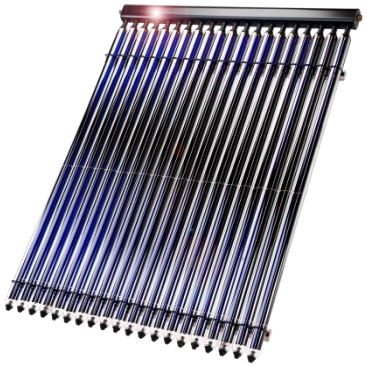
DIRECT FLOW VACUUM TUBE COLLECTOR SUN 401

Technical datasheet Nr 84

The direct flow vacuum tube collector SUN 401 offers an unequalled performance, flexibility and versatility of installation, adapting itself to the majority of the technical and architectural requirements.



Certified
SOLAR KEYMARK
Nr 011-7S2625 R

Certified CSTBat

• DESCRIPTION:

- Direct flow through a coaxial heat exchanger.
- Coated aluminium box.
- Copper absorber plate with highly selective coating (absorption 95%, emissivity 5%).
- 65mm glass tube with “plug and play” connection with double O-rings.
- Low-iron content soda lime glass has one of the highest transmission characteristics of any glass on the market today.
- One of the only vacuum tube collectors to have passed the optional Hail Impact Test which is covered under specification EN 12975.
- One of the best vacuum levels on the market, inferior to 1.10^{-6} mbar, that provides an excellent thermal insulation.
- One of the largest getter surface area with defined length, assuring a vacuum integrity for many years to come.
- Patented hermetically fused glass-to-metal seal with design life superior to 30 year.
- Fully automated European manufacturing process, improving production quality.
- High quality flexible stainless steel neck relieves stress on the glass to metal seal.
- 22mm “plug-ang-play” fittings with double O-rings.
- Mechanical load up to 1,5 tonne (SUN 501.30).
- The longest warranty period on the market today.

Installation options:

- Vertical (portrait) or horizontal (landscape) orientation of tubes.
- Recommanded inclination from 2° to 90°.
- Type of installation: flat, on tilted frame, on sloping roof, elevated, on wall.
- Flat tiles, corrugated tiles, roman-tiles, slates, steel roof, asbestos cement.

• TECHNICAL SPECIFICATIONS:

Designation	Unit	SUN 401.20	SUN 401.30
Reference		50070102196	50070102197
Number of tubes	-	20	30
Gross area	m²	2.77	4.15
Aperture area	m²	2.15	3.23
Absorber area	m²	2.04	3.02
Overall height	mm	1954	1954
Overall width	mm	1416	2125
Depth	mm	93	93
Empty weight	kg	52.1	78.4
Fluid capacity	l	3.8	5.6
Connections	Cu…mm	22	22
Zero-loss efficiency η_0 (aperture / absorber)	-	0.768 / 0.809	0.768 / 0.821
First-order coefficient a_1 (aperture / absorber)	W/(m².K)	1.36 / 1.433	1.36 / 1.455
Second-order coefficient a_2 (aperture / absorber)	W/(m².K²)	0.0053 / 0.0056	0.0053 / 0.0057
Zero-loss efficiency B (aperture / absorber)	-	0.77 / 0.81	0.77 / 0.83
Overall coefficient of heat transfer K (aperture / absorber)	W/(m².K)	1.73 / 1.82	1.73 / 1.85
Maximum operating pressure	bar	8	8
Stagnation temperature	°C	313	313
Recommanded flow rate (absorber)	l/(h.m_{abs}^2)	40	40
Maximum quantity of collectors per array	-	7	5
Tilt angle limits	°	2° to 90°	2° to 90°
Warranty (Term and Conditions apply) – Tubes = 20 year including 5 year warranty against hail damage (under conditions) – Collector = 10 year (under conditions).			

ZI - BP2 - 46120 Leyme (FRANCE) Téléphone : 05.65.40.39.39 - Fax : 05.65.40.39.40
E-mail : info.lacaze-energies@groupe-cahors.com - www.lacaze-energies.fr