

# thermo slate

by CUPA GROUP

TECHNICAL INFORMATION

THERMAL SOLAR NATURAL SLATE ROOFING



# thermoslate

by CUPA GROUP

**THERMOSLATE®**, the only solar system in the market made with natural slate that **generates energy for heating sanitary hot water and swimming pool.**

Our installations with solar collectors **THERMOSLATE®**, are characterized by the **ability to adapt** to the needs of each location and roof.

## DEFINE YOUR SUITABLE INSTALLATION. THERMOSLATE® IN 3 STEPS

**1**

Choose the **location** of installation



**2**

Define the SHW consumption depending on the number of people

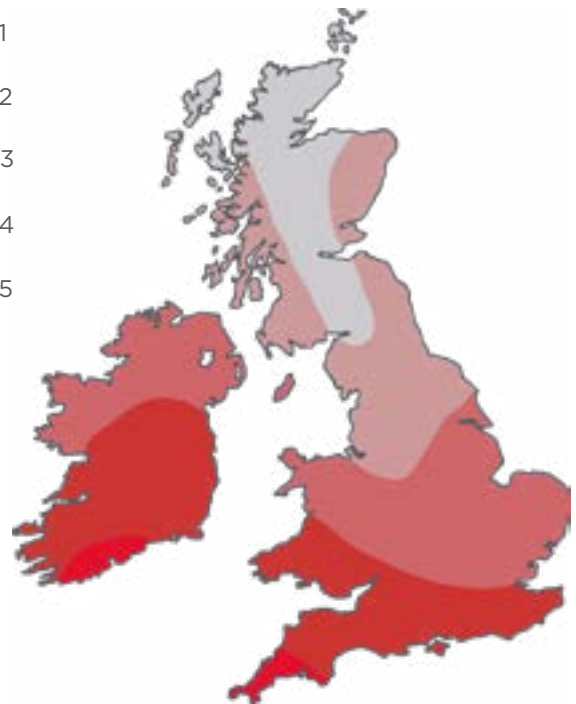

















**3**

Choose the best configuration of collectors according to the available surface on the roof



- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5



	Number of people	Number of bedrooms	Solar cylinder volume	Average solar contribution	Possible configuration THERMOSLATE®
ZONA I - IV		2	200 L	55 %	 ○ 
		3, 4	300 L	50 %	 ○ 
		4, 5	400 L	55 %	 ○ 
ZONA V		2	200 L	60 %	
		3, 4	300 L	55 %	
		4, 5	400 L	55 %	 ○ 

\* Estimated figures for 50L per day and per person. South orientation  $\pm 20^\circ$  and inclination  $30^\circ \pm 10^\circ$ .  
 \* These data may vary depending on the orientation and inclination.



Full integration into facades and pitched roofs over 20°



The best solution for Solar Thermal installations in homes and emblematic buildings



Compatible with all existing storage systems, control and distribution



According to the standards requirements in all climate zones

## A THERMOSLATE® SOLUTION FOR EACH NECESSITY



### THERMOSLATE® SOLAR PANEL MODEL

Characteristics	THS.3222.S07
SLATE FORMAT (cm)	50x25
OVERLAP (cm)	10
EXTERNAL DIMENSIONS	2267x743x37
TOTAL AREA (m <sup>2</sup> )	1,45
TOTAL CATCHMENT AREA (m <sup>2</sup> )	1,36

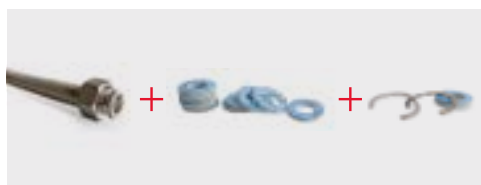


# CONNECTION AND WATERPROOFING KIT

EVERYTHING YOU NEED TO INSTALL THERMOSLATE®



## Specific kits for THERMOSLATE®



**CONNECTIONS**  
BETWEEN PANELS  
WITH RETAINING  
CLIPS



**SIDE WATERPROOF FLASHINGS (RIGHT)**



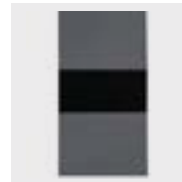
**FLEXIBLE HOSE**  
CONNECTION FOR THE  
INSTALLATION



**SIDE WATERPROOF FLASHINGS (LEFT)**



**NUTS, WASHERS AND REDUCERS**



**WATERPROOFING COMPONENTS BETWEEN PANELS**

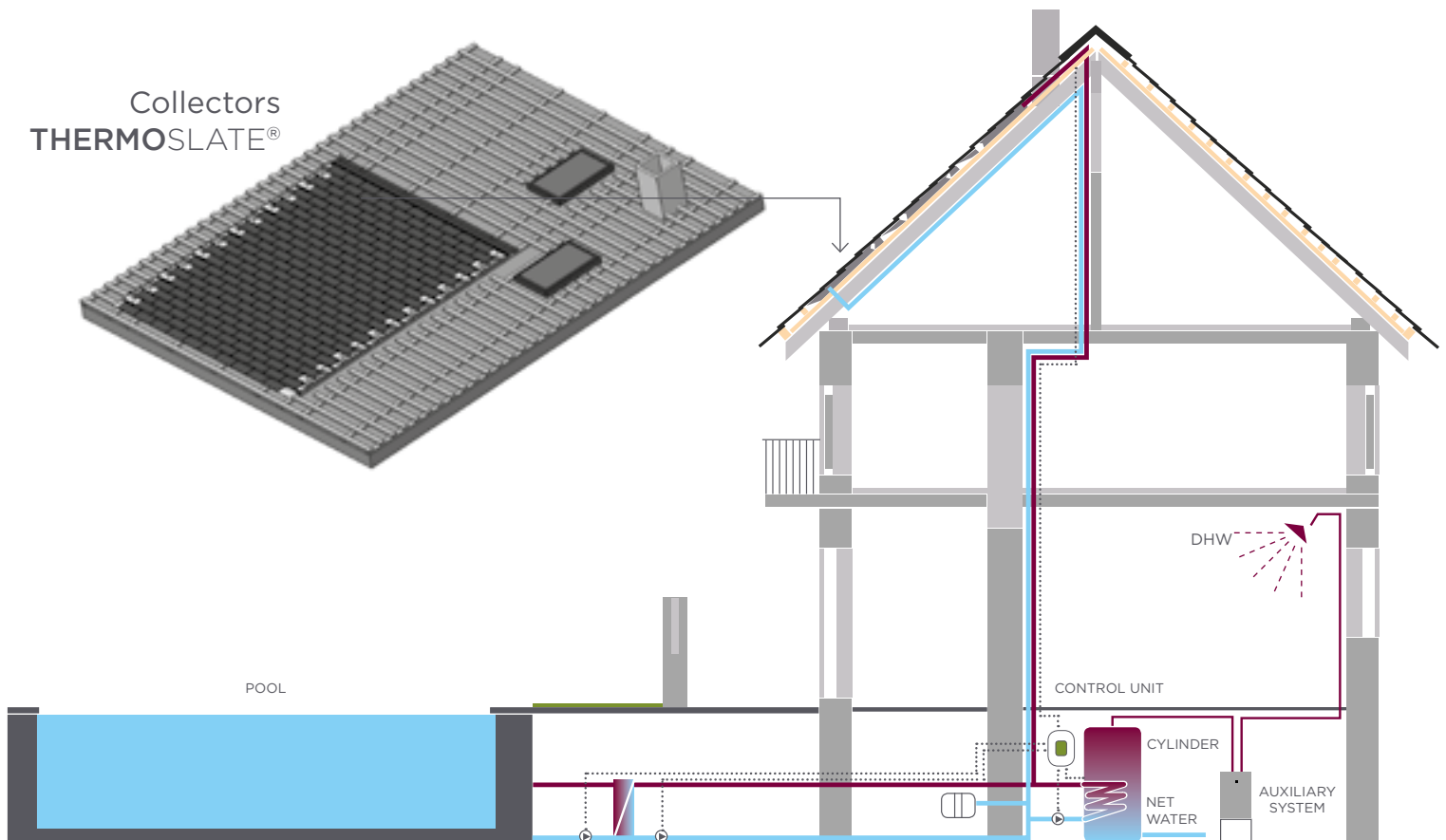


# thermoslate CASE STUDY

## PROJECT DESCRIPTION

FAMILY BUILDING. 5 PEOPLE.	
THERMOSLATE®	7 x THS.5025.S10 (1,36 m <sup>2</sup> ) solar collectors
Hydraulic equipment	1 x Solar cylinder 400 L
	1 x Connection kit 8-10
Accessories	1x Bottom integration frame
	1 x Top integration frame
	1 x Waterproofing kit

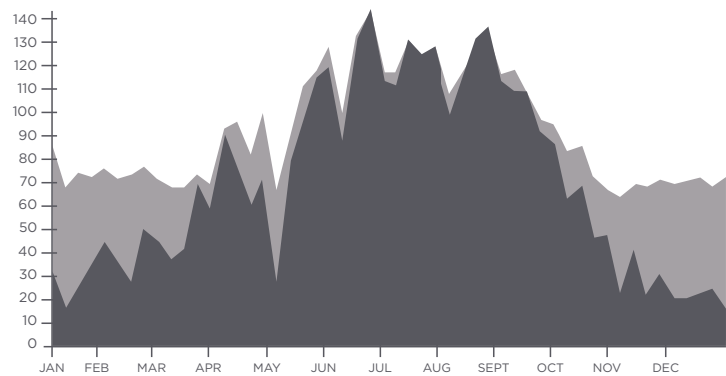
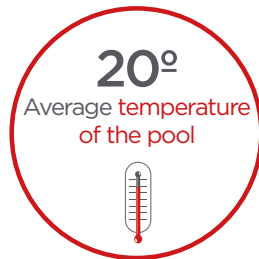
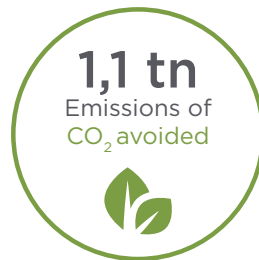
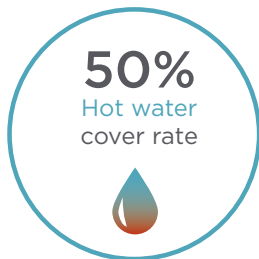
Collectors  
THERMOSLATE®



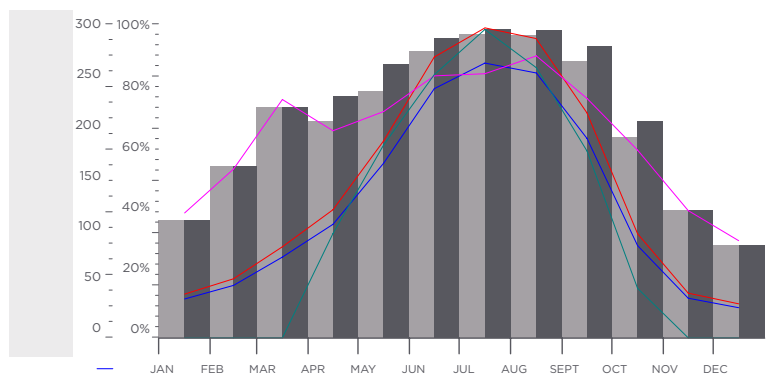


# thermoslate CASE STUDY

## PERFORMANCE AND SAVINGS



■ 3.647 kWh: Energy solar system      ■ 4.783 kWh: Total energy consumption



■ Total coverage rate: 76%      ■ Emissions of CO<sub>2</sub> avoided: 1.543 kg  
 ■ Coverage rate DHW: 67%      ■ Solar ACS economy 2.324 kWh  
 ■ Domestic diesel economy EL 580 l      ■ Solar pool economy 1.318 kWh

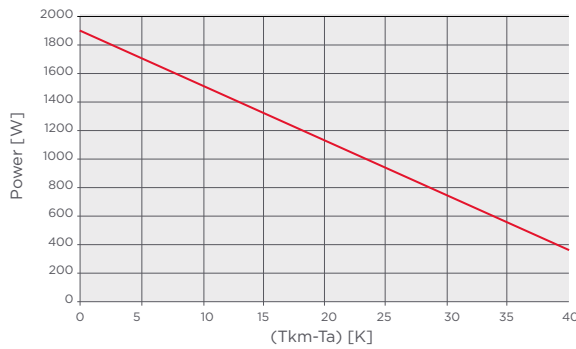


# EFFICIENCY

GREEN ENERGY FOR EVERY PROJECT



SYSTEM YIELD GRAPH

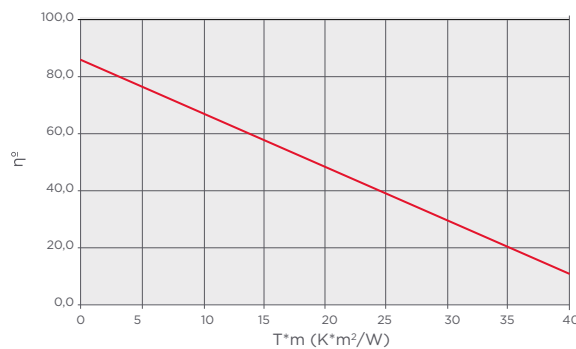


The yield graph can be calculated using the following formula:

$$\eta_o = 0,861 \quad a_1 = 13,552 \quad a_2 = 0,054$$

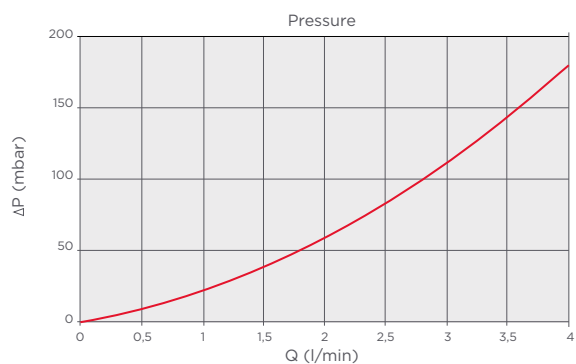
(W/(m²k))      (W/(m²k))

YIELD GRAPH PER PANEL



A **THERMOSLATE®** installation with 5 panels generates an average of 4000W which is enough to cover the requirements of a typical 4 person household whatever the climate zone.

PRESSURE LOSS GRAPH



The pressure loss of the panel at 3L/min and 25° is 130mbar/25KPa. Please consult the graph for pressure losses up to 4L/min.



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THERMOSLATE® systems have been designed and developed by CUPAGROUP

