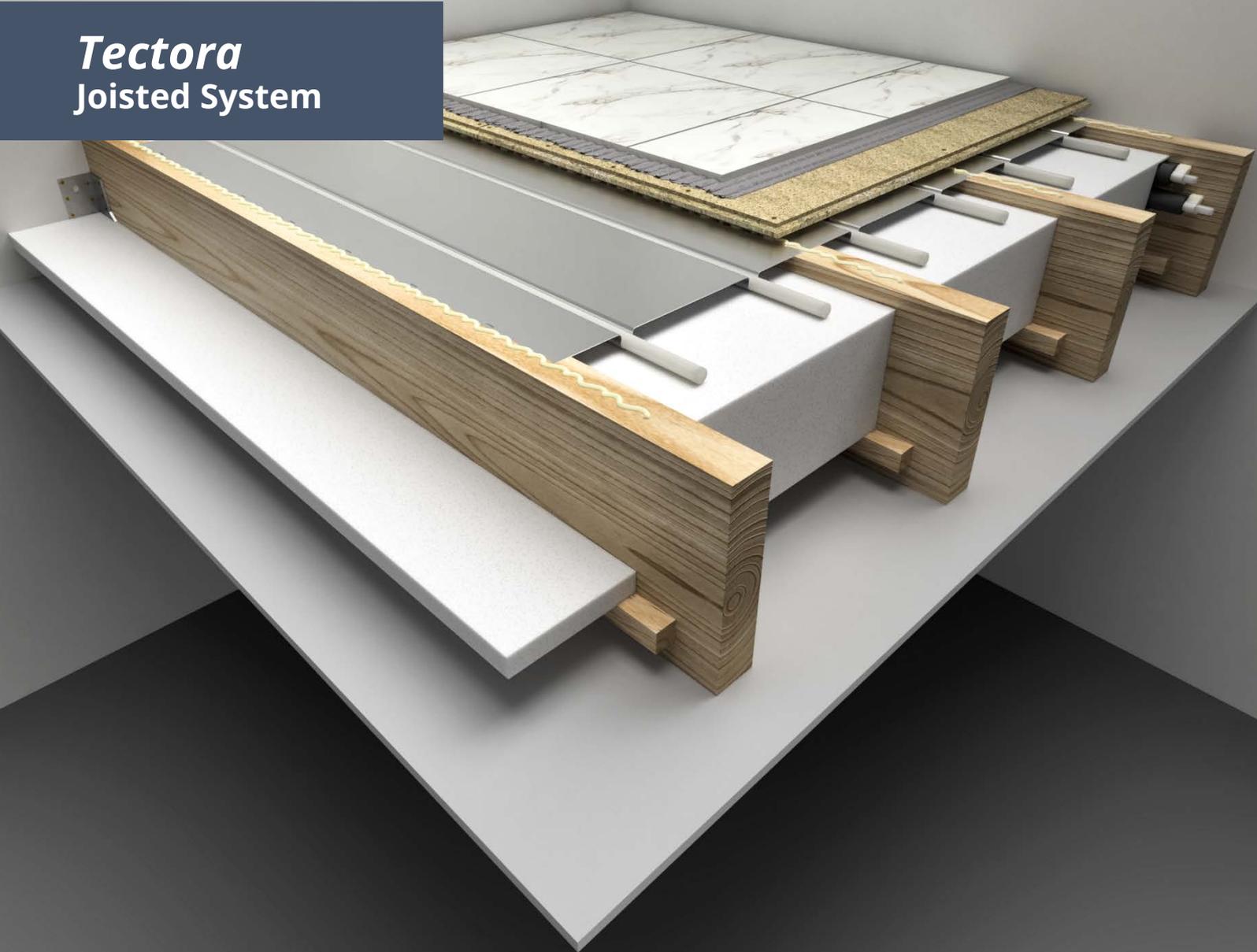


# Tectora Joisted System



## For timber suspended & battened floors

Perfect for installation in refurbishment projects and retrofits - where services or other obstructions are already within the floor void.

## “Dry” installation - No screed required

A T&G chipboard deck is required over the diffusion plates meaning quicker installation times and reduced floor heights than traditional screed systems.

## Even heat distribution

The diffusion plates ensure heat generated by the hUFH system is evenly distributed across the floor surface providing consistent warmth to the room.

## Suitable with all floor finishes

The T&G chipboard floor deck allows for a variety of different floor finishes to be installed such as vinyl, tiles, carpets and laminates.

**SAFETY Net**  
Installation-Guarantee



## Overview

Warmup's Tectora System is a hydronic underfloor heating system designed for use within either battened or suspended timber floors, including TJI joist constructions.

The system requires rigid EPS/PIR insulation to be installed between 400mm c/c floor joists to help support the aluminium diffusion plates. The diffusion plates are then secured to the joists into which 16mm pipework is installed.

A final T&G chipboard floor deck is installed over the system which, along with the diffusion plates, distribute heat evenly across the floor surface providing consistent warmth to the room.

Tectora is suitable for almost any floor finish, including tiles.

**Warmup**

# Typical Floor Build-Up

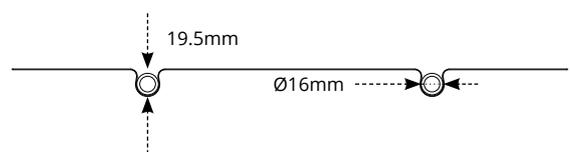
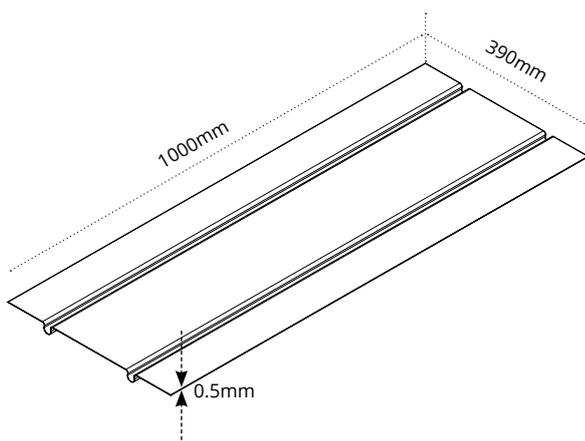
All floor finishes

<b>1 Floor finish</b>
<b>2 Floor deck</b> <i>Floor deck to be fitted in line with manufacturers instructions.</i>
<b>3 Floor sensor</b> <i>Must be recessed into the joist. See manual for full details.</i>
<b>4 Pipe clips</b> <i>Clipped into the insulation layer at beginning, middle and end of the pipe turns.</i>
<b>5 Warmup 16mm PE-RT pipe</b>
<b>6 Aluminium diffuser plates</b> <i>Stapled to joists at 150mm spacings.</i>
<b>7 Insulation layer</b> <i>Thickness in line with building regulations</i>
<b>8 25 x 25mm battens</b> <i>To support the insulation layer</i>
<b>9 Joists at 400mm centres</b>
<b>10 Flow and return pipes*</b> <i>Installed beneath the Tectora diffuser plates, notched or through holes drilled in the joists in line with building regulations.</i>

\* Service pipes must be insulated within the joist space and supported at 300mm intervals on horizontal runs and 500mm on vertical runs using pipe clips

## Technical Specifications

<b>Product code</b>	WHS-TE-ALUDP1
<b>Dimensions</b>	390mm x 1000mm
<b>Height</b>	19.5mm
<b>Aluminium thickness</b>	0.5mm
<b>Composition</b>	Aluminium
<b>Pipe centres</b>	200mm
<b>Pipe diameter</b>	16mm



# System performance

k <sub>H</sub> Value - W/m <sup>2</sup> 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
200mm pipe centres	2.84	2.62	2.43	2.27	2.12	1.99	1.88	1.78	1.69	1.61	1.54	1.47	1.41

<b>q = Specific heat output, W/m<sup>2</sup></b>	<b>k<sub>H</sub> = System performance factor, W/m<sup>2</sup>K</b>
<b>T<sub>water</sub> = Mean water temperature</b>	<b>T<sub>air</sub> = Room air temperature</b>

Using the system k<sub>H</sub> value to calculate the system heat output:

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

**Example:**

The heat output through an 18mm thick, ≈ 1.25 tog timber floor, over Tectora with 18mm T&G P5 chipboard floor deck, fitted with pipe at 200mm centres, in a 21°C room heated with 40°C water is;

$$q = 1.99 \times (40 - 21) = 1.99 \times 19 = 37.8\text{W/m}^2$$

Alternatively, using the system k<sub>H</sub> 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/m<sup>2</sup>, through a 3 mm thick ≈ 0.25 tog LVT floor finish, over Tectora with 18mm T&G P5 chipboard floor deck, fitted with pipe at 200 mm centres, in a 22 °C room is;

$$T_{\text{water}} = (55 / 2.62) + 22 = 21 + 22 \approx 43^\circ\text{C}$$

# 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.

---



---

## 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 Clips - WHS-CL-T40 / WHS-CL-T60

The clips are used to securely hold the heating pipe in place on the insulation layer below. This ensures minimal movement and maintains the intended pipe spacing once the screed layer is applied on top of the system.

---

# Contact

## Warmup plc

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

[uk@warmup.com](mailto: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