



SOLINK - The heat pump collector

SOLINK combines the high efficiency of ground source heat pumps with the advantages of air source heat pumps. Silent operation and flexible roof or facade installation make the collector an attractive energy source for both electricity and heat. SOLINK was specially developed for heat pumps. Coupling with geothermal probes is not necessary due to the highly efficient heat exchanger which enables dual use of the roof area. This makes possible completely renewable energy supply systems with low operating costs.

Dual use of the roof and 8 times larger heat exchange area

The roof surface can normally only be used once for electricity or heat production. With SOLINK, an approximately 8-fold larger surface area on the reverse side effectively harvests environmental and solar heat from the air and simultaneously makes use of PV module waste heat. In this way, the entire heat requirement of the building can be satisfied directly and the annual average electricity consumption of the system produced. Due to the large heat exchanger surface, this is possible within a significantly smaller roof area compared to other PVT collectors.

Apartment building with 6 flats and a 17kW heat pump near Freiburg in southern Germany



- NOW IN 3 SIZES**
- LANDSCAPE FORMAT WITH 1.99 OR 2.41m²,
 - PORTRAIT FORMAT WITH 1.99m²
 - POWER 430Wp or 530Wp
 - STATE-OF-THE-ART M10 TECHNOLOGY
 - BETTER PV EFFICIENCY EVEN AT HIGHER TEMPERATURES

Silent operation

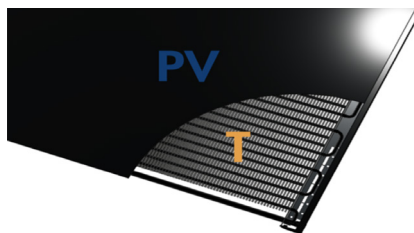
SOLINK does not require the usual fans or a separate outdoor unit. Compared to an air-source heat pump, the saved installation space can be enjoyed in peace.

Highest efficiency, all without geothermal probes

Until now, probes or ground heat exchangers had to be laid via earthworks to ensure low power consumption. SOLINK makes this unnecessary. In most cases, roof surfaces are sufficient. If necessary, the façade may also be considered. With similar investment costs, the overall economy is greater.

6 % performance boost, quality and durability

The large air heat exchanger ensures a lower module temperature compared to standard PV panels even when the heat pump is not operating. An approximately 6-10 % higher electrical yield and a reduced maximum module temperature lead to a long service life. SOLINK is based on a previous development in use since 2014 and continues to be developed further.



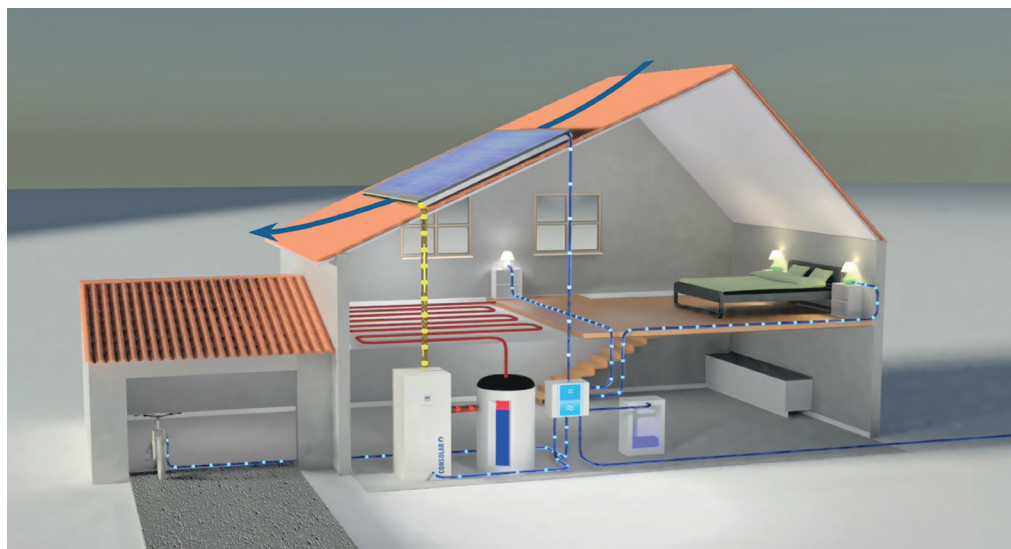
SOLINK - Power and heat from one collector



SOLINK was awarded the 2017 Environmental Technology Prize for Energy Efficiency in the German state of Baden-Württemberg



In 2022, Consolar was recognised by the Hessian Ministry of Economics, Energy, Transport and Housing as a finalist for the Hessian State Prize for Innovative Energy Solutions for its SOLINK PVT heat pump collector.



Illustrative example system (includes third-party components offered separately)

AN ECONOMICAL SOLUTION

- Reduced running costs due to highly efficient and energy-saving heat pump operation
- Comparable investment costs to ground-source heat pumps with PV
- Save on electricity costs with self-production
- Up to 35% funding possible via BEG subsidies in Germany

FLEXIBLE RANGE OF APPLICATION

- Single- and multi-family residential
- Office and commercial buildings
- Municipal buildings
- Cold district heating networks
- Swimming pools
- Replacement/supplement to borehole fields

BENEFITS FOR INSTALLERS

- Proven plug-in connection systems for heat and power
- Simple piping and installation due to integrated manifolds
- Hydraulic connectors between the collectors require no additional fixing
- Reinforced hoses are secured in seconds using tool-less clips
- No F-gas certification necessary due to brine circuit

Collector/Module	SOLINK 430 MH	SOLINK 430 MV	SOLINK 530 LH
Collector dimensions (W x H x D)	1743 x 1143 x 53 mm	1156 x 1730 x 53 mm	2115 x 1143 x 53 mm
Gross area	1,99 m ²	1,99 m ²	2,41 m ²
Weight	32 kg	32 kg	38 kg
Collector aperture	1743 x 1128 mm	1156 x 1715 mm	2115 x 1128 mm
Aperture area	1.97 m ²	1.98 m ²	2.39 m ²
Nominal power (electrical)	430 Wp ± 3%		530 Wp ± 3%
Nominal current/voltage ¹⁾	13,7 A / 31,4 V		13,8 A / 38,8 V
Short circuit current ¹⁾	14,4 A		14,4 A
Open circuit voltage ¹⁾	38,1 V		46,7 V
Module efficiency (electrical)	21.0 %		21.0 %
Maximum reverse current ¹⁾	25 A		25 A
Max. system voltage	1500 V (protection class II)		1500 V (protection class II)
Temperature range ²⁾	-30 to +80 °C		-30 to +80 °C
Fluid volume	3.4 l		4.2 l
Stagnation temperature	70 °C		70 °C
Collector orientation ³⁾	South orientation is optimal with 30° to 75° pitch		

¹⁾ Electrical data were measured at standard PV conditions. Improvements due to module cooling are not taken into account.

The module performance is continuously developed.

²⁾ For storage. Operating conditions determined by antifreeze concentration

³⁾ In regions with more than 10 days of snow per year, no shallower angle should be used and the snow-shedding function is to be planned for.



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