



## SUNPOWER s.r.o.

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## Radiantly warm in winter Refreshing cool in summer

### Warms naturally like the sun:

Long wavelength (95%) radiant heat, similar to that of a tiled stove, fills the room in all directions.

The climate is pleasant in every part of the room, even with a high ceiling.

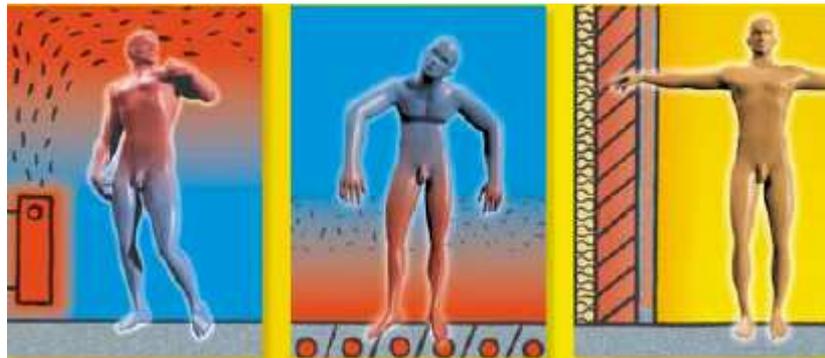
You feel totally comfortable, as if you had found a place in the summer sun.



### Stirs up no dust:

Radiant heat does not result in air movements and does not spread dust around as do conventional heating systems with vertically rising air. With our product there is a "calm". No dust is stirred up and the air in the room remains clear.

You always experience well-being and a pleasant room-climate!



### Large-area low temperature system reduces energy consumption:

The climatic wall/floor heats extremely economically. It uses a low temperature over a large area and can therefore exploit the storage capacity of the wall.

### Cools pleasantly as a mountain stream:

In summer, cold water circulates through the heating system and cools the walls. Heat is drawn from the human body because according to the laws of physics, the body at the higher temperature always gives heat to the body at the lower temperature. On the hottest of days you experience pleasant, natural cooling – as if you were near a mountain stream.

Conventional air-conditioning systems cool down the air in the room. The sudden temperature difference on entering the room can lead to a cold shock and catching cold. The climatic wall/floor does not cool the air but draws off the body heat. As a result you experience a gentler cooling which is much more pleasant and bearable.

Much less energy consumption than an air conditioner:

The principle of cooling the body instead of the entire air in the room, means that the climatic wall/floor has much lower running costs than normal air-conditioners. In addition, the cooling energy can also be used for preheating your hot water.

**It also functions under the roof:**

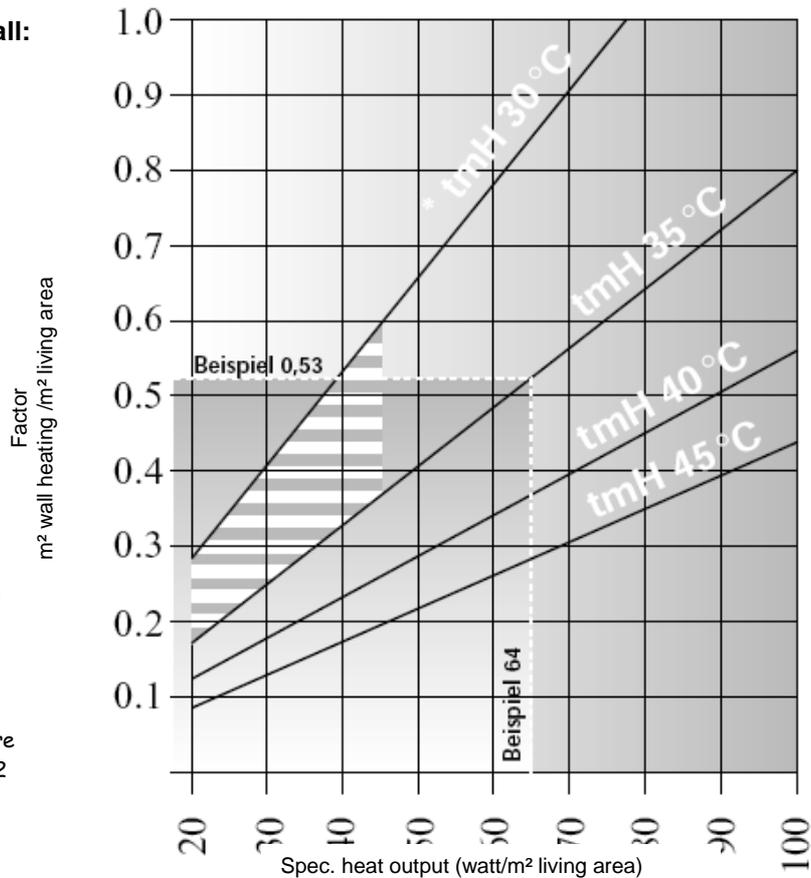
The climatic wall has special advantages for attic apartments, loft extensions and buildings with flat roofs. It maintains a pleasant room climate even when the sun is burning down on the roof.

**Design of the Climatic wall:**

Design data according To average hot-water Temperature.

-  Optimum design range
-  low-temperature heating
-  with auxiliary solar heating in well-insulated houses

\* average hot water temperature = (feed + return temperature)/2

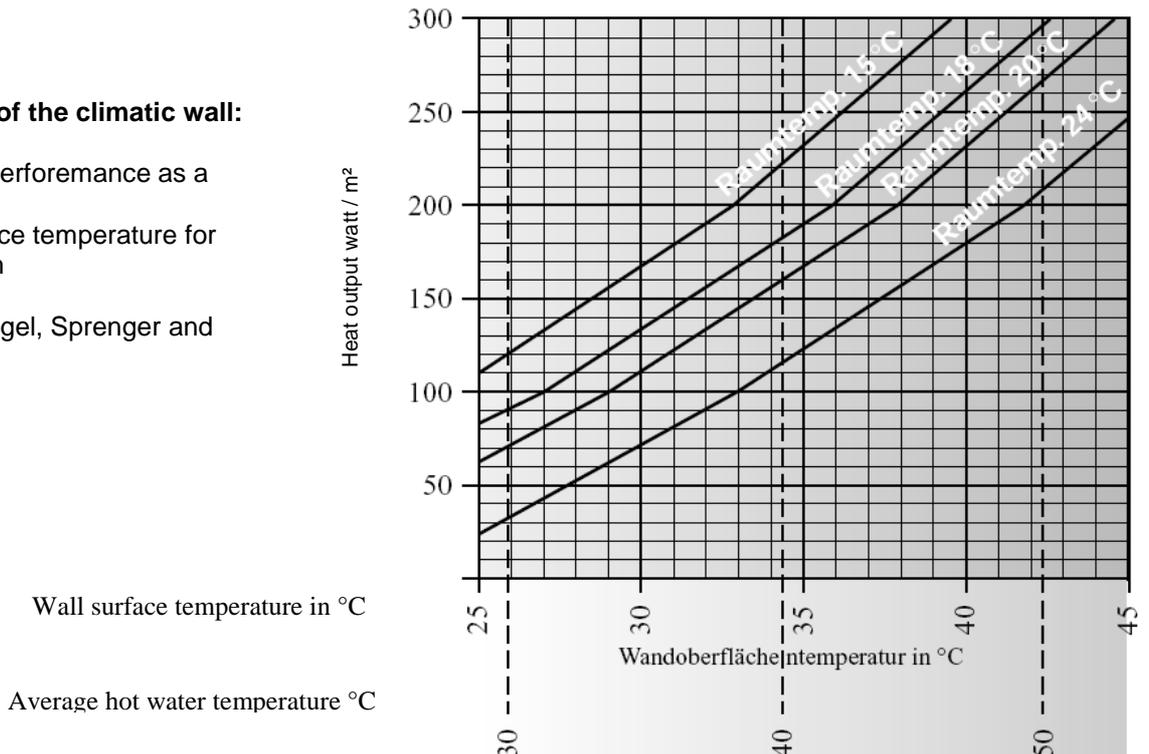


Example: You have a tmh of 35°C ; a heat output of 64 watt/m² ; so you will get a factor of 0,53. That means you multiply the m² living area with this factor and you will get the needed area of the climatic wall.

For a 20 m² room you need 10,6 m² climatic wall.

**Heat output of the climatic wall:**

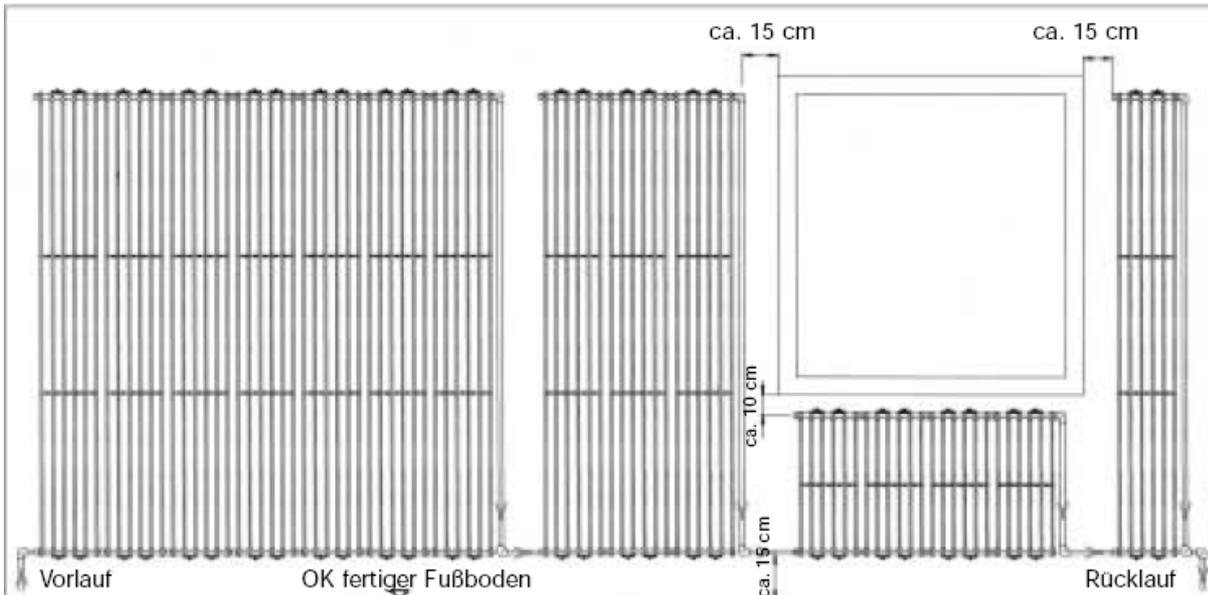
Heat output performance as a function of the wall surface temperature for different room temperatures (after Recknagel, Sprenger and Hönnmann,...).



**Fit the climatic wall:**

You can cover the climatic wall/floor with all usual materials.

Plaster, wood, tile,..... Furnitures in front of the wall does not reduce the heat output.



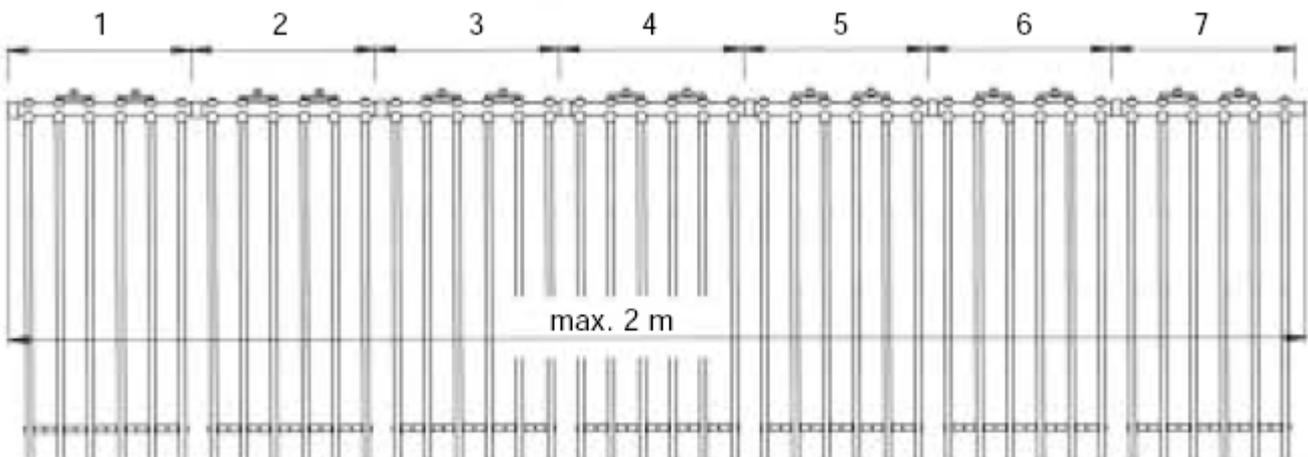
It is very simple to fit it on the wall.

It will be delivered in seperate parts.

The parts were welded with a special tool and fixed to the wall with simple nails.

The use of single-cast components in the climatic wall

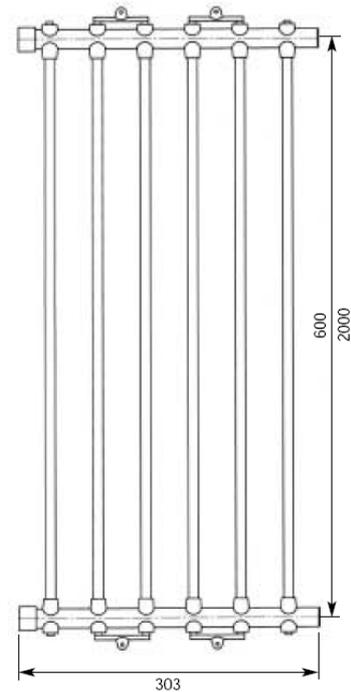
Make it especially easy to install and keeps the price at a reasonable level.



Standard length: 600 mm / 2000 mm

Special requirements are available (max. Lengths 4000 mm).  
Width is always 303 mm !

**Strongly recommended for careful budgeteers.  
Natural energy-saving radiant heat in winter,  
pleasant cooling in the summer  
and at running costs which are way below those  
for an air-conditioner  
– a hit for every careful budgeteer -**



(climatic) Wall Heating

### *Radiantly Warm in Winter...*

This system is installed in either the floor or the wall it works by radiantly heating the room with long wave radiation (95%) resulting in a pleasant climate and temperature throughout the room. This type of system is unique in the sense that it works in harmony with your body, this is due to the large volume of water within the system which heats at a lower temperature to acclimatise your home; as opposed to the conventional heating systems such as; radiators and under floor heating which work at higher temperatures, resulting in moisture being extracted from the body.

The climatic wall/floor heats extremely economically, it uses a low temperature over a large area and therefore can exploit the storage capacity of the wall. It is very simple and quick to fit onto walls or into floors. It is delivered in separate parts and the parts are then welded with a special tool and fixed to the wall with simple nails.

Climatic systems do not stir up dust in rooms; the radiant heat does not result in air movements and does not spread dust around unlike conventional heating systems with vertically rising air. You can cover the climatic floor/wall with all the usual materials...Plaster, wood, tile etc. Also placing furniture in front of the wall does not reduce the heat output



## *Refreshingly Cool in Summer.....*

With the use of this system on the hottest of days you can experience pleasant, natural cooling. In summer, cold water can be circulated through the heating system to cool the walls. Heat is drawn from the human body by the climatic wall/floor because according to the laws of physics, the entity at the higher temperature always gives heat to the entity at the lower temperature. Conventional air-conditioning systems work by cooling down the air in the room, this causes a sudden temperature difference on entering the room which can lead to an unpleasant cold shock. The climatic/floor does not cool the air but draws off the body heat; as a result you experience a gentler cooling which is much more pleasant and bearable.



The principle of cooling the body instead of the entire air in the room means that the climatic wall/floor has much less energy consumption than normal air conditioners and therefore has a much lower running costs. In addition, the cooling energy can also be used for preheating your hot water. The climatic wall is very effective for use in attic apartments, loft extensions and buildings with flat roofs as it maintains the room climate even when the sun is burning down on the roof.