



EXTEND YOUR SWIM SEASON



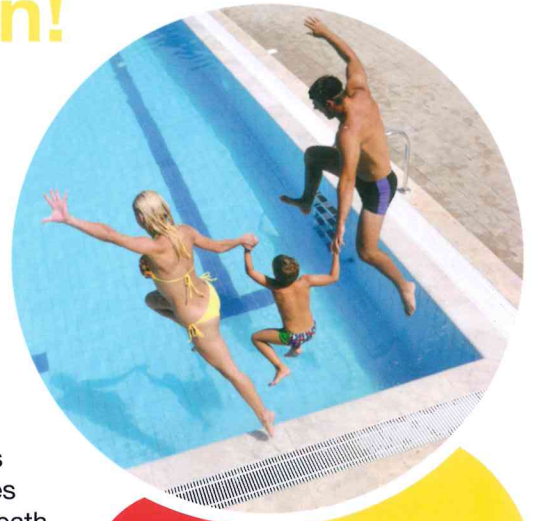
Extend Your Swim Season!

Get the most out of your swimming pool with SunUp!

Solar pool heating costs absolutely nothing to operate by capturing FREE energy from the sun. Using clean, renewable solar power you can enjoy all the benefits of a heated pool while being cost and energy efficient.

Just set your desired temperature and take advantage of your pool beyond the warmer months. There are no extra charges on your utility bill and the systems are virtually maintenance free, so no additional costs after installation.

Designed with your roof in mind, a SunUp system requires less roof penetrations because they don't use straps. The slim, light weight panels have individual tubes that allow your roof to breathe – preventing moisture from being trapped underneath.



Costs of Operation

Annual costs to heat your pool can add up quickly if you use gas or electric heating options. However, with a SunUp Solar Pool Heating System, your only additional cost to your utility bill is running a pool pump.

Pool Pump with SunUp
May increase your electric bill by \$30 to \$74 per year.

\$840

Electric Heat Pump
Annual Average of
Heating Expenses**

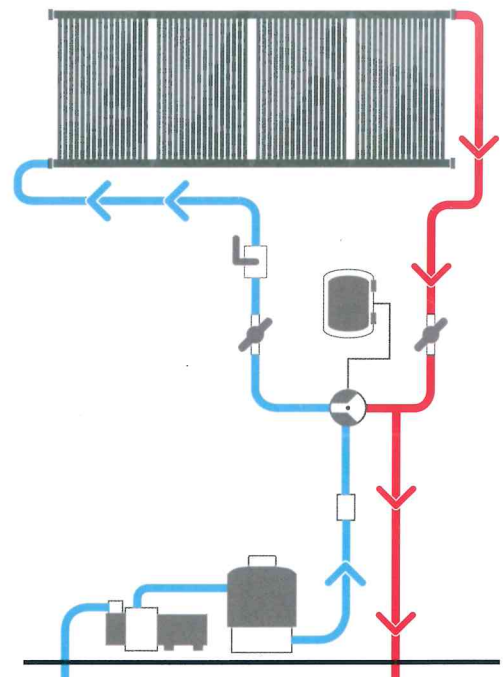
\$1,704

Gas Heat Pump
Annual Average of
Heating Expenses**

**Based on a 1,000 SF, uncovered outdoor pool in Atlanta, GA heated to 78° between April 1 and October 31. Figures provided by the U.S. Department of Energy website: www.energysavers.gov

How It Works

1. Using your existing pool pump, pool water is directed through a series of valves to your solar collectors.
2. Pool water enters the solar collectors at the bottom and rises to the top through the individual tubes of the collector.
3. As the water rises through the collector, it is heated by the sun's radiant energy.
4. The water is then returned to the pool to repeat the cycle until your pool has been warmed to your desired temperature.



**Provided by ELM Distribution
for SunUp Solar Pool Heating
Collectors and Components.**

Design Features

1. Unique Hexagon-Shaped Manifold

A flat aesthetic installation on a large range of roof types.

2. Reinforced Ribs

Ensures the manifold header withstands various pressure and temperature changes over time.

3. Over-Molding Manufacturing Method

Eliminate leaks from welding by fusing the header directly over the panel tubes.

4. Individual Tube Design

Minimize wind effects on the panel and allows for rapid moisture release.

5. Spacer Bars

Prevents the panel from warping over time and abrasion to the riser tubes.



Other Features

- **The Modular Structure** enables fast and firm connection between panels, creating any size absorption area over any type of roof imaginable.
- **Specially Formulated Polymer Material** stabilizes against sustained ultraviolet radiation, extreme weather and aging.
- **Alligator Clamps** can be positioned anywhere on the panel header and allows for direct drilling to various designs of roof truss structures.
- **All-Polymer Parts and Fittings** create simple connections between panels and standard plumbing pipes.
*Optional fittings to flex hose with a 2" adaptor.

Collector Data

Collector Model	SU-48	SU-40	SU-32
Size, Nominal	4' x 12'	4' x 10'	4' x 8'
Width	47.24"	47.24"	47.24"
Length	143.70"	119.69"	95.67"
Aperture Area	47.14 sq ft	39.26 sq ft	31.38 sq ft
Manifold Diameter	2"	2"	2"
Dry Weight	16.53 lbs	13.67 lbs	11.02 lbs
Volume Capacity	3.8 gal	3.1 gal	2.4 gal
Working Pressure	90 psi	90 psi	90 psi
Burst Pressure	135 psi	135 psi	135 psi
Typical Flow	5 - 7 gpm	4 - 6 gpm	3 - 5 gpm

Certification Data

Certifying Organization	SU-48	SU-40	SU-32	Performance Expectations
National Standard SRCC	47,135	39,551	28,279	$\eta = (0.909)(1 - 0.026u) - (2.1084 + 1.1254u)(P/G''')$

SU-48

Solar Insolation

Category T(°F)		2,000 BTU/ft ²	1,500 BTU/ft ²	1,000 BTU/ft ²
Water Temp. Minus Air Temp.	A (-9)	94.28	75.42	56.57
	B (+9)	47.14	28.28	9.43
	C (+36)	4.71	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

SU-40

Solar Insolation

Category T(°F)		2,000 BTU/ft ²	1,500 BTU/ft ²	1,000 BTU/ft ²
Water Temp. Minus Air Temp.	A (-9)	78.32	62.82	47.11
	B (+9)	39.26	23.56	7.85
	C (+36)	3.93	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

SU-32

Solar Insolation

Category T(°F)		2,000 BTU/ft ²	1,500 BTU/ft ²	1,000 BTU/ft ²
Water Temp. Minus Air Temp.	A (-9)	62.76	50.21	37.66
	B (+9)	31.38	18.83	6.28
	C (+36)	3.14	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

KEY

A - Pool Heating (Warm Climate) **B** - Pool Heating (Cool Climate)

C - Water Heating (Warm Climate) **D** - Space & Water Heating



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