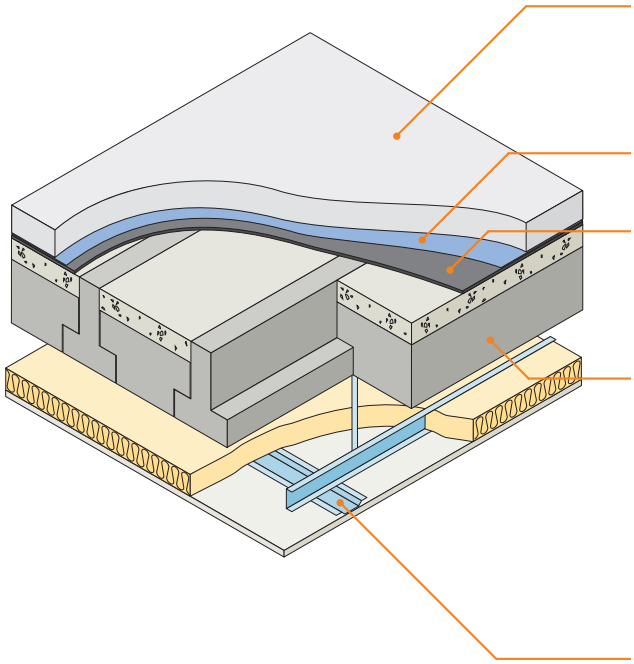
Separating Floor – Concrete

E-FC-6

Beam and block floor with precast or in-situ edge beams ■
Screed laid on Regupol E48 resilient layer system ■
For use with dense aggregate block flanking walls only ■

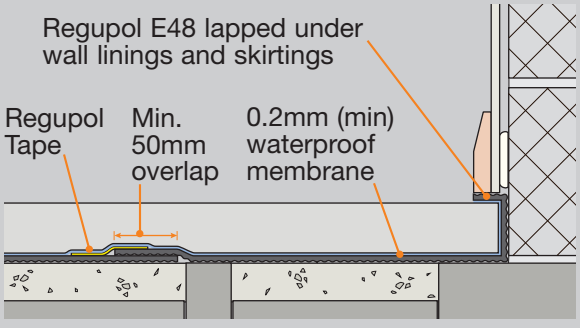


Screed	65mm (min) cement:sand screed or 40mm (min) proprietary screed, nominal 80 kg/m² mass per unit area
DPM	0.2mm (min) waterproof membrane
Resilient layer	8mm Regupol E48, dimple side down, fully lapped up walls and Regupol tape for jointing
Structural floor	beam and block, min 100mm thick dense aggregate infill blocks, min 50mm concrete topping, min strength class C20, to floor blocks, min 300kg/m² combined mass per unit area – see section 7 for cut rows
Ceiling	Min 300mm from top of beam to ceiling board – see section 8

SYSTEM INSTALLATION

The use of this screed resilient layer system **must** incorporate the following:

1) **8mm Regupol E48** (resilient layer to be laid over entire floor area with 50mm overlaps)
2) All joints sealed with Regupol tape
3) 0.2mm (min) waterproof membrane

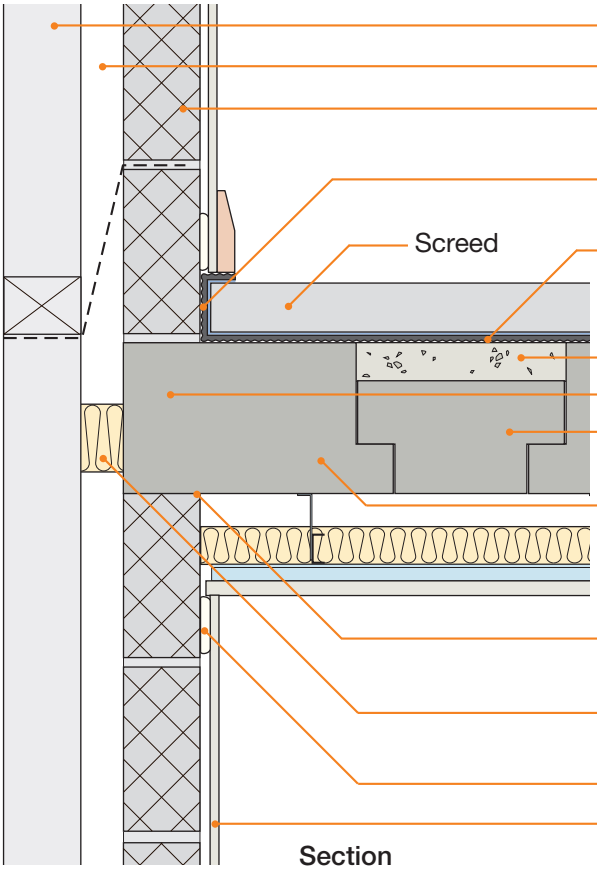


- **Regupol E48** must be laid dimpled side down
- **Regupol E48** must be turned up at walls and lapped under wall linings and skirtings
- Lay a 0.2mm (min) waterproof membrane over the entire floor

DO

- Butt floor blocks tightly together
- Cover floor blocks with min 50mm concrete topping
- Ensure that concrete does not enter the cavity and bridge the two leaves of supporting wall blockwork - it is acceptable to use proprietary cavity stops to provide a shutter
- Ensure precast or in-situ edge beams are correctly installed
- Ensure in-situ concrete downstand is at least 75mm wide
- Ensure Regupol E48 is laid dimple side down, covers entire floor area and has overlapped joints sealed with Regupol tape
- Ensure Regupol E48 resilient layer isolates screed from the perimeter walls, wall linings and skirtings
- Ensure depth from top of beams to ceiling is min 300mm
- Ensure 50mm mineral fibre quilt is installed over whole ceiling board areas
- Ensure that only solid blocks (i.e. not hollow or cellular) are used in the construction of external (flanking) walls

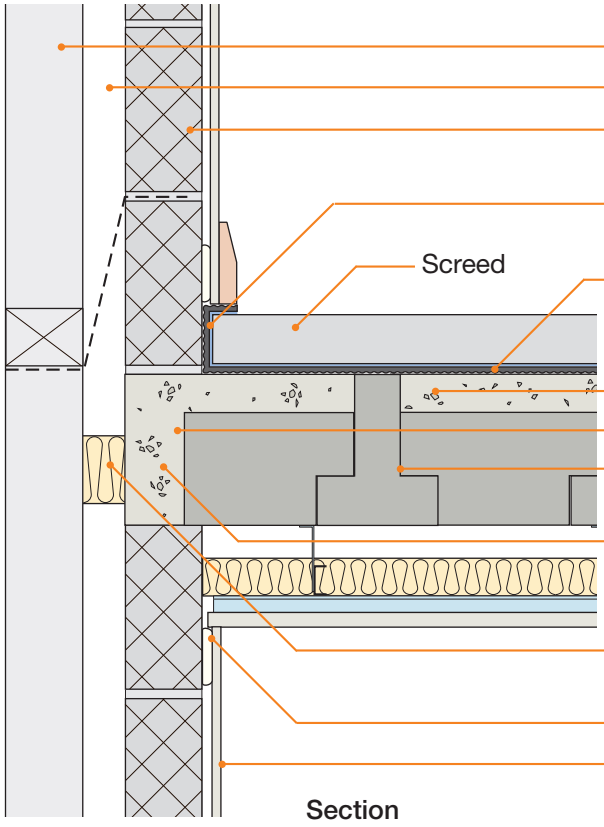
1. External (flanking) wall junction – beams parallel with wall (using precast edge beams)



Section

- Masonry outer leaf
- External wall cavity (min 50mm)
- Inner leaf (min 100mm) dense aggregate concrete block (1850-2300kg/m³)
- 8mm Regupol E48 **must isolate screed** from all perimeter masonry walls, wall linings and skirting
- 8mm Regupol E48 must have 50mm (min) overlapped joints and be sealed with Regupol tape
- Beam and block floor:
  - min 50mm concrete topping to all floor blocks
  - walls must not be continuous between storeys
  - floor blocks to be tightly abutted (see section 7 for floor block types)
  - precast concrete edge beam min 300mm wide must break vertical continuity of wall leaves (NB: edge beam shape may vary between manufacturers)
  - all voids between edge beam and inner leaf blockwork filled with mortar or flexible sealant
- Close cavity with a flexible cavity stop unless it is fully filled with mineral wool insulation
- Continuous horizontal ribbon of adhesive
- Nominal 8kg/m² gypsum-based board or 13mm plaster

2. External (flanking) wall junction – beams parallel with wall (using in-situ concrete downstand)



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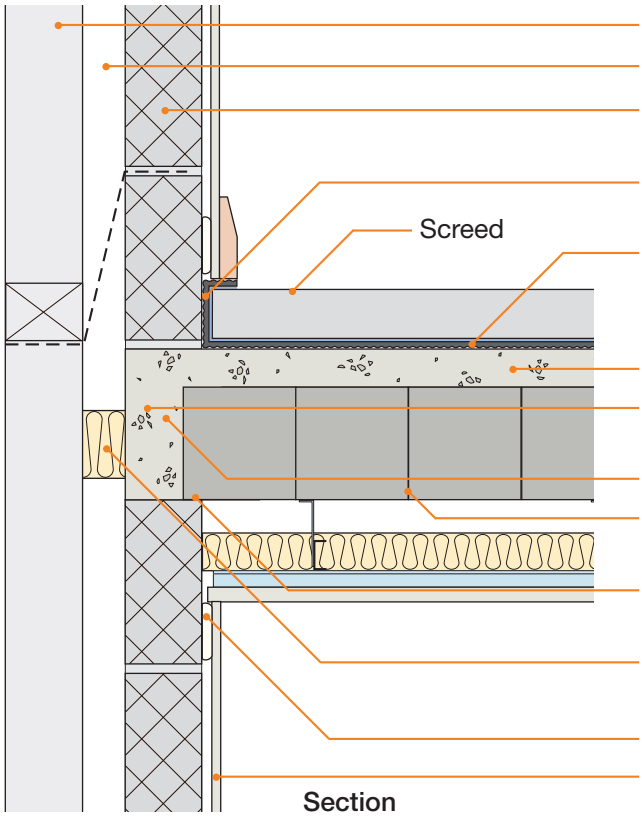
- Beam and block floor:
  - min 50mm concrete topping to all floor blocks
  - walls must not be continuous between storeys
  - floor blocks to be tightly abutted (see section 7 for floor block types)
  - in-situ concrete downstand must be min 75mm wide and must break vertical continuity of wall leaves
- Close cavity with a flexible cavity stop unless it is fully filled with mineral wool insulation
- Continuous horizontal ribbon of adhesive
- Nominal 8kg/m² gypsum-based board or 13mm plaster

3. External (flanking) wall junction – beams bearing on wall



Masonry outer leaf

External wall cavity (min 50mm)

Inner leaf (min 100mm) dense aggregate concrete block (1850-2300kg/m³)

8mm Regupol E48 **must isolate screed** from all perimeter masonry walls, wall linings and skirting

8mm Regupol E48 must have 50mm (min) overlapped joints and be sealed with Regupol tape

Beam and block floor:

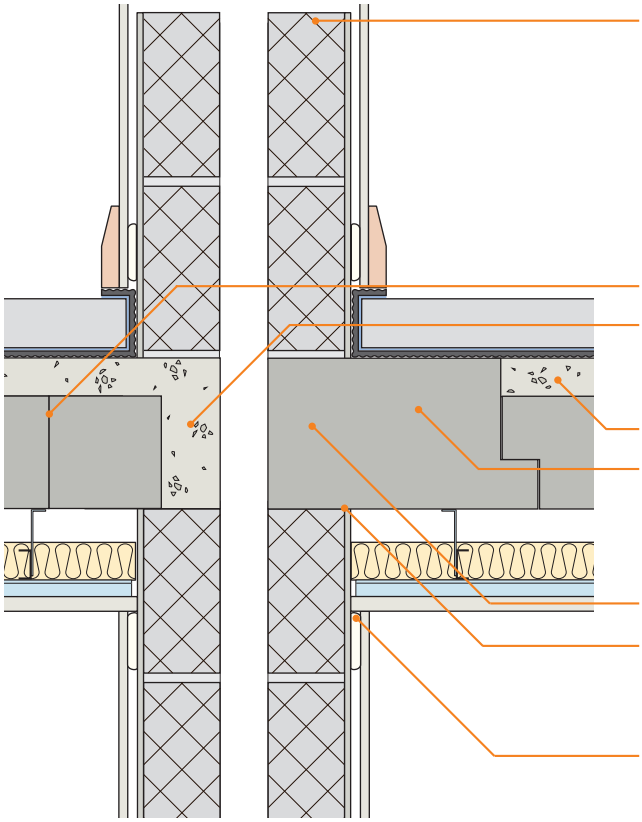
- min 50mm concrete topping to all floor blocks
- in-situ downstand beam must be min 75mm wide and must break vertical continuity of wall leaves
- walls must not be continuous between storeys
- floor blocks to be tightly abutted (see section 7 for floor block types)
- junction between floor blocks and wall must be closed (see section 7)

Close cavity with a flexible cavity stop unless it is fully filled with mineral wool insulation

Continuous horizontal ribbon of adhesive

Nominal 8kg/m² gypsum-based board or 13mm plaster

4. Separating wall junction



Separating wall:

- if using robustdetails® for wall – refer to Table 3a in introduction to select an appropriate robustdetails® separating wall
- if using wall requiring pre-completion testing – seek specialist advice

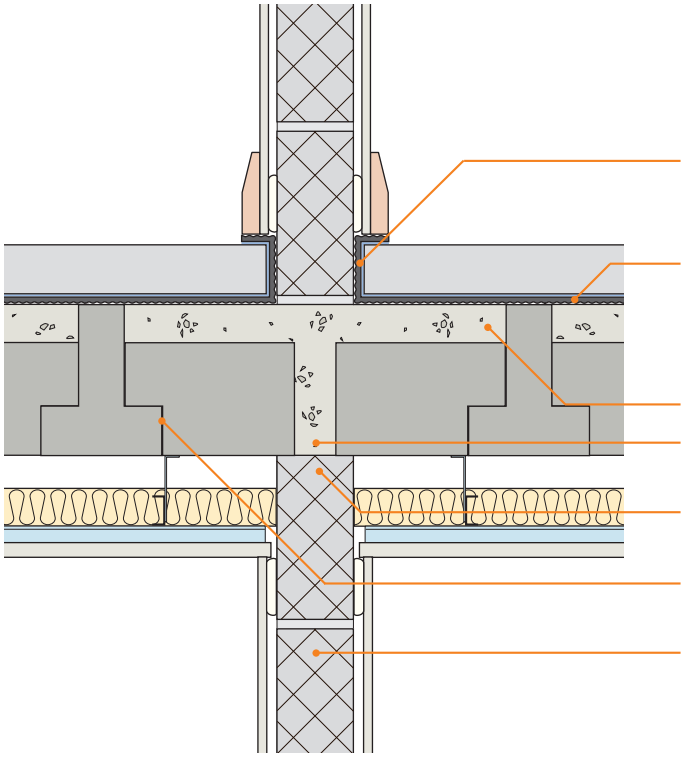
Core floor junctions with wall:

- floor blocks to be tightly abutted
- if beams are bearing on wall (i.e. perpendicular to wall) an in-situ concrete downstand of min 75mm width must be used
- min 50mm concrete topping to all floor blocks
- if beams are parallel to separating wall min 300mm wide precast concrete edge beam or min 75mm wide in-situ concrete downstand must break vertical continuity of wall leaves
- walls must not be continuous between storeys
- all voids between precast edge beam and separating wall blockwork filled with mortar or flexible sealant

Continuous horizontal ribbon of adhesive

Sketch shows E-WM-3 separating wall

5. Loadbearing internal wall – floor beams parallel to wall



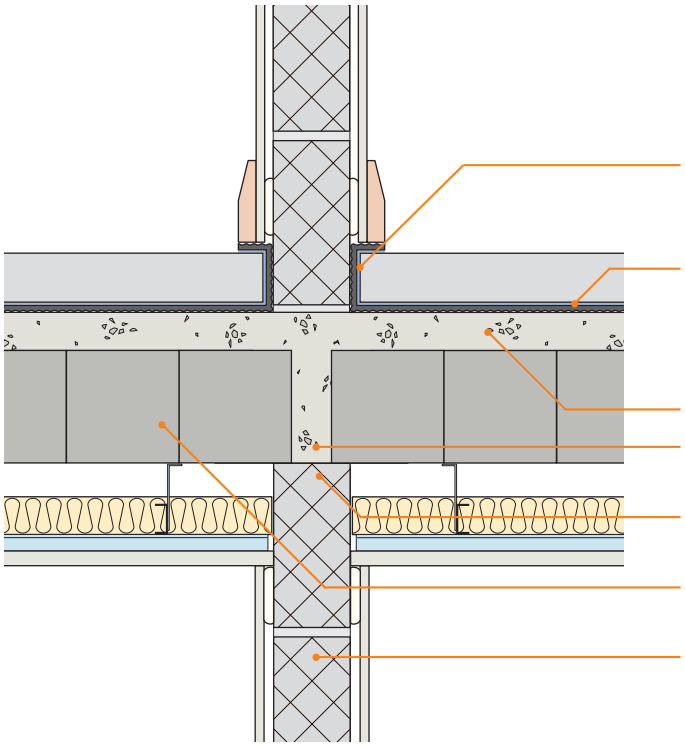
8mm Regupol E48 **must isolate screed** from all perimeter masonry walls, wall linings and skirting

8mm Regupol E48 must have 50mm (min) overlapped joints and be sealed with Regupol tape

Beam and block floor:

- min 50mm concrete topping to all floor blocks
- in-situ downstand must be min 50mm wide and must break vertical continuity of wall
- walls must not be continuous between storeys
- floor blocks must be tightly abutted (see section 7 for floor block types)
- Internal loadbearing blockwork partition

6. Loadbearing internal wall – floor beams bearing onto wall



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- Internal loadbearing blockwork partition

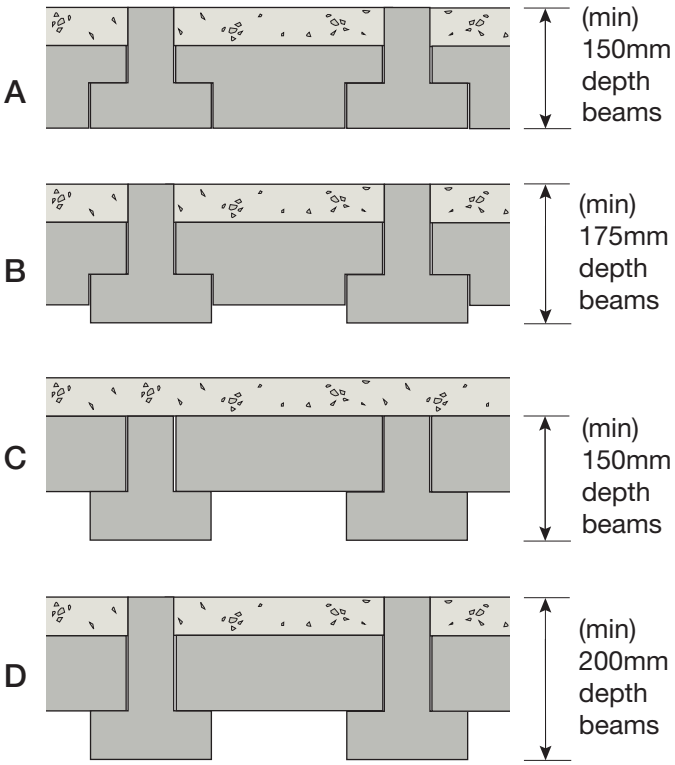
7. Floor block types

Beam/block variations

To minimise the overall floor depth, rebated or 'T' shape dense blocks may be used.

Alternatively, as indicated in 'C' and 'D' below, plain dense blocks may be used.

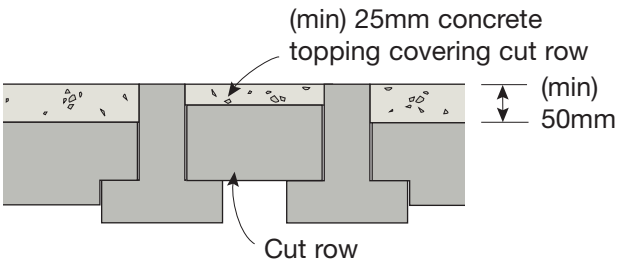
In all cases, the C20 topping must be applied such that it provides a minimum 50mm cover to the blocks.



Cut rows

No more than one cut row of floor blocks may be used per room floor with minimum 25mm concrete topping.

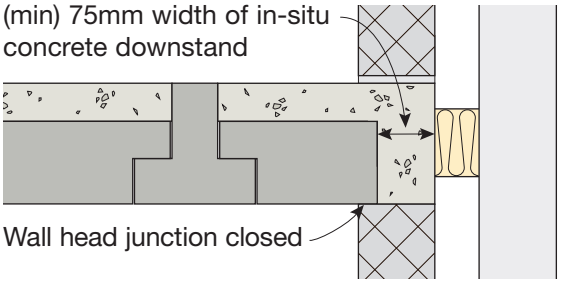
Where a cut row junctions with perimeter walls ensure that no gap is left and that a cut block or brick slip is used to seal this junction prior to applying concrete topping.

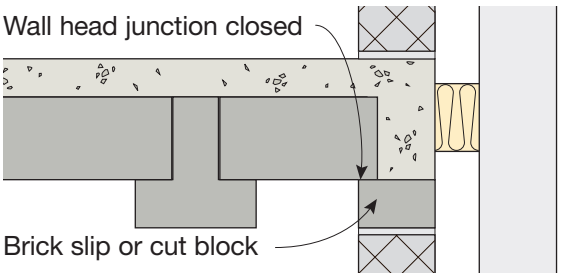


Wall head and floor block junctions

No gaps should remain where the last floor block junctions at the wall head.

Where the floor block does not close this gap, brick slips or cut blocks may be used.





8. Ceiling treatments for E-FC-6

All ceiling treatments must be installed in accordance with the manufacturer's instructions. All ceiling joints must be sealed with tape or caulked with sealant.

The minimum depth between top of beams and ceiling board **must not be less** than 300mm.

Note: the sound insulation performance of all ceiling treatments is increased if:

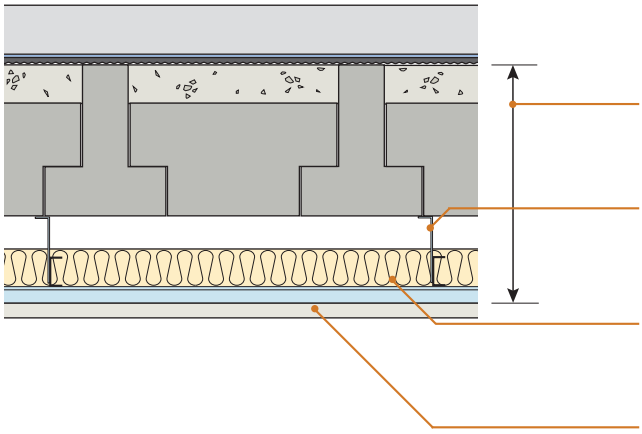
- resilient hangers are used
- increased thickness or density of mineral fibre quilt is used. (Do not fully fill the ceiling void with quilt.)

Downlighters and recessed lighting

Downlighters or recessed lighting may be installed in the ceiling:

- in accordance with the manufacturer's instructions
- at no more than one light per 2m² of ceiling area in each room or see Appendix F
- at centres not less than 0.75m
- into openings not exceeding 100mm diameter or 100x100mm

Particular attention should also be paid to Building Regulations Part B – Fire Safety.



Floor depth requirements and ceiling treatments

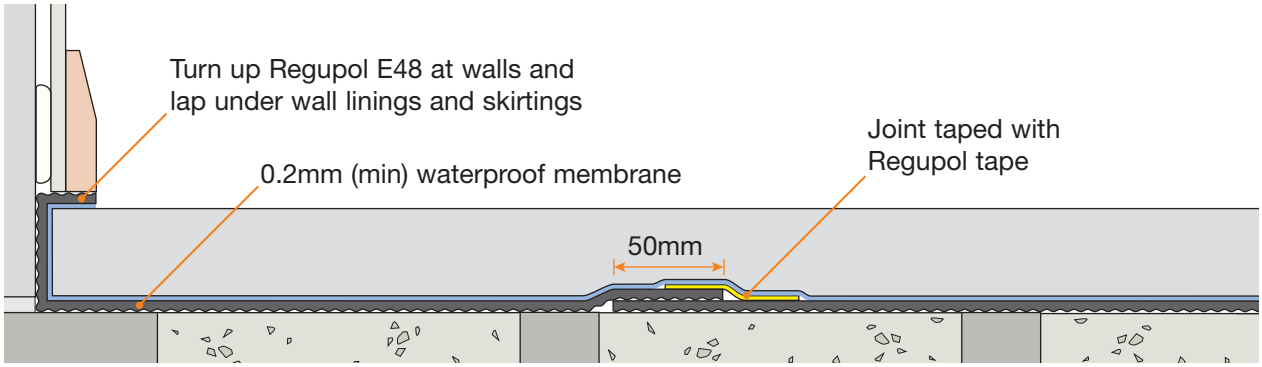
All E-FC-6 floors must have a minimum depth of 300mm **between top of beam and ceiling board**

Only suspended metal frame ceilings systems may be used

Min 50mm mineral fibre quilt (min 10kg/m³) in the ceiling void to cover whole ceiling board area

One layer of nominal 10kg/m² gypsum-based board

9. Resilient layer installation



SCREED TYPE

65mm (min) cement:sand screed or 40mm (min) proprietary screed, nominal 80 kg/m² mass per unit area

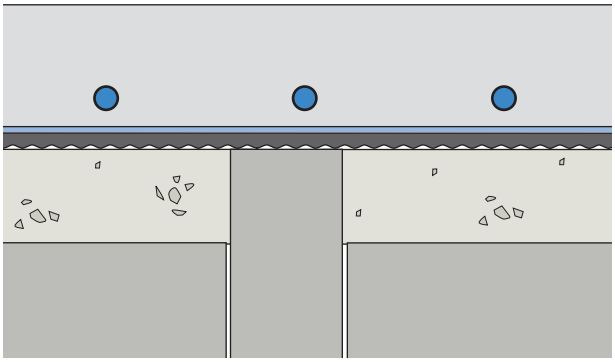
- 8mm Regupol E48 must be laid **dimpled side down**
- overlap all Regupol E48 joints (both along and across the roll) by at least 50mm and tape all joints using Regupol tape
- turn up Regupol E48 at walls to ensure screed will not touch the walls and is of sufficient length to lap under wall linings and skirtings
- lay a waterproof membrane (min 0.2mm thick) over the entire floor

10. Underfloor heating

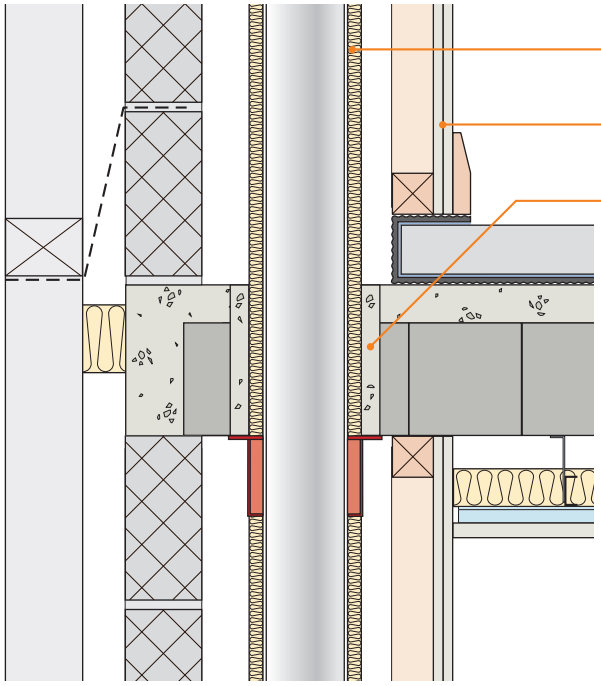
Underfloor heating systems (including connectors and fixings) installed within the screed must not penetrate the resilient layer or bridge the screed to the slab.

Underfloor heating systems which have a supporting layer/board may be laid on top of the Regupol E48

Appropriate screed depth cover to the heating system must be designed for – contact underfloor heating manufacturer for guidance.



11. Services – service pipes through separating floor

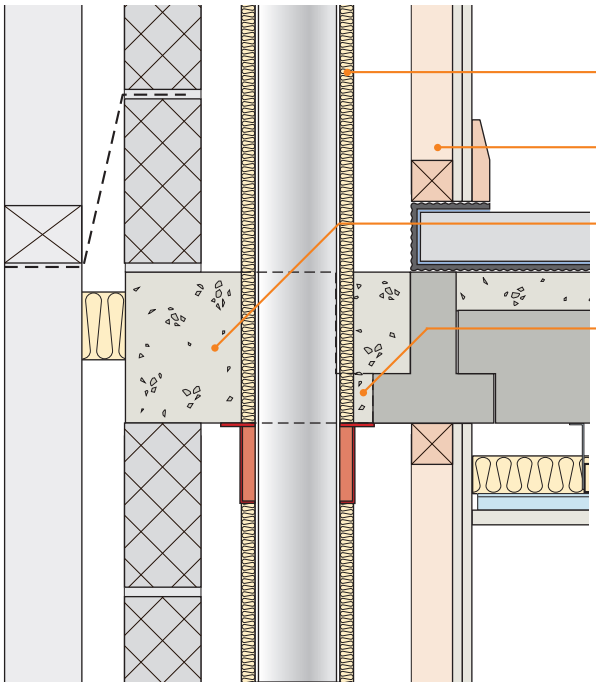


25mm (min) mineral wool quilt (min 10kg/m^3) around pipe

Pipe boxed in with two layers gypsum-based board, each layer nominal 8kg/m^2

All voids around pipe sealed

12. Service - service pipes through separating floor (using precast edge beams)



25mm (min) mineral wool quilt (min 10kg/m^3) around pipe

Pipe boxed in with two layers gypsum-based board, each layer nominal 8kg/m^2

Where precast edge beams are adopted it is acceptable to use in-situ concrete local to services

All voids around pipe sealed

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See overleaf for checklist

CHECKLIST (to be completed by site manager/supervisor)

Company:

Site:

Plot: Site manager/supervisor:

Ref.	Item	Yes (✔)	No (✔)	Inspected (initials & date)
1.	Are the external wall inner leaves and separating walls of dense aggregate blockwork (min 1850-2300kg/m^3)?			
2.	Are all floor blocks of dense aggregate (1850-2300kg/m^3) and tightly abutted?			
3.	Are min 300mm wide precast concrete edge beams, or min 75mm in-situ concrete downstands installed where the beams are parallel to the external or separating flanking walls?			
4.	Are in-situ concrete downstand beams min 75mm wide where the beams are bearing on the external or separating flanking walls?			
5.	Is the concrete topping to the floor blocks at least 50mm thick?			
6.	Is the Regupol E48 dimple side down and covering the whole floor area with min 50mm overlapped joints and sealed with Regupol tape?			
7.	Is the Regupol E48 isolating the screed from the perimeter walls, wall linings and skirting?			
8.	Is the ceiling system metal frame, with min 50mm mineral fibre quilt laid over the whole ceiling and of min 300mm depth from top of beam to ceiling board?			
9.	Is the ceiling board 10kg/m^2 and are all joints sealed with tape or caulked with sealant?			
10.	Are service pipes wrapped in quilt and boxed with two layers of nominal 8kg/m^2 gypsum-based board?			
11.	Is the separating floor satisfactorily complete?			

Contact details for technical assistance from CMS Acoustics, sole distributor of Regupol E48 resilient layer system:

Telephone: 01925 577711 **Fax:** 01925 577733 **E-mail:** info@cmsacoustics.co.uk

Notes (include details of any corrective action)

Site manager/supervisor signature . . . . . .