QATM
a VERDER company

VOLAUTOMATISCHE SLIJPMACHINE & POLIJSTMACHINE

QPOL 300 BOT

qatm.com/nl/producten/slijpen-polijsten-etsen/volautomatisch-slijpen-polijsten/qpol-300-bot/

QPOL 300 BOT

VOLAUTOMATISCHE SLIJPMACHINE & POLIJSTMACHINE

With the Qpol 300 BOT, QATM has developed a unique and fully automatic compact device that automates the entire grinding and polishing process, including cleaning and drying.

Intuitive operation via touchscreens and up to two autonomous sample heads enable fast and automated sample preparation. Thanks to its modular line design, it can be adapted to individual requirements.

THE ADVANTAGES OF AUTOMATION WITH THE QPOL 300 BOT:

- **Automated processes:** Grinding, polishing, and cleaning are fully automated.
- **Flexible media selection:** Choose customized media tailored to your specific requirements.
- **High reproducibility:** Ensure consistent results through reliable processes.

QPOL 300 BOT

MODULAR CONSTRUCTION

Binnen de stevige aluminium behuizing is het mogelijk om 4 tot 8 systeem werkstations te installeren. Er kunnen maximaal 11 verschillende bewerkingen worden geprogrammeerd en de volgorde ervan kan worden bepaald voor een bepaalde toepassing. De opties omvatten voor-slijpen, slijpen en polijsten, evenals reinigen en drogen in elke combinatie. De Qpol 300BOT gaat automatisch van de ene stap naar de volgende, waardoor de handmatige, tijdrovende taak van het reinigen van elke monsterhouder tussen de stappen wordt geëlimineerd. Met zijn modulaire opbouw heeft de Qpol 300BOT een prijs-prestatieverhouding die het een kosteneffectief systeem maakt, zelfs voor lager volume labs.

QPOL 300 BOT

GRINDING AND POLISHING STATIONS

The Qpol 300 BOT is constructed with stations for complete materialographic operations from planar grinding through intermediate steps and final polishing. All stations are integrated into the system. The grinding and polishing discs are fixed onto the working wheels by using a vacuum (Vacu-Jet System) or magnetic disc system.

Each station can be configured for specific abrasive requirements. Water, diamond suspensions, diamond lubricant and oxide dispensing are fully integrated and controlled via programming. Grinding and polishing stations can also include fully automatic protective covers to maintain a clean work environment.

QPOL 300 BOT

OVERTUIGENDE VOORDELEN

GRINDING AND POLISHING HEAD

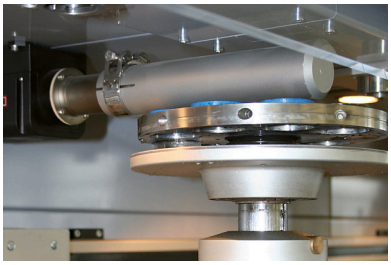
The grinding and polishing head picks up a sample holder from the stack and travels to individual work stations to perform each cycle in the proper sequence. Upon completion, the head returns the holder to the stack. The use of two heads allows simultaneous grinding and polishing and optimizes the Qpol 300 BOT when preparing multiple specimen holders.

SAMPLE HOLDER STACK

The sample holder racking system holds up to 12 sample holders. After starting the machine, the holders are taken out automatically for processing. After processing, the completed sample holders are returned to their original position with the polished surface facing upwards.

FOIL CHANGER

In the storage elevator, there are four compartments for disposable grinding discs, such as SiC paper. The vacuum exchange arm grips the pre-selected SiC paper and places it onto the wheel. The Vacu-Jet system then operates immediately, securing the disc to the plate automatically. When finished, the used grinding paper is discarded.



WARM AIR DYING

After final cleaning, a programmable warm air blower dries the samples with the polished side upwards. Then the dry samples are stored in the sample stack. The drying time is programmable.

QPOL 300 BOT

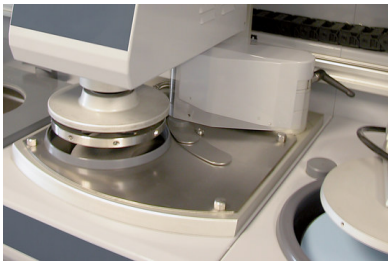
OVERTUIGENDE VOORDELEN

HIGH SPEED CLEANING STATION

The cleaning station enables a fully automatic cleaning of the sample. The multi-step cleaning is carried out with water, air and alcohol. Cleaning times and steps are completely adjustable as needed.

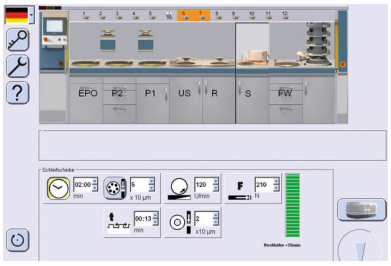
DATA TRANSFER

The QATM central lab is always looking for solutions for your problems. We can develop an optimum procedure for a particular sample and send it to you via data transfer. Acquired data can also be exchanged via an internal network. This enables reproducibility and comparison of procedures and parameters anywhere, anytime.



SURFACE GRINDING STATION

The high speed grinding station planes the surface of the sample very quickly using an abrasive stone. The fully enclosed stone has an integrated recirculation coolant system in the cabinet. SiC and Al2O3 grinding stones are kept flat by an automatic diamond dressing device with adjustable dressing depths and intervals.
The wearing surface of our standard grinding stone with glued carrier plate is 30 mm. For diamond grinding disc applications, a cup-wheel with sample holder adaption is available for dressing the diamond surface in freely configurable intervals.



TOUCH SCREEN CONTROL

Simple operation with drag-and-drop graphical touch-screen controls at the central panel that can slide to any work station. For each step, the screen shows a graphical representation of the working position. It is possible to follow the processing sequence in real time. The process sequence can be stored and then recalled as a complete program. A large number of programs can be stored and then recalled as needed. As standard equipment, there is a LAN connection for remote maintenance and monitoring by your facility or by QATM. This enables the recognition and removal of faults/errors or downloading of updates and procedures.

QPOL 300 BOT

INDIVIDUALLY CONFIGURABLE

With the Qpol 300 bot, all preparation steps up to the analysis can be performed. It is individually configured so that maximum sample throughput can be achieved with minimum space requirements. To achieve this, we analyse and optimise all preparation steps for the specific application in advance and then configure the system to suit the specific application.

1 | Movable control panel (sideway) with touch screen control; individually programmed preparation cycles can be saved

2 | Polishing head: clockwise/anti-clockwise rotation

3 | Holder stack for six sample holders

4 | Two grinding and polishing stations with variable speed of working wheels

5 | Fully-automatic sample cleaning with water, Ethanol, air

6 | Warm air dryer with timer

7 | Grinding station with four different grinding media/grains stored in foil changer

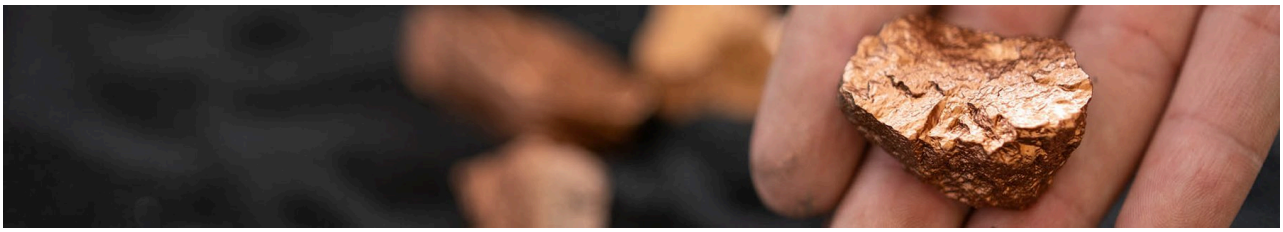
8 | Dosing drawer for storing of polishing suspensions

9 | Settling tank

QPOL 300 BOT

GEOLOGIE EN MINERALOGIE

Dit instrument is ideaal voor geologische en mineralogische toepassingen.



PREPARATION GUIDE FOR GEOLOGY AND MINERALOGY → qatm.com/nl/toepassingen/geology-and-mineralogy/

QPOL 300 BOT

PERFECT GRINDING AND POLISHING

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.

NAAR HET PRODUCTENOVERZICHT "GRINDING" →
qatm.com/nl/producten/verbruiksmateriaal/grinding/

NAAR HET PRODUCTENOVERZICHT "POLISHING" →
qatm.com/nl/producten/verbruiksmateriaal/polishing/

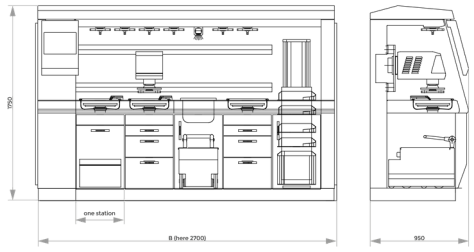
QPOL 300 BOT

PRODUCTAFBEELDINGEN

QPOL 300 BOT

TECHNISCHE GEGEVENS

Draaischijven	max. Ø 300 mm
Monsterhouder-Ø	160 - 204 mm
Snelheidsmonsterhouder	20 - 120 tpm
Central pressure	50 - 450 N
Snelheid werkwiel (Slijpen en Polijsten station)	50 - 600 tpm
Slijpsteen	Ø 350 mm
Reinigingsstation	lucht, water, ethanol (optie)
Vermogen ultrasoon reinigingsstation	400 W
Aansluitvermogen	4,3 - 15,6 kVA (afhankelijk van de configuratie)
B x H x D	2260 - 4020 mm (4 - 8 stations) x 1750 x 950 mm



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