



Installation Guides, Data Sheets & Technical Index's

LowBoard Installation Guide

TI 5014

Detailed technical information on the use with underfloor heating.

A large, abstract graphic composed of several overlapping squares in various shades of green and grey. The letters 'TI' are printed in white on the top-left square.

TI



LowBoard Flooring System for Floating Floor Constructions

INTRODUCTION

The LowBoard is a 15mm thick panel laid over a solid sub floor. The low panel height makes it suitable where there is not enough floor-to-ceiling height to install a conventional underfloor heating system. The panel has a multidirectional design that allows the pipe to be installed in any direction. The universal panel is simply laid across the floor – no loop ends and straights to configure – and the pipe is pressed into the channels. A 6mm ply is laid and fixed over the LowBoard panels to complete the floor. Insulation must be present in the floor.

INSTALLATION

1. Make sure the floor is flat and level and has been swept to remove all debris.
2. Starting at one corner, leaving a 10mm gap around the perimeter, lay the first panel.
3. Continue laying the panels making sure that the exit routs between panels are aligned.
4. Following the issued CAD drawing and starting at the manifold position push the pipe into the routed channels. The circuit will finish at the manifold.
5. Pressure test each circuit to ensure that it has not been damaged in installation. Keep the pipe under pressure until the floor is complete.
6. With all the circuits installed lay and screw the 6mm covering layer over the LowBoard panels.

SPECIFICATION

Timoleon LowBoard system using 12mm PE-RT pipe. The 15mm LowBoard panels to be laid fully floating as a continuous layer over a subfloor. A 6mm covering layer such as ply is then to be fixed over the LowBoard panels. The system is to be designed, installed and commissioned to BS1264.

TECHNICAL INFORMATION

Pipe – 12mm PE-RT pipe with EVOH oxygen barrier.

LowBoard panels – 15mm wood supporting panel with integrated diffuser. Panel dimensions are 1200x600mm. Pipe is set at 150mm centres.

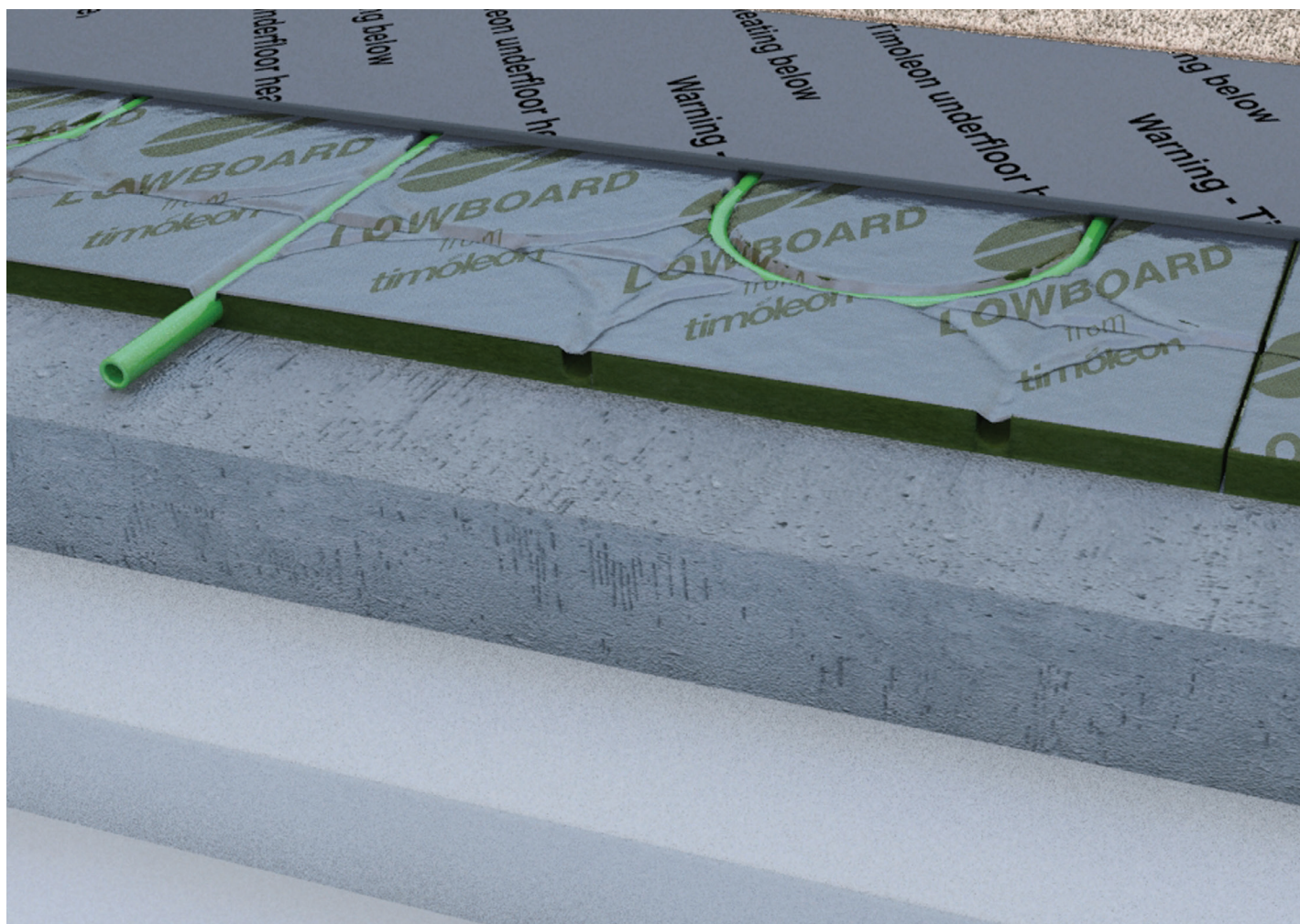
Heat outputs are dependent on the water temperature, floor construction (including insulation levels), system dimensioning, floor finish & design conditions. Please call 01392 363605 for advice.

Heat Output Table (W/m ²)	Flow & return water temperature (°C)		
	50/40	45/35	40/30
Tile Finish (0.01m ² K/W)	76	60	44
15mm Wood Finish (0.1m ² K/W)	66	52	39
Carpet & Underlay (0.15 m ² K/W)	62	49	36

Based on 16mm PE-RT pipe at 150mm centres (higher performance configuration) with Timoleon 23mm SRB panels laid over. 0.15 m²K/W = 1.5 TOG. Air Temperature = 20°C



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The LowBoard panel enables underfloor heating to be installed where there is minimal height available to build up the floor. The total height of the panel is just 15mm.

The LowBoard panel is a high density wood board with grooves routed to accept the 12mm pipe. The panel has an aluminium layer bonded to the underside that acts to spread the heat through the board and into the floor. The panels are laid as a floating floor over the existing construction with a ply layer or the floor finish laid over to complete the floor.



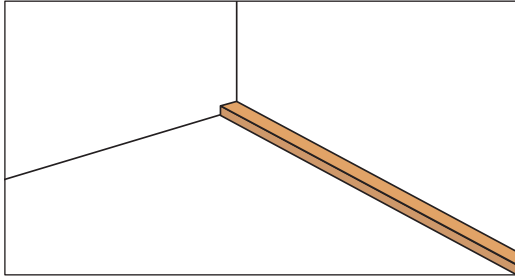
PRIOR TO INSTALLATION

If it is necessary to store the system once you have taken delivery ensure it is kept dry, out of direct sunlight and away from sharp objects or possible chemical spillage. Ensure the area is weather tight.

1

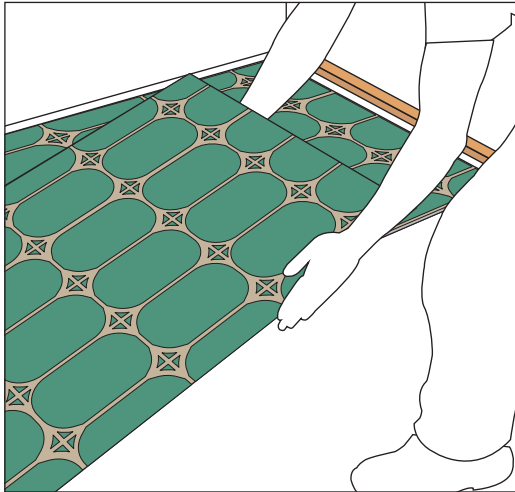
Ensure existing slab/floor deck meets at least SR2 (5mm deviation in 2m) requirements for floor regularity (BS8204) and preferably SR1 (3mm deviation in 2m). Note the floor batten or floor finish company may have their own requirements which take precedent.

2



Where flows and returns are planned to run along a wall lay a 50mm batten against the wall. Start the installation of the LowBoards leaving a 75mm gap between the LowBoard and the batten.

3



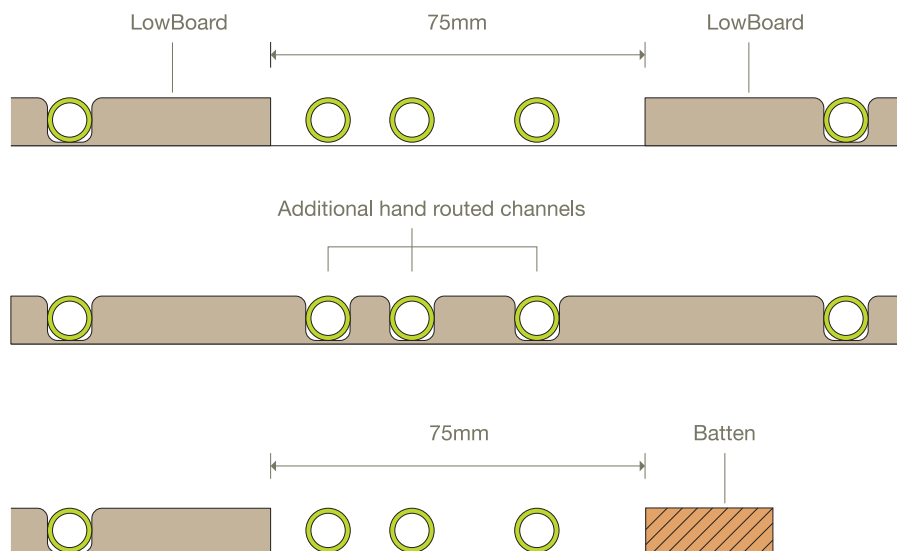
Lay the LowBoards across the floor leaving a 10mm gap where the Lowboards butt up to a wall. Use the offcuts to start the next run of LowBoard panels.

LowBoard 15 panels are square edged.
LowBoard 22 panels are tongue and grooved.
LowBoard 22 T&Gs must be fully glued when laid together.

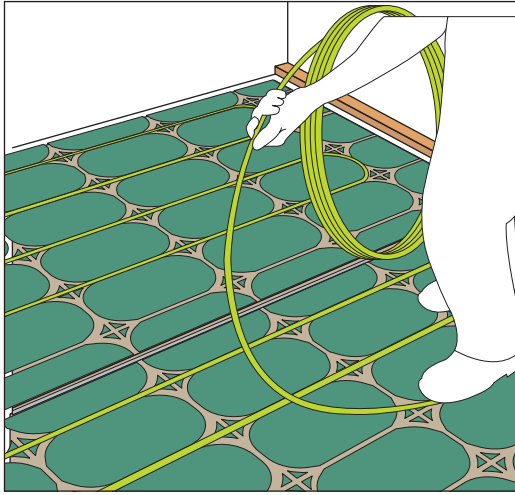
4

If there are multiple flows and returns that cannot be accommodated in the pre-routed channels, such as the approach to the manifold, then use one of the following methods:

- Leave a 75mm gap between LowBoard panels
- Hand rout the required 12mm (or 16mm) channels in the LowBoard panels
- Lay 50mm battens with a 75mm gap between battens

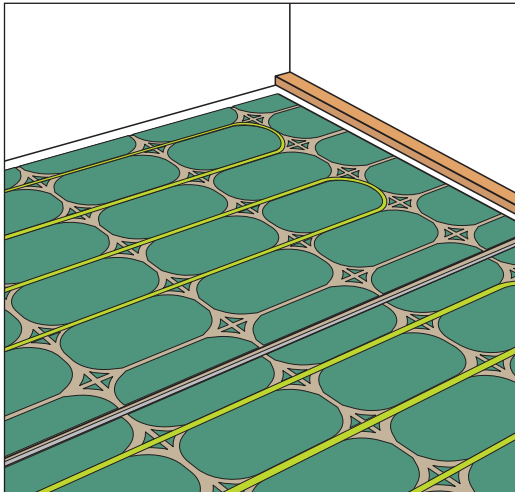


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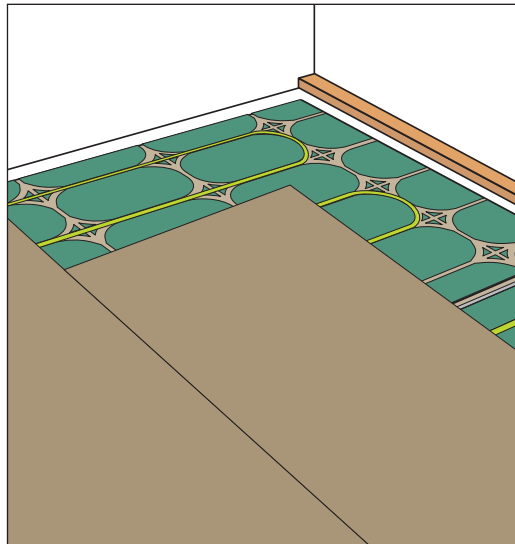
Starting at the manifold and referring to the Timoleon CAD design, lay the 12mm (or 16mm) pipe into the LowBoard panels.

6



Repeat until all of the circuits have been laid

7



Once the panels and pipe have been laid the circuits should be pressure tested and kept under pressure while the floor finish and/or covering ply are laid.



WARNING

If the pipe work is kinked during the installation, the coil must be replaced or the pipe repaired with a Timoleon connector and then pressure tested. No connections should be made unless accessible.

Filling/pressure testing

1. If the manifold is being used to pressure test all circuits at once close both primary isolation valves.
2. Connect a pressure tester to any drain valve, vent the system of air and increase the pressure to 6 bar.
3. Once at this pressure, leave for 60 minutes. If the pressure has dropped examine the pipework. It may be necessary to pressure test individual circuits to determine if there has been damage to the pipe.
4. If the pressure is maintained and passes the test record the results on the pressure test certificate. Have the test witnessed and certified by a third party.
5. Maintain this test pressure whilst the screed is being laid.

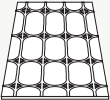
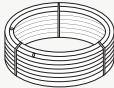
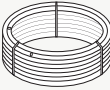

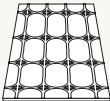

Floating Floors

The floor deck should be timber or timber composite with tongued and grooved edges.

Always refer to the flooring manufacturers' instructions.

During the initial heat 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.

Accessories for this system

	LowBoard 15		16mm Underfloor heating pipe
Code	ULB-13UMM	Code	UPI-16XXX
Dimensions	1200 x 600 x 15	Dimensions	16mm
	12mm Underfloor heating pipe		3mm Underlay TOG=0.8
Code	UPI-12XXX	Code	UAC-ULY03
Dimensions	12mm	Dimensions	3mm
	LowBoard 22 (T&G)		11mm Thermal & acoustic underlay TOG=3.1
Code	ULB-22UMM	Code	UAC-ULY11
Dimensions	2400 x 600 x 22	Dimensions	11mm

Polyethylene RT (PE-RT)

Plastic pipe for underfloor heating

INTRODUCTION

Timoleon uses high quality PE-RT underfloor heating pipes from HakaGerodur AG. The five-layer structure achieves a high degree of oxygen tightness and ensures that this is retained even under rough building site conditions.

The entire HakaGerodur range is backed by decades of experience in plastics processing.



STRUCTURE/ MATERIAL

PE-RT heating pipes use a specially modified polyethylene of medium density, the molecular structure and composition of which ensures very good thermal stability and a high degree of mechanical strength.

The five-layer pipe structure is manufactured by means of extrusion in one single process. The EVOH layer provides a very good oxygen barrier while the outer PE-RT layer protects the pipe from damage.

DIMENSIONS & APPLICATIONS

- ↘ 12mm, 16mm, 20mm
- ↘ Not potable
- ↘ Not for high temperature systems
- ↘ Underfloor heating
- ↘ Ceiling cooling

APPROVALS & STANDARDS

- ↘ KOMO approval: K14254
- ↘ SKZ (Southern German Plastics Centre) monitored (SKZ symbol A236)
- ↘ Properties in accordance with DIN 16833 / 16834

ADVANTAGES

- ↘ Oxygen-tight with co-extruded EVOH layer in accordance with DIN 4726.
- ↘ Operational range max. 6 bar, max constant temperature 60 °C.
- ↘ Pipes made of PE-RT are corrosion free.
- ↘ Excellent stress crack resistance.
- ↘ Flexible and easy to lay.
- ↘ Tight bending radius.
- ↘ Resistant to numerous chemicals (details on request).
- ↘ No incrustation due to smooth inner pipe surface.
- ↘ Low weight.

