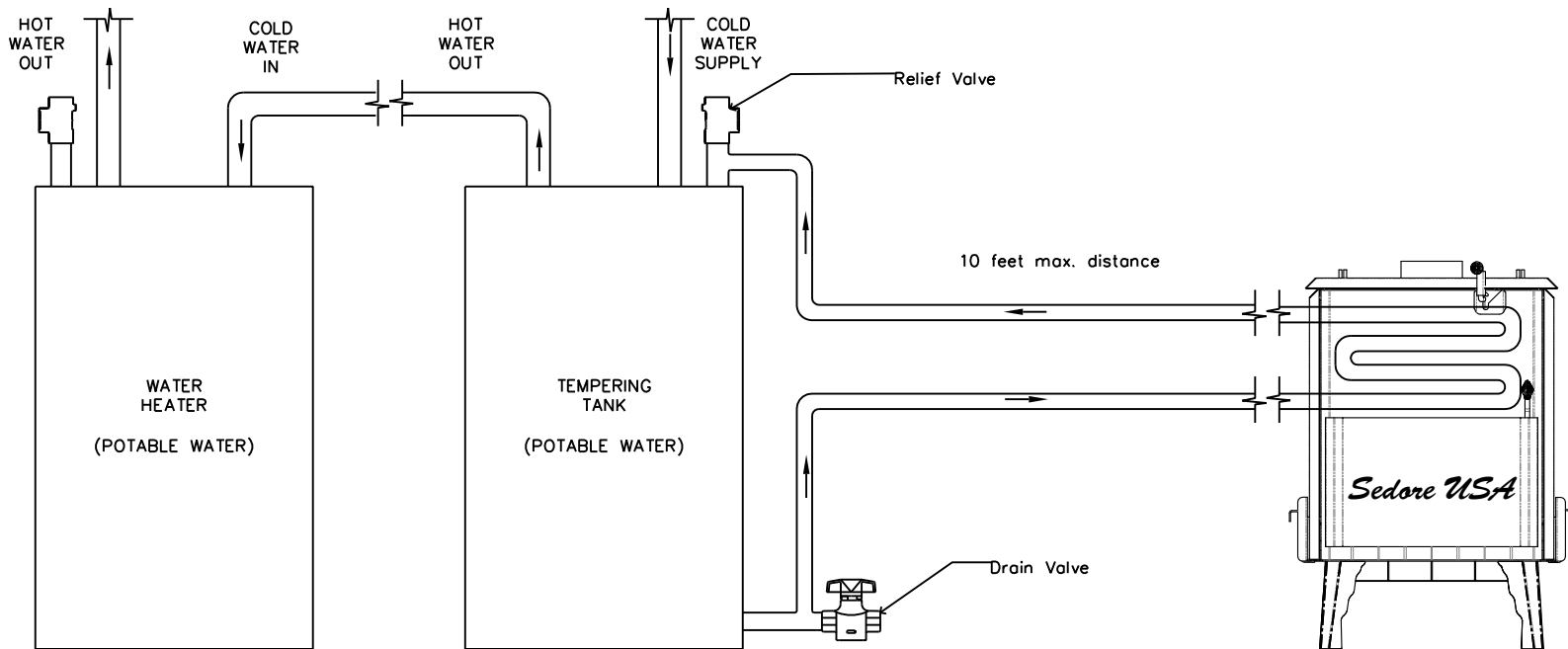


Sedone USA Tempering Tank

Thermosiphon is a property of physics and refers to a method of passive heat exchange based on natural convection, which circulates a substance (liquid, or gas such as air) without the necessity of a mechanical pump. This circulation can either be open-loop, as when the substance in a holding tank is passed in one direction via a heated transfer tube mounted at the bottom of the tank to a distribution point - even one mounted above the originating tank - or it can be a vertical closed-loop circuit with return to the original container. Its purpose is to simplify the transfer of liquid or gas while avoiding the cost and complexity of a conventional pump.

Convective movement of the liquid starts when liquid in the loop is heated, causing it to expand and become less dense, and thus more buoyant than the cooler water in the bottom of the loop. Convection moves the heated liquid upwards in the system as it is simultaneously replaced by cooler liquid returning by gravity. Ideally, the liquid flows easily because a good thermosiphon should have very little hydraulic resistance.



Install tempering tank as water heater method.

- Shut off the hot water heater and the cold water supply to it. Drain the tank completely.
 - Remove the existing temp/ pressure relief valve and discard. Install a short 3/4" nipple and tee along with the new temp pressure relief valve.
 - Run 3/4" copper tubing along with the necessary fittings between the hot water tank and the top leg of the water coil. Install a 3/4" vent elbow and automatic "float type" air vent in the high point of the line. Run 3/4" tubing from the release exit of the temp pressure relief valve downward so that hot water may escape in the event of overheating.
 - Remove the drain valve at the bottom of the tank. Install a short 3/4" nipple and tee and re-install the drain valve to the tee. Run 3/4" copper tubing to the bottom side of the water coil.
 - Connect Hot water out of tempering tank to Cold water in on water heater.
- After all of the connections have been completed, you may refill the tank. Turn on the hot water heater only after the tank has been completely refilled.