



Qpress 40

Qpress 50

Qmount

DISCOVER THE VERSATILITY OF MODERN MOUNTING METHODS
FROM HOT TO UV TO COLD MOUNTING

COLD MOUNTING VS. HOT MOUNTING: CHOOSE THE RIGHT TECHNIQUE FOR YOUR SAMPLES

THE OPTIMAL SAMPLE PREPARATION FOR PRECISE TEST RESULTS

THE CHOICE OF MOUNTING METHOD

Samples for materialographic examination are mounted hot or cold. Both methods complement each other and should not be regarded as competing methods. In the case of cold mounting, a distinction is made between chemically and light-initiated plastic systems. When choosing the mounting method, it should be noted that pressure and heat can damage the microstructure of the sample and distort the test results. Pores and gaps in the sample must always be completely filled by the mounting resin. In general, the procedure, mounting material and method must be adapted to the test objective and the laboratory conditions.

WHEN IS MOUNTING REQUIRED?

- | Samples are too small for grinding/polishing and hardness testing (small load/microhardness): the enlarged sample surface due to mounting simplifies handling
- | Simultaneous automatic preparation of larger sample quantities
- | Preparation of coatings and coating thickness measurements
- | Protection of edge zones
- | For sensitive and/or porous samples

DEVICES FOR MOUNTING



Pages 04 - 11

QPRESS 40

- | Mould: Ø 25 - 40 mm
(6 different diameters)
- | Closure system: Bajonet closure
- | Double mounting possible



Pages 12 - 19

QPRESS 50

- | Modular setup
- | Max. number of pressing units: 2 or 4
- | Moulds: Ø 25.2 - 50 mm
(8 different diameters)
- | Closure system: Slide closure



Pages 20 - 26

QMOUNT

- | UV mounting in the shortest possible time
(60 seconds)
- | Highly efficient, long-life LED technology
- | Robust machine design



Page 27

INFILTRATION DEVICE, PRESSURE DEVICE

- | Support for cold mounting
- | Infiltration of porous materials
(epoxy resins)
- | Improved edge bonding under pressure
(methacrylate cold mounting material)

3 DIFFERENT METHODS

MOUNTING

Mounting is a process used to prepare samples for materialographic preparation and analysis. The sample to be examined is encapsulated in a solid or liquid mounting compound. After curing, the mounting compound forms a protective shell around the sample. This allows for easier handling of fragile specimens, transforms multiple specimens of different geometries into uniform shapes of the same dimensions, and provides better edge retention of the specimens.

Depending on the laboratory facilities and the requirements of the resin, different mounting methods can be used. There are hot mounting, cold mounting, and light-induced mounting.



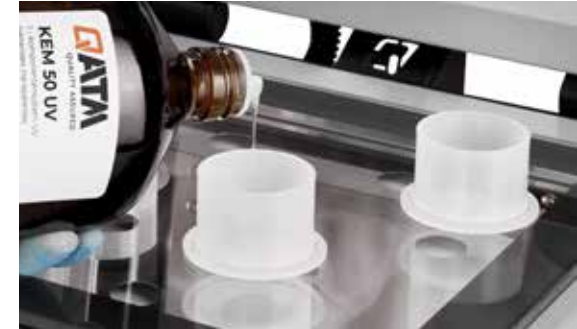
Hot mounting

- | Hot mounting is carried out in hot mounting presses at high pressures and temperatures.
- | Thermosetting mounting materials for high hardness and thermoplastic mounting materials for transparent mountings are available as hot mounting materials.
- | Hot mounting provides the best edge retention and planarity and is ideal for wet chemical etching.



Cold mounting

- | QPREP cold mounting materials are suitable for heat- or pressure-sensitive samples.
- | Cold mounting uses chemical reactions to cure the mounting material, with acrylic resins, epoxy resins, and polyester resins available.
- | The selection is based on properties such as reaction time, removal rate, and hardness.
- | Cold mounting can be used for a variety of sample materials and shapes in various sizes.



UV mounting

- | UV mounting materials consist of filler-free modified acrylic resins.
- | They are cured under UV irradiation within a narrow wavelength range and require specially designed equipment.
- | The UV initiators present in the resin absorb UV radiation for the initiation of the reaction.
- | UV mounting is the fastest method without the need for high pressures or external heat.
- | The 1-component systems used do not require mixing, result in transparent mountings, and enable safe work in the laboratory.

FASTER THAN EVER BEFORE

QPRESS 40

NEW

- | Short mounting times (up to 35% time savings)
- | Robust bayonet quick-release closure
- | 7" touch display with innovative control software and optional one-button operation
- | Dust Guard: extraction of granule dust during filling (patented)
- | Compact and high-quality design with powder-coated metal housing
- | High sample throughput possible due to double mounting

www.qatm.com/qpress40



The Qpress 40 is a robust hot mounting press for exceptionally fast mounting processes.

Thanks to its powerful heating/cooling technology and speed-optimized temperature control, the mounting time is significantly reduced. The robust bayonet closure, optional simple one-button operation, and clear parameter display on the 7" industrial touchscreen ensure convenient and intuitive use. The connectable, patented extraction system sets new standards in occupational safety for the user.



SIMPLE ONE-BUTTON OPERATION

The highest possible operating safety is achieved with the butler function. In just a few steps, the entire mounting process can be controlled by pressing the multifunction button. In addition, the PLUS software has a method database with pre-installed, consumable-specific mounting recipes and allows the storage of more than 128 user-defined mounting methods. This ensures the fastest possible operation with maximum process reliability.



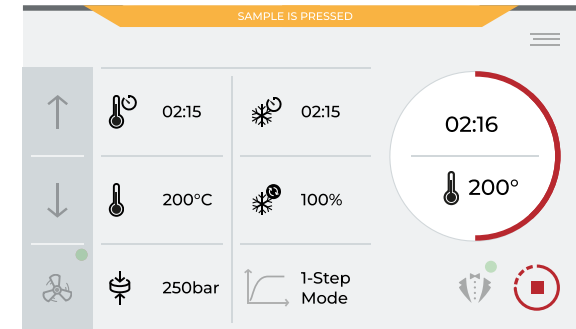
EASY TO CLEAN

The suction nozzle attached to the back of the machine is removable, making cleaning very convenient. The mould and the two plungers can be removed for cleaning in just a few simple steps.



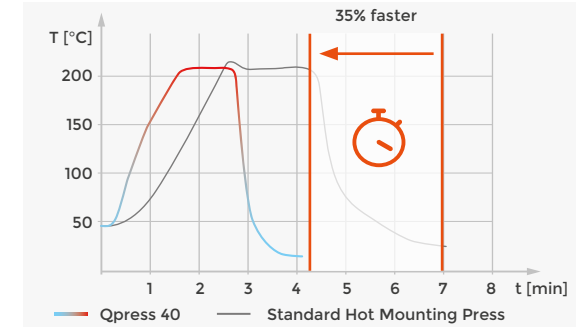
EXTRACTION OF FINE DUST

The patented and optional integrable suction device (Dust Guard) protects the user from inhaling dust that can escape when the mounting resin is filled into the mould. This significantly enhances health protection in the workplace. In the PLUS software version, the extraction system is automatically controlled by the software.



CLEAR SOFTWARE

The intuitive software with a modern interface displays all important mounting parameters on the robust 7" industrial touch panel. Here, you can set the heating and cooling times, desired cooling capacity, temperature, and press mould pressure. Additionally, the software displays the current status of the hot mounting press. User Account Control allows settings to be write-protected.



SPEED-OPTIMIZED HEATING AND COOLING TECHNOLOGY

Shorter mounting times are achieved by:

- Optimized heat transfer between heating elements and mould
- Fast temperature control to precisely reach the target temperature
- Preheating function to shorten the heat-up time

The new technology can reduce the mounting time by up to 35%.

THE NEW QPRESS 40 SETS STANDARDS

HIGHLIGHTS

- | Speed-optimized heating / cooling technology
- | Intuitive one-button operation
- | Tall press cylinder for double mounting
- | Robust quick closure
- | Extraction of fine dust
- | Clear process control



MORE INNOVATIVE FEATURES

A DEVICE THAT CAN DO MORE



TALL PRESS CYLINDER FOR DOUBLE MOUNTING

The tall press cylinder allows two samples to be mounted on top of each other simultaneously. This saves valuable mounting time and doubles sample throughput. Additionally, this mounting method is particularly time- and energy-efficient.



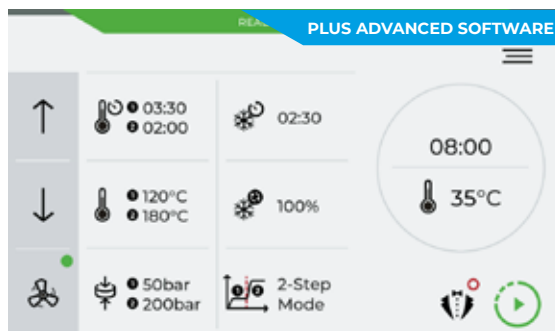
ROBUST BAYONET CLOSURE

The robust and ergonomic bayonet closure fits comfortably in the hand and allows quick and easy opening and closing of the press cylinder.



GRANULATE COMPARTMENT

The machine includes a granule compartment for easy pick-up and disposal of excess mounting granules.



2-STEP MODE

For sensitive samples (sheets, thin-walled pipes, coated materials), a 2-step mode can be activated permitting independent control of temperature and pressure. For example, in the first stage, the mounting resin melts at low press chamber pressure. In the second stage, full pressure is applied for compaction, providing maximum protection for the sample.



SOFTWARE-SUPPORTED DESCALING FUNCTION

The machine features an automatic descaling function. Simply insert a descaling tablet and select the software function to start the descaling process.

SHORT MOUNTING TIMES

UP TO 35% TIME SAVINGS

The Qpress 40 enables particularly fast mounting, saves resources and avoids unnecessary waiting times. The following overview shows suitable standard parameters for the available mounting materials and mould diameters to ensure high-quality sample mounting. These parameters serve as a guide and may vary depending on the application and sample size.

MOUNTING TIMES

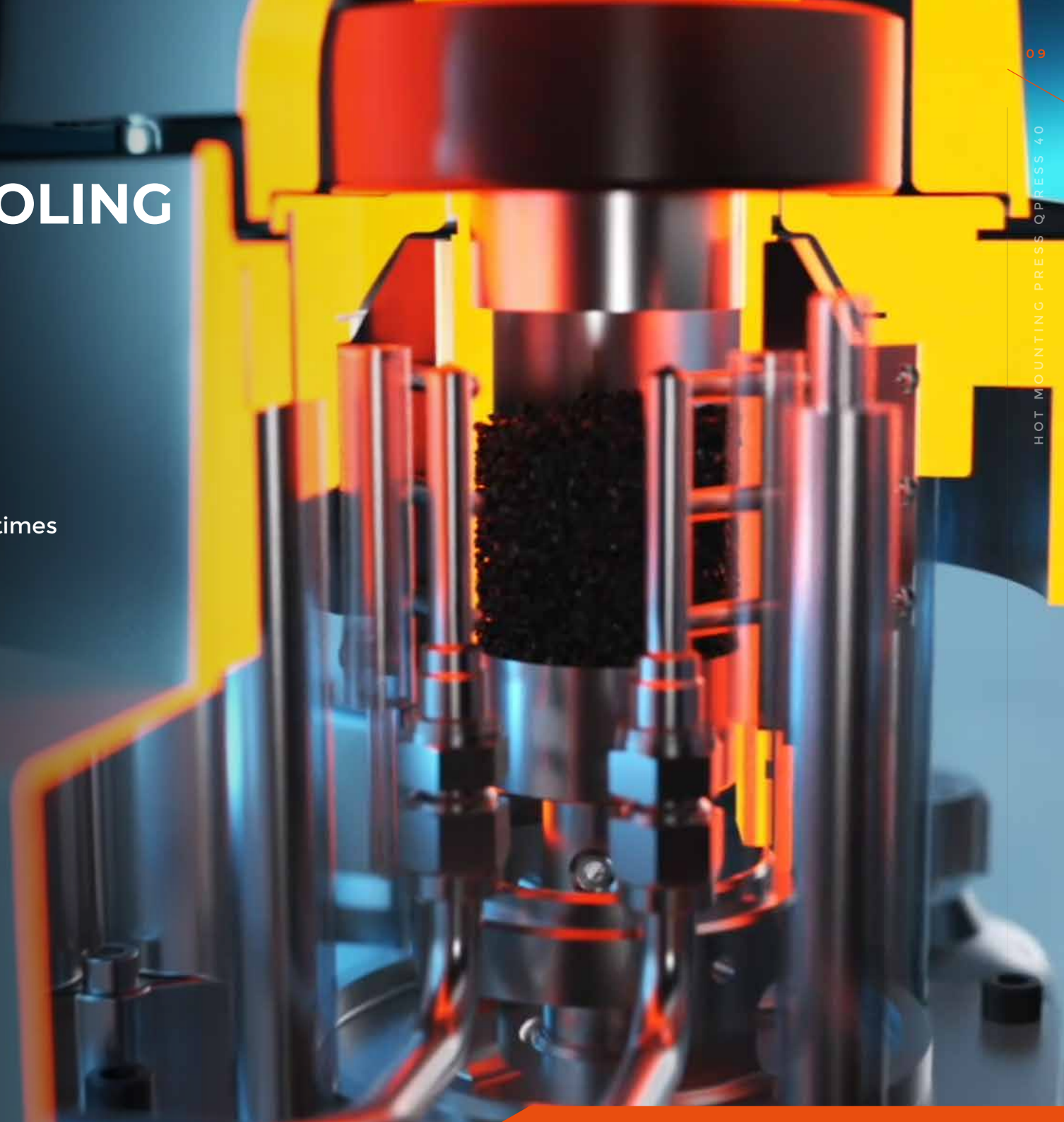
Mounting mould	Ø 25 mm / Ø 1"		Ø 30 mm / Ø 1 ¼"		Ø 40 mm / Ø 1 ½"		Temperature (°C)	Pressure (bar)	Cooling rate
	Heating time (min:sec)	Cooling time (min:sec)	Heating time (min:sec)	Cooling time (min:sec)	Heating time (min:sec)	Cooling time (min:sec)			
BAKELIT BLACK/GREEN/RED	03:30	02:30	03:30	02:15	03:15	03:00	180	250	100%
EPO BLACK	03:30	02:30	03:15	02:15	03:15	02:45	200	250	100%
EPO-MAX	03:30	02:30	03:15	02:15	02:15	02:15	200	250	100%
DUROPLAST BLACK	03:00	02:00	03:00	02:00	03:15	02:15	200	250	100%
THERMOPLAST	04:00	05:00	03:30	05:00	04:00	05:30	200	250	60-100%



TECHNOLOGY THAT CONVINCES

HEATING & COOLING TECHNOLOGY

- | Excellent heat transfer
- | Precise temperature control
- | Preheating function
- | Significant reduction in mounting times



FLEXIBILITY ON A NEW LEVEL

QPRESS 40 SOFTWARE IN TWO VARIANTS FOR EVERY REQUIREMENT

The Qpress 40 software is available in two variants. The **Standard Software GO** allows for quick setting of process parameters and starting of the mounting process.

The **Software Variant PLUS** offers additional features such as a method database, butler function, and automatic control of extraction. The Plus software also includes the 2-step mode for sensitive samples.

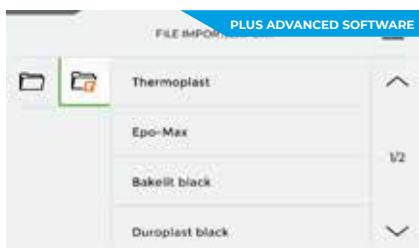
YOU CAN UPGRADE TO ADVANCED SOFTWARE PLUS AT ANY TIME.



BUTLER FUNCTION



DUST GUARD



METHOD DATABASE



2-STEP MODE

SOFTWARE FEATURES	GO Standard Software	PLUS Advanced Software
Setting of the mounting parameters via touch display (heating/cooling times, temperature, pressure)	✓	✓
Speed-optimized temperature control	✓	✓
Possibility of double mounting	✓	✓
User account control	✓	✓
Status bar	✓	✓
Adjustable cooling capacity	✓	✓
Automatic descaling function	✓	✓
① Butler function (simple one-button operation)	✗	✓
② Dust Guard: Extraction of fine dust (controlled via software)	✗	✓
③ Method database (saving and loading programs)	✗	✓
④ 2-Step Mode (for sensitive samples)	✗	✓



ACCESSORIES



CIRCULATING COOLING

- Powerful cooling
- Resource-saving circulation system instead of fresh water
- Low maintenance due to closed-circuit coolant circulation, reducing limescale deposits
- Can connect up to two hot mounting presses



MOULDS

- Easily interchangeable moulds are available with or without chamfer in these sizes: \varnothing 25 mm, \varnothing 30 mm, \varnothing 40 mm, \varnothing 1", \varnothing 1 $\frac{1}{4}$ ", \varnothing 1 $\frac{1}{2}$ ".



SUCTION

- The optional extraction device allows for direct dust extraction when filling the mounting resin. It also enables easy cleaning of the machine with a removable suction hose. The extraction system can connect to up to two mounting machines and is controlled via the Qpress 40 software. It includes a replaceable vacuum cleaner bag and an additional fine dust filter.



TECHNICAL DATA

Qpress 40

Basic device

Mould	\varnothing 25 mm, \varnothing 30 mm, \varnothing 40 mm \varnothing 1", \varnothing 1 $\frac{1}{4}$ ", \varnothing 1 $\frac{1}{2}$ "
Closure system	Bajonet closure
Max. pressure	in mould cylinder \varnothing 40 mm / \varnothing 1 $\frac{1}{2}$ " 250 bar in mould cylinder $<$ \varnothing 40 mm 350 bar
Adjustable temperature	20 - 200 °C
Heating time (adjustable) / Cooling time (adjustable)	0 - 30 min. (in 15 s steps)
Drive power (hydraulics)	0.36 kW
Heating capacity	1.6 kW
Connected load	2.0 kW
Power connection	230 V / 50 Hz or 110 V / 60 Hz
Dimensions (WxHxD)	approx. 365 x 433 x 538 mm
Weight	~ 41 kg

**A WORLDWIDE FIRST –
MODULAR HOT MOUNTING PRESS
WITH ONE-HAND SLIDING CLOSURE**

QPRESS 50

- | 7" touch screen user interface with intuitive QATM user software
- | Patented sliding closure with comfortable one-hand operation
- | Dust Guard (patented) removes fine dust to improve safety
- | Optimized mounting times due to faster heating cooling part
- | High modularity for both simultaneous and independently controlled mounting
- | User account management with different access rights
- | Pre-installed preparation methods and consumables
- | Powder coated steel housing

www.qatm.com/qpress50



Qpress 50

The Qpress 50 is a modular hot mounting press for fast and simultaneously independent mounting of different materialographic specimens. Due to its modularity the Qpress 50 can be configured ideally to the specific customer's needs; e.g. the specimens can differ in size and material.

The 7" touch screen with intuitive software contains user account management, preinstalled recipes and user-defined maintenance tasks and more. The device combines fast mounting and high energy efficiency in a robust powder-coated steel case.



IMPROVED SLIDING CLOSURE

One-hand sliding closure with integrated suction nozzle. When the mould is closed, excess granulate is pushed into a removable compartment (dirt trap). The sliding closure can be lifted off to clean the upper flask.



USER SAFETY

An integrated exhaust device (Dust Guard) protects the operator from inhaling expired fine dust during the moulds with mounting resin.



EASY TO OPERATE

The multi-functional button indicates the selected mounting unit, the operation state of the pressing unit and facilitates the operation of the whole unit. The 7" touch display with control software consists of pre-installed mounting methods, consumables and offers the storage of more than 200 user-defined mounting methods.



FAST MOUNTING CYCLE

The Qpress 50 is designed for fast mounting including a pre-heat function and saves significantly time compared to other hot mounting presses.

TECHNICAL FEATURES OF THE QPRESS 50

HIGHLIGHTS

- | High modularity to meet specific customer needs
- | Dust Guard removes fine dust to improve safety
- | Innovative design of heating/cooling unit guarantees precise and energy-efficient mounting process
- | Basic unit supports all additional pressing units
- | Pre-heat function reduces cycle time
- | Adjustable cooling power and a choice of cooling modes reduce water consumption



FOR UP TO 4 MOUNTS SIMULTANEOUSLY

EXCELLENT MODULARITY TO MEET YOUR NEEDS



Qpress 50-2

FOR MEDIUM QUANTITY OF MOUNTS

The Qpress 50-2 is the perfect choice for small and medium quantities of mounts. The basic unit includes one pressing unit and can be extended with one additional mounting unit at any time. The units are operated independently and simultaneously.



| ADDITIONAL
 PRESSING UNIT Qp 50

| Qpress 50-2
 BASIC UNIT

Qpress 50-4

FOR LARGE QUANTITY OF MOUNTS

Up to 4 mounts can be done simultaneously and independently from each other. The basic unit includes one pressing unit and is extendable by 1, 2 or 3 additional mounting units. The diameter of the mount of each pressing unit is chosen individually by 25.2 mm, 30 mm, 1 1/4" (~32 mm), 1 1/2" (~38 mm), 40 mm and 50 mm - each diameter with or without chamfer.



| ADDITIONAL
 PRESSING UNIT Qp 50

| Qpress 50-4
 BASIC UNIT

| ADDITIONAL
 PRESSING UNIT Qp 50

CLEAR, ROBUST DESIGN MADE IN GERMANY

SUPERIORITY IN DETAIL

Sliding closure (patented)

- | One-hand operation
- | Innovative design
- | Safety closure under pressure
- | Easy to operate
- | Removable for cleaning upper ram
- | Includes dirt trap

Multi-functional button

- | Displays the operating status in different colors and controls the device.
- (white = switched on; green = ready to mount; red = heating; blue = cooling).

Mounting

- | Fast mounting
- | 4 different pressure modes
- | Highly precise temperature control
- | Adjustable heating/cooling power

Modularity (patented)

- | Basic unit supports up to three additional pressing units
- | Simultaneous mounting
- | Independently controlled
- | Status indication by the multifunctional button

Dust Guard (patented)

- | Vacuums fine dust of mounting material
- | Integrated in design of sliding closure

Pre-heat function

- | Pre-heating of mould
- | Reduces cycle time
- | Pre-heat temperature can be set manually

Control interface

- | 7" color touch screen
- | Intuitive control software
- | Pre-installed preparation methods for QATM consumables
- | Smart control modularity
- | Assistance function for easy use of the additional pressing units



1. USB connector for data transfer
2. Network plug, e.g. for remote service
3. Plug-in for vacuum cleaner

SOFTWARE - INTUITIVE, EASY TO USE, AND SIMPLY CLEVER

- | Up to 200 user-defined preparation methods storable
- | Pre-installed mounting recipes and consumables
- | Assistance function for easy use of the additional pressing units

User account management:

- | Administrator account
- | Creating preparation methods
- | Operator account
- | Limited access

Maintenance:

- | Pre-defined maintenance tasks
- | User-defined maintenance intervals
- | User defined maintenance tasks

	Temperature	Pressure	Time	Percentage
1	0°C 08m:00s	220bar	0s / 0s 00m:30s	80 % 08m:30s
2	0°C 08m:00s	220bar	0s / 0s 02m:00s	80 % 01m:01s
3	190°C 08m:00s	100bar	0s / 0s 04m:00s	80 % 12m:00s
4	190°C 08m:00s	100bar	0s / 0s 04m:00s	80 % 12m:00s

Status overview of fully equipped Qpress 50

ACCESSORIES



SUCTION

I The heart of the Dust Guard



RECIRCULATION COOLING UNIT

I Powerful cooling with adjustable water temperature
- resource-saving and low-maintenance.

I Also available as system cooling



MOULD ASSEMBLY

I Available with or without chamfer in these sizes:

Ø 25.2 mm, Ø 30 mm, Ø 1¼" (~32 mm),

Ø 1½" (~38 mm), Ø 40 mm, Ø 50 mm



TECHNICAL DATA

Qpress 50

Qp 50

	Basic device	Pressing unit
Mould	Ø 25.2 - 50 mm (8 different sizes)	Ø 25.2 - 50 mm (8 different sizes)
Closure system	Sliding closure	Sliding closure
Thermostate range	20 - 200 °C	20 - 200 °C
Heating time / Cooling time	Adjustable	Adjustable
Max. pressure in mould cylinder depending on mould assembly's size	250 - 350 bar	250 - 350 bar
Connection power	1.6 kVA	1.5 kVA
Heating power	1200 W	1200 W
Power connection	230 V / 50 Hz or 110 V / 60 Hz	230 V / 50 Hz or 110 V / 60 Hz
Dimensions (WxHxD)	402 x 382 x 563 mm	187 x 382 x 449 mm
Weight	~ 50 kg	~ 42 kg

THE RIGHT MOUNTING MATERIAL FOR YOUR SAMPLES

HOT MOUNTING MATERIALS



www.qatm.com/consumables

QPREP hot mounting materials are specifically chosen plastic granules consists of various base polymers. Adding of fillers influences hardness, shrinking behaviour and mechanical workability. The Duroplast group cures at a higher temperature in the range of 130-180 °C. Thermoplastics melt at temperatures of 130-180 °C and cure during the cooling phase. In comparison to Duroplasts this significantly increases the cooling time depending on the diameter of the mounted sample, but crystal clear/transparent mountings are possible. QPREP hot mounting materials offer good edge retention, a high degree of hardness of the mounting material and high plane parallelism. The samples can be marked very easily by engraving or labeling.



PROPERTIES OF HOT MOUNTING MATERIALS

Mounting material	Recommended Application	Basis/ Filler	Hardness (Shore D)	Removal rate (grindability)
EPO BLACK	High edge retention, edge examination, medium-hard to hard materials	Epoxy resin/ mineral and glass fibre	93	very low
EPO-MAX	High edge retention, edge examination, medium-hard to hard materials, easy cleaning of mould and ram due to low adhesion	Epoxy resin/ mineral	93	very low
DUROPLAST BLACK	Conductive, SEM-analysis, electrolytic polishing	Phenolic resin/ graphite	89	medium
THERMOPLAST	Transparent mounting, targeted preparation, good for padding, marking	Acrylic resin	86	medium
BAKELIT BLACK	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour and graphite	90	medium
BAKELIT GREEN	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour	90	medium
BAKELIT RED	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour	90	medium



EPO BLACK



EPO-MAX



DUROPLAST BLACK



THERMOPLAST



BAKELIT BLACK



BAKELIT GREEN



BAKELIT RED

OPTIMIZE YOUR MOUNTING PROCESSES

ACCESSORIES & TOOLS FOR HOT MOUNTING



www.qatm.com/consumables

Depending on the shape of the specimen to be mounted, the chosen hot mounting material, and the objectives of the materialographic preparation QPREP's wide range of accessories and tools ensures the best possible analysis results.

The following tools are available:

- | Silicone paste and silicone spray as anti-sticking agent, brass brush for cleaning the mounting mould, funnel for easy filling of hot mounting powder, dosing spoon, angle adapter 10° (plastic) for angled polishing, square bottle with screw-top for approx. 1 litre mounting material.
- | For alignment of thin samples in a mould, steel or plastic clips are available in a variety of colors.



USEFUL INFORMATION ON HOT MOUNTING

SAVE COSTS BY COMBINING MOUNTING MATERIALS

To reduce costs, EPO black, EPO-Max and Duroplast black can be used together with Bakelites. The sample is covered with a small amount of the desired mounting medium and then filled with lower-priced material. It is important to choose the mounting parameters so that the mounting material hardens optimally.

INCREASED EFFICIENCY WITH DOUBLE MOUNTING

Some hot mounting presses offer the possibility of producing two samples simultaneously on top of each other in the press mould by means of double mounting. This doubles the sample throughput with approximately the same time, effort and energy expenditure and significantly increases productivity without sacrificing reproducibility and quality of the mounting. The sample height is limited to approximately 15 mm.

IT'S ALL ABOUT THE TEMPERATURE

For better edge sharpness and minimized shrink gaps, the mounted samples should be cooled under pressure to room temperature before being removed from the hot mounting press. Indications of too low temperatures or pressures during mounting are improperly melted or milky mounting agent. The temperature and pressure values set on the hot mounting press should always correspond to the recommended values for the mounting medium used.

THE CORRECT STORAGE OF MOUNTING MATERIAL

The cause of insufficiently cured, mounted samples can be too much moisture in the mounting medium: Always close the container properly after use.

HOT MOUNTINGS FOR ELECTROLYTIC PREPARATION

In electrolytic applications, electrically non-conductive thermoplastic is used together with Duroplast black. First, a small amount of thermoplastic is added to the sample and then the missing amount of mounting is filled with Duroplast black. This results in an electrically conductive body with a non-conductive preparation surface. This is important to avoid oxidation of the graphite contained in Duroplast black. This leads to excessive electrolyte aging and an irregular sample surface.

THE FAST WAY TO TRANSPARENT MOUNTED SAMPLES

QMOUNT

- | Fastest, simplest and most modern type of embedding
- | UV mounting in the shortest possible time
- | Low curing temperature (70 - 90°C)
- | Highly efficient, long-life LED technology
- | Very easy handling
- | High sample capacity (12 samples, Ø 50 mm)
- | Robust machine design
- | Cover with soft-close
- | Scratch-resistant and large sample support
- | Small device -> little space required
- | Connectable suction unit (optional)

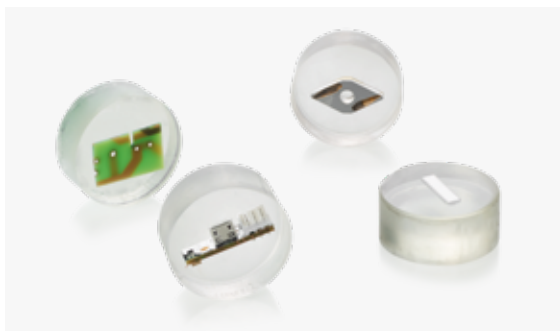
www.qatm.com/qmount





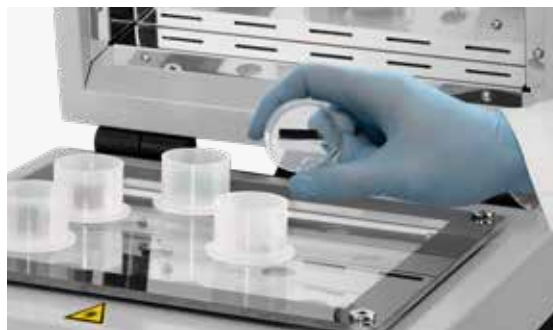
The Qmount is a modern device for the light-curing-based mounting of materialographic samples.

The samples are placed in the device which is equipped with customized, powerful LED technology. The UV transparent mounting moulds are filled with the UV curing resin. The transparent sample can be removed within a very short time frame. A suction unit from the QATM portfolio can be connected to the device to increase work safety.



MULTI-TASK VERSATILITY

Due to the very short process times, the Qmount opens up the possibility of producing transparent, materialographic standard mountings of various materials very quickly and cost-effectively.



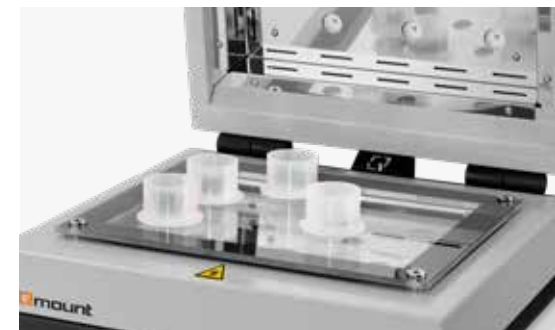
VERY FAST MOUNTING

The compact device is equipped with specially developed and durable LED boards, which irradiate the samples highly efficient with UV radiation of a very narrowly tolerated wavelength range (emission maximum at $\lambda = 365 \text{ nm}$) and allow standard samples to cure within 60 seconds.



HIGH SAMPLE CAPACITY

The device contains a scratch-resistant glass plate (200 x 260 mm) which enables the simultaneous curing of up to 12 samples with a diameter of 40 mm. The simple design guarantees an easy cleaning of the working space.



ROBUST TECHNOLOGY

The integrated ventilation guarantees low polymerization temperatures of approx. 70 - 90 °C. A robust design with powder-coated aluminum housing and high-quality components enables high sample volumes. The hood is equipped with a softclose feature.



EASIEST OPERATION

The process parameters are clearly shown on a color display and can be continuously adjusted using a rotary knob. The mounting process is started, paused or ended using the QATM start-stop button. An acoustic signal informs the user at the end of the process.



CONSUMABLES

For a perfect mounting process, QATM offers UV-transparent mounting moulds in different diameters and a variety of mounting aids. You can choose between two different mounting resins:

Qprep UV 50: for mounting in 60 seconds

Qprep UV 55: for mounting in 10 minutes
with up to ~70% less gap formation



WORK SAFETY AND COMFORT

As standard, the device is equipped with a connection for external suction to filter the vapors and odors and to increase work safety. A suitable suction device with activated carbon filter is available in the QATM accessories.

THE INNOVATIVE SOLUTION FOR MOUNTING SUPERIORITY IN DETAIL

Easiest operation

- | Setting the desired mounting time
- | Display of the remaining time during the process



Highly efficient, long-life LED technology

- | Low heat radiation thanks to narrowly tolerated wavelength range
- | Homogeneous illumination
- | Industrial quality

Soft-close cover

- | Quick to operate
- | Robust hinges
- | Integrated safety switch

Connection for an external suction unit

- | To increase work safety with particularly high sample throughput

Installation surface for UV mountings

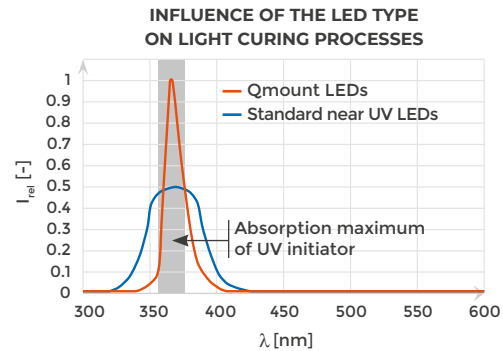
- | High sample capacity (up to 12 samples Ø 50 mm)
- | Robust and scratch-resistant
- | Easy to clean



HIGHLY EFFICIENT UV LED TECHNOLOGY

To minimize loss of electric power the Qmount is equipped with specialized UV LEDs. These show a very slim emission spectrum, which maximum superimposes with the absorption maximum of the KEM 50 UV initiator. This enables shorter curing times with a low electric consumption.

UV initiators get the necessary activation energy for the initiation reaction by absorbing UV radiation. Every molecule has a specific absorption spectrum, which shows certain wavelength areas in which the absorption coefficient of the molecule is particularly large. Outside of the so called absorption maxima a large portion of the emitted radiation is lost. Standard UV LEDs usually emit a significant amount of radiation besides the wavelength intervals in which the initiator has a good absorption. This radiation is converted to heat.



TECHNICAL DATA

Qmount

Max. sample support surface	200 x 260 mm
Max. sample height	40 mm
Wavelength	365 nm
Adjustable curing time	0 - 100 min
Polymerization temperature (depending on application)	70 - 90 °C
Connection voltage	100 - 240 V 50/60 Hz (1Ph/N/PE)
Dimensions (W x H x D)	377 x 172 x 436 mm
Weight	~ 14.5 kg

SPECIAL MEDIA FOR LIGHT-CURING MOUNTING

UV MOUNTING MATERIALS



www.qatm.com/consumables

If transparent mounting of a sample within 1-5 minutes without high heat input or pressure is desired, light-curing mounting is essential. Single component mounting materials based on a modified acrylate are used here. Curing is conducted under UV light at a temperature of approx. 90°C. This method is quite easy to handle and even very small samples can be fixed and ideally positioned within a very short time.



PROPERTIES OF UV MOUNTING MATERIALS

Mounting Material	Recommended Application	Basis	Curing time	Curing temperature	Hardness (Shore D)	Removal rate (grindability)
Qprep UV 50	For standard samples, soft to medium hard materials, targeted preparation	Modified methacrylate	approx. 60 s	approx. 90 °C	83	high
Qprep UV 55	Mounting with lower gap formation of standard samples, soft to medium-hard materials, specimen preparation and surface inspection	Modified methacrylate	8 - 10 minutes	approx. 95 °C	83	high



QPREP UV 50



QPREP UV 55

THE RIGHT MOUNTING MATERIAL FOR YOUR SAMPLES

COLD MOUNTING MATERIALS



www.qatm.com/consumables

QPREP cold mounting resins are available with methyl methacrylate or MMA-free as well as epoxy based. Acrylate or MMA-free based cold mounting resins are characterized by good removal rate, short curing times and good chemical resistance. Epoxy resins are used for mounting of porous and temperature sensitive materials. Furthermore, they are used when the lowest possible gap formation is intended. The high degree of freedom of the used mounting moulds enables the processing of very different sample sizes and geometries. The classic cold mounting remains the most versatile mounting technique on the market.



PROPERTIES OF COLD MOUNTING MATERIALS

Mounting Material	Recommended Application	Basis	Curing time	Curing temperature	Hardness (Shore D)	Removal rate (grindability)
KEM 15 plus	With high edge retention, edge examination, medium-hard to hard materials	Methyl methacrylate	approx. 25 min.	approx. 85-100 °C	85	very low
KEM 20	Transparent mounting (pressure vessel), targeted preparation	Methyl methacrylate	approx. 15 min.	approx. 100-120 °C	84	medium
KEM 30	Semi-transparent mounting (pressure vessel), routine work, soft to medium-hard materials	Methyl methacrylate	approx. 5 min.	approx. 95-110 °C	85	medium
KEM 35	Minimized gap formation, edge examination, medium-hard to hard materials	Methyl methacrylate	approx. 12 min.	approx. 85-100 °C	87	very low
Qprep SEM 5000	SEM (Scanning electron microscopy), electrolytic polishing	Modified methyl methacrylate	approx. 10 min.	approx. 85-110 °C	91	very low
KEM 60	Universal usage	Tetrahydrofurfuryl-2-methacrylate	approx. 10 min.	approx. 95-110 °C	85	low
Qpox 90	Mounting using vacuum, sensitive and brittle materials	Epoxy resin	approx. 16-24 h	at room temperature up to approx. 50 °C	79	high
Qpox 92	Vacuum impregnation, brittle and heat sensitive materials, porous materials	Epoxy resin	approx. 12-13 h	at room temperature up to approx. 35 °C	81	medium
Qpox 94	Vacuum infiltration of porous and sensitive materials and surfaces, metal foams, ceramic substrates, samples with corrosion deposits	Epoxy resin	approx. 9 h (at room temperature), approx. 3 h (at 45 °C)	at room temperature up to 90-100 °C, in oven at 45 °C up to 140 °C	80	high



KEM 15 plus



KEM 20



KEM 30



KEM 35



QPREP SEM 5000



KEM 60



QPOX 90



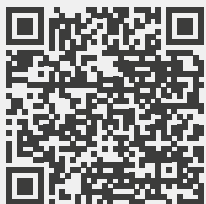
QPOX 92



QPOX 94

WIDE RANGE OF MOUNTING MOULDS

COLD AND UV MOUNTING MOULDS



www.qatm.com/consumables

Choosing a cold mounting mould of the correct size and suitable material the result of the mounting can be optimized. QPREP offers a variety of reusable and chemically resistant moulds of different sizes, and materials for this purpose.

- | Silicone rubber, round or rectangular, beveled edge
- | Polypropylene, round, without chamfer
- | Polyethylene, round, without chamfer
- | PTFE, beveled edge, round



The Qmould mounting moulds are completely new to the product range. The specially designed handles of these new mounting moulds, combined with the respective material selection, allows for easy demoulding of the mounted samples, provides increased mould durability and stability, and improves the handling of the mounting mould and mounted samples.



OPTIMIZE YOUR MOUNTING PROCESSES

ACCESSORIES & TOOLS FOR COLD AND UV MOUNTING



www.qatm.com/consumables

The mixing of the different resin components as well as the exact positioning of your specimens influence the quality of your mounting. Therefore, QPREP supports with a wide range of tools and accessories for cold mounting. Mixing of the resin components, fixing and correct positioning of the samples in the cold mounting moulds can thus be realized reliably and safely.

Available are

- | Disposable mixing cups, reusable silicone mixing cups, wooden mixing sticks, various dosing spoons, angle adapter 10° (plastic) for angled polishing.
- | For alignment of thin samples, steel or plastic clips are available in a variety of colors.
- | Mounting aids are available for 2 to 4 samples of different thicknesses (>1 mm to 4 mm)



FOR THE COLD MOUNTING OF POROUS SAMPLES

INFILTRATION DEVICE



www.qatm.com/consumables

The infiltration device is recommended for the mounting of porous samples with epoxy resin (Qpox 90 / 92 / 94).

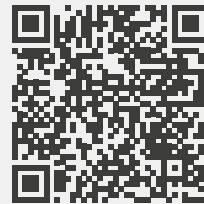
When cold mounting porous specimens it is purposeful to infiltrate them under vacuum, with a low viscosity mounting medium (epoxy resins). The QPREP infiltration device offers a solution for mounting under vacuum.

The infiltration device consists of a desiccator with mechanic dosing and vacuum pump. On the rotating disc up to 8 mounting moulds Ø 50 mm or 9 mounting moulds Ø 40 mm can be used. The vacuum pressure is 0.8 bar.



FOR VERY CLEAR, TRANSPARENT MOUNTINGS

PRESSURE DEVICE QPREP PRESSURE



www.qatm.com/consumables

In order to achieve a clear and transparent mounting with methyl methacrylates (mounting resins KEM 15, 20, 30, 35, 60 and Qprep SEM 5000), they should harden in a pressure device at increased pressure (between 2 and 2.5 bar). This process increases the boiling point of the mounting resin, which in turn reduces the formation of gas bubbles during polymerization. The Qprep Pressure device enables almost bubble-free curing of the methyl methacrylates, so that the final product is clear and transparent. In order to operate the pressure device, it is necessary to connect to a compressed air supply that can deliver a pressure of about 6 bar.



ATM Qness GmbH

Emil-Reinert-Str. 2
57636 Mammelzen
Germany

Phone: +49 2681 9539 0
Fax: +49 2681 9539 27

ATM Qness GmbH

Reitbauernweg 26
5440 Golling
Austria

Phone: +43 6244 34393
Fax: +43 6244 34393 30

PREMIUM QUALITY
MADE IN GERMANY



info@qatm.com www.qatm.com

VERDER

VERDER SCIENTIFIC is composed of leading laboratory equipment companies active in sample preparation and analysis for quality control as well as research & development purposes.

As trusted solution partner, VERDER SCIENTIFIC enables thousands of companies to ensure economic, technological and environmental progress by mastering their scientific applications. Together, we make the world a healthier, safer and more sustainable place.



**ENABLING
PROGRESS**