



user guide

Helmer Scientific 1.8 cu ft Countertop Refrigerator



document history

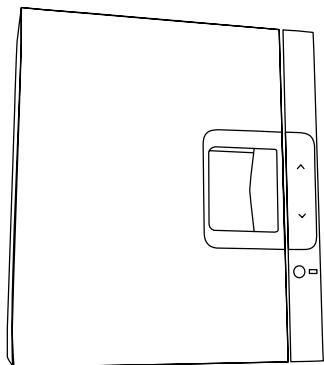
Revision	Date	CO	Supersession	Revision Description
A	29 FEB 2016	11618	n/a	Initial release

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welcome to Helmer® Scientific 1.8 cf Countertop Refrigerator

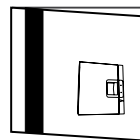
THIS PACKAGE CONTAINS:



1.8 cf Countertop Refrigerator



Glycol Sensor



User Guide



Power Cord



Accessory Bag



Door Lock Keys

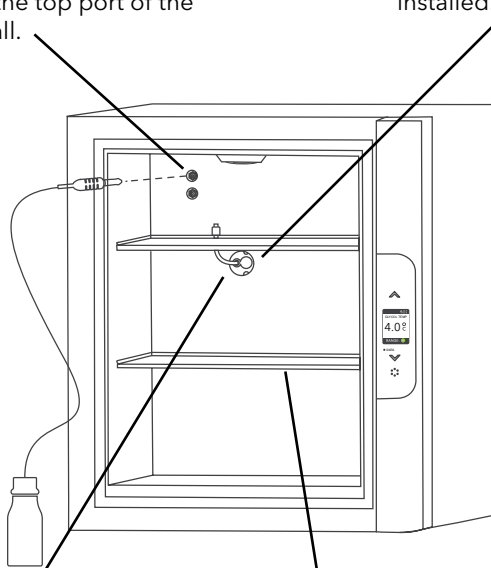
product interior

GLYCOL SENSOR PORT

Ensure the enclosed glycol temperature probe is inserted into the jack in the top port of the interior back wall.

ACCESS PORT

Allows independent monitoring probe to be installed.



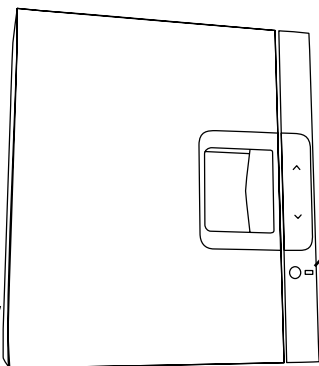
AIR SENSOR

Reads and controls interior air temperature.

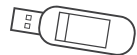
ADJUSTABLE SHELVES

Customize the shelf positions to maximize your storage. A lip around the sides and back of the shelf help keep stored boxes dry.

product exterior

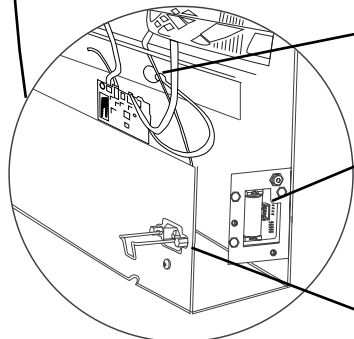


USB PORT



(Memory stick not included)

DOOR LOCK



Left rear corner
(Shown with access panel removed)

ACCESS PORT

A sealed port supports usage of an independent monitoring probe.

BATTERY

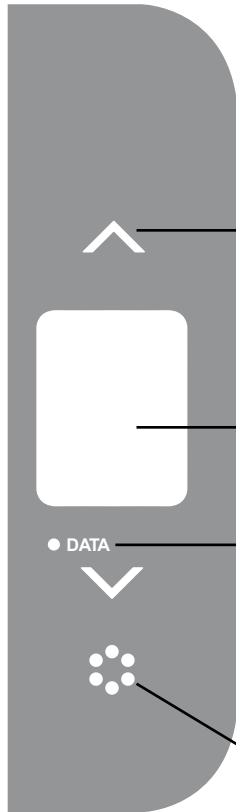
A pre-installed battery supports continuous data logging. Remove the red plastic tag from the battery after initial power-on. To replace, remove the access panel and two screws.

POWER CORD RECEPTACLE



control panel

The control panel features an LCD display, an LED indicator and 3 interactive buttons.



SCROLL BUTTONS


Use the ^ and v arrows to scroll through menu options.

LCD DISPLAY

LED INDICATOR

The LED indicator will illuminate green when the data logging feature is enabled and active, even during a power outage. Flashing red indicates data logging issues, such as low battery power, full memory, or data logging error.

CONTROL BUTTON

Use the control button  to access and confirm menu options.

LCD display screen



TEMPERATURE READING

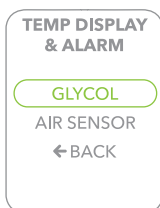
The display is preset to show the glycol temperature sensor in degrees Celsius.

RANGE INDICATOR

The range indicator is based on preset upper and lower alarm threshold temperatures.

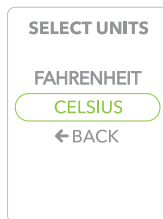
PRESET DISPLAY SETTING

The unit is preset to display and alarm based on glycol temperature.



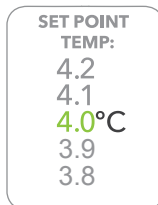
SET TEMP UNITS

The glycol temperature reading can be displayed in °C or °F.



PRESET SETPOINT TEMP

The unit is preset to
4.0 °C
(41.2 °F)



LCD display screen



SYSTEM ICONS

Icons at the top of the display screen represent the system's status.

PROMPT OR ALERT ICONS

system icons



USB



Defrost



Battery

prompt or alert icons

RANGE



Range OK

RANGE



Range Error



Please Wait



Temperature



Time/Interval



Download

alarm overview

preset alarms

Alarm	Factory Setting	Icon
Temperature Range Alarm	min 2 °C max 8 °C	
Door Ajar Alarm	1 minute	
No Power Alarm	> 10 seconds outage	
Battery Low Alarm	< 30% remaining	
Memory Full Alarm	< 25% remaining	

how to clear alarms

An alarm indicator will display in two second intervals until you clear it from memory. To clear an alarm press to activate the display and select YES from the menu option. Select YES to clear each alarm. An indicator will confirm each cleared alarm. Each alarm event is recorded in the data log. Selecting NO will skip to the next alarm or back to the main menu keeping the alarm state active.

how to change alarms

MAIN MENU

DATA LOG

ALERTS

TOOLS

SETTINGS

←BACK

ALERTS

DOOR AJAR

TEMP RANGE

MEMORY

BATTERY

POWER

←BACK

UPPER ALARM THRESHOLD:

8.2

8.1

8.0°C

7.9

7.8

LOWER ALARM THRESHOLD:

2.2

2.1

2.0°C

1.9

1.8

ALARMS SET:

8°C



2°C

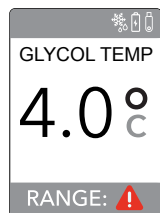
indicator purposes

LED indicator

The LED indicator illuminates green when the data logging feature is enabled and active, even during a power outage. Flashing red indicates data logging concerns, such as low battery power, full memory, or data logging error.

range indicator

The range indicator is based on preset upper and lower alarm threshold temperatures. In normal operation mode, RANGE displays a green checkmark indicating air temperature is within the acceptable range. If the temperature falls outside the range,  is displayed until the air temperature returns to the acceptable range. The  is your first warning sign of a potential deviation in temperature.




temp monitoring data


The system is preset to record a temperature data reading every 15 minutes. The onboard memory will store up to 4000 data points, providing approximately 41 days of temperature recordings at 15 minute intervals.

set date & time

Follow the steps below to set the date and time.



MAIN MENU DATA LOG ALERTS TOOLS SETTINGS ←BACK	SETTINGS DISPLAY TEMP DATE/TIME DATA LOG ←BACK	SET TIME & DATE MANUAL ←BACK	SET TIME 8 9 12:30am 1 2	SET DATE 8 9 12/30/2015 1 2	TIME & DATE SET 12:30 am 12/30/2015 
---	---	--	--	---	---

change recording interval

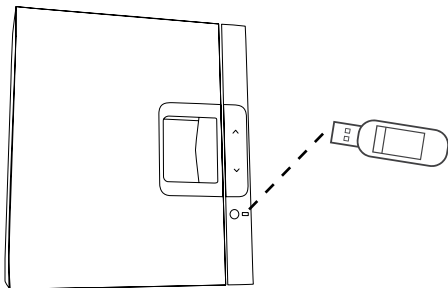
MAIN MENU DATA LOG ALERTS TOOLS SETTINGS ←BACK	SETTINGS DISPLAY TEMP DATE/TIME DATA LOG ←BACK	SET DATA INTERVAL DISABLE 15 MINS 1 HRS 8 HRS 12 HRS ←BACK	INTERVAL SET 15 mins 
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view & clear min/max

Follow the steps below to view and clear min and max temperature readings.

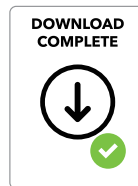
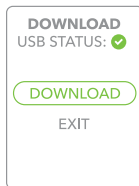
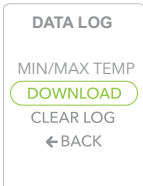
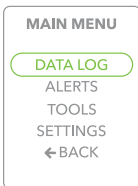
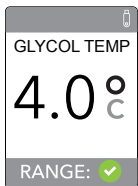
MAIN MENU DATA LOG ALERTS TOOLS SETTINGS ←BACK	DATA LOG MIN/MAX TEMP DOWNLOAD CLEAR LOG ←BACK	MIN/MAX TEMP LAST CLEARED 11:33 PM 12/12/16 MAX 5.3°C MIN 3.1°C CLEAR TEMPS EXIT	CLEAR TEMPS ARE YOU SURE?  YES CANCEL	MIN/MAX TEMP TEMPS CLEARED 
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data access

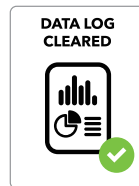
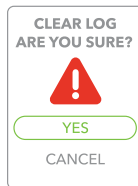
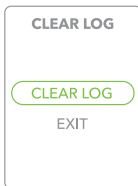
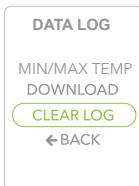
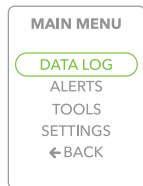


Insert a memory stick into the USB port to retrieve data. Wait for USB icon to appear in the system icon bar, then proceed to DATA LOG and follow the steps below to download data or clear data log.

download data



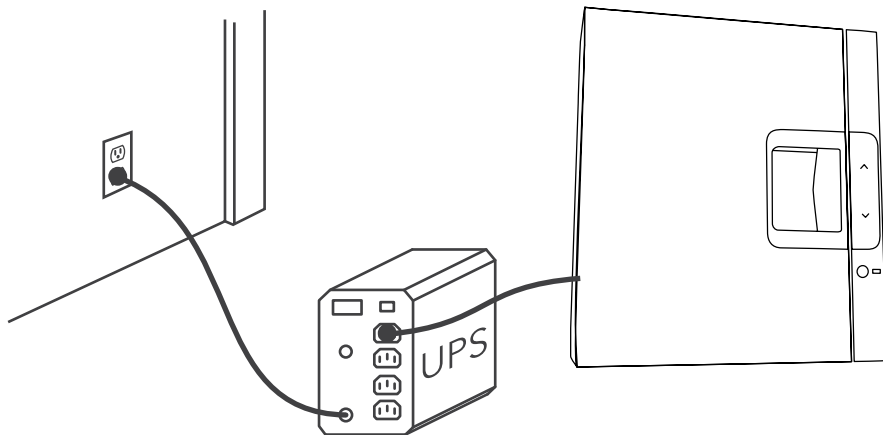
clear data log



battery backup protection

In the case of a power outage event, Helmer® Scientific 1.8 cf Countertop Refrigerators can remain fully operational if powered by an uninterruptible power supply (UPS).

Contact Helmer Technical Service for more information at 800-743-5637.



safety & general operation

Power On / Off

The system is activated by plugging the power cord into 110V power outlet. To turn off the system, unplug from the power source.

Cold Wall System

This is a cold wall system which employs tubing embedded in the sidewalls and back of the unit. During the refrigeration process, heat is removed through the tubing and expelled through the heat pump. With cold wall refrigerators, condensation may form on the interior of the cabinet and should be periodically wiped dry with an absorbent cloth.

Periodic Cleaning

Fans are located inside the rear panel and at the top of the cabinet and are the only mechanical parts in the system. Periodical inspection to monitor for dust accumulation is recommended. Do not attempt to clean the power supply below the fan assembly.

Refrigerant / Pressure Relief

If the refrigeration system is unplugged, venting of the R744 through the pressure regulating relief valves on the refrigeration system can occur. In such cases, the system may need to be recharged with R744 but in any case, the pressure regulating relief valve(s) are not to be defeated or capped. The relief setting shall not be altered. Service is only to be done by a factory authorized service person.

Caution

Risk of Electric Shock. If the cord or plug becomes damaged, replace only with a cord and plug of the same type. There are moving parts, uninsulated live parts, and hot parts. Do not remove the back panel or attempt to repair.

For repairs or operating issues, please contact Helmer Technical Service at 800-743-5637 or visit our website at www.helmerinc.com.



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