



HEAT PUMP + RADIANT SYSTEM

Why do heat pumps and radiant systems work so well together?

A heat pump generally operates under more favourable conditions when it produces water at lower temperatures.

Thanks to its large heat transfer surface, a radiant system can distribute heat throughout a building using water at lower temperatures than terminals designed for high-temperature operation.

Mirai SMI 4.0

Mirai SMI Leaf

EMMETI Floor

Efficiency depends not just on the unit, but on the conditions in which it operates.



THE KEY PRINCIPLE:

Flow temperature makes the difference

Lower temperatures, more favourable operating conditions.

01 35 °C

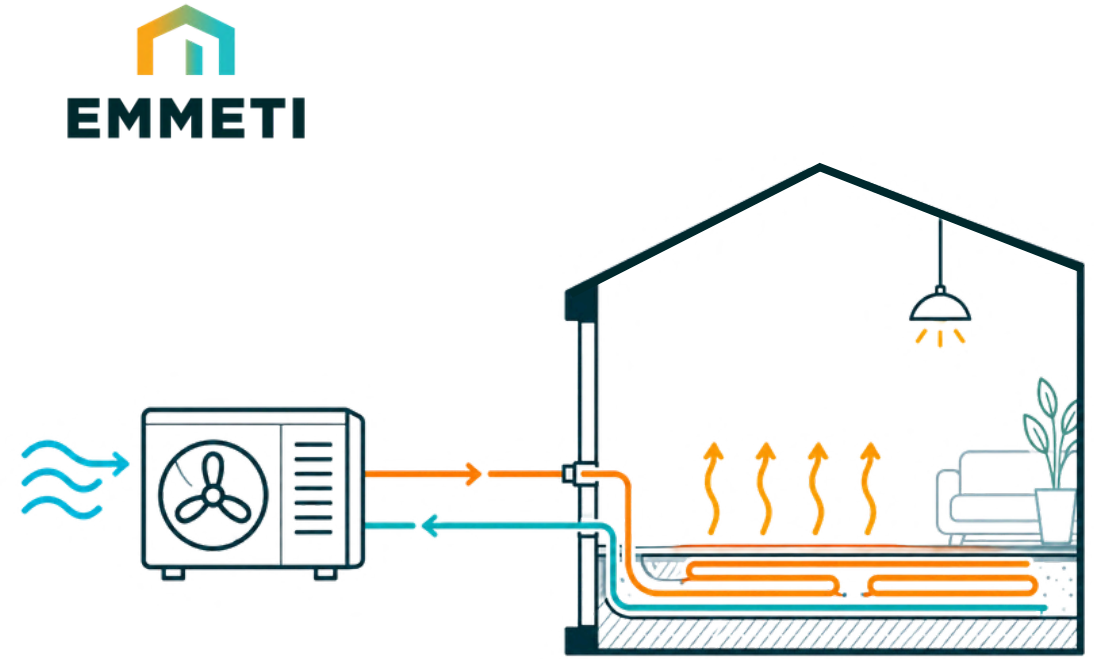
Reference temperature for low-temperature applications.

02 Lower temperature lift

The lower the temperature required by the system, the smaller the temperature lift the heat pump must provide.

03 Large heat transfer surface

Radiant systems distribute heat over a large surface, allowing lower water operating temperatures.



Low temperature + large heat transfer surface = more favourable conditions

INTEGRATED SYSTEM

Heat generation and distribution work together

The heat pump generates thermal energy, while the radiant system distributes it throughout the building using low-temperature water.



MIRAI SMI 4.0 / MIRAI SMI Leaf

Inverter air-to-water heat pumps designed to match their output to system demand.

EMMETI Floor

The large radiant surface distributes heat throughout the building using low-temperature water.

CONTROL

Water temperature is adjusted to operating conditions and the building's actual heating needs.



RESULT

Efficiency begins with the system

When designed to work together, each component can operate in conditions suited to the building's actual needs, contributing to comfort and overall system efficiency.

For EMMETI, efficiency is designed as a system.

Generation · distribution · heat emission · control



MIRAI → low-temperature water → EMMETI Floor → indoor comfort