



GRINDING & POLISHING MACHINE

QPOL PRO

FLAGSHIP GRINDING AND POLISHING MACHINE - POWER MEETS PRECISION

The Qpol PRO is a fully automatic grinding and polishing machine that operates with both single and central pressure. It was developed for continuous industrial use with maximum operating capacity and impresses with its unique features.

PRODUCT ADVANTAGES

- | **Maximum reproducibility:** Material removal measurement with a precision of up to 10 µm, electronic force control in closed-loop, and a sturdy aluminum housing
- | **High performance:** Powerful, maintenance-free direct drives (patented) and sample holders up to 204 mm
- | **Intuitive operation:** Patented sample holder mounting, well-designed software concept, and one-button operation



[Click to view video](#)

GRINDING & POLISHING MACHINE QPOL PRO

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
- | Maintenance-free direct drives for continuous operation with optimal performance, even for larger samples
- | The impact-resistant plastic tub offers impressive durability, corrosion resistance, and easy cleaning



GRINDING/POLISHING HEAD WITH STEP MOTOR

Thanks to its uniform oscillating motion, the grinding/polishing head can utilize the entire working disc

- | Longer service life of consumables
- | Intuitive adjustment of the oscillating motion and ability to memorize previously set endpoints
- | Semi-automatic sample holder mounting (can also be operated with one hand)



PRECISE MATERIAL REMOVAL MEASUREMENT

Thanks to its robust design and force sensors, automatic target preparations can be performed

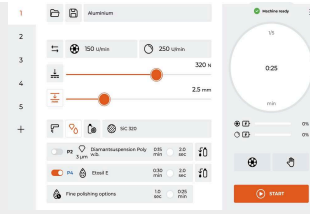
- | Accuracy of up to 10 μm
- | Closed-loop electronic force control
- | Ideal for electronics and thin sections



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



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
- | Working disc cooling for long polishing cycles and reduced cleaning effort thanks to basin rinsing
- | The tub insert (plastic inlay) is easy to replace or clean to remove abrasion and residue from the Suspension

INTUITIVE AND EASY TO USE

Ergonomically integrated 10-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
- | Level indicator for suspensions
- | Pre-installed preparation methods for various materials and applications

OPTION: QDOSER DOSING SYSTEMS

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

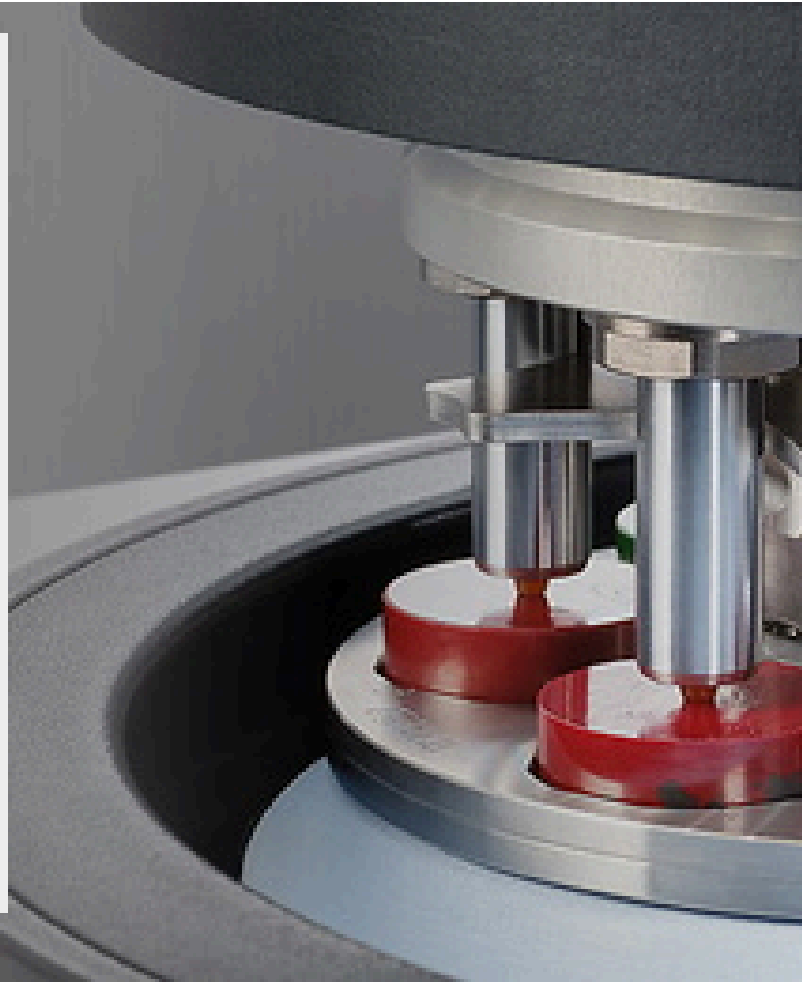
- | Modular Dosing System: Qdoser GO and PLUS can be combined for up to 8 suspensions
- | Qdoser GO: Fully automatic, software-controlled dispensing system with 4 easily removable and refillable dispensing bottles for reproducible results (magnetic stirring function available as an option)
- | Qdoser PLUS: Also allows for fine polishing (optional upgrade to a 1-liter bottle for fine polishing suspension)

**PRECISE MATERIAL REMOVAL
MEASUREMENT, HIGH-PERFORMANCE
MOTORS AND LARGE SAMPLES**

**QPOL PRO - EFFICIENT
PREPARATIONS OF THE
HIGHEST QUALITY**

The Qpol PRO delivers 5–80 N of contact force in single-sample mode and 20–500 N in central pressure mode. Thanks to its powerful direct drive, up to 5 specimens with a diameter of 70 mm can be prepared at variable speeds in synchronous or counter-rotating modes

- | Easy sample holder change, even with just one hand (patented)
- | Reproducible results thanks to stepper motors and material removal measurement
- | Fully controllable via the software; no more swiveling required



GRINDING & POLISHING MACHINE QPOL PRO
SUPERIORITY IN DETAIL

1. Highest precision

- | Direct force measurement (patented)
- | Material removal measurement system

2. Process-optimized polishing head

- | Intelligent sample holder clamping system (patented)
- | Efficient pendulum motion

3. Robust design

- | Low-vibration cast aluminum components
- | Maintenance-free & high-performance direct drives

4. Intuitive process control

- | 10" industrial touch panel
- | Pre-installed method database
- | One-button operation

5. Modular dosing system

- | Magnetic stirring function
- | Fill level indicator



HIGH PROCESS FLEXIBILITY QDOSER DOSING SYSTEMS

The fully automatic, software-controlled Qdoser dosing system speeds up the grinding and polishing processes in the materialographic laboratory and is compatible with the QPol M, GO, and PLUS series, as well as the QPol PRO. 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 easily removable, making them simple to clean. A backflush function keeps the connecting hoses clean.

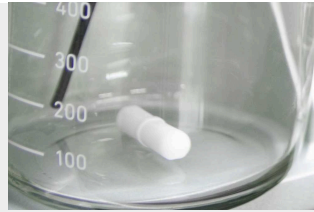




OPTIMIZED FILLING AND DOSING

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



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



DOSAGE

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

- | Easy installation of the dispensing nozzles into the designat-ed 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



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

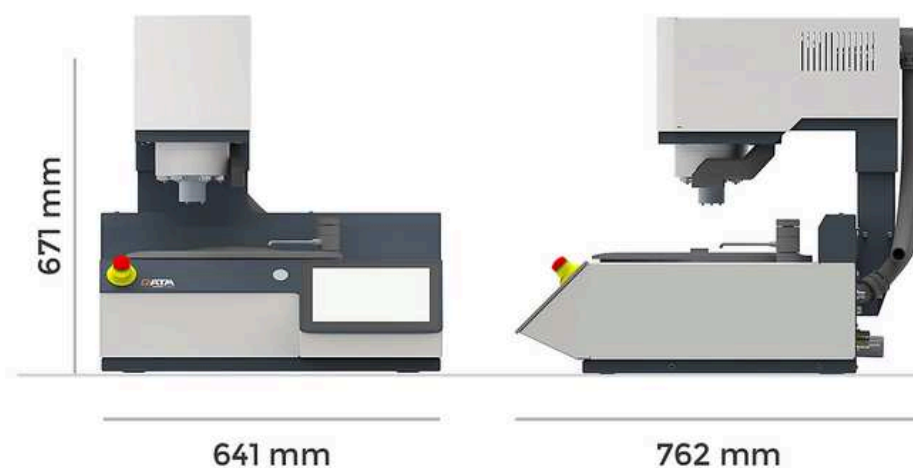
PERFECT GRINDING AND POLISHING – CONSUMABLES BY QATM

Grinding and polishing is more reliable, safe and efficient when processed with the right ingredients: knowledge, care and the right choice of consumables and instruments.



GRINDING & POLISHING MACHINE QPOL PRO

TECHNICAL DATA



Working wheels

ø 250/300 mm
(recommended size: ø 300 mm)

Sample holder

Single pressure: ø 160 mm
Central pressure: ø 204 mm

Number of samples

Single pressure: 1 - 6 samples, ø 50 mm
Central pressure: 1 - 5 samples, ø 70 mm

Contact force

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

Speed (grinding machine)

50 - 600 rpm, continuously variable

Rotational speed (grinding head)

30 - 200 min⁻¹

Water connection	1x Fresh water G ½" max. 6 bar
Compressed-air connection	6-8 bar, coupling connector NG 8
Dosing device (optional)	Qdoser PLUS, Qdoser GO
Ambient temperature	10 - 40 °C
Drive power	Working wheel: 1.1 kW (S1) Grinding head: 0.37 kW (S1)
Connected load	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)
Interfaces	USB, Ethernet
B x H x T	641 x 671 x 762 mm
Weight (depending on equipment)	approx. 95 kg

www.qatm.com/qpol-pro

ORDER DATA

BASIC EQUIPMENT

MACHINE (1 ITEM REQUIRED)

M5633000  Qpol PRO 200-240 V 50/60 Hz

M5633005 Qpol PRO 100-120 V 50/60 Hz

CONNECTION SET

Z5631604 Connection set for Qpol PRO

WORKING WHEEL (1 ITEM REQUIRED)

Z5633002 Working wheel Ø 250 mm

Z5633003 Working wheel Ø 300 mm

PROTECTIVE COVER (TO BE ORDERED WITH THE MACHINE)

A5633001 Preparation protective cover with safety switch

Z5633001 Protective cover

OPTIONS (CAN BE ORDERED SEPARATELY)

95016346  Magnetic foil anisotropic
Magnetic foil anisotropic Ø 250 x 1.0 mm PSA

95012161  Magnetic foil anisotropic Ø 300 x 1.0 mm PSA

SPLASHING GUARD (1 ITEM REQUIRED)

Z5631602 Splashing guard Ø 200/250 mm

Z5631607 Splashing guard Ø 300 mm

CLAMPING AND PROTECTION RING

Z5631004	Clamping ring Ø 250 mm
Z5631009	Clamping ring Ø 300 mm
Z5631022	Protection ring Ø 250 mm
Z5631023	Protection ring Ø 300 mm

GRINDING BOWL INLAY

95018173	Qpol grinding bowl inlay (5-pack)
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SAMPLE HOLDER (1 ITEM REQUIRED)

Z5446020	Sample holder L-160-6-Ø-25 single pressure
Z5446022	Sample holder L-160-6-Ø-30 single pressure
Z5446025	Sample holder L-160-6-Ø-40 single pressure
Z5446026	Sample holder L-160-6-Ø-50 single pressure
Z5446021	Sample holder L-160-6-Ø-1" single pressure
Z5446023	Sample holder L-160-6-Ø-1 1/4" single pressure
Z5446024	Sample holder L-160-6-Ø-1 1/2" single pressure
Z5446027	Sample holder L-160-6-Ø-2" single pressure
Z5446028	Sample holder L-160-3-RE-55x30 single pressure
Z5446029	Sample holder L-160-3-RE-60x40 single pressure
Z5446030	Sample holder L-160-12-Ø-25 central pressure
Z5446031	Sample holder L-160-8-Ø-30 central pressure
Z5446034	Sample holder L-160-6-Ø-40 central pressure
Z5446035	Sample holder L-160-5-Ø-50 central pressure
Z5446042	Sample holder L-185-3-Ø-60 central pressure
Z5446044	Sample holder L-204-5-Ø-70 central pressure
Z5446030	Sample holder L-160-12-Ø-1" central pressure
Z5446032	Sample holder L-160-8-Ø-1 1/4" central pressure
Z5446033	Sample holder L-160-6-Ø-1 1/2" central pressure
Z5446035	Sample holder L-160-5-Ø-2" central pressure
Z5446036	Sample holder L-160-3-RE-55x30 central pressure
Z5446037	Sample holder L-160-3-RE-60x40 central pressure

Z5446043	Sample holder L-185-3-RE-70x40 central pressure
Z5446045	Sample holder L-204-3-RE-100x50 central pressure
Z5446038	Sample holder L-160-6-Ø-20-40 central pressure

DISTANCE RING

05446012	Distance ring-50-25
05446015	Distance ring-2"-1"
05446011	Distance ring-50-30
05446014	Distance ring-2"-1 1/4"
05446010	Distance ring-50-40
05446013	Distance ring-2"-1 1/2"

LEVELLING PLATE

05400114	 Levelling plate Ø 160 mm 2 mm
05400246	Levelling plate Ø 160 mm 4 mm

DOSING UNIT

M6300110	Qdoser PLUS
M6300115	Qdoser PLUS with magnetic stirrer
Z6300070	1 l extension final polish suspension
M6300100	Qdoser GO
M6300105	Qdoser GO with magnetic stirrer
Z5631015	 Qdoser ONE
Z5631014	 Holder for Qdoser ONE
Z5631016	 Stand for Qdoser ONE

SETTLING TANK / RECIRCULATION UNIT

A5810261		Settling tank 45 L insertable 800
A5810237		Settling tank 45 L insertable 900
A5800496		Settling tank 45 L movable
A5633000		Preparation for recirculation unit for Qpol PRO
Z5800012		Recirculation tank 45 L movable
Z5800013		Recirculation tank 45 L insertable
Z5800014		Pump module recirculation cooling
Z5631605		Qpol control unit for recirculation unit
Z5631606		Qpol shift valve for recirculation unit