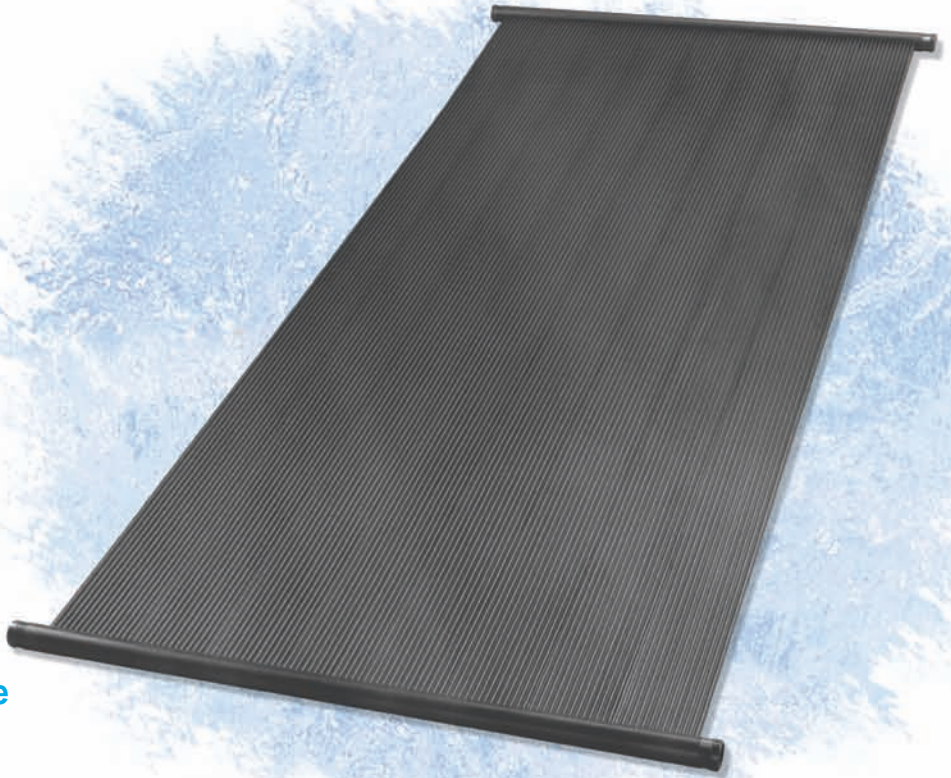


# The Original Innovator in Solar Pool Heating

- Patented Sun Tracking Tube and Curved Web Design**  
 Maximizes heat gain throughout the day.
- Multi-Plate Construction**  
 Allows for wind-relief during extreme weather conditions as well as for thermal expansion and contraction.
- Stainless Steel Mounting Hardware**  
 Greater strength and rust-free with fewer mounting points for easy installation.
- All Welded Construction**  
 For maximum strength and durability.
- Metered Direct Flow Design**  
 Compatible with today's high-flow, high-efficiency pool filtration systems – available in low profile 1-1/2" manifold for residential pools or a 2" heavy-duty commercial design.



Collector Cross Section showing heat trap design for better all day performance, even on windy days.

## TECHNICAL DATA

### DIMENSIONS

Model Number	Model 1500 Series			Model 2000 Series		
	10001-5	10001-2	10001-1	10204-12	10204-10	10204-8
Nominal Size ft.	4x12	4x10	4x8	4x12	4x10	4x8
Overall Collector Length-in	144.0	120.0	96.0	144.0	120.0	96.0
Collector Width-in	47.0	47.0	47.0	47.0	47.0	47.0
Manifold Length-in	50.5	50.5	50.5	50.5	50.5	50.5
Manifold O.D.-in	1.9	1.9	1.9	2.4	2.4	2.4
Manifold I.D.-in	1.5	1.5	1.5	2.0	2.0	2.0
Gross Collector Area-ft <sup>2</sup>	47.3	39.3	31.4	47.3	39.3	31.4
Net Collector Area-ft <sup>2</sup>	47.3	39.3	31.4	47.3	39.3	31.4

### WEIGHTS

Dry-lbs	21.3	17.1	14.3	22.3	18.1	15.3
Wet-lbs	48.0	41.6	35.1	54.0	47.6	41.1
Wet lbs-ft <sup>2</sup>	1.0	1.0	1.1	1.1	1.2	1.3
Fluid Capacity-gal	3.2	2.9	2.5	3.8	3.5	3.1

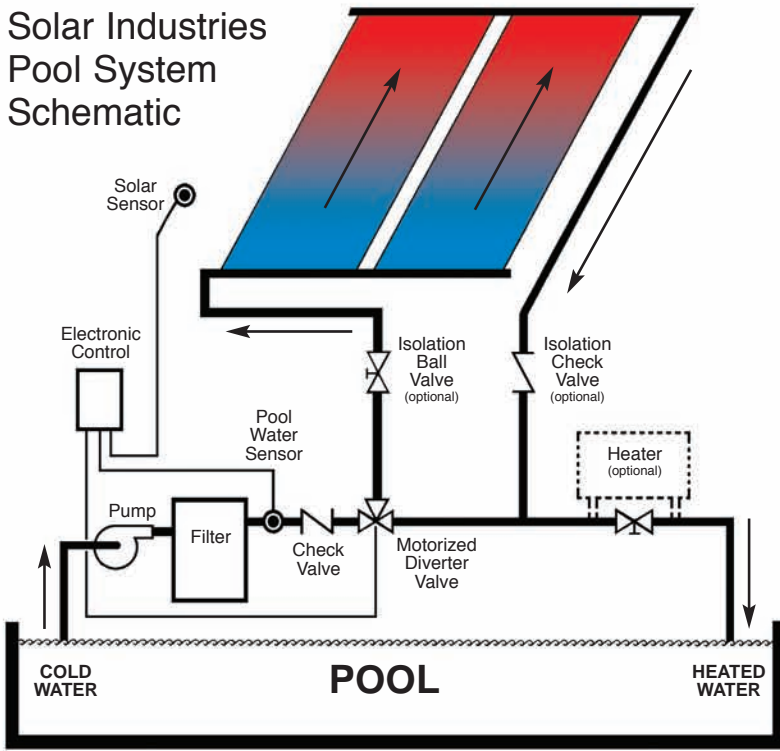
### FLUID FLOW RATES

Model Number	Model 1500 Series			Model 2000 Series		
	10001-5	10001-2	10001-1	10204-12	10204-10	10204-8
Maximum-GPM	10.0	10.0	10.0	10.0	10.0	10.0
Minimum-GPM	3.0	2.5	2.5	3.0	2.5	2.5
Recommended-GPM	5.0	4.0	3.25	5.0	4.0	3.25
Max. Collector with Single Feed @ Recommended Flow Rate	10	12	12	12	14	14

### PRESSURES

Pressure Drop:	0.14 ft head (0.06PSI) pressure loss @ recommended flow rate 0.09 ft head (0.04PSI) pressure loss @ minimum flow rate
Max. Fluid Pressure:	Greater than 100 PSI @ 80°F
Recommended Max Operating Pressure:	50 PSI @ 140°F

# Solar Industries Pool System Schematic



## GUIDE SPECIFICATIONS

Contractor to supply and install \_\_\_\_\_ Solar Industries collectors, nominal size (4x12, 4x10, 4x8) with overall frontal area of (47.3, 39.3, 31.4) square feet each manufactured by Aquatherm Industries, Inc. Collectors shall be fabricated from a propylene copolymer with stabilizer combination providing long term resistance to heat and light. The weight of collector when filled with water shall be no more than 1.3 pounds per square foot of frontal area.

The collectors shall be capable of withstanding an internal static test pressure of 100 psi and working pressure of 50 psi per ANSI/NSF 50, Annex B.3.; shall pass a 20,000 cycle pressure test per Annex B.1. and shall be resistant to corrosion, the effects of freezing, and internal scale accumulation. Pressure head loss of a single panel must not exceed 0.14 feet water at recommended flow rate. Maximum flow rate per collector may not exceed 10 gpm.

Collectors shall be capable of thermal performances of at least 85% efficiency when inlet fluid temperature equals ambient temperature and be rated at a minimum of 1,000 BTU's per square foot per day at an inlet temperature of 95° F with a daily insolation of 1,600 BTU's.

Collector shall be vented to allow for moisture ventilation of the mounting surface and wind relief during adverse weather conditions. Venting shall not be visible unless collector is exposed to high winds.

Collector mounting shall consist of 18-8 chromium-nickel stainless steel mounting hardware and two continuous transverse straps with a minimum yield / tensile strength of 47,000 / 90,000 psi and having a black polypropylene coating.

Water connections shall be made with dual-durometer hose connections molded from EPDM with a minimum 70 / 80 hardness and must withstand a minimum pressure of 100 psi at 140 degrees F as designated under IAPMO PS-33 2010b. Hose clamps shall be all stainless worm gear type with 18-8 chromium-nickel stainless band and shall be IAPMO listed.

The collectors shall meet or exceed the minimum standards established by SRCC, FSEC, IAPMO, The City of Los Angeles as well as other applicable nationally recognized standards and shall be manufactured in the U.S.A. All hydraulic components including the collectors must be NSF-50 listed for use with commercial swimming pools.

## THERMAL PERFORMANCE RATINGS

Thermal Performance Equation  $\eta_n = 85.8 - 3.42$   
 Incident Angle Modifier  $K_{q,r} = 1.0 - 0.03$   
 (Rated in accordance with ASHRAE standard 96-80)

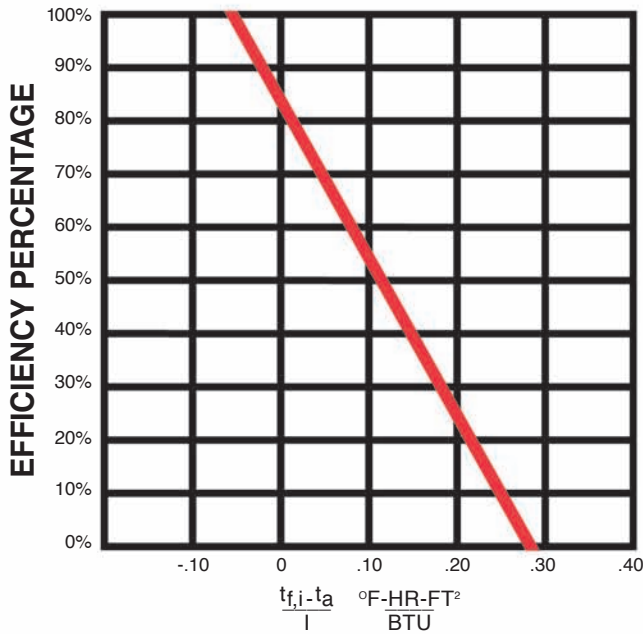
Florida Solar Energy Center Certification  
 4x12 - 47,700 (BTU's per std day)  
 4x10 - 39,800 (BTU's per std day)  
 4x8 - 31,800 (BTU's per std day)

## CERTIFICATIONS, APPROVALS & TESTING

Solar Industries Solar Heating Systems meet or exceed the criteria for approvals from the following accredited independent laboratories and agencies:

- Florida Solar Energy Center
- Solar Rating and Certification Corporation
- City of Los Angeles
- DOE- Bright Way Program
- International Association of Plumbing and Mechanical Officials (IAPMO)
- National Sanitation Foundation (NSF-50)

### Instantaneous Efficiency of Solar Industries Collectors



### Pressure Drop in Head/Feet with Multiple Solar Industries Collectors

Number of Collectors	Model 1500 Series - 1-1/2"	Model 2000 Series - 2"
8 Collectors	0.6, 0.9, 1.6, /, /, /	0.3, 0.5, 1.0, /, /, /
10 Collectors	/, 1.3, 1.8, 3.1, /, /	/, 0.6, 1.1, 1.6, /, /
12 Collectors	/, /, 2.4, 3.3, 4.5, /	/, /, 1.3, 1.8, 2.5, /
14 Collectors	/, /, /, 1.8, 2.6, 3.0	

Flow Rate (GPM) on x-axis: 25, 30, 40, 50, 60, 70

**Solar Industries**  
 Solar Pool Heating Systems



**35** years  
 The Original Since 1976

www.solarindustries.com

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