



Qpol M Series

Qpol GO Series

Qpol PLUS Series

Qpol Vibro

MANUAL AND AUTOMATIC GRINDING & POLISHING MACHINES

**PRECISE SURFACES IN MATERIALOGRAPHIC
GRINDING AND POLISHING TECHNOLOGY**

PRODUCT PORTFOLIO

QATM GRINDING AND POLISHING TECHNOLOGY FOR THE MATERIALS SCIENCE LABORATORY

POLISHING REDEFINED

QATM's product portfolio includes a wide range of high-performance grinding and polishing machines that meet the high precision requirements of materialographic grinding and polishing. Our services range from basic surface grinding to complex, fully automated grinding and polishing processes.

WHEN IS GRINDING/POLISHING NECESSARY?

Grinding and polishing a material sample is one of the most important steps in sample preparation. The goal is to achieve a surface free of deformation and scratches that reveals the microstructure of the sample. This is the only way to enable a meaningful assessment via microscope. A corresponding etching process makes contrasts visible.

GRINDING/POLISHING MACHINES, MADE IN GERMANY



PAGES 04-07

QPOL M SERIES

Manual grinding/polishing machines

- | Single wheel or twin wheel
- | Working wheels: \varnothing 200/250/300 mm



PAGES 08-11

QPOL GO SERIES

Semi-automatic grinding/polishing machines

- | Single wheel or twin wheel
- | Working wheels: \varnothing 200/250/300 mm
- | Single pressure: 6 samples, \varnothing 40 mm, sample holders: \varnothing 130 mm
- | Central pressure: 5 samples, \varnothing 40 mm, sample holders: \varnothing 130 mm
- | Simple sample preparation thanks to the GO grinding/polishing head



PAGES 12-15

QPOL PLUS SERIES

Semi-automatic grinding/polishing machines

- | Single wheel or twin wheel
- | Working wheels: \varnothing 200/250/300 mm
- | Single pressure: 6 samples, \varnothing 50 mm, sample holders: \varnothing 160 mm
- | Central pressure: 5 samples, \varnothing 50 mm, sample holder: up to \varnothing 185 mm
- | Also suitable for large samples



PAGES 22-25

QPOL VIBRO

Vibration polishing machine

- | Polishing bowl: \varnothing 308 mm
- | Vibration frequency: 60-120 Hz
- | Weights for adjustable sample contact pressure
- | Program memory for reproducible results
- | Custom sample holders

THERE ARE THREE DIFFERENT TECHNIQUES TO CHOOSE FROM

GRINDING/POLISHING PROCESSES

Manual grinding and polishing give the user maximum control over every single step of the preparation process. Thanks to real-time feedback on pressure, speed, and movement, even the most challenging samples can be processed individually and with precision.

Semi-automatic or automatic grinding and polishing ensure greater reproducibility and more efficient workflows. Key process parameters such as contact pressure and duration are automated, thereby reducing operator influence. This ensures consistent results, especially when working with multiple samples and higher throughput requirements. Semi-automatic systems are considered the ideal balance between ease of use and investment costs, and they enhance process reliability by reducing dependence on the operator.

Vibration polishing is the premium stage of final preparation. It enables a final polish with virtually no deformation and is ideal for demanding applications such as EBSD analysis, AFM measurements, or nano hardness testing.



QDOSER DOSING SYSTEMS

Additional components for optimal grinding and polishing results

- | QDOSER ONE
- | QDOSER GO
- | QDOSER PLUS



QATM SAMPLE HOLDERS

Precise mounting of various samples

- | Suitable for mounted samples and samples with complex geometries
- | A wide range of models to meet individual needs
- | A standardized mounting system for easy replacement of sample holders
- | Leveling device



QPREP GRINDING AND POLISHING MEDIA

Perfect grinding and polishing

- | Diamond grinding discs
- | Grinding papers and foils
- | Polishing cloths
- | Suspensions and lubricants
- | Magnetic foil

MANUAL GRINDING/POLISHING MACHINES – ROBUST IN USE. SIMPLE TO HANDLE.

Qpol M Series

The Qpol M1 and M2 are manual, single wheel or twin wheel grinding and polishing machines for the materialographic laboratory and are suitable for working wheels Ø 200, 250 and 300 mm. The powerful drive with speed control enables the processing of a wide variety of materials. The robust device, equipped with high-quality technology, has a very smooth running and delivers the best preparation results.

- | **Easy to use:** The ergonomically integrated touch panel clearly displays all process parameters as well as convenient features for manual preparation that can be easily changed at any time.
- | **Reproducible Results:** The adjustable timer and torque display to visualize the current contact pressure enable comfortable and reproducible manual preparation steps.
- | **Automated processes:** The robust device can be combined with the Qdoser GO automatic dosing system. Thus, it allows the two-handed polishing of samples with optimal dosage of diamond suspension.

www.qatm.com/qpol-m-series



SUPERIORITY IN THE DETAILS

- 1 WORKING WHEELS Ø 200/250/300 mm**
 - | Single Disc Design for easy working wheel replacement
- 2 OPTIONAL SECOND WORKING WHEEL**
 - | Less setup time between steps
- 3 SIMPLE ONE-BUTTON OPERATION**
 - | Durable stainless steel start button for directly starting/ stopping the machine
- 4 CLEAR PARAMETER SETTINGS**
 - | Tried-and-true methods with a new design
- 5 ERGONOMIC SPLASH GUARD RING**
 - | Prevents splashing and provides an ergonomic hand rest
- 6 AUTOMATIC WATER VALVE**
 - | Water can be automatically activated at the start and end of the process
- 7 OPTIONAL DOSING SYSTEM**
 - | Allows for two-handed polishing and ensures optimal application



Video:
Grinding/polishing
machine
QPOL M SERIES

HIGHLIGHT – EVERYTHING AT A GLANCE

INTUITIVE AND EASY TO USE

Ergonomically integrated 7-inch industrial touchscreen with QATM user software

- | Intuitive menu structure and easy configuration
- | Progress indicator for the current procedure via a status bar and an audible signal at the end of the grinding/polishing process
- | Built-in timer and direct display of torque/contact pressure for high reproducibility



QPOL M SERIES LOOK CLOSELY FEATURES



DURABLE AND RELIABLE

Machine body made of a sturdy welded aluminum construction with a high-quality, durable powder coating

- | Extremely smooth operation thanks to a low-vibration design
- | Powerful speed-controlled drive with optimal performance, suitable even for larger samples
- | This impact-resistant plastic bowl offers impressive durability, corrosion resistance, and easy cleaning



SIMPLE CLEANING SYSTEM

Single Disc Design: Easy removal of all components and easy access

- | The splash guard ring and working wheel can be removed with minimal effort, thereby reducing setup and cleaning times
- | The bowl insert (plastic inlay) is easy to replace or clean to remove abrasion and residue from the suspension



STURDY, PULL-OUT FAUCET

Easy and thorough cleaning of the work area and the grinding tray

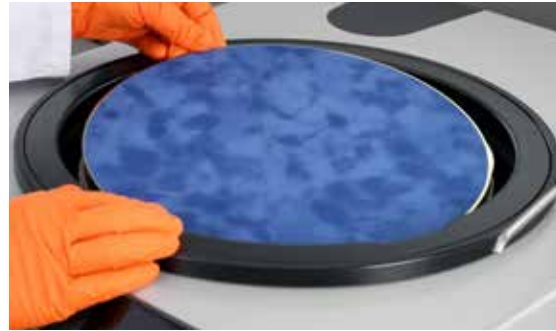
- | Cleaning Boost function: removes residual liquid from the grinding/polishing media (drying at 750 rpm in 3 seconds)
- | The water valve is activated automatically at the start and end of the preparation process
- | Sturdy faucet with a flexible hose extension



WORK SAFETY

High operational safety thanks to a generously sized bowl area and a loosely mounted splash guard ring

- | The small gap between the splash guard ring and the working wheel ensures safe operation
- | Pressing the emergency stop button immediately stops all moving parts



ERGONOMICALLY SHAPED SPLASH GUARD

User-friendly design and the ability to quickly replace consumables

- | The ergonomically shaped splash guard significantly reduces splashing and can be used as a comfortable hand rest during longer procedures
- | Grip recesses allow for the replacement of grinding/polishing media even when the ring is in place



OPTION: QDOSER DOSING SYSTEMS

Can be optionally equipped with semi-automatic or software-controlled dosing systems for high process flexibility

- | **Qdoser GO:** Fully automatic, software-controlled dispensing system with 4 easily removable and refillable dispensing bottles for reproducible results (magnetic stirring function available as an option)
- | **Qdoser ONE:** Dropper bottle for easy and continuous dosing



SEMI-AUTOMATIC GRINDING AND POLISHING MACHINES – MAKE IT EASY. MAKE IT AUTOMATED.

Qpol GO Series

The Qpol GO 1 and GO 2 are automatic, single wheel or twin wheel grinding and polishing machines that can be operated with either single or central pressure. They are suitable for working wheels with a diameter of 200, 250 and 300 mm. With its powerful, speed-controlled drive and robust construction, it provides the perfect foundation for entering the world of semi-automatic grinding and polishing machines.

- | **Automated processes:** High-removal grinding/polishing, variable dosing of diamond suspensions/lubricants, contact pressure, speed control, and the direction of rotation (same or opposite direction) for the polishing head and working wheel are all variable and freely adjustable.
- | **Intuitive Software:** The updated software combines proven concepts with modern design.
- | **High reproducibility:** Automatic sample preparation methods can be customized, and up to 200 preparation methods—protected by user account management—can be edited and saved. Grinding and polishing results remain consistent even when the process is repeated.

www.qatm.com/qpol-go-series



SUPERIORITY IN THE DETAILS

1 ERGONOMIC CONTROL PANEL

- | Compact 7-inch industrial touchscreen with intuitive QATM user software

2 ROBUST MACHINE BODY

- | Sturdy powder-coated aluminum construction
- | USB port for data transfer (updates also possible)

3 SINGLE DISC DESIGN

- | Easy removal of working wheel and splash guard ring
- | Ergonomically shaped splash guard
- | Impact-resistant plastic bowl

4 FAUCET

- | Stainless steel faucet with a pull-out, flexible hose extension

5 SMART GRINDING/POLISHING HEAD

- | Supports both single pressure and central pressure
- | Two-hand operation for operator safety, recessed handles on both sides with push buttons for easy swiveling and movement (adjustable swivel positions)
- | Connection for the Qdoser GO for the automatic supply of suspensions to the grinding/polishing head
- | Energy-efficient LED lighting for the workspace
- | For sample holders with a diameter of 130 mm, holding up to 6 samples with a diameter of 40 mm

6 EMERGENCY STOP SWITCH

- | Stop all running processes and moving parts

OPTION: QDOSER GO DOSING UNIT

- | Automatic dosing of diamond suspensions/lubricants
- | Suspension storage bottles can be refilled and removed during operation



Video:
Grinding/polishing
machine
QPOL GO SERIES

HIGHLIGHT – PRECISE SAMPLE PROCESSING WITH SINGLE AND CENTRAL PRESSURE

GO GRINDING/POLISHING HEAD

The GO grinding and polishing head delivers 5–80 N of contact pressure in single pressure mode and 20–350 N in central pressure mode. Up to 6 samples with a diameter of 40 mm can be prepared at variable speeds using sample holders with a diameter of 130 mm, either in the same or opposite directions.

- | Reproducible results through automatic grinding and polishing
- | Easy to move thanks to recessed handles with integrated push buttons
- | Easy sample holder replacement thanks to ample clearance from the work surface



QPOL GO SERIES LOOK CLOSELY FEATURES



DURABLE AND RELIABLE

Machine body made of a sturdy welded aluminum construction with a high-quality, durable powder coating

- | Extremely smooth operation thanks to a low-vibration design
- | Powerful speed-controlled drive with optimal performance, suitable even for larger samples
- | This impact-resistant plastic bowl offers impressive durability, corrosion resistance, and easy cleaning



GRINDING/POLISHING HEAD WITH SWIVEL BEARINGS

High level of user-friendliness and flexibility: The grinding/polishing head is equipped with adjustable swivel stops for easy swiveling

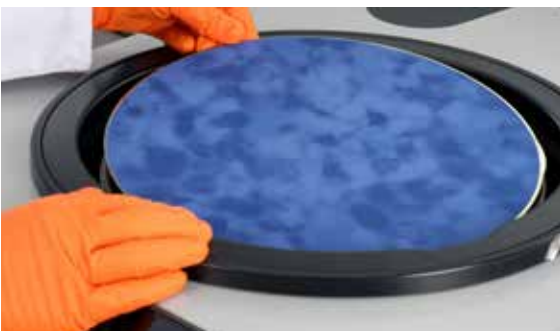
- | Recessed handles on both sides with integrated push buttons for unlocking, ensuring convenient operation
- | Easy sample holder replacement thanks to the large gap between the grinding/polishing head and the work surface



SIMPLE CLEANING SYSTEM

Single Disc Design: Easy removal of all components and easy access

- ! The splash guard ring and working wheel can be removed with minimal effort, thereby reducing setup and cleaning times
- ! The bowl insert (plastic inlay) is easy to replace or clean to remove abrasion and residue from the suspension



ERGONOMICALLY SHAPED SPLASH GUARD

User-friendly design and the ability to quickly replace consumables

- ! The ergonomically shaped splash guard significantly reduces splashing and can be used as a comfortable hand rest during longer procedures
- ! Grip recesses allow for the replacement of grinding/polishing media even when the ring is in place



STURDY, PULL-OUT FAUCET

Easy and thorough cleaning of the work area and the grinding tray

- ! Cleaning Boost function: removes residual liquid from the grinding/polishing media (drying at 750 rpm in 3 seconds)
- ! The water valve is activated automatically at the start and end of the preparation process
- ! Sturdy faucet with a flexible hose extension



INTUITIVE AND EASY TO USE

Ergonomically integrated 7-inch industrial touchscreen with QATM user software

- ! Clear menu structure and easy configuration and saving of all process parameters
- ! Progress indicator for the current procedure via a status bar and an audible signal at the end of the grinding/polishing process
- ! Built-in timer and direct display of torque/contact pressure for high reproducibility



OPTION: QDOSER DOSING SYSTEMS

Optionally available with dosing systems for high process flexibility

- ! **Qdoser GO:** Fully automatic, software-controlled dispensing system with 4 easily removable and refillable dispensing bottles for reproducible results (magnetic stirring function available as an option)
- ! **Qdoser ONE:** Dropper bottle for easy and continuous dosing



SEMI-AUTOMATIC GRINDING AND POLISHING MACHINES – MAKE IT EASY. MAKE IT AUTOMATED.

Qpol PLUS Series

The Qpol PLUS 1 and PLUS 2 are automatic, single wheel or twin wheel grinding and polishing machines that can operate using either single or central pressure. They are suitable for working wheels with a diameter of 200, 250 and 300 mm. The high-performance PLUS head also allows the use of large sample holders with diameters up to 185 mm (central pressure).

- | **Automated processes:** High-removal grinding/polishing, variable dosing of diamond suspensions/lubricants, contact pressure, speed control, and the direction of rotation (same or opposite direction) for the polishing head and working wheel are all variable and freely adjustable.
- | **High flexibility:** The L sample holder allows for the use of very large samples.
- | **High reproducibility:** Automatic sample preparation methods can be customized, and up to 200 preparation methods—protected by user account management—can be edited and saved. Grinding and polishing results remain consistent even when the process is repeated.

www.qatm.com/qpol-plus-series



SUPERIORITY IN THE DETAILS

1 ERGONOMIC CONTROL PANEL

- | Compact 7-inch industrial touchscreen with intuitive QATM user software

2 ROBUST MACHINE BODY

- | Sturdy powder-coated aluminum construction
- | USB port for data transfer (updates also possible)

3 SINGLE DISC DESIGN

- | Easy removal of working wheel and splash guard ring
- | Ergonomically shaped splash guard
- | Impact-resistant plastic bowl

4 FAUCET

- | Stainless steel faucet with a pull-out, flexible hose extension

5 SMART GRINDING/POLISHING HEAD

- | Supports both single pressure and central pressure
- | Two-hand operation for operator safety, recessed handles on both sides with push buttons for easy swiveling and movement (adjustable swivel positions)
- | Connection for the Qdoser GO/PLUS for the automatic supply of suspensions to the grinding/polishing head
- | Energy-efficient LED lighting for the workspace
- | Single pressure for sample holders with a diameter of 160 mm, holding up to 6 samples with a diameter of 50 mm
- | Central pressure for sample holders up to 185 mm in diameter

6 EMERGENCY STOP SWITCH

- | Stop all running processes and moving parts

7 OPTION: QDOSER PLUS DOSING UNIT

- | Automatic dosing of diamond suspensions/lubricants
- | Suspension storage bottles can be refilled and removed during operation
- | Enables automatic fine polishing of samples



Video:
Grinding/polishing
machine
QPOL PLUS SERIES



HIGHLIGHT – HIGH THROUGHPUT, LARGE SAMPLES, AND EXCELLENT REPRODUCIBILITY

PLUS GRINDING/POLISHING HEAD

The PLUS grinding and polishing head delivers a contact pressure of 5–80 N in single pressure mode and 20–350 N in central pressure mode. Up to 6 samples with a diameter of 50 mm can be prepared at variable speeds using sample holders with a diameter of 160 mm, either in the same or opposite directions. In addition, thanks to the L-type sample holders, central-pressure sample holders with a diameter of up to 185 mm can also be used.

- | Reproducible results through automatic grinding and polishing
- | Easy to move thanks to recessed handles with integrated push buttons
- | Easy sample holder replacement thanks to ample clearance from the work surface

QPOL PLUS SERIES LOOK CLOSELY FEATURES



DURABLE AND RELIABLE

Machine body made of a sturdy welded aluminum construction with a high-quality, durable powder coating

- | Extremely smooth operation thanks to a low-vibration design
- | Powerful speed-controlled drive with optimal performance, suitable even for larger samples
- | The impact-resistant plastic bowl offers impressive durability, corrosion resistance, and easy cleaning



GRINDING/POLISHING HEAD WITH SWIVEL BEARINGS

High level of user-friendliness and flexibility: The grinding/polishing head is equipped with adjustable swivel stops for easy swiveling

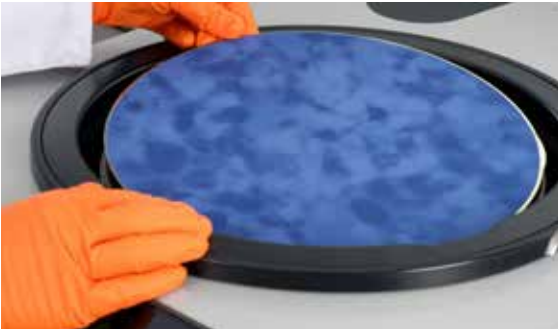
- | Recessed handles on both sides with integrated push buttons for unlocking, ensuring convenient operation
- | Easy sample holder replacement thanks to the large gap between the grinding/polishing head and the work surface



SIMPLE CLEANING SYSTEM

Single Disc Design: Easy removal of all components and easy access

- ▮ The splash guard ring and working wheel can be removed with minimal effort, thereby reducing setup and cleaning times
- ▮ The bowl insert (plastic inlay) is easy to replace or clean to remove abrasion and residue from the suspension



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User-friendly design and the ability to quickly replace consumables

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STURDY, PULL-OUT FAUCET

Easy and thorough cleaning of the work area and the grinding tray

- ▮ Cleaning Boost function: removes residual liquid from the grinding/polishing media (drying at 750 rpm in 3 seconds)
- ▮ The water valve is activated automatically at the start and end of the preparation process
- ▮ Sturdy faucet with a flexible hose extension



INTUITIVE AND EASY TO USE

Ergonomically integrated 7-inch industrial touchscreen with QATM user software

- ▮ Clear menu structure and easy configuration and saving of all process parameters
- ▮ Progress indicator for the current procedure via a status bar and an audible signal at the end of the grinding/polishing process
- ▮ Built-in timer and direct display of torque/contact pressure for high reproducibility



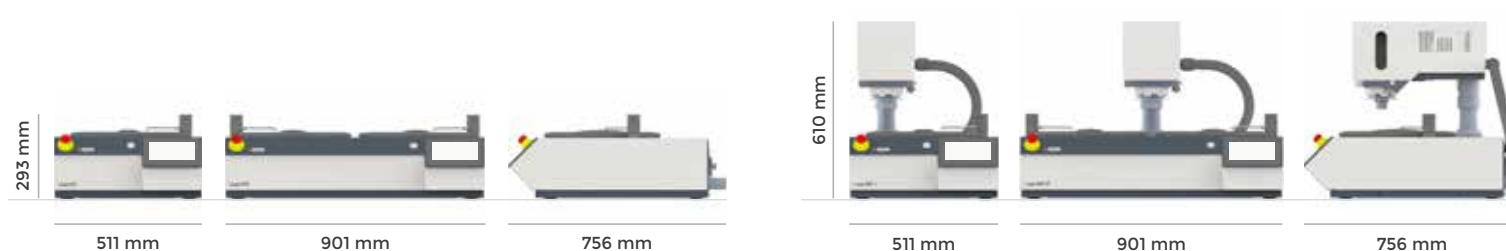
OPTION: QDOSER DOSING SYSTEMS

Can be optionally equipped with software-controlled dosing systems for high process flexibility

- ▮ **Qdoser GO:** Fully automatic, software-controlled dispensing system with 4 easily removable and refillable dispensing bottles for reproducible results (magnetic stirring function available as an option)
- ▮ **Qdoser PLUS:** Also allows for fine polishing (optional upgrade to a 1-liter bottle for fine polishing suspension)



MANUAL & AUTOMATIC GRINDING / POLISHING MACHINES IN COMPARISON



	QPOL M SERIES		QPOL GO SERIES	
	Grinding/Polishing Machines		Grinding/Polishing Machines	
Model variant	Qpol M1: single wheel	Qpol M2: twin wheel	Qpol GO 1: single wheel	Qpol GO 2: twin wheel
Working wheels	Ø 200/250/300 mm		Ø 200/250/300 mm (recommended size: Ø 250 mm)	
Sample holder	-		Single pressure: Ø 130 mm Central pressure: Ø 130 mm	
Number of samples	-		Single pressure: 1-6 samples, 40 mm diameter Central pressure: 1-5 samples, Ø 40 mm	
Contact force	manually		Single pressure: variable, 5-80 N Central pressure: variable, 20-350 N	
Speed (grinding machine)	30-600 rpm, continuously variable		30-600 rpm, continuously variable	
Rotational speed (grinding head)	-		30-160 min ⁻¹	
Water connection	1x fresh water G 1/2" max. 6 bar		1x fresh water G 1/2" max. 6 bar	
Dosing device (optional)	Qdoser GO, Qdoser ONE		Qdoser GO, Qdoser ONE	
Ambient temperature	10-40 °C		10-40 °C	
Drive power	Working wheel: 0.75 kW (S1) / 1.1 kW (S3)		Working wheel: 0.75 kW (S1) / 1.1 kW (S3) Grinding head: 0.37 kW (S1)	
Connected load	1.4 kVA		1.4 kVA	
Power connection	220-240 V, 50/60 Hz (1 Ph/N/PE) / 100-120 V, 50/60 Hz (1 Ph/N/PE)		220-240 V, 50/60 Hz (1 Ph/N/PE) / 100-120 V, 50/60 Hz (1 Ph/N/PE)	
Interfaces	USB		USB	
B x H x T	Qpol M1: 511 x 293 x 756 mm	Qpol M2: 901 x 293x 749 mm	Qpol GO 1: 511 x 610 x 756 mm	Qpol GO 2: 901 x 610 x 749 mm
Weight (depending on equipment)	Qpol M1: approx. 40 kg	Qpol M2: approx. 60 kg	Qpol GO 1: approx. 65 kg	Qpol GO 2: approx. 80 kg



QPOL PLUS SERIES

Grinding/Polishing Machines

Qpol PLUS 1: single wheel

Qpol PLUS 2: twin wheel

Ø 200/250/300 mm
(recommended size: Ø 300 mm)

Single pressure: Ø 160 mm
Central pressure: up to Ø 185 mm

Single pressure: 1-6 samples, 50 mm diameter
Central pressure: 1-5 samples, Ø 50 mm

Single pressure: variable, 5-80 N
Central pressure: variable, 20-350 N

30-600 rpm, continuously variable

30-160 min⁻¹

1x fresh water G 1/2" max. 6 bar

Qdoser PLUS, Qdoser GO, Qdoser ONE

10-40°C

Working wheel: 0.75 kW (S1) / 1.1 kW (S3)
Grinding head: 0.37 kW (S1)

1.4 kVA

220-240 V, 50/60 Hz (1 Ph/N/PE) /
100-120 V, 50/60 Hz (1 Ph/N/PE)

USB

Qpol PLUS 1: 511 x 610 x 756 mm

Qpol PLUS 2: 901 x 610 x 749 mm

Qpol PLUS 1: approx. 65 kg

Qpol PLUS 2: approx. 80 kg



HIGH PROCESS FLEXIBILITY

QDOSER DOSING SYSTEMS

The fully automatic, software-controlled Qdoser dosing system speeds up the grinding and polishing processes in the materialography laboratory and is compatible with devices in the Qpol M, GO, and PLUS series. Four screw-top 500-ml glass bottles can be filled with QPREP diamond suspensions, QPREP lubricants (diamond lubricants), and/or QPREP fine-polishing suspensions through a separate opening in the lid. The suspension storage bottles are easy to remove, making them simple to clean. A backflush function keeps the connecting hoses clean.



Video:
Usage &
Cleaning
QDOSER





OPTIMIZED FILLING AND DOSING

The suspension storage bottles can be removed at any time and refilled in a way that is optimized for application, e.g., with:

- | **Qdoser PLUS:** 3x diamond suspensions/lubricant and 1x fine polishing suspension (optional upgrade to a 1-liter bottle for fine polishing suspension)
- | **Qdoser GO:** 4x Dia-COMplete diamond suspensions



DOSAGE

High flexibility and ease of use thanks to simple polishing agent dispensing

- | Easy installation of the dispensing nozzles into the designated mount in the grinding and polishing head
- | Fully automatic, software-controlled dosing via the industrial touchscreen on Qpol machines
- | Dosing interval can be adjusted as needed
- | Including backflush function for easy cleaning



OPTION: MAGNETIC STIRRER

A magnetic stirrer is available as an option for stirring the polishing agents to achieve excellent preparation results

- | The integrated magnetic stirrer prevents the suspension from settling
- | Optimal distribution of polishing particles through automatic stirring of the suspensions



QDOSER ONE

Dropper bottle for easy and continuous dosing

- | Easy to use - Standard QATM suspension and lubricant bottles can be quickly and easily screwed onto the dispenser
- | Continuously variable dosing rate - The dosing rate is precisely controlled using an adjustment screw
- | Can be used with a stand or mounted on polishing head

ACCESSORIES



SEDIMENTATION TANK

The QATM sedimentation tank (45 L, PVC) reliably separates solids from process water

- | Protection for machinery and the drainage system - Reliably prevents chips generated during grinding and polishing from entering the drainage system
- | 2 Chamber System - The 45-liter corrosion-free PVC tank with an integrated inlet strainer and filter bag ensures effective separation of solids and process water

PRECISE MOUNTING OF VARIOUS SAMPLES

QATM SAMPLE HOLDER

A range of sample holders is available to suit various applications. They enable precise and secure clamping of the samples and form the basis for efficient grinding and polishing processes. This ensures reproducible results while reducing process times.

- | Suitable for mounted samples and samples with complex geometries
- | A wide range of models to meet individual needs
- | Quick and precise clamping with a leveling device (accessory)
- | Stainless steel sample holders
- | A well-designed locking mechanism for quick and ergonomic sample holder changes



SAMPLE HOLDER M (FOR SINGLE PRESSURE)

Compatible with Qpol GO 1 / GO 2

- | Made of stainless steel
- | Sample holder: Ø 130 mm
- | Sample collection: 6 samples (Ø 25-40 mm / 1-1.5 in)
- | Stainless steel spacer rings are available



SAMPLE HOLDER M (FOR CENTRAL PRESSURE)

Compatible with Qpol GO 1 / GO 2

- | Made of stainless steel
- | Sample holder: Ø 130 mm
- | Sample mounting (3-point clamping): 8, 6, and 5 samples (Ø 25-40 mm / 1-1.5")
- | Sample collection (droplet form): 5 samples (Ø 20-40 mm)



SAMPLE HOLDER L (FOR SINGLE PRESSURE)

Compatible with Qpol PLUS 1 / PLUS 2

- | Made of stainless steel
- | Sample holder: \varnothing 160 mm
- | Sample collection: 6 samples (\varnothing 25–50 mm / 1–2")
- | Stainless steel spacer rings are available



SAMPLE HOLDER L (FOR CENTRAL PRESSURE)

Compatible with Qpol PLUS 1 / PLUS 2

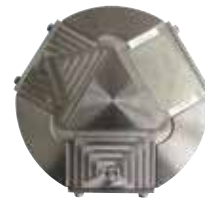
- | Made of stainless steel
- | Sample holder: \varnothing 160–185 mm
- | Sample mounting (3-point clamping): 12, 8, 6, 5, and 3 samples (\varnothing 25–60 mm / 1–2 in.)
- | Sample collection (droplet form): 6 samples (\varnothing 20–40 mm)

SAMPLE HOLDERS FOR SAMPLES WITH COMPLEX GEOMETRIES OR CUSTOM DIMENSIONS

Samples with complex geometries or large dimensions can be individually secured, ground, and polished using the universal sample holder.



Samples with special dimensions can be securely clamped and machined using special sample holders.



ACCESSORIES



LEVELING DEVICE WITH CLAMPING AID

Thanks to the pneumatic clamping system, sample holders for central pressure can be fixed quickly and without effort at a uniform level.

The sample spacing is infinitely adjustable and suitable for all standard sample diameters. The dissociation aid is used to gently detach the prepared samples.

The advantage of the leveling device is that it significantly reduces preparation time – especially during plane grinding.



Video:
Working with
central pressure
LEVELING DEVICE

VIBRATION POLISHING MACHINE – DEFORMATION-FREE FINE POLISHING WITH GENTLE MATERIAL REMOVAL

Qpol Vibro

Qpol Vibro: Vibration polishing machine equipped with a polishing bowl, Ø 308 mm, for manual or automatic operation

- | A sturdy powder-coated aluminum housing
- | For tests such as EBSD analysis (electron backscatter diffraction), nano-identification using AFM (atomic force microscopy), or micro-hardness testing
- | Easy and quick replacement of the polishing bowl thanks to the magnetic attachment system
- | Automatically controlled vibration frequency of 60-120 Hz
- | Surface-Guard: reduces the crystallization of the suspension and corrosion of the ground surface

www.qatm.com/qpol-vibro



SUPERIORITY IN THE DETAILS

1 DURABLE HOUSING

- | A sturdy powder-coated aluminum housing

2 REPLACEABLE POLISHING BOWL

- | The patented magnetic mounting system allows for quick replacement
- | QATM Surface-Guard reduces crystallization

3 ERGONOMICALLY INTEGRATED 4.3-INCH INDUSTRIAL TOUCHSCREEN

- | Intuitive and simple operation
- | Pre-established preparation methods

4 VENTED HOOD

- | A transparent cover made of scratch-resistant acrylic glass with shock absorption allows for reliable visual inspection
- | Protects samples and polishing cloths from contamination
- | Allows the use of an external exhaust system

5 PREPARATION FOR EXTERNAL SUCTION

- | External exhaust system

6 ETHERNET/USB INTERFACES FOR DATA PROCESSING

- | Remote Control, Service Tools, Data Storage and Exchange)



QATM SURFACE-GUARD

With Surface-Guard (motion interval), QATM has developed a special operating mode that protects the high-quality polished sample surface from corrosion and similar damage after preparation is complete.

This is particularly advantageous for samples prone to corrosion, such as cast iron.



Corrosion Testing



with Surface-Guard

HIGHLIGHT – INTUITIVE AND EASY TO USE

QATM user software for intuitive and user-friendly operation

- | Program memory for reproducible results
- | 15 preparation methods for various materials/consumables preinstalled
- | Up to 200 custom preparation methods available
- | No restrictions on setting polishing time and vibration intensity
- | Operation can be unattended
- | The alarm function (timer) notifies the user when the program ends
- | Automatic frequency control to optimize the vibration frequency (depending on the number and shape of the samples)



QPOL VIBRO LOOK CLOSELY FEATURES



DURABLE AND RELIABLE

Machine body made of a sturdy welded aluminum construction with a high-quality, durable powder coating

- | Extremely smooth operation thanks to a low-vibration design
- | Powerful speed-controlled drive with optimal performance, suitable even for larger samples
- | The plastic polishing bowl stands out for its durability, corrosion resistance, and ease of cleaning



WORK SAFETY

High operational safety thanks to a generously sized bowl area

- | Can be easily connected to an external exhaust system via the exhaust connection (\varnothing 40 mm)
- | Reliable removal of moisture and gases



INSERTING THE POLISHING BOWL

Efficient workflow thanks to easy insertion, quick replacement, and secure fastening of the polishing bowl and polishing cloth

- | A **patented mounting system** with a strong magnet secures the polishing bowl and polishing cloth
- | The retaining ring protects the edge of the polishing cloth and ensures a long service life
- | For all polishing cloths with a magnetic system



LOADING THE MOUNTED SAMPLE

A wide variety of sample holders for mounted samples and custom sizes are available to ensure an optimal polishing process

- | The large polishing bowl (\varnothing 308 mm) provides ample space for very large samples and sample holders
- | The clamping ring limits the movement of the sample holder and ensures a uniform polishing result
- | Single pressure can be applied to sensitive samples using various additional weights
- | Simultaneous polishing of up to 21 samples is possible



POURING THE SUSPENSION

Manual dosing and filling with application-specific suspension

- | Polishing bowl with lid for use with multiple bowls in recurring polishing processes involving different materials (contamination protection)
- | Reduction of vibrations on the machine or lab bench thanks to a vibration-dampened motor; quiet operation even during polishing sessions lasting several hours
- | Easy to clean thanks to the simple removal of all components

ACCESSORIES



Sample holder

- | Ø 25–25.4 mm (1"), 300 g, additional weight 90 g
- | Ø 30–32 mm (1 ¼"), 220 g, additional weight 90 g
- | Ø 38–40 mm (1 ½"), 550 g, additional weight 190 g
- | Ø 50 mm (2"), 360 g, additional weight 190 g



Special sample holder

- | Ø 60 mm, 875 g, additional weight 190 g
- | Ø 70 mm, 605 g, additional weight 190 g



Qpol Vibro Leveling Discs

- | For leveling mounted samples
- | For samples with diameters of 25–50 mm, 1–2"
- | Special leveling discs for samples with diameters of 60 mm and 70 mm



Polishing cloths

- | Iota, Ø 300 mm (short-pile, soft synthetic fabric)
- | Zeta, Ø 300 mm (short-pile, soft synthetic fabric)
- | Additional polishing cloths (300 mm diameter) are available



Suspension

- | Eposal
- | Eposil F, Eposil M
- | Eposil Non Dry
- | Etosil E

TECHNICAL SPECIFICATIONS



QPOL VIBRO	
Vibration polishing machine	
Inner diameter of the bowl	Ø 308 mm
Polishing cloth	300 mm, 305 mm (12")
Vibration frequency	60–120 Hz, automatically regulated
Exhaust air connection	Ø 40 mm
Ambient temperature	10–40 °C
IP Code	IP 22
Drive power	135 VA
Connected load	0.25 kVA
Power connection	220–240 V 50/60 Hz (1 Ph/N/PE) / 100–120 V, 50/60 Hz (1 Ph/N/PE)
Interfaces	USB, Ethernet
B x H x T	510 x 300 x 590 mm
Weight (depending on equipment)	approx. 45 kg

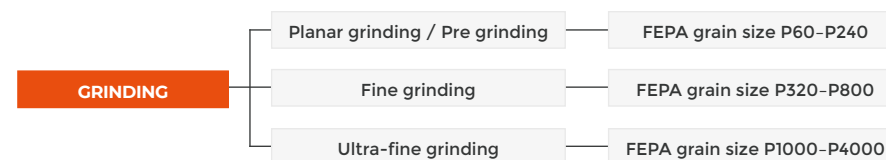
FOR MATERIALOGRAPHIC PREPARATION
RESULTS OF THE HIGHEST QUALITY

QPREP GRINDING AND POLISHING MEDIA

Mechanical grinding in materialographic sample preparation smooths sample surfaces and includes rough grinding, fine grinding, and ultra-fine grinding. The polishing process then removes any deformation in the material caused by grinding. To do this, loose abrasive particles of progressively finer grain sizes are applied to special polishing cloths.

GRINDING IN MATERIALOGRAPHIC SAMPLE PREPARATION

In materialographic sample preparation, the grinding process is divided into three categories:

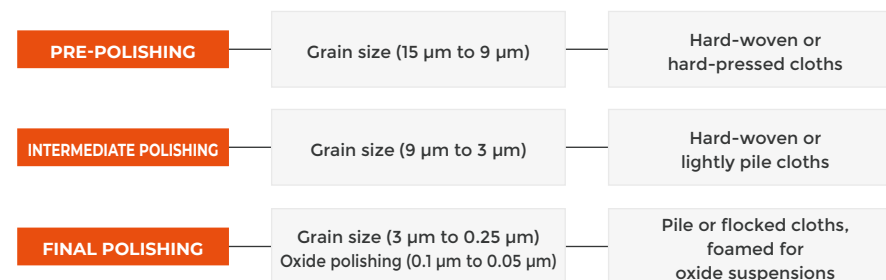


www.qatm.com/grinding



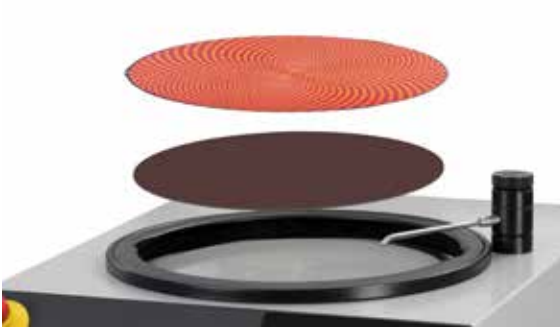
POLISHING IN MATERIALOGRAPHIC SAMPLE PREPARATION

In the polishing process, three polishing steps using different polishing media are distinguished in materialographic sample preparation:



www.qatm.com/polishing





MAGNETIC FOILS

PRODUCT BENEFITS

- When attached to the work surface, it allows for the secure fastening of all Galaxy grinding discs and polishing cloths
- Easy to use and long-lasting
- Low impact elasticity during grinding or polishing
- Different magnetic field strengths for high holding force



GRINDING PAPERS AND GRINDING FOILS

PRODUCT BENEFITS

- As an alternative to QPREP grinding discs, samples can be prepared using QPREP grinding papers and foils
- Tear- and water-resistant (does not soften during grinding)
- Low impact elasticity
- Compatible with QPREP attachment systems for optimal adhesion and easy handling



WIDE SELECTION OF DIAMOND GRINDING DISCS

PRODUCT BENEFITS

- A comprehensive portfolio of QPREP diamond grinding discs with various bonding systems and grain sizes
- High material removal rate, for medium-hard and hard materials
- Excellent flatness with a high-quality surface finish and sharp edges
- Short preparation times combined with long service life



POLISHING CLOTHS

PRODUCT BENEFITS

- QPREP polishing cloths offer the right cloth for every polishing step, which, when used with the appropriate QPREP diamond suspension, ensures excellent polishing results
- A wide range of high-quality polishing cloths for pre-polishing, intermediate polishing, final polishing, and fine polishing, available in various hardness levels from very hard, hard, medium, to soft



CONTERO FINE GRINDING/LAPPING DISCS (S, H)

PRODUCT BENEFITS

- High material removal rate, flatness, and edge sharpness
- Application with diamond suspensions having a particle size of 6-15 µm
- Maintenance-free and ready to use
- High surface finish and uniform scratch pattern
- Reducing the number of preparation steps while maintaining long service life



SUSPENSIONS AND LUBRICANTS

PRODUCT BENEFITS

- A comprehensive range of polishing agents, including QPREP diamond suspensions, lubricants (diamond lubricants), and ultra-fine polishing suspensions
- High material removal rate and time-saving polishing of all materials
- Available in water-, alcohol-, and oil-based formulations

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**ENABLING
PROGRESS**