

SOL 27 Premium Technical Specifications

Technical Data



Model	SOL 27 Premium S	SOL 27 Premium W
Item no.	230016	230017
Type	Vertical	Horizontal
Height	85.5" / 2171 mm	46.1" / 1171 mm
Width	46.1" / 1171 mm	85.5" / 2171 mm
Depth	3.8" / 96 mm	3.8" / 96 mm
Weight	88.2 lb / 40 kg	89.3 lb / 40.5 kg
Casing material	Aluminum, corrosion resistant	Aluminum, corrosion resistant
Glass cover	ESG	ESG
Glass thickness	0.125" / 3.2 mm	0.125" / 3.2 mm
Thermal insulation thickness	2" / 50 mm	2" / 50 mm
Thermal insulation material	Mineral wool, low outgassing, WLG 040	Mineral wool, low outgassing, WLG 040
Collector connection	22 mm plug-in connector	22 mm plug-in connector
Max. idle temperature	<410°F / <210°C	<410°F / <210°C
Min. operating pressure	50.75 psi / 0.35 MPa	50.75 psi / 0.35 MPa
Max. permissible pressure	87 psi / 0.6 MPa	87 psi / 0.6 MPa
Pressure drop at 300 l/h	0.51 psi / 0.0035 MPa	0.51 psi / 0.0035 MPa
Test pressure	247 psi / 1.7 MPa	247 psi / 1.7 MPa
Test medium	Water (at the factory)	Water (at the factory)
Heat transfer medium	DowFrost	DowFrost
Fill level, heat transfer medium	0.4 gal / 1.5 l	0.48 gal / 1.83 l
Nominal volume flow	13-80 gal/hr / 50-300 l/hr	13-80 gal/hr / 50-300 l/hr
Angle of inclination	20°-85°	20°-85°
Total area	27.34 ft² / 2.54 m²	27.34 ft² / 2.54 m²
Aperture area	25.73 ft² / 2.39 m²	25.73 ft² / 2.39 m²
Absorber area	25.62 ft² / 2.38 m²	25.62 ft² / 2.38 m²
Absorber	Aluminum, highly selective coating, copper pipes, laser welded	Aluminum, highly selective coating, copper pipes, laser welded
Gasket	EPDM	EPDM
Conversion factor η_0	0.82	0.83
Effective heat transfer coefficient a1	3.46 W / (m²K)	3.46 W / (m²K)
Effective heat transfer coefficient a2	0.0153 W / m²K²	0.0153 W / m²K²
Absorption level α	95%, $\pm 2\%$	95%, $\pm 2\%$
Emission level ϵ	5%, $\pm 1\%$	5%, $\pm 1\%$
Collector yield	>525 / kWh/(m² p.a.)	>525 / kWh/(m² p.a.)

Performance subject to global solar radiation levels, installation conditions, heat transfer medium temperature and system characteristics.