SPP-Spartan
Solar Flat Plate Collector

SOLAR PANELS PLUS
1-866-576-5277

- ☐ *Ultrasonically Welded Aluminum Fins*
- ☐ *SRCC Certified*
- ☐ *Selective Black Absorber Coating*
- ☐ *Glass Wool Insulation*

BUY AMERICAN

The SPP-Spartan is a is a high performance solar flat plate collector.

These collectors are used to produce domestic hot water, and in space heating systems. They are available in 4x8 and a 4x10.

Buy American Compliant, and SRCC certified, these collectors are perfect for residential and commercial applications alike.

- ☐ Buy American Compliant: The SPP-Spartan collector complies with the Buy American Act (BAA) and American Recovery & Reinvestment Act (ARRA), which is a requirement on many commercial and government projects
- ☐ SRCC Certified: Collector is OG-100 certified, allowing the SPP-Spartan collector to qualify for Federal, State, and local incentives, such as rebates and tax credits
- ☐ Ultrasonically Welded Aluminum Fins: Ultrasonic metal welding allows for a reliable, long lasting, durable collector, able to withstand thermal stress and all types of environmental conditions
- ☐ Black Absorber Coating: Black paint absorber coating is a high-absorption coating that allows for very high solar gains, allowing you to produce cost effective, free solar heat and hot water
- ☐ Glass Wool Insulation: Glass wool fiberglass insulation is a durable, high temperature insulation with excellent heat retention properties, allowing for high thermal gain all year long

SPP-Spartan Specifications

Size	4' x 8'	4' x 10'
Length	96"	120"
Width	47.2"	47.2"
Depth	3.9"	3.9"
Weight	121lbs	130lbs
Gross Front Area	31.5sf	39.4sf
Aperture	30.0sf	36.7sf
Volumetric Fluid Capacity	0.6gl	0.7gl

Enclosure Material	Black Anodized Aluminum
Insulation	1" Plyisocyanurate, 1" glass wood + radiant barrier
Gaskets	EPDM Rubber
Glazing	4mm low iron tempered glass
Glass Transmittance	91.6%
Absorber Coating	Vapor Deposition Selective Coating
Absorptivity	95%
Emissivity	25%

Absorber Type	Harp Style
Absorber Material	Copper Waterway with Aluminum Fin
Number of Flow Tubes	8
Flow Pattern	Parallel
Riser Tube	½" Outside Diameter
Header Tube	1 1/8" Outside Diameter
Riser Spacing	5.56"
Recommended Flow Rate	0.8 – 4.5gpm
Pressure Rating	160psi

SRCC Certification Data: Collector Thermal Performance Rating

BTU per Panel Per Day: 4' x 8'			
Category (Ti-Ta)	Clear Day 2000 Btu/ft2/day	Mildly Cloudy 1500 Btu/ft2/ day	Cloudy Day 1000 Btu/ft2/ day
A (-9F)	41,500	31,400	21,400
B (9F)	36,700	26,600	16,600
C (36F)	29,600	19,700	10,000
D (90F)	16,700	7,700	900
E (144F)	5,700	200	0

BTU per Panel Per Day: 4' x 10'			
Category (Ti-Ta)	Clear Day 2000 Btu/ft2/day	Mildly Cloudy 1500 Btu/ft2/ day	Cloudy Day 1000 Btu/ft2/ day
A (-9F)	51,900	39,300	26,800
B (9F)	45,900	33,300	20,800
C (36F)	37,100	24,700	12,500
D (90F)	20,900	9,700	1,200
E (144F)	7,200	200	0

(Ti) – Temperature Inlet: Refers to temperature of fluid entering manifold.
(Ta) – Temperature Ambient: Refers to the ambient temperature, or the outside air temperature.
(Ti-Ta) – Refers to the inlet fluid temperature subtracted from the outside ambient temperature. For example, if the temperature entering the manifold is 100F, and the outside air temperature is 80F, the Ti-Ta would be 20F.

(A) – Pool Heating (Warm Climate)
(B) – Pool Heating (Cool Climate)
(C) – Water Heating (Warm Climate)
(D) – Water Heating (Cool Climate)
(E) – Air Conditioning