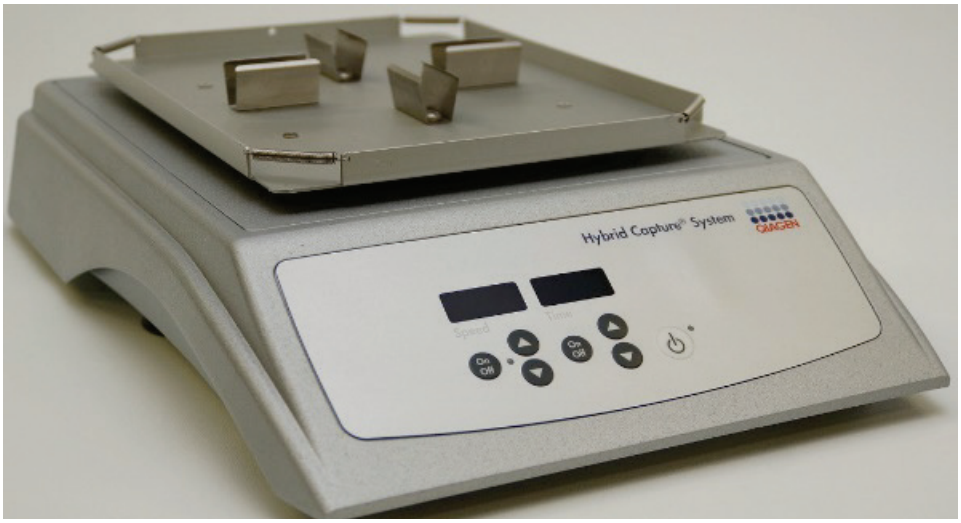
April 2023

Hybrid Capture® System
Rotary Shaker 1 User Manual



CE

IVD

REF 6000-2110E (120 V)
6000-2240E (230 V)

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Contents

1 Introduction

The Hybrid Capture System (HCS) Rotary Shaker 1 is an instrument designed to shake microplates and consists of a shaker base and a shaker platform.

Read this user manual prior to operating the HCS Rotary Shaker 1.

1.1 About this user manual

This user manual provides information about the HCS Rotary Shaker 1 in the following sections:

- Introduction
- Safety Information
- General Description
- Installation Procedures
- General Operation
- Maintenance
- Troubleshooting
- Technical Data
- Appendices
- Ordering Information
- Document Revision History

The appendices contain the following information:

- Appendix A – Waste Electrical and Electronic Equipment (WEEE)
- Appendix B – Warranty
- Appendix C – FCC Declaration

1.2 General information

1.2.1 Technical assistance

For technical assistance and more information, please see our Technical Support Center at **www.qiagen.com/TechSupportCenter** or contact QIAGEN® Technical Services or a local distributor.

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 Services.

1.2.3 Version management

This document is *Hybrid Capture System Rotary Shaker 1 User Manual*; see the front cover of this user manual for document number and revision.

1.3 Intended use

The HCS Rotary Shaker 1 is designed for shaking microplates and is intended for use in conjunction with *digene*® Hybrid Capture 2 (HC2®) DNA Tests. The HCS Rotary Shaker 1 is intended for professional use.

1.4 Materials required

- HCS Rotary Shaker 1
- Power cord

1.5 Materials required but not provided

N/A

2 Safety Information

This manual contains information about warnings and cautions that must be followed by the user to ensure safe operation of the HCS Rotary Shaker 1 and to maintain the instrument in a safe condition.

WARNING 	The term **WARNING** is used to inform you about situations that could result in personal injury to you or other persons. Details about these circumstances are provided to avoid personal injury to you or other persons.

CAUTION 	The term **CAUTION** is used to inform you about situations that could result in damage to the instrument or other equipment. Details about these circumstances are provided to avoid damage to the instrument or other equipment.

Please be aware that you may be required to consult your local regulations for reporting serious incidents that have occurred in relation to the device to the manufacturer and/or its authorized representative and the regulatory authority in which the user and/or the patient is established.

Before using the instrument, it is essential to read this manual carefully and to pay particular attention to any details it contains concerning hazards that may arise from the use of the instrument.

The details given in this manual are intended to supplement, not supersede, the normal safety requirements prevailing in the user's country.

2.1 Proper use

WARNING/ CAUTION 	**Risk of personal injury and material damage** Improper use of the HCS Rotary Shaker 1 may cause personal injuries to the user or damage to the instrument. The HCS Rotary Shaker 1 must only be operated by qualified personnel who have been appropriately trained.

WARNING/ CAUTION 	**Risk of personal injury and instrument damage** Prior to operation, secure the HCS Rotary Shaker 1 to a level, smooth, stable surface by firmly pressing down on the four (4) corners of the unit, creating a strong suction to the work surface (DO NOT place on a bench mat). Failure to do so will cause excess vibration and could cause personal injury, Instrument damage, and/or property damage.

WARNING/ CAUTION 	**Risk of instrument damage** Spills should be removed promptly. DO NOT use a cleaning agent or solvent on the front panel which is abrasive or harmful to plastics, nor one which is flammable. Always ensure the power is disconnected from the unit prior to any cleaning.

WARNING 	**Risk of personal injury** Always wear shatterproof eye protection.

WARNING 	**Risk of material damage** Only a QIAGEN Field Service Specialist can service or repair the instrument. The only exceptions are the maintenance activities listed in the “Maintenance” section, page 17, of this user manual.

WARNING/ CAUTION 	**Risk of personal injury and material damage** Do not immerse the HCS Rotary Shaker 1 in water or pour liquids over the instrument as electrical shock may occur.

WARNING/ CAUTION 	**Risk of improper operation** 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 the proper operation.

Take the following precautions when operating or working near the HCS Rotary Shaker 1:

- Always make certain that the shaker platform and any hardware are secure before operating the HCS Rotary Shaker 1.
- Load the HCS Rotary Shaker 1 symmetrically. Avoid unbalanced loads. When shaking a single microplate, a second empty microplate must be placed diagonally to balance the load. Likewise, when shaking 3 microplates, an empty microplate must be placed in the fourth position to balance the load.
- Do not use solvents and flammables on or near the HCS Rotary Shaker 1.
- Use the instrument in a dry, clean environment.
- Wipe down the base and platform of the HCS Rotary Shaker 1 after each use with a soft, dry cloth.
- Clean up any spills immediately.
- Do not allow dust to accumulate on the unit.
- If needed, the shaker platform may be removed and cleaned with a cloth dampened in a dilute detergent solution. See “Maintenance,” page 17, for additional instructions.

- Avoid cold starts: Unit is not designed to start after being in a cold room environment. Bring unit into cold room from a room temperature environment, operate, and remove unit from cold room as soon as operation is complete.

2.2 Electrical safety

Only operate the HCS Rotary Shaker 1 with the power cord provided with the instrument. For satisfactory and safe operation of the HCS Rotary Shaker 1, it is essential that the line power cord is connected to true electrical earth (ground).

2.3 Biological safety

WARNING 	**Hazardous substances** The products used with this instrument may contain hazardous substances. When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). These are available online in PDF format at **www.qiagen.com/safety** where you can find, view, and print the SDS for each QIAGEN kit and kit component. For further information see the instructions for use that comes with the kit.

WARNING 	**Risk of exposure to hazardous material** Shake hazardous samples only in appropriate containment vessels.

WARNING/ CAUTION 	**Risk of personal injury and material damage** Consider any laboratory equipment used for research or clinical analysis a potential biohazard that requires decontamination before reuse.

WARNING 	**Risk of personal injury** Sodium hypochlorite solution is caustic; wear rubber gloves and eye protection when handling it.

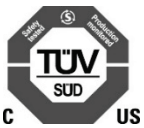
To dispose of the HCS Rotary Shaker 1, follow all national, state, and local health and safety regulation and laws for disposing of laboratory waste. For disposal of Waste Electrical and Electronic Equipment (WEEE compliance), see "Appendix A – Waste Electrical and Electronic Equipment (WEEE)".

2.4 Waste disposal

Waste may contain certain hazardous chemicals or contagious/biohazardous materials and must be collected and disposed of properly in accordance with all national, state, and local health and safety regulations and laws.

2.5 Symbols

The following symbols may be found on the instrument, in this user manual or on labels associated with the instrument.

Symbol	Location	Description
	On the instrument	General warning sign
	Type plate on the instrument, instrument box label, and the front cover of this user manual	CE mark for Europe
	Type plate on the instrument, instrument box label, and the front cover of this user manual	In vitro diagnostic medical device
	Type plate on the instrument and instrument box label	RoHS mark for China (the restriction of the use of certain hazardous substances in electrical and electronic equipment)
	Type plate on the instrument and instrument box label	Waste Electrical and Electronic Equipment (WEEE)
	Type plate on the instrument and instrument box label	Serial number
	Type plate on the instrument, instrument box label, and the front cover of this user manual	Manufacturer
	Type plate on the Instrument and instrument box label	RCM mark for Australia
	Type plate on the Instrument and instrument box label	The instrument complies with applicable standards for electrical safety of laboratory equipment

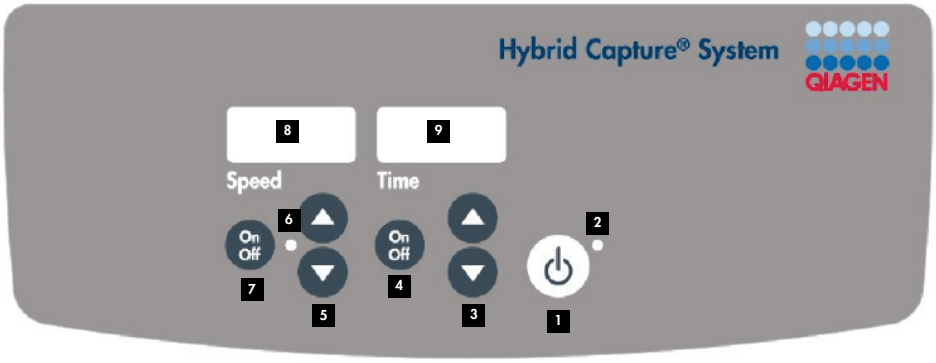
Symbol	Location	Description
GTIN	UDI Label on the instrument	Global trade item number
	Instrument box label	Fragile, handle with care
	Instrument box label and instrument box label	Consult instructions for use
EC REP	Front cover of this user manual and instrument box label	Authorized representative in the European Community
REF	Type plate on the instrument, instrument box label, and the front cover of this user manual	Catalog number
UDI	Type plate on the back of the instrument and instrument box label	Unique device identifier (UDI)
	Instrument box label	Relative humidity
	Instrument box label	Barometric pressure
	Instrument box label	Temperature range
MAT	Front cover of this year manual	Material

3 General Description

The HCS Rotary Shaker 1 is a shaker platform attached to a shaker base with 4 screws. The shaker platform is spring-loaded and can secure four 96-well microplates. The HCS Rotary Shaker 1 can hold up to 4 microplates.

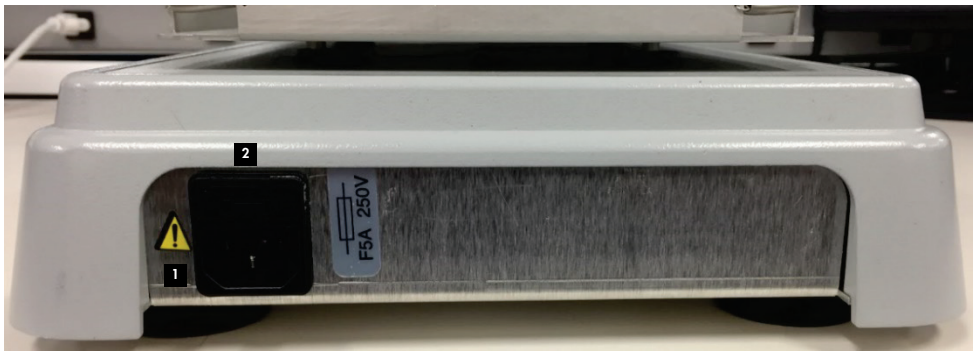
The HCS Rotary Shaker 1 can be used in environments from –10°C to 60°C, allowing for cold room use as well as incubated applications. The HCS Rotary Shaker 1 is constructed of heavy-gauge metal that provides a stable base for a steady, vibration-free operation. The following figures show the major external components of the instrument.

All of the operating controls for the HCS Rotary Shaker 1 are located on the front panel. The following figure shows the front panel and details of the shaker platform.



1 Power/Standby button
2 Standby Indicator light
3 Timer up/down arrows
4 Timer on/off button
5 Speed up/down arrows
6 Shaking indicator light
7 Shaking on/off button
8 Speed display
9 Time display

The power inlet and fuse drawer are on the back of the HCS Rotary Shaker 1.



1 Power inlet module
2 Fuse drawer

3.1 Operational modes

The speed of the Shaker 1 is variable, from 100–1200 revolutions per minute (RPM). It operates in a circular motion with an orbit of 0.3 cm (0.12 inches).

The HCS Rotary Shaker 1 features a timer with an operating time range from 0 to 9,999 minutes in one (1) second increments.

The HCS Rotary Shaker 1 can operate in both Continuous Operation or Timer Terminated operation modes.

4 Installation Procedures

4.1 Unpacking

Before using the HCS Rotary Shaker 1 for the first time, examine the exterior carton and the equipment itself for damage. In the event of shipping damage, contact your local QIAGEN representative or QIAGEN Technical Services.

Carefully unpack the instrument and verify the contents of the package, which should contain the following components of the instrument:

- HCS Rotary Shaker 1
- 1 power cord

If any of these items are missing, contact your local QIAGEN representative or QIAGEN Technical Services. Save the original packaging until the instrument is operated successfully.

4.2 Getting started

Make sure to select the correct voltage rating by checking the type plate on the side of the instrument. Record the serial number, located on the type plate, for future reference. Turn the unit upside down, gently rest it on the shaking platform, and inspect the suction cup feet. Remove any dust or debris from the suction cup feet with 70% isopropyl alcohol and a lint-free cloth. Likewise, prepare the surface where the HCS Rotary Shaker 1 will be placed by wiping it with 70% isopropyl alcohol and a lint-free cloth.

Place the HCS Rotary Shaker 1 on a level, smooth, stable surface near a grounded electrical outlet. Allow at least 8 cm (3 inches) clearance on all sides of the instrument for proper ventilation. Make sure the shaker platform will not touch other objects while in operation.

Secure the HCS Rotary Shaker 1 to the work surface by firmly pressing down on the four (4) corners of the unit, creating a strong suction to the work surface (DO NOT place on a bench mat).

WARNING/ CAUTION 	**Risk of personal injury and instrument damage** Failure to create a strong suction to secure the Shaker will cause excess vibration, personal injury, Instrument damage, and/or property damage.

At a corner of the instrument, attempt to push the instrument sideways with a medium amount of force. If the instrument is properly suctioned to the surface, it will not move.

Plug the power cord into a grounded electrical outlet.

5 General Operation

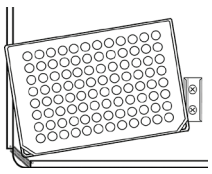
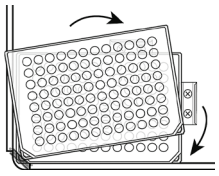
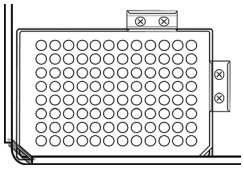
The HCS Rotary Shaker 1 can be used in either continuous or timer-terminated operation.

Certain load and speed ratios can cause vibration of the instrument. If the instrument vibrates, adjust the speed and/or load as necessary to eliminate the vibration.

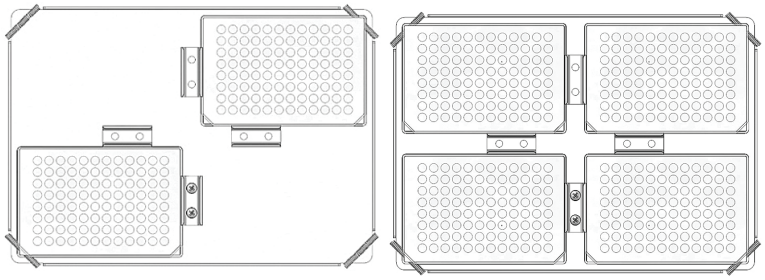
5.1 Loading microplates

The HCS Rotary Shaker 1 is designed to hold 2 or 4 microplates, but must be loaded symmetrically to avoid unbalanced loads. When shaking a single microplate, a second empty microplate must be placed diagonally to balance the load. Likewise, when shaking 3 microplates, one empty microplate must be placed in the fourth position to balance the load.

1. Place 2 microplates diagonally on the platform, or place 4 microplates on the platform.
2. Place the corner of the plate under the spring located at each corner of the platform.
3. Slide plate into place.
4. You are ready to use.

2.  3.  4. 

Examples of acceptable microplate loading configurations:



2 Microplates **4 Microplates**

5.2 Continuous operation

1. Power on the instrument by pressing the power/standby button.

   The standby indicator light turns off, and the speed display and the timer display illuminate.
2. Press the speed up/down arrows, to set the desired speed.
3. To begin shaking, press the shaking on/off button.

   The shaking indicator light will blink rapidly until the desired speed is reached, then it will remain illuminated. The HCS Rotary Shaker 1 will shake continuously until the shaking on/off button is pressed.
4. To stop the shaking, press the shaking on/off button.

5.3 Timer-terminated operation

Timer-terminated operation allows for timed shaking procedures.

1. Power on the instrument by pressing the power/standby button.

   The standby indicator light turns off, and the speed display and the timer display illuminate.
2. Press the speed up/down arrows, to set the desired speed.
3. Press the timer up/down arrows until you reach the desired time remaining.
4. Press the shaking on/off button. The shaking indicator light will blink rapidly until the desired speed is reached, then it will remain illuminated.
5. After the shaking indicator light is solidly illuminated, press the timer on/off button to start the countdown.
6. When the time display reaches zero (0:00), both the time and shaking functions will shut off automatically. Four audible beeps will indicate the countdown function is complete, and the time display will default back to the set time.
7. To interrupt an automatic timing cycle before it is completed, press the timer on/off button. The time display will flash until you resume the time function by pressing the timer on/off button again. This interrupt will not stop the shaking function, the shaking function will stop only when the timer reaches zero (0:00).

5.4 Timer function – Accumulated time

1. By default, the timer will begin at zero (0:00) minutes. Press the timer on/off button to begin timing.
2. Press the timer on/off button to stop timing. Press the timer on/off button again to resume timing.
3. To reset the time to zero (0:00) minutes, make sure the timing is stopped, and press and hold the timer on/off button for 3 seconds. Alternately, while of the timing is stopped, simultaneously press the timer up and down arrows to reset the time to zero (0:00) minutes.

5.5 Timer function – Remaining time

Note: If the timer is used in conjunction with the shaking function, when the time display reaches zero (0:00), both the time and shaking functions will shut off automatically.

1. Press the timer up/down arrows until you reach the desired time remaining.
2. Press the timer on/off button to start the countdown.
3. If the timer is used in conjunction with the shaking function, when the time display reaches zero (0:00), both the time and shaking functions will shut off automatically. Four audible beeps will indicate the countdown function is complete, and the time display will default back to the set time.
4. To repeat for the same time, depress the timer on/off button again.
5. To interrupt an automatic timing cycle before it is completed, press the on/off button to the right of the time display. The time display will flash until you resume the time function by pressing the on/off button again. This interrupt will not stop the shaking function, the shaking function will stop only when the timer reaches zero (0:00).

5.6 Beeper preference

1. To silence beeper operation (except for error codes), with the unit in standby mode, press and hold the time on/off button and press the power/standby button.
2. To restore normal beeper operation, repeat step 1 above. Alternately, you may remove AC power to unit for 10 seconds and then restore AC Power.

6 Maintenance

CAUTION 	**Risk of material damage** Only a QIAGEN Field Service Specialist can service or repair the instrument. The only exceptions are the Maintenance activities in the "Maintenance" section of this user manual.

If you have a problem with maintenance of the HCS Rotary Shaker 1, contact QIAGEN Technical Services. QIAGEN charges for repairs that are required due to incorrect maintenance.

6.1 Cleaning and decontamination

WARNING/ CAUTION 	**Risk of personal injury and material damage** Consider any laboratory equipment used for research or clinical analysis a potential biohazard that requires decontamination before reuse.

The user is responsible for decontamination to the instrument if hazardous materials are spilled on the instrument. Wear powder-free gloves when handling potentially contaminated equipment.

WARNING 	**Risk of personal injury** Sodium hypochlorite solution is caustic; wear rubber gloves and eye protection when handling it.

WARNING/ CAUTION 	**Risk of instrument damage** Spills should be removed promptly. DO NOT use a cleaning agent or solvent on the front panel which is abrasive or harmful to plastics, nor one which is flammable. Always ensure the power is disconnected from the unit prior to any cleaning.

Wipe down exposed surfaces using a soft cloth wetted with a solution of 0.5% sodium hypochlorite solution (NaOCl or bleach). Industrial bleach contains approximately 10% NaOCl; household bleach contains approximately 5% NaOCl. When using industrial bleach, prepare a 1:20 mixture of bleach to water. When using household bleach, prepare a 1:10 mixture of bleach to water. Follow by wiping with a soft cloth moistened with deionized or distilled water.

6.2 Regular maintenance

The motor and shaking mechanism in the HCS Rotary Shaker 1 require no routine maintenance or lubrication. However at least every three (3) months, perform the following:

1. Unplug the unit.
2. Remove any accumulated dirt from the base and tray with a soft cloth, and if required, a dilute detergent solution.
3. Check all platform screws to make sure they are properly tightened

6.3 Detaching and replacing the shaker platform

In the event that the shaker platform needs to be removed (e.g., to clean up spilled reagent that cannot be properly cleaned with the platform in place), detach and replace the shaker platform as follows:

1. Remove the 4 screws on the shaker platform that are covered when plates are loaded on the platform.
2. Lift the shaker platform up off the shaker base.
3. Clean the shaker platform and shaker base with a dilute detergent solution. Make sure the shaker platform is completely dry before proceeding to the next step.
4. Line up the 4 screw holes on the shaker base with the 4 holes on the shaker platform.
5. Secure the shaker platform to the base mount using the 4 screws that were removed earlier.

6.4 Replacing the fuse

Only use fuses of the same type and rating for the voltage in your location.

Note: a spare fuse is stored in the fuse drawer.

1. Remove the power cord from the power source.
2. Gently pry open the fuse drawer at the rear of the shaker base.
3. Remove the fuse from the plastic clip in the fuse drawer.
4. Place a new fuse in plastic clip in the fuse drawer.
5. Insert the fuse drawer back into the instrument.

Voltage	HCS Rotary Shaker 1 catalog number	Fuse amperage	Fuse type
120 V	6000-2110E	5 AMP 250 volt	5 x 20 mm (0.25 x 1.25 in.) Quick acting UL-listed fuse
230 V	6000-2240E	5 AMP 250 volt	5 x 20 mm (0.25 x 1.25 in.) Quick acting UL-listed fuse

6.5 Shaking speed verification

We recommend verifying the speed of the HCS Rotary Shaker 1 every 3 months.

A standard optical tachometer with an average RPM function is required to perform this procedure. Set the tachometer to measure revolutions per minute.

1. Power on the instrument by pressing the power/standby button.
2. The standby indicator light turns off, and the speed display and the timer display illuminate.
3. Press the speed up/down arrows, to set the desired speed.
4. Apply a 3 x 3 cm (1 x 1 inch) strip of reflective tape to the shaker platform.
5. To begin shaking, press the shaking on/off button.
6. The shaking indicator light will blink rapidly until the desired speed is reached, then it will remain illuminated.
7. Press and hold the **Start Measurement** button on the tachometer.

   Depending on the tachometer, the functional description of the tachometer may vary.
8. Aim the light beam onto the reflective tape so the reflective tape crosses the light beam once every revolution. Focus the light beam on the reflective tape by raising or lowering the tachometer.
9. Hold the tachometer steady for at least 5 seconds.
10. Release the **Start Measurement** button on the tachometer.
11. To stop the shaking, press the shaking on/off button.
12. Press the **Memory** or **Recall** button on the tachometer to display the average RPM measurement.
13. Record the RPM average measurement.

    If the measured RPM is within ±100 RPM of the HCS Rotary Shaker 1 speed control setting, the operation of the HCS Rotary Shaker 1 is verified and no further action is required; if the measured RPM is not within ±100 RPM of the HCS Rotary Shaker 1 speed control setting, contact your local QIAGEN representative or QIAGEN Technical Services.

6.6 Servicing

Maintain your instrument in good working order. In the event that the instrument is subjected to adverse conditions, such as a fire, flood, or earthquake, schedule a service inspection of the instrument to ensure safe operation.

Do not attempt to repair the instrument. Removing the case will nullify the warranty. In the event that the product is inoperable, please contact your local QIAGEN representative and provide full failure details. When making your call, please make sure that you have the serial number of the instrument.

Do not ship the instrument back for repair until advised to do so by your local representative or QIAGEN Technical Services.

In the event that you are requested to return the instrument or any part thereof, it is your legal requirement to ensure that the unit is fully decontaminated. Your local QIAGEN representative or QIAGEN Technical Services may request a certificate is included with the instrument to verify the decontamination. Failure to do this may result in the refusal to repair the unit. Contact your local QIAGEN representative or QIAGEN Technical Services for a Return Goods Authorization (RGA) number. Mark this number on the outside of the shipping box.

7 Troubleshooting

Refer to this section for error handling and troubleshooting. If the recommended steps do not resolve the problem, contact QIAGEN Technical Services for assistance.

Possible problem or cause		Corrective action
Standby indicator light is not illuminated		
a)	Power cord is not plugged in properly	Make sure that the power cord is plugged in.
b)	Power source is not functioning	Make sure the power source has power; correct as necessary.
c)	Fuse may need to be replaced	Replace the fuse. See “Replacing the fuse,” page 18.
Speed and Time displays are not illuminated		
a)	Power cord is not plugged in properly	Make sure that the power cord is plugged in.
b)	Power source is not functioning	Make sure the power source has power; correct as necessary.
c)	Fuse may need to be replaced	Replace the fuse. See “Replacing the fuse,” page 18.
d)	Power/Standby button has not been pressed.	Press the power/standby button
The Speed and Time displays are illuminated but no shaking occurs		
The shaking on/off button is not pressed		Press the shaking on/off button.
Shaking stops unexpectedly		
a)	The fuse may need to be replaced	Replace the fuse. See “Replacing the fuse,” page 18.
b)	Set time has expired	Refer to sections 5.3 above to 5.5 above for timer operation.
The instrument vibrates excessively		
a)	The instrument is on an uneven surface	Relocate the instrument to a flat, even surface.
b)	Suction foot is loose	Secure each suction foot to the benchtop by firmly pressing on all four corners of the unit. If this does not resolve the issue, clean all 6 suction feet and the benchtop with 70% isopropyl alcohol and a lint-free cloth, then secure the unit to the benchtop by firmly pressing on all four corners of the unit
c)	The shaker platform is loose	Securely attach the shaker platform to the shaker base mount by tightening the 4 screws on the shaker platform that are covered when plates are loaded on the platform.
Microplates are not held securely		
a)	Microplates are not inserted properly	Properly insert the microplates (see “Loading microplates” on page 14).
b)	The stainless steel plate holders are loose or bent	Remove the microplates. Gently bend the stainless steel plate holders toward the platform so that they resemble the shape of a letter “V”.
Rattling or ticking sound when shaking		
a)	Loose screw on the platform	Tighten platform screws
b)	Foreign object on the platform	Remove foreign object and restart unit
Error Code E04 is displayed (unit overload)		
a)	Maximum load exceeded	Remove excessive load from the platform. Press the power/standby button to clear this error. Press the power/standby button again to resume operation.
b)	Loose suction foot	Secure each suction foot to the benchtop by firmly pressing on all four corners of the unit. Press the power/standby button to clear this error. Press the power/standby button again to resume operation.

Error Code E03 is displayed (drive system failure)

a)	Mechanical obstruction	Remove mechanical obstruction. Press the power/standby button to clear this error. Press the power/standby button again to resume operation.
b)	Loose suction foot	Secure each suction foot to the benchtop by firmly pressing on all four corners of the unit. Press the power/standby button to clear this error. Press the power/standby button again to resume operation.
c)	Drive system failure	If the E03 error persists after the above troubleshooting steps, contact QIAGEN Technical Services.

8 Technical Data

8.1 Operating conditions

Condition	Parameter
Dimensions (w x d x h)	28 x 43 x 10 cm (11 x 17 x 4 inches)
Shipping Weight	11.4 kg (25 lbs)
Power requirements for 6000-2110E	120 Volts AC 50/60Hz
Power requirements for 6000-2240E	230 Volts AC 50/60Hz
Power consumption (both voltages)	20 Watts
Fuse requirements (both voltages)	5 AMP/250V, Quick acting
Timer	0 to 9,999 minutes in one (1) second increments
Air temperature	–10°C to 60°C
Relative humidity	Maximum 80% (non-condensing)
Maximum load	4 microplates
Place of operation	For indoor use only
Pollution level	II
Altitude	Up to 2000 meters (6562 feet)
Shaking speed	100–1200 RPM
Shaking motion	Orbital
Shaking orbit diameter	0.3 cm (0.12 inches)

8.2 Transport conditions

Condition	Parameter
Air temperature	–20°C to 65°C in manufacturer's package
Relative humidity	Maximum 80% (non-condensing)

8.3 Storage conditions

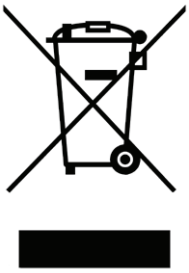
Condition	Parameter
Air temperature	–20°C to 65°C in manufacturer's package
Relative humidity	Maximum 80% (non-condensing)

Appendices

Appendix A – Waste Electrical and Electronic Equipment (WEEE)

This section provides information about disposal of waste electrical and electronic equipment by users.

The following crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or to a designated collection point for recycling, according to local laws and regulations.



Separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and make sure that the product is recycled in a manner that protects human health and the environment.

QIAGEN provides recycling upon request at additional cost. To recycle electronic equipment, you should contact your local QIAGEN sales office for the required return form. After you submit the form, QIAGEN will contact you either to request follow-up information for scheduling the collection of your electronic waste or to provide you with an individual quote.

Appendix B – Warranty

The HCS Rotary Shaker 1 is warranted against defects in materials and workmanship for a period of one year from the date it is shipped from the manufacturer. If notified of such defects during the warranty period, the manufacturer will, at its option, either repair or replace products that prove to be defective.

The warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, unauthorized modification or service, misuse, operation outside of the environmental specifications for the product or units returned with inadequate packaging.

Appendix C – FCC Declaration

The "United States Federal Communications Commission" (USFCC) (in 47 CFR 15. 105) declared that the users of this product must be informed of the following facts and circumstances.

"This device complies with part 15 of the FCC:

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."

This IVD equipment complies with the emission and immunity requirement of IEC 61326-2-6:2012 and DIN EN 61326-2-6:2013. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been designed and tested to CISPR 11 Class A. In a domestic environment it may cause radio interference, in which case, you may need to take measures to mitigate the interference.

"This Class A digital apparatus complies with Canadian ICES-0003."

The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/T.V. technician for help.

QIAGEN is not responsible for any radio television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connection cables and equipment other than those specified by QIAGEN. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Ordering Information

Product	Contents	Cat. no.
Hybrid Capture System Rotary Shaker 1	120 volt rotary shaker for use with *digene* Hybrid Capture 2 DNA tests	6000-2110E
Hybrid Capture System Rotary Shaker 1	230 volt rotary shaker for use with *digene* Hybrid Capture 2 DNA tests	6000-2240E

Document Revision History

Revision	Description
R1, April 2023	Initial release for IVDR compliance