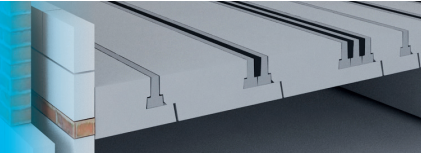


# CUBE6 Thermal Floor Installation Guide



## GENERAL INSTRUCTIONS

### Site Preparation & Void

The ground below the beams should be stripped of all vegetation. A minimum 150mm void is required below the underside of the floor which will require adequate ventilation. Underfloor vents are to be positioned in accordance with the CUBE6 drawing or Architect's drawing if supplied by others. A DPM may also be required.

Contact Building Control to discuss site specifics.

### Delivery of Beams & Polystyrene Panels

Unless otherwise agreed, delivery of the beams will be via a wagon & drag vehicle with the polystyrene panels on articulated vehicles. Beams will be mechanically off-loaded to a central point, panels will be off-loaded by hand. It is the responsibility of the customer to advise of any problems with access to, or on the site, at the time of placing the order. Assistance will be required to enable the off-loading procedure.

### Stacking & Storage of Beams

Beams must be stacked in line with the Stacking Procedure Guide on timber bearers on ground that is firm, dry and level.

### Stacking, Storage & Placement of Panels

Polystyrene panels are supplied plastic wrapped but are otherwise unprotected. Panels should be stacked on firm level ground and protected against prolonged sunlight and wind damage.

### Loading out of Floor

Care must be taken not to overload the floor beams or panels during the construction period. The floor has been designed to withstand light foot traffic. Temporary boards should be used in all other instances. Spot boards should be used to receive the concrete from the chute.

Palleted materials must **NOT** be placed onto the floor.

**Please do not hesitate to contact us should you wish to discuss any of the above or if you require any further information.**

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## INSTALLATION INSTRUCTIONS

### Sequence

Prior to commencement we would ask that, where indicated, the internal structural wall be built through parallel to the span of the beams to support the edge panel. Beams are to be placed on a mortar bedded damp proof course and must achieve a minimum load bearing of 90mm.

The Thermal Floor layout drawing will have start points for the precast concrete beam positions within each of the 'Bays'. Starter and end panels are supplied pre-cut ready for installing. Panel direction is defined in each bay by a section indicating the direction of the 'toe' of the panel.

With the first few beams loosely positioned, the first row of polystyrene panels can be placed between the beam and the wall, or between the beams, and the beams pulled into final position ensuring that the panels fit securely.

After all the Units have been installed the concrete closure blocks are mortared in and the brick course raised to finished floor level. A perimeter strip will be required to the external edge and a BBA approved DPM is advised and will be required should a fluid concrete be used.

### Cut Panels

Panels are supplied 1200mm long and will need to be cut to suit the length of beam in each row. These cut panels should be placed at the end of the row and towards the external edge of the unit. Installers should be made aware of areas where cut panels exist and extra taken to avoid damage. Re-use all cuts prior to using new panels.

### DO NOT CUT OR USE HALF PANELS FOR STARTER UNITS.

To accommodate SVPs, cut a hole in the panel where required and feed the pipe through. Expanding foam can then be sprayed into the voids surrounding the pipe.

### End Bearings & Internal Wall Infill

Closure blocks to be installed and bedded to the loadbearing external walls only. The polystyrene panels, or filler panels, can be cut and placed to cover non-loadbearing internal sleeper walls. Loadbearing walls must be built through to the foundations by filling the gap with concrete with the polystyrene panels acting as shuttering.

### Structural Topping

To avoid damage to the polystyrene panels, the structural topping should be laid as soon as possible after the polystyrene panels have been installed.

### Domestic Only

#### Micro Fibre 75mm reinforced concrete\*

*Above services/underfloor heating pipes*

- C25/30 with Fibrin X-T or Fibrin 23 micro fibre, dosage of 0.91kg/m<sup>3</sup>
- C28/35 self-compacting with Fibrin PC12 micro fibre, dosage of 0.75kg/m<sup>3</sup>

### Domestic & Communal Areas

#### Macro Fibre 75mm reinforced concrete\*

*Above services/underfloor heating pipes*

- C25/30 with Durus S400 macro polymer fibre, dosage of 4kg/m<sup>3</sup>
- C25/30 with Durus Easy Finish macro polymer fibre, dosage of 3kg/m<sup>3</sup>
- C28/35 with Novomesh B&BA macro polymer & micro polyolefin, dosage rate 3.84kg/m<sup>3</sup>

#### Steel Fibre & Steel Mesh 75mm reinforced concrete\*

*Above services/underfloor heating pipes*

- C25/30 with Adfil SF86 steel fibre, dosage rate 13.33kg/m<sup>3</sup>
- C25/30 with one layer of A142 mesh, nominal cover to reinforcement steel must be 25mm
- C28/35 with Novomesh B&BA steel fibres, dosage rate 17.5kg/m<sup>3</sup>

#### 65mm reinforced concrete\* *Above services/underfloor heating pipes*

- C28/35 self-compacting with Fibrin PC12 micro fibre, dosage of 0.75kg/m<sup>3</sup>
- C28/35 with one layer of A142 mesh, nominal cover to reinforcement steel must be 25mm

\*maximum aggregate size 10mm

The concrete topping should be accordance with BS8500-1:2015, BS8500-2:2015 & BS206:2013, manufactured in plants covered by the QSRMC scheme and laid by personnel with the appropriate skills and experience.

NHBC do not accept micro fibre structural concrete toppings.