

#### **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<sup>®</sup> floor trusses and roof trusses to the face of beams and girders.



# 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					



		<i>c</i> :	Dir	nensions (m	m)
	Product Lode	Size	А	В	С
	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
e 1	JH45120	45 x 120	46	112	31
<b>Fabl</b>	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 memeber, 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 ( $\emptyset$ ) 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**





**Screw Fixings** 



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

	Joist Hanger Product Code	Number of Nail Fixings		Loading	Ŀ	Joint Group			
		Supporting member	Supported member	Туре	"1	JD3	JD4	JD5	JD6
IXINGS	JH3590	8	6	DL Only	0.57	4.3	3.1	2.5	1.9
NAILFI	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



V FIXINGS	Joist Hanger Product Code	Number of Nail Fixings		Loading		Joint Group				
		Supporting member	Supported member	Туре	<b>*</b> 1	JD3	JD4	JD5	JD6	
	JH3590	4	4	DL Only	0.57	4.8	4.8	3.4	2.5	
SCREW	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		Joint Group				
		Supporting member	Supported member	Туре	"1	JD3	JD4	JD5	JD6	
IXINGS	JH35120		8	DL Only	0.57	6.0	4.3	3.5	2.7	
AILFD	JH40120			DL+ Floor LL	0.69	7.3	5.2	4.3	3.3	
Z	JH45120	12			0.77		5.0			
	JH50120			DL+Roof LL	0.77	8.2	5.8	4.8	3.6	
	JH45140		DL+WL	1.14	8.7	6.2	5.1	3.9		

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

	Joist Hanger Product Code	Number of Nail Fixings		Loading		Joint Group			
		Supporting member	Supported member	Туре	<b>*</b> 1	JD3	JD4	JD5	JD6
FIXINGS	JH35120			DL Only	0.57	6.6	6.6	4.7	3.4
CREW	JH40120	4	4	DL+ Floor LL	0.69	8.0	8.0	5.7	4.1
0,	JH45120 JH50120	0	4	DL+Roof LL	0.77	8.9	8.9	6.3	4.6
	JH45140		DL+WL	1.14	7.9	7.9	5.6	4.1	



## Joist Hanger Depth - 150mm to 190mm

# FIXING CONFIGURATIONS

# **Nail Fixings**



**Screw Fixings** 



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

NAIL FIXINGS	Joist Hanger	Number of Nail Fixings		Loading		Joint Group				
	Product Code	Supporting member	Supported member	Туре	"1	JD3	JD4	JD5	JD6	
	JH95150	20	12	DL Only	0.57	9.7	7.0	5.7	4.3	
	JH65165 JH70160			DL+ Floor LL	0.69	11.8	8.4	6.9	5.3	
	JH40190 JH45190			DL+Roof LL	0.77	13.1	9.4	7.7	5.9	
	JH50190			DL+WL	1.14	11.7	8.4	6.8	5.2	

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

	Joist Hanger Product Code	Number of Nail Fixings		Loading	1.	Joint Group			
		Supporting member	Supported member	Туре	<b>~</b> 1	JD3	JD4	JD5	JD6
FIXINGS	JH95150*	10	6	DL Only	0.57	10.2	10.2	7.2	5.3
SCREW	JH65165 JH70160*			DL+ Floor LL	0.69	12.3	12.3	8.7	6.4
	JH40190 JH45190			DL+Roof LL	0.77	13.7	13.7	9.7	7.1
	JH50190			DL+WL	1.14	12.2	12.2	8.6	6.3

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



## Joist Hanger Depth - 220mm

# FIXING CONFIGURATIONS

# **Nail Fixings**



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

**Screw Fixings** 



	Joist Hanger Product Code	Number of Nail Fixings		Loading		Joint Group			
		Supporting member	Supported member	Туре	"1	JD3	JD4	JD5	JD6
VINGC	JH45220		16	DL Only	0.57	13.3	9.5	7.8	5.9
NAILFD		28		DL+ Floor LL	0.69	14.7	11.5	9.5	7.2
				DL+Roof LL 0.77 14	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

SCREW FIXINGS	Joist Hanger Product Code	Number of Nail Fixings		Loading		Joint Group			
		Supporting member	Supported member	Туре	<b>~</b> 1	JD3	JD4	JD5	JD6
	JH45220			DL Only	0.57	13.7	13.7	9.7	7.1
		14	8	DL+ Floor LL	0.69	14.7	14.7	11.8	8.6
				DL+Roof LL 0.77 1	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



Fix MiTek nails or screws to supported truss as specified in the Tables 2 to 9

#### 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 be cover at least 60% of the depth of the supported member, unless additional lateral restraints are provided to the top of the supported member. Refer to page 8 when using JH70160 and JH95150 to support floor trusses.

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.

# MiTek<sup>®</sup>

# 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.



PosiStrut or TimberStrut floor trusses



## 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



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 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.

# This datasheet is available anytime, anywhere! - Download



Get IF ON Google Play



**QLD** +61 7 3861 2100 **SA** +61 8 8234 1326 **VIC** +61 3 8795 8888 **WA** +61 8 6279 8925