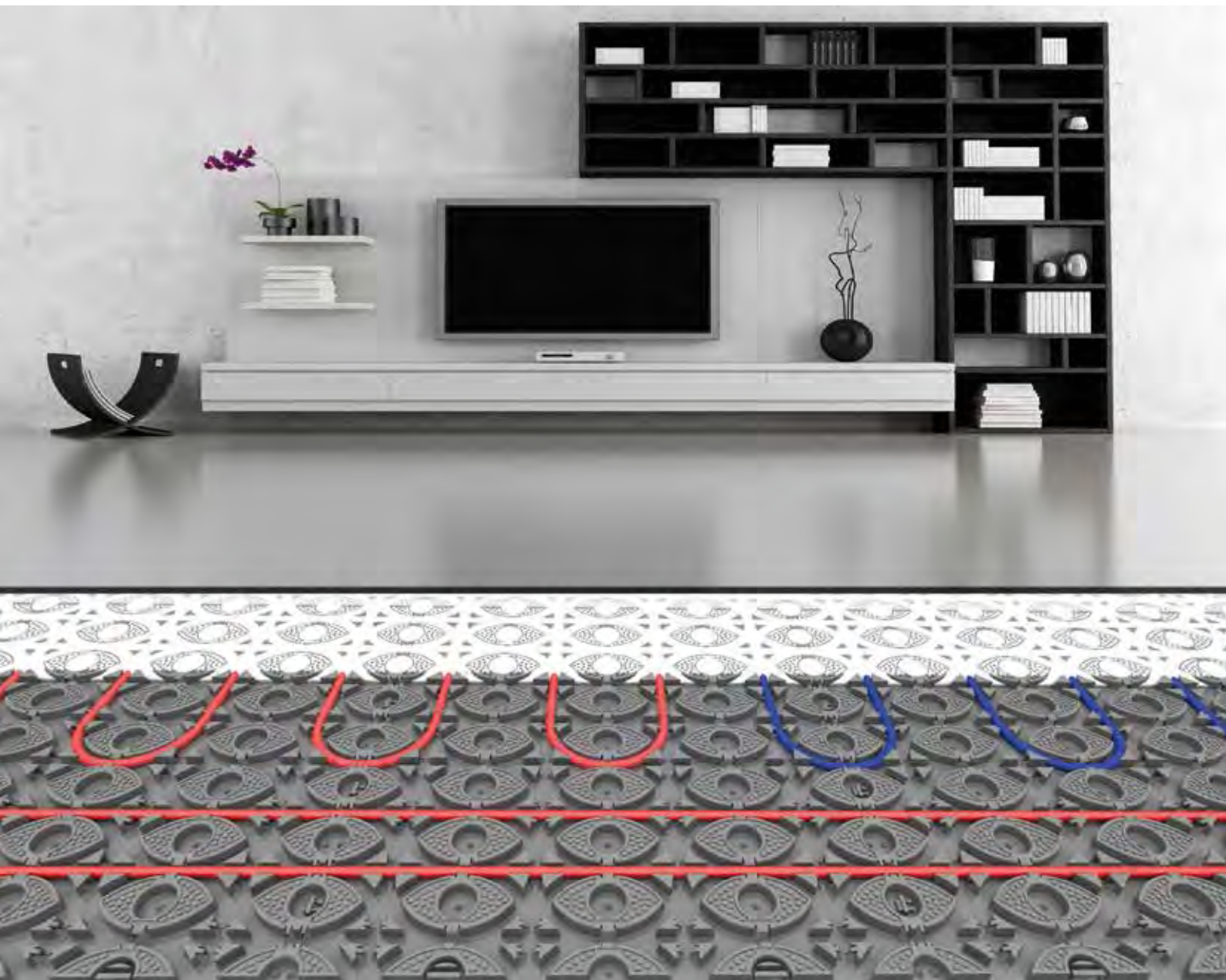


# Profix™



PROFIX™

**HEATING AND COOLING**

**E2IC**  
**INSULATION**

[www.profixpanel.co.uk](http://www.profixpanel.co.uk)

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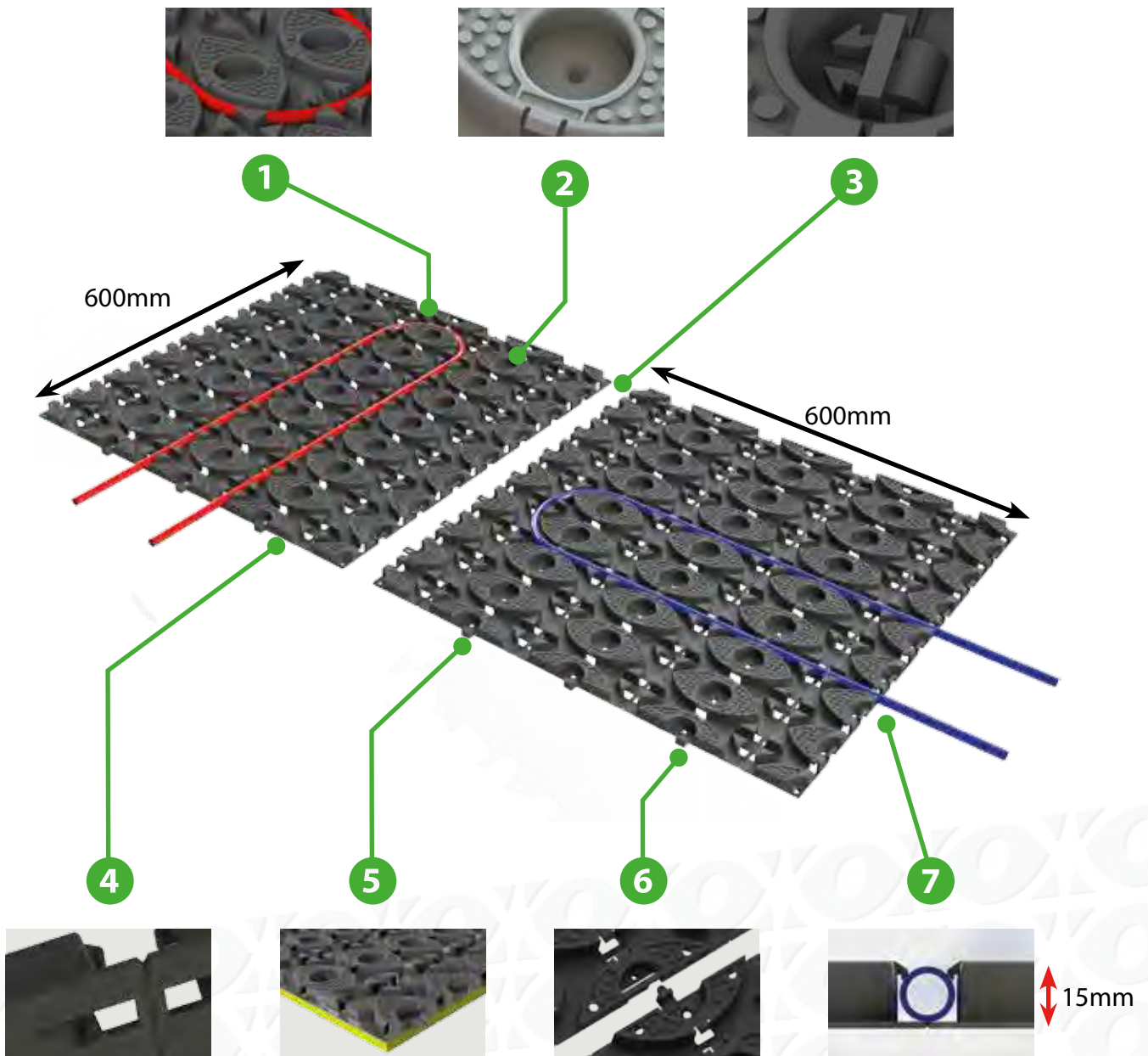
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## INTRODUCTION

The Profix™ Panel is a revolutionary pipe retention system which provides a very quick to install and simple to use solution for a wide range of floor heating, wall heating and ceiling cooling applications.

Epic Insulation Ltd is a leading manufacturer and supplier of specialist products to the underfloor heating, wall heating and ceiling cooling markets and is the sole UK distributor of the Profix™ Panel.

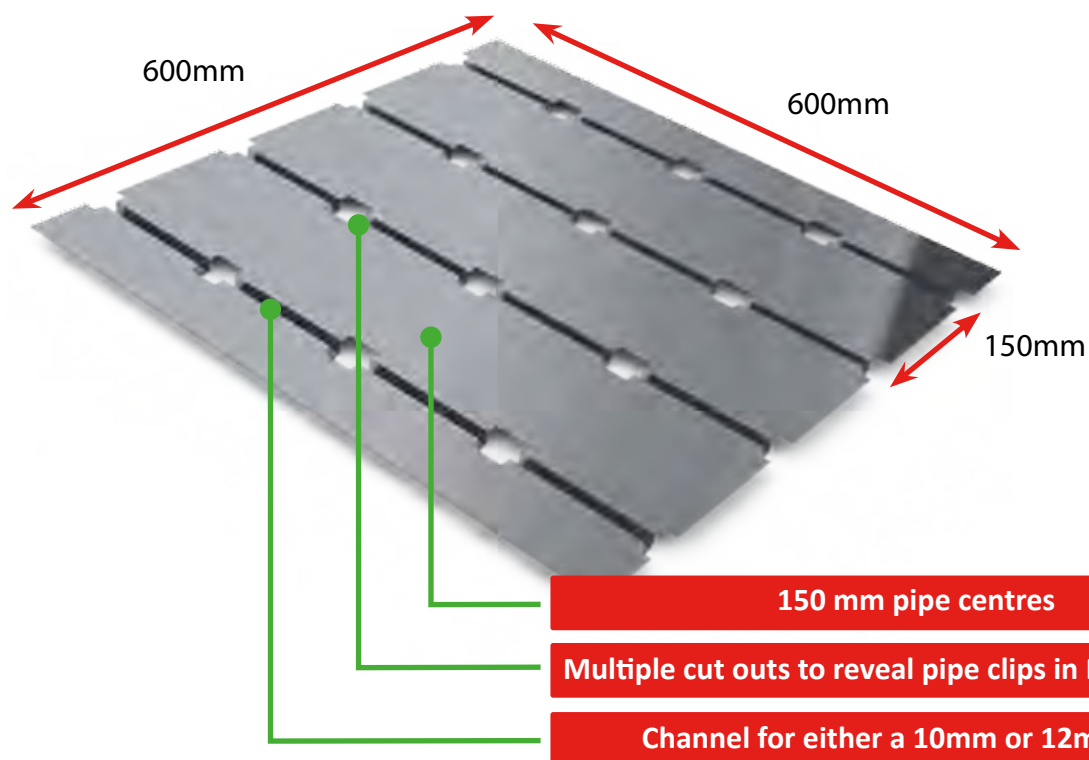




- 1** Multiple "PIPE RETENTION CLIPS" to secure the pipe in place
- 2** "PURPOSE DESIGNED SUPPORTS" to provide a structural key for tile adhesive and low profile screeds
- 3** 'SNAP CLIPS' to fasten the panels together

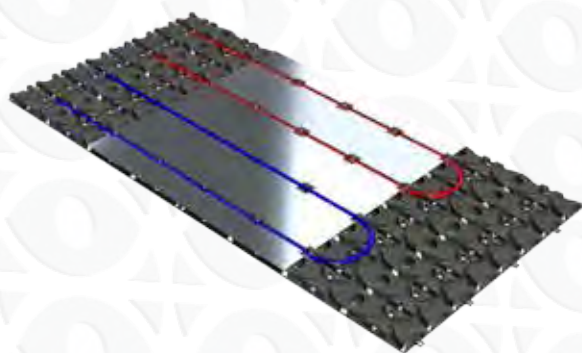
- 4** Multiple "BREAK POINTS" with V shaped notches to aid cutting knife alignment
- 5** Optional 'HIGH COMPRESSIVE STRENGTH INSULATION LAYER' pre-bonded to each panel
- 6** "SLIDE AND LOCK FEATURE" to connect the panels together
- 7** "ULTRA LOW PROFILE" for either a 10mm or a 12mm pipe





The Profix™ Plate, when combined with the Profix™ Panel, enables a completely dry (and hence very rapid) installation for underfloor heating/cooling, wall heating/cooling or ceiling cooling/heating applications.

The purpose made cut outs in the Profix™ Plate expose the pipe retention clips in the Profix™ Panel beneath allowing the pipework to be held securely in place whether in floors, walls or ceilings.



# HEAT OUTPUT TABLE

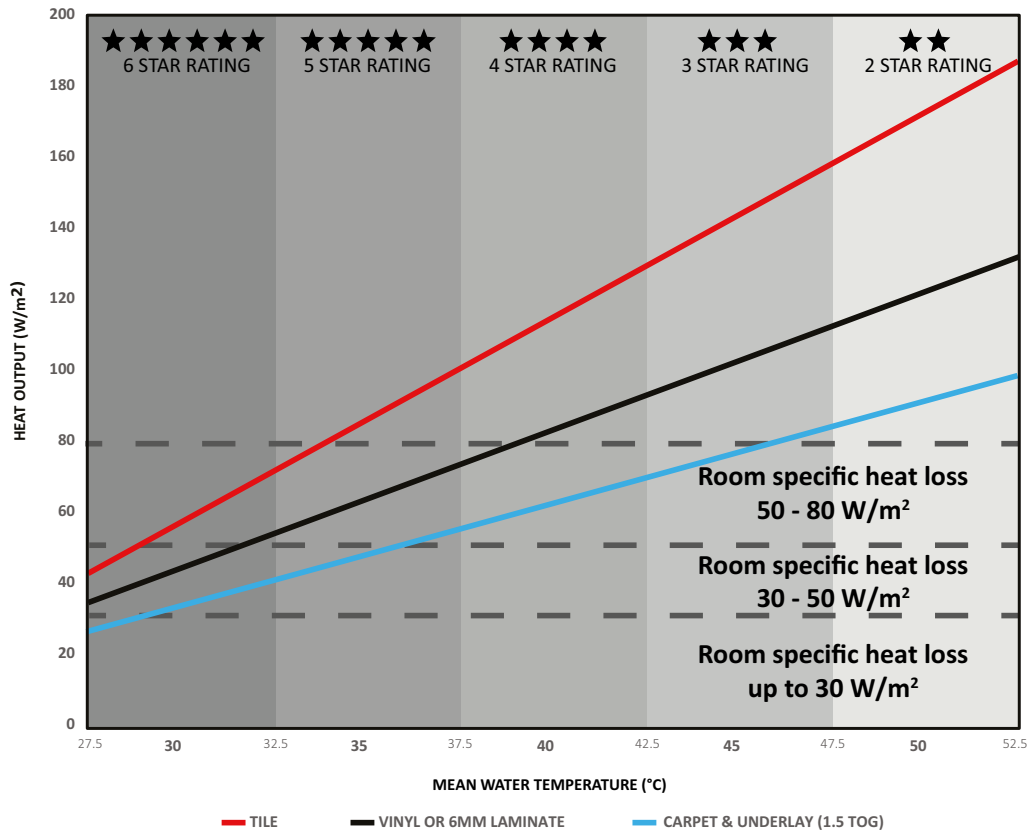
		MEAN WATER TEMPERATURE									
		30 °C		35 °C		40 °C		45 °C		50 °C	
SYSTEM TYPE	FLOOR COVERING	Heat Output W/m <sup>2</sup>	Floor Surface Temp °C	Heat Output W/m <sup>2</sup>	Floor Surface Temp °C	Heat Output W/m <sup>2</sup>	Floor Surface Temp °C	Heat Output W/m <sup>2</sup>	Floor Surface Temp °C	Heat Output W/m <sup>2</sup>	Floor Surface Temp °C
Profix Low Profile Screed	Tile	56.60	25.24	84.90	27.86	113.20	30.48	141.50	33.10	169.80	35.72
	Vinyl or 6mm Laminate	40.20	23.72	60.32	25.59	80.43	27.45	100.53	29.31	120.64	31.17
	Carpet & Underlay (1.5 TOG)	30.00	22.78	45.00	24.17	60.00	25.56	75.00	26.94	90.00	28.33
Profix Grooved Screed Board	Tile	39.10	23.62	58.70	25.44	74.00	26.85	92.50	28.56	111.00	30.28
	6mm Laminate Direct	26.20	22.43	39.30	23.64	52.40	24.85	65.50	26.06	78.60	27.28
	6mm Ply + Carpet & Underlay (1.5 TOG)	17.50	21.62	26.19	22.43	34.92	23.23	43.65	24.04	52.38	24.85
Profix Heat Diffuser (Standard)	15mm Engineered Wood	25.10	22.32	37.65	23.49	50.20	24.65	62.75	25.81	75.30	26.97
	18mm Chipboard + 6mm Laminate	15.59	21.44	31.40	22.91	41.87	23.88	52.33	24.85	62.80	25.81
	18mm Chipboard + Carpet & Underlay (1.5 TOG)	20.93	21.94	23.38	22.16	31.17	22.89	38.97	23.61	46.76	24.33
Profix Heat Diffuser (Premium)	Tile	25.80	22.39	38.70	23.58	51.60	24.78	64.50	25.97	77.40	27.17
	Vinyl or 6mm Laminate	25.20	22.33	37.80	23.50	50.40	24.67	63.00	25.83	75.60	27.00
	Carpet & Underlay (1.5 TOG)	19.30	21.79	28.95	22.68	38.60	23.57	48.25	24.47	57.90	25.36
Profix Profoil	15mm Engineered Wood	23.93	22.22	35.90	23.32	47.87	24.43	59.83	25.54	71.80	26.65
	18mm Chipboard + 6mm Laminate	20.63	21.91	30.95	22.87	41.27	23.82	51.58	24.78	61.90	25.73
	18mm Chipboard + Carpet & Underlay (1.5 TOG)	16.00	21.48	24.00	22.22	32.00	22.96	40.00	23.70	48.00	24.44
Profix Dry Mix	15mm Engineered Wood	22.31	22.07	33.46	23.10	44.61	24.13	55.77	25.16	66.92	26.20
	18mm Chipboard + 6mm Laminate	18.79	21.74	28.18	22.61	37.57	23.48	46.97	24.35	56.36	25.22
	18mm Chipboard + Carpet & Underlay (1.5 TOG)	17.83	21.65	26.75	22.48	35.67	23.30	44.58	24.13	53.50	24.95

The heat outputs detailed above were determined using computer modelled finite element analysis. Each system type was simulated using a floor surface heat transfer coefficient of 10.8 W/m<sup>2</sup>K, with the surrounding air volume maintained at 20°C in order to achieve steady state conditions. The thermal properties of each material were considered, including but not limited to thermal conductivity, specific heat capacity and density. The diameter of the underfloor heating pipework used was 12mm with a pipe wall thickness of 1.0mm, fixed at 150mm pipe centres. The flow rate of the water within the pipework was maintained at 1.0 m/s, combining both laminar and turbulent flow conditions. The internal water temperature was regulated at five different temperatures, namely 30°C, 35°C, 40°C, 45°C and 50°C, throughout each test until steady state conditions were achieved through convergence of each individual parameter. The results were then compiled in the above table and also depicted in the graphs which follow. The performance of a warm water underfloor heating system can be influenced by many factors and differences in actual heat outputs achieved on site may be observed when compared with the above data. Therefore, the heat output data shown should be used for comparative purposes between systems and floor coverings only.

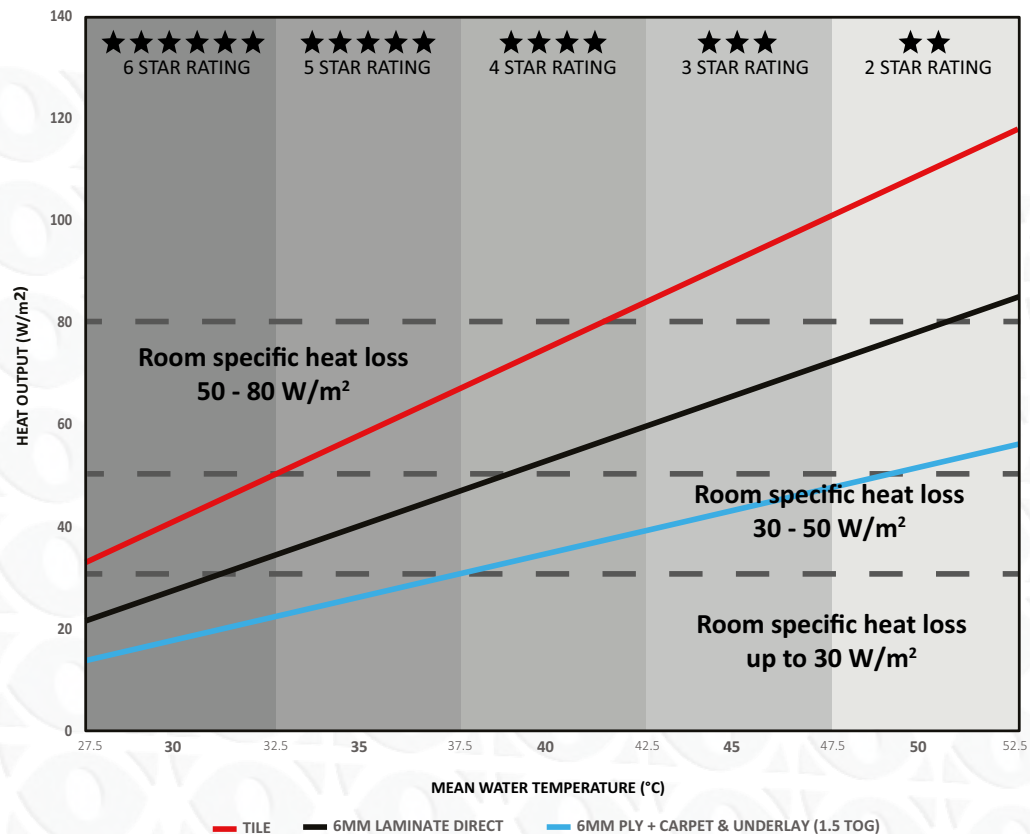


# HEAT EMITTER GRAPHS (HEAT PUMPS)

## LOW PROFILE SCREED SYSTEM

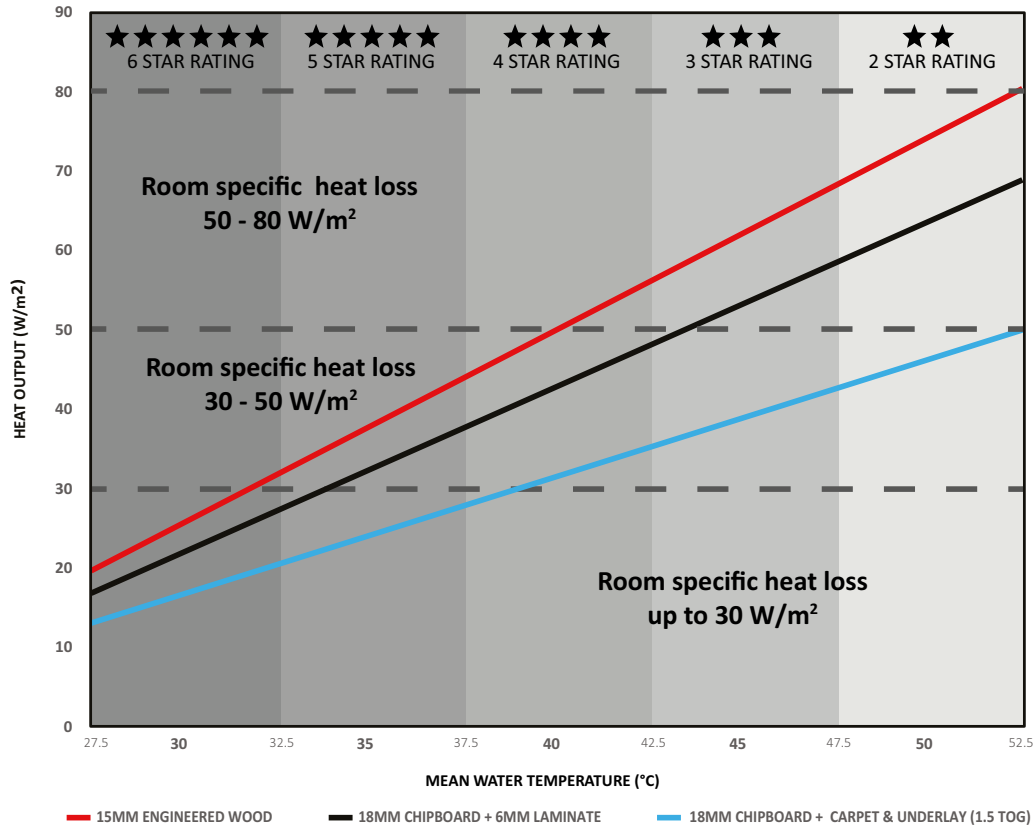


## GROOVED SCREED BOARD SYSTEM

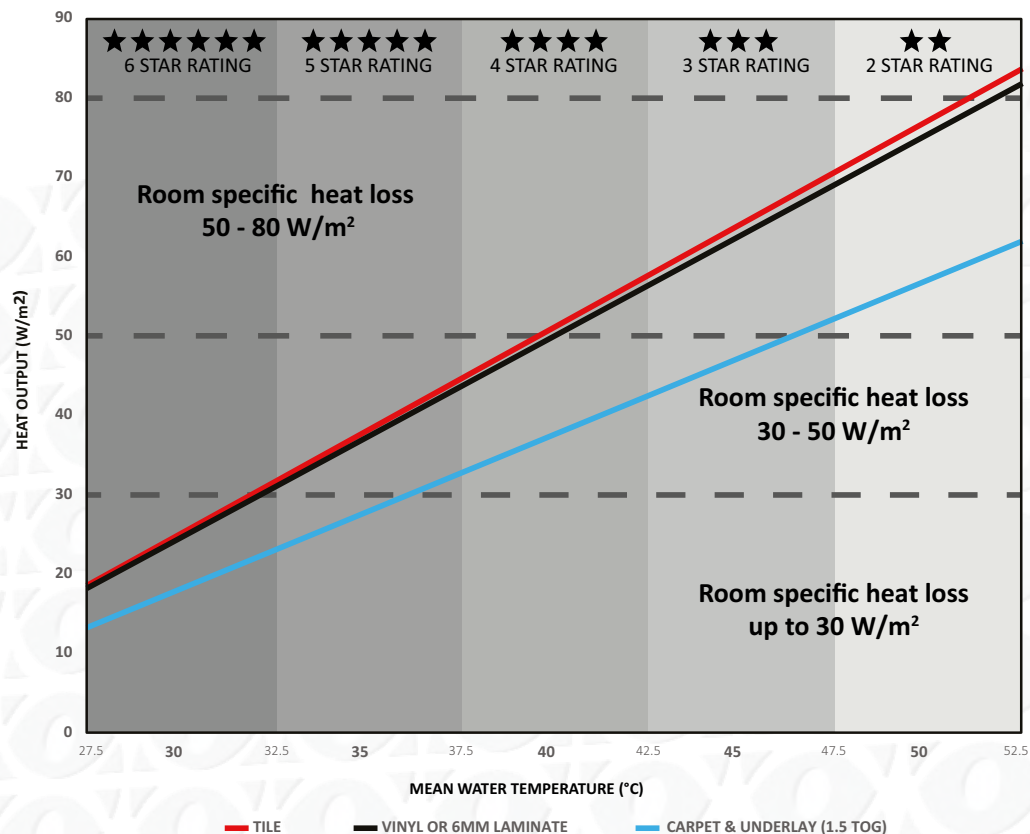


# HEAT EMITTER GRAPHS (HEAT PUMPS)

## HEAT DIFFUSER SYSTEM (STANDARD)



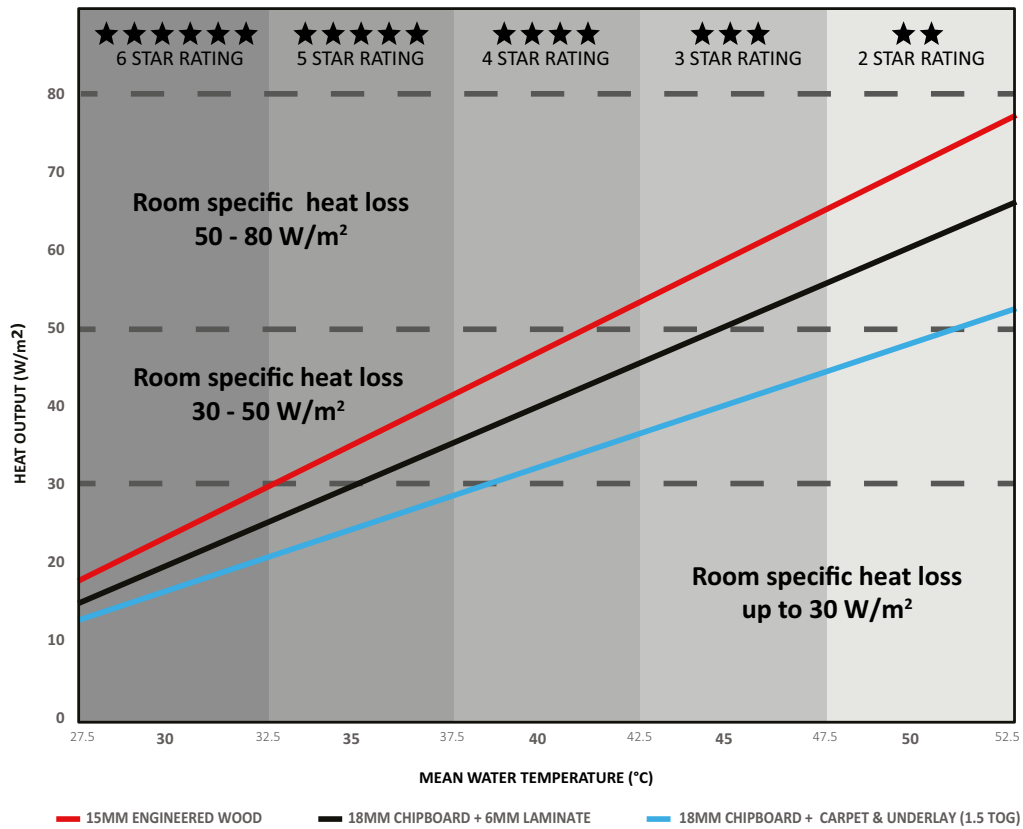
## HEAT DIFFUSER SYSTEM (PREMIUM)



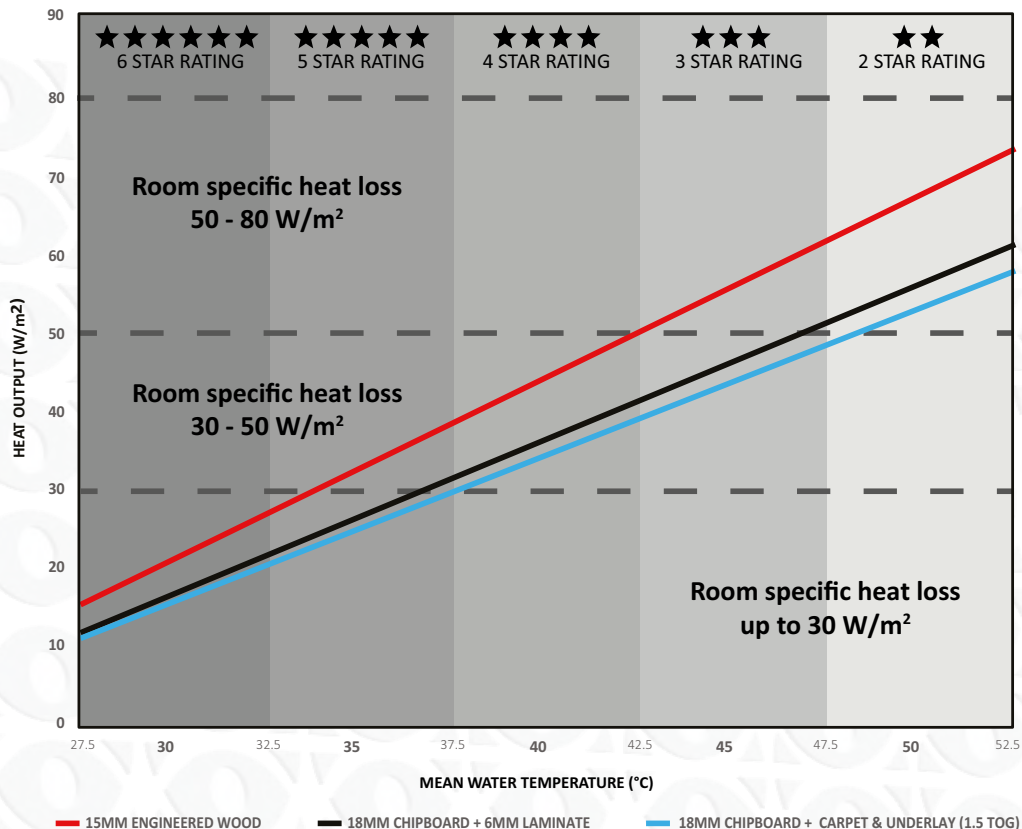


# HEAT EMITTER GRAPHS (HEAT PUMPS)

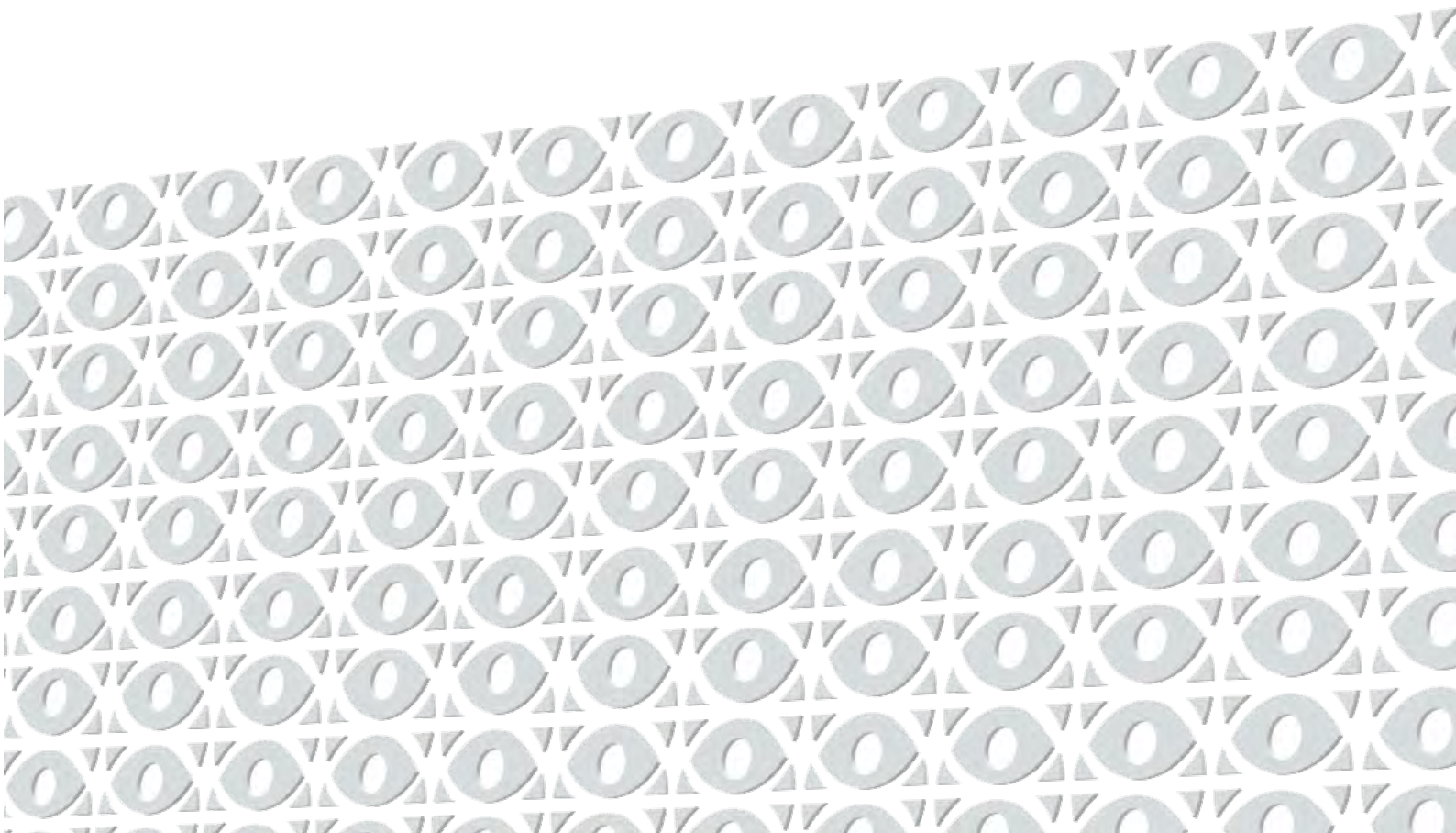
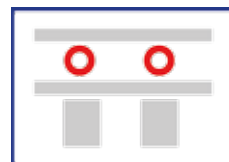
## PROFOIL™ SYSTEM



## DRY MIX SYSTEM





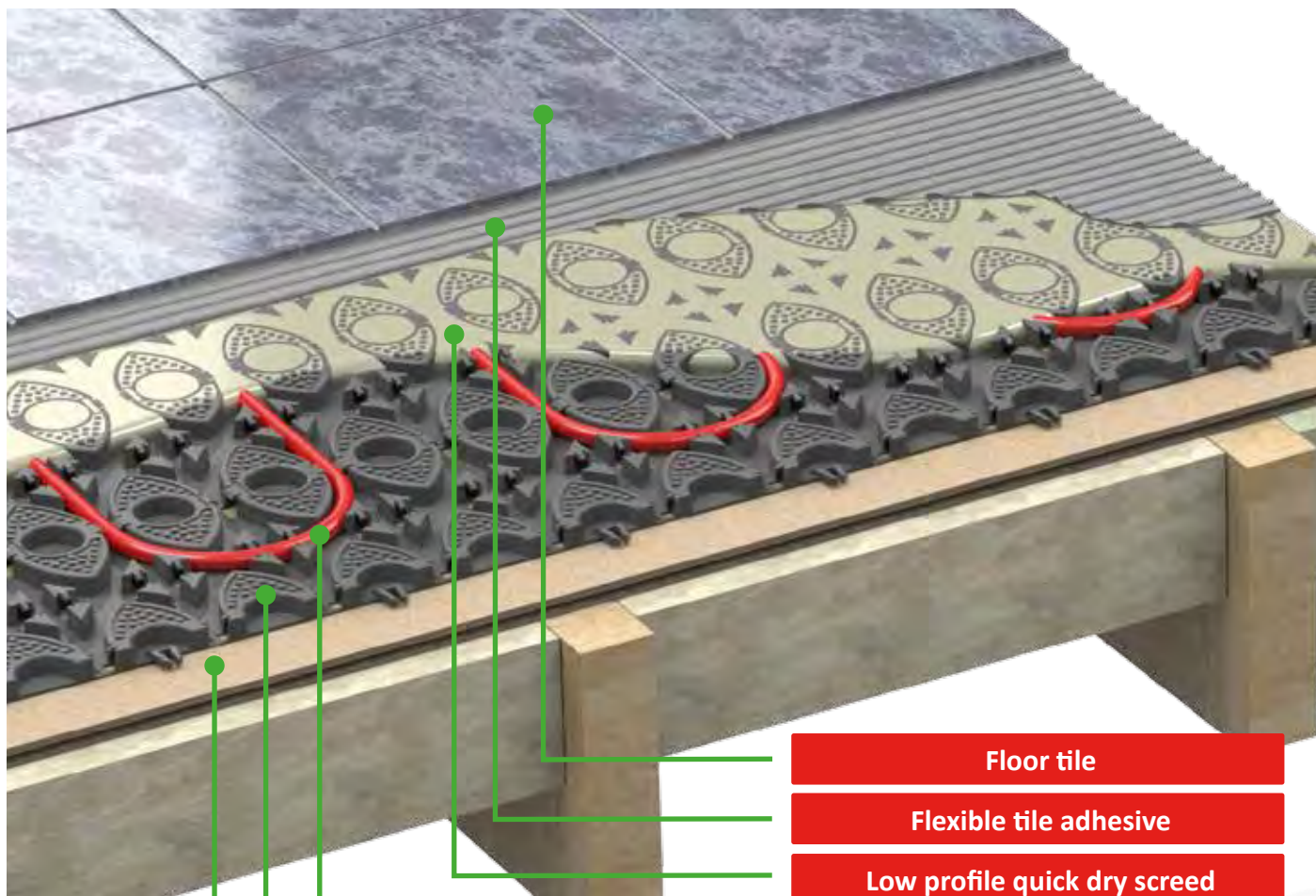


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**HEATING AND COOLING**

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**SUSPENDED FLOORS**





**Floor tile**

**Flexible tile adhesive**

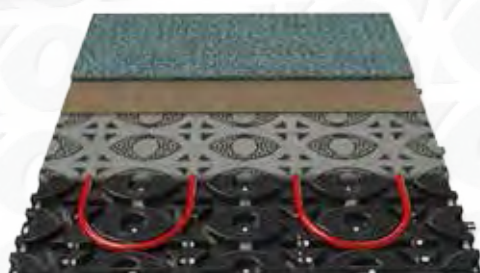
**Low profile quick dry screed**

**10mm or 12mm pipe**

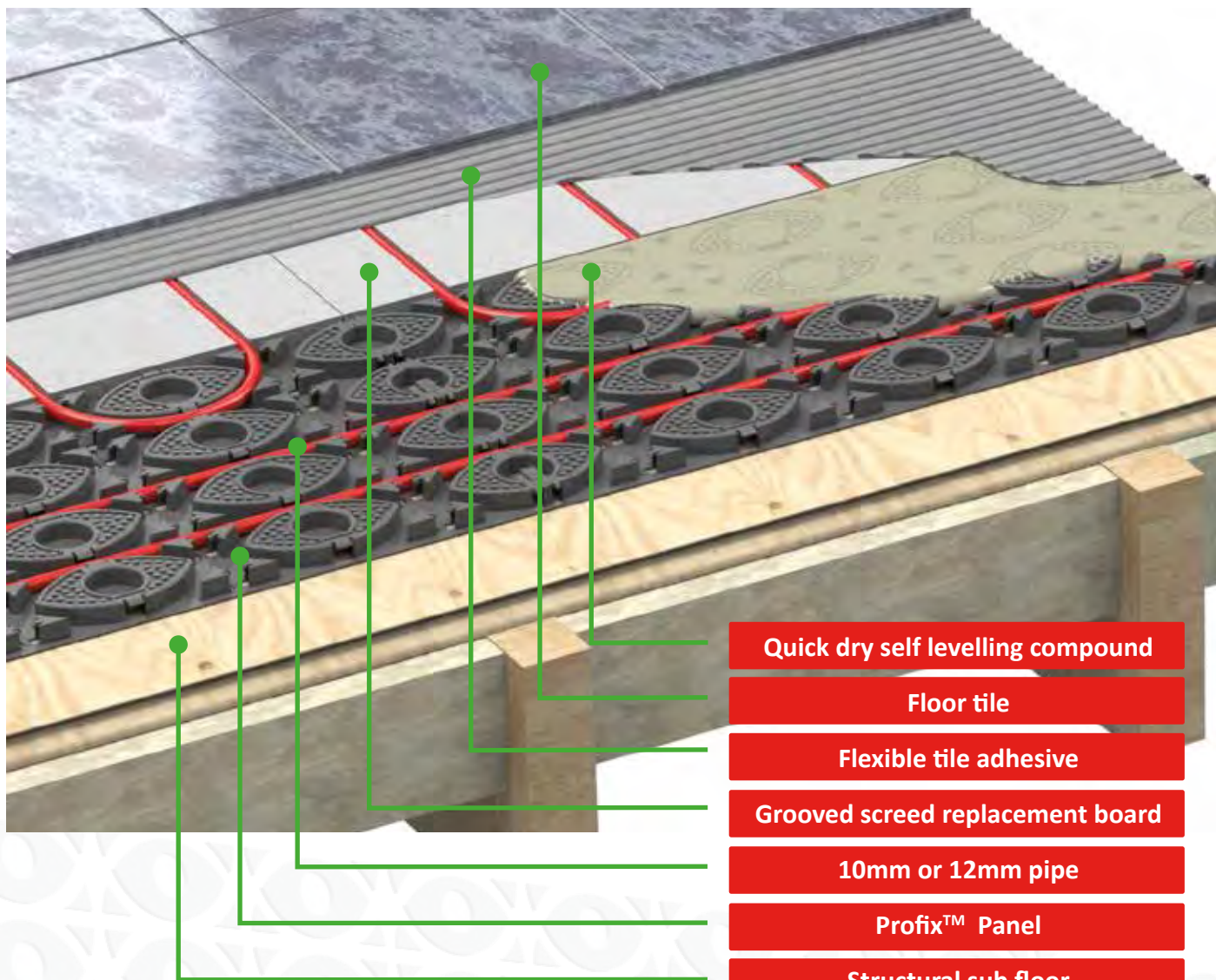
**Profix™ Panel**

**Structural sub floor**

The Profix™ Panel, when combined with a low profile quick drying self-levelling screed and a warm water underfloor heating system, provides a unique low thickness / high heat output floor heating solution for both new build and retrofit projects. This revolutionary new system can deliver high heat outputs even at relatively low water temperatures, which makes it an ideal solution for use with heat pumps.







Quick dry self levelling compound

Floor tile

Flexible tile adhesive

Grooved screed replacement board

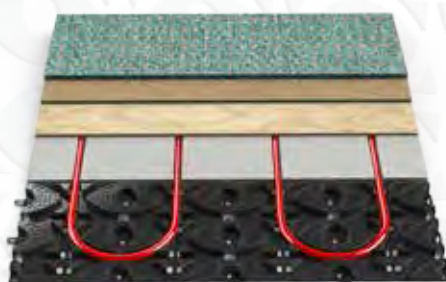
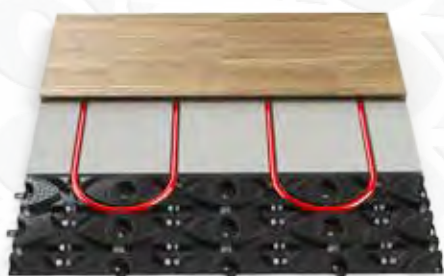
10mm or 12mm pipe

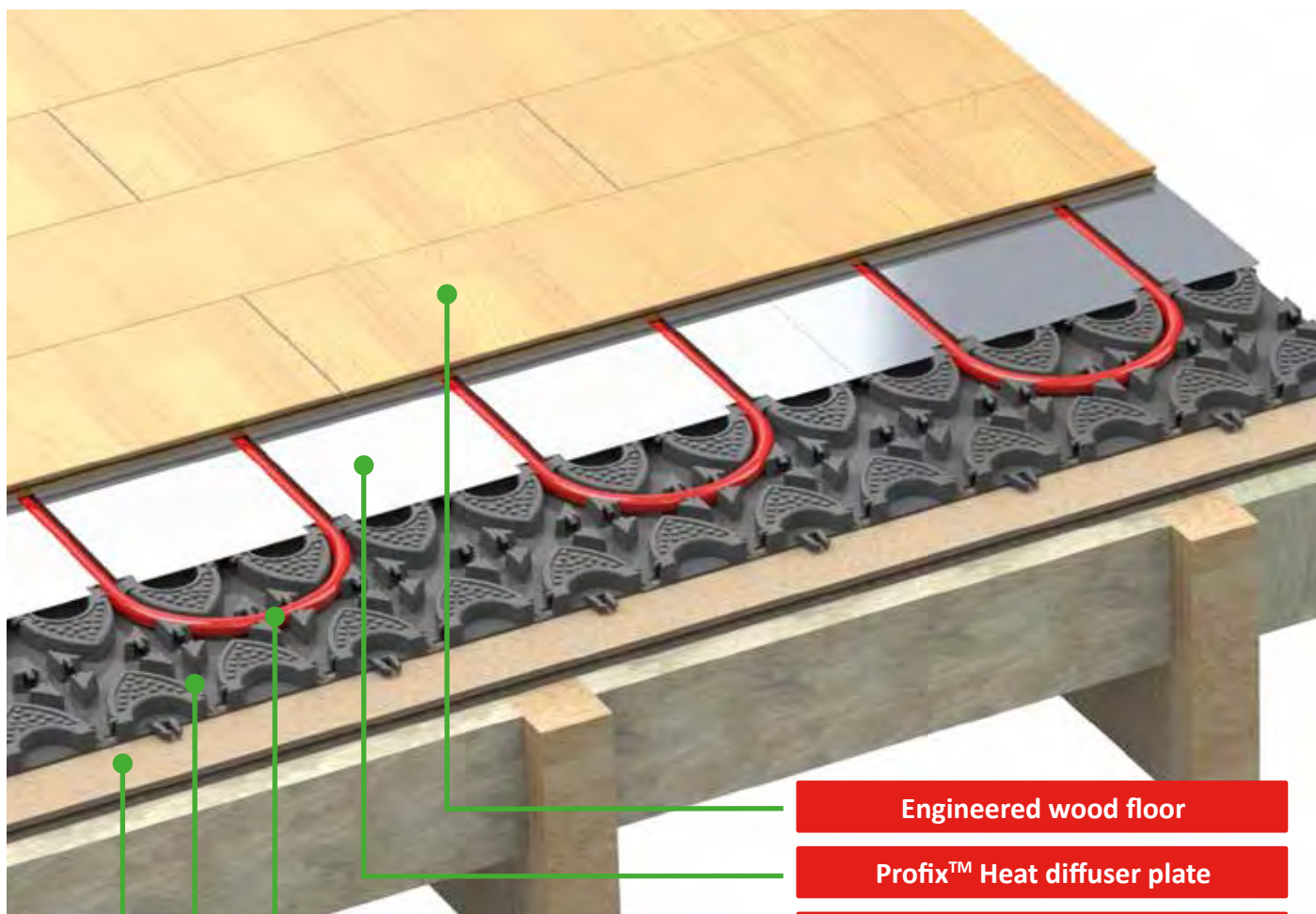
Prifix™ Panel

Structural sub floor

The Prifix™ Panel is an ideal end return / highway panel for use with grooved screed boards incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Prifix™ Panel is compatible with grooved screed boards of any thickness starting from as thin as 15mm.





**Engineered wood floor**

**Profix™ Heat diffuser plate**

**10mm or 12mm pipe**

**Profix™ Panel**

**Structural sub floor**

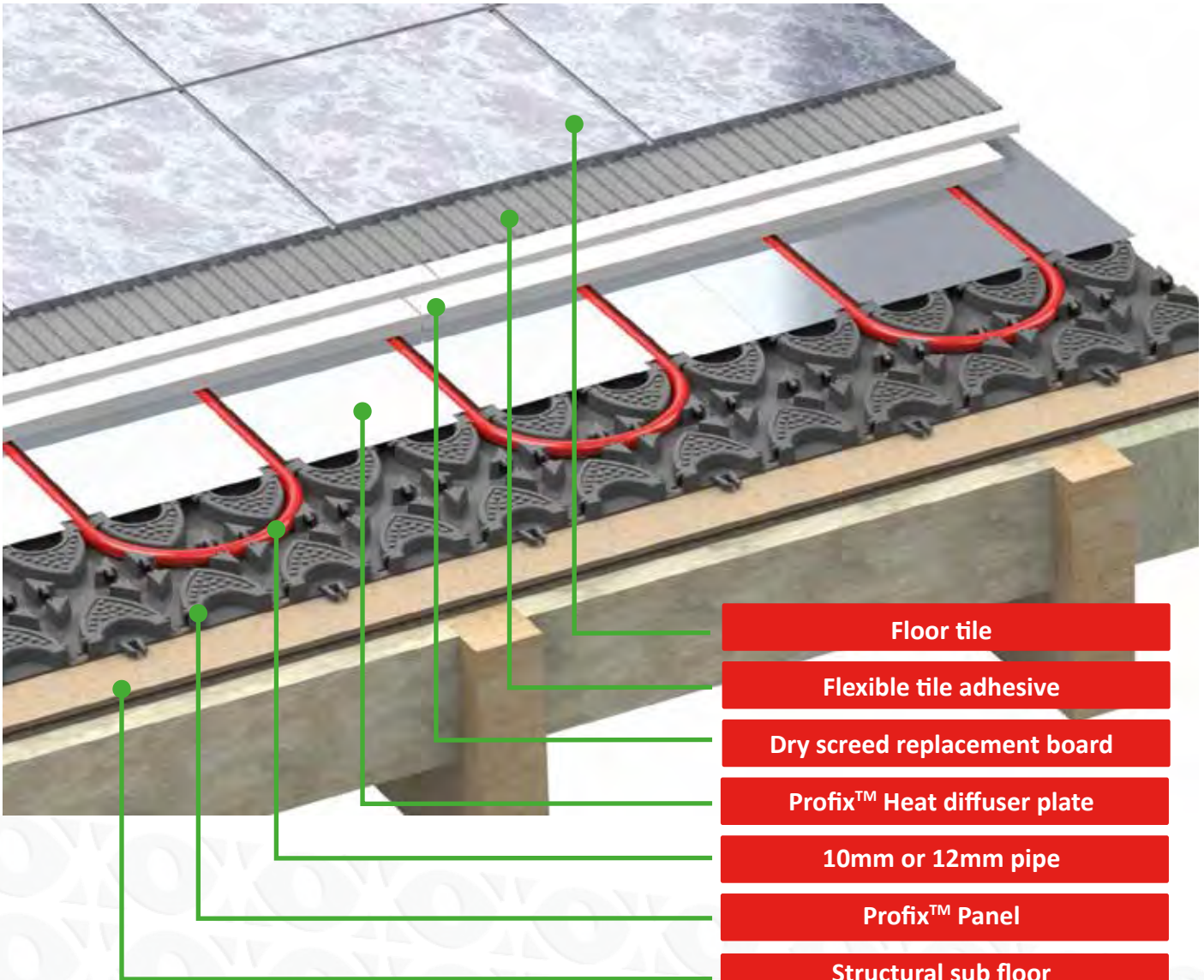
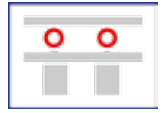


The Profix™ Panel, when combined with the Profix™ Plate, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer, reducing system response time and optimising the performance of the underfloor heating system.



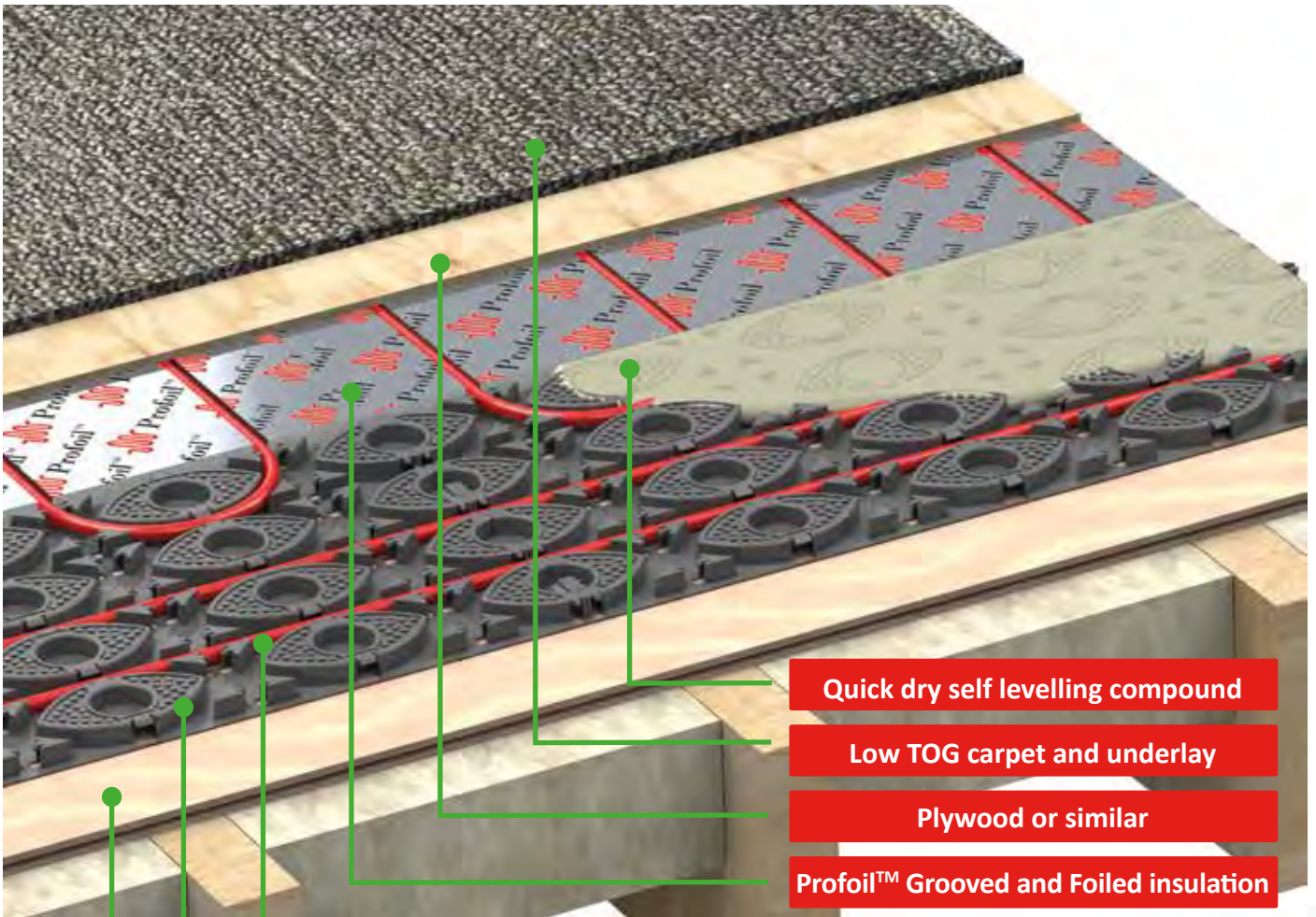
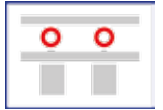




The Profix™ Panel, when combined with the Profix™ Plate, provides a high performance solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a highly thermally conductive screed replacement board which, in addition to optimising heat transfer, enables either a tiled, vinyl, or thin laminate floor to be bonded directly to it or for a low tog carpet and underlay to be laid directly onto it.





**Quick dry self levelling compound**

**Low TOG carpet and underlay**

**Plywood or similar**

**Profoil™ Grooved and Foiled insulation**

**10mm or 12mm pipe**

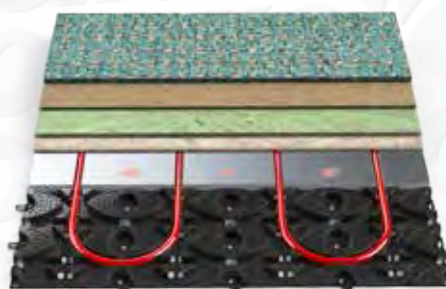
**Profix™ Panel**

**Structural sub floor**

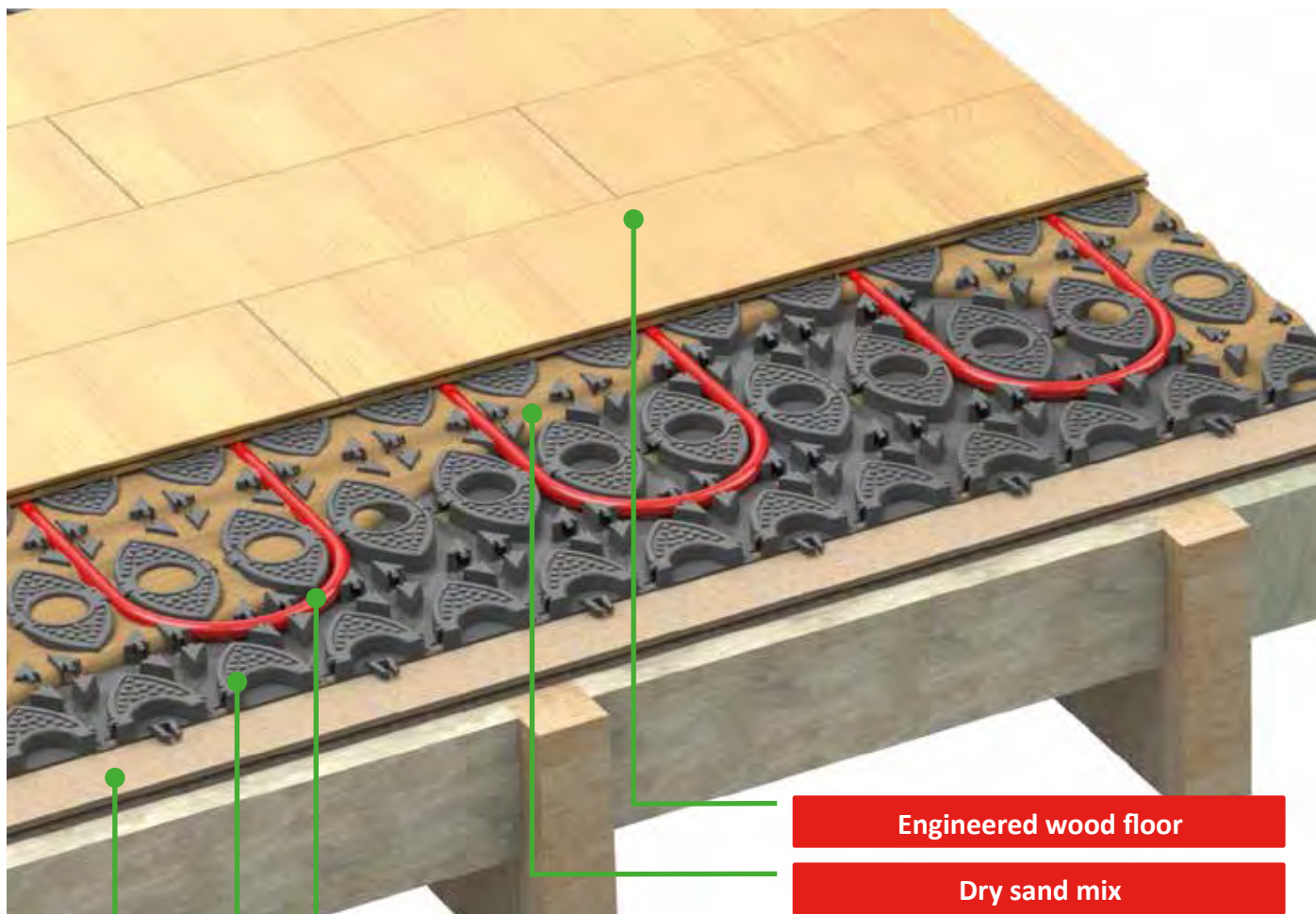


The Profix™ Panel is an ideal end return / highway panel for use with Profoil™ Grooved & Foiled Insulation Panels incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Profix™ Panel is compatible with Profoil™ Grooved & Foiled Insulation Panels of any thickness starting from as thin as 15mm.







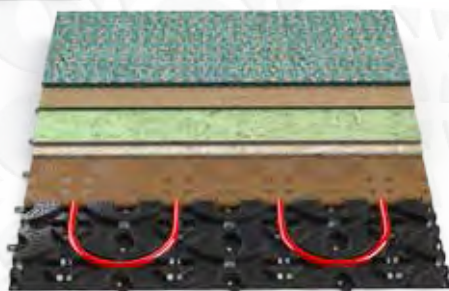
**Engineered wood floor**

**Dry sand mix**

**10mm or 12mm pipe**

**Profix™ Panel**

**Structural sub floor**



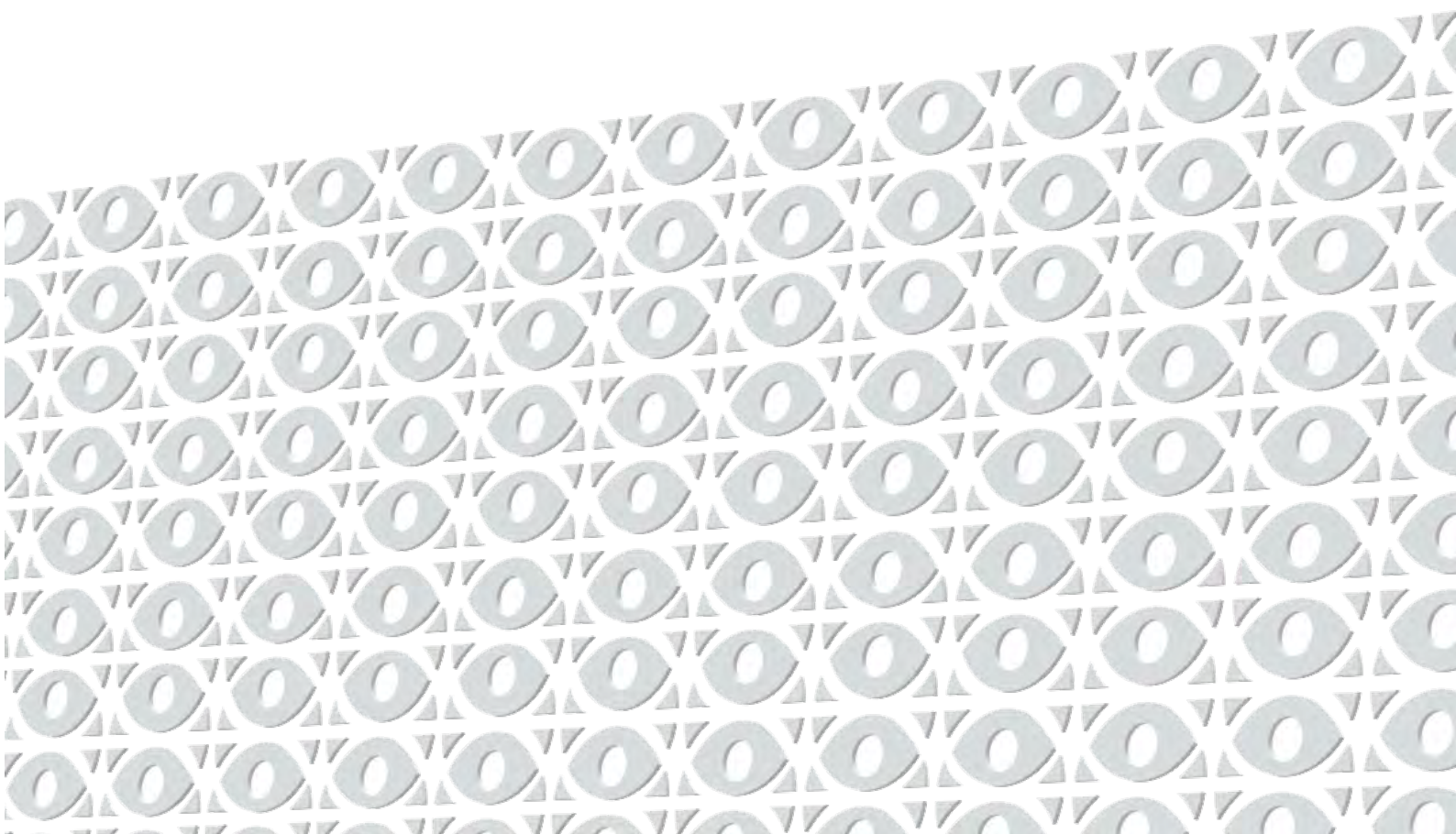
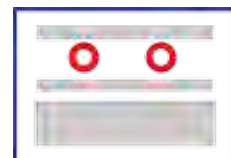
The Profix™ Panel, when combined with a dry sand mix, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer due to the relatively high thermal mass, and optimising the performance of the underfloor heating system.





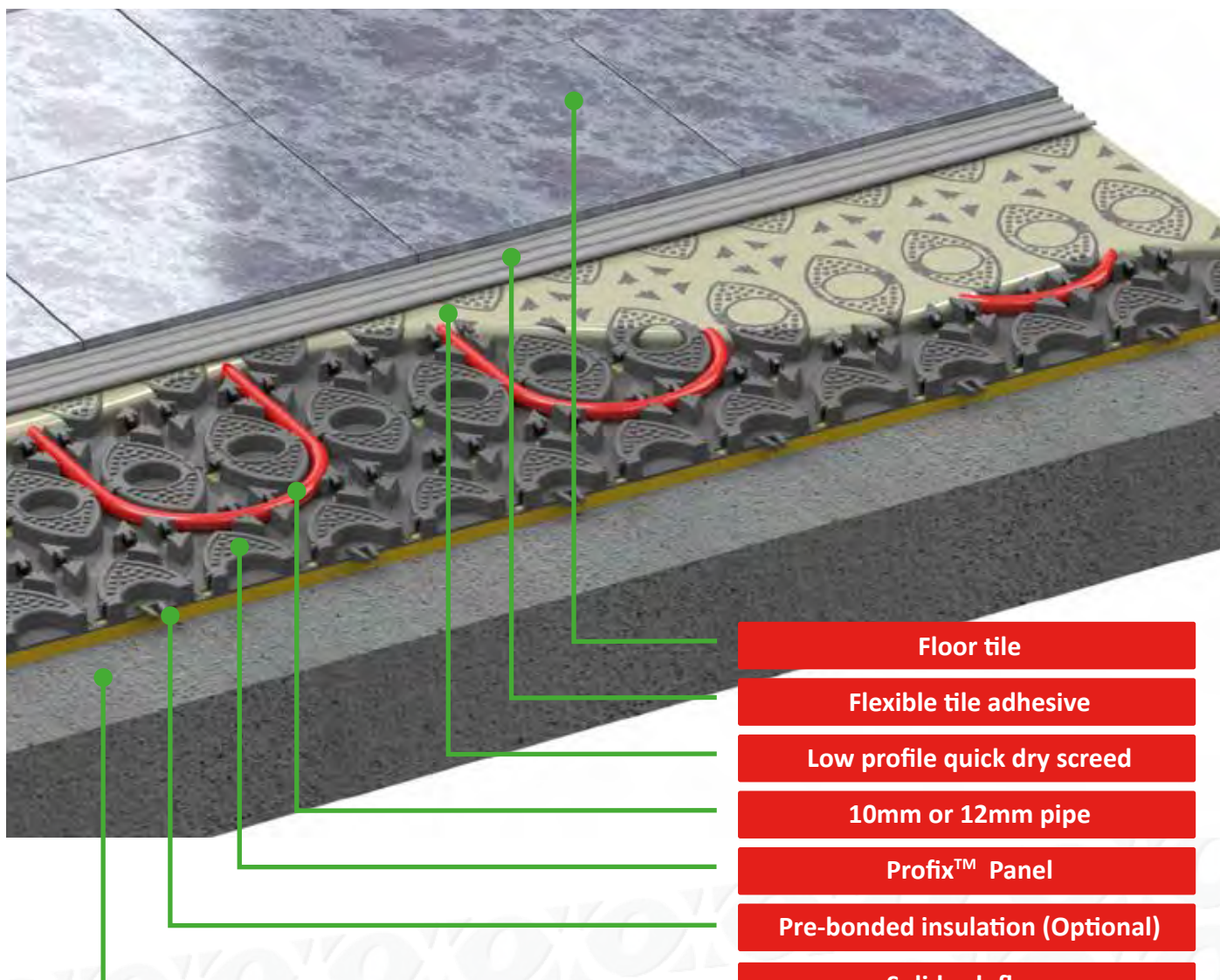
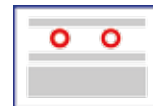




PROFIX™  
**HEATING AND COOLING**

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**SOLID FLOORS**



**Floor tile**

**Flexible tile adhesive**

**Low profile quick dry screed**

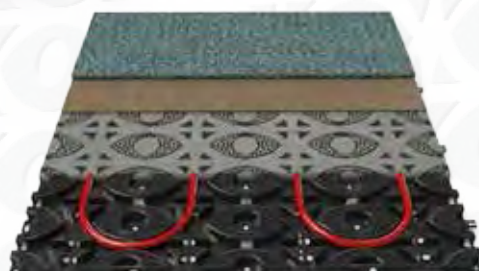
**10mm or 12mm pipe**

**Profix™ Panel**

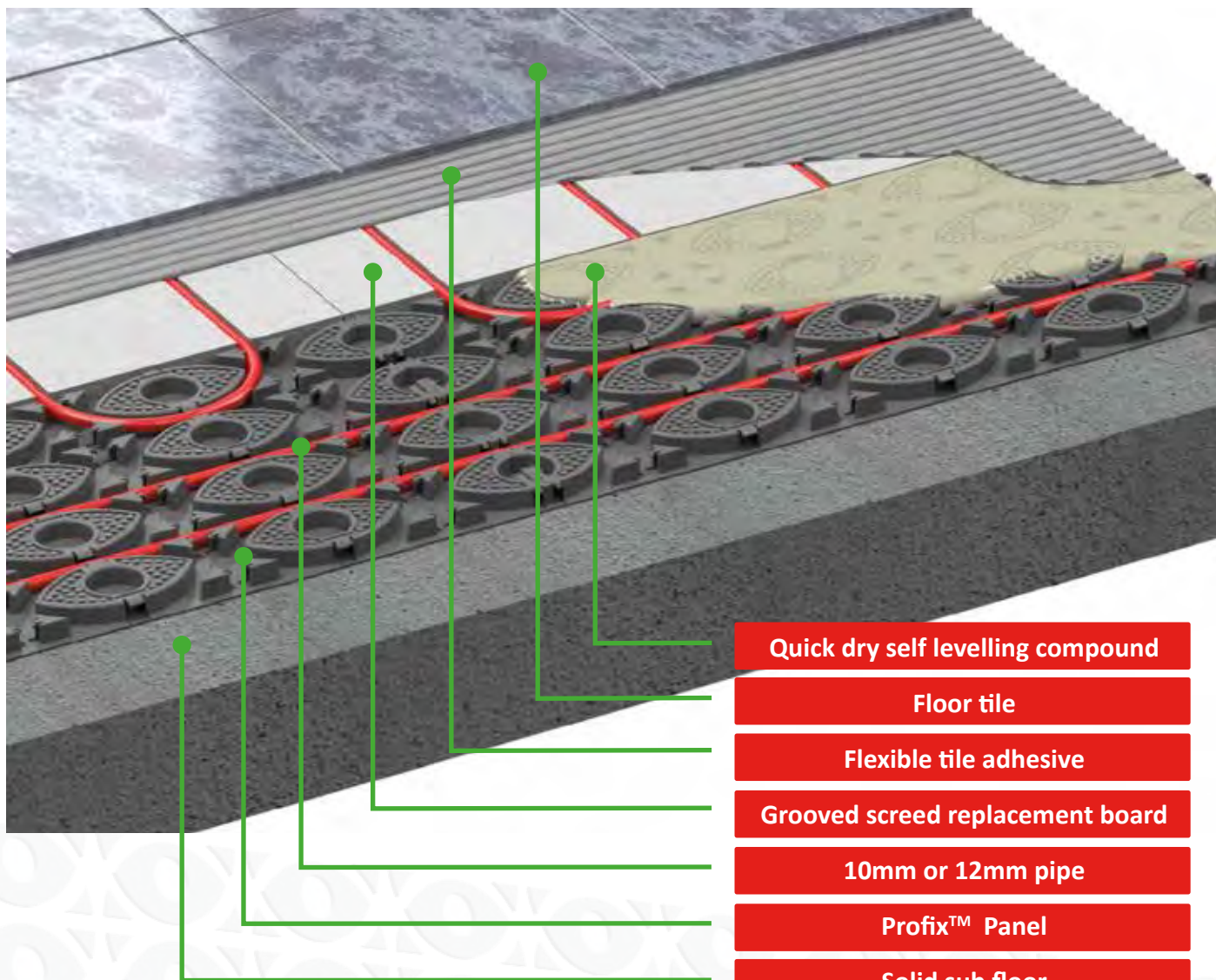
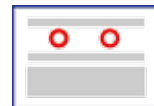
**Pre-bonded insulation (Optional)**

**Solid sub floor**

The Profix™ Panel, when combined with a low profile quick drying self-levelling screed and a warm water underfloor heating system, provides a unique low thickness / high heat output floor heating solution for both new build and retrofit projects. This revolutionary new system can deliver high heat outputs even at relatively low water temperatures, which makes it an ideal solution for use with heat pumps.







**Quick dry self levelling compound**

**Floor tile**

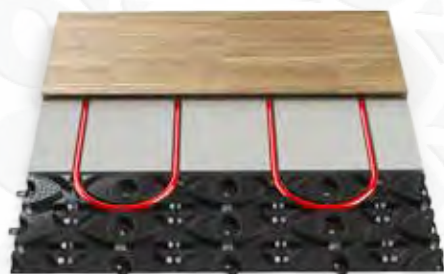
**Flexible tile adhesive**

**Grooved screed replacement board**

**10mm or 12mm pipe**

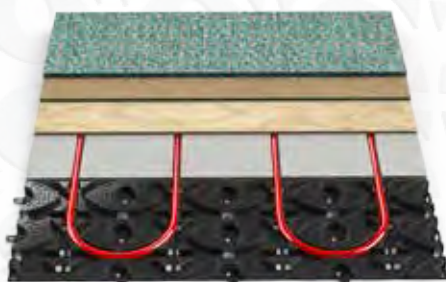
**Profix™ Panel**

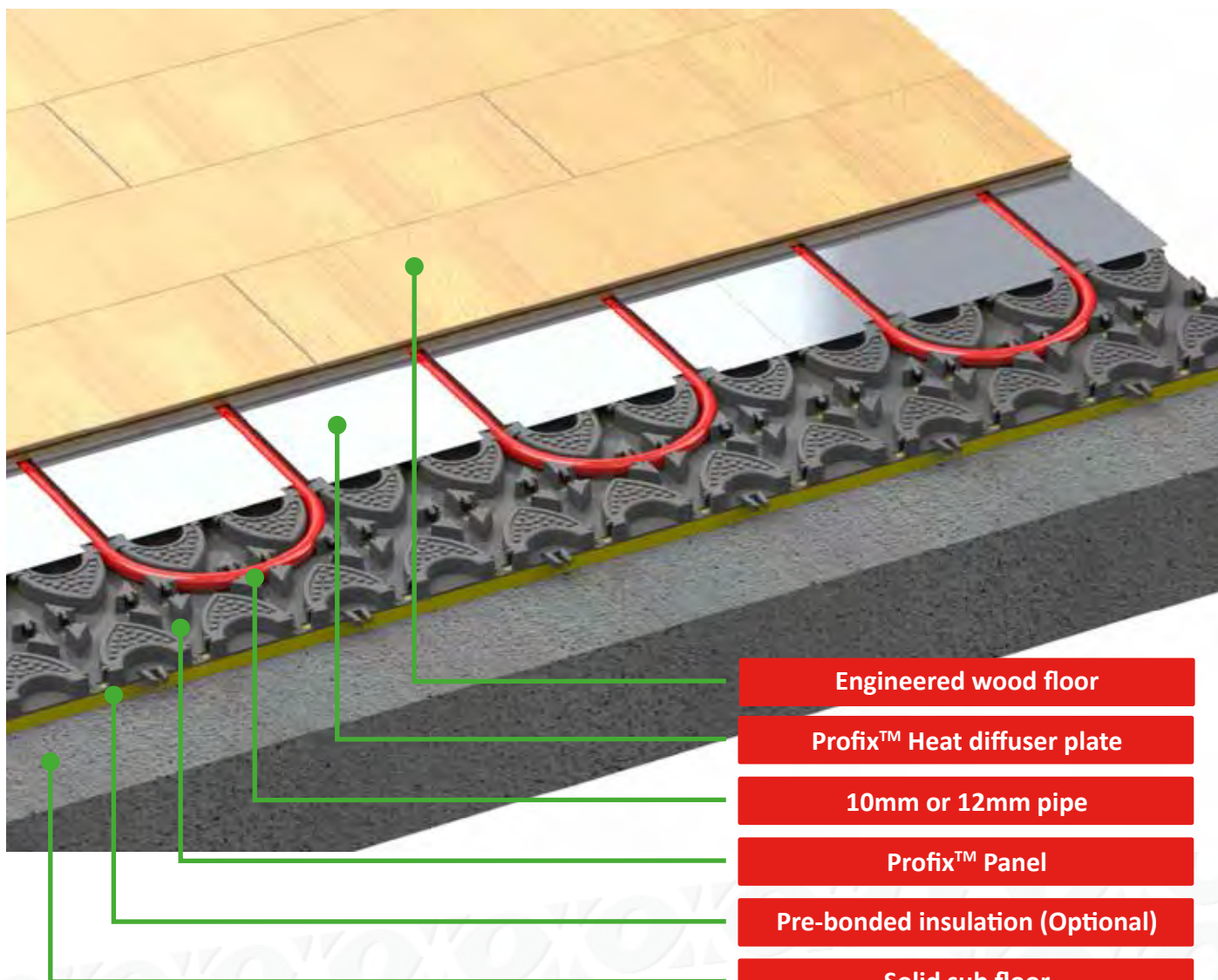
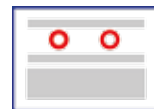
**Solid sub floor**



The Profix™ Panel is an ideal end return / highway panel for use with grooved screed boards incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Profix™ Panel is compatible with grooved screed boards of any thickness starting from as thin as 15mm.





Engineered wood floor

Profix™ Heat diffuser plate

10mm or 12mm pipe

Profix™ Panel

Pre-bonded insulation (Optional)

Solid sub floor



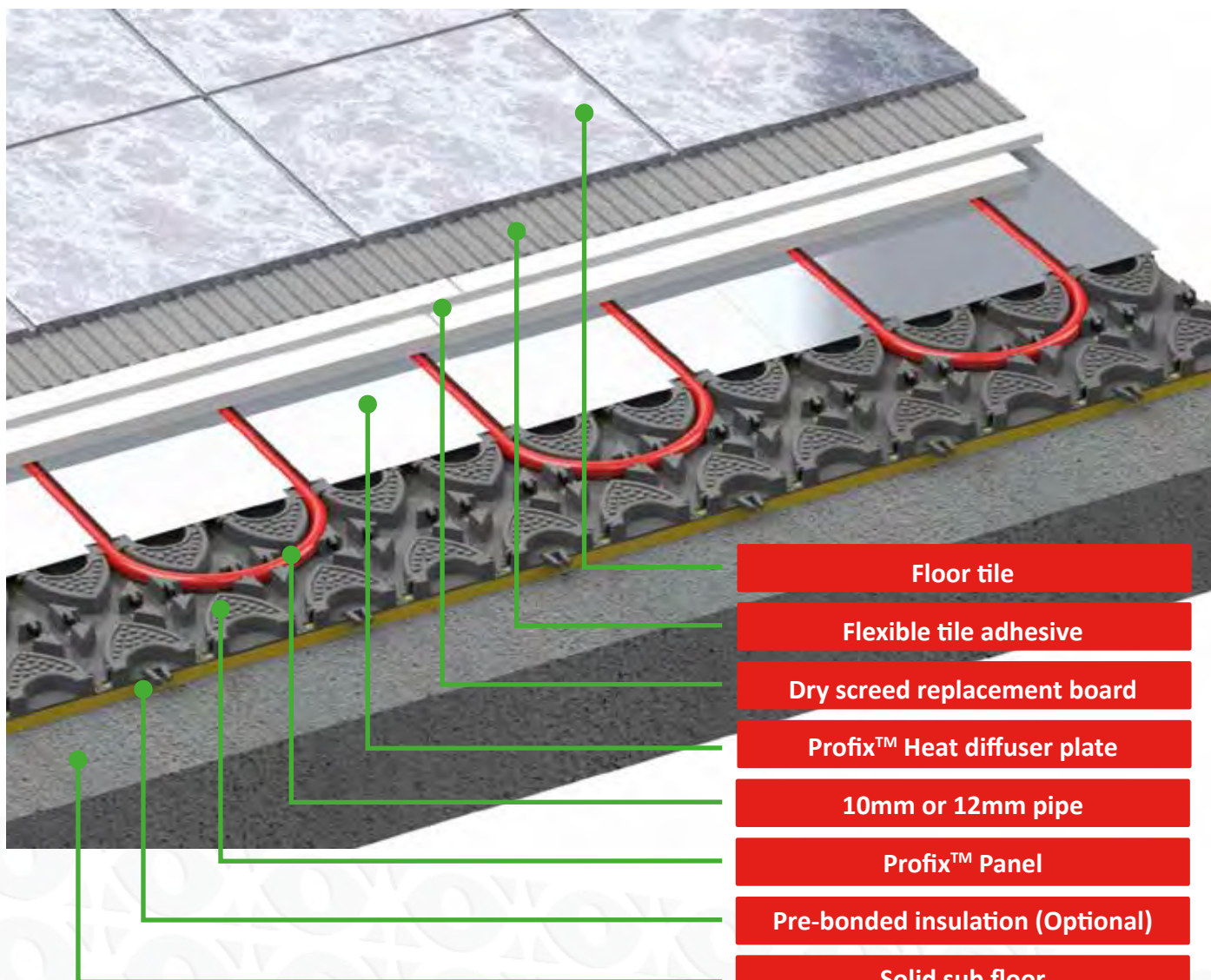
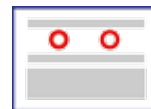
The Profix™ Panel, when combined with the Profix™ Plate, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer, reducing system response time and optimising the performance of the underfloor heating system.





# HEAT DIFFUSER SYSTEM (PREMIUM)



**Floor tile**

**Flexible tile adhesive**

**Dry screed replacement board**

**Profix™ Heat diffuser plate**

**10mm or 12mm pipe**

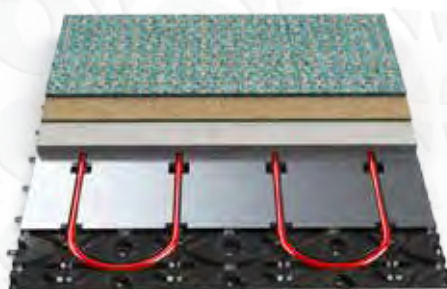
**Profix™ Panel**

**Pre-bonded insulation (Optional)**

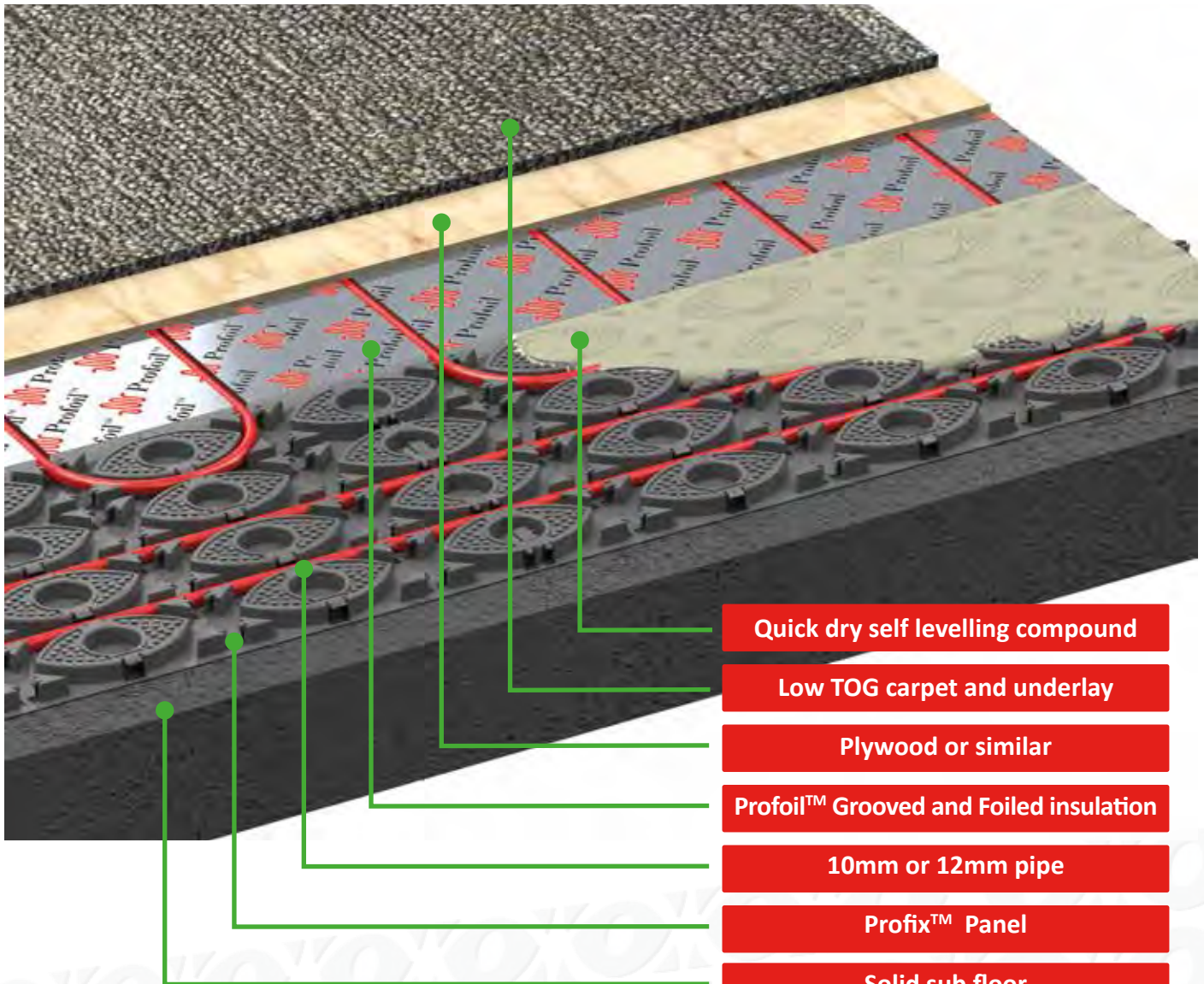
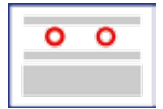
**Solid sub floor**

The Profix™ Panel, when combined with the Profix™ Plate, provides a high performance solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a highly thermally conductive screed replacement board which, in addition to optimising heat transfer, enables either a tiled, vinyl, or thin laminate floor to be bonded directly to it or for a low tog carpet and underlay to be laid directly onto it.







**Quick dry self levelling compound**

**Low TOG carpet and underlay**

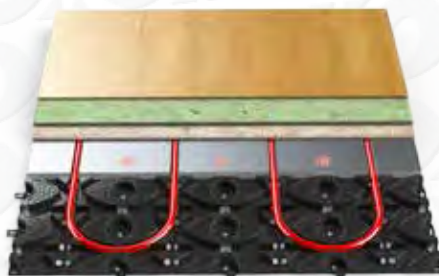
**Plywood or similar**

**Profoil™ Grooved and Foiled insulation**

**10mm or 12mm pipe**

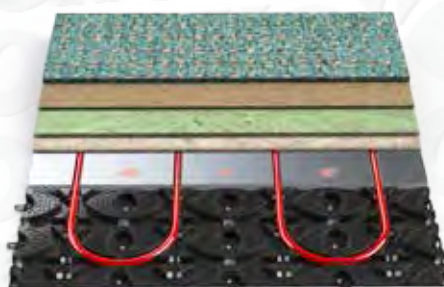
**Profix™ Panel**

**Solid sub floor**

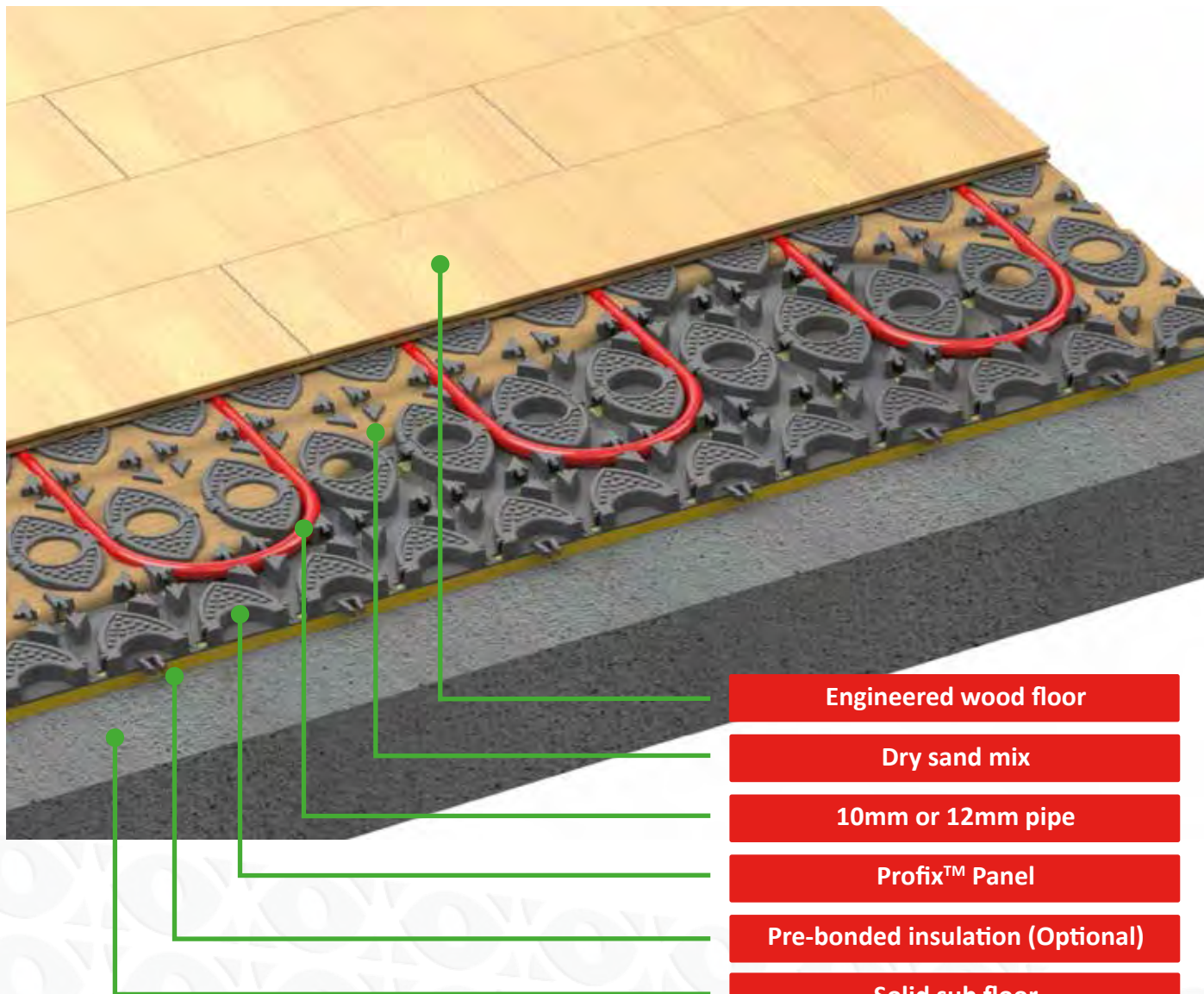
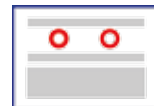


The Profix™ Panel is an ideal end return / highway panel for use with Profoil™ Grooved & Foiled Insulation Panels incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Profix™ Panel is compatible with Profoil™ Grooved & Foiled Insulation Panels of any thickness starting from as thin as 15mm.







**Engineered wood floor**

**Dry sand mix**

**10mm or 12mm pipe**

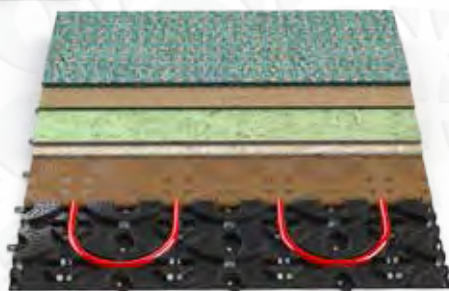
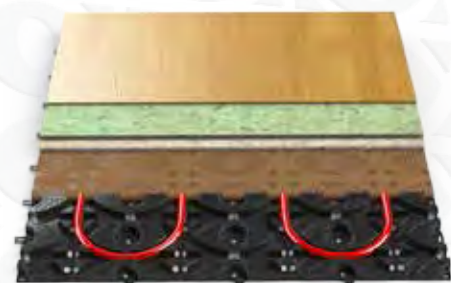
**Profix™ Panel**

**Pre-bonded insulation (Optional)**

**Solid sub floor**

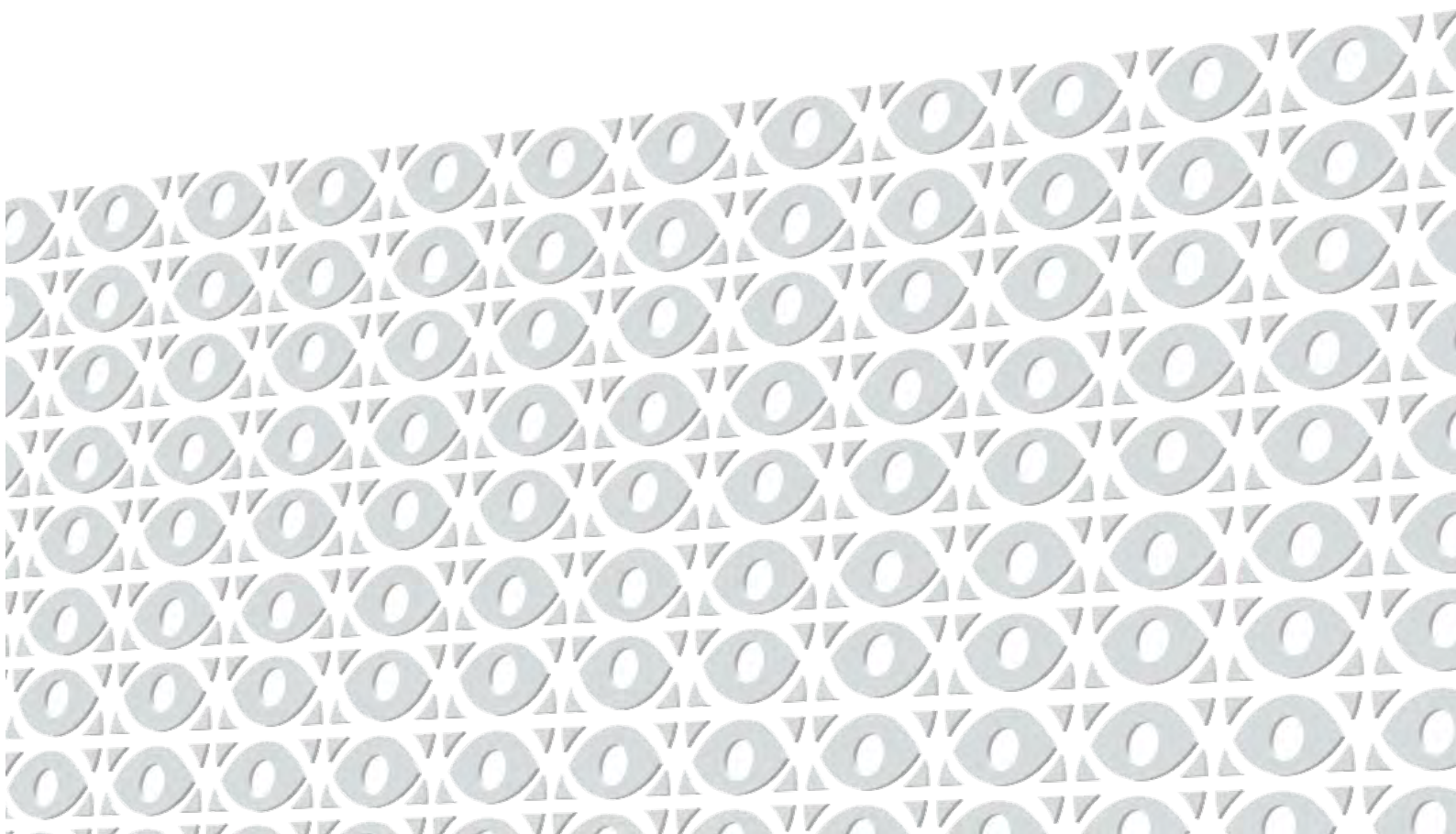
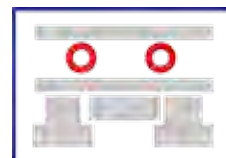
The Profix™ Panel, when combined with a dry sand mix, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer due to the relatively high thermal mass, and optimising the performance of the underfloor heating system.





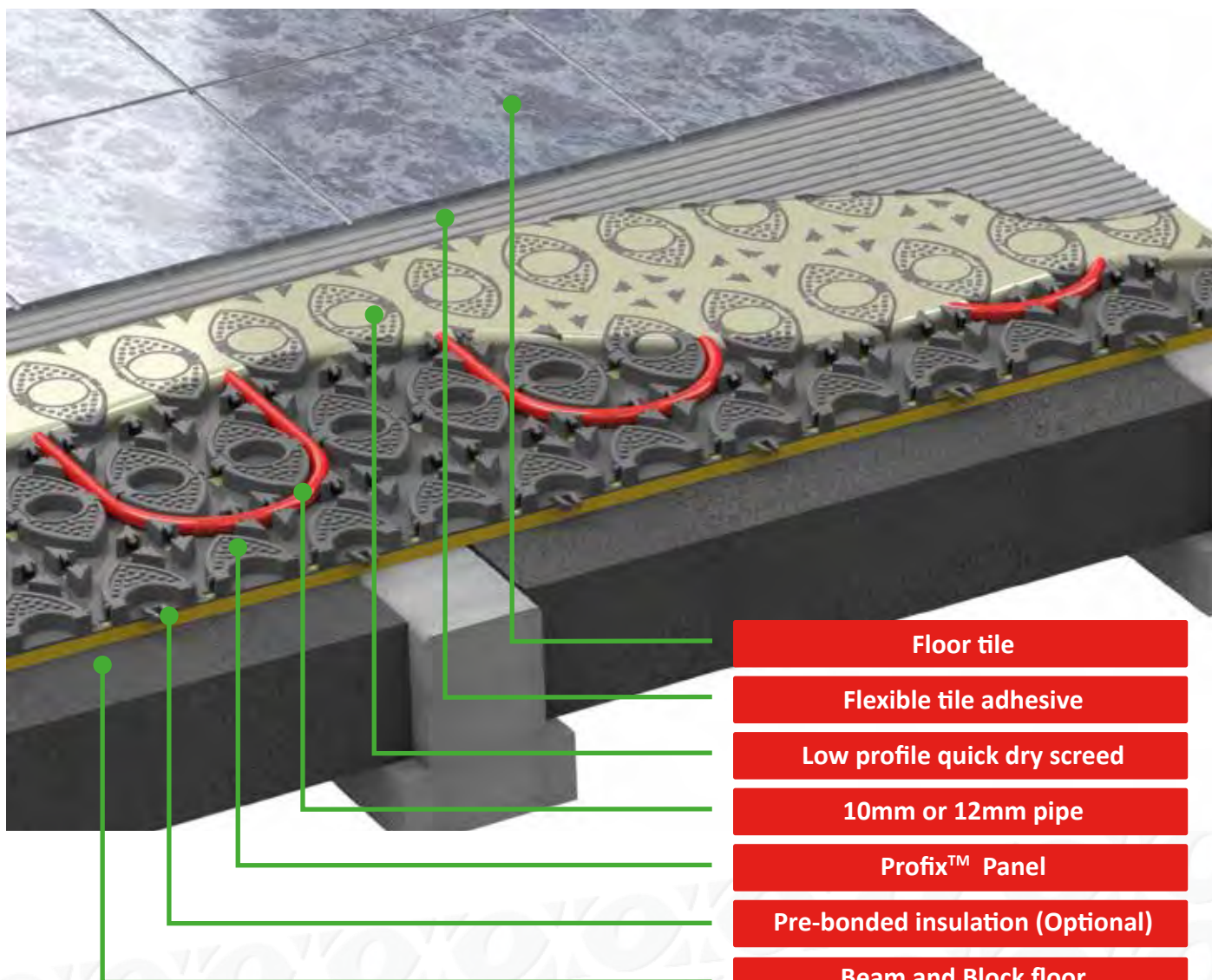




PROFIX™  
**HEATING AND COOLING**

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**BEAM AND BLOCK FLOORS**



**Floor tile**

**Flexible tile adhesive**

**Low profile quick dry screed**

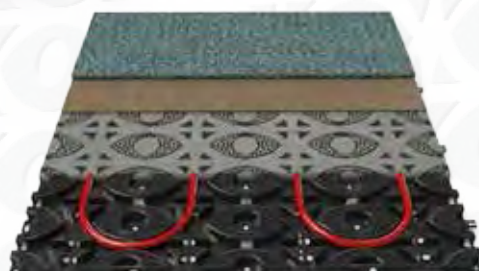
**10mm or 12mm pipe**

**Profix™ Panel**

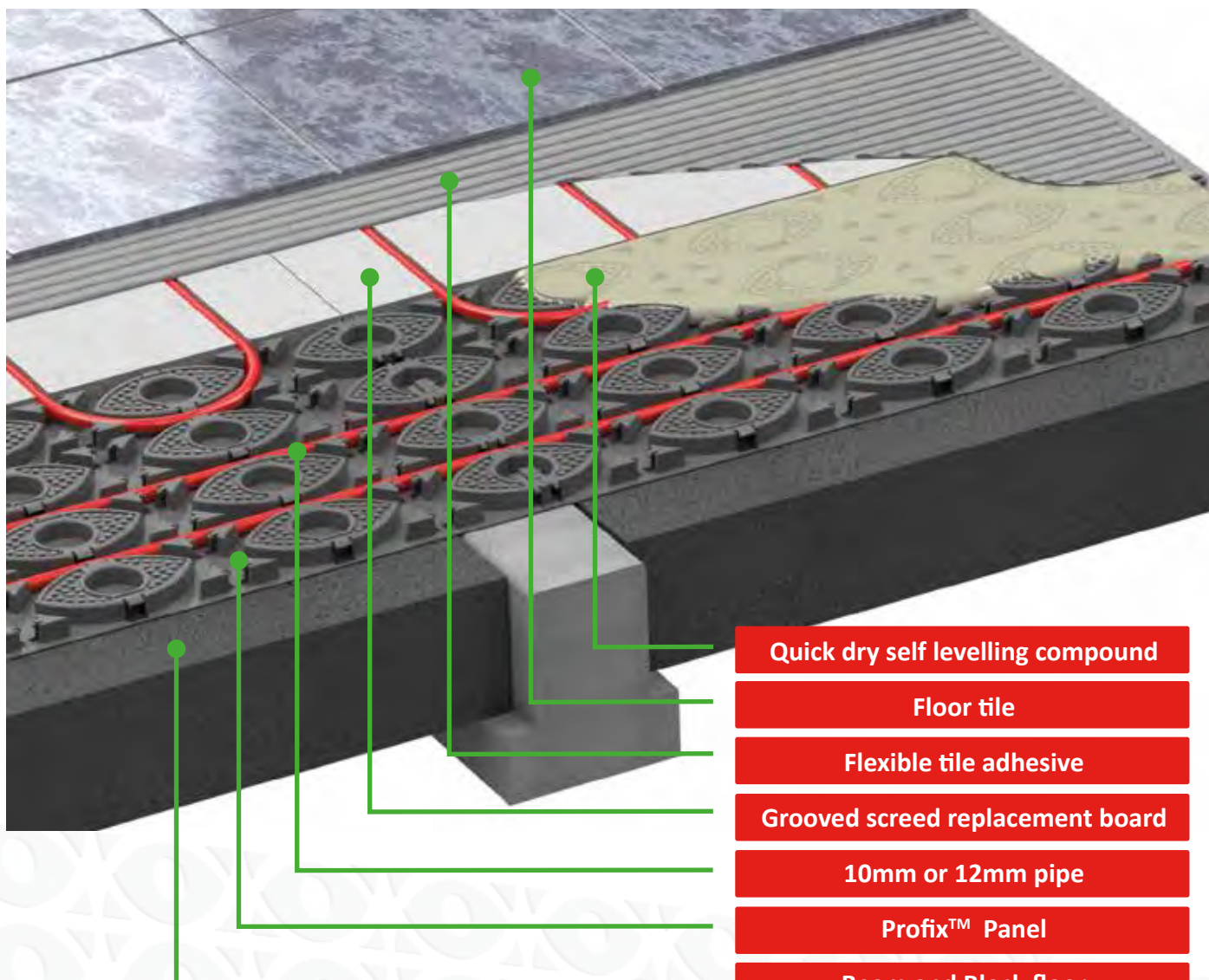
**Pre-bonded insulation (Optional)**

**Beam and Block floor**

The Profix™ Panel, when combined with a low profile quick drying self-levelling screed and a warm water underfloor heating system, provides a unique low thickness / high heat output floor heating solution for both new build and retrofit projects. This revolutionary new system can deliver high heat outputs even at relatively low water temperatures, which makes it an ideal solution for use with heat pumps.







**Quick dry self levelling compound**

**Floor tile**

**Flexible tile adhesive**

**Grooved screed replacement board**

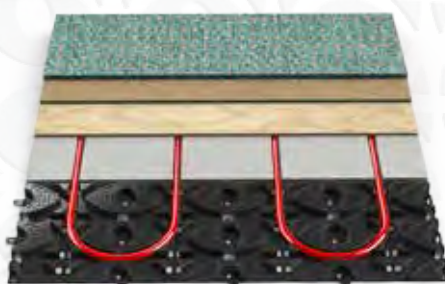
**10mm or 12mm pipe**

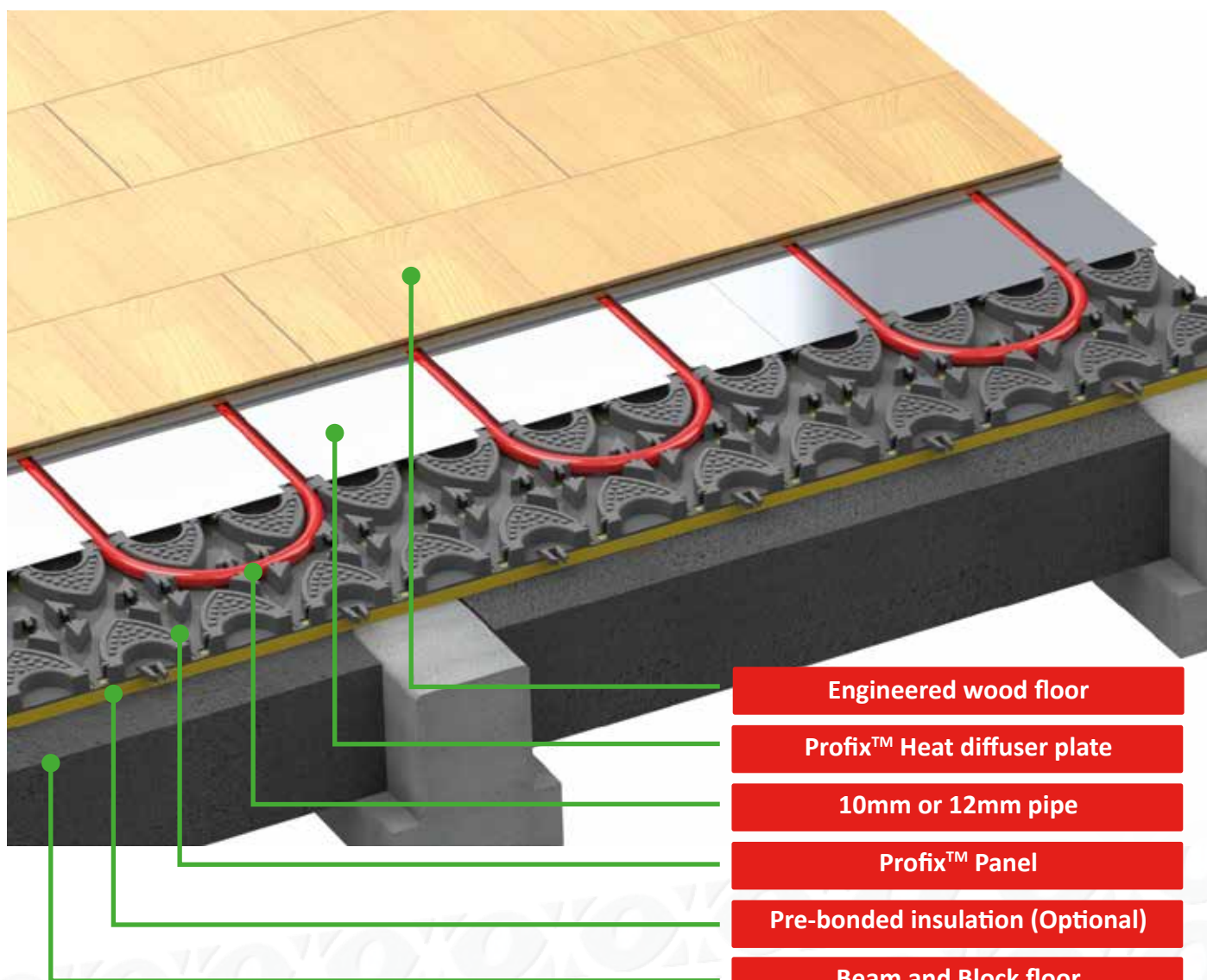
**Prifix™ Panel**

**Beam and Block floor**

The Prifix™ Panel is an ideal end return / highway panel for use with grooved screed boards incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Prifix™ Panel is compatible with grooved screed boards of any thickness starting from as thin as 15mm.





**Engineered wood floor**

**Profix™ Heat diffuser plate**

**10mm or 12mm pipe**

**Profix™ Panel**

**Pre-bonded insulation (Optional)**

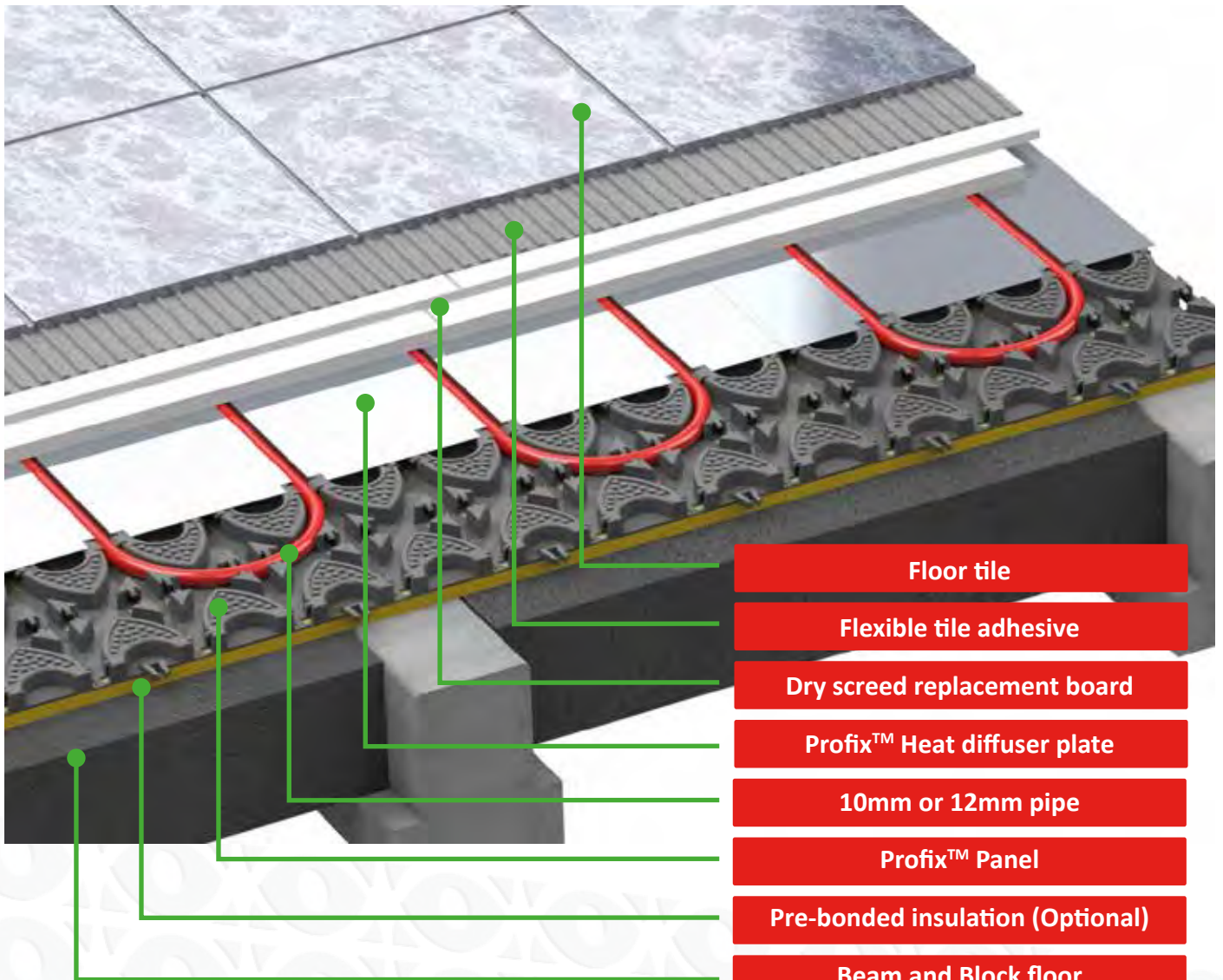
**Beam and Block floor**

The Profix™ Panel, when combined with the Profix™ Plate, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer, reducing system response time and optimising the performance of the underfloor heating system.

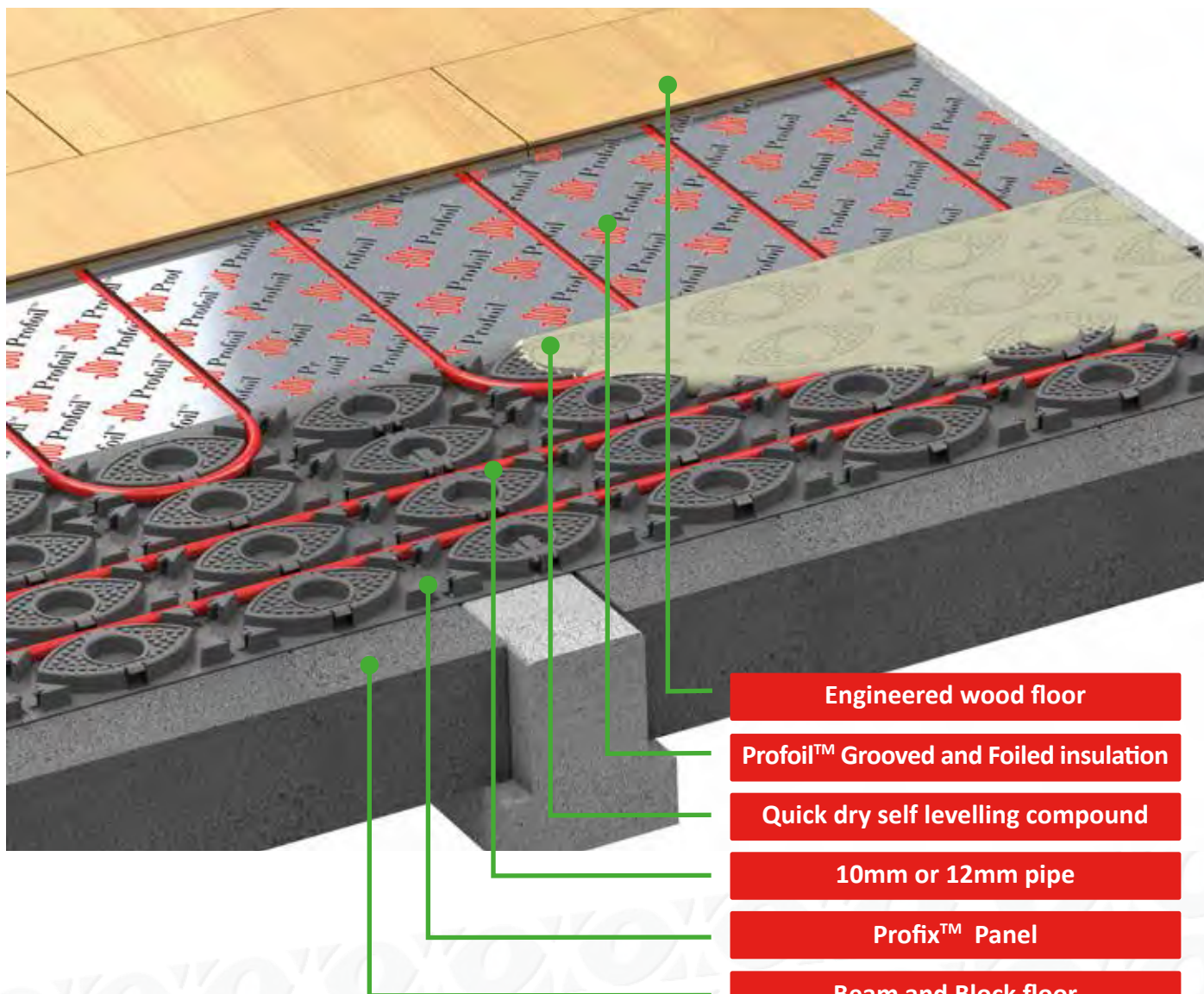






The Profix™ Panel, when combined with the Profix™ Plate, provides a high performance solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a highly thermally conductive screed replacement board which, in addition to optimising heat transfer, enables either a tiled, vinyl, or thin laminate floor to be bonded directly to it or for a low tog carpet and underlay to be laid directly onto it.



**Engineered wood floor**

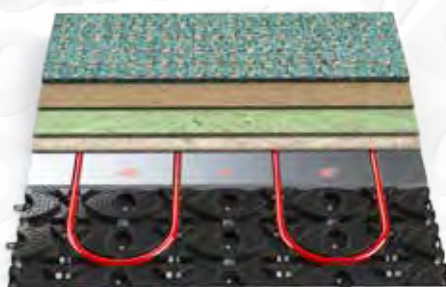
**Profoil™ Grooved and Foiled insulation**

**Quick dry self levelling compound**

**10mm or 12mm pipe**

**Profix™ Panel**

**Beam and Block floor**

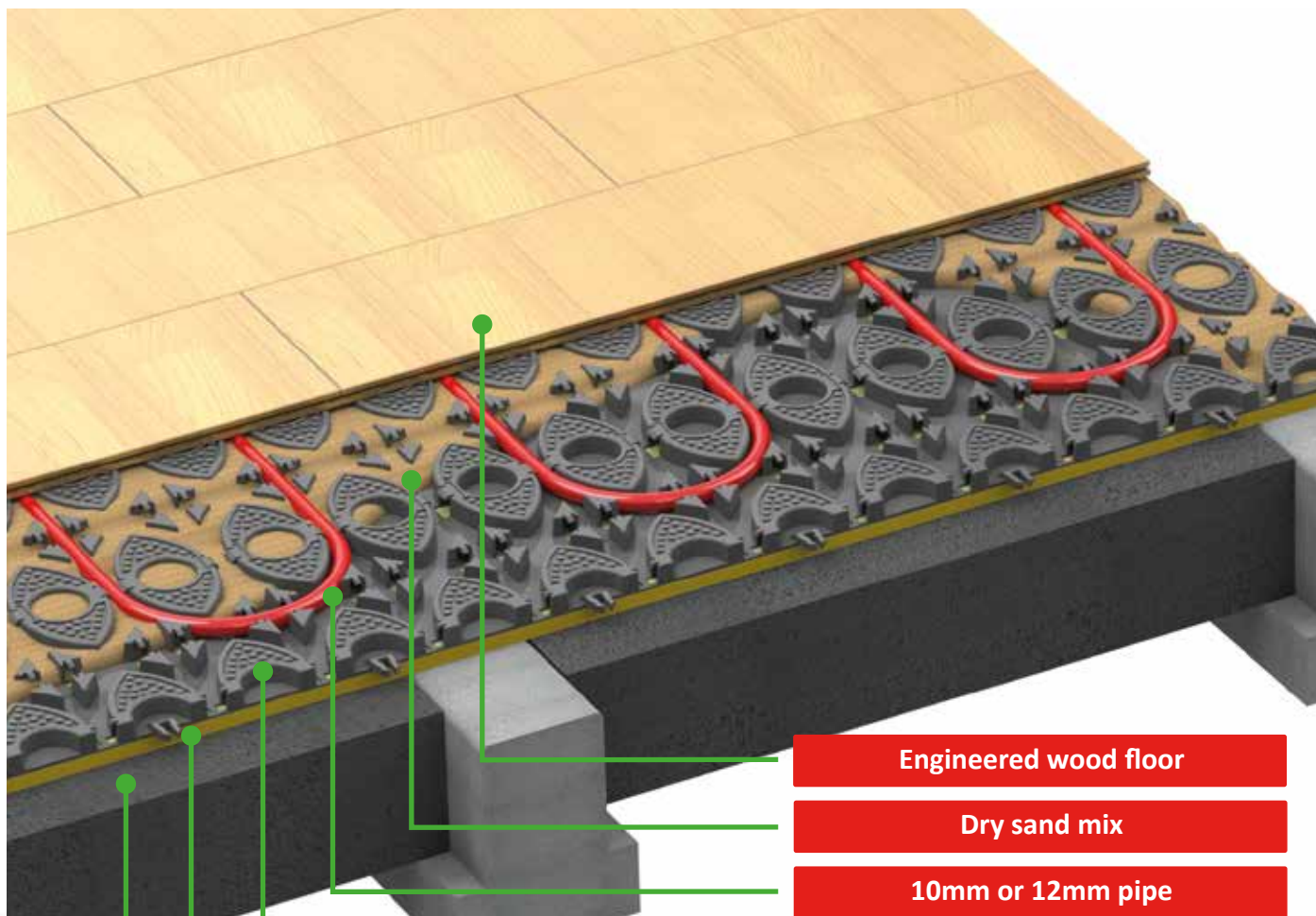


The Profix™ Panel is an ideal end return / highway panel for use with Profoil™ Grooved & Foiled Insulation Panels incorporating a warm water underfloor heating system using either 10mm or 12mm pipe.

Thanks to the inclusion of an optional pre-bonded insulation layer, the Profix™ Panel is compatible with Profoil™ Grooved & Foiled Insulation Panels of any thickness starting from as thin as 15mm.







Engineered wood floor

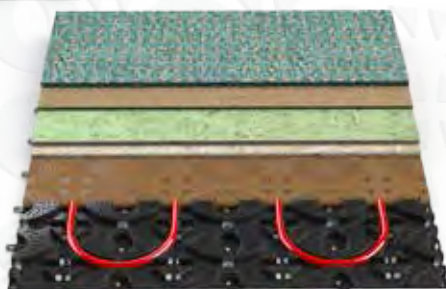
Dry sand mix

10mm or 12mm pipe

Profix™ Panel

Pre-bonded insulation (Optional)

Beam and Block floor



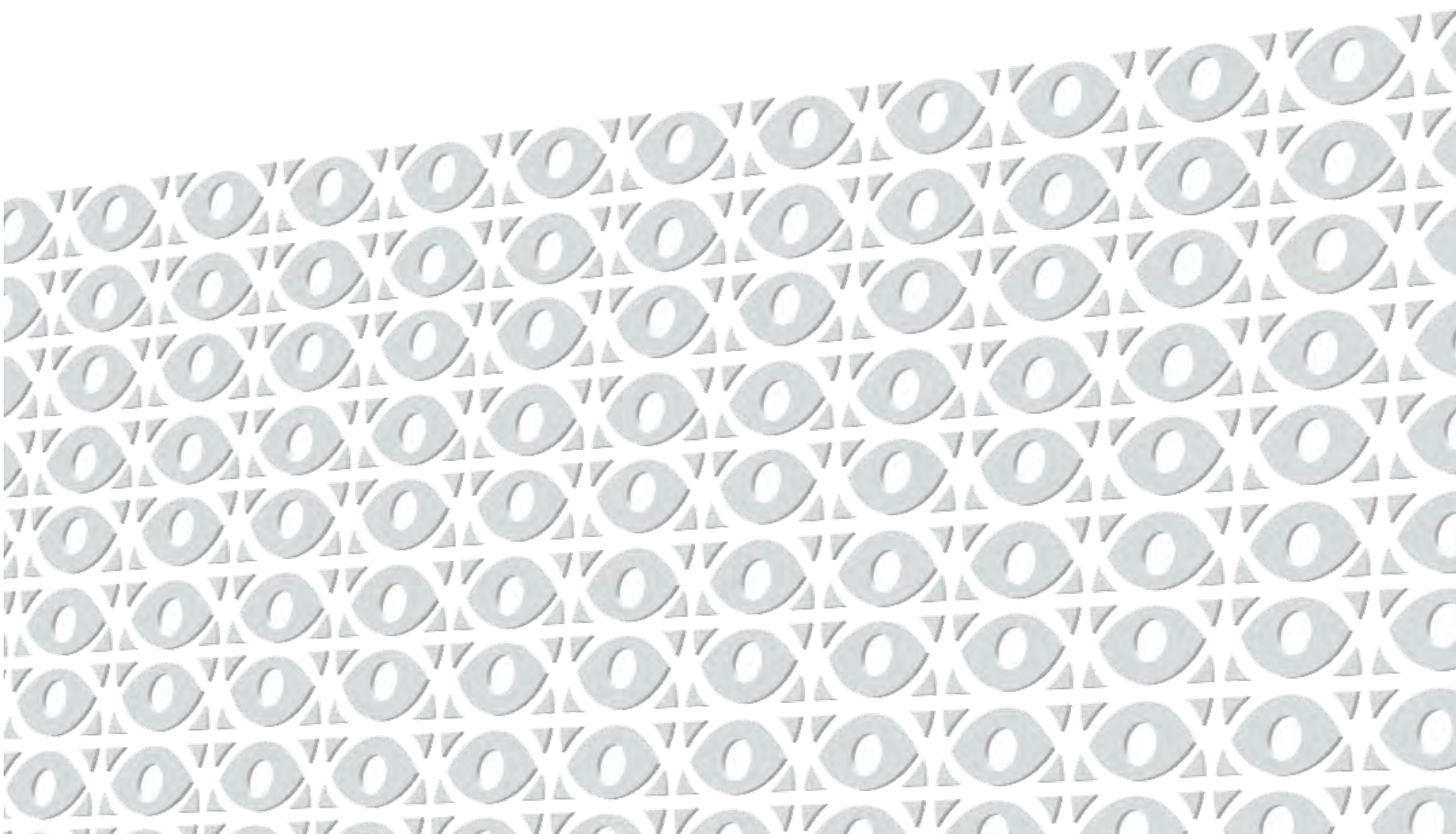
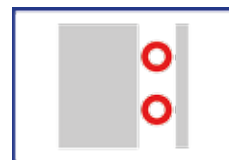
The Profix™ Panel, when combined with a dry sand mix, provides a very quick and easy to install ultra-low profile solution for use with warm water underfloor heating systems incorporating either a 10mm or 12mm pipe.

The high structural integrity of the Profix™ Panel enables the direct application of a quality engineered wood floor, improving heat transfer due to the relatively high thermal mass, and optimising the performance of the underfloor heating system.







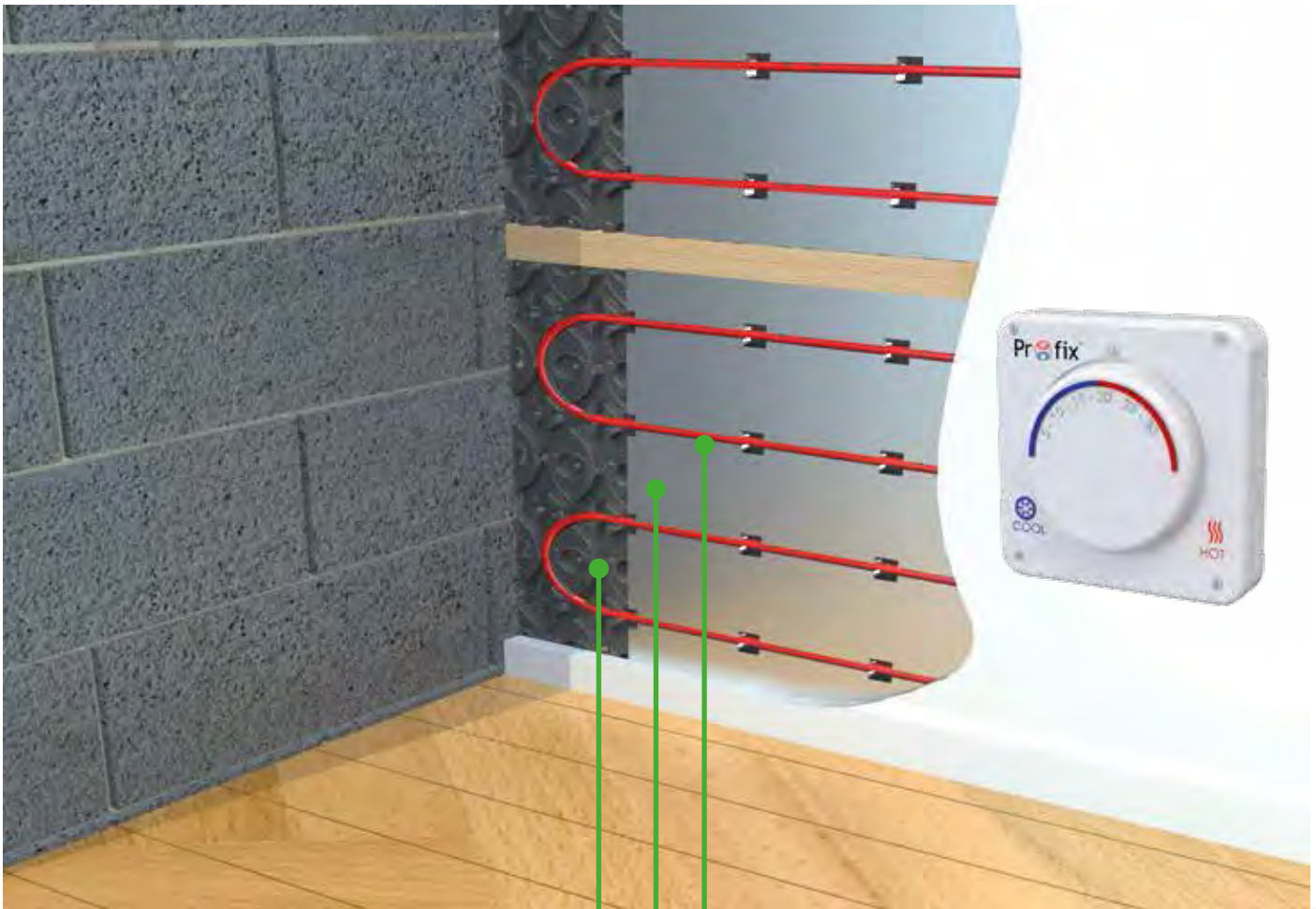
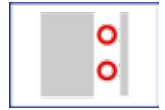


PROFIX™

**HEATING AND COOLING**

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**WALL HEATING/COOLING**



10mm or 12mm pipe

Profix™ Plate

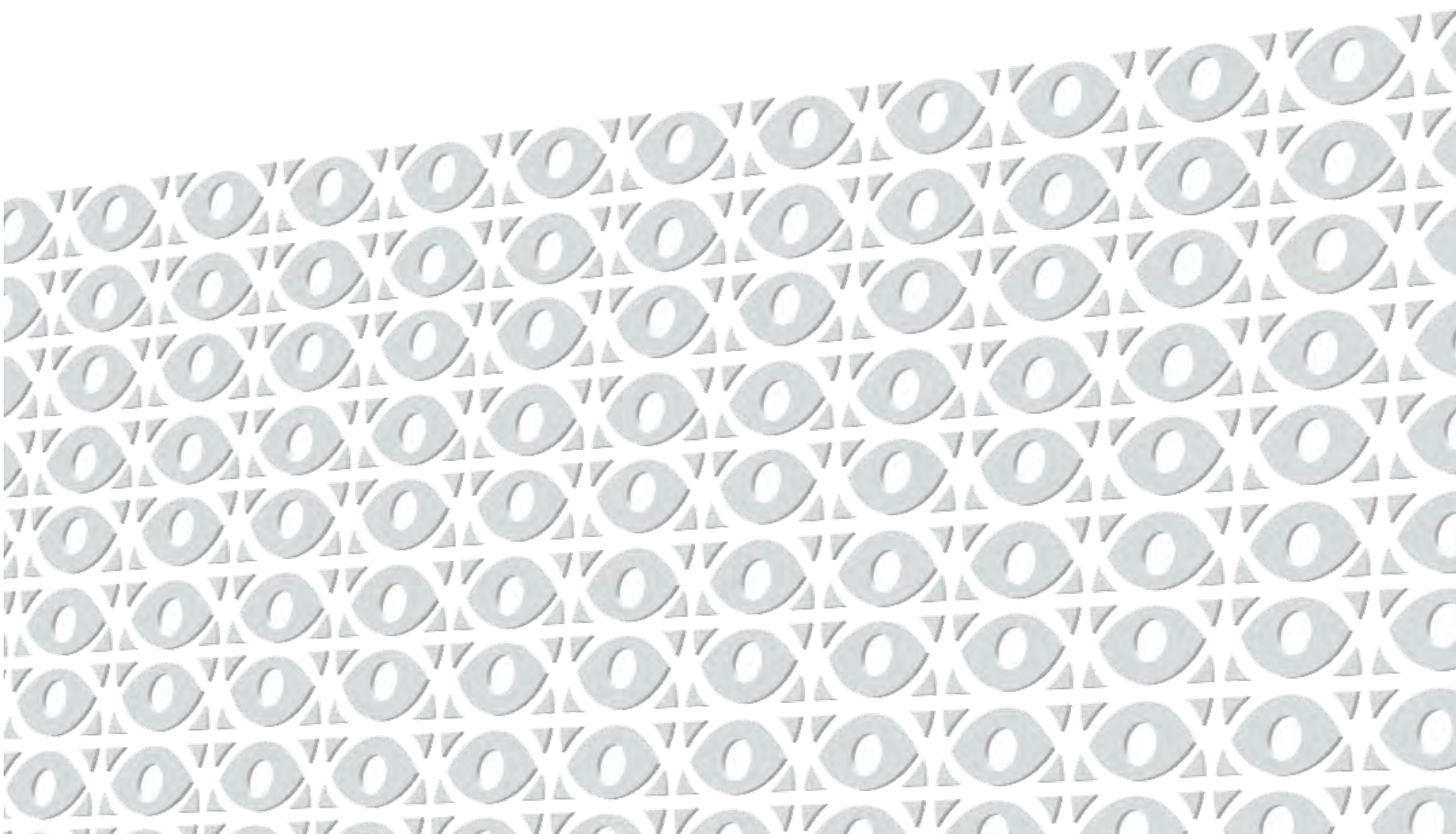
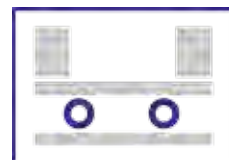
Profix™ Panel

The Profix™ Panel, when combined with the Profix™ Plate, provides a quick and easy to install low profile solution for wall heating / cooling systems incorporating either a 10mm or 12mm pipe. This revolutionary new system can deliver relatively high heating / cooling outputs, which makes it ideal for use with reversible heat pumps.

Wall heating is especially suitable for rooms where floor heating is either impractical or where additional heat output is required, for example in bathrooms with insufficient floor area for an underfloor heating system alone to provide adequate heat output.



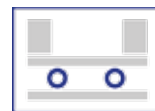




PROFIX™  
**HEATING AND COOLING**

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**CEILING COOLING/HEATING**



**10mm or 12mm pipe**

**Profix™ Plate**

**Profix™ Panel**

**Ceiling Board**

The Profix™ Panel, when combined with the Profix™ Plate, provides a quick and easy to install low profile solution for ceiling cooling / heating systems incorporating either a 10mm or 12mm pipe. This revolutionary new system can deliver relatively high heating / cooling outputs making it ideal for use with reversible heat pumps.

Ceiling cooling is especially suitable for rooms with a high heat load, for example rooms containing electronic equipment or where high levels of solar gain are prevalent. Ceiling heating is especially suitable for rooms where floor heating is either impractical or where additional heat output is required, for example in bathrooms with insufficient floor area for an underfloor heating system alone to provide adequate heat output.









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