

PLUS FLOOR



FLOORSPAN
CONTRACTS

eFloor Plus

Thermally efficient floors

Product Guide



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Energy? Efficiency? Easy.

eFloor Plus is the perfect flooring system for modern, energy efficient homes. An all-in-one insulated flooring solution that is: tailored to your needs, easy to install and cost-effective.

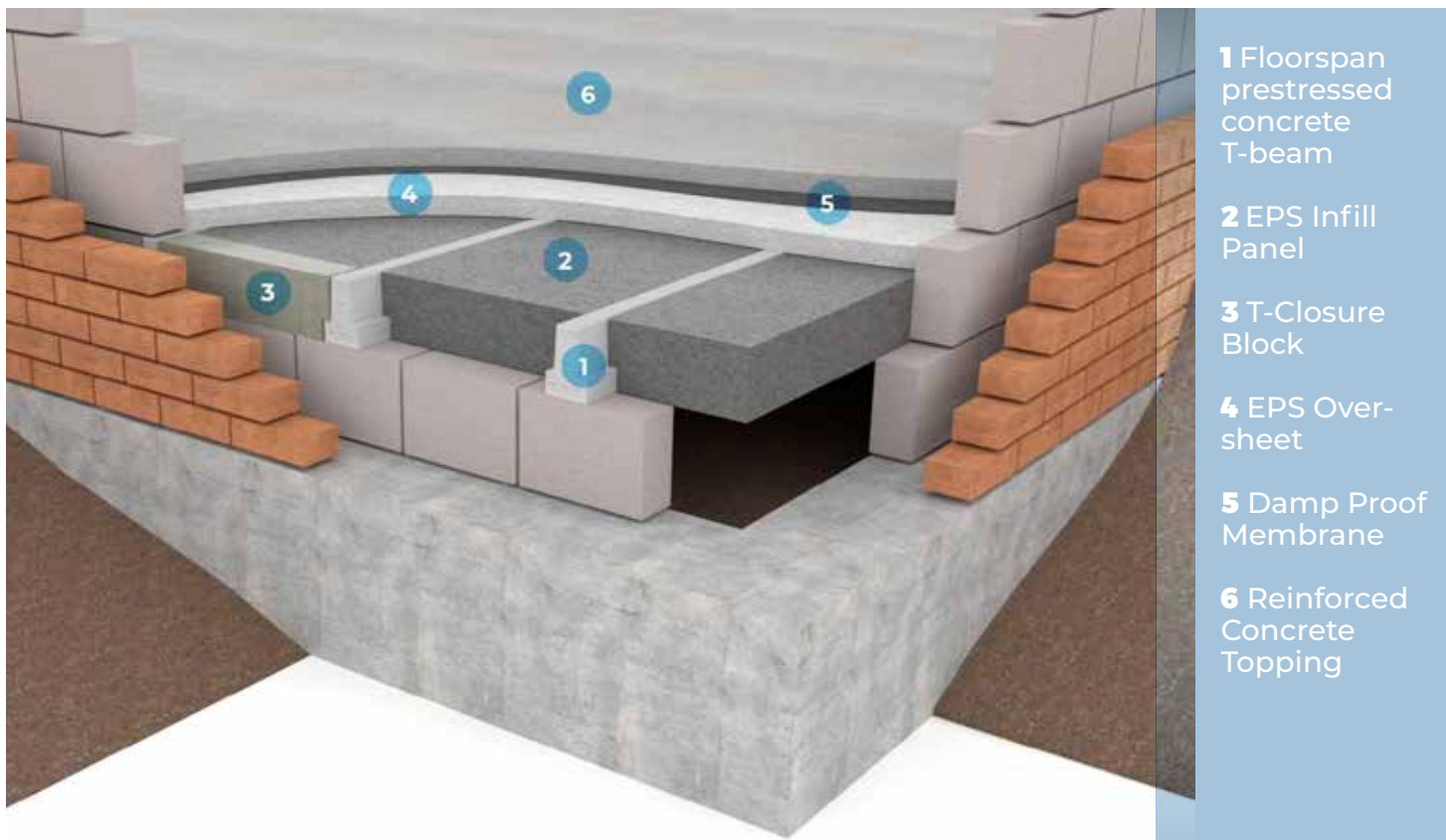


We have combined Floorspan prestressed concrete 'T' beams with expanded polystyrene (EPS) insulation panels to create a flooring solution with impressive levels of thermal insulation.

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



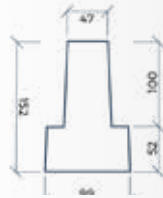
- BBA certified
- Quick and easy to install
- Excellent thermal performance
- Minimal wastage on site
- Thermal Conductivity for panels as low as 0.031 w/mK
- Can be laid in wet conditions
- Green guide A+ rating
- Safe working platform
- Rot, moisture and damp proof
- No specialist training is required for installation

System Overview

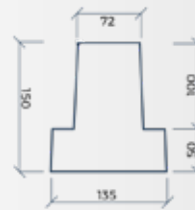
1 Floorspan T-Beams



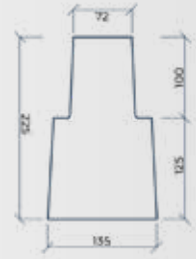
150mm 'Lightbeam'



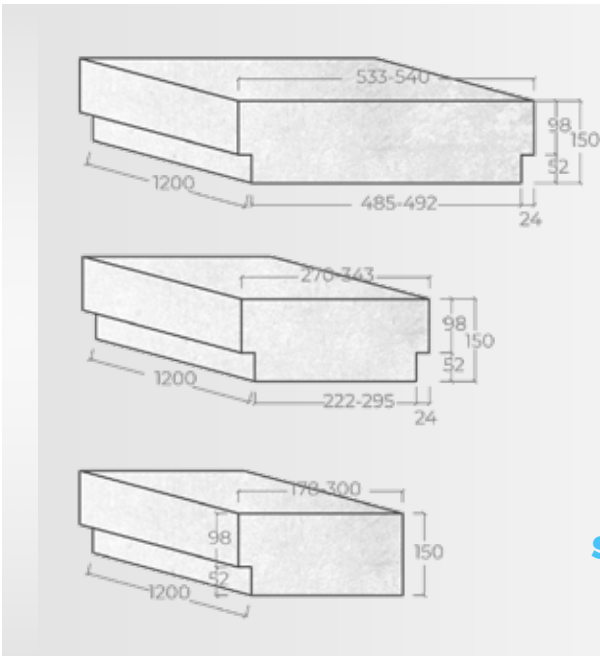
150mm 'Standard beam'



225mm Lightbeam+



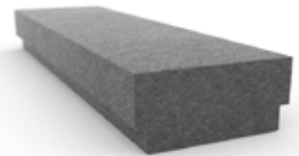
2 EPS Infill Panels



Full Panel



Half Panel



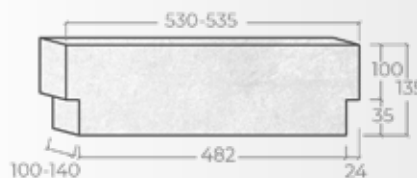
Starter / End Panel



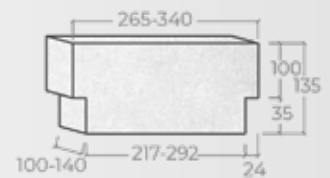
3 T-Closure Blocks



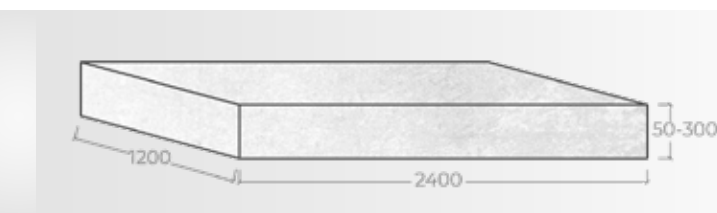
Full T Closure



Half T Closure



4 EPS Oversheet



Installation

This installation guide assumes 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 starter/end panel installation.

Installation Steps

Step 1 Damp Proof Internal Walls

Roll a damp-proof course out along the internal walls.

Step 2 Place concrete beams

Floorspan provides a bespoke layout plan that details where beams should be placed. In many cases, we can place beams right onto the internal walls.



Step 3a Starter / End Panel

The starter panel is cut from a full panel and used at the edge of the bay.

This guide is intended as an overview. Each eFloor Plus floor is designed to meet our client's requirement. As such, extra steps may be necessary. Floorspan will provide a design drawing/s for each project that will detail specifics.



Step 3b Full Panel

The full panel is used to fill a standard gap between beams.



Step 3c Cut Panel

End of row panels should not be cut to less than 300mm. Use half and cut remaining to avoid wastage.

Partitions up to a maximum line load of 3.0kN/m (studwork or lightweight block) can be built up from the top of the reinforced screed. Structural double/triple beams to be infilled with concrete.

MATERIALS

eFloor Plus includes all precast concrete and EPS elements.

Other materials (such as damp proof coursing and structural topping) should be sourced elsewhere.

Please seek advice from your supplier.

INSTALLATION ADVICE

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



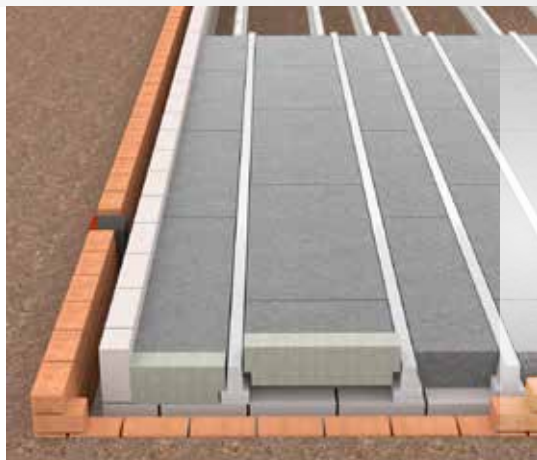
Step 3d Half Panel

The half panel is used to fill a narrow gap between the beams.



Step 3e End Panel

The end panel is cut from a full panel and is used at the edge of the bay in the final row.



Step 4 T-Closure Blocks

Fix T-Closure blocks and bed with mortar.

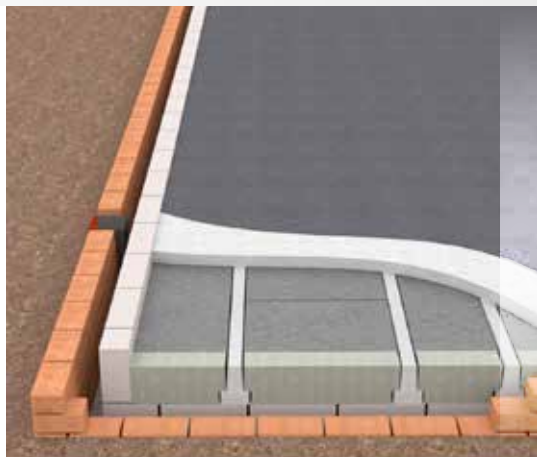


Step 5 Oversheet

Place the polystyrene oversheet on top of the newly fitted floor. It is necessary to infill any double or triple beams with concrete.

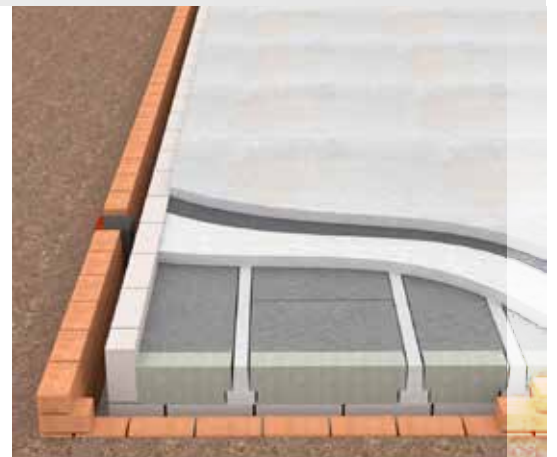
Step 6 Perimeter Strips

Place thin strips of EPS around perimeter wall to ensure thermal performance.



Step 7 Damp Proof Membrane

Roll out a layer of damp-proof membrane on top of oversheet.



Step 8 Concrete

A 75mm deep structural concrete topping to complete the floor.

Span Tables

Span / load tables are based on a 1.8kN/m² finishes (75mm reinforced concrete topping). Values are given for clear span conditions and 1.0 kN/m² stud partitions.











LIGHT BEAMS











A narrow-section, 150mm deep, inverted T beam. At only 25kg per linear metre, they can be easily carried by two men.

'Light' beam is ideal for domestic applications including extensions, ground floor and upper floors of new build dwellings.

STANDARD BEAMS

A slightly wider, heavier 150mm deep concrete beam. 'Standard' beams weigh 35kg per linear metre and are suited to longer spans and/or heavier loading conditions. Such as: larger houses, offices and care homes.

 Lightbeam	Clear Span (m)	1kN/m ² Span (m)	Panel Configuration
S595	4.5	3.9	
S460	5.0	4.4	
S325	5.3	5.1	
D694	5.3	4.9	
D559	5.3	5.3	
D424	5.3	5.3	
T793	5.3	5.3	
T658	5.3	5.3	
T523	5.3	5.3	

 Standard beam	Clear Span (m)	1kN/m ² Span (m)	Panel Configuration
S621	4.9	4.3	
S486	5.4	4.7	
S351	6.0	5.4	
D756	5.8	5.2	
D621	6.0	5.6	
D486	6.0	6.0	
T891	6.0	5.6	
T756	6.0	6.0	
T621	6.0	6.0	

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

U-Value Table Lightbeam	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	0.15	0.13	0.12	0.11	0.1	0.09

Based on 75% full panels and 25% half panels
Indicative - mileage may vary

Floorspan Contracts are a precast concrete manufacturer based in Wisbech, Cambridgeshire. Floorspan was established in 1997 and since then we have evolved into one of the largest suspended concrete flooring specialists in the UK. Our customers benefit from a progressive company with a modern 6-acre production facility, a large fleet of specialist vehicles and an expert team of technical and support staff.



eFLOOR PLUS

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Get an eFloor Plus quotation at efloor.store