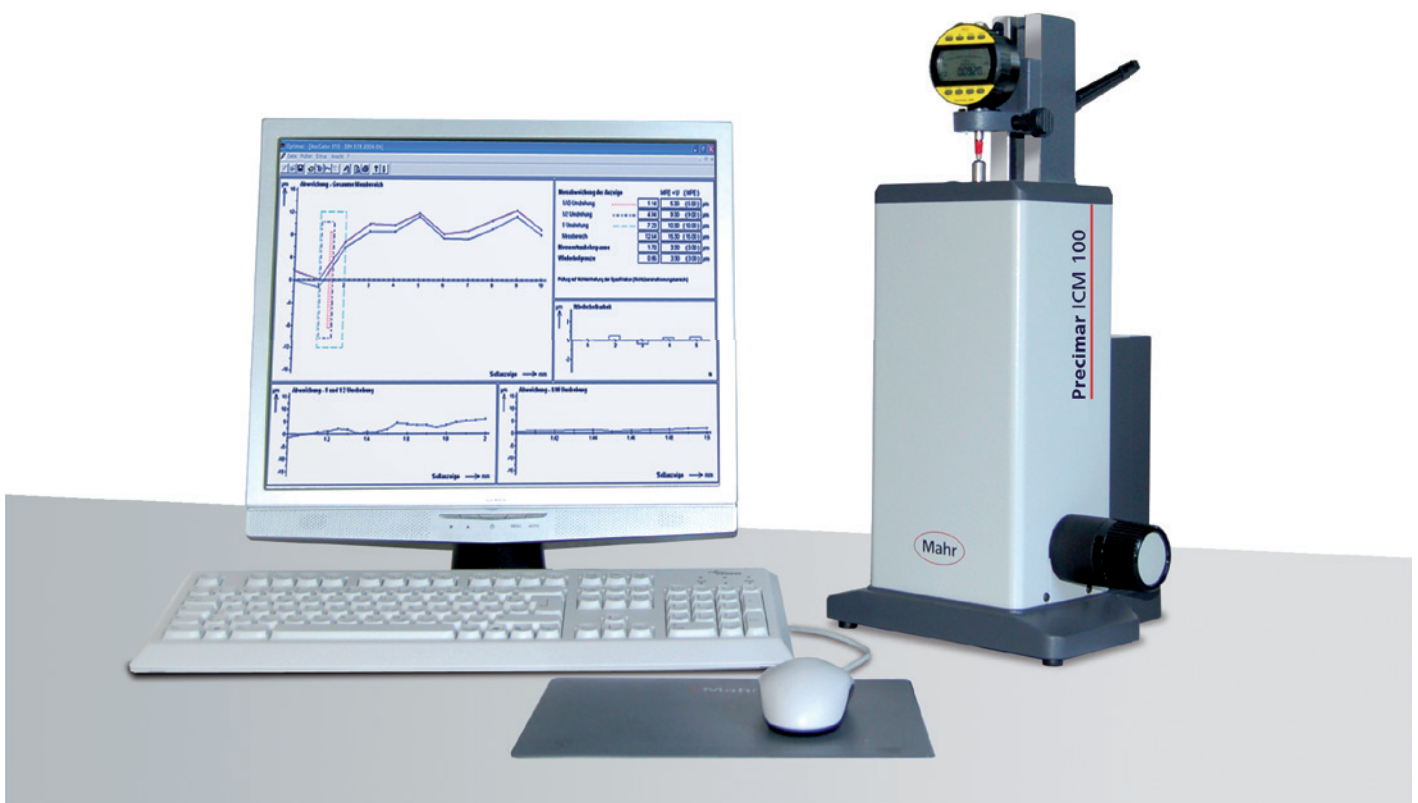
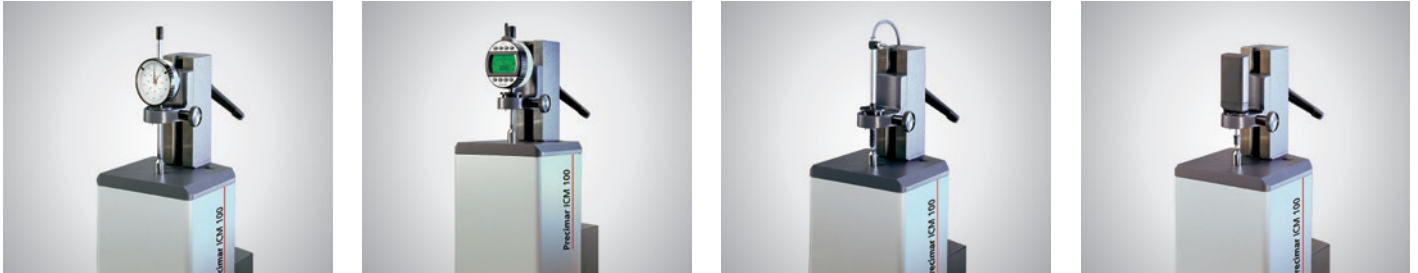


## Precimar. Dial Indicator Testing

Partially and fully automated Testing of Indicating Measuring Equipment

Dial indicator test devices from Mahr stand for accurate and efficient measurement. These devices are designed for absolute measurement of dial indicators, dial comparators, dial test indicator measuring devices and 2-point bore gages as well as inductive and incremental measuring probes. Typical areas of use include dial indicator testing in all sectors of industry, measuring rooms and calibration laboratories as well as production testing by dial indicator manufacturers. The Precimar ICM 100 from Mahr is a practical solution for both the cost-effective, semi-automatic testing of analog dial indicators and the efficient, fully automatic testing of digital measuring equipment.



# Precimar ICM 25

## Long Range Indicator Checker

### FEATURES

- Energy supply: 230 V/115 V; 50/60 Hz
- Package contains: split bushing BU-197, mounting shaft 800a3/8, MarCheck angle display stand



### Application:

For testing of:

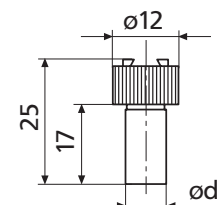
- Dial indicators (analog and digital)
- Dial comparators (analog and digital)
- Dial test indicator measuring devices (analog and digital)
- Inductive and incremental probes

### TECHNICAL DATA

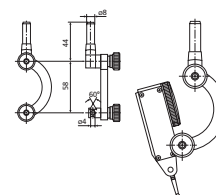
Order no.	Type
2062722	ICM 25

### ACCESSORIES

Order no.	Product name	Type
4305885	Mounting shaft $\varnothing$ 4 mm	800 a4
4305893	Universal centering support frame	800 b
5350196	Gage inspection program QMSOFT® / QM-DIAL32	
5360322	Foot switch for data transfer from MarCheck to PC	
7024634	Data connection cable RS232C (3 m)	



800 a6;800 a8;800 a3/8;800 a4;800 a1/4"



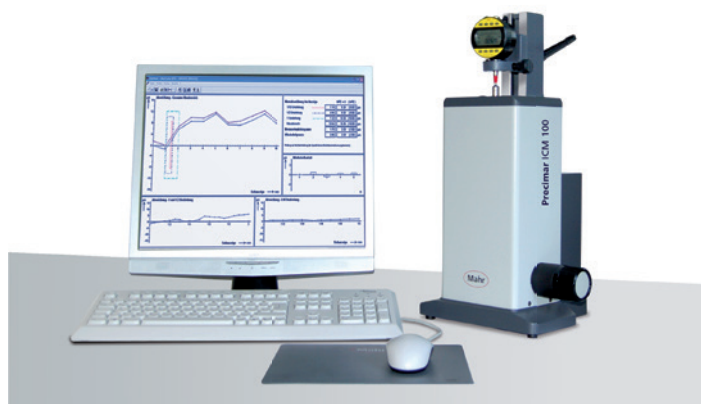
800 b

# Precimar Precimar ICM 100

## Dial Indicator Test Device

### DESCRIPTION

- The Precimar ICM 100 is the most cost-effective test station for the partially or fully automated testing of dial indicators, dial comparators, dial test indicator measuring devices and 2-point bore gages, as well as inductive and incremental measuring probes.
- Automated sub-processes with motorized measuring spindle drive
- Fully automatic measuring procedure with digital measuring equipment
- Precimar ICM 100 is suitable for horizontal use
- Testpiece held by a vertical guide. Fast height adjustment to adapt measuring objects to different measuring ranges
- Rigid, box-shaped device housing
- For measuring objects with 8 mm, 28 mm, 3/8" shaft diameter
- Electronic handwheel for manual control of spindle movement. The sensitivity of the electronic handwheel adjusts automatically to the testpiece resolution
- All control elements are ergonomically arranged
- Complies with Ernst Abbe's comparator principle for maximum measuring accuracies
- LIF 101 measuring system with error compensation
- Checking of 2-point bore gages with no loss of accuracy
- Pre-positioning: automatic
- Fine positioning: electronic rotary knob



### TECHNICAL DATA

ICM 100	
Positioning speed [mm/s]	2
Type	Precimar ICM 100
Measuring range	100 mm, 4 inch (101.66 mm)
Direct measuring range [mm]	100
Measuring uncertainty $MPE_{E1}$ (L in mm) [ $\mu\text{m}$ ]	$\leq (0.2 + L/250)$
Digital numerical increment [ $\mu\text{m}$ ]	0.02
Device dimensions (LxWxH)	235 x 216 x 480

### APPLICATIONS

- For testing of:
  - Dial indicators (analog and digital)
  - Dial comparators (analog and digital)
  - Dial test indicator measuring devices (analog and digital)
  - Inductive and incremental probes
  - 2-point bore gages

### ACCESSORIES

- Holder for dial test indicator measuring devices
- Wide choice of adapters for digital dial indicators and incremental measuring probes from various manufacturers
- Please ask for the appropriate adapter
- Inductive probes from various manufacturers can be connected to Precimar ICM 100 via the probe interface.
- Holding device and software for testing 2-point bore gages with a moving measuring pin (test in accordance with VDI / VDE / DGQ 2618, Part 13.2, 2005)
- Device for force sensor on request
- Camera attachment kit for precise and ergonomically improved operation in semi-automatic measuring procedures
- Calibration set for user calibration
- Factory or DAKS/DKD calibrations available



For more information, please visit our website: [www.mahr.com](http://www.mahr.com)

# Precimar Precimar ICM 100 IP

## Dial Indicator Test Device

### DESCRIPTION

- 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. 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.
- 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 and NF.
- High-performance USB 3.0 industrial camera with high image quality and wide dynamic range
- 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 / 100 mm – dial & digital indicators, comparators, test indicators
- 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
- Inductive probes from various manufacturers can be tested (only in manual mode)

### Supplied with:

- Precimar ICM 100 base device
- Precimar IP 100 upgrade kit image processing
- Software Precimar MSW V12
- Software option Precimar ICM IP image processing
- USB cable
- Clamping 8 mm
- Mount for dial test indicators
- Mahr calibration certificate
- Operating manual



### TECHNICAL DATA

Dial indicator testing machines, image processing	
Positioning speed [mm/s]	4
Type	Precimar ICM 100 IP
Measuring range	100 mm
Measuring uncertainty $MPE_{E1}$ (L in mm) [ $\mu\text{m}$ ]	$\leq (0.2 + L/250)$
Digital numerical increment [ $\mu\text{m}$ ]	0.02
Mass [kg]	45

### APPLICATIONS

- Calibration of dial indicators, dial test indicator measuring devices and dial comparators
- The Precimar MSW 100 software system controls the dial indicator test device, processes the camera image (pointer or numeric display of the test object) and the reference measuring values of the dial indicator test device, and also performs all the subsequent processes related to test equipment management.
- The testing routine can be implemented based on DIN, VDI, DKD or DAkkS guidelines, various international standards, or based on the company's internal specifications.
- Deviations between test objects are illustrated in a graph during testing.



For more information, please visit our website: [www.mahr.com](http://www.mahr.com)

# Precimar ICM 100 IP

Fully automated dial indicator test bench

## 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 and NF.
- High-performance USB 3.0 industrial camera with high image quality and wide dynamic range
- 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 / 100 mm – dial & digital indicators, comparators, test indicators
- 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
- Inductive probes from various manufacturers can be tested (only in manual mode)
- **Energy supply:** 230 V/115 V; 50/60 Hz



## Application:

- Calibration of dial indicators, dial test indicator measuring devices and dial comparators
- The Precimar MSW 100 software system controls the dial indicator test device, processes the camera image (pointer or numeric display of the test object) and the reference measuring values of the dial indicator test device, and also performs all the subsequent processes related to test equipment management.
- The testing routine can be implemented based on DIN, VDI, DKD or DAKS guidelines, various international standards, or based on the company's internal specifications.
- Deviations between test objects are illustrated in a graph during testing.

## TECHNICAL DATA

Order no.	Type	Measuring range	Measuring uncertainty $MPE_{E1}$ (L in mm) [ $\mu\text{m}$ ]	Mass [kg]
5351010	Precimar ICM 100 IP	$\leq (0,2 + L/250)$	100 mm	45

