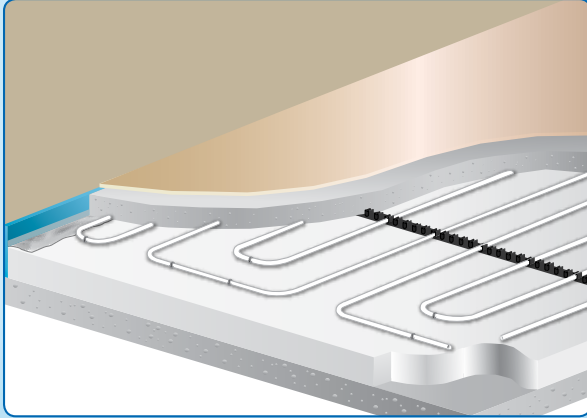


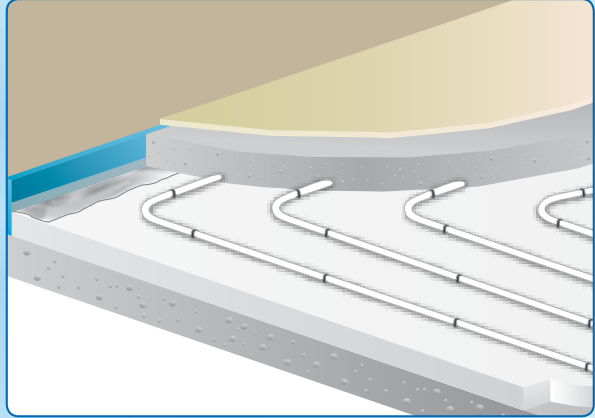
Floor Constructions and Pipe Securing Systems

Emmeti offer a wide range of materials and fixings to suit a variety of installation requirements for screeded, concrete and floating floor types.

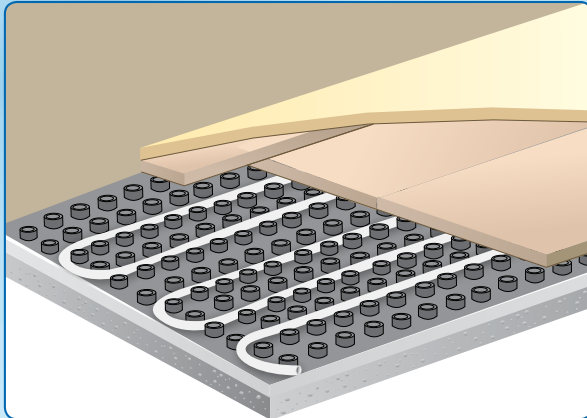
Solid Floor with Clip Rail



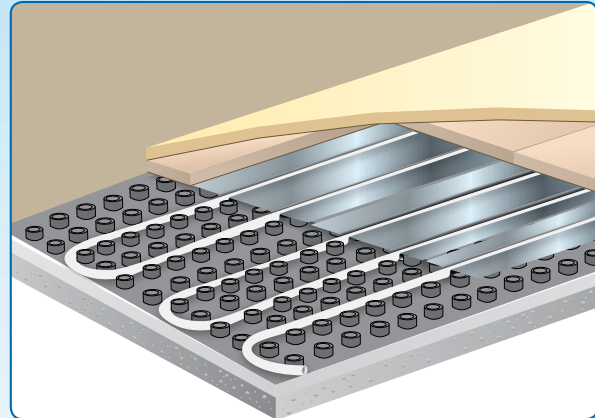
Solid Floor with Pipe Clips



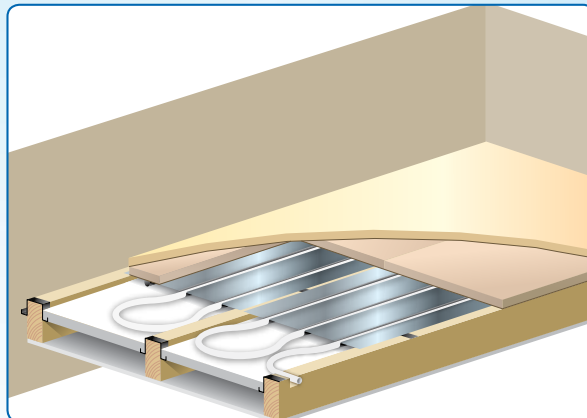
Solid Floor with Castellated Panels



Spreader Plates with Castellated Panels



Spreader Plates for Timber Suspended Floors



Technical Product Guide

Underfloor Heating Accessories



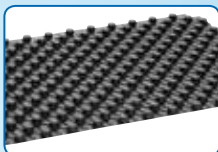
Edge Insulation Strip - Insulating Perimeter Strip

Designed to provide a separation layer between the wall and screed floor layer. Made of low density polyethylene (LDPE), with an adhesive strip (3cm wide) for fixing to a wall. The edge insulation strip as an option comes with a sealing polyethylene overlap (18cm wide) that creates a barrier between the insulation boards and edging strip.



Clip Rail

A range of mounting rails to cater for pipes from 16mm to 20mm, with options of self-adhesive tape backing or dual barb for secure location during under floor heating installation.



Castellated Panel

Designed as a simple alternative to clip rails or staples as a method for holding pipe in place. This method is used for rapid installation of underfloor heating systems, placed on top of insulation. Emmeti offer two types of castellated panel's; standard panel with surface bosses with adhesive layer and standard panel with surface bosses without adhesive layer.



Roll Dispensers for Pipe

Three types of pipe dispensers available, Low Roll, High Roll and Low Roll with telescopic arms. Designed to allow for pipe to be uncoiled efficiently and effectively



Pipe Bend Supports

Used to protect and support pipe between the manifold and where it enters the floor. An optional fixing lug available for smaller size pipe



Tacker Gun

Fast and efficient method to fix pipe to insulation. Specifically designed for the range of tacker staples we have available, it can be used to secure pipe directly to floor insulation.



Tacker Staples

A range of tacker staples designed to work effectively and efficiently with our range of Tacker Guns.



Manual Clips

A range of clips for manual fixing catering for pipe sizes from 16mm to 20mm OD.



Straddle Clips

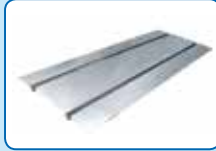
For use on insulation panels with raised bosses to retain and guide pipe, by bridging between bosses. Can also be used to bridge between insulation sheets to anchor them in place relative to each other.

Underfloor Heating Accessories



Manual Twist Pipe Clip

Manual Twist Pipe clip for pipe 16mm-18mm, designed to be hand threaded into insulation to anchor the clip and pipe.



Spreader (Heat Emission) Plates

Sometimes known as diffuser plates. Made from 0.5mm thick brushed aluminium sheet, emission plates are designed to mount the underfloor heating pipework under suspended timber or battened floors. A variety of widths are available.



Closing Bend for Spreader Plates

Working in conjunction with spreader plates, closing bends allow for easier application of pipework.



Floor Insulation Panel

A range of floor insulation panels for use with Emmeti underfloor heating pipe systems, including: expanded polystyrene (EPS) boards with surface bosses and pipe spacings of either 5.5 or 7cm for thermal insulation; elastic expanded polystyrene (EPS-T) boards for thermal and acoustic insulation and self-expanding cork panels (ICB) for thermal insulation.



Dry Installation Systems

Designed for applications directly beneath or immediately above the floor finish without the use of screed. Two systems are included: aluminium spreader plates intended for use with suspended or battened floors and Dry Floor intended for use as an overlay system for existing floors.



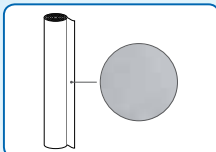
Galvanised Steel Plate

Designed for use with Dry Floor Panels to provide load bearing capability



Polyethylene sheet (in roll)

Single fold sheet width 2 x 1m, roll of 50m, in polyethylene, thickness 0.2mm.



Geotextile sheet (in roll)

Permeable membrane, non woven in polypropylene. Thickness 4mm. Density: 500 gr/m².



Infravision thermal imaging camera

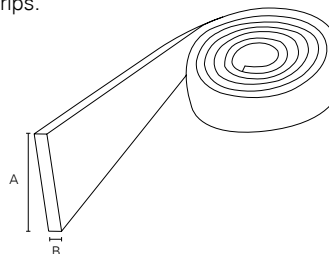
Very high resolution infrared camera. Comes in hard wearing plastic carry pack, complete with 2 lithium batteries, charger, adaptor, TV connection cable, USB connection cable, software CD, instruction manual and guarantee.

Technical Product Guide

Edging Strip – Insulating Perimeter Strip

Edge insulation strip is essential for any underfloor heating system. They are designed to be used on solid flooring with insulation and screeding on top.

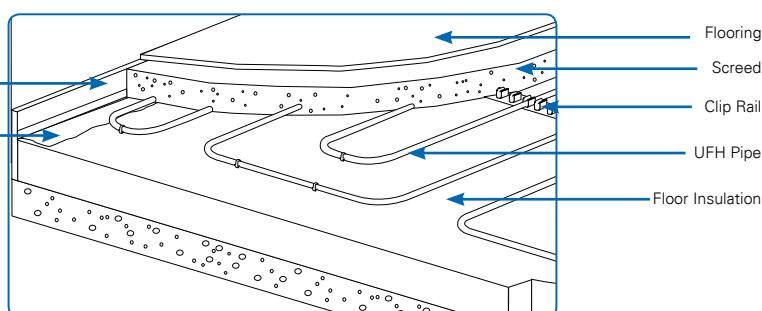
Edging strip (also known as perimeter strip) acts as a thermal bridge (preventing moisture crossing over) to reduce heat loss and noise, once the screed has set. It also accommodates some expansion of the screed slab. The perimeter strip is notched, allowing easy trimming using the pre scored tear off strips.



Edging Strip Insulation Installation

Edge Insulation strip with adhesive strip for easy application

Polyethylene Overlap placed over the floor insulation, below the screed. This is centrally attached along the edging strip



Description	Code	Thickness mm (B)	Max. Height mm (A)	Min Height mm (A)	No of Scores	Adhesive film Width	Sealing Polyethylene Overlap
Edge Strip 150mm	U9282010	8	150	100	5	-	-
Edge Strip 150mm	U9282020	8	150	100	5	-	Yes
Edge Strip 150mm	U9282030	8	150	100	5	30	Yes
Edge Strip 130mm	U9282040	8	130	80	5	-	-
Edge Strip 130mm	U9282050	8	130	80	5	-	Yes
Edge Strip 130mm	U9282060	8	130	80	5	30	Yes

Available in 2 widths 150mm and 130mm, both are 8mm thick in 25m rolls, there are three different variants. All variants are Low Density Polyethylene (LDPE) and Blue in colour.

Scored Edge Strip

The height of the edging strip (130mm or 150mm) you will require is dependent on the thickness of the floor screed. There are 5 horizontal scored strips which can be reduced from 15cm to 8cm. Once the screed floor has hardened the excess edge strip can be easily trimmed to size.

Scored Edge Strip with Overlap

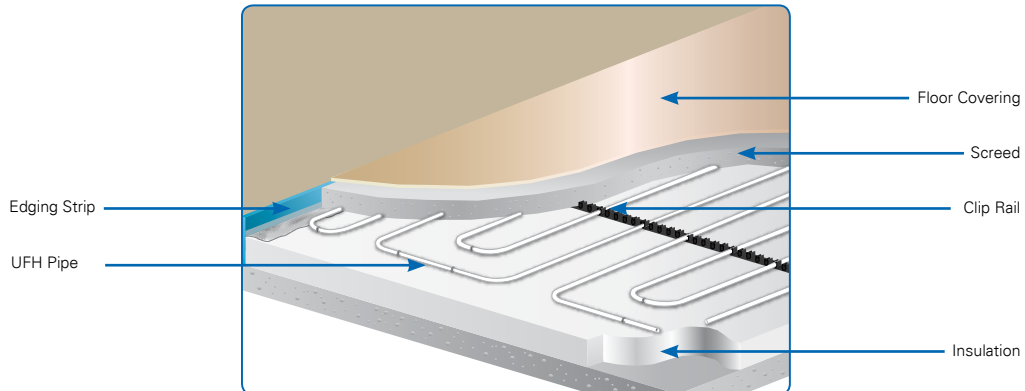
Overlap creates a barrier between floor insulation and screed. This type of edge strip has a polyethylene, 18 cm wide overlap which is designed to prevent moisture from penetrating through the thermal insulation. The edging strip is placed against the wall with the polyethylene overlap placed over the floor insulation prior to screeding.

Scored Edge Strip with Overlap and Adhesive tape

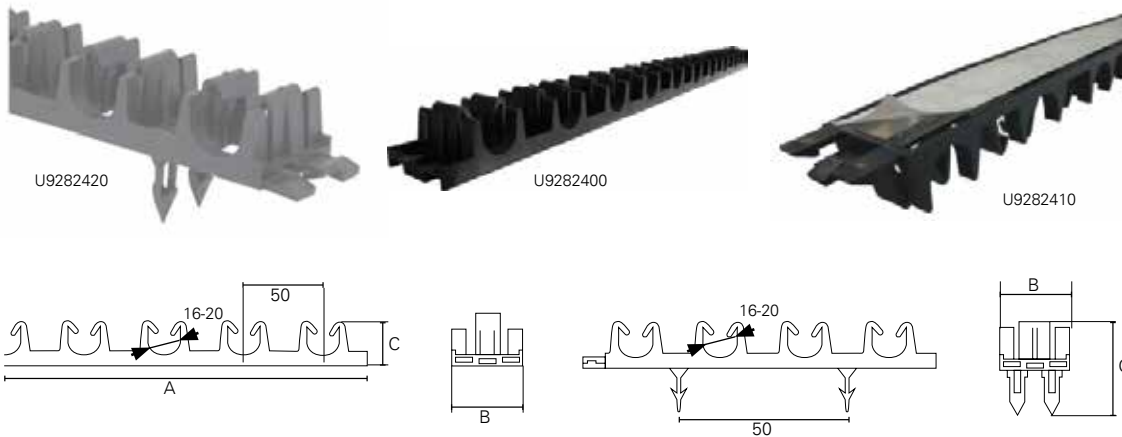
This option has both the overlap and adhesive tape. The 3cm wide adhesive tape runs through the entire length of the 25m roll. This option allows quick and secure fixing to the wall when installing. The adhesive tape film is covered with a strip of silicone paper which is easily removed.

Clip Rails

Solid Floor with Clip Rail



Emmeti offer a range of mounting rails to cater for pipes from 16mm to 20mm. The clip rail application is a cost efficient solution to ensuring underfloor pipe is fixed into place securely.



Once installation of the floor insulation and edging strip has taken place. The clip rails are then placed in their desired position and fixed using the installers preferred method, either using manual staples (please note you are unable to use tacker staples for secure fixing), adhesive tape or dual barb clip rails. Once fixed securely you can then start installing the pipe in the desired layout.

Emmeti clip rails are supplied in 1 meter lengths, but can be separated to make ½ meter lengths if required.

Description	Code	Length (A) mm	Width (B) mm	Height (C) mm	Pipe Diameter Ø mm	Min distance between pipe (mm)
Clip Rail without adhesive	U9282400	1000	40	28	16-20	50
Clip Rail with adhesive	U9282410	1000	40	28	16-20	50
Clip Rail Double Chisel	U9282420	1000	40	53	16-20	50

Emmeti offer three types of clip rail, all manufactured in polypropylene and black in colour.

Standard Clip Rail

Allows quick and easy installation, secure mounting and unrestricted use. Made of durable material and can hold the weight of people walking over it. The clip rail can be secured into place with manual clips using Emmeti codes U9282200 49mm to U9282230 66mm

Clip Rail with Adhesive Tape

Allows quick and easy installation, secure mounting and unrestricted use. Has an adhesive tape which runs the full length of the clip rail and 30mm wide. The adhesive tape film is covered with a strip of silicone paper which is easily removed. There is no requirement for staples. Remove the silicone paper from the adhesive strip and place the clip rail in its desired location on the floor insulation. This is now securely applied. Made of durable material and can hold the weight of people walking over it.

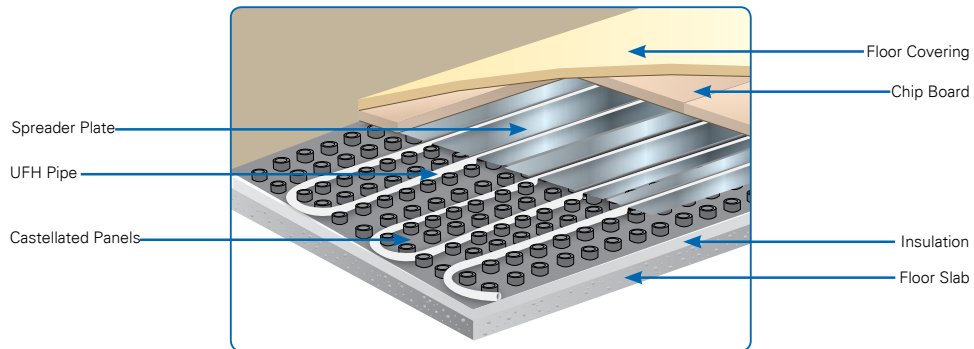
Clip Rail with Double Barb

Allows quick and easy installation, secure mounting and unrestricted use. The clip rail is placed in the desired location on the floor insulation, the clip rail is held into place by the barb being pushed into the insulation by hand. However it is important to note insulation can be less than 21mm. This is now securely applied. Made of durable material and can hold the weight of people walking over it.

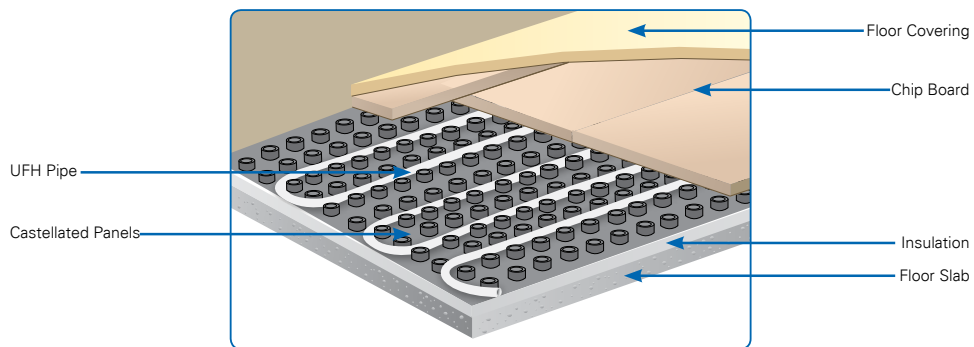
Technical Product Guide

Castellated Panels

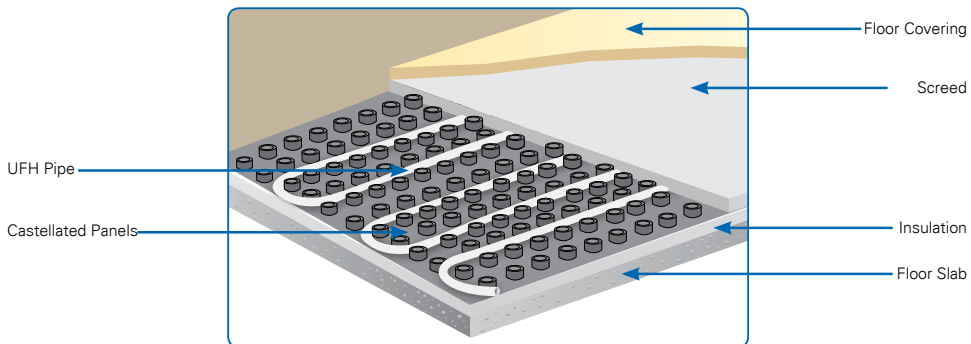
Spreader Plates with Castellated Panels



Castellated Panels for Securing Pipe

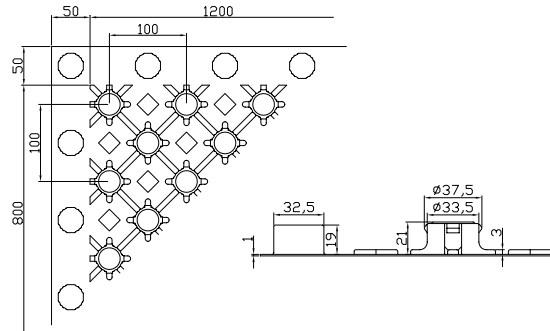
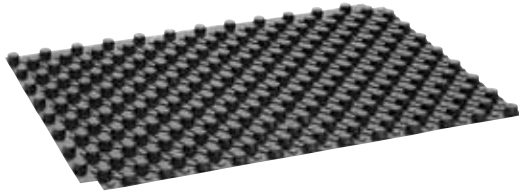


Castellated Panels for Screed



Castellated Panels

Castellated Panels



Castellated Panels is another method to aid in securing underfloor heating pipes where sufficient insulation has already been fitted. The castellated panels are placed over the (existing) insulation. There are three applications as pictorially shown on the previous page. The pipes can be mounted directly on to the castellated panels using the raised bosses, then either place chip board over the top or use screed. When pouring screed over the top, it is important that edge insulation is placed against all the walls as this will provide a barrier against perimeter heat loss and allows for expansion and contraction of the screed. Spreader plates can also be used by being placed and secured over the top of the castellated panels using the raised bosses

Emmeti offer two types of castellated panels, with an adhesive layer and without an adhesive layer. Both are 1mm thick which allows for walking over them. They have a total surface area of 1250 x 850mm and a 1200 x 800mm working surface area, with an overall height of 22mm. Both have a distance of 50mm between the bosses and are suitable for 16mm and 17mm pipes. The castellated panels are interlocking with overlapping edges and manufactured in expanded Polystyrene (EPS).

The standard castellated panel can be used either simply for holding pipe in place (instead of tacker clips or clip rail), or with spreader plates. However, Emmeti recommend you use the castellated panel with adhesive layer backing for this, as the glue holds the panel down onto the insulation, preventing it from lifting when laying pipe into it. When using with spreader plates, simply lay down the spreader plates first, at whatever spacing is appropriate, then the pipe.

Description	Size	Code
Castellated Board, no adhesive layer	24m ²	28134260
Castellated Board, with adhesive layer	24m ²	28134262

Technical Data	Size
Total length	1250 mm
Total width	850 mm
Total thickness	22 mm
Film thickness	1 mm
Pipe spacing	5 cm
External Ø pipes	16-17 mm

Technical Product Guide

Pipe Decoiler

Emmeti offer a selection of pipe dispensers for underfloor heating pipe. The pipe coil is placed on the decoiler to aid the pipe to uncoil efficiently and effectively, allowing for the pipe to be laid by a single person whilst improving the installers working conditions, and reducing labour costs.

The decoiler is made of galvanised steel sections, which are connected using wing nuts therefore it is easy to assemble and dismantle.



Description	Code	Height mm (A)	Height mm(B)	Ø 1	Ø 2	Weight
Low Roll Decoiler	U9281810	166	548 - 800	1140	360	15.8kg
Low Roll Decoiler c/w telescopic arms	U9281820	166	548 - 800	1140 - 1440	360	18.3kg
High Roll Decoiler	U9281830	488	870 - 1122	1140	360	16.8kg

Emmeti offer three types of decoilers to suit installer's preference; two types varying in height (Low or High roll decoiler) and one low roll dispenser with telescopic arms.

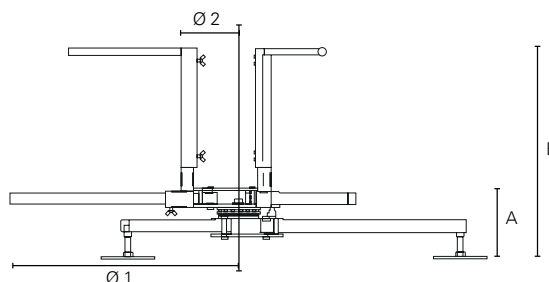
The below table shows the recommended maximum number of pipe coils depending on the pipe sizes.

Pipe DN	Pipe Coil Length		
	100m	200m	500m
16mm	6 coils	3 coils	1 coil
18mm	4 coils	2 coils	/
20mm	3 coils	1 coil	/

Max. Height of a coil – 60cm

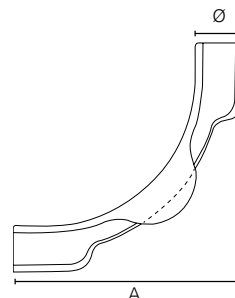
Min. Inner diameter of a coil - 36cm

Max. Outer diameter of a coil – 112cm



Pipe Bend Supports

Emmeti pipe bend supports allow you to protect and support heating pipes in a 90° bend. The support bends guide the heating pipes through floors and ceilings to the manifold. They also aid in changing the direction of the pipe at a 90° angle directly at the underfloor insulating layer. Emmeti also offer a pipe bend support for 10-12mm pipe with fixing lug which are useful for on wall heating

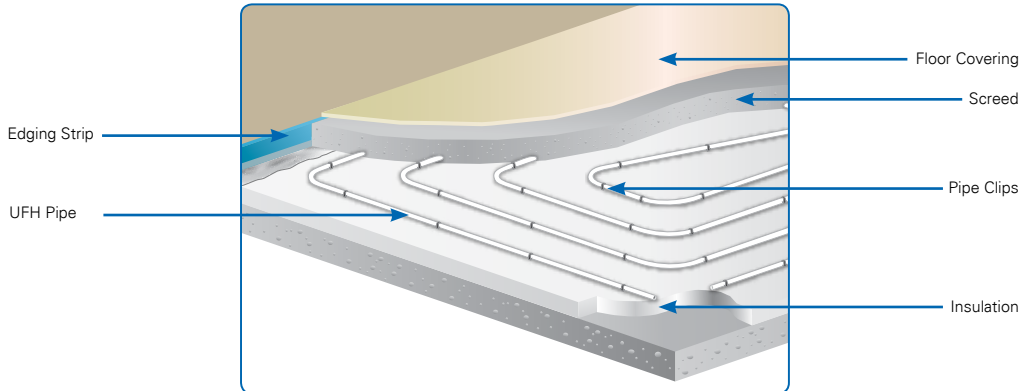


Description	Code	Ø	A (mm)
Bend Support 10-12mm with fixing lug	U9282500	10-12	100
Bend Support 14-18mm	U9282510	14-18	115
Bend Support 20-22mm	U9282520	20-22	144
Bend Support 25mm	U9282530	25	172
Bend Support 32-34mm	U9282540	32-34	228

Available in various sizes to suit pipe sizes from 10mm to 20mm. All support bends are manufactured in Nylon + 15% Glass fibre.

Tacker Gun

Screed Floor with Pipe Clips

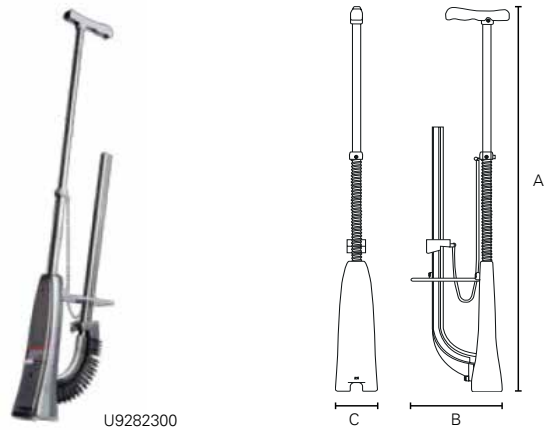


Tacker Guns are an effective and efficient method to secure pipe directly to floor insulation.

The tacker guns are extremely light and are designed with an ergonomic handle to ensure comfort and reduce fatigue of the installer. The tacker guns are available in two handle heights to aid in the comfort to the installer.

The Tacker gun can be simply adjusted to take different size tacker clips by screwing or unscrewing an adjustment screw (Allen key provided) this will create appropriate space in the clip seat depending on the size of the tacker clip. This will prevent the tacker clips from adversely falling out and ensure proper operation of the Tacker gun.

It is recommended that you use the listed Emmeti Tacker staples U9282100 single hook 40mm; U9282110 double hook 40mm; U9282120 double hook 50mm; U9282130 single hook 57mm, shown below with this tacker gun



Description	Code	A (mm)	B (mm)	C (mm)
Universal Tacker Gun Short Handle	U9282300	810	160	80
Universal Tacker Gun Long Handle	U9282310	1000	160	80

Tacker Staples

A range of tacker staples designed to work effectively and efficiently with our range of Tacker Guns.

It aids in fixing and securing heating pipes to an insulating layer quickly and easily.

Depending on thickness and density of the insulating layer, clips of appropriate length are available. They are sold in strips which make it extremely simple to load into the magazine of the tacker gun. Double hook options are available for stronger grip. It is recommended that you use the Emmeti tacker gun listed above U9282300 and U9282310 shown above.



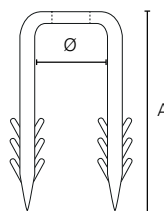
Description	Code	A (mm)	B (mm)	Pipe Diameter Ø	No of Clips per Strip
Single Hook 40mm	U9282100	40	22	15-20	25
Double Hook 40mm	U9282110	40	32	15-20	30
Double Hook 50mm	U9282120	50	32	15-20	25
Single Hook 57mm	U9282130	57	39	15-20	25

All manufactured in polypropylene and black in colour.

Technical Product Guide

Manual Clips

A range of staples for manual fixing catering for pipe sizes from 16mm to 18mm OD. These can be used in conjunction with our range of clip rails. This ensures secure fixing of the clip rail and pipe.

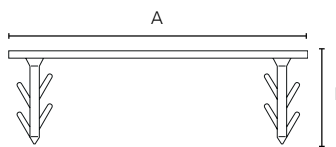


Description	Code	A (mm)	Ø
Manual Clips 49mm (PP)	U9282200	49	18
Manual Clips 49mm (NY)	U9282210	49	18
Manual Clips 66mm (PP)	U9282220	66	18
Manual Clips 66mm (NY)	U9282230	66	18

Emmeti offer manual clips in both Nylon and Polypropylene. Visually they both look the same; however the difference between Polypropylene and Nylon is in the hardness of material. Polypropylene is suitable for most installations, and Nylon is recommended for harder insulation EPS 200 and above. They are not to be used with a tacker gun.

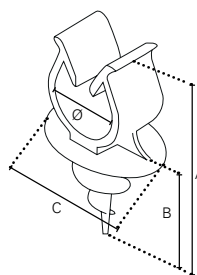
Straddle Clips

For use on castellated panels with raised bosses to retain and guide pipe. Material, Polypropylene.



Description	Code	A (mm)	B (mm)
Straddle Clip 90 x 28mm	U9282260	90	28

Manual Twist Pipe Clips

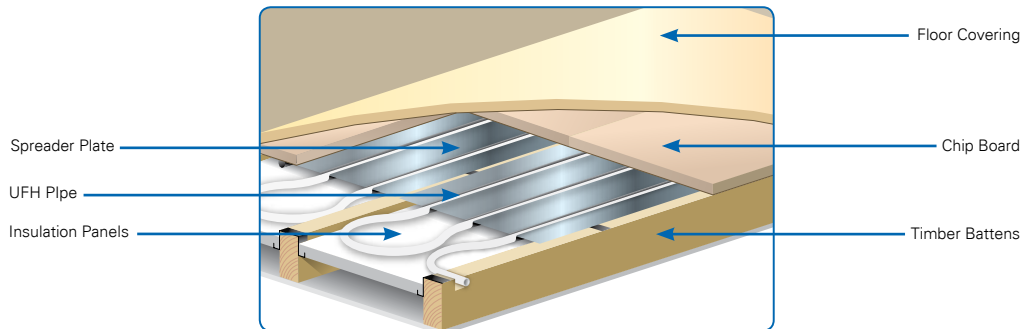


Manual Twist Pipe Clips screw into the insulating board, fixing PE-X 16mm – 18mm O.D pipes. Twist clips, like staples, can be fixed into any position, which provides choice of pipe layout and spacing.

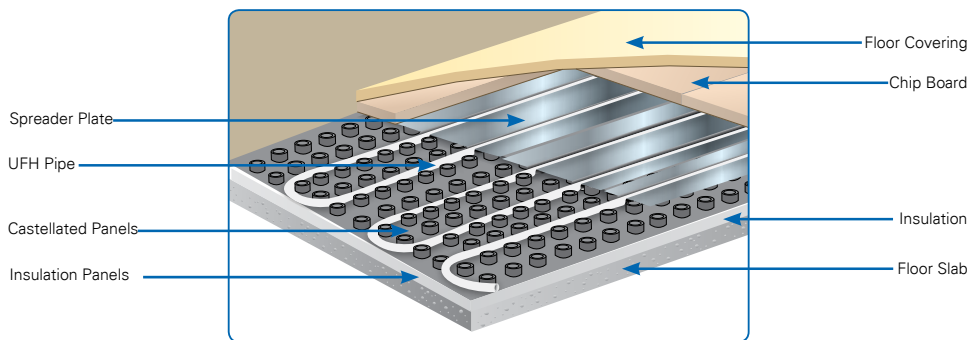
Description	Code	A	B	C Ø
Manual Twist Pipe Clip for 16mm-18mm	U9282240	58	27	35 16-18

Spreader Plates

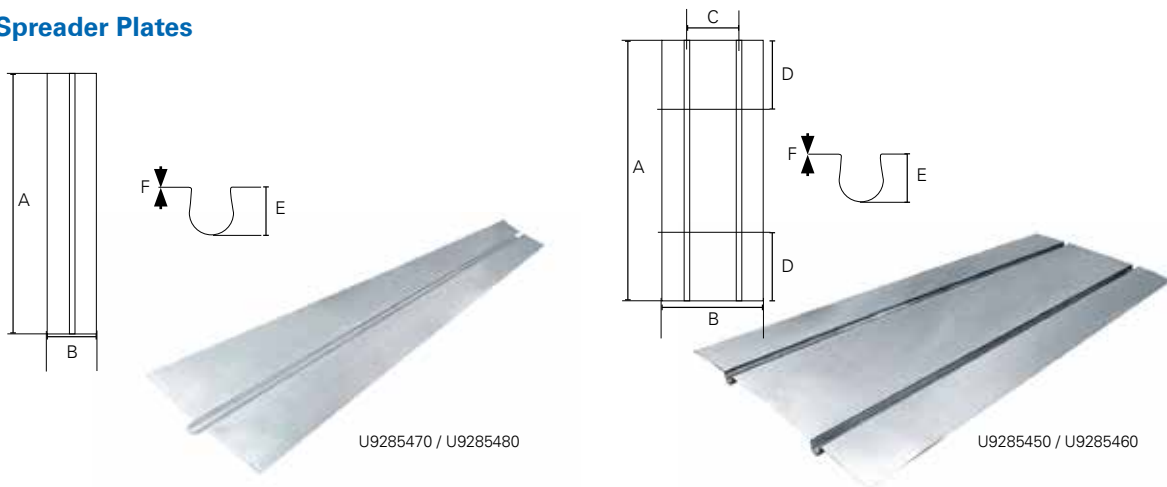
Timber Suspended Floor System



Spreader Plates with Castellated Panels



Spreader Plates



Emmeti Spreader plates are designed for use with suspended floors and battened floors. They are simply fixed between the joists over the top of the insulating floor layer ensuring that the heat generated from the pipes is not lost downwards but is spread evenly across the floor. The pipe is then positioned within the grooves which are designed to hold the pipe securely; the grooves run the entire length of the spreader plate.

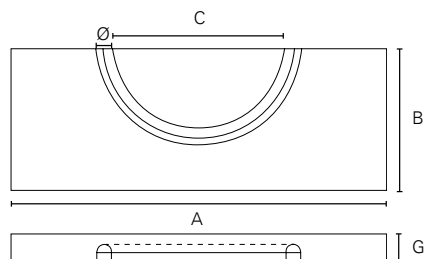
Description	Code	Ø	Length (A mm)	Width (B mm)	Width b/w Channels (C mm)	Cut Spacing (D mm)	Groove Depth (E mm)	Plate Thickness (F mm)
Double Channel (2 way) without cuts	U9285450	16	1000	395	200	-	18.5	0.5
Double Channel (2 way) cuts	U9285460	16	1000	395	200	250	18.5	0.5
Single Channel (1 way) without cuts	U9285470	16	1000	195	-	-	18.5	0.5
Single Channel (1 way) cuts	U9285480	16	1000	195	-	250	18.5	0.5

Emmeti offer both single and double channel spreader plates, depending on the spacing between the joist centres will determine whether you would use single channel or double channel plates. There is also the option to have spreader plates with additional 'cuts'. The cuts enable the installer to easily break the spreader plates in to divisions of 25cm without having to use any additional tooling.

All manufactured in Aluminium

Technical Product Guide

Closing Bend for Spreader Plates



Closing bends work in conjunction our spreader plates. For quick assembly and aesthetic installation of underfloor heating systems.

Description	Code	Ø	Length A	Size mm		
				Width B	Bend C	Thickness G
Closing bend for Spreader Plate	U9285510	16	400	150	200	30

Made from Expanded Polystyrene

Floor Insulation Panel

The Emmeti underfloor heating plant range offers special components for the simple and rapid creation of durable and reliable systems which provide excellent standards of comfort.

The high quality of the products, the technical characteristics of the materials used and the extreme flexibility of fittings, make it possible to install underfloor heating in any type of building for domestic, commercial, industrial or sporting use, in offices, places of worship and buildings of historical value.

The Emmeti Floor system is invisible and does not limit furnishing options in the rooms.



Standard Floor Insulating Panel

Description	Density	Pack m ²	Code
1100 x 600 x 32 / H10	40 kg/m ³	14.52	28130079
1100 x 600 x 48 / H20	30 kg/m ³	7.92	28134060
1100 x 600 x 63 / H30	30 kg/m ³	6.6	28134050

Panel in expanded polystyrene (EPS), with surface bosses and cylindrical edges, clad in a film of rigid polystyrene. Pipe spacing 5 cm. CE UNI EN 13163.

Technical data	Standard	Model H10	Model H20	Model H30
Type	UNI EN 13163	EPS 250	EPS 200	EPS 200
Density	UNI EN 1602	40 kg/m ³	30 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 250 kPa	≥ 200 kPa	≥ 200 kPa
Thermal conductivity	EN 12939	0.034 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.45 m ² K/W	0.75 m ² K/W	1.05 m ² K/W
Thermal resistance (Sins/λins)	UNI EN 1264	0.29 m ² K/W	0.57 m ² K/W	0.86 m ² K/W
Class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 4%	< 4%	< 4%
Useful thickness Sins	UNI EN 1264	10 mm	20 mm	30 mm
Total length		1135 mm	1135 mm	1135 mm
Total width		635 mm	635 mm	635 mm
Total thickness		32 mm	48 mm	63 mm
Film thickness		0,16 mm	0,16 mm	0,16 mm
Pipe spacing		50 mm	50 mm	50 mm
External Ø of installing pipes		16-17 mm	16-17 mm	16-17 mm
Pack		14.52 m ²	7.92 m ²	6.6 m ²



H = 10/20/30 mm

Technical Product Guide

Floor Insulation Panel (continued)

Standard Floor Insulating Panel



Description	Density	Pack m ²	Code
1100 x 600 x 78 / H40 (*)	30 kg/m ³	5.28	28134062
1100 x 600 x 78 / H50	30 kg/m ³	4.62	28130093
1100 x 600 x 88 / H60 (*)	30 kg/m ³	3.96	28134064

Panel in expanded polystyrene (EPS), with surface bosses and tongue-and-groove edges, clad in a film of rigid polystyrene. Pipe spacing 5 cm. CE UNI EN 13163. *Available on request: 40 days lead time.

Technical data	Standard	Model H40	Model H50	Model H60
Type	UNI EN 13163	EPS 200	EPS 200	EPS 200
Density	UNI EN 1602	30 kg/m ³	30 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 200 kPa	≥ 200 kPa	≥ 200 kPa
Thermal conductivity	EN 12939	0.035 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	1.35 m ² K/W	1.65 m ² K/W	1.90 m ² K/W
Thermal resistance (Sins/λins)	UNI EN 1264	1.15 m ² K/W	1.42 m ² K/W	1.71 m ² K/W
Class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 5%	< 4%	< 5%
Useful thickness Sins	UNI EN 1264	40 mm	50 mm	60 mm
Total length		1120 mm	1120 mm	1120 mm
Total width		620 mm	620 mm	620 mm
Total thickness		68 mm	78 mm	88 mm
Film thickness		0.16 mm	0.16 mm	0.16 mm
Pipe spacing		50 mm	50 mm	50 mm
External Ø of installing pipes			16-17 mm	
Pack		5.28 m ²	4.62 m ²	3.96 m ²



H = 50 mm

Floor Insulation Panel (continued)

Standard Combi Floor Insulating Panel



Description	Density	Pack m ²	Code
1200 x 800 x 32 / H10	30 kg/m ³	17.28	28134074
1200 x 800 x 42 / H20	25 kg/m ³	2.48	28134076
1200 x 800 x 52 / H30	25 kg/m ³	8.64	28134078

Panel in expanded polystyrene (EPs), with surface bosses and cylindrical edges, coupled with a moulded film of rigid polystyrene. Pipe spacing 5 cm. UNI EN 13163

Technical data	Standard	Model H10	Model H20	Model H30
Type	UNI EN 13163	EPS 200	EPS 150	EPS 150
Density	UNI EN 1602	30 kg/m ³	25 kg/m ³	25 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 200 kPa	≥ 150 kPa	≥ 150 kPa
Thermal conductivity	EN 12939	0.035 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.45 m ² K/W	0.75 m ² K/W	1.00 m ² K/W
Thermal resistance (sins/λins)	UNI EN 1264	0.29 m ² K/W	0.57 m ² K/W	0.86 m ² K/W
Class of reaction to fire	UNI ENO 11925	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 5%	< 5%	< 5%
Useful thickness sins	UNI EN 1264	10 mm	20 mm	30 mm
Total lenght		1250 mm	1250 mm	1250 mm
Total width		850 mm	850 mm	850 mm
Total thickness		32 mm	42 mm	52 mm
Film thickness		0.65 mm	0.65 mm	0.65 mm
Pipe spacing		50 mm	50 mm	50 mm
External Ø installed pipes		16-17 mm	16-17 mm	16-17 mm
Pack		17.28 m ²	12.48 m ²	8.64 m ²



Technical Product Guide

Floor Insulation Panel (continued)

Classic Floor insulating panel without film



Description	Density	Pack m ²	Code
1200 x 750 x 65 / H30*	25 kg/m ³	9	28130096
1200 x 750 x 50 / H20	25 kg/m ³	10.8	28130097

Panel in polystyrene (EPS), with surface bosses and tongue-and-groove edges, pipe spacing: 7,5 cm.
CE UNI EN 13163. *Available on request: 40 days lead time.

Technical data	Standard	Model H20	Model H20	Model H30	Model H30
Type	UNI EN 13163	EPS 150	EPS 200	EPS 150	EPS 200
Density	UNI EN 1602	25 kg/m ³	30 kg/m ³	25 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 150 kPa	≥ 200 kPa	≥ 150 kPa	≥ 200 kPa
Thermal conductivity	EN 12939	0.035 W/mK	0.035 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.8 m ² K/W	0.8 m ² K/W	1.10 m ² K/W	1.10 m ² K/W
Thermal resistance (sins/λins)	UNI EN 1264	0.57 m ² K/W	0.57 m ² K/W	0.86 m ² K/W	0.86 m ² K/W
Class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 4%	< 4%	< 4%	< 4%
Useful thickness Sins	UNI EN 1264	20 mm	20 mm	30 mm	30 mm
Total length		1220 mm	1220 mm	1220 mm	1220 mm
Total width		770 mm	770 mm	770 mm	770 mm
Total thickness		50 mm	50 mm	65 mm	65 mm
Pipe spacing		75 mm	75 mm	75 mm	75 mm
External Ø installed pipes		16-17-20 mm	16-17-20 mm	16-17-20 mm	16-17-20 mm
Pack		10.8 m ²	10.8 m ²	9 m ²	9 m ²

Floor Insulation Panel (continued)

Classic Floor insulating panel with film (thickness 0.16 mm)



Description	Density	Pack m ²	Code
1200 x 750 x 65 / H30*	30 kg/m ³	9	28130099
1200 x 750 x 65 / H30*	25 kg/m ³	9	28134024

Panel in polystyrene (EPS), with surfaced bosses and tongue-and-groove edges, with Ps film, pipe spacing: 7,5 cm.
CE UNI EN 13163. *Available on request: 40 days lead time.

Technical data	Standard	Model H20	Model H30	Model H30
Type	UNI EN 13163	EPS 200	EPS 150	EPS 200
Density	UNI EN 1602	30 kg/m ³	25 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 200 kPa	≥ 150 kPa	≥ 200 kPa
Thermal conductivity	EN 12939	0.8 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.57 m ² K/W	1.10 m ² K/W	1.10 m ² K/W
Thermal resistance (Sins/λins)	UNI EN 1264	1.42 m ² K/W	0.86 m ² K/W	0.86 m ² K/W
Class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 4%	< 4%	< 4%
Useful thickness Sins	UNI EN 1264	20 mm	30 mm	30 mm
Total length		1220 mm	1220 mm	1220 mm
Total width		770 mm	770 mm	770 mm
Total thickness		50 mm	65 mm	65 mm
Pipe spacing		75 mm	75 mm	75 mm
External Ø of installing pipes		16-17-20 mm	16-17-20 mm	16-17-20mm
mmPack		10.8 m ²	9 m ²	9 m ²



Technical Product Guide

Floor Insulation Panel (continued)

Step Combi Floor phono-insulating panel



Description	Density	Pack m ²	Code
1400 x 800 x 54 / H35*	23 kg/m ³	6.72	28134090

Panel in elastic expanded polystyrene (EPS-T), thermal and insulation, with surface bosses and cylindrical edges, coupled with a moulded film of rigid polystyrene. Pipe spacing 5 cm.
CE UNI EN 13163. *Available on request: 40 days lead time.

Technical data	Standard	Model H50
Type	UNI EN 13163	EPS-T
Density	UNI EN 1602	23 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 100 kPa
Dynamic stiffness	EN 29052-1 / UNI EN 13163	< 30 Mn/m ³ /sD30
Compressibility	EN 12431 / UNI EN 13163	≤ 2 mm/cP2
Delta Iw ** (index of evaluation of attenuation of the level of sound pressure on the walkway)	UNI EN 12354-2	26 dB
Thermal conductivity	EN 12939	0.04 W/mK
Thermic resistance RD	EN 12939	0.9 m ² K/W
Thermal resistance (sins/λins)	UNI EN 1264	0.87 m ² K/W
Class of reaction at fire	UNI EN ISO 11925	Euroclass E
Water absorption	ISO 2896	< 4%
Useful thickness sins	UNI EN 1264	35 mm
Total length		1450 mm
Total width		850 mm
Total thickness		54 mm
Film thickness		0.6 mm
Pipe spacing		50 mm
External Ø pipes		16 mm
Pack 6,72 m ² Pack		6.72 m ²

Reference to technical data table:

** forecast calculation for systems with "slab + resilient layer" system (floating flooring), valid for concrete and cement block floors, as per the simplified model set forth by standard EN 12354-2, table C1.

Conditions: mass per unit of area of the slab: 100 kg/m² - dynamic rigidity of the resilient slab: 30MN/m³



Floor Insulation Panel (continued)

Step Combi Floor phono-insulating panel



Description	Density	Pack m ²	Code
1000 x 500 x 57 / H30	23 kg/m ³	6	28134096

Panel in polystyrene (EPS), with surfaced bosses and tongue-and-groove edges, with Ps film, pipe spacing: 7,5 cm. CE UNI EN 13163.

Technical data	Standard	Model H50
Type	UNI EN 13163	EPS-T
Density	UNI EN 1602	23 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 100 kPa
Dinamic stiffness	EN 29052-1 / UNI EN 13163	< 30 Mn/m ³ /sD30
Compressibility	EN 12431 / UNI EN 13163	≥ 2 mm/CP2
Delta Lw ** (index of evaluation of attenuation of the level of sound pressure on the walkway)	UNI EN 12354-2	26 dB
Thermal conductivity	EN 12939	0.04 W/mK
Thermic resistance RD	EN 12939	0.9 m ² K/W
Thermal resistance (sins/λins)	UNI EN1264	0.75 m ² K/W
Class of reaction at fire	UNI EN ISO 11925	Euroclass E
Water absorption	EN 12087	< 5%
Useful thickness Sins	UNI EN 1264	30 mm
Total length		1030 mm
Total width		530 mm
Total thickness		57 mm
Film thickness		0.4 mm
Pipe spacing		50 mm
External Ø pipes		16-17 mm
Pack		6 m ²

Reference to technical data table:

** forecast calculation for systems with "slab + resilient layer" system (floating flooring), valid for concrete and cement block floors, as per the simplified model set forth by standard EN 12354-2, table C1.

Conditions: mass per unit of area of the slab: 100 kg/m² - dynamic rigidity of the resilient slab: 30MN/m³



Technical Product Guide

Floor Insulation Panel (continued)

Plan Floor insulating panel



Description	Density	Pack m ²	Code
1100 x 600 x 30 / H30	30 kg/m ³	10.56	28130072
1100 x 600 x 30 / H30 (*)	25 kg/m ³	10.56	28130075

Smooth panel in polystyrene (EPS) for thermic insulating, with surface marks for laying pipes and perimetral slots. coated in stiff polystyrene film. Bosses passage 5 cm.
CE UNI EN 13163. *Available on request: 40 days lead time.

Technical data	Standard	Model H30	Model H30
Type	UNI EN 13163	EPS 150	EPS 200
Density	UNI EN 1602	25 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 150 kPa	≥ 200 kPa
Thermal conductivity	EN 12939	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.85 m ² K/W	0.85 m ² K/W
Thermal resistance (sins/λins)	UNI EN 1264	0.85 m ² K/W	0.85 m ² K/W
Class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 4%	< 4%
Useful thickness sins	UNI EN 1264	30 mm	30 mm
Total length		1120 mm	1120 mm
Total width		620 mm	620 mm
Total thickness		30 mm	30 mm
Film thickness		0.16 mm	0.16 mm
Pipe spacing		50 mm	50 mm
Pack		10.56 m ²	10.56 m ²

Reference to technical data table:

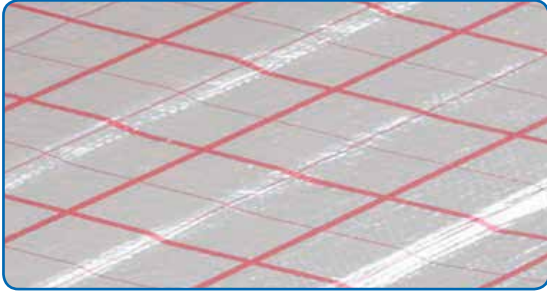
** forecast calculation for systems with "slab + resilient layer" system (floating flooring), valid for concrete and cement block floors, as per the simplified model set forth by standard EN 12354-2, table C1.

Conditions: mass per unit of area of the slab: 100 kg/m² - dynamic rigidity of the resilient slab: 30MN/m³



Floor Insulation Panel (continued)

Roll Floor insulating panel



Description	Density	Pack m ²	Code
10000 x 1000 x 30 / H30	25 kg/m ³	10	28134250
10000 x 1000 x 40 / H40 (*)	25 kg/m ³	10	28134252
10000 x 1000 x 50 / H50 (*)	25 kg/m ³	10	28134254

Smooth roll panel consisting of slats (dimensions: 1000 x 1000 mm) made with moulded expanded polystyrene (EPS) for thermal insulation, combined with an aluminium HDPE film with red laying mark, 5 cm interval and self-adhesive edge. *Available on request: 40 days lead time.

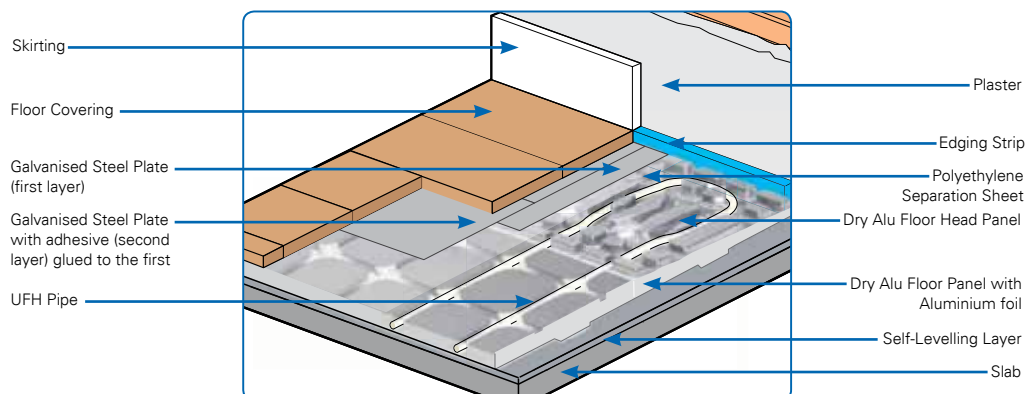
Technical data	Standard	Model H30	Model H40	Model H50
Type	UNI EN 13163	EPS 150	EPS 150	EPS 150
Density	UNI EN 1602	25 kg/m ³	25 kg/m ³	25 kg/m ³
Compression resistance at 10% of crushing	UNI EN 826	≥ 150 kPa	≥ 150 kPa	≥ 150 kPa
Thermal conductivity	EN 12939	0.035 W/mK	0.035 W/mK	0.035 W/mK
Thermic resistance RD	EN 12939	0.85 m ² K/W	1.15 m ² K/W	1.45 m ² K/W
Thermal resistance (sins/λins)	UNI EN 1264	0.85 m ² K/W	1.15 m ² K/W	1.45 m ² K/W
class of reaction to fire	UNI EN ISO 11925	Euroclass E	Euroclass E	Euroclass E
Water absorption	ISO 2896	< 5%	< 5%	< 5%
Useful thickness sins	UNI EN 1264	30 mm	40 mm	50 mm
Total lenght		10.000 mm	10.000 mm	10.000 mm
Total width		1.000 mm	1.000 mm	1.000 mm
Total thickness		30 mm	40 mm	50 mm
coating thickness		0.16 mm	0.16 mm	0.16 mm
Pipe spacing		50 mm	50 mm	50 mm
Pack		10 m ²	10 m ²	10 m ²



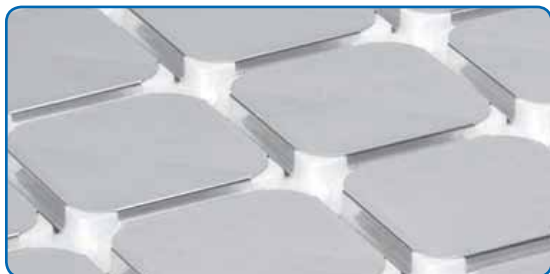
Technical Product Guide

Dry Installation Systems

Dry Installation System



Dry Alu Floor insulating panel



Description

1200 x 600 x 28 / H10
1200 x 600 x 38 / H20

Pack m²

11.52
8.64

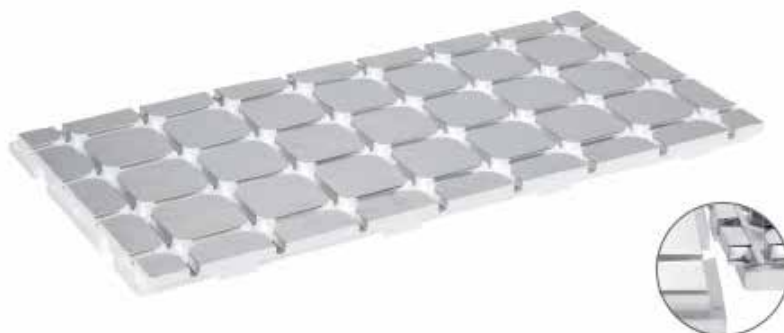
Code

28134100
28134102

Polystyrene panel type EPs 200, conforming to Uni En 13163, with dovetail joints on the 4 sides and upper aluminium foil. laying pitch 150 mm. suitable for coil circuits.

Technical data

	Standard	Model H10	Model H20
Type	Uni En 13163	EPs 200	EPs 200
Density	Uni En 1602	30 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	Uni En 826	≥ 250 kPa	≥ 200 kPa
Thermal conductivity	En 12939	0.034 W/mK	0.035 W/mK
Thermic resistance RD	En 12939	0.59 m ² K/W	0.88 m ² K/W
Thermal resistance (sins/λins)	Uni En 1264	0.29 m ² K/W	0.57 m ² K/W
class of reaction of fire	Uni En isO 11925	Euroclass E	Euroclass E
Water absorption	isO 2896	< 4%	< 4%
Useful thickness sins	Uni En 1264	10 mm	20 mm
Total length		1215 mm	1215 mm
Total width		615 mm	615 mm
Total thickness		28 mm	38 mm
al thickness		0.3 mm	0.3 mm
Pipe spacing		150 mm	150 mm
External Ø installed pipes		17 mm	17 mm
Pack		11.52 m ²	8.64 m ²



Dry Installation Systems (continued)

Head Dry Alu Floor insulating panel



Description

600 x 300 x 28 / H10
600 x 300 x 38 / H20

Pack m²

5.76
4.32

Code

28134104
28134106

Polystyrene panel type EPs 200, conforming to Uni En 13163, with dovetail joints on the 4 sides and upper rigid Ps foil. Suitable for realizing the head curves of the coil circuits, with pitch 150 mm.

Technical data

	Norm	Model H10 (head)	Model H20 (head)
Type	Uni En 13163	EPs 200	EPs 200
Density	Uni En 1602	30 kg/m ³	30 kg/m ³
Compression resistance at 10% of crushing	Uni En 826	≥ 250 kPa	≥ 200 kPa
Thermal conductivity	En 12939	0.034 W/mK	0.035 W/mK
Thermic resistance RD	En 12939	0.59 m ² K/W	0.88 m ² K/W
Thermal resistance (sins/λins)	Uni En 1264	0.29 m ² K/W	0.57 m ² K/W
class of reaction of fire	Uni En isO 11925	Euroclass E	Euroclass E
Water absorption	isO 2896	< 4%	< 4%
Useful thickness sins	Uni En 1264	10 mm	20 mm
Total length		615 mm	615 mm
Total width		315 mm	315 mm
Total thickness		28 mm	38 mm
Film Thickness		0.3 mm	0.3 mm
Pipe spacing		150 mm	150 mm
External Ø installed pipes		17 mm	17 mm
Pack		5.76 m ²	4.32 m ²

Galvanized steel plate, thickness 1 mm



Description

600 x 600 x 1 (*)
600 x 300 x 1 (*)
600 x 600 x 1 (**)
600 x 300 x 1 (**)

Pack m²

3.6
3.6
3.6
3.6

Code

28134108
28134112
28134110
28134114

(*) Without adhesive side - (**) With adhesive side

Technical Product Guide

Polyethylene sheet (in roll)

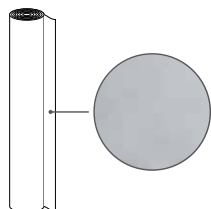


Polyethylene sheet (in roll)

Size	Pack m ²	Code
2 x 50m	100	28130850

Single fold sheet width 2 x 1m, roll of 50m, in polyethylene, thickness 0.2mm.

Geotextile sheet (in roll)



Geotextile sheet (in roll)

Size	m ²	Code
2 x 25m	50	28130048

Permeable membrane, non woven in polypropylene. Thickness 4mm.
Density: 500 gr/m².

Infravision thermal imaging camera



Infravision thermal imaging camera

Pcs/Pack	Code
1	U9295010

Very high resolution infrared camera. Infrared sensor resolution of 160x120 pixels, and a thermal sensitivity of 0.065°C. 2 x digital zoom, 3.5" LCD display, and 2°C accuracy. Comes in hard wearing plastic carry pack, complete with 2 lithium batteries, charger, adaptor, TV connection cable, USB connection cable, software CD, instruction manual and guarantee.