

# READ CAREFULLY AND SAVE FOR FUTURE REFERENCE

## SAFETY

This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities.

• Never clamp down the lid when brewing, the clamps are only to be used with an optional T500 compatible distilling column (not included).

• This appliance should not be left unattended during operation.

• The appliance should be operated on a flat stable surface, NEVER on an incline.

- The unit must be plugged into a GFCI protected plug.
- Do not move when hot to prevent scalding.

• Do not run the pump without the recirculation arm attached. Doing so can cause scalding! Keep the blue handle closed when the recirculation arm is removed.

• If the supply cord or plug is damaged, it must be replaced by a qualified electrician in order to avoid a hazard.

• **DO NOT IMMERSE IN WATER** - The base of the unit is not waterproof and should not be immersed for cleaning. The unit must be unplugged from power before cleaning.

• This appliance is intended for household use only, and is not designed for commercial use.

## Mashing, Sparging, and Boiling

**BATCH SIZE:** You can make either a 2½ gallon or 5 gallon batch in the Mash & Boil.

**STRIKE WATER CALCULATION:** You will first need to calculate your strike water. Use .30 gallons of water for every pound of grain, with a minimum amount of 2 gallons, regardless of batch size.

#### **Examples:**

 $2\frac{1}{2}$  GALLON BATCH WITH 5 POUNDS OF CRUSHED GRAIN: Instead of using (5 × .3) gallons to calculate strike water which would be 1.5 gallons, use 2 gallons which is the minimum.

5 GALLON BATCH WITH 11 POUNDS OF CRUSHED GRAIN: Use  $(11 \times .3)$  which is 3.3 gallons of strike water.

5 GALLON BATCH WITH 16 POUNDS OF CRUSHED GRAIN: Use  $(16 \times .3)$  which is 4.8 gallons of strike water (16 pounds is maximum capacity).

**STEP 1:** Calculate your strike water for your batch and add to the Mash & Boil. Insert the Sparging Basket and cover with lid. Plug in the unit, set for 1600 W, and turn **ON** the far right (red rocker) power switch. Now press **ON/OFF** on the digital control, and press **SET**. The default strike water temperature of 162° will flash. To change this, press the + or – buttons, otherwise, press SET to agree to this strike temperature (which results in a mash temperature of 152° to 154° F.).

**STEP 2:** After setting the runtime, the **TIMER** value of 0:00 will flash. This means the unit will turn on as soon as you press SET again as you have not entered a delayed start time.

If you want to delay the start of the unit, enter the number of hours you want to wait before the unit starts (enter 1 to 23 hours in whole hours only). For example, if you want the unit to start 8 hours from now, enter a value of 8.

**STEP 3:** To agree to this and start the heating cycle for the strike water (or TIMER countdown), press **SET** again to start the strike water heat cycle.

**STEP 4:** Once the strike water has reached the target temperature of 162° F., open the lid and start mixing in the crushed grain with a long spoon. Mix in thoroughly for even heat distribution until the mash develops a porridge like consistency. If you find the mash is a little dry, pour a half gallon of strike water from the bottom valve and mix it into the top of the mash. Now with the lid removed, change the set temperature to 152° F (down from 162° F.), by following the instructions in step 1.

**STEP 5:** Now attach the recirculation arm and the short piece of silicone tubing with the white plastic Sparge Attachment (see picture). With the blue handled valve all the way open (vertical) turn on the **PUMP** switch on the side of the unit to start the pump. You will need to use the valve to adjust the flow of recirculation so the unit maintains about an inch of water above the grain bed during the 1 hour mash.



Too much flow, and the unit will run dry (you will hear a sucking sound) and too little, and the needed 1" of liquid above the grain will not be maintained. You will have to play around with the valve adjustment a bit to maintain about an inch of water above the grain bed as every mash is different.

If your mash clogs, and is not flowing well enough for the pump to function, you either have too fine a crush of the grain in the mash, or too large a percentage of gummy starches like flaked grains. Turn off the pump and put on the lid, and let mash without recirculation if this happens. Wait 1 hour for mashing to complete (but start preparing your sparge water now, see below).

**SPARGE WATER CALCULATION**: You will need to calculate the amount of hot 168° F. sparge water you will need at the end of the 1 hour mash. Use your strike water calculation amount and multiply by .75 to get the amount of sparge water needed.

### **Examples:**

 $2\frac{1}{2}$  GALLON BATCH WITH 5 POUNDS OF CRUSHED GRAIN: 2 gallons of strike water multiplied by .75 =  $1\frac{1}{2}$  gallons of sparge water needed.

5 GALLON BATCH WITH 11 POUNDS OF CRUSHED GRAIN: Multiply your 3.3 gallons of strike water by .75 to get 2.48 gallons needed.

5 GALLON BATCH WITH 16 POUNDS OF CRUSHED GRAIN: Multiply your 4.8 gallons of strike water by .75 to get 3.6 gallons needed.

**STEP 6:** Prepare your sparge water. Heat the calculated amount of water in a separate vessel to 168° F., so it will be ready for use at the end of the 1 hour mash period. It is okay to mash for longer than 1 hour if your sparge water is not quite ready yet.

**STEP 7:** Time to sparge. Now unscrew and detach the recirculation arm and pull the mashing basket straight up, and then twist to set its 4 legs on the upper wire support. Be careful not to drop the full basket on the floor, as the legs may bend under the weight of the wet grain. Change the set temperature to 218° F. by following the instructions in step 1 to boil.

**STEP 8:** While the temperature is rising, the malt sugar is dripping into your Mash & Boil from the Sparging Basket. Now it is time to add the 168° F. sparge water you have prepared, to wash the malt sugars into the boiler. Sparge until you have 5½ to 6 gallons of wort.

#### **IF USING 7 POUNDS OF CRUSHED MALT OR LESS**



If you are using 7 pounds of crushed malt or less, you will first need to push the wet crushed malt up so it covers the side perforations of the basket to prevent splashing down the sides when you add strike water. When using this small amount of grain, only add a quart of sparge water at a time to prevent splashing out the sides.

Brewer's Edge<sup>®</sup> offers an optional Small Batch Adapter, item J11, that covers the side holes. This is recommended if you do a lot of small 2½ gallon batches.

#### IF USING 8 TO 16 POUNDS OF CRUSHED MALT

Add a half gallon of 168° F. sparge water at a time to the top of the basket, let the basket drain, and add more sparge water as needed until the 5½-6 gallon mark is reached. It is helpful to use a flashlight and shine it across to the gallon marker side to make the markers more visible. Keep doing this until you have 5½-6 gallons, and then lift the Sparging Basket off when it has finished draining. Turn up the thermostat to 217° F and wait for the boil to begin. **IMPORTANT** - Do not clamp the lid when boiling, leave the clamps loose to prevent steam burns! We recommend leaving the lid off when the unit comes to a boil.

**STEP 9:** Boiling will be reached in about 50 minutes. Boil for 1 hour, adding hops and brewing your usual way. **Do not run the pump during the boil.** Consider using a hop spider if you intend on pumping through a wort chiller at the end of the boil to reduce the chance of pump clogging.

**STEP 10:** After the boil, use the chiller of your choice to chill the wort. Once cool, transfer into your designated fermenter. We recommend using the valve rather than using the pump to pump out, as the pump can sometimes clog on hop particles after the boil.



#### **CLEARING A CLOGGED PUMP**

The pump can become clogged occasionally, particularly when large amounts of pellet hops are used. To clear a

pump clog, turn the pump off and remove the recirculation arm. Add a half gallon of water to the unit. Open the blue valve handle and blow vigorously on the side pipe, and also

#### FOR USE IN DISTILLING

should not be used.

The Mash & Boil lid is distilling ready. If you plan to use your Mash & Boil to distill, you will need a standard Turbo 500 type distilling column that fits in a 47mm lid hole. Unscrew the handle from the Mash & Boil lid with a screwdriver to

suck to loosen any clog. Whole hops

reveal a 47mm hole, and install your column. Be sure to clamp the lid to seal when distilling, and release clamps when done.

#### **CLEANING THE UNIT**

**Always unplug before cleaning.** Clean your Mash & Boil interior with a scrub sponge and then rinse with water.

Now plug it back in and add a gallon of clean water. Reattach the recirculation arm and run the pump for a few seconds until the water runs clear. Now unplug the unit, remove the recirculation arm, and leave the unit upside down to dry between uses.

#### DO NOT REMOVE THE VALVE FOR CLEANING!

**Doing so will void the warranty and may cause leaks between the double walls.** Open the valve and rinse with water to clean. The heat of the next boil will effectively sanitize the valve.

### ERROR CODES & THE RESET BUTTON:

**ER1:** Thermostat error, usually caused by the red thermostat cable plug coming loose from the top left corner of the internal power board.



**ER4:** Thermostat overheating protection. This can happen when the heating element and thermostat are covered by a hop or grain bag. It can also be caused by heavy trub deposits resulting from too fine a grain crush, or malt extract or honey being poured into the unit, coating the thermostat. Reset by unplugging, and pressing the reset button on the bottom center of the unit.

#### 1 YEAR WARRANTY & SERVICE (do not return to store)

A one year warranty from date of purchase is provided by Brewer's Edge<sup>®</sup>. This applies to household use only, commercial use will void this warranty. Warranty is valid in the United States only, and only applies to units purchased from authorized sellers, which are home brewing dedicated retailers and online home brew stores. Proof of purchase in the form of a receipt for store or online purchase is required for warranty service.

Email **info@brewersedge.com** with a copy of your proof of purchase for warranty service information. You can also go to **brewersedge.com** for the latest tips on use, and check the Facebook Mash & Boil user group.

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