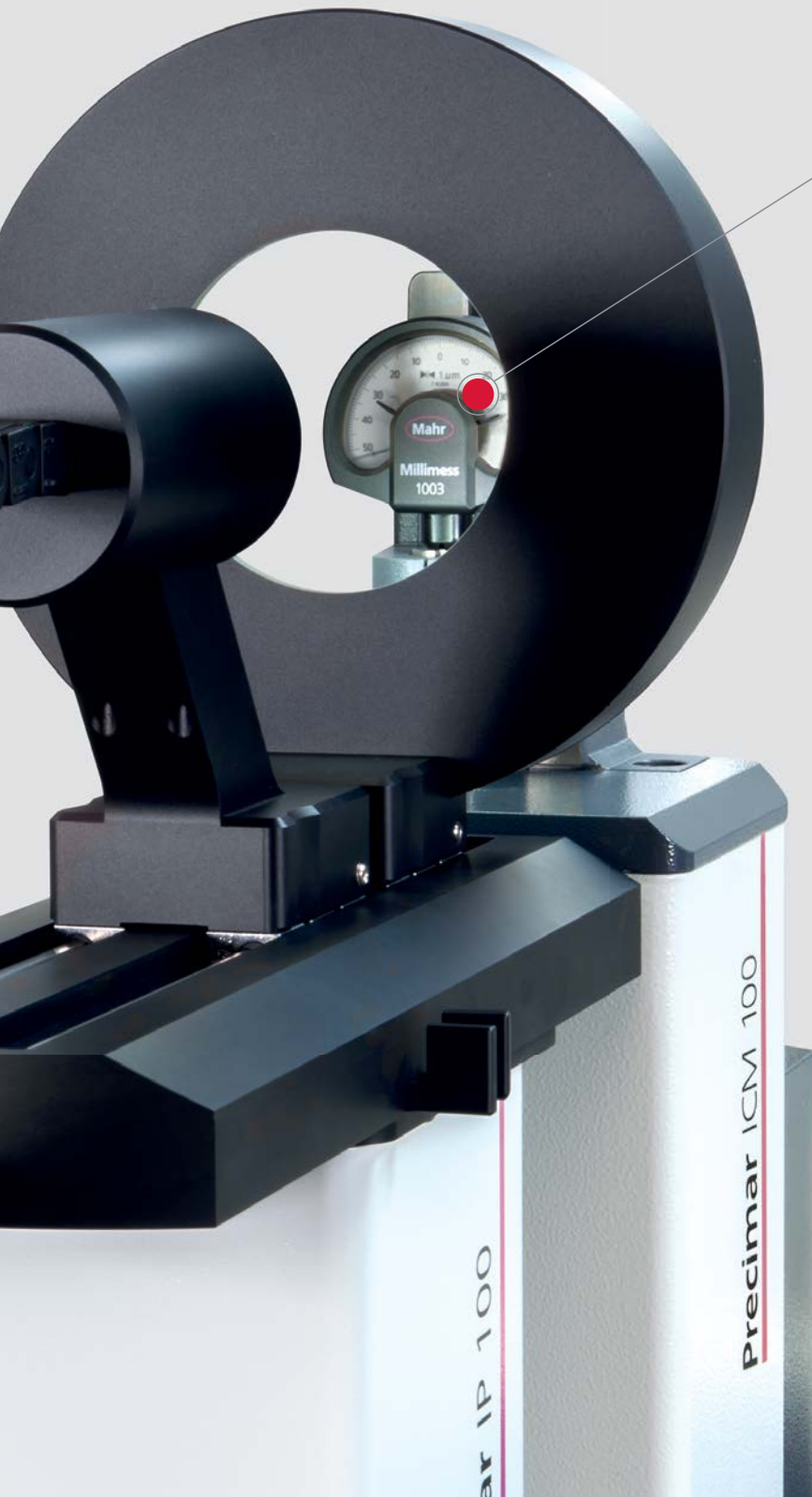
Digital Indicators



Dial comparators



Dial test indicators



100 mm

direct measurement range

Fast and Reliable Results

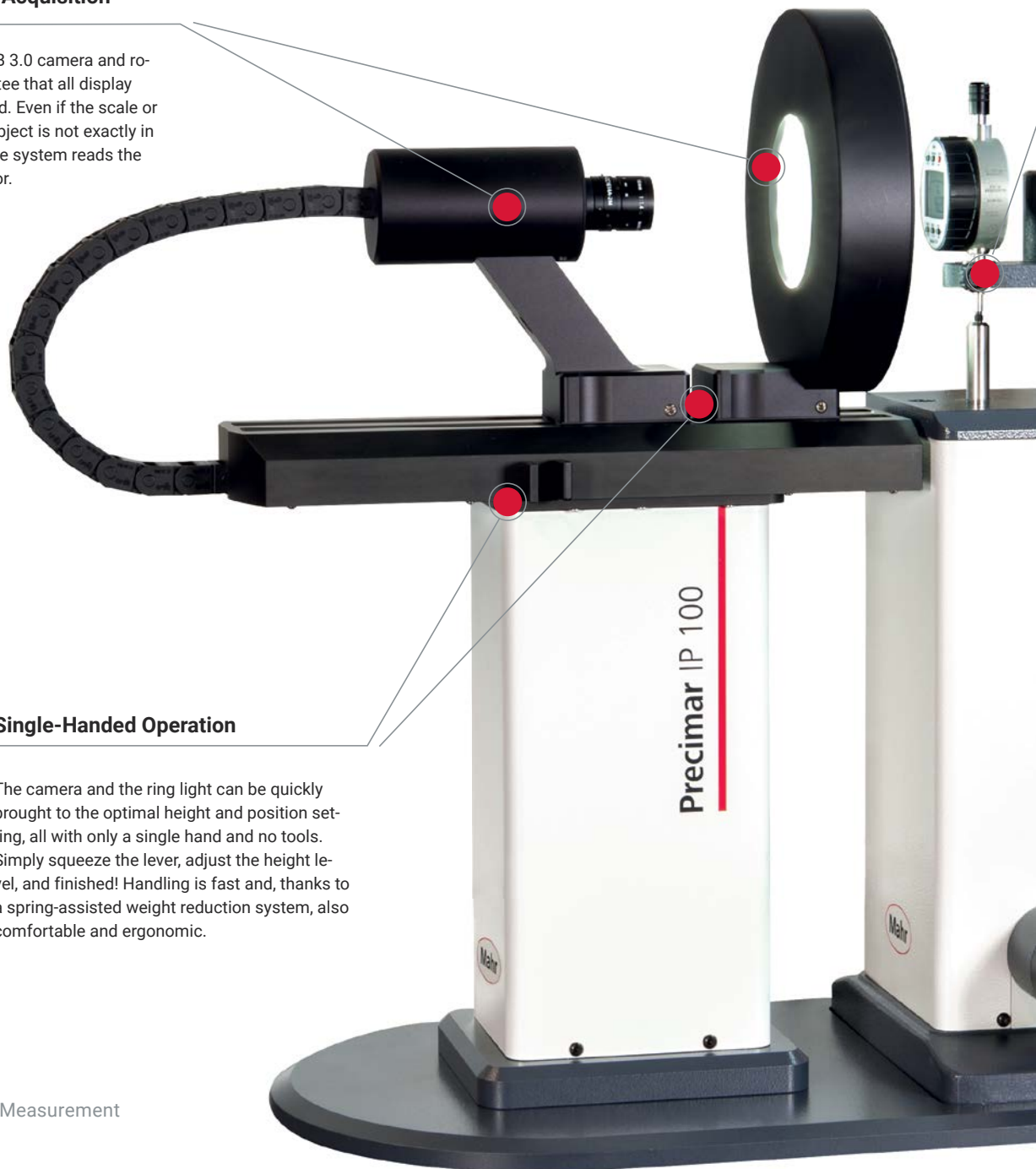
The space-saving table-top unit is designed for simple operation and fast test procedures. Automated measuring significantly increases your efficiency. At the same time, the innovative, ergonomic design ensures that every movement is comfortable.

Fast & Reliable Data Acquisition

The high-performance USB 3.0 camera and robust LED ring light guarantee that all display values are reliably detected. Even if the scale or digit display of your test object is not exactly in the center of the image, the system reads the display values without error.

Single-Handed Operation

The camera and the ring light can be quickly brought to the optimal height and position setting, all with only a single hand and no tools. Simply squeeze the lever, adjust the height level, and finished! Handling is fast and, thanks to a spring-assisted weight reduction system, also comfortable and ergonomic.



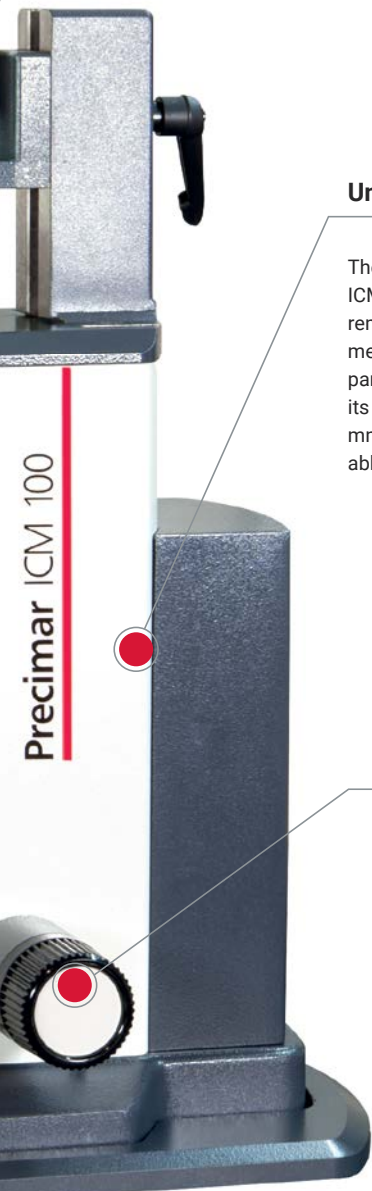
Pre-Loaded Measurement Modules

Measurement modules for more than 266 test specimens are pre-loaded into the software. Simply select a module during set-up based on the indicator you wish to measure. This saves time and reduces the risk of data entry errors. You can also create custom measurement modules or modify existing modules to fit your needs and requirements.



Improved Specimen Mounting

The bracket for mounting the test specimen exhibits improved clamping properties and easier handling. Specimens with shaft diameters of 8 mm, 28 mm, or 3/8" can be easily and securely mounted.



Universal & Proven

The proven foundation of the ICM 100 IP is the ICM 100 (fka Optimar 100). This proven measurement solution is versatile in its capability to measure analog and digital indicators and comparators of different makes and models. With its measurement range of up to 4 inches / 100 mm, you will achieve standardized and traceable measurement results.

Easy Setup

Ready to go in a few moments – thanks to software support with live visualization. You can see at a glance whether the camera is in focus and the exposure is sufficient. Real-time visual feedback ensures that each of your hand movements is right.

Manual Mode

Would you prefer to measure certain indicators or comparators using a manual or semi-automated process? This is easily accomplished using the electronic handwheel. In manual or semi-automatic mode, the camera can be used as a magnifier. With the enlarged live-feed image, you can more easily read the dial face, thereby reducing eye strain and parallax error.

Precimar ICM 100 IP

Whether you are testing an indicator or a comparator – Precimar ICM 100 IP is the economical solution for automated testing of your test specimens. Typical areas of application are measuring equipment testing in all industries, measuring rooms, calibration laboratories and serial testing at dial gage manufacturers.

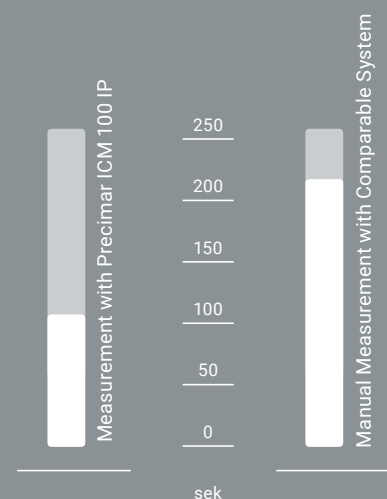
The fully automatic testing makes your measurement process much more comfortable and quick – and thus much more economical. A high-performance camera takes over the strenuous, error-prone reading of the display values. The associated software controls the ICM 100 IP for you and checks whether the data read corresponds to the specified reference values.

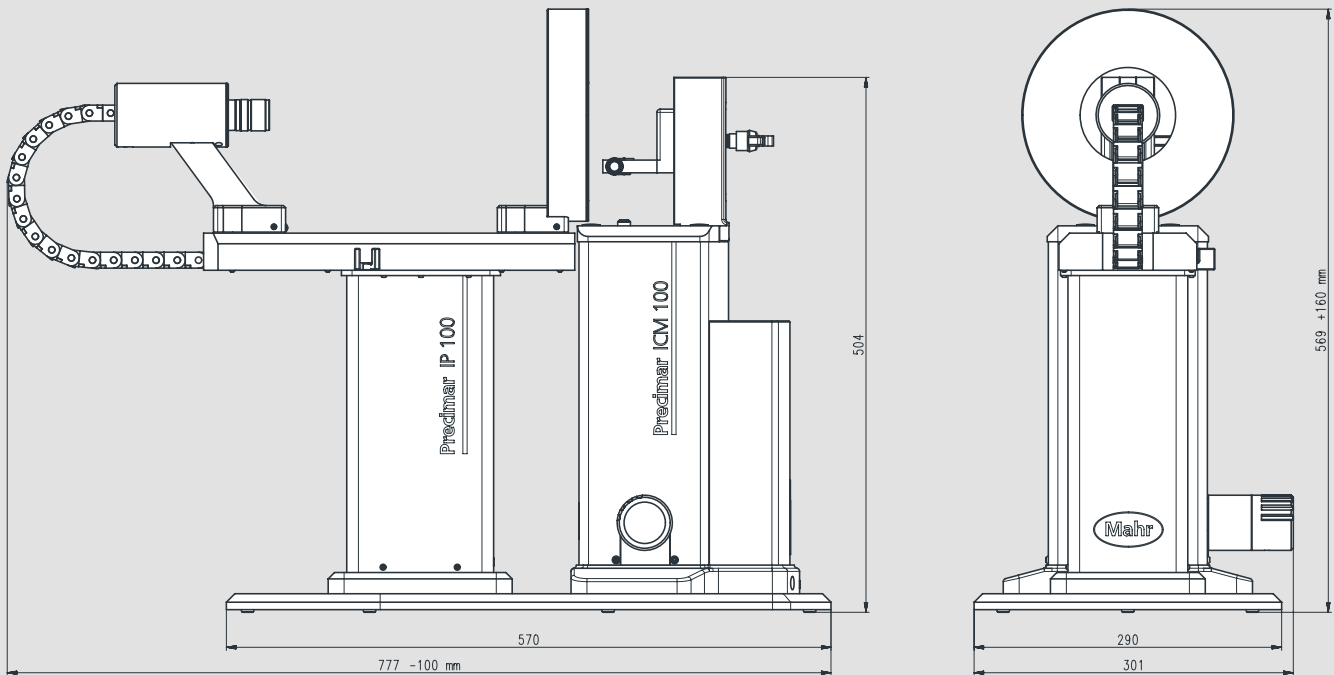
Features:

- Convenient, tool-free and intuitive operation with just one hand
- Highest-accuracy measurement through compliance with Abbe's principle
- Testing to international standards, including ASME/ANSI, DIN, BS, JIS, VDI, GOST, NF
- High-performance USB 3.0 industrial camera with high image quality and wide dynamic range
- High-resolution lens with low distortion – for error-free determination of measured values
- Robust, industrial-grade LED ring light for measurements unaffected by ambient light
- Ability to automatically measure digital indicators through direct reading of values – no cables required
- Wide variety of possible test specimens up to 4 Inches / 100mm – dial & digital indicators, comparators, test indicators
- Inductive probes from various manufacturers can be tested (only in manual mode)
- Pre-programmed measurement modules with pre-loaded nominal values and tolerances
- Direct measurement range of 4 inches / 100 mm – no need to reposition the test specimen during testing

Automation for Time Savings!

Never before has it been so efficient to measure indicators and comparators. With the **Precimar ICM 100 IP**, reduce measurement time by over 60 % thanks to faster image processing, easy-to-use software, and simpler handling.





Technical Data

Direct Measurement Range	100 mm, 4 inch (101,6 mm)
Measuring System	Incremental Glass Scale
Resolution	0,02 µm
Maximum Permissible Error (MPE)	(0,2 + l/250) µm, l in mm
Positioning Speed	max. 4 mm/s / 0.16 in/s
Positioning for Testing Analog & Digital Dial Gages and Probes	Pre-positioning: automatic
	Fine positioning: electronic rotary knob
Positioning for Testing Analog & Digital Dial Gages and Probes	Automatic
Electrical Requirements	Primary: 110 – 240 V/50 – 60 Hz
	Secondary: 12 VDC; 2,5 A
Camera	USB 3.0 CMOS camera



Complete Package or Upgrade

Mahr offers the Precimar ICM 100 IP as either a complete, ready-to-go system or as an upgrade package for your existing Optimar 100 or ICM 100 or additional questions. Please contact your local Mahr representative for assistance.

Precimar ICM 100 IP
Complete package

Article no. 535 10 10

Upgrade kits

for Precimar Optimar 100 (Article no. 532 00 05)
for Precimar ICM 100 (Article no. 535 10 00)
for Precimar ICM 100 (Article no. 535 10 05)

Article no. 535 10 50
Article no. 535 10 60
Article no. 535 10 70



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