



# **TORFLOOR 2® INSTALL GUIDE IG UFH 30.1**

**TorFloor 2® Installation Guide**

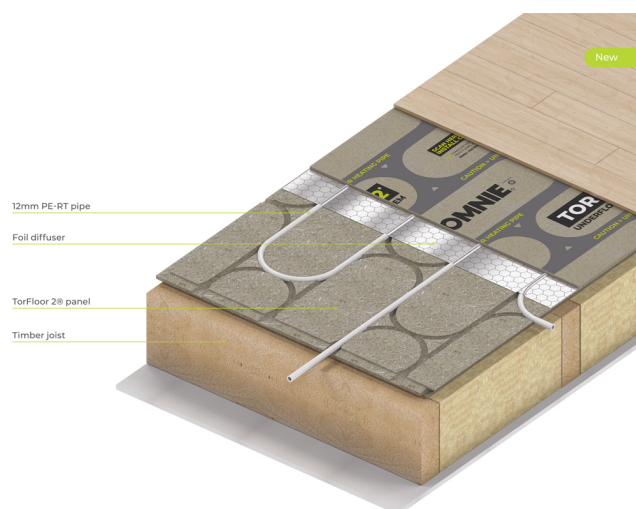
[www.omnie.co.uk](http://www.omnie.co.uk)

### TORFLOOR 2® - GENERAL ARRANGEMENT

TorFloor 2® is a high performance underfloor heating system that provides a floor, underfloor heating and floor deck in one assembly. TorFloor 2® should be used to substitute a floor deck and is intended to be laid directly onto supporting joists or battens. The panel is tested to ensure structural integrity and is made from P5 chipboard material. Testing certification information is available from [www.omnie.co.uk](http://www.omnie.co.uk).

TorFloor 2® has two component layers; the Deck Panel and the Cover Panel. The Cover Panel features OMNIE's advanced AL HEX foil heat emitter technology, pre-bonded to the underside.

**NOTE:** This guide is suitable for installing TorFloor 2® into both joist and batten floor constructions. For brevity, 'joist' is used throughout.



### BEFORE YOU START

As OMNIE continues to develop and improve product information and instructions it is recommended you check the OMNIE website ([www.omnie.co.uk](http://www.omnie.co.uk)) for the latest Datasheets & Install Guides.

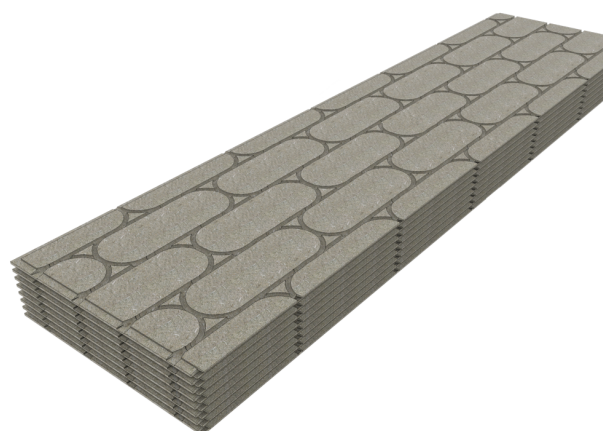
**NOTE** - Where there are unheated flooring areas, blank and unrouted Cover Panels should be utilised, as outlined in Stage 5. Do not use the printed Cover Panels for these unpiped/unheated areas.

Please read all stages of this install guide before proceeding with the installation.

### STORAGE

**NOTE:** If it is necessary to store the system once you have taken delivery, ensure it is kept in the following conditions:

- A dry, weathertight area
- Out of direct sunlight
- Away from sharp objects or chemical spillages
- All panels must be stacked horizontally and raised off the ground and **STORED FLAT**
- Panels must not be exposed to moisture or high humidity
- Ensure that all areas are correctly prepared, dry and protected from the weather



### SUPPLIED ITEMS

For the TorFloor 2® system, we supply the following:

- 22mm Deck Panels for the area required (including an allowance for waste)
- 6mm Cover Panels with printed top surface, routed channel and pre-bonded diffuser (including an allowance for waste)
- 6mm unrouted, unprinted Cover Panels to cover the unpiped and unheated parts of the floor (including an allowance for waste)
- 60mm screws for fixing the 22mm Deck panel to the joists
- 20mm screws for fixing the 6mm Cover Panel to the Deck Panel
- 12mm OMNI-Flo underfloor heating pipe
- CAD drawing(s) showing pipe layout

If any of the above are missing from your pallet delivery, please contact your project manager immediately on 01392 36 36 05.

### STAGE 1 : PREPARATION

Check all joists/battens are:

- Level and even
- Clean from debris
- Without any surface deviations such as knots or nails

#### IMPORTANT

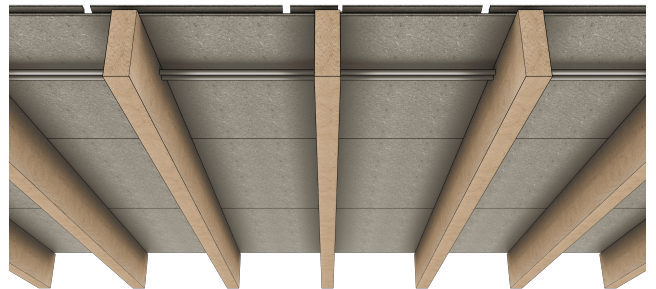
The way that the TorFloor 2® system will be installed depends on access to the floor void below and/or site sequences or requirements.

If floor void IS NOT accessible from below (a suspended joist floor with the ceiling in a place or a timber batten floor), stages 3-7 will need to be completed room-by-room, starting at the room furthest from the manifold. Access panels will be required for installing the flow and return pipework.

If floor void IS accessible from below: Stages 3-7 can be completed for the whole floor deck at once. No access panels will be required as the pipe can be handled from below and can be run between joists

**NOTE:** TorFloor 2® is a structural panel and therefore cannot be routed to allow extra channels for flow and returns or for any other reason. See install procedure for flow and returns below.

The moisture content of the TorFloor 2® Deck Panels and Cover Panels should be ideally at 8-10% moisture content, ideally acclimatised together before installation.



**NOTE:** When working with any wood products, dust and particles can become airborne and pose a hazard to health. This is particularly relevant when machining, cutting or routing. Please follow all the relevant health & safety rules regarding required personal safety equipment and extraction/ventilation requirements are also followed.

### STAGE 2 : INSTALLATION OF THE DECK PANELS

Lay the first Deck Panel in a room into a corner, leaving a minimum 10mm gap between the end and edge of the panel and the walls. The grooved edges of the Deck Panel should be placed in the corner. The opposite end of the Deck Panel must sit on the centre line of a joist.

Lay the panels in a run, ensuring the end of each panel falls on a centre line of a joist. Use the off-cut of each run to start the following run of panels. Ensure that each row of panels has a group of return loops at each end.

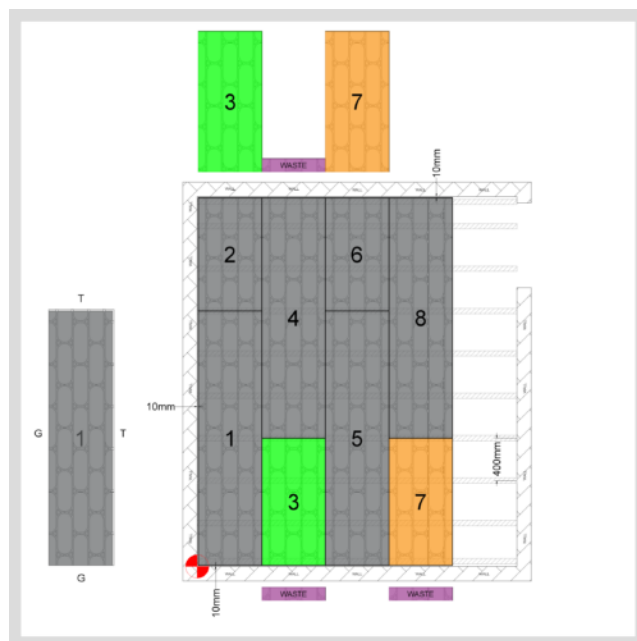
When cutting the TorFloor 2® panels, we recommend that the shortest length of panel should be supported across a minimum of three joists. For example, if the supports are set nominally at 400mm centres, the shortest panel length should be 800mm. DO NOT fit very short lengths which are supported by only two joists, one at each end, unless supported by noggins.

#### ACCESS PANELS

An access panel allows connection of the room pipe to the flow and return pipes when the floor cannot be accessed from the underside. These must be cut into a TorFloor 2® Deck Panel.

If access panels are required, do not glue/screw these TorFloor 2® Deck Panels until the pipe has been installed.

To create an access panel, drill a 15mm hole at a 20-degree angle through the TorFloor 2® Deck Panel at the point at which the flow pipe needs to drop into the joist space.



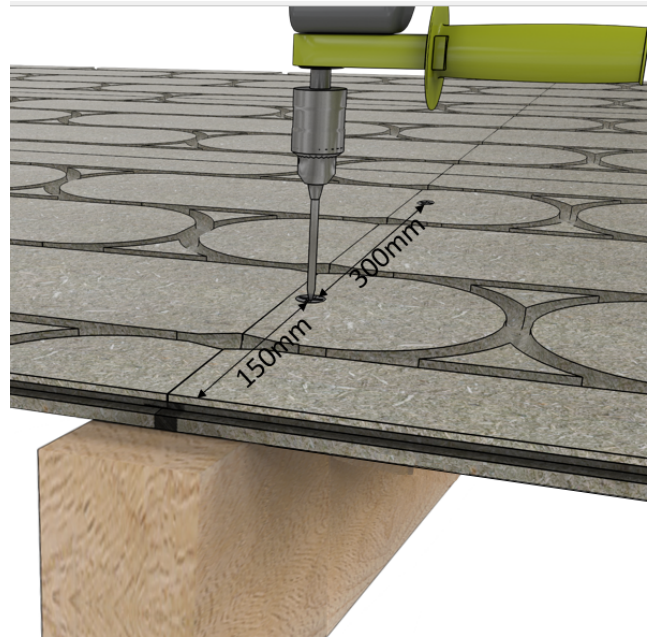


### STAGE 3 : FIXING THE DECK PANELS

All Deck Panels must be glued with appropriate PVA adhesive on BOTH sides of the tongue and groove and fully driven together (in order to withstand loads specified in EN12871).

**NOTE:** If access panels are required, do not glue/screw these boards until the pipe has been installed.

The panels should then be glued and screwed to the joists. At each joist, fixings provided should be used, 60mm long screws x 2, placed 150mm away from the edge of the T&G. A pilot hole should be drilled at these points with no.8 Particleboard screws to fix the panels to the joists.



### STAGE 4 : PIPE INSTALLATION

Before installing the pipe work, it is advised to sweep or vacuum the floor area as debris may have fallen into the channels.

Referring to the OMNIE CAD design, insert the pipe into the TorFloor 2® Deck Panels.

**NOTE:**

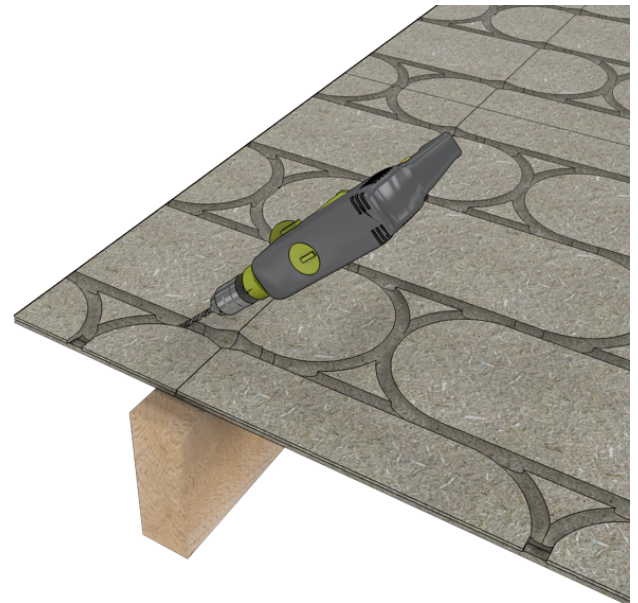
- The minimum temperature for laying the pipe should be +5°C
- Installation is easier when the pipe is inserted into the Deck Panel channel in the opposite direction of how it is naturally 'sprung' when de-coiled.
- If the pipework is kinked during the installation, the coil must be replaced or the pipe repaired with an OMNIE connector and then pressure tested. No connections should be made unless fully accessible following the completion of the finished floor.
- All exposed pipework within the joist spaces must be insulated.

#### Transitioning pipe from the panel to the joist space

If there are any access panels, drill a 15mm hole at a 20 degree angle through the TorFloor 2® Deck Panel at the point at which the flow pipe needs to drop into the joist space.

Feed one end of the pipe through the hole from above through to the manifold, notching or drilling as required. Where there is limited access, a plain access panel can be created and 12mm pipe interconnecting fittings used, if required.

Once the pipework has been installed into the room, the access panel can



then be glued and screwed.

### Running pipe between joists

Where flow and return pipework runs through the joists, there must be a notch or hole. Notching and drilling in solid wood joists must be done in accordance with Building Regulations Part A such that:

A) Holes should be drilled through the neutral axis and should be positioned between 0.25 and 0.4 times the joist span length.

B) Holes must not be less than 3 x diameters (of the hole) apart.

C) Notches must not deeper than 0.125 times the joist depth, and they should not be closer to a support than 0.07 times the span, not further away than 0.25 times the span.

Continue laying the panels and pipe until all circuits are complete.

Once the panels and pipe have been installed, the circuits should be hydraulically pressure tested.

## STAGE 5 : LAYING THE COVER PANELS

It is preferable for the pipe to be kept under pressure while the Cover Panels are laid. If this is not possible, the pressure test must be carried out for a second time once the Cover Panels have been installed.

Sweep or vacuum the Deck Panel to remove any debris to ensure a flush fit. Place the routed Cover Panels on top of the Deck Panels. Stagger the boards as shown.

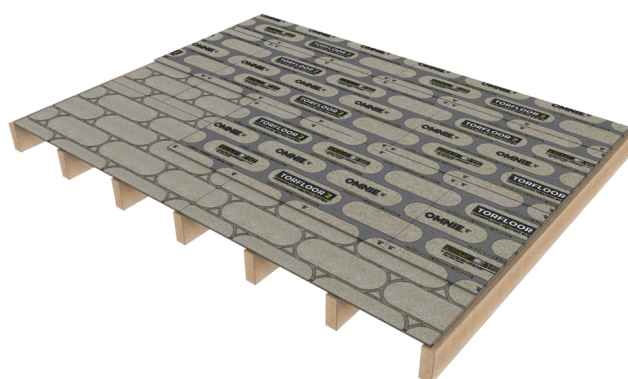
The routed pattern in the Cover and Deck panels will align. The Cover Panels will self-locate into place over the pipe, when this occurs the boards will set flat against each other.

Walk over the Cover Panels to ensure the AL HEX foil heat diffuser on the underside of panel breaks to accommodate the pipe, signified by an audible 'crunch' sound.

It is recommended to lay all the Cover Panels over the whole floor area before fixing down any of the Cover Panels.

Once all Cover Panels have been laid in the working area and you are happy with the fitting around the outside of the area and the fitting of the cover panels, panel to panel, screw down the Cover Panels in locations marked on the print "AFFIX HERE" using the fixings provided.

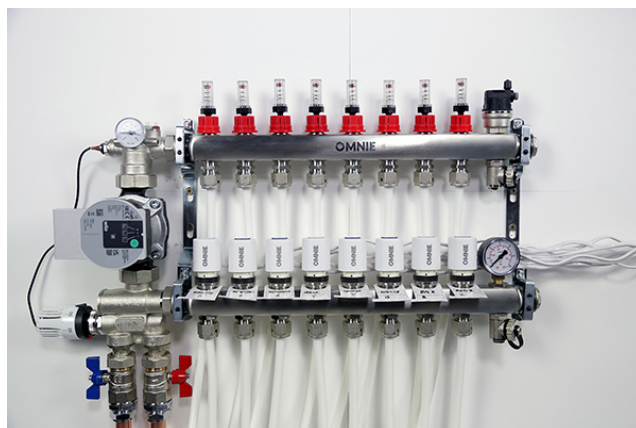
More screws may be needed to fix the Cover Panel flat to the Deck Panel, especially if the joists are uneven. The screws and positions specified are the minimum required for structural performance. When adding screws avoid the areas printed locating pipe channels underneath.



Note: If there are areas on the pipe layout which do not have any heating pipe underneath, cover those with blank, unrouted and unprinted Cover Panels provided.

### STAGE 6 : FILLING THE SYSTEM

Please refer to the Manifold Installation Guide included with the OMNIE Manifold.



### NOTES FOR WOOD FLOORS

When hardwood floors are laid, the moisture-content of the timber should be 8-10%. Please check with the flooring supplier that the proposed floor is suitable with underfloor heating.

Tongued and grooved joints in the floor deck should be glued with PU adhesive or a PVAc adhesive conforming to durability class D3 of BS EN 204. It is essential that a clear gap of at least 10mm is left all the way around the periphery of a timber floor deck, under the skirting to accommodate any swelling of the floor deck due to change in moisture content. All wedges used during the floor deck installation, to press panels together, must be removed when the floor deck is complete.

During the initial system warm up, the mixing valve should be set to supply temperature between 20°C and 25°C which needs to be maintained for at least 3 days. After this period, the flow temperature can then be increased to the design maximum and should be held for a further 4 days to complete the process.