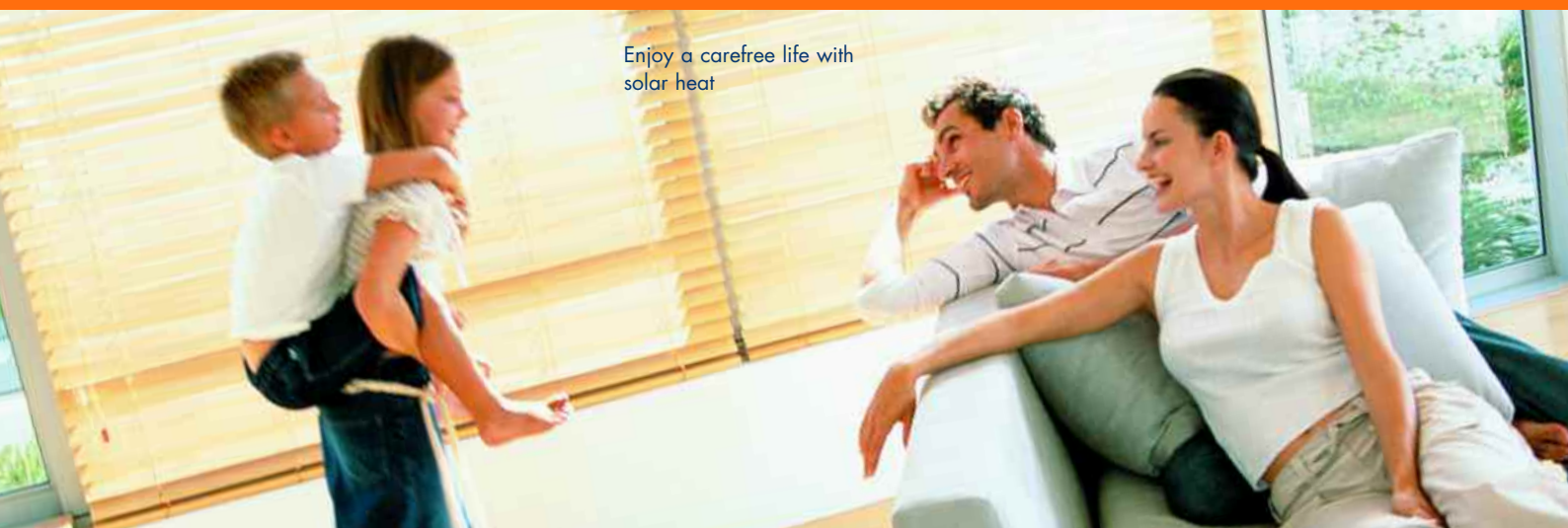


TUBO 12 CPC

The evacuated tube collector with base connections



Enjoy a carefree life with solar heat



The TUBO 12 CPC is a newly developed evacuated tube collector. It significantly stands out from other evacuated collectors on the market on account of its tubing concept, its construction and the choice of materials. Especially in autumn, winter and spring, when the demand for heat is at its peak, the TUBO 12 CPC yields considerably more solar heat than flat plate collectors.

Usage

- Usable with a solar installation for hot water generation and particularly for heating support
- In heating support there are ca. 30 - 50% higher energy savings when compared with flat plate installations of equal size
- For new builds or during renovation, the collector is mountable on a sloped or flat roof or on the facade
- Compatible with a complete solar installation, particularly the Consolar thermal stores from the SOLUS II product range - CONUS 502, COAX 200 or COAX 390

Advantages

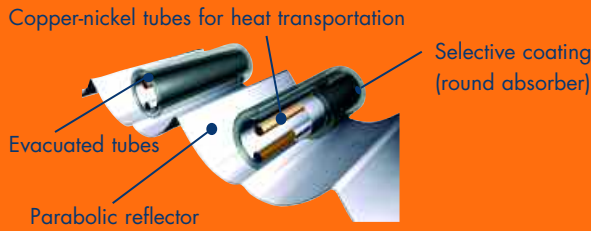
- The only evacuated tube collector on the market with standby friendly base connections
- Very high efficiency in the ITW test 2007
- The flattest collector on the European market with only 55 mm
- Small modules for horizontal or vertical mounting
- Solar heating support even in the coldest season
- Slimline, elegant design without a visually noticeable connection box
- Very swift amortization period due to high-grade materials and efficient use of material



Bottom left: TUBO 12 CPC is certified according to Keymark. (Reg. no. 011-7S074 F)



Sun: Day and Night.

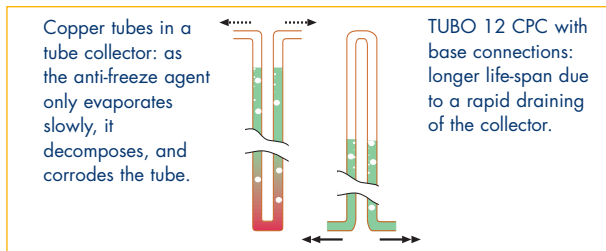


Base connections for a longer life-span

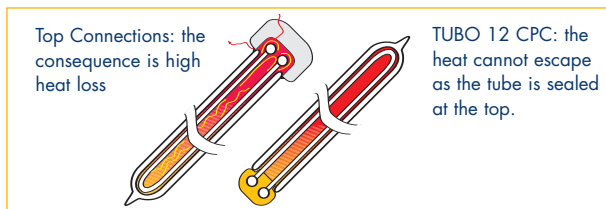
With almost all tube collectors on the market the connections are situated at the top. Since the arrangement of the collector tubing has a significant impact on its operating characteristics, the base connections of TUBO 12 CPC are an important development with fundamental advantages:



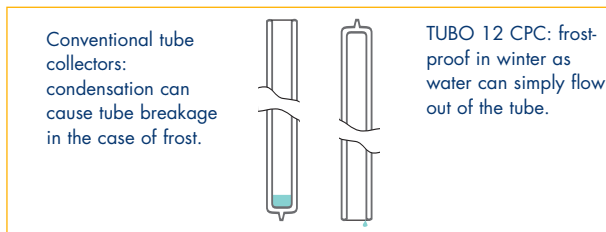
- During the installation shutdown in summer the solar fluid is expelled quickly from TUBO 12 CPC through the base connections. The anti-freeze agent therefore lasts longer and the other components are also preserved.



- The warm air in the tube cannot escape, as the tube is sealed at the top. More heat can be utilised.



- Condensation, which can build up in humid weather conditions, flows downwards out of the tube, thereby removing the threat of glass tube breakage in the case of winter frost.



Great flexibility on the roof

- Utilised areas are expanded through the possibility of horizontal installation in addition to the common vertical mounting.
- Installation on flat or sloped roofs can be carried out easily.

Attractive and slim design

- The exceptional design of Tubo 12 CPC is impressive: the 55mm flat connection box consists of stainless steel and the upper caps possess an elegant shape.
- The surface of a collector module measures 1.2 m². Up to 12 modules can be combined to form a field yet they appear visually as one unit. There are no disturbing frame structures or bulky casing on account of the module's frameless, self-supporting construction.



Thermos flask principle for maximum energy savings

- Up to 30 - 50% energy savings in heating support are possible in comparison with flat plate collector of the same size. Due to the vacuum between the inner and outer tube hardly any heat gets lost.
- The round absorber of TUBO 12 CPC is more capable of transforming slanting sunrays into heat than flat plate or tube collectors with flat absorber surfaces, even if these can be turned.
- The integrated parabolic reflectors direct the sunrays into the evacuated tubes and convert them into heat with very little wastage. Thus the required space on the roof is much smaller than for other types of collectors.

Outstanding quality and selected materials

TUBO 12 CPC is manufactured with very high-grade materials because a solar installation should deliver energy for many years.

- The TUBO12 CPC is particularly resistant to hailstorms through its stainless steel casing, as well as its high-grade quality tubes which possess 13% thicker glass than the standard make.
- Ordinary copper cannot withstand in the long run the high temperatures of up to 300°C in the collector. Therefore high-grade copper-nickel tubes are employed in the tubing of TUBO 12 CPC as this combination is a very corrosion-resistant and durable alloy.
- You can profit from the optimised quality control through Consolar's in-house production of the TUBO 12 CPC.

High-efficiency solar installations

The TUBO 12 CPC - the flattest collector in Europe*



* according to research by Consolar

Choose high-performance technology by Consolar

- 20,000 tried-and-tested installations Europe-wide
- Over 20 patents and registered designs
- Collaboration with renowned institutes and research facilities
- Ethically responsible with in-house development and environmentally-friendly manufacturing in southern Germany
- Longevity and safety due to high-grade raw materials and more than 20 years development experience

Outstanding test result with regard to efficiency

- Recent tests by the Institut für Wärmetechnik und Thermodynamik (ITW) (Institute for Heat Technology and Thermodynamics) in Stuttgart, Germany in early 2007 showed that under the same test conditions and using the same number of collectors as in the last test by Stiftung Warentest (German Foundation for Testing Products), 6 TUBO 12 CPC collectors together with a SOLUS II 560L combination thermal store saves 16 % more hot water and heating energy in comparison with the previous test. This is an outstanding test result for Consolar, which was only achieved in the previous Stiftung Warentest test with the use of considerably bigger thermal stores and collector areas.



Lean-to facade mounting of 8 TUBO modules, Germany



6 TUBO modules on posts, Italy



Elegant integration of 4 TUBO modules, Italy



Hardly visibly in-roof mounted TUBO modules, Germany



A facade mounting of TUBO, combined with a photovoltaic installation



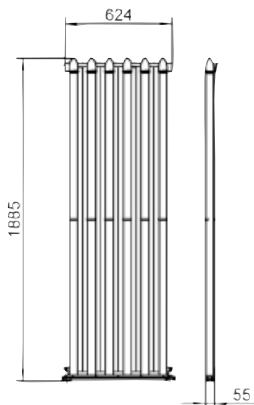
Vertically erected TUBO collectors, southern Europe

Inspiring high-performance technology



Assembly advantages:

- The small size of the collector (63 x 189 cm) allows for versatile architectonic integration. A collector can be mounted on small or awkward roof areas as well as directly on the facade.
- The unusually low weight of the collector (16.4 kg) makes the fitting child's play.
- With a width of only 62.5 cm the TUBO 12 CPC fits through an attic window; a crane is not necessary.
- A single tube can, if necessary, be exchanged without interruption of the heating cycle.
- Low maintenance: the anti-freeze agent rarely needs to be changed as pipes drain automatically if steam forms.



absolutely compact, light-weight and flat: TUBO 12 CPC can be easily fitted by one person!

How much you can save with the tube collector:

With 12 collector modules of TUBO 12 CPC you can save ca. 70 - 80% of the annual demand for hot water of a modern family home. By changing the boiler and other measures quite often savings of more than 50% are possible.

Technical Data	TUBO 12 CPC
Dimensions and weight:	<ul style="list-style-type: none"> ■ Dimensions: (L x B x T) in mm 1885 x 625 x 55 ■ Weight: 16.4 kg
Collector surface in a field of 1-7 modules (aperture surface):	<ul style="list-style-type: none"> ■ 1: 0.98 m² / 2: 2.06 m² ■ 3: 3.16 m² / 4: 2.24 m² ■ 5: 5.33 m² / 6: 6.42 m² ■ 7: 7.50 m²
Performance: Measured according to: EN 12975-2 by ITW Stuttgart, test report no. 06COL 457	<ul style="list-style-type: none"> ■ Referred to aperture surface: ■ ETA0: 62%; a1: 0.395; a2 0.02 ■ Angle correction at 50° deviation from collector norm: perpendicular to the tubes: 1.04 parallel to the tubes: 0,95 ■ Standby temperature: 250 °C
Materials	<ul style="list-style-type: none"> ■ Outer tube: borosilicate glass with 5 x 10-3 Pa Vacuum and barium getter ■ Inner tubing: copper-nickel alloy ■ Collecting box and upper tube support: stainless steel ■ Tube caps: aluminium ■ Reflector: aluminium
Mounting options:	<ul style="list-style-type: none"> ■ Standing or lying installation possible
Quality testing:	<ul style="list-style-type: none"> ■ Tested according to EN 12975-2 by ITW Stuttgart, test report no. 06COL 457 ■ Keymark certified. Reg. No. 011-7S074 F
Consolar-warranty:	<ul style="list-style-type: none"> ■ 5 years, 10 years against performance reduction or leakage due to scaling



Complete packages from Consolar:

You obtain a well coordinated high-performance solar system with the TUBO 12 CPC tube collectors when combined with the Consolar thermal stores of the SOLUS II product range, the CONUS 502 or the COAX 200 / COAX 390, and a pellet stove from the LENIUS range.

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