

Solar Pool Heating with Gobi Collectors







Closed-loop Design with Heat Exchanger

The universal system for all climates

This versatile design can be installed in any location and for any pool, and because the Gobi is boxed, insulated, solar glass covered and has a high performance absorber, it is able to collect solar radiation yearround and is therefore an optimal solution in many situations:

- In all windy and cool areas;
- Where a truly extended season is desired;
- For indoor pools that have no direct sun gain and require more heat;
- Where attractive skylight appearance is desired;
- In all areas with freezing temperatures;
- For yearround pool heating;
- In all large systems with multiple banks of collectors, where air locks and uneven flow are a problem;
- When collectors are installed on a multi-story building and daily fill requires too much lift and horsepower;
- When the collectors are installed at ground level or below the pool and gravity draining into the pool is not feasible;
- Where pool maintenance is a problem;
- To achieve dual purpose heating, such as pool heating in summer and home heating in winter with the addition of a heat exchanger.

Advantages:

-  Flexible layout and design, collectors above or below the pool, multi-story, piping over ridges and other high points;
-  Freeze and boiling protection without draining;
-  Protection of collectors from harmful pool chemicals;
-  Freedom from air and flow problems from daily filling and draining.
-  Longer lasting solar heating system
-  Multi-use of the collector area with more heat exchangers

Recommended Heat Transfer Fluid:

High-temperature inhibited propylene glycol, such as Heliodyne Dyn-0-Flo HD.
Use 40 to 60 % glycol mixed with water for fluid stability.

Description: The solar collector loop is filled with the glycol/water mix in a closed-loop design. A heat exchanger of cupronickel construction transfers heat from collectors to pool in an efficient counterflow pattern. A differential control starts the collector loop pump to circulate the glycol/water mix through the heat exchanger. The pool pump is set to operate during solar hours to remove the heat from the heat exchanger into the pool.

Additional equipment assures the safe operation of the system: an expansion tank allows the fluid to expand as it heats up during operation or stagnation. A pressure relief valve is an essential safety, a pressure gauge assures filling to recommended pressure and is a useful diagnostic tool. A hose bib for filling the system, an air vent to allow air to escape during filling. It is tightened down after filling.

It is important that expansion tank and pressure relief valve are 150 psi rated to avoid boilout of the collector fluid when stagnating. Do not install a temperature and pressure relief valve on the collector loop.



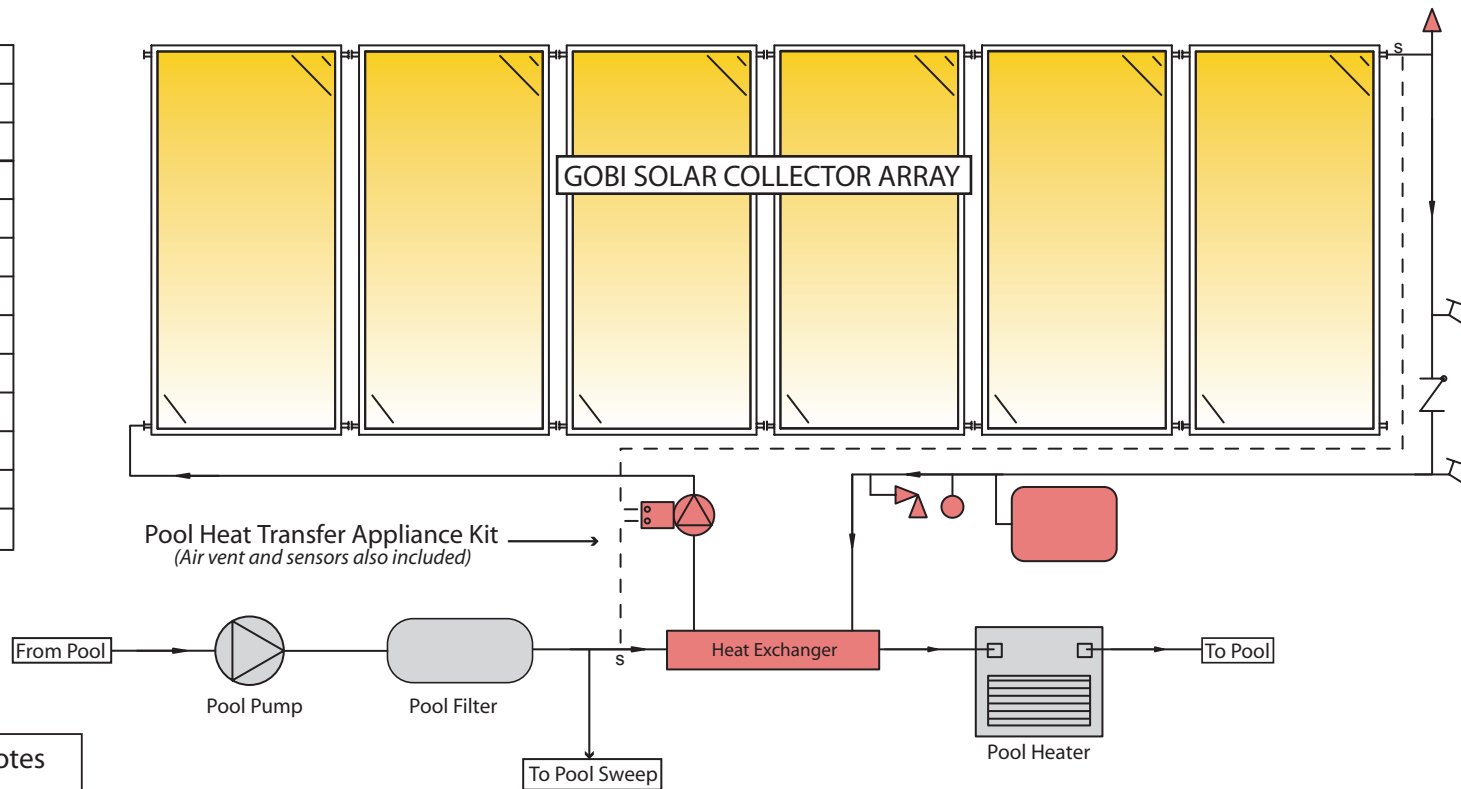
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Solar Pool Heating

Closed Loop Glycol with Heat Exchanger

SYMBOL	DESCRIPTION
	PIPE
	AIR VENT
	CHECK VALVE
	POOL CONTROLLER
	DRAIN VALVE
	DYN-O-SEAL UNION
	EXPANSION TANK
	HELIO-PAK SERIES PUMP
	PRESSURE GAUGE
	PRESSURE RELIEF VALVE
	SENSOR
	TEMPERATURE GAUGE



Large Pool Array Notes

- 8 Gobi Max per Array
- Max 7 ft/s pipe fluid velocity
- Use only Dyn-O-Flo HD high temperature glycol with inhibitors or similar product
- Use min 30% DOF HD / H₂O mixture
- Adhere to all HELIODYNE installation manuals and guidelines

Versatile design for seasonal or year-round operation. Protects solar collectors from freezing and corrosive pool chemicals, keeps fluid passages clean and efficiency high. Optimal applications: large pools, indoor pools, cold climates, where pool maintenance is a problem. Also ideal when collectors are to be installed on a multistory structure, on the ground, or below the pool. Best in all situations where gravity draining is difficult to achieve due to collector placement or a large number of collectors. Best results with high efficiency Gobi Solar Collectors.

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