

Solar Heating System Factsheet

Sun Industries SKYRAYS



System model SKYRAYS
System type Thermosiphon system
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- Performance test EN12976:2006
- Quality test EN12976:2006

- Solar Keymark



System-Data

No. of collector modules/tubes 1/20
Gross collector array area 2.90 m²
Storage tank volume 165+54¹⁾ l
Design load¹⁾ 120 l/d

Types of collector mounting

- Construction for sloping roof
- Integration into sloping roof
- On flat roof with stand
- Facade

Gross dimension flat roof (D x W x H) 1830 mm x 1740 mm x 1910 mm
Gross dimension sloping roof (L x W) --

Collector

Model	SKYRAYS	Total width	1640 mm
Type	Evacuated tube collector	Gross area	2.903 m ²
Total length	1770 mm	Weight empty	80 kg

Storage tank

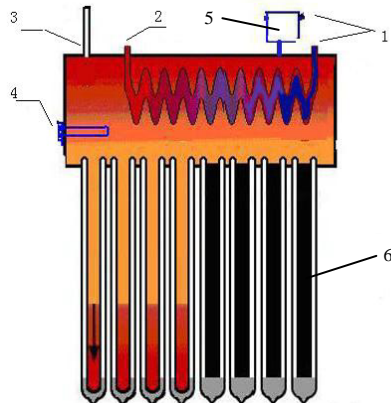
Model	SKYRAYS	Outside diameter	475 mm
Type	Horizontal; pressure less with immersed helix HE	Weight empty	30 kg
Insulation material	Polyurethane foam	Electrical heater	-- kW
Corrosion protection	Stainless steel	Max. operating pressure	Ambient pressure
Total length	1765 mm	Max. storage temperature	100 °C

Heat transfer medium solar loop

Manufacturer	--	Model name	--
Type	Water	Concentration/Freezing point	--
			No freeze protection

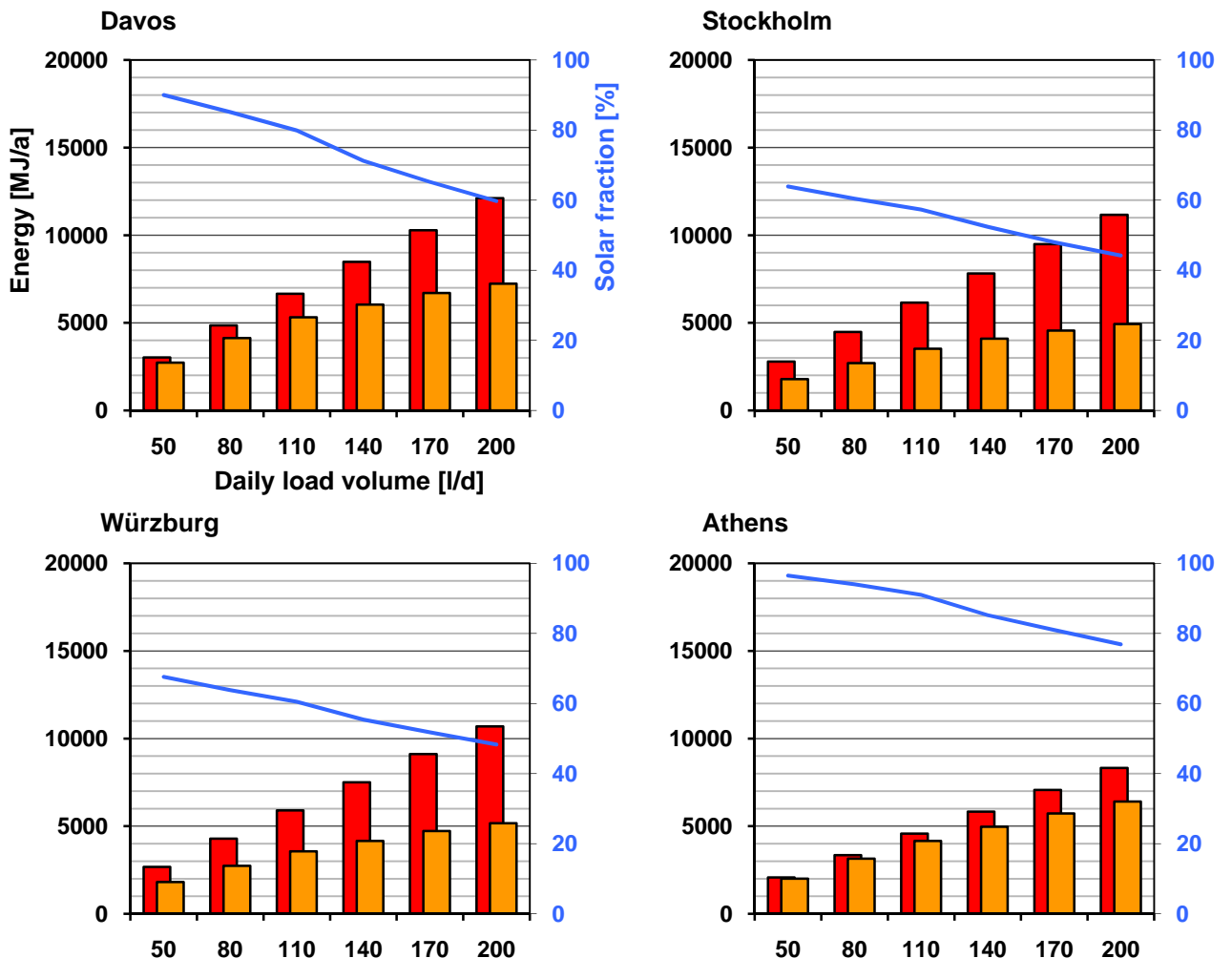
¹⁾ 165 l in the tank + 54 l in the tubes

Schematic of system



- 1: Cold water inlet
- 2: Hot water outlet
- 3: Vent
- 4: Electrical resistance heater (optional)
- 5: Assistant tank: feed-and-expansion
- 6: Evacuated tubes (natural convection)

Annual performance prediction and solar fraction for the EN locations^{*)}



Reference conditions according to EN 12976

- Collector alignment South, tilt angle 45°
- Hot water temperature 45°C
- Draw-off 6 h after solar noon; 100 %

Performance indicators

- f_{sol} : Solar fraction in % ($f_{sol} = Q_L/Q_d$)
- Q_L : Heat delivered by the solar system (load)
- Q_d : Heat demand

^{*)} The reference conditions for performance prediction in accordance with EN 12976:2006 is described in the accompanying document to the system factsheets.