



# The Chronical™

— BREWMASTER EDITION —

Quick Reference Guide

## Stainless Steel Prep

**Pre-Clean:** Prior to first time use, thoroughly wash all surfaces of the Chronical, including all valves and fittings, with Tri-Sodium Phosphate (TSP) in hot water, mixed to the manufacturer's recommendations. Scrub with a soft terry cloth, and after the initial TSP wash, rinse thoroughly and dry all surfaces.

**Passivation:** It's 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 Chronical with Star San at a concentration of 1 ounce per gallon at 70-80°F for 30 minutes. **Moving forward, for best stainless performance, passivation should be performed at least once a year or anytime you believe you may have inadvertently scratched the surface.**

**Cleaning and Sanitizing:** As part of a regular cleaning regimen both pre and post-fermentation, wash the interior surfaces of your Chronical with an alkali cleaner such as PBW at a ratio of 0.75 ounce per gallon. Then sanitize with Star San or another acid based sanitizer per the manufacturer's recommendations.

## Chronical Set Up

**Installing the Neoprene Insulating Jacket:** Begin by setting your Chronical upside-down on its upper rim on a flat non-marring surface. Orientate the jacket so the Ss emblem lines up with the front of the Chronical, then align the legs with the jacket's leg hole cutouts. Slowly work the jacket onto the vessel, carefully making sure that each fitting is brought through its appropriate cutout.

**Chiller Coil:** Your BME Chronical includes a pre-installed side-mounted chiller coil. However, keep in mind that an O-ring is only required on the interior of the coil's compression fittings; between the Chronical's interior sidewall and the coil's threaded mounting flange. The O-rings included on the exterior, between the exterior sidewall and locknuts are extras, remove them and retain them in the event they need replacement sometime in the future.

**Installing the Butterfly Valves:** Your BME Chronical is shipped with two versions of butterfly valves; one racking valve and one dump valve. The racking valve is easily identifiable since it has a smaller diameter inlet machined into the body to accept the racking arm.

Install the racking arm into the racking butterfly valve as shown. As a result of tight machining tolerances, always use food-safe lubricant or Star San when inserting the racking arm into the racking valve. Additional spare O-rings (and other supporting / related parts) are available for purchase on our website.

Once assembled, feed the racking valve and arm assembly into the upper 1" tri-clover ferule, then use the included silicone gasket and clamp to secure the butterfly valve to the ferule. Always use a silicone gasket between each tri-clover connection, as shown.

To complete the dump valve assembly, start by installing the included 90 degree tri-clover elbow onto the conical's lower 1.5" tri-clover ferule. Finally, install the dump valve onto the opposite end of the elbow, aligning the dump valve's orientation vertically with the racking valve. In some instances, you may have to orientate the valve's squeeze trigger vertically along one side of the Chronical.

**Installing the Thermowell and LCD Thermometer:** Begin by removing the included locknut from the thermowell assembly. There will be two O-rings found on the threaded portion of the fitting. Remove one of the O-rings and retain it as a spare, the thermowell only requires ONE O-ring to form a liquid tight seal.

Next, feed the thermowell through the 17 mm punch found just below the Ss Brewing Technologies logo on the front of the Chronical. The O-ring should be seated against the interior sidewall of the vessel, as shown. Lastly, thread the locknut onto the fitting from the exterior and tighten.

Once the thermowell is in place, install the included batteries into the LCD thermometer, then install the LCD assembly into the included silicone boot. Lastly, feed the thermoprobe into the thermowell, and seat the silicone boot as close to the thermowell's lock nut as possible.

## What's in the Box

- Chronical Fermenter
- Lid with Gasket
- 3" TC Cap w/ 1/2" Barb and PRV
- Chiller Coil Assembly
- Neoprene Insulating Jacket
- Butterfly Valve - Racking
- Butterfly Valve - Dump
- Sampling Valve
- 90 Degree Elbow
- Racking Arm
- (3) 1.5" TC Clamps
- (1) 3" TC Clamp
- (3) 1.5" TC Gaskets
- (1) 3" TC Gasket
- 3/8" Threaded Adjustable Feet
- Thermowell Assembly
- LCD Thermometer Assembly

## Operation

Your Brewmaster Edition Chronical™ fermenter features a 3" tri-clover top ferule that can operate as a port for our optional clean-in-place (CIP) spray ball, optional blow-off cane, or the included blow-off barb/pressure release valve combo. Furthermore, we designed the fermenter with advanced brewing practices in mind; meaning that hops or other adjuncts can be easily added directly to fermenting beer without breaking the lid seal. Moreover, if you have an abundance of 1.5" tri-clamp gear, we offer a 3" to 1.5" reducer on our website to support legacy customer equipment.

Unlike ball valves, the butterfly valves included with your Brewmaster Edition Chronical™ fermenter were designed with zero dead space, meaning that there are no crevices for bacteria or yeast to hide. As a result, standard cleaning and sanitation practices should ensure proper operation without complete valve body disassembly.

Be mindful that butterfly valves create a much larger fluid passage way than a comparably sized ball valve. As a result, familiarize yourself with how quickly fluid transfers and dump operations occur with water. This will ensure that you don't inadvertently release more liquid than originally intended when operating the valves.

Once the fermenter is cleaned sanitized and prepped for fermentation, we recommend that you orient the racking arm so that it is aligned opposite to the butterfly valve's squeeze trigger, as shown. Moreover, ensure that the racking arm is pointed down during active fermentation; a clog could ensue if trub and yeast settle into the racking arm's opening.

As a best practice to avoid contamination, we recommend you fill the fermenter from the bottom up using the racking or dump valve with the lid and air-lock in place. 1.5" TC hose barbs are available for purchase on our website.

After fermentation is complete, when rotating the butterfly valve to reposition the racking arm in the upward position for kegging or bottling, take care to only loosen the tri-clamp slightly to allow for smooth rotation. Over-loosening the clamp could result in a leak and/or spillage.

**Installing a Blow-off:** As many home brewers are aware, high gravity beers require a blow-off tube to adequately vent the build-up of CO<sub>2</sub>



from within the vessel. Run a length of ½” silicone tubing from the included lid cap’s ½” barb to a small container of Star San to complete the air-lock. As an alternative option to silicone tubing, we offer a stainless blow-off cane that integrates seamlessly with the included 3” TC lid, it is available for purchase on our website.

**Trub Dump and Yeast Harvesting:** Two key features of all Chronical fermenters is the ability to dump trub and harvest yeast. Once primary fermentation has begun, we recommend that users dump trub using the lower dump valve within the first 48 hours to prevent solidification of break material. Typical purge rates usually result in the loss of 1-2 pints. Before dump operation, make sure to disengage your airlock to prevent Star San from getting drawn into the Chronical as a result of a vacuum forming.

Thereafter, once fermentation is nearly complete, a cleaner yeast sample can be harvested once the majority of trub has been removed. To harvest yeast, begin with a small sanitized container, and then samples can be taken from either the dump valve or racking valve as long as the racking arm is orientated in the downward position.

**Pressurized Transfers:** While gravity racking works well for smaller 7 gallon Chronicals that can be easily lifted, larger sizes become cumbersome and prohibitive as a result of the additional weight. To lift a Chronical larger than 7 gallons while full, at least 2 people should lift the vessel using the legs and handles to avoid personal injury or damage to the vessel due to the excess weight.

For users that want to utilize their CO2 system to perform a pressurized transfer, you can use the included 3” cap with ½” barb and pressure release valve (PRV). The PRV is to insure that an overabundance or buildup of pressure does not cause damage to the Chronical’s lid clamps. Most users will require a reducer barb to convert their regulators 5/16” or 3/8” output to the lid cap’s ½” barb input. A detailed FAQ and parts list is available on our website.

Begin by completely depressurizing the CO2 system, typically by dialing the regulator down to its lowest setting. Next, run a length of tubing from the CO2 regulator to the 5/16” or 3/8” side of the reducer fitting. Then another length of ½” tubing from the reducer assembly to the Chronical’s lid cap. Finally, run a length of sanitized tubing from the Chronical’s racking valve to a freshly cleaned and sanitized keg. Begin by opening the racking valve first. Once the racking valve is

open, slowly increase the regulator’s pressure output until the gauge registers roughly 1-1.5 PSI.

**Typically, only 1-1.5 psi is needed to transfer beer over to your keg(s). Excessive pressures pushed suddenly over to your fermenter may result in damage to the unit or in extreme cases personal injury. Also keep in mind that transferring to a keg/vessel that is located well above the fermenter and/or the use of an in-line filter greatly increases the pressure required to push the beer, and as such both of those situations should be avoided.**

Following a successful transfer, always thoroughly clean all surfaces and parts. Furthermore, the lid gasket should also be completely removed to clean both the gasket, in addition to the lid’s gasket channel.

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#### USE THE FOLLOWING WITH CAUTION:

- Stainless steel scrubbing pads or Scotch-Brite pads. If used too aggressively, abrasive pads can damage the surface and/or finish of the stainless
- Oxalic Acid cleaners such as Bar Keeper’s Friend, Kleen King, or Revere Ware Stainless cleaners on the electrically etched volume markings and 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 pin holes 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 Chronical.

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*If you have any further questions about your Chronical go to our website and take a look at our extensive knowledge base in the FAQ section. Over the years it has become a treasure trove of information. If after searching our FAQs, you still can’t find an answer to your specific question(s), please email us at [support@ssbrewtech.com](mailto:support@ssbrewtech.com).*

[www.ssbrewtech.com](http://www.ssbrewtech.com)

Warranty information can be found at [www.ssbrewtech.com/warranty](http://www.ssbrewtech.com/warranty)



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