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FloorTrus™
TIMBER OPEN WEB FLOOR SOLUTION

INSTALLATION GUIDE FOR MASONRY CONSTRUCTION

ALPINE

ITW Industry

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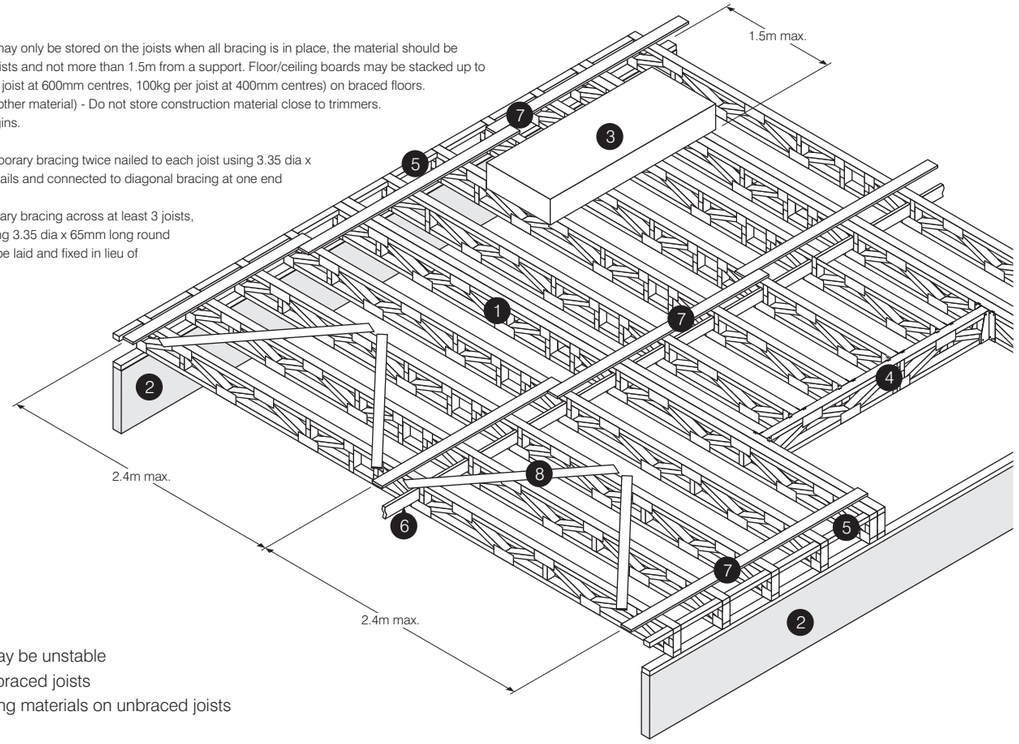
Temporary safety bracing for floors

1 FloorTrus.
2 Load bearing wall.
3 Construction materials may only be stored on the joists when all bracing is in place, the material should be spread over at least 4 joists and not more than 1.5m from a support. Floor/ceiling boards may be stacked up to 250mm high (150kg per joist at 600mm centres, 100kg per joist at 400mm centres) on braced floors.
4 Trimmer (SpaceJoist or other material) - Do not store construction material close to trimmers.
5 Top chord restraint noggins.
6 Strongback.
7 22 x 97 longitudinal temporary bracing twice nailed to each joist using 3.35 dia x 65mm long round wire nails and connected to diagonal bracing at one end of the joist run.
8 22 x 97 diagonal temporary bracing across at least 3 joists, twice nailed to each using 3.35 dia x 65mm long round wire nails (decking can be laid and fixed in lieu of diagonal bracing).



Warning

- Unbraced joists may be unstable
- Do not walk on unbraced joists
- Do not store building materials on unbraced joists

Installation notes

Unloading of joists and loose timber components

At all times the contractor responsible should allocate sufficient resources in terms of equipment and personnel to safely undertake the relevant work operations in accordance with both an Approved Method Statement and the Site Health and Safety Plan.

As a general principle, joists and associated components should be lifted and moved on a minimum number of occasions; the most preferred option being to unload and transfer units directly to the final level of use for immediate assembly.

Where uncertainty is encountered as to the correct method of supporting and lifting components, advice should immediately be sought from the Joist Designer.

Where necessary, strongbacks or lifting beams should be securely and properly attached to the components to prevent buckling during lifting operations.

In situations where components are unloaded using fork lifts or modified front loaders then the contractor should again ensure that the method of lifting does not overstress or damage the joists.

At all times, joists and bundles of joists should be kept vertical when being moved. Where damage to components is suspected as a result of a breach of lifting procedures, this should be immediately reported to the Joist Designer.

The site storage of joists and loose timber components

Where it is necessary to store joists and associated timber components on site this should be undertaken with full consideration of the following matters:

- The proposed storage area should be level, well drained and free from vegetation.
- Joists should preferably be stored vertical (to minimise the risk of distortion) using suitable bearers located at positions where support has been assumed in the design. Where joists are stacked horizontally, a level support should be provided at approximately 1000 mm centres.
- Support bearers should be of sufficient height to ensure that joists do not come into contact with the ground.
- At all times consideration should be given to the moisture content of the timber products. Where it is considered that weatherproof protection is necessary this should be arranged so as to allow proper ventilation and the free passage of air around all components.
- Adequate props should be installed on both sides of vertically stored joists in order to ensure overall stability and to allow the safe removal of units as they are required.

Manoeuvring joists and loose timber components prior to assembly

At all times the Primary Health and Safety initiative of Prevention and Protection should be observed according to the standard hierarchy of risk control.

Where units are transferred to temporary storage/working platforms prior to fixing these shall be of sufficient strength and conform to all the requirements given for permanent storage noted above.

In all cases except those involving the lightest of loads (see the current Manual Handling Regulations) all lifting work shall be undertaken using mechanical lifting equipment.

For further notes refer to page 32 - 33 of the Alpine Open Web Joist Manual (available at www.itw-industry.com)

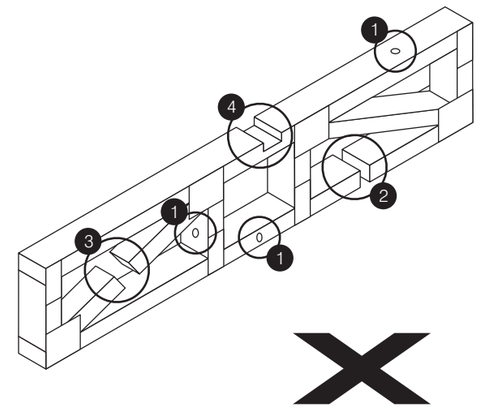
Do’s and Don'ts on site

Do's

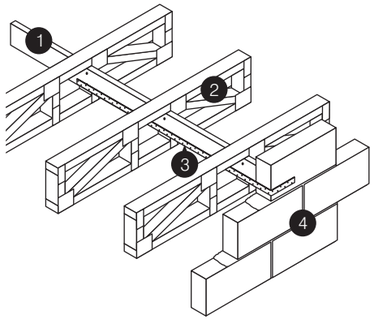
- Store as described in the Installation notes
- Lift the joists in a vertical position
- Use the open web feature for installation of services
- Protect joists from inclement weather
- Install the joists as they have been designed: Refer to the joist designer’s drawings for the correct orientation, spacing etc.

Don’ts

1 Do not drill holes through any part of the joist
2 Do not cut through the chords
3 Do not cut through or remove the webs
4 Do not cut notches in any part of the joist

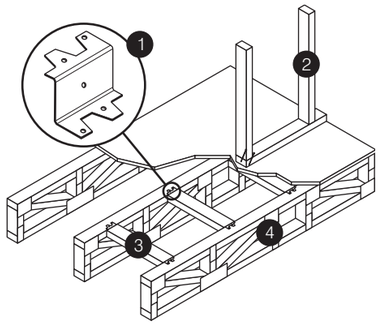


Horizontal restraint strap (A)



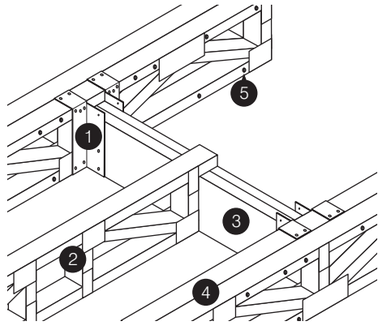
1. Strongback fixed at every joist against underside of top chord as shown using 2 no. 3.35mm dia x 75mm long galvanised round wire nails (refer the table on page 12 for strongback size)
2. FloorTrus
3. Restraint strap (fixing to be determined by building designer)
4. Masonry wall

Non load-bearing partitions parallel to joists



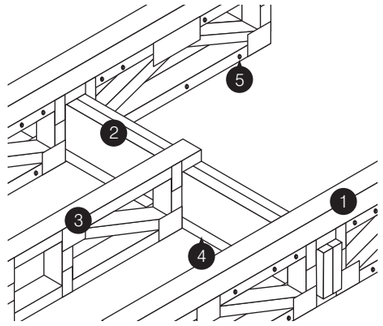
1. Z-clip
2. Non load bearing partition
3. Timber noggin
4. FloorTrus

Stair opening (engineered timber trimmer)



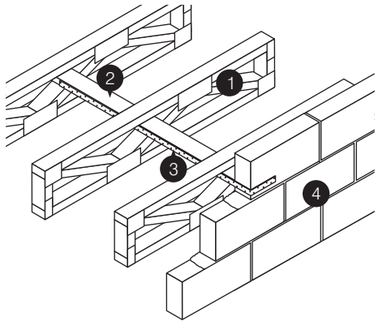
1. Hanger
2. Top hung FloorTrus
3. Engineered timber trimmer
4. Multiple FloorTrus
5. Drive screw

Narrow opening (pocket beam)



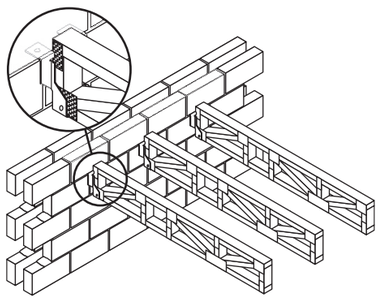
1. Multiple FloorTrus
2. Engineered timber trimmer (depth to suit)
3. Top hung FloorTrus
4. Packing piece for fixing ceiling
5. Drive screw

Horizontal restraint strap (B)



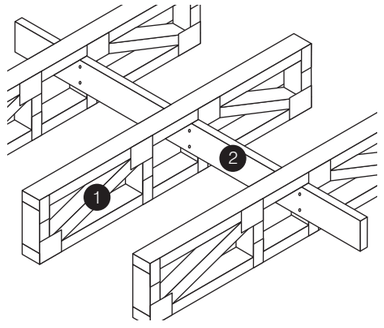
1. FloorTrus
2. Timber brace twice nailed to each joist using 3.35 x 75mm long galvanised round wire nails, fixed over 3 joists (min) and tight to the face of the wall
3. Restraint strap(fixing to be determined by the building designer)
4. Masonry wall

Joists on masonry hangers



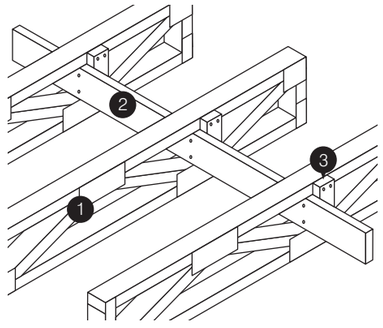
1. Masonry hanger - all masonry must be fully cured and a min. of 3 block course (675mm) must be constructed above the hanger before loading
2. Outer wall
3. Masonry load bearing wall
4. FloorTrus

Strongback detail (fixed to vertical webs)



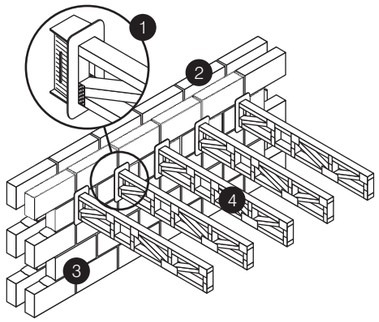
1. FloorTrus
2. Strongback fixed at every joist against underside of top chord as shown using 2 no. 3.35mm dia x 75mm long galvanised round wire nails (refer to the table for strongback size)

Strongback detail (fixed to timber nailer blocks)



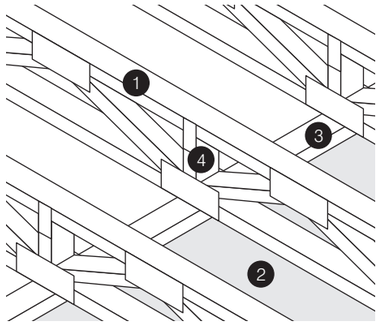
1. FloorTrus
2. Strongback fixed at every joist against underside of top chord as shown using 2 no. 3.35mm dia x 75mm long galvanised round wire nails(refer the for strongback size)
3. 35 x 97 Nailer block fixed to top and bottom chord using 2 no. 3.35mm dia. x 75mm long galvanised round wire nails

Joists built into masonry in plastic seals



1. Plastic joist seal to prevent air leakage (refer to manufacturers specification)
2. Outer wall
3. Masonry load bearing wall
4. FloorTrus

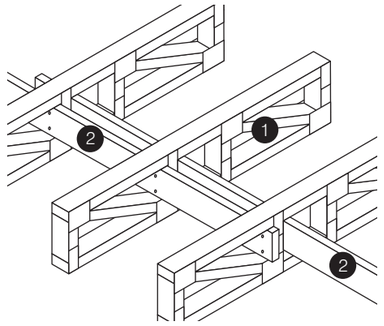
Internal bearing



1. FloorTrus
2. Internal load bearing wall
3. Wallplate
4. Single or double vertical web positioned centrally over the wallplate

NOTE: BLOCKING IS REQUIRED BETWEEN JOISTS UNLESS WALLS ARE BUILT UP BETWEEN JOISTS

Strongback joint detail (fixed to vertical webs)



1. FloorTrus
2. Strongback fixed at every joist against underside of top chord as shown using 2 no. 3.35mm dia x 75mm long galvanised round wire nails (refer the table for strongback size)

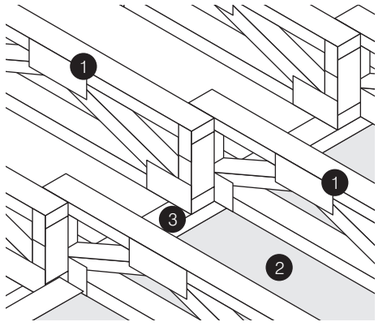
Strongback tables

Span (m)	Strongback spacing
< 4	None
4 - 8	1 at centre of span
> 8	2 at equal spacing

Depth (mm)	Strongback spacing
< 250	35 x 72 TR26 or 44 x 72 C16
250 - 300	35 x 97 TR26 or 44 x 97 C16
> 300	35 x 147 TR26 or 44 x 147 C16

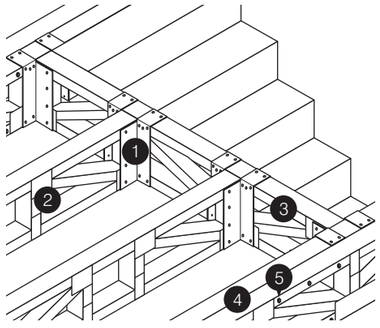
These tables are to be read in conjunction with all strongback details

Shared internal bearing



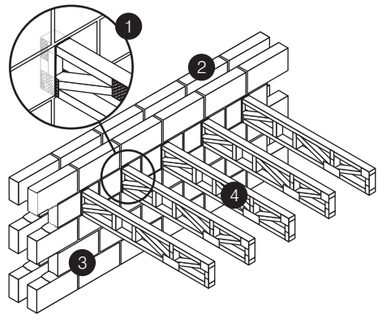
1. FloorTrus
2. Internal load bearing wall
3. Wallplate

Stair opening



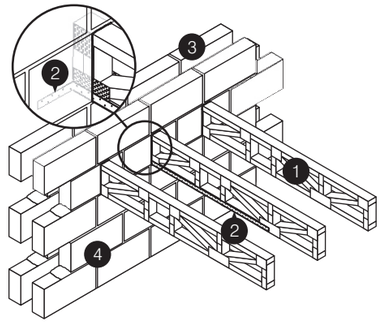
1. Hanger
2. FloorTrus
3. FloorTrus trimmer
4. Multiple FloorTrus
5. Drive screw

Joists built into masonry and sealed with mastic



1. Mastic sealant to prevent air leakage
2. Outer wall
3. Masonry load bearing wall
4. FloorTrus

Parallel restraint strap



1. FloorTrus
2. Restraint strap (fixing to be determined by the building designer)
3. Outer wall
4. Masonry load bearing wall