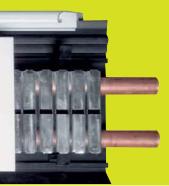


# **Climaboard**®

skirting-board heating systems





#### Skirting board heating system

Climaboard is a radiator, which consists of copper tubes, aluminum and PP (Polypropylene). The aim is to create a perfectly balanced heat environment.

It differs from the conventional heating system that we know till now, because it heats the space from the lowest point and through the radiation emitted by the heated walls.

#### How does Climaboard work?

Applying the laws of physics, Climaboard takes advantage of "the Coanda effect", in which the tendency of a moving fluid is to attach itself to a surface and flow along it.

Hence, Climaboard is usually mounted inside rooms on the exterior or structural walls where the warm air generated at skirting board level rises following the surface of the wall, effectively drying the wall and acting as an insulating layer to prevent cold air entering through the walls.

Thus the system provides comfort even in the most extreme outdoor conditions with a result of both natural and healthy, as the natural feeling of heat that the solar radiation gives during a sunny winter day!

#### **Climaboard versions**

#### **Hydraulic version**

Climaboard operates as a common radiator which is supplied by hot water from a complex of burner - boiler or a heat pump, provides to the space the heat that we need.

#### **Electric version**

In this case, a specific (220 V) electrical resistance is placed inside of Climaboard and by using a thermostat, we give the required heat. This version is especially attractive for cottages where the boiler-room installation is quite costly and difficult.

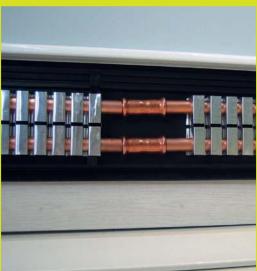


#### Simple installation

The installation of the thermal elements is very simple and almost no preparation work is necessary. Each part is cut to desired dimensions and angles. The base of PP (polypropylene) and the top profile of aluminum placed one inside the other and screwed to the wall. Then, mounting plastic clips are installed onto the PP base at 30 cm intervals in order to place the heat exchanger.

In the hydraulic version, the connection between the parts of heat exchanger and the provision of hot water may be done by suitable fittings and flexible connectors. In the electric version, the electrical resistances and the cable are placed inside the tubes of heat exchanger and connected. Finally, the front panel of aluminum is placed, after we give the proper form.







#### **Test reports**

Tests at the Politecnico di Milano show that rooms heated with Climaboard quickly achieve an even temperature distribution with as little as 1°C maximum difference between the floor and the ceiling, temperature for environments up to 3 meters high. During testing no hot or cold spots were observed. (Fig. 1)

#### Perfect aesthetics!

Climaboard after a series of patented innovations has managed to overcome the problems associated with earlier designs, in particular those of noise or loss of thermal continuity caused by differential expansion rates between copper pipes and aluminum fins.

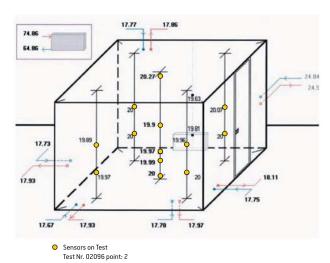
Climaboard has a unique, patented method by which the aluminium fins are attached to the copper pipes. Because the flange joint is free to expand and contract while still maintaining good thermal contact, in most situations there should not be a problem with noise. However, one or two clicks may be heard during initial heating up and cooling down cycles.

Climaboard is available in a wide range of colors and can be matched to any surface effect such as wood grain or marble from a sample or digital photograph. It can be painted just like radiators with good quality high temperature paint.

#### **Energy saving system**

Climaboard provides quick and efficient control over room temperature, with energy savings of up to 30% as there are no accumulations of wasted heat below the ceiling in addition with the lower volume of water (hot water is contained only in the heat exchanger).

Benefits include elimination of mould around corners and less micro-dust as there is no extra air circulation. (Fig. 2)



Politecnico di Milano-Departimento di Energetica Laboratorio Measure Recerche Termotecniche M.R.T.

Fig. 1

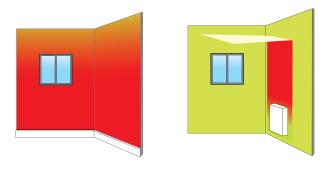


Fig. 2







Climaboard is an environmental friendly heating system with the following benefits:

- Energy efficient savings of up to 30%
- Unobtrusive, healthy and beneficial heat
- Works with gas, oil or electric power
- No hot or cold spots as little as 1° variation even up to 3 mtrs high
- Gets heat right into the corners
- No micro dust
- Inexpensive to install and maintain
- Retrofittable, even in apartments without room for a boiler!
- Stylish Italian design available in an infinite variety of finishes
- 10 year warranty on parts



Materials	Polypropylene, copper, alu
Dimensions	Height 140mm, width 30mm
Water capacity	0,266 l/m
Input water temperature oC	40 45 50 55 60 65 70
Heating output Watt/meter	95 118 153 178 203 218 240

### Certification

Climaboard is approved to EN442-1 and -2 for water based and electrical heating systems  ${}^{\circ}$ 



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