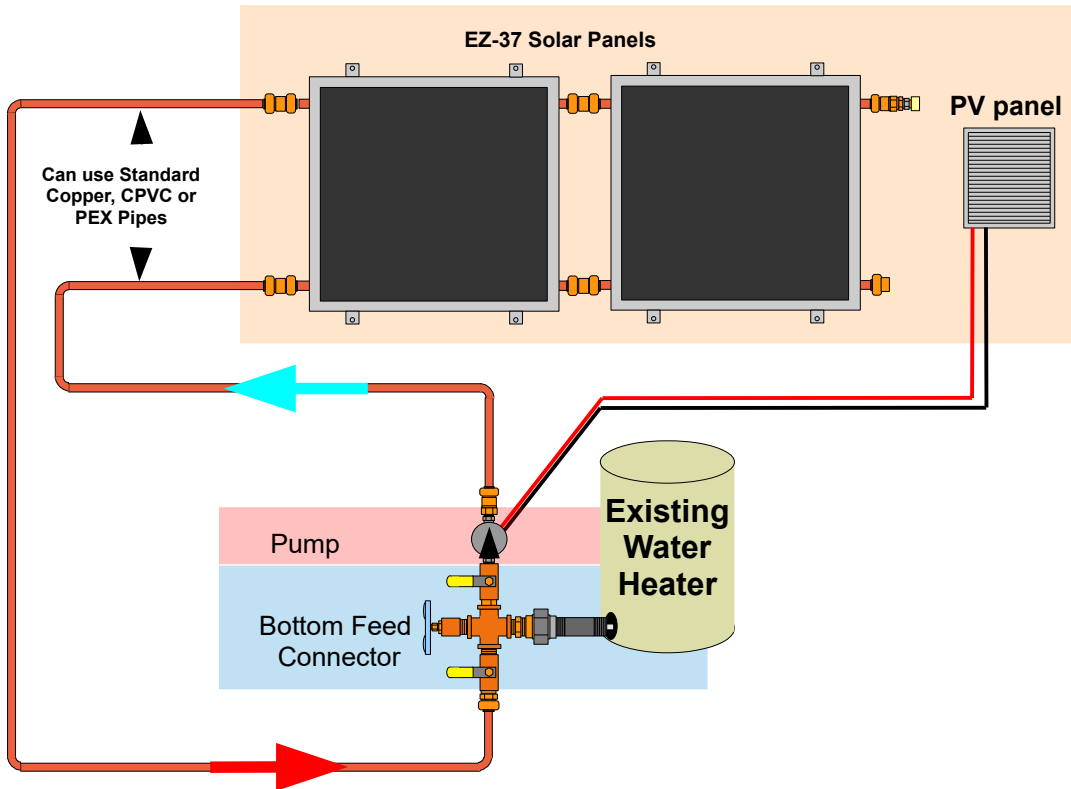


Data Sheet: EZ System



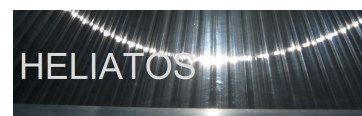
General Information:

The EZ Solar Water Heating System is an open loop direct water circulation hybrid solar water heating system. It uses EZ-37 solar thermal panels to collect heat from sunlight which is transferred to the water directly. The solar water heater is connected to the existing standard residential water heater through a HELIATOS Bottom feed connector. The water is pulled from the bottom of the tank through the Bottom Feed Connector and pumped toward the panels by a small solar powered circulation pump. It returns with a raised temperature and re-enters the tank through the same connector. The Bottom Feed Connector is specially designed to keep the colder feed to the panels and the hotter return from the panels separated effectively.

System Sizing:

For southerly latitudes there should be 1 panel for each 10 to 15 gallons of water heater capacity. More northerly latitudes require a panel for each 6 gallons of water heater capacity. If the distance between the tank and the thermal panels is larger than 20 feet a panel should be added for each additional 15 feet of distance. Pipe runs longer than 50 ft each way are not recommended.

Data Sheet: EZ System



Freeze Protection:

The standard EZ system is NOT freeze protected. The panels and other outside components can be severely damaged by freezing conditions. Before any freezes this system must be drained so it is not filled with water. It is not necessary to expel all water, about 75% will suffice.

HELIATOS System Kits include:

- EZ-37 thermal panels
- Pump and the associated PV panel
- Bottom feed connector
- Automatic air vent
- All plumbing fittings, adapters, wire, PV mounting hardware

Installers have to provide:

- Pipes to and from the panels, any 1/2" CTS (US standard) pipe rated for hot water
- Insulation for the pipe
- Mounting hardware for the thermal panels appropriate for the mounting surface
- Standard plumbing tools
- An existing residential water heater with a 3/4" drain at the bottom (will NOT work with Marathon Non-Metallic Water Heaters)

System Parts:

Thermal Panels	HELIATOS EZ-37
Water Pump	TopsFlo TD5 Stainless Steel
Power Source for Pump	10W Photo-voltaic Panel, 21Voc, 17 Vmp
Water Connection	HELIATOS Bottom Feed Connector
Piping	1/2" CTS: PEX, CPVC, or Copper