Simplified Braumeister and related brewing equipment operating instructions

Before starting the brewing process, you will need to activate any provided and already warmed Wyeast yeast packages (if your recipe calls for yeast from Wyeast) by locating and moving the inner packet to a corner. You will then need to place this area in the palm of one hand and firmly smack the package with your other hand to break the inner nutrient packet and then confirm that the inner packet is broken. Shake the package well to release the nutrients and allow the package to incubate and swell until you are ready to pitch it into your designated fermentor with your cooled and oxygenated wort (about 5 hours). Yeast from White Labs and Inland Island simply needs to be warmed slowly to room temperature about 2 hours before pitching (see note about this before the boil process section below).

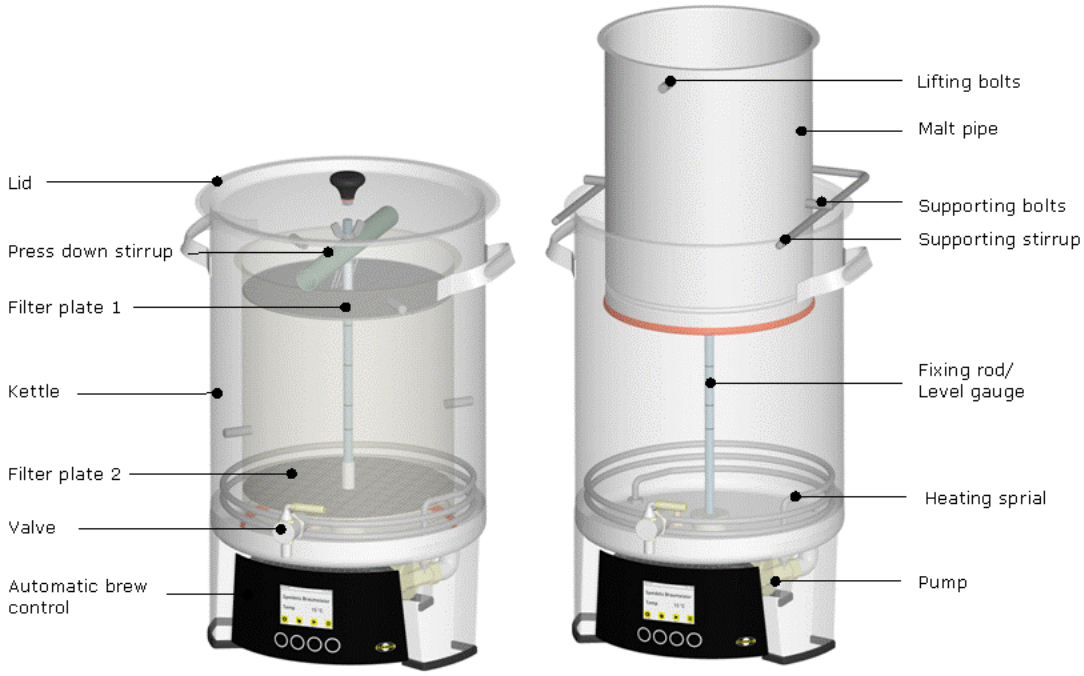
Be sure to bookmark your Braumeister's numeric IP (Internet Protocol) address in your phone or tablet's web browser so that you can monitor the brewing process from anywhere in our brewery during your brew day with us. You can even monitor the brewing process from our taproom where you can hang out with your friends and family while your Braumeister brews your beer. Your Braumeister's numeric IP address should appear in the upper left-hand corner of the display on its **Automatic brew control**, e.g., 192.168.0.114.

After activating any provided Wyeast yeast packages and bookmarking your Braumeister's numeric IP address, it is time to start the brewing process by first adding the provided individually packaged and pre-portioned brewing salts (based on your recipe), e.g., Gypsum, Epsom Salts, and Calcium Chloride, together with Five Star 5.2 PH Stabilizer to the pre-filtered water that is already in your Braumeister's **Kettle**.

Mashing

Now, install the stainless hood and press the Brewstart button on your Braumeister's **Automatic brew control**, select your pre-loaded recipe, and follow the onscreen instructions from there. Insert **Filter plate 2** (the filter plate with the tubular sleeve upwards into the Malt pipe followed by a fine sieve screen on top of that). When instructed onscreen to insert the

malt pipe, remove the stainless hood and be sure to insert the **Malt pipe** (either the standard or short pipe depending on your recipe) together with **Filter plate 2** into your Braumeister's **Kettle** with the rubber seal facing downwards. Confirm that the pipe is sitting flat on the bottom of your Braumeister. Now, open the provided and pre-packaged malts that your recipe called for and slowly pour the already crushed grain into the malt pipe while stirring thoroughly with a wooden mash paddle to prevent any clumping. Be especially careful when pouring and stirring your grain into the malt pipe to not let any of the grain fall into the Braumeister outside of the malt pipe, as this could clog the pumps. After adding the crushed grain, insert **Filter plate 1** (the second fine sieve screen over top of the mash followed by the second filter plate with the tubular sleeve upwards). To secure the malt pipe, insert the **Press down stirrup**, thread on the wing nut, and tighten while pressing down on the stirrup. *Please note that if you are using the short malt pipe for a Brew On Premises rental session, you need to insert the short malt pipe spacing sleeve before threading on and tightening the wing nut.* Now, replace the stainless hood and confirm to your Braumeister that you have filled the malt pipe by pressing the Select button on the **Automatic brew control** and continue to follow the onscreen instructions from there.



„Braumeister" during mashing

„Braumeister" during lautering

For the next few hours, your Braumeister will take care of the mashing process for you.

IMPORTANT SAFETY NOTE!: The wort and stainless hood are very hot. From here on out, be sure to wear the provided rubber gloves along with their knitted white glove inserts, all over top of disposable latex gloves, and protective eyewear whenever working with your Braumeister, e.g., when removing your Braumeister's stainless hood to see what is happening inside, lifting the malt pipe, adding hops, etc., to protect yourself from any hot liquid or steam.

Lautering

After the mashing process is complete, raise the **Malt pipe** up from your Braumeister's **Kettle** with the lifting bow hooked to the **Lifting bolts** and to the overhead rope ratchet attached to our lifting stand for mechanical advantage, suspend the malt pipe by setting the **Supporting bolts** on the **Supporting stirrup**, and allow the residual sugars to drain out back into your Braumeister's **Kettle** for 10 minutes. While these sugars are draining out, set the digital remote for our on-demand hot water heaters, which is just above the sink in our brewhouse, to 170° F and run the hot water from the faucet for a few minutes or until it reaches 170° F as confirmed by one of our handheld digital probe thermometers. Now, use one of our measuring pitchers to measure out 4 ½ liters of water and pour it over top of **Filter plate 1** and the underlying grains suspended in the malt pipe over your Braumeister's **Kettle** to continue the rinsing (lautering) process. After another 10 minutes of draining, repeat the process with another 4 ½ liters of 170° F water. The entire lautering process should take approximately 30 minutes.

At this point, we will help you remove the **Malt pipe** from your Braumeister entirely and take care of the spent grains for you. We donate your spent grains along with those of your fellow brewers to local-area farmers for use in feeding their livestock.

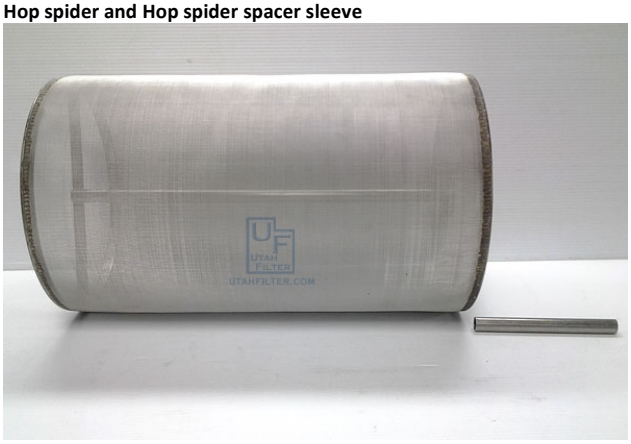
After removing the malt pipe from your Braumeister, it is now time to start the boil process. This is also a good time to obtain any White Labs or Inland Island yeast that you may be using in your recipe from our staff, so it has time to slowly warm up to room temperature before you need to pitch it.

Boil process

Before starting the boil process, take a pre-boil gravity reading using either or both a hydrometer or refractometer (analog or digital) and dilute your wort (unfermented beer) by stirring in additional water up to the 55 liter marking on your Braumeister's **Fixing rod/level gauge**, if necessary, to hit your recipe's target gravity. *Please note that if you are using the short malt pipe for a Brew On Premises rental session, you should only dilute your wort up to the 30 liter marking.* Now add 30 drops (15 drops if using the short malt pipe) of Foam Control (FermCapS) to your Braumeister's **Kettle** from the provided 1 ounce bottle using the included eye dropper. This will reduce foam production during the hot-break portion of the boil, and accordingly, will reduce the risk of boil over. Then slip the **Hop spider spacer sleeve** onto the

Fixing rod/level gauge followed by the **Hop spider** itself, replace the stainless hood, and follow the onscreen instructions to begin the boil process.

Hop spider and Hop spider spacer sleeve



During the boil, your Braumeister will alert you when it is time to add the provided pre-packaged and addition numbered hops as well as any other ingredients that your recipe may call for, so make sure you have these ingredients ready to go beforehand. Hops may be added without having to remove the stainless hood, though it is important that you wear the aforementioned gloves to protect yourself from the venting steam. When your Braumeister alerts you to add non-hop related ingredients, if any, e.g., Whilfloc tablets for clarification 7 minutes before the end of the boil, remove the stainless hood and add the tablets to the boil, but be sure add them outside of the hop spider for optimum effectiveness. Now, replace the stainless hood and continue with the boil, adding hops and other ingredients when alerted to do so.

At the end of the boil, remove the stainless hood, and raise the **Hop spider** up from the Braumeister's **Kettle**, again using the overhead rope ratchet on our lifting stand for mechanical advantage (hooked onto the hop spider), suspend it on one of our hop spider support stirrups, and allow any wort to drain out back into your Braumeister's **Kettle** while stirring the hops inside the spider with the wooden mash paddle to assist drainage. When drainage is complete, we will remove the hop spider from your Braumeister entirely and discard the spent hops for you. At this point, take your original gravity reading, again using either or both a hydrometer or refractometer (analog or digital) and dilute your wort by stirring in additional water, if necessary, to hit your recipe's target gravity.

Cooling

Now it is time to whirlpool and cool your finished wort. To do so, stir your wort in a clockwise pattern using the wooden mash paddle to whirlpool the trub (material that will be left behind in your Braumeister after your wort has been transferred to a designated fermentor) to the center. Let your everything settle for 10 minutes. At this point, depending on availability, you may cool your finished wort using one of our glycol connected plate chillers while oxygenating and transferring it to your designated fermentor at the same time. Before doing so, however, you should loosen and remove the lid on your designated fermentor and pitch your yeast into it. Be sure to sanitize your scissors and wipe down your yeast packages/bottles with Star San sanitizer before cutting/twisting them open and pitching the yeast into your fermentor. To start the cooling, oxygenation, and transfer process, connect the long hose that is attached to the transfer pump under the fermentor rack, i.e., the one with a stainless female quick disconnect fitting on the other end, to the short hose connected to the **Valve** on the front of

your Braumeister with a stainless male quick disconnect on the other end. Connect the other hose that is attached to the oxygenation tee, i.e., the one with a tri-clamp fitting on the other end, to the lower butterfly value on your designated fermentor and fully open the butterfly valve. Now, prime the pump by opening the valve on the transfer pump and the **Valve** on the front of your Braumeister to let your wort begin flowing. If wort does not readily flow into the transfer pump, slowly pull the ring on the pump's vent valve to allow air to escape from the pump head. When you see wort escape from the vent valve holes, release the ring and turn on the pump. Adjust the flow, using the knob on the linear flow valve, based on the exiting wort's temperature reading on the inline thermometer, with the target temperature being about 69° F for ales and 57° F for lagers. Immediately after the wort starts flowing into your designated fermentor, begin oxygenating it by turning the oxygen flow regulator to 2 LPM (Liters Per Minute). When the wort level in your Braumeister empties down to the 20 liter mark, i.e., the bottom mark on the **Fixing rod/level gauge**, tilt your Braumeister forward and slide one of our spacing blocks under its back foot to decant and transfer the remaining liters of wort. *Please note that if a plate chiller is not available, you may still begin cooling your wort by connecting cold water lines, i.e., the garden hoses attached to the cold water supply bib on the wall directly adjacent to the glass overhead door at the front of our brewhouse, to your Braumeister's double-jacket and resume whirlpooling until a plate chiller together with its related transfer pump and oxygenation setup otherwise becomes available.*

Once you pitch your yeast and transfer your finished wort into your designated fermentor, you have completed your competitive brew day with us. Cheers! Now go and celebrate by enjoying a cold beer in our taproom. We take care of the rest, including the cleanup and any subsequent dry hopping as well as the transfer(s) from your designated primary fermentor to a second fermentor or brite tank for secondary fermentation if your recipe calls for that, i.e., your recipe includes the addition of beer flavorings, spices, sugars, etc., and/or to a serving vessel for carbonation.

When your beer is ready to be served in our taproom along with the beers of the other brewers you are competing against, the actual judging will begin. Judging consists of a simple measure, your beer's sales divided by its time on tap relative to the beers of the other brewers you are competing against. In this way, your beer is truly judged by the demand of the general public.

200/500 liter Braumeisters

The brewing process on our 200 and 500 liter Braumeisters is substantially similar to the foregoing process for our 50 liters Braumeisters. If you are invited to brew on these larger Braumeisters, however, you will receive individual attention and step-by-step assistance from our friendly staff, so you have nothing to worry about… we have you covered.

Brewing checklist

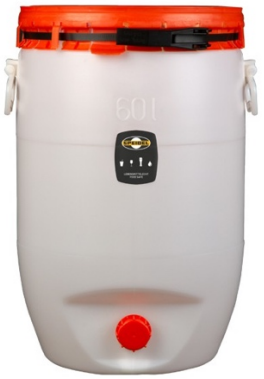
- ☐ Read and understand the Simplified Braumeister and related brewing equipment operating instructions and sign and return to us the associated acknowledgment form (please email your signed acknowledgment form back to us at brewmaster@pilothousebrewco.com before coming in to brew with us).
- ☐ Activate any Wyeast packages.
- ☐ Bookmark your Braumeister's numeric IP address.
- ☐ Add any brewing salts as well as PH stabilizer to **Kettle** and install stainless hood.
- ☐ Select your recipe from your Braumeister's **Automatic brew control** and start the brewing process.
- ☐ Follow and respond to onscreen instructions.
- ☐ Remove stainless hood and insert **Malt pipe** (either the standard or short pipe) together with **Filter plate 2** and mash in malts.
- ☐ Insert **Filter plate 1** and secure malt pipe with **Press down stirrup** and wing nut before replacing stainless hood.
- ☐ Start mashing.

IMPORTANT SAFETY NOTE!: Wort and stainless hood are very hot. Please wear protective gear as required for the following steps to avoid injury.

- ☐ When directed by your Braumeister, remove stainless hood, raise **Malt pipe** and begin lautering by allowing the malt pipe to drain for 10 minutes.
- ☐ Continue lautering by adding 4 ½ liters of 170° F water to the top of the **Malt pipe** and let drain for 10 minutes more.
- ☐ Repeat previous step and continue lautering for another 10 minutes.
- ☐ Remove **Malt pipe** with the assistance of our staff.
- ☐ Obtain any White Labs or Inland Island yeast from our staff to warm to room temperature.
- ☐ Take pre-boil gravity reading and note reading here_____.
- ☐ Dilute wort, if necessary, to hit target pre-boil gravity and note final adjusted gravity pre-boil gravity reading here_____.
- ☐ Add Foam Control to wort.
- ☐ Insert **Hop spider spacer sleeve** followed by the **Hop spider** itself and replace stainless hood.
- ☐ Start boil process.
- ☐ Add hops and other brewing ingredients when your Braumeister alerts you to do so.
- ☐ Remove stainless hood and raise **Hop spider** to let drain.
- ☐ Remove **Hop spider** with the assistance of our staff.
- ☐ Take original gravity reading and note reading here_____
- ☐ Dilute wort, if necessary, to hit target original gravity and note final adjusted original gravity reading here_____.
- ☐ Whirlpool wort and let settle for 10 minutes.
- ☐ Pitch yeast into fermentor.
- ☐ Cool, oxygenate, and transfer wort into fermentor.
- ☐ Notify our staff that your brew day is complete and celebrate by enjoying a cold beer in our taproom!

Supplemental Brew On Premises only instructions

If you are renting one of our Braumeisters for a Brew On Premises brewing session, you will need to pitch your yeast and transfer your finished wort into a fermentor of your own for at home fermentation and consumption afterwards. If you do not have a fermentor, you may purchase one from us along with any bottling equipment that you might need. We carry both 30 liter and 60 liter plastic fermentors from Speidel, as well as vinyl tubing, bottling buckets, bottling wands, and EZ cap flip top beer bottles, i.e., everything you need to enjoy the beer you brewed with us at home.



Let your beer ferment at home for 2 weeks. Once your airlock stops bubbling (after 5 to 7 days), you may dry hop your beer, if your recipe calls for that, by adding hops to your fermentor. You may also add up to 2 tablespoons of BioFine to your fermentor at this time to further clarify your beer. After fermentation, you will need to siphon your finished beer into a bottling bucket after first adding 1 ¼ cups of DME (Dry Malt Extract) pre-boiled in 2 cups of water and then cooled. DME is what carbonates your beer naturally in the bottle. Let your beer carbonate or bottle condition for at least 2 weeks (3 or more weeks recommended) before drinking it. Bottle conditioned beer is best served in glasses, being careful as you pour it so as to not disturb the yeast sediment on the bottom of the bottle.

Manuals and videos

For more information on the operation of our Braumeisters please refer to their official operating manuals/brewing instructions from Speidel that are available for download on the Brewers' Tools page, which is accessible from links on either the Competitive Brewing or Memberships pages of our website. We also have links to videos demonstrating the use of Speidel's Braumeisters on our Brewers' Tools page for viewing.

ACKNOWLEDGMENT

I do hereby acknowledge that I have read and understand the foregoing Simplified Braumeister and related brewing equipment operating instructions; that I am of sound mind; that I am twenty-one (21) years of age or older; that I signed this acknowledgment willingly and am under no constraint or undue influence; and that I signed this acknowledgement as my free and voluntary act for the purpose therein expressed.

MEMBER

Name:_____

Signature:_____

Date:_____