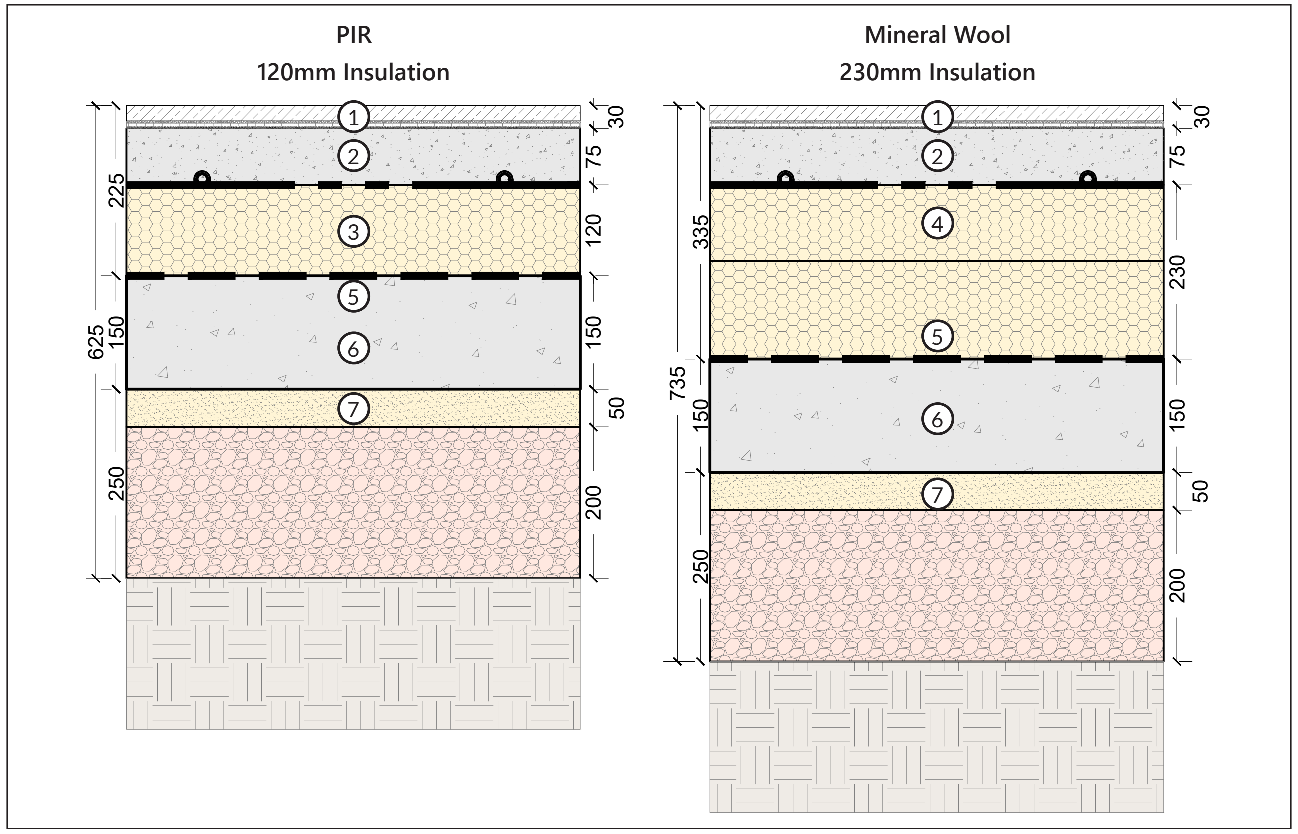
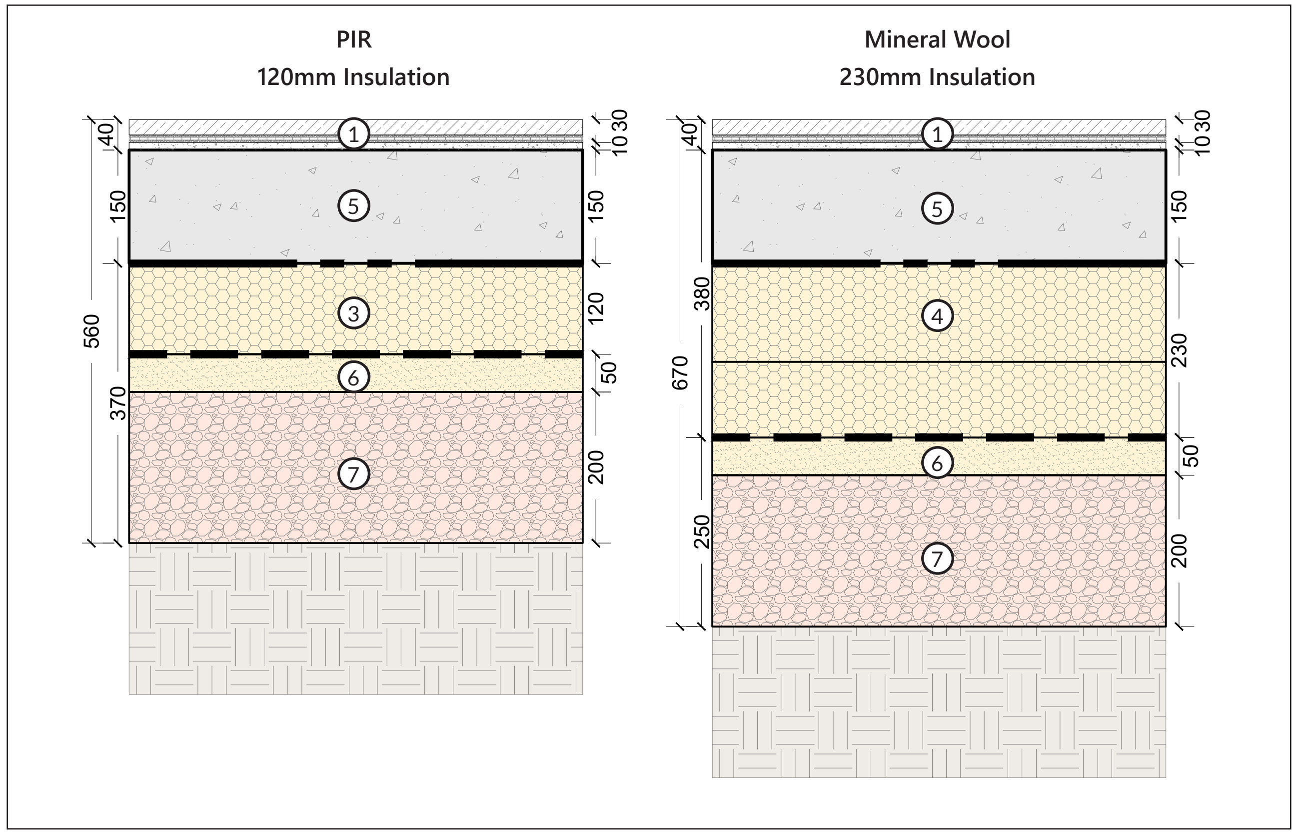
Ground Floor Concrete Floors - Insulation Above Concrete Slab

0.13 W/m²K - (New Build 50m2 / Extensions up to 60m2 - 10x6m)



Ground Floor Concrete Floors - Insulation Below Concrete Slab

0.13 W/m²K - (New Build 50m2 / Extensions up to 60m2 - 10x6m)



Residential Ground Floor Build-up

Ground Floor Residential Build-up

01 - Floor Finish Zone (30mm)

Timber or Tiles: Maximum 20mm Board/Tile with 10mm Adhesive & Dimtra Matt

Solid wood flooring is not recommended for installations over UFH. Always check with manufacturer to ensure the selected Solid or Engineered Wood Flooring is approved for use over UFH. Check to see if a decoupling membrane is required as this will add 3mm within the floor finish zone.

Carpet: Typically, 10mm Underlay / 10mm Carpet

Combined TOG value of the carpet and underlay should not exceed 2.5 tog.

Underlay Layer - When installing certain flooring as floating installation, a suitable polythene slip membrane beneath is essential. Check with manufacturer of flooring.

02 - Screed/UFH (60mm to 85mm Zone)

Unbonded Sand & Cement Screed - Minimum: 85mm

- *75mm (65mm K-Screed – potentially more expensive)*
- *10mm structural slab building tolerances*

DMP – 500 Gauge Polythene Layer

It is recommended to include a moisture suppressant layer within the subfloor. This layer must be incorporated beneath the heat source and fully supported from beneath.

03 - PIR Insulation (120mm)

120mm Insulation (Kingspan K103 or Similar)

04 - Mineral Wool Insulation (230mm)

230mm Insulation (Rockwool Thermal or Similar)

05 - Waterproofing Layer

DPM - Visqueen Radon R400 Membrane

06 - Concrete (150mm)

Range from 150mm to 200mm

(Confirm with Structural Engineer)

07 - Sand & Sub-base (250mm)

50mm Sand Binding

200mm MOT Type 01 Sub-base (Compressed)

Cost Comparison

Concrete - Insulation Above Slab 0.13 W/m²K

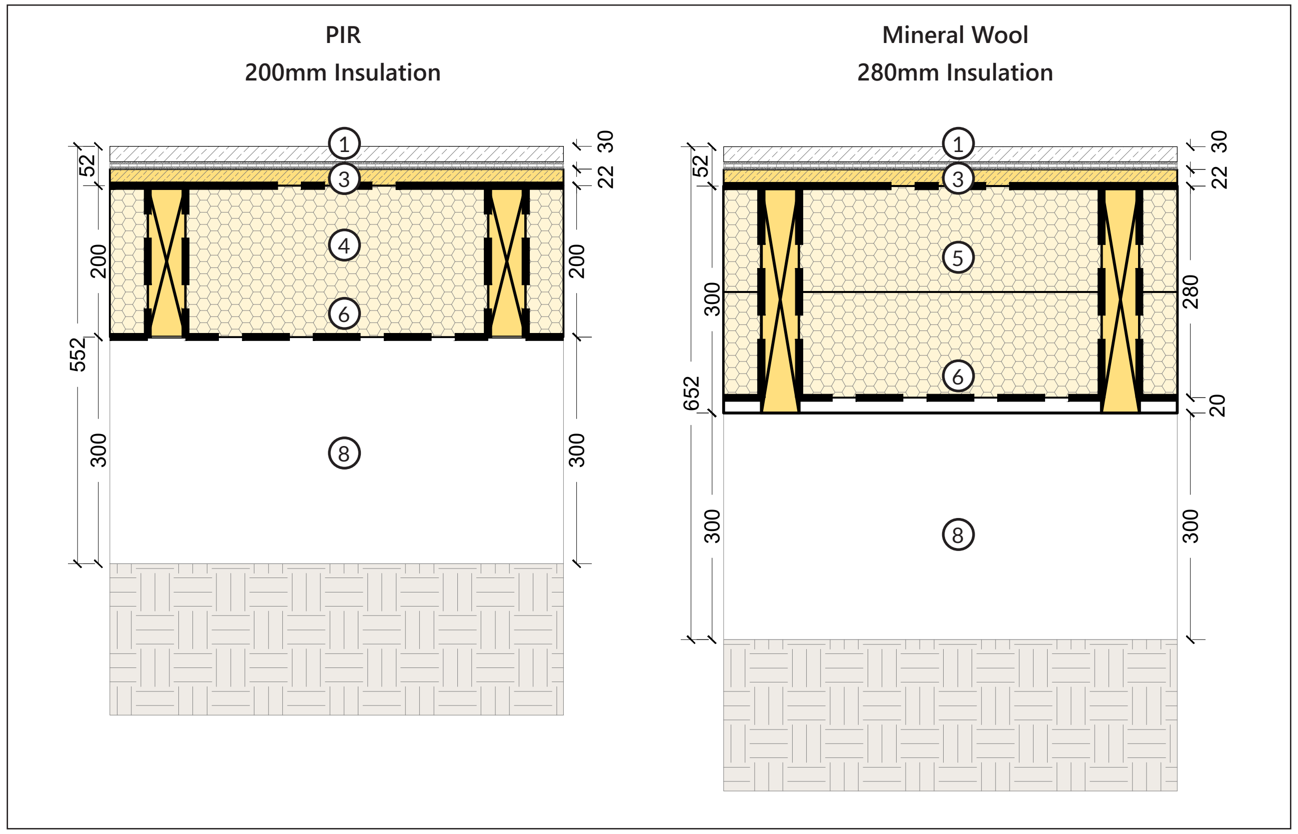
- PIR Insulation - £222.49 per m2
- Mineral Wool Insulation - £284.28 per m2

Concrete - Insulation Below Slab 0.13 W/m²K

- PIR Insulation - £212.49 per m2
- Mineral Wool Insulation - £274.28 per m2

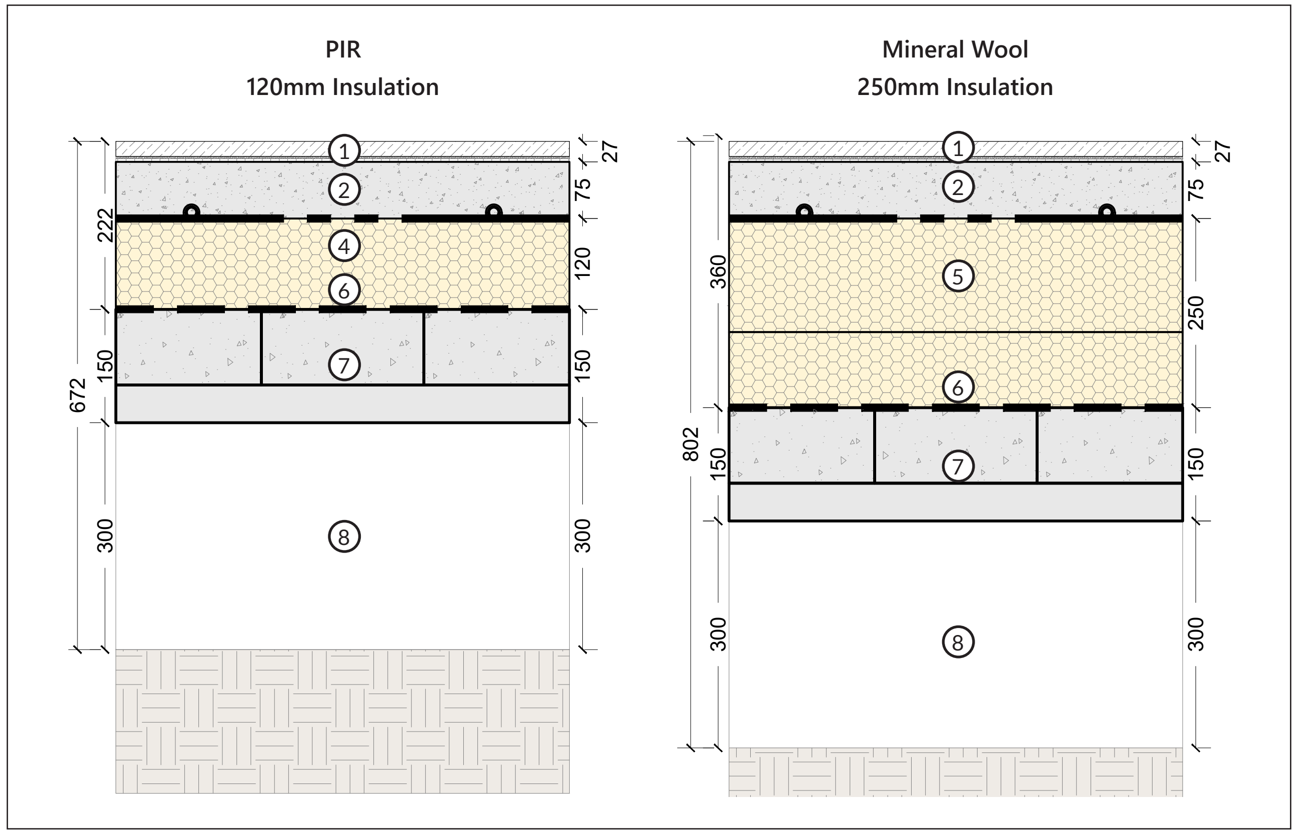
Ground Floor Timber Floors - Insulation Between Joists

0.13/14 W/m²K - (New Build 50m2 / Extensions up to 60m2 - 10x6m)



Ground Floor Block & Beam Floors - Insulation Above Blocks

0.13 W/m²K - (New Build 50m2 / Extensions up to 60m2 - 10x6m)



Residential Ground Floor Build-up

Ground Floor Residential Build-up

01 - Floor Finish Zone (30mm)

Timber or Tiles: Maximum 20mm Board/Tile with 10mm Adhesive & Dimtra Matt

Solid wood flooring is not recommended for installations over UFH. Always check with manufacturer to ensure the selected Solid or Engineered Wood Flooring is approved for use over UFH. Check to see if a decoupling membrane is required as this will add 3mm within the floor finish zone.

Carpet: Typically, 10mm Underlay / 10mm Carpet

Combined TOG value of the carpet and underlay should not exceed 2.5 tog.

Underlay Layer - When installing certain flooring as floating installation, a suitable polythene slip membrane beneath is essential. Check with manufacturer of flooring.

02 - Screed/UFH (60mm to 85mm Zone)

Unbonded Sand & Cement Screed - Minimum: 85mm

- *75mm (65mm K-Screed – potentially more expensive)*
- *10mm structural slab building tolerances*

DMP – 500 Gauge Polythene Layer

It is recommended to include a moisture suppressant layer within the subfloor. This layer must be incorporated beneath the heat source and fully supported from beneath.

03 - Timber Joists & Desk (22/ 200 or 300mm)

22mm T&G MR Chipboard Flooring TG4 with VCL

200mm Timber Joist to Structural Engineers Specification

300mm Timber Joist to Structural Engineers Specification

04 - PIR Insulation (200mm)

200mm Insulation (Celotex XR400 or Similar)

120mm Insulation (Kingspan K103 or Similar)

05 - Mineral Wool Insulation (280mm)

280mm Insulation (Rockwool Flexi or Similar)

250mm Insulation (Rockwool Thermal or Similar)

06 - Waterproofing Layer

DPM - Visqueen Radon R400 Membrane

07 - Concrete Block & Beam (150mm)

150mm Block & Beam System

(Length, Size & Strength to be confirmed with SE)

08 - Void (300mm)

Min 300mm Ventilation Void

Cost Comparison

Timber - Insulation Between Joists 0.13 W/m²K

- PIR Insulation - £138.06 per m2
- Mineral Wool Insulation - £139.26 per m2

Block & Beam - Insulation Above Slab 0.13 W/m²K

- PIR Insulation - £218.72 per m2
- Mineral Wool Insulation - £337.71 per m2