

EINBREW 30L BREWING SYSTEM

USER INSTRUCTIONS

INTRODUCTION

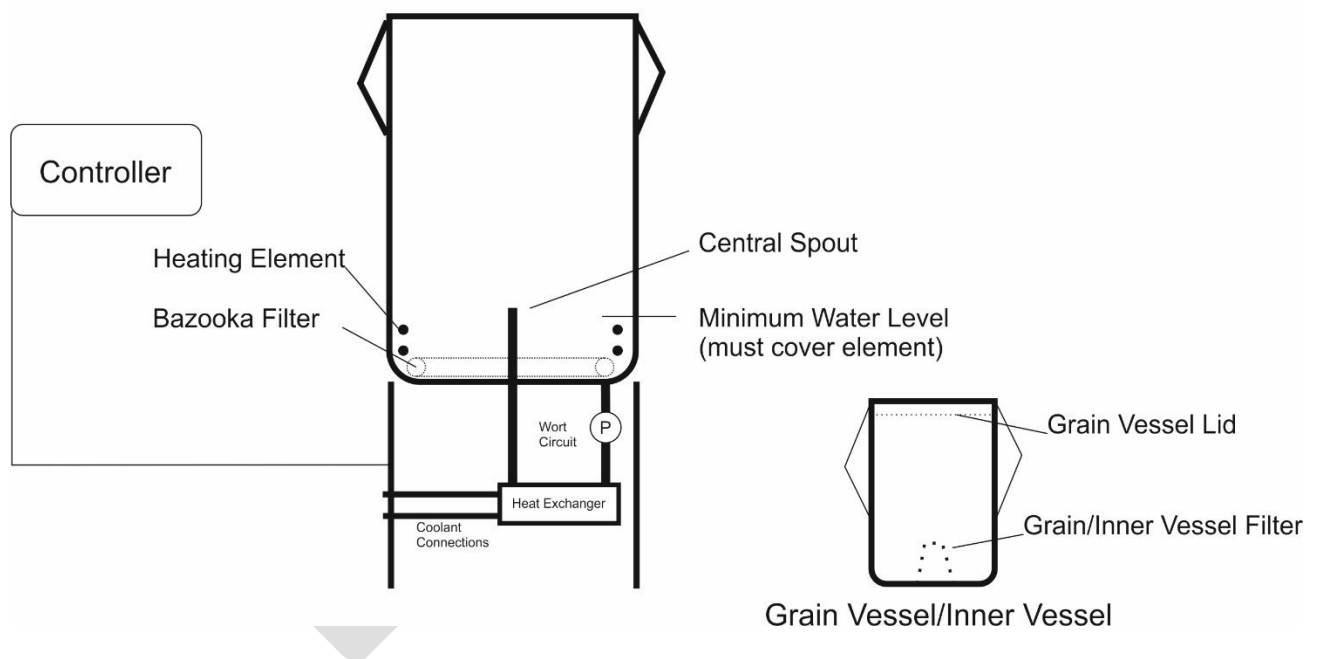
Congratulations on your investment in an EINBREW automatic all-grain brewing system! This will help you brew better and more consistent beer by automating and controlling the brewing process, ensuring that you have accuracy and repeatability every time – leaving you to worry about the important things whilst we take care of the drudgery!

EINBREW allows you to store and brew multi-stage all-grain recipes, maximising the efficiency of extraction of sugars from your grain using its central upwards forced infusion. As you can pump during boil you can also get the best out of your hops – and reduce the chance of scorching!

Our integrated cooling system and pump out method allows to you transfer your wort into a fermenter with a minimum of fuss, and more importantly, less chance of infection.

These user instructions will help you get the best out of your EINBREW system and allow you to use it safely, and we recommend you read through them fully before starting your brew day!

EINBREW



CONTENTS

Introduction	2
Contents.....	3
Safety Information	4
Technical Specifications	5
Components and Accessories	6
Getting Started	7
Cleaning	8
Before using EINBREW for the first time	8
Cleaning EINBREW after your brew day	8
Configuring EINBREW	10
Handheld Controller	10
Main Menu.....	10
Start Brewing Menu.....	11
Settings Menu.....	12
Rinse Menu	13
Pump Out Menu	14
Recipes Menu	15
Brewing Wort.....	18
Preparing for Brewing.....	18
Mashing	20
Grain Removal.....	21
Boiling Wort.....	22
Cooling Wort.....	23
Brew Complete and Pumping Out	24
Cleaning	25
Troubleshooting.....	26
Volumes and Masses (weights)	29
Warranty.....	29
Maintenance.....	29
Returning EINBREW for repair.....	30
WEEE Regulations	30

SAFETY INFORMATION

- Please inspect your EINBREW system and accessories for damage when you receive it. If there is any damage, please do not use the system and contact your supplier or Support for assistance.
- Do not operate the system if the power lead shows any signs of damage or wear.
- When manually cleaning your EINBREW system, please ensure that it is fully disconnected from the mains supply beforehand. We recommend removing the plug from the socket to ensure disconnection. Also ensure that you do not allow liquid to come in contact with the control systems located underneath the main EINBREW vessel, and ensure the vessel is dry before reconnecting the electricity supply.
- **The EINBREW 30L MUST be used with a RCD/GFCI/RCBO device. Ensure that you test it prior to every use.**
- Ensure that the supplied power lead is fully unwound during use. If using any extension leads, ensure that they are fully unwound and have a >10A current capacity when unwound.
- EINBREW is not meant to be directly utilised by children or vulnerable adults, or around pets. Please ensure that the device is only used with adequate supervision to ensure safety.
- EINBREW will become extremely hot during use (temperatures up to and exceeding 100°C). Please ensure that you take great care around the system, lid and accessories when it is in use. Please wear gloves/protection equipment when working on or around EINBREW.
- As condensation may form on the lid during use, please ensure you angle the lid over the system to allow any hot liquid to run off.
- EINBREW must be installed on a stable, level surface. Do not use on rough or uneven surfaces.
- Do not move the EINBREW system during use. Ensure that it is empty and fully cooled before moving. The handles on the side of the vessel will become hot during use.
- When removing the internal vessel during the mashing process, it will be very hot and contain hot wort and grains. Please exercise care when removing.
- EINBREW does not contain any user serviceable parts, and should not be disassembled or repairs attempted. Please contact your supplier or Support for any assistance required.
- Please be careful when pumping out liquid from EINBREW, especially if you have opted not to cool wort beforehand. Ensure that you do not disconnect any pipes during pump out.
- EINBREW features boil dry protection which will switch off the heating element if the water level is too low. To reset this, please wait for the system to cool down, then press the reset button underneath the main vessel.
- Use Hop bags or a hop basket to insert hops; this minimises the possibility of blockages in the main filter.
- **DO NOT USE THIS PRODUCT AS AN ISOLATION DEVICE, TO ISOLATE PUMPS, ELEMENTS OR ANY EQUIPMENT.**

TECHNICAL SPECIFICATIONS

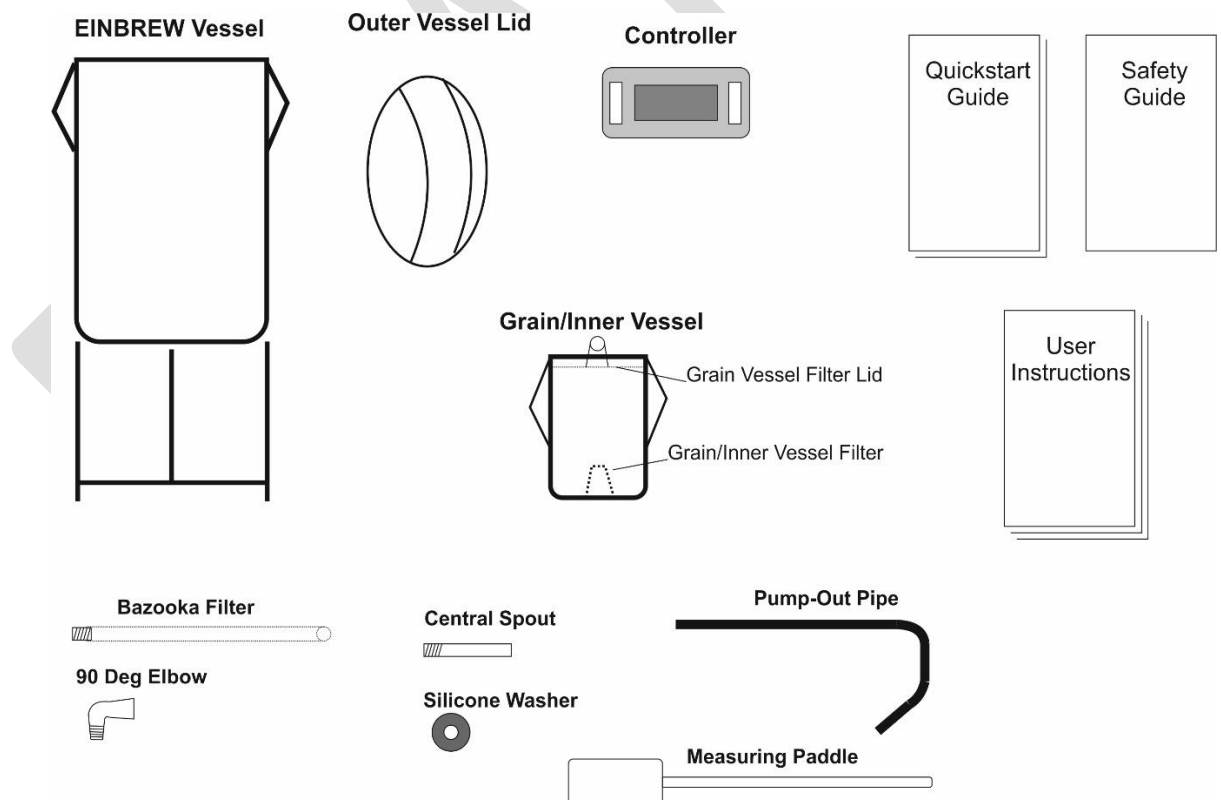
Feature	EINBREW 30L
Product Dimensions	Diameter 550mm, Height 780mm
Power Supply Input	220Vac/230Vac, 50Hz, 10A
Fuses	Two (live and neutral) 15A, 32x5mm quick blow.
Control Precision	0.3C
Temperature Measurement Accuracy	0.3C
Heating Element	2100W, 9.5A @ 230Vac
Main Vessel Capacity	Max. ~45L
Inner Vessel Capacity (Grain)	Max. capacity is 18L, about 9kg.
Pump	3m Head, 16W
Product Weight (empty)	18kg
Product Weight (packaged)	~25kg, 600mm x 600mm x 800mm
Control Unit Enclosure	Sealed to IP65 standard
Handheld Enclosure	Sealed to IP54 standard
Maximum Wort Volume	40L/45L (10.5 US gal)
Max Grain Bill	Max. capacity is 18L, about 10kg.
Minimum Water Volume	10L, 26L, refer to Volume and Masses Section.
Circulate when boiling	YES
Wort Pumped out	YES
Tap	No (not needed, wort pumped out)
Audible / visible stage alarms	YES
Audible / visible cooling alarm	YES
Programmable Recipes	YES, 10 recipes with 9 programmable mash steps each
Microprocessor Control	YES
Hop Insertions Alarms	YES, 9 programmable insertion alarms
Controller position	Flexible, handheld.
Hop filtering	YES
Integral cooler	YES
Automatic Cleaning Cycle	YES
Ergonomic Design	YES
Limited Lifetime Warranty	YES
Product Compliance	CE and LVD Compliant
Country of Manufacture	Northern Ireland



COMPONENTS AND ACCESSORIES

Your EINBREW system will come shipped with the following components. When you unpack please ensure you check everything is there, and if any parts are missing please contact your supplier or Support immediately.

- 1) 1 x EINBREW stainless steel main heating vessel and control system with 2m power lead.
- 2) 1 x Stainless steel inner grain vessel.
- 3) 1 x Handheld controller.
- 4) 1 x Pump-out pipe.
- 5) 1 x Measuring paddle.
- 6) 1 x Circulation (bazooka) filter.
- 7) 1 x Grain vessel filter lid.
- 8) 1 x Outer vessel lid.
- 9) 1 x User Instructions (detailed).
- 10) 1 x Quick Start Guide & Safety Guide.



GETTING STARTED

We know you're eager to get on with making some beer, so the first thing to do is get your EINBREW system setup!

Once you've checked you've got everything, place your EINBREW on a flat and level surface near a power outlet. Take care not to damage the attached power lead.

EINBREW 30L should be connected to an electric outlet suitable for the total electrical load. The supply MUST be protected by an RCD/GFCI/RCBO device, for your safety – please test the RCD/GFCI/RCBO device before each use, using the built-in test function.

IF YOU DO NOT UNDERSTAND THE ABOVE STATEMENT, PLEASE CONSULT A LOCAL EXPERT.

Attach the plug for the Handheld controller wired lead to the round socket on the side of the main vessel.

If you intend to use the built-in cooling function that EINBREW provides, please insert your cold water feed and waste water feed to the marked quick-release connectors on the rear of the vessel, it does not matter which is flow and which is exhaust. Please do not turn on the water feed until required, and especially ensure that it is disconnected before you attempt to connect.

If you're setting EINBREW up for the first time, please ensure that rinse and clean the unit before use, follow the instructions in the Cleaning section.

CLEANING

Thanks to our automatic cleaning cycle, cleaning EINBREW is a breeze! Please ensure that you disconnect the system from the electrical mains supply before carrying out any manual cleaning steps, however.

Before using EINBREW for the first time

Insert the inner grain vessel **UPSIDEDOWN** in the main vessel and set the inner filter lid on top. Ensure that you remove any obvious debris from inside the system, and then pour approx. 15L of water inside the main vessel, let the levels equalise in both the inner and outer (main) vessels. Place the lid on top of the system.

Once you've finished adding water, please connect EINBREW to the electrical mains supply. You will see the screen on the handheld controller display become active. Choose the Rinse option on the main menu and follow the on-screen instructions – this will heat and circulate water around the EINBREW system to clean it.

When the programme has completed, please allow the system to cool for some time so that it's safe to work with. The Brew Temperature indicated on the display reflects the internal water temperature. Once this has completed, slowly remove the inner vessel. Place this to one side, e.g. inside a bucket to ensure any liquid is captured.

Use the Pump Out menu option to remove all the liquid from EINBREW into a bucket or other vessel. Once the liquid level gets too low for the pump, please stop the pump, and disconnect the controller and the EINBREW from the mains, you can then lift the EINBREW by the rear cable recess and tip out any remaining water.

Your EINBREW is now ready to make wort!

Cleaning EINBREW after your brew day

Remove all grain from the inner grain vessel and dispose of it. Please be careful as the grain may still be hot or contain traces of hot liquid. The Bazooka filter can be unscrewed horizontally and then removed for cleaning. Once disconnected from the mains electricity supply, the main vessel can be rinsed and the liquid pumped out in manual mode and/or tipped out.

Remove the hops from the bottom of the main vessel. There may still be hot liquid so please take care.

Insert the inner grain vessel **UPSIDEDOWN** in the main vessel and set the inner filter lid on top. Ensure that you remove any obvious debris from inside the system, and then pour between **12L and 15L** of water inside the main vessel, place the outer lid on top of the system.

Connect the EINBREW to the electrical mains supply. You will see the screen on the handheld controller display become active. Choose the Rinse option on the main menu and follow the on-screen instructions – this will heat and circulate water around the EINBREW system to clean it. **Once you commence the cleaning cycle, make sure to observe that the water level does not fall below the top of the heating**

element, if it does insert more water to ensure it stays above the element. Place the outer lid on the EINBREW and let it complete its cleaning cycle.

When the programme has completed, please allow the system to cool for some time so that it's safe to work with. The Brew Temperature indicated on the display reflects the internal water temperature. Once this has completed, slowly remove the inner vessel, allowing the hot water to drain out. Place this to one side, e.g. inside a bucket to ensure any liquid is captured.

Use the Pump Out menu option to remove all the liquid from EINBREW into a bucket or other vessel. Once the liquid level gets too low for the pump, please stop the pump, and disconnect the controller and the EINBREW from the mains, you can then lift the EINBREW by the rear cable recess and tip out any remaining water.

Please be careful carrying this out if the liquid temperature is still hot.

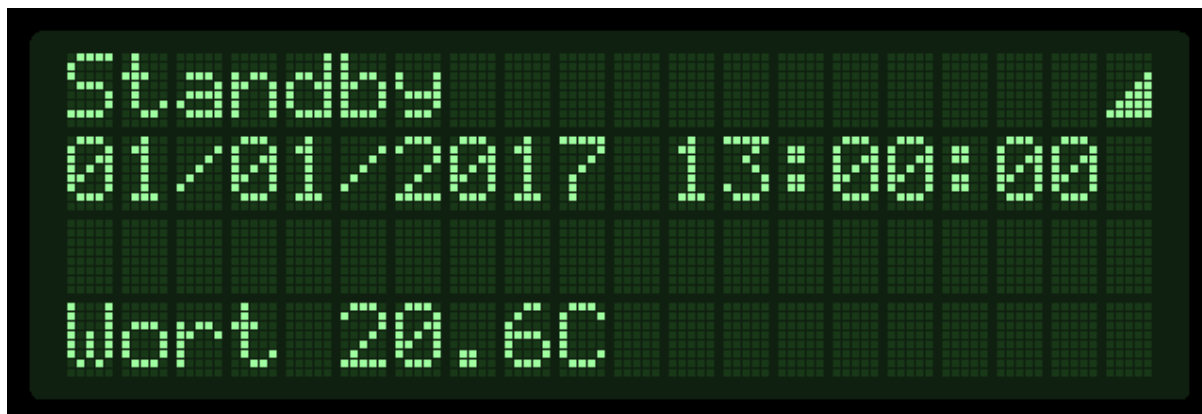
Take care if you are ever running the system with the inner vessel in place, but with no grain! When in this state, the system needs 26 litres of water. As the pump will fill the inner vessel and this will lower the liquid level around the element, if the element becomes exposed to air, it can fuse and fail. The system is designed to take account of grain volumes. TO BE SAFE, assume that each 1kg of grain has a volume of 1.2 litre.

With the inner grain vessel removed the system needs only around 10L to cover the element.

CONFIGURING EINBREW

Handheld Controller

The Handheld Controller features a 4x20 character OLED display to keep you updated on how your brew is going, along with a full menu system to let you configure your recipes and system settings.

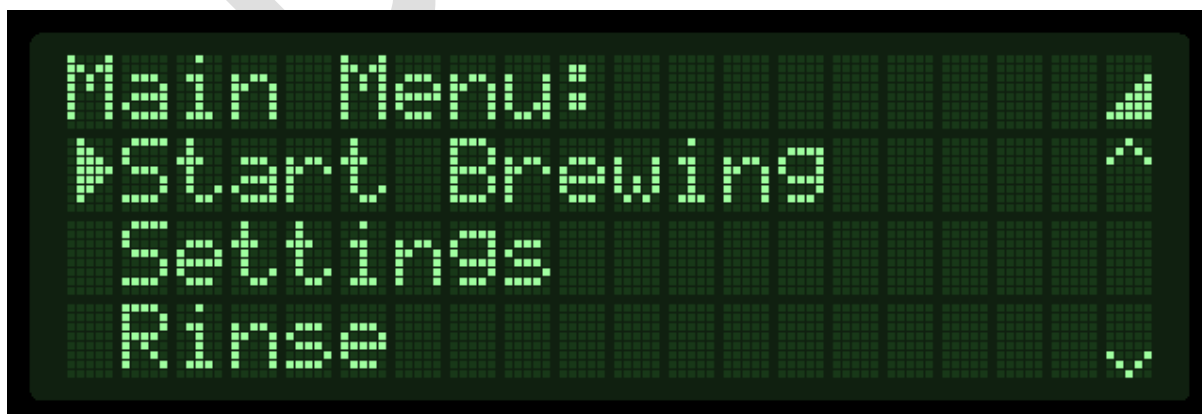


When EINBREW is not in use, the display will indicate that it is in Standby mode, along with the present Date and Time. The “signal” icon at the top-right of the display indicates that the Handheld controller is connected to the EINBREW system successfully. The temperature of the main vessel is indicated at the bottom as the Wort temperature.

The ▲▼◀▶ and **OK** buttons are used to navigate through the menu system and choose/alter settings.

Main Menu

To access the menu system, press the **OK** button when the system is in Standby mode. The menu will be displayed and you can navigate using the ▲ or ▼ buttons. Press **OK** to activate the selected top menu item, denoted by a > symbol to the left-hand side of the display. The title of the present menu is always displayed at the top of the screen.



Menu Option	Explanation
Start Brewing	Begin brewing Wort with a recipe of your choice.

Menu Option	Explanation
Settings	Alter system settings.
Rinse	Begin the Rinse/Cleaning cycle.
Pump Out	Remove liquid from the system using the Pump Out accessory.
Manual	Operate the system in manual mode, specifying the Temperature and the pump operation. Heater On will activate the heater at 100% regardless of temperature, Heater Auto will automatically control to the set temperature.
Recipes	Define and execute Recipes.
Exit...	Close the Menu.

Start Brewing Menu

This allows you to select a pre-defined recipe and begin the brewing process. To abort the process, select the **Back** option to return to the Main Menu.



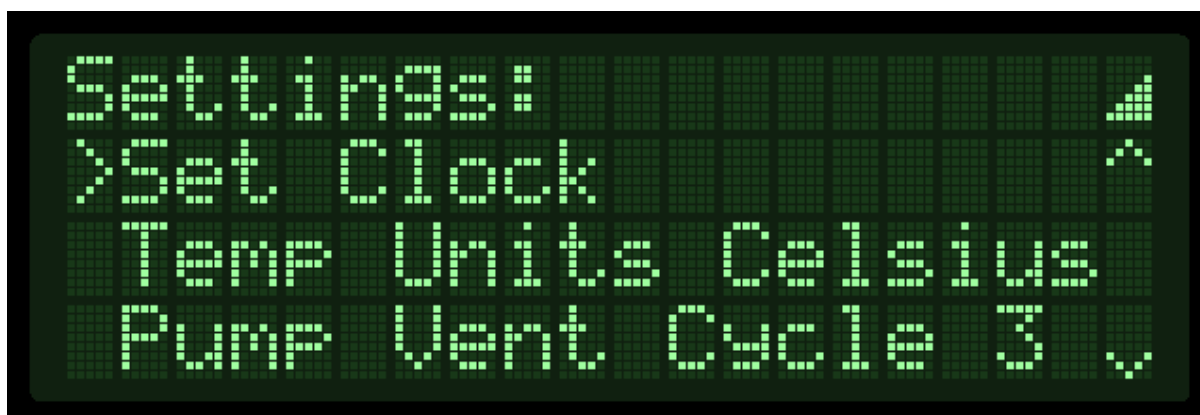
Once you've selected a Recipe, you can review (and change) its settings. Select a Recipe parameter using the ▲▼ buttons, then use the ◀▶ buttons to alter the value. See the **Recipe Menu** section for more details. To abort the process, select the **Back** option to return to the Main Menu.



Once you've selected Start Recipe, the brewing cycle will begin. Please follow the on-screen prompts to go through the brewing process. See the **Brewing Wort** section for more information.

Settings Menu

The Settings Menu allows you to configure how the EINBREW performs, and adjust various parameters relating to the Brewing Cycle.

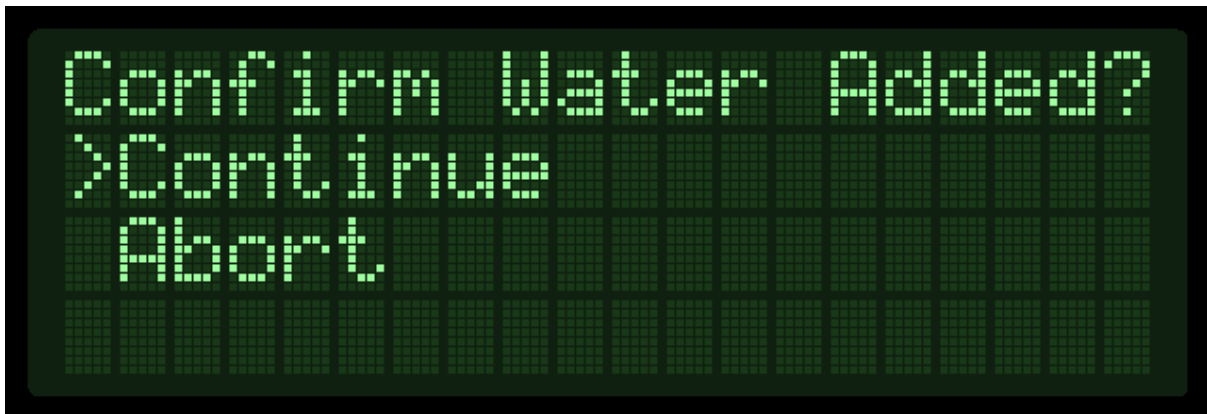


Menu Option	Explanation
Set Clock	Allow the System Clock to be set. The present Date and Time can be defined.
Temp Units	Toggle the Temperature Units between Celsius and Fahrenheit. All displayed values and settings will be converted accordingly after switching.
Pump Vent Cycle	Set the number of Pump Ventilation Cycles that are carried out when the Pump is activated, to prevent trapped air.
Pump Vent ON	Set the length of the Pump Ventilation ON Cycle in seconds.
Pump Vent off	Set the length of the Pump Ventilation off Cycle in seconds.
Set MaxPumpTemp	Enable/Disable Maximum Temperature for the Pump. When enabled, the pump will be deactivated if the temperature exceeds the defined value.
Max Pump Temp	Temperature value which when exceeded the Pump will be deactivated, when Maximum Pump Temperature is active. This can be used to disable the pump to avoid cavitation effects at boil, for example.
Set MaxHeatTemp	Enable/Disable Maximum Temperature for the Heater. When enabled, the heater will be deactivated if the temperature exceeds the defined value.
Max Heat Temp	Temperature value which when exceeded the Heater will be deactivated, when Maximum Heater Temperature is active. This is primarily to react in case of Boil Dry situations.
Enable G Rest	Choose to enable/disable Grain Rests.
G Rest Period	Set the interval used between Grain Rests when mashing. Grain Rests help prevent compaction of the grain in the inner vessel.
G Rest Length	Set the length of time for each Grain Rest.
Rinse Temp	Set the Temperature that the Rinse cycle will heat water to.
Rinse Length	Select the Length of the Rinse Cycle.
Rinse Pump	Select if the Pump is activated during the Rinse Cycle.
Diagnostics	Access the Diagnostics menu to help diagnose issues with EINBREW - Please only utilise these options if directed to by Support.
Reset Settings	After confirmation, reset all settings to Factory Defaults.
Save & Exit	Close the Menu and Save all settings.
Exit...	Close the Menu without saving settings.

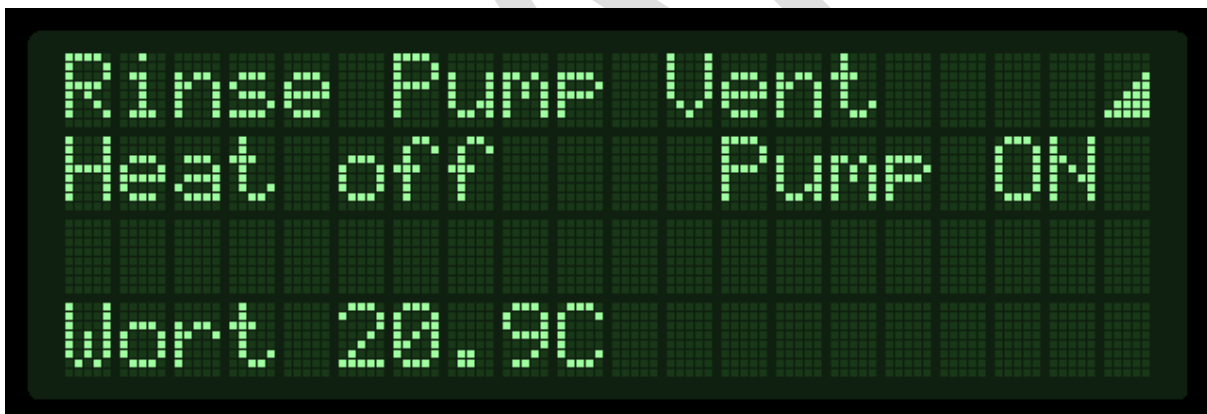
Rinse Menu

The Rinse menu allows to you activate a cleaning cycle after you've finished with EINBREW. This makes cleaning and maintaining your system easier.

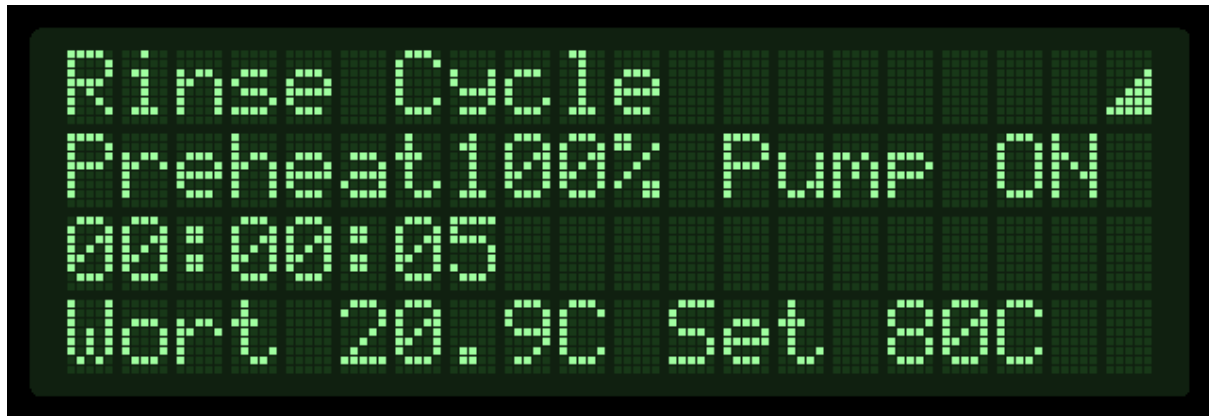
When you select this option, you'll be asked to confirm if you've added water. Please insert the inner vessel, add 30L of water and replace the lid before continuing. Select the Abort option to exit without rinsing.



EINBREW will automatically begin a Pump Ventilation cycle to ensure that the water is brought through the system properly with no trapped air. No user intervention is required.



The water will automatically be preheated to the defined Rinse temperature, then a timer will begin for the cycle. The Preheating screen displays the time the system has been preheating for, along with the current liquid temperature and Set temperature.



When the cycle has completed the Handheld Controller will sound an alarm to alert you. Once the system has cooled the **Pump Out** section can be used to remove the water.

If you would like to abort the Rinse cycle in progress, press the **OK** button to view the runtime menu.

Continue will resume the rinsing cycle, **Pump Vent** will trigger a Pump Ventilation, and **Abort** will exit the Rinse cycle and return to Standby.



Pump Out Menu

The **Pump Out** option allows you to remove water from the EINBREW system, either after brewing or when cleaning. To use, remove the inner vessel and fit the Pump Out Pipe over the pump central outlet at the bottom-middle of the main vessel. Ensure that it is fitted vertically.

Once you've done that you're ready to pump out! Please note that whilst our pump is fitted with run-dry protection to prevent it getting damaged when no water is in the system, it is advisable to not run the system without water.



To activate the pump, press and hold the ◀ button. As a safety feature, the pump will only activate when the button is held. If you need to activate the pump for a longer period, you can toggle it on and off with the ▶ button. Once you've finished pumping out, press the ▲ and ▼ buttons together to exit the **Pump Out** mode and return to Standby.

Recipes Menu

EINBREW will let you pre-define 10 of your favourite recipes to make brewing quick and easy! You can change the recipes settings just before you begin in the **Start Brewing** menu, or use the **Recipes Menu** to get everything setup before your brewday.

To begin select the Recipe you would like to edit.



Once you've selected a Recipe, you can review (and change) its settings. Select a Recipe parameter using the ▲ ▼ buttons, then use the ◀ ▶ buttons to alter the value. To abort the process, select the **Back** option to return to the Main Menu.



Each Recipe has several settings you can adjust. You can define up to 9 mashing stages - if you would like to skip/bypass a stage, you can set its Time to off (0 minutes!) and it'll be ignored when brewing.

Please note that whilst you can define a set length for each stage, this time doesn't include any time spent preheating, i.e. moving from a lower temperature to a higher temperature. The timer for each stage will only start when the system reaches the Set Temperature you have defined.

Menu Option	Explanation
Start Recipe	Begin Brewing with the present recipe. Provides same action as selecting this option from the Start Brewing menu.
Name	Text Name for the Recipe. Use the ▲ and ▼ buttons to change the current character and OK to confirm.
Water Start	The amount of water to put in at the start of the recipe.
Water Topup	The volume you should top-up or SPARGE to at Mash Out, before the boil stage.
Mash In Temp	Temperature for the Mash In stage.
Mash S1 Temp	Temperature for Mash Stage 1.
Mash S1 Time	Length of Mash Stage 1. This does not include preheating time to reach target Temperature.
Mash S2 Temp	Temperature for Mash Stage 2.
Mash S2 Time	Length of Mash Stage 2. This does not include preheating time to reach target Temperature.
Mash S3 Temp	Temperature for Mash Stage 3.
Mash S3 Time	Length of Mash Stage 3. This does not include preheating time to reach target Temperature.
Mash S4 Temp	Temperature for Mash Stage 4.
Mash S4 Time	Length of Mash Stage 4. This does not include preheating time to reach target Temperature.
Mash S5 Temp	Temperature for Mash Stage 5.
Mash S5 Time	Length of Mash Stage 5. This does not include preheating time to reach target Temperature.
Mash S6 Temp	Temperature for Mash Stage 6.
Mash S6 Time	Length of Mash Stage 6. This does not include preheating time to reach target Temperature.
Mash S7 Temp	Temperature for Mash Stage 7.
Mash S7 Time	Length of Mash Stage 7. This does not include preheating time to reach target Temperature.
Mash S8 Temp	Temperature for Mash Stage 8.
Mash S8 Time	Length of Mash Stage 8. This does not include preheating time to reach target Temperature.

Menu Option	Explanation
Mash S9 Temp	Temperature for Mash Stage 9.
Mash S9 Time	Length of Mash Stage 9. This does not include preheating time to reach target Temperature.
Drainback Time	At the end of the Mash Stages, the system will pause for a defined period of time and turn the pump off to allow the wort to withdraw from the grain/inner vessel. This will make it easier to lift.
Boil Temp	Temperature for the Boil Stage.
Boil Time	Length of Boil Stage.
Boil Pump	Set the Pump Mode during Boil Stage.
Hop 1 Time	Time for Hop Insertion 1 in the Boil Stage. Times are relative to the start of the Boil Stage. If you do not wish to use a Hop Insertion, set the Time to 0.
Hop 2 Time	Time for Hop Insertion 2 in the Boil Stage.
Hop 3 Time	Time for Hop Insertion 3 in the Boil Stage.
Hop 4 Time	Time for Hop Insertion 4 in the Boil Stage.
Hop 5 Time	Time for Hop Insertion 5 in the Boil Stage.
Hop 6 Time	Time for Hop Insertion 6 in the Boil Stage.
Hop 7 Time	Time for Hop Insertion 7 in the Boil Stage.
Hop 8 Time	Time for Hop Insertion 8 in the Boil Stage.
Hop 9 Time	Time for Hop Insertion 9 in the Boil Stage.
Cooling	Enable optional cooling at the end of the Brewing Cycle. This will allow you to use the EINBREW integrated cooler in conjunction with a cold water feed to reduce the temperature of your wort to safe levels for fermentation before pumping out.
Cooling Temp	Define the Temperature to cool to. Be careful not to set this too low, as very low temperatures are only achievable if your cold water temperature is low enough – typically you should go no lower than room temperature.
Back	Return to the Recipes Menu.

The information for each Recipe is saved in the Handheld's memory and will be remembered for future usage.

BREWING WORT

Preparing for Brewing

Before brewing, please ensure that you have followed the steps in the **Cleaning** section – this will help prevent infection. Also make sure that the inner vessel has been removed from EINBREW. It is also important to note that the system will preheat faster and use less energy if you keep the lid on as much as possible during the brewing process.

Before starting any recipe, you insert the correct volume of water.

To access the menu system, press the **OK** button when the system is in Standby mode. The menu will be displayed and you can navigate to the **Start Brewing** option with the ▲ or ▼ buttons.

This allows you to select a pre-defined recipe and begin the brewing process. To abort the process, select the **Back** option to return to the Main Menu.



Once you've selected a Recipe, you can review (and change) its settings. Select a Recipe parameter using the ▲▼ buttons, then use the ◀▶ buttons to alter the value. See the **Recipe Menu** section for more details. To abort the process, select the **Back** option to return to the Main Menu.

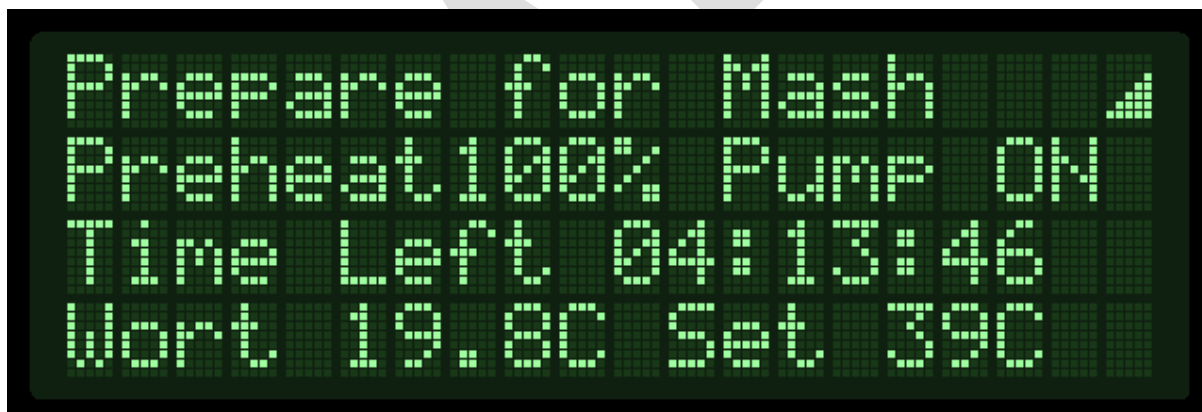


Once you've selected Start Recipe, the brewing cycle will begin. Please follow the on-screen prompts as you go through the brewing process.

The first thing to do is to add the water specified in your recipe – this will be displayed on-screen for reference. Please ensure that you always insert a minimum amount of 10 litres of water when beginning Mash In – this will ensure that the heating element is always covered. Additional water will be required later when the grain basket is added. Once you've done that, select the Continue option to begin heating the water for mash-in.



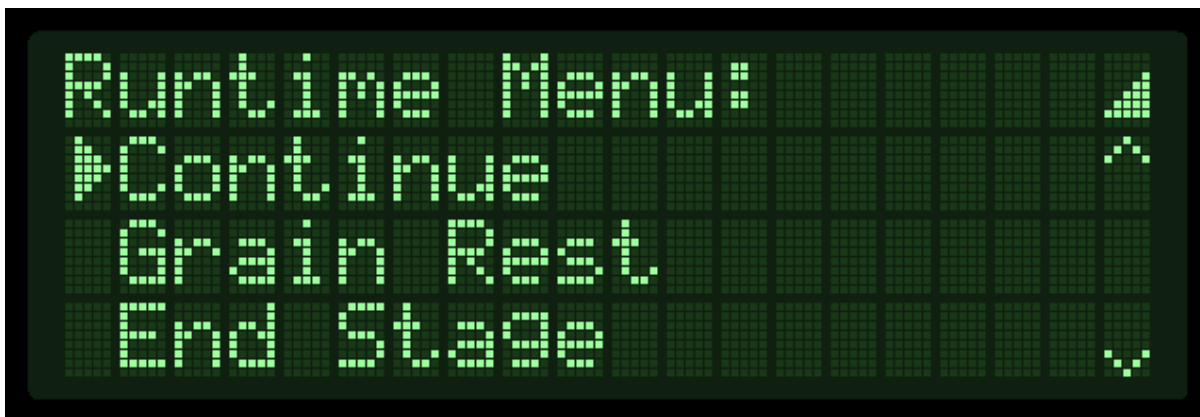
The Handheld will tell you that it's starting to heat the water. You'll also notice that at the very start, the system will ventilate the Pump to ensure that there's no trapped air.



Whilst the water is preheating, the Handheld will display the heating status, the pump status and the current Wort temperature versus the Set (desired) temperature. The 3rd line of the display will also display on rotation the estimated total brew time left (Time Left), and the current stage runtime versus the estimated total time at present heating rate (e.g. 00:04:15/00:18:04). All times are in Hours, Minutes and Seconds (hh:mm:ss).

EINBREW uses proportional heating, so it'll apply less heat energy the closer you get to your Set Temperature. This reduces overshoot and minimises energy usage.

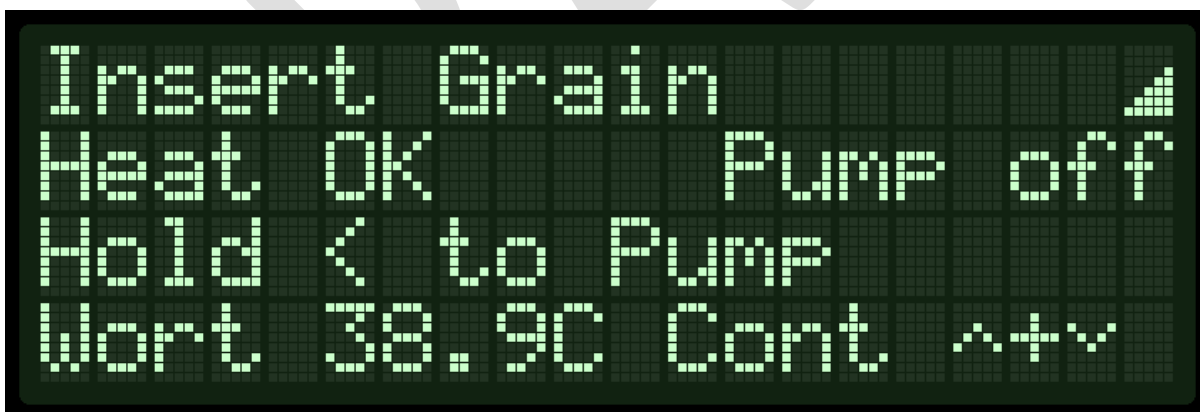
If you need to abort at any time during the brewing process, you can press the **Select** button to display the runtime menu. The options available may differ slightly depending on what stage you're at.



Menu Option	Explanation
Continue	Continue following the recipe.
Grain Rest	Immediately trigger a Grain Rest. This will turn off the Pump, but the heating will remain on (if necessary). Only available during Mash Stages.
End Stage	End the present stage immediately. Effectively used to skip a stage.
Exit...	Exit the brewing process – you will be asked for confirmation.

Mashing

At the end of the Preparation stage, an alarm will sound and you can add the inner vessel to EINBREW. You may find it easier to leave adding the grain until the inner vessel has been added and is beginning to fill up with water – allowing you to stir it in gradually and avoid creation of water channels.



When inserting the vessel and stirring in the grain, you can also optionally press and hold the ◀ button to pump in water. As a safety feature, the pump will only activate when the button is held. Ensure that you do not allow the water level to flow over the top of the inner vessel and let grain enter the system – you want to minimise this to ensure the wort is free of debris when mashing.

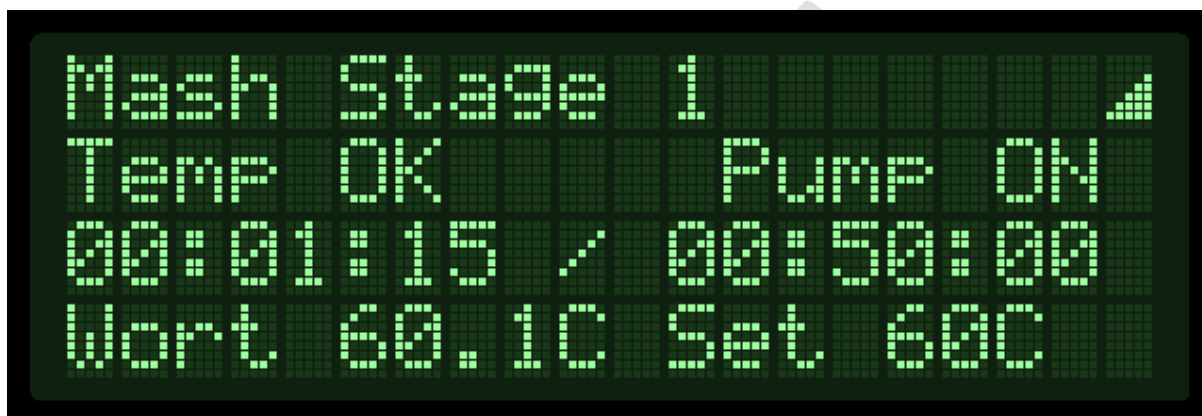
Once you’ve finished adding your grain, add the mesh lid and lock it in place on the top of the inner vessel, then press the ▲ and ▼ buttons together to continue.

EINBREW will now begin heating to meet the temperature for the first mash stage. It’s worth noting that because you’ve added a lot of colder grain, the temperature of the wort will drop at first – this will

equalise and start rising. The wort will begin to be pumped into the bottom of the inner vessel, and will slowly rise through to the top and spill over back into the main vessel. This provides gentle recirculation and continuous sparging of the grain.

You may see some small pieces of debris circulating around in the wort, this is normal. Any large grains will be stopped by the filter installed at the top of the inner vessel. If there does appear to be too much debris, please check this has been fitted correctly and securely.

As before you'll see the system go into Preheat mode first – once this is complete it'll begin the Stage Timer based on the timings you've specified, e.g. 60C for 50 minutes.



As before the elapsed/total time for this stage and the estimated Time Left for the entire brew will be displayed on a rotational basis on the 3rd line.

If you've chosen to use Mash Stage 2-9, this process will repeat until the stages have been completed. No user intervention is required, the system will time and control temperature automatically.

Grain Rests will also occur automatically during the process – this will turn the pump off for a period of time to allow the grain to settle, before starting again. The heater will remain on during this if the temperature drops.

At the very end of the Mash Stages, the Drainback stage will occur. This will turn off the pump and heater for a period to allow the water in the inner vessel to drain back into the main vessel, and reduce the weight of the inner vessel prior to removal.

Grain Removal

Once all the mash stages have finished, an alarm will sound and you're ready to remove the inner vessel containing the grain. Ensure that you use safety equipment such as gloves when removing the inner vessel, and be aware that it will be heavy due to the grain and water content. Make sure that the lid with handle is properly engaged before trying to lift it. **At the end of mashing, with the pump off remove the outer lid and after a couple of minutes the handle of the grain vessel should be cool enough to touch, you can then lift the grain vessel and hang it on the 2 brackets; allowing it to drain and for you to sparge if you wish.**



Raise the inner vessel slowly out of the hot wort, using the fixings on the side to rest it near the top of EINBREW. Let the wort drain out for a few minutes first – this will return most of the liquid back to the brew and make it easier to lift it out. If you'd like to manually sparge water through the grain, you can also do this now, topping up to the desired volume – please make sure you heat the additional water to the right temperature before sparging and ensure that you add it slowly and carefully.

Sparging is optional, if you DO want to sparge, then simply reduce the strike volume to account for the sparge water to be added later, remembering that each 1kg of grain will absorb 1L of water, and you will boil off about 3L per hour.

If you DON'T want to sparge, then simply use the correct increased strike volume, remembering that each 1kg of grain will absorb 1L of water, and you will boil off about 3L per hour.

Once most of the wort has drained out, you can remove the inner vessel completely. Take care as hot wort is likely to drip out of the bottom – it can be helpful to have an empty bucket on standby to place it in, to prevent any mess. If the bucket has been cleaned, you can also add any runoff back into the system at the beginning of the boil.

Press the ▲ and ▼ buttons together to continue when you're ready.

Boiling Wort

Now that the grain's out of the way you're ready to boil your wort! Follow the on-screen instructions to begin boiling.

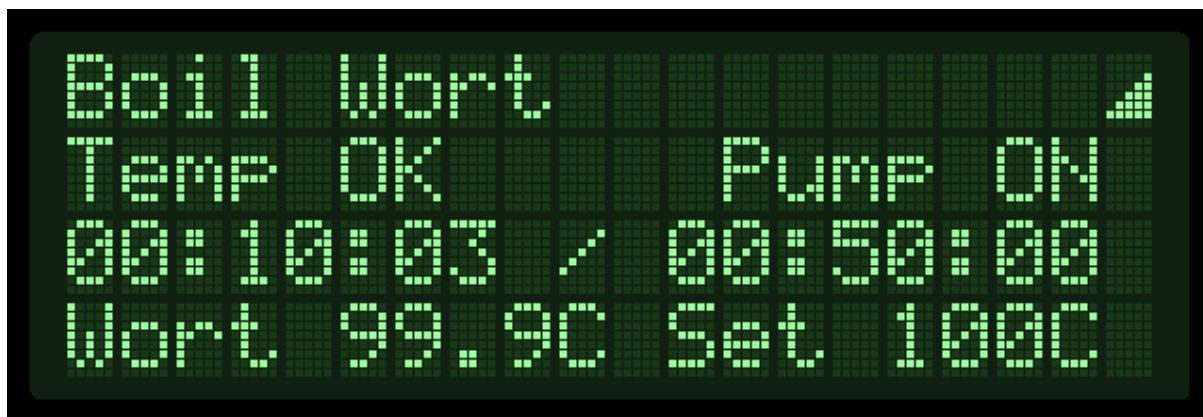
If you've turned on any Hop Insertions for your recipe, you'll get an alarm and reminder to put them in during the process – **PLEASE USE A HOP BAG OR HOP BASKET to insert hops. Hops, particularly in pellet form can BLOCK the circulation filter, this can make pumping out slow and difficult. Always be careful when inserting hops, as the wort will be extremely hot.**

A pre-boil alarm will be sounded at 95 degrees C, to allow you to monitor the start of the boil and set it up as you desire. This can be silenced by pressing a button.

You can adjust the initial target temperature on-the-fly as required using the ◀▶ buttons – this can be helpful as the exact boiling point may differ depending on environmental factors and your recipe.

Once the wort reaches your specified boiling temperature, the stage timer will start. You can adjust the Boil Power using the ◀▶ buttons, from 0% to 100%. This will help you obtain your desired boil – from vigorous to gentle!

EINBREW has the ability to pump at boiling point to help infuse your wort with the flavour from the hops, although normally it will be set to go off at higher temperatures, to prevent the pump struggling due to boil turbulence and cavitation. It is also possible to turn the pump On and Off using the runtime menu option.



Once the boiling phase has completed, if you've selected to optionally cool the wort EINBREW will begin lowering the temperature using the built-in water cooler. If there's any hops that haven't been inserted during the Boil stage, you'll now be prompted to insert all remaining hops.



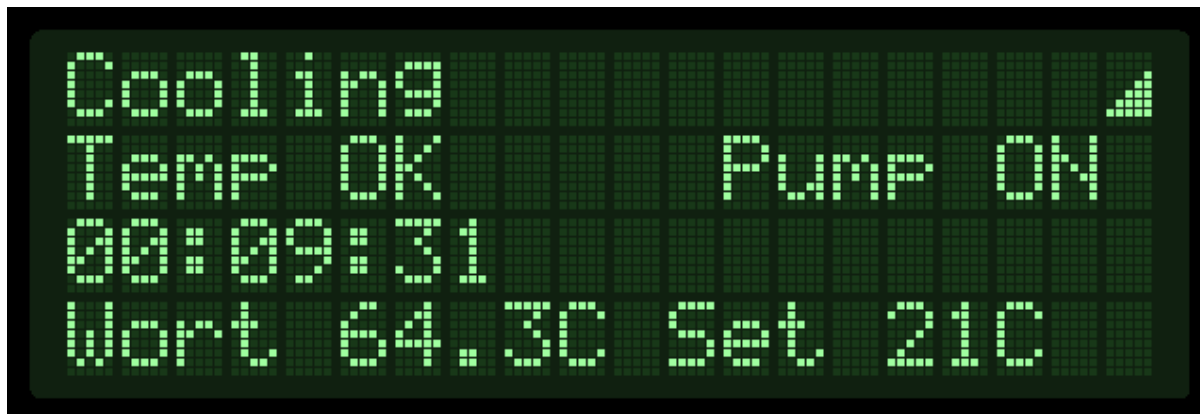
Cooling Wort

Unlike other systems where you have to use messy and complicated external cooling coil arrangements, EINBREW has a build-in wort cooler, this cooling heat exchanger is in the wort circuit. For the cooling function to work you must fulfil the following conditions:-

- a) the EINBREW pump must be running.
- b) cold water must be flowing to and from the heat exchanger via the connections on the rear.

If you've selected to use cooling in your recipe, you'll receive an alarm at the end of the Boil stage to

begin the cooling.



First you must wait for the wort temperature to drop below the Pump Max Run Temp, normally 95C, this should take around 5 to 10 minutes, once the pump starts circulating the wort, you can turn on the coolant flow to the rear of the EINBREW, the wort temperature will start to drop rapidly. Cooling of around 30 litres from 95C to 24C will take just around 25 minutes, depending on coolant water temperature. **We strongly recommend that you always save your exhaust water.**

As EINBREW pumps the wort through the cooler automatically, all you have to do is sit and wait – the controller will alarm and turn the pump off when your target temperature is reached, you can then turn off your cold water (coolant) feed.

Brew Complete and Pumping Out

Your wort is ready for transferring to the fermentor! You can do this by using the **Pump Out** menu option when you've returned to the main menu.



Fit the Pump Out Pipe over the central spout at the bottom-middle of the main vessel. Ensure that it is fitted vertically. Position the Fermentation vessel so it is ready to receive wort from the pump out pipe – you may need to add additional hose to ensure that it reaches adequately.

Once you've done that you're ready to pump out. Please note, that while the pump is fitted with run-dry protection to prevent it getting damaged when no water is in the system, it is preferable not to run it without water. When the water level inside the vessel starts getting low a whirlpool may form over the

pump inlet to the side of the vessel. If you aren't using the hop bag/basket, please also ensure that any loose hops do not cover the pump inlet.



To activate the pump, press and hold the ◀ button. As a safety feature, the pump will only activate when the button is held. **If you need to activate the pump for a longer period, you can toggle it on or off** with the ▶ button. Once you've finished pumping out, press the ▲ and ▼ buttons together to exit the **Pump Out** mode and return to Standby.

Cleaning

One last thing to take care of before you can safely store away your EINBREW for your next batch – cleaning! Please follow the instructions in the **Cleaning** section for how to proceed. It's important to clean immediately after brewing, as leaving it as-is will encourage growth of mould and other unpleasant effects.

TROUBLESHOOTING

- Controller is beeping
 - It is alarming because it has reached a stage in the process (e.g. insert mash, cooling) that requires human intervention. Please follow the on-screen instructions to continue.
- EINBREW is beeping
 - This will typically happen due to lost communications with the handheld controller – you will hear two beeps every minute or two. See the “Comms Error” displayed on Handheld section below.
- Turning the Handheld On/Off
 - Normally the EINBREW Handheld will turn on as soon as you connect the external power and turn on the mains electrical supply. Ensure that the wired connector to the main EINBREW unit is connected securely. To turn off EINBREW, please disconnect the external power supply from the main electrical supply. There is no dedicated on/off switch for the Handheld.
- Handheld does not turn on
 - Please ensure that the wired connection cable is inserted securely.
 - If using an **RCD/GFCI/RCBO device** as recommended, please ensure that it is activated and not in TEST mode. It will not provide power in this state.
 - Please check that the fuses have not blown. Ensure that the system is disconnected from mains electricity whilst removing or replacing the fuses.
- Brew taking a long time to reach Set Temperature
 - It can be normal for EINBREW to take a reasonable length of time to preheat to temperatures in your mashing stage – typically you may find an increase in temperature of 1°C every 1 minute. This will differ depending on the ambient temperature, and if you have the lid on or off. Also, the higher the temperature, the more heat losses will occur – it will be slower to transition from 90°C to 100°C, than 20°C to 30°C.
 - When cooling, for example using cold water, the temperature drop will typically be very quick at the start and become progressively slower as your wort temperature nears the temperature of your cooling medium. This means that it may take a long time to achieve your required cooling temperature – or if it’s set too low and your cooling medium is too hot, you may never reach it.
 - The Maximum Heater Temperature has been exceeded. This is designed to avoid boil dry operations – if it is interfering with your brew, you may have manually selected to make it too low. It should be above the normal boiling point of water/wort you’re encountering during brews. It will be signified by showing the heater status as MHT on the display.
 - Communications has been lost with the EINBREW system, which for safety will automatically turn off the Pump and Heater after a period of time. See the “Comms Error” displayed on Handheld section below.

- “Comms Error” displayed on Handheld
 - If the EINBREW handheld has issues communicating with the main system, it will display the error “!Comms Error!” on the first line of the OLED display. Please check connections to see if the wired cable to the handheld is loose, and reset the Handheld by turning the mains electrical power off for 30 seconds, then turning it on again. If you still experience issues after this, please contact support.
- Error Indicators
 - If the EINBREW handheld has issues communicating with the main system, it will display the error “!Comms Error!” on the first line of the OLED display. Please check connections to see if the wired cable to the handheld is loose, and reset the Handheld by turning the mains electrical power off for 30 seconds, then turning it on again. If you still experience issues after this, please contact support.
 - Other errors may also be displayed by the Handheld, e.g. if you see an unusual temperature reading, this may be due to an incorrectly placed, incorrectly connected or damaged temperature probe.
 - Please note any information and communicate it to Support if necessary.
- Pump does not operate
 - **The wort has exceeded the Maximum Pump Run Temperature.** This will be signified by showing the pump status as MPT on the display. Reduce the temperature below the set value and wait for 2 minutes, then the pump will automatically turn on again.
 - The pump inlet (bazooka filter) is clogged with debris. Please check that the filter for the inlet is not covered and remove any debris.
 - The Pump features run-dry protection. It will not function if there is not enough water to pump – due to whirlpooling effects this may start occurring when the depth of water in the main vessel is around 5cm. It is not possible to pump out all liquid/wort from the vessel.
 - The Pump will automatically ventilate when first turned on/turned on again after a period off – this is normal and will generally pass soon.
- Disconnected Handheld during Brewing Process
 - If you accidentally or purposefully disconnect the Handheld controller, then it will lose power and any progress in the present brewing process will be lost.
 - For safety, after a short period the EINBREW will automatically turn off the Pump and Heater when it senses the Handheld is disconnected.
 - To continue brewing after a disconnection, reconnect the Handheld. When the Handheld has powered up successfully, you will have two options for picking up where you left off.
 - Option One, start the recipe as normal and use the End Stage options in the Runtime Menu to progress the recipe to close to where you were previously. This may not be suitable if e.g. in the middle of a long mashing stage.

- Option Two, use Manual Mode to control the temperature and pump manually, going through your recipe stages. It'll be necessary for you to monitor timings yourself, for example using a smartphone stopwatch.
- Power Failure during Brewing Process
 - If a power failure occurs, please switch off EINBREW at the plug.
 - Once power has been restored, turn on EINBREW again. Depending on the duration of the outage, you may be able to pick off close to where you left off. There are two ways to achieve this.
 - Option One, start the recipe as normal and use the End Stage options in the Runtime Menu to progress the recipe to close to where you were previously. This may not be suitable if e.g. in the middle of a long mashing stage.
 - Option Two, use Manual Mode to control the temperature and pump manually, going through your recipe stages. It'll be necessary for you to monitor timings yourself, for example using a smartphone stopwatch.
 - If the outage has been for a substantial period of time, you may need to adjust your recipe accordingly to compensate, or unfortunately dispose of the batch of wort.
- The Brew Temperature changes a lot when trying to maintain temperature
 - It is normal that there will be some variation in temperature. Typically, you will see a small overshoot when trying to obtain a particular set temperature, and may see some oscillations below and/or above the set temperature when controlling. This is to be expected, and totally normal. How much this will depend on things like volume of water, ambient temperature – and also the set temperature, as you will have bigger ambient losses at higher temperatures.
 - If you are seeing larger swings than you would like, there are some things you can do to improve system stability.
 - Ensure that you keep the lid on at all times. Continually removing and replacing the lid will cause fluctuations in temperature.
 - Add insulation to the vessel. This will help to remove ambient losses and make things more stable.
 - As Grain Rests turn off the pump, there will be temperature fluctuations whilst the pump is off, and immediately after turning it back on, as the system temperature equalises again.
- System continually resets itself
 - Ensure that the power lead is firmly plugged in.
 - If you are having regular power fluctuations at your premises, this may be causing resets due to low supply voltage. Please contact your electricity company to report the fault.
 - Check to see if the reset occurs at particular times, e.g. when you are turning the Pump on/off, or the heater on/off, or something else.
 - If the problem persists, please note any information and communicate it to Support if necessary.

VOLUMES AND MASSES (WEIGHTS)

Maximum Strike volume is about 30L with <4kgs grain. If you want a larger grain bill then strike with less and for every added kg of grain above **4kg**, deduct 2L from 30L strike volume, at mash-out suspend grain and sparge to desired volume & For example, want to use 8kgs grain, strike with 22L and sparge at mash-out. Maximum pre-boil wort volume is ~40/45L. You must ensure that the level of wort in the outer vessel does not to exceed the height of the inner vessel, therefore the water in the inner vessel will be able to overflow and **cascade down** into the outer vessel.

Minimum Strike volume about >21L with around 3kgs grain.

The measuring paddle volume measurement is only accurate with the grain vessel removed (it does not account for liquid or grain volumes in the inner grain vessel)

Take care if you are ever running the system with the inner vessel in place, but with no grain! When in this state, the system needs 26 litres of water. As the pump will fill the inner vessel and this will lower the liquid level around the element, if the element becomes exposed to air, it can fuse and fail. The system is designed to take account of grain volume. TO BE SAFE, assume that each 1kg of grain has a volume of 1.2 litre.

With the inner vessel removed, the system needs 10 litres to cover the element.

Grain absorption is typically around 1 litre per kilo of gain, a 4kg grain bill will have a dry volume of around 6 litres and will absorb around 4 litres of water, and have a wet volume of 9 to 11 litres.

The inner gain vessel has a volume of 21 litres, it can typically hold a maximum of 10kg of a dry grain bill, which will have a dry volume of around 14 litres and a wet volume of about 19 litres.

Inner grain vessel (empty and dry) has a mass of 3.3kg.

WARRANTY

All EINBREW products carry a 1 year back to base warranty covering manufacturing defects and component failures. The product has no user-serviceable parts except where otherwise stated, 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, other than inside the main vessel and inner vessel for brewing and cleaning purposes. The heating element is not user serviceable; please contact your supplier in the first instance, then the manufacturer.

Please remember to follow the **Cleaning** instructions when you receive EINBREW, and after every time you utilise the product.

RETURNING EINBREW 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, if relevant. A repair estimate showing freight return and other charges will be submitted to the sender, if required and applicable, before work on the device commences.

Manufacturer Address for Repair and Spare Parts:

EINBREW

28 Station Road, BT37 0AW - United Kingdom. Or an approved repair company.

WEEE REGULATIONS

For EU customers EINBREW 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.