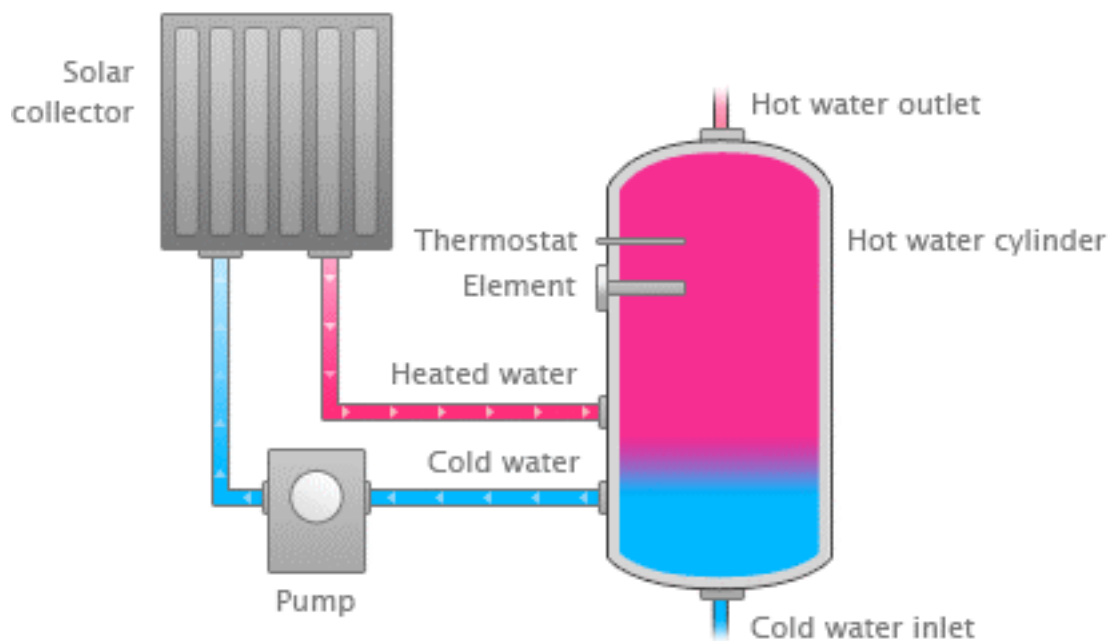

FACT SHEET: OPEN LOOP AND CLOSED LOOP SOLAR HOT WATER SYSTEMS

An open loop or closed loop solar hot water system can be used with either a flat plate or evacuated tube collector.

Open Loop Solar Water System

An open loop system has water circulated directly from the hot water cylinder to the solar collector to be heated up before being returned to the hot water cylinder. A diagram of an open loop system is shown below.

Open-loop hot water cylinder



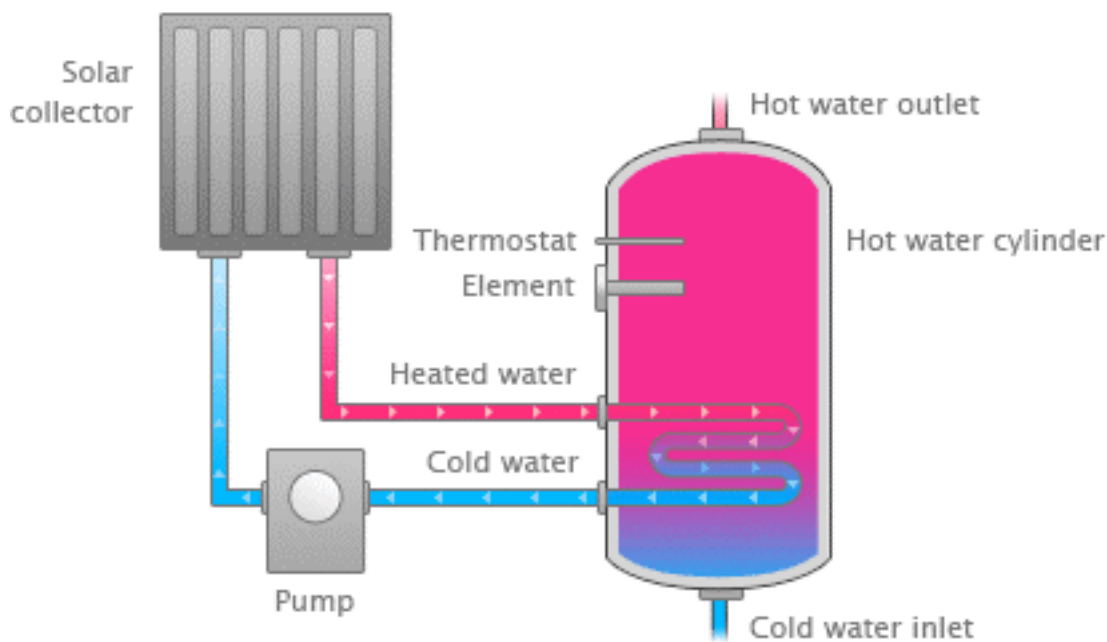
Closed Loop Solar Hot Water System

A closed loop solar hot water system uses a heat transfer fluid such as glycol or a mixture of water and glycol which is circulated from the hot water cylinder to the solar collector and it heats the water in the tank.

The water is heated in the tank by the fluid passing through a heat exchanger in the hot water cylinder. The heat from the fluid is used to heat the water in the hot water cylinder. The heat transfer fluid (glycol and glycol/water mix) does not mix with the water in the hot water cylinder.

A diagram of a closed loop system is as follows:

Closed-loop hot water cylinder



To determine whether an open loop system or closed loop system is best for your situation some things to consider are:

- Excessive temperatures (frost or heat) : a glycol system may be best
- An open loop system is generally cheaper than a closed loop system
- An open loop systems is less complicated – less to go wrong
- If you have water quality issues such as hard water or other harsh water conditions
- If you are on a low water pressure system you will need to use a closed loop system. With mains pressure either system is applicable.

