



300°C

TEMPERATURE

Radiant panels of medium and high temperature, of 150°C and 300°C.

Characteristics:

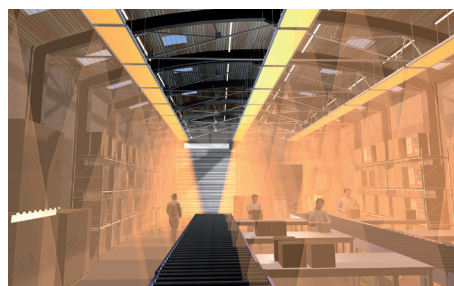
Easy installation, economic and flexible: electric box and converters are not necessary. Panels can be added to an already existing installation. Adjustable by means of an ambient thermostat. 2 or 3 units can be connected to different circuits, which allows reducing the absorbed current in not so cold periods. Protection against moisture: it can be installed outdoors under cover.

APPLICATIONS

Providing heating in great height and/or big volume enclosures (factory halls, workshops, warehouses, sport facilities).

Providing comfort in working areas located in bigger dimension enclosures without heating.

Drying processes of products, components and materials.



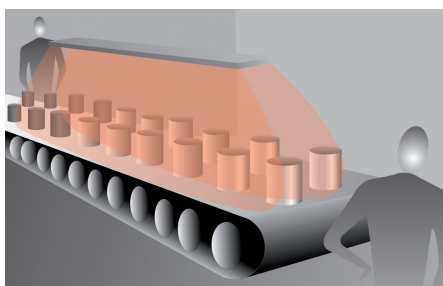
Factory halls, workshops, warehouses.



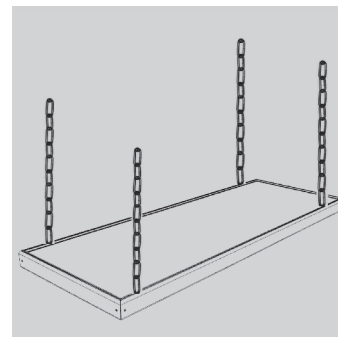
Working areas.



Supermarkets.

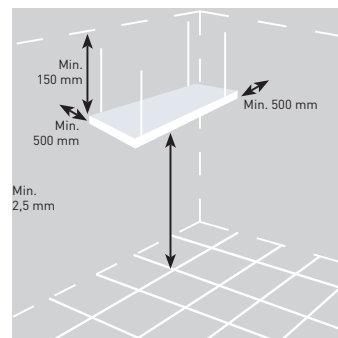


Drying processes.



Easy installation

It can be installed directly on the ceiling, on the wall, or in any other steady element, such as a beam. It includes, in addition, 4 supports to be hung from the ceiling by chains.



TERMOTEC-MT/HT:

Minimum installation distances by security regulations.

TECHNICAL CHARACTERISTICS

Model	Voltage (V)	Power (W)	Absorberd current (A)		Maximum superficial temperature (°C)	Recommended installation height (m)	Protection	Insulation	Dimensions L x W x H (mm)	Weight (kg)
			230V	400V						
TERMOTEC-HT-1750	230V mono	1750	7,7		300	2,5	IP54	Class I	1675x220x75	8
TERMOTEC-HT-3500	230V mono / 400V 3-N *	3500	16,0	9,3	300	2,5 to 3,5	IP54	Class I	1675x400x75	12
TERMOTEC-HT-5250	230V mono / 400V 3-N	5250	24,0	13,5	300	3,5 to 4,5	IP54	Class I	1675x570x75	16

* 2/400: 2 fases

CALCULATION PROCEDURE OF GENERAL HEATING SYSTEMS (FOR THE 100% OF CLOSED AREAS) VIA RADIANT PANELS



Determine the density power

$$\text{Densidad de potencia necesaria} = 75 \text{ W/m}^2 \times C1 \times C2 \times C3 \times C4$$

Depending on the operation period of the system	C1
The heating operates constantly (24/7)	1
The heating only operates during daily period (less 20h/day)	1,4

Depending on the type of building insulation	C2
Good	1
Medium	1,2
Bad	1,4

Depending on the building height	C3
≤ 3 m	1
4 m	1,1
5 m	1,2
6 m	1,3
7 m	1,4
8 m	1,5
9 m	1,6
10 m	1,7
11 m	1,8
12 m	2,0

Depending on the outside minimum temperature	C4
> 0 °C	1,1
≤ 0 °C	1,2

Calculation example

- Factory hall area: 300 m²
- Factory hall height: 7 m
- Panels installation height: 6 m
- Type of building insulation: Bad
- Heating operation: ← 20 h/día (night stop)
- Outside minimum temperature: ← 0 °C
- Power density: $75 \text{ W/m}^2 \cdot 1,4 \cdot 1,4 \cdot 1,4 \cdot 1,2 = 247 \text{ W/m}^2$
- Power needed: $247 \text{ W/m}^2 \cdot 300 \text{ m}^2 = 74.088 \text{ W (74 kW)}$
- For panel height= 6 m, HT-5250 is recommended
- Solution with Termotech HT:
74.088 W / 5.250 W for panel = 14 panels TERMOTECH HT-5250

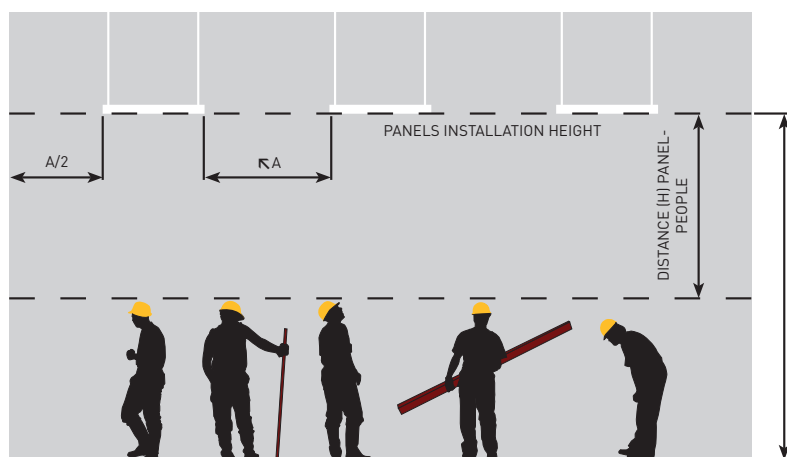
Determine the power needed

$$\text{Power needed: power density} \times \text{area to heat}$$

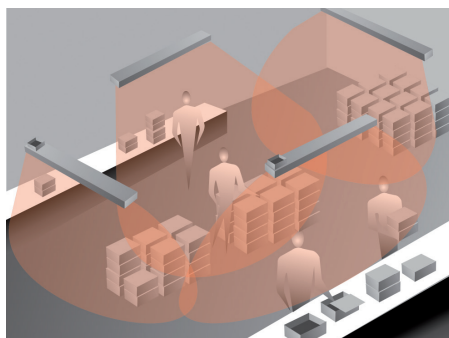
Selection of the suitable panel

Power density (W/m ²)	Distance panel - ground		
	2,5 < H ≤ 3,5 m	3,5 < H ≤ 4,5 m	H > 4,5 m
90-120	HT-1750	HT-3500	HT-3500
120-150	HT-3500	HT-3500	HT-3500
150-180	HT-3500	HT-3500	HT-5250
180-210	HT-3500	HT-5250	HT-5250
+210	HT-5250	HT-5250	HT-5250

Panel distribution



When continued occupancy during long periods of time, it is advisable a minimum distance of 1,5 to 2m between the panels (H) and people located in the heated area.



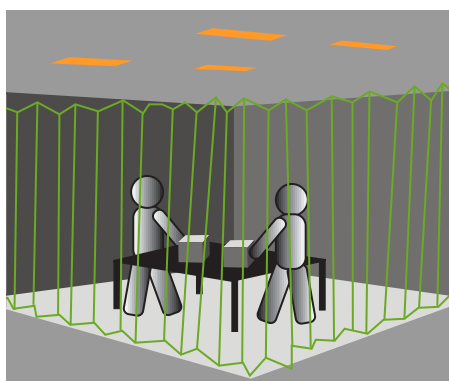
Power needed: 300 W/m²

Exclusively use of high temperature panels

TERMOTEC-HT

In case of important airflows (max. 0.3m/s), screens should be created to avoid them. The Panels should be distributed homogeneously in all the area to heat. In little working spaces it is advisable to place them around the perimeter, ensuring radiation to all directions.

The calculation of requirements for the power heating needed in a room determines the use of a certain number of panels. Sometimes it is important to take into account that is better meet this requirements by having a bigger number of devices with lower power, for a better distribution of them in the comfort area.



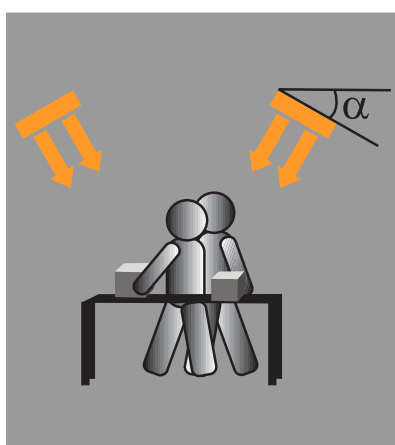
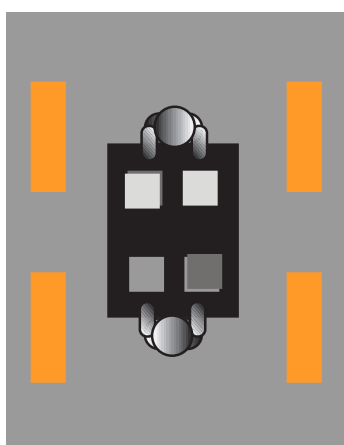
Maximum inclination of the panels α : 15°

Calculation examples

- Working area, island type of 3,5 x 6 m = 21 m²
- Total power needed= 21 m² · 300 W/m² = 6.300 W

Solution: **4 panels TERMOTEC-HT-1750**

- Maximum inclination of panels: 15°
- If there are important airflows (>0,3 m/s) it is required to screen the working area.



Comfort area covered by the models TERMOTEC-MT/HT:

Model	Power (kW)	Comfort area (m ²)	Recommended installation height (m)
TERMOTEC-HT-1750	1,75	6	2,5
TERMOTEC-HT-3500	3,5	12	2,5-3,5
TERMOTEC-HT-5250	5,25	18	3,5-4,5

* Minimum height: 2,5m.

It is advisable the use of chains that allow adjusting precisely the height of the panels, with the aim of achieving the desired comfort.

ACCESSORIES: REMOTE CONTROL UNITS



CR-TEMP
Dimensions LxAxH (mm):
100x95x25

CR-TEMP: Room temperature controller according with Regulation (EU) 2015/1188 implementing Directive 2009/125/EC with regard to ecodesign requirements for local space heaters.

Ambient temperature controller with an electronic sensor inside. Allows for manual or automatic control of ON/OFF switch with the following functions:

- Setpoint temperature.
- Weekly programming that can switch on and off twice a day.
- Detects open windows from quick drop in temperature.
- Manual override. Includes an electronic sensor that reads room temperature.



CONTROL ETT-6
Dimensions LxAxH (mm):
156x110x72

CONTROL ETT-6

Electronic step controller for control activation of up to 6 devices.

In combination with the CR-TEMP control, it allows the gradual start to be activated according to the selected temperature.

Each unit can control up to 6 devices activation (6A max.).