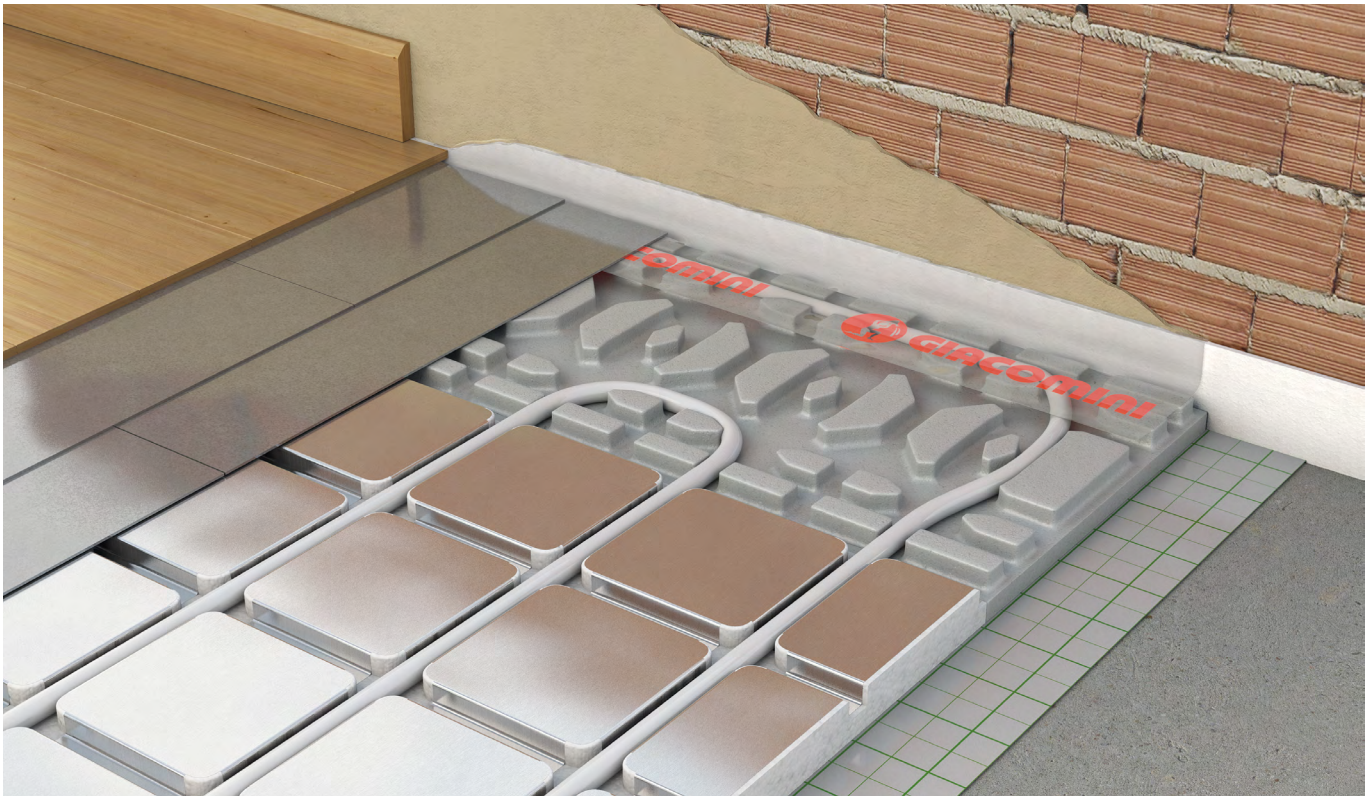


## Radiant “dry” floor system

Datasheet  
0541EN  10/2021



Radiant dry floor system without the use of cement mortar as support layer of the superficial finish and with possibility of making the system in a reduced thickness (30 mm except the superficial finish) composed by:

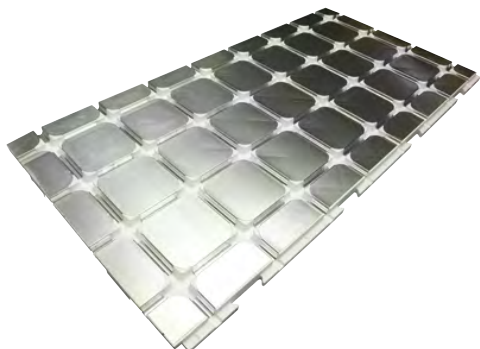
- Preform insulating panel R883-1 series, joint combined with a thermoconductor profile made up by an aluminium foil;
- Thermoformed header panel R884 series, for the passage of the service pipe lines and the support of the circuit bending;
- Plastic material or multilayer pipe having max external diameter of 17 mm, R999, R978 or R996T series;
- R984 protection layer made of polyethylene impermeable to steam;
- K369A wall insulation strip;
- Zinc plated steel plates as support layer for the load partition, K805P series;
- Zinc plated steel plates having double-sided adhesive to make the second support layer for the load partition, K805P-1 series;
- Pipe fixing clips to the insulating panel, K809 series (where necessary).

## Product codes and technical data

### R883-1 preformed panel

Preformed insulating panel in expanded polystyrene, joint combined with a thermoconductor profile made up by an aluminium foil of 0,3 mm thickness.

It allows the passage of the pipes in both directions and if necessary at 45° (by removing a preform part of the sheet). It has grooves on the four sides for combination with adjacent panels.



PANEL	
Product code	R883Y101
Panel dimension	1200 x 600 mm
Panel surface	0,72 m <sup>2</sup>
Total thickness	28 mm
Pipes diameter	16÷17 mm
Minimum laying pitch	150 mm
INSULATING PLATE	
Material	Sintered expanded polystyrene EPS200
Density	30 Kg/m <sup>3</sup>
Thermal conductivity, $\lambda_D$	0,034 W/(m K)
Thermal resistance, $R_\lambda$ Complyng EN1264-3:2009 (par.4.1.2.2)	0,65 m <sup>2</sup> K/W
Thermal resistance, $R_\lambda$ Complyng EN1264-3 ( $R_{\lambda_{ISO}} = s_{ISO}/\lambda_{ISO}$ )	0,29 m <sup>2</sup> K/W
Minimum compression resistance to 10% crush	200 kPa
Reaction to the fire	Euroclass E
PLATE COMBINED TO THE PANEL	
Material	Aluminium thermoconductor plate
Thickness	0,3 mm

### R884 header panel

Header panel made of expanded polystyrene with PST film, thermoformed, aluminium colour, for the passage of the service pipe lines and the support of the circuit bending. On the four sides, it has grooves for the joining with the adjacent panels.

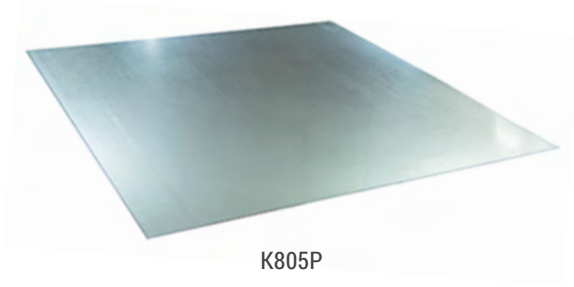


PANEL	
Product code	R884Y101
Panel dimension	600 x 300 mm
Panel surface	0,18 m <sup>2</sup>
Total thickness	28 mm
Pipes diameter	16÷17 mm
Minimum laying pitch	150 mm
INSULATING PLATE	
Material	Sintered expanded polystyrene EPS200
Density	30 Kg/m <sup>3</sup>
Thermal conductivity, $\lambda_D$	0,034 W/(m K)
Thermal resistance, $R_\lambda$ Complyng EN1264-3:2009 (par.4.1.2.2)	0,65 m <sup>2</sup> K/W
Thermal resistance, $R_\lambda$ Complyng EN1264-3 ( $R_{\lambda_{ISO}} = s_{ISO}/\lambda_{ISO}$ )	0,29 m <sup>2</sup> K/W
Minimum compression resistance to 10% crush	200 kPa
Reaction to the fire	Euroclass E

### K805P and K805P-1 zinc coated steel plates

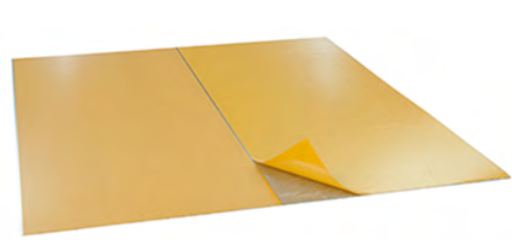
Double layer of load partition made up by zinc plated steel plates.

The second layer, having double-sided adhesive, will be glued staggered on the first so as to close the escapes among the plates.



K805P

Product code	K805PY003	K805PY004
Dimension	600x300x1 mm	600x600x1 mm
Material	Zinc coated steel without adhesive	

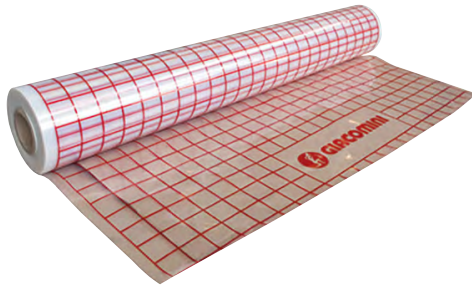


K805P-1

Product code	K805PY023	K805PY024
Dimension	600x300x1 mm	600x600x1 mm
Material	Zinc coated steel with adhesive	

### R984 protection layer

Protection layer made of polyethylene impermeable to steam.



Product code	R984Y015
Dimension	1,25x100 mm
Material	Polyethylene impermeable to steam

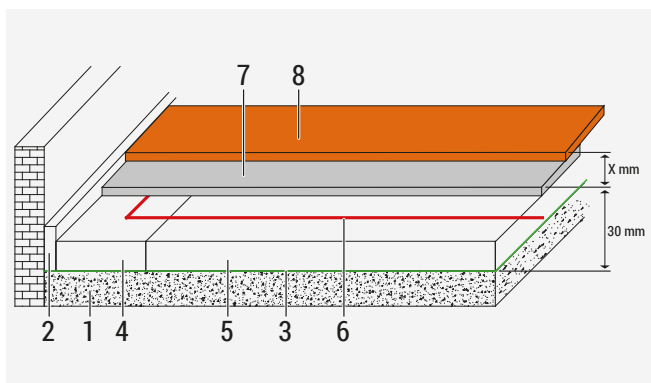
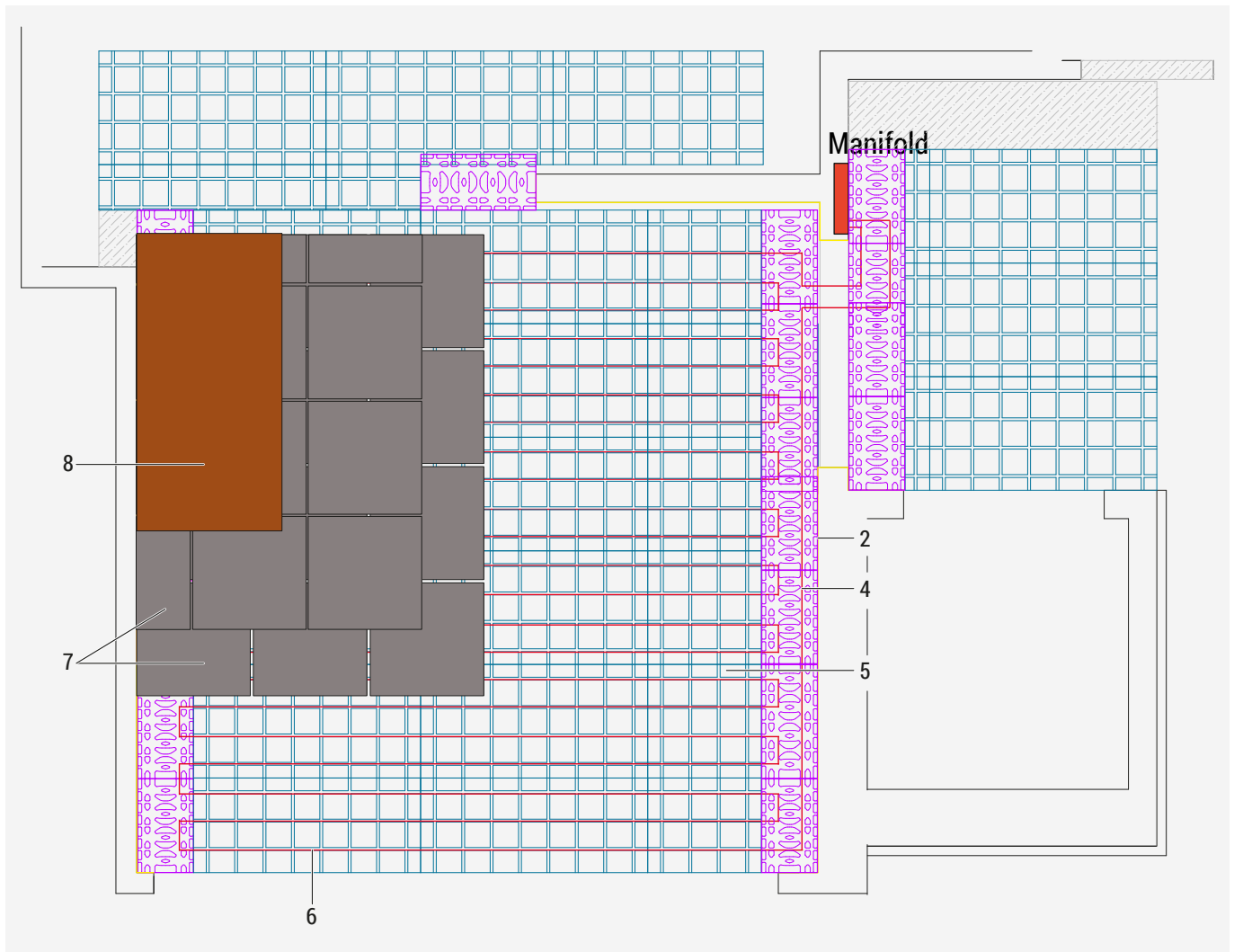
### K809 fixing clips

Fixing clips for pipes on radiant dry floor systems.



Product code	K809Y001
Dimension	50x26 mm

## Components



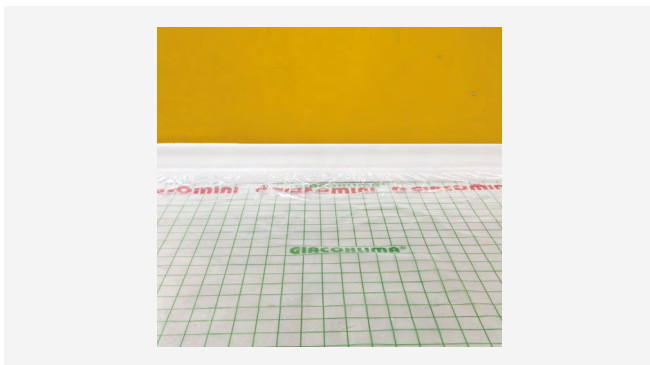
- 1 Base support layer (slab)
- 2 K369A wall insulation strip
- 3 Protection layer made of polyethylene impermeable to steam, R984 series
- 4 Thermoformed header panel R884 series, for the passage of service pipe lines and the support of the circuit bending
- 5 Preformed panel R883-1 series joint combined to an aluminium thermoconductor foil
- 6 Plastic material or multilayer pipe of 17 mm maximum external diameter
- 7 Double layer of zinc coated steel plates as support layer, K805P and K805P-1 series
- 8 Superficial finish

## ➤ Installation

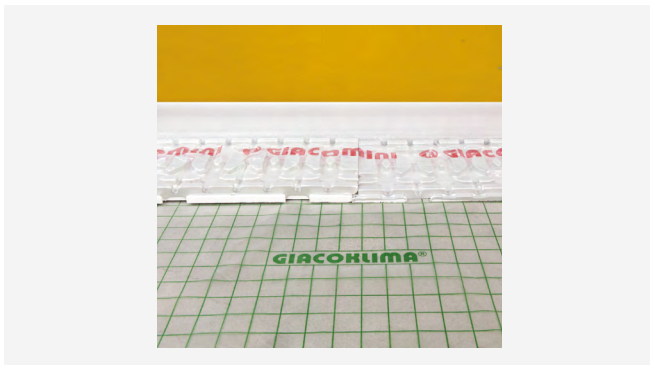
**Phase 1.** Laying of the wall insulation strip along the internal perimeter of the house.



**Phase 2.** Laying of the protection layer in polyethylene impermeable to steam, on all house surface.



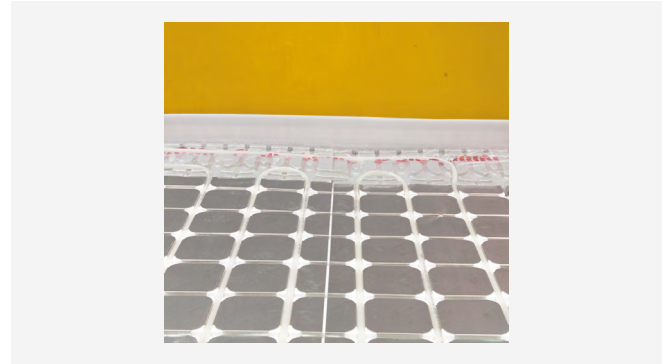
**Phase 3.** Laying of the header panels along the walls.



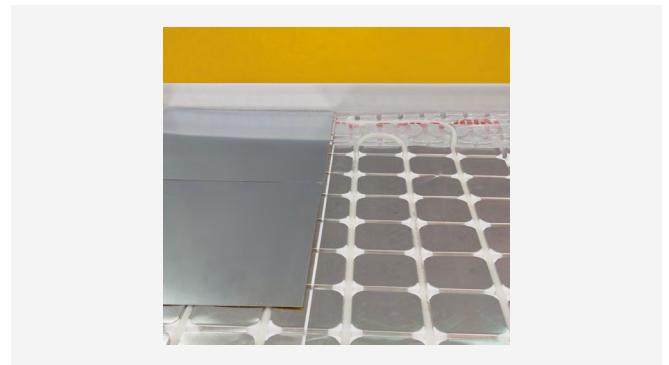
**Phase 4.** Laying of the insulating performed panels, with diffuser layer in coupled aluminium.



**Phase 5.** Laying of the pipe along the perform guides of panels and headers, if necessary use the K809 fixing clips to better fasten the pipe to the panel.



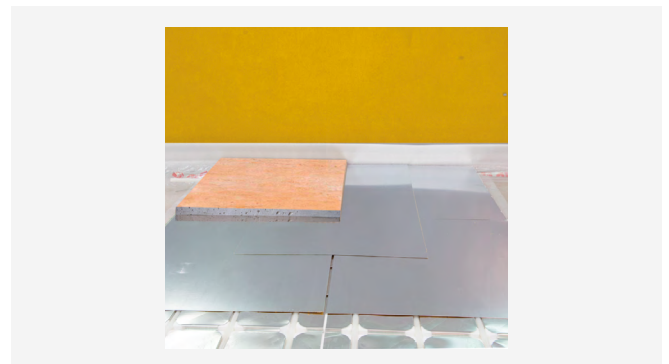
**Phase 6.** Laying of the first layer of zinc coated steel plates. Position the plates with a minimum 1 mm escape between a plate and the adjacent one.



**Phase 7.** Laying of the second layer of plates, staggered as regards to the first one, glued on the below plates through double-sided adhesive.



**Phase 8.** Laying of the superficial finish.



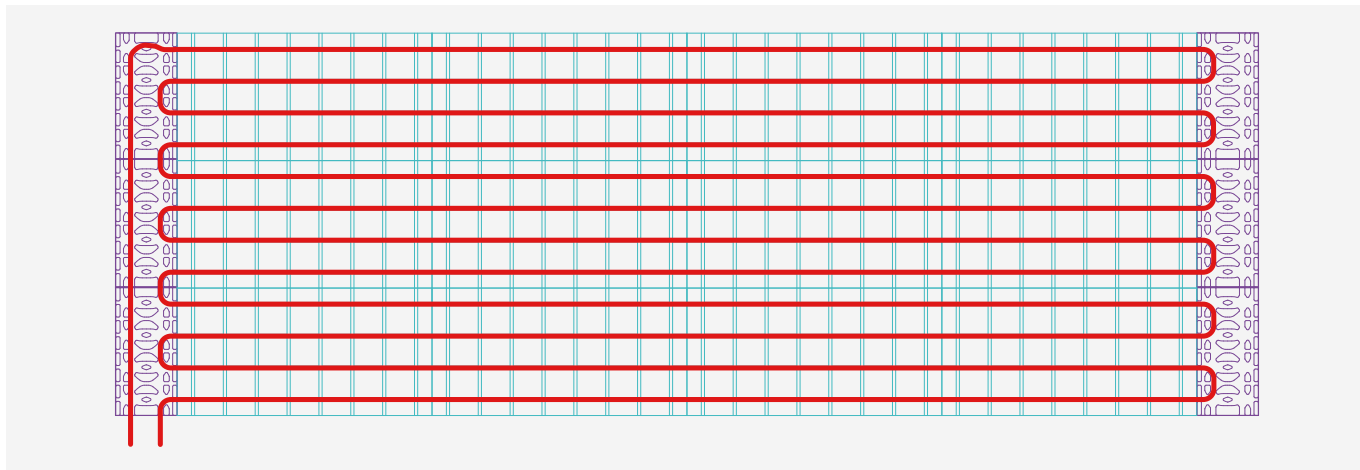
**▲ WARNING.** In radiant dry floor systems, it is necessary that the slab below the insulating panel is perfectly at level.

**🔗 NOTE.** The filling of the perimeter spaces, that are difficult to be reached with the R883-1 preform panel, and above all with the zinc coated steel strips, can be effected with a self-levelling concrete, not radiant, separated by the slab with the first layer of the R984 polyethylene sheet, and made up to a level equivalent to that one of the system, support layer included.

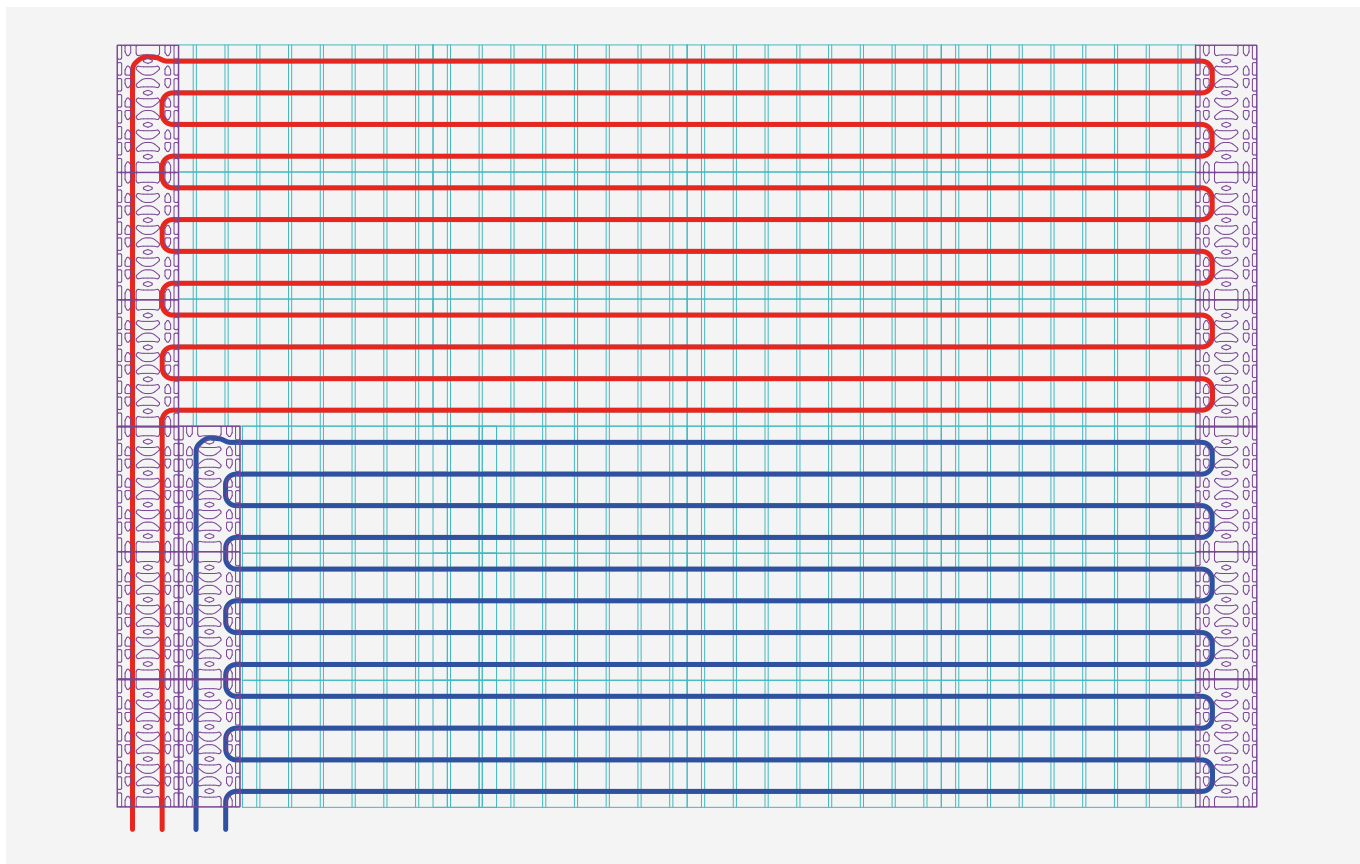
This solution can be used also to make a self-levelling concrete, not radiant, in areas where very high concentrated loads are expected, or anyway loads higher than those ones bearable by the used support layer.

**🔗 NOTE.** In the applications of the radiant dry floor systems, it is essential referring to EN 1264 standard, regarding the design and the plant and structural installation, by respecting strictly the testing and first start-up procedures.

### Laying example for no.1 radiant circuit



### Laying example for no.2 radiant circuits



## ➤ Reference Standards

- UNI EN 1264: Floor heating: systems and components
- EN 13163: Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS).

## ➤ Product specifications

### KLIMA DRY, radiant dry floor system

Radiant dry floor system without the use of cement mortar as support layer of the superficial finish, and with the possibility of making the system in a reduced thickness (30 mm except the superficial finish) composed by:

- R883-1 series insulating panel in expanded polystyrene (EPS200). Density 30 kg/m<sup>3</sup>, thermal resistance (complying EN 1264-3) 0,29 m<sup>2</sup>K/W. Compression resistance to 10 % crush 200 kPa. Joint combined with a thermoconductor profile constituted by an aluminium foil 0,3 mm thickness. It allows the passage of the pipes in both directions, and if necessary at 45° (by removing a perform part of the sheet). Panel dimension 1200x600 mm. Total thickness 28 mm, with grooves on the four sides for coupling with the adjacent panels, and additional plugs to be inserted in the voids to increase the load resistance;
- Insulating header panels, R884 series, for the passage of the service pipe lines and the support of the circuit bending. Expanded polystyrene plates (EPS200), covered with thermoform PST film. 30 kg/m<sup>3</sup>. Thermal resistance (complying EN 1264-3) 0,29 m<sup>2</sup>K/W. Plate dimensions 600x300 mm. 28 mm thickness with grooves on the four sides for coupling with the adjacent panels;
- K369A series perimeter strip for radiant floor systems in polyethylene. One side is completely adhesive and the other has a protection strip. 50 m coil length. Size 150x8 mm or 250x8mm;
- Plastic material or multilayer pipe of maximum external diameter 17 mm, R999, R978 or R996T series;
- Double partition layer of the load made of 1 mm thickness zinc coated steel plates, dimensions 600x600 mm or 600x300 mm, K805P series. The second layer having double-sided adhesive, K805P-1 series, will be staggered glued on the first in order to close the escapes among the plates;
- Fixing clip for the pipe to the insulating panel, K809 series (where necessary)-

**⚠ Safety Warning.** Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

**♻ Package Disposal.** Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

**ℹ Additional information.** For more information, go to [giacomini.com](http://giacomini.com) or contact our technical assistance service. This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith. The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.

**♻ Product Disposal.** Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.