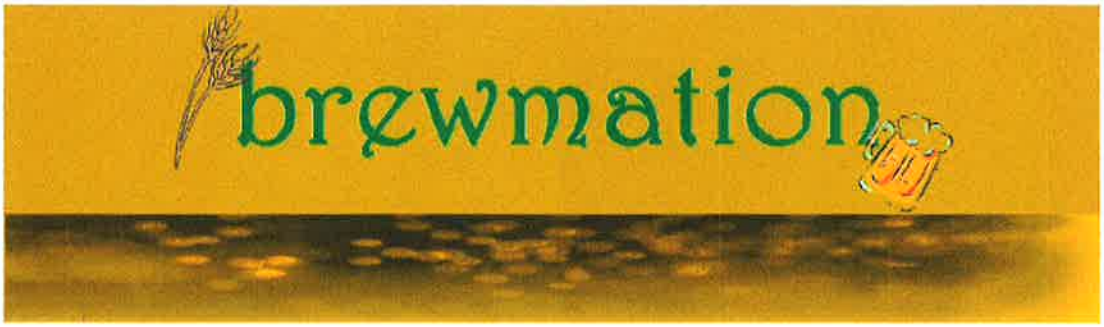


BREWMATION

Basic / HERMS brewery

INSTRUCTION MANUAL: 12K Basic

Table of contents:

I. Power Ratings:

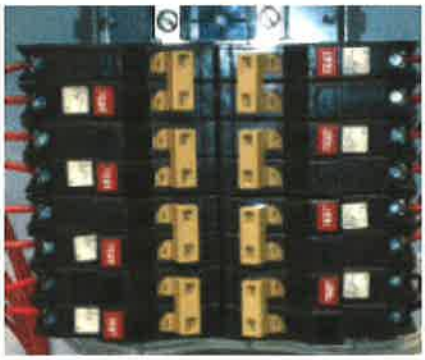
LOAD Ratings:

Voltage required: 240 VAC single phase or 208/240 VAC three phase
Load: 60-125A breaker required (depending on heater interlocks)

GFCI Breakers

All components are protected by GFCI breakers. One breaker per element and one breaker for the pumps is part of the main sub panel.

If any of these breakers begin to trip there is a fault to ground that needs to be addressed (replacement heating element, or pump issues).



II. Installation:

Components / Placement:

Components to be mounted to the Stout Tanks:

1) Heater Elements 1" NPT to Stout supplied tri-clamp (Mounted below the float and temperature probe)
2) Level Switchs 2ea.
3) Temperature Probes 3 ea.

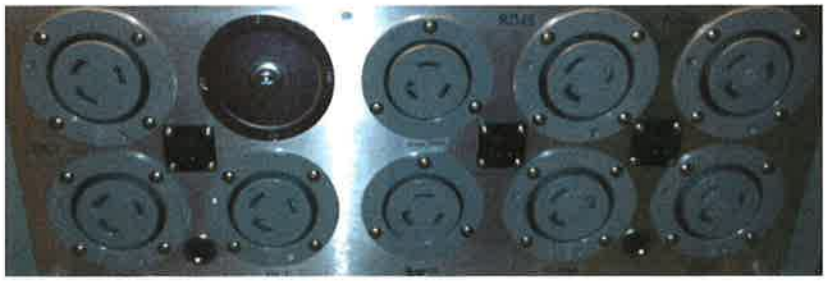
NOTE: The temperature probes need to be coated with the included heat transfer paste

The following shows the float switch in the "off" position (how it should look when the tank is empty). Do not install upside down…. This will result in pre-mature heater operation and will burn out the heaters.

Electrical Connections:

Power Connections: The unit is to be hard wired to the GFCI Sub Panel. An access hole can be drilled in the side or top of the panel (preferably the side to protect from any water). Take extra care when drilling this hole to be sure the bit will not hit any of the internal wires. The connection lugs are labeled for the 240V single-phase circuit, the neutral, and the ground.

When connecting the components to the system make sure power is completely shut off prior to making the connections. Take care to note the plug's orientation as they only go in one way. Do not force the plug as it will cause damage. All connectors are twist lock.



NOTE: Do not power the unit with the heaters connected without the float switch being properly installed. Running the heaters dry (not submerged) will result in burned out heaters.

III. Operation:

PUMPS:

The two pumps are operated with the on/off switches.

HEATERS:

The HLT and Kettle heaters have on/off switches.

The HLT heater is tied into the LOVE controller. When the set point is reached, the heaters will turn off. When the temperature in the HLT falls below the set point, the heaters will turn on. For both instances, the safety interlock float needs to sense water in order for the heaters to turn on.

The Kettle heaters are interlocked with the HLT heaters to prevent both sets from turning on fully at the same time. If both are turned on, one of the HLT heaters will not run and one of the kettle heaters will not run. The Kettle heaters are tied into the LOVE controller in the event the kettle is used as an HLT. Set the temperature set point to 220F for boiling (default).

All heater output power can be adjusted with the potentiometer (0-10 = 0-100% power).

The LOVE controller set point for the LOVE controllers can be changed by pressing the "set" button. Use the up / down arrows to modify the set point. After a few seconds the display will return to the measured temperature (you can press the set and down arrow at the same time to achieve the same result)

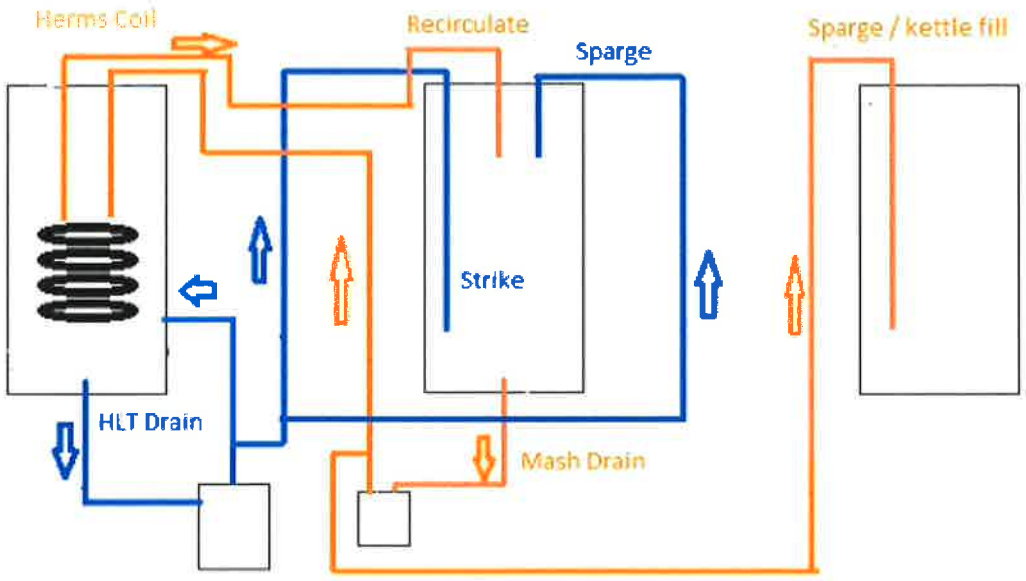
IV. HERMS:

There are two ways to operate the HERMS control.

One is to recirculate the entire time using the HLT temperature as the control point. The HLT temperature would be set a few degrees higher than the desired mash tun temperature.

The other method is to set the mash tun LOVE controller to the desired mash temperature. The wort pump will then turn on/off to maintain the temperature.

VII. PLUMBING:



The plumbing fittings supplied are all laid out in individual packets with instructions inserted in the packet showing where they are to be installed. The above diagram shows the flow scheme.

¼ turn valves are supplied for the HERMS recirculation rate, sparge water rate, and sparge wort (run off) rate.

NOTE: ALWAYS slow the liquid flow with valves that are located on the output side of the pumps. NEVER slow the liquid flow rate with valves located on the inlet side of the pump.

V. Technical Support:

For technical support, please contact Brewmation at Service@Brewmation.com

TOPLINE TF-C100MD PUMP WITH 1/2 HP TEFC MOTOR

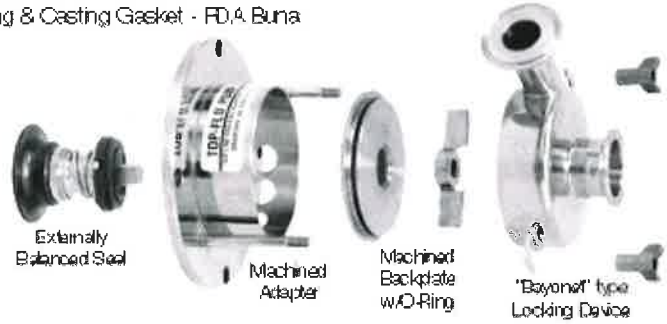
The TOP-FLO® TF-C100 centrifugal pump is ideal for use in small and medium size process applications in the dairy, food, beverage, pharmaceutical and other sanitary process industries. The C100 Pump has an adapter and backplate made from precision machined stainless steel. An O-ring on the backplate provides a tight, secure seal with the casing for longer trouble-free operation. Because all of the other C100 Pump components remain the same, existing pumps can be easily retrofitted to the new designed adapter and backplate. Includes an IronHorse AC induction motor, 0.5 hp, 1-phase, 115/208-230V, 1800 RPM, TEFC, 56C frame, rolled steel, Class F insulation, NEMA design B, capacitor start, removable bolt-on base

Top-Flo®TF-C100 Centrifugal Pump

The TOP-FLO® TF-C100 centrifugal pump is ideal for use in small and medium size process applications in the dairy, food, beverage, pharmaceutical and other sanitary process industries.

Specifications

- Pump Casing
  - Circular Type
- Pump Connections
  - 1 1/2" Inlet x 1" Outlet
  - Clamp type - Standard
- Pump Construction materials
  - All Wetted Parts - Type 316L Balance Type 304
  - Carbon Seal
  - O-Ring & Casting Gasket - FDA Buna
- 3A Approved
- Pump Finish
  - Polished ID/OD 32Ra
- Pump Impeller
  - Max 3.685" Diameter
- Pump Seal
  - External Balanced
  - Sanitary Single Mechanical



Pump disassembly for cleaning the seal:

1. Remove the two wing nuts

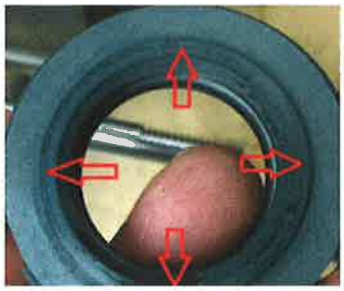
2. Remove the outside housing by pulling on the output neck

3. Center the holding pin inside the shaft to release the impeller. Remove the pin from the shaft for safe keeping.

4. Remove the back plate

5. Remove the seal mechanism

The seal mechanism is made up of four parts. The seal ring, the shaft O-ring located inside the seal, the seal holding cup, and the spring.



Remove the seal and inspect the face to be sure it is clean and is not chipped or cracked. The red arrows show the critical area of the seal that presses up against the back plate

Inspect the "O" ring for any damage or build up. This "O" ring needs to sit firmly in the slot around the seal.

Also inspect and clean the back plate where the seal presses against it. Make sure any buildup of material is completey removed.

6. Replace the seal mechanism

Align the cup tabs so the seal sits in the cup

The notch in the cup (spring side) will need to align with the tab on the shaft. If these are not aligned, the mechanism will not push all the way in preventing the back plate from sitting properly

7. Replace the back plate and impeller by first inserting the holding pin in the shaft (rotate the shaft so the pin does not slide out). Then place the back plate and impeller on the shaft.

The back plate should push all the way against the rear housing while compressing the seal mechanism's spring. If the housing does not go all the way back, see step 6 and check the tab alignment.

Allow the pin to slide to one side. This will hold the impeller and back plate in place.

Re-install the housing with the wing nuts and the pump is now ready to be put back in service.