



CEILING HOME SMART & CEILING HOME PLUS RADIANT CEILING SYSTEMS

CEILING HOME SMART

DESCRIPTION

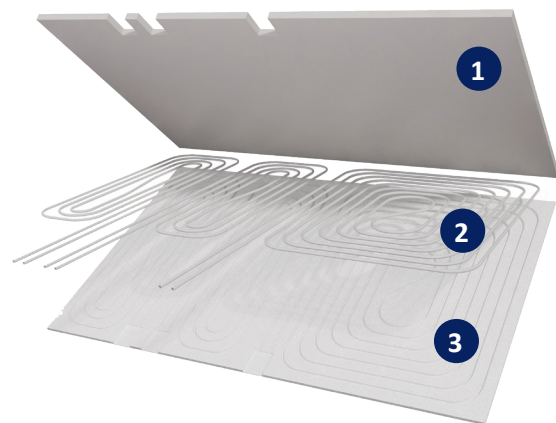
Ceiling Home Smart is a system solution designed for the installation of radiant ceiling heating and/or cooling systems.

The panel used in **Ceiling Home Smart** is a special high-density core board (Type D), made of gypsum enhanced with glass fibers and wood fibers, providing a high level of surface hardness and mechanical strength.

- A single panel with low water absorption characteristics, divisible into 3 sub-modules, ensuring adaptability to any room where installation is required and guaranteeing maximum coverage.
- Panel dimensions: 2000 × 1200 × 45 mm, made of gypsum plasterboard. Polyethylene PE-X piping Ø12 × 1.1 mm is used to form the circuits, with a laying pitch of 50 mm, integrated within the sub-modules and covered with an insulating layer.

STRUCTURE

1. Insulating layer made of EPS panels with a thickness of 30 mm.
2. Radiant circuits consisting of **polyethylene piping Ø12 × 1.1 mm, with a laying pitch of 50 mm.**
3. Gypsum plasterboard panels coated with a material capable of capturing and neutralizing indoor pollutants. Internally grooved to house the radiant circuit pipes and marked with a printed layout of the pipe path on the underside of the panels.



CEILING HOME PLUS NEW

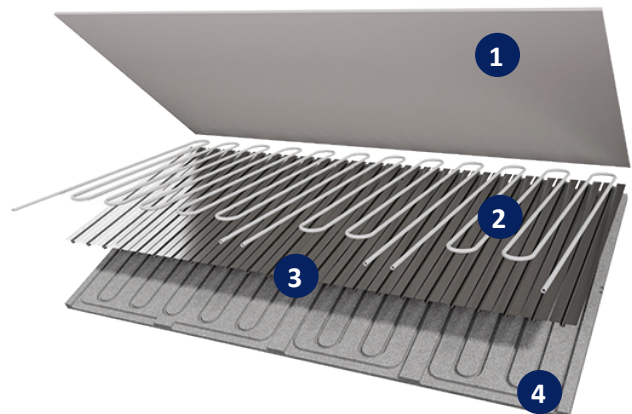
DESCRIPTION

Ceiling Home Plus is a system solution for the installation of radiant ceiling heating and/or cooling systems. As an evolution of the **Ceiling Home Smart** system, the new panels feature enhanced technical and dimensional characteristics.

- Available in 2 models, divisible into 3 or 2 sub-modules, ensuring adaptability to any room where installation is required and guaranteeing maximum coverage.
- Panel dimensions: 2400 × 1200 × 51.5 mm, made of gypsum plasterboard with rounded longitudinal edges. Multilayer piping Ø16 × 2 mm is used to form the circuits, with a laying pitch of 100 mm, integrated within the sub-modules and covered with graphite-enhanced insulating panels.

STRUCTURE

1. Gypsum plasterboard panels with rounded edges, coated with a material capable of capturing and neutralizing indoor pollutants, and featuring printed circuit layouts on the underside of the panels.
2. Radiant circuits made of **multilayer piping Ø16 × 2 mm, with a laying pitch of 100 mm.**
3. Aluminum plates for pipe anchoring, improving heat transfer from the thermal carrier and enhancing radiant performance.
4. Insulating layer made of EPS panels with a thickness of 39 mm.

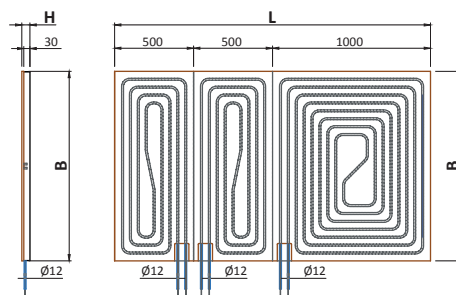


CEILING HOME SMART

DIMENSIONAL CHARACTERISTICS

		Code	
		450 0701 (3 modules)	450 0702 (End panel)
Length (L)	mm	2000	
Width (B)	mm	1200	
Height (H)	mm	45	
Insulation thickness	mm	30	
Total panel surface area	m ²	2,4	
Sub-modules / Circuits	n°	3	-
PE-X piping $\varnothing 12 \times 1.1$ mm	m	19,3 + 9 + 9	-
Laying pitch	mm	50	
Water content	L	2,8	-
Empty weight (full panel)	kg	16,5	

3 MODULES



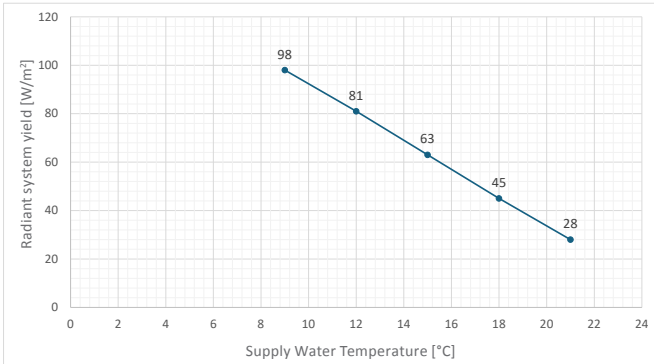
CASE HISTORY

Aparthotel in Fano (PU): A multi-story residential complex constructed entirely of engineered wood (X-LAM), featuring cutting-edge construction solutions designed to maximize occupant comfort.



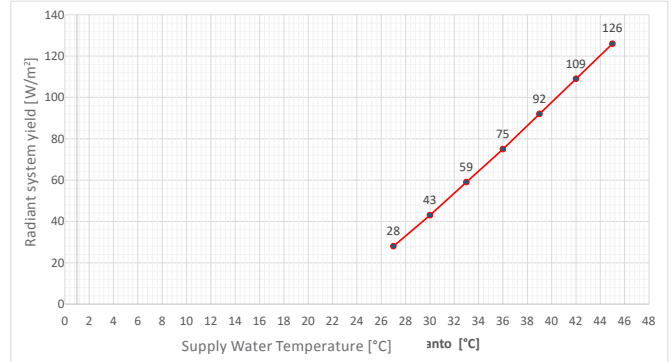
THERMAL PERFORMANCE

RADIANT SYSTEM YIELD – COOLING



Room air temperature °C	Supply water temperature °C	ΔQ^* °C	Power W/m ²
26	9	17	98
26	12	14	81
26	15	11	63
26	18	8	45
26	21	5	28

RADIANT SYSTEM YIELD – HEATING



Room air temperature °C	Supply water temperature °C	ΔQ^* °C	Power W/m ²
20	27	7	28
20	30	10	43
20	33	13	59
20	36	16	75
20	39	19	92
20	42	22	109
20	45	25	126

* ΔQ : Thermal gradient between system and environment, calculated as the difference between supply water temperature and indoor air temperature.

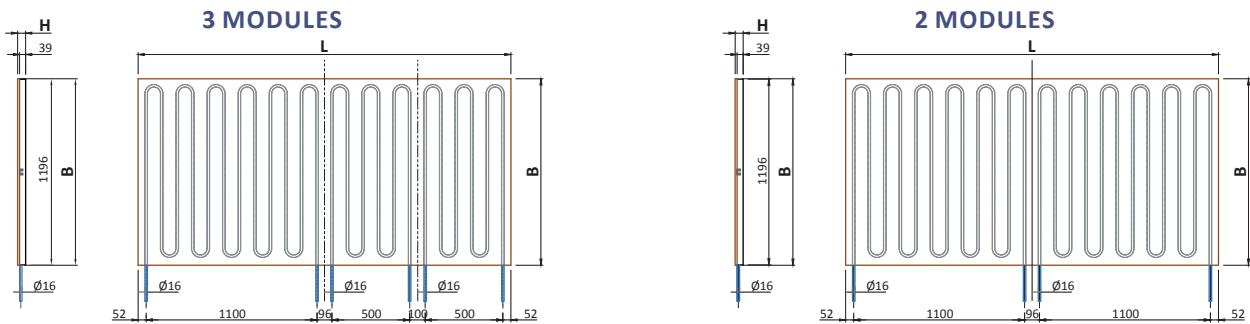


From the images, the main backbone of the system can be seen, consisting of multilayer piping $\varnothing 20 \times 2$ mm, properly insulated to ensure correct operation during summer cooling. Connections between the panels and the backbone are made using specific press-fit fittings (Art. 5581C - 5581 - 5581T). The use of end panels also allows for the integration of ceiling lighting points.

CEILING HOME PLUS NEW

DIMENSIONAL CHARACTERISTICS

		Code		
		450 0770 (3 modules)	450 0771 (2 modules)	450 0772 (End panel)
Length (L)	mm	2400		
Width (B)	mm	1200		
Height (H)	mm	51,5		
Insulation thickness	mm	39		
Total panel surface area	m ²	2,88		
Sub-modules / Circuits	n°	3	2	-
Interassi attacchi mandata/ritorno	mm	1100÷500÷500	1100÷1100	-
Tubazione multistrato Ø16x2 mm	m	15 + 7 + 7	15 + 15	-
Laying pitch	mm	100		
Water content	L	3,4	3,4	-
Water-filled active panel weight	kg	39,0	38,5	-
Weight of the passive panel	kg	-	-	28,9



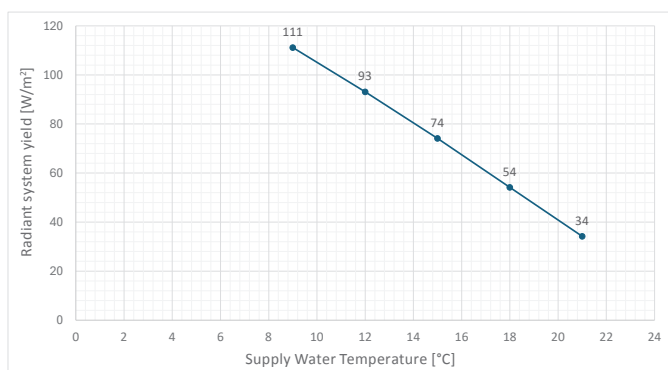
CASE HISTORY

Residential buildings in San Benedetto del Tronto (AP): A multi-story wooden residential complex featuring cutting-edge construction solutions designed to ensure maximum occupant comfort. As in this case study, the entire structure is built using X-LAM engineered wood, a technology that combines high structural performance, sustainability, and comfort.



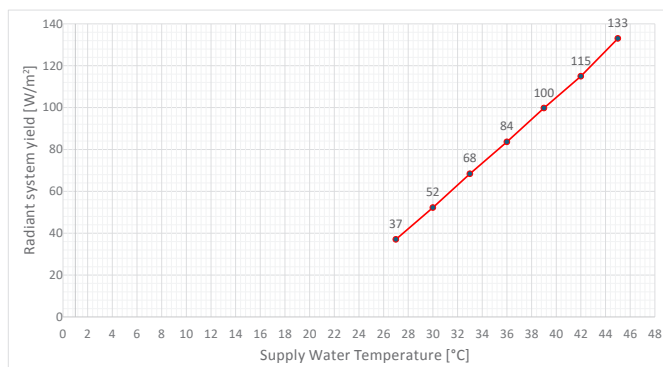
THERMAL PERFORMANCE

RADIANT SYSTEM YIELD – COOLING



Room air temperature °C	Supply water temperature °C	ΔQ^* °C	Power W/m ²
26	9	17	111
26	12	14	93
26	15	11	74
26	18	8	54
26	21	5	34

RADIANT SYSTEM YIELD – HEATING



Room air temperature °C	Supply water temperature °C	ΔQ^* °C	Power W/m ²
20	27	7	37
20	30	10	52
20	33	13	68
20	36	16	84
20	39	19	100
20	42	22	115
20	45	25	133

* ΔQ : Thermal gradient between system and environment, calculated as the difference between supply water temperature and indoor air temperature.



From the images, the main backbone of the system can be seen, consisting of multilayer piping $\varnothing 20 \times 2$ mm, along with the corresponding connections to the **Ceiling Home Plus** radiant panels.

The installation is completed with the supply and distribution lines dedicated to the air handling units.



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