BUILDING PRODUCT

JoistHanger

FOR FACE FIXING OF JOISTS TO BEAMS.

The JoistHanger has been developed as an economical and effective way to fasten joists, Posi-Strut® floor trusses and roof trusses to the face of beams and girders.

For durability information refer to **Corrosion Resistance of MiTek Metal Connectors**, available at MiTek website.

USES

Available in a range of sizes to suit the most common timber dimensions. The JoistHangers provide a simple but effective way to:

- → Fasten joists to the face of beams.
- → Fasten 70mm and 90mm thick Posi-Strut floor trusses to the face of other beams.
- → Fasten small span standard trusses to girder trusses.

ADVANTAGES

- → Fast fixing method, providing a reliable fixing capacity.
- → Simple nail fixing.
- → No drilling is required.

This certified Engineered Building Product complies with the National Construction Code, Australian Standards and is CodeMark certified.

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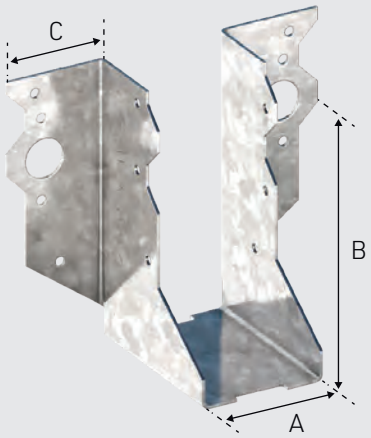
CODEMARK
CM70055
Australia

SPECIFICATIONS

Steel Grade	G300
Thickness (Total Coated)	1.0mm
Galvanised Coating	Z275
Nails	MiTek 30 x 2.8mm hot dipped galvanised reinforced head.
Screws (alternative fixing with JoistHanger JH70160 and JH95150)	MSA1430 – MiTek No.14 x 30mm anti-split self-drilling HD galvanised screws with Ruspert® coating for fixing into single supporting beam
	MSA1465 – MiTek No.14 x 65mm anti-split self-drilling HD galvanised screws with Ruspert® coating for fixing into double 35mm or 45mm wide supporting beam
Product Code	See Table 1



SIZES

The sizes used for dressed timber will generally be different from those for unseasoned, rough sawn material. Use Table 1 to select an appropriate JoistHanger size.

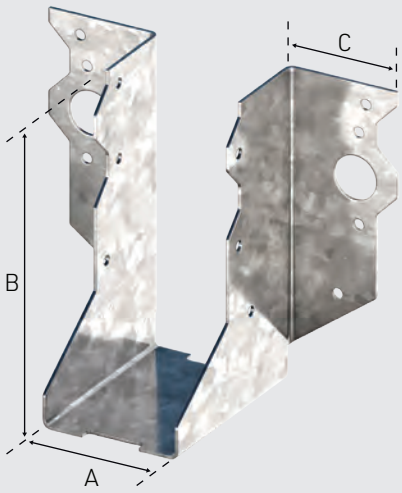


Table 1

Product Code	Size	Dimensions (mm)		
		A	B	C
JH3590	35 x 90	36	84	31
JH35120	35 x 120	36	117	31
JH4090	40 x 90	41	82	31
JH40120	40 x 120	41	115	31
JH40190	40 x 190	41	180	31
JH4590	45 x 90	46	79	31
JH45120	45 x 120	46	112	31
JH45140	45 x 140	46	139	31
JH45190	45 x 190	46	177	31
JH45220	45 x 220	46	214	31
JH5090	50 x 90	51	77	31
JH50120	50 x 120	51	110	31
JH50190	50 x 190	51	175	31
JH65165	65 x 165	65	167	31
JH70160	70 x 160	70	165	31
JH95150	95 x 150	95	152	31

Category	1	2	3
Adjustment factor	1.00	0.94	0.88

Values in tables 2 & 3 incorporate the Category 1 capacity factor (Ø) for houses. For other categories, multiply the design capacities by adjustment factors as above.. Refer to AS1720.1 for a full definition of each category.

When different timbers are used in each member, base 'DL only', 'DL+Floor LL' and 'DL+LL' capacities on the joint group of supporting member, and base 'DL + WL capacity on the weaker joint group of either member.

FIXING WITH NAILS

Limit State Design Capacity for Fixing with Nails (kN)

Table 2

JoistHanger Size	Loading Type	Joint Group									
		J2	J3	J4	J5	J6	JD2	JD3	JD4	JD5	JD6
90mm Deep	DL Only	4.3	3.1	2.2	1.7	1.2	5.5	4.3	3.1	2.5	1.9
	DL + Floor LL	5.2	3.7	2.6	2.0	1.5	6.6	5.2	3.7	3.1	2.3
	DL + Roof LL	5.8	4.2	3.0	2.2	1.7	7.4	5.8	4.2	3.4	2.6
	DL + WL	6.5	4.6	3.3	2.5	1.8	8.2	6.5	4.6	3.8	2.9
140mm Deep	DL Only	5.7	4.1	2.9	2.2	1.6	7.7	6.0	4.3	3.5	2.7
	DL + Floor LL	6.9	4.9	3.5	2.6	2.0	9.3	7.3	5.2	4.3	3.3
	DL + Roof LL	7.7	5.5	3.9	2.9	2.2	10.3	8.2	5.8	4.8	3.6
	DL + WL	8.7	6.2	4.4	3.3	2.5	11.0	8.7	6.2	5.1	3.9
190mm Deep	DL Only	8.7	6.2	4.4	3.3	2.5	12.3	9.7	7.0	5.7	4.3
	DL + Floor LL	10.5	7.5	5.3	4.0	3.0	14.9	11.8	8.4	6.9	5.3
	DL + Roof LL	11.7	8.4	5.9	4.5	3.3	16.7	13.1	9.4	7.7	5.9
	DL + WL	10.4	7.4	5.2	4.0	3.0	14.8	11.7	8.4	6.8	5.2
220mm Deep	DL Only	11.8	8.4	6.0	4.5	3.4	13.3	13.3	9.5	7.8	5.9
	DL + Floor LL	14.3	10.2	7.2	5.5	4.1	16.1	16.1	11.5	9.5	7.2
	DL + Roof LL	16.0	11.4	8.1	6.1	4.5	18.0	18.0	12.9	10.5	8.0
	DL + WL	13.5	9.7	6.8	5.2	3.8	15.2	15.2	10.9	8.9	6.8

FIXING WITH SCREWS

Limit State Design Capacity for Fixing with Screws (kN)

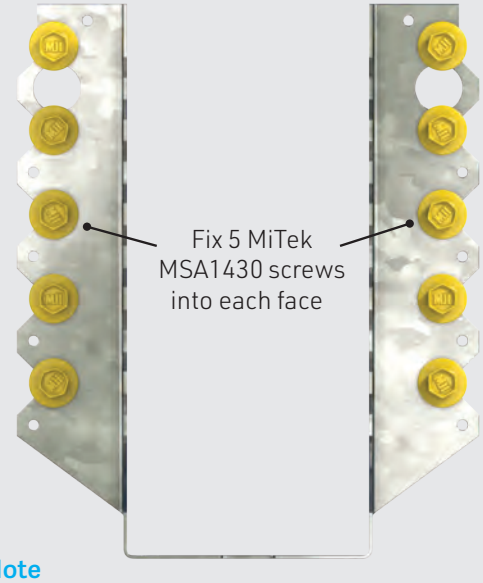
Table 3

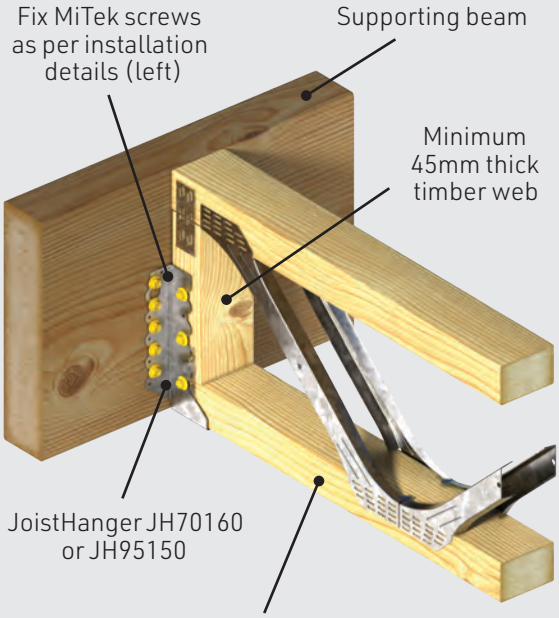
JoistHanger Size	Loading Type	Joint Group		
		JD3	JD4	JD5
JH70160 JH95150	DL Only	7.7	7.7	6.3
	DL + Floor LL	9.3	9.3	7.7

Notes

1. Use 45mm thick timber for end vertical web when fixing JoistHanger with screws.
2. MiTek screws shall be driven into existing nail holes into the bracket, where shown.
3. Use MiTek MSA1465 screws in double 35mm ply beams. In double 45mm ply beams and beyond, the layers are also to be laminated together with additional fixings for load sharing.
4. Design capacities have been obtained from laboratory testing and procedures given in AS 1720.1.
5. The vertical web may be set back from the end of the Posi-Truss, up to 5mm maximum.

Screw fixing locations to supporting beam



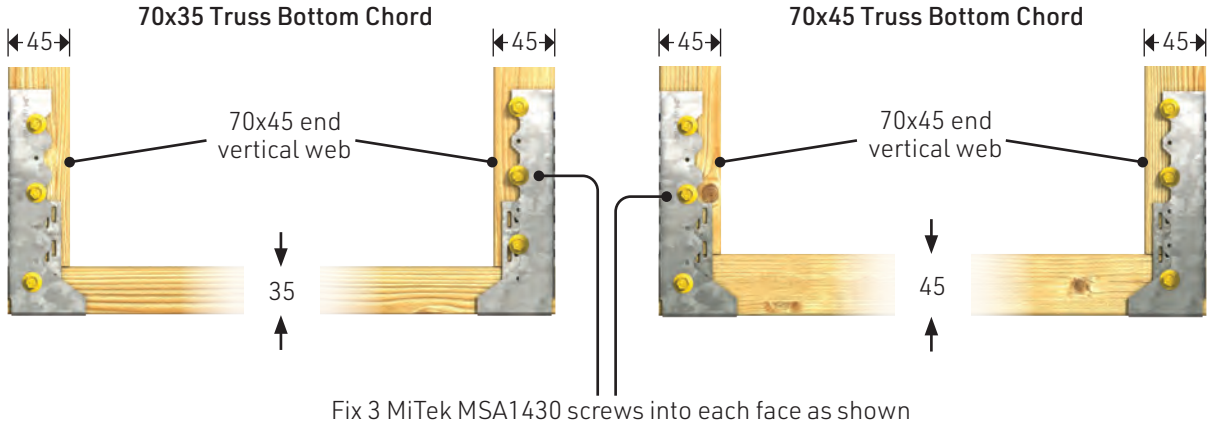


Note

MiTek's patented screws are designed to tap their way through the smaller holes in the steel flanges and nailplates.

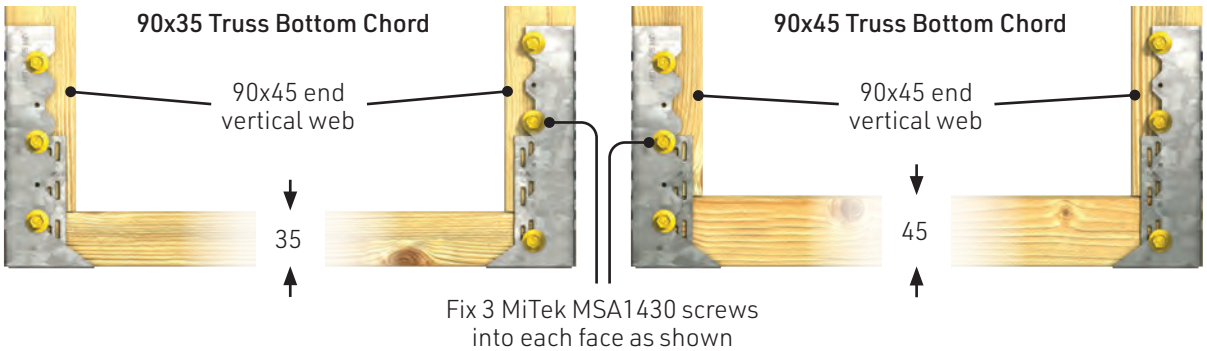
SCREW FIXING LOCATIONS TO FLOOR TRUSS

Fixing details for JoistHanger JH70160



SCREW FIXING LOCATIONS TO FLOOR TRUSS CONT'D

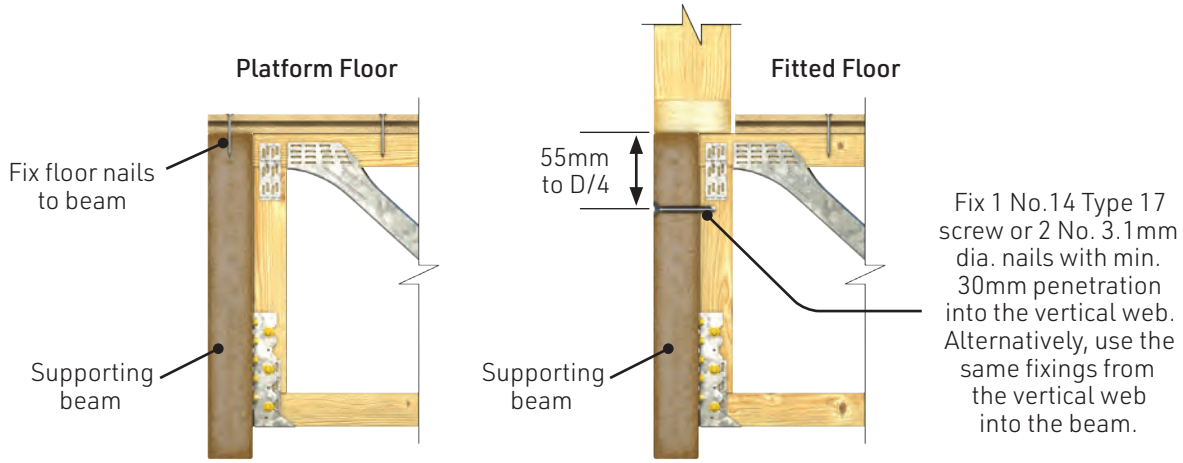
Fixing details for JoistHanger JH95150



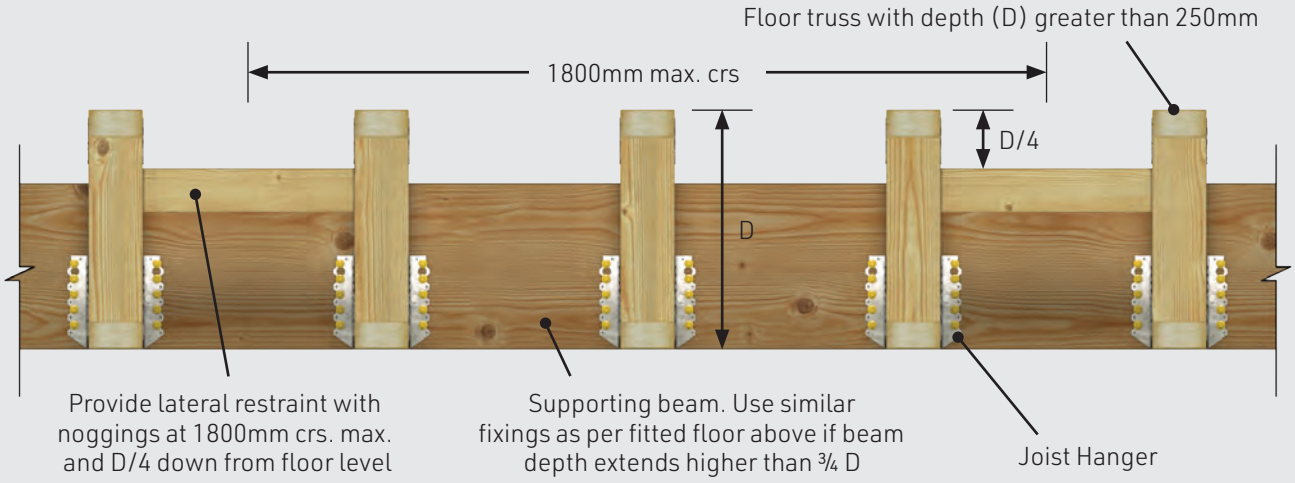
INSTALLATION DETAILS

Additional lateral restraints are required to prevent the rotation of deep floor trusses with a depth greater than 250mm. Refer to the following installation details. The Posi-Truss shall be installed hard against the supporting beam in the JoistHanger shoe.

WHEN THE BEAM AND FLOOR TRUSS ARE AT THE SAME FLOOR LEVEL



WHEN THE BEAM HEIGHT IS LOWER THAN THE FLOOR TRUSS



WHEN THE FLOOR TRUSS IS SHORT OF BEAM

Refer to MiTek Standard Detail for Floor truss Maximum 35mm Short of Beam (Job No. STDPS Drawing No. M4) when the end of floor truss is offset from the supporting beam.

FIXING WITH NAILS

General Installation

1. The JoistHanger should be fixed to the supporting member using the number of nails specified in Table 4.
2. Place the member to be supported in the JoistHanger so that it is firmly against the supporting member.
3. Drive the number of nails into the supported member as specified in Table 4.
4. Where the girder truss \ supporting beam is of multiple ply construction, fasten the bottom chords of the girder truss or the supporting beams with one M12 bolt located within 100mm of each side of the JoistHanger.

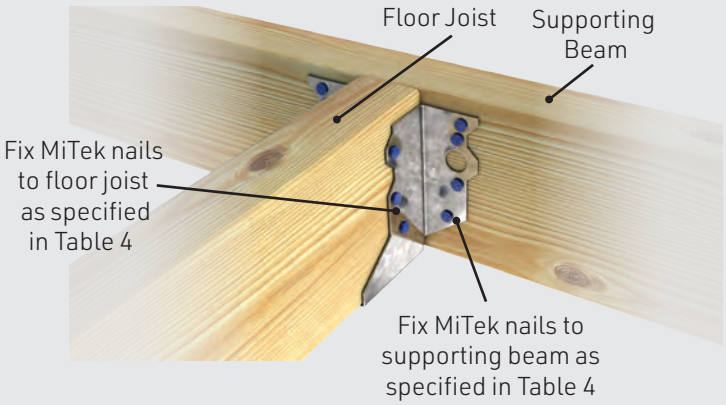
Alternatively, use two sufficiently long No. 14 screws in place of one M12 bolt.

NAILING REQUIREMENTS

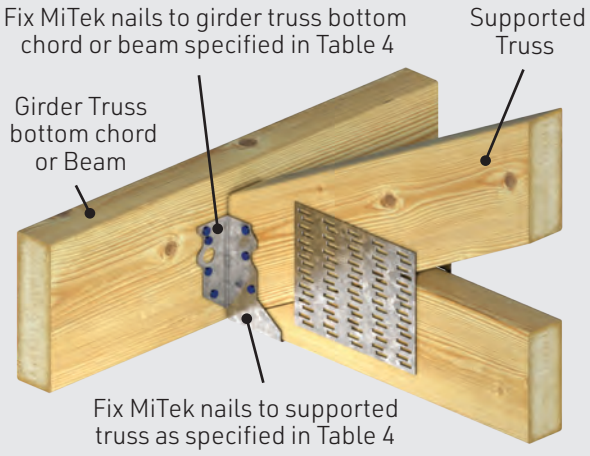
Table 4

JoistHanger Size (mm)	Fixing to	
	Supporting Member	Supported Member
90	8	6
120 to 140	12	8
150 to 190	20	12
220	28	16

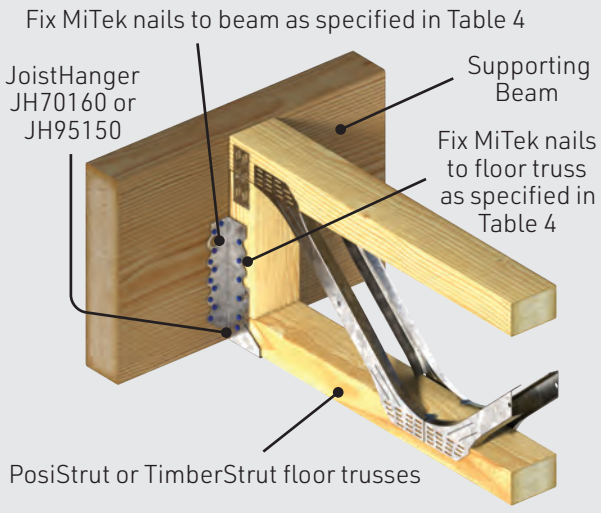
FIXING FLOOR JOIST TO BEAM



FIXING STANDARD TRUSS TO GIRDER TRUSS OR BEAM



FIXING FLOOR TRUSS TO BEAM



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