

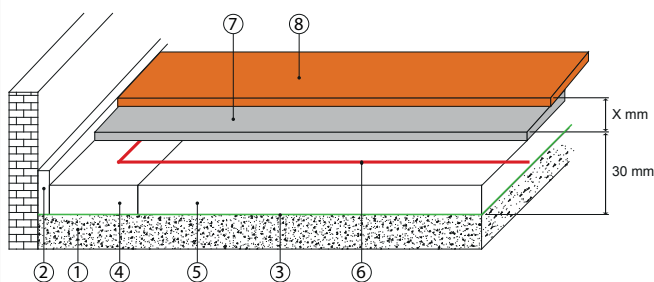
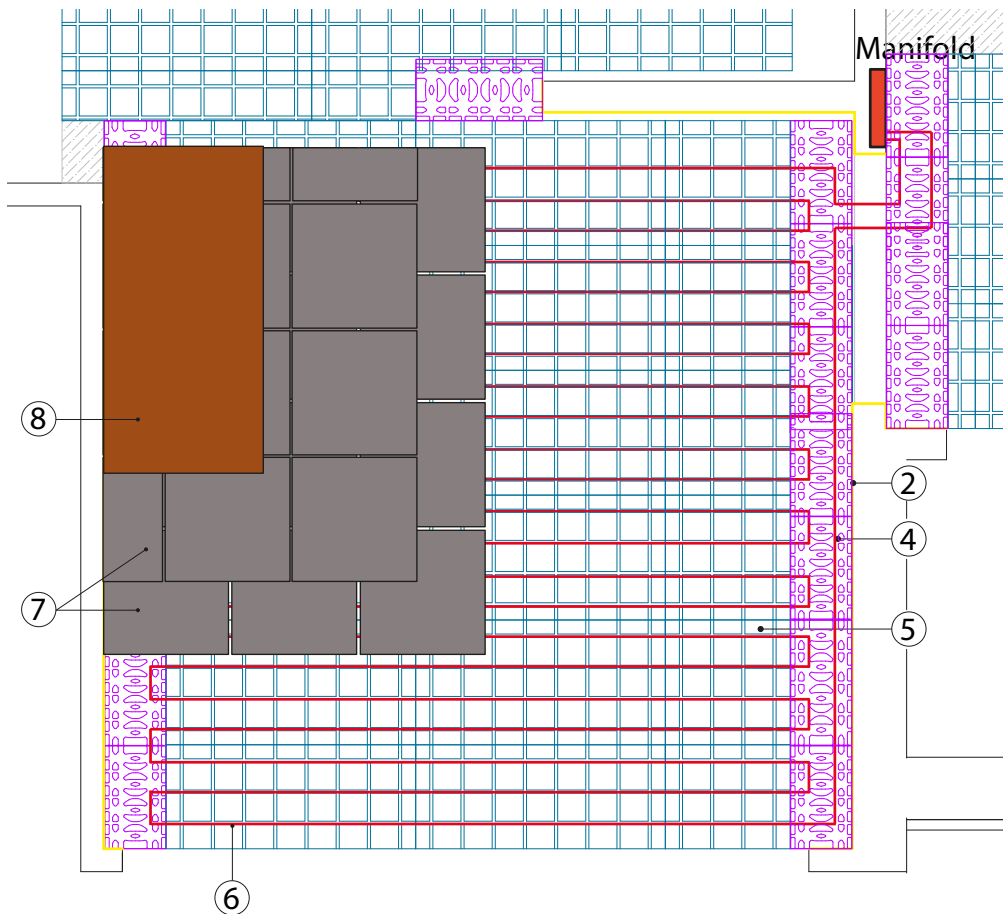
RADIANT DRY FLOOR SYSTEM

Description

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:

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

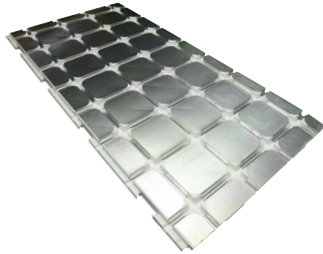
Components



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	Preform 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 plated steel plates as support layer, K805P and K805P-1 series
8	Superficial finish

R883-1 preform panel

Preform 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.

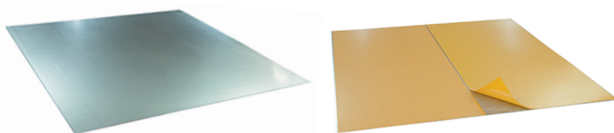


R883-1

INSULATING PLATE	
Product code	R883Y101
Panel dimensions	1200x600 mm
Panel surface	0,72 m ²
Total thickness	28 mm
Pipe diameter	16÷17 mm
Minimum laying pitch	150 mm
Material	EPS 200
Density	30 Kg/m ³
Heat conductivity, λ ₀	0,034 W/(m K)
Thermal resistance R _λ	0,65 m ² K/W
Minimum compression resistance to 10% crush	200 kPa
Reaction to fire of the insulating part	E euroclass
PLATE COMBINED TO THE PANEL	
Material	Aluminium thermoconductor plate
Thickness	0,3 mm

Zinc plated steel plates K805P and K805P-1

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

K805P-1

ZINC COATED STEEL PLATES WITHOUT DOUBLE-SIDED ADHESIVE (K805P)		
Product codes	K805PY003	K805PY004
Dimensions	600x300x1 mm	600x600x1 mm
Materials	Zinc coated steel without double-sided adhesive	
ZINC COATED STEEL PLATES WITH DOUBLE-SIDED ADHESIVE (K805P-1)		
Product codes	K805PY023	K805PY024
Dimensions	600x300x1 mm	600x600x1 mm
Materials	Zinc coated steel with double-sided adhesive	

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.

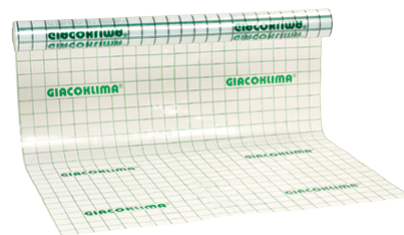


R884

Product code	R884Y101
Header dimensions	600x300 mm
Panel surface	0,18 m ²
Total thickness	28 mm
Pipe diameter	16÷17 mm
Minimum laying pitch	150 mm
Material	EPS 200
Density	30 Kg/m ³
Heat conductivity, λ ₀	0,034 W/(m K)
Thermal resistance R _λ	0,55 m ² K/W
Minimum compression resistance to 10% crush	200 kPa
Reaction to fire of the insulating part	Euroclass E

R984 protection layer

Protection layer made of polyethylene impermeable to steam.



R984

Product code	R984Y005
Coil dimensions	1,35x100 m
Material	polyethylene impermeable to steam

K809 fixing clip

Fixing clip for pipes on radiant dry floor systems.



K809

Product code	K809Y001
Dimensions (HxL)	50x26 mm

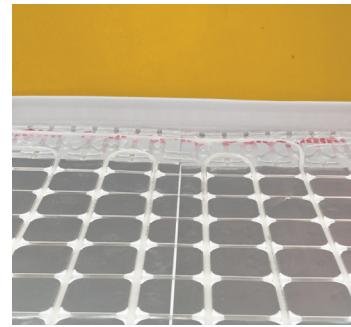
Installation

PHASE 1



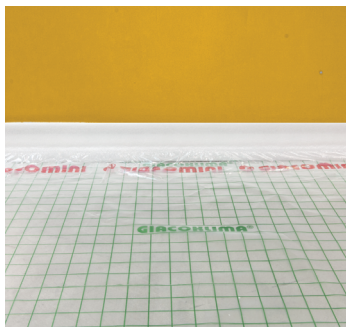
Laying of the wall insulation strip along the internal perimeter of the house.

PHASE 5



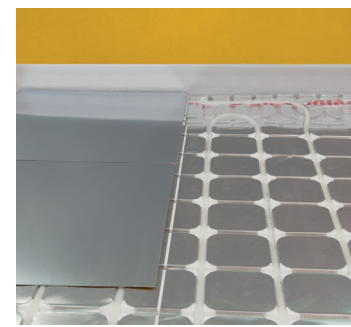
Laying of the pipe along the perform guides of panels and headers, if necessary use the fixing clips K809 to fasten the pipe to the panel better.

PHASE 2



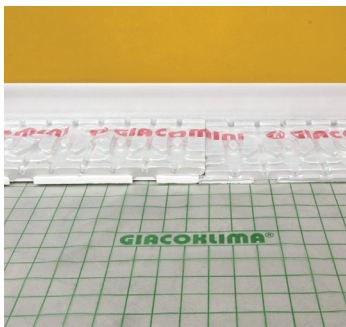
Laying of the protection layer in polyethylene impermeable to steam, on all house surface.

PHASE 6



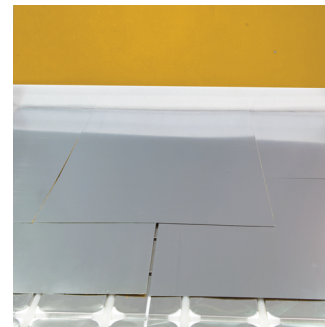
Laying of the first layer of zinc coated steel plates. Position the plates with a minimum 1mm escape between a plate and the adjacent one.

PHASE 3



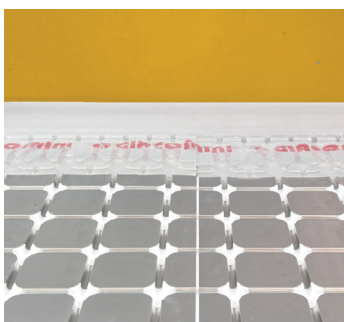
Laying of the header panels along the walls.

PHASE 7



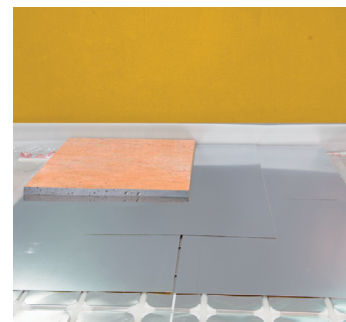
Laying of the second layer of plates, staggered as regards to the first one, glued on the below plates through double-sided adhesive.

PHASE 4



Laying of the insulating perform panels, with diffuser layer in coupled aluminium..

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.

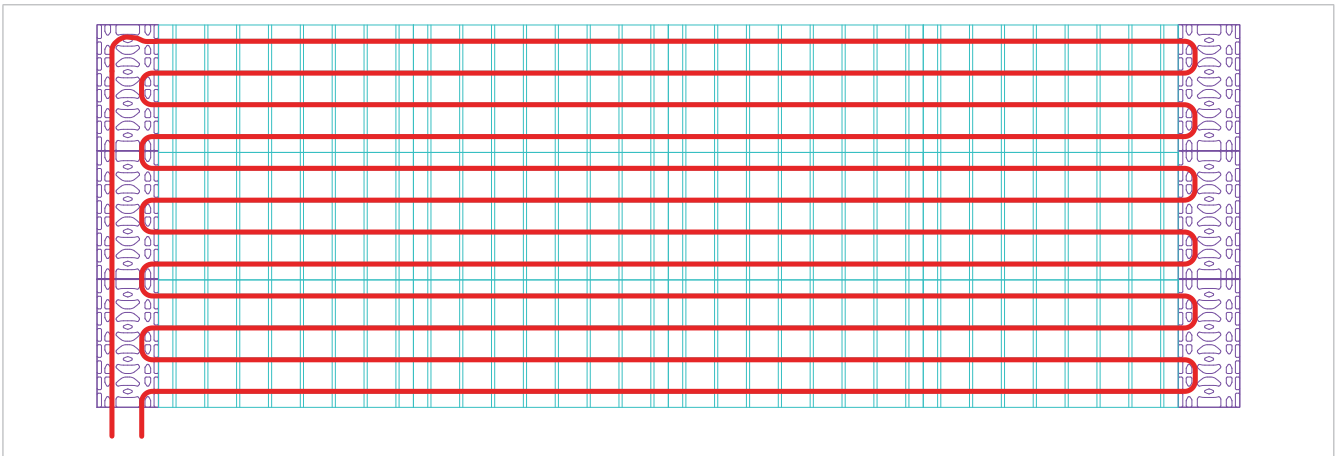


Note.
The filling of the perimeter spaces, that are difficult to be reached with the R883-1 preform panel, and above all with the zinc coated steel strips, can be effected with a self-levelling concrete, not radiant, separated by the slab with the first layer of the R984 polyethylene sheet, and made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

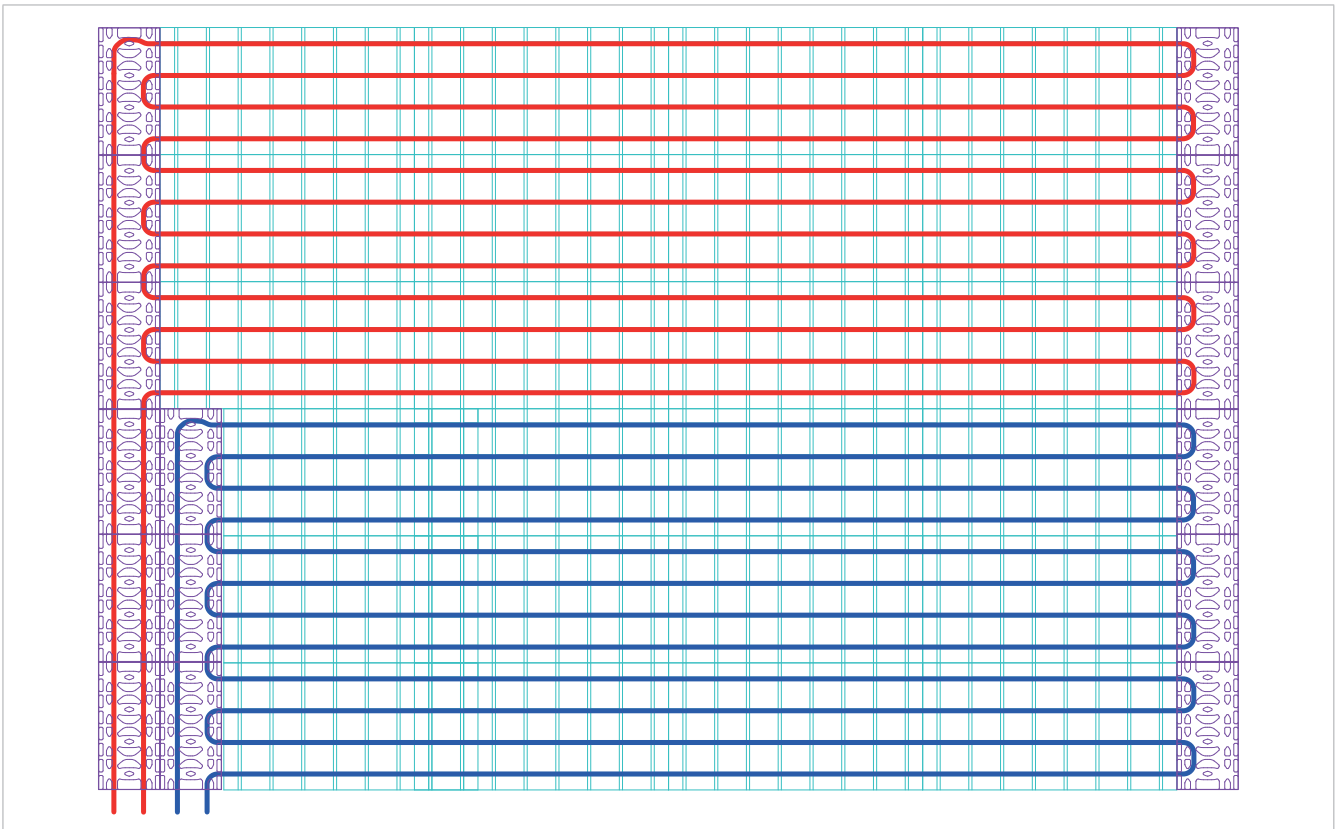


Note.
In the applications of the radiant dry floor systems, it is essential referring to EN 1264 standard, regarding the design and the plant and structural installation, by respecting strictly the testing and first start-up procedures.

Laying example for no.1 radiant circuit



Laying example for no.2 radiant circuits





Normative references

- UNI EN 1264

Floor heating: systems and components

- EN 13163

Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) – Specification

Product specifications

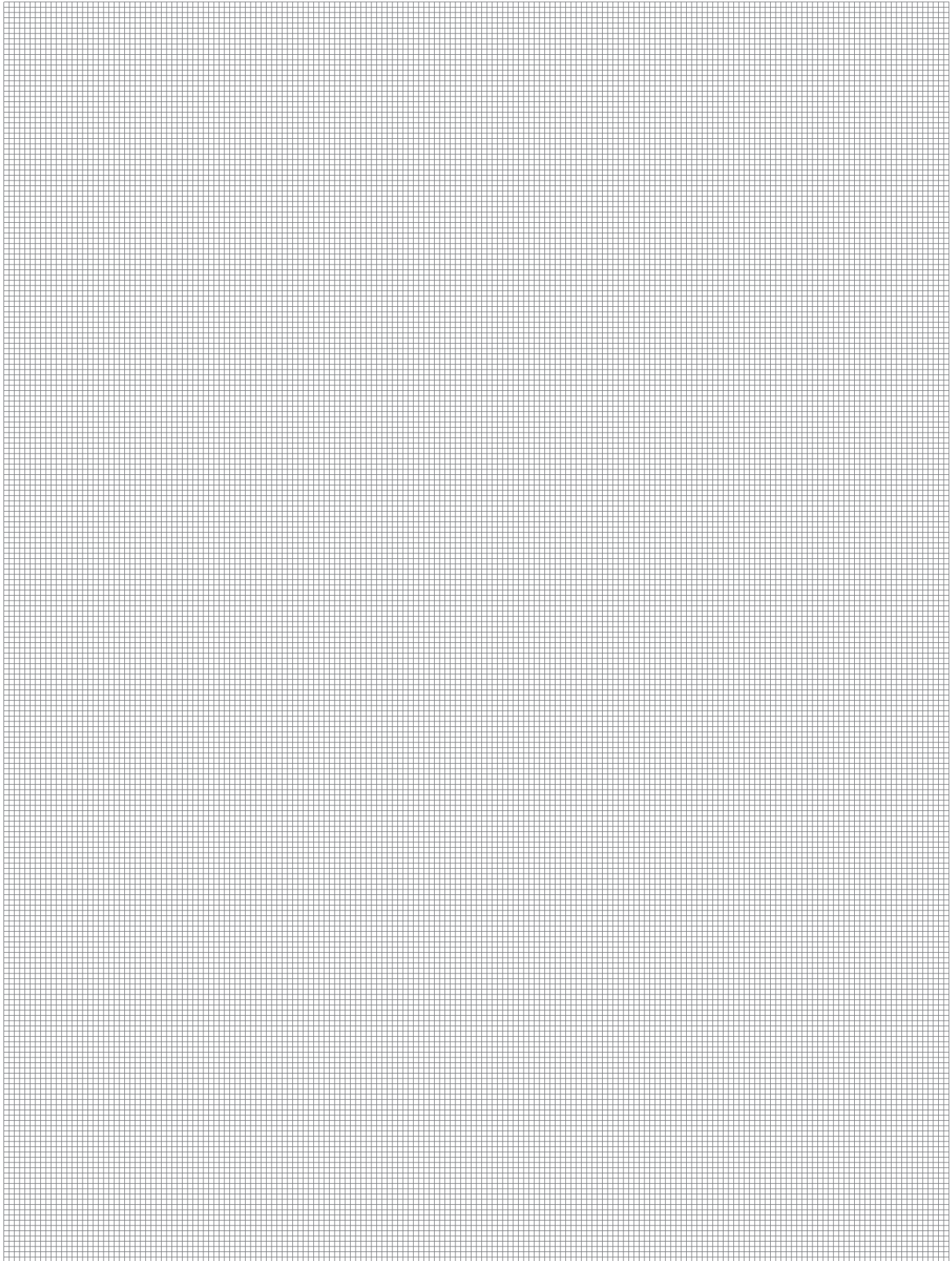
Radiant dry floor system

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:

- **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. Temperature range -20÷80°C.
- **R883-1** series insulating panel in expanded polystyrene (EPS200). Density 30 kg/m³, thermal resistance 0,65 m² 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/m³. Thermal resistance 0,55 m² K/W. Plate dimensions 600x300 mm. 28 mm thickness with grooves on the four sides for coupling with the adjacent panels.
- Plastic material or multilayer pipe of maximum external diameter 17 mm, **R999**, **R978** or **R996T** series
- Fixing clip for the pipe to the insulating panel, **K809** series (where necessary)
- 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.

**Warning.**

Store in covered place, not expose to direct sunlight also after the installation, until laying the screed.



Additional information

For more information, go to www.giacomini.com or contact our technical assistance service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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