Thermomax Evacuated Heat Pipe Solar Collectors (tubes) operate differently than the other collectors available on the market. These solar collectors consist of a heat pipe inside a vacuum-sealed tube, as shown.

- Each tube contains a sealed cooper pipe (heat pipe).
- The pipe is then attached to a black copper fin that fills the tube (absorber plate).
- Protruding from the top of each tube is a metal tip attached to the sealed pipe (condenser).
- These tubes are mounted, the metal tips up, into a heat exchanger (manifold).
- As the sun shines on the black surface of the fin, the liquid inside the heat pipe is heated.
- Hot vapor rises to the top of the pipe.
- Water, or glycol, flows through the manifold and picks up the heat from the tubes.
- The heated liquid circulates through another heat exchanger and gives off its heat to water that is stored in a solar storage tank.
- The system is simple to install and easy to expand.

A heat pipe acts like a high conductance thermal conductor. Due to its thermal-physical properties, its heat transfer rate is thousand's times greater than that of the best solid heat conductor of the same dimensions. The basic heat pipe is a closed container consisting of a capillary wick structure and a small amount of vaporizable fluid. The heat pipe employs an evaporating-condensing cycle, which accepts heat from an external source, uses this heat to evaporate the liquid (latent heat) and then releases latent heat by reverse transformation (condensation) at a heat sink region. This process is repeated continuously by a return feed mechanism of the condensed fluid back to the heat zone.

For more information, please visit [www.thermomax.com](http://www.thermomax.com)