

2012 Solar Pool Heating System Comparison

	Heliocol HC-50	Aquatherm Ecosun	FAFCO Sun saver	Hi-Tec HT408	Techno-Solis Swimmaster	Suntrek
Warranty						
Panels	12 years	10 years	12 years	12 Years	10 years	15 years
Parts	12 years	Not covered	Not covered	Not Covered	Not covered	Not covered
Labor	12 years	10 years	Not covered	12 Years	Not covered	Not covered

Heliocol offers the best warranty overall as it is the only manufacturer to cover not only the panels, but parts and labor, as well.

Warranty information for each brand obtained in Jan. 2012 from the following websites: www.heliocol.com, www.solarindustries.com, www.fafcosolar.com, www.hi-techsolar.com, www.techno-solis.com and www.suntreksolar.com

Energy Production						
Btu Per Square Foot Per Day	2,020	1,760	1,870	1,540	1,850	1,470
Total Btu for 400 Square Foot System	808,000	704,000	748,000	616,000	740,000	588,000

Heliocol produces more energy per square foot.

Performance ratings provided in Jan. 2012 by the Solar Rating & Certification Corporation (SRCC) for thousands of Btu per square foot per day in category A (pool heating, warm climate) on a clear day. Heliocol, Aquatherm, FAFCO and Techno-Solis tested per ASHRAE96. Hi-Tec and Suntrek tested per ISO 9806-3.

Performance						
Working Pressure	90 psi	35 psi	30 psi	27 psi	25 psi	40 psi
Burst Pressure	270 psi	85 psi	45 psi	27 psi	35 psi	40 psi
Pressure Drop Per Foot	0.42	1.60	3.50	0.32	0.43	1.00

Heliocol's patented overmolding and individual tube design allows significantly higher working pressure and burst pressure, making it the most suitable solar pool heating system for swimming pools already operating at high pressure ranges.

Pressure performance based upon figures obtained in Jan. 2012 from specification sheets and the following brand websites: www.heliocol.com, www.solarindustries.com, www.fafcosolar.com, www.hi-techsolar.com, www.techno-solis.com and www.suntreksolar.com. Working pressure based upon standard flow rate of 5 gpm. Maximum pressure calculated at 80°F. Pressure drop calculated using the following standard formula: $2.31ft = 1\text{ psi}$ to convert.

Aesthetics						
Colors Available	Black Gray Terracotta	Black	Black	Black	Black	Black
Seamless Panel Design	Yes. Patented panel clamps allow panels to be installed closer together, providing more energy on available roof space.	No. Gaps between panels reduce overall system efficiency by reducing the amount of panel coverage on available roof space.	No. Gaps between panels reduce overall system efficiency by reducing the amount of panel coverage on available roof space.	No. Gaps between panels reduce overall system efficiency by reducing the amount of panel coverage on available roof space.	No. Gaps between panels reduce overall system efficiency by reducing the amount of panel coverage on available roof space.	No. Gaps between panels reduce overall system efficiency by reducing the amount of panel coverage on available roof space.

With three color choices to match different roof styles, and gapless connections between panels, Heliocol is more aesthetically pleasing and blends with ease into the existing architecture. In addition, the seamless design is one of the many factors behind Heliocol's top-rated performance.

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Roof Protection						
Individual Tube Design	Yes. Allows expansion and contraction, eliminates cracks and leaks, lets roof breathe, and keeps it clean and dry.	No. Monolithic design decreases wind resistance, can crack and leak due to thermal expansion and traps roof moisture.	No. Monolithic design decreases wind resistance, can crack and leak due to thermal expansion and traps roof moisture.	No. Monolithic design decreases wind resistance, can crack and leak due to thermal expansion and traps roof moisture.	No. Monolithic design decreases wind resistance, can crack and leak due to thermal expansion and traps roof moisture.	No. Monolithic design decreases wind resistance, can crack and leak due to thermal expansion and traps roof moisture.
Strapless Installation	Yes. Patented, strapless mounting system.	No. Straps are required to secure the panel to the roof.	No. Straps are required to secure the panel to the roof.	No. Straps are required to secure the panel to the roof.	No. Straps are required to secure the panel to the roof.	No. Straps and glue required to secure the panel to roof.
Minimizes Roof Penetrations	Yes. Strapless mounting significantly minimizes roof penetrations.	No. Strap installation requires a significant number of roof penetrations.	No. Strap installation requires a significant number of roof penetrations.	No. Strap installation requires a significant number of roof penetrations.	No. Strap installation requires a significant number of roof penetrations.	No. Strap installation requires a significant number of roof penetrations.
Wind Resistant	Yes. Individual tube design prevents "lift", increasing wind resistance.	No. Monolithic design lifts like a sail or wing in high winds.	No. Monolithic design lifts like a sail or wing in high winds.	No. Monolithic design lifts like a sail or wing in high winds.	No. Monolithic design lifts like a sail or wing in high winds.	No. Monolithic design lifts like a sail or wing in high winds.
Prevent Moisture Build-Up on Roof	Yes. Open design allows proper evaporation of rain, making it the best panel for flat roofs.	No. Monolithic design prevents rapid moisture evaporation, causing potential roof rot over time.	No. Monolithic design prevents rapid moisture evaporation, causing potential roof rot over time.	No. Monolithic design prevents rapid moisture evaporation, causing potential roof rot over time.	No. Monolithic design prevents rapid moisture evaporation, causing potential roof rot over time.	No. Monolithic design prevents rapid moisture evaporation, causing potential roof rot over time.

Heliocol is the only solar pool heating panel that actually protects the roof. Because the individual tube design significantly reduces wind load, Heliocol can be installed with no straps and fewer roof penetrations. In addition, Heliocol's open design prevents moisture build up on the roof .

Installation and mounting information for each brand obtained in Jan. 2012 from the following websites: www.heliocol.com, www.solarindustries.com, www.fafcosolar.com, www.hi-tecsolar.com, www.techno-solis.com and www.suntreksolar.com

Connections						
Panel Connection	Plastic panel clamps, which never rust or leak. Clamps expand and contract with temperature changes, maintaining a sealed connection.	Radiator-type hoses (which can deteriorate over time, leaving stains on your roof) and metal clamps which require periodic service to tighten against leakage.	Radiator-type hoses (which can deteriorate over time, leaving stains on your roof) and metal clamps which require periodic service to tighten against leakage.	Radiator-type hoses (which can deteriorate over time, leaving stains on your roof) and metal clamps which require periodic service to tighten against leakage.	Radiator-type hoses (which can deteriorate over time, leaving stains on your roof) and metal clamps which require periodic service to tighten against leakage.	Radiator-type hoses (which can deteriorate over time, leaving stains on your roof) and metal clamps which require periodic service to tighten against leakage.
Roof Connection	Gator clamps which reduce roof penetrations, allow for natural expansion and contraction of the panels and are designed to mount to roof trusses only for a more secure connection.	Anchor straps, which require more roof penetrations, can also damage panels and roof surface over time as they do not allow for thermal expansion. Not all connections are on trusses, requiring chip board reinforcements in attic.	Anchor straps, which require more roof penetrations, can also damage panels and roof surface over time as they do not allow for thermal expansion. Not all connections are on trusses, requiring chip board reinforcements in attic.	Anchor straps, which require more roof penetrations, can also damage panels and roof surface over time as they do not allow for thermal expansion. Not all connections are on trusses, requiring chip board reinforcements in attic.	Anchor straps, which require more roof penetrations, can also damage panels and roof surface over time as they do not allow for thermal expansion. Not all connections are on trusses, requiring chip board reinforcements in attic.	Cut pieces of panel to mount to roof, along with anchor straps, which require more roof penetrations. Panels can buckle and degrade the roof over time due to thermal expansion. Not all connections are on trusses, requiring chip board reinforcements in attic.
Maintenance-Free	Yes, with no hoses and no metal clamps, the system is truly maintenance-free.	Regular roof-top system maintenance required to tighten each clamp and check each hose connection.	Regular roof-top system maintenance required to tighten each clamp and check each hose connection.	Regular roof-top system maintenance required to tighten each clamp and check each hose connection.	Regular roof-top system maintenance required to tighten each clamp and check each hose connection.	Regular roof-top system maintenance required to tighten each clamp and check each hose connection.

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Safety Certifications						
ISO 9001 for Quality Management	1999	2011	No	No	No	No
ISO 14001 for Environmental Protection	2008	No	No	No	No	No
NSF 50 for Safety and Reliability for Pool, Spa and Recreational Water Facility Use	2011	2011	No	No	No	No
NSF 61 (Raw Materials) for Safety in Drinking Water Components	2009	No	No	No	No	No
SRCC OG-100 for Safety, Durability and Performance of Solar Collectors	Yes	Yes	Yes	Yes	Yes	Yes

Heliocol sets the bar for reliability and consumer safety with more certifications than any competitor.

ISO 9001 is the benchmark for quality management and ISO 14001 is the global standard for environmental protection, both issued by the International Organization for Standardization. NSF-50 certifies standards for products used in public pools, spas and recreational water facilities and NSF-61 addresses contaminant levels in drinking water components; both are issued by the National Sanitation Foundation. Heliocol is manufactured using NSF-61 certified raw materials. SRCC OG-100 certification applies to solar collectors and is issued by the Solar Rating & Certification Corporation. Certification information obtained Jan. 2012 from the following websites: www.iso.org, www.nsf.org and www.solar-rating.org.