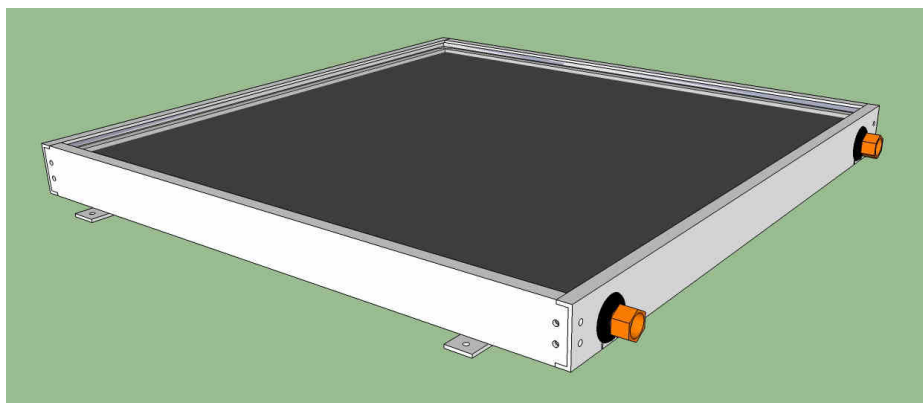


Data Sheet: EZ-37



General Information:



The EZ-37 solar water heater panel is designed to be used in active solar water heating applications. It can be installed with direct connection to household water and is also compatible with glycol based systems. Lightweight materials as well as a very low total volume of water in the panel keep the weight low to minimize added roof loading and to facilitate installation.

Water inside the panel only comes into contact with ACR type copper tubing and brass fittings, both approved for use in residential and commercial potable water systems, including in California and Vermont. If a heat transfer fluid other than municipal water is used it must be non-corrosive to alloy C12200 copper. All corrosion protection and other measures applicable to residential and commercial copper pipe potable water systems should be followed identically.

Materials:

Glazing	UV resistant twin wall polycarbonate
Frame	Architectural grade aluminum alloy 6063
Insulation	Polyiso foam (meets requirements for ASTM-C1289, Type 1 specification)
Water Conduit	Copper Tubing (Alloy C12200 certified for public water supplies meeting EPA Lead and Copper Rule 56 FR26460, June 7 th , 1991)
Fittings	Brass, Dezincification resistant

Physical:

Length	24.0	Inches
Width (including fittings)	25.5	Inches
Height	2.125	Inches
Active Collector Area	3.674	ft ²
Mounting Hole Spacing	24.75 x 17.00	Inches x Inches
Volume of Liquid in Collector	10.5	fl. oz.
Total Panel Weight	11.6	lb.
Input and Output Connections	5/8" Compression Nuts	-

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Maximum Ratings:

Pressure	150	Psi
Collector Temperature	212	°F
Mounting Surface Unevenness	1/4	Inch (corner to corner)

Freezing:

As this panel is built for using directly with potable water care has to be taken to account for the effect of freezing outside temperatures. Water in the panel is contained within copper tubing. Expanding ice will rupture this tubing. If outside temperatures at your site can be near freezing, a drainback system, freeze valve, or other freeze protection device has to be installed to prevent the water from freezing in the panel. Alternatively the panel can be used with glycol based heat transfer fluids or any other fluid that does not freeze and is compatible with ASTM12200 copper tubing. **This panel is not designed to be exposed to freezing temperatures in a direct domestic water application without a freeze protection device.**

Glazing:

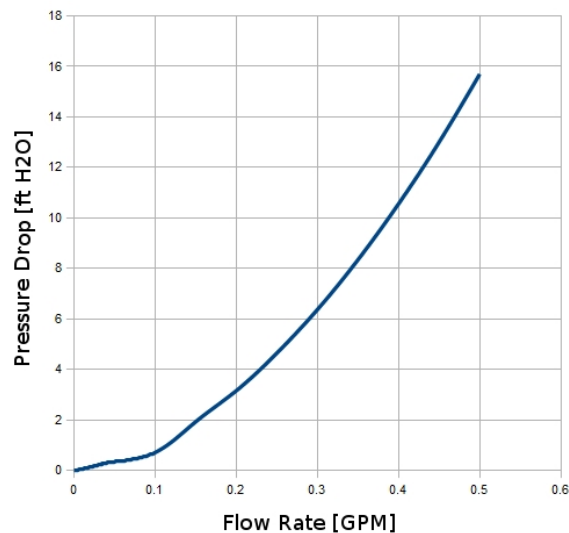
The glazing is extremely durable unbreakable polycarbonate. The material is specially made to provide thermal insulation to keep the radiant energy of the sun inside the panel. The slightly elastic nature of the polycarbonate allows installation of the panels on slightly uneven surfaces, where glass would crack.

Excessive weight on the glazing can lead to permanent deformations, so please **do not put heavy objects on the panels and do not step on them.**

Flow Characteristics:

Water can flow through the panel in both directions.

To minimize total weight and roof loading water in the panel flows through small diameter tubing such that depending on the flow rate a significant pressure drop occurs. The total system has to be designed taking this pressure drop into account. Insufficient flow rate (due to lack of pumping capacity) combined with high solar radiation can lead to boiling in the panels and should be avoided. This graph can be used to match pumping capacity and system pressure drop to achieve proper flow levels.



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Maintenance:

The aluminum frame will never need any maintenance.

The tubing and other parts of the collector itself are maintenance free for the life of the panel. If the panel is used with very hard water and repeatedly loses circulation such that calcium deposits form inside it can be flushed with mild acetic acid (white vinegar).

Light dust on the glazing does not degrade the heater's performance significantly, but if the glazing is covered with excessive dust, spray with a garden hose. **Never wipe this surface with a dry cloth.**

Once a year we recommend that you clean the glazing using water with a dash of dish detergent and a soft cloth. Scratches also do not affect the performance. **Do not attempt to remove scratches by polishing, as this will destroy the UV protection film on the surface of the glazing.**

Technical Drawing:

