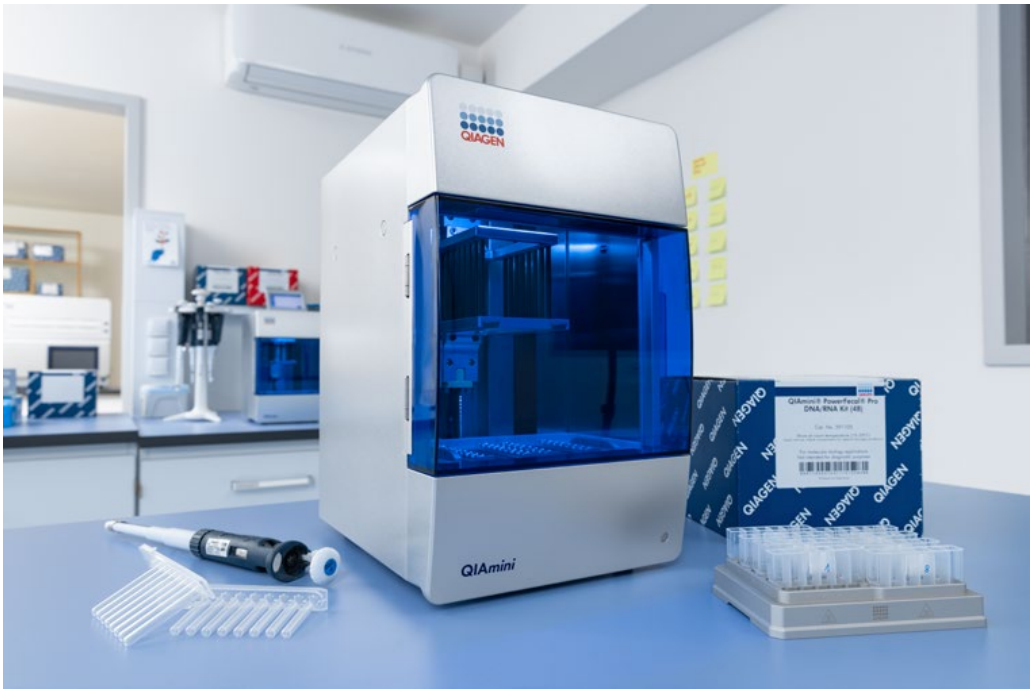
August 2026

QIAmini User Manual

For Research Use Only. Not for use in diagnostic procedures.



CE

REF 9003607

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1. Introduction

Thank you for choosing QIAmini. We are confident it will become an integral part of your research laboratory. Before using QIAmini, read this user manual carefully and pay attention to the safety information. The instructions and safety information in the user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

1.1. About this user manual

This user manual provides information about QIAmini in the following sections:

- Introduction – contains information regarding the intended use and requirements of QIAmini
- Safety Information – includes important information on any hazards related to QIAmini and how to properly use the instrument
- General Description – an overview of the features of QIAmini
- Installation Procedures – instructions on how to set up the instrument before its first use
- Operating Procedures – includes instructions related to protocol runs
- Maintenance Procedures – contains information about cleaning and maintenance
- Troubleshooting – instructions on what to do in case of any problems
- Technical Specifications – includes technical specifications
- Appendix A – Technical Data
- Appendix B – Ordering Information
- Document Revision History

1.2. General information

1.2.1. Technical assistance

At QIAGEN®, we pride ourselves on the quality and availability of our technical support. Our Technical Service Departments are staffed by experienced scientists with extensive practical and theoretical expertise in molecular biology and the use of QIAGEN products. If you have any questions or experience any difficulties regarding QIAmini or QIAGEN products in general, do not hesitate to contact us.

QIAGEN customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other scientists as well as to the researchers at QIAGEN. We therefore encourage you to contact us if you have any suggestions about product performance or new applications and techniques.

For technical assistance and more information, please visit QIAmini Suite (**www.qiagen.com/QIAminiSuite**) or see our Technical Support Center at **support.qiagen.com** or call one of the QIAGEN Technical Service Departments or local distributors.

When contacting QIAGEN Technical Service about errors, please have the following information ready:

- QIAmini serial number and error code (if applicable)
- Sample material and pretreatment
- Protocol file
- Timepoint when the error occurred for the first time
- Frequency of error occurrence (i.e., intermittent or persistent error)
- Copy of Report file (if applicable)

1.2.2. Policy statement

It is the policy of QIAGEN to improve products as new techniques and components become available. QIAGEN reserves the right to change specifications at any time. In an effort to produce useful and appropriate documentation, we appreciate your comments on this user manual. Please contact QIAGEN Technical Service.

1.3. Intended use of QIAmini

QIAmini is designed to perform automated isolation and purification of nucleic acids. The instrument is intended for use by professional operators, such as technicians, trained in molecular biological techniques and the operation of QIAmini. The instrument is intended for research use only and not for use in diagnostic procedures.

1.4. Requirements for QIAmini

The table below covers the general level of competence and training necessary for transportation, installation, use, maintenance, and servicing of QIAmini.

Task	Personnel	Training and experience
Delivery	No special requirements	No special requirements
Installation, routine use (running protocols), and maintenance (including defined service procedures)	Laboratory technicians or equivalent	Appropriately trained and experienced personnel familiar with use of computers and automation in general.
Servicing	QIAGEN Field Service Specialists or service technicians of an authorized agent	Trained and authorized by QIAGEN

2. Safety Information

Before using QIAmini, it is essential that you read this user manual carefully and pay particular attention to the safety information. The instructions and safety information in the user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

Possible hazards that could harm the user or result in damage to the instrument are clearly stated at the appropriate places throughout this consolidated operating guide. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Note: Translation of the user manual to some languages is provided and available in the QIAGEN webpage.

Expected life of QIAmini is at least 5 years. After reaching the expected life, unless QIAGEN provides clear indications that beyond this time its performance requirements cannot continue to be met, by following the specified maintenance plan, the instrument can continue to be serviced and safely used by customers until either depreciation policies recommend its decommissioning, or failure rate makes the maintenance cost unacceptable.

The following types of safety information appear throughout the *QIAmini User Manual*.

WARNING

The term **WARNING** is used to inform you about situations that could result in **personal injury** to you or others.

Details about these circumstances are given in a box like this one.

CAUTION

The term **CAUTION** is used to inform you about situations that could result in **damage to an instrument** or other equipment.

Details about these circumstances are given in a box like this one.

The guidance provided in this manual is intended to supplement, not supersede, the normal safety requirements prevailing in the user's country.

2.1. Proper use

Perform the maintenance as described in Section 6 Maintenance Procedures. QIAGEN charges for repairs that are required due to incorrect maintenance.

In case of emergency, power off QIAmini at the power switch located in the back of the instrument and unplug the power cord from the power outlet.

WARNING/ CAUTION

Risk of personal injury and material damage

Improper use of QIAmini may cause personal injuries or damage to the instrument. QIAmini must only be operated by qualified personnel who have been appropriately trained.

WARNING/ CAUTION

Risk of personal injury and material damage

The QIAmini UV lamp is a high-pressure component and can break unexpectedly during handling or operation. Handle the lamp gently, avoid mechanical stress, and follow strict measures. Breakage can release glass fragments.

WARNING

Risk of fire or explosion

When using ethanol or ethanol-based liquids on QIAmini, handle such liquids carefully and in accordance with the required safety regulations. If liquid has been spilled, wipe it off and leave the QIAmini door open to allow flammable vapors to disperse.

WARNING

Risk of explosion

QIAmini is intended for use with reagents and substances supplied with QIAGEN kits, as outlined in their respective Instructions for use. Use of other reagents and substances may lead to fire or explosion.

WARNING

Risk of overheating

To ensure proper ventilation, maintain a minimum clearance of 10 cm at the sides and rear of QIAmini.

Slits and openings that ensure the ventilation of the instrument must not be covered.

CAUTION

Risk of personal injury and material damage

Do not move QIAmini during operation.

CAUTION

Damage to the instrument

Avoid spilling water or chemicals onto QIAmini. Instrument damage caused by water or chemical spillage will void your warranty.

CAUTION

Damage to the instrument

Ensure that QIAmini is switched off (power off) and main plug removed from power outlet before you manually move the mechanical components of the instrument.

CAUTION

Damage to the instrument

Do not lean on/against the instrument or touchscreen.

Note: If hazardous material is spilled on or inside QIAmini, the user is responsible for carrying out appropriate decontamination.

2.2. Electrical safety

QIAmini is powered by a Safety Extra–Low Voltage (SELV) 24 V DC supply provided through a certified power adapter connected to the mains. The instrument itself is not connected to the mains.

Note: If operation of the instrument is interrupted in any way (e.g., due to interruption of the power supply or a mechanical error), first switch off QIAmini, then disconnect the electrical cord from the power supply before attempting troubleshooting or service activity.

To ensure satisfactory and safe operation of QIAmini, follow the advice below:

- The line power cord of the power adapter must be connected to a line power outlet that has a protective conductor (earth/ground).
- Place the instrument in a location so that the power cord is accessible and can be readily connected/disconnected.
- Use only the power cord delivered by QIAGEN.
- Do not operate the instrument with any covers or parts removed.
- If liquid has spilled inside the instrument, switch off the instrument, disconnect it from the power outlet, and contact QIAGEN Technical Service for advice before attempting any troubleshooting.
- If the instrument becomes electrically unsafe, prevent other personnel from operating it and contact QIAGEN Technical Service.

The instrument may be electrically unsafe when:

- QIAmini or the line power cord appears to be damaged.
- QIAmini has been stored in unfavorable conditions for a prolonged period.
- QIAmini has been subjected to severe transport stresses.
- Liquids have come into direct contact with electrical components of QIAmini.
- The power cord has been exchanged with a power cord that was not intended to be used with QIAmini.

2.3. Operating conditions

Parameters such as temperature range and humidity range are described in Section 8 Technical Specifications.

Before proceeding, it is recommended that you familiarize yourself with the features of the instrument as described in Sections 3.2 External features of QIAmini, 3.3 Internal features of QIAmini, and 3.4 Disposables.

The door of QIAmini must remain closed. Open the door only when instructed to do so by the user manual or instrument software.

WARNING **Explosive atmosphere**

QIAmini is not designed for use in an explosive atmosphere.

WARNING **Risk of overheating**

To ensure proper ventilation, maintain a minimum clearance of 10 cm at the sides and rear of QIAmini.

Slits and openings that ensure the ventilation of the instrument must not be covered.

WARNING **Risk of explosion**

QIAmini is intended for use with reagents and substances supplied with QIAGEN kits. Use of other reagents and substances may lead to fire or explosion.

CAUTION **Damage to the instrument**

Direct sunlight may bleach parts of the instrument and cause damage to plastic parts. QIAmini must be located out of direct sunlight.

CAUTION **Damage to the instrument**

Do not use QIAmini in the vicinity of sources of strong electromagnetic radiation (e.g., unshielded, deliberately operated high-frequency sources or mobile radio devices), or close to a centrifuge, because these can interfere with the proper operation.

2.4. Biological safety

Specimens and reagents containing materials from humans should be treated as potentially infectious. Use safe laboratory procedures as outlined in publications such as Biosafety in Microbiological and Biomedical Laboratories, HHS (**www.cdc.gov/labs/BMBL.html**). You should be aware of the health hazard presented by such agents and should use, store, and dispose of such samples according to the required safety regulations.

WARNING **Samples containing infectious agents**

Some samples used with QIAmini may contain infectious agents. Handle such samples with the greatest of care and in accordance with the required safety regulations.

Always wear safety glasses, gloves, and a lab coat.

The responsible body (e.g., a laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Safety Data Sheets (SDSs) or the OSHA,* ACGIH,† or COSHH‡ documents.

Venting for fumes and disposal of waste must be in accordance with all national, state, and local health and safety regulations and laws.

* OSHA — Occupational Safety and Health Organization (United States of America)
† ACGIH – American Conference of Government Industrial Hygienists (United States of America)
‡ COSHH – Control of Substances Hazardous to Health (United Kingdom)

2.5. Chemicals

WARNING/ CAUTION

Risk of release of hazardous mercury

QIAmini UV lamp contains mercury, which can be released upon breakage.

In case of breakage, the area must be ventilated and the lamp debris treated as hazardous waste due to the presence of mercury.

WARNING

Hazardous chemicals

Some chemicals used with QIAmini may be hazardous or may become hazardous after completion of purification.

Always wear safety glasses, gloves, and a lab coat.

The responsible body (e.g., a laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Safety Data Sheets (SDSs) or the OSHA,* ACGIH,† or COSHH‡ documents.

Venting for fumes and disposal of waste must be in accordance with all national, state, and local health and safety regulations and laws.

* OSHA — Occupational Safety and Health Organization (United States of America)

† ACGIH – American Conference of Government Industrial Hygienists (United States of America)

‡ COSHH – Control of Substances Hazardous to Health (United Kingdom)

WARNING

Toxic fumes

Do not use bleach to clean or disinfect QIAmini or the labware, as bleach in contact with salts from the buffers can produce toxic fumes.

Note: If you work with volatile solvents, toxic substances, etc., you must provide an efficient laboratory ventilation system to remove vapors that may be produced.

2.6. Waste disposal

Used consumables, such as QIAmini cartridges and rod covers, may contain hazardous chemicals or infectious agents from the purification process. Such waste must be collected and disposed of properly, according to local safety regulations.

For information about how to dispose of QIAmini, see the "Waste Electrical and Electronic Equipment (WEEE)" section in Appendix A – Technical Data.

WARNING

Hazardous chemicals and infectious agents

Waste may contain toxic or infectious material and must be disposed of properly. Refer to your local safety regulations for proper disposal procedures.

2.7. Mechanical hazards

The door of QIAmini must remain closed during operation of the instrument.

WARNING **Moving parts**

To avoid contact with moving parts during the operation of QIAmini, the instrument must be operated with the door closed.

The door must be closed during operation. The door sensor detects the door position during protocol runs. If the door sensor is not functioning properly, contact QIAGEN Technical Service.

WARNING **Moving parts**

Avoid contact with moving parts during operation of QIAmini. Under no circumstances should hands be placed behind the rear cover. Do not attempt to remove any plasticware from the worktable while the instrument is operating.

2.8. Heat hazard

The QIAmini worktable contains a heating system.

WARNING **Hot surface**

The heating system can reach temperatures of up to 120°C. Avoid touching it when it is hot, in particular, shortly after a run has been carried out.

2.9. Radiation

QIAmini has a UV-C lamp, which can be used to support decontamination procedures. A door sensor ensures that the operation of the UV lamp stops if door is opened. If the door sensor is not functioning correctly, contact QIAGEN Technical Service.

WARNING **UV radiation**

Avoid looking directly into UV light. Do not expose your skin to UV light.

2.10. Maintenance safety

WARNING/ CAUTION

Risk of personal injury and material damage

Only perform maintenance that is specifically described in this user manual.

Perform the maintenance as described in Section 6 Maintenance Procedures. QIAGEN charges for repairs that are required due to incorrect maintenance.

WARNING/ CAUTION

Risk of personal injury and material damage

Improper use of QIAmini may cause personal injuries or damage to the instrument. QIAmini must only be operated by qualified personnel who have been appropriately trained.

Operate QIAmini only as described in Section 5 Operating Procedures. QIAGEN charges for repairs that are required due to incorrect operation.

WARNING

Risk of fire

After cleaning QIAmini with alcohol-based disinfectant, leave the instrument door open to allow flammable vapors to disperse.

Only clean QIAmini with alcohol-based disinfectant when worktable components have cooled down.

CAUTION

Damage to the instrument

Do not use bleach, solvents, or reagents containing acids, alkalis, or abrasives to clean QIAmini.

CAUTION

Damage to the instrument

Direct sunlight may bleach parts of the instrument and cause damage to plastic parts. QIAmini must be located out of direct sunlight.

CAUTION

Damage to the instrument

Do not use spray bottles containing alcohol or disinfectant to clean surfaces of QIAmini. Spray bottles should be used only to clean items that have been removed from the worktable and if permitted by local laboratory operating practices.

CAUTION

Damage to the instrument

After wiping the worktable with paper towels, make sure no residual pieces of paper towel remain. Pieces of paper towel remaining on the worktable could lead to a worktable collision.

WARNING/ CAUTION

Risk of personal injury and material damage

Do not open any panels on QIAmini.

Only perform maintenance as described in this user manual.

2.11. Symbols on QIAmini

The following symbols appear on QIAmini.

Symbol	Location	Description
	Inside instrument on the workdeck	UV irradiation
	Inside instrument on the workdeck	Mercury
	Inside instrument on the workdeck	Crush hazard - Moving parts may crush your fingers or hand.
	Inside instrument on the workdeck	Strong magnetic field – Take care to avoid exposure to a strong magnetic field
	Inside instrument on the workdeck	Biohazard — The workdeck may be contaminated with biohazardous material and must be handled with gloves.
	Inside instrument on the workdeck and on the cartridge frame	Heat hazard – Do not perform maintenance before the system has cooled down.
	Bottom of the instrument	Storage position for transport lock screw **Note**: Placement of the screw after removal to prevent screw loss, ready for next use.
	Type plate on the right side panel	WEEE about the disposal of waste electrical and electronic equipment for Europe and rest of the world.
	Type plate on the right side panel	Legal manufacturer
	Type plate on the back of the instrument	Instrument manufacturing date
	Type plate on the back of the instrument	Unique Device Identifier (UDI) as a 2D barcode in Data Matrix format
SN	Type plate on the back of the instrument	Instrument serial number
GTIN	Type plate on the back of the instrument	Global Trade Item Number
REF	Type plate on the back of the instrument	Catalog number
	Type plate on the back of the instrument	Bluetooth®

3. General Description

QIAmini is used for research use only applications and performs automated nucleic acid purification from up to eight samples per run using magnetic-particle technology.

QIAGEN QIAmini kits developed to purify nucleic acids using the QIAmini system come with specific protocols that can be downloaded on the QIAGEN website (**www.qiagen.com**) or accessed using the QIAmini Suite (QIAmini companion software) (**www.qiagen.com/QIAminiSuite**). The protocols can be adapted according to experimental setup needs via QIAmini Suite and transferred to the instrument via USB drive, Bluetooth, or barcode scanner. The instrument's touchscreen display allows the user to easily select and start protocols.

When the protocol run starts, the isolation of nucleic acids is carried out automatically. The mixing and separation of magnetic particles are performed by the processing unit consisting of the rod cover holder carrying the rod cover and the magnet head module. If required by the protocol, the temperature of the reagents is controlled by the heating system to enable heated lysis or elution.

3.1. QIAmini principle

Sample preparation using QIAmini usually consists of four main steps: lyse, bind, wash, and elute.

- Samples are lysed and heat incubated, if required by the protocol.
- Nucleic acids bind to the surface of the magnetic particles and are washed to remove contaminants.
- Purified nucleic acid is eluted.

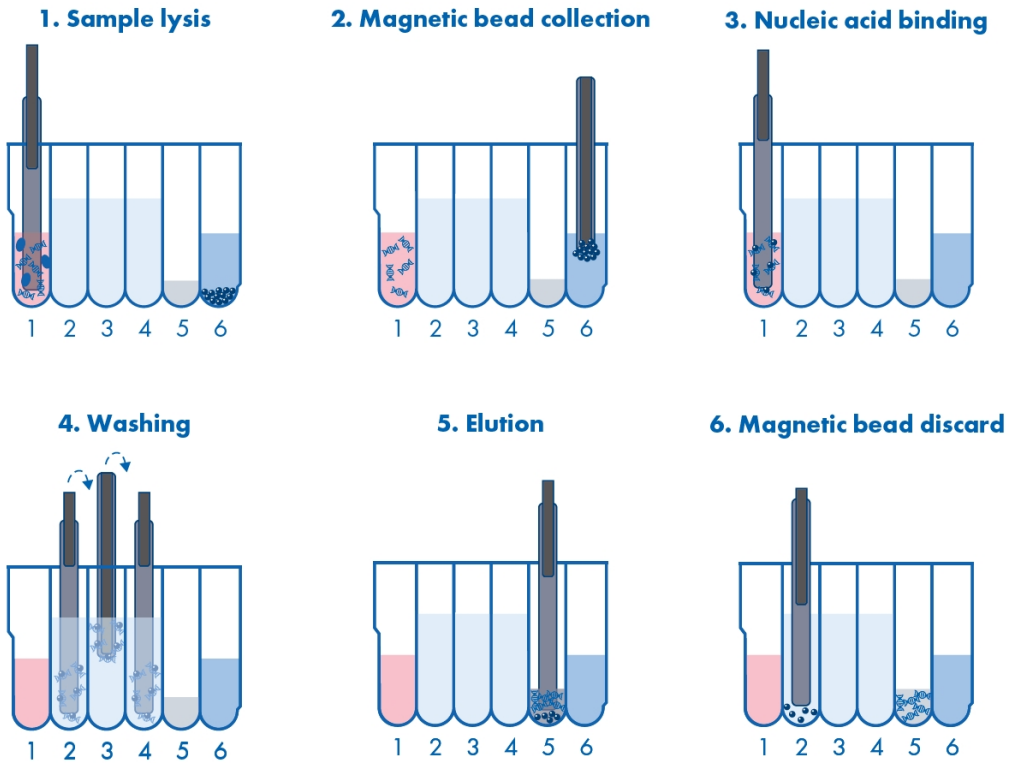


Figure 1. QIAmini working principle.

Attracting magnetic particles

To attract magnetic particles, the magnetic rods are first fully inserted into the QIAmini Rod Covers. The magnetic rods with rod covers then move slowly up and down in the well containing the sample to ensure maximal attraction of magnetic particles.

Washing magnetic particles

QIAmini washes magnetic particles by transferring them from one wash solution to another. To improve washing efficiency, the rod covers are designed to minimize liquid transfer along with the magnetic particles. To ensure that magnetic particles are evenly distributed in a solution during a long incubation, QIAmini mixes the solution either continuously or periodically by moving the rod cover.

Transfer magnetic particles

To transfer magnetic particles, the magnetic rods with rod cover are first moved down into a well. The magnetic rods are then withdrawn from the rod cover, and the rod cover is lowered into the well. The rod cover is moved quickly up and down to ensure maximal release and mixing of magnetic particles in the solution in the well.

Concentrating magnetic particles

QIAmini concentrates magnetic particles by attracting the magnetic particles from a solution of large volume and releasing the particles in a solution of low volume.

3.2. External features of QIAmini

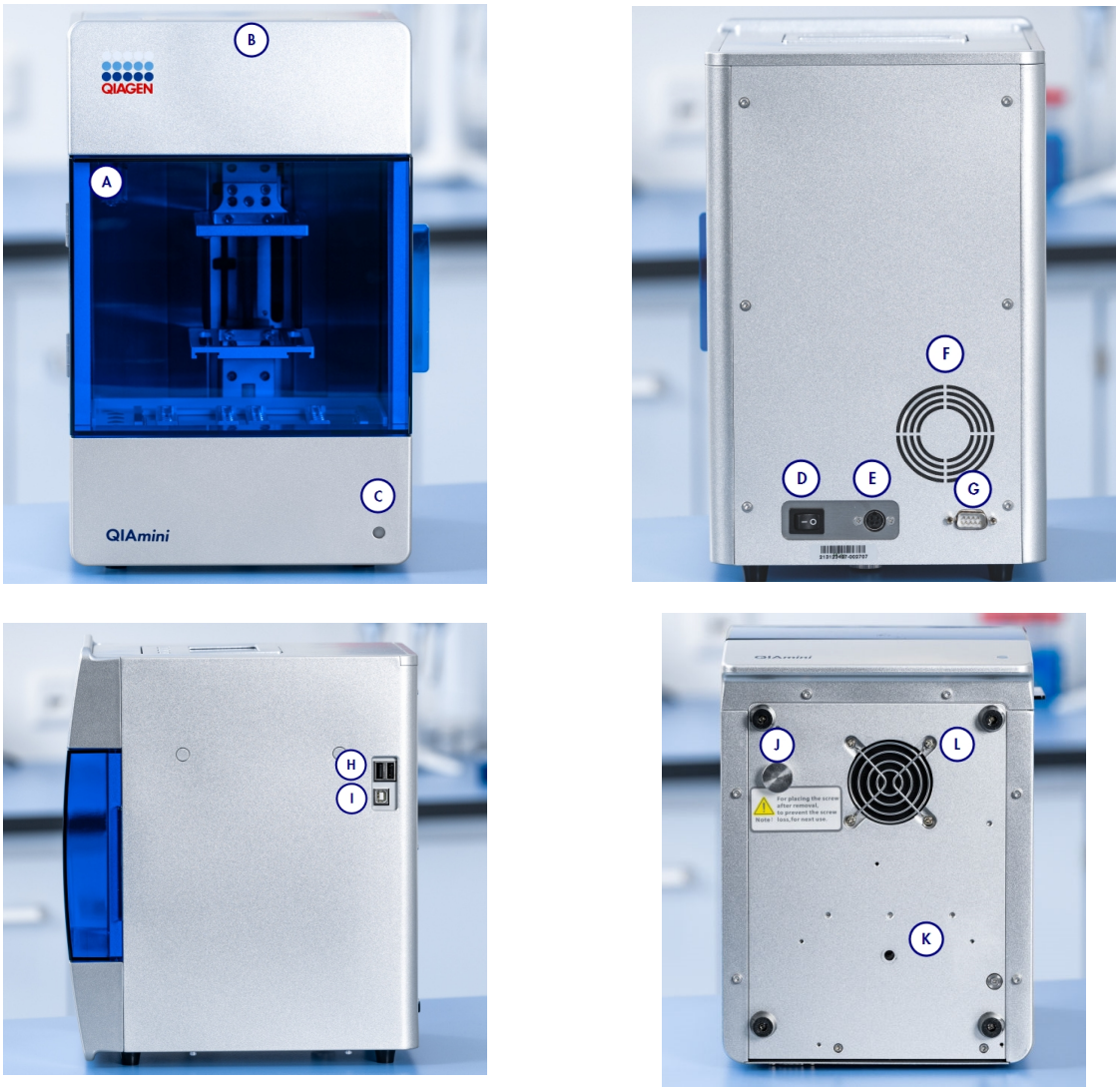


Figure 2. Front, rear, right side, and underside of QIAmini.

A	Transparent door (cover)	**G**	Barcode scanner port
B	Touchscreen	**H**	USB port
C	Status indicator light	**I**	PC port (only for production)
D	Power switch	**J**	Storage position for transport screw
E	Power socket	**K**	Transport screw position
F	Ventilation opening	**L**	Ventilation outlet

3.2.1. Touchscreen

QIAmini is controlled using a swivel-mounted 4.3 inch touchscreen. The graphic user interface (GUI) is displayed on the touchscreen, allowing the user to operate the instrument, upload and download protocols and reports, start runs, and change settings. During the sample processing, the touchscreen shows the protocol status and remaining time. Three shortcut keys for operations can be found beneath the touchscreen that can be used to switch between protocols (Figure 3A), start the protocol (Figure 3B), or stop the run (Figure 3C).

Figure 3. The QIAmini touch display.

- **A** **Tab**: Switch between protocols
- **B** **Run**: Start the protocol
- **C** **Stop**: Stop the protocol

3.2.2. Status indicator light

Figure 4. The QIAmini status indicator light.

The QIAmini status indicator light is positioned in the lower right corner of the instrument door.

Green status light	Protocol run ongoing
Blue status light	Protocol paused
Red status light	UV run ongoing or alarm (e.g., run interrupted by open door)

3.2.3. Transparent door

The QIAmini door protects the interior of the instrument from external contamination during protocol runs. Additionally, the door protects operators from moving parts during protocol runs and UV irradiation during decontamination procedures.

The door must be closed to start a protocol run and must remain closed until the GUI notifies the operator that the run is finished. A door sensor ensures that operation is interrupted if the door is opened during protocol or UV decontamination run. The door can be manually opened to gain access to the workdeck when no protocol is running.

WARNING **Moving parts**

To avoid contact with moving parts during the operation of QIAmini, the instrument must be operated with the door closed.

The door sensor detects the door position and interrupts instrument operation if the door is opened. If the door sensor is not functioning correctly, contact QIAGEN Technical Service.

3.2.4. Power switch

The power switch is located on the back of QIAmini. To turn on QIAmini, press the power switch. After pressing the power switch, the status indicator (Section 3.2.2 Status indicator light) lights up, the startup screen appears on the touchscreen, and the instrument initializes. To save energy, QIAmini can be turned off when not in use. To turn off QIAmini, press the power switch; the instrument software does not need to be shut down separately.

Figure 5. Location of the power switch (highlighted with a white frame).

3.2.5. Power cord socket

The power cord socket is located on the back of QIAmini (highlighted with a white frame in the image below) and is used for connecting the instrument to a power outlet via the supplied power cord and AC/DC adapter.

Figure 6. Location of the power cord socket (highlighted with a white frame).

Note: QIAmini is equipped with a country specific cable.

WARNING **Electrical hazard**

Any interruption of the protective conductor (earth/ground lead) inside or outside the instrument or disconnection of the protective conductor terminal is likely to make the instrument dangerous.

Intentional interruption is prohibited.

WARNING **Damage to electronics**

Before powering on the instrument, make sure that the correct supply voltage is used.

Use of AC/DC power adapter, other than the one supplied by QIAGEN may damage the electronics.

3.2.6. Barcode scanner port

The barcode scanner of QIAmini is an optional accessory and can be connected to the QIAmini using the barcode scanner port (RS232 port) in the back of the instrument (Figure 6). The scanner is used for transferring protocols via QR code to QIAmini.

For more information on how to use the barcode scanner, refer to Section 5.2.2 Import of protocols via QR code.

Figure 7. Location of the barcode scanner port (highlighted with a white frame).

3.2.7. USB port

QIAmini has two USB ports that are located on the right side panel of the instrument. The USB ports allow you to connect a USB drive. The USB drive can be used to import or export protocols (Section 5.2.1), export run reports (Section 5.1.2), or create a support package (Section 5.1.2).

Important: Use only the USB drive provided by QIAGEN. Do not connect other USB drive devices to USB ports.

Important: Do not remove the USB drive or interrupt power while downloading or transferring data to and from the instrument.

3.3. Internal features of QIAmini

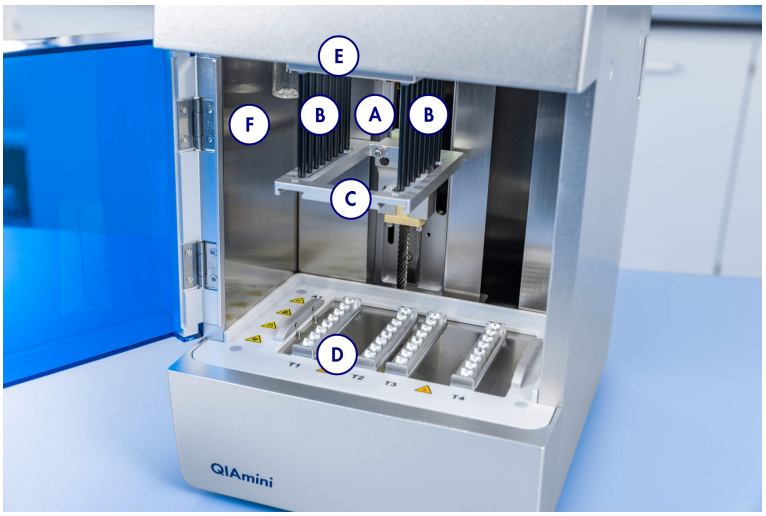


Figure 8. Internal view of QIAmini.

A	Processing unit	**D**	Heater block
B	Magnet head	**E**	UV lamp
C	Rod cover holder	**F**	Internal light

3.3.1. Processing unit

The processing unit consists of the magnet head (Figure 8B) and the rod cover holder (Figure 8C). The magnet head is composed of two rows with eight magnetic rods each. The rod cover holder carries the rod covers during the run. It performs the mixing steps and, when synchronized with the magnet head, extracts the beads from the well liquid for transfer into the next well.

3.3.2. Heater block

The purpose of the heater block is to support temperature incubation steps within the protocol, such as lysis or elution. The heater block consists of four rows (Figure 9) designed to support the interfacing with the cartridges and operate in a range of ambient temperature up to 120°C.

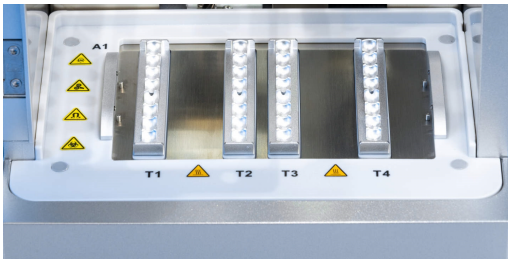


Figure 9. The heater block of QIAmini consists of four rows (T1, T2, T3, and T4).

3.3.3. UV lamp

The UV lamp is used for UV decontamination run (Section 6.4).

WARNING **UV radiation**

Avoid looking directly into UV light. Do not expose your skin to UV light.

3.3.4. Bluetooth

The QIAmini is equipped with Bluetooth functionality.

For more information on Bluetooth functionality, refer to Section 5.5.3 Bluetooth connection.

3.4. Disposables

QIAmini is intended for use in combination with the QIAmini Cartridge Frame, which is designed to accommodate up to eight prefilled QIAmini Cartridges, enabling the simultaneous processing of up to eight samples.

The QIAmini Cartridge Frame provides precise positioning of the cartridges within an SBS-compatible footprint and serves as a stable, reusable interface between the instrument and the consumables.

The QIAmini Cartridges, together with the dedicated QIAmini Rod Covers, are specifically designed to operate in this integrated setup. Their coordinated geometry ensures consistent interaction with all wells, supporting uniform processing conditions and reliable, reproducible results across all samples.

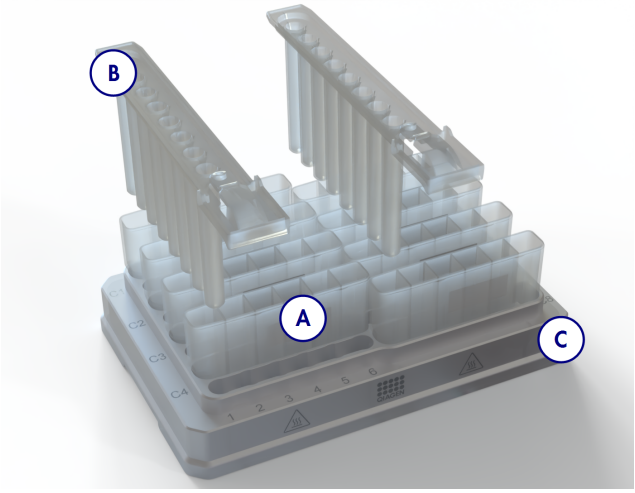


Figure 10. QIAmini disposables.

- **A** QIAmini Cartridge
- **B** QIAmini Rod Covers
- **C** QIAmini Cartridge Frame

Note: Only use disposables manufactured by QIAGEN.

3.4.1. QIAmini Cartridge

The QIAmini Cartridges are prefilled consumables designed for automated sample processing on the instrument.

Each cartridge is sealed with a protective sealing foil to ensure reagent integrity during storage and handling. The sealing foil is equipped with an integrated pull tab (flap), enabling safe and controlled removal immediately prior to use. The flap is designed to be easily accessible to support proper handling and to minimize the risk of spillage or contamination.

In addition, each cartridge features a lateral labeling field that allows clear identification of the corresponding sample. This labeling area supports user-specific marking (e.g., sample ID), facilitating reliable sample tracking throughout the workflow.

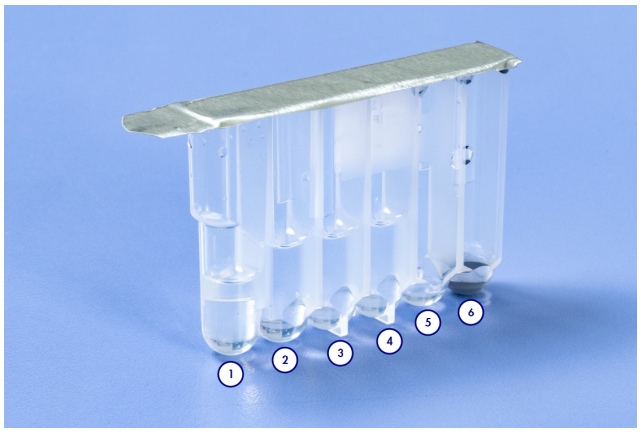


Figure 11. Prefilled QIAmini Cartridge (well 1 to 6, from left to right).

Note: The foil of the sealed cartridges needs to be removed gently prior to loading the instrument.

3.4.2. QIAmini Cartridge Frame

The cartridge frame is designed to accommodate up to eight prefilled QIAmini Cartridges, enabling the parallel processing of up to eight samples. It is manufactured from aluminum and features a protective, chemically resistant coating, ensuring durability and reusability.

Dedicated positions for the QIAmini Cartridges are clearly labeled (C1–C8), and the corresponding well positions (1–6) are also marked to facilitate proper placement and minimize handling errors.

Safe loading and unloading of the cartridge frame and cartridges are described in detail in Section 5.3.1.

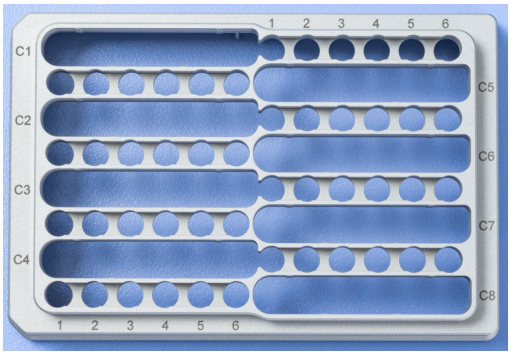


Figure 12. QIAmini Cartridge Frame.

3.4.3. QIAmini Rod Cover

The QIAmini Rod Covers are designed for use in combination with the QIAmini Cartridges and support reliable sample processing by providing defined interaction with the cartridge wells. Each rod cover aligns precisely with the cartridge positions, ensuring consistent and reproducible operation across all samples.

Two rod covers are required for a complete run (eight samples), ensuring full coverage of all processing.

Figure 13. QIAmini Rod Covers.

4. Installation Procedures

4.1. System delivery and installation

The following items are delivered:

- QIAmini instrument
- Power cord
- Power supply
- QIAmini Cartridge Frame
- USB drive
- Important Note – Online Availability of Instrument Instructions for Use and Protocols (**www.qiagen.com/HB-3856**)
- Packaging list and COM

4.2. Site requirements

QIAmini must be located out of direct sunlight, away from heat sources and away from sources of vibration and electrical interference. Refer to Section 8 Technical Specifications for the operating conditions (temperature and humidity). The installation site should be free of drafts, moisture, and dust, and should not be subject to large temperature fluctuations.

Use a level workbench that is large and strong enough to accommodate the QIAmini. Refer to Section 8 Technical Specifications for the weight and dimensions of QIAmini.

Ensure that the workbench is dry, clean, and vibration-proof, and has additional space for accessories. Do not use this device in close proximity to sources of strong electromagnetic radiation (e.g., unshielded intentional RF sources), as these can interfere with proper operation.

QIAmini must be placed within approximately 1.5 m of a properly grounded (earthed) AC power outlet. Ensure that QIAmini is positioned so that the power connector and power switch on the back of the instrument are easily accessible at all times, allowing the instrument to be powered off and disconnected without difficulty.

Note: It is recommended to plug the instrument directly into its own power outlet and not to share the power outlet with another lab equipment.

WARNING **Explosive atmosphere**

QIAmini is not designed for use in an explosive atmosphere.

WARNING **Risk of overheating**

To ensure proper ventilation, maintain a minimum clearance of 10 cm at the sides and rear of QIAmini. Slits and openings that ensure the ventilation of the instrument must not be covered.

CAUTION **Damage to the instrument**

Direct sunlight may bleach parts of the instrument and cause damage to plastic parts. QIAmini must be located out of direct sunlight.

WARNING **Risk of personal injury and material damage through falling of the instrument**

Improper handling of QIAmini during transport and installation can lead to user injury.

Particularly when lifting the instrument above head height, the instrument can fall and lead to serious injury.

Ensure that the transport lock screw is inserted properly to avoid damage of the magnet head during transport.

Transport the instrument close to the floor and avoid lifting above the head.

Install the instrument on a sufficiently large, solid, and stable surface that is protected against oscillations.

Ensure that all instrument feet are sitting stably and evenly on the surface.

4.3. Power requirements

QIAmini operates at 24 V DC supplied by an AC/DC adapter 100–240 V AC, 50/60 Hz.

Make sure that the voltage rating of the QIAmini power adapter is compatible with the AC voltage available at the installation site.

WARNING **Damage to electronics**

Before powering on the instrument, make sure that the correct supply voltage is used.

Use of incorrect supply voltage may damage the electronics.

To check the recommended supply voltage, refer to the specifications indicated in the type plate of the instrument.

WARNING **Electrical hazard**

Any interruption of the protective conductor (earth/ground lead)of the power adapter or disconnection of the protective conductor terminal is likely to make the instrument dangerous.

Intentional interruption is prohibited.

4.4. Grounding requirements

To protect operating personnel, the AC/DC power adapter of QIAmini must be correctly grounded (earthed). The power cord includes three conductors that, when connected to an appropriate AC power outlet, grounds (earths) the AC/DC power adapter. To preserve this protection feature, do not operate the instrument from an AC power outlet that has no ground (earth) connection.

4.5. Unpacking of QIAmini

1. Before unpacking QIAmini, move the package to the site of installation and check that the arrows on the package point upward. In addition, check whether the package is damaged. If the package is damaged, contact QIAGEN Technical Service.
2. Open the outer and inner box and remove the white foam layer containing the power supply and the USB drive.
3. Remove the instrument from the outer packaging by lifting it with both hands. Grip the instrument from below using the designated cutouts, positioning your hands at the front and back under the rim.

Figure 14. Unpacking of QIAmini.

4. Position the instrument on a lab bench.

Note: Retain the original packaging for future transportation, storage, or service purposes. The packaging is designed to provide optimal protection for the instrument.

4.5.1. Removal of the transport security screw

To protect QIAmini during transport, a transport security screw is located on the underside of the instrument. It is important to remove the transport security screw before powering on QIAmini to avoid any damage.

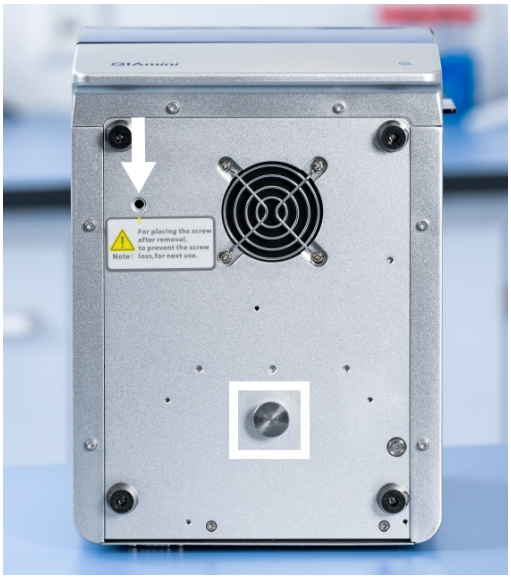


Figure 15. Location of the transport lock screw (highlighted by a white frame) and the storage position (highlighted by a white arrow) on the underside of QIAmini.

To remove the transport lock screw, perform the following steps:

1. Rotate QIAmini onto the back and place it on a soft surface. Ensure that the instrument is protected against tilting at all times.
2. Remove the transport lock. It is a screw located in a recess at the center of the base plate (Figure 15, white box).
3. Insert the transport lock screw completely into the storage location (Figure 15, white arrow).
4. Rotate QIAmini back onto its feet.
5. Open the instrument door and remove the transport foam securing the processing unit.
6. QIAmini is now ready for use.

CAUTION **Damage to the instrument**

Operation of QIAmini with the transport lock screw installed can lead to damage to the mechanical components of the instrument.

4.5.2. Connection of the AC power cord

1. Remove the power supply from the foam packing material on top of QIAmini.
2. The QIAmini power cord is delivered in a separate package. Remove the power cord.
3. Connect the power cord to the power supply as shown in the picture below.

Figure 16. Connecting QIAmini power cord to the power supply.

Note: Only use the power cord and power supply that are supplied with QIAmini.

4. Ensure that the power button is set to off (0).
5. Check that the voltage rating on the type plate at the back of the QIAmini AC/DC power adapter matches the voltage available at the installation site.

   Note: The QIAmini AC/DC power adapter is set up to accept all input voltages within the range 100–240 V AC and does not need to be configured manually.

6. Plug the power cord into the instrument power cord socket.

Figure 17. Connecting QIAmini power supply to the instrument.

7. Plug the power cord into a grounded power outlet.

WARNING **Damage to electronics**

Before powering on the instrument, make sure that the correct supply voltage is used.

Use of incorrect supply voltage may damage the electronics.

To check the recommended supply voltage, refer to the specifications indicated in the type plate of the instrument.

WARNING **Electrical hazard**

Any interruption of the protective conductor (earth/ground lead) inside or outside the instrument or disconnection of the protective conductor terminal is likely to make the instrument dangerous.

Intentional interruption is prohibited.

4.5.3. Installation of the external barcode scanner (optional)

1. Remove the barcode scanner from the box.
2. Before powering on the instrument, connect the barcode scanner to the RS232 port on the back of the instrument.

Figure 18. Connecting the barcode scanner to the RS232 port.

3. Tighten the screws to RS232 port.

Figure 19. Tightening screws to RS232 port.

4. Installation of the QIAmini barcode scanner is now complete and the scanner can be used to load protocols via QR code (Section 5.2.2 Import of protocols via QR code).

4.6. Repacking and transport of QIAmini

WARNING **Damage to the instrument**

Transport of QIAmini without the transport lock screw installled can lead to damage to the mechanical components of the instrument.

Before transporting QIAmini, the instrument must first be decontaminated. Refer to Sections 6.1 Cleaning agents and 6.2 Instrument cleaning and decontamination for more details. Then prepare the instrument as follows.

4.6.1. Installation of transport lock screw

To install the transport lock screw, follow the following steps:

1. Power off the instrument.
2. Remove the power cord and the barcode scanner.
3. Prepare the instrument for insertion of the transport lock screw by manually moving the rod cover holder and magnetic bars to the middle of the instrument and then to the bottom of the instrument. End position is shown in Figure 20.

   Note: When inserting the transport foam, move the processing unit upward so that the foam fits properly.

   Note: For instruments without transport foams, contact QIAGEN Technical Service.

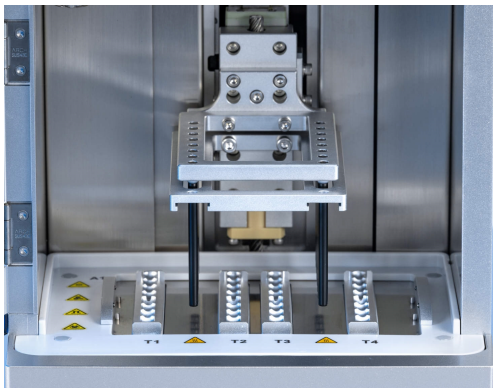


Figure 20. Position of rod cover holder and magnet bars for installation of transport lock screw.

4. Rotate QIAmini carefully onto the back. Ensure that the instrument is protected against tilting at all times (Figure 21).

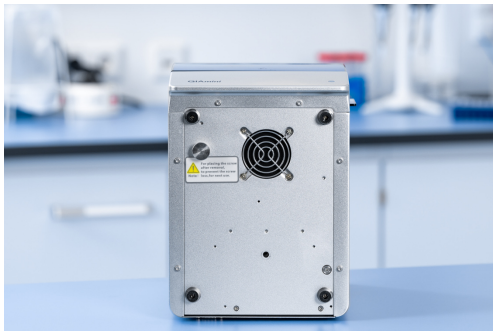
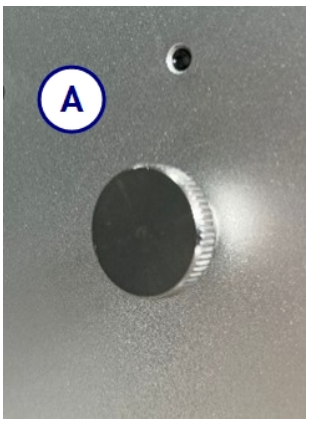


Figure 21. Instrument position for insertion of transport lock screw.

5. Remove the transport lock screw from the storage position (Figure 21).
6. Insert the screw into the transport position.



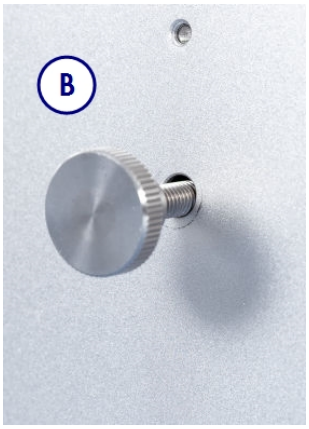


Figure 22. Transport screw in storage position. On the left side, the correct insertion is displayed **(A)**. If the holes are not properly aligned, the screw cannot be inserted properly and the alignment needs to be corrected **(B)**.

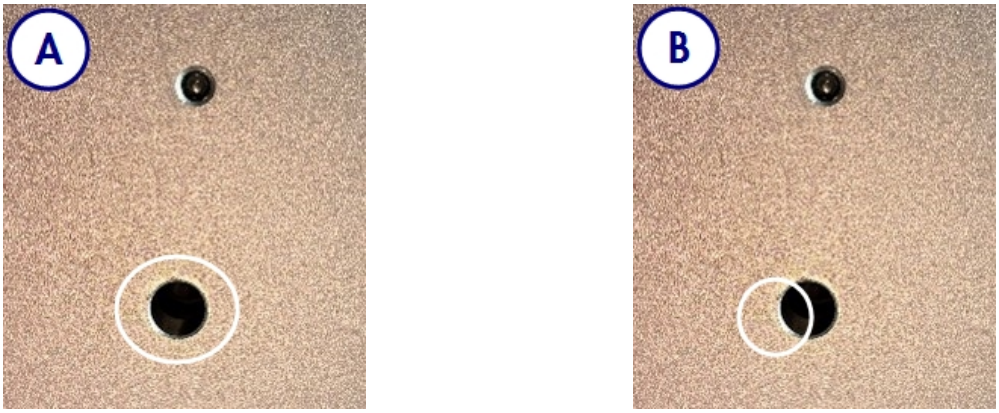


Figure 23. (A) Both holes are aligned; (B) holes are not aligned.

Note: If you are not able to insert the screw completely, the alignment of the holes needs to be corrected. Open the door of the instrument and move magnet bars and rod cover holder carefully sideways until you can see the opening (refer to Figure 23).

4.6.2. Packing of QIAmini

1. Prepare the packing materials.
2. Install transport lock screw on the bottom of the instrument (for detailed instructions, read Section 4.6.1 Installation of transport lock screw).

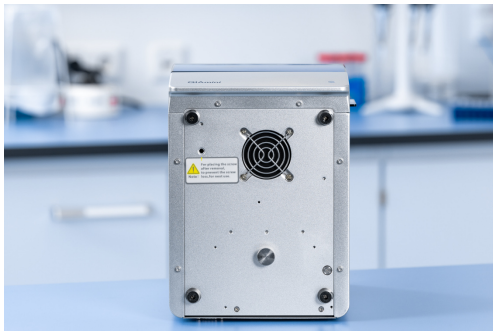


Figure 24. QIAmini with transport lock screw in tranport position.

3. Fold down the touchscreen and secure it with a piece of adhesive tape.

Figure 25. Touchscreen secured for transport.

4. Open the door and secure the handler with the C-shaped transport foam. The magnetic head must be in the top position and the rod cover holder in the middle position to allow installation of the transport foam.

   Note: For instruments without transport foams, contact QIAGEN Technical Service.

5. Close the door and secure it with a piece of tape. Move instrument to transportation box base.

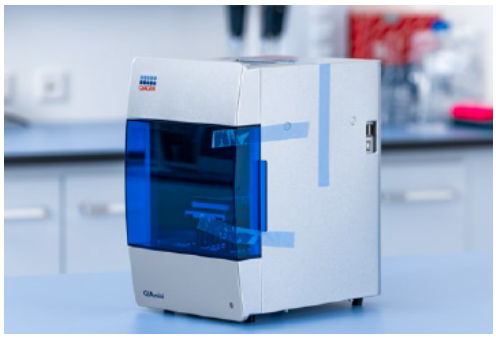


Figure 26. QIAmini door secured for transport.

6. Move instrument to transportation box base.

Figure 27. QIAmini repacked into original box.

7. Pack accessories into the accessories box, then place onto the top of the transportation box together with the PE foam.

Figure 28. QIAmini accessories repacked in the accessories box.

8. Seal the outside edges of the carton with tape.

   Note: Using the original package minimizes potential damage during transportation of QIAmini.

5. Operating Procedures

This section describes how to operate QIAmini.

Before proceeding, we recommend that you familiarize yourself with the features of the instrument by referring to Section 3 General Description.

QIAmini is intended to be used only in combination with QIAGEN kits indicated for use with QIAmini for the applications described in the kit handbooks.

The door of QIAmini must remain closed during operation of the instrument.

The magnetic bars and rod cover holder of QIAmini move during operation of the instrument. Never open the QIAmini door while the instrument is operating.

WARNING

Moving parts

To avoid contact with moving parts during the operation of QIAmini, the instrument must be operated with the door closed.

If the door sensor or lock is not functioning properly, contact QIAGEN Technical Service.

WARNING

Risk of personal injury

Do not attempt to move QIAmini during operation.

WARNING/ CAUTION

Risk of personal injury and material damage

Improper use of QIAmini may cause personal injuries or damage to the instrument. QIAmini must only be operated by qualified personnel who have been appropriately trained.

Servicing of QIAmini, which is not described in this user manual, must only be performed by a QIAGEN Field Service Specialist.

CAUTION

Damage to the instrument

Avoid spilling water or chemicals onto QIAmini. Instrument damage caused by water or chemical spillage will void your warranty.

5.1. Use of the QIAmini instrument software

QIAmini is operated using a touchscreen. The following actions can be done using the user menu:

- Start, pause, or stop runs
- Check the status of the run and the instrument
- Upload or download protocols
- Download run reports
- Change instrument settings to customize QIAmini

The QIAmini software functionalities are structured in three menus: **Run**, **Report**, and **Settings**. The toolbar on the left-hand side can be used to navigate between these menus. Each screen of the user menu consists of three elements: the toolbar, the main content, and the footer.

After QIAmini is switched on, the instrument performs initialization of all axes and shows the **Protocol Run** menu.

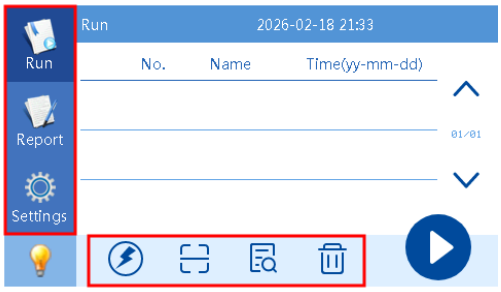


Figure 29. Homescreen of the QIAmini. The toolbar on the left side (highlighted by red rectangle) allows navigation between the three main menus: **Run**, **Report**, and **Settings**. In addition, the internal workdeck light can be controlled using the light bulb symbol ( ).

Icon	Definition
	View protocol **Run** menu.
	View protocol **Report** menu.
	View **Settings** menu.
	Turn off and on internal light.

Note: The instrument's touchscreen does not support swiping and multi-finger gestures.

Note: The QIAmini does not come with preloaded protocols. Visit the QIAmini product page (**www.qiagen.com/QIAmini**), the respective QIAmini kit product page on QIAGEN website (**www.qiagen.com**), or QIAmini Suite (**www.qiagen.com/QIAminiSuite**) to download protocols.

5.1.1. The Protocol Run menu

The **Protocol Run** menu provides two views: **Favorites view** (Figure 30) and **List view** (Figure 31).

The list view always contains all protocols available on the instrument, whereas the favorite view is reduced to the protocols selected by the user (for details, refer to Section 5.2.4).

Press ☰ or ⚡ to toggle between views.

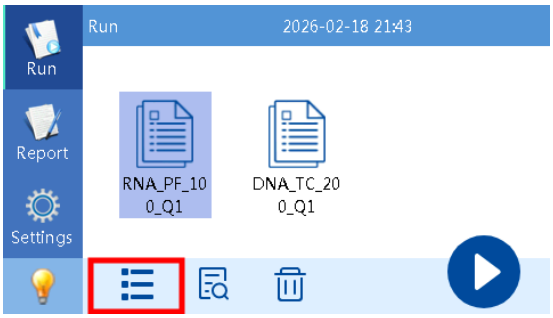


Figure 30. Favorites view.

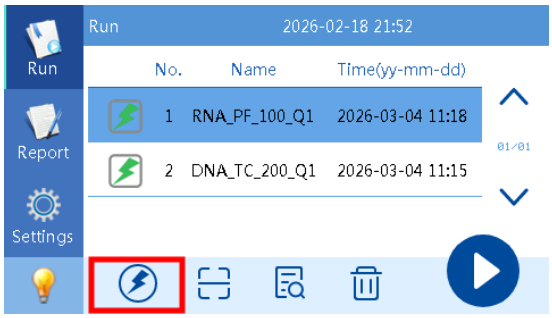


Figure 31. List view.

Icon	Definition
☰	Switch from favorite to list view.
⚡	Switch from list to favorite view.
	Preview protocol steps and setting.
	Add protocol via QR code (optional barcode scanner required).
	Delete the selected protocol from instrument internal memory.
▶	Run the selected protocol.

5.1.2. Run Report menu

QIAmini automatically generates and stores run reports of each protocol run. The instrument can store up to 1000 run reports. Selected run reports can be downloaded to a USB drive attached to one of the USB ports of the instrument, or if a Bluetooth connection is established, import can be started via QIAmini suite app on a mobile device. For more details, refer to the *QIAmini Suite User Guide* (**www.qiagen.com/HB-3800**).

Recommended: Download and delete the reports regularly.

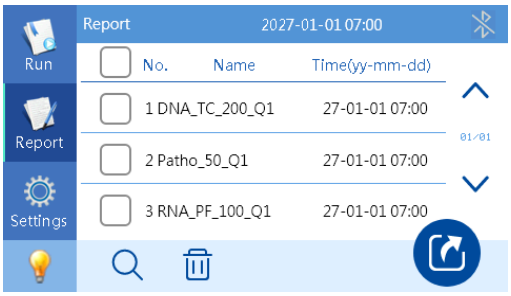


Figure 32. Run Report menu.

Icon	Function
	Search, used to search for the specified report.
	Delete selected report.
	Export selected reports to USB drive.

5.1.3. The Settings menu

The Settings menu mainly has four functions:

1. UV decontamination
2. Control of the fan
3. Systems settings
    a. Time
    b. Language
    c. Transfer of data
    d. Bluetooth connection
    e. Version information
4. Service

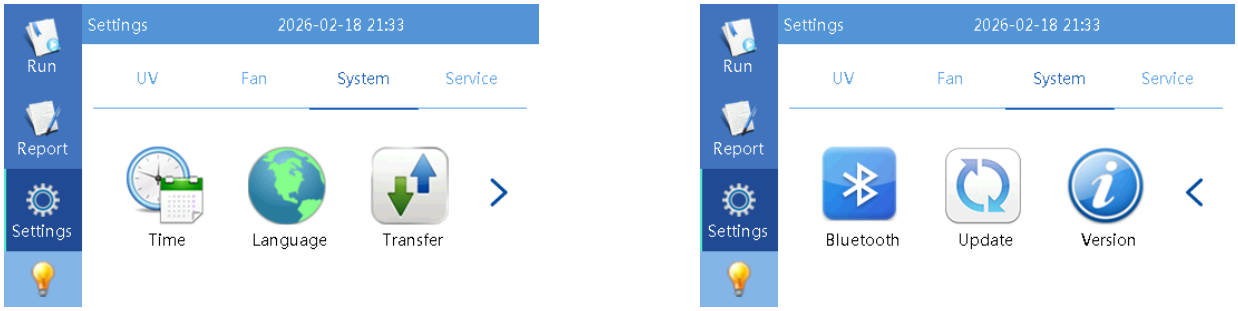


Figure 33. Settings menu.

5.2. Protocol management

QIAmini protocols can be downloaded from QIAmini Suite (**www.qiagen.com/QIAminiSuite**) running on a desktop PC or a mobile device (Android or IOS), from the QIAmini product page (**www.qiagen.com/QIAmini**), or from the product pages QIAmini kit(s) (**www.qiagen.com**).

To import or export protocols, QIAmini offers three options:

- Import/export of protocols via **USB drive**
- Import of protocols via **QR code** with barcode scanner
- Import/export of protocols via **Bluetooth** with QIAmini Suite

Note: QIAmini does not come with pre-installed protocols. Download the latest protocol relevant to your application.

All QIAGEN protocols for dedicated QIAmini kits are free of charge. The individual protocol files (TXT files and QR codes) are available on the QIAmini product page (**www.qiagen.com/QIAmini**) or on the respective product page of the QIAmini kit (**www.qiagen.com**). In addition, you can find all protocols in QIAmini Suite.

5.2.1. Import/export of protocols via USB drive

Import of protocols via USB drive

Protocols can be exported as TXT files from QIAmini Suite (**www.qiagen.com/QIAminiSuite**) or the QIAmini product page (**www.qiagen.com**) relevant to your application (for details, see the *QIAmini Suite User Guide*: **www.qiagen.com/HB-3800**). To import the files to QIAmini, the QIAmini USB drive is required.

1. Prepare the USB drive for protocol upload. The instrument only recognizes protocols within a folder called “Items” on the first layer of the USB drive. If this is the first time using the QIAmini USB drive, the folder needs to be created first.

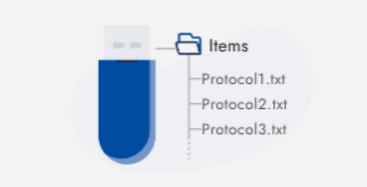


Figure 34. USB drive folder structure for protocol upload. All protocols to be uploaded onto QIAmini need to be localized in a folder named items.

2. Connect the prepared USB drive to one of the USB ports on the right side of the instrument.
3. In the **Settings** menu, select **System** from the menu, and tap **Transfer**. Select **Import** and **Confirm** to view the list of protocols available on the USB drive.
4. Select one or multiple protocols and press the to start import of the protocols.
5. After confirmation of the import to be successful, return to the main menu .
6. Remove USB drive.

Note: Renaming the protocol file can lead to errors during upload to the instrument.

Export of protocols via USB drive

Protocols can be exported from QIAmini as TXT files.

1. Connect a USB drive to one of the USB ports of the instrument.
2. In the **Settings** menu, select **Transfer** from the menu. Select **Export**, and **Confirm** to view the list of protocols available on the instrument.
3. Select one or multiple protocols and press to start export of the protocols.
4. After confirmation of the export to be successful return to the main menu .

Note: The protocols can be found in a folder called "Items" on the first layer of the USB drive folder structure. If this is the first time using this specific USB drive, the instrument will create the folder on its own.

5.2.2. Import of protocols via QR code

Protocols can be exported from QIAmini Suite (companion software) as QR codes. For details, see the *QIAmini Suite User Guide* (**www.qiagen.com/HB-3800**). In addition, QR codes can be found on the product pages of the instrument and QIAmini kits on **www.qiagen.com**. To import protocols, the optional QIAmini barcode scanner (Section 4.5.3) is required. The QR code can be presented on a mobile device or as a printout.

1. Attach the barcode scanner to the barcode scanner port on the back of QIAmini.
2. Open the **Run** menu and switch to **list view** . Press to scan the QR code of the protocol.

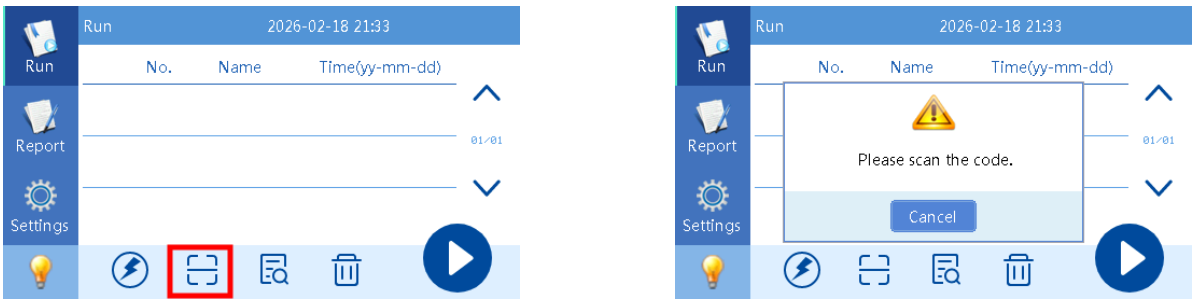


Figure 35. The run menu – List view – Scan protocol QR code.

The protocol is automatically added to the list of protocols.

5.2.3. Import via mobile device using Bluetooth connection

Protocols can be directly imported from the QIAmini Suite (QIAmini companion app) to a mobile device. For this feature, the Bluetooth connection of the instrument has to be activated (see Section 5.5.3 Bluetooth connection). For more details, see the *QIAmini Suite User Guide* (**www.qiagen.com/HB-3800**). To import the files, follow the instructions in the QIAmini Suite.

5.2.4. Adding protocols to the favorite view

The favorites view allows the user to create shortcuts and display only a selected subset of the protocols available on the QIAmini instrument. Protocols can be marked or unmarked as favorites in the list view of the protocol run menu by selecting the checkbox in front of the respective protocol. Only protocols marked by  are visible in the favorites view.

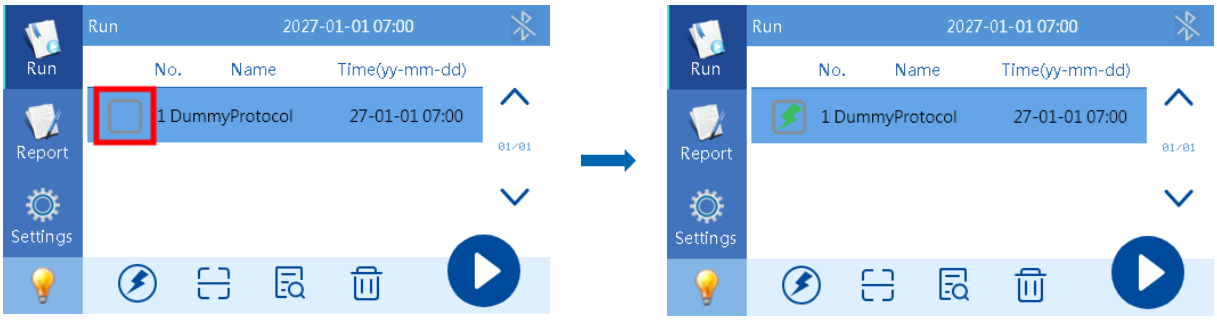


Figure 36. The run menu – List view – Create Favorites.

5.2.5. Deleting protocols

To delete a selected protocol press  , (Figure 37, highlighted by red rectangle). After confirmation, the protocol (Figure 37) will be deleted from the internal memory.

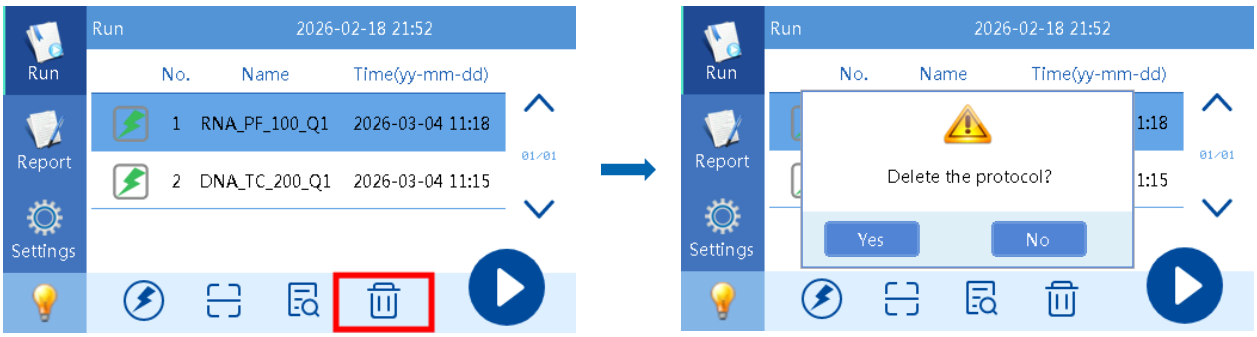


Figure 37. The run menu — Delete protocols.

Note: Deletion of the protocol cannot be undone.

5.2.6. Protocol preview

The protocol preview is available in the protocol **Run** menu list and favorites view. Tap to preview details of the selected protocol.

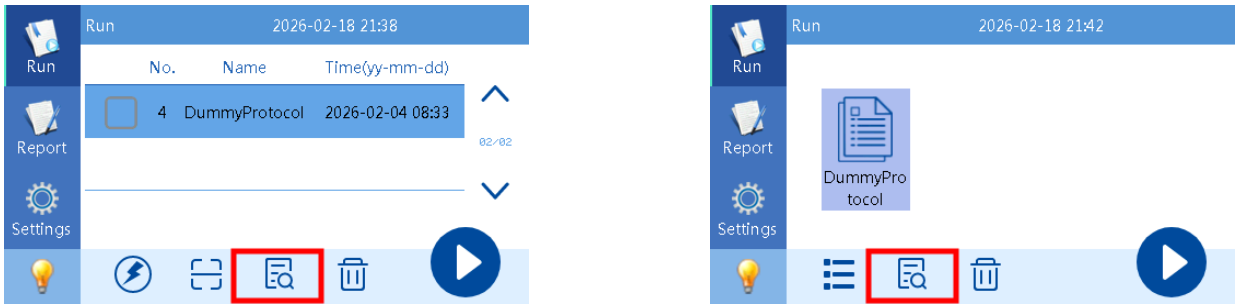


Figure 38. The Run menu – list view(left), favorite view (right) – View Protocol details.

Press or to switch between protocol step (Figure 39) and protocol settings (Figure 40) overview. Afterward, tap to return to the protocol overview.

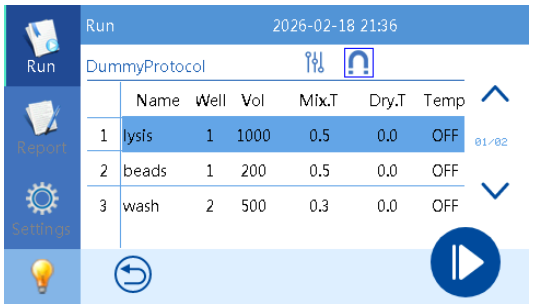


Figure 39. Protocol preview – Step overview.

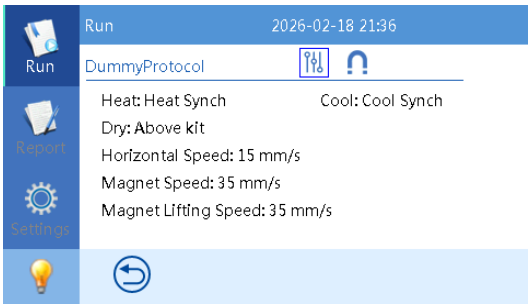


Figure 40. Protocol preview – Settings overview.

5.3. Start a run

Up to eight cartridges can be used for each run. Read the handbook of the respective kit carefully before starting to load QIAmini.

Note: The instrument applies the same protocol to all cartridges. Do not mix kits of different applications.

5.3.1. Preparation of cartridges and cartridge frame

Loading of QIAmini includes preparation of the cartridge, loading of cartridges into the cartridge frame, and removing the foil. To load the cartridge frame:

1. Label the cartridges according to your needs using the labeling field.

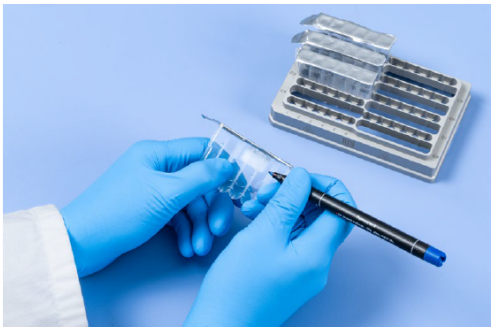


Figure 41. Cartridge labeling.

2. Invert prefilled cartridge(s) to resuspend magnetic beads. Flick down to remove reagents and bead suspension from under the foil.
3. Place the cartridges, with the flap on the left side and the label containing the kit information to the back, into the cartridge frame (QIAGEN logo facing front) and push down gently. Ensure correct orientation by positioning the cartridge frame such that the QIAGEN logo faces the front.

Figure 42. Cartridge loading.

Note: If loading cartridges on both sides of the frame, ensure that all flaps of the cartridge foil are accessible.

Note: Asymmetrical loading can lead to slight instability of the frame on the workdeck. If possible, always prefer symmetrical loading.

4. **Important**: Carefully remove the sealing foil to avoid splashing of reagents.

Figure 43. Removal of cartridge foil.

5. Follow the instructions of the respective kit handbook on how to treat the reagent cartridge(s) and where to add the sample. There might also be other manual steps required.

5.3.2. Procedure on QIAmini

1. Turn on the instrument.
2. Select the desired protocol (find a list of all protocols in the list view of the **Run** menu). The selected protocol appears with a blue color highlight in the list view.

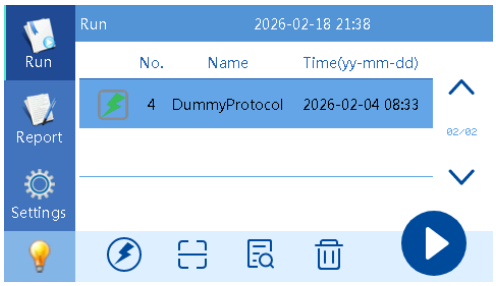


Figure 44. The Run menu – list view – Protocol selected for run.

Note: For details regarding protocol selection, refer to the kit handbook. If the protocol is not visible in the list, follow the instructions for protocol upload first (Section 5.2.1 Import/export of protocols via USB drive).

Note: The flash icon ( ) only indicates that the protocol has been selected as favorite and is visible in list view as well as favorites view.

3. Open the instrument door. Load the cartridge frame holding the cartridge(s) into the instrument.

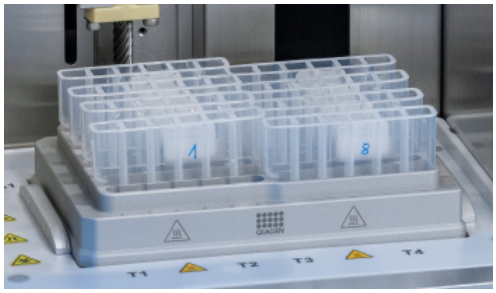


Figure 45. Cartridge frame loaded with eight reagent cartridges on the workdeck.

Note: Ensure the cartridge frame is placed in the correct orientation (QIAGEN logo facing the front). Press the cartridges down to fully engage with the heater block.

4. Slide a set of rod covers into the rod cover holder.

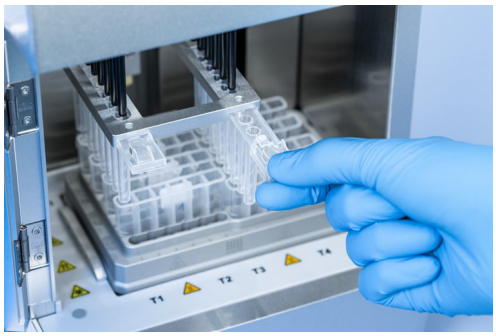


Figure 46. Insertion of rod covers into the rod cover holder.

Note: Press the clip down to allow full insertion of the rod cover holder.

5. Close the door.
6. Press ▶ to start a run. Check and confirm that consumables have been installed correctly to initiate the protocol. The instrument initializes all axes and starts the run.

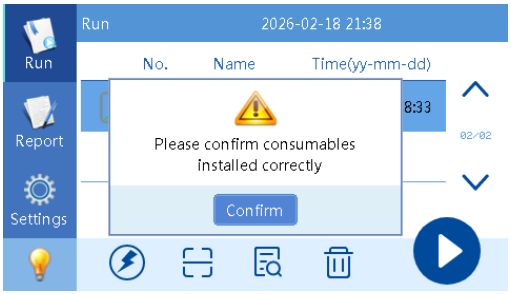


Figure 47. Starting protocol dialog box.

Note: If the run was started by mistake, select **Confirm** and cancel the run immediately during the initialization phase of the instrument.

5.3.3. Run status

The run status screen provides information of the ongoing run.

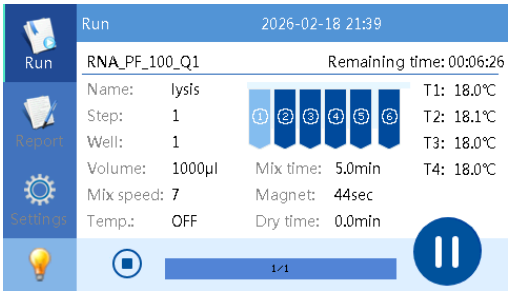


Figure 48. The run menu – Run status screen.

The screen enables the following actions:

Pause the run

Press ⏸ to pause the run. The instrument immediately stops all actions. As soon as the ▶ button is pressed, the run continues.

Note: Pausing a run might affect the application performance. If protocol includes heating, the heater might still be hot and should not be touched.

Stop the run

1. Press ⏹ to stop the run.
2. A dialog box appears and, if the protocol needs to be stopped, a confirmation is required.

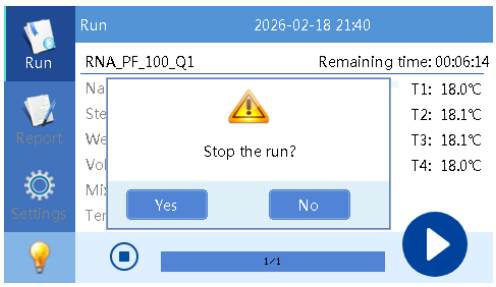


Figure 49. Stopping protocol dialog box.

3. Press ⮌ button to return to the protocol run menu.

Note: Reuse of cartridges after a stopped run is not recommended.

5.3.4. Unload the instrument

After a protocol run is completed, an audible signal sounds and a pop-up message appears.

1. Confirm the notification and press .

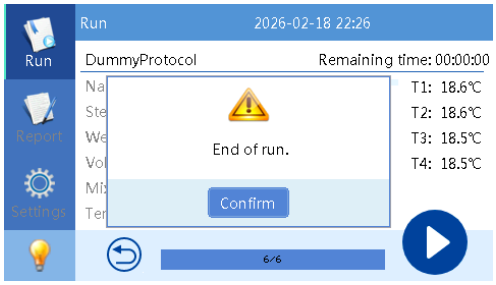


Figure 50. End of run dialog box.

2. Open the instrument door.
3. Remove the rod cover(s) by pressing down the clip and sliding them out of the rod cover holder.
4. Remove the cartridge frame with cartridge(s).
5. Follow the instructions of the respective kit handbook on how to retrieve your eluate.
6. Dispose the cartridges and rod covers according to local safety regulations.
7. Clean the instrument (for details, see Section 6.2 Instrument cleaning and decontamination).

5.4. QIAmini report(s)

QIAmini automatically generates and stores a report for each run performed. QIAmini can store up to 1000 run reports. In case the QIAmini report memory is full, the earliest memory is overwritten.

To view the list of reports navigate to the **Report** menu.

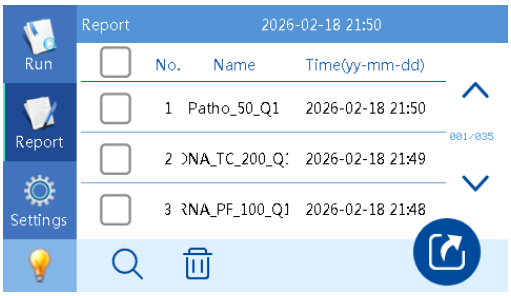


Figure 51. Report menu.

Note: Please download the reports on a regular basis to avoid loss of reports.

5.4.1. Search for reports

If a specific report is required, the instrument can filter the list of reports by creation date.

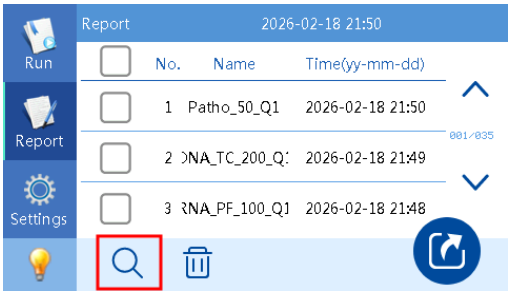


Figure 52. The report menu – Search for reports.

Tap 🔍 to search for a specific report and the "Search Date" dialog box appears (Figure 53), which allows limiting the list of reports to a specific creation timeframe.

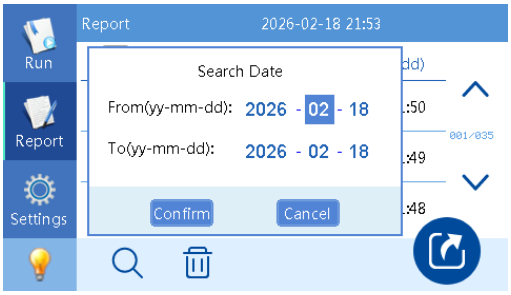


Figure 53. The report menu – Search date dialog box.

To enter a customized timeframe, tap the date and use the virtual keyboard (Figure 54) to change the dates as desired.

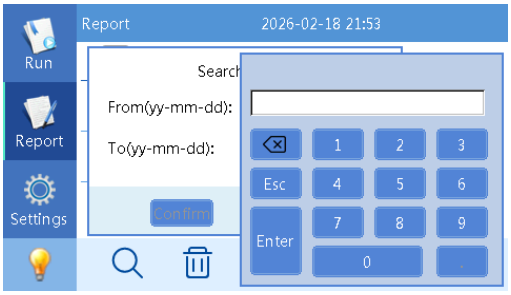


Figure 54. The report menu – virtual keyboard

After pressing **Confirm**, the list of reports is reduced to the reports created within the selected timeframe.

Press ↩ to leave the reduced view and return to the complete list of reports.

5.4.2. Download of report(s)

The reports can be downloaded to USB drive or directly transferred to your mobile device equipped with QIAmini app (for more details, see the *QIAmini Suite User Guide*: **www.qiagen.com/HB-3800**) if Bluetooth is enabled.

To download reports to a USB drive:

1. Plug in a USB drive to one of the USB ports on the right side of the instrument.

   Note: Use only the QIAGEN USB drive delivered with the instrument.

2. Navigate to the **Report** menu.
3. Select the reports(s) intended for download using the checkbox. To download all reports at once, the checkbox in the header can be used (Figure 55).

Figure 55. QIAmini report menu – selection of report(s). The checkbox highlighted by red rectangle can be used to select all reports at once.

4. Start the download by pressing .

   A dialog box confirms as soon as the export is finished.

5. Remove the USB drive from the instrument.

   Note: The reports can be found in a folder called "Runlog" on the first layer of the USB drive folder structure. If this is the first time using this specific USB drive, the instrument creates the folder on its own.

5.4.3. Delete reports

QIAmini offers an easy way to delete one, multiple, or all reports on the instrument.

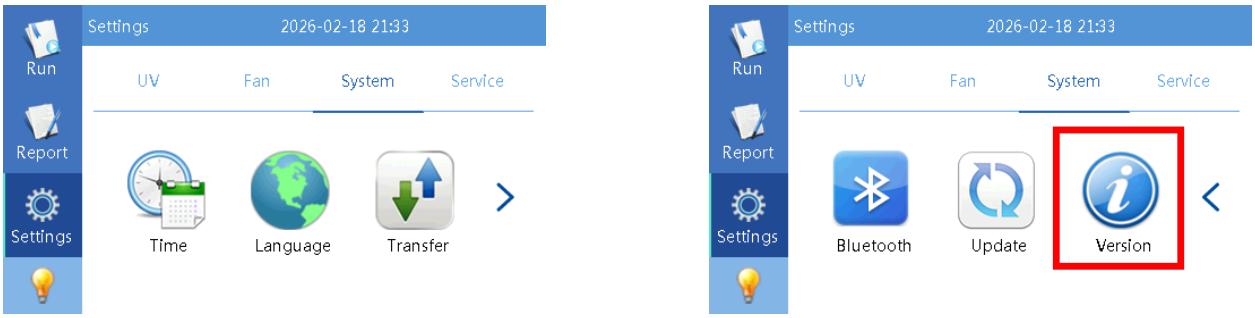
1. Navigate to the **Report** menu.
2. Select the reports(s) intended for deletion using the checkbox. To delete all reports at once, the checkbox in the header can be used (Figure 55).
3. Press .
4. Confirm deletion of the report by pressing **Yes** on the Delete report dialog box.
5. The selected report(s) is deleted from the internal memory of the instrument.

Note: Deletion of report(s) cannot be undone.

5.5. Change and update settings

In the **Settings** menu, various configurations can be adjusted and instrument information can be accessed.

1. Time settings
2. Language settings
3. Transfer
4. Bluetooth
5. Update (Software)
6. Version (System information)
7. Control of internal fan
8. Control of internal light



Note: The transfer functionality is covered in Section 5.2.1 Import/export of protocols via USB drive.

5.5.1. Date and time settings of QIAmini

To adjust date and time settings:

1. In the **Settings** menu, select **System** from the menu and tap the **Time** icon.

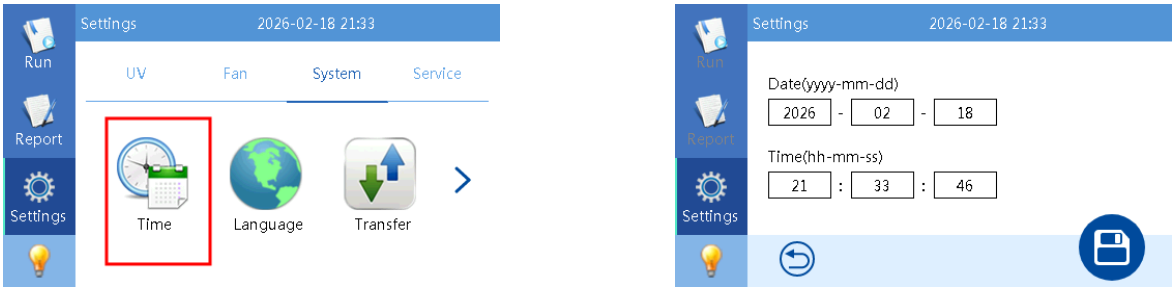


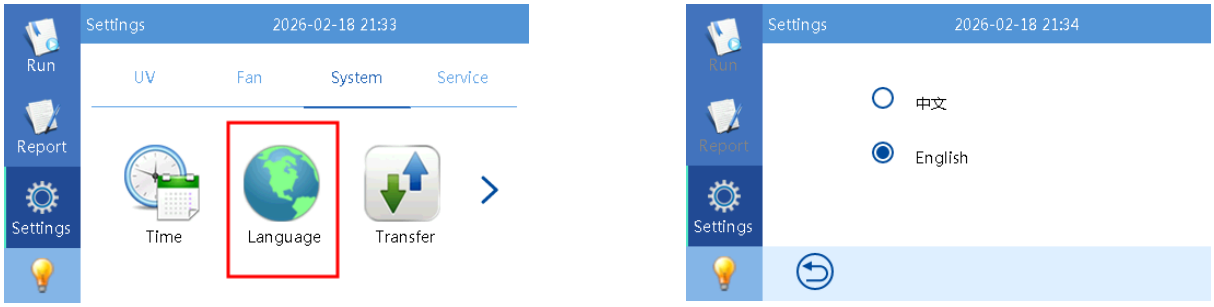
Figure 56. The Settings Menu – System – Time Settings

2. To adjust date or time, tap the corresponding field. A virtual keyboard appears as an input method. Confirm new entry by pressing **Enter**.
3. After updating all required fields, press **Save**.
4. Confirm and press ⮌ to return to the System settings screen.

5.5.2. Language

To adjust language settings:

1. In the **Settings** menu, select **System** from the menu and tap the **Language** icon.



2. Select the required language for the QIAmini instrument software by toggling between the options **English** and **Chinese**.
3. Press ⮌ to return to the System setting screen.

   Note: Change of language is applied to the entire system.

5.5.3. Bluetooth connection

The QIAmini offers Bluetooth connection to a mobile device. Activated Bluetooth functionality is shown by the Bluetooth symbol displayed in the upper right corner (Figure 57).

1. In the **Settings** menu, select **System** from the menu and tap on the **Bluetooth** icon.

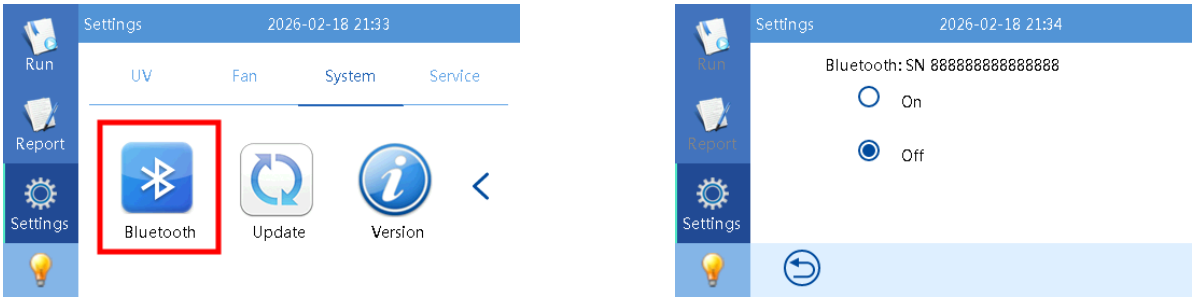


Figure 57. The QIAmini settings menu – Bluetooth connection.

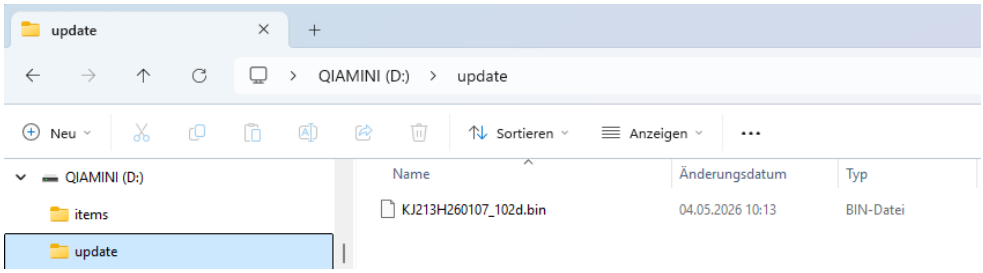
2. To activate or deactivate Bluetooth, toggle between on and off. If Bluetooth is activated, the **Bluetooth** icon is presented in the upper right corner.
3. Press ⮌ to return to the System settings screen.

Note: The ID of the instrument is presented in the Bluetooth connection screen and is required when connecting to the mobile device.

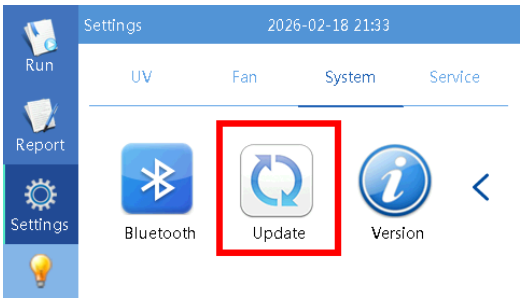
5.5.4. Software update

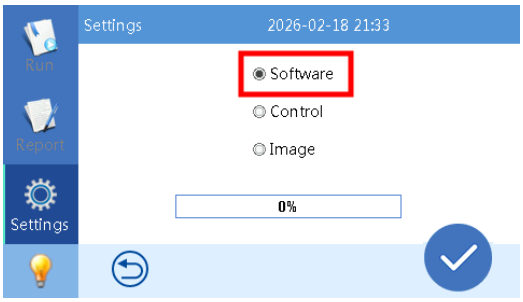
To update the QIAmini software:

1. Prepare the QIAmini USB drive and create a folder named “update” on the first layer of the device. Place the BIN file for software update inside the “update” folder.



2. Connect the USB drive to one of the USB ports on the right side of QIAmini.
3. In the **Settings** menu, select **System** from the menu and tap the **Update** icon.





4. To start the update, select **Software** and tap ✓ once.

   Note: The update might take a second to start.

5. After the progress bar reached 100%, a blue screen appears and the instrument completes the update. An acoustic signal sounds as soon as the update is completed successfully.

   Note: Do not turn off the instrument before the update is completed.

6. As soon as the message “Update Ok, Please reset!” appears, turn off the power and restart the instrument.

5.5.5. Version

To check the software version of the instrument:

1. In the **Settings** menu, select **System** from the menu and tap the **Version** icon. The instrument software version will be displayed on the screen.

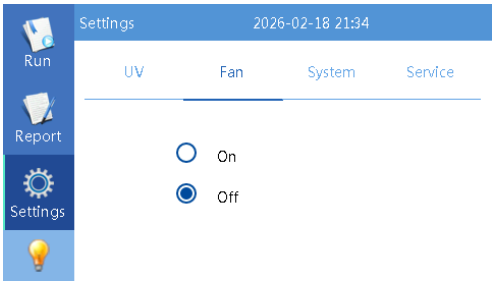
Figure 58. The settings menu – System – Software Version.

2. Press ⮌ to return to the System setting screen.

5.5.6. Internal fan

To turn on or off the internal fan, follow the instruction below:

1. In the **Settings** menu, select **Fan** from the menu.



2. To control the status of the internal fan toggle between on and off to reach the required status.

5.5.7. Internal light

The option to turn off or on the internal light is available on the main screen. The light can be controlled by tapping on the light bulb in the lower left corner.

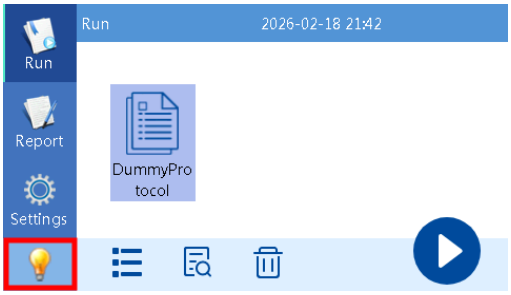


Figure 59. Activation or deactivation of internal light (highlighted by red rectangle).

6. Maintenance Procedures

WARNING/ CAUTION

Risk of personal injury and material damage

Only perform maintenance that is specifically described in this user manual.

To ensure reliable operation of the QIAmini, maintenance procedures must be performed. The procedures are shown in the table below. Each maintenance procedure must be carried out by appropriate laboratory technicians or equivalent.

Type of task	Frequency	Personnel
Cleaning and decontamination of QIAmini	After each run	Laboratory technicians or equivalent
Cleaning and decontamination of the cartridge frame	After each run	Laboratory technicians or equivalent

Optionally, a UV decontamination procedure may be performed as required to reduce pathogen and nucleic acid contamination. See Section 6.4 UV decontamination run for further details.

6.1. Cleaning agents

The surfaces and the cartridge frame of QIAmini must be cleaned and disinfected with compatible detergents and disinfectants. Follow the instructions provided by the manufacturer of such materials to safely clean the instrument.

Note: If different disinfectants are used than the recommended ones, ensure that they have the same composition.

If you are unsure about the suitability of the detergents or disinfectants to be used with QIAmini, do not use them.

General cleaning of QIAmini, with the exception of the door, can be done using mild detergents, such as 70% ethanol. The door should only be cleaned with lint-free tissue moistened with water.

CAUTION

Damage to the instrument

Do not use spray bottles containing alcohol or disinfectant to clean surfaces of QIAmini. Spray bottles should be used only to clean items that have been removed from the worktable and if permitted by local laboratory operating practices.

WARNING

Risk of fire

After cleaning QIAmini with alcohol-based disinfectant, leave the instrument door open to allow flammable vapors to disperse.

Only clean QIAmini with alcohol-based disinfectant when worktable components have cooled down.

WARNING

Risk of fire

Do not allow cleaning fluid or decontamination agents to come into contact with the electrical parts of QIAmini.

6.2. Instrument cleaning and decontamination

6.2.1. Cleaning agents for QIAmini

Ethanol-based disinfectants can be used for disinfecting surfaces such as the worktable. An example of ethanol-based disinfectants are the Mikrozid® Liquid (Mikrozid Liquid consists of 25 g ethanol and 35 g 1-propanol per 100 g) or Mikrozid AF wipes. For countries where Mikrozid Liquid is not available, 70% ethanol can be used.

Note: The housing should only be cleaned with 70% ethanol.

Note: The door should only be cleaned with lint-free tissue moistened with water.

6.2.2. Cleaning procedure for QIAmini

The following procedure should be performed after each run to ensure safe operation of the instrument:

1. Wear appropriate personal protective equipment for the kind of used samples and cleaning agents (such as lab coat, gloves, protective glasses).
2. Remove rod covers from the rod cover holder and remove the cartridge frame including cartridges. Dispose of waste according to your local safety regulations.

   Important: The cartridge frame needs to be cleaned after each use (for details, see Section 6.3 Cleaning and decontamination of accessories).
3. Power down the instrument.
4. Wipe the inner surfaces of the instrument with 70% ethanol. Ensure that no traces of visible contamination remain, such as buffer or sample spots. If necessary, repeat the cleaning procedure.

   Important: The magnetic head is a fragile part. Please handle with care and do not collide with it to avoid the risk of damage.
5. Optionally, perform the automatic UV decontamination (Section 6.4 UV decontamination run).
6. Leave the instrument open for some time to allow any vapors to disperse. Only power on the instrument after the vapors have dispersed.
7. If required, clean the door with lint-free tissue moistened with water.
8. If required, clean the housing with lint-free cloth and 70% ethanol.

6.3. Cleaning and decontamination of accessories

6.3.1. Cleaning agents for QIAmini Cartridge Frame

Disinfectants based on quaternary ammonium salt can be used for submerging accessories. An example of such disinfectants are Lysetol® AF or Gigasept® Instru AF (Schülke & Mayr GmbH, see **www.schuelke.com**). These disinfectants consist of 14 g cocospropylene–diamine–guanidine diacetate, 35 g phenoxypropanol, and 2.5 g benzalkonium chloride per 100 g, with anticorrosion components, fragrance, and 15–30% nonionic surfactants.

Note: If you want to use different disinfectants than the recommended ones, make sure that they have the same composition.

6.3.2. Cleaning procedure for QIAmini Cartridge Frame

The QIAmini Cartridge Frame should be cleaned when visible contamination is present and decontaminated when infectious agents have been used.

1. Wear appropriate personal protective equipment for the kind of used samples and cleaning agents (such as lab coat, gloves, protective glasses).
2. Remove the cartridge frame from the instrument.
3. Remove any visible contamination by wiping with a lint-free cloth doused in 70% ethanol or Mikrozid AF Liquid. Alternatively, Mikrozid AF wipes can be used.
4. Submerge the accessory for 1 h in an appropriate decontamination solution (Section 6.3.1 Cleaning agents for QIAmini Cartridge Frame).
5. Rinse the accessory with deionized water and allow to dry before the next run.

6.4. UV decontamination run

Before starting the UV decontamination, remove the cartridge frame and disposables from the instrument. Clean the instrument to remove visible reagent or sample contaminations (Section 6.2 Instrument cleaning and decontamination).

1. Close the instrument door.
2. Select **UV** in the **Settings** menu.

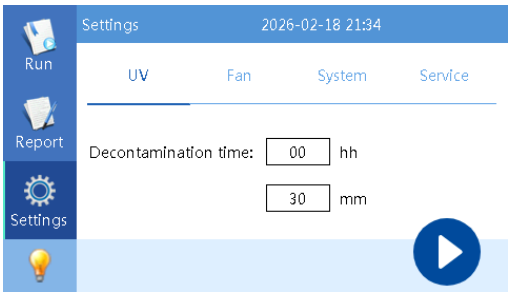


Figure 60. The settings screen – UV decontamination.

3. Either press ▶ to start a decontamination run with the default duration (30 min) or change duration with the automatically displayed keyboard as required and press start afterward. The required decontamination time depends on the biological material processed on the device.

   Note: Contact QIAGEN Technical Service for assistance with choosing the right irradiation time for particular contaminants.

4. During decontamination procedure, the remaining time is displayed on the screen and the status light turns red.

   Note: Do not open the instrument door during the UV procedure.

   Note: The UV decontamination run can be stopped at any time by pressing ⏹.

5. Once the set decontamination time has elapsed, the UV light turns off and an acoustic signal sounds.

7. Troubleshooting

This section provides information about what to do if an error occurs when using the QIAmini system.

If further assistance is required, contact QIAGEN Technical Service (**support.qiagen.com**).

When contacting QIAGEN Technical Service about an error with QIAmini, note the steps leading up to the error and any information appearing in any dialog boxes. This information will help the QIAGEN Technical Service solve the problem.

When contacting QIAGEN Technical Service about errors, have the following information ready:

- QIAmini serial number (printed on the type plate on the back of the instrument)
- Software version (Go to the **Settings** menu, select **System** from the menu, and tap on the **Version** icon.)
- Lot number and name of the kit
- Timepoint when the error occurred for the first time
- Frequency of error occurrence (i.e., intermittent or persistent error)
- Error message and error code
- Detailed description of the steps leading to the error situation
- Photos of the error situation, particularly the state of the instrument when the error occurred
- Protocol file and Report (if the error occurred during protocol run execution)

This information will help you and your QIAGEN Technical Service Specialist to deal most efficiently with your issue.

Please note that QIAGEN Technical Service can only assist the troubleshooting of protocol issues if the protocol uses QIAGEN chemistry, for example, when using a QIAGEN kit.

Note: Information about the latest software and protocol versions can be found at **www.qiagen.com**. In some cases, updates may be available for addressing specific problems.

7.1. General troubleshooting measures

If a run is interrupted due to an error, the instrument needs to be returned to a safe state, which includes removal of all disposables and accessories. To gain access to the accessories, the axes can be moved manually after the instrument is turned off. If it is unclear how to recover instrument state, contact QIAGEN Technical Service for assistance.

7.2. Help with specific error cases

Error	Measure
No UV light	Replace UV bulb (Section 7.3 Replacement of UV lamp)
Error 425	Ensure that the transport security screw is removed.
Magnetic rods broken	Replace the magnetic rods (Appendix A – Technical Data).
Protocol not visible on USB drive	Ensure that "items" folder is created according to instructions (Section 5.2.1 Import/export of protocols via USB drive).
Error during protocol upload from USB drive	Ensure that the protocol name is not changed after download from the QIAmini Suite software.

7.3. Replacement of UV lamp

After the UV lamp has been used for ≥2000 h, replacing the new UV lamp (refer to Appendix B – Ordering Information) is recommended.

1. Ensure that the instrument is turned off.
2. Open the door and move the processing unit (magnetic head and rod cover holder) to the right side and the down.
3. Remove the old UV lamp from the instrument and replace with the new one.

WARNING/ CAUTION

Risk of personal injury and material damage

The QIAmini UV lamp is a high-pressure component and can break unexpectedly during handling or operation. Handle the lamp gently, avoid mechanical stress, and follow strict safety measures. Breakage can release glass fragment.

Always wear appropriate personal protective equipment (PPE), including safety glasses and protective gloves, when handling or replacing the UV lamp.

WARNING/ CAUTION

Risk of release of hazardous mercury

The QIAmini UV lamp contains mercury, which can be released upon breakage.

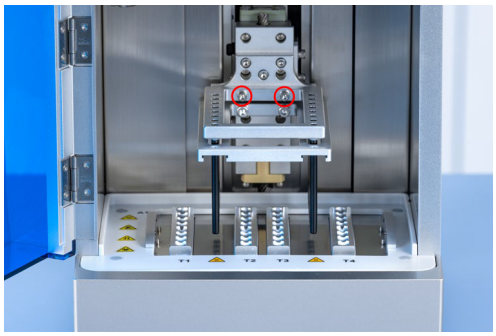
In case of breakage, the area must be ventilated and the lamp debris treated as hazardous waste due to the presence of mercury. The lamp must not be disposed of in household or general waste. After replacement, dispose of the used lamp through an authorized hazardous waste or recycling program in accordance with applicable regulations.

7.4. Replacement of the magnetic head

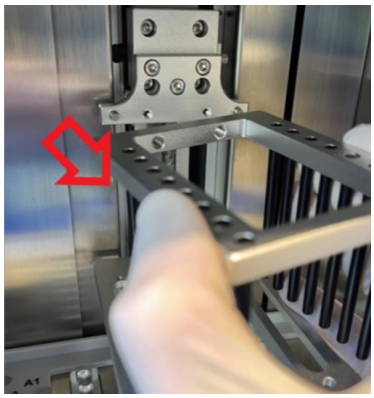
Follow the steps below to replace the magnetic head of QIAmini using the QIAmini Magnetic Head Replacement Set (refer to Appendix B – Ordering Information).

1. Switch off the instrument and disconnect it from the power supply.
2. Open the instrument door.
3. Move the rod cover holder to the lower position.

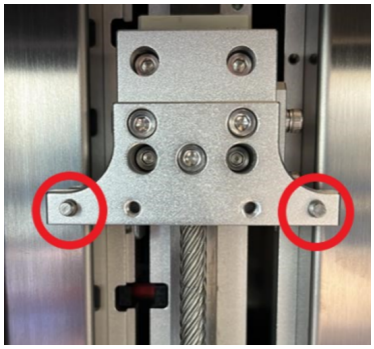
4. Move the magnetic head to a position where the mounting screws (highlighted in the picture below) are accessible.



5. Using the screwdriver provided in the QIAmini Magnetic Head Replacement Set (refer to Appendix B – Ordering Information), remove the two screws securing the magnetic head.
6. Carefully remove the magnetic head.



7. Position the new magnetic head. The two alignment pins ensure correct positioning of the magnetic head.
8. Reinstall and securely tighten the two mounting screws.



7.4.1. Manual check

9. Slide in a set of rod covers and manually move the magnetic head down. The magnetic rods should be able to enter the rod covers without collision.

   Important: If collision occurs, repeat steps 4 to 9. In case the magnetic rods are still crashing into the rod cover holder, contact QIAGEN Technical Service for further instructions.

10. Close the door and connect the instrument to the power supply.
11. Turn on the instrument and allow the initialization process to be completed.
12. Verify that the instrument initializes successfully and that no errors are reported.
13. Remove the rod covers.

8. Technical Specifications

8.1. Environmental conditions – operating conditions

Description	Requirement
Power **AC/DC Power Adaptor**	**Input**: 24 V DC **Input**: 100–240 V AC, 50/60 Hz, 2.0–1.0 A **Output**: 24 V DC 6.67 A, 160 W
Overvoltage category	I
Fuse	None
Air temperature	10–30°C
Relative humidity	≤80%
Altitude	up to 2000 m (6500 ft)
Place of operation	For indoor use only
Pollution level	2
Average noise level	<65 dB

8.2. Environmental conditions – transport conditions

Description	Requirement
Air temperature	–25°C to 60°C (–13°F to 140°F) in manufacturer's package **Note**: If QIAmini is transported in temperature's below 0°C (32°F), it is recommended to wait 24 hours before switching on the instrument to allow it to reach the temperature conditions of the installation environment.
Relative humidity	≤80% RH
Environmental class	2K11 (IEC 60721-3-2) 2M4 (IEC 60721-3-2)

8.3. Environmental conditions – storage conditions

Description	Requirement
Air temperature	5–40°C (41–104°F) in manufacturer's package
Relative humidity	≤80% RH
Environmental class	2K11 (IEC 60721-3-2) 2M4 (IEC 60721-3-2)

8.4. Mechanical data and hardware features

Description	Requirement
Dimensions	**Height**: 327 mm **Width**: 215 mm **Depth**: 274 mm
Weight	**With packaging**: 12 kg **Without packaging**: 8.7 kg

Appendix A – Technical Data

Technical data information is available in **www.qiagen.com/HB-3799-D01**

Appendix B – Ordering Information

Ordering information

Note: Only use accessories supplied by QIAGEN.

Product	Contents	Cat. no.
QIAmini (AU)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type I, and 1 year warranty on parts and labor.	9003637
QIAmini (CH)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type J, and 1 year warranty on parts and labor.	9003638
QIAmini (EU)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type E+F, and 1 year warranty on parts and labor.	9003634
QIAmini (IND)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type M, and 1 year warranty on parts and labor.	9003639
QIAmini (JP)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type B, and 1 year warranty on parts and labor.	9003641
QIAmini (KR)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type E+F, and 1 year warranty on parts and labor.	9003640
QIAmini (NA)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type B, and 1 year warranty on parts and labor.	9003635
QIAmini (UK)*	An instrument that purifies nucleic acids from up to eight samples using magnetic beads and QIAmini extraction kits; includes required accessories, power plug type G, and 1 year warranty on parts and labor.	9003636
Accessories		
QIAmini Cartridge Frame (1)	Supplementary cartridge frame; for use with QIAmini	9028648
QIAsprint Barcode Scanner	Barcode scanner that reads QIAmini protocol files (optional); for use with QIAmini	9028657
QIAmini UV Bulb	Replacement UV bulb; for use with QIAmini	9028506
QIAmini USB Drive	Replacement USB drive; for use with QIAmini	9028658
QIAmini Magnetic Head Replacement Set	Magnet Head Replacement Set; for use with QIAmini	9028659
Related products		
QIAmini DNA Blood Kit (48)	48 QIAmini DNA Blood Cartridges, 12 QIAmini Rod Covers, 10 mL RNase-free Water, 12 mL Buffer AL-T/M, and 1.25 mL Proteinase K.	590105
QIAmini Pathogen Kit (48)	48 QIAmini Pathogen Cartridges, 12 QIAmini Rod Covers, Buffer ACL, Proteinase K, Carrier RNA, RNase-free water	590205
QIAmini DNA Tissue/Cells Kit (48)	48 QIAmini DNA Tissue/Cells Cartridges, 12 QIAmini Rod Covers, 2x7 mL RNase-free Water, 14 mL Buffer ATL, 6 mL Buffer VXL, 1 mL Reagent DX, and 2 mL Proteinase K	591005
QIAmini RNA Tissue/Cells Kit (48)	48 QIAmini RNA Tissue/Cells Cartridges, 12 QIAmini Rod Covers, RNase-free DNase, 10 mL RNase-free Water, 45 mL Buffer RLT, and Proteinase K	591105
QIAmini PowerFecal® Pro DNA/RNA Kit	48 QIAmini PowerFecal Pro DNA/RNA Cartridges, 12 QIAmini Rod Covers, 40 mL Solution CD1, 15 mL Solution CD2, 50 PowerBead Pro Tubes (2 mL)	591205

Product	Contents	Cat. no.
QIAmini Rod Covers (50)	Set of 50 QIAmini Rod Covers; for use with QIAmini	590025
Service		
QIAmini, Warranty Extension	Warranty Extension for instruments repaired at Regional Repair Center, includes 1 year extension of coverage beyond standard 1 year warranty. Warranty covers labor and parts that address manufacturer defects. Warranty Extensions can only be sold at the time of new instrument sales.	9246453
QIAmini, Warranty 2 year Extension	Warranty Extension for instruments repaired at Regional Repair Center, includes 2 year extension of coverage beyond standard 1 year warranty. Warranty covers labor and parts that address manufacturer defects. Warranty Extensions can only be sold at the time of new instrument sales.	9246454

* Includes QIAmini (cat. no. 9003607) and the specific power plug.

For up-to-date licensing and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at **www.qiagen.com** or can be requested from QIAGEN Technical Service or your local distributor.

Document Revision History

Revision	Description
August 2026	Initial release.

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