

## FCN CLIMATE WALL

### PRODUCT INFORMATION

The No. 1 solution to build your energy-efficient home



Cool in summer



Warm in winter

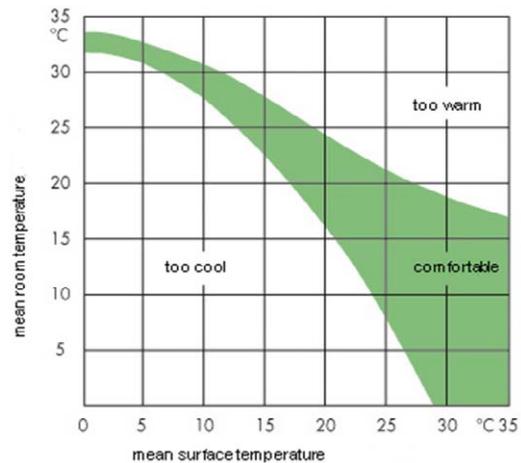
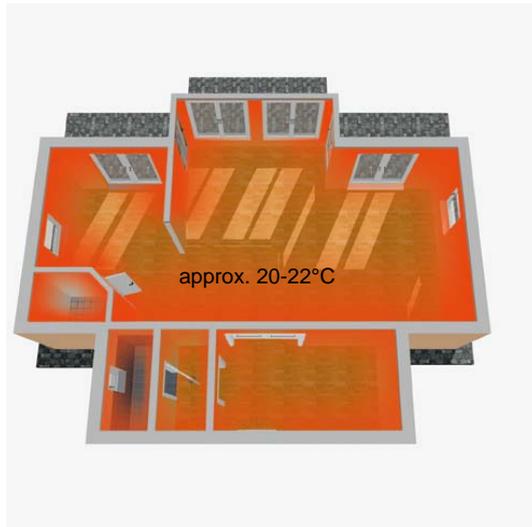
### Controlling component temperatures in new buildings

Unlike conventional systems used for the heating and cooling of buildings, the temperature control of structural components relies on existing building components, such as walls and ceilings, that are used as heating and cooling surfaces. Integrated piping runs through the building – just like a vascular system. The water circulating in these pipes can be heated and cooled as and when required. The FCN climate wall is a component enabling the walls to act as heaters in winter and as coolers in summer.

### THE PERFORMANCE *PLUS*

- Heating suitable for allergy sufferers, eliminating dust
- Suitable for all low-temperature heating systems
- No impact of radiators on interior design
- Extensive radiant surfaces for heating and cooling

Short construction time due to prefabrication



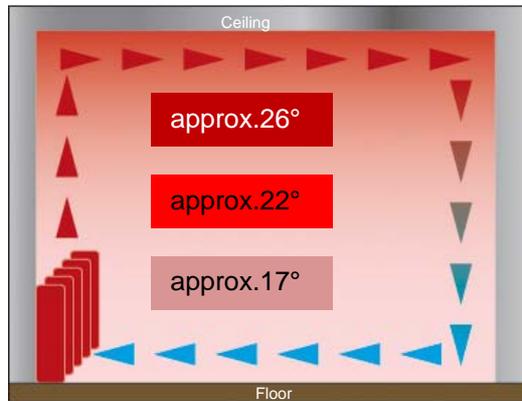
**Heat distribution** - *pleasant radiant heat and comfortable temperature - enables precise control of radiant heat - no draughts*

**IN A NUTSHELL:** FCN climate walls provide users with healthy radiant heat in winter and with the perception of cool walls in summer. The system to control the temperature of structural components generates no noise and draughts or adverse effects on indoor comfort that are otherwise associated with air-conditioning systems. The low temperature gradients make FCN climate walls the perfect choice for using renewable energy sources.

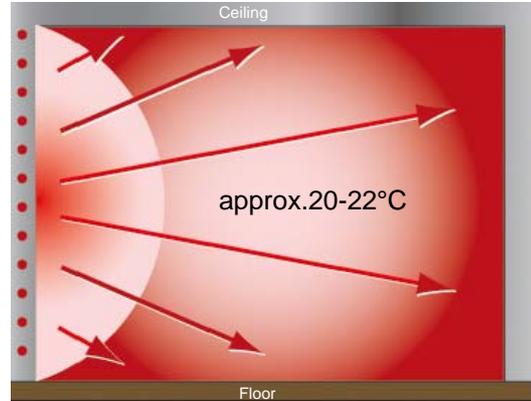
## THE FCN BENEFITS

- **No additional cost**  
for building designs without radiators, but can also be combined with underfloor heating
- **Heating cost reductions**  
Heating costs are reduced by lowering flow temperatures whilst utilising the maximum possible area for the wall units
- **Heat storage**  
Rooms are kept cool in summer and comfortably warm in winter as a result of the appropriate interaction of thermal insulation and heat storage in a wall

### Conventional radiators



### FCN climate wall



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|---|--|
| <ul style="list-style-type: none"> <li>- Rely on convection</li> <li>- Circulating air stirs up dust</li> <li>- Temperature gradient causes perception of draughts</li> <li>- Higher room temperature required</li> </ul> | <ul style="list-style-type: none"> <li>+ Pleasant radiant heat</li> <li>+ Pleasant “comfort temperature”</li> <li>+ Energy-saving</li> </ul> |
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## TECHNICAL SPECIFICATIONS

### Design

The FCN climate wall comprises lightweight concrete elements for external and internal walls with water pipes integrated as early as at the prefabrication stage in the factory. The water flowing through these pipes can be cooled or heated as and when required.

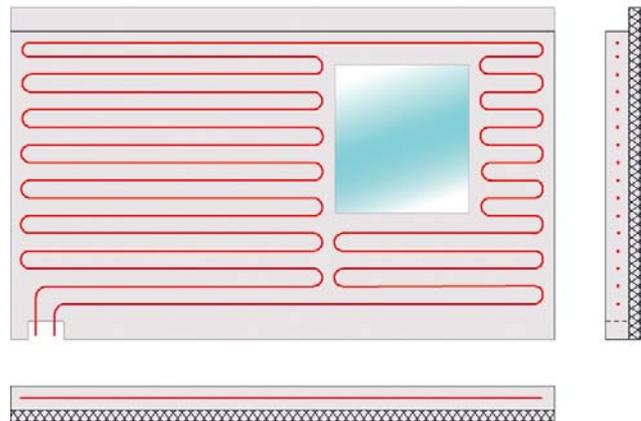
The wall units thus serve two purposes: Besides room partitioning, they also act as heaters or absorption surfaces for heat dissipation.

The individual elements are manufactured to full storey height. External wall units are available in thicknesses of 20.0, 24.0 and 17.5 cm whereas internal wall units are available in thicknesses of 15.0, 17.5, 20.0 and 24.0 cm.

The climate wall units are made from no-fines lightweight concrete. This material is perfectly suited for this purpose because it ensures heat insulation and storage whilst also providing outstanding soundproofing performance. Upon request, external wall units are fitted with a composite thermal insulation system at the factory. Its surfaces are completely level and plane-parallel.



Model of FCN climate wall



Prefabrication using formwork systems (sketch)

## PRODUCTION

