

Solar heat collectors

Clean and free energy from the sun

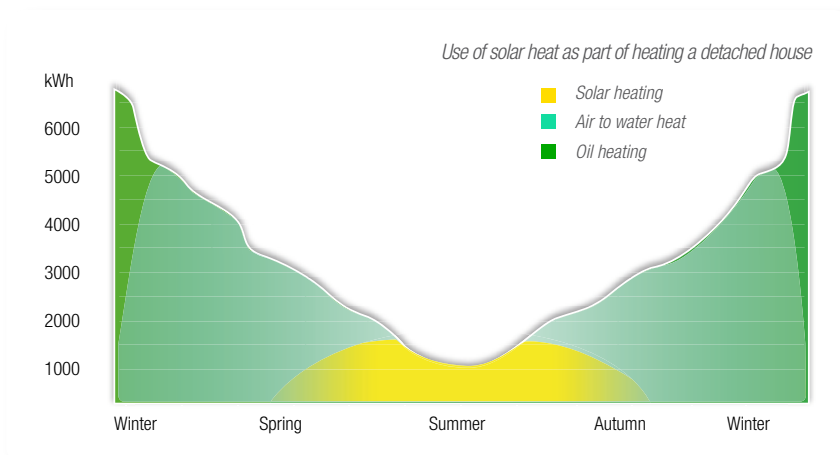


Solarpro



Renewable energy

Solar energy is renewable and free energy that reduces CO₂ emissions. Solar energy can be used for heating as well as producing domestic hot water. The annual amount of solar radiation on a horizontal surface is approximately 960 kWh/m². In practice, solar heat can be used for heating domestic hot water in spring, summer and autumn time.



APPLICATIONS

- Heating and producing domestic hot water for detached houses and leisure homes
- Heating swimming pools
- Producing domestic hot water at camping areas and open-air swimming pools

Let the sun warm

- Compact and durable structure
- The ventilation structure prevents condensation on the glass of the solar collector
- Stands also the Scandinavian climatic conditions, tested snow and wind load resistance
- Easy to install
- Low need for maintenance
- Reduces carbon dioxide emissions
- Support by Oilon in Finland
- Solar Keymark certified
- Made from environmentally-friendly and recyclable materials



Solarpro



For new buildings or alongside current heating solution

The operation of a solar heating system is based on heating a non-freezing solution circulating in the pipes of the solar collectors using solar radiation. The circulating fluid releases the heat to the buffer tank. A pump and control unit is fitted beside the buffer tank, with automation to ensure that the pump starts whenever heat is available. When no heat is available, the pump does not run.

The most benefit from solar heating can be achieved by combining the solar heating system to the heating of the building as well as domestic hot water. Oilon's Solarpro collectors can easily be connected to any closed water heating system. Thus, they are excellently suited for supplementing oil, wood, ground source or electric heating.



The collectors are placed in a sunny location, such as the roof, with the optimum direction being to the south. The collector is tilted to an angle of approximately 40 to 60 degrees from the horizontal plane. Usually, the best location is on the roof, but the collectors can also be installed on the ground using special stands. The collectors can also be integrated into the roof structure or fitted onto a wall.

Technical specifications

DIMENSIONING A SOLAR HEATING SYSTEM

End use	2 persons	3 persons	4 persons	5 persons
Domestic hot water	2 collectors, 300 litre buffer tank	3 collectors, 300 litre buffer tank	4 collectors, 500 litre buffer tank	5 collectors, 500 litre buffer tank
Domestic hot water and heating	2 collectors, 330 litre hybrid buffer tank	4 collectors, 500 litre hybrid buffer tank	5 collectors, 500 litre hybrid buffer tank	6 collectors, 500 litre hybrid buffer tank

SOLARPRO SP20

- dimensions 1,870 x 1,150 x 95 mm
- surface area 2.15 m²
- weight (empty) 34 kg
- liquid content approx. 1.7 l
- 2 connectors R ½"
- aluminium frame, dark grey
- mineral wool insulation 50 mm
- max. operating pressure 10 bar
- max. stagnation temperature 203 °C
- 3.2 mm structured solar glass
- absorption surface 10 Cu 8 vertical pipes and
2 Cu 18 horizontal pipes, selective coating
(Blue - tec eta_plus)



SOLARPRO SPLS20

- dimensions 1,870 x 1,150 x 95 mm
- surface area 2,15 m²
- weight (empty) 35 kg
- liquid volume approx. 1.7 l
- 4 connectors R ½"
- aluminium frame, dark grey
- mineral wool insulation 50 mm
- max. operating pressure 10 bar
- max. stagnation temperature 217 °C
- 3,2 mm structured solar glass
- absorption surface 2 Cu horizontal pipes and
serpentine pipe Cu 9, selective coating
(Blue - tec eta_plus)

PUMP AND CONTROL UNIT

- dimensions 480 x 200 x 145 mm
- electronic display and control unit
- insulated plastic enclosure, black
- 3 temperature sensors
- max. fluid temperature 110 °C, temporarily
130 °C
- max. pressure 10 bar
- connector size ½"
- max. pump capacity 3 m³/h
- max. pump delivery height 6 m
- pressure gauge and flow meter, safety, shut-off
and check valves

Oilon hybrid buffer tank



Buffer tank

A versatile buffer tank is the core of hybrid heating, allowing connection of various heating solutions. The use of an Oilon hybrid buffer tank makes it possible to also connect other heating solutions to the same buffer tank with the solar heating system. In case of high consumption peaks, the energy source can be bio oil/oil, biogas/gas, pellet or wood heating or standard electric heaters in the buffer tank.

The collectors can also be used for the production of domestic hot water in a building with direct electric heating, in which case the solar heating system is connected to the service buffer tank. In order to work, solar heating requires solar collectors, a pump and control unit, a suitable buffer tank and fixtures for the collectors.

A buffer tank with a minimum capacity of 250 litres is recommended for producing domestic hot water, with a copper loop in the lower part for the liquid circulation of the solar collectors.

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