

Solar Heating System Factsheet

Dalsun CN304



System model	Dalsun CN304
System type	Thermosiphon system
Manufacturer	Nicoll S.p.A.
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Date of test	11.2011

- Performance test EN12976:2006
- Quality test EN12976:2006

- Solar Keymark



System-Data

No. of collector modules/pipes	2
Gross collector area	4.19 m ²
Storage tank volume	282 l
Design load¹⁾	200 l/d

Types of collector mounting

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

Gross dimensions flat roof (D x W x H)

2100 mm x 2270 mm x 2050 mm

Gross dimensions sloping roof (L x W)

2650 mm x 2270 mm

Collector

Model	ARIS 2003	Total width	1031 mm
Type	Flat-plate collector	Gross area	2.1 m ²
Total length	2032 mm	Weight empty	40 kg

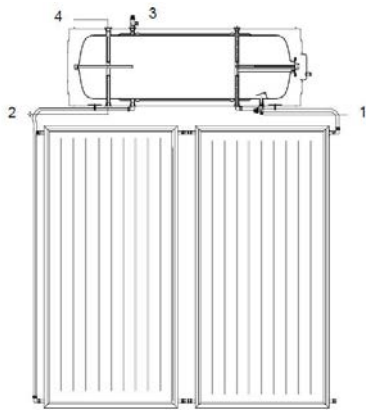
Storage tank

Model	Dalsun CN304	Outside diameter	580 mm
Type	Horizontal	Weight empty	106 kg
Insulation material	Polyurethane foam	Electrical heater	--
Corrosion protection	Enamelled, Mg sacrificial anode	Max. operating pressure	6 bar
Total length	1775 mm	Max. storage temperature	95 °C

Heat transfer medium solar loop

Manufacturer	Shell Chemicals	Model	MPG-Industrial
Type	Water-/Propyleneglycol mixture	Concentration/Freezing point	25% / -10°C

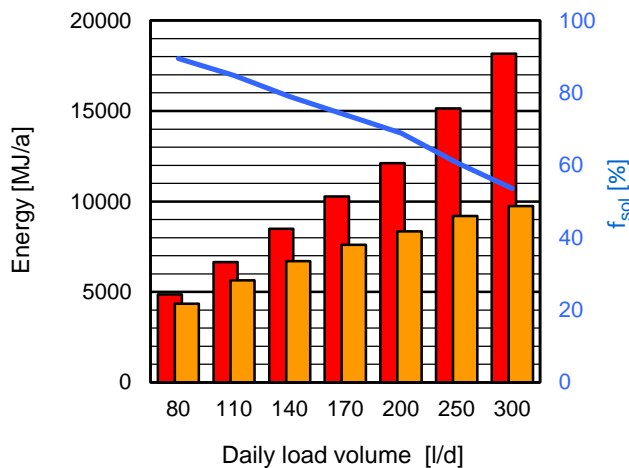
Schematic of system



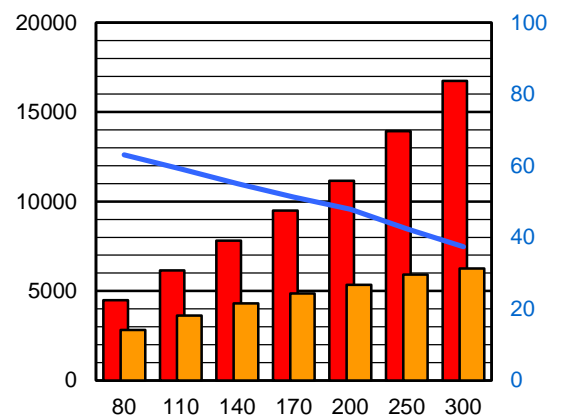
- 1 Cold water inlet
- 2 Hot water outlet
- 3 Pressure relief valve (3 bar)
- 4 Temperature and pressure relief valve (93 °C / 6 bar)

Annual performance prediction and solar fraction for the EN locations*

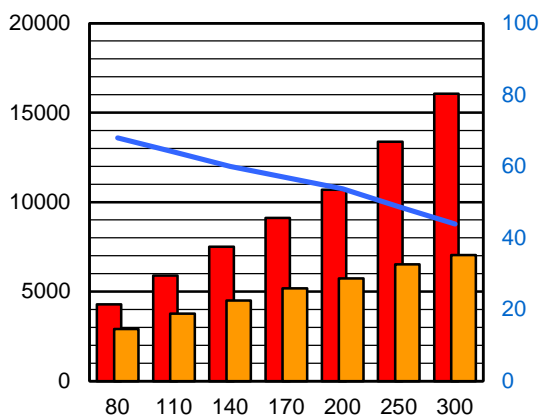
Davos



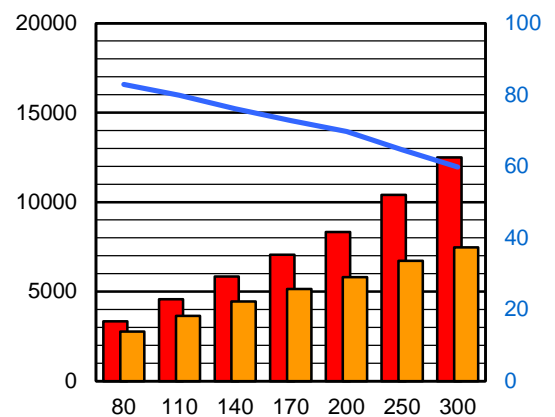
Stockholm



Würzburg



Athens



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 annual performance prediction in accordance with EN 12976:2006 are described in the **accompanying document to the system factsheets**.