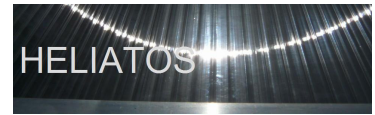


HELIATOS Bottom Feed Connector Installation Instructions



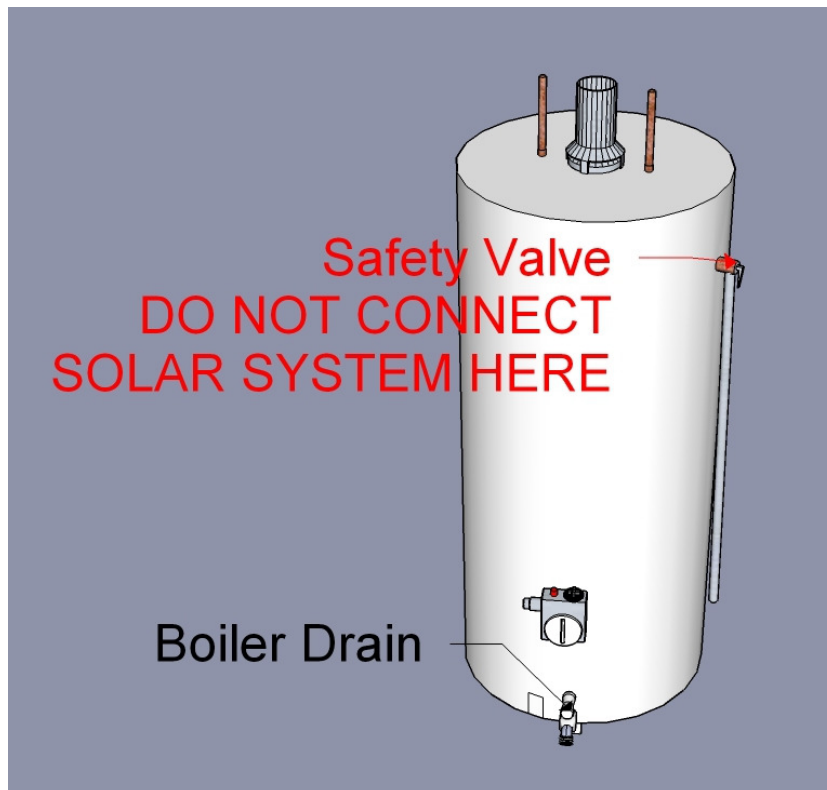
Introduction

The “Bottom Feed” solar water heater connector is meant to connect solar water heater panels directly to your existing standard water heater. It's main advantages are ease of installation, efficiency, and that under most circumstances it eliminates the need for check valves and the associated increased pumping power requirements.

To install this connector your water heater must be equipped with a standard “boiler drain”. Almost all water heaters have this drain. The only exceptions are extremely small point of use heaters (2.5 gals.) and some side connecting units. The connector and boiler drain have standard pipe threads, so during installation apply a generous amount of Teflon tape to the threads before installation.

Step 1

Turn off the water heater and locate the “boiler drain”. All standard drains are located near the bottom of the water heater. Drain the water heater using a standard garden hose.

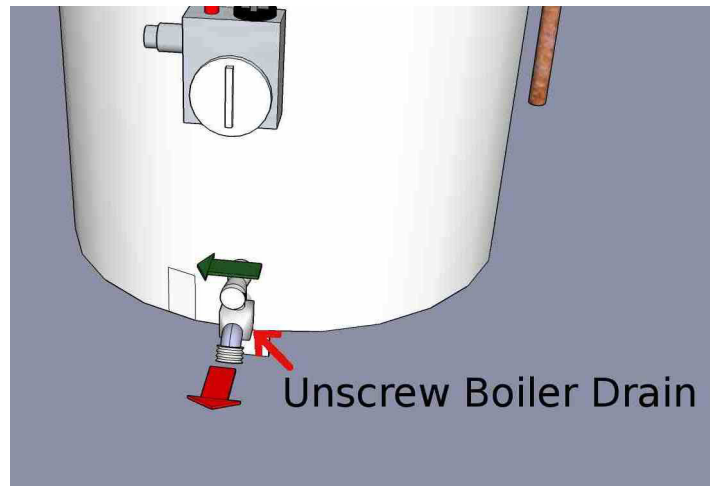


HELIATOS Bottom Feed Connector Installation Instructions



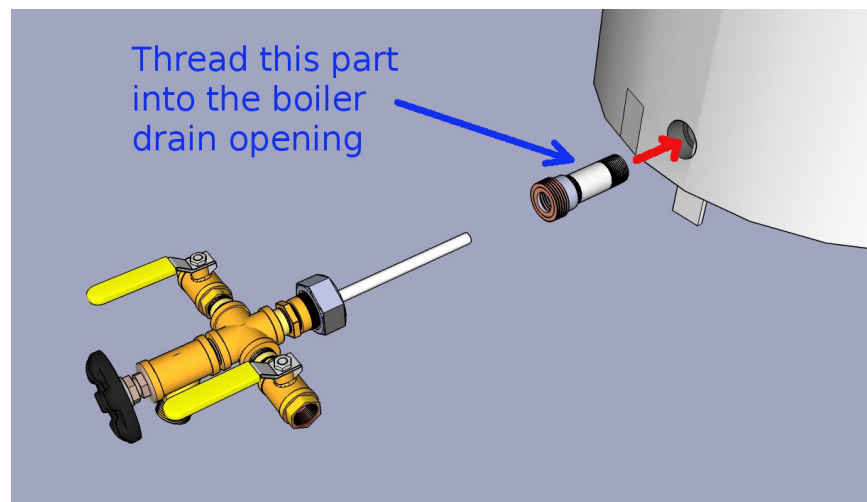
Step 2

Once the tank is empty unscrew the drain valve to remove it from the water heater tank. The Bottom Feed Connector includes a new metal boiler drain so the existing unit will not be needed any more.



Step 3

The bottom feed connector consists of 2 main parts that are held together by the large nut in the middle. First you have to separate the two parts by unscrewing the big nut. Then thread the steel part (gray metal) into the water heater where the boiler drain used to be using Teflon tape on the threads.

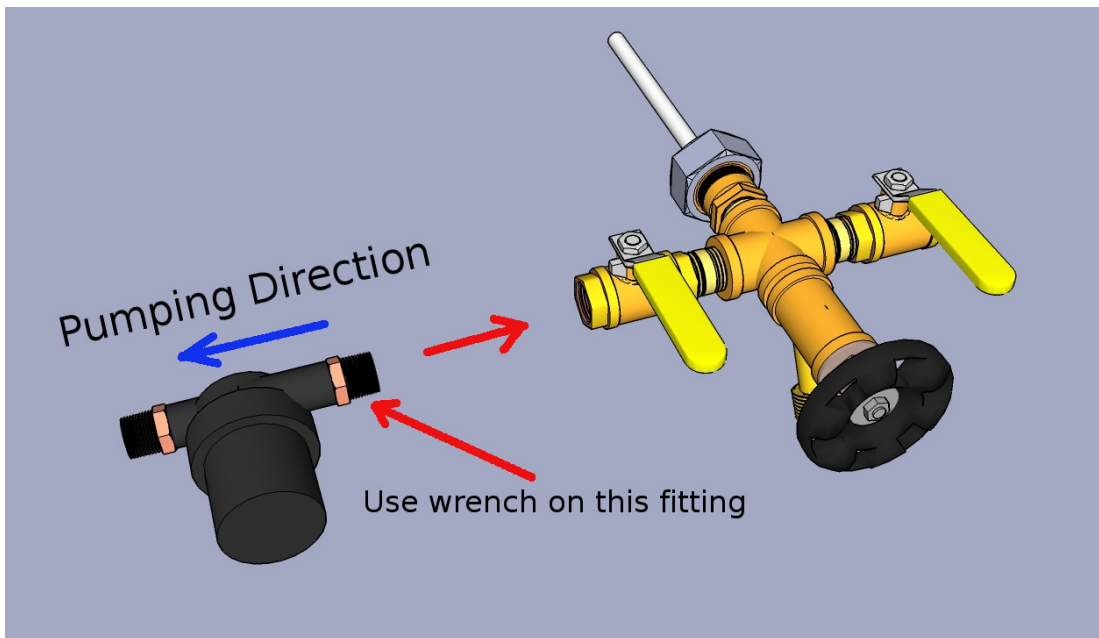


HELIATOS Bottom Feed Connector Installation Instructions

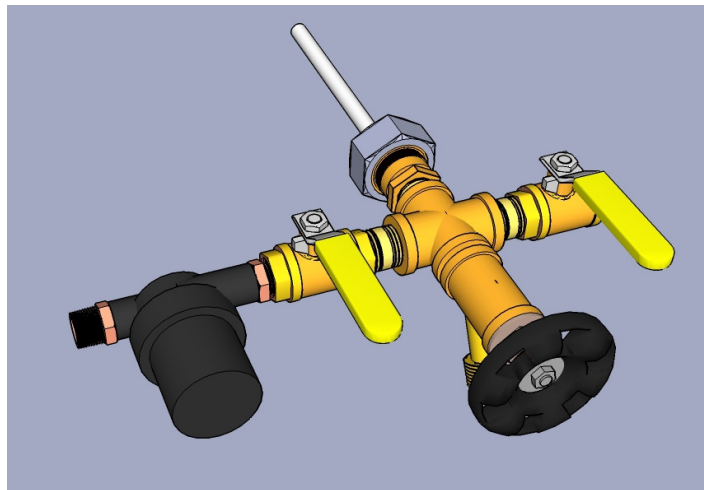


Step 4

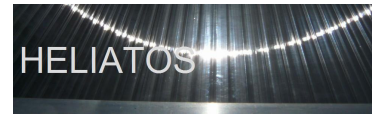
This is easiest accomplished on a workbench. Install the pump on the “cold” side of the bottom feed connector (marked with a C). Please make sure you use the wrench on the pump fitting you are installing. Putting the wrench on the opposite side of the pump will torque the plastic housing and break the pump.



The pump should end up oriented as shown in the picture. The pumping direction is very important for the efficiency of the system. There is always a marking on pumps which indicates in which direction the pump moves the water. This must be **AWAY** from the bottom feed connector.

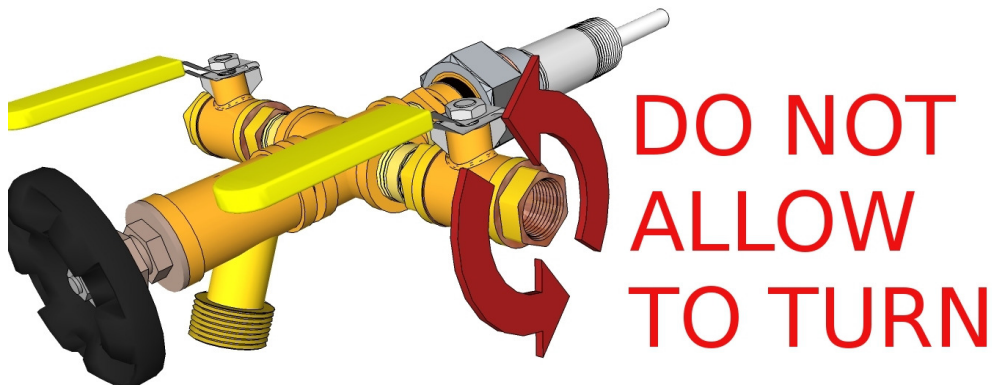


HELIATOS Bottom Feed Connector Installation Instructions



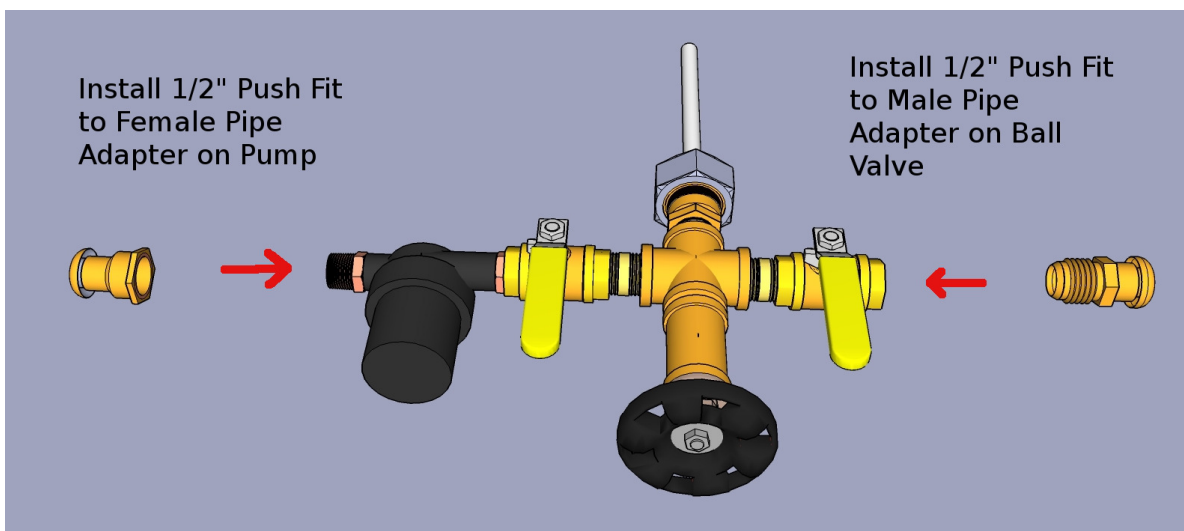
Installation Warning:

When tightening threaded fittings and adapters to the ball valve on the hot side of the Bottom Feed Connector DO NOT allow the ball valve to rotate. It is important to prevent rotation of the ball valve with a wrench while tightening fittings to it.



EZ-Connect Installations (1/2" Copper or CPVC pipe and 1/2" PEX tubing):

For 1/2" pipe (copper or CPVC) or 1/2" PEX tubing we recommend you use a push fit to female adapter on the pump and a push fit to male adapter on the ball valve on the hot side (marked with an H). This is the type of connection used with the new EZ-Connect system. The EZ-Connect fittings kits include these adapters.

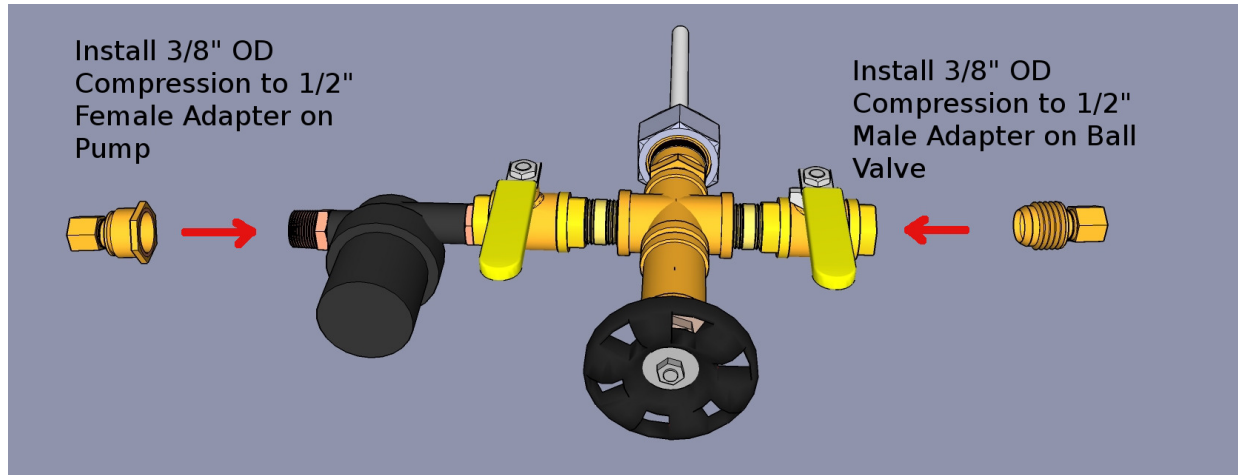


HELIATOS Bottom Feed Connector Installation Instructions



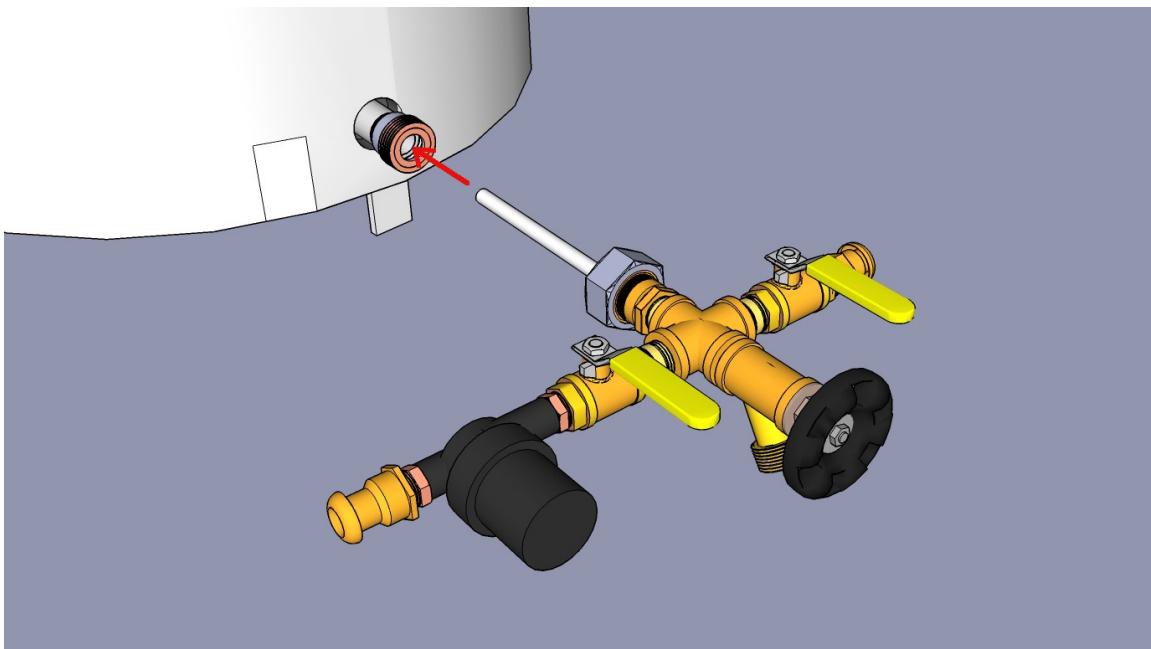
SW-37 or MH-37 Installations (3/8" OD tube PEX or copper):

If you are using 1/4" PEX or 3/8" OD copper tubing we recommend using a FPT to Compression adapter on the pump and a MPT to compression adapter on the ball valve on the hot side (marked with an H). These type of adapters are supplied with our standard SW-37 and MH-37 based complete kits.

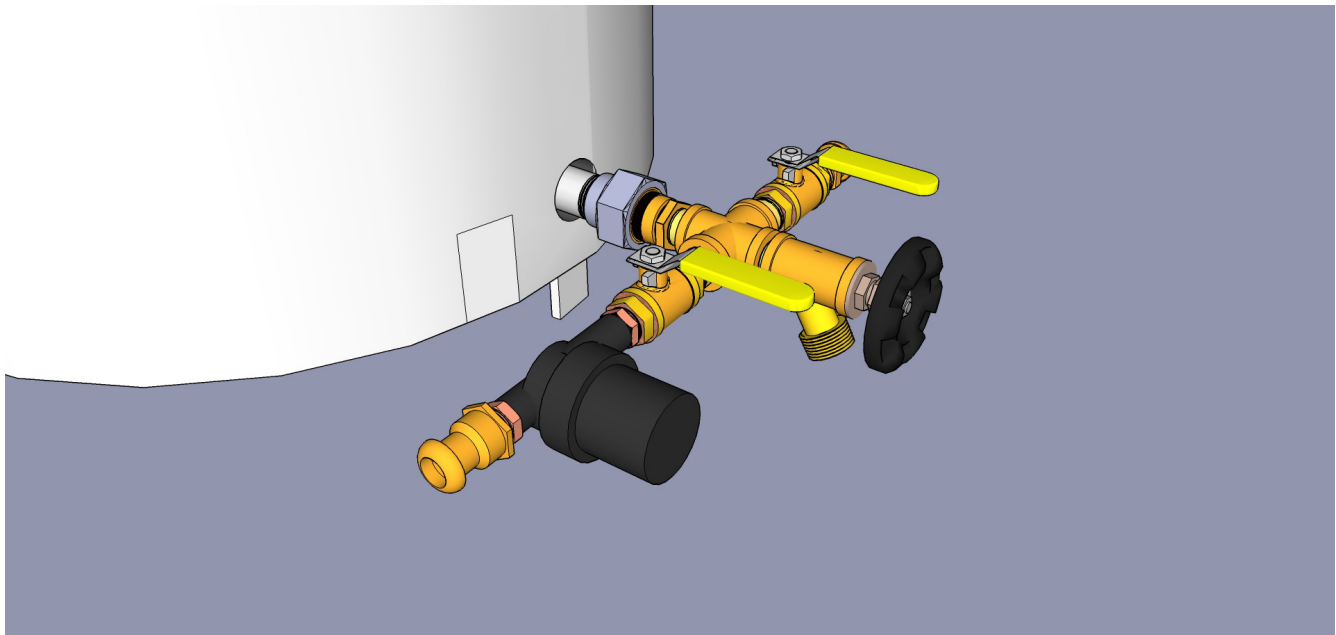


Step 5

Now the pre-assembled Bottom Feed Connector main body can be re-attached to the steel section that was previously threaded into the water heater.



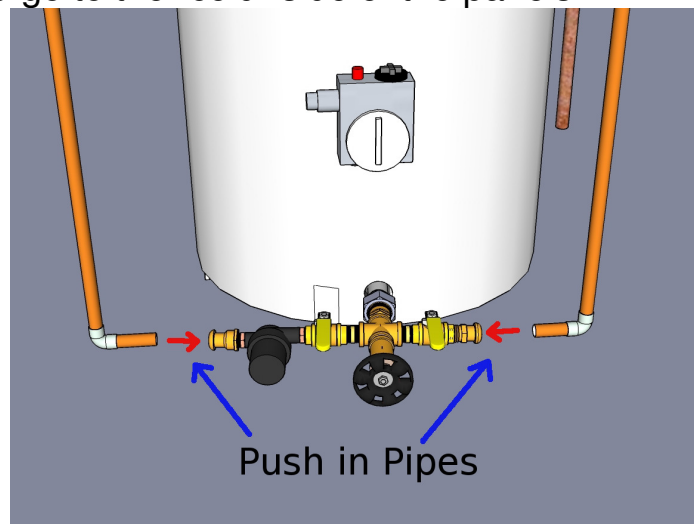
HELIATOS Bottom Feed Connector Installation Instructions



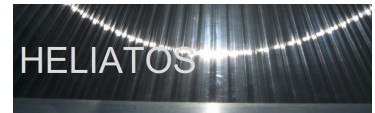
Step 6

EZ-Connect Installations (1/2" Copper or CPVC pipe and 1/2" PEX tubing):

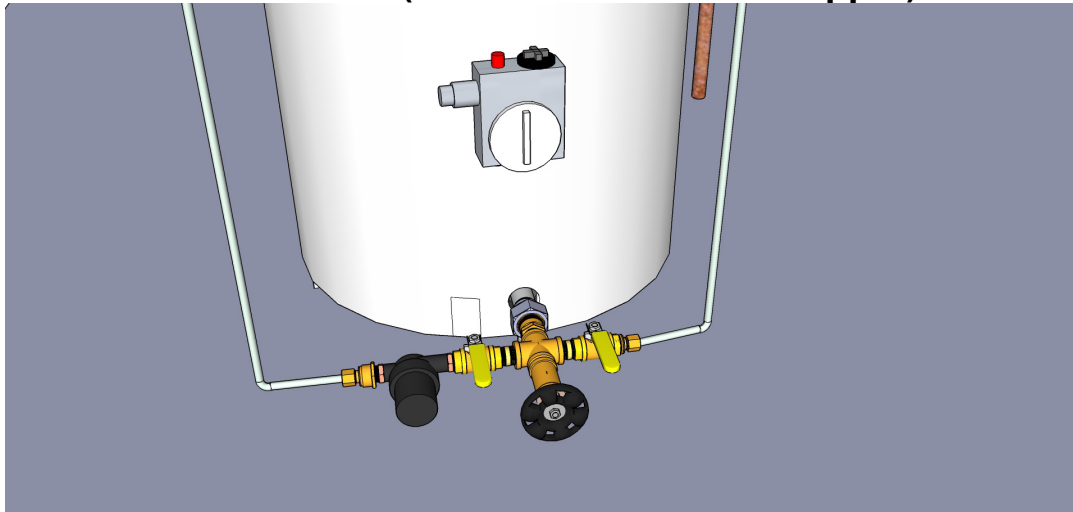
The final step is to insert the pipes going to the panels into the push to fit adapters or the compression fittings. If you are using piping that is not flexible, especially copper please make sure that the weight of the piping does not rest on the bottom feed connector and especially not the pump. The pipe connected to the pump should go to the "cold" side of the panels.



HELIATOS Bottom Feed Connector Installation Instructions



SW-37 or MH-37 Installations (3/8" OD tube PEX or copper):



The final step is to install the 3/8" OD tubing to the two compression fittings. The connection from the "cold" side of the Bottom Feed Connector (through the pump) should go to the cold side of the panels.

Completed Bottom Feed Connector Installation

