

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

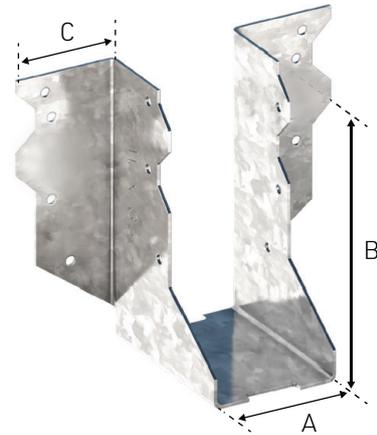
- Fast fixing method, providing a reliable fixing capacity.
- Simple nail or screw fixing.
- No drilling is required.



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

SPECIFICATIONS

Steel Grade	G300
Thickness (Total Coated)	1.0mm
Galvanised Coating	Z275
Nails	MiTek 30 x 2.8mm hot dipped galvanised reinforced head.
Screws	MSA1430 – MiTek No.14 x 30mm anti-split self-drilling screws with Ruspert® coating
Product Code	See Table 1



	Product Code	Size	Dimensions (mm)		
			A	B	C
Table 1	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	

DESIGN CAPACITIES

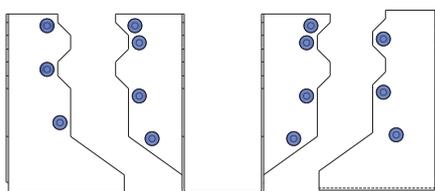
When different timbers are used in each member, base 'DL only', 'DL+Floor LL' and 'DL Roof LL' capacities on the joint group of supporting member, and base 'DL+WL' capacity on the weaker joint group of either member.

Values in Table 2 to Table 9 incorporate the Category 1 capacity factor (ϕ) for houses. For Category 2, multiply these values by 0.94, and Category 3 multiply by 0.88. Refer to AS1720.1 for a full definition of each category.

Joist Hanger Depth - 90mm

FIXING CONFIGURATIONS

Nail Fixings



Screw Fixings

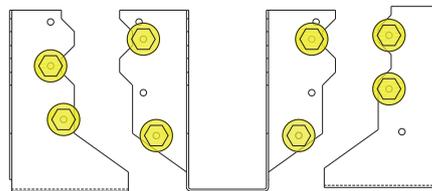


Table 2 - Limit state design capacity (kN) for nail fixings

NAIL FIXINGS	Joist Hanger Product Code	Number of Nail Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
	JH3590	8	6	DL Only	0.57	4.3	3.1	2.5	1.9
	JH4090			DL+ Floor LL	0.69	5.2	3.7	3.1	2.3
	JH4590			DL+Roof LL	0.77	5.8	4.2	3.4	2.6
	JH5090			DL+WL	1.14	6.5	4.6	3.8	2.9

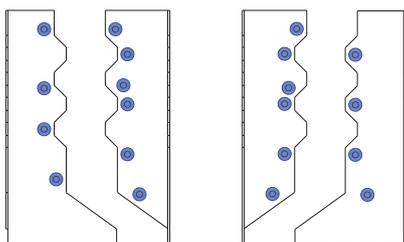
Table 3 - Limit state design capacity (kN) for screw fixings

SCREW FIXINGS	Joist Hanger Product Code	Number of Screw Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
	JH3590	4	4	DL Only	0.57	4.8	4.8	3.4	2.5
	JH4090			DL+ Floor LL	0.69	5.8	5.8	4.1	3.0
	JH4590			DL+Roof LL	0.77	6.5	6.5	4.6	3.3
	JH5090			DL+WL	1.14	7.9	7.9	5.6	4.1

Joist Hanger Depth - 120mm to 140mm

FIXING CONFIGURATIONS

Nail Fixings



Screw Fixings

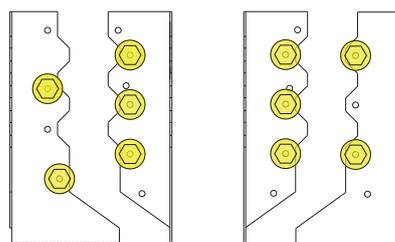


Table 4 - Limit state design capacity (kN) for nail fixings

	Joist Hanger Product Code	Number of Nail Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
NAIL FIXINGS	JH35120	12	8	DL Only	0.57	6.0	4.3	3.5	2.7
	JH40120			DL+ Floor LL	0.69	7.3	5.2	4.3	3.3
	JH45120			DL+Roof LL	0.77	8.2	5.8	4.8	3.6
	JH50120			DL+WL	1.14	8.7	6.2	5.1	3.9
	JH45140								

Table 5 - Limit state design capacity (kN) for screw fixings

	Joist Hanger Product Code	Number of Screw Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
SCREW FIXINGS	JH35120	6	4	DL Only	0.57	6.6	6.6	4.7	3.4
	JH40120			DL+ Floor LL	0.69	8.0	8.0	5.7	4.1
	JH45120			DL+Roof LL	0.77	8.9	8.9	6.3	4.6
	JH50120			DL+WL	1.14	7.9	7.9	5.6	4.1
	JH45140								

Joist Hanger Depth - 150mm to 190mm

FIXING CONFIGURATIONS

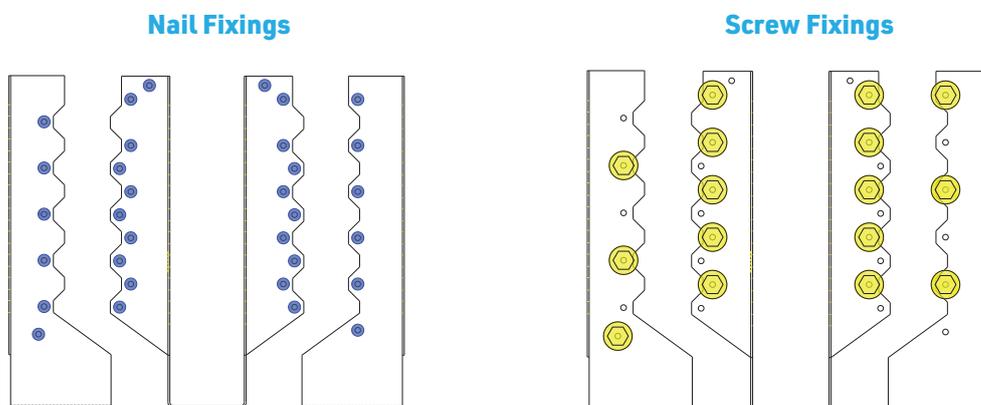


Table 6 - Limit state design capacity (kN) for nail fixings

	Joist Hanger Product Code	Number of Nail Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
NAIL FIXINGS	JH95150	20	12	DL Only	0.57	9.7	7.0	5.7	4.3
	JH65165			DL+ Floor LL	0.69	11.8	8.4	6.9	5.3
	JH70160			DL+Roof LL	0.77	13.1	9.4	7.7	5.9
	JH40190			DL+WL	1.14	11.7	8.4	6.8	5.2
	JH45190								
	JH50190								

Table 7 - Limit state design capacity (kN) for screw fixings

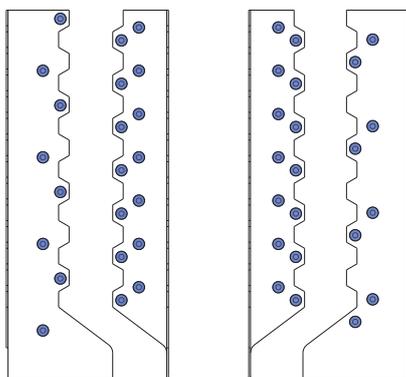
	Joist Hanger Product Code	Number of Screw Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
SCREW FIXINGS	JH95150*	10	6	DL Only	0.57	10.2	10.2	7.2	5.3
	JH65165			DL+ Floor LL	0.69	12.3	12.3	8.7	6.4
	JH70160*			DL+Roof LL	0.77	13.7	13.7	9.7	7.1
	JH40190			DL+WL	1.14	12.2	12.2	8.6	6.3
	JH45190								
	JH50190								

* Refer to page 8 when using JH70160 and JH95150 to support floor trusses

Joist Hanger Depth - 220mm

FIXING CONFIGURATIONS

Nail Fixings



Screw Fixings

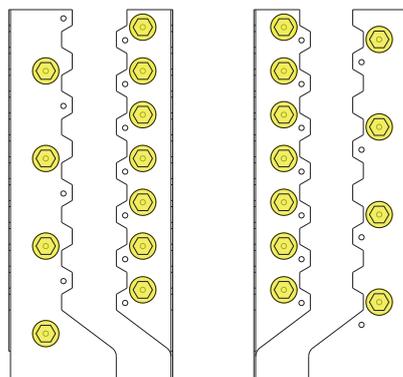


Table 8 - Limit state design capacity (kN) for nail fixings

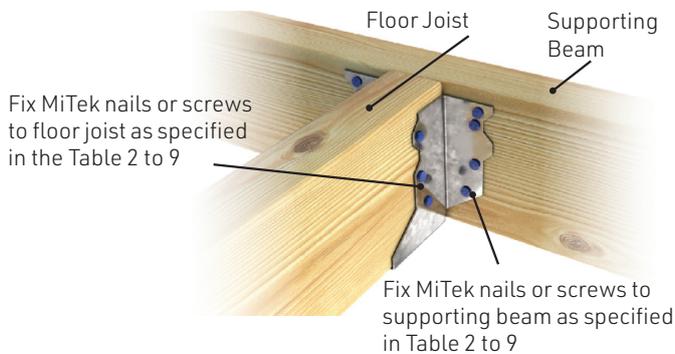
	Joist Hanger Product Code	Number of Nail Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
NAIL FIXINGS	JH45220	28	16	DL Only	0.57	13.3	9.5	7.8	5.9
				DL+ Floor LL	0.69	14.7	11.5	9.5	7.2
				DL+Roof LL	0.77	14.7	12.9	10.5	8.0
				DL+WL	1.14	14.7	10.9	8.9	6.8

Table 9 - Limit state design capacity (kN) for screw fixings

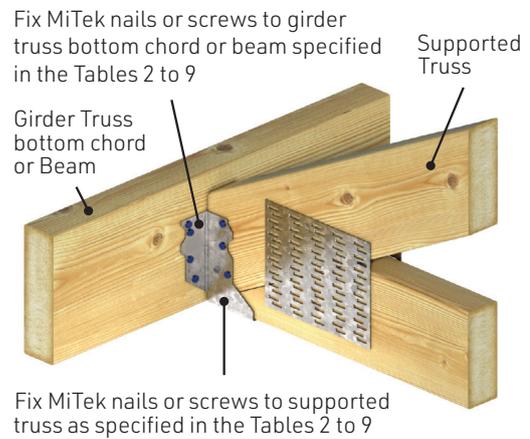
	Joist Hanger Product Code	Number of Screw Fixings		Loading Type	k_1	Joint Group			
		Supporting member	Supported member			JD3	JD4	JD5	JD6
SCREW FIXINGS	JH45220	14	8	DL Only	0.57	13.7	13.7	9.7	7.1
				DL+ Floor LL	0.69	14.7	14.7	11.8	8.6
				DL+Roof LL	0.77	14.7	14.7	13.1	9.6
				DL+WL	1.14	14.7	14.7	11.1	8.1

GENERAL INSTALLATIONS

FIXING FLOOR JOIST TO BEAM

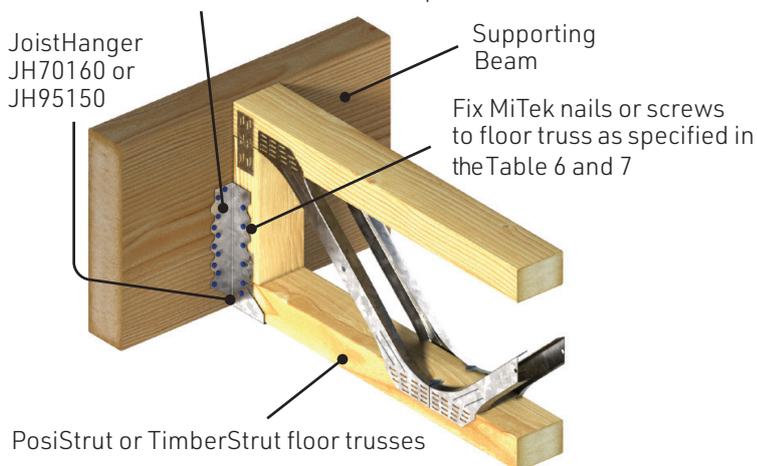


FIXING STANDARD TRUSS TO GIRDER TRUSS OR BEAM



FIXING FLOOR TRUSS TO BEAM

Fix MiTek nails or screws to beam as specified in the Table 6 and 7

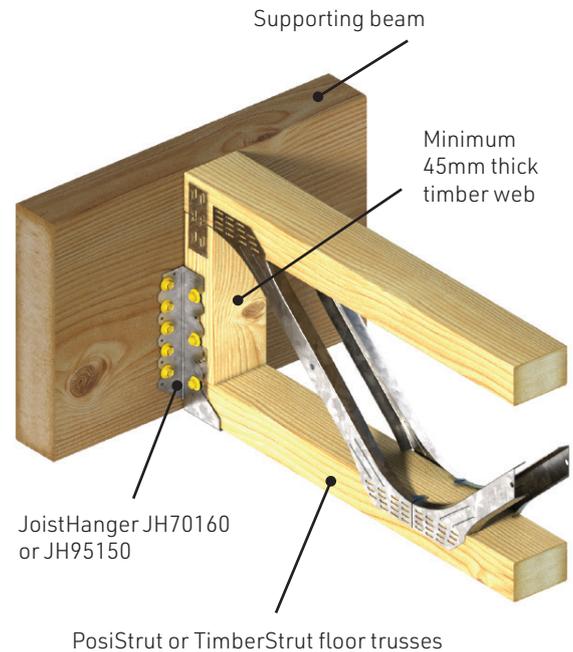


1. The JoistHanger should be fixed to the supporting member using the specified number of nails or screws into existing nail holes, where shown.
2. Place the member to be supported in the JoistHanger so that it is firmly against the supporting member.
3. Drive the specified number of nails or screws into the supported member, where shown.
4. The JoistHanger must cover at least 60% of the depth of supported member unless additional blocking or lateral restraints are provided to the top of the supported member at the support point.
5. Where the girder truss or supporting beam is of multiple ply construction, the plies are to be laminated together as per Clause 2.3 and Clause J2 for sawn timber and Engineer Wood Products (EWPs) in AS 1684 respectively. In addition, 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.

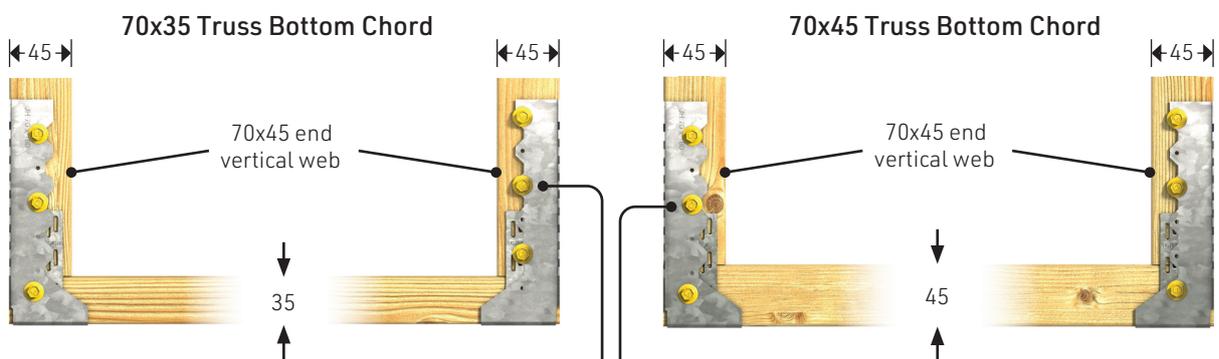
SCREW FIXING CONFIGURATION FOR FLOOR TRUSSES

NOTES

1. MiTek's patented screws are designed to tap their way through the smaller holes in the steel flanges and nailplates.
2. Use 45mm thick timber for end vertical web when fixing JoistHanger with screws.
3. The vertical web may be set back from the end of the PosiTruss, up to 5mm maximum.



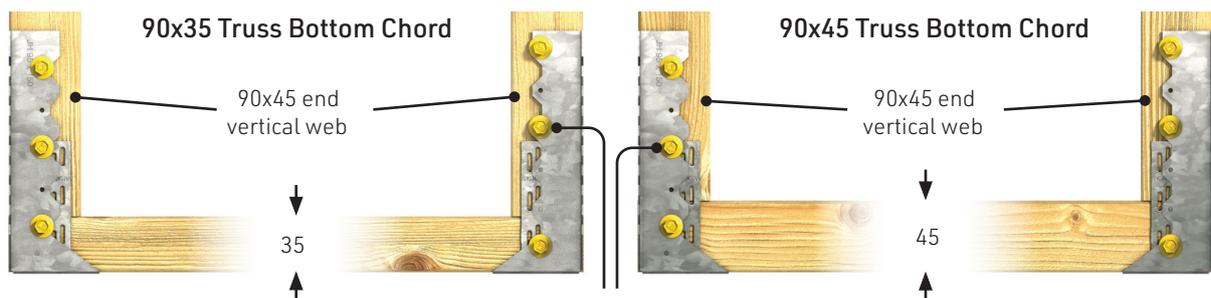
Fixing details for JoistHanger JH70160



Fix 3 MiTek MSA1430 screws into each face as shown

SCREW FIXING LOCATIONS TO FLOOR TRUSS CONT'D

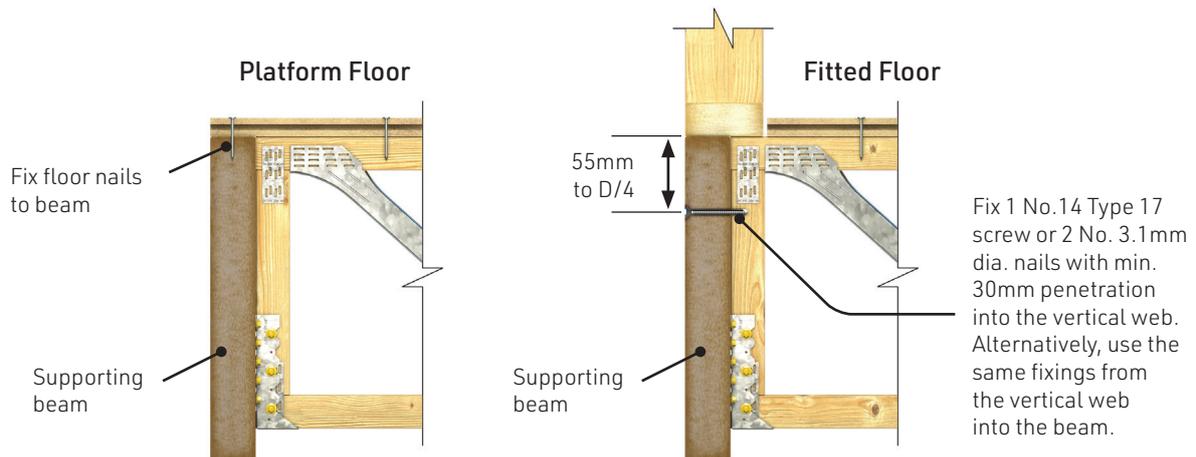
Fixing details for JoistHanger JH95150



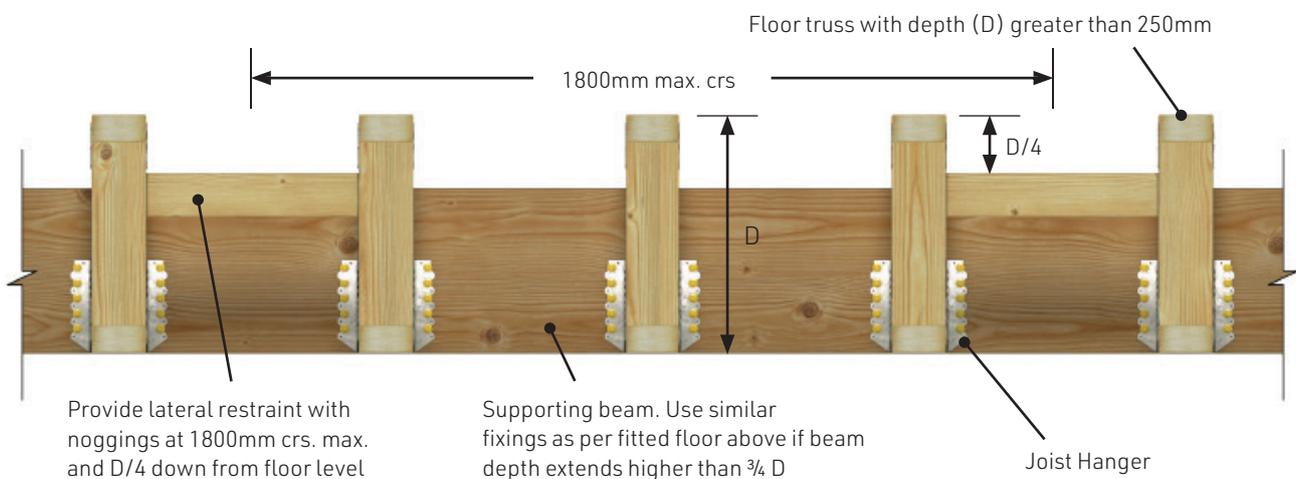
Fix 3 MiTek MSA1430 screws into each face as shown

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 Joist Hanger 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.

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