



eFloor Plus

Complete Site Guide



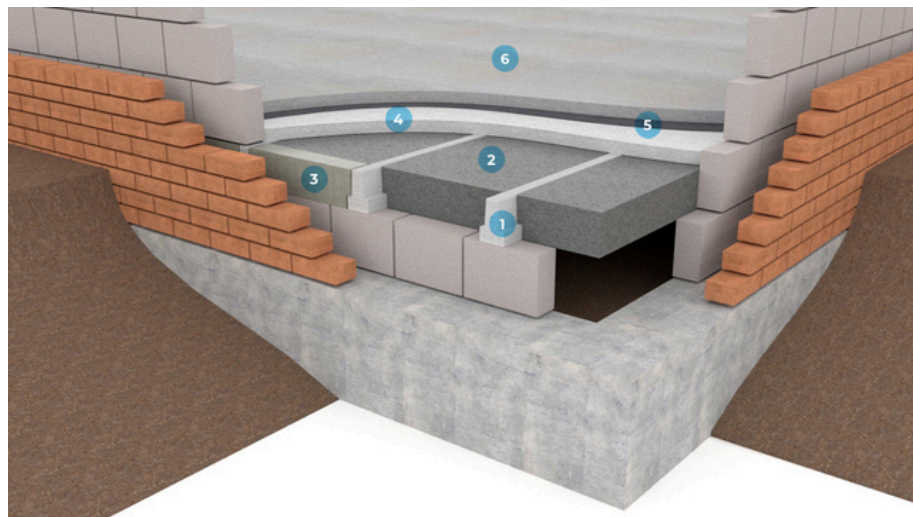
EXPANDED POLYSTYRENE DATASHEET

We have combined Floorspan prestressed concrete 'T' beams with expanded polystyrene (EPS) insulation panels to create a flooring solution with impressive levels of thermal insulation.

Concrete 'T' beams are infilled with rigid, EPS panels. These polystyrene panels are lightweight and easy to install, offering time, effort and safety benefits on site.

A variable depth polystyrene over sheet adds to the customisation options and enables us to meet and exceed current thermal performance targets and requirements.

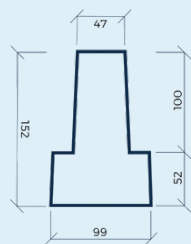
The specialist EPS infill panels will combine with our full range of prestressed concrete 'T' beams. Offering a huge combination of solutions for all scenarios and increased opportunity for cost effective layouts.



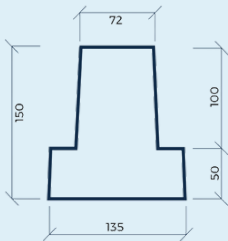
- 1 Floorspan Prestressed Concrete T-Beam
- 2 EPS Infill Panel
- 3 T-Closure Block
- 4 EPS Top Sheet
- 5 Damp Proof Membrane
- 6 Reinforced Structural Topping

SYSTEM OVERVIEW

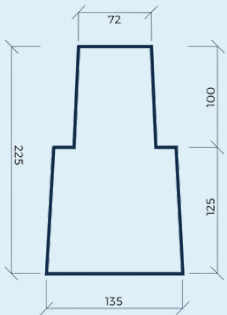
Floorspan T-Beams



150mm Lightbeam

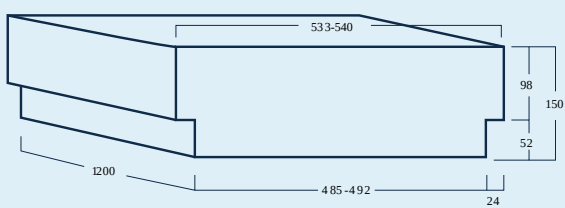


150mm Standard Beam

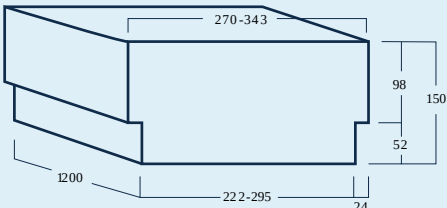


225mm Lightbeam+

EPS Infill Panels

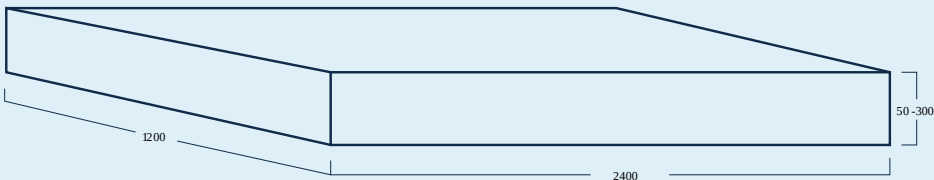


Full Panel

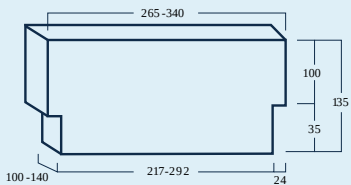


Half Panel

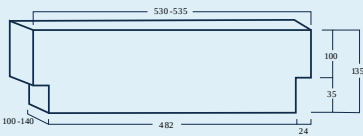
EPS Oversheet



T-Closure Blocks



Half T-Closure



Full T-Closure

SPAN LOADS

Span/ load tables are based on a 1.8kN/m² finish (reinforced structural topping). Values are given for clear span condition and 1.0kN/m² stud partitions.

LIGHTBEAMS

A narrow-section, 150mm deep, inverted T beam. At only 25kg per linear metre, they are ideals for domestic applications including; extensions, and ground floors of new build dwellings.

 Lightbeam	Clear Span (m)	1kN/m2 Span (m)	Panel Configuration
S595	4.2	3.7	
S460	4.7	4.2	
S325	5.3	4.9	
D694	5.3	4.7	
D559	5.3	5.1	
D424	5.3	5.3	
T793	5.3	5.3	
T658	5.3	5.3	
T523	5.3	5.3	

STANDARD BEAMS

A slightly wider, heavier 150mm deep concrete beam. ‘Standard’ beams weigh 35kg per linear metre and are suited to longer spans.

 Standard beam	Clear Span (m)	1kN/m2 Span (m)	Panel Configuration
S621	4.6	4.2	
S486	5.2	4.6	
S351	5.8	5.3	
D756	5.6	5.1	
D621	5.8	5.5	
D486	5.8	5.8	
T891	5.8	5.6	
T756	5.8	5.8	
T621	5.8	5.8	

THERMAL PERFORMANCE

'U' value is the measure of thermal transmittance through a building part. Part L of the building regulation sets out the recommended 'U' values. Another key consideration is that the dwelling emission rate (DER) should be lower than the target emission rate (TER).

The table below gives an idea of the 'U' values that can be achieved with eFloor Plus based on Perimeter/ Area ratios.

U-Value Table W/m²k		Top sheet depth					
		75mm	100mm	125mm	150mm	175mm	200mm
P / A	0.8	0.17	0.15	0.13	0.12	0.11	0.1
	0.7	0.17	0.15	0.13	0.12	0.11	0.1
	0.6	0.16	0.14	0.13	0.12	0.11	0.1
	0.5	0.16	0.14	0.13	0.12	0.11	0.1
	0.4	0.16	0.14	0.13	0.11	0.1	0.1
	0.3	0.16	0.13	0.12	0.11	0.1	0.09

Based on Lightbeam 75% full panels and 25% half panels*

Support current and future building regulations

All new homes must now produce 31% less emissions, complying with the new Part L building regulations which specifies the floor U value as a minimum of 0.13u. The Construction of new dwellings must comply with the increased energy performance standards as set out in the new Part L regulations.

Looking towards the future for the 2025 legislation the Future Homes Standard is anticipated to specify flooring at 0.11u. Efloor plus can support U values down to 0.09u and is well placed to support home builders for the 2025 legislation and beyond'

✓ U-VALUE

0.1

w/m²K



EXPANDED POLYSTYRENE DELIVERY PROTOCOL

DELIVERY OF YOUR POLY

Our polystyrene is typically delivered using an articulated lorry to ensure an efficient and timely service. If your site requires an alternative delivery method, we're happy to accommodate - please note that additional charges may apply for special arrangements.

Materials will be offloaded manually by the customer. If skids are required to facilitate forklift offloading, please ensure this is specified at the time of order.

Please Note: Our eFloor supplier provides up to 2 hours for offloading upon arrival at site. If additional time is required this will be charged at £45.00 per hour (or part thereof)

HOW MANY PANELS SHOULD I EXPECT IN A PACK?

Our polystyrene is delivered on an articulated lorry, unless the site requests otherwise. Additional charges will be applied if such a request is made.

Product	Pack Size	Top Sheet Depth	Pack Size
Full - 520mm Infills	4 Per Pack	150mm	2 Per Pack
Half - 270mm Infills	8 Per Pack	75mm	4 Per Pack
440 x 1200 x 98mm Make-Up Panel	6 Per Pack		

TIMEFRAME FROM POINT OF DELIVERY

If you notice any issues with the quantity or quality of the panels, top sheets or beams, please get in touch with Floorspan within 48 hours of signing the delivery note. Reaching out within this timeframe helps us resolve things quickly and smoothly.

WHO DO I CONTACT IF SOMETHING IS WRONG?

If there are any discrepancies or concerns with your order then you should contact Floorspan Contracts directly.

📞 01945 476161 ✉ Developments@floorspan.co.uk



EXPANDED POLYSTYRENE INSTALLATION GUIDE

This installation guide assumed that footings have been dug and brickwork bearing walls are ready for installation of the eFloor Plus system. We suggest a cavity void of 225mm beneath the bearing at the perimeter edges to combat damp and a minimum void of 150mm underneath the completed floor to facilitate ventilation (we suggest seeking the advice of a 3rd party adviser). Internal perimeter walls that run parallel to the beams should be built up in advance to allow for start/end panel installation.

STEP 1 - Damp Proof Internal Walls

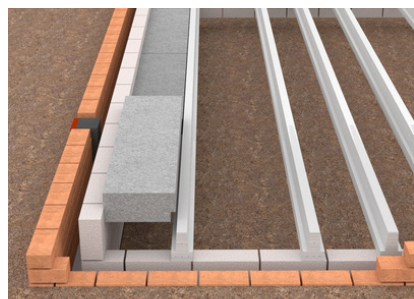
Roll a damp-proof course out along the inner leaf of all external cavity walls and internal sleeper walls.

STEP 2 - Study the Design and Place Concrete Beams

Floorspan provides a bespoke layout design that details exactly where beams should be placed and what direction you should start from for each bay

STEP 3A - Start Laying Panels (Starter Panel)

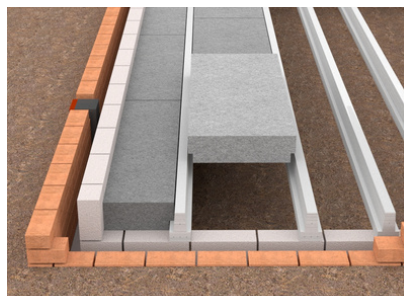
The starter panels are always cut from a full panel (maximum of 300mm to ensure friction fitting) and used at the starting edge of the bay



STEP 3B - Start Laying Panels (Full Panel)

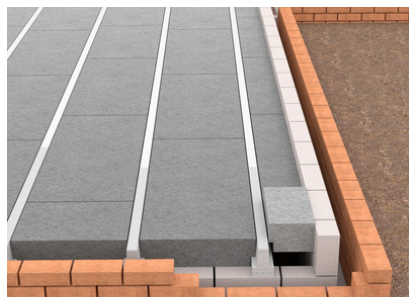
Full(540), half (270) or cut panels (where shaded, dim shown) are used to fill in the gaps between beams, subject to the pattern requirement based on the span and load. Dimensions are provided for cut panels (maximum of 440mm wide, these are shaded to highlight for the installers.

Note: Infill panels can be trimmed to different beams length using a handsaw. Any offcuts must be at least 300mm long and should be placed at the edges of the floor.



STEP 3C - Start Laying Panels (End Panels)

End-of-bay panels can, in most cases, be made up from remaining cuts of the full panels used at the start - however, if both the end and start cuts total to more than 540mm, this will result in the end panels being cut from another full panel (which will have been allowed for in our calculations).



STEP 4 - Fix T-Closure Blocks and Bed with Mortar

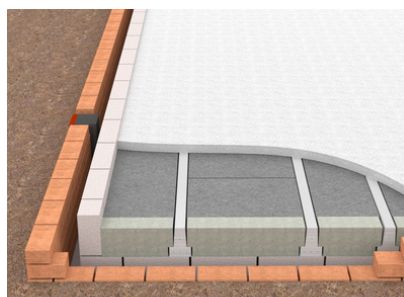
The design will provide a sufficient number of T-closure blocks, with their locations and quantities clearly shown on our drawing. For gaps of 270mm or less, a half t closure will be used; for larger gaps, a full T-closure will be specified.

STEP 6 - Lay the EPS Top Sheet Over the Beams and Infill Panels

Start in one corner, laying as many full 2400 x 1200 boards as possible before cutting to fill any remaining gaps.

eFloor Plus can support blockwork walls with a maximum line load of 3.0kN/m, provided the design allows for this. If so, blockwork walls can be built directly off the Top Sheet.

Please ensure that the internal wall construction details are provided to Floorspan before design work begins. The same applies for Newel Posts and any other structural elements.



STEP 6 - Lay Perimeter Edge Insulation - If Required

If required, this can be supplied as an optional extra.

Materials

eFloor Plus system includes the Precast Concrete Floor Beams, Polystyrene Infill Panels and Top Sheet.

Other materials (such as damp proof coursing and structural topping) should be sourced elsewhere. Please refer to the BBA certificate for full specification of reinforced structural toppings.

Perimeter strips can be provided at an extra cost.

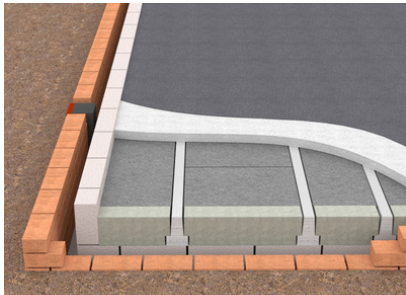
Installation Advice

We provide a floor layout plan with every eFloor Plus order. However, if you have any questions about installation or about our design, we will always be happy to help.

STEP 7 - Lay Tanking for Screed/Concrete

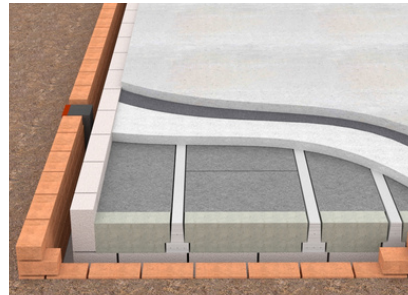
Roll out a layer of Vapour Barrier (minimum 125mu grade) or DPC/DPM, making sure all joints are taped and the material is turned up at the wall edges to provide full tanking.

If required, this is also the stage where underfloor heating should be installed and pressure tested, before the Reinforced Structural Topping is laid.



STEP 8 - Pour Screed/Concrete

Carefully pour a 75mm Reinforced Structural Topping, please refer to BBA Certificate for the specification of all suitable options.



This guide is intended as an overview. Each eFloor Plus layout is designed to meet our client's requirements. As such extra steps may be necessary. Floorspan will provide a design drawing(s) for each project that will detail the specifics. Please refer to the BBA certificate for full details and specification.

Scan the QR Code to watch our eFloor Plus installation video.





GET IN **TOUCH**



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CONTRACTS