MiTek
Posi-Joist
Details
Rev 5.4
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Posi-Joists chords fixed together as specified by design using EWP clip or screw connectors, see approved list from MiTek Industries.

Note: Loaded face be clearly marked on Posi-Joist girder

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Posi-Joist To Girder Detail
Solid or engineered timber ring beam with depth to suit.

Edge joist to be fully webbed with internal crush blocks at max 1.8m centres.

Solid timber packer as specified by timber frame design.

Bottom Chord Support
Timber Frame External
(With Ring Beam And Packer)
Bottom Chord Support
Timber Frame Internal
(With Restraint Noggings)

Full depth chord restraint blocking fixed between Posi-Joists
Unless proven by design the Posi-Strut should overhang the bearing by 15mm.

- Packing piece to suite Posi-Joist TC flange depth and Ring beam width
- Ring beam (Size to suit)
- Continuous plasterboard runner
- Gap between end of Bottom Chord of Posi-Joist and plasterboard runner

Top Chord Support Timber Frame
Internal or External
Top restraint noggings fixed between Posi-Joists

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Minimum bearing determined by design
(Choose correct full depth hanger relative to coursework, load, bearing width and desired bearing level)

**Bottom Chord Support Masonry On Hanger With Top Nogging Restraint**
Blockwork to continue between beams to provide restraint
Unless proven by design the Posi-Strut should overhang the bearing by 15mm
Note: Full depth blocking required between joists if top fixed or non full depth face fixed hangers used.

Timber pack as specified by building designer fixed to beam (size to suit)

Face fixed Posi-Joist hanger

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Bottom Chord Support
Flush To Steel Beam
Unless proven by design the Posi-Strut should overhang the bearing by 15mm

Timber plate fixed to top of steel

Timber pack fixed to beam (size to suit)

Gap between end of bottom chord of Posi-Joist and plasterboard runner

Packing piece to suite Posi-Joist TC flange depth and plate width

Top Chord Support To Downstand Steel Beam
Bottom Chord Support
Timber Frame Internal Lapped
(With Full Depth Strutting)
Bottom Chord Support
Timber Frame Internal Continuous
(With Full Depth Strutting If Required)

Single or double full depth blocking required between Posi-Joists only if load bearing wall above
Bottom Chord Support
Masonry Internal Lapped

Note: This is not allowed on fire walls.
Bottom Chord Support
Masonry Internal Continuous
Or Butting Ends

(Minimum 45mm Bearing Required If Joist Split On Centre Line Of Wall)
Bottom Chord Support  
Masonry Internal Continuous  
With Solid Timber Block

Note: Use on internal load bearing internal walls (not fire walls). Full blockfill only required when there is a load bearing wall above the floor level.
Non-Loadbearing Partitions Parallel To Posi-Joists.

Wall panel skew nailed through onto nogging with a min of 2 no 3.35 dia galvanised wire nails, length to suit.

Nogging nailed down onto wall panel as above.

38x89 C16 (min) noggings at max 600mm centres

Z clips.
Non-Loadbearing Partitions Parallel To Posi-Joists
(Alternative Nogging Support Detail)

Wall panels skew nailed through onto noggings with a min of 2 no 3.35 dia galvanised wire nails, length to suit.

Plated stacked nogging supported on top face of bottom chord of Posi-Joists
LARGE SERVICES MAY NEED TO BE OF FLEXIBLE MATERIAL TO BE ABLE TO BE FED THROUGH THE VOIDS IN THE POSI-JOISTS

**Maximum Duct Sizes**

<table>
<thead>
<tr>
<th>POSI JOIST SIZE</th>
<th>W</th>
<th>CIRCLE DIA</th>
<th>SQUARE</th>
<th>RECTANGLE DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>PS-8</td>
<td>108</td>
<td>105</td>
<td>95</td>
<td>270</td>
</tr>
<tr>
<td>PS-9</td>
<td>131</td>
<td>124</td>
<td>115</td>
<td>310</td>
</tr>
<tr>
<td>PS-10</td>
<td>159</td>
<td>150</td>
<td>135</td>
<td>320</td>
</tr>
<tr>
<td>PS-12</td>
<td>210</td>
<td>190</td>
<td>155</td>
<td>350</td>
</tr>
<tr>
<td>PS-14</td>
<td>279</td>
<td>250</td>
<td>200</td>
<td>490</td>
</tr>
<tr>
<td>PS-16</td>
<td>327</td>
<td>272</td>
<td>220</td>
<td>510</td>
</tr>
</tbody>
</table>
Posi-Joists chords fixed together as specified by design using EWP clip or screw connectors, see approved list from MiTek Industries.

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Staircase Opening With 2 Ply Posi-Joist Trimming Girder and Posi-Joist Trimmer Beam
Chords fixed together at point of load using cluster of Heco Topix-CC screws as shown fixed from loaded face around vertical web with nominal 600 ctrs applied to remainder of Posi-Joist

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Staircase Opening With 3 Ply Posi-Joist Trimming Girder and Posi-Joist Trimmer Beam
Posi-Joists chords fixed together as specified by design using EWP clip or screw connectors, see approved list from MiTek Industries.

Solid timber or EWP trimmer depth to suit

Floor packers added to suit trimmer size

Trimmer to be notched over bottom flange of hanger

Unless proven by design the Posi-Strut should overhang the bearing by 15mm

Staircase Opening With Posi-Joist Trimming Girder and EWP Trimmer Beam
Staircase Opening With Posi-Joist Trimming Girder and Solid Timber Trimmer Beam On Hangers

Posi-Joists chords fixed together as specified by design using EWP clip or screw connectors, see approved list from MiTek Industries.

Trimmer to be notched over bottom flange of hanger

Floor packers added to suit trimmer size
Posi-Joists chords fixed together as specified by design using EWP clip or screw connectors, see approved list from MiTek Industries.

Solid timber or EWP trimer at depth to suit slotted through girders

Packing piece to pick up ceiling

Floor packers added to suit trimmer size

Staircase Opening With Solid Timber Or EWP Trimmer Beam Slotted Through Posi-Joist Trimming Girder
Staircase Opening With EWP Stair Trimmer and Posi-Joist Trimmer Beam

Do not notch bottom member of Posi-Joist over bottom flange of hanger.

Strongback securely fixed to trimmer using suitable hanger

Twice nail brace to web using 3.1 x 75mm long galvanised wire nails

PSD23
38x75 (min) blocks twice nailed to top and bottom members and twice nailed to brace using 3.1 x 75mm long galvanised wire nails

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations etc.

Position strongbackss tight to the underside of top chord.

<table>
<thead>
<tr>
<th>WEB SIZE</th>
<th>RECOMMENDED MIN STRONGBACK SECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS-8, PS-9 &amp; PS-10</td>
<td>50 x 100 TR26*</td>
</tr>
<tr>
<td>PS12, PS-14 &amp; PS16</td>
<td>35 x 150 TR26*</td>
</tr>
</tbody>
</table>

**INSERT STRONGBACK THROUGH POSI - JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTER THEY HAVE BEEN FIXED.**

**Strongback Detail**

*(Fixed To Site Added Blocks)*

*(Fix at a maximum of 4.0 metre centres and within effective zone)*
Twice nail brace to web using 3.1 x 75mm long galvanised wire nails

Position strongbacks tight to the underside of top chord

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations etc.

Position strongbacks tight to the underside of top chord.

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</table>

**INSERT STRONGBACK THROUGH POSI - JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTER THEY HAVE BEEN FIXED.**

**Strongback Detail**

*(Fixed To Built In Vertical Webs)*

*(Fix at a maximum of 4.0 metre centres and within effective zone)*
Twice nail brace to web using 3.1 x 75mm long galvanised wire nails

Strongback Bridging
(Fixed To Built In Vertical Webs)
(Fix at a maximum of 4.0 metre centres and within effective zone)

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations etc.

Position strongbacks tight to the underside of top chord

**INSERT STRONGBACK THROUGH POSI-JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTER THEY HAVE BEEN FIXED.**
38x75 (min) blocks twice nailed to top and bottom members and twice nailed to brace using 3.1 x 75mm long galvanised wire nails

1200mm long splice fixed with 10 no 3.1x 75mm galvanised wire nails each side of splice, nailed through and clenched over on far side

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations etc.

Position strongbacks tight to the underside of top chord

**Strongback Splice**
*(Fixed To Site Added Blocks)*

(Fix at a maximum of 4.0 metre centres and within effective zone)
Strap fixed along top edge of strongback with a minimum of four fixings of which at least one is to be over the third joist.

Strongback twice nailed to brace using min 3.1 x 75mm long galvanised wire nails

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Horizontal Restraint
Strap Fixed To Strongback
35 x 97 C16 nogging nailed to underside of top chord of Posi-Joists with 3.1 x 75mm long galvanised wire nails

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

**Horizontal Restraint Strap Fixed To Nogging**
Typical Timber Frame Compartment
Floor / Party Wall Detail

Floating Floor Comprising:-
18mm T & G Chipboard on 19mm Plasterboard Plank
on 25mm Fibreglass Slab on 18mm T & G Chipboard.
All T & G edges glued, and 19mm plank bonded to
chipboard with dabs of Gyproc sealant at 300mm
centres. Joints between chipboard and plasterboard
to be staggered and board direction reversed.

Bead of sealent applied
prior to fixing
19mm plasterboard plank.

100mm Mineral wool insulation quilt 23kg/m2.

Mineral wool cavity barrier.

47x 89 Continuous Pack

47x 89 Packs
between joists.

2 no 30 x 200mm GMS
Straps at 1200mm centres.

Posi-web over
bearing by min
15mm

First Posi-Joist beam
set back from wall
by approx 200mm

Posi-Joists
Parallel to wall.

Plasterboard noggins

Ring Beams in
solid timber or LVL.

Posi-Joists
Bearing on wall.

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 screws.
Lay Firleline board in echelon pattern with staggered joints.
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.

**Fixing Round SVP Using Bearer Plates**
Fixing Round SVP

Using SVP Hangers

- Fixing Round SVP Soil Vent Pipe Hanger.
  - May be handed.

- Z clips.

- Full depth masonry hanger

- Top restraint nogging omitted for clarity

- Nogging to provide floor fixing

- Do not notch bottom member of Posi-Joist over bottom flange of hanger.
Fixing Round SVP
Using Timber Trimmer

Unless proven by design the Posi-Strut should overhang the bearing by 15mm

- Top restraint noggin omitted for clarity
- Full depth masonry hanger
- Do not notch bottom member of Posi-Joist over bottom flange of hanger.
- Full depth masonry hanger
- Solid timber or EWP trimmer depth to suit
- Floor packer added to suit trimmer size
330mm solid block from dry well seasoned timber tight fixed at manufacture

Max 130mm to be trimmed on site

Plan view of Posi-Joist with one block

Plan view of Posi-Joist with two blocks

General Support Details
Site Length Adjustment
400mm solid block from dry well seasoned timber tight fixed at manufacture

Side elevation

Block nailed to top and bottom chords using 7 No. 3.1mm diameter 90mm long power driven annular ring-shank nails at 48mm centres.

Plan view of Posi-Joist with one block

Two blocks required when chords are 122mm or 147mm

Block nailed to top and bottom chords using 7 No. 3.1mm diameter 90mm long power driven annular ring-shank nails at 48mm centres.

Plan view of Posi-Joist with two blocks

General Support Details
Internal Blocked Bearing Detail