How it Works

Construction

The AP solar collector is comprised of four main parts:

Evacuated Tube (ET)

Absorbs solar energy and converts it to usable heat. Vacuum between the two glass layers insulates against heat loss.

Heat Pipe (HP)

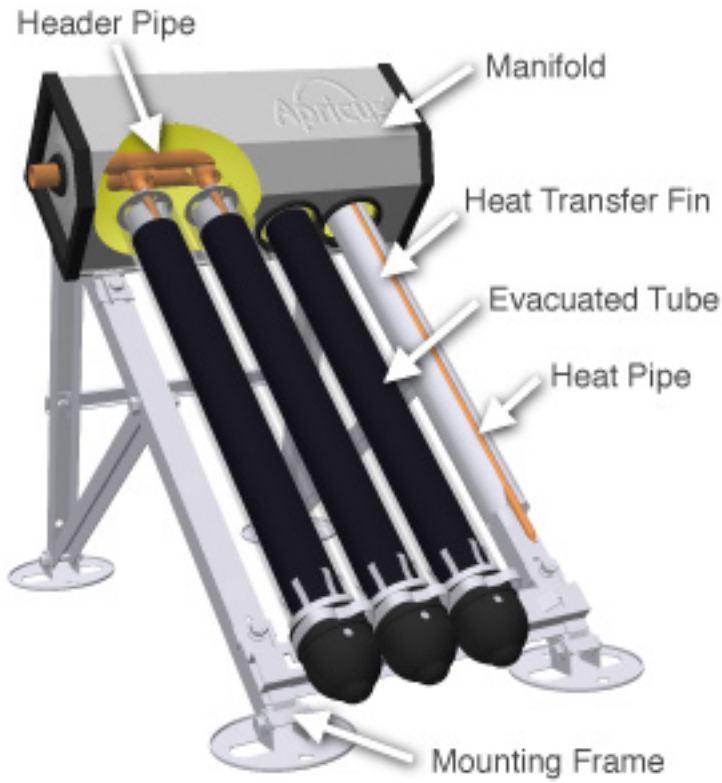
Copper vacuum pipe that transfers the heat from within the ET up to the manifold.

Manifold

Insulated box containing the copper header pipe. The header is a pair of contoured copper pipes with dry connect sockets that the heat pipes plug into.

Mounting Frame

Strong and easy to install with various options to match different mounting methods.



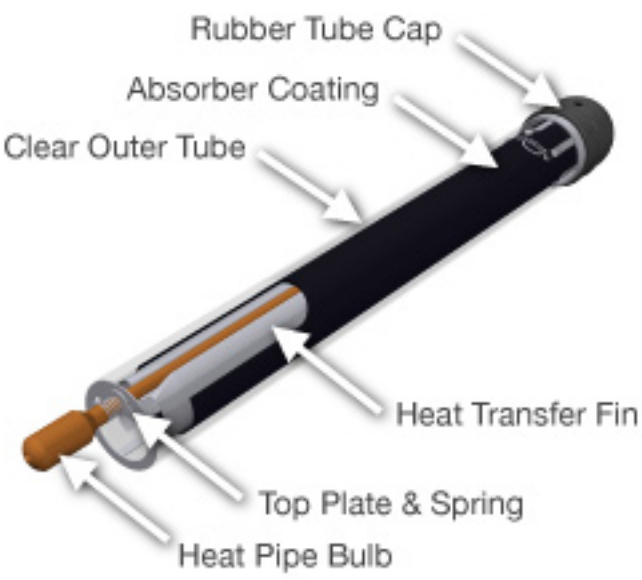
Operation

Step 1: The absorber coating on the inner glass tube absorbs sunlight and converts it into heat.

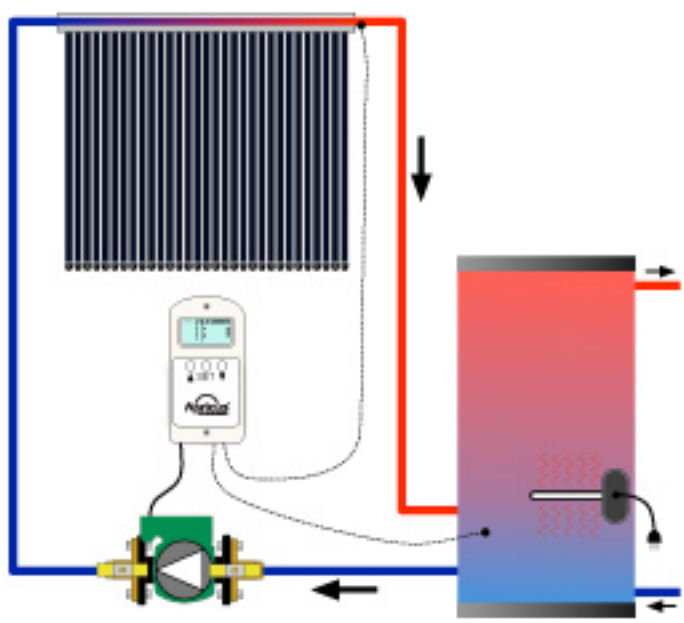
Step 2: Steam forms inside heat pipe which transfers heat rapidly up to the manifold.

Step 3: A pump circulates water or heat transfer fluid through the header pipe, carrying heat back to the storage tank. Gradually throughout the day the tank is heated up.

Evacuated Tube Anatomy



Basic System Diagram



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