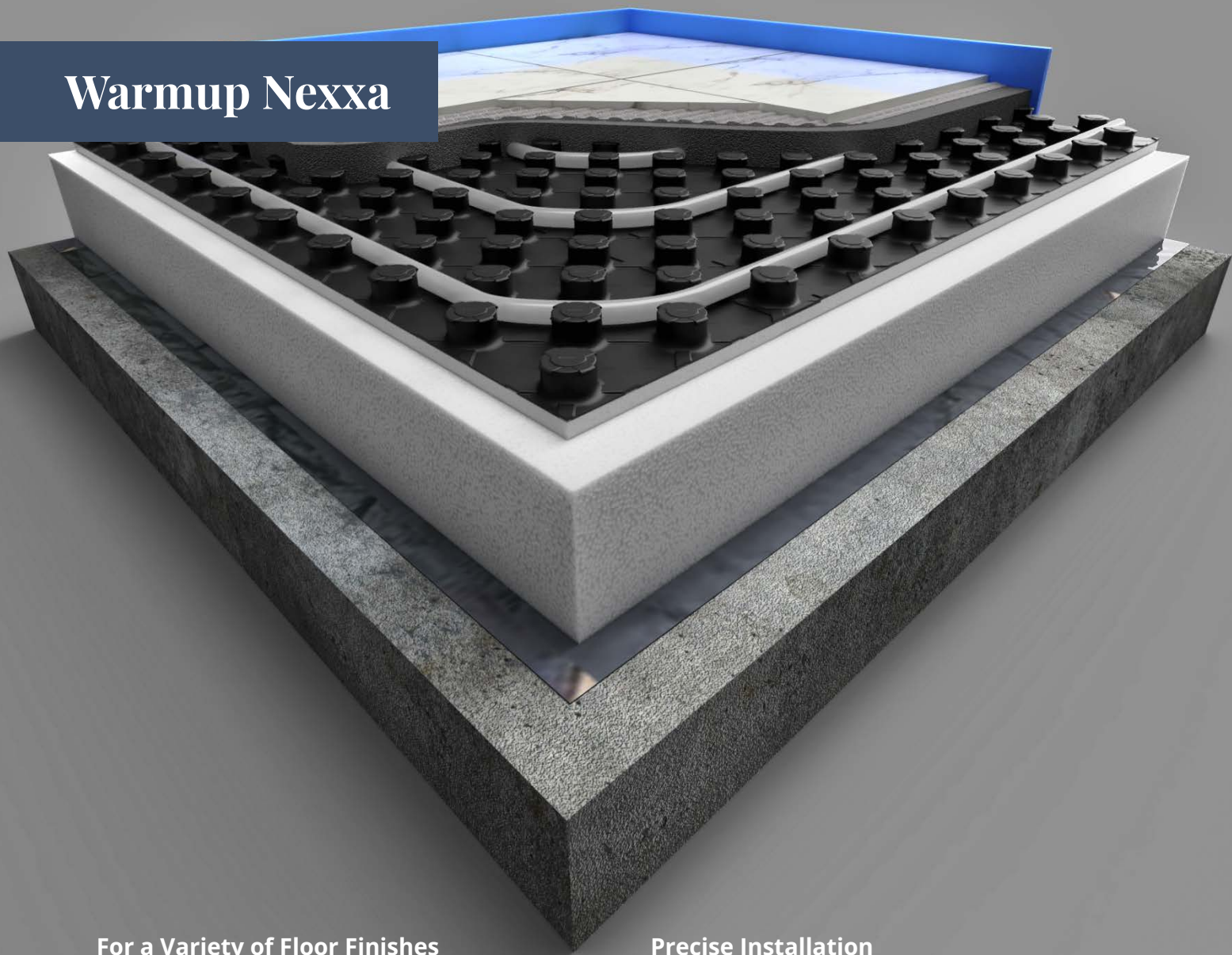


Warmup Nexxa



For a Variety of Floor Finishes

The Nexxa system can be installed with almost any floor finish and in particular where the flooring may be replaced from time to time.

Reduced Screed Depth

The decreased volume of screed not only reduces the structural load on the building, but it also leads to cost savings in screed materials, making it an efficient and cost-effective solution

Precise Installation

Allows for precise installation of underfloor heating within a floating screeded floor. The castellations grip the pipe, preventing both horizontal and vertical movement.

Enhanced Energy Efficiency

Heat outputs can be increased and water temperatures reduced by using thinner, more conductive screeds.



Overview

The Warmup Nexxa Panel system enables the most precise installation of underfloor heating within a floating screeded floor. Regular castellations grip the pipe preventing both horizontal and vertical movement and allowing any future floor fixings to be made with confidence.

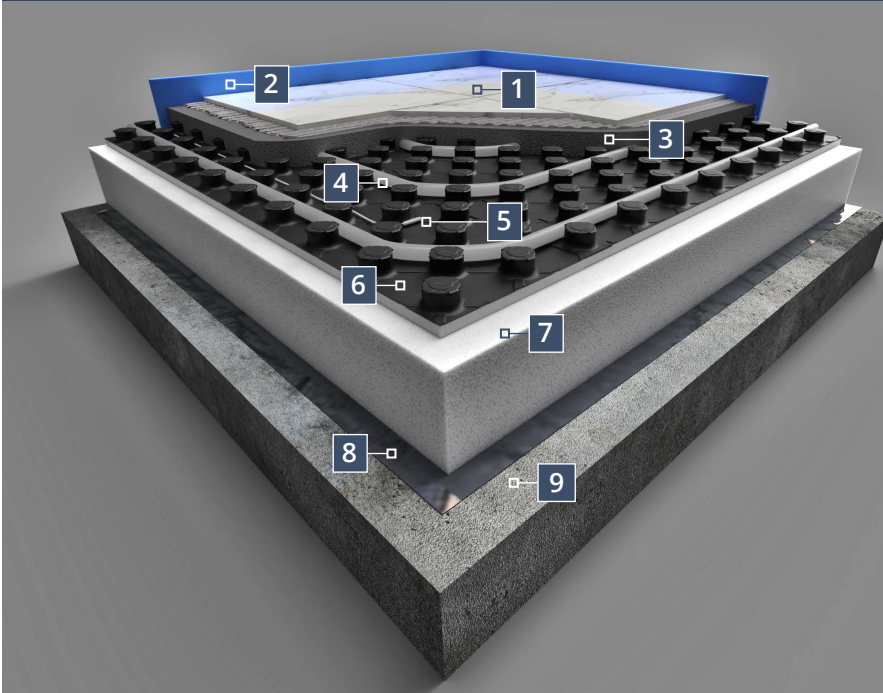
Because the Nexxa Panels regularly constrain the pipe the additional 5 mm of screed that is normally required to ensure suitable screed coverage over the pipe is no longer required. This will affect all screeds but for calcium sulphate screeds which require a minimum cover of 25 mm over the pipework, this reduces the screed depth by 10%.

The castellations themselves further reduce the volume of screed required taking the total reduction to almost 20% using the previous example. Reducing the volume of screed not only reduces the structural load on the building and the cost of the screed it also creates a more responsive heating systems reducing an areas heat loss outside of its utilised hours.

The standard Nexxa panel is made from robust castellated polystyrene and features an 11mm EPS insulation backing. By special order, we also offer a version with 30mm EPS backing with acoustic properties and a Peel & Stick version, which comes with a self-adhesive backing but does not include insulation.

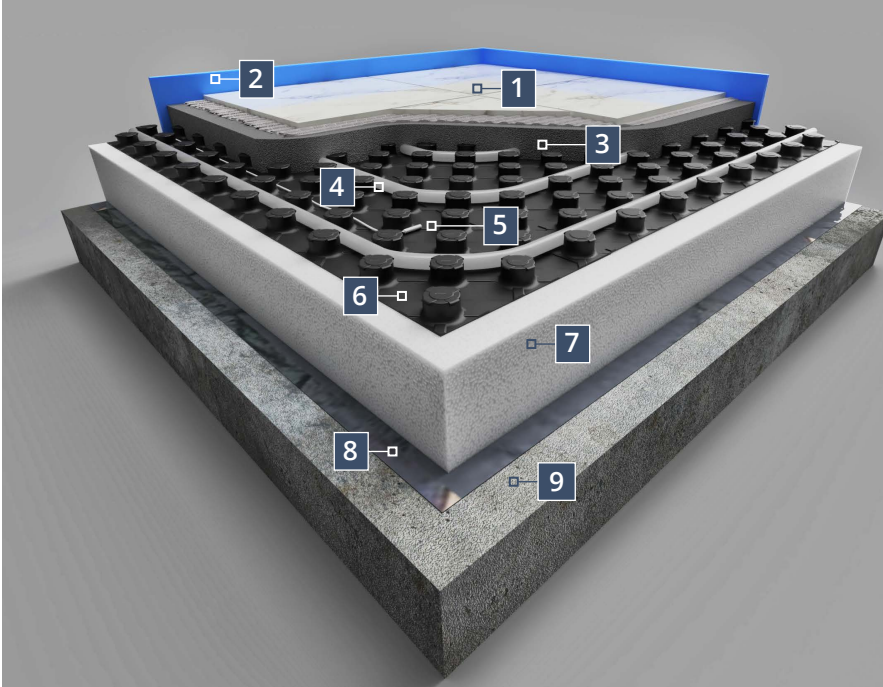
Typical Floor Build-Up

Nexxa - Recommended Subfloor - All Floor Finishes



- 1 Floor Finish**
- 2 Perimeter Strip**
To allow for differential movement between finished floor level and walls
- 3 Screed Layer**
- 4 Warmup PE-RT Pipe**
- 5 Floor Sensor**
Tab tape the sensor to the subfloor. Do not tape over the sensor tip!
- 6 Warmup Nexxa**
Laid floating over the insulation layer and secured in all corners of the room using clips [WHS-CL-T60]
- 7 Insulation Layer**
- 8 Damp Proof Membrane (DPM)**
To prevent water ingress
- 9 Concrete subfloor**

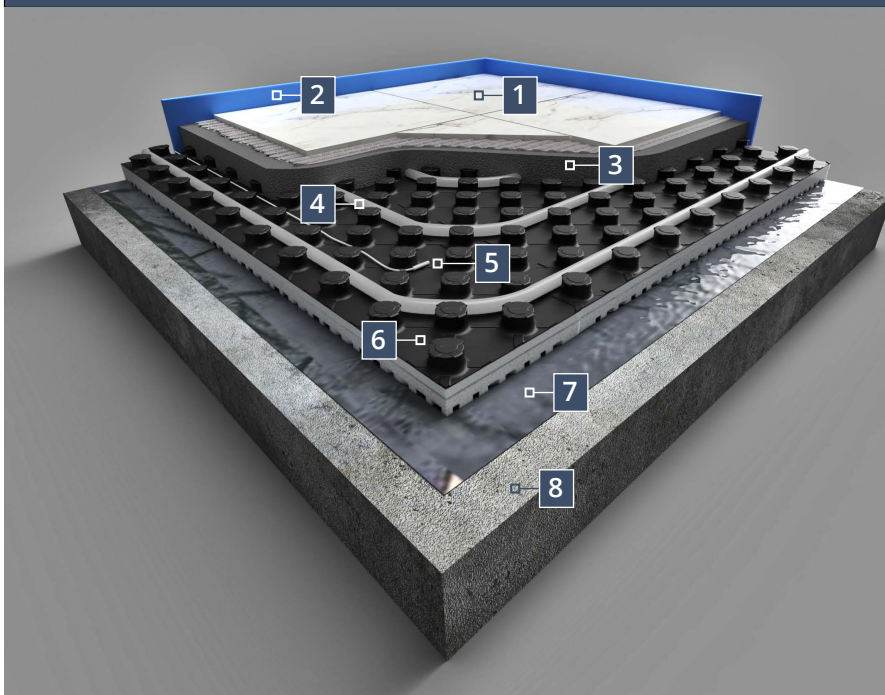
Nexxa Peel & Stick - Recommended Subfloor - All Floor Finishes



- 1 Floor Finish**
- 2 Perimeter Strip**
To allow for differential movement between finished floor level and walls
- 3 Screed Layer**
- 4 Warmup PE-RT Pipe**
- 5 Floor Sensor**
Tab tape the sensor to the subfloor. Do not tape over the sensor tip!
- 6 Warmup Nexxa Peel & Stick**
Adheres to insulation layer with self-adhesive backing
- 7 Insulation Layer**
- 8 Damp Proof Membrane (DPM)**
To prevent water ingress
- 9 Concrete subfloor**

Typical Floor Build-Up

Nexxa Insulating & Acoustic - Recommended Subfloor - All Floor Finishes



- 1 Floor Finish**
- 2 Perimeter Strip**
To allow for differential movement between finished floor level and walls
- 3 Screed Layer**
- 4 Warmup PE-RT Pipe**
- 5 Floor Sensor**
Tab tape the sensor to the subfloor. Do not tape over the sensor tip!
- 6 Warmup Nexxa Insulating & Acoustic***
Laid floating over the damp proof membrane
- 7 Damp Proof Membrane (DPM)**
To prevent water ingress
- 8 Concrete subfloor**

* Impact sound reduction $\Delta L_{w,ik}$ of 28dB; According to DIN 4109 based on this products dynamic stiffness according to DIN 18164-2 combined with a floating screed according to DIN 18560-2 with a specific mass $\geq 70\text{kg/m}^2$.



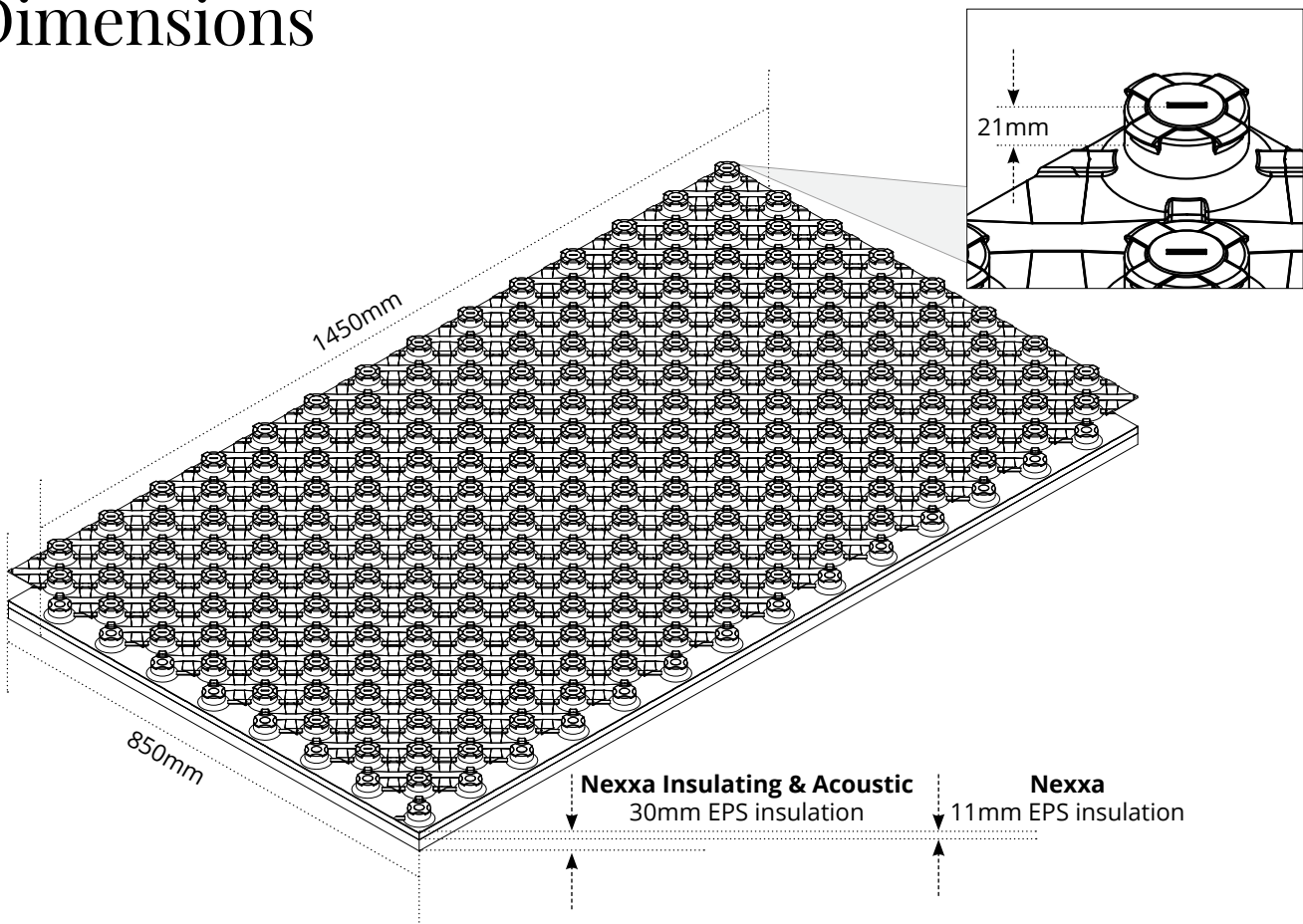
Warmup Nexxa Insulating & Acoustic panels are intended for multi-residential dwellings. Its thermal insulation performance is sufficient to meet the requirements of separating floors defined within EN 1264 and ISO 11855

Technical Specification

| | Nexxa | Nexxa Peel & Stick | Nexxa Insulating & Acoustic |
|---|---|--|---|
| Product code | WHS-TL-ALU10 | NEX-P&S | NEX-30 |
| Dimensions including overlap | 1450 x 850 mm | 1450 x 850 mm | 1450 x 850 mm |
| Insulation dimensions | 1400 x 800 x 11 mm | - | 1400 x 800 x 30 mm |
| Usable area | 1.12 m ² | 1.12 m ² | 1.12 m ² |
| Castellation height | 21 mm | 21 mm | 21 mm |
| Overall height | 32 mm | 21 mm | 51 mm |
| Composition | Polystyrene with EPS insulation backing | Polystyrene with self adhesive backing | Polystyrene with EPS insulation backing |
| Pipe diameter | 14-17mm | 14-17mm | 14-17mm |
| Castellation spacing | 50 mm | 50 mm | 50 mm |
| Diagonal spacing | 71 mm | 71 mm | 71 mm |
| Thermal conductivity | 0.035 W/mK | - | 0.04 W/mK |
| Thermal resistance R _D | 0.314 m ² K / W | - | 0.75 m ² K / W |
| Impact sound reduction $\Delta L_{w,R}$ | - | - | 28dB* |
| Compressive stress CS (10) | 200 kPa | - | - |
| Max. traffic load | 60 kPa | - | 5 kPa |
| Reaction to Fire | E | - | E |
| Colour | Black/anthracite | Black/anthracite | Black/anthracite |

* According to DIN 4109 based on this products dynamic stiffness according to DIN 18164-2 combined with a floating screed according to DIN 18560-2 with a specific mass $\geq 70\text{kg/m}^2$.

Dimensions



Screed Depths

| Typical Screed Types and Minimum Thickness over Nexxa | | |
|---|------------------------|------------------|
| Screed Type | Minimum thickness (mm) | Standard |
| Traditional cementitious sand/cement | 70 (65) | BS 8204-1 |
| Traditional calcium sulfate | 40 | CIRIA Report 184 |
| Pumpable self-smoothing calcium sulfate | 40 (35) | BS 8204-7 |
| Pumpable self-smoothing cementitious | 40 (35) | BS 8204-7 |



The table above shows different screed materials used and minimum thicknesses required for use with underfloor heating systems. **Domestic measurements are in brackets.** This table is for guidance only, screed layers used over Warmup Nexxa must be chosen and installed in line with the latest edition of building regulations and standards.

System Performance

| k _H Value - W/m ² K | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Resistance of Floor Covering, tog | 0.00 | 0.25 | 0.50 | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |

| Pipe Centres | Warmup Nexxa Panels | | | | | | | | | | | | |
|--------------|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 100 mm | 6.08 | 5.21 | 4.56 | 4.05 | 3.65 | 3.32 | 3.04 | 2.81 | 2.61 | 2.43 | 2.28 | 2.15 | 2.03 |
| 150 mm | 5.19 | 4.53 | 4.03 | 3.62 | 3.29 | 3.02 | 2.78 | 2.58 | 2.41 | 2.26 | 2.13 | 2.01 | 1.90 |
| 200 mm | 4.47 | 3.97 | 3.57 | 3.25 | 2.98 | 2.75 | 2.55 | 2.38 | 2.23 | 2.10 | 1.99 | 1.88 | 1.79 |
| 250 mm | 3.87 | 3.49 | 3.18 | 2.92 | 2.70 | 2.51 | 2.34 | 2.20 | 2.07 | 1.96 | 1.85 | 1.76 | 1.68 |
| 300 mm | 3.37 | 3.08 | 2.84 | 2.63 | 2.45 | 2.29 | 2.15 | 2.03 | 1.92 | 1.82 | 1.73 | 1.65 | 1.58 |

| | |
|---|--|
| q = Specific Heat Output, W/m ² | k _H = System Performance Factor, W/m ² K |
| T _{water} = Mean water Temperature | T _{air} = Room Air Temperature |

Using the system k_H value to calculate the system heat output:

$$q = k_H \times (T_{\text{water}} - T_{\text{air}})$$

Example:

The heat output through an 18 mm thick, ≈ 1.25 tog timber floor, over Warmup Nexxa, fitted with pipe at 200 mm centres, in a 21 °C room heated with 40 °C water is;

$$q = 2.75 \times (40 - 21) = 2.75 \times 19 = 52.25 \text{ W/m}^2$$

Alternatively, using the system k_H value to calculate the required water temperature, knowing the required heat output:

$$T_{\text{water}} = (q / k_H) + T_{\text{air}}$$

Example:

The water temperature required to produce a heat output of 55 W/m², through a 3 mm thick ≈ 0.25 tog LVT floor finish, over Warmup Nexxa, fitted with pipe at 200 mm centres, in a 22 °C room is;

$$T_{\text{water}} = (55 / 3.97) + 22 = 13 + 22 = 36^\circ\text{C}$$

Components



PE-RT Pipe - WHS-P-PERT-xx

Warmup PE-RT (Polyethylene of Raised Temperature Resistance) pipe. The pipe guarantees leak free performance with a smooth internal structure for improved flow, reduced pressure loss and deposit formation.



Warmup 6iE - 6iE-01-OB-DC / 6iE-01-BP-LC

The world's first UFH thermostat with a smartphone touchscreen providing effortless control at your fingertips. Connected to the internet by WiFi, it can be controlled from a smart phone, tablet or computer as well as its own touchscreen interface. Working automatically; it learns your routines and location through background communication with your smartphone. Using this knowledge it suggests ways to save energy.



Warmup Element - RSW-01-WH-RG (ELM-01-WH-RG) / RSW-01-OB-DC (ELM-01-OB-DC)

Warmup's Element WiFi Thermostat has been designed with simplicity and stylish functionality in mind. It brings energy-efficient heating control to all Warmup floor heaters. Combining smart technology with simple, contemporary design, the Element WiFi Thermostat is the perfect all-rounder to control Warmup heating systems.



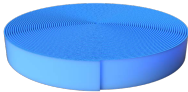
Warmup Clips - WHS-CL-T60

The clips are used to securely hold the Nexxa panels in place to the insulation layer below.



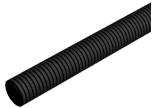
Pipe bend supports - WHS-P-BEND

The bend support is used for supporting pipes to make a smooth 90-degree turn where needed & provides a rigid bend which changes the pipes direction without causing excessive bending



Warmup perimeter strip - WHS-X-EDGE50

High quality foam perimeter strip, to allow for differential movement between finished floor level and walls when layer the screed over the Clypso system.



Pipe Conduit - WHS-CL_CONDUIT

A standard flexible conduit used to cross expansion joints and insulate flow and return pipework, reducing its heat output as it passes through other rooms.



Damp Proof Membrane - WHS-X-POL1200

Polythene damp proof membrane installed on the concrete slab, prior to the insulation layer being installed, thus creating a moisture barrier that prevents rising damp.

Contact

Warmup plc

www.warmup.co.uk
uk@warmup.com

T: 0345 345 2288
F: 0345 345 2299

Warmup plc ■ 704 Tudor Estate ■ Abbey Road ■ London ■ NW10 7UW ■ UK

Warmup GmbH ■ Ottostraße 3 ■ 27793 Wildeshausen ■ DE