

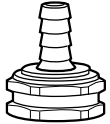


**NORTHERN BREWER**

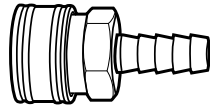
# COUNTERFLOW CHILLER CONNECTION KIT - PUMP FED

## INVENTORY

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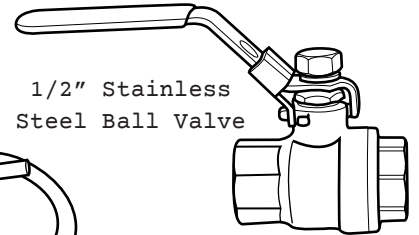
(3) Female Garden  
Hose Thread



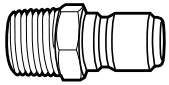
(5) Female Stainless  
Quick Disconnect



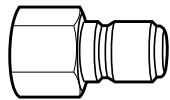
(4) Worm Gear  
Clamp



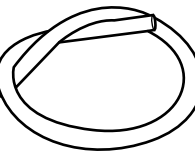
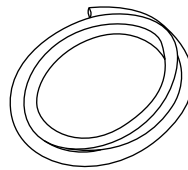
1/2" Stainless  
Steel Ball Valve



(2) Male Stainless  
Quick Disconnect x  
Male 1/2" NPT



(3) Male Stainless  
Quick Disconnect x  
Female 1/2" NPT



(12 ft) Thermoplastic  
Tubing & (12 ft) Clear  
Hi-Temp Tubing

## ASSEMBLY - PUMP FITTINGS

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1. Apply teflon thread tape to the threads on both the INPUT and OUTPUT of the pump head and 1 male stainless quick disconnect x male 1/2" NPT fitting.
2. Thread the male stainless quick disconnect x female 1/2" NPT fitting onto the INPUT of the pump and tighten with a wrench.
3. Thread the taped male stainless quick disconnect x male 1/2" NPT into the OUTPUT side of the ball valve and tighten with wrenches.
4. Thread the ball valve/disconnect assembly onto the OUTPUT of the pump and tighten with wrenches until the valve is firmly tightened and the valve handle is in the desired position.

## ASSEMBLY - CHILLER FITTINGS

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1. Apply teflon thread tape to the threaded wort INPUT and OUTPUT of the chiller.
2. Thread male stainless quick disconnects x female 1/2" NPT onto both the Wort INPUT and OUTPUT of the chiller and tighten with a wrench.

## ASSEMBLY - KETTLE & TUBING

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1. Apply teflon thread tape to the threads of the remaining male stainless quick disconnect x male 1/2" NPT fitting.
2. Thread the disconnect into the OUTPUT of the valve on the boil kettle and tighten with a wrench.
3. Decide how long you would like your wort tubing and cut the thermoplastic tubing accordingly. You will need 3 total sections of tubing: From kettle to the pump, from the pump to the chiller, and from the chiller to the fermentor.
4. The thermoplastic tubing lengths running from the kettle to the pump, and from the pump to the chiller will each need 2 worm gear clamps - slide one on each end of each section of tubing.
5. Insert the barbed female quick disconnects into both ends of each length of tubing.
6. Using a screwdriver, firmly tighten the worm gear clamps where the tubing covers the barb to affix the quick disconnects to the tubing.
7. Repeat steps 4-6 with your final length that will run from the chiller to the fermentor. This time only 1 end will get a quick disconnect & clamp as the other will be used to discharge into your fermentor.

## ASSEMBLY - CONTINUED

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1. Decide how long you would like the water tubing and cut the clear tubing accordingly.
2. The clear tubing length running from the water source to your chiller will need 2 worm gear clamps - slide one on each end.
3. Insert the barbed female garden hose fittings into each end of the length of tubing.
4. Using a screwdriver, firmly tighten the worm gear clamps where the tubing covers the barb to affix the garden hose fittings to the tubing.
5. Repeat steps 2-4 with the other length of clear tubing. This time only 1 end will get a garden hose fitting & clamp, as the other end will be used to discharge the waste cooling water.

## USE

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1. After the boil is complete, attach the tubing assemblies in the correct configuration to the chiller (see diagram). Ensure the wort and water will flow in opposite directions for optimal cooling efficiency.
2. Sanitize the chiller by using a prepared sanitizing solution, or see the "Pro Tips" section to the right.
3. Place the sanitized wort outlet hose into the fermentor, and the cooling waste water hose into a sink or drain.
4. Begin the flow of wort and water through the chiller by turning on the pump and opening the ball valve, and turning on the cooling water source.
5. Monitor the temperature of wort exiting the chiller and increase or decrease the flow of water as necessary to maintain your desired wort temperature. You can also use the ball valve on the OUTPUT of your pump to control flow of wort to achieve even better cooling efficiency.

## CARE

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1. When finished chilling, rinse out the chiller and wort tubing with hot water. Occasionally soak the tubing and chiller in a cleanser solution to ensure a long service life. Drain the chiller and tubing completely prior to storage.

## PRO TIPS

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1. To attach the quick disconnects to the pump or kettle, simply pull back the main ring on the body of the female quick disconnect and insert over the male quick disconnect. Release the ring to lock it in place. To detach, pull the ring back and remove the female quick disconnect from the male.
2. As an alternative to sanitizing with a liquid sanitizing solution, simply recirculate the hot wort through the chiller and back into the boil kettle for a few minutes use heat to sanitize the chiller before turning on the water.

