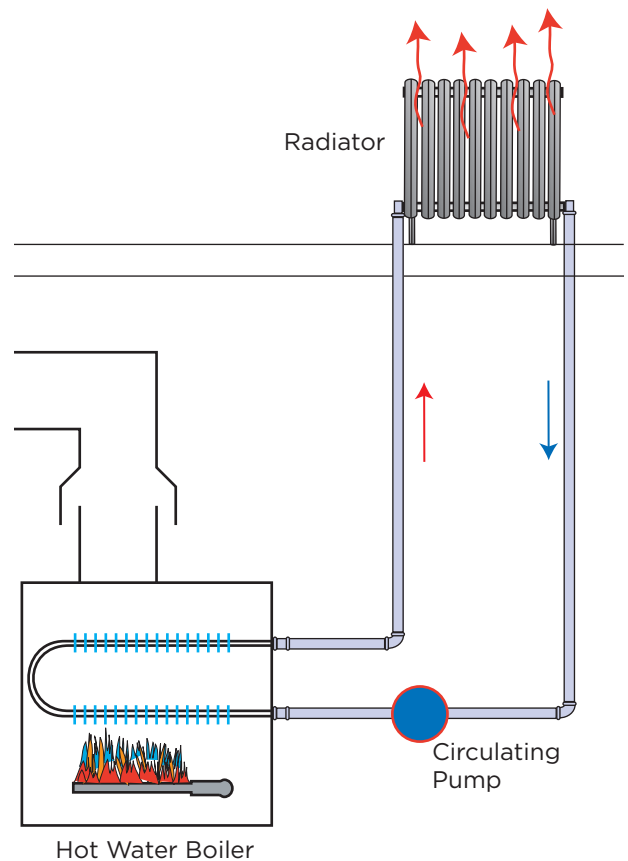


# Hot Water Heat

A heating system that heats the home by circulating hot water is called a hydronic heating system. The device that does the heating is called a boiler even though it does not actually boil the water. Water picks up heat as it flows through the boiler. Heat is released at the radiators in each room. Water flows back to the boiler to be re-heated. A circulating pump keeps things moving. The same water circulates through the system over and over again.

## Radiators and Convectors

Usually a home will have either radiators or baseboard convectors, not both. The traditional radiator is made of cast iron and stands on the floor against a wall. If you have ever lived in an old home in a cold climate, the radiators are what you put your socks, hat and mitts on to dry them out and keep them warm and ready. Since radiators are massive, they heat up slowly and ooze heat into the room over a long period of time. This makes for very even heating, a benefit of hot water heat.



Hot water baseboard convectors look like electric baseboard heaters. They don't take up as much space as radiators. Modern radiators and convectors come in all shapes and sizes including decorative wall panels and even heated towel racks for the bathroom.

## Radiant Heating

In-floor hot water radiant heat is an alternative to radiators and convectors. Pipes are embedded in the floor and heat energy is radiated into the room. This kind of heat is getting more popular in North America.

## Benefits of Hot Water Heating

There are many benefits to hot water heating. Here are a few:

**Silent:** A properly installed hydronic heating system should be nearly silent throughout the home.

**Even heat:** Since the system heats up slowly and cools slowly, the heating is very even.

**Doesn't circulate dust:** Hydronic heating systems do not stir up dust and blow it around the house. This is healthier and there's no filter to change.

**Doesn't circulate odors:** Hot water does not circulate odors like forced air heating does.

**Easy to create separate zones:** Piping is easier to control than air ducting. It is easy to create separate heating zones in the house with separate thermostats.

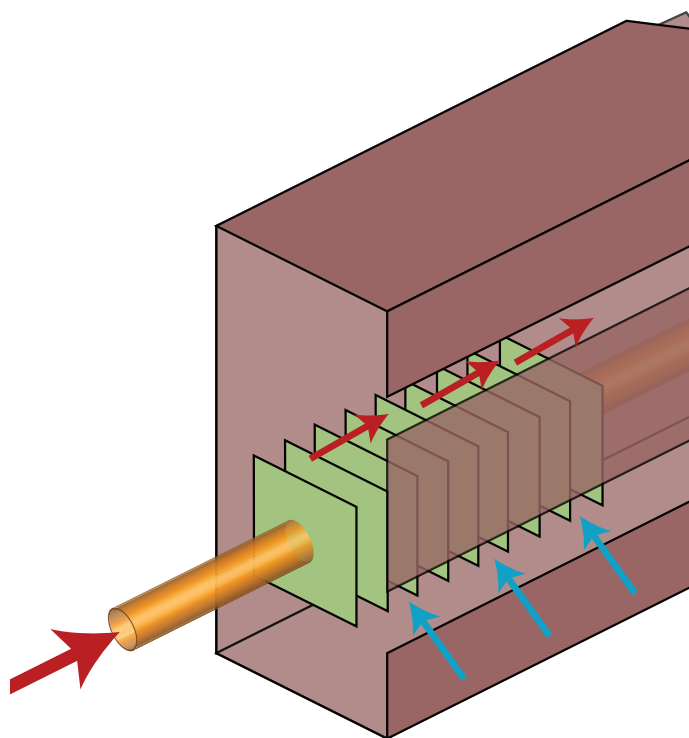
## What's the Downside?

**Cooling:** One reason hot water heating isn't more popular in North America is that air conditioning cannot piggyback on it. The air ducting and blower of a forced air heating system can be used for cooling by adding the cooling components into the forced air heating system. If you have hot water heating, you will have to add independent ducting for cooling or install a ductless cooling system.

**More expensive:** There are fewer options when it comes to hot water heating. Boilers tend to be more expensive than forced air furnaces. Repairs, modifications and extensions to the system are more expensive too.

## Maintenance Tips

- Leaks should be dealt with promptly. Look for two common leakage points:
  - Radiator control valves on old cast iron radiators - look where the pipes go into the base of the radiator.
  - Pressure relief valve on the boiler - this could indicate a water-logged expansion tank or simply a defective valve.
- Air gets trapped in the radiators, reducing the amount of heat given off. Most radiators have a bleed valve at the top. Open the valve and let the air hiss out. When you see some water come out, close the valve.
- Yearly service on any heating system is a good idea.



Hot Water Baseboard Convector

Hot water heating accounts for a small percentage of the residential heating systems in North America while the experience is exactly the opposite in Europe. With modern features and people seeking healthier alternatives, hot water heating is now becoming more popular in North America.