

## FERMENTEMP H2 User Instructions

Congratulations on your investment in a FERMENTEMP H2 fermenting brew temperature controller! This will help you to brew better and more consistent beer by achieving consistent temperature control, eliminating any effects caused by variations of temperature on your brewing batches and giving you piece of mind with around the clock monitoring and control. The FERMENTEMP H2 model will also count the number of hours from switch-on, this allows you to accurately record the number of hours (from the start) when taking gravity readings. It has an audible alarm (for under and over temperatures) and also records the max and min temperatures seen during the fermentation, so you can be confident the brew has not been spoiled.

Before you start using the FERMENTEMP H2, there are a few things to consider. FERMENTEMP H2 can only actively heat the brew, it cannot actively cool it - this means that for correct operation you must use the FERMENTEMP H2 in an environment where the ambient temperature is cooler than the desired fermentation temperature of your brew. This will allow the FERMENTEMP H2 to increase and maintain the brewing vessel temperature throughout the process.

**As FERMENTEMP H2 adds a maximum of 48W of gentle heating to the brew, it is important to note that if you're storing your brew in colder environments (e.g. in a garage or basement or during winter) where the temperature will drop sharply at night, it may be necessary to also use insulation around your brewing vessel.** This will reduce the heat loss from the vessel, and also means that any heat energy the FERMENTEMP introduces to your brew will be efficiently used and not lost. Our temperature statistics will help you check if your insulation is effective. Unlike other heaters that heat constantly, FERMENTEMP control allows you to save money and energy by only applying extra heat when it's actually needed.

Temperature has an important effect on the fermentation process, colder makes fermentation run slower and possibly stall, warmer makes it run faster and can produce fusel alcohols (solvent tasting alcohols), as well as potentially killing yeast. Depending on the type of brew you're looking for, FERMENTEMP can help regulate and achieve your goals.

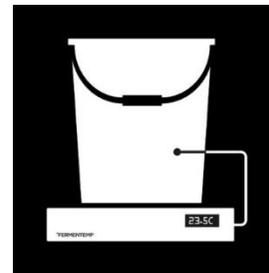
We know you want to experiment with your brew and make it better every time – FERMENTEMP assists with this by providing consistency of output, letting you concentrate on the flavour, clarity or even how quickly you can brew batches. Maintaining a constant temperature makes the brewing times consistent, as it is not varying with the fluctuations of ambient temperature.

**SAFETY FIRST.** When insulating the fermenter be careful not to cover the top of the heater. This will allow the heat to dissipate from the top of the heater into the fermenter, stopping the heater from 'overheating'. It should be noted that the FERMENTEMP has an internal over-temperature cut off. Be careful not to spill any liquids on the heater, if you do, do not touch the heater or fermenter, immediately remove the power and clean and allow the heater to dry before using again.

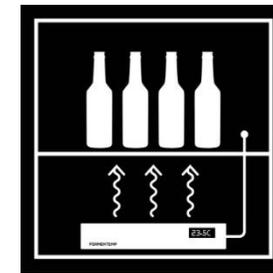
**Using the FERMENTEMP H2.** The FERMENTEMP H2 is designed to have the primary fermentation vessel placed on top and the Brew temperature sensor (black lead) taped to the outside of the vessel, halfway between the top and bottom of the liquid, this will indicate the temperature of the liquid at its midpoint. After placing the vessel on top, we recommend adding an additional insulation jacket to help maintain temperature. The Ambient temperature sensor (white lead) should be placed near your fermenter but not near any heating sources. Alternatively you can place the black probe on the outside of the vessel at the top liquid and the white on the outside of the vessel at the mid-point instead of measuring ambient.

You're now ready to start fermenting! Plug the power lead of the FERMENTEMP H2 into the mains supply to turn on the FERMENTEMP. The controller at the front of the unit will activate, allowing you to set your brew fermentation temperature. If the temperature of your brew is too low/high, you may find a temperature alarm triggered when you turn on the unit – simply press any key on the controller to silence it. We recommend you use the Reset Stats option each time you start a new brew – check the **Menu System** section for details.

### Primary Fermentation Control



### Secondary Fermentation Control

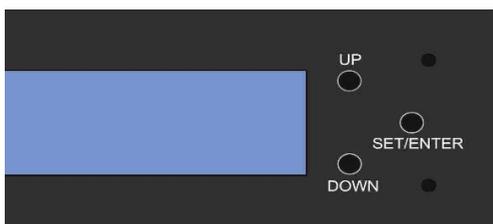


**Controller Operation.** The FERMENTEMP H2 controller panel has a 16x2 backlit character LCD display and a navigable menu system to keep you up to date with how your brew is progressing.



When the heater is on the Heating “Ht” status on the top-right of the main display will change to indicate an up arrow, instead of a single line “\_”. If the buzzer is sounding, this indicates that an alarm has been activated, low or high temperature. The buzzer will also sound briefly any time you press a key.

The display will show the current Brew temperature and the heating status continually on the first line, and rotate display of different information and statistics on the bottom line, showing each for about 5 seconds.



**Setting the Brew/Fermentation Temperature.** To adjust the set temperature, press the ▲ or ▼ buttons to the right of the display, you can then use these to adjust the set point temperature accordingly in 0.1° steps. After 5 seconds of inactivity the value will be saved and the display will revert to the main display, or you can press **Set/Enter** button in the middle to save immediately.

When the measured temperature drops below the level you have set, the heating will be turned on. This will be indicated by the Heating “Ht” status on the top-right of the main display changing to indicate an up arrow.

To ensure that your brew does not get too hot or cold, the controller also includes a low and high temperature audible alarm. This will be triggered (by default) when the measured Brew Temperature is +5° above or -5° below the set temperature. You can change this value by referring to the **Settings Menu** section. Once the heater is turned on, the temperature displayed will slowly rise to meet the temperature you’ve set. As the FERMENTEMP H2 uses gentle heating, please note that it may take some time to get the brew up to the temperature you’ve set, perhaps several hours depending on the temperature differential – ideally you’ll ensure that the brew is

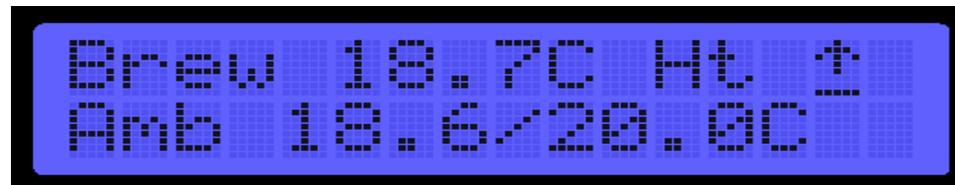
close to the desired temperature before starting to control it, and FERMENTEMP H2 will maintain that level for you.

**Monitoring your Brew.** Now that you’re setup the FERMENTEMP H2, you can sit back and relax! It will do the work of making sure your brew is sitting comfortably, whilst you can do the same. If you like, you can monitor the brew temperature using the led numeric display during the brew process.

**After Primary Fermentation has Finished.** Once you’ve finished Primary Fermentation, all you have to do is switch off & unplug the FERMENTEMP H2 from the mains supply, remove the temperature probe from the fermenter.

**Secondary Fermentation.** The FERMENTEMP H2 can be used to control the temperature of a cupboard or closet during secondary fermentation, conditioning or lagering. We recommend that the FERMENTEMP unit is placed on the bottom shelf of the cupboard or closet and the brew to be conditioned is placed on shelves above, do not place any bottles or vessels directly on the FERMENTEMP during secondary fermentation. It is also important to remember to set the correct secondary fermentation temperature set point on the controller.

**Information Display.** The bottom line of the LCD display will show additional information on a rotational basis, changing every 5 seconds. Additional explanation on this is below.



Information	Explanation
<b>Set Temperature</b>	Display the Set Temperature that FERMENTEMP will heat and maintain to.
<b>Fermentation Runtime</b>	Number of hours operating.
<b>Ambient Temp Min/Max</b>	Minimum and Maximum temperature observed on the Ambient Temperature probe. This can help diagnose if you need to move your brew to a warmer environment.
<b>Brew Temp Min/Max</b>	Minimum and Maximum temperature observed on the Brew Temperature probe. This can help diagnose if you need to improve your insulation.
<b>Ambient Temperature</b>	The present value from the Ambient Temperature probe.

**Menu System.** To access the menu system, press the **Set** button when the main display is showing the brew temperature and heating status. The menu will be displayed and you can navigate using the **▲** or **▼** buttons. Press **Set** to activate the selected top menu item, denoted by a **>** symbol to the left-hand side of the display. If you do not select an option, the menu will automatically close and return to the main interface after 10 seconds of inactivity.



Menu Option	Explanation
Settings	Configure FERMENTEMP settings, including temperature units.
Statistics	Display additional fermentation statistics.
Reset Stats	Reset all fermentation statistics. You will be asked to confirm this.
Exit	Close the menu.

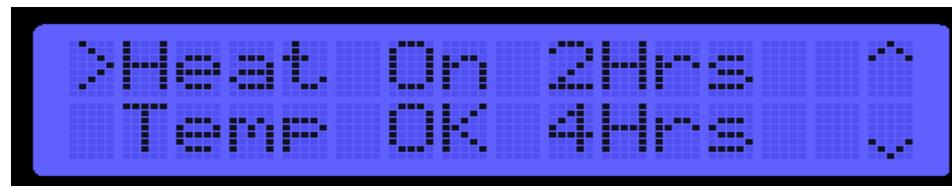
**Settings Menu.** If you would like to modify the default behaviour of the FERMENTEMP, you can do so by altering the controller settings, accessible via the Main Menu.

Use the **▲** or **▼** keys to navigate between the different settings and press the **Set** key again to enter the setting - the **>** symbol will change to a **=** symbol. Then use the **▲** or **▼** keys to adjust the value down and up. After changing the value, press the **Set** key to save it.



Menu Option	Explanation
Temp Units	Select the Temperature Units used with FERMENTEMP – Centigrade (°C) or Fahrenheit (°F).
Deadband	This defines the control dead band applied to the Set Temperature. <b>By default this is 0.3°.</b> It can be varied from 0.2° to 2.0°.
Lo Alarm	<b>This is set to -5° by default.</b> The alarm will sound if the Brew temp is less than Set Temp – Low Alarm. It can be varied from -0.4° to -20.0°.
Hi Alarm	<b>This is set to +5° by default.</b> The alarm will sound if the Brew temp is greater than Set Temp + High Alarm. It can be varied from +0.4° to +20.0°.
Swap Probe	<b>This is set to False by default.</b> When this setting is enabled (True), the Ambient and Brew temperature probes are swapped. This can be used if you have accidentally used the wrong probe for your brew, or have broken/damaged a probe.
Exit	Close the menu.

**Statistics Menu.** This allows you to view additional Statistics collected by the FERMENTEMP. To reset the statistics data, choose the **Reset Stats** option from the Main Menu.



Menu Option	Explanation
Heat On	Number of hours the heater has been turned on for.
Temp OK	Number of hours the Brew temp has been within the Set Temp + Deadband range (i.e. correct fermentation temperature).
Exit	Close the menu.

## Troubleshooting

**Controller is Beeping (High or low temperature alarm).** To stop the alarm, click any button. You can set a low and high temperature alarm. This will make the controller sound an alarm when the measured temperature deviates from the set point by the low/high alarm value set, or greater. The alarm will reset if the temperature improves beyond its threshold.

**Turning the Controller On/Off.** Normally the FERMENTEMP controller will turn on as soon as you connect the external power and turn on the mains electrical supply. To turn off FERMENTEMP, please disconnect the external power supply from the mains electrical supply.

**Brew Taking a Long Time to Heat to Set Point.** If the ambient temperature is too low compared to the desired temperature, then the FERMENTEMP will struggle to transfer enough heat into the fermentation vessel. FERMENTEMP is only 48W/163BTU/hr. Generally if the ambient is within 10°C/20°F of the set point, then the FERMENTEMP will be able to maintain the temperature, without insulation. If the ambient is likely to be lower than 4°C (that is 4°C to 10°C, 8°F to 20°F) BELOW the desired set point temperature, we recommend insulating the fermentation vessel, generally this is good practice, lessen temperature swings and reduce energy usage. Use an old duvet or fleece, and ensure that the FERMENTEMP is enclosed within the wrap. This will minimise heat loss and save energy. We also recommend getting the brew liquid to within a degree of two of the desired set point temperature initially.

**Error Indicators.** If FERMENTEMP encounters a problem, it may display a fault code on the controller. Please note this information and communicate it to Technical Support if necessary. The Brew or Ambient temperature value being unreasonably low or high may also indicate a fault.

**Warranty.** All FERMENTEMP products carry a 1 year back to base warranty covering manufacturing defects and component failures. The product has no user-serviceable parts and must never be opened or disassembled, and as such should only be repaired by skilled and authorised personnel. Failure to comply could result in unsafe operation and should not be attempted under any circumstances. Contact below for a list of approved service agents. Note: Any unauthorised repair or adjustment will automatically render the warranty invalid.

**Maintenance.** Prior to each use of the unit, check the casing for signs of damage or misuse. Check the leads for signs of damage, ensure the outer insulation is not broken. If the unit is damaged it must NOT be used and should be returned to the supplier. The unit must not be used for any purpose than for that recommended by the manufacturer. The unit must not be submerged or exposed to liquid. The heating element is not user serviceable; please contact your supplier in the first instance, then the manufacturer.

**Cleaning.** Before cleaning, disconnect all electricity supply to the product. Wipe the outside of the enclosure with a clean cloth dampened with a little water and mild detergent.

## Repair and spare parts

FERMENTEMP	Product dimensions	340 x 345 x 70mm, 3kgs or 13"x 13.5"x 2.7", 7lbs
28 Station Road	Power supply input	120Vac/60Hz or 220Vac/230Vac/50Hz
Newtownabbey	Power supply output	24Vdc, 2A, 48W minimum
Co. Antrim BT37 0AW	Control precision	+/-1°C, +/-1°F
United Kingdom	Heating range	Generally ambient +10°C or +20°F
	Heating element	1 x 50W/24Vdc element
Or an approved repair company	Enclosure material	Model H2-BK – Power Coated Mild Steel

**Returning a product for repair.** If returning a product to the manufacturer for repair, it should be sent freight pre-paid to the appropriate address. A copy of the Invoice and of the packing note should be sent simultaneously by airmail to expedite clearance through Customs. A repair estimate showing freight return and other charges will be submitted to the sender, if required, before work on the device commences.

**WEEE.** For EU customers FERMENTEMP offer a product take-back service. For customers within the European Union (only) and products manufactured or sold by us; when those products reach the end of their life, simply send them back to us at your expense, we will dispose of them according to the relevant legislation. WEEE Registration Number WEE/DD2117VU.

**User Instructions v2.0.2 – 14 Feb 2017.**