PROFIX™
HEATING AND COOLING
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.
Multiple “PIPE RETENTION CLIPS” to secure the pipe in place

“PURPOSE DESIGNED SUPPORTS” to provide a structural key for tile adhesive and low profile screeds

‘SNAP CLIPS’ to fasten the panels together

Multiple “BREAK POINTS” with V shaped notches to aid cutting knife alignment

Optional ‘HIGH COMRESSIVE STRENGTH INSULATION LAYER’ pre-bonded to each panel

“SLIDE AND LOCK FEATURE” to connect the panels together

“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

<table>
<thead>
<tr>
<th>SYSTEM TYPE</th>
<th>FLOOR COVERING</th>
<th>MEAN WATER TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30 °C</td>
</tr>
<tr>
<td>Profix Low Profile Screed</td>
<td>Tile</td>
<td>56.60</td>
</tr>
<tr>
<td></td>
<td>Vinyl or 6mm Laminate</td>
<td>40.20</td>
</tr>
<tr>
<td></td>
<td>Carpet &amp; Underlay (1.5 TOG)</td>
<td>30.00</td>
</tr>
<tr>
<td>Profix Grooved Screed Board</td>
<td>Tile</td>
<td>39.10</td>
</tr>
<tr>
<td></td>
<td>6mm Laminate Direct</td>
<td>26.20</td>
</tr>
<tr>
<td></td>
<td>6mm Ply + Carpet &amp; Underlay (1.5 TOG)</td>
<td>17.50</td>
</tr>
<tr>
<td>Profix Heat Diffuser (Standard)</td>
<td>15mm Engineered Wood</td>
<td>25.10</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + 6mm Laminate</td>
<td>15.59</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + Carpet &amp; Underlay (1.5 TOG)</td>
<td>20.93</td>
</tr>
<tr>
<td>Profix Heat Diffuser (Premium)</td>
<td>Tile</td>
<td>25.80</td>
</tr>
<tr>
<td></td>
<td>Vinyl or 6mm Laminate</td>
<td>25.20</td>
</tr>
<tr>
<td></td>
<td>Carpet &amp; Underlay (1.5 TOG)</td>
<td>19.30</td>
</tr>
<tr>
<td>Profix Profoil</td>
<td>15mm Engineered Wood</td>
<td>23.93</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + 6mm Laminate</td>
<td>20.63</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + Carpet &amp; Underlay (1.5 TOG)</td>
<td>16.00</td>
</tr>
<tr>
<td>Profix Dry Mix</td>
<td>15mm Engineered Wood</td>
<td>22.31</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + 6mm Laminate</td>
<td>18.79</td>
</tr>
<tr>
<td></td>
<td>18mm Chipboard + Carpet &amp; Underlay (1.5 TOG)</td>
<td>17.83</td>
</tr>
</tbody>
</table>

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/m²K, 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

Room specific heat loss
50 - 80 W/m²

Room specific heat loss
30 - 50 W/m²

Room specific heat loss
up to 30 W/m²
HEAT Emitter Graphs (Heat Pumps)

Heat Diffuser System (Standard)

- Room specific heat loss: up to 30 W/m²
- Room specific heat loss: 30 - 50 W/m²
- Room specific heat loss: 50 - 80 W/m²

Heat Diffuser System (Premium)

- Room specific heat loss: up to 30 W/m²
- Room specific heat loss: 30 - 50 W/m²
- Room specific heat loss: 50 - 80 W/m²

Graphs showing Heat Output (W/m²) vs. Mean Water Temperature (°C) for different grades of insulation and floor types.

- 18mm Chipboard + 6mm Laminate
- 18mm Chipboard + Carpet & Underlay (1.5 TOG)
- 15mm Engineered Wood
- Ceramic, Vinyl or 6mm Laminate
- Carpet & Underlay (1.5 TOG)
HEAT EMITTER GRAPHES (HEAT PUMPS)

PROFOIL™ SYSTEM

Room specific heat loss
50 - 80 W/m²

Room specific heat loss
30 - 50 W/m²

Room specific heat loss
up to 30 W/m²

MEAN WATER TEMPERATURE (°C)

HEAT OUTPUT (W/m²)

15MM ENGINEERED WOOD  18MM CHIPBOARD + 6MM LAMINATE  18MM CHIPBOARD + CARPET & UNDERLAY (1.5 TOG)

DRY MIX SYSTEM

Room specific heat loss
50 - 80 W/m²

Room specific heat loss
30 - 50 W/m²

Room specific heat loss
up to 30 W/m²

MEAN WATER TEMPERATURE (°C)

HEAT OUTPUT (W/m²)

15MM ENGINEERED WOOD  18MM CHIPBOARD + 6MM LAMINATE  18MM CHIPBOARD + CARPET & UNDERLAY (1.5 TOG)
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.
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.
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.
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.
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

SOLID FLOORS
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.
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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.

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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.
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

BEAM AND BLOCK FLOORS
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.
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.
HEAT DIFFUSER SYSTEM (STANDARD)

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.

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 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.
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.

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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.
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