

# TC-100 Bundle

User Guide



# Congrats on your new temperature control bundle!

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The TC-100 temp control system is our solution to possibly the most important part of brewing, fermentation. The TC-100 will easily hold your fermentation temps exactly where you would like them even in the hottest or the coldest conditions. The only additional item needed is a cold-water reservoir. This can be as simple as a cooler with ice or a fridge with cold water reservoir or even a dedicated glycol chiller.

This guide will show you how to setup and use your system

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01.

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# Assembly

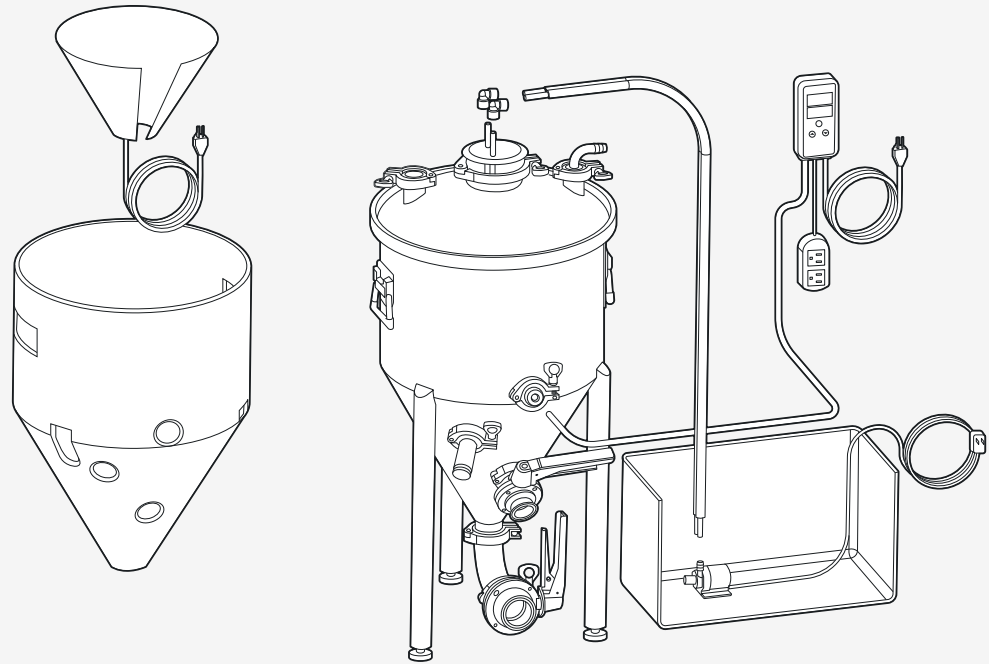
Ready to assemble your TC-100 bundle? This guide will show you how to assemble each piece with step-by-step instructions and key visuals.

**Conical TC-100**

**FLEX TC-100**

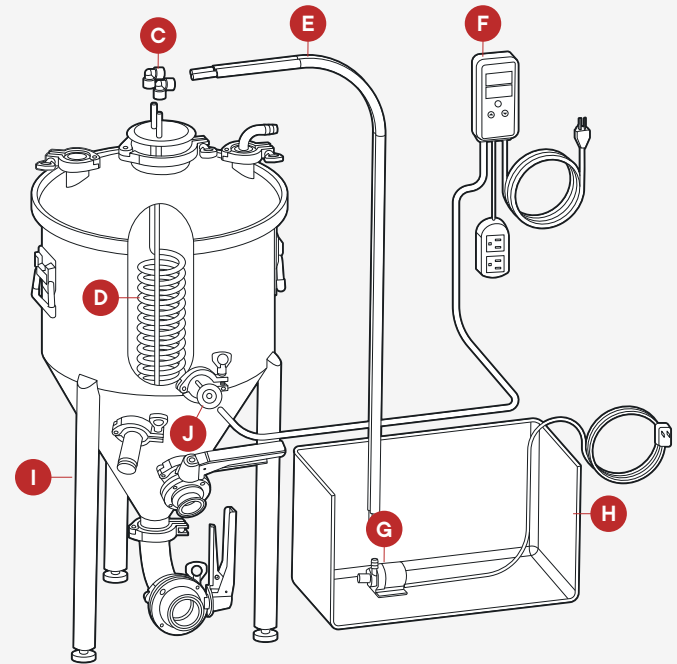
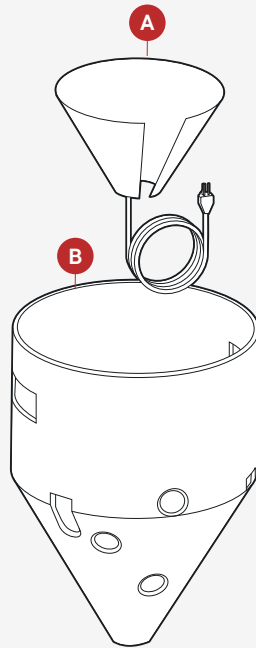
**Installation**

# Assembly – TC-100 Bundle



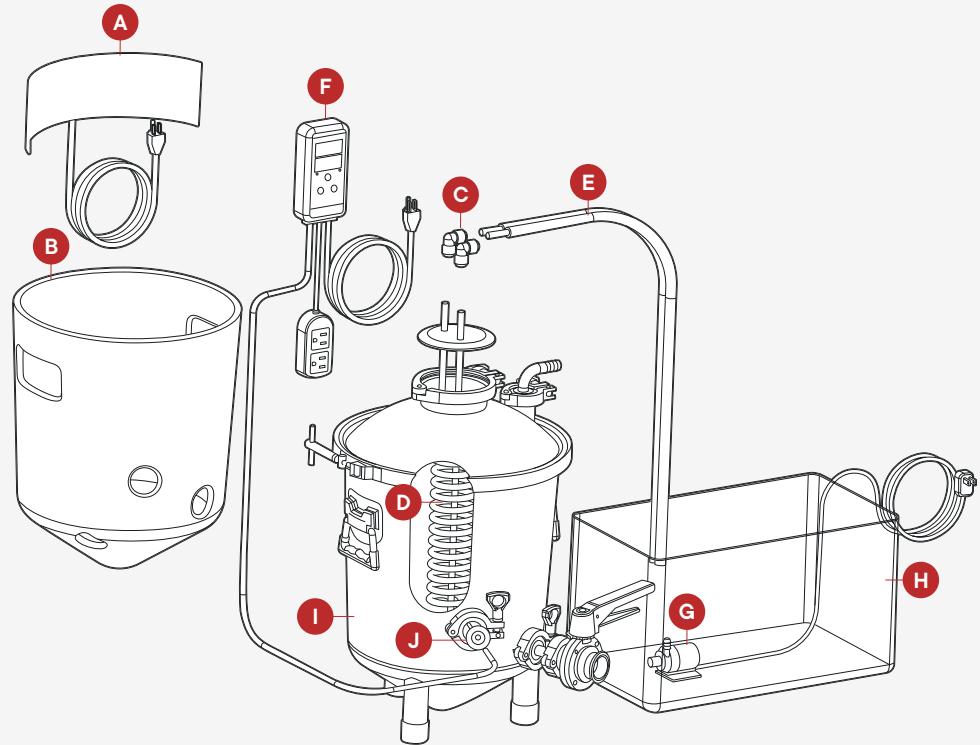
# Assembly – TC-100 Bundle Conical

| ITEM | DESCRIPTION                      | QTY |
|------|----------------------------------|-----|
| A    | Heater (Optional)                | 1   |
| B    | Insulated Jacket                 | 1   |
| C    | 90° Quick Connects               | 2   |
| D    | Temp Coil                        | 1   |
| E    | Insulated Tubing                 | 1   |
| F    | Temp Controller                  | 1   |
| G    | Pump                             | 1   |
| H    | Cold Water Source (Not Included) | 1   |
| I    | Fermenter (Sold Separately)      | 1   |
| J    | TC Thermowell                    | 1   |

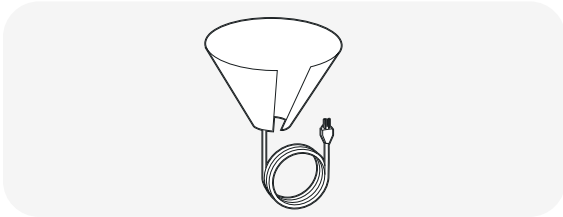


# Assembly – TC-100 Bundle FLEX

| ITEM | DESCRIPTION                      | QTY |
|------|----------------------------------|-----|
| A    | Heater (Optional)                | 1   |
| B    | Insulated Jacket                 | 1   |
| C    | 90° Quick Connects               | 2   |
| D    | Temp Coil                        | 1   |
| E    | Insulated Tubing                 | 1   |
| F    | Temp Controller                  | 1   |
| G    | Pump                             | 1   |
| H    | Cold Water Source (Not Included) | 1   |
| I    | FLEX Fermenter (Sold Separately) | 1   |
| J    | TC Thermowell                    | 1   |

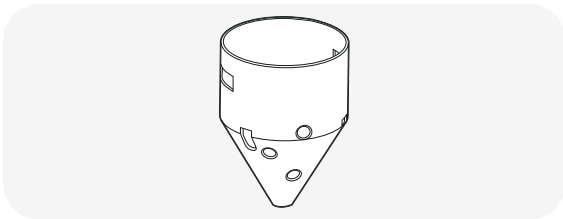


# Assembly – TC-100 Bundle



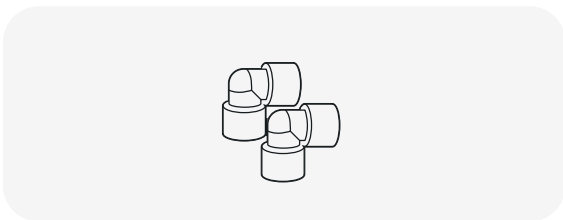
## Heater (optional)

Warms the batch if it gets below your set temperature. It is particularly useful if you are fermenting in a cold environment.



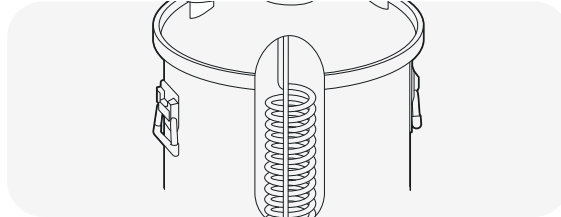
## Insulated Jacket

Adds insulation and prevents sweating when the batch is cold. The Velcro on the inside attaches to the heater to keep it in place.



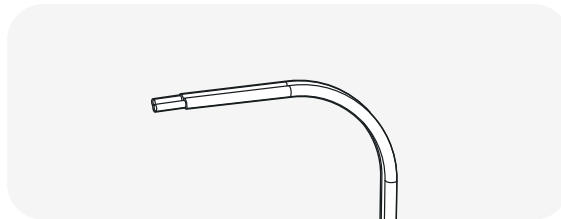
## 90° Quick Connects

Connects the insulated tubing to the Temp Coil and prevents the tubing from kinking.



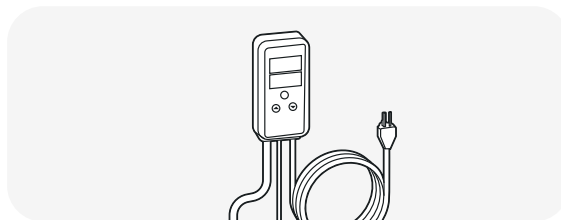
## Temp Coil

Your coolant (cold water or glycol) flows through here to cool the batch. It is designed to work with full and half batches for each of our fermenters.



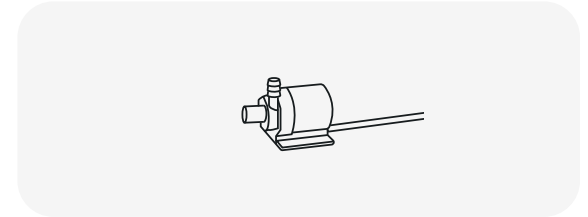
## Insulated Tubing

Keeps your coolant cold on its way to the fermenter. Also prevents sweating.



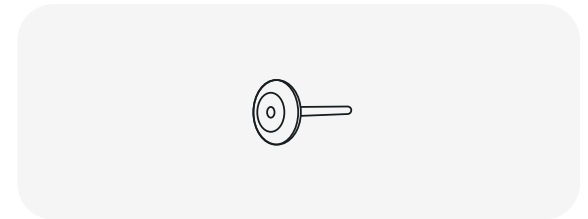
## Temp Controller

The brains of the operation. Turns the pump or heater on/off based on your temp setting.



## Pump

Moves coolant from the reservoir to the fermenter. Uses DC power which is much safer than an AC powered submersible pump.

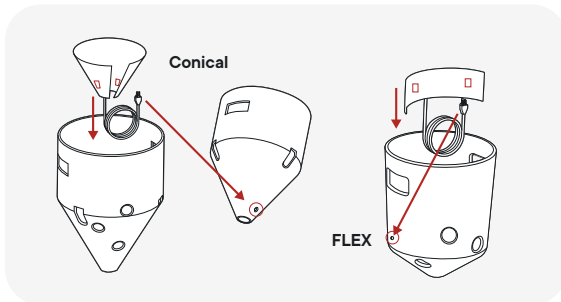


## TC Thermowell

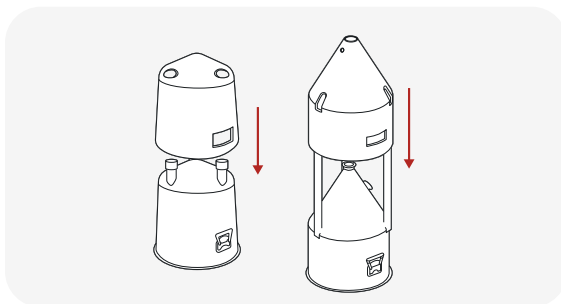
This long hollow tube lets you get an accurate temp reading with the probe from the Temp Controller. Simply insert the probe into the Thermowell

# Assembly – TC-100 Bundle

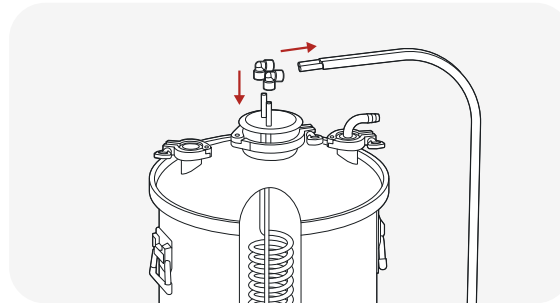
1. If you purchased the **optional** heating unit, attach it to the inside of the neoprene jacket.
  - a. Feed the power cord through the small hole in the back of the jacket.
  - b. Align the black velcro strips on the heater with the gray velcro strips on the inside of the neoprene jacket and press to attach.
  - c. Pull the power cord through the hole so there is no slack inside the jacket.



2. With the fermenter upside down and none of the accessories attached, slide the insulated jacket over the legs, welded ports and handles through all of the correlating holes.

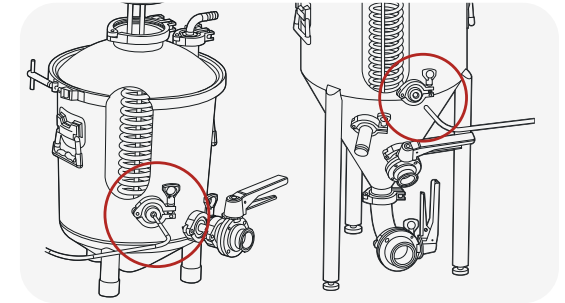
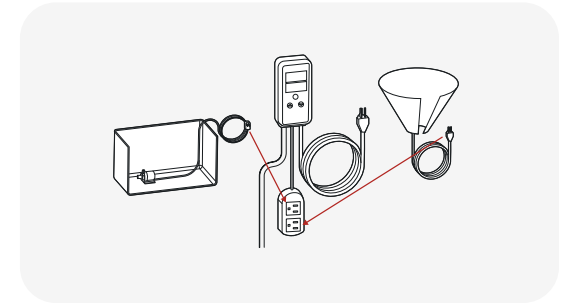


3. Flip the fermenter right side up, attach your lid, and affix your temp coil to the 4" TC port.
4. Attach your 90° quick connect elbows to the temp coil inlet and outlet.
5. Attach both tubes from one end of your insulated tubing to the other ends of the 90° quick connect elbows. Make sure to push these in until they pop into place.



6. Next, attach one of the tubes from the opposite end of your insulated tubing to your pump. Leave the other end free to act as the return into your coil.
7. Submerge the pump into your cold water source.
8. Plug in your pump to the 'cooling' plug. Then plug in your heater to the 'heating' plug.
9. Push the temp probe from the controller all the way into the thermowell port.

**PRO TIP:** Wrap the excess cord around the thermowell port.



## Controller Set Up

1. The 'TEMP' readout on your controller is the temperature inside of the fermenter.
2. The 'SET' readout is what temp you would like the fermenter to be maintained at.
3. To change the 'SET' temp, simply push the up or down arrow.

**PRO TIP:** Hang your temp controller from the handle on the conical lid clamp.



# Temperature Inversion

At temperatures of 40F+ the beer inside your fermenter will have a standard temperature gradient with warmer on the top and cooler on the bottom. At around 40F this actually flips; a temperature inversion occurs. Due to density changes the colder beer will now be on the top and the warmer beer will be on the bottom.

To combat this our coil design has two configurations for cooling (see **Figure 1**) which will give the best results for either maintaining fermentation temps or cold crashing your beer.

- Temps of 40F+: You'll want the 'In' line to be the top of the coil and the 'Return' line to be the end of the coil that bends straight vertical. This will keep the coldest fluid at the top where your beer is the warmest.
- Temps under 40F: You'll want the 'In' line to be the coil run that goes straight to the bottom and the 'Return' line to be where the coil starts. This will keep the coldest fluid at the bottom where your beer is the warmest.

Figure 1

