orkli

www.oksol.orkli.com

15 FACTS ABOUT OKSOL, THE ONLY ALL-IN-ONE, FORCED, AUTONOMOUS SOLAR SYSTEM ON THE MARKET

1 100% RENEWABLE

ORKLI Group is committed to developing sustainable, renewable energy solutions.

2 AUTONOMY

No external electrical connection needed, thanks to the embedded photovoltaic panel powering the pump.

3 SUSTAINABLE AND ZERO CO_2 EMISSIONS

No electricity used, plus no water wastage.

OKSOL contributes to the 2020 European targets

- 20% increase in the use of renewable energies
- 20% reduction in primary energy consumption
- 20% reduction in greenhouse gas emissions

ZERO emissions & beyond

4 EASY TO INSTALL

Easy to fit, no hydraulic or electronic regulation required; simply connect to the water inlet and outlet.

5 EASY TO MAINTAIN

Four easy access points for fast and simple maintenance of key elements of the systems.

6 ENERGY EFFICIENCY

The pump efficiently modulates its speed based on solar radiation intensity. Minimized losses due to optimized pipping.

7 PERFORMANCE & RELIABILITY

Not subject to potential power outage nor human error (because of fully integrated design, no handling by inexperienced people).

8 FUNCTIONAL & ATTRACTIVE DESIGN

All-in-one, functional, robust design with high performance materials. Attractive design to match building style, including roof-integrated system or flat or sloped roof mounting options.

9 DURABILITY & HIGH RESISTANCE

No overheat in primary system thanks to an integrated heatsink. Shock-proofed material. Long life cycle.

10 WARRANTY

Three years.

11 CERTIFICATION & COMMITTED QUALITY

Keymark 011-7S1479A. Performance/quality test of 100% OKSOL in solar radiation chamber.

12 LOWER TCO (TOTAL COST OF OWNERSHIP)

Reduced capital costs

- Shorter installation time due to ease of installation
- Fewer components

Reduced operating costs

- Shorter maintenance time due to ease of access
- Higher efficiency and durability …

13 SAVES SPACE AT HOME

The 150-liter capacity and corrosion-resistant internal tank saves valuable space inside the building.

14 ALL KIND OF BUILDINGS

Suited to every type of residential and commercial building thanks to improved energy performance, lower TCO and lower environmental impact.

Single-family housing · Housing blocks · Shopping centres · Schools · Museums · Offices · Industrial areas

15 MAXIMUM COMFORT

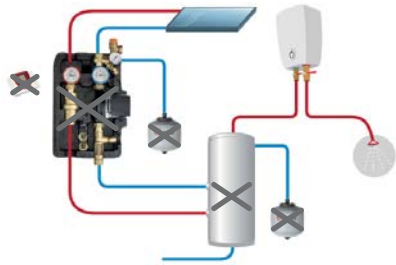
The patented thermal energy stratification system guarantees immediate availability of hot water for the user. No circulation pump noise in living areas.

OKSOL-150 : ALL-IN-ONE, FORCED, AUTONOMOUS SYSTEM, UP TO ~63%* REDUCTION IN INSTALLATION TIME

COMPONENTS TO INSTALL A SOLAR SYSTEM		COMPONENTS	DRAIN BACK	OKSOL
MATERIAL	Collector	●	●	●
	Hydraulic group	●	●	
	Tank	●	●	
	Solar tube	●	●	
	Secondary tube	●	●	●
ACCESSORIES	Structure 45°	●	●	●
	Expansion tank	●		
	Sanitary solar fluid	●	●	
	Drain valves	●		
ELECTRIC INSTALLATION	Electrical legalization	●	●	
	Material and labor	●	●	
INSTALLATION TIME		25.5 h.	15.5 h.	9.5 h.

** Figures are based on estimations by third party market experts and may depend on conditions and circumstances of the installation. Orkli does not accept responsibility nor liability for this information.*

TRADITIONAL SYSTEM



OKSOL SOLUTION

• TECHNICAL DATA

SOLAR ABSORBER

Type	PVD
Absorption surface	2.00 m²
Absorptivity	0.95
Emissivity	0.05
Capacity	4 litres
Max. operating pressure	3 bars

BASE INSULATION

Type	Expanded PU
Thickness	45 mm
Density	45 kg/m³
Conductivity	0.023 W/m²K

EXTERNAL DIMENSIONS

Total surface area	2.12 m²
Length	2,031 mm
Width	1,060 mm
Other data	290 mm

COVER

Type	Methacrylate PMMA
Thickness	3.5 mm
Transmittance	0.92
Max. admissible negative pressure	3,000 Pa

INSULATION BETWEEN TANK AND ABSORBER

Type	Rock wool
Thickness	25 mm
Density	70 kg/m³
Conductivity	0.036 W/m²K

STORAGE TANK

Type	PPSU
Capacity	150 litres
Max. service pressure	5 bars

OTHER DATA

Weight (including primary fluid)	95 kg
Warranty	3 years
Primary fluid content	7 litres

• COMPONENTS CHARACTERISTICS

CIRCULATION PUMP

Type	Magnetic, brushless
Flow rate	2.4 - 3 l/min*
Rated power	2.8 W
Voltage DC	12 V

**800-1000 W/m²*

PHOTOVOLTAIC PANEL

Type	Polycrystalline silicon
Rated power	3 W
Rated voltage	9 V

SAFETY VALVES

	Primary	Secondary
Max. service pressure	3 bars	5 bars
Max. operating temperature	-	90 °C
Max. temperature	160 °C	121 °C
Description	1/2" F-M	1/2" M-M

HEATSINK

Rated power	800 W (@ 70 °C)
Max. service pressure	6 bars

• SYSTEM OUTPUT INDICATORS

ANNUAL RESULTS

AREA	LITRES DRAWN DAILY (litres/day)											
	110 l/d	140 l/d	170 l/d	110 l/d	140 l/d	170 l/d	110 l/d	140 l/d	170 l/d	110 l/d	140 l/d	170 l/d
	Q_d kWh/y			Q_L kWh/y			f_{sol} %			Q_{par}		
Stockholm, SE	1,706	2,171	2,636	793	898	969	46.5	41.4	36.7	-	-	-
Würzburg, DE	1,635	2,082	2,528	811	943	1,033	49.6	45.3	40.9	-	-	-
Davos, CH	1,850	2,355	2,860	1,154	1,305	1,400	62.3	55.4	49.0	-	-	-
Athens, GR	1,271	1,617	1,964	1,011	1,200	1,355	79.6	74.2	69.0	-	-	-

Performance indicators: Qd (MJ/y; annual heat demand for DHW); QL (MJ/y; system output: annual heat energy delivered by solar system); fsol (%; QL/Qd; solar fraction); Qpar (MJ/y; annual parasitic energy: electricity for pumps/controllers)

CONDITIONS OF REFERENCE				STOCKHOLM, SE	WÜRZBURG, DE	DAVOS, CH	ATENAS, GR
	G	kWh/m²	Annual irradiation South	1,113	1,230	1,684	1,718
	Ta	°C	Annual mean air temperature	6.9	9.0	3.2	18.5
	Tc	°C	Annual mean cold water temperature	8.5	10.0	5.4	17.8
	ΔTc	°C	Seasonal variation of Tc	2.1 - 14.9	7.0 - 13.0	4.6 - 6.2	10.4 - 25.2

Th 45°C: desired (mixing valve) temperature

• SOLAR RANGE

Solar domestic water kit

Zone valves

Indirect exchange kit

Hydraulic groups

Drain unit

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