R982Q

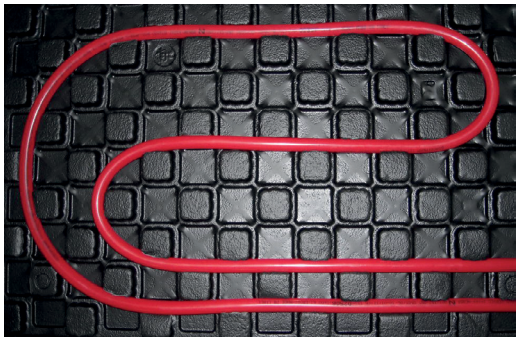


fig.1 During the laying of the pipes, the layout and geometry of the "mushrooms" results in a pliable lateral surface that buckles to create a firm, precise housing for the radiant circuits. This characteristic eliminates the need for pipe-fixing clips.

Description

The R982Q pre-formed panel is used in radiant underfloor systems as an insulating support for the pipes. The use of the panel is essential for creating a modern, practical system as it allows the rooms to be air-conditioned quickly and with reduced power usage (given that it limits the mass of the heated structures and reduces downward heat loss). With the use of insulating panels, radiant underfloor systems have taken a huge quality leap, in terms of both comfort and energy savings.

The use of the pre-formed insulating panels also maintains comfortable environmental temperatures while limiting the floor surface temperature (as indicated in EN 1264 - max. 29 °C for living areas). This means the complete absence of the physiological discomfort and structural problems typical of the old installation techniques, no longer used. Thanks to the insulating panels, users can reduce the number of pipes laid and hence the number of radiant circuits, the flow rate of circulating water, the diameters of the supply pipes, circulator pressure and power levels used, resulting in immediate overall energy savings that help safeguard the environment.

Versions and packages

Product code	Size	No. of panels	Total effective surface
R982QY013	T50 – h37	10	11,20 m²
R982QY015	T50 – h50	7	7,84 m²
R982QY016	T50 – h60	10	11,20 m²
R982QY017	T50 – h75	8	8,96 m²

T = Pitch (mm); h = Height (mm)

Characteristics

The R982Q pre-formed insulating panel, made of sintered foam polystyrene (EPS) in accordance with EN 13163, is coupled with a special 0,4 mm protective layer in polystyrene (PS). The notable thickness of the covering ensures the excellent mechanical resistance of the "mushrooms", ensuring the most suitable panel density for the required thermal/acoustic insulation characteristics. The profile solutions adopted ensure the firm, precise coupling of the panels, the possibility to lay the radiant circuits without any need for pipe-fixing clips (in most installations), and advantages in the casting of the screed (avoiding the formation of air pockets that would inevitably reduce the efficiency of the radiant floor). The use of the R982Q pre-formed panel therefore saves time when laying the pipes, and allows the creation of circuits with 50 mm pitches and multiples thereof (typical of radiant floor heating and cooling systems) in an orderly manner, even in the most difficult situations. Models with a total thickness of 50, 60, 75 mm not only provide thermal insulation and act as a support for the radiant circuits, but also improve footfall soundproofing (equal to 26 dB) thanks to their dynamic rigidity - class SD30. The model with a total thickness of 37 mm, on the other hand, enables the installation of a radiant underfloor system even when the available space is limited, for example in renovation projects.

Sound absorption

The R982Q T50-h50 (R982QY015), T50-h60 (R982QY016), T50-h75 (R982QY017) pre-formed insulating panels have a shaped bottom surface - a feature that distinguishes them as sound-absorbing elements. In compliance with EN 13163, the R982QY015, R982QY016 and R982QY017 panels are in class 30 SD (equivalent to declaring a dynamic rigidity of s' ≤ 30 MN / m^3, as calculated according to EN13172).

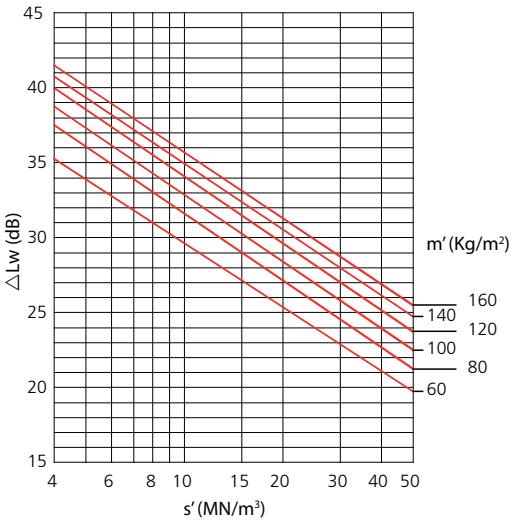


fig.2 Figure C1 of the UNI EN 12354-2 standard (fig.2) shows how, for a given mass per unit area of the screed, a limited value of dynamic rigidity s' leads to an improvement in the soundproofing at the highest LW footfall level.

Dimensions

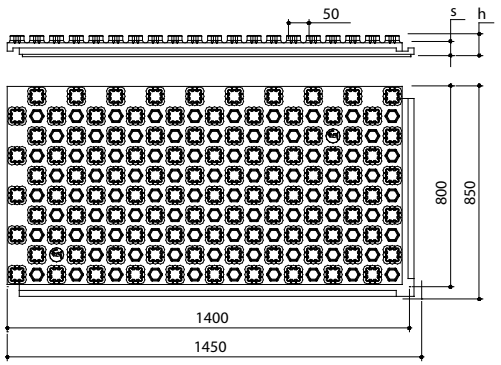


fig.3 R982QY013: h 37 mm; th 15 mm
R982QY015: h 50 mm; th 28 mm
R982QY016: h 60 mm; th 38 mm
R982QY017: h 75 mm; th 53 mm

Technical data

Insulating panel R982QY013	
Product code	R982QY013
Effective dimensions	1400 x 800 mm
Effective surface	1,12 m^2
Panel dimensions	1450 x 850 mm
Panel surface	1,23 m^2
Total thickness	37 mm sheet: 15 mm + mushroom: 22 mm
Pipe diameter	15÷18 mm
Allowed pitches	multiples of 50 mm
Quantity of piping per m^2	100 mm pitch: 10 m 150 mm pitch: 6,67 m
Pre-formed insulating sheet	
Material	Sintered foam polystyrene PS30 (EPS150)
Application range	30 kg/m^3
Thermal conductivity, λ_D	0,034 W/(m K)
Thermal resistance R_λ	0,88 m^2 K/W
Minimum compression resistance at 10% crushing	150 kPa (1,5 kg/cm^2)
Anti-fire protection in accordance with DIN4102	B2 (Euroclass E)
Classification as per EN13163	EPS – EN13163 – T1 – L1 – W1 – S1 – P3 DS(N)5 – DLT(1)5 – BS250 – CS(10)150
Protective layer	
Material	Polystyrene (PS)
Thickness	0,4 mm
Colour	Black

Pre-formed insulation panel R982QY015	
Product code	R982QY015
Effective dimensions	1400 x 800 mm
Effective surface	1,12 m^2
Panel dimensions	1450 x 850 mm
Panel surface	1,23 m^2
Total thickness	50mm sheet: 28 mm + mushroom: 22 mm
Pipe diameter	15÷18 mm
Allowed pitches	multiples of 50 mm
Quantity of piping per m^2	100 mm pitch: 10 m 150 mm pitch: 6,67 m
Pre-formed insulating sheet	
Material	Sintered foam polystyrene PST – TK 5000
Application range	23 kg/m^3
Thermal conductivity, λ_D	0,034 W/(m K)
Thermal resistance R_λ	1,27 m^2 K/W
Mobile load	5,0 kPa
Compressibility	2 mm
Dynamic rigidity	30 MN/m^3
Anti-fire protection in accordance with DIN4102	B2 (Euroclass E)
Classification as per EN13163	EPS – EN13163 – T4 – L1 – W1 – S1 – P3 DS(N)5 – BS100 – SD30 – CP2
Protective layer	
Material	Polystyrene (PS)
Thickness	0,4 mm
Colour	Black

Pre-formed insulation panel R982QY016	
Product code	R982QY016
Effective dimensions	1400 x 800 mm
Effective surface	1,12 m^2
Panel dimensions	1450 x 850 mm
Panel surface	1,23 m^2
Total thickness	60 mm sheet: 38 mm + mushroom: 22 mm
Pipe diameter	15÷18 mm
Allowed pitches	multiples of 50 mm
Quantity of piping per m^2	100 mm pitch: 10 m 150 mm pitch: 6,67 m
Pre-formed insulating sheet	
Material	Sintered foam polystyrene PST – TK 5000
Application range:	23 kg/m^3
Thermal conductivity, λ_D	0,034 W/(m K)
Thermal resistance R_λ	1,56 m^2 K/W
Mobile load	5,0 kPa
Compressibility	2 mm
Dynamic rigidity	30 MN/m^3
Anti-fire protection in accordance with DIN4102	B2 (Euroclass E)
Classification as per EN13163	EPS – EN13163 – T4 – L1 – W1 – S1 – P3 DS(N)5 – BS100 – SD30 – CP2
Protective layer	
Material	Polystyrene (PS)
Thickness	0,4 mm
Colour	Black

Pre-formed insulation panel R982QY017	
Product code	R982QY017
Effective dimensions	1400 x 800 mm
Effective surface	1,12 m^2
Panel dimensions	1450 x 850 mm
Panel surface	1,23 m^2
Total thickness	75 mm sheet: 53 mm + mushroom: 22 mm
Pipe diameter	15÷18 mm
Allowed pitches	multiples of 50 mm
Quantity of piping per m^2	100 mm pitch: 10 m 150 mm pitch: 6,67 m
Pre-formed insulating sheet	
Material	Sintered foam polystyrene PST – TK 5000
Application range	23 kg/m^3
Thermal conductivity, λ_D	0,034 W/(m K)
Thermal resistance R_λ	2,00 m^2 K/W
Mobile load	5,0 kPa
Compressibility	2 mm
Dynamic rigidity	30 MN/m^3
Anti-fire protection in accordance with DIN4102	B2 (Euroclass E)
Classification as per EN13163	EPS – EN13163 – T4 – L1 – W1 – S1 – P3 DS(N)5 – BS100 – SD30 – CP2
Protective layer	
Material	Polystyrene (PS)
Thickness	0,4 mm
Colour	Black

Normative references

- UNI EN 1264

Underfloor heating – Systems and components

- EN 13163

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

- UNI EN 12354-2

Acoustics in construction – Evaluation of acoustic performance of buildings starting from products performance– Trampling insulation

Product specifications

R982QY013

Pre-formed insulating panel for radiant underfloor systems. Black. Height 37 mm (insulating sheet 15 mm, knuckles 22 mm). Consists of a sintered foam polystyrene (EPS) insulation sheet and a polystyrene (PS) protection layer of 0,4 mm. For pipes with Ø 15÷18 mm. Centre distance for laying 50 mm. Dimensions: 1450x850 mm (effective dimensions: 1400x800 mm). Effective panel surface 1,12 m^2. Thermal conductivity 0,034 W/(m K). Thermal resistance 0,88 m^2 K/W. Application range 30 kg/m^3. Minimum compression resistance at 10% crushing 150 kPa Anti-fire class EN 4102: B2 (Euroclass E)

R982QY015

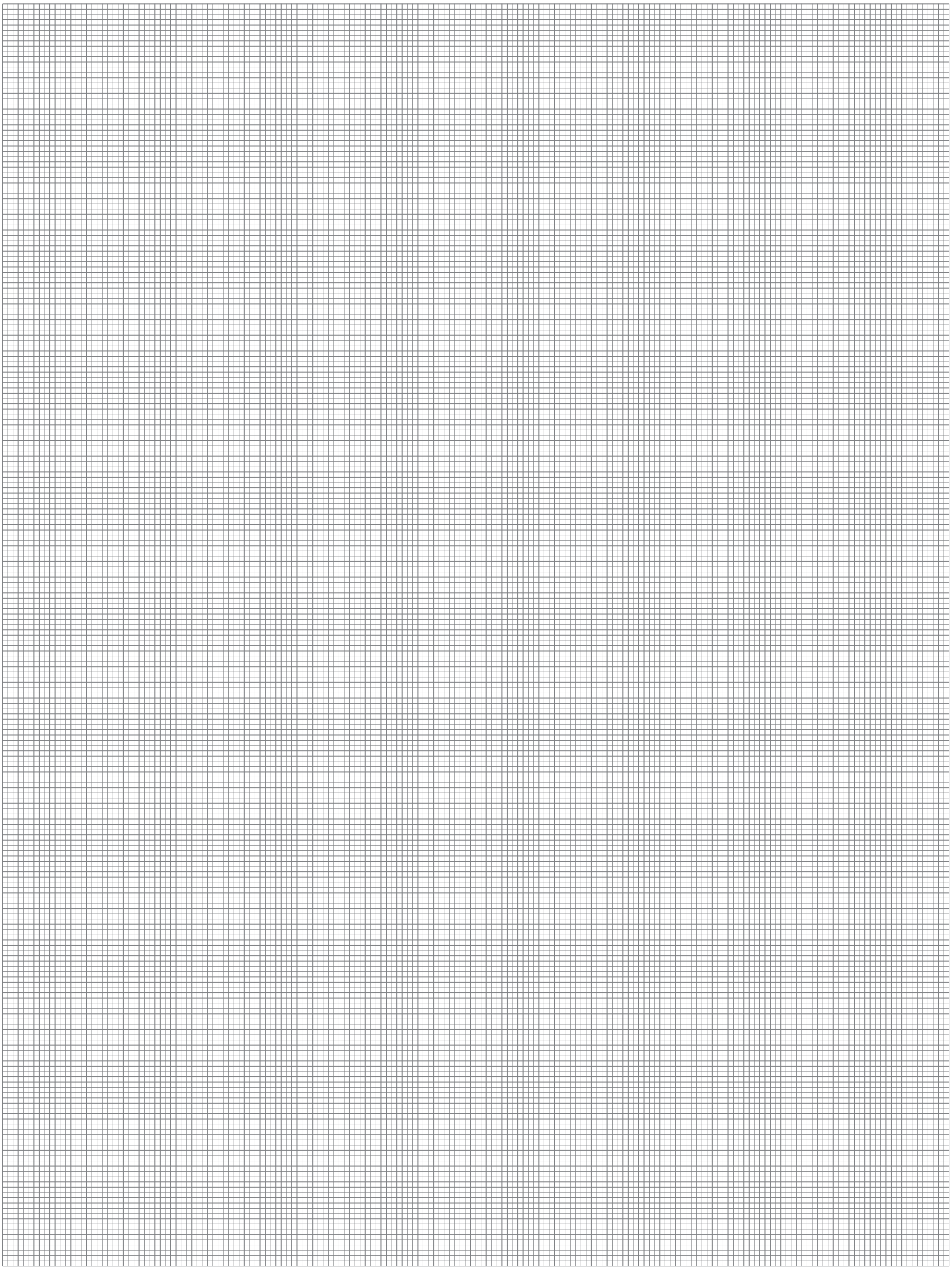
Pre-formed insulating panel for radiant underfloor systems. Black. Height 50 mm (insulating sheet 28 mm, knuckles 22 mm). Consists of a sintered foam polystyrene (EPS) insulation sheet and a polystyrene (PS) protection layer of 0,4 mm. For pipes with Ø 15÷18 mm. Centre distance for laying 50 mm. Dimensions: 1450x850 mm (effective dimensions: 1400x800 mm). Effective panel surface 1,12 m^2. Thermal conductivity 0,034 W/(m K). Thermal resistance 1,27 m^2 K/W. Application range 23 kg/m^3. Dynamic rigidity 30 MN/m^3. Compressibility 2 mm. Mobile load 5 kPa. Anti-fire class EN 4102: B2 (Euroclass E)

R982QY016

Pre-formed insulating panel for radiant underfloor systems. Black. Height 60 mm (insulating sheet 38 mm, knuckles 22 mm). Consists of a sintered foam polystyrene (EPS) insulation sheet and a polystyrene (PS) protection layer of 0,4 mm. For pipes with Ø 15÷18 mm. Centre distance for laying 50 mm. Dimensions: 1450x850 mm (effective dimensions: 1400x800 mm). Effective panel surface 1,12 m^2. Thermal conductivity 0,034 W/(m K). Thermal resistance 1,56 m^2 K/W. Application range 23 kg/m^3. Dynamic rigidity 30 MN/m^3. Compressibility 2 mm. Mobile load 5 kPa. Anti-fire class EN 4102: B2 (Euroclass E)

R982QY017

Pre-formed insulating panel for radiant underfloor systems. Black. Height 75 mm (insulating sheet 53 mm, knuckles 22 mm). Consists of a sintered foam polystyrene (EPS) insulation sheet and a polystyrene (PS) protection layer of 0,4 mm. For pipes with Ø 15÷18 mm. Centre distance for laying 50 mm. Dimensions: 1450x850 mm (effective dimensions: 1400x800 mm). Effective panel surface 1,12 m^2. Thermal conductivity 0,034 W/(m K). Thermal resistance 2,00 m^2 K/W. Application range 23 kg/m^3. Dynamic rigidity 30 MN/m^3. Compressibility 2 mm. Mobile load 5 kPa. Anti-fire class EN 4102: B2 (Euroclass E)



Additional information

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