



Midwest Homebrewing & Winemaking Supplies  
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# What is a wort chiller? Why do I need one? What are the differences between the different types?

## What is a wort chiller?

A wort chiller is a device that allows the homebrewer to bring boiling wort down to yeast pitching temperature in a fraction of the time an ice bath takes.

## Why is a wort chiller so important? Why do I need one?

It is very important to cool your wort to below 80 degrees as quickly as possible after the boil. This is the time that the wort is most susceptible to bacterial contamination. A wort chiller nearly negates any chance of infection. A wort chiller also helps to produce clearer beer, since it helps to facilitate cold break. Cold break is composed of protein and tannin complexes that become insoluble as the temperature of your wort drops. Good cold break means clearer beer. A wort chiller is probably the most time-saving, economical device a homebrewer can buy. It's the one thing that we tell everybody buying a Midwest Homebrewing Equipment Kit that they should not be without. There are three basic types of wort chillers: immersion, counterflow, and plate. We'll talk about the differences, advantages and disadvantages of each type.

## About immersion wort chillers

As the name implies, the immersion-type chiller is submerged into the wort. You then attach the chiller to either a garden hose or your kitchen faucet (requires the faucet adapter, sold separately). Once attached, you run cold water through the wort chiller and your wort will be at pitching temperature within about fifteen minutes.



**Stainless Steel  
Immersion Chiller**



**Copper  
Immersion Chiller**



**Deluxe Copper  
w/Garden Hose Fittings**



**Deluxe Stainless Steel  
w/Garden Hose Fittings**

**Advantages to Immersion Chillers:** No need to sanitize! Since you are submerging the chiller in boiling wort, any bacteria present will be killed instantly. When you are finished, be sure to rinse well with hot water.

**Easy to use!** An immersion chiller is highly recommended for novice to intermediate brewers. No special connections are required, with the exception of the [faucet adapter](#) if you are attaching it to your kitchen sink.

**The only real disadvantages** to using immersion wort chillers are the cooling time and the amount of water used as compared to counterflow chillers. Still, a quality immersion chiller only takes about fifteen minutes to be effective, and it uses a lot less water than an ice bath.



**Convoluted  
Counter-flow  
Wort Chiller**

### About counterflow wort chillers

The counterflow type has a smaller diameter copper tubing that is inside larger tubing. Wort flows from the kettle through the smaller tube, while cold water flows through the larger tube in the opposite direction. This results in a much shorter cooling time, and you also use less water than the immersion types. Counterflow wort chillers also require a kettle with a ball valve, and lines for entry and exit.

#### Advantages to Counterflow Chillers:

**FAST!** Counterflow chillers consume less water and chill at least twice as fast as compared to most immersion types.

**Best possible cold break!** A counterflow chiller cools wort to pitching temperatures in minutes, or even seconds! This means that nearly all of the proteins and tannins that may be present will drop out of solution as the wort is chilled and siphoned into the fermenter.

As great as counterflow chillers are, they do have a few disadvantages. You do need to have enough height difference between kettle and fermenter to allow for a counterflow chiller. You will need a ball valve on your brew kettle. You will also need to sanitize before and clean after every use.

### About plate chillers



**Shirron Economy  
Counterflow Chiller**

A plate wort chiller can be thought of as a compact version of a counterflow chiller. Like an immersion chiller, the plate chiller is a standalone heat exchanger where both hot wort and cold water are brought together outside of the brew pot. However, in the case of a plate chiller, the actual heat exchange takes place across a series of metal plates rather than in a single hose or tube.

Plate chillers are said to have the best efficiency in water usage and obviously take up a very small space which may be a concern in a compact brewing system. One drawback is that the tiny passages and inability to disassemble makes cleaning difficult. Care must be taken to strain the pellet hop particles out of the wort prior to running through the chiller by using a hop stopper or similar straining device.

#### Advantages to Plate Chillers:

**FASTEST!** Plate chillers consume the least amount of water and chill faster than even the counter-flow chiller. Like the counter-flow chiller, you also will achieve excellent cold break, dropping nearly all of the proteins and tannins out of solution.

The only real disadvantage to these plate chillers is cost. In addition to all of the [connections](#) needed, you may also find that you need a [high-temperature pump](#) to push your wort through the chiller, if your setup does not allow for gravity to do so. That being said, if you love homebrewing and plan on doing it for many years, a plate chiller is one piece of equipment that you will never regret buying.

### Summary

As with anything in homebrewing, your choice comes down to personal preference. Batch size, available space, and budget are all things to consider when deciding which wort chiller is the right one for you.



**The Terminator**