OKU® Solar Heating – Let the sun do the work!

New generation new Design

OKU® – solar heating of swimming-pools

The problem is all too familiar. An outdoor, unheated swimming pool, will reach its ideal bathing temperature for only three or four weeks in the height of summer. That is a very short time, when you think of the investment and maintenance you put into it.

An indoor swimming pool has to be heated all year round, even in the middle of summer. Heating a swimming pool using conventional means of energy can be costly and is also a load on the environment. That is why solar energy is

the best solution. OKU®-solar-panels are especially designed for this application. This is what OKU®-solar heating provides: maximum efficiency and the right temperature for your swimming-pool.

Enjoy a warm and comfortable pool temperature with OKU®-solar heating. It is a rewarding investment that is powered by the suns free energy and it is your contribution to protecting the environment.
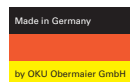
Item no. 1000
- integrated collecting pipe dia. 40 mm
- two couplings dia. 25mm
- length 1320 mm
- width 820 mm
- 1.08 m²

Made in Germany
by OKU Obermaier GmbH
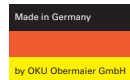
Item no. 1001
- with four couplings dia. 25 mm
- length 1280 mm
- width 820 mm
- 1.05 m²

Made in Germany
by OKU Obermaier GmbH

Item no. 1002
- with 2 integrated collecting pipe dia. 40 mm
- length 1360 mm
- width 820 mm
- 1.12 m²

Made in Germany
by OKU Obermaier GmbH

OKU®-solar-panels, made of high density polyethylene, offer the right foundation for operating such installations.

| OKU-solar-panel	
Low pressure drop	approx. 0.003 bar at 200 l/h/m²
Flow rate	150 to 250 l/m²/h
Weight	approx. 5.8 kg/m² water volume approx. 5.8 l/m²
Testing pressure	4.5 bar at NT
Working pressure	up to 1.2 bar up to 40°C
Bursting strength	> 18 bar restistant against negative pressure
Efficiency	up to 85 % – power up to 0.85 kWh/m²
Average value	0.5 to 0.6 kW/h/m²
Open-circuit proof	temperature-resistant from -50 to +115°C

The advantages:
- low pressure loss, high efficiency, non-corroding
- resistant to swimming pool water
- absolutely frost-proof, produced in one piece
- resistant to animal bite marks
- supports human weight
- simple to install – modular system
- reduced water content – faster reaction time
- optimized design - essential increased mechanical stability
- improved efficiency by optimized turbulent flow
- highest performance

FLORIDA SOLAR ENERGY CENTER®
A Research Institute of the University of Central Florida

Different configurations of OKU®-swimming-pool solar heating
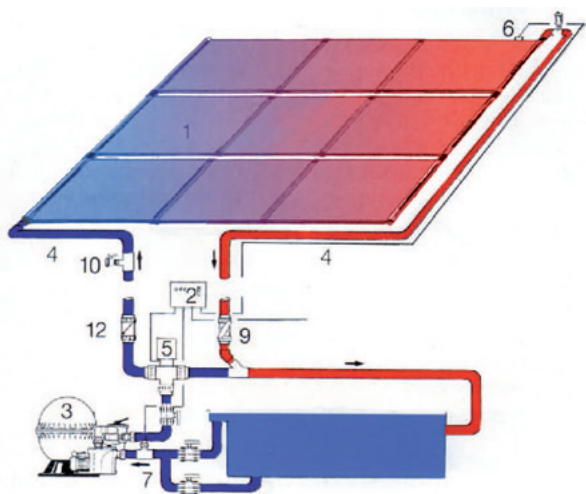
Operation with filter pump via three-way motor ball valve with difference-temperature regulation

This configuration can usually be selected if the panels are not to be set up higher than 6 m above the surface of the water. The three-way motor ball valve is integrated into the pressure line of the filter installation. Because of the difference-temperature regulation the ball valve is changed over when the panel temperature is higher than the temperature of the water of the swimming-pool. The filter stream is then pumped through the panels. The warmed water flows back into the filter circuit by way of a Tee.
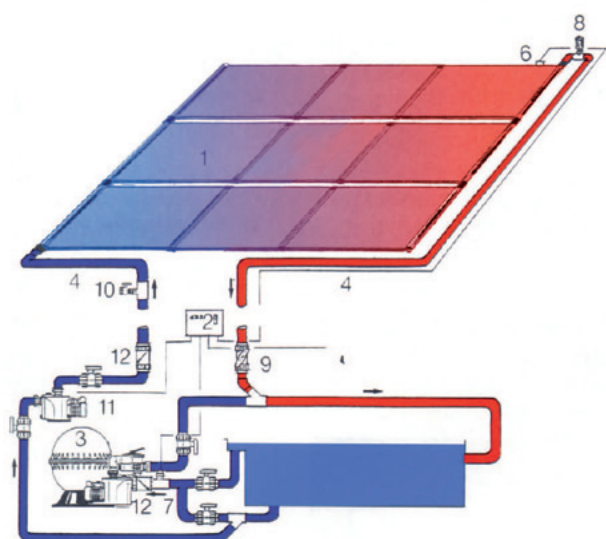
Operation with own pump and temperature difference regulator integrated into filter circuit

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 panel is more than 6 m. The water is diverted from the filter installation by way of a Tee and pumped through the panels by the auxiliary pump. This pump is switched by the difference-temperature regulation to ensure that it only runs to actually win energy. The filter and solar pump are separately regulated. It is usually advisable to integrate non-return valves in both the solar and the filter circuit.

The components

1   OKU®-panel
2   Difference-temperature regulator OKU® Suncontrol
3   Filter installation
4   Solar circuit forward and return
5   Three-way motor ball valve
6   Temperature sensor, panels

7   Temperature sensor, swimming-pool
8   Vent valve
9   Stop cock (downdraft brake)
10 Drain cock
11 Pump for solar circuit
12 Non-return valve