



ENGINEERING BETTER BEER

SVBS | Product Guide



WARNING

Serious injury, shock, or death can occur from improper use.

Read all instructions, safety information, and warnings before operating this product.

- Read all instructions.
- This system is not intended for use by or near children or persons with reduced physical, sensory, or mental capabilities.
- Always remove storage cover before use.
- Never touch the kettle surfaces during use or until the system has completely cooled.
- Always operate this product on a stable, level surface.
- Always operate this product in a well-ventilated space.
- Never operate this product if any cord is damaged or if any other malfunctions occur.
- Ensure the access hole cover on the bottom of the unit is installed at all times.
- Always ensure a minimum of 2 gallons (8 liters) is present in the Kettle before turning on the heating element.
- Never run the pump dry.
- Never leave this product unattended during use.
- Never stick any object in the base of the unit while power is connected.
- Never operate or store this product in any environment that is subject to external water, fluids, or rain.
- Never submerge this product in any liquid.
- Always unplug from power outlet when cleaning or disassembling.
- Never spray the power connections or any other electronic component with water or other fluids.
- Never use the system without the Pump Filter installed in the Kettle.

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SYSTEM OVERVIEW

The SVBS is an electric brewing system designed to produce 5 gallons of wort in a single, compact unit. This product uses the brew-in-a-bag method and utilizes a patent-pending sanitary valve system for mash recirculation, whirlpooling, and knockout. The included touch screen controller allows for precision temperature control and data logging.

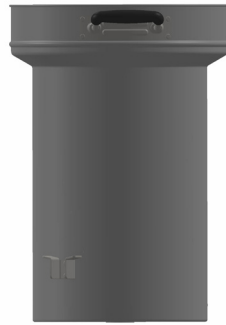


OVERVIEW

IN THE BOX



SVBS Kettle



Mash Basket



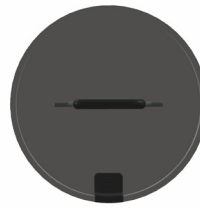
SVBS Storage Cover



Touch Screen
Controller



Pump Filter +
Silicone Gasket



Lid



Power Cord



RIMS Diffuser Body



RIMS Diffuser
Cap



Basket Seal



Recirc Tube



3/4" TC Clamp



3/4" TC to 1/2 Hose
Barb



3/4" TC Gasket



3/8" ID Silicone Tubing
& Hose Clamp

INITIAL CLEANING AND PASSIVATION

PRE-CLEAN

Prior to first-time use, thoroughly wash all surfaces of the SVBS, including all valves and fittings, with Tri-Sodium Phosphate (TSP) in hot water, mixed with the manufacturer's recommendations. Be careful to not get any of the electronics (power cables, switches, etc.) wet while cleaning. If this happens, please wait until the system has completely dried before plugging in the SVBS. Scrub with a soft cloth (don't use anything abrasive) and after the initial TSP wash, rinse thoroughly and dry all surfaces. Check out our TSP Cleaning FAQ knowledge base article for more info!

PASSIVATION

It is good practice to periodically passivate all stainless steel equipment with an acid-based solution to establish a uniform passive oxide layer that will maximize corrosion resistance. Following the pre-clean step, fill the Kettle with hot water (at 140-180°F) mixed with Citric Acid (at a concentration of 4% by weight) for at least 30 minutes (up to 2 hours.) Drain, dry, and then rinse with purified water. Most tap water contains various salts and chlorides (either naturally or for taste) which can undermine the passive oxide layer you just worked to create. Check out our Passivation FAQ knowledge base article for more info!

BREW DAY

CLEANING AND SANITIZING

As part of a regular cleaning regimen, wash the interior surfaces of your System with hot water and an alkaline cleaner such as PBW. Then sanitize with hot water and an acid-based sanitizer. Check out our Cleaning FAQ and Sanitization FAQ knowledge base articles for more info! Please review dosage and disposal requirements for all chemicals before use.

<https://ssbrewtech.zendesk.com/hc/en-us/articles/202239329-Before-Using-Your-Equipment-Cleaning-Guide>

USE THE FOLLOWING WITH CAUTION:

- Stainless steel scrubbing pads or abrasive scouring pads. If used too aggressively, abrasive pads (like Scotch-Brite Green Heavy Duty scour pads) can damage the surface and/or finish of the stainless. Non-scratch scouring pads are recommended (like Scotch-Brite Blue non-scratch scour pads.)
- Oxalic Acid cleaners such as Bar Keeper's Friend, Kleen King, or Revere Ware Copper and Stainless Steel Cleaner on the etched volume markings or etched logo. They may cause the markings to fade.

NEVER USE THE FOLLOWING:

- Chlorine bleach or chlorine-based products. Chlorine can cause pitting of stainless steel, or pinholes through the surface which cannot be repaired.
- OxiClean or other peroxide cleaners in combination with hard water. These can cause calcium carbonate to precipitate onto the surface. If this happens, re-passivate your SVBS.

CONNECTING POWER & CONTROLLER DISPLAY

The Main Power Connector, Display Connector, and Power Button are located on the back left side of the SVBS.

CONNECTING THE TOUCH DISPLAY

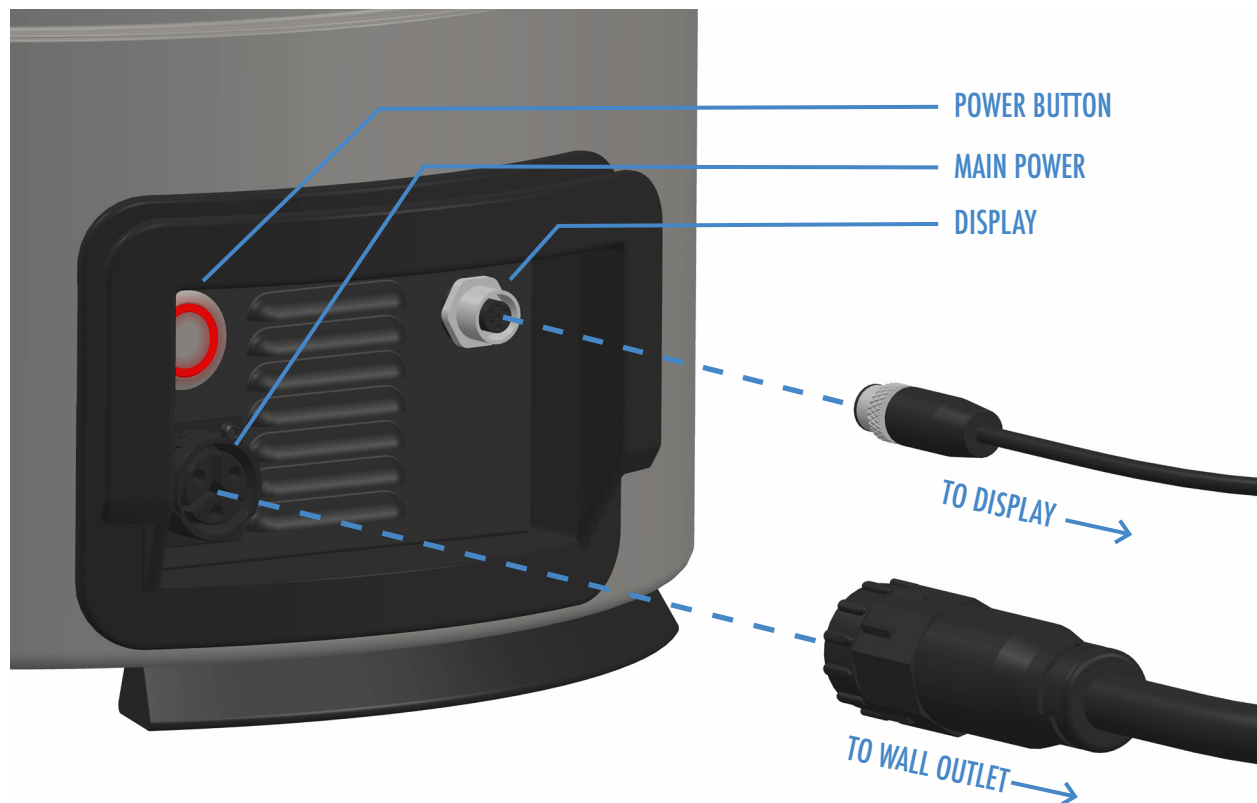
Plug the Display Cord into the Display Connector on the SVBS. The display uses a keyed M12 style connector to ensure correct orientation and also features a threaded lock mechanism. Once the plug is pressed into the display connector on the SVBS, twist the knurled ring (using only your fingers) until the connection is snug

CONNECTING POWER

With dry hands, plug the SVBS Power Cord into the SVBS then twist the lock ring on the power cord to lock the cord to the SVBS. After the power cord is securely connected to the SVBS, connect the other end of the SVBS Power Cord to your main power supply

POWER BUTTON

To turn on your SVBS, simply press the power button so that it clicks in and latches. The red ring light will activate and the internal cooling fan will turn on. Press the button again to turn off your SVBS.

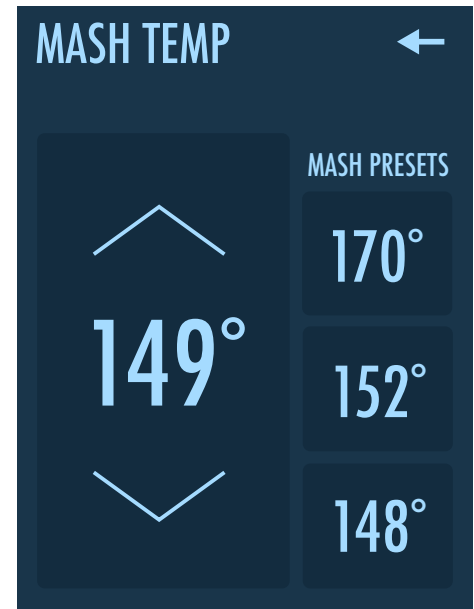


CONTROLLER FUNCTIONS

SETTING THE MASH TEMPERATURE

When in **MASH** mode, you can set the controller to heat to and hold a certain temperature.

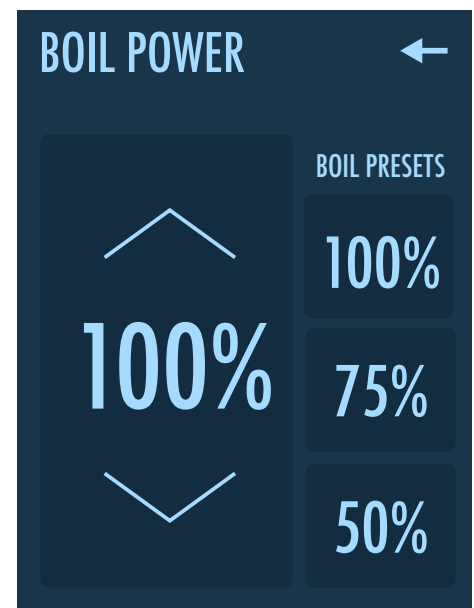
1. On the Mash screen, tap the temperature readout in the lower left corner of the screen to access the Mash Temp Adjustment Screen
2. Using the up and down arrows, select the desired temperature.
3. Select the return arrow in the upper right corner of the screen to return to the Mash screen. The temperature value displayed between the up and down arrows will automatically be saved when you exit the adjustment screen



SETTING THE ELEMENT POWER

When in **BOIL** mode, you can use the controller to directly control the power output of the element to help control heating. This is most useful to help maintain a gentle boil during your brew.

1. On the Boil screen, tap the power percentage in the lower left corner of the screen.
2. Using the up and down arrows, select the desired power percentage.
3. Select the return arrow in the upper right corner of the screen to return to the Boil screen. The percentage displayed will automatically be saved when you exit the adjustment screen



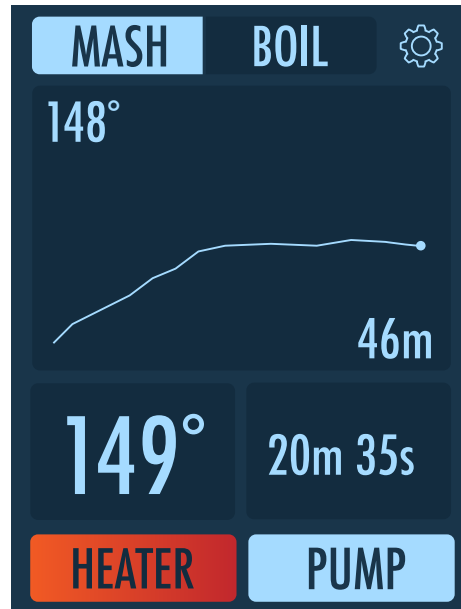
CONTROLLER FUNCTIONS (CONTINUED)

ACTIVATING THE HEATER ELEMENT AND PUMP

In both **MASH** and **BOIL** modes, you can easily activate the Heater Element and Pump using the on-screen buttons.

To activate the Heater Element, press the **HEATER** button. The button will change to a **red** color to indicate it is on. To turn off the Heater element, tap the **HEATER** button again.

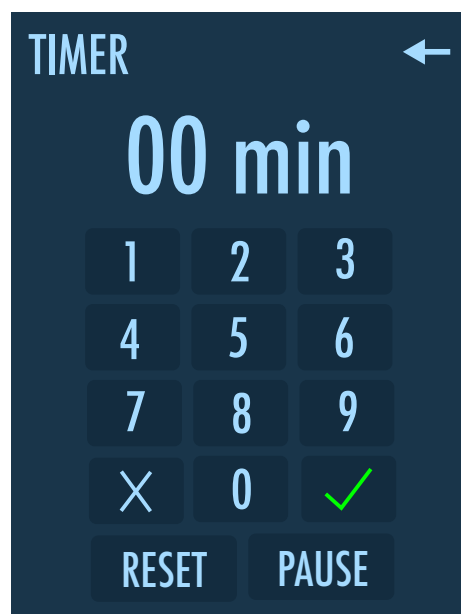
To activate the Pump, tap the **PUMP** button. The button will turn a light blue color to indicate it is on. To turn off the pump, tap the **PUMP** button again. Note, in the image to the right, both the Heater and Pump are shown in their ON state



SETTING TIMER

The SVBS Controller features a timer that can be used during your brew day to help track certain steps and processes. The timer works in both **MASH** and **BOIL** modes.

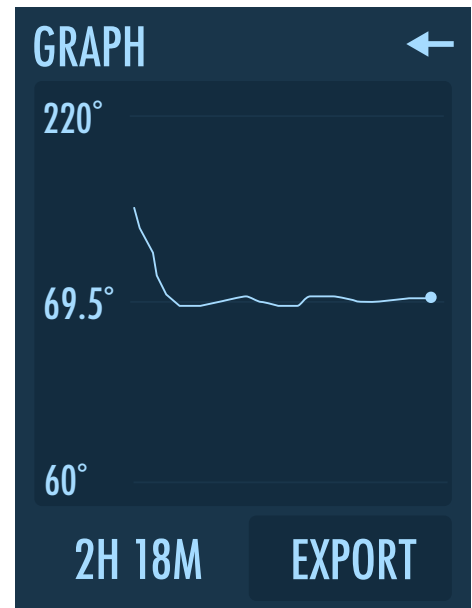
1. To set a timer, tap the **TIMER** button on the lower right of the display.
2. The Timer Selection Screen will appear. You can then input your desired time using the Number Pad.
3. Tap the green Check Mark “✓” to confirm timer selection and return to the main screen. The timer will now begin to count down here the word **TIMER** was previously displayed.
4. To pause or reset the timer during your brew, tap the Timer button and then tap either the **RESET** or **PAUSE** buttons below the number pad.



CONTROLLER FUNCTIONS (CONTINUED)

VIEWING TEMPERATURE READING GRAPH

During operation you will see a mini graph on the Control Screen. Tapping the mini graph on this screen will open the full graph detailing temperatures over time. From here you can view the temperature history and can export the data log to a USB drive as detailed below.



EXPORT TEMPERATURE READING GRAPH

1. To export your batch temperature log, tap the **“EXPORT”** button to open the DATA EXPORT screen.
2. Insert a FAT32 formatted USB drive into the Controller.
3. Tap **“EXPORT CSV”**.
4. Select the Return Arrow **“←”** on the DATA EXPORT Screen.
5. To reset the graph data, press **“RESTART”** from Settings Screen to clear previous data log.

NOTE: The largest exterior size of USB drive that will fit the SVBS Controller is 0.65” wide x 0.29” tall (16.4mm x 7.4mm). Drives with large cases may not fit the SVBS Controller.

DATA EXPORT

Insert a FAT32 formatted USB drive into the SVBS Controller.

Once inserted, press the button below to initiate the export.

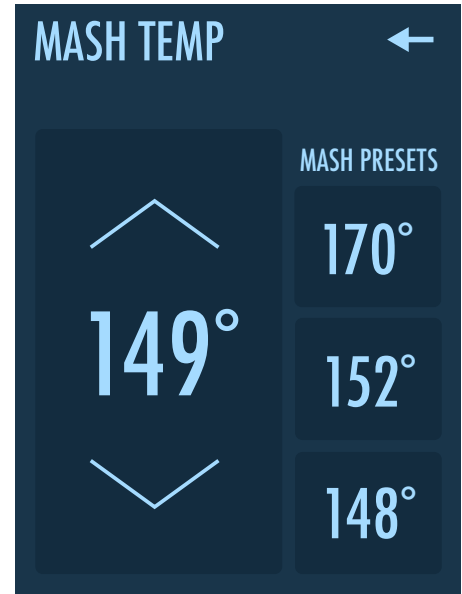
EXPORT .CSV

CONTROLLER FUNCTIONS (CONTINUED)

PRESET TEMPERATURE SETTINGS

Preset temperatures may be stored in the touch screen controller for quick temperature selection.

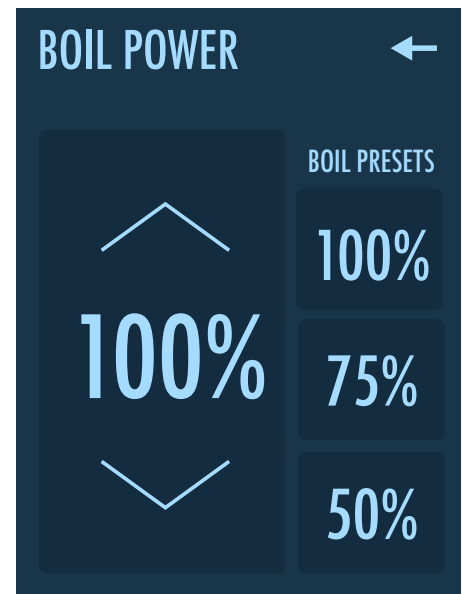
1. On the Mash screen, select the temperature setting in the lower left corner of the screen.
2. Using the up and down arrows, select the desired temperature.
3. Touch and hold one of the three available preset temperatures for 3 seconds to store the desired temperature.
4. The desired temperature will now appear under the preset column.
5. Select the return arrow in the upper right corner of the screen to return to the Mash screen.



PRESET POWER SETTINGS

Preset power settings may be stored in the touch screen controller for quick adjustment of power applied to the heating element.

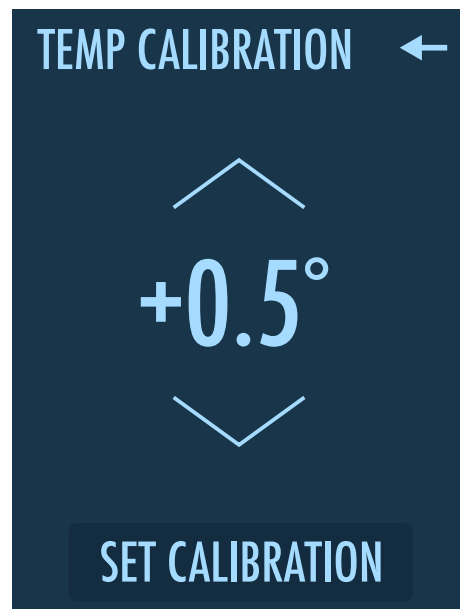
1. On the Boil screen, select the power percentage in the lower left corner of the screen.
2. Using the up and down arrows, select the desired power percentage.
3. Touch and hold one of the three available preset percentages for 3 seconds to store the desired power setting.
4. The desired power percentage will now appear under the preset column.
5. Select the return arrow in the upper right corner of the screen to return to the Boil screen.



SETTINGS

CALIBRATE TEMPERATURE PROBE (OFFSET)

1. Determine how many degrees you need to adjust the controller (up to 12.0 degrees either way). This can be determined by filling the SVBS with about 2 gallons of water and comparing it to a calibrated thermometer.
2. Tap the Settings Cog “⚙️” on the Start Up Screen or during operation.
3. Tap “CALIBRATE” to bring up the Temp Calibration Screen.
4. Adjust up or down as desired.
5. Once calibrated, tap the Return Arrow “←” on the Temp Calibration Screen to return to the Settings screen.
6. To exit the Settings screen, tap the Return Arrow “←” on the Settings Screen



SWITCH BETWEEN FAHRENHEIT AND CELSIUS SCALE MODES

1. Select Settings Cog “⚙️” on the Start Up Screen or during operation.
2. Select F° (for Fahrenheit reading) or C° (for Celsius reading) on the Settings Screen.
3. Select the Return Arrow “←” on the Settings Screen.



FACTORY RESET

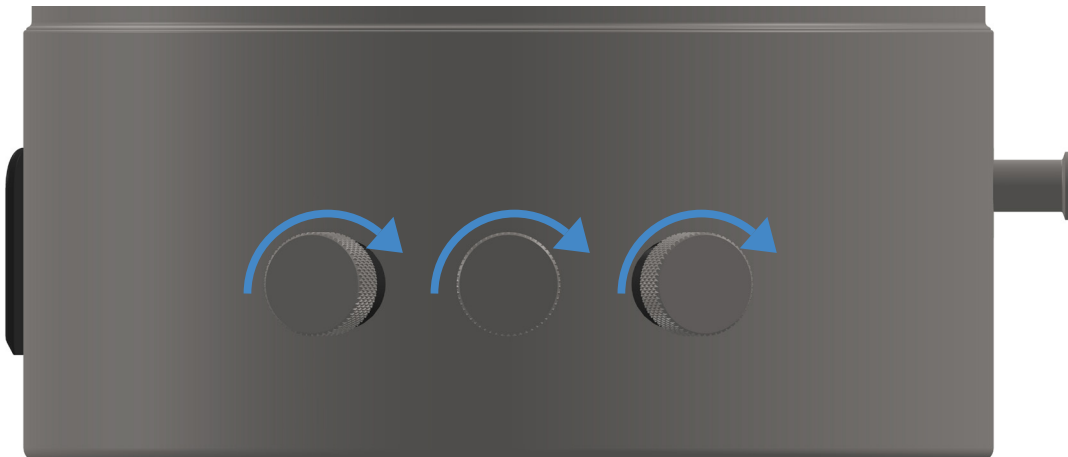
1. Tap the Settings Cog “⚙️” on the Start-Up Screen or during operation.
2. Tap “FACTORY RESET”. Your screen will blink and factory reset your controller. This will bring you to the First Time Setup Screen.

BREW DAY

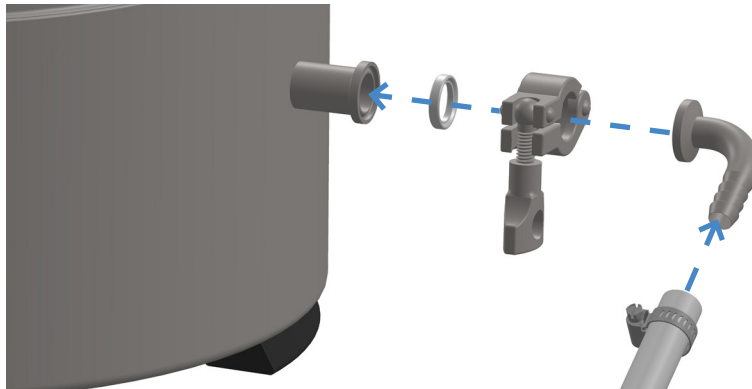
PRE-SANITIZING STEP

The knockout path must be sanitized prior to conducting your brew. It is best practice to circulate a non-foaming sanitizer through the pump and all tubing paths before beginning.

1. Ensure all valves are closed.



2. Prepare 2 gallons of non-foaming sanitizer solution in the **Kettle**.
3. Ensure your **Knockout Tubing** is connected to the **Knockout TC** on the right side of the system. Place the outlet of the **3/8-inch Silicone Tube** in a bucket or drain.

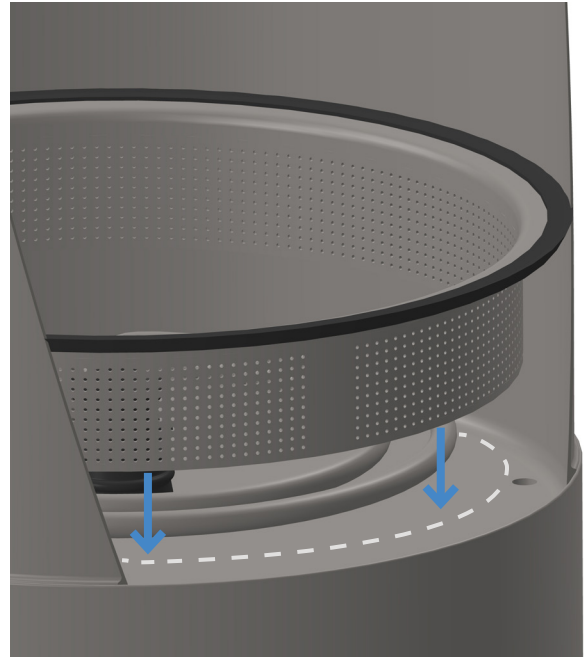
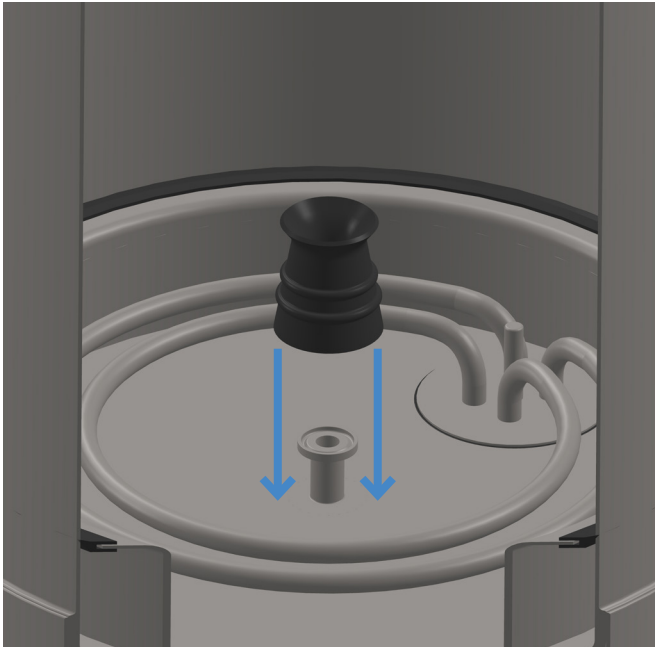


4. Open the Recirc and Whirlpool valves and turn on the pump to recirculate the sanitizer. Follow your sanitizer manufacturer's instructions to allow for adequate contact time.
5. Open the Knockout valve and close the Recirc and Whirlpool valves.
7. Drain the sanitizer solution from the **Kettle** and then turn off the pump.
8. When completely drained, close all three valves and place the outlet of the **3/8-inch Silicone Tube** in sanitizer.

BREW DAY (CONTINUED)

PREP & HEATING STRIKE WATER

1. Install the **Basket Seal** onto the $\frac{3}{4}$ " TC flange in the base of the Kettle.
2. Moisten the **Pump Filter Gasket** with sanitizer or water and install the **Pump Filter** into the base of the Kettle. Adjust the **Pump Filter's** placement, if necessary, to ensure the drain hole is not visible.



3. Ensure Valves are closed and fill the **Kettle** with the desired amount of brewing water.

NOTE: The brew-in-a-bag method uses a higher water-to-grist ratio than traditional mashes. It is recommended to account for this increase in water and properly adjust your water chemistry to achieve a mash pH between 5.2-5.6.

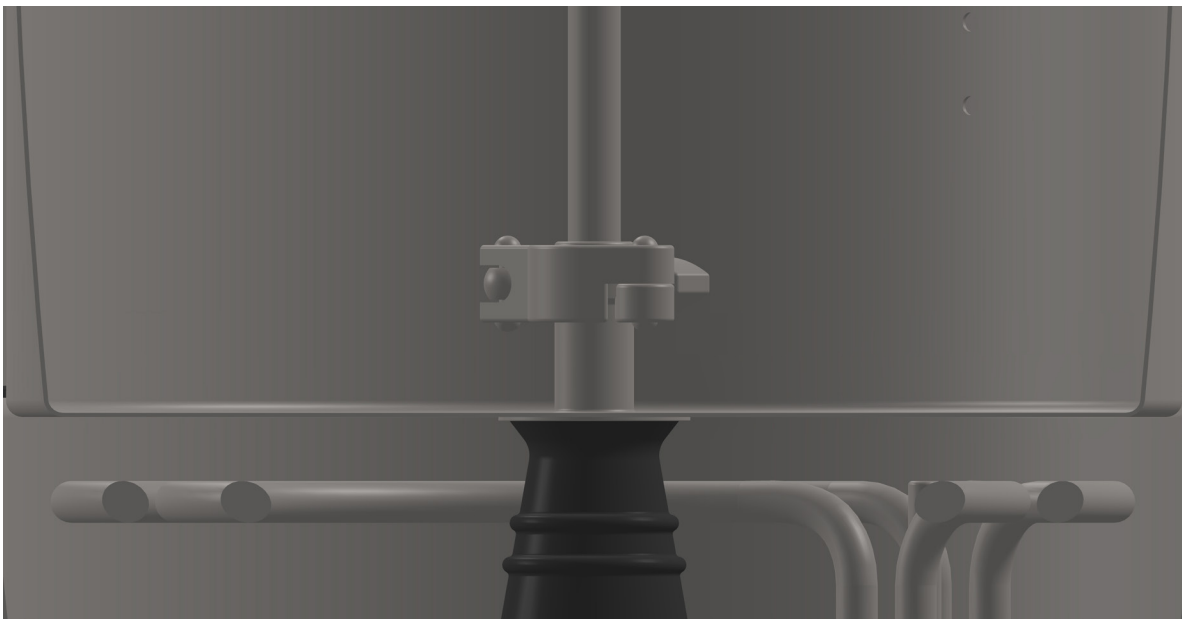
4. After filling the **Kettle** with water, purge the air from the enclosed tubing by fully opening the Recirc and Whirlpool valves. After the air is purged, close the Whirlpool valve until snug.
5. At this point, you may want to reset the Brew Timer so that the total elapsed time at the end of your brew day will be representative of the time from heating your strike water. Select the Settings Cog "⚙️" in the upper right corner of the screen, then select "**RESTART BREW**".

BREW DAY (CONTINUED)

6. Using the included $\frac{3}{4}$ " **TC Clamp** and $\frac{3}{4}$ " **TC Gasket**, install the **Recirc Tube** on the $\frac{3}{4}$ " TC as shown. Slide the **RIMS Diffuser** onto the **Recirc Tube** by about 1/2-inch.



7. Insert the **Mash Basket** into the **Kettle** and push down gently on the **Mash Basket** to ensure it is fully seated as shown.



8. Turn on the pump using the PUMP button and slowly open the Recirc valve to recirculate the water during heating. Before proceeding, ensure you have good consistent flow through the **Recirc Tube** and the **RIMS Diffuser**. On the Mash screen, set the desired strike water temperature and then tap the HEATER button to turn on the element. Place the **Lid** on the **Mash Basket** until the water reaches the desired strike temperature.

BREW DAY (CONTINUED)

MASHING

1. Once the strike water reaches the desired temperature, remove the **Lid** and turn off the pump and heater. Next, reduce the set temperature to your desired Mash Temperature.
2. Slowly pour in your milled grains while gently stirring to ensure full saturation.
3. If necessary, lower the **RIMS Diffuser** until the top is approximately 2 inches above the grain bed.
4. Turn on the pump and slowly open the Recirc valve until the water begins to flow from the **RIMS Diffuser**.

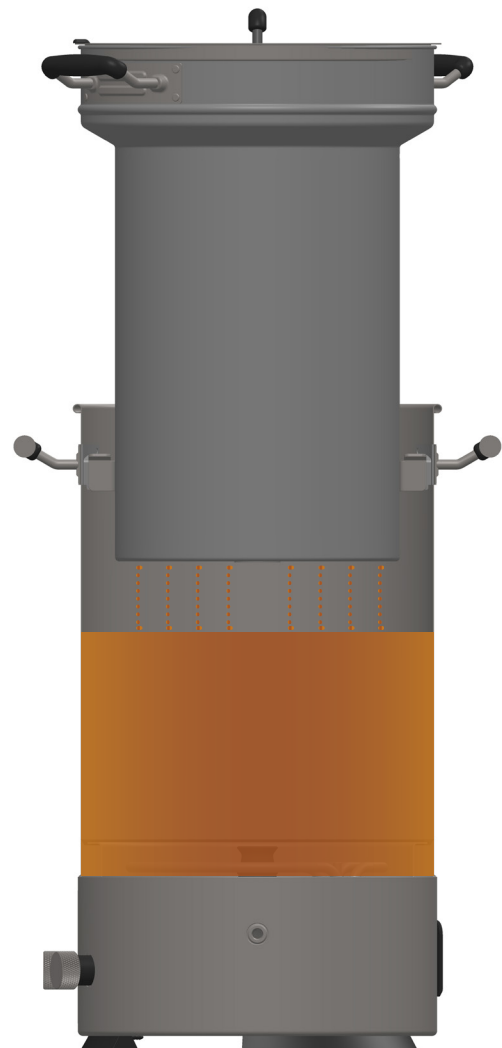
NOTE: Monitor the fluid level in the **Mash Basket** to ensure it remains constant. If necessary, reduce the recirculation flow rate by adjusting the Recirc knob.

5. Place the **Lid** on the **Mash Basket** and periodically check the fluid level during the mashing process.

NOTE: A stuck mash bed can prevent wort from draining through the **Mash Basket**. If excess fluid is observed in the **Mash Basket**, immediately turn off the heater element and pump and stir the mash until the excess fluid has sufficiently drained.

6. When mashing is complete, slowly lift the **Mash Basket** and place it on the supports inside of the **Kettle** to lauter.

7. Remove the **Mash Basket** from the **Kettle** and place over a 5-gallon bucket to collect any residual wort left in the spent grain. If the bucket is clean, you can collect this wort and add it back to the **Kettle** if desired.



BREW DAY (CONTINUED)

BOILING

1. Set power to 100% until a rolling boil is achieved.

NOTE: This can be started while the **Mash Basket** is draining in the **Kettle**.

2. Carefully watch the **Kettle** to ensure no boil-overs occur. Turn off the heater element and reduce the power if necessary.

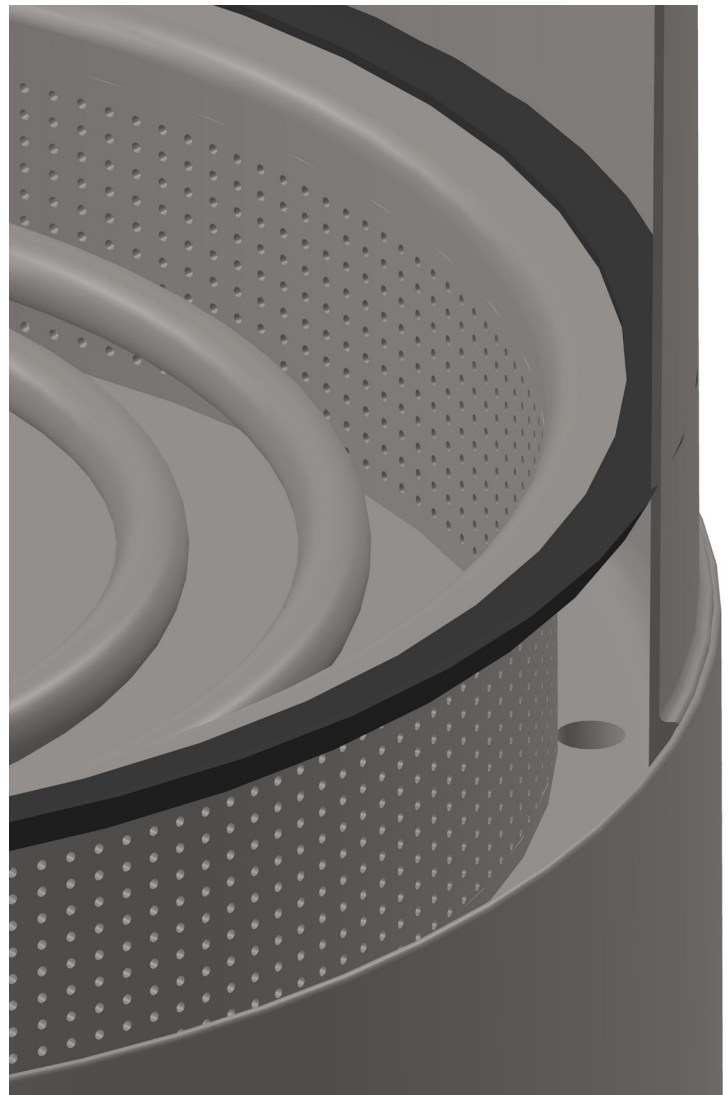
NOTE: Depending on ambient conditions, power may be reduced to around 60% for the remainder of the boil. Adjust the power setting as necessary to achieve a sufficient boil.

PUMP FILTER

The primary purpose of the Pump Filter is to prevent the pump in the base of the SVBS from becoming clogged with trub and hop material while whirlpooling and transferring to the fermenter during the knock out process.

The Pump Filter should always be used when brewing to avoid any risk to the pump and manifold system.

Due to the effectiveness of the Pump Filter, you may need to account for additional kettle loss when formulating your recipe. Variables such as malt bill, grain crush, kettle finings, hop additions, chilling method (immersion chiller vs plate chiller or counterflow chiller), etc, can affect the volume of kettle loss. For recipes with a larger volume of kettle hop additions, it is recommended that a hop spider or heat resistant mesh bag is used to help contain them.

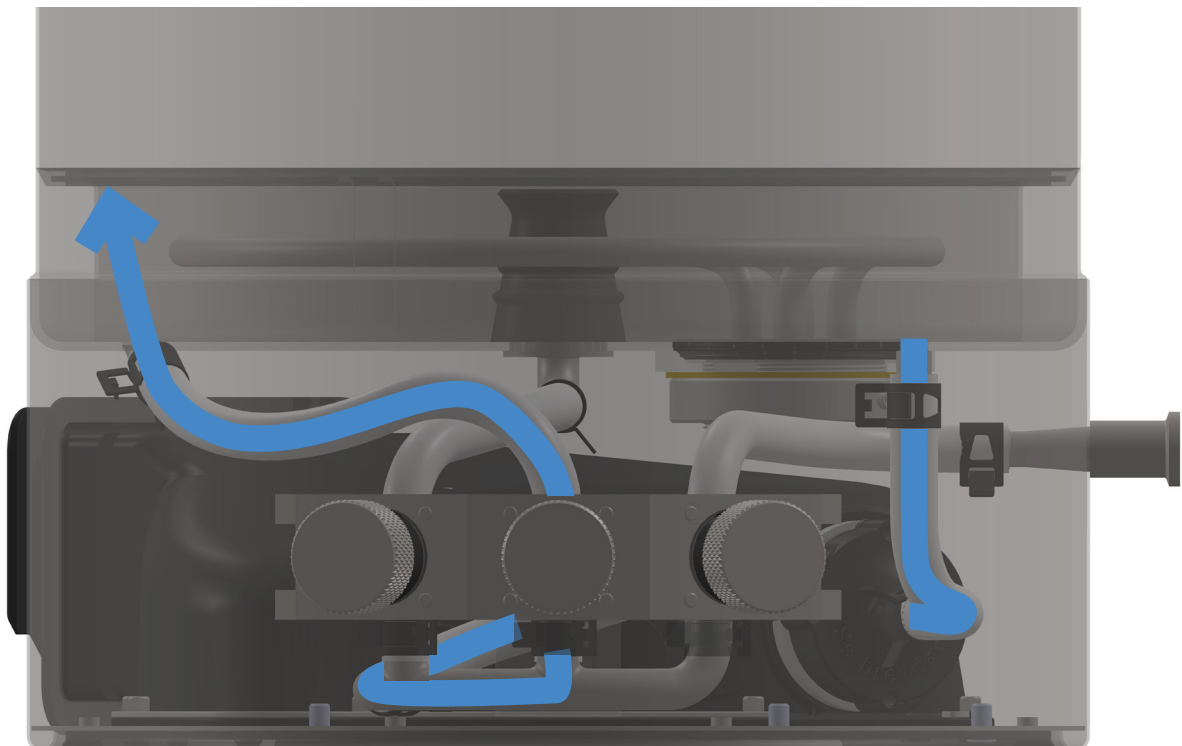


BREW DAY (CONTINUED)

WHIRLPOOLING

Whirlpooling is an important step that helps promote beer clarity.

1. At the end of the boil, turn off the heating element and open the Whirlpool Valve.
2. Turn on the pump and whirlpool for at least 10 minutes.
3. When whirlpooling is complete, turn off the pump and close the whirlpool valve.
4. Let the wort rest for at least 10 minutes to allow the trub cone to collect in the center of the **Kettle** before knockout.



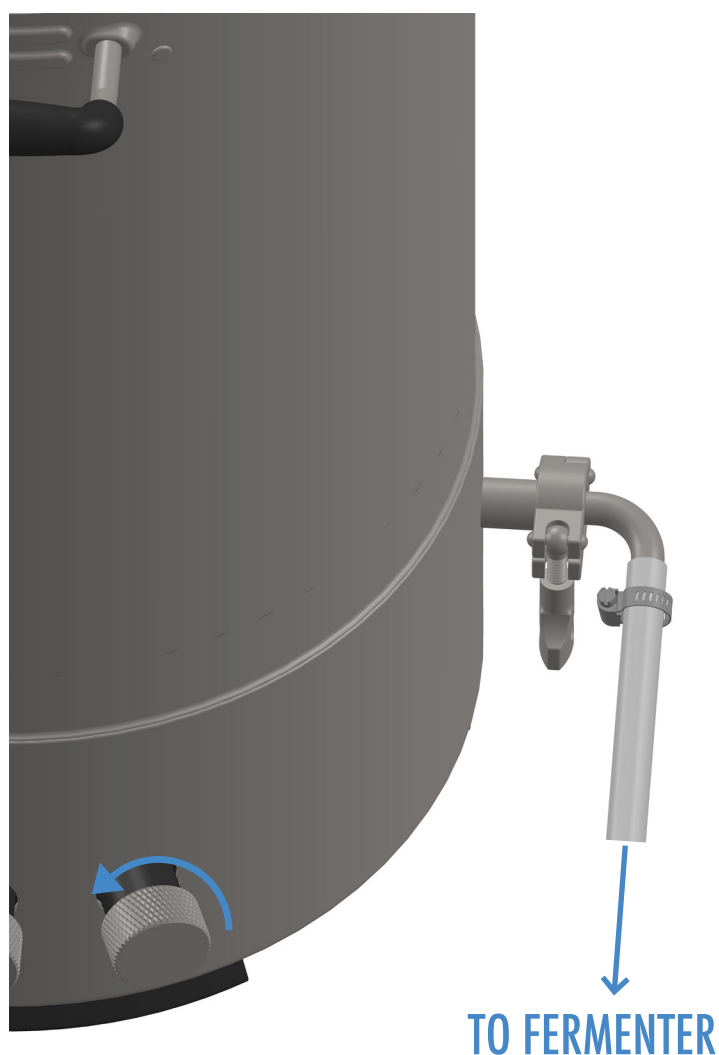
OPERATION

BREW DAY (CONTINUED)

KNOCKOUT

It is important to quickly chill your wort to yeast pitching temperature before knocking out into your fermenter. A sanitized immersion chiller can be placed directly in the **Kettle** or the wort can be transferred through a plate chiller or equivalent.

1. Open the Knockout valve to drain the wort from the **Kettle**. For best results, it is recommended to start with opening the valve only about 1.25-1.5 of a turn.
2. Close the Knockout valve when draining is complete.



BREW DAY (CONTINUED)

CLEANING

Wort and trub matter can create a sticky mess in the Kettle, pump and enclosed tubing if left for an extended period. Always conduct a thorough cleaning immediately after the system has cooled.

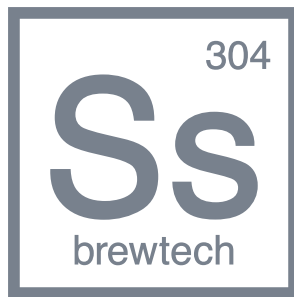
1. Rinse the **Kettle** with water to remove any residual wort and trub.
2. Remove the **Pump Filter** and **Basket Seal** and rinse off any residual hop matter or trub.
3. Place the **3/8-inch Silicone Tube** in a bucket or drain.
4. Open all valves and run water through the **Kettle** to rinse the pump and tubing paths.
5. Drain water and close all valves.
6. Reinstall the **Pump Filter** and **Basket Seal**.
7. Fill the **Kettle** with 2 gallons of water and heat the water to the desired temperature for cleaning.

NOTE: When heating small volumes of water, it is recommended to set the temperature about 5 degrees lower than desired to avoid overshoot.

8. Route the **3/8-inch Silicone Tube** up to the top of the **Kettle** so that the cleaner can recirculated.
9. Add your desired brewing equipment cleaner to the **Kettle** and open all valves.
10. Turn on the pump and recirculate the cleaning solution. Follow your cleaner manufacturer's instructions to ensure adequate contact time.
11. When cleaning is complete, drain the cleaning solution from the **Kettle** and close all valves.
12. Fill the **Kettle** with rinse water and begin the rinse process by repeating steps 10 and 11 with your rinse water.
13. When complete, fully open all valves and flip the SVBS upside down to allow it to completely dry.

STORAGE

Store your SVBS in a dry location protected from the external elements. It is recommended to keep all valves open during storage.



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