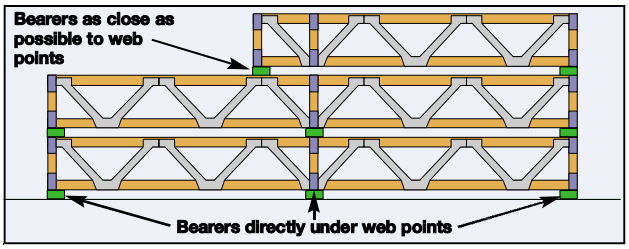
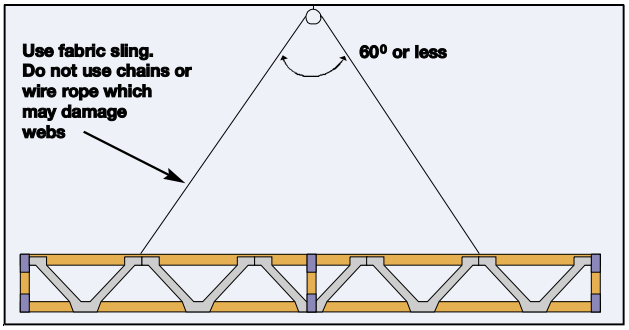
Posi-Joist™
Site Handling and Storage

Storage on site should be for a limited period of time prior to erection of the Posi-Joists™.
Posi-Joists™ should either be stored vertically or on the flat. If stored vertically there should be intermediate bearers at node points not within the bay of a joist, as shown below. If stored in a flat position, sufficient bearings should be provided to prevent excessive lateral bending.



It is recommend that completed Posi-Joists™ be strapped together and wrapped in a waterproof protective covering to protect them from short term exposure to inclement weather.
Special precautions should be taken when stacking top chord supported floor cassettes to prevent the stack lozenging in storage. Additional bracing to the ends of the stack should be fixed to stop lateral movement.
Care should be taken when handling the Posi-Joists™ to avoid bending, twisting or dropping.
When loading/offloading with a crane, slings should always be attached to the timber chords or the cassette lifting points, and not to the metal webs to avoid buckling. Slings should be attached at panel points closest to the quarter points of the Posi-Joists™ as shown below.



Set Out & Placement

Posi-Joists™ are generally placed perpendicular to the load bearing supporting walls and should be located so that the distance between them does not exceed the design spacing – always consult the Posi-Joist™ layout drawing and proceed with erection of the floors as follows:-

1 Plan the erection sequence and place the Posi-Joists™ close to where they are required, only distribute a sufficient number of joists around the building which an be erected in a reasonable period of time. Posi-Joists™ should be protected from inclement weather and stored as noted above.

2 Before lifting the Posi-Joists™ to scaffold level do make sure the correct end of the joist is at the appropriate support as the end details may be different. Also be aware of any internal supports which are being used and that the special internal bearing detail for the joist is in the correct position.

3 If the Posi-Joists™ are supported over more than 2 supports make sure all the supports are the same level and when the joists are lifted into place they rest on all of the supports.

4 If the Posi-Joists™ are supported on masonry hangers, make sure they are the ones specified and are firmly anchored in place. Joists should have a full bearing with no more than a 5mm gap between the end of the joist and the face of the hanger. Masonry hangers with a cavity return and integral strap provide lateral restraint to wall heads.

5 Make sure the Posi-Joists™ are erected the correct way around, the joists will normally be marked "TOP" and the first metal web will normally start at the top of the Posi-Joists™.

6 The Posi-Joists™ are positioned to coincide with the deck joints, the first of which is normally 1210mm away from the wall face in masonry construction or 1200mm from the cavity face in Timber Frame construction when the deck extends to the cavity face; when the joists are spaced at 400 or 600mm centres. There is normally a 10mm perimeter gap between the face of the deck and the face of the wall in masonry construction to allow for potential expansion of the deck. The board material is normally 1200 x 2400mm, the long dimension spanning at 90° to the joist span. The remaining joists are normally spaced on a grid of 400, or 600mm centres, on occasion at 480mm centres.

7 When the deck is set out from the face of the wall it is normal to have the first joist edge 50mm from the face of the wall where in Timber Frame construction with the deck set out from the cavity face it is normal to not have a joist close to the wall, the deck and plasterboard being supported on a timber ledger nailed to the frame. Carefully follow the layout drawing and the wall/joist interface details provided by the Building Designer, in particular in Timber Frame where the joist centres and the stud centres may have to line through.

8 The penultimate Posi-Joist™ in the run is set out on the standard module and the last joist is positioned similar to the first in the run.

9 Posi-Joist™ stair trimmer joists and trimmers will be required around stair openings which may be on the main joist grid or usually off the grid. Set these joists out strictly in accordance with the architectural and Posi-Joist™ layout drawing and fix the trimmer joist to the stair trimmer and the trimmed joists to the trimmer joist with the metal hangers specified making sure that any 2 ply joists are adequately connected together as detailed.

10 To temporary brace and space the Posi-Joists™ which have been laid in position fix a piece of 22 x 97 bracing to the top of the joists at their ends and mid span or around 2.4m centres on spans longer than 4.8m.

11 Install the strongback bracing as detailed, the strongback is always installed on edge not on flat and must be fixed to the integral strongback blocks or nogging pieces nailed to the face of the joist. Due to the width of the Posi-Joist™ chords and the additional stiffness installed in the floor due to the strongback bracing, it will not normally be necessary to employ any temporary diagonal bracing.

12 When all the Posi-Joists™ have been positioned and fixed in place, the partition noggings, perimeter noggings, rim boards, when required can be installed, and in the case of masonry construction the steel lateral restraint straps should be fixed in place at no greater than 2m centres and should extend over 3 joists.

13 The floor carcass is now ready now to receive the decking material and acoustic material where required.

14 The maximum load of sheet materials temporary stored on the Posi-Joists™ is 250kg/m2 and should not be greater than 300mm deep. This equates to 16 sheets of 18mm chipboard, 13 sheets of 22mm chipboard or 20 sheets of 15mm plasterboard. Where the sheets are stacked by hand they should span lengthways across the joists, (Fig 1), when lifted mechanically they should be seated on 5 bearers the width of which are 600mm longer than the width of the board. (Figs 2 & 3).

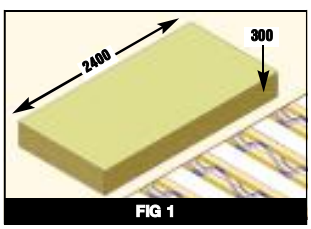


FIG 1

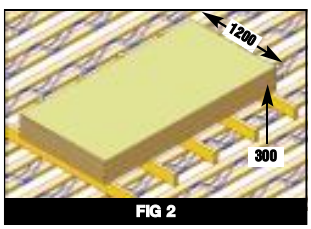


FIG 2

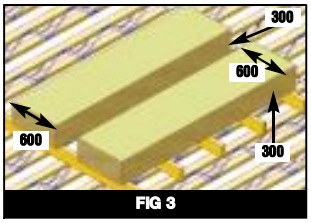
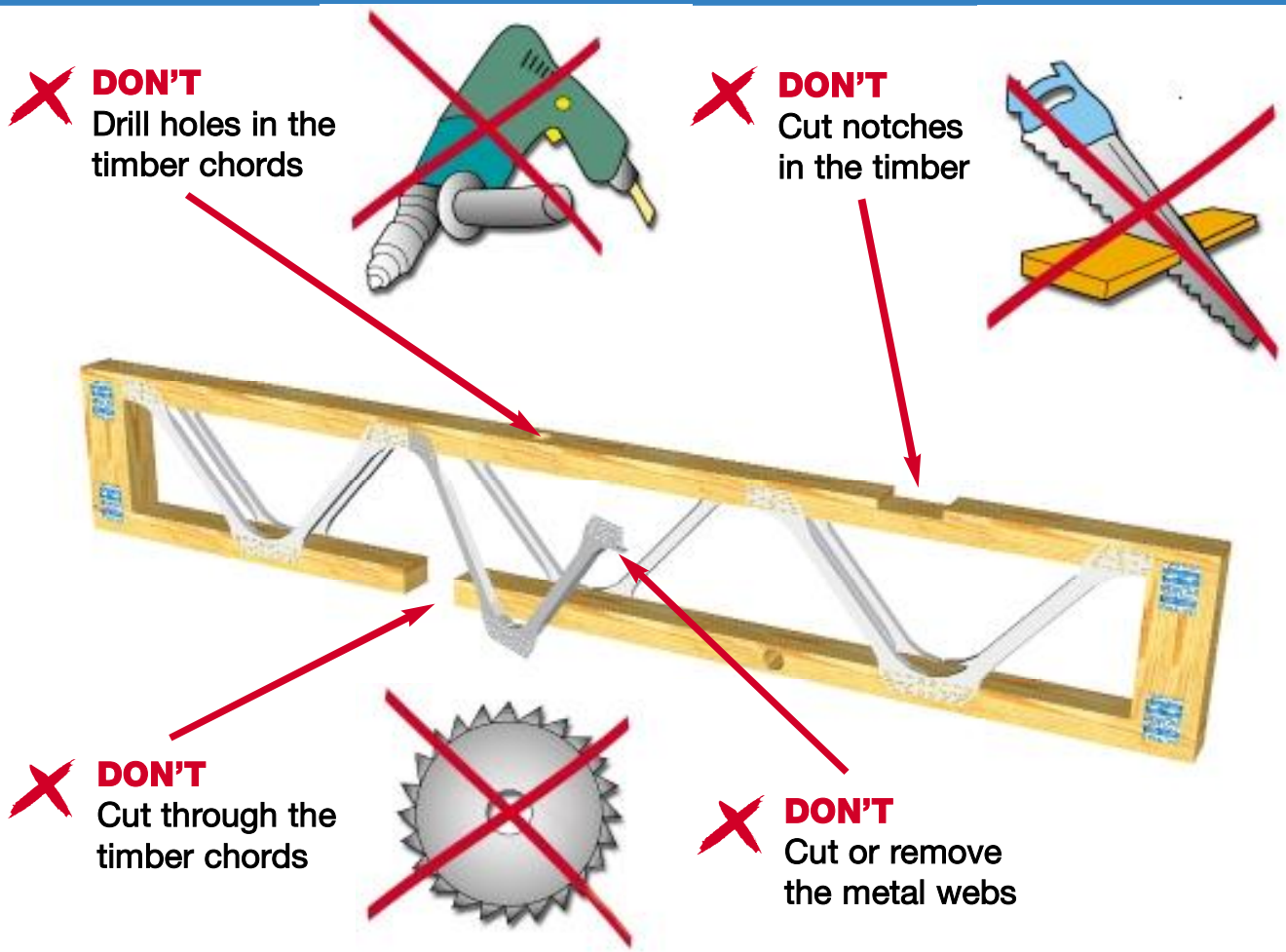


FIG 3

MiTek®

Posi-Joist™
Do's and Don'ts



DO
Store as shown in handling and storage section

DO
Use the open web feature for services

DO
Lift the joists in a vertical position

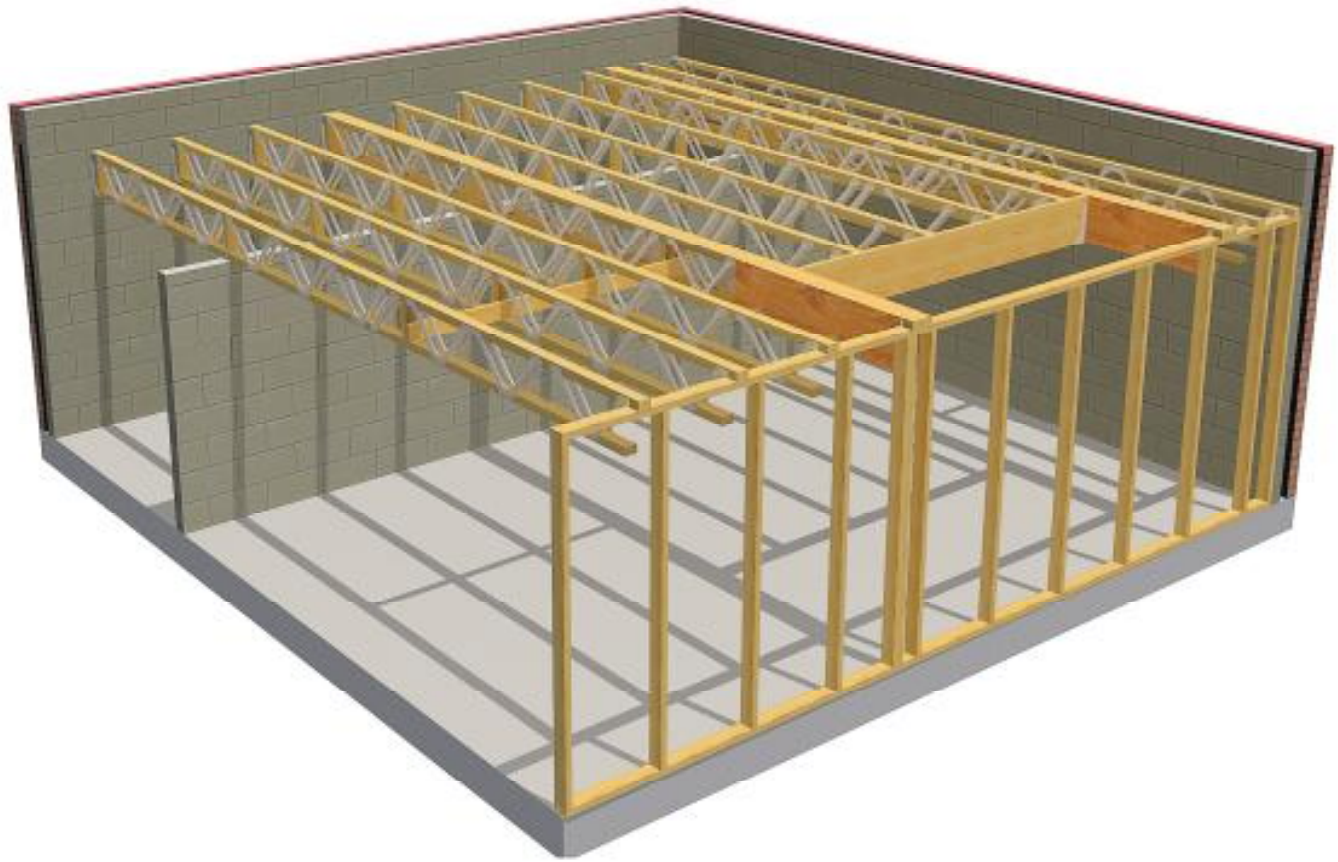
DO
protect joists from inclement weather

Authorised Posi-Joist™ Manufacturer

MiTek Industries Limited
MiTek House
Grazebrook Industrial Estate
Peartree Lane
Dudley DY2 0XW
T: 01384 451 400
F: 01384 451 411
E: info@mitek.co.uk
W: www.mitek.co.uk

Posi-Joist™
Installation Guide

These details must be read in conjunction with the suppliers layout.

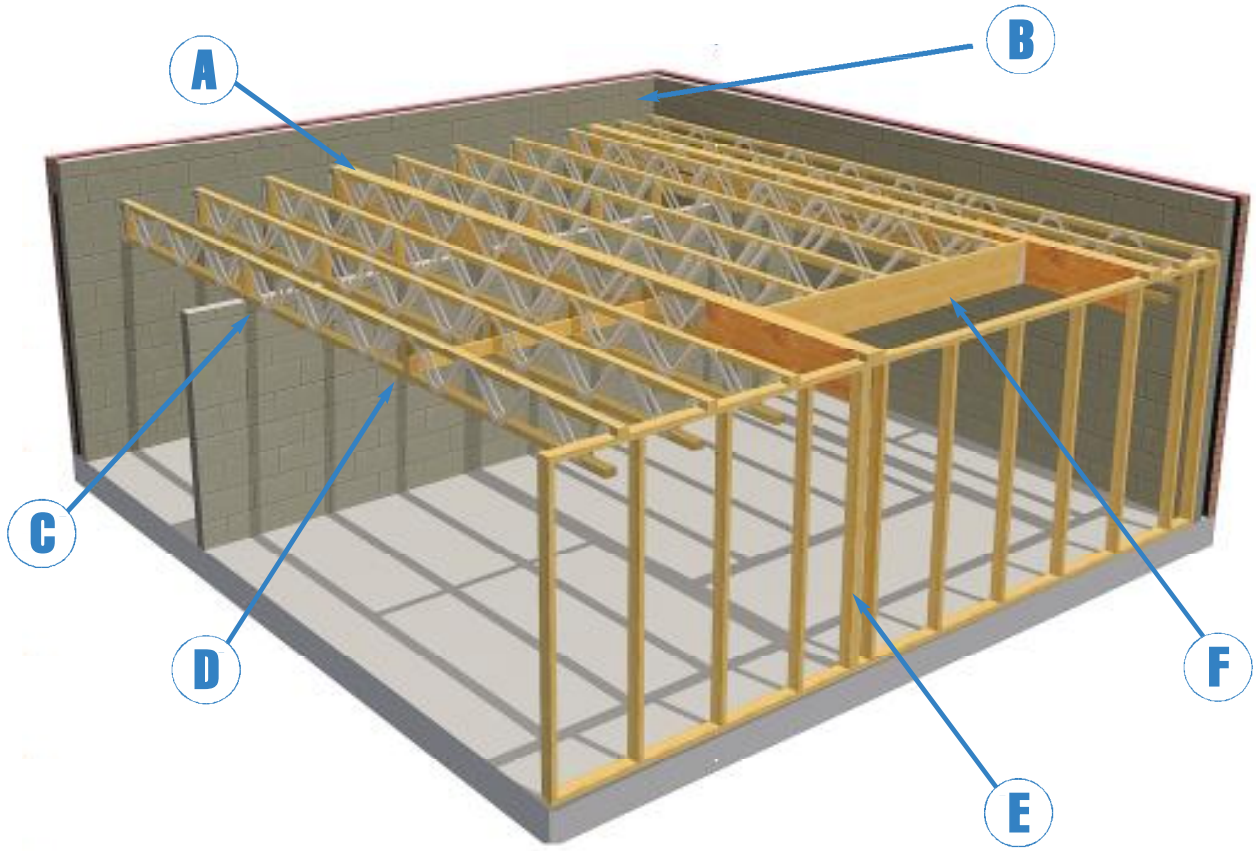


A guide for storage, handling and installation of the MiTek Posi-Joist™ floor system

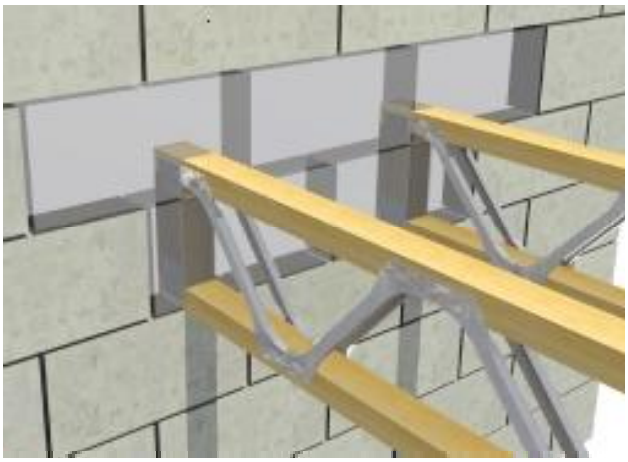
MiTek®

Posi-Joist™
Installation Details

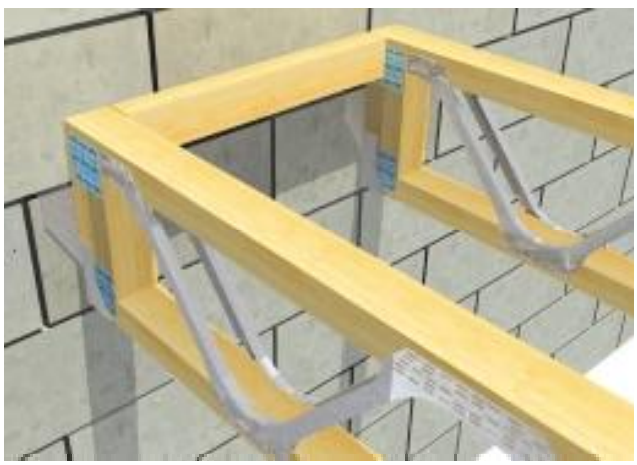
These details must be read in conjunction with the suppliers layout.



A Masonry wall conection details

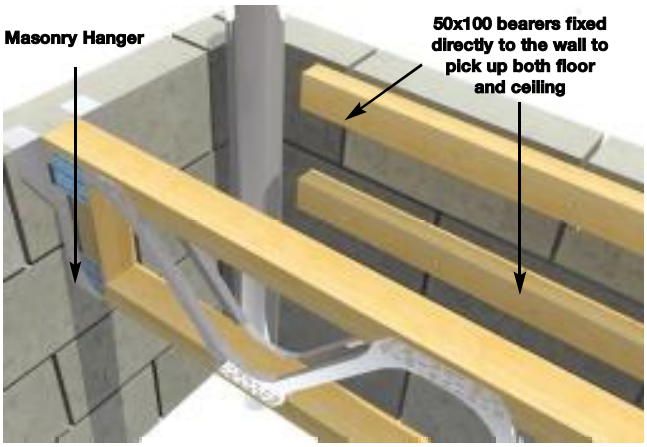


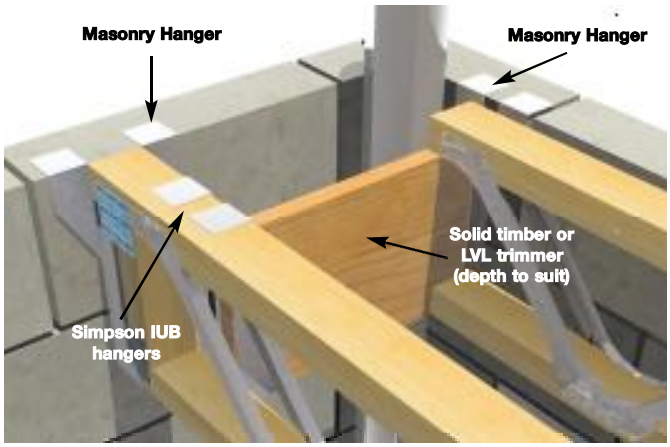
Blockwork to continue between beams to provide restraint.
(DTLR Robust Detail for Thermal Bridging should be observed).
Note: This is not allowed on external walls.



47x72mm Top Chord restraint fixed between beams.
Minimum bearing determined by design.
(Choose correct hanger for load, bearing width and coursework level of hanger bearing flange.)

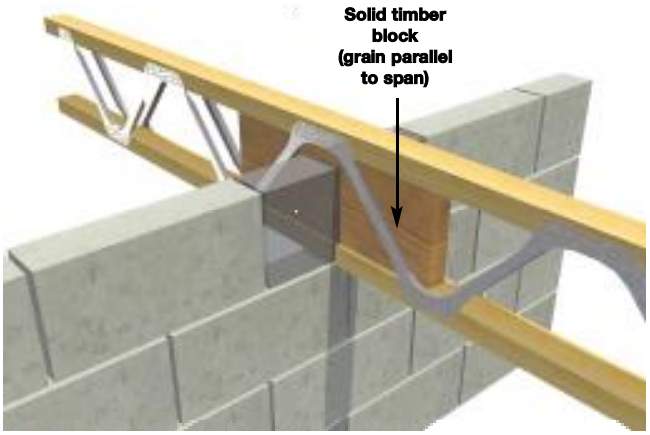
B Soil pipe corner details

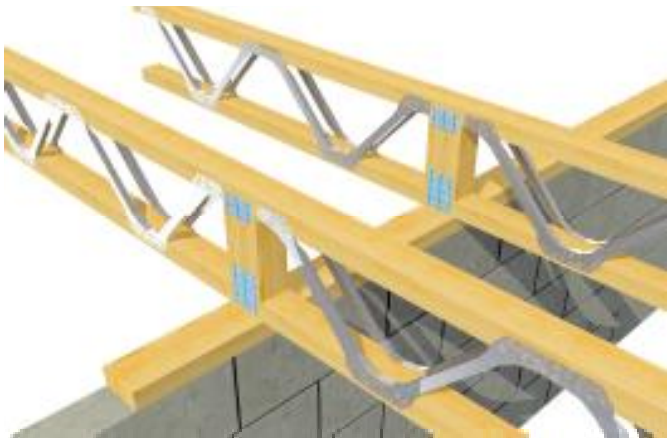




This may not perform well acoustically as sound will be transmitted directly from the floor to the bearer through the inner leaf of the wall.

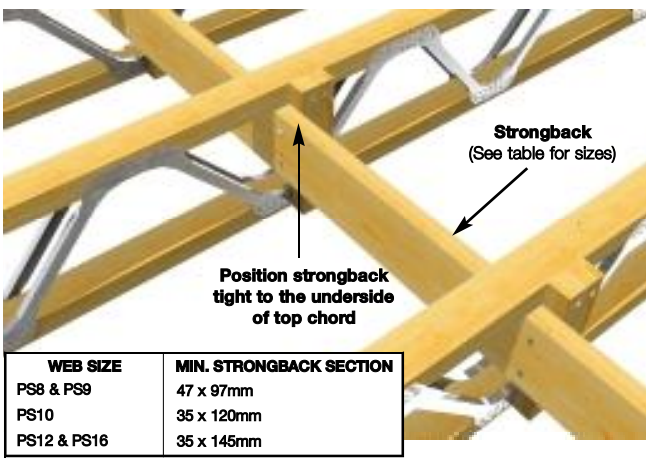
C Internal bearing details





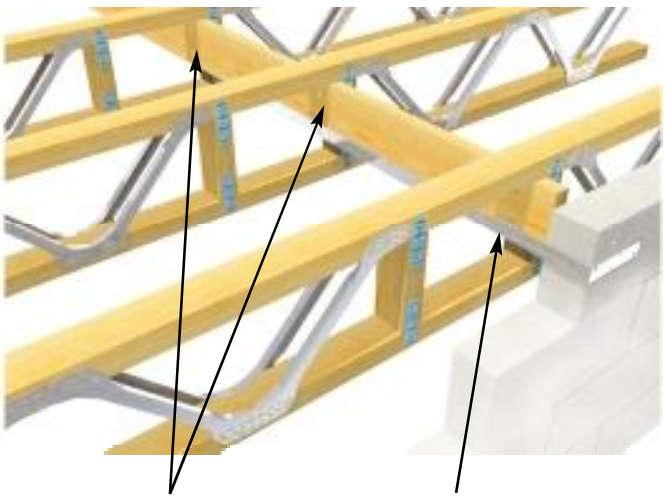
(DTLR Robust Detail for Thermal Bridging should be observed). **Note: This is not allowed on external walls or fire walls.**

D Strongback bracing details



WEB SIZE	MIN. STRONGBACK SECTION
PS8 & PS9	47 x 97mm
PS10	35 x 120mm
PS12 & PS16	35 x 145mm

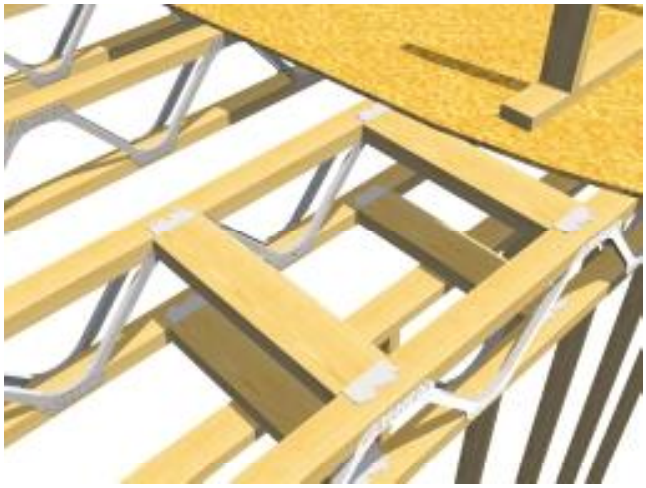
38x75mm (min) blocks twice nailed to top and bottom members and twice nailed to brace using 3.1x75mm long galvanised wire nails.
Insert strongback through joists before fixing joists, it may not be possible after joists have been fixed.



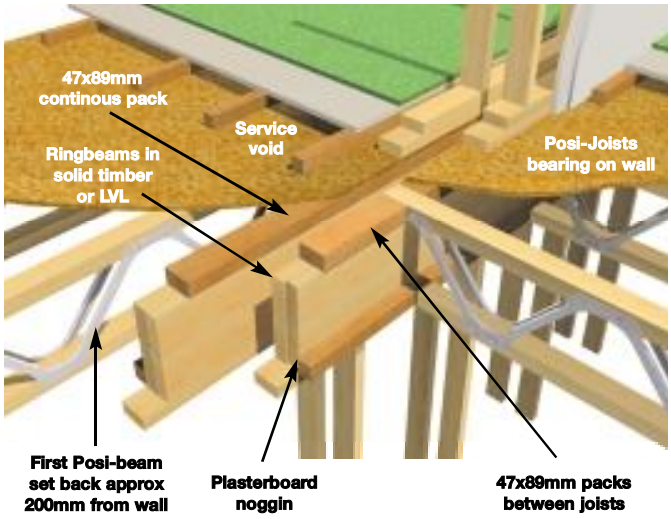
Twice nailed to brace using 3.1x75mm long galvanised wire nails

Strap fixed with a minimum of four fixings of which at least one is to be over the third joist

E Timber frame details



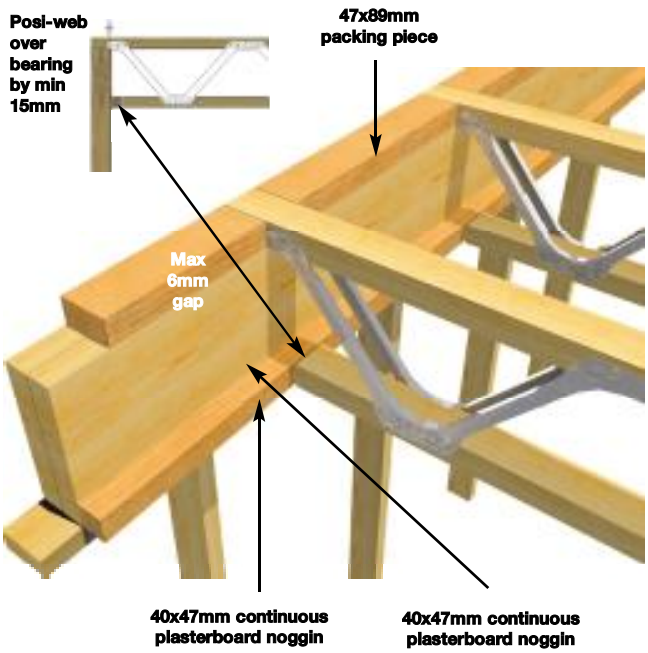
Non-load bearing partitions parallel to floor beams

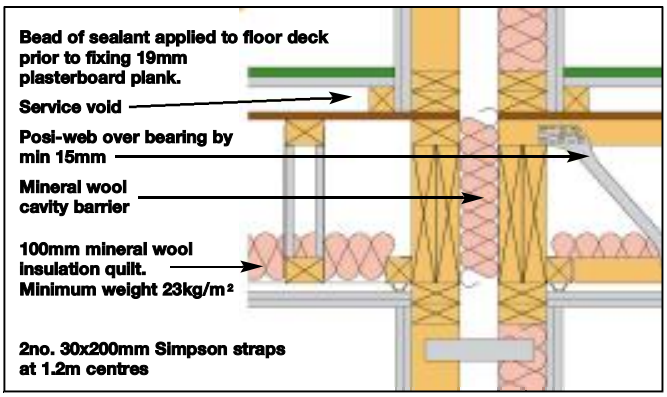


Timber frame party wall (with service void)

Floor comprising: 22mm T&G chipboard on 19mm plasterboard and plank on 47x75mm resilient floor batten at 400mm centres on 18mm T&G chipboard. All T&G edges glued.

Ceiling (not shown) comprising: 2 layers 15mm Gyproc Fireline board on 16mm resilient bars at 400mm centres. First layer fixed with 38mm Gyproc screws at 230mm centres. Second layer fixed with 60mm gyproc screws at 230mm centres. Staggered with first layer. Lay Fireline board in echelon pattern with staggered joints.





F Stairwell details