GRAINFATHER

CHEERS, NICE TO MEET YOU

GC4 INSTRUCTION MANUAL

G SERIES

HI, WANT TO CHILL?

GRAINFATHER 3 YEAR WARRANTY

THANK YOU FOR CHOOSING THE GRAINFATHER GC4

Get started by following these instructions on how to assemble and use your **G**C4.
We recommend reading the following safety information before use.

SAFETY INFORMATION

CAUTION

Risk of Fire or Explosion. Failure to follow this safety information can cause a fire hazard.

1. When transporting, keep level and lift from the base.
2. Never tip the unit on its side or upside down. This will void the warranty as it will damage the electronics.
3. Always operate on a flat surface in a well-ventilated environment.
4. **WARNING:** Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
5. Keep the sides of the unit where the vents are located, at least 20cm (7.9”) clear of any objects as it requires uninterrupted airflow to operate.
6. Avoid getting any liquid on the control touch panel.
7. Use food grade propylene glycol. Seek glycol manufacturers specifications for more information.
8. Do not store explosive substances such as aerosol cans with a flammable propellant on or in this appliance.
9. **WARNING:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
10. **WARNING:** Do not damage the refrigerant circuit.
11. **WARNING:** When positioning the appliance, ensure the supply cord is not trapped or damaged.
12. **WARNING:** Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.
13. **CAUTION:** Risk of Electric Shock. If the cord or plug becomes damaged, replace only with a cord and plug of the same type.
14. **CAUTION:** Avoid any act of moving and handling of the chiller/refrigerator/freezer that may cause damage to the refrigerant tubing or increase the risk of a leak.
15. This appliance is intended to be used in household and similar applications.

THE FOLLOWING STATEMENTS APPLIES TO GRAINFATHER PRODUCTS SOLD IN AUSTRALIA AND NEW ZEALAND:

- The appliance is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children should be supervised not to play with the appliance.

THE FOLLOWING STATEMENTS APPLIES TO GRAINFATHER PRODUCTS SOLD IN EUROPE AND UNITED KINGDOM:

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.

NOTE: Further to the safeguards listed above, we do not recommend the use of this product by children. Not following the safety information above could result in serious injuries and may void your warranty.

HOW DOES A GLYCOL CHILLER WORK?

Your new Grainfather **G**C4 Glycol Chiller is a powerful fermentation tool that provides both cooling and heating power to your fermenter to ensure your fermentation stays at the ideal temperature with a high level of accuracy.

The **G**C4 cools a reservoir of glycol solution and uses a pump to deliver cold glycol when your fermenter's controller requests, cooling your fermentation. It also provides power to a 30W heater in your **G**F30 Conical Fermenter, or the heater included with your **G**CA Glycol Chiller Adapter. These elements combined ensure that your fermentation is consistently maintained at the desired temperature. In ideal conditions, it's possible to cool a fermenter to between 4 - 6°C (39 - 43°F) or heat it to 10°C (18°F) above ambient temperature. You can easily manage the fermentation temperature through the fermenter controller or connect through the Grainfather App.

GRAINFATHER GC4 GLYCOL CHILLER COMPATIBILITY

Choose to connect your glycol chiller to a Grainfather **G** SERIES Fermenter, like the **G**F30 Conical Fermenter, or almost any other fermenter when used with the Grainfather **G**CA Glycol Chiller Adapter, sold separately online or at your local retailer. The **G**C4 can power up to four fermenters simultaneously.

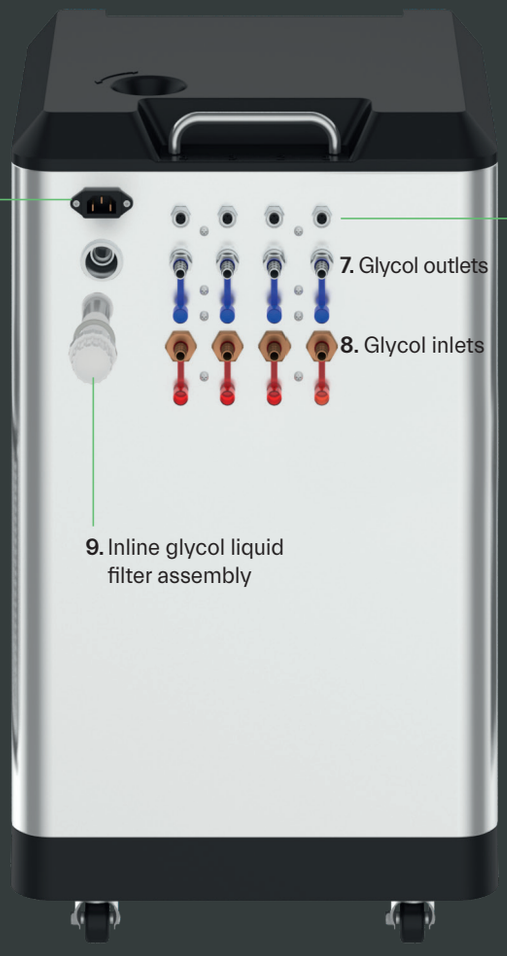
NOTE: See diagram to right.

ANATOMY DIAGRAM & PARTS LIST

1. Control panel

2. Glycol liquid filler cap

10. Fermenter power sockets



3. Power socket

7. Glycol outlets

8. Glycol inlets

4. Glycol funnel

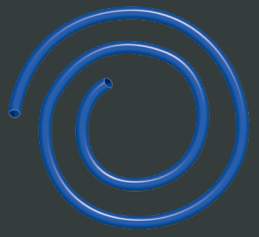
5. 3 L (0.8 US Gal) propylene glycol (packaged separately*)

9. Inline glycol liquid filter assembly

11. **G** SERIES Conical Fermenter Cooling Connection Kit

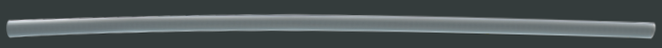
12. Cooling hose (inlet)

13. Seals 14. Coupler set



15. Cooling hose (outlet)

6. Wall outlet power cord (with plug based on country of sale*)



16. Priming hose

NOTE: The full spare parts list for the **G**C4 is available online: **help.grainfather.com**

*Items included with **G**C4 may vary by market.

PRIMING YOUR GC4 PUMP

Make sure the **G**C4 has been standing upright for 24 hours before turning it on. Before the first use of this product, you must prime the pump by carefully following the instructions below.

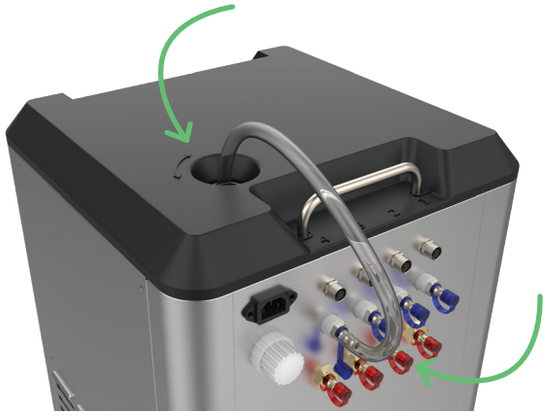
IMPORTANT NOTE

Complete this step before first time use only.

1. Before plugging in the **G**C4, ensure that the glycol filter cap on the back of the unit has been screwed on tightly.

2. Open the glycol liquid filler cap (2) located on the top of the **G**C4. Using the glycol funnel (4), pour 4 L (1.06 US Gal) of water into the tank. Close the cap and let the chiller rest for a minimum of 5 minutes.

3. Connect the priming hose (16) to the glycol mixture outlet connection (7) (with blue cap) under number 4. Then, open the cap and insert the free end of the hose into the opening of the glycol tank.



4. Measure out 2 L (0.53 US Gal) of food-safe propylene glycol (5) into a jug.

5

5. Attach one end of the power cord (6) to the power socket (10) on the back of the **G**C4 and plug the other end into a suitable wall socket. Press the power button to turn on. When turned on, the chiller will make a beeping noise and an exclamation warning light will flash - this is the low glycol level warning.

6. Press and hold the '▲' button for 3 seconds to enter pump override mode. The 'SET' button should be flashing to indicate the chiller is in pump override mode. This mode deactivates the low glycol level warning (if present) and allows the pump to run without a cooling signal from a Grainfather **G** SERIES Fermenter.

7. Press the number '4' button to start the pump, the button will begin to flash and the pump will start to run. If this does not happen, check that the chiller is in pump override mode (step 6).

8. Leave the pump to run for 2 minutes, then press the number '4' button again to stop the pump.

9. Pour the prepared 2 L (0.53 US Gal) of propylene glycol into the tank using the glycol funnel (4). After one minute from when the pump has stopped, press the number '4' button to start the pump again. You should start to see bubbles and liquid flowing through the hose (16) from the outlet connection to the opening of the glycol tank.

10. Repeat the pump cycle with the pump on for 2 minutes, then off for 1 minute until only liquid (no visible bubbles) is flowing through the hose. Then, press the number '4' button to stop the pump and close the port.

11. Turn off the **G**C4 and then disconnect the priming hose and close the cap.

CONNECTING TO A G SERIES FERMENTER

If you're using a **G** SERIES Fermenter, use the instructions below to set up your **G**C4 in preparation to chill. If you're using a **G**CA, please go to page 10.

PREPARE COOLING CONNECTIONS

A Cooling Connection Kit (11) is required to use your **G**C4. This consists of brass couplers (14), seals (13), and hoses (12, 15) and connects your **G**C4 to a **G** SERIES Conical Fermenter. Firstly, connect the couplers to the fermenter:

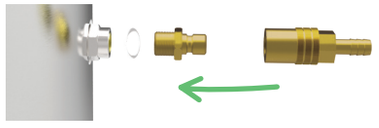
1. Place a white seal inside the threaded hole on the side of the fermenter.

2. Next, take the threaded section of the coupler and screw it into the same side of the fermenter where you placed the seal. Make sure it's screwed in tightly. Use a spanner, if necessary, but do not over tighten.

3. Connect the other end of the coupler to the section you just used by pushing the spring-loaded sleeve back and sliding it over.

4. Repeat these steps on the other side of the fermenter.

NOTE: It is possible to cut the hoses shorter if necessary. Place the chiller and fermenter in their final place, carefully measure and cut the hoses accordingly.



COUPLING THE GC4 TO YOUR FERMENTER

1. Make sure the **G**C4 is turned off.

2. On the back panel of the chiller, locate the glycol outlet connections (7). Connect the blue hose to the outlet connection of channel number 1. This hose then connects to the coupler on the fermenter that is attached in the lowest position.

3. The glycol return connection is where the glycol is returned to the chiller. The return connections have a red silicone cap connected to them and are located below the outlet connections. Connect the red hose to the return connection of channel number 1. This hose then connects to the coupler on the fermenter that is attached in the highest position.

NOTE: Make sure that your glycol outlet connection (blue hose) is connected to the coupler in the lowest position on the fermenter, and the glycol return connection (red hose) is connected to the coupler in the highest position on the fermenter. The glycol needs to be pumped into the cooling sleeve from the bottom to ensure that the sleeve is flooded with glycol.

NOTE: The **G**C4 can connect up to four fermenters to the chiller. The outlet connections from the chiller are silver in colour and the return connections are gold.

The buttons on the front of the chiller labelled 1, 2, 3, and 4 match up to the connections on the back labelled accordingly.

CONNECTING MORE THAN ONE FERMENTER

The **G**C4 can allow up to four fermenters to be connected at one time. When connecting more than one fermenter, repeat the connection steps on pages 9 and 10 for each additional fermenter that needs to be connected by matching the remaining connections labelled from 2–4. Then complete the following:

1. Top up the glycol tank as per the 'Topping Up the Glycol Tank' sub-section on page 11 until it is FULL.

2. Take care to make sure that each fermenter is plugged into the correct numbers on the **G**C4. It is a good idea to label the fermenter and hoses to the matching number on the chiller to avoid any confusion.

NOTE: To prevent damage to internal chiller components, if the glycol level is too low, the pump and compressor will automatically switch off. The chiller will make a beeping noise and an exclamation warning light will flash. This is the low glycol level warning. When this happens, refill the glycol tank until it is FULL which will restart the pump.

CONNECTING A FERMENTER USING THE GCA GLYCOL CHILLER ADAPTER

To connect your **G**CA to the **G**C4, please use the instructions provided with your **G**CA or find the instructions online here: https://bit.ly/gc4-gca

TOPPING UP THE GLYCOL TANK

Once your **G**C4 starts pumping glycol to a new fermenter for the first time, the fermenter will retain some glycol so the glycol level in the **G**C4 will drop.

We recommend topping up the tank until it is full to maintain optimum cooling performance. The 'full' level is slightly over 6 L (1.5 US Gal) which is indicated when the liquid level is high enough so that the glycol just submerges the cross bar (the flat metal piece that the float indicator slides through). Please use the instructions below to top up your glycol.

1. Turn off the **G**C4.

2. Make up a glycol mixture of one part glycol and two parts water. If your tank was full and then you connected an additional fermenter, the approximate volumes required to top up the tank until it is full are as follows:

600 ml (20 US FL oz) of mixture consisting of 200 ml (6.7 US FL oz) glycol + 400 ml (13.5 US FL oz) water.

NOTE: Always combine the glycol and water in a jug prior to adding into the tank.

TIP: To save time, we recommend preparing more than enough mixture and storing the remaining unused glycol mixture in a bottle to top up next time as per the ratio below:

33% propylene glycol (330 ml / 11.2 US Fl oz) + 67% water (670 ml / 22.7 US Fl oz)

3. Open the glycol liquid filler cap on top of the glycol chiller. Using the glycol funnel provided, slowly pour the glycol mixture into the tank. Pouring too quickly may cause air bubbles to become trapped.

4. Replace and tighten the cap.

5. Wait a minimum of five minutes before turning the unit back on. This allows any air bubbles that may have been trapped in the mixture to escape. Trapped air bubbles can prevent the pump from operating correctly or lead to false low-level alarms.

IMPORTANT NOTE

If contaminants enter the glycol tank, they can cause blockages. To prevent contaminants from entering the glycol tank ALWAYS follow these steps:

- Use a clean vessel free from any foreign matter when making up the mixture.
- Use the included Grainfather Glycol Funnel to transfer mixture into the **G**C4.
- Replace the cap immediately after adding the mixture into the tank.

NOTE: The **G**C4 has an inline filter to protect from foreign matter. It should be cleaned referring to the instructions on page 14 whenever you replace your glycol. For optimal performance choose to replace the glycol mixture every 6 months.

OPERATING THE CHILLER

You are now ready to start cooling your fermenter with the **G**C4. Please follow the instructions below to begin. You will find a control panel function guide on page 15 to help you understand the button functionality.

1. Ensure the **G**C4 is plugged in to a suitable wall socket.

2. Connect the M12 power cord (included with your **G** SERIES Fermenter or the **G**CA) to the fermenter power socket (3) located under number 1 on your **G**C4.

3. Turn the **G**C4 on by pressing the power button on the control panel, the button will light up red.

4. The fermenter will now receive power from the **G**C4 and turn on.

NOTE: Using the chiller with your **G** SERIES fermenter eliminates the need for a separate fermenter power supply as the chiller provides power to all fermenters through their respective M12 power cords.

TEMPERATURE CONTROL

NOTE: Please read this thoroughly before first use.
We have configured the unit to the optimal settings, to provide the best cooling efficiency from the chiller to a fermenter for any required fermentation temperature. We highly recommend to not change these settings as this could result in poor cooling performance and in extreme cases the glycol mixture may freeze, which has the potential to cause damage to the chiller unit.

If your controller needs to be reset, please see the factory settings and method below to complete this.

GLYCOL SET TEMPERATURE = -4.5°C (23.9°F)
HYSTERESIS = 3.0°C (5.4°F)

1. Press 'SET', then using the '▲' and '▼' buttons, select your desired glycol set temperature. Press 'SET' again to confirm.

2. Press and hold the '▼' button to enter the hysteresis setting mode. Using the '▲' and '▼' buttons, select your desired hysteresis. Press 'SET' to confirm.

NOTE: The set temperature is the compressor off temperature, and the hysteresis is the difference between the compressor on and off temperatures. To prevent accidentally changing the settings you can lock the controller. When the controller is locked, the power button will flash slowly. To lock or unlock, press and hold the power button for 3 seconds.

SETTING FERMENTER TEMPERATURE

1. Set the desired fermenting temperature on the controller of the **G** SERIES or **G**CA controller.

2. Press the number button on the **G**C4 that corresponds to the connection that will be in use.

3. The fermenter will now signal to the **G**C4 if it needs any cooling or heating.

NOTE: Once a number button is pressed, it will light up blue. If it is also receiving a cooling signal from the connected fermenter, the light will flash.

CLEANING & MAINTENANCE

CLEANING THE AIR FILTER

For optimal performance of your **G**C4, it is recommended to clean the air filter every six months. If the **G**C4 is operated in a dusty environment, cleaning will need to occur more often to ensure best performance.

1. Turn off the unit and unplug at the wall.

2. Remove the right-hand side and left-hand side panels of the unit by unscrewing and removing the screws using a 2.5mm Allen key and pulling off from the middle region of the panel.

3. Gently remove the side panels and the plastic frames containing the air filters.

4. Use a vacuum cleaner to remove any dust from the air filter.

5. Reinstall the air filters and the side panels.

6. Replace screws.

CLEANING THE EXTERIOR

The stainless exterior of the unit should be cleaned regularly to remove dust from the unit, which may cause rust spots over time, especially in high-humidity areas.

Use a suitable stainless-steel cleaner and a soft cloth to clean the unit. For plastic components, use a glass cleaner and a soft cloth to remove any dust.

CLEANING SAFETY

1. Always turn off the chiller prior to cleaning and unplug from the socket.

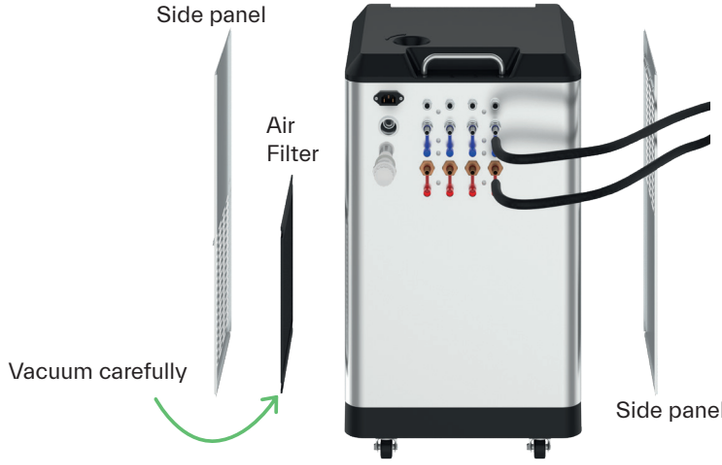
2. Regularly clean the ventilation panels using a soft cloth or brush.

3. DO NOT clean the stainless steel or plastic casing with a wire brush or steel wool.

4. Use water or washing liquid that does not contain alkali or chlorine products.

5. DO NOT spray water onto ventilation panels.

7. Regularly check the glycol mixture level to make sure it is not too low. For optimal performance, it is recommended to replace the glycol mixture every 6 months.



REPLACING EXISTING GLYCOL MIXTURE WITH NEW GLYCOL MIXTURE

For optimal performance, we recommend replacing the glycol mixture every six months if you are using your **G**C4 regularly. See below for instructions on how to replace the glycol:

1. Turn off the **G**C4.

2. Attach a hose to the glycol outlet connection of any channel.

3. Put the free end of the hose into a bucket or sink for the glycol mixture to exit into.

4. Turn the **G**C4 on, then make sure all number buttons are in the 'OFF' position. The buttons will have no light on if they are off.

5. Enter pump override mode by pressing and holding the '▲' button for 3 seconds. The 'SET' button should be flashing to indicate the chiller is in pump override mode. This mode deactivates the low glycol level warning (if present) and allows the pump to run without a cooling signal from a Grainfather Conical Fermenter.

6. To begin the removal of the existing glycol mixture from the glycol tank, press the number button on the **G**C4 that corresponds to the outlet where you have attached the hose. When the glycol stops flowing, press the same number button again to stop the pump.

7. Turn the **G**C4 off.

8. Discard the glycol mixture you have removed from the chiller.

9. Before replacing the glycol in the tank, you will need to clean the inline glycol filter as per the instructions to the right on this page.

10. You will now need to refill the glycol tank. Follow the priming instructions on page 7 to do this.

NOTE: Running the pump dry for an extended period will cause damage to the pump. DO NOT leave the **G**C4 unattended when in pump override mode.

CLEANING THE INLINE GLYCOL FILTER

The inline glycol filter can become blocked with debris over time, reducing the performance of the **G**C4. It is recommended to clean the inline glycol filter every six months or when the glycol solution is replaced.

1. Check that the **G**C4 is switched off.

2. Using a towel, hold underneath the filter cap and remove the filter cap. A small amount of glycol solution will flow out.

3. Gently remove the filter and flush with cold water from the outside, then visually inspect for debris.

4. Once the filter is clean, reinstall the filter and the cap ensuring the filter cap is firmly in place.

TOUCH PANEL FUNCTIONS

FUNCTION	ACTION	DESCRIPTION	RECOMMENDATION
On / Off	Touch the 'ON/OFF' button.	Turns the **G**C4 on and off.	Use as needed.
Switch between °C and °F	Hold the 'SET' button for 3 seconds.	Switches the functions of the **G**C4 between °C and °F.	Use as needed.
Activate/ deactivate channel '1', '2', '3', or '4'	Touch the '1', '2', '3', or '4' button.	When a channel is activated, the button will light up blue. In this state, heating or cooling will automatically be provided when a signal is received from the fermenter/**G**CA. The button will pulse blue when glycol is pumped to the fermenter. When a channel is inactive, the button will not be lit. No heating or cooling will be provided to the fermenter.	Use as needed.
Lock or unlock the touch panel	Hold the 'ON/OFF' button for 3 seconds.	When the touch panel is locked, it won't respond to unintentional inputs, and the power button will pulse red.	Use as needed.
Pump override	Hold the '▲' button for 3 seconds. Activate the pump using channel '1', '2', '3', or '4' buttons on the touch panel. Hold the '▲' button for 3 seconds to exit pump override mode.	The 'SET' button will flash when the **G**C4 is in pump override mode. This mode silences the low-level alarm, allowing the pump to run at a low glycol level and without a cooling signal from a fermenter/**G**CA.	Use as needed. Do not run the pump dry or leave it unattended in this mode.
Change glycol set temperature	Touch the 'SET' button. Use the '▲' and '▼' buttons to change the set glycol temperature. Touch the 'SET' button to confirm.	This function can adjust the temperature at which the **G**C4 maintains the glycol. However, we recommend keeping the default settings (-4.5°C, 23.9°F). Settings colder than this could damage the **G**C4.	Not recommended to change unless directed by Grainfather Customer Service.
Change hysteresis	Hold the '▼' button for 3 seconds. Use the '▲' and '▼' buttons to change the set hysteresis value. Touch the 'SET' button to confirm.	The hysteresis value is the difference between the glycol temperature when the compressor turns on and off. We recommend keeping the default settings (3°C, 5.4°F).	Not recommended to change unless directed by Grainfather Customer Service.

IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL INSTRUCTIONS

CAUTION
- Risk of fires and electric shock.
- Replace only with genuine Grainfather cord set.
- Do not immerse in water.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

FOR INDOOR USE ONLY

SCAN AND EXPLORE THE FREE GRAINFATHER APP

RESOURCES: Check out our YouTube Channel for helpful videos.
For more information, visit our Help Centre: **help.grainfather.com**

GET IN TOUCH ONLINE: help.grainfather.com/hc/en-us/requests/new