

# SOLAR THERMAL COLLECTORS

A WAY OF UNDERSTANDING ARCHITECTURE

www.emikon.com



design and functionality

The ST and STH solar thermal collectors with their design and functionality offer a new way of conceiving an architectural material as an energy solution. Thanks to their studied design and finish, they are an innovative solution that brings a new concept to architecture. We see this solution as a step forward in the world of architecture which allows a cutting edge design that is also sustainable. Every building can be covered in a material that allows for the use of solar energy.

## A SOLUTION FOR ARCHITECTURE

SOLAR THERMAL ENERGY

- · large scale solutions
- · integration into the building architecture
- · personalized formats and sizes
- · wide range of colors
- · can be made with ALUCOBOND
- materials are 100% green (environmentally friendly)
- · high thermodynamic performance
- advertising panels

Our main objective was to make a product that offered an architectural solution, a finishing material for applications in flooring and cladding that would capture solar energy.

We have developed a material that has strong solar thermal properties and at the same time also offers a solution as a designer finishing material.

In the future our buildings will be covered in materials that allow the capture of energy in a natural way, including solar energy.



### A SOLUTION FOR ARCHITECTURE

Emikon solar collectors, incorporated into the ST system, are the main installation elements, designed to capture solar thermal energy; they can be adapted to fit a flat or an inclined roof, and if necessary can be installed on vertical facades, becoming a decorative element of the facade. They have an excellent price/performance ratio and correctly dimensioned, can reduce energy consumption by 80% in heating water and the home. At the same time we are contributing to a healthy environment thanks to the fact that the system does not generate CO2.

#### **Different Solutions for the Placement of ST Panels**

As a solution for facade cladding, they can substitute any material, providing a quality, designer finish that is durable and has a functionality that is very different from any other finishing material or cladding.

Collectors intended for facades serve as a design element, as well as, an architectural solution and are thus available in a wide range of formats and colors.

The collectors are most commonly placed at an angle on the highest roof of a house or building. Placing the collectors at an angle is the best way to obtain the highest performance from solar collectors. Collectors at an angle for roofs are also available in a variety of formats and colors.

For flat roofs we can also place the collectors flat on the roof, which is a good solution for terraces and decorative spaces. Flat roof collectors also come in a variety of formats and colors.



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ST solar thermal collectors design and functionality

### HOT WATER DHW

### HOT WATER FOR THE SAME COST

Emikon offers you the possibility of enjoying hot water, up to 55°C (131°F), in your home, with a highly efficient system and without releasing CO2 into the atmosphere. Additionally, you can reduce your energy consumption up to 80%. With practically zero maintenance, your peaceful, carefree enjoyment of the installation is guaranteed.

### **CENTRAL HEATING**

### ENJOY GREAT COMFORT IN ALL YOUR HOME

With its ST Solar Thermodynamic System, Emikon captures sufficient heat so that your home will have a comfortable temperature during cold winter days. The ST system can also be used during spring, autumn and summer to heat the water in your pool.

### HOT WATER FOR YOUR POOL

### ENJOY YOUR POOL YEAR-ROUND

The Emikon ST Solar Thermodynamic System makes it possible for you to enjoy your pool all year round with very low energy consumption. When you choose solar thermal energy to heat the water in your pool you are choosing to considerably reduce maintenance costs while also contributing to making the environment healthier. Our experience in making and installing these systems is our guarantee of excellent service.

### HEATING FOR LARGE SPACES

### FEEL THAT YOU ARE SURROUNDED IN COMFORT

Traditional boilers can easily be replaced with the Emikon ST system, thus reducing the cost of generating hot water. There are currently ST installations to heat large volumes of water in hotels, department stores, restaurants, medical clinics, school, etc.

EMIKON



### super-slim technology

### functional features

EMIKON ST solar thermal collectors offer a range of possibilities for many different applications. They are especially suited for hot water installations in households, hotels, nursing homes and department stores.

They can also be used to give support to central heating systems, as well as the heating of pools, thereby reducing energy consumption inside and extending the life of exterior systems.

EMIKON ST solar thermal collectors are designed with super-slim technology that is light-weight and free of frames and inter-spaces, which makes them ideally suited for incorporation into the structure of any type of building. They act as a protective shield, generate heat energy at a competitive cost and are highly durable and efficient, all thanks to a carefully studied design and the high quality of the materials used in their manufacture. The ease of installation also makes the ST collectors the ideal system to be used as design elements.

#### Performance Curve



gain factor No 0,750

 $(T_m - T_a)/G) [m^2 \cdot K/W]$ 

Model	ST	STH

#### Dimensions

-

Total length	(mm)	2000	
Total width	(mm)	1000	
Depth	(mm)	17	
Total area	(m2)	2	
Absorption area	(m2)	2	
Fluid capacity	(L)	1.8	
Heat transfer fluid		Water or glycol water	

#### Pressure ratings

			_	
Maximum rated pressure	(bar)	14		
Maximum working pressure	(bar)	8	_	
Nominal working pressure	(bar)	1.5	_	
Recommended flow volume	(L/h-m2)	180		

#### Manufacturing quality

Transparent coverings		
Outer casing	Aluminium	
Absorbers	Aluminium	
Thermal insulation	Insulating Resins	
		_

#### **Performance curves**

Instant. optical performance	Black	95 %
Instant. optical performance.	Red	72 %
Instant. optical performance.	Blue	70 %
Instant. optical performance.	Beige	68 %



ST

STH

greenhouse

solar thermal collectors

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