hycool©
Solar Cooling Systems

ECOTHERM
HEAT TRANSFER SOLUTIONS

# FRESNEL SOLAR THERMAL COLLECTORS

HyCool uses a concentrating technology based on ECOTHERM's novel Fresnel collectors. It has been specifically designed to offer a compact and easy-to-install system to ensure successful small-scale installations.

The system is based on flat mirror modules, which consist of narrow stripes of tempered glass glued directly onto silicon line hinges. This patented innovation means that there is no need for any extra mechanical mirror support and marks the difference with other PTC concentrators and Fresnel technologies in the market.

## FEATURES

### Process heat up to 230˚C

Designed to achieve temperatures of up to 230˚C and 25 bar. Heat can be delivered as direct steam, pressurized hot water, thermal oil, or hot air.

### Reduce costs

With efficient and flexible solar thermal energy use, an automatic cleaning system and prefabricated technology to reduce on-site installation costs.

### Optimise space

A modular and adaptable system designed for both rooftop and terrain installations. The reduced shadowing effect among mirror stripes enables a very high density of mirror area per ground area.

### Hail and wind resistant

The flat mirror system (module height < 20 cm) reduces wind exposure and is designed to withstand hail up to 4 cm ice balls. This also makes it lightweight which avoids complex system foundations or substructures.

### 100% renewable

Solar thermal energy can help reduce your industrial $CO_2$ footprint thanks to its efficiency and flexibility. It also allows to easily save up to 30% of the yearly fossil fuel consumption and potential carbon taxes.

https://hycool-project.eu

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## TECHNICAL DATA

Mirror module

- Length: 5,0m
- Width: 2,3m
- Mirror surface: 10m²
- Total surface: app. 11.5m²

Collector unit (= 2 mirror modules)

- Total surface: app. 23m²
- Receiver height: 2,5m
- Total weight: < 25kg/m²

Orientation

- Any compass direction
- Any inclination up to 30° (parallel to roof surface)

## ELECTRICAL DATA

Open loop tracking based on geo-position

Electrical mirror positioning

Touch panel 5“ - 23“

Best energy efficiency class of electrical components

Data monitoring and remote control (optional)

## CERTIFIED EFFICIENCY

ISO 9806:2013

## IMPROVED ENERGY MANAGEMENT SYSTEM

Manages storage capacities and loads on different temperature levels

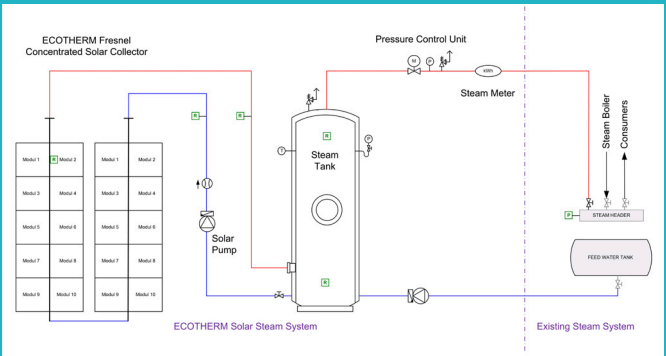
Considers weather forecasting and power tariffs for optimization

Based on a proprietary algorithm and patented mirror support

Can exchange information through a cloud-base interoperable data exchange server

## SOLAR SYSTEM GENERATION

System pressure: 0-25 bar
Steam generation 0,3-10 t/h
Triple safety devices
Fully automated operation
Remote monitoring
Easy system integration
No changes to existing system
Clearly defined interfaces
Design lifespan: 25 years

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