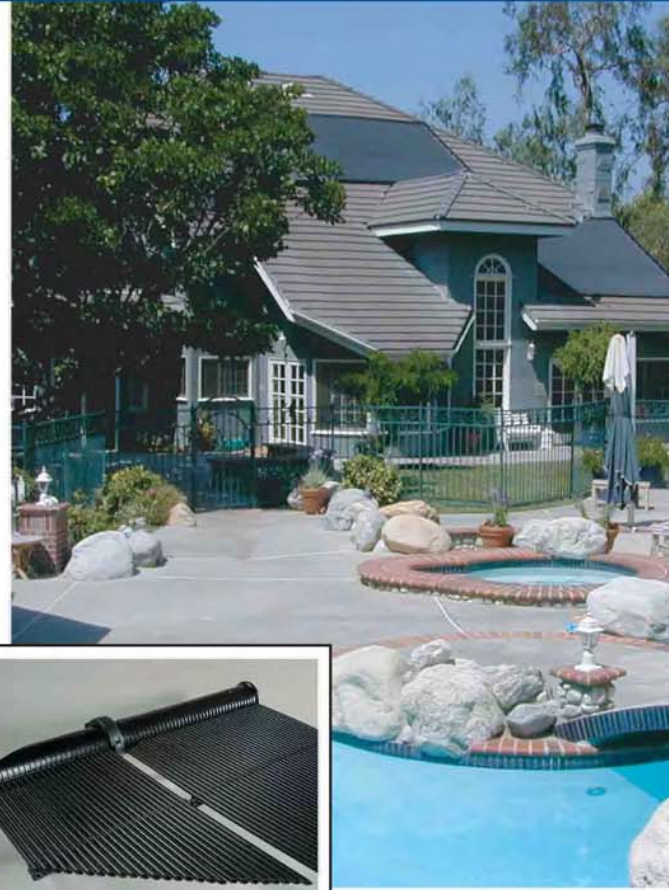


TECHNICAL INFORMATION & SPECIFICATIONS

The HELIOLCOL Solar Collector is the most advanced pool heating panel on the market today. In continuous production since 1977 by the world's largest solar pool collector manufacturer, HELIOLCOL has a proven track record of durability, performance and design excellence.

Heliocol's Unique Technical Features

- Patented Individual Tube Design allows for expansion and contraction, eliminating cracks and leaks
- One-piece "over molded" construction eliminates welds
- No moisture build-up under collectors
- Innovative mounting hardware eliminates need for radiator hoses, metal clamps and multiple straps across the collectors
- Designed to withstand Hurricane force winds
- Low collector head loss rate reduces pump requirements



Heliocol was chosen to heat the swimming pool facilities for the Summer Olympic Games in 1996 Atlanta and 2004 Athens!

Certification Data

- ISO 9002 and ISO 9001:2000
- Ortech International Laboratories
- Solar Rating & Certification Corporation (SRCC)
- Solar Energy Analysis Laboratory (SEAL)
- DSET Laboratories, Inc.
- HRS, Florida (Required for commercial use)
- Dade County, Florida
- Miami Testing Laboratory
- Florida Solar Energy Center (FSEC)
- City of Los Angeles #RR-4508
- British National Water Council (for potability)
- German Federal Health Board
- Israeli Technical Institute
- Standard Installation Corporation of Israel

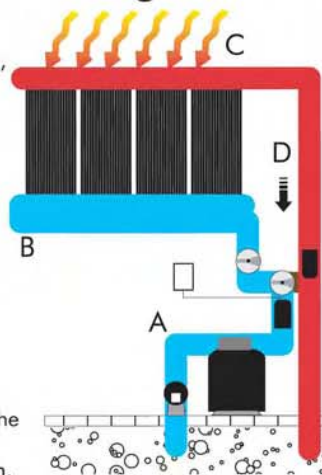
How Solar Pool Heating Works

A: Using your existing pool pump, pool water is directed through a series of valves to your solar collectors.

B: Pool water enters the solar collectors at the bottom and rises to the top through the individual tubes of the collector.

C: As the water rises through the collector it is heated by the sun's radiant energy.

D: The water is then returned to the pool to repeat the cycle until your pool has been warmed by the sun.



HELIOLCOL
SOLAR POOL HEATING. ENGINEERED FOR LIFE.

What ISO Certification Means to You

Established in 1947, the International Organization for Standardization (ISO) is a worldwide federation of national standards bodies representing over 130 countries.

ISO9002 Certified is a standard granted only to companies performing at the highest levels in their industries. Heliocol is the first and only solar pool collector in the world to achieve ISO9002 Certified status, a result of more than two years of measuring Heliocol's customer service, product failure rate, and engineering processes.

Heliocol has additionally been awarded certification for ISO9001-2000, which goes beyond measuring product quality and the manufacturing process to the overall management, sales and marketing, and business operations of the company. ISO9001-2000 Certification is recognized as the highest achievable industry standard on earth today.

FULL TWELVE (12) YEAR WARRANTY PLUS LIFETIME LIMITED WARRANTY (WITH FREEZE PROTECTION)

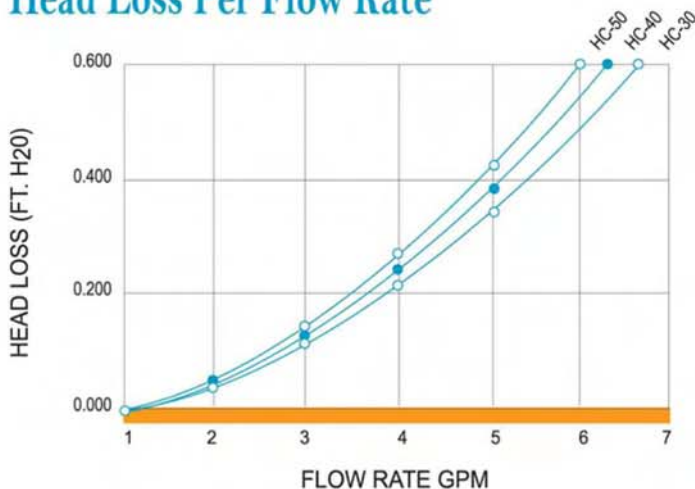
Performance Ratings

Certifying Organization	BTUs Per Day			Performance Equations
	HC-50	HC-40	HC-30	
Int'l Standard ORTECH	47,400	39,400	28,440	$.872 - 3.729 (T_i - T_A) / I$ $K_A X = 1.00 - .0316(S) - .0104(S)^2$
National Standard SRCC	47,400	39,400	28,440	$.872 - 3.729 (T_i - T_A) / I$ $K_A X = 1.00 - .0316(S) - .0104(S)^2$
Florida Standard	956 BTU's/ft ²	956 BTU's/ft ²	956 BTU's/ft ²	$.828 - 3.26 (T_i - T_A) / I$ $K_A X = 1.00 - .11(S)$

Collector Data

Collector Model	HC-50	HC-40	HC-30	HC-12.5	HC-10
Size, Nominal	4' x 12.5'	4' x 10.5'	4' x 8'	1' x 12.5'	1' x 10.5'
Width	47" 120 cm	47" 120 cm	47" 120 cm	11.75"	11.75"
Length	152.1" 380 cm	127" 323 cm	91" 231 cm	151.5"	127"
Area (sq. ft.)	50.0 4.65 m ²	41.6 3.88 m ²	30.0 2.77 m ²	12.2	10.2
Manifold Diameter	2" 5.08 cm	2" 5.08 cm	2" 5.08 cm	2"	2"
Weight, Dry	22 lbs. 10 kg	19 lbs. 8.5 kg	15 lbs. 6.8 kg	5.5 lbs.	4.75 lbs.
Volume Capacity	3.7 gal. 14 L	3.1 gal. 12 L	2.4 gal. 9 L	.93 gal.	.78 gal.
Working Pressure	90 PSI	90 PSI	90 PSI	90 PSI	90 PSI
Burst Pressure	270 PSI	270 PSI	270 PSI	270 PSI	270 PSI
Recommended Flow	5 GPM	4 GPM	3 GPM	1.25 GPM	1 GPM

Head Loss Per Flow Rate



Heliocol HC-50

Collector Rating Numbers

Thousands of BTU's per day per panel

Category ΔT (°F)	Solar Insolation			
	2,000 BTU/ft ²	1,500 BTU/ft ²	1,000 BTU/ft ²	
Water Temp.	A (-9)	98.74	78.07	57.49
	B (+9)	64.13	44.01	23.96
Minus	C (+36)	22.91	7.64	0
Air Temp.	D (+90)	0	0	0
	E (+144)	0	0	0