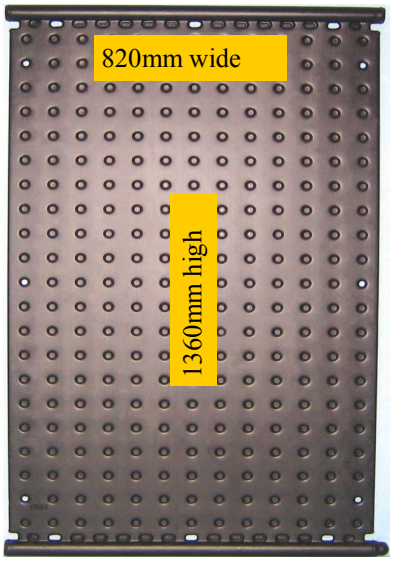
alpha energy
earth friendly solar solutions



1.12m^2 surface area

- Low pressure drop - approx.0.003 bar at 200 l/h/m$_2$
- Flow rate150 to 250 l/m$_2$/h
- Molded in one piece - homogeneous black polyethylene pl
- Weight approx. 6 kg/m$_2$ - water content 6 l/m$_2$
- Testing pressure 4.5 bar at NT
- Working pressure up to 1.2 bar - 40°
- Efficiency up to approx. 80% - power up to 0.8 kWh/m$_2$
- Average value 0.5 to 0.6 kWh/m$_2$
- Operation often possible with existing filter pump
- Non-corroding – resistant to swimming-pool water
- Pool water pumped direct through absorber
- Idling-proof
- Temperature-resistant from -50 to + 115°C
- Full - area through - flow - frost - resistant - supports human weight

The regionally different number of sunshine hours can be allowed for by adding or deducting up to 20% absorber area.

Pump performance

The flow rate should be 150 to 250 l/m$_2$ absorber area per hour. The required type of pump is easy to determine. The delivery rate is calculated from the absorber area x 200 l. The delivery head is the difference in height between the water level and the absorber panel plus approx. 5 m.

Alpha Solar recommends the
HIFLO STP50
Solar pool pump for all Alpha OKU solar pool installations

UV proof silicone rubber panel joiner
NOTE : 2 Joiners per panel

The ANASOL temperature differential pool controller, will turn your pump on to push hot solar heated water into your swimming pool, then turn off again to give your solar panels time to reheat to start the process again

The problem is familiar.

1. An outdoor swimming pool that is not heated is only really comfortably warm for three or four weeks at the height of summer - very little when you think of all the investment and maintenance you put into it.
2. An indoor swimming pool has to be heated all the year round, even in the middle of summer.
3. Heating a swimming pool using conventional means of energy can be a costly business and is also a load on the environment.
4. The heating of swimming pools is an ideal application for solar energy because not very high temperatures are needed, but large quantities of water have to be heated, so it makes sense to operate such an installation with a large flow rate at a relatively low temperature level.
5. In that way your Alpha Eco swimming-pool solar heating produces optimum efficiency.

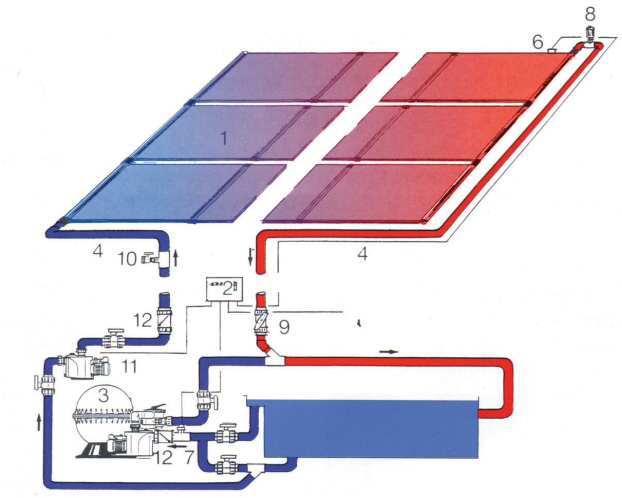
Enjoy a well-tempered swimming pool with an Alpha Eco solar heating system , its an attractive investment for an inexhaustible source of free energy.
You will sleep well knowing of your contribution to protection of the environment as well as having a warm and tepid swimming pool to enjoy

The water of the swimming pool can flow through the Alpha OKU solar pool absorbers in either direction, so they can be mounted both lengthwise and side by side.
The individual rows of absorbers are connected on a Tichelmann principle (same routes for each row). It is not advisable to connect more than thirty 1002 Alpha OKU absorbers in series.

DESIGN

Recommended absorber area in % of pool surface for open-air pools with cover or indoor swimming pools (early October through end of March)Temperature increase 6-10 °C compared to unheated swimming pools

Angle of inclination	Direction of inclination				
	E	NE	N	NW	W
	%	%	%	%	%
@ 90° the solar array required v surface area of the pool =	90	80	70	75	85
@ 60° the solar array required v surface area of the pool =	80	65	55	60	70
@ 45° the solar array required v surface area of the pool =	70	60	50	55	65
@ 30° the solar array required v surface area of the pool =	60	55	45	50	55
@ 15° the solar array required v surface area of the pool =	55	50	50	50	55
@ 0° the solar array required v surface area of the pool =	50	50	50	50	50



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The above PIC is the recommended installation method with own pump and separate solar pump controlled by Solar water heating controller integrated into the existing filtration circuit

In many cases it may be sensible or even necessary to install a separate pump for the solar heating , for example when the delivery head from the water level to the absorber panel is more than 6 m. the water is diverted from the filtration system installation by way of a Tee and pumped through the absorbers by the auxiliary pump.
This pump is switched by the difference- temperature regulation to ensure that it only runs to actually win energy.
The filtration and solar pump are separately regulated.
It is usually advisable to integrate non-return valves in both the solar and the filter circuit.