



MODULAR, FLEXIBLE, INDIVIDUAL

MANUAL & AUTOMATIC GRINDING & POLISHING MACHINES





CLEVER FUNCTIONS FOR MORE COMFORT AND SAFETY

NEW GENERATION DESIGN AND OPERATING CONCEPT

QATM OFFERS A WIDE SELECTION OF DIFFERENT MODELS OF GRINDERS AND POLISHERS. THEY ARE CHARACTERISED BY THEIR HIGH QUALITY, ROBUST YET MODERN DESIGN AND NEW FUNCTIONALITIES.

MACHINES FOR MANUAL SAMPLE PREPARATION



QPOL 250 MI/M2 - MANUAL SAMPLE PREPARATION MADE EASY

Manual grinding & polishing machines with the option for an automatic grinding and polishing head.

- I Working wheels: Ø 200/250 mm
- I Speed: 30 600 rpm, continuously adjustable
- I Single or twin wheel unit



QPOL 300 M1/M2 – MANUAL UNITS WITH STRONG DRIVES AND CONVINCING FEATURES

Manual grinding & polishing machines with the option for an automatic grinding and polishing head.

- I Working wheels: Ø 250/300 mm
- I Speed: 30 600 rpm, continuously adjustable
- I Single or twin wheel unit
- I Visualization of the current grinding force
- I Timer function
- I Automatic water valve

MACHINES FOR AUTOMATIC SAMPLE PREPARATION



QPOL GO – THE BUDGET SOLUTION FOR AUTOMATED SAMPLE PREPARATION

Grinding and polishing head for 1 - 4 samples with Ø 40 mm

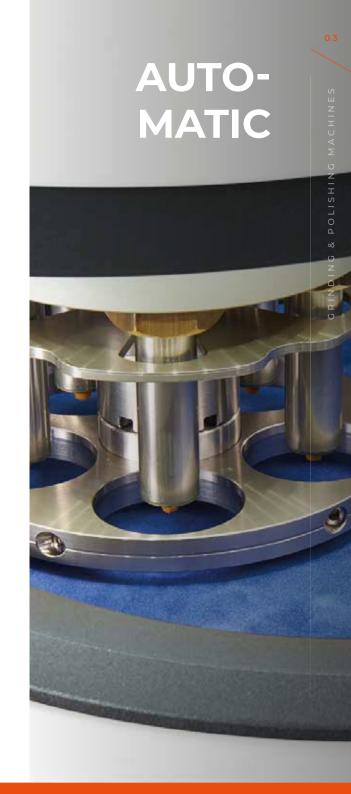
- Adjustable pressure (single pressure 5 45 N)
- I Adjustable timer for preparation time
- I Toolless sample holder clamping
- I No. of samples (single pressure): 1 4 samples Ø 40 mm
- I Retrofittable on Qpol 250/300 M machines



QPOL 250 A1/A2-ECO / QPOL 300 A1/A2-ECO - GRINDERS AND POLISHERS WITH ROBUST TECHNOLOGY AND ELABORATE OPERATIONAL DESIGN

Automatic grinding & polishing machines.

- I Working wheels: Ø 200/250 mm (Qpol 250 A1/A2-ECO) Ø 250/300 mm (Qpol 300 A1/A2-ECO)
- I Intuitive QATM software
- I Programmable memory for reproducible results
- I Single or twin wheel unit
- I No. of samples (single pressure): 1 5 samples Ø 40 mm
- I Single/central pressure: 5 80 N/20 350 N



I Impact-proof plastic bowlI Aluminium case, powder coated

I Retrofittable automatic grinding/polishing head Qpol GO



Qpol 250 M1 **Qpol 250** M2

The Qpol 250 M1 is a manual single wheel grinder & polisher and the Qpol 250 M2 is a manual twin wheel grinder & polisher for working wheels with Ø 200/250 mm.

The start/stop button with illuminated status display as well as the rotary switch with scale and integrated boost button allow for intuitive operation of the manual machines. The set speed remains constant throughout the entire grinding and polishing process.

The particularly powerful, speed-controlled drive makes the machine suitable for all work step and materials. The working wheel can be set to rotate clockwise or counter-clockwise. Thanks to the impact-proof plastic basin, powder-coated aluminium case and sophisticated machine technology, the Qpol M series runs very smoothly and ensures excellent preparation results.



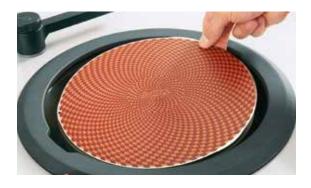
ROBUST PULL-OUT WATER HOSE

The pull-out flexible hose extension allows the tap to be used for cleaning the entire working area and the basin. It can be conveniently operated with one hand.



SINGLE-DISC DESIGN

Thanks to the innovative mounting system, it locks itself automatically. After lifting it off, all parts underneath are readily accessible for easy and time-saving cleaning of the machine.



ERGONOMICALLY SHAPED SPLASH GUARD RING

The ergonomically shaped splash guard ring significantly reduces splashing. It may also be used as a hand rest for longer preparations. The recessed grips allow the grinding and polishing medium to be changed while the ring is still attached. The modified working wheel, the generously designed basin and a loosely fitted splash guard ring ensure a high degree of operator safety.



OPTIONAL GRINDING/POLISHING HEAD QPOL GO

The perfect solution for automated sample preparation. The Qpol 250 M machines can be equipped with the optional Qpol Go grinding/polishing head. Find out more on pages 14-15.

DRY IN THE BLINK OF AN EYE

BOOST FUNCTION

U/Min

CATA

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At the end of the preparation procedure, the boost function may be activated to discharge any liquid left on the grinding and polishing medium in 3 seconds at 750 rpm.



OPTIONAL DOSING UNIT QDOSER GO AND QDOSER ONE

The manual grinders and polishers can be combined with the automatic dosing system Qdoser Go or the manual dosing solution Qdoser One, thus offering a high degree of flexibility for sample preparation and ease of use.

Find out more on pages 12-13.





TECHNICAL DATA





Application	Manual grinding and polishing of materialographic samples			
Fields of application	Preparation of sample surfaces for the materialographic analysis			
Number of working wheels	1	2		
Diameter of working wheel	Ø 200 / 250 mm	Ø 200 / 250 mm		
Speed (working wheel)	30 - 600 U/min, continuously adjustable	30 - 600 U/min, continuously adjustable		
Direction of rotation working wheel	right / left	right / left		
Drive power (main drive)	0.55 kW (SI operation)	0.55 kW (S1 operation)		
Connected load	1.0 kVA	1.0 kVA		
Power supply	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)		
WxHxD	511 x 265 x 710 mm	901 x 265 x 710 mm		
Weight (depends on equipment)	~ 25 - 30 kg	~ 45 - 49 kg		
Water connection	1x fresh water connection R½" max. 6 bars	lx fresh water connection R½" max. 6 bars		
Dosing unit (option)	Qdoser GO or Qdoser ONE	Qdoser GO or Qdoser ONE		
Grinding & polishing head (option)	Qpol GO	Qpol GO		

I Aluminium case, powder coated

I Retrofittable automatic grinding/polishing head Qpol GO



Qpol 300 M1 **Qpol 300** M2

The Qpol 300 M1 is a manual, single wheel, and the Qpol 300 M2 is a manual, twin wheel grinding and polishing machine for working wheels Ø 250/300 mm.

The impact-resistant plastic bowl, the powder-coated aluminium housing and the high-quality components inside the device are the basis for smooth running and best preparation results.

A spin cycle function (Cleaning Boost) helps to spin dry the grinding and polishing medium at 750 rpm at the end of the preparation process within 3 seconds and then turns off the device. The particularly strong, speed-controlled drive makes this model suitable for all preparation steps and materials. In addition, the working disc can be operated in clockwise/counter-clockwise rotation.



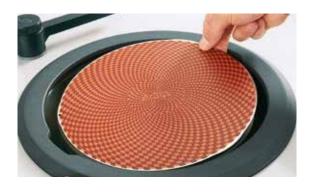
FOR REPRODUCIBLE PREPARATIONS

The time setting and torque display to visualize the current contact pressure are the basis for easy and reproducible manual preparation steps. The water valve is automatically activated at the beginning/end of the preparation process, if required.



INTUITIVE PARAMETER SETTING

The machine is operated and programmed via the 4.3" touch screen. All process parameters can be saved as a preparation method.



ERGONOMICALLY SHAPED SPLASH GUARD RING

The machine design with its new splash guard ring, clearly laid out working area, water tap and sloping control panel convincingly meets all the requirements for comfortable operation. The new mounting system for the working wheel (single disc principle) saves time when changing the grinding and polishing media and cleaning the machine.



OPTIONAL GRINDING/POLISHING HEAD QPOL GO

The perfect solution for autmated sample preparation. The Qpol 300 M machines can be equipped with the optional grinding/polishing head Qpol Go. Find out more on pages 14-15.



EVERYTHING UNDER CONTROL

Process ready to start

300

rpm

200

100

200 rpm

04:00

300

400

500

®

DATA

600

In the ergonomically integrated touch panel, all process parameters as well as convenient features for manual preparation are clearly displayed and can be easily changed at any time.



OPTIONAL DOSING UNIT QDOSER GO AND QDOSER ONE

The manual grinders and polishers can be combined with the automatic dosing system Qdoser Go or the manual dosing solution Qdoser One, thus offering a high degree of flexibility for sample preparation and ease of use.

Find out more on pages 12-13.





TECHNICAL DATA





Application	Manual grinding and polishing of materialographic samples			
Fields of application	Preparation of sample surfaces for the materialographic analysis			
Number of working wheels	1	2		
Diameter of working wheel	Ø 250 / 300 mm	Ø 250 / 300 mm		
Speed (working wheel)	30 - 600 U/min, continuously adjustable	30 - 600 U/min, continuously adjustable		
Direction of rotation working wheel	right / left	right / left		
Drive power (main drive)	0.75 kW (SI operation)	2x 0.75 kW (S1 operation)		
Connected load	1.8 kVA	1.8 kVA		
Power supply	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)		
WxHxD	511 x 265 x 710 mm	901 x 265 x 710 mm		
Weight (depends on equipment)	~ 25 - 30 kg	~ 45 - 49 kg		
Water connection	lx fresh water connection R½" max. 6 bars	1x fresh water connection R½" max. 6 bars		
Dosing unit (option)	Qdoser GO or Qdoser ONE	Qdoser GO or Qdoser ONE		
Grinding & polishing head (option)	Qpol GO	Qpol GO		

UNIQUE HANDLING

EASY & CONVENIENT DOSING

4 screwable 500 ml glass bottles for 3x diamond suspensions and 1x lubricant or 4x diamond suspension Dia-Complete can be filled through a separate lid. They are quickly removed for easy cleaning.



AUTOMATIC DOSING UNIT FOR MANUAL GRINDING & POLISHING MACHINES

QDOSER GO

The Qdoser GO automatic dosing unit may be used in combination with all manual grinders & polishers. The dosing arm with dosing nozzles may be freely positioned on the grinding & polishing machine. The dosing is controlled via the Qdoser GO operating panel. The predosing and backflushing function may also be started manually. After the Qdoser GO has been activated, the liquids are dispensed/dosed automatically during the entire preparation procedure. In combination with other QATM grinders & polishers, the dosing is also started automatically without the need for manual activation.

- I Automatic dosing of
- · 3x diamond suspensions and 1x lubricant or
- · 4x diamond suspension Dia-Complete
- I Dosing intervall adjustable
- I Reverse rinsing function
- I Single or automatic mode
- I For all grinders & polishers
- I Glass bottles for suspensions refillable and removable

DOSING BOTTLE FOR GRINDING & POLISHING MACHINES

QDOSER ONE



The Qdoser ONE dosing system is an easy-to-use solution for manual or semi-automatic polishing processes. QATM's standard suspension and lubricant bottles can be quickly screwed on the dosing attachment. The dosing volume is closely and continuously controlled with an adjusting screw. The system can be mounted to the polishing heads Qpol GO and ECO. If used with manual grinding/polishing machines, a stand with suction cups can be placed on the machines.

- I Dosing attachment for standard and suspension bottles
- I Adjustable dosing volume
- I Can be freely positioned with stand
- I Can be screwed to polishing heads Qpol GO and ECO



THE BUDGET SOLUTION FOR AUTOMATED SAMPLE PREPARATION

GRINDING AND POLISHING HEAD QPOL GO

- I Variable single pressure
- I Adjustable timer for preparation time
- I Toolless sample holder clamping
- I Aluminium case, powder coated
- I Retrofittable on Qpol 250/300 M machines
- I Economic LED illumination





The Qpol GO grinding and polishing head enables the perfect introduction to automatic sample preparation and can be combined with the single and twin wheel grinding and polishing machines Qpol 250 M1/2 and Qpol 300 M1/2.

The grinding/polishing pressure (single pressure) and the preparation time can be continuously adjusted using the corresponding rotary control directly on the grinding and polishing head. The robust device can be combined with a dosing dropper bottle Qdoser ONE that can be screwed onto the polishing head or the Qdoser ECO dosing system and offers maximum flexibility for sample preparation and operating convenience.



ROBUST TECHNOLOGY AND DESIGN

The established technology, simple design and intuitive operating concept ensure simple and rapid preparation steps



EASY TO USE

The working area of the polishing head is easily accessible and visible thanks to LED illumination and the sleek design.

TECHNICAL DATA

(depends on equipment)



Application	Automatic grinding and polishing of materialographic samples
Fields of application	Preparation of sample surface for the materialographic analysis
No. of samples (single pressure)	1 - 4 samples Ø 40 mm
Single pressing force	variable, 5 - 45 N
Speed (head)	150 U/min
Sample holder	Ø 120 mm
Drive power (head)	60 W
Drive power (nead)	
Weight	18.5 kg





GRINDERS AND POLISHERS WITH ROBUST TECHNOLOGY AND ELABORATE OPERATIONAL DESIGN

QPOL 250 A1/A2-ECO QPOL 300 A1/A2-ECO

- I Single or twin wheel automatic grinding & polishing machines
- I Working wheels: Ø 200/250 mm or Ø 250/300 mm
- I Speed: 30 600 rpm, continuously adjustable
- I Individually controlled working wheels (Qpol 300 A2-ECO)
- I Spin cycle feature (Cleaning Boost)
- I 4.3" Touch-Screen mit intuitiver QATM Benutzersoftware
- I 200 customized programs storable

- I Variable speed of working wheel and polishing head
- Working wheel and polishing head: clockwise/counter-clockwise rotation

ATA

Qpol 250 A] 000

- I Easy cleaning/rinsing of bowl by lifting the working wheel (single-disc design)
- I Impact-proof plastic bowl
- I Aluminium case, powder coated
- I Economic LED illumination

Qpol 250 A1[©] **Qpol 250** A2[©] **Qpol 300** A1[©] **Qpol 300** A2[©]

The Qpol 250 A1/A2-ECO are single or twin wheel grinding and polishing machines for the materialographic laboratory, suitable for working wheels \emptyset 200/250 mm. However, the Qpol 300 A1/A2-ECO are suitable for working wheels \emptyset 250/300 mm.

The machines are conveniently operated by a 4.3 "touch screen.

The new holder for the working wheel (single-disc design) enables materialographic sample preparation without carrier disc without compromising performance. The control software allows to edit and save up to 200 preparation methods, protected by a user account management.

The process of the current preparation is visualized by a status bar. It is possible to select an additional acoustic signal at the end of each preparation step in the service menu.

Pressure, speed and direction of rotation (head and working disc) are adjustable. A spin cycle function (Cleaning Boost) helps to spin dry the grinding and polishing medium at 750 rpm at the end of the preparation process within 3 seconds.

PERFECT COMBINATION OF PERFORMANCE AND DESIGN

Polishing head ECO

- I Two-handed operation for operator safety
- I Grip recesses on both sides for easy swivelling and movement
- I Integrated buttons for unlocking
- I Adjustable swivel limits
- I Automatic water supply
- I Energy-saving LED illumination of the working area
- I Variable speed control for the polishing head
- Polishing head with clockwise / counterclockwise rotation
- I Holder for 4x dosing unit Qdoser Eco integrable
- I For sample holders with Ø 130 mm



- Automatic dosing of 3x diamond suspensions and 1x lubricant or 4x diamond suspension Dia-Complete
- I Dosing intervall adjustable
- I Reverse rinsing function
- I Controlled by software of grinder & polisher
- I Glass bottles for suspensions refillable and removable
- I Incl. dosing nozzles



3 Control

- I 4.3" Touch screen with intuitive QATM user software
- I 200 customized programs storable
- | Spin cycle feature (Cleaning Boost)
- I USB plug for data transfer and software updates
- I Ethernet plug for online-diagnostics and user support

Working wheel

- I working wheels Ø 200/250 mm (Qpol 250) or Ø 250/300 mm (Qpol 300)
- I Single-disc design
- I Variable speed control
- I Clockwise / counter-clockwise rotation
- I Easy, fast and tool-free change of working wheel

5 Basic unit

- I Basin rinsing tube
- I Aluminium case, powder-coated
- I Impact proof plastic bowl
- I Incl. ergonomically shaped splash ring and cover
- I Online operator support

OPERATING CONCEPT

MAKING ALL THE RIGHT MOVES

The machines intuitive operation offers maximum reproducibility for sample preparation and easy of use.





E





ECO POLISHING HEAD

The ECO polishing head is equipped with LED illumination of the working area and a holder for the nozzles of the Qdoser ECO dosing system. Water is supplied automatically via the head.



ELECTRONIC CONTROL SYSTEM

The machine is operated and programmed via the 4.3" touch screen. Preparation methods for sample preparation may be edited and saved. It is also possible to prepare samples manually.



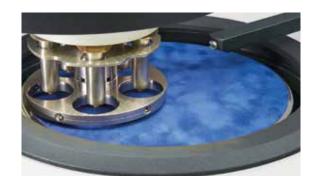
OPERATING COMFORT

The ECO grinding & polishing head with adjustable swivelling limits is equipped with recessed grips on both sides and integrated buttons for easy swivelling and adjustment. A large gap between the working surface and the polishing head ensures convenient changing of the sample holder.



OPTIONAL DOSING UNIT QDOSER ECO AND QDOSER ONE

The automatic grinders and polishers can be combined with the fully automatic dosing system Qdoser ECO or the manual dosing solution Qdoser One, thus offering a high degree of flexibility for sample preparation and ease of use. Find out more on page 21.



VARIABLE SPEED

The grinding & polishing head ECO exerts 5 - 80 N in single pressure and 20 - 350 N in central pressure mode. Up to 5 samples \emptyset 40 mm can be moved at variable speed with sample holders \emptyset 130 mm.



SAMPLE HOLDERS

QATM offers a wide selection of standard sample holders in various diameters and for different applications and machines. Samples with unusual dimensions can be clamped with the help of special design sample holders.









TECHNICAL DATA









Application	Automatic grinding and polishing of materialographic samples		Automatic grinding and polishing of materialographic samples	
Fields of application	Preparation of sample surfaces for the materialographic analysis		Preparation of sample surfaces for the materialographic analysis	
Number of working wheels	1	2	1	2
Diameter of working wheel	Ø 200 / 250 mm	Ø 200 / 250 mm	Ø 250 / 300 mm	Ø 250 / 300 mm
No. of samples (single pressure)	1-5 samples Ø 40 mm			
Single pressing force	variable, 5 - 80 N			
Central pressing force	variable, 20 - 350 N			
Speed (grinder)	30 - 600 U/min, continuously adjustable			
Speed (head)	30 - 160 U/min, continuously adjustable			
Sample holder	Ø 130 mm	Ø 130 mm	Ø 130 mm	Ø 130 mm
Direction of rotation working wheel	right / left	right / left	right / left	right / left
Drive power (grinder)	0.55 kW (SI operation)	0.55 kW (S1 operation)	0.75 kW (S1 operation)	2x 0.75 kW (SI operation)
Drive power (head)	0.18 kW (SI operation)	0.18 kW (S1 operation)	0.18 kW (S1 operation)	0.18 kW (S1 operation)
Connected load	2.3 kVA	2.3 kVA	2.8 kVA	3.3 kVA
Power supply	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)	200-240 V / 50 / 60 Hz (1 Ph / N / PE) 100-120 V / 50 / 60 Hz (1 Ph / N / PE)
WxHxD	511 x 530-610 x 710 mm	901 x 530-610 x 710 mm	511 x 530-610 x 710 mm	901 x 530-610 x 710 mm
Weight (depends on equipment)	~ 64 - 72 kg	~ 78 - 85 kg	~ 64 - 72 kg	~ 78 - 85 kg
Water connection	1x fresh water connection R½" max. 6 bars	1x fresh water connection R½" max. 6 bars	1x fresh water connection R½" max. 6 bars	lx fresh water connection R½" max. 6 bars
Dosing unit (option)	Qdoser ECO or Qdoser ONE			



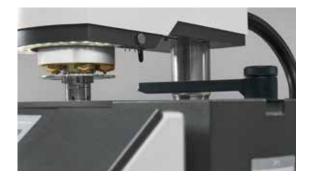
FULLY AUTOMATIC DOSING UNIT FOR AUTOMATIC GRINDING & POLISHING MACHINES

QDOSER ECO

The fully automatic dosing system QDOSER ECO (TOPAS ECO) speeds up grinding and polishing processes in the materialographic lab and is suitable for use with the Qpol 250/300 A series. Four 500 ml glass bottles with screw caps hold 3x suspension and 1x lubricant or 4x Dia-Complete and can be filled via a separate lid. They are easily removed for cleaning.

The dosing nozzles are inserted into a holder attached to the head. The dosing interval is controlled via the touch screen and the software of the Qpol 250/300 A devices. The backflushing function keeps the hoses clean.

- I Fully automatic dosing of
- · 3x diamond suspensions and 1x lubricant or
- · 4x diamond suspension Dia-Complete
- I Dosing intervall adjustable
- I Reverse rinsing function
- I Controlled by software of Qpol 250/300 A grinders & polishers
- I For grinders & polishers Qpol 250/300 A series
- I Glass bottles for suspensions refillable and removable



DOSING

The dosing nozzles of the Qdoser ECO are easily attached to the grinding and polishing head of the Qpol ECO. The dosing is controlled fully automatically by the Qpol 250 A-ECO/ Qpol 300 A-ECO software.



MAGNETIC STIRRER (OPTIONAL)

The control of the magnetic stirrer is integrated in the Qpol 250 A-ECO/Qpol 300 A-ECO machine series. It has 4 stirring stations, and prevents the suspension from settling in the bottles. The speed can be varied as required with a knob on the back of the machine.



ALL-IN SMART SOLUTIONS

GET YOUR PERFECT RESULTS

A GOOD START TO PERFECT PREPARATION

SOLUTION BOXES

In addition to the necessary expertise, the correct selection of media suitable for the sample material is essential for successful preparation. The Solution Boxes offer an all-in-one solution for the preparation of various materials. They are ideally suited for first preparation trials of materials, which are new to the user and also support inexperienced users with practical tips & tricks...

EVERYTHING FOR GRINDING AND POLISHING

QPREP CONSUMABLES

The portfolio of consumables is perfectly adjusted to our machines.



DIAMOND GRINDING DISCS SIC GRINDING DISCS



SIC GRINDING PAPERS



DIAMOND GRINDING FOILS



DIAMOND SUSPENSIONS



ADHESIVE CARRIER



DIAMOND PASTES



ALUMINA GRINDING FOILS



POLISHING CLOTHS



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PREMIUM QUALITY MADE IN GERMANY

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MINES.

VERDER scientific

VERDER SCIENTIFIC

SCIENCE FOR SOLIDS

Verder Scientific is a business field belonging to the Verder Group and sets standards in the development, manufacture and sale of laboratory and analytics devices. Used in quality control, research and development for test-piece preparation and the analysis of solids.

For several decades our companies have supplied production plants and research institutes, laboratories for quality testing and analytics, all kinds of technical specialists and scientists with modern, reliable devices to solve the many and varied challenges they face.

