



FPE Series - Solar Flat Plate Collectors

The patented Sunvelope® FPE Series flat plate glazed collector incorporates our unique patented 'envelope' absorber plate, carefully integrated with tempered glass front, insulation, and an aluminum frame and back in a freeze tolerant package that eliminates the complexity associated with drain back and glycol systems.

Freeze Tolerant:

Sunvelope®'s envelope design inherently withstands freeze conditions without damage. A thin layer of water (0.1" thick) is contained within a high-tensile strength material (304 stainless steel), configured in a flexible structure. The fluid expansion resulting from freezing conditions is well below the elastic limits of the material.

This unique feature allows for the installation of simpler, more cost effective, and more efficient Direct Pump systems in all geographies and weather conditions.

No Heat Exchanger Required:

The water inside the tank is heated directly by the Sunvelope® collector(s), resulting in faster water heating, and a more efficient system.

Flexibility in Size and Type of Backup Tank:

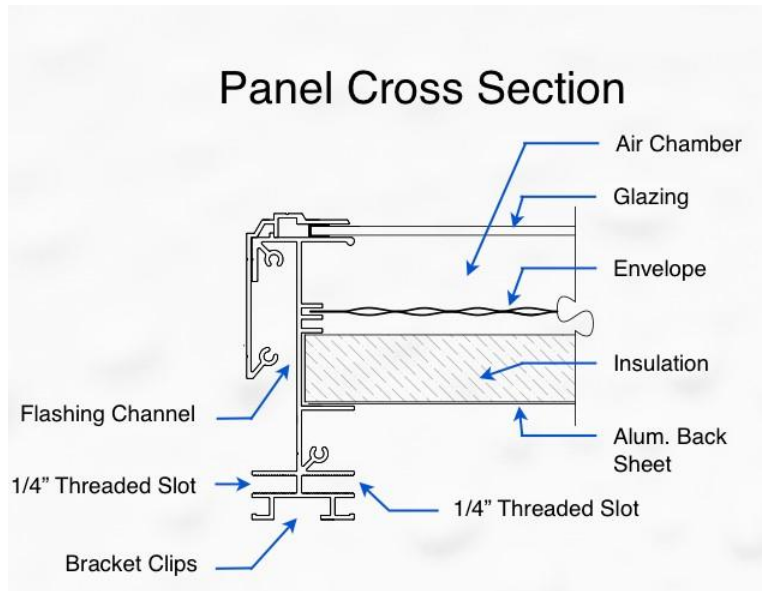
Sunvelope® collector(s) can be integrated with any commercially available electric or gas water heater, reducing the cost of this component and allowing for system configurations that address a wide range of hot water needs.

What Does This Mean?

Freeze tolerant collectors reduce installed costs by 40%, compared to more complex Glycol and Drain Back systems.



Technical Specifications



Orientation Flexibility

Interconnection locations allows for collectors to be installed in portrait or landscape orientation without any adverse impact on collector performance.

Technical Specifications	FPE-17	FPE-21	FPE-30
Height	5 ft. 9 in.	7 ft.	10 ft.
Width	3 ft.	3 ft.	3 ft.
Gross Area	18.16 sq. ft.	21.84 sq. ft.	31.78 sq. ft.
Net Area	16.1 sq. ft.	19.98 sq. ft.	28.72 sq. ft.
Dry Weight	78 lbs.	95 lbs.	141 lbs.
Fluid Capacity	0.4 gallons	0.5 gallons	0.7 gallons
Maximum Operating Pressure	80 psi.	80 psi	80 psi
Maximum pressure	160 psi.	160 psi	160 psi
Recommended Design Flow Rate/ collector (water)	0.2-1.0 GPM	0.2-1.3 GPM	0.5-2.0 GPM