

BEWI Thermal Floor System

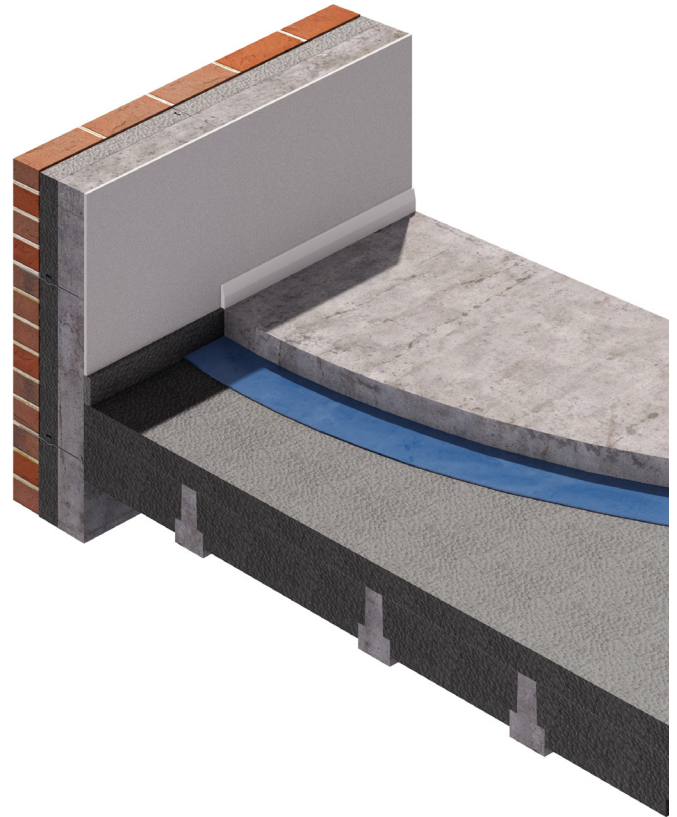
Technical Datasheet

The BEWI Thermal Floor System is a BBA-certified (Certificate 20/5829, Product Sheet 1) suspended ground floor solution comprising prestressed concrete beams, high-performance insulation infill panels, top sheets, perimeter edge strips, and associated accessories.

The system is simple to install and ensures consistent thermal performance, with insulation components pre-cut to fit precisely between the beams and tailored to achieve the required project-specific U-value. This factory-prepared approach helps minimise on-site adjustments, improves build quality, and reduces installation time.

Once installed, the floor structure is completed with the application of a structural concrete topping in accordance with the specifications outlined in BBA Certificate 20/5829, Product Sheet 1. This topping provides the necessary structural integrity, load distribution, and durability required for the finished floor.

Overall, the BEWI Thermal Floor System offers a compliant, efficient, and thermally effective solution for suspended ground floors, combining structural performance with enhanced insulation in a single, co-ordinated package.



Key Benefits

- BBA Certified (20/5829 Product Sheet 1)
- Fast and easy installation achieves specified U-Values
- Outstanding Psi Values assist with Part L Compliance
- Reduces depth of required excavation and spoil removal
- Improves Health & Safety on site
- Zero waste left on site

Sustainability and Quality

BEWI insulation can be supplied in EPS (expanded polystyrene) or in HP (high performance) EPS to provide the required thermal or thickness performance.

Expanded Polystyrene is A+ rated in the BRE Green Guide to Specification.

BEWI EPS insulation is 100% recyclable and BEWI provides a site collection of clean material cut offs and these are recycled back into insulation boards.

BEWI manufactures to ISO 9001 and ISO14001 certified standards.

CE Marking

BEWI Thermal Floor System is CE marked with DoP available on request.



For more information:

bewi.com e-mail: sales.insulation.uk@bewi.com Tel: 0870 600 3666

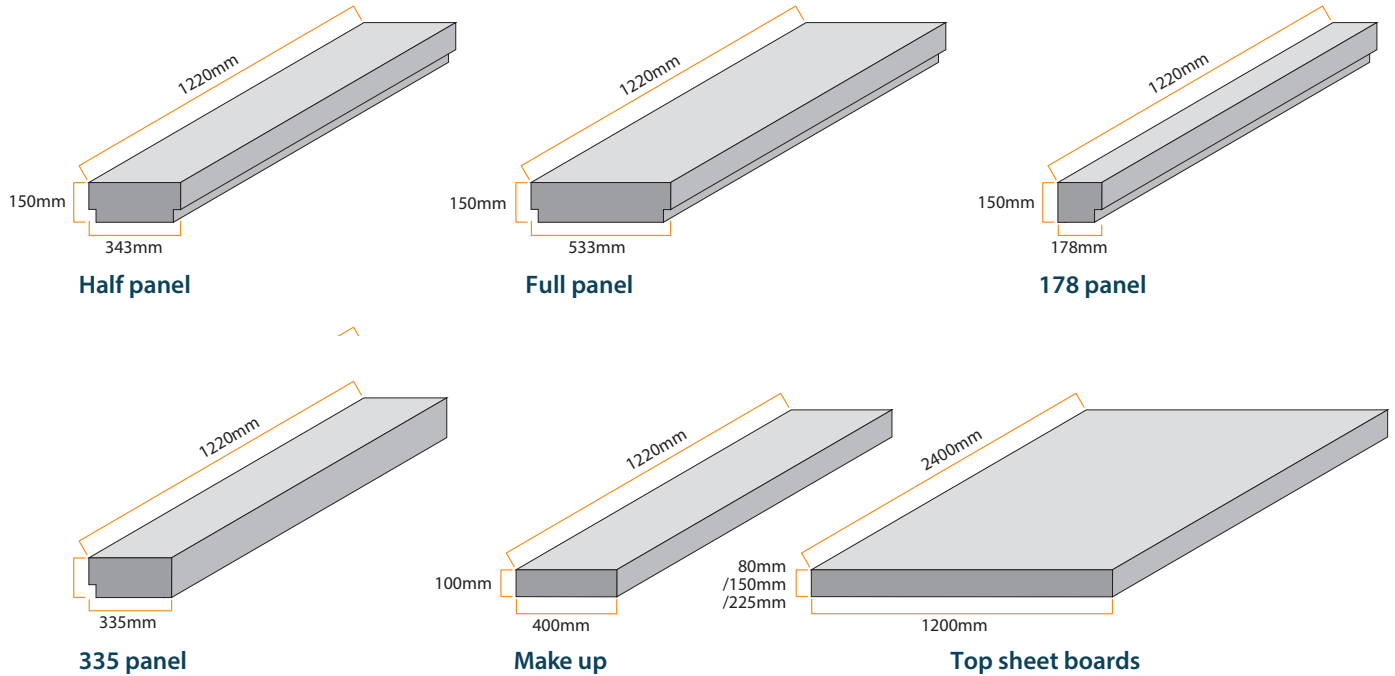
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Permitted loadings

Description	Maximum characteristic loads for single-family dwellings (min. 65mm thickness)	Maximum characteristic loads for single-family dwellings or communal areas in blocks of flats or other suitable buildings (min. 75mm thickness)
Imposed uniformly distributed load (UDL) (kN m ⁻²)	1.5 ⁽¹⁾	3.0 ⁽¹⁾
Imposed concentrated load (kN)	2.0 ⁽¹⁾⁽²⁾	4.0 ⁽¹⁾⁽²⁾
Line load partition parallel and perpendicular to the beam (kN m ⁻¹)	1.0 ⁽³⁾	3.0 ⁽³⁾
Allowance for moveable partition (kN m ⁻²)	1.0 ⁽³⁾	1.0 ⁽³⁾
Finishes (kN m ⁻²)	0.5	0.5

(1) Variable action concentrated load must be combined with the variable action UDL or other variable actions.

(2) Variable action concentrated load is assumed to be applied over a square plate not less than 100 by 100mm.

(3) Variable action allowance for moveable partition must not be combined with permanent action line load partition wall.

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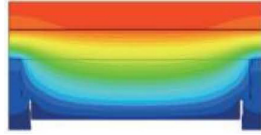
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U-values: Achieving Part L

BEWI Thermal Floor System provides a simple means to achieving improvements on the overall DER allowing designers to meet and exceed Part L requirements.



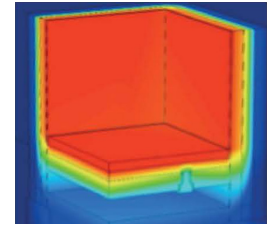
Typical U-value ranges for our High Performance (HP+ Thermal Conductivity 0.030W/mK) top sheet and infill panel combinations:

Top Sheet thickness	U-Value (W/m ² K)
80mm	0.14 - 0.16
150mm	0.11 - 0.12
225mm	0.08 - 0.10

U-values will be confirmed at point of floor design based on the P/A ratio and beam layout.

Psi Values: Achieving Part L

The example below indicates the improved Psi (v) achieved by using BEWI

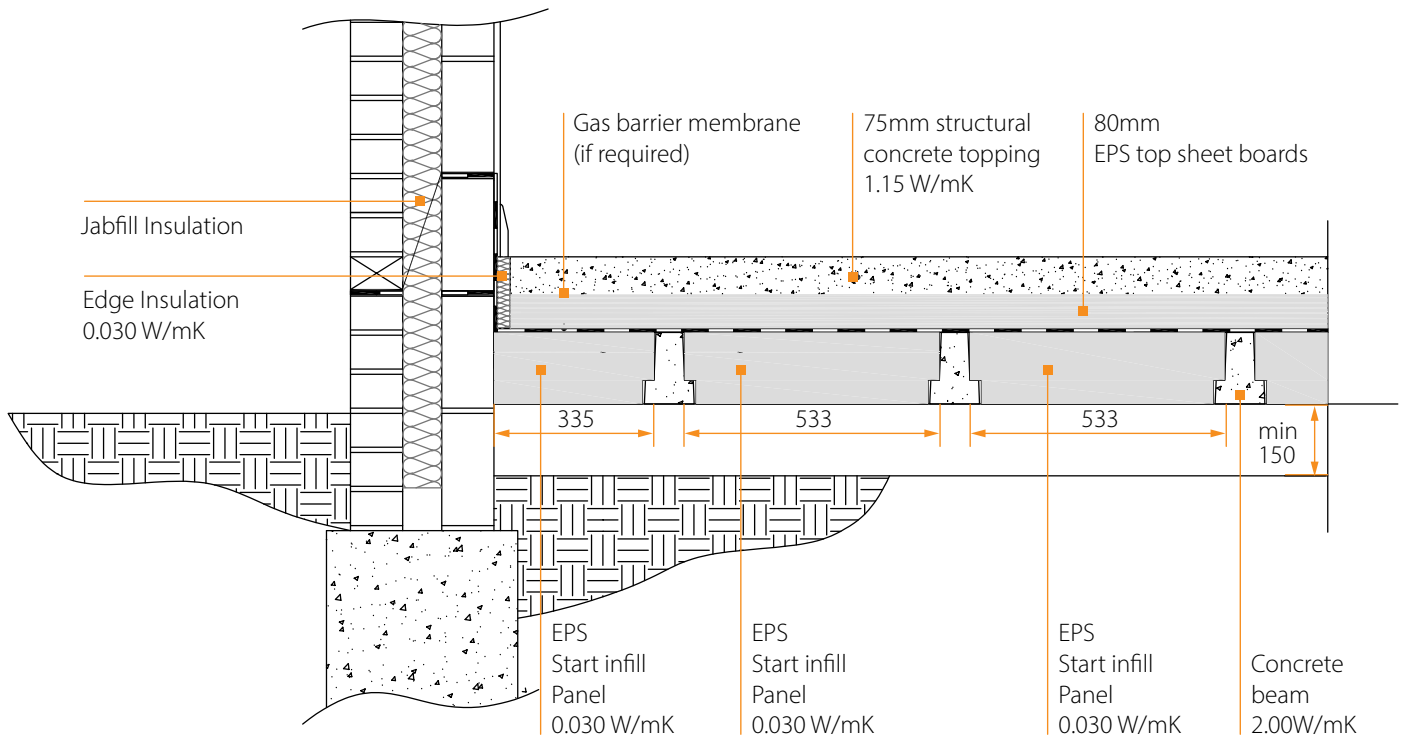


Junction	Psi (ψ) Value (W/mK)
Example using BEWI Thermal Floor System	0.057 *
PARTY WALL Conservative defaults from SAP 2012	0.16 **
EXTERNAL WALL Conservative defaults from SAP 2012	0.32 **

* Value calculated on the below junction model

** Values taken from Table K1 SAP

Example cross section of installation



Disclaimer: Every effort has been made to ensure the correctness of the information provided in this data sheet and is based on data and knowledge accurate at the time of production. It is designed for experienced professionals in the building and construction industry and does not offer a complete overview of industry practices. Therefore, this cannot guarantee the performance results, as usage and installation conditions are outside our control. If you have any questions regarding the suitability of the application, please contact us.

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