

TUBO II C mounted on the Belgian antarctic research facility



TUBO II T installation in Appenzell (CH), SPT



TUBO II C & T – innovative tube collectors for large and small installations

Vacuum tube collectors for versatile applications

With the two new tube collectors TUBO II C with reflectors and TUBO II T without reflectors, a versatile range of applications are possible. While the TUBO II C is usually used for pitched roof and flat-roof systems, the TUBO II T is usually used for facade mounting or horizontal mounting on flat roofs, its main application area. Due to their symmetrical design, both types can also be mounted in landscape, for example on balconies.

Flexible use, outstanding design

The small module size is suitable for horizontal, vertical, roof-mounted, flat-roof and frame mounting. The TUBO II impresses with its extraordinary design and is one of the lowest profile tube collectors on the market. Giving an aesthetically pleasing appearance.



TUBO II C

Maximum energy savings thanks to the high collector yield

Thanks to the TUBO II C and TUBO II T, a high thermal efficiency can be achieved even in the winter half of the year. The vacuum between

the tubes gives excellent insulation. This is the main reason for the 20% – 40% higher efficiency compared to flat plate collectors. In addition, the light beams are concentrated in the TUBO II C via parabolic reflectors. Thus, even with relatively small collector areas, high gains can be achieved.

Quality and durability

Over 20 years of practical experience are woven in the TUBO II. The used materials are chosen for a long service life. The underslung manifold provides essential advantages: Condensation, which forms in certain weather conditions, can run out of the tube. As a result, the tube can not burst during freezing. In addition this leads to an increased service life of the antifreeze and to particularly low heat losses.

Environment

The frameless, flat design of the collector minimises elaborate material use and thus energy for production. Double glassed vacuum tubes efficiently replace unnecessary insulation.

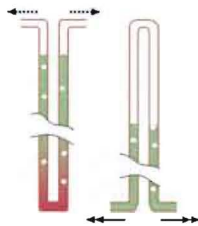


TUBO II T

TUBO 12 CI on an apartment building in Weil am Rhein (DE)

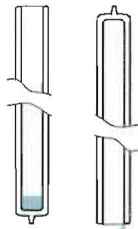


TUBO II T mounted on a corporate building in Esslingen (DE)



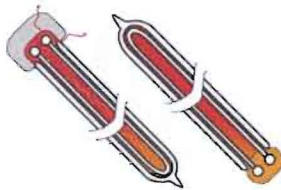
LONG DURABILITY DURING HIGH TEMPERATURES

TUBO II with connection manifold at the bottom: Increases the lifetime of the antifreeze by quickly evacuating the collector.



FROST PROTECTION

TUBO II with the manifold at the bottom: In winter, condensing water can simply run out. This ensures frost protection for the glass tubes.



LOW HEAT LOSSES

TUBO II with connection manifold at the bottom: Lower heat losses due to warm tube end with vacuum insulation.

NEWS AND ADVANTAGES OF THE TUBO II

- Symmetrical design for neat Balustrade installation TUBO II C & T
- Invisible horizontal mounting e.g. for flat roofs with TUBO II T
- Integrated compensator in each collector, therefore up to 14 collectors can be connected in one seamless array
- A sensor is installed on each collector at the factory
- Simple installation using a proven plug-in connection system
- Improved performance of the TUBO II C over the previous model

TECHNICAL SPECIFICATIONS OF TUBO TUBE COLLECTORS

Collector	TUBO II C	TUBO II T
Collector dimensions and weight	Dimensions (W x L x H) in mm: 624 x 1947 x 85 Gross area: 1,22 m ² Weight: 18 kg	Dimensions (W x L x H) in mm: 624 x 1947 x 85 Gross area: 1,22 m ² Weight: 18 kg
Collector absorber area	1,07 m ²	0,39 m ²
Collector aperture area (1-7 Mod.)	0,98 m ² . Zusätzlich 0,1 m ² zwischen zwei Kollektoren (Zubehör: Zwischenspiegel)	0,46 m ²
Maximum heat output (P _{max}) at 1000 W/m ²	650 W	362 W
Performance (aperture area)	η _g : 66,3%; α1: 0,782 W/m ² K; α2: 0,012 W/m ² K ² Incidence angle correction factor IAM 1,00	η _g : 78,7%; α1: 2,99 W/m ² K; α2: 0,015 W/m ² K ² Incidence angle correction factor IAM 1,27
Permissible collector tilt	25-90°	0-90°
Certification / Quality Test	Testing according to DIN EN 12975-1: 2011-01, DIN EN ISO 8906:2014-03 CEN-Keymark 28.00 (2015-12) Reg. No. 011-7S2464 R and 7S2463 R	Testing according to DIN EN 12975-1: 2011-01, DIN EN ISO 8906:2014-03 CEN-Keymark 28.00 (2015-12) Reg. No. 011-7S2464 R and 7S2463 R
Hail resistance / Certificates	Hail and ice ball test according to EN ISO 9806	Hail and ice ball test according to EN ISO 9806

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Subject to alterations and errors.