

Beam and Block floor systems

Beam and block floor systems combine precast prestressed concrete beams and infill blocks to produce high quality economic ground and upper floors in residential and other building types.

THE BENEFITS OF BEAM AND BLOCK FLOORING

Factory Produced

Beams are factory produced to the highest standards using strict quality controls.

Restricted Access Sites

Beam and block flooring is ideal for use on developments with restricted access.

Infill Blocks

Infill blocks may be standard walling blocks complying with BS 6073: Part 1 which are available throughout the United Kingdom, or purpose made flooring infill blocks. Blocks should be capable of sustaining a central point load of 3.5 kN.

Working Platform

Beam and block floors provide an immediate working platform for the following trades.

No Formwork or Propping

Expensive formwork and temporary props are eliminated.

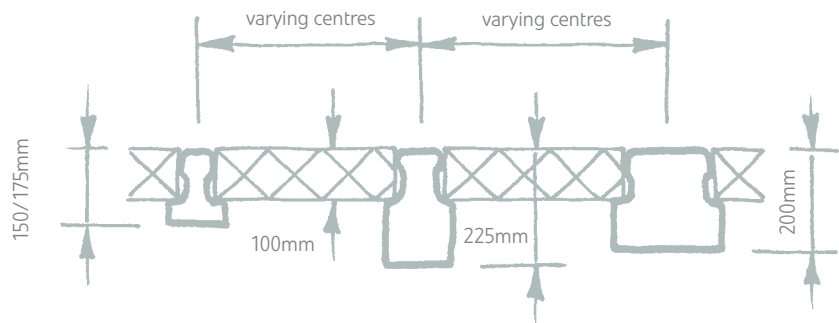
Holes for Services

Holes can be formed by the omission of blocks and made good by others using in-situ concrete after the installation of services.

Fire Resistance

Beam and block floors provide a fire resistance of half an hour and can provide up to one hour.

Typical beam sections



Section profiles

May vary in detail depending on manufacturer. Typical examples are shown above.

Beam depths

Range from 150mm to 225mm.

Structural performance

Different manufacturers offer a wide range of beam depths and widths with consequent variations in performance. Additionally beam spacings and block densities may be used to provide the optimum design performance for a specific situation. Generally spans of up to 6m are available depending upon loading conditions, but manufacturers should be consulted for full information. (See members directory).

Design

Beam and block floors are designed in accordance with BS8110: (1997) The Structural Use of Concrete.

Wide Spacings

Blocks can be installed at 440mm wide spacing for loadings over 1.5kN/m² and up to 5.0kN/m² imposed loads, but suitably designed finishes

may be required to avoid overloading the blocks if the equivalent point load in BS6399 Part 1 exceeds 1.8kN.

Camber

Prestressed concrete beams will exhibit a degree of upward camber, the extent of which will depend upon the span and the amount of prestress within the design. Due allowance must therefore be made for this in determining finishes and the overall floor thickness. Further guidance should be obtained from individual manufacturers. (See members directory).

Ground Floors

Void ventilation and D.P.C. to suit specific situations can readily be accommodated on beam and block floor construction.



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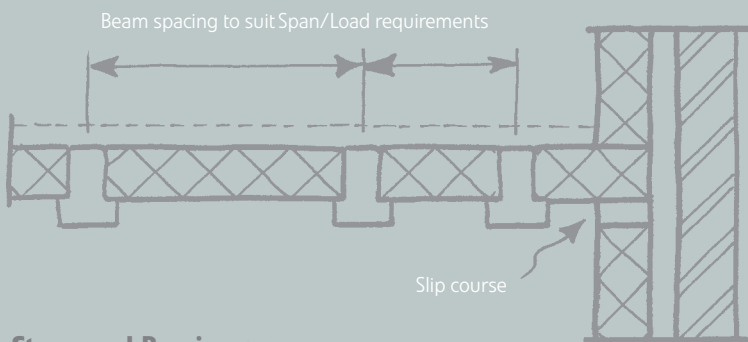
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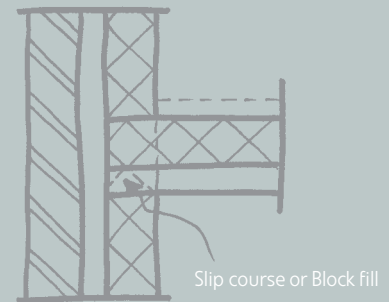
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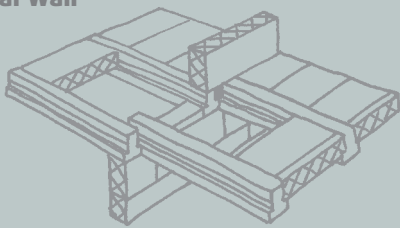
Internal Edge Details



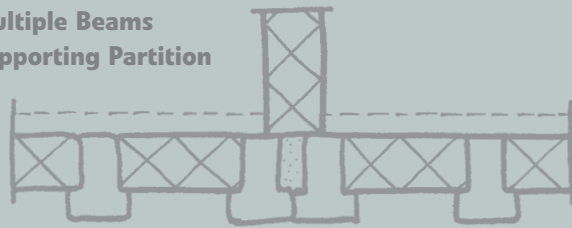
External Wall Bearing



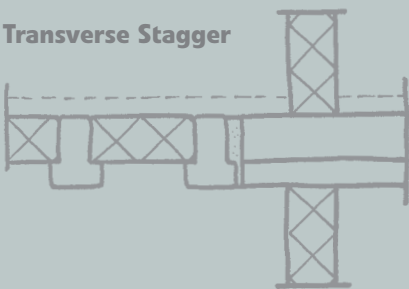
Staggered Bearing on Internal Wall



Multiple Beams Supporting Partition



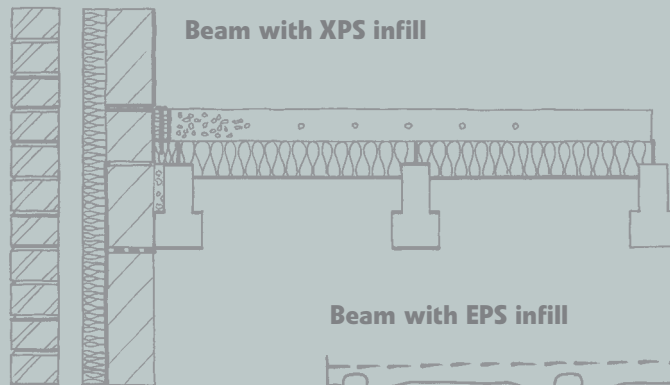
Transverse Stagger



Beams at Close Centres



Beam with XPS infill



Beam with EPS infill



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