



50 years of proven experience,
installed in more than 400,000
swimming pools in over 50 countries:

Heliocol by Magen eco-Energy

The largest international manufacturer
of solar pool heating systems in the world



Extend Your Swim Season with a Heliocol Solar Pool Heating System!

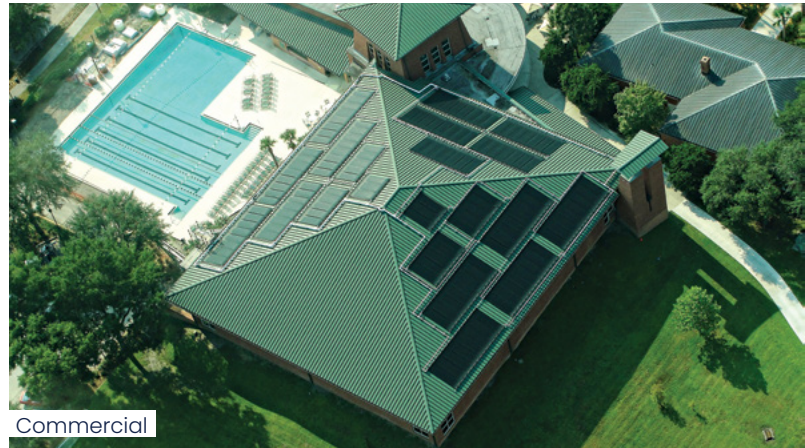
In 1977, Heliocol became the world's first solar pool heating collector of its kind, featuring a patented individual tube design and mounting hardware combined with a one-piece overmolded construction. Since then, Heliocol systems have been known for their design excellence with a proven track record for efficiency, reliability, and safety.

Residential

A swimming pool is a significant investment that should be enjoyed to the fullest extent. This is why over 400,000 customers worldwide heat their pools with Heliocol. Going solar can also increase your property value while saving energy and money.

Commercial

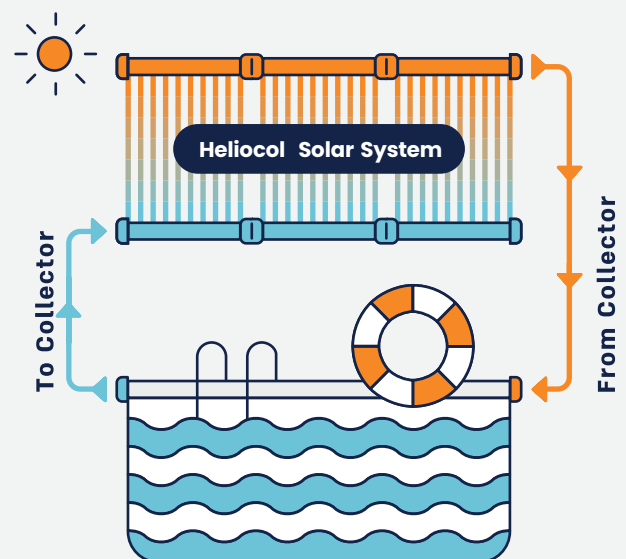
Our systems also work great in commercial installations for resorts, military bases, universities, hospitals, corporations and more. Heliocol panels



were even chosen to heat the olympic pool for the 1996 Summer Olympic Games in Atlanta, Georgia, 2004 in Athens, Greece and 2008 in Beijing, China. On average, a 100 panel system will save 2,400 gallons of LP fuel per month. The United States Department of Energy stated that commercial solar pool heating is the most effective application of renewable energy available today.

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.



Design Features

Heliocol is the world's largest solar pool heating manufacturer. Our panels have several patented design features. We pride ourselves on being environmentally safe, maintenance free and roof friendly. If there would be any issues, Heliocol has you covered with a twelve year limited warranty including freeze protection.

1. One-Piece Unibody Construction

The overmolded header is formed over each individual tube and fused together during construction, producing the strongest possible connection. Overmolding eliminates cracks and welds for a longer lasting, maintenance-free system.

2. Individual Tubes

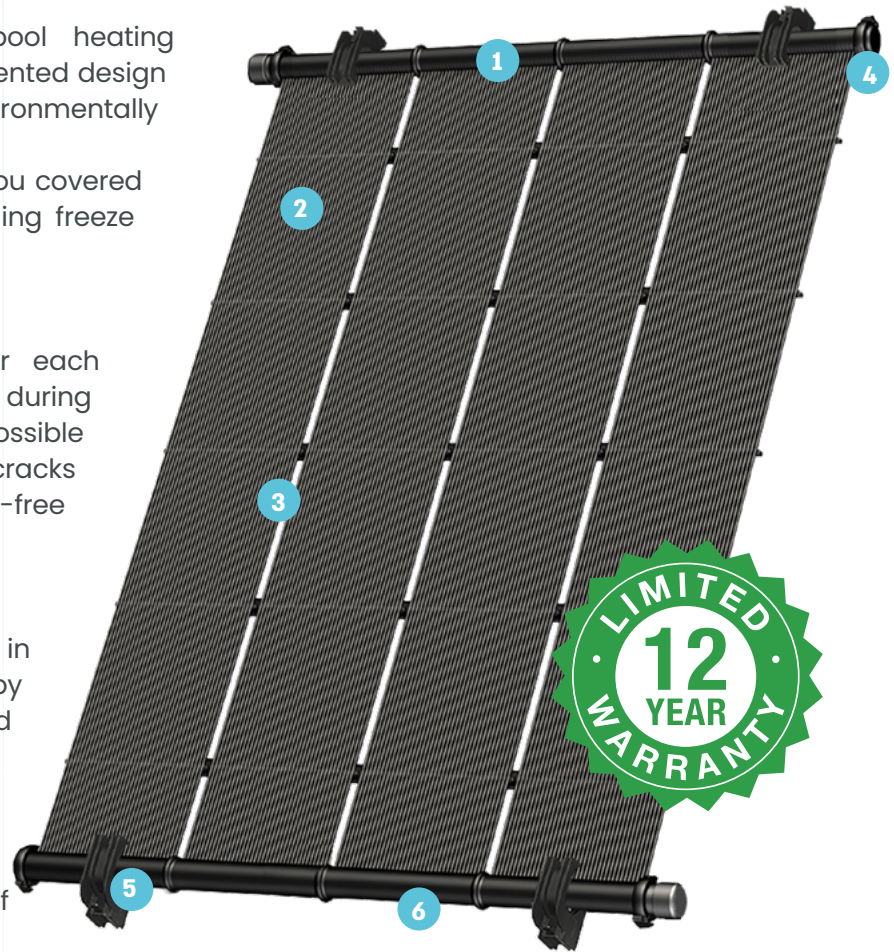
Open design resists lift and stays put even in high winds. Protects the roof from rain rot by allowing rapid moisture evaporation. Round tubes capture more heat.

3. Mounting Sleds

Sleds maintain alignment of individual riser tubes. Prevent abrasion to panel and roof when expanding and contracting.

4. Panel Clamps

Patented panel clamps eliminate rubber hoses and metal clamps that require regular rooftop maintenance and replacement, eliminating hassles and saving time and money. Clamps also allow panels to be mounted closer together for a more efficient and more attractive system.



5. Gator Clamps

Strapless mounting allows for expansion and contraction and fewer roof penetrations.

6. Open Flow Design

Each and every individual tube opens into the header, increasing flow and virtually eliminating backpressure, saving wear and tear on pool pumps.

Longer Lifetime

The lifetime of your Heliocol system doubles the average of gas and electric heating options.

GAS	5 years
ELECTRIC	10 years
HELIOCOL	20+ years

Costs of Operation

Heating your pool with gas or electricity adds up fast—but with Heliocol solar, your only extra cost is the low power needed to run the pool pump.

Heliocol (Pool Pump) May increase your electric bill by \$30 to \$40 per year.**	Electric Heat Pump Annual Average of Heating Expenses** \$840
	Gas Heat Pump Annual Average of Heating Expenses** \$1,704

**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

Collector Data

Collector Model	HC-50	HC-40	HC-38	HC-30
Size, Nominal	4' x 12.5'	4' x 10.5'	4' x 9.5'	4' x 8'
Width	46.56"	46.56"	46.56"	46.56"
Length	151.44"	127.00"	114.84"	91.00"
Aperture Area	48.23 sq ft	40.68 sq ft	36.68 sq ft	29.15 sq ft
Manifold Diameter	2"	2"	2"	2"
Dry Weight	22 lbs	19 lbs	18 lbs	15 lbs
Volume Capacity	3.7 gal	3.1 gal	2.8 gal	2.4 gal
Working Pressure	90 psi	90 psi	90 psi	90 psi
Burst Pressure	270 psi	270 psi	270 psi	270 psi
Typical Flow	5 - 7 gpm	4 - 6 gpm	3.8 - 5.5 gpm	3 - 4.4 gpm

Certification Data

Certifying Organization	HC-50	HC-40	HC-38	HC-30	Performance Expectations
National Standard SRCC Equivalent of 948 BTU/sq ft	48,230	40,680	36,680	29,150	$\eta = (0.909)(1 - 0.0206u)$ $(2.1084 + 1.1254u)(P/G)$
Florida Standard	956 BTU's/ft ²				$0.828 - 3.26 (T_i - T_a) / I$ $K_A X = 1.00 - 0.11(S)$

HC-50

Solar Insolation

Category T (°F)		2,000 BTU/ft²	1,500 BTU/ft²	1,000 BTU/ft²
Water Temp. Minus Air Temp.	A (-9)	101.28	77.17	57.88
	B (+9)	48.23	28.94	9.65
	C (+36)	4.82	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

HC-40

Solar Insolation

Category T (°F)		2,000 BTU/ft²	1,500 BTU/ft²	1,000 BTU/ft²
Water Temp. Minus Air Temp.	A (-9)	85.43	65.09	48.82
	B (+9)	40.68	24.41	8.14
	C (+36)	4.07	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

HC-38

Solar Insolation

Category T (°F)		2,000 BTU/ft²	1,500 BTU/ft²	1,000 BTU/ft²
Water Temp. Minus Air Temp.	A (-9)	77.03	58.69	44.02
	B (+9)	36.68	22.01	7.34
	C (+36)	3.67	0	0
	D (+90)	0	0	0

Thousands of BTU's per day per panel

HC-30

Solar Insolation

Category T (°F)		2,000 BTU/ft²	1,500 BTU/ft²	1,000 BTU/ft²
Water Temp. Minus Air Temp.	A (-9)	61.22	46.64	34.98
	B (+9)	29.15	17.49	5.83
	C (+36)	2.92	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

