

TECHNICAL DATA

		GONIOMAT M5 Order-No.: 241 605	GONIOMAT M10 Order-No.: 241 610
Measuring range	degree	360	
Uncertainty (multiple measurement)* **	arcsec	1.5	2.5
Uncertainty (single measurement)*	arcsec	2.5	5.0
Uncertainty (pyramidal measurement)* ***	arcsec	10.0	15.0
Operating temperature	°C	20 ± 3	
Minimum surface area (glass uncoated)	mm ²	2	
Maximum sample diameter	mm	125	
Maximum sample weight	kg	10	
Table diameter	mm	125	
Maximum pyramidal angle	arcmin	20	
Autocollimator focal length	mm	200	
Autocollimator aperture	mm	28	
Base dimension without PC	mm	490 x 250	
Weight	kg	19	
PC-Connection / Supply		USB 2.0	

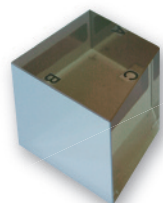
* as per DIN 1319

** four measurements on 90° rotated encoder positions required; sample surfaces $\lambda/10$ p.v., 30 x 30 mm

*** with the use of a 3-point base

Angle reference

Each Goniomat M is supplied with an angle reference for verification of the calibration status on-site.



Description	Order-No.
Angle reference	280 620 10

ACCESSORIES

Polygon mirrors

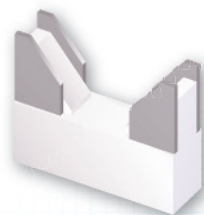
We offer certified 8- or 12-faces polygons optionally which are traceable to national standards. They can be used for calibration, meeting the requirements of quality management systems.



Description	Order-No.
Polygon mirror 8 faces 2"	205 307
Polygon mirror 12 faces 2"	205 313

V-Block prism

We offer a holder for secure mounting of wedges or plane plates in a diameter range from 40 to 60 mm. Alongside the determination of the wedge angle, it is possible to determine the deviation of the optical axis against the cylindrical axis of the sample.



Description	Order-No.
V-Block prism	280 624

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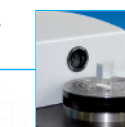
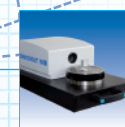
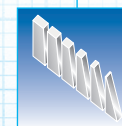
e-mail: info@moeller-wedel-optical.com

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Semiautomatic Goniometer with electronic image evaluation

GONIOMAT M

Objective, precise and reliable
angle measurement



OVERVIEW

The **GONIOMAT M** is a semiautomatic goniometer with electronic image evaluation that is essential for the measuring and testing of angles of optical prisms, polygons and wedges. Furthermore it can be used for the measuring and testing of angle gauges.

The **GONIOMAT M** is indispensable for testing laboratories, workshops as well as for receiving and final inspection. The **GONIOMAT M** series is available in two levels of accuracy:

- **GONIOMAT M5**; class 1.5 arcsec
- **GONIOMAT M10**; class 2.5 arcsec



Measurement task:

- Measurement of plane angle of prisms, especially of 90°-prisms
- Angle measuring of polygons
- Measurement of wedge angles
- Angle measurement of micro prisms
- Measurement of angle gauges
- Evaluation of deflection angles
- Measurement of pyramidal angle

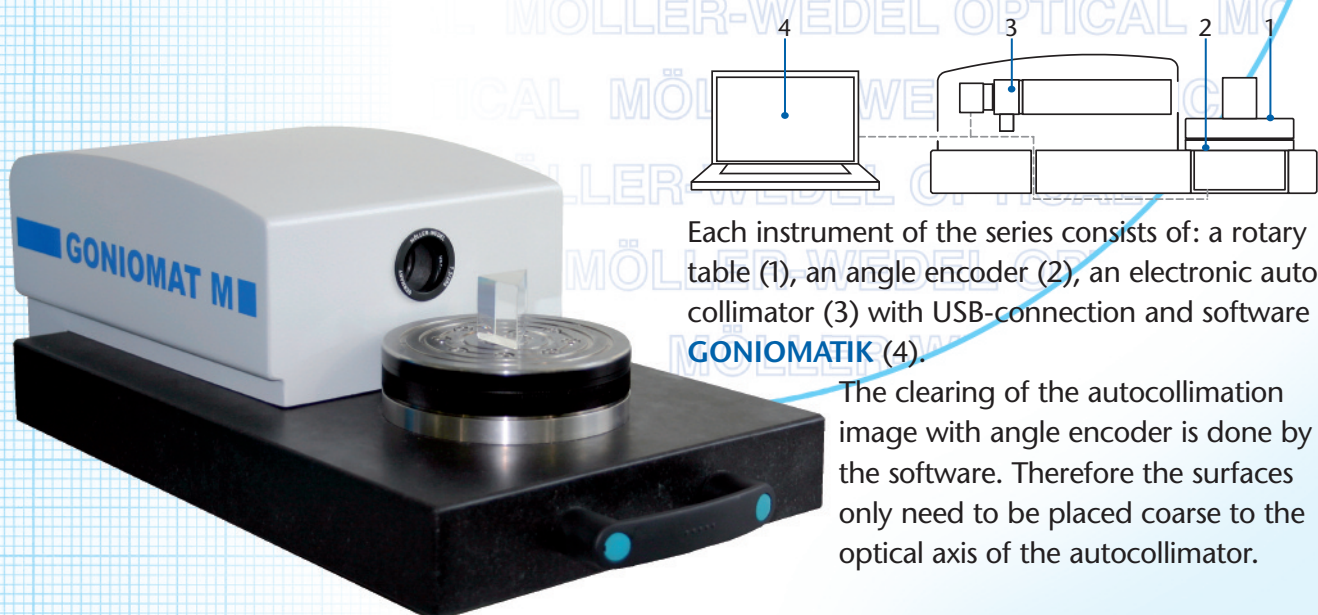
Innovation: Through combination of the newest camera technique, MÖLLER-WEDEL OPTICAL standard components and our innovative software concept, we achieve the following improvements:

- simple adjustment of the test prism surface to the optical axis of the autocollimator
- automatic clearing of the autocollimation image with angle encoder
- The mechanical tilting table is replaced by a "virtual" tilting table which is emulated by the software

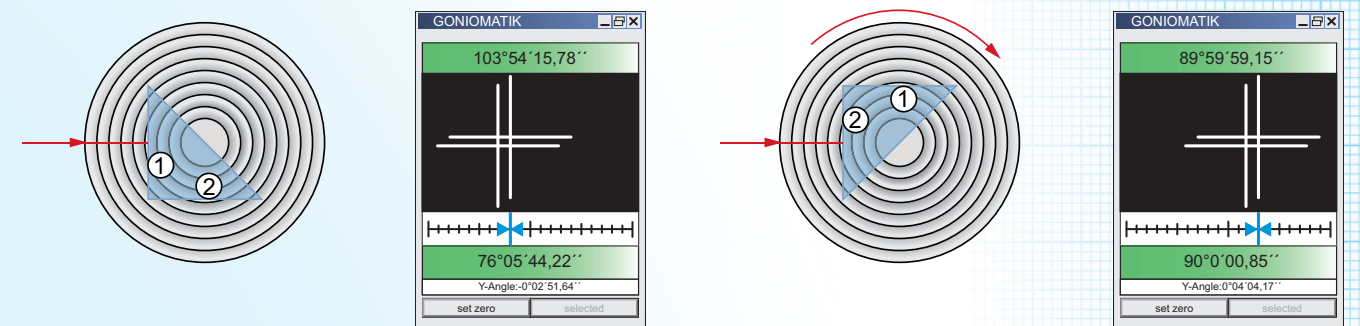
Advantages of the GONIOMAT-M series:

- Short measurement times
- Elimination of the subjective rate by electronic image evaluation
- Logging of measurement results
- Easy handling
- Portable due to the compact design

MEASURING PRINCIPLE



MEASURING PROCESS



1. Place the prism and turn the first surface to the autocollimator, until the autocollimation image gets visible in the measurement window
2. Set the measurement position to "Zero"
3. Turn the next surface to the autocollimator
4. The angle between both surfaces will be indicated as soon as the autocollimation image appears in the measurement window

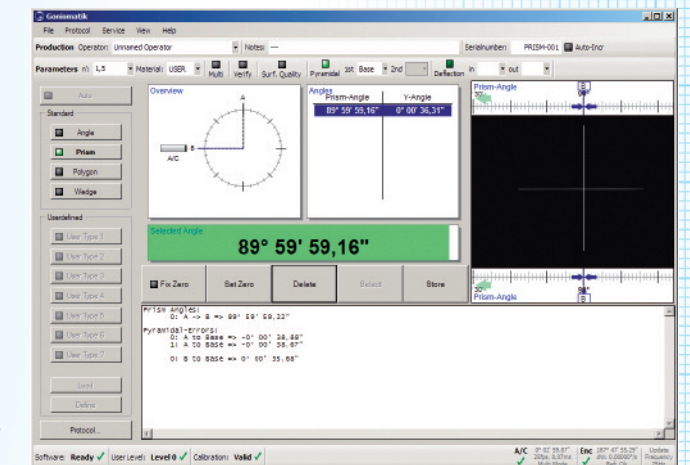


SOFTWARE

The **GONIOMATIK** software is part of the Goniometer of the **GONIOMAT M** series. It supports the following features:

- Visualisation of the autocollimation image and its position against the axis of the autocollimator
- Readout of encoder position and autocollimation image as well as the allocation between them
- Consideration of the angle in y-direction (virtual tilt table)
- Easy finding of reflexes through prediction of the required position (reflex forecast)
- Presetting and monitoring of tolerance parameters (Go/NoGo)
- Absolute testing of polygons with the rosette method
- Evaluation of the measurement results in coordination with the ISO 10110-1, VDI-2605 as well as the DIN 3140 standards
- Logging of the measurement results

The Software can be switched to "Workshopmode". This mode is equipped with limited functionality, but offers easier handling in return.



System requirements:

- Pentium 4 or higher (PC or Laptop)
- Operation system Windows® XP or higher
- Min 256 MB memory
- USB 2.0 Port
- Display resolution min. 1024x768 pixel True Color

