

QGRIND XL



CONVENIENT OPERATION

The modern design of QATM's proven control software allows for intuitive and user-friendly operation. All process parameters are clearly displayed and can be easily set by touch.



- | 7" touch screen
- | Status display and acoustic signal
- | Material removal measurement with graphical display
- | Automatic referencing and wear indication of grinding stone and dressing diamond
- | User Account Management with variable user rights
- | USB / Ethernet interface for remote maintenance and data transfer

The particularly robust and powerful design of the Qgrind XL planar grinding machine enables maximum and precise material removal.

The ForceControl function ensures reproducible grinding results with the integrated electronic measuring systems. By selecting and combining different grinding modes, both maximum material

removal rates (roughing) and excellent sample surfaces (finishing) are achieved. With the SmartGrind software function, the grinding process can be continuously monitored and made particularly efficient by means of fully automatic determination of dressing intervals. The integration of a cleaning station and the intuitive software interface set new standards in convenience and user-friendliness.



GRINDING STONES AND DIAMOND GRINDING DISCS

High-quality aluminum oxide or silicon carbide grinding stones are available for the various applications. Resin-bonded diamond grinding discs can be used for planar grinding of ceramic materials and hard metals.



AUTOMATIC DIAMOND DRESSER

In SmartGrind mode, the grinding process is continuously evaluated and the stone dressing requirement is automatically determined and efficiently controlled. It can also be dressed periodically, after a timed interval, as well as by confirmation.



CLEANING STATION (OPTIONAL)

In the cleaning station samples are automatically cleaned with water, ethanol and air or by spin cycling at up to 800 rpm (adjustable). Thus, each preparation step is finalized with a cleaning step to avoid cross contamination.


BASIC MODULE
Qgrind XL (base)


- | planar grinding machine with central pressure
- | stable welded steel construction, powder-coated
- | grinding bowl made of stainless steel
- | variable speed control of the grinding stone and grinding head
- | ForceControl system with electronic measuring system
- | selection and combination of different grinding modes (roughing and finishing)
- | SmartGrind function for fully automatic, efficient dressing (different modes for dressing selectable)
- | removal measurement with graphic display
- | integrated cleaning station (optional) with water, ethanol, air and spin-off
- | 7" touch screen with intuitive QATM user software
- | 200 user programs can be saved
- | USB and Ethernet connection
- | automatic safety hood
- | wear indicator for grinding stone and dressing diamond
- | automatic referencing of grinding stone and dressing diamond
- | energy-saving LED illumination of the work area
- | preparation for external suction
- | integrated circulation cooling unit (optional)
- | rinsing hose for manual cleaning
- | for use with Al_2O_3 -, SiC grinding stones or diamond grinding discs (depending on equipment)

400 V / 50 Hz (3Ph/PE)

Order No.: M5700110

480 V / 60 Hz (3Ph/PE)

Order No.: M5700120

220 V / 60Hz (3Ph/PE)

Order No.: M5700130
EQUIPMENT
EQUIPMENT FOR RECIRCULATION COOLING SYSTEM


- | incl. 45 L recirculation cooling system
- | PVC tank
- | removable separating slide
- | inlet sieve with filter bag and overflow
- | incl. connection set
- | mobile, without folding wheels

Order No.: A5700131
EXTERNAL COOLING

- | equipment for connection to an external cooling system
- | cooling water ON / OFF control in software with a pneumatically actuated ball valve
- | 1 inch thread connection

Order No.: A5700135
BELT FILTER 130 L


- | incl. filter roll
- | belt filter requires a separate power connection

tank	130 Ltr.
filter area	0.35 m ²
filter capacity	30 l/min (emulsion)
pump power approx.	15 Ltr./min
colour	RAL 7040
dimensions (W x H x D)	607 x 632 x 1308 mm
weight	approx. 90 kg

400 V / 50 Hz (3Ph/PE)

Order No.: A5700132

480 V / 60 Hz (3Ph/PE)

Order No.: A5700133

220 V / 60Hz (3Ph/PE)

Order No.: A5700134

EQUIPMENT

CLEANING STATION



- | automatic cleaning of sample holders up to Ø 204 mm
- | cleaning media: water, ethanol and air
- | integration of the cleaning step in preparation processes
- | drying by spin cycle with max. 800 rpm (adjustable)
- | user-defined programming of cleaning process in software
- | level warning for ethanol containers
- | preparation for external suction (recommended when using ethanol)
- | tap water (drinking water) and compressed air required

with cleaning station:
(incl. sideways swiveling grinding head)

Order No.: A5700122

without cleaning station:
(grinding head cannot be moved sideways)

Order No.: A5700121

EQUIPMENT

EQUIPMENT GRINDING STONE

- | carrying plate for a Al₂O₃ or SiC grinding stone
- | motorized dresser with electronic force measuring system
- | automatic referencing of grinding stone and dressing diamond
- | wear display of grinding stone and dressing diamond in software

grinding stone diameter Ø 356 mm

max. grinding stone height 45 mm

mounting hole for the grinding stones Ø 38 mm

mounting for QATM multipoint diamond dresser
incl. multipoint diamond dresser

equipment grinding stone

Order No.: A5700141

ACCESSORIES

BASIC SET QGRIND XL

Order No.: Z5700101

EQUIPMENT

MEDIA CONNECTIONS

- | water in
- | water drain
- | compressed-air (only in case of cleaning station)
- | power supply
- | Ethernet

on back side of the machine:

Order No.: A5700111

on right-hand side of the machine:

Order No.: A5700112

OPTION

SIGNAL LIGHT



- | LED-signal light with status display
- | color coding according to DIN EN 60204-1

Order No.: A5700051

EQUIPMENT DIAMOND GRINDING DISC

- | carrying plate for diamond grinding disc
- | semi automatic dresser with mounting for cleaning stone

grinding disc diameter Ø 350 mm

grinding disc height 45 mm

mounting hole for the grinding disc Ø 38.1 mm

mounting for QATM cleaning stones Ø 10 mm

max. length of cleaning stones 150 mm

incl. 10 cleaning stones

Equipment diamond grinding disc

Order No.: A5700142

CONNECTION SET QGRIND XL

Order No.: Z5700002

SPECIFICATIONS
QGRIND XL

connected load	9 kVA
power supply	1 400 V / 50 Hz (3Ph/PE) 2 480 V / 60 Hz (3Ph/PE) 3 220 V / 60Hz (3Ph/PE)
removal measurement	±0.1 mm display accuracy at 1 mm removal
removal range	0.1 mm - 10 mm
dimensions (W x H x D)	approx. 860 x 1623 x 1055 mm
weight	approx. 433 kg

GRINDING STONE

drive power	4 kW (S1)
diameter	Ø max. 356 mm
variable speed	1000 - 2000 rpm

SAMPLE HOLDER / GRINDING HEAD

drive power	0.75 kW (S1)
diameter	Ø 160 - 204 mm
variable speed	30 - 160 rpm
speed of cleaning boost	30 - 800 rpm
rotation direction	clockwise/ counterclockwise
sample pressure (central)	50 - 750 N

