

Radiant ceiling systems.

Leonardo Click&Safe & Magic ceiling panels.

radiant heating
& cooling
components

OEM



Climatic comfort that comes from above



It becomes a ceiling in its own right

The Leonardo Click&Safe system is installed like a traditional plasterboard ceiling.



Easy to install in all conditions

Whether new build or renovation, the Leonardo Click&Safe system can be installed quickly.



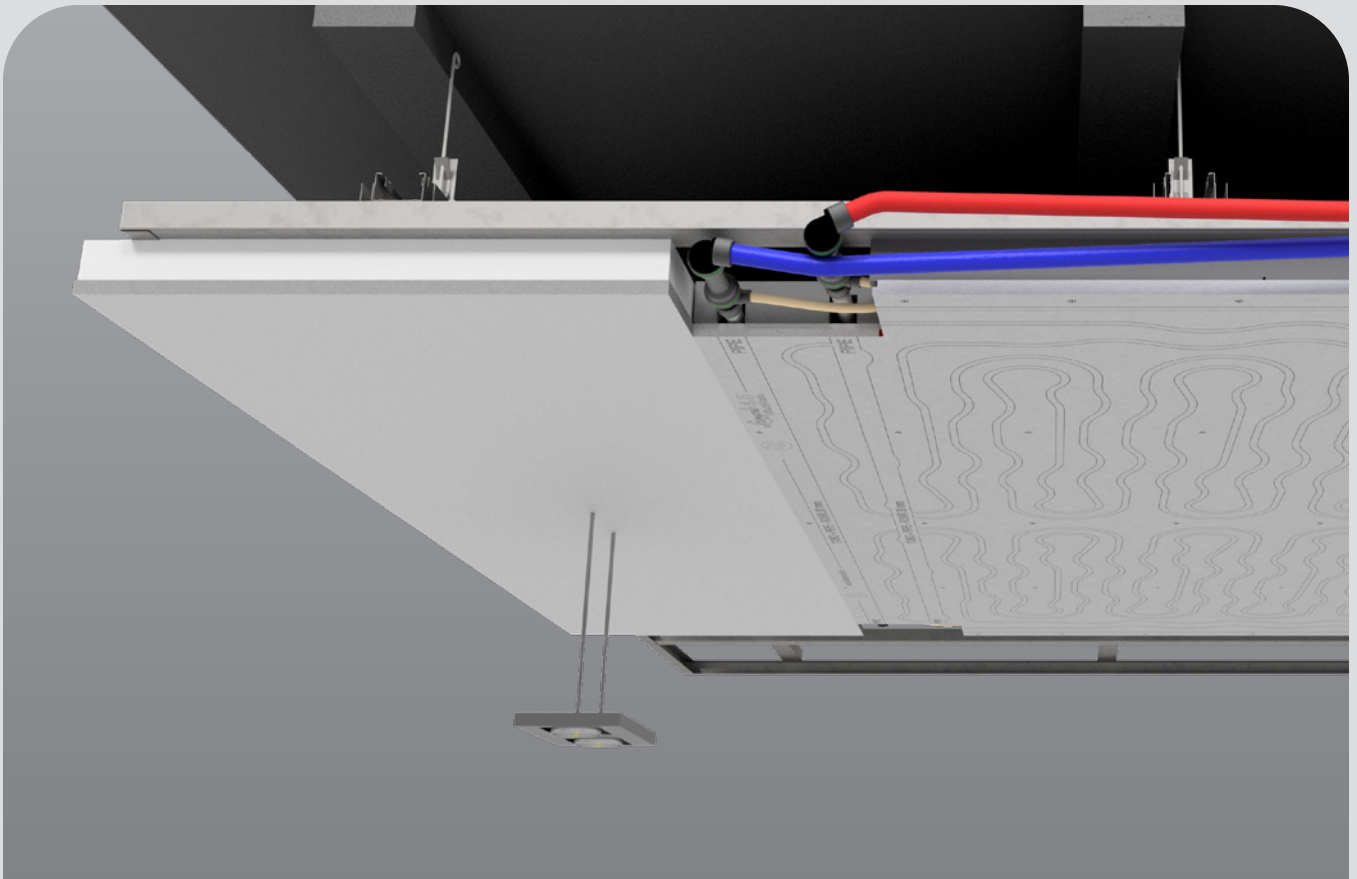
Design flexibility and reduced brickwork

The system is suitable for any project and adapts to any type of surface and environment.



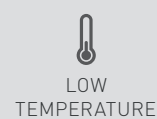
Fast start-up

The system reaches set temperature within minutes, reducing waste and energy consumption.



The advantages of cooling/heating ceiling systems

- perfect application for cooling
- well suitable for heating
- fast response time for cooling up/down
- perfect for residential building
- perfect for office building



Simplified method of installation

- the new tool-free fitting system Click&Safe guarantees a secure and extremely fast connection of the ceiling panels
- the fittings are already pre-assembled at the factory and only a connecting element has to be clipped in on site
- milled plasterboard with pipe 10 x 1.3 mm pre-assembled
- laser marking of the pipe guide for maximum safety during assembly
- integrated distribution line, multi-layer pipe 20 x 2.0 mm

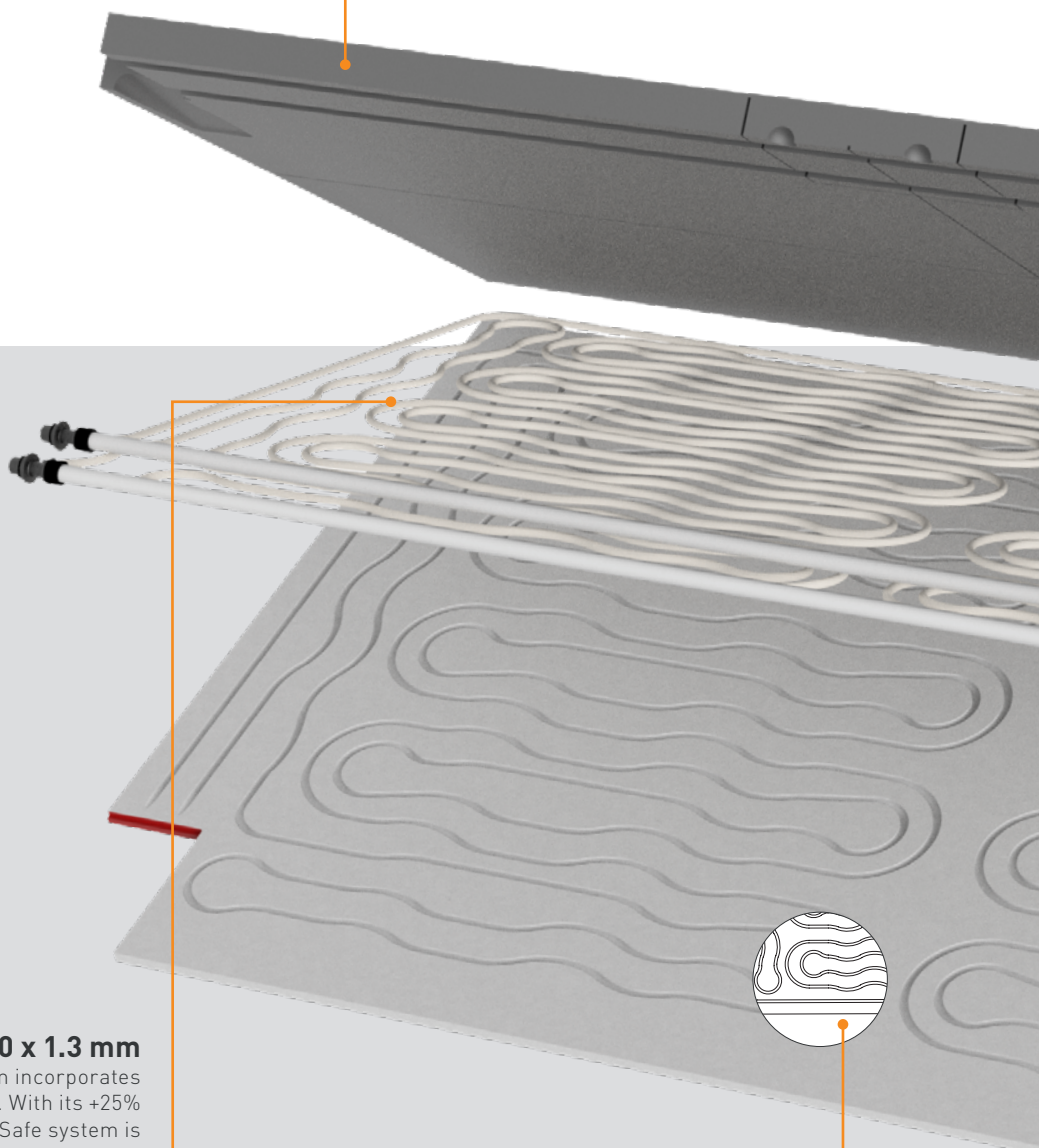
The new Leonardo Click&Safe ceiling panel

The Leonardo Click&Safe system allows for a ceiling radiant system for multiple applications. This system is composed of modular plasterboard panels with a 5-layer PE-RT pipe already inserted and arranged in a serpentine pattern so as to maximise the exchange surface between piping and plasterboard.

The plasterboard panel is supplied coupled with an insulating board to ensure high thermal performance.

Always insulated system

The insulation board is increased in accordance with the requirements of the UNI EN 1264:2021 allowing thermal losses to be limited, increasing the performance of the entire system.



5-layer PE-RT pipe 10 x 1.3 mm

The Leonardo Click&Safe system incorporates a 10 x 1.3 mm diameter pipe. With its +25% diameter, the Leonardo Click&Safe system is significantly more efficient*.

** compared to traditional systems that adopt 8 x 1.1 mm pipes*

Laser tracing

Laser marking clearly indicates the presence of the pipe, preventing accidental drilling during installation.

Hydraulic backbone

The panel is complete with hydraulic piping for connecting the panels in series. The pipework is made of multilayer PE-RT Type II 20 x 2 mm. The special fitting certified with in-line leak test is pre-assembled.

New Click&Safe fitting



CONNECT 10 M² IN LESS THAN A MINUTE!

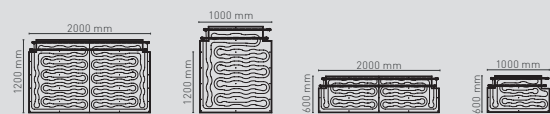
NO EQUIPMENT REQUIRED

VISUAL SECURITY THANKS TO THE CLIP



Safety and durability

Compression fittings pre-assembled on the pipe to ensure maximum tightness over time, with double gasketed fittings (Click&Safe) between the panels that close on the calibrated fitting and not on the pipe. Fittings tested at different temperature and pressure cycles in a certified laboratory.



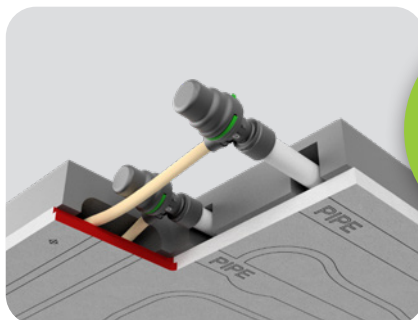
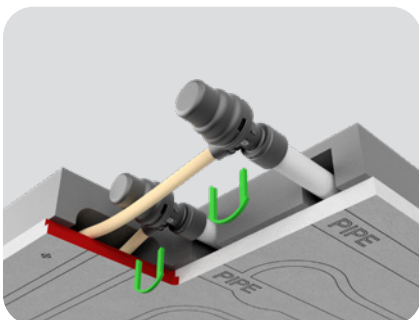
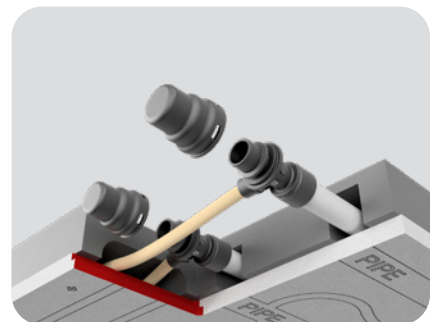
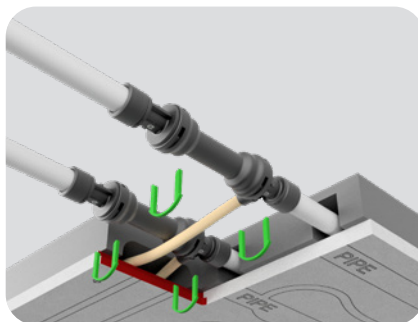
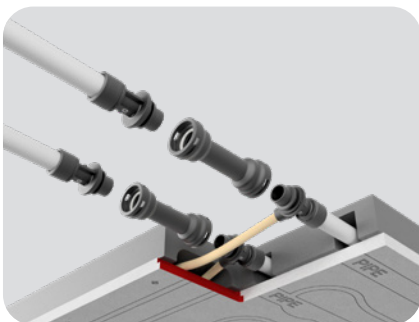
Panel range

A wide range of variants is available, which differ in terms of material type (plasterboard, insulation), dimensions (1200 x 2000 mm, 1200 x 1000 mm, 600 x 2000 mm, 600 x 1000 mm) and spacing (5.5, 3.5, 3 cm).



Effortless, tool-free mounting

The new tool-free fitting system guarantees a secure and extremely fast connection of the ceiling panels. The fittings are already pre-assembled at the factory and only a connecting element has to be clipped in on site. End caps can be mounted at the end of the lines using the same simplified principle.

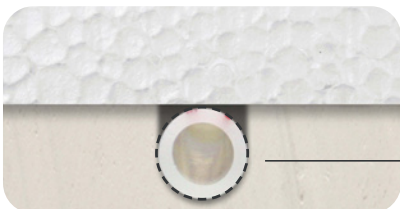


**CONNECT
10 M² IN
LESS THAN A
MINUTE!**

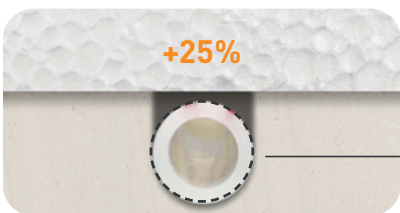


10 x 1.3 mm PE-RT pipe (5L)

Panel division

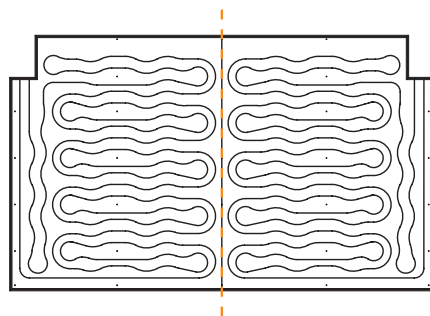


Conventional pipe
8 x 1.1 mm

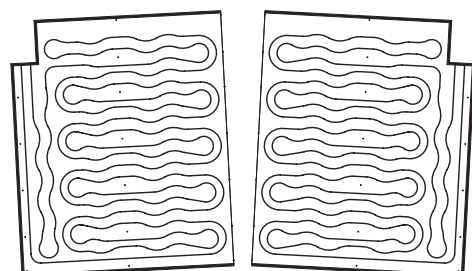
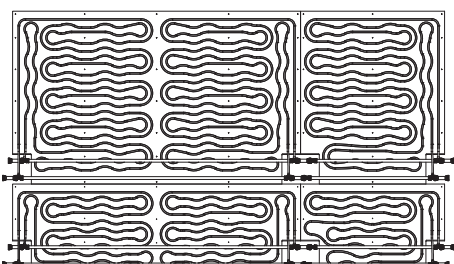


Pipe
10 x 1.3 mm

The new tool-free fitting system guarantees a secure and extremely fast connection of the ceiling panels. The fittings are already pre-assembled at the factory and only a connecting element has to be clipped in on site. End caps can be mounted at the end of the lines using the same simplified principle.



Integrated distribution line (multi-layer 20 x 2 mm)



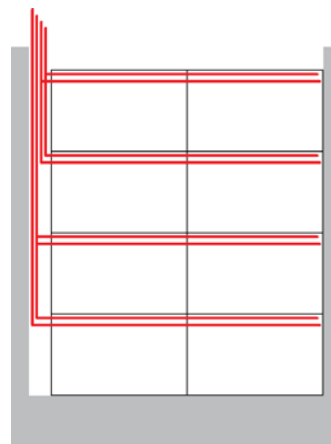


Maximum active surface

The ceiling system is able to maximise the active surface (up to 96%*) compared to a conventional ceiling system (~72%*), as it incorporates the conveyance lines. A broader active surface generates greater heating or cooling uniformity, thus improving the degree of environmental comfort.

Certified system

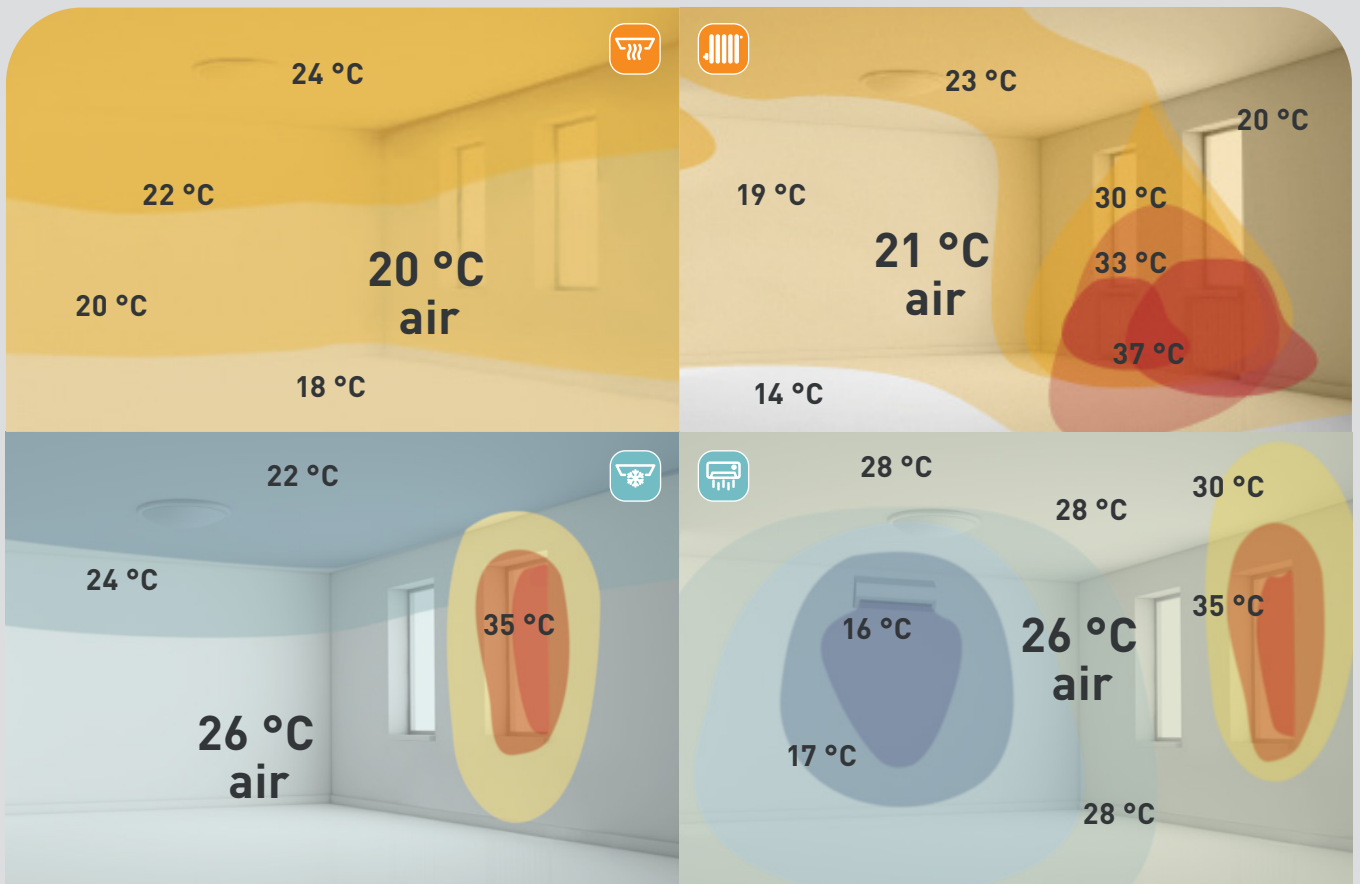
Certified heating and cooling performance according to **EN 14037-5 – EN 14240**.



72%*
Conventional
radiant ceiling system

96%*
Ceiling system
radiant ceiling system



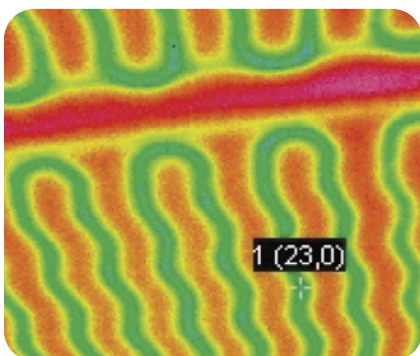


The natural environment

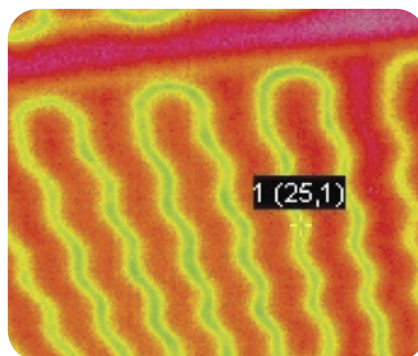
The radiant ceiling heating system transmits heat by radiation. Unlike a radiator, which heats the surrounding air by directing it upwards and generating a convective motion, radiant ceiling heating creates a uniform zone of comfort without causing air movement. In cold air systems with split or fan coil units, air movement is generated that creates stratification and often discomfort to people if the machines are not correctly positioned. The radiant ceiling system cools all the surfaces of the room homogeneously, discharging energy from the mass and creating the right thermal exchange with the people living in the room.

Low thermal inertia

The diameter and thickness of the pipe used (10 x 1.3 mm), the piping integrated into the plasterboard and the special serpentine pattern of the piping make it a high-performance ceiling system with very low thermal inertia. Below are two thermographic pictures of the ceiling system operating in cooling mode with an average water temperature of 18 °C. As can be noticed, after a mere 20 minutes the system has already reached full power.



5 minutes from start-up

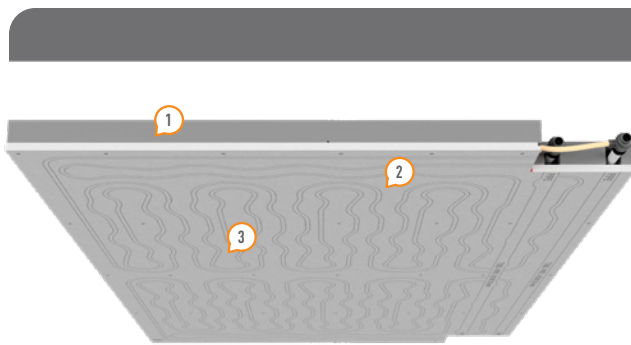


20 minutes from start-up

Leonardo Click&Safe 5.5

- WSP Lab certified yield
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)

The ceiling board 5.5 system is composed of a 15 mm plasterboard panel paired with a 45 mm expanded polystyrene panel sintered with graphite (thermal conductivity 0.031 W/mK according to EN 13163) including factory-integrated 5-layer pipes made of PE-RT type I (DIN 16833 / ISO 24033 / ISO 22391) with EVOH oxygen barrier. The pipe is arranged in a wave-like serpentine pattern so as to maximise the heat-exchange surface between the piping and the plasterboard. There are lasered markings of the pipe course on the visible board surface. In the insulation is integrated the 20 x 2 mm multi-layer PE-RT/ALU/PE-RT pipe connection line to simplify and optimise the connection of the panels to the manifold.



1. EPS with graphite insulating board
2. Plasterboard
3. Laser-engraved pipe guides for PE-RT type I 10 x 1.3 mm pipe with 5.5 cm pipe spacing

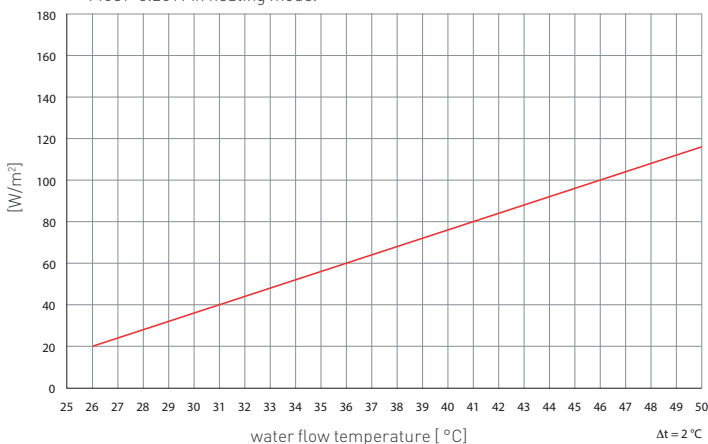
		ARTICLE	DESCRIPTION	
		30030051500000	Ceiling board 5.5 1200 x 2000 mm	
		30030052600000	Ceiling board 5.5 1200 x 1000 mm	
		30030052500000	Ceiling board 5.5 600 x 2000 mm	
		30030052700000	Ceiling board 5.5 600 x 1000 mm	
INSULATION	sintered EPS with graphite			
λ_D	0.031 W/mK (insulation)			
PANEL	plasterboard			
THICKNESS	60 mm (45 + 15)			
WEIGHT*	~13.5 kg/m ² (1200 x 2000) ~13.8 kg/m ² (600 x 2000) ~13.3 kg/m ² (1200 x 1000, 600 x 1000)			
PIPE	10 x 1.3 mm			
PIPE SPACING	5.5 cm			
		<ul style="list-style-type: none"> ● PH: 76.9 W/m² Water inlet 40° C, $\Delta\theta = 2K$ ● PC: 47.7 W/m² Water inlet 15° C, $\Delta\theta = 2K$ 		

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

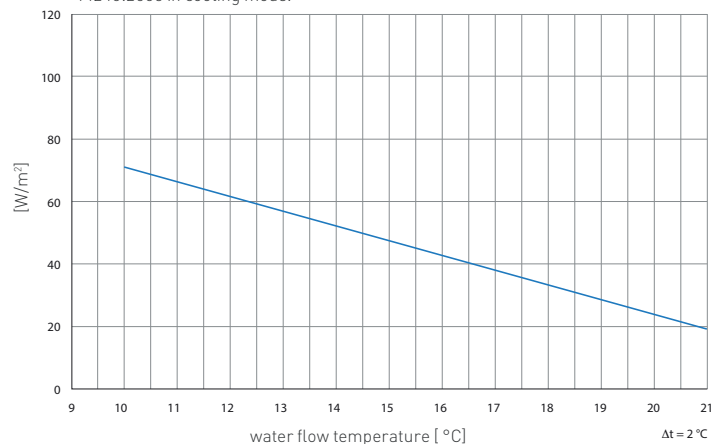
WSP^{lab}



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

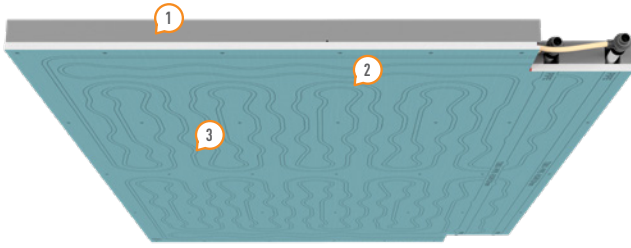
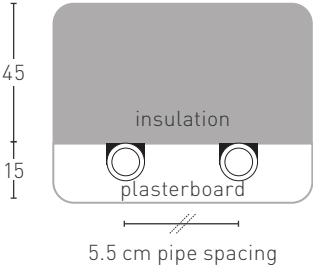
WSP^{lab}



Leonardo Click&Safe 5.5 HYDRO

- WSP Lab certified yield
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)
- easy assembly thanks to standard modularity

The ceiling board 5.5 system is composed of a 15 mm plasterboard panel paired with a 45 mm expanded polystyrene panel sintered with graphite (thermal conductivity 0.031 W/mK according to EN 13163) including factory-integrated 5-layer pipes made of PE-RT type I (DIN 16833 / ISO 24033 / ISO 22391) with EVOH oxygen barrier. The pipe is arranged in a wave-like serpentine pattern so as to maximise the heat-exchange surface between the piping and the plasterboard. There are lasered markings of the pipe course on the visible board surface. In the insulation is integrated the 20 x 2 mm multi-layer PE-RT/ALU/PE-RT pipe connection line to simplify and optimise the connection of the panels to the manifold.

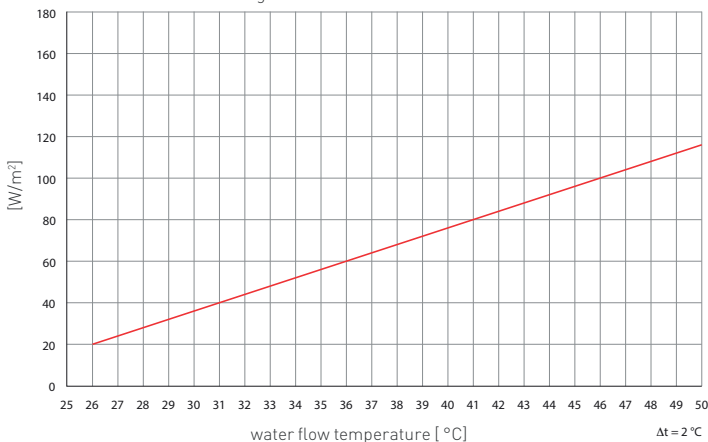
		ARTICLE	DESCRIPTION
		30030061500000	Ceiling board 5.5 HYDRO 1200 x 2000 mm
		30030062600000	Ceiling board 5.5 HYDRO 1200 x 1000 mm
		30030062500000	Ceiling board 5.5 HYDRO 600 x 2000 mm
<p>1. EPS with graphite insulating board 2. Water-repellent plasterboard 3. Laser-engraved pipe guides for PE-RT type I 10 x 1.3 mm pipe with 5.5 cm pipe spacing</p>			
INSULATION	sintered EPS with graphite		
λ_D	0.031 W/mK (insulation)		
PANEL	hydro plasterboard		
THICKNESS	60 mm (45 + 15)		
WEIGHT*	~14.2 kg/m ² (1200 x 2000) ~13.9 kg/m ² (1200 x 1000) ~14.4 kg/m ² (600 x 2000)		
PIPE	10 x 1.3 mm		
PIPE SPACING	5.5 cm		
			
		● PH: 76.9 W/m ² Water inlet 40° C, $\Delta\theta = 2K$ ● PC: 47.7 W/m ² Water inlet 15° C, $\Delta\theta = 2K$	

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

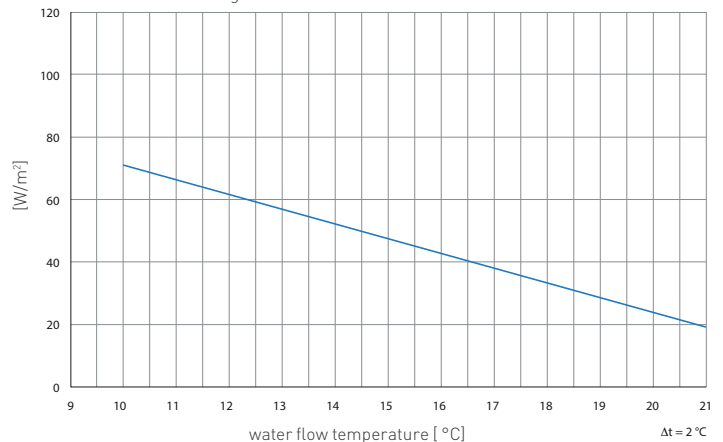
WSPlab



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

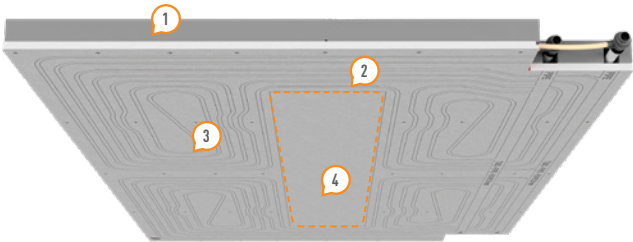
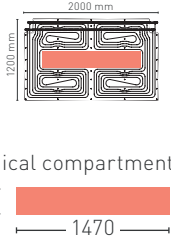
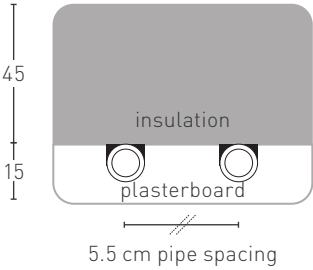
WSPlab



Leonardo Click&Safe LUX

- WSP Lab certified yield
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)
- technical compartment for the installation of equipment

The ceiling board Lux guarantees enhanced design flexibility, which allows for installing – in a rapid and straightforward manner – lighting systems, air treatment vents or other types of systems. In fact, the central zone of the panel features a specially designed section (1470 x 240 mm) for installing the circuitry. The ceiling board is compatible and combinable with ceiling boards* range radiant ceiling solutions with 60 mm panels thickness, and – performance being equal – can be replaced with a ceiling panel with 5.5 cm pipe spacing.

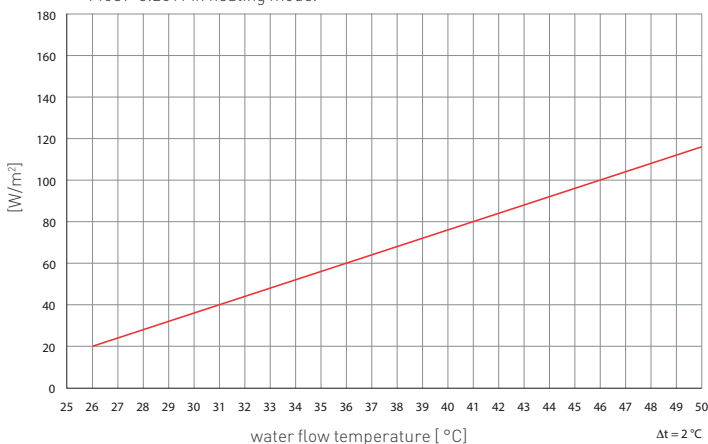
		ARTICLE	DESCRIPTION
 <ol style="list-style-type: none"> 1. EPS with graphite insulating board 2. Plasterboard 3. Laser-engraved pipe guides for PE-RT type I 10 x 1.3 mm pipe with 5.5 cm pipe spacing 4. Technical compartment for the insertion of equipment such as lighting, air vents... 		3003005160000	Ceiling board Lux 1200 x 2000 mm 
INSULATION	sintered EPS with graphite		
λ_D	0.031 W/mK (insulation)		
PANEL	plasterboard		
THICKNESS	60 mm (45 + 15)		
WEIGHT*	~13.5 kg/m ² (1200 x 2000 mm)		
PIPE	10 x 1.3 mm		
PIPE SPACING	5.5 cm	<ul style="list-style-type: none"> ● PH: 76.9 W/m² Water inlet 40° C, $\Delta\theta = 2K$ ● PC: 47.7 W/m² Water inlet 15° C, $\Delta\theta = 2K$ 	

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

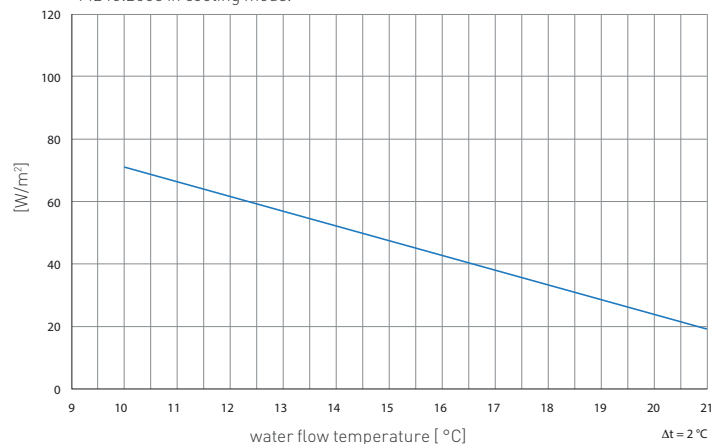
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Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

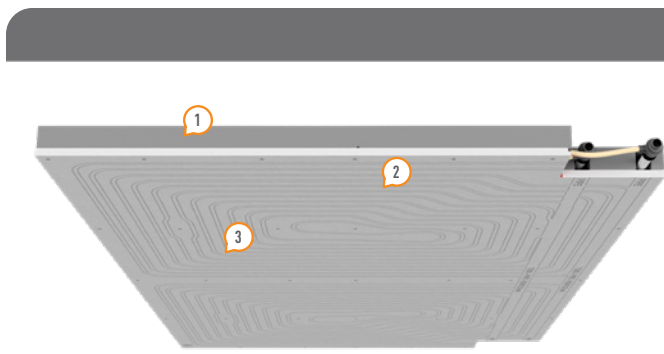
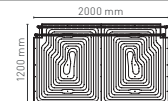
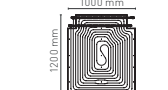
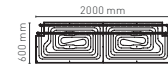
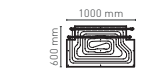
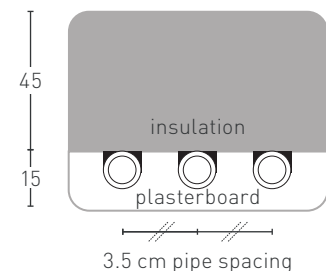
WSPlab



Leonardo Click&Safe 3.5

- WSP Lab certified yield
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)

The ceiling board 3.5 system is composed of a 15 mm plasterboard panel paired with a 35 mm expanded polystyrene panel sintered with graphite (thermal conductivity 0.030 W/mK according to EN 13163) including factory-integrated 5-layer pipes made of PE-RT type I (DIN 16833 / ISO 24033 / ISO 22391) with EVOH oxygen barrier. The pipe is arranged in a wave-like serpentine pattern so as to maximise the heat-exchange surface between the piping and the plasterboard. There are lasered markings of the pipe course on the visible board surface. In the insulation is integrated the 20 x 2 mm multi-layer PE-RT/ALU/PE-RT pipe connection line to simplify and optimise the connection of the panels to the manifold.

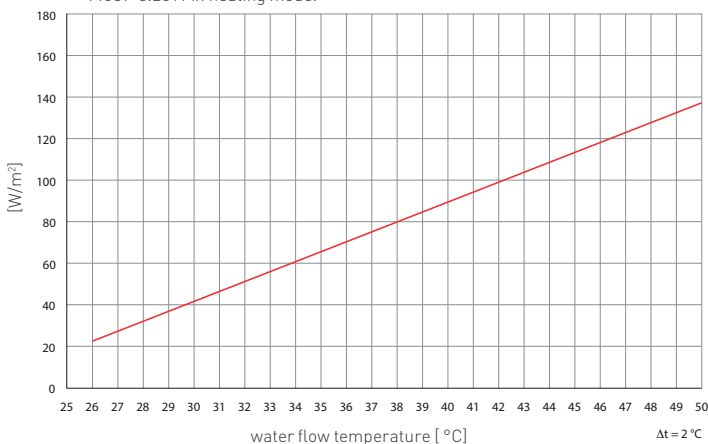
		ARTICLE	DESCRIPTION	
 <p>1. EPS with graphite insulating board 2. Plasterboard 3. Laser-engraved pipe guides for PE-RT type I 10 x 1.3 mm pipe with 3.5 cm pipe spacing</p>		30030057500000	Ceiling board 3.5 1200 x 2000 mm	
		30030058600000	Ceiling board 3.5 1200 x 1000 mm	
		30030058500000	Ceiling board 3.5 600 x 2000 mm	
		30030058700000	Ceiling board 3.5 600 x 1000 mm	
INSULATION	sintered EPS with graphite			
λ_D	0.031 W/mK (insulation)			
PANEL	plasterboard			
THICKNESS	60 mm (45 + 15)			
WEIGHT*	~13.6 kg/m ² (1200 x 2000) ~13.8 kg/m ² (600 x 2000) ~13.3 kg/m ² (1200 x 1000, 600 x 1000)			
PIPE	10 x 1.3 mm			
PIPE SPACING	3.5 cm			
				
		● PH: 86.8 W/m ² Water inlet 39° C, $\Delta\theta = 2K$ ● PC: 61.6 W/m ² Water inlet 15° C, $\Delta\theta = 2K$		

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

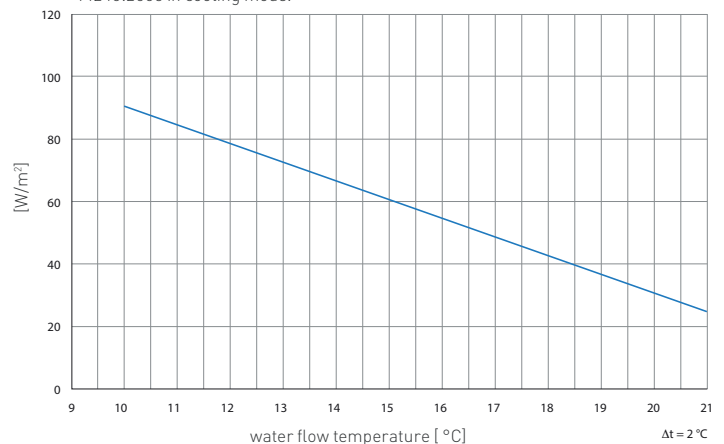
WSPlab



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

WSPlab



Leonardo Click&Safe 3.5 HYDRO

- WSP Lab certified yield
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)
- easy assembly thanks to standard modularity

The ceiling board 3.5 system is composed of a 15 mm plasterboard panel paired with a 45 mm expanded polystyrene panel sintered with graphite (thermal conductivity 0.031 W/mK according to EN 13163) including factory-integrated 5-layer pipes made of PE-RT type I (DIN 16833 / ISO 24033 / ISO 22391) with EVOH oxygen barrier. The pipe is arranged in a double spiral pattern so as to maximise the heat-exchange surface between the piping and the plasterboard. There are lasered markings of the pipe course on the visible board surface. In the insulation is integrated the 20 x 2 mm multi-layer PE-RT/ALU/PE-RT pipe connection line to simplify and optimise the connection of the panels to the manifold.

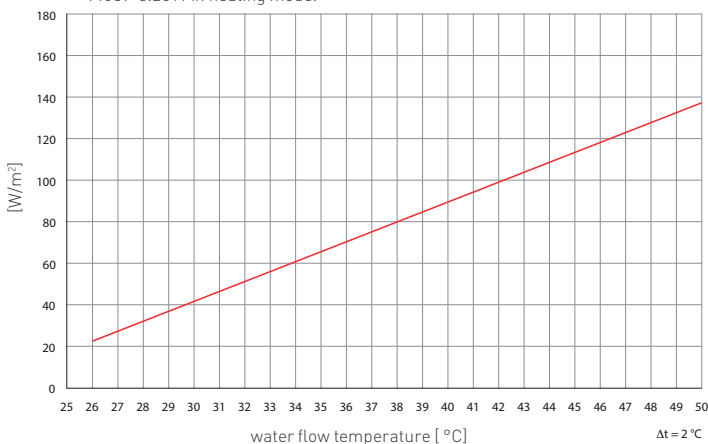
		ARTICLE	DESCRIPTION
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		30030068600000	Ceiling board 3.5 HYDRO 1200 x 1000 mm
		30030068500000	Ceiling board 3.5 HYDRO 600 x 2000 mm
		30030068700000	Ceiling board 3.5 HYDRO 600 x 1000 mm
INSULATION	sintered EPS with graphite		
λ_D	0.031 W/mK (insulation)		
PANEL	HYDRO plasterboard		
THICKNESS	60 mm (45 + 15)		
WEIGHT*	~14.1 kg/m ² (1200 x 2000) ~14.4 kg/m ² (600 x 2000) ~13.9 kg/m ² (1200 x 1000, 600 x 1000)		
PIPE	10 x 1.3 mm		
PIPE SPACING	3.5 cm		
		● PH: 86.8 W/m ² Water inlet 39° C, $\Delta\theta = 2K$ ● PC: 61.6 W/m ² Water inlet 15° C, $\Delta\theta = 2K$	

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

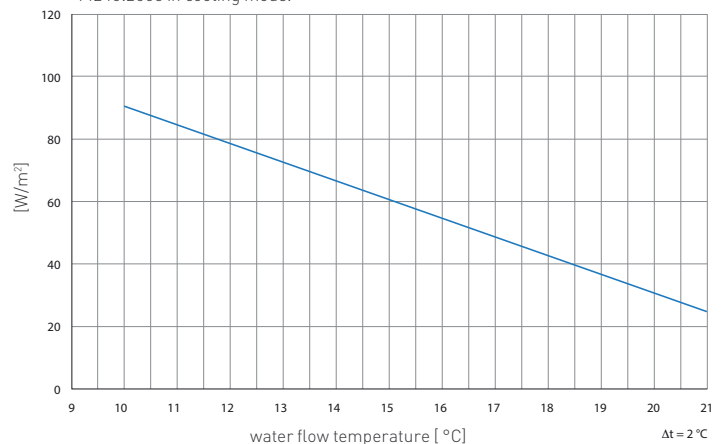
WSPlab



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

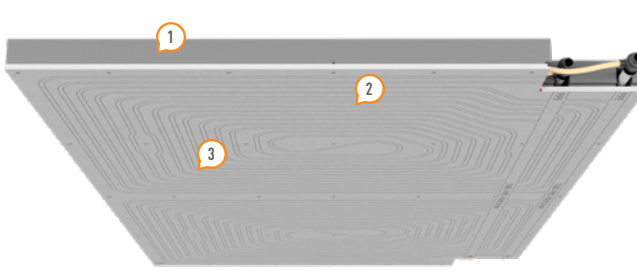
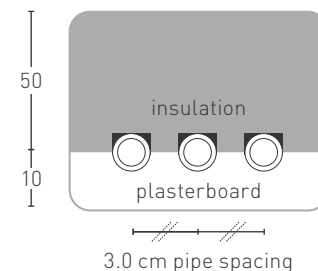
WSPlab



Leonardo Click&Safe 3.0 PLUS

- yield certified by Istituto Giordano
- adductions inserted in the panel
- pre-assembled fittings for maximum tightness over time
- connection between panels with double gasketed fittings (Click&Safe)
- radiant system with Activ'Air® technology that absorbs and neutralises formaldehyde in the air

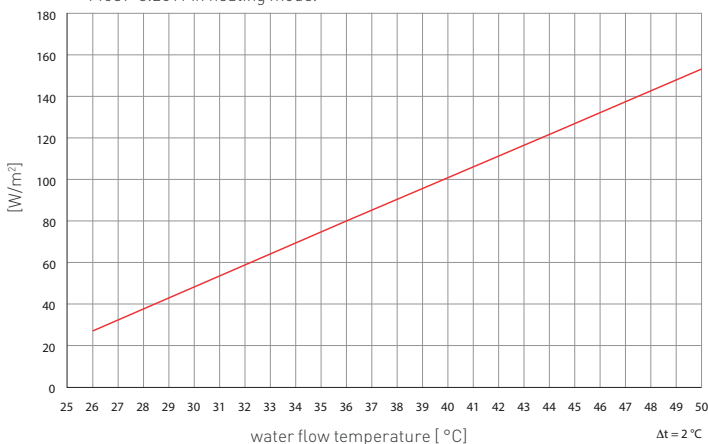
10 mm pre-finished plasterboard panel with Activ'Air® technology coupled with 50 mm expanded polystyrene sintered with graphite, complete with 5-layer high temperature resistant polyethylene PE-RT piping type I (DIN 16833 / ISO 24033 / ISO 22391) with EVOH oxygen barrier in the pipe thickness and vapour permeability lower than 0.32 mg/(m²d) at 40 °C and 3.6 mg/(m²d) at 80 °C. PE-RT type I 10 x 1.3 mm pipe arranged in a double spiral pattern and 3.0 cm pipe spacing; on the surface of the panel there is a laser drawing indicating the position of the pipe; pipe complete with fittings. Smooth finish.

		ARTICLE	DESCRIPTION
		30030140000000	Ceiling board 3.0 PLUS 1200 x 2000 mm
		30030142100000	Ceiling board 3.0 PLUS 1200 x 1000 mm
		30030142000000	Ceiling board 3.0 PLUS 600 x 2000 mm
<p>1. EPS with graphite insulating board 2. Plasterboard + Activ'Air®. 3. Laser-engraved pipe guides for PE-RT type I 10 x 1.3 mm pipe with 3.0 cm pipe spacing</p>			
INSULATION	sintered EPS with graphite		
λ_D	0.031 W/mK (insulation)		
PANEL	plasterboard + Activ'Air®		
THICKNESS	60 mm (50 + 10)		
WEIGHT*	~11.7 kg/m² (1200 x 2000, 1200 x 1000) ~12 kg/m² (600 x 2000)		
PIPE	10 x 1.3 mm		
PIPE SPACING	3.0 cm	<p>● PH: 84.9 W/m² Water inlet 37° C, $\Delta\theta = 2K$</p> <p>● PC: 79 W/m² Water inlet 15° C, $\Delta\theta = 2K$</p>	

* weight of the board with water inside the piping.

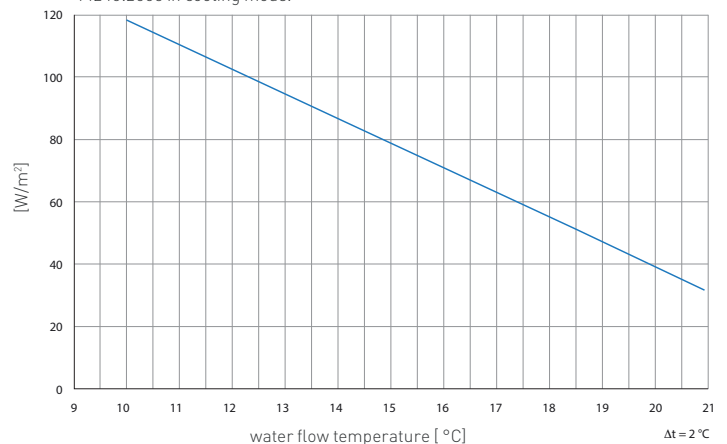
Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.



Radiant comfort is also sound-absorbing



Coupled acoustic double panel

The system is silent and invisible and the double panel is very effective in reducing impact noise.



High performance in any season

The system designed for year-round comfort in all weather conditions.



Reduction of air pollutants

The presence of zeolite in plasterboard promotes the absorption of pollutants.



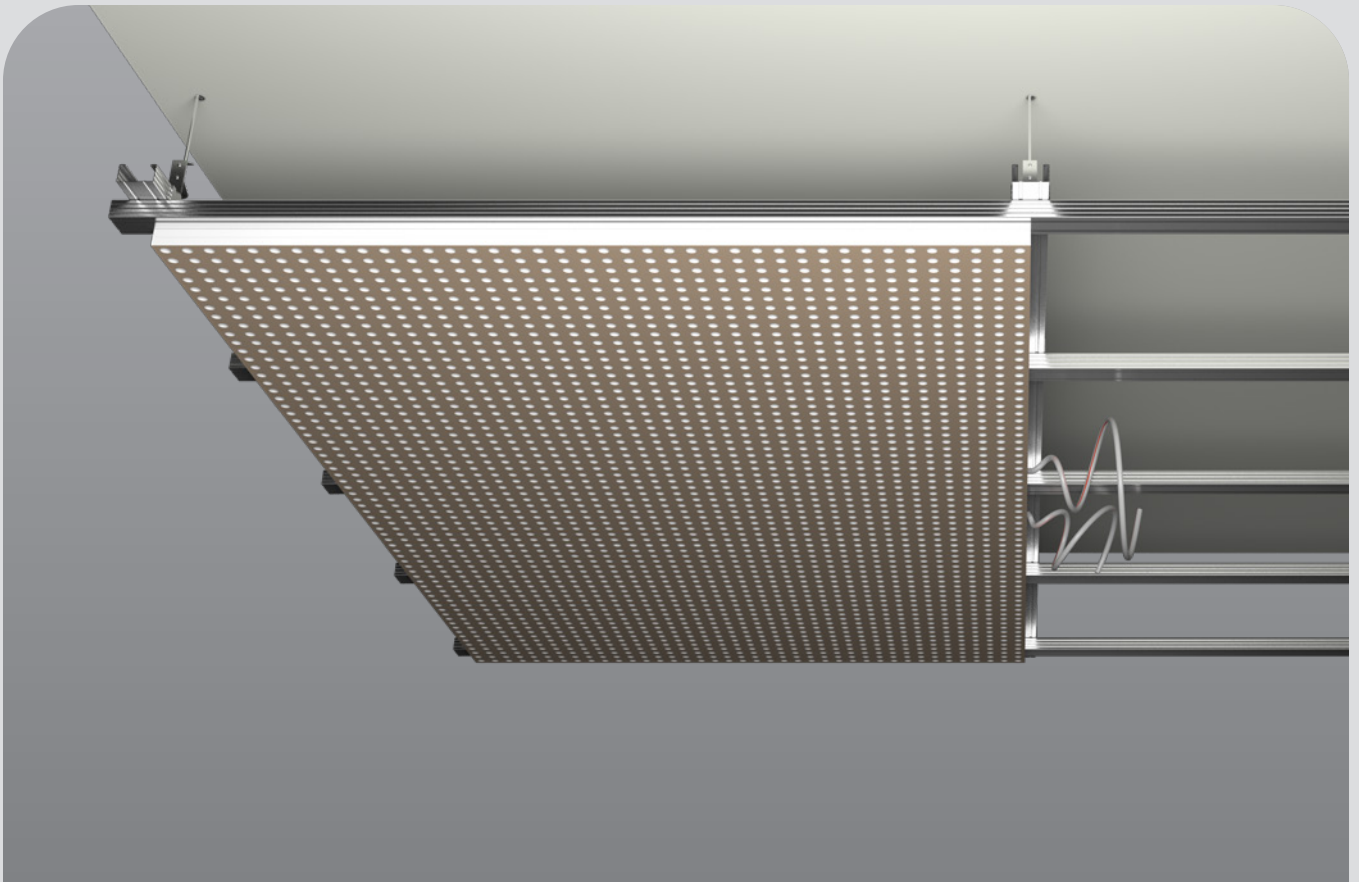
Fast start-up

The system reaches set temperature within minutes, reducing waste and energy consumption.



High sound absorption

The system provides acoustic comfort. Say goodbye to environmental reverberation.



Thermal and acoustic comfort in one solution

The acoustic ceiling is the ideal radiant system to be installed in all those environments that require a high degree of thermal and acoustic comfort such as offices, meeting rooms, auditoriums, shops, etc.

The bagged glass wool guarantees excellent insulation, while the pipework, with a diameter of 10 x 1.3 mm, allows for greater energy exchange, which increases the speed of inertia and performance.

Thanks to the double acoustic plasterboard sheet, this system combines the benefits of the climatic comfort of a radiant ceiling system with the high soundproofing power that eliminates all those annoying phenomena of environmental resonance.

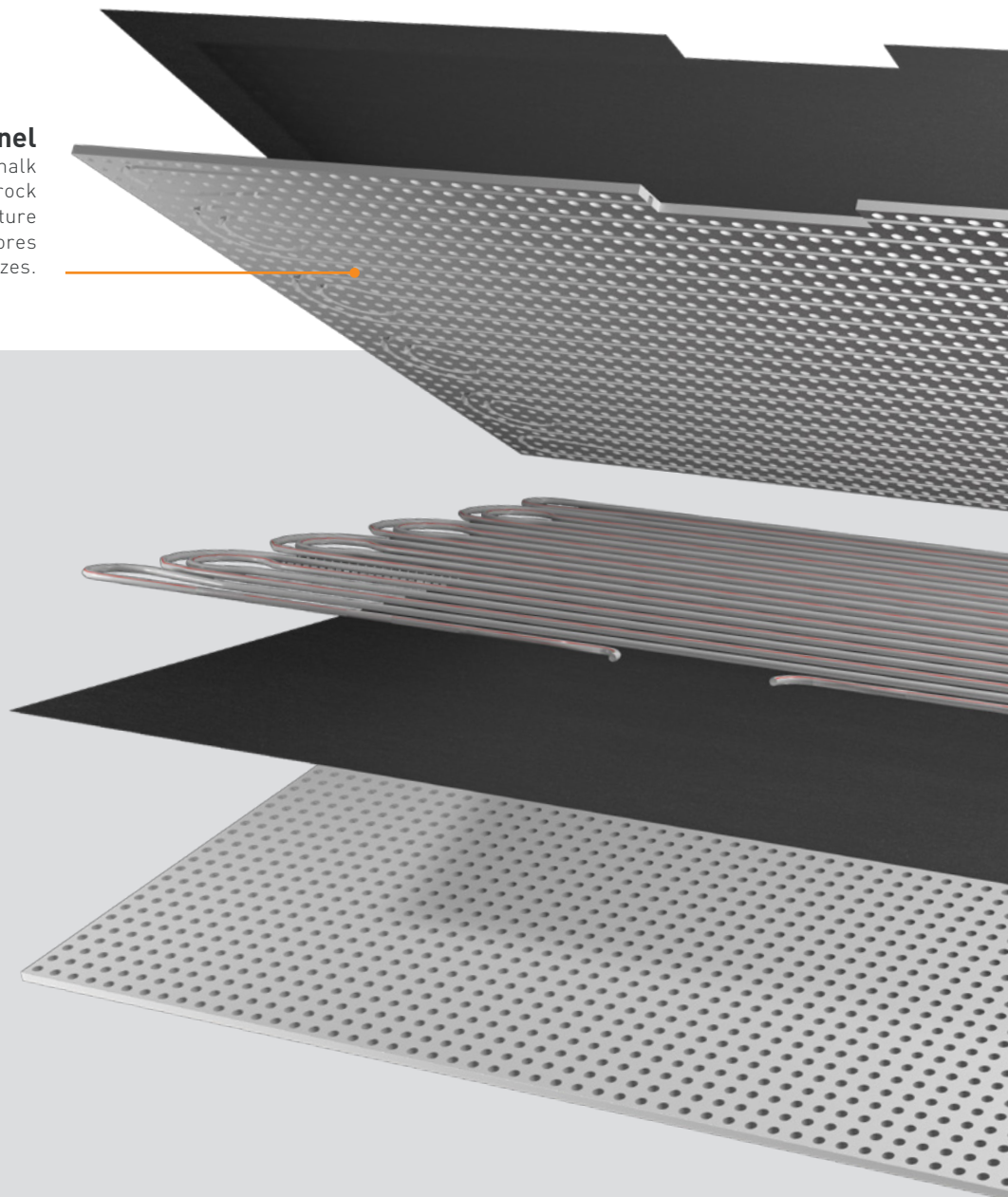
The radiant acoustic ceiling board

The acoustic ceiling system combines the benefits of radiant comfort with a high level of sound absorption, thanks to a double acoustic tile made of perforated plasterboard and acoustic felt, which eliminates all unwanted environmental reverberation.

The chalk and zeolite composition of the panel also helps to reduce the concentration of pollutants in the air in enclosed spaces. The pipe is arranged in a serpentine pattern in the thickness of the top panel. It is ideal for heating in winter and cooling in summer.

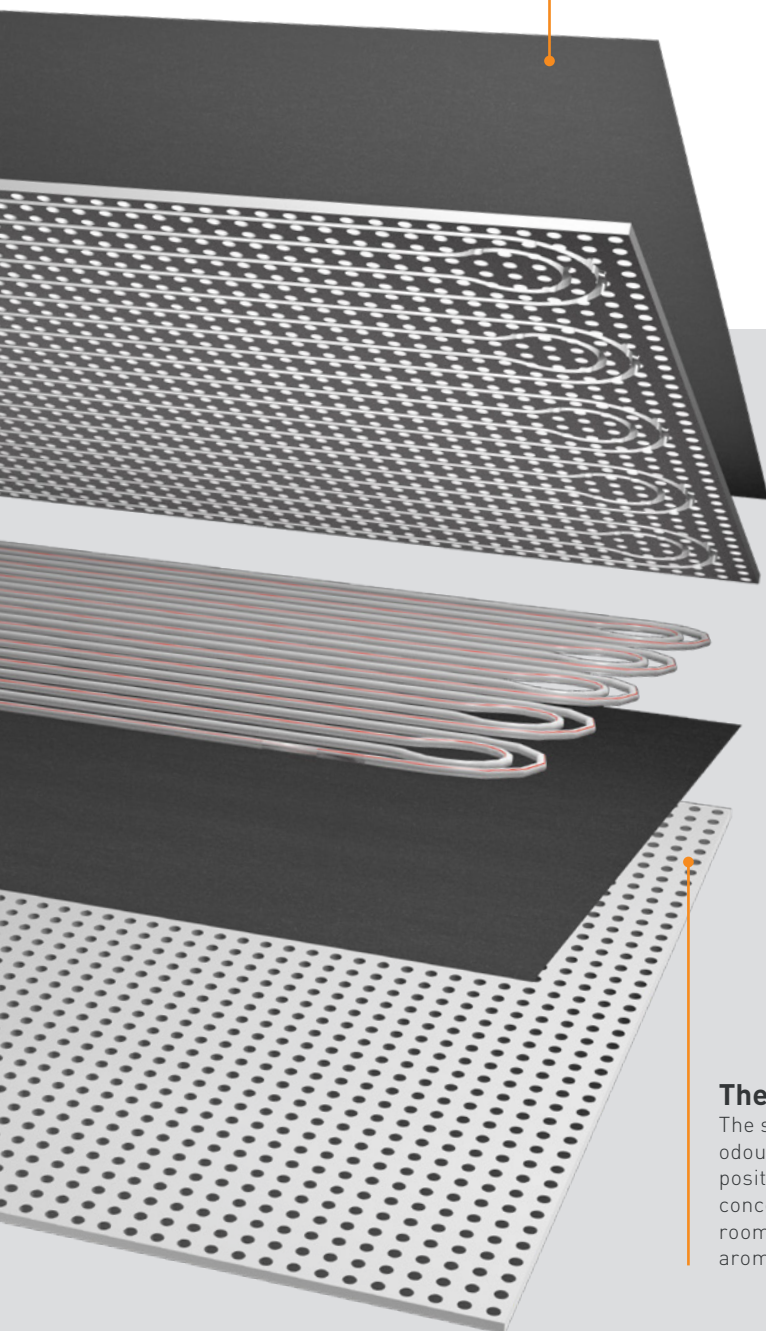
Acoustic plasterboard panel

The panel consists of a core of chalk and zeolite. Zeolite is a natural rock with a honeycomb crystalline structure characterised by a large number of pores of varying sizes.



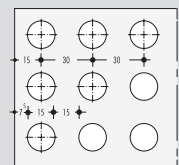
Acoustic felt

Felt is a sound-absorbing material which, due to its relatively soft structure, does not reflect sound waves, thus reducing reverberation.



The structure

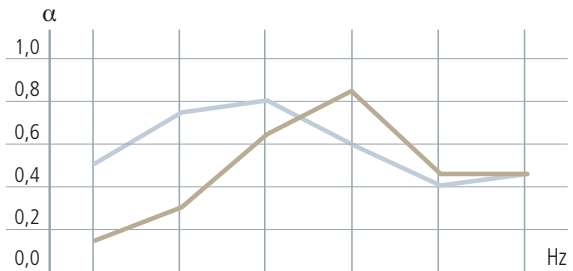
The special cage structure enables it to capture odours up to 65% of its weight and has a positive effect on indoor air quality, reducing the concentration of pollutants in poorly ventilated rooms (cigarette smoke, cooking smells, benzene, aromatic hydrocarbons, etc.).





Acoustic performance

Thanks to the double plasterboard acoustic board, this system combines the climatic comfort advantages of a radiant ceiling system with a high sound-absorption power capable of eliminating the bothering effects of environmental reverberation.



f(Hz)	125	250	500	1000	2000	4000
α						
a	0,50	0,75	0,80	0,60	0,40	0,45
b	0,15	0,30	0,65	0,85	0,45	0,45

a — $\alpha_w = 0,50$ absorption (LM)
 b — $\alpha_w = 0,50$ absorption (M)

f (Hz)	125	250	500	1000	2000	4000
α_s	0.7	1.0	0.95	0.9	0.95	0.90

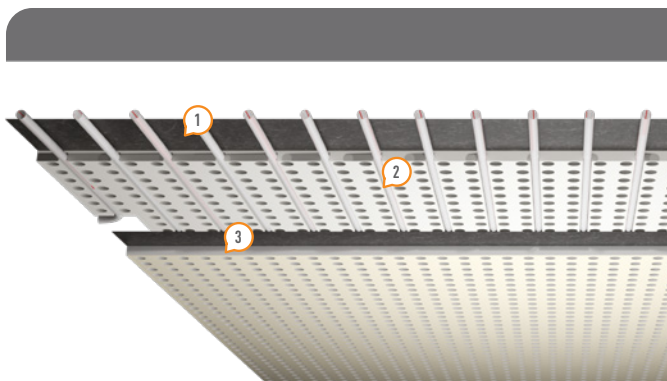
Sound absorption values relative to the single sound-absorbing board (Knauf technical sheet data).

Sound absorption as calculated for the acoustic ceiling + 50 mm rock wool panel combination. Calculated according to the EN 29053 and ASTM C522 standards, assuming a gap of 200 mm.

Acoustic ceiling board

- WSP Lab certified yield
- high sound absorption
- reduced concentration of pollutants in the air
- large active surface
- fittings without O-rings for maximum tightness over time
- high cooling performance

The acoustic ceiling system is composed of two paired panels of perforated plasterboard and acoustic felt measuring 12.5 mm each, for a total of 25 mm, with the hole pattern arranged exactly one above the other. The plasterboard panel includes piping with 5 polyethylene layers with EVOH oxygen barrier. The PE-RT piping type I (DIN 16833 / ISO 24033 / ISO 22391) polyethylene piping capable of withstanding high temperatures, with 6 cm pipe spacing, is arranged in a serpentine pattern and incorporated in the upper board. The special composition of the board allows for reducing the concentration in the air of pollutants (cigarette smoke, kitchen odours, benzene, etc.).



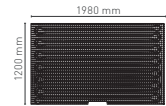
1. Sound-absorbing felt
2. Sound-absorbing plasterboard inclusive of PE-RT piping type I
3. Sound-absorbing plasterboard

ARTICLE

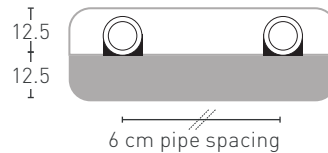
DESCRIPTION

300201100

Acoustic ceiling
1200 x 1980 mm



INSULATION	fibreglass
λ_D	0.036 W/mK (insulation)
PANEL	acoustic plasterboard
THICKNESS	25 mm (12.5 + 12.5)
WEIGHT*	~19.5 kg/m ² (1200 x 1980 mm)
PIPE	10 x 1.3 mm
PIPE SPACING	6 cm



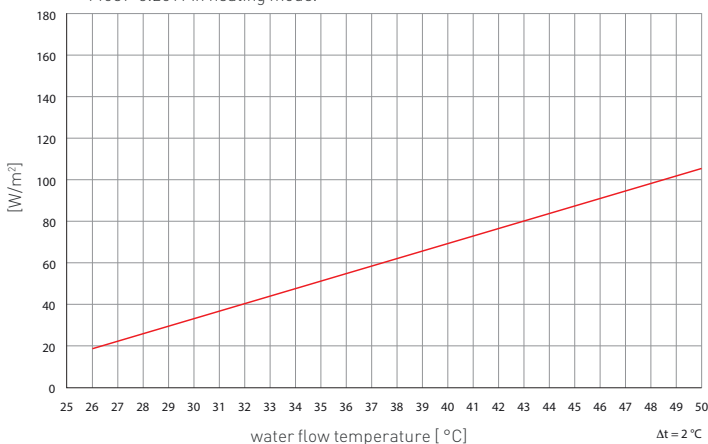
- PH: 71.1 W/m² Water inlet 40° C, $\Delta\theta = 2K$
- PC: 42.7 W/m² Water inlet 15° C, $\Delta\theta = 2K$

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

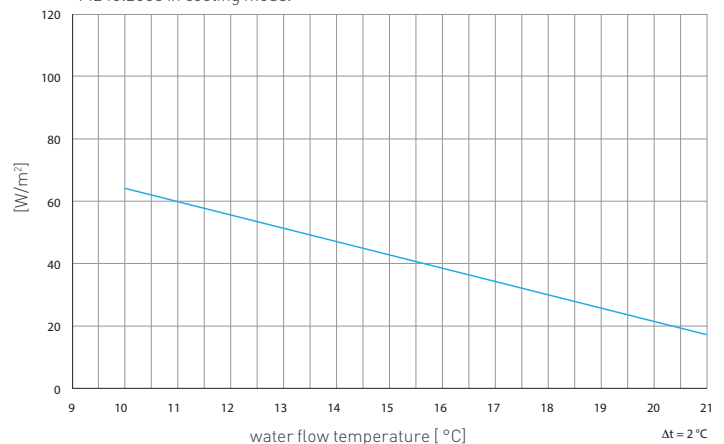
WSPlab



Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

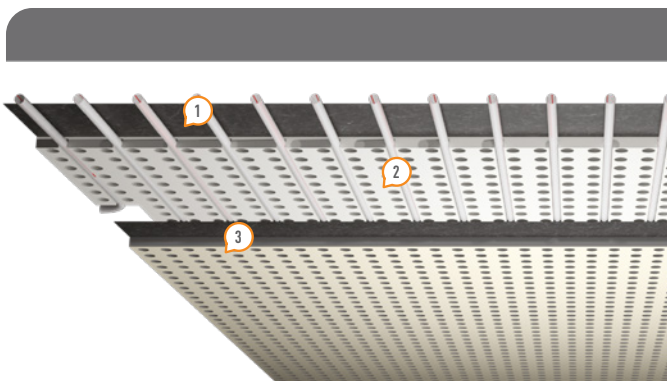
WSPlab



Acoustic ceiling board HP

- WSP Lab certified yield
- high sound absorption
- reduced concentration of pollutants in the air
- acoustic plasterboard with graphite
- fittings without O-rings for maximum tightness over time
- high cooling performance

The acoustic ceiling High Performance system is composed of two visible paired panels of perforated plasterboard and acoustic felt, made of graphite, measuring 12.5 + 10 mm, for a total of 22.5 mm, with the hole pattern arranged exactly one above the other. The plasterboard panel includes piping with 5 polyethylene layers with EVOH oxygen barrier. The PE-RT piping type I (DIN 16833 / ISO 24033 / ISO 22391) polyethylene piping capable of withstanding high temperatures, with 6 cm pipe spacing, is arranged in a serpentine pattern and incorporated in the upper board. The special composition of the board allows for reducing the concentration in the air of pollutants (cigarette smoke, kitchen odours, benzene, etc.).

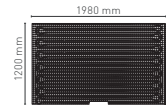


1. Sound-absorbing felt
2. Sound-absorbing plasterboard inclusive of PE-RT piping type I
3. Sound-absorbing plasterboard with graphite

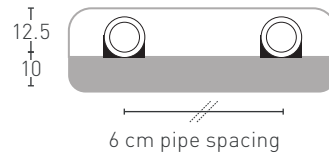
ARTICLE	DESCRIPTION
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300203250

Acoustic ceiling
High Performance
1200 x 1980 mm



INSULATION	fibreglass
λ_D	0.036 W/mK (insulation)
PANEL	acoustic plasterboard with graphite
THICKNESS	22.5 mm (10 + 12.5)
WEIGHT*	~18.5 kg/m ² (1200 x 1980 mm)
PIPE	10 x 1.3 mm
PIPE SPACING	6 cm



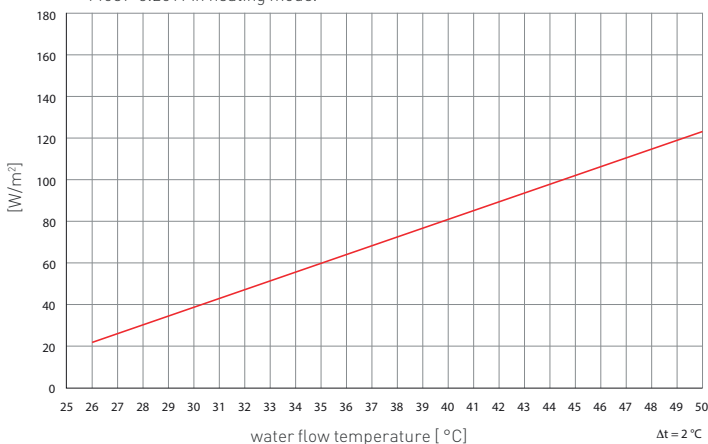
- PH: 80 W/m² Water inlet 40° C, $\Delta\theta = 2K$
- PC: 50 W/m² Water inlet 15° C, $\Delta\theta = 2K$

* weight of the board with water inside the piping.

Heating

Curves deriving from the output certificates according to prEN 14037-5:2011 in heating mode.

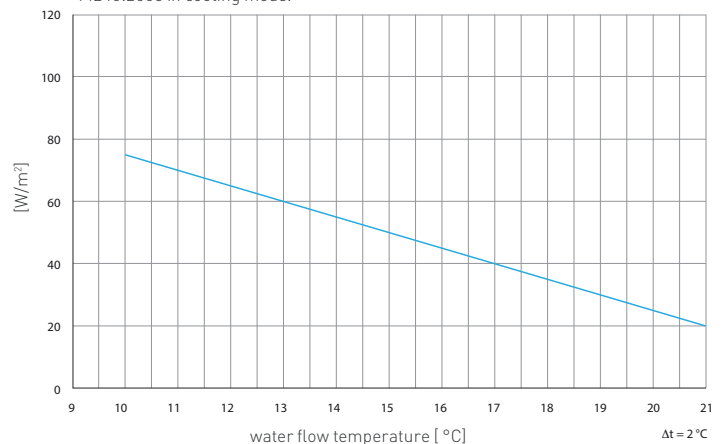
WSPlab



Cooling

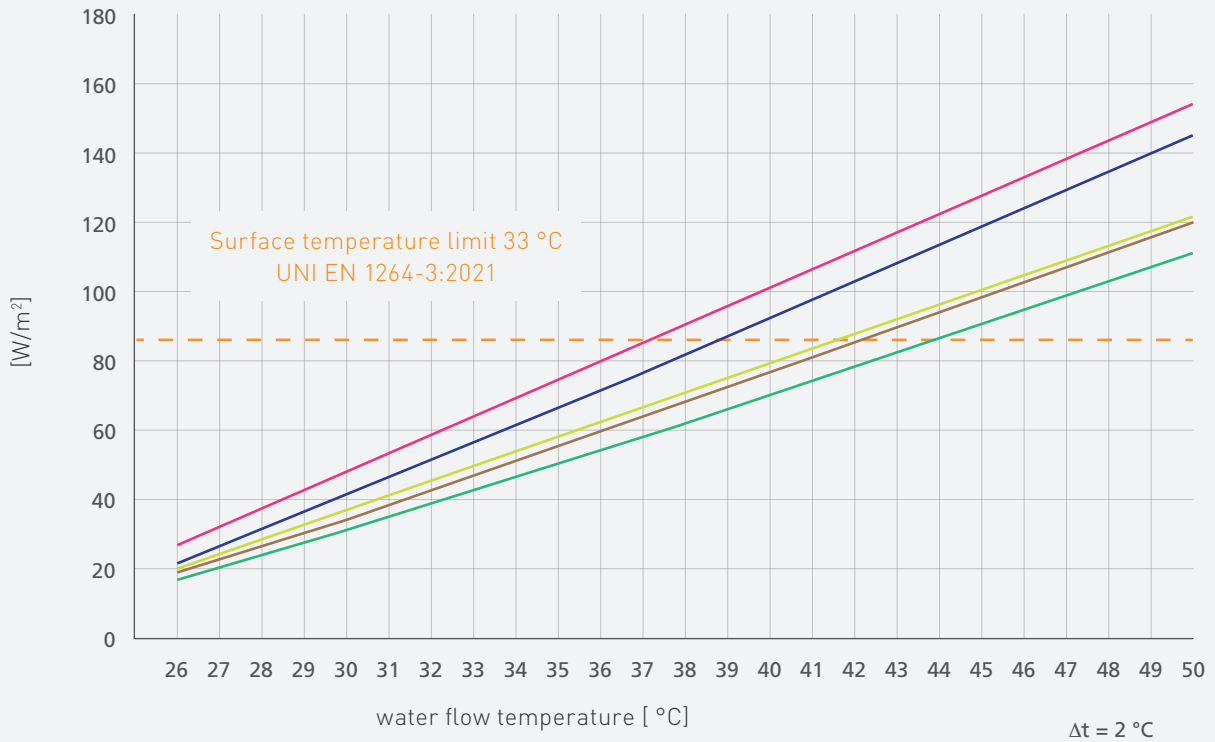
Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode.

WSPlab



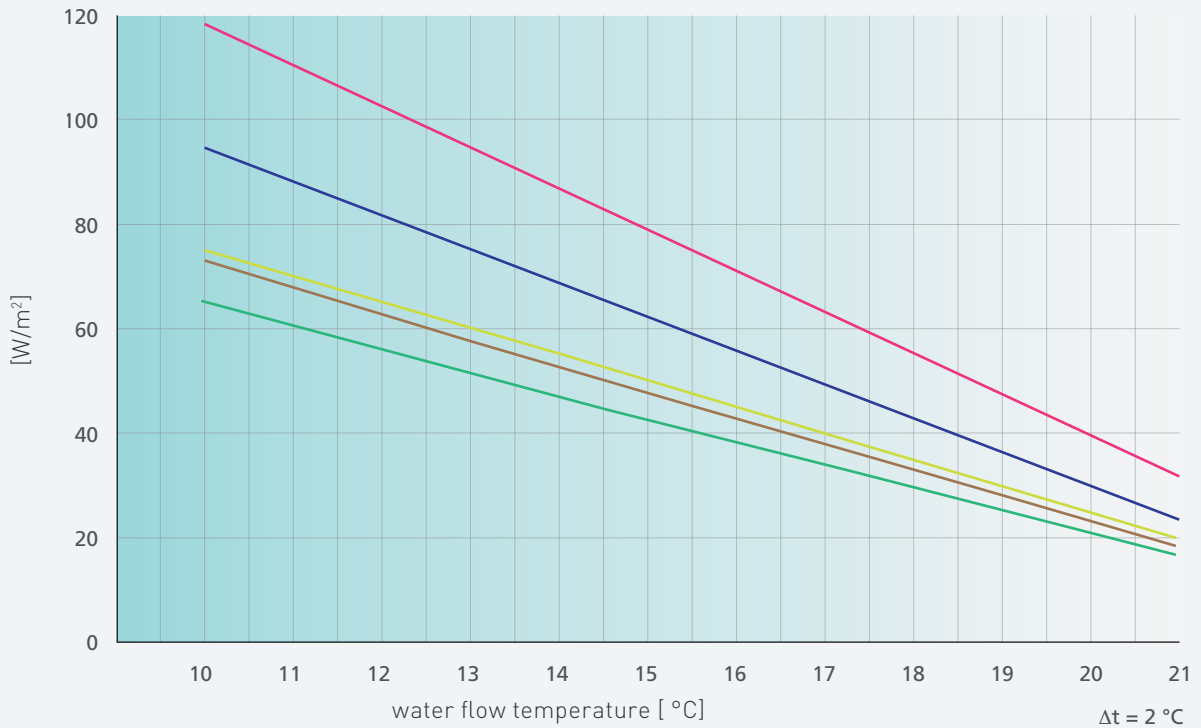
Heating

Curves deriving from the output certificates according to prEN 14037-5:2016 in heating mode. [WSP^{lab}](#)

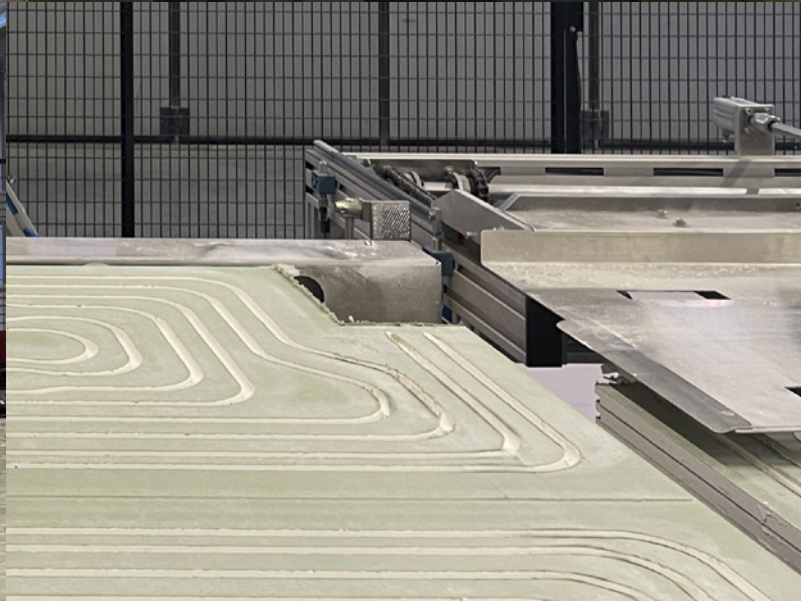


Cooling

Curves deriving from the output certificates according to UNI EN 14240:2005 in cooling mode. [WSP^{lab}](#)



- LEONARDO CLICK&SAFE **5.5**
- LEONARDO CLICK&SAFE **3.5**
- LEONARDO CLICK&SAFE **3.0 PLUS**
- LEONARDO CLICK&SAFE **5.5 HYDRO**
- LEONARDO CLICK&SAFE **3.5 HYDRO**
- CEILING **ACOUSTIC**
- LEONARDO CLICK&SAFE **LUX**
- CEILING **ACOUSTIC HP**



PRODUCTION PLANT BOLZANO/BOZEN (ITALY)

Enetec SpA Benefit Company

Pillhof 89
I-39057 Frangarto (BZ)
T +39 0471 051 508
F +39 0471 051 509
mail@enetec.info

Plant Bolzano/Bozen

Molding & Milling
Pillhof 89
I-39057 Frangarto (BZ)
T +39 0471 051 508
F +39 0471 051 509
mail@enetec.info

Plant Verolanuova

EPS Production
Via IV Novembre, 34
I-25028 Verolanuova (BS)
T +39 030 933163
F +39 030 9923998
eps@enetec.info

Enetec Plastics GmbH

Pipe extrusion
Kalkarer Str. 81 – Halle 25-27
D-47533 Kleve
T +49 2821 89 88 00
pipes@enetec.info
sales@enetec.info