



10303001/10303002/10303003

Aquilon
Chiller

User Manual

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II. Safety



IMPORTANT Safety Items to be Observed.

Safety Warnings

! DANGER (may cause serious damage to property and or casualties)

1. Please carefully read this User Manual prior to operating the instrument and observe the instructions on safe operation.
2. Ensure that only trained staff operate this instrument
3. The power source must be grounded reliably and away from any sources of electromagnetic interference.
4. Ensure that the instrument and its accessories are free of any potential defects.
5. Confirm that the voltage and frequency of the power supply matches the specified voltage and frequency specified prior to use.
6. Ensure the cover of the junction box is properly installed prior to operation.
7. Always wear applicable PPE whilst operating the instrument.
8. Place the instrument on a stable, dry, clean, antiskid, and fireproof surface.
9. Ensure there is sufficient ventilation gaps and spacing above and around the instrument
10. Ensure the instrument is stable and level and will not move due to vibration upon start-up.
11. Liquid must not enter the casing

! WARNING (may cause property damage or personal injury)

12. The working environment must be free of any flammable, explosive, volatile or corrosive substances.
13. Only accessories listed as 'optional accessories' for use, can guarantee operational safety.
14. Ensure handling and disposal of packaging is compliant to local environmental laws and regulations.

! ATTENTION (may affect operational performance or service life)

15. The instrument is deenergised only when the power cable is disconnected from the power source.
16. Ensure the instrument and its accessories are protected external vibration.
17. The Company reserves the right to modify the design and technical data of the pump without notice.
18. Only accredited and qualified professional repair technicians can open the instrument or conduct required repairs. Persons performing repairs on the instrument other than those selected or approved by the Company shall operate to void any warranty contained hereinabove for the product
19. Do NOT operate this instrument immediately after transport, wait 1-2 days before operating. The instrument must be used in accordance with this User Manual.

2.1 After Sales Support

If problems are encountered or technical support is required when installing or using the instrument, please contact serviceusa@hollandgreenscience.com

The Company may provide technical assistance and information regarding the instrument or equipment or Service without charge at its sole discretion. Buyer assumes sole responsibility for any reliance on or use of such assistance and information, and the Company makes no warranty thereon.

Upon contact the following information is required:

- Product serial number (located on the instrument nameplate)
- Description of issue or problem
- Method and or operating steps you have undertaken towards resolution.
- Your contact details inclusive of telephone number and email address.

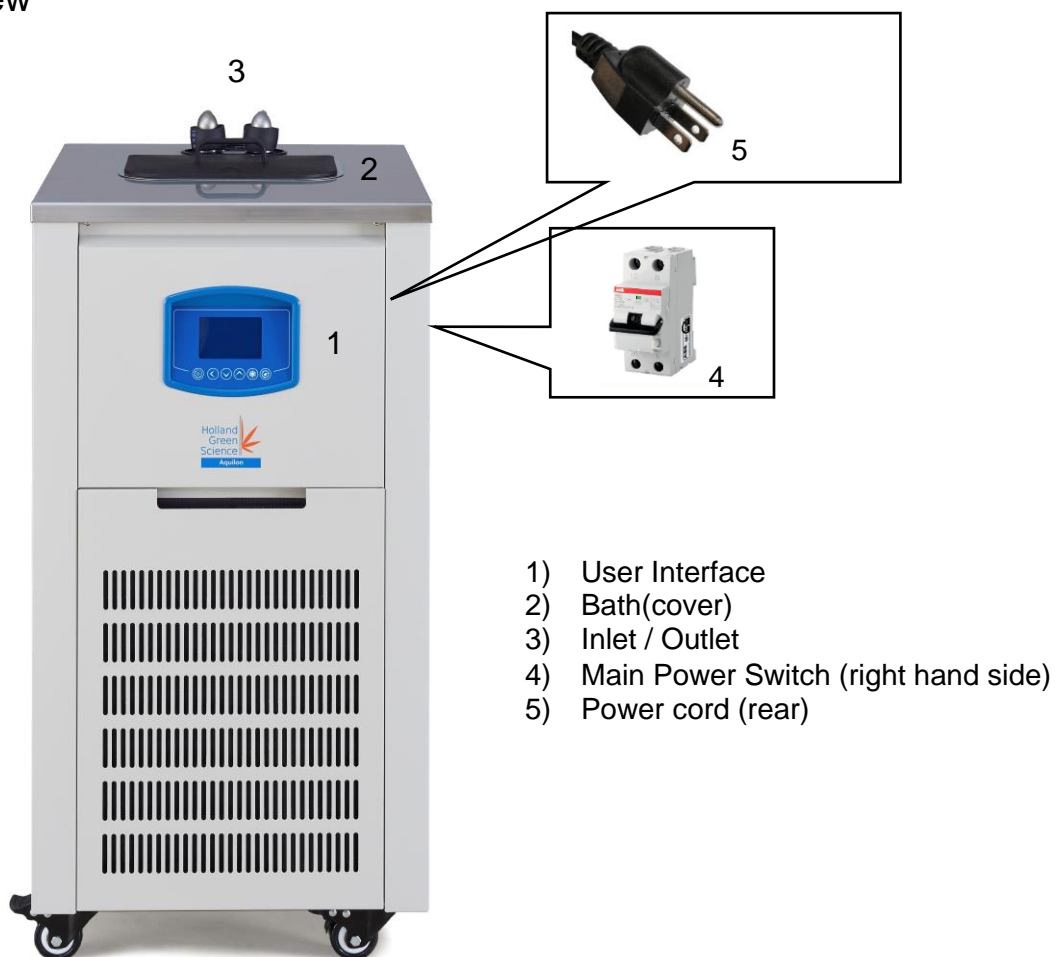
III. Aquilon Introduction

The Aquilon recirculating chillers feature PID temperature controllers to provide accurate and reliable temperature control and cooling. They are designed for continuous, reliable operation

When the liquid is not in use, the liquid should be discharged.

Included are alarm functions such as, timing and over-temperature protection.
A Pt100 platinum resistance sensor is used as the temperature sensing element.

Overview



IV. Technical Specifications

Model		10303001	10303002	10303003
Product Name		Aquilon Min	Aquilon	Aquilon Max
Reservoir volume(L)		10.5	13	25
Refrigeration Performance	Process temperature (°C)	- 20°C~20°C		
	Ambient Temperature (°C)	≤30		
	Ambient relative humidity (%RH)	≤65		
	Temperature stability (°C)	±0.5°C		
	Cooling capacity at 10°C (W)	1200	1500	2500
	Refrigerant	R404A	R410A	
Electrical performance	Power Consumption (W)	800	1300	1600
	Sensor	PT100		
	Controller Display Type	Liquid Crystal		
	Safety protection	Compressor delay protection, machine leakage, over-current, over-voltage protection		
	Power	AC120V/60HZ		AC220V±10%/60HZ
Pump	Power Consumption (W)	60		
	Maximum flow (L/min)	17		
	Maximum lift (m)	15		
	Liquid inlet and outlet pipe diameter (mm)	φ10	φ12	
Dimensions (mm)		335*455*671	400*500*739	450*600*821
Altitude (m)		<2000	<2000	<2000


V. Proper Use

The instrument is designed for non-residential use and to be used in conjunction only with accessories recommended within this manual and by the manufacturer.

VI. Inspection

Unpack the equipment carefully and check for any damage which may have arisen during transport. In the event of identified damage, please contact serviceusa@hollandgreenscience.com
The package includes the following items

Item Description	Quantity
Main Unit	1
Hose	1

	<p>CAUTION: If there is any visible damage to the instrument, please do not connect the instrument to a power supply.</p>	
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VII. Operating Instructions

Preparation and Precautions Prior to Use

- a. The instrument must be placed on a flat and level surface composed of non-combustible materials.
- b. 300mm (minimum) of clearance is required around the instrument to ensure the front and back ventilation grilles are well ventilated.
- c. This instrument is equipped with a compressor. If the instrument is transported, do NOT operate immediately. Stand in the correct position or location and wait 1 to 2 days prior to operating.
- d. When filling the liquid tank, ensure liquid does not enter the instrument casing.
- e. The liquid must cover the evaporator.
- f. Use an appropriate liquid for desired temperature range
- g. When the liquid is water, pay close attention to the temperature set point to prevent icing
- h. Do not mix liquids
- i. **DANGER!** Do NOT use flammable liquids. Use of such is classified as 'improper use' of the instrument.
- j. Tighten hose connections securely.
- k. During continuous operation, the connection between the bath cover and the circulation pump may become very cold. When touching these areas ensure suitable PPE is being worn.
- l. Do not transport the instrument with liquid inside the tank due to the potential of liquid ingress into the instrument.
- m. **Use only clean liquids** to prevent sediment or solids entering the cooling system and damaging the instrument.

7.1 User Interface



- **TEMP:** Displays the measured temperature value. To set the desired temperature, press the **SETTINGS** key until the **TEMP SET** value flashes. Press the setting key again to confirm the parameter.
- **SET:** Displays the desired temperature value set manually.
- **RUN:** Indicates that the chiller is operating.
- **Cooling Indicator:** Indicates chiller is cooling.
- **Circulation Indicator:** Indicates pump is operating.
- **TIME:** Displays the set running time; this value counts down to zero and operation stops. To set a timer, press the **SETTINGS** key. When the **TIME** value flashes, enter the desired time using they arrow keys. Leave at zero if a timer is not needed.
- **Silence Indicator:** Indicates a silenced alarm.
- **Alarm Indicator:** Indicates an alarm.



Settings: Used for manually setting values and parameters.



Left Arrow: Shifts to the numbers on the left to set desired value.



Down Arrow: One push will decrease 1 digit; A long press will decrease digits faster.



Up Arrow: One push will increase 1 digit; A long press will increase digits faster.



Cooling Key: Press and hold key for more than 4 seconds to control start/stop the cooling function.



Circulation Key: Press to start/stop the circulation function.

7.2 Startup




Connect the power according to the power outlet.


Turn on the instrument at the main switch. The display shows the initialization sequence before the instrument is ready to use.


NOTE: Every time you turn on the instrument it will beep intermittently, the icon of visual alarm and the word “end” will appear on the display.

7.3 Setting of parameters

Temperature Setting




When the instrument is switched on, press the  button one time, and the set temperature value will start to flash. Set the desired temperature value with  or  keys


The  button allows for movement between the digits.

Confirm the set value with another press of  button.

Time Settings

Press the  button.


The last value of the set time (timer) will start to flash. Set the desired value (hh:mm) by pressing  or  keys. The  button allows for movement between the digits.

Confirm the set value with another press of  button.

NOTE: the value “00:00” indicates the operating mode is continuous, once you start with the START / STOP button, the system will continue maintaining the set temperature until it is stopped manually.

If you set the timer, such as one hour, the instrument will reach the set temperature and maintain it for one hour.

7.4 Start / Stop Cooling Operation

Before the refrigeration is turned on, please press  key to let the liquid circulate in the pipeline in advance.

After setting the operating parameters, press  button for 4 to 5 seconds to start the cooling process.

VIII. Troubleshooting

Problem	Causes	Solution
No power	The power cord is unplugged or not plugged in correctly	Reinsert
	Tripped Breaker	Reset once, if a further trip occurs, contact serviceusa@hollandgreenscience.com

IX. Maintenance and Cleaning

Keep the instrument dry and clean in routine operations.

Clean the outer surface with a non-abrasive cleanser and only connect the power supply when the entire instrument surface is dry.

If liquid or moist solids enters the instrument, please immediately disconnect the power supply and contact supportusa@hollandgreenscience.com

- Surface stains on the instrument should be cleaned only by a clean, soft rag and detergent.
- The power must be disconnected before any maintenance or cleaning.
- Do not clean the instrument with any corrosive cleaning solutions.
- If the instrument is left unused for a long period, switch 'OFF' the power and store within a dry, clean, level, and stable surface at normal temperature.



Caution!

Before any Maintenance or Inspection, the Power Cable **MUST** be removed from the power socket.