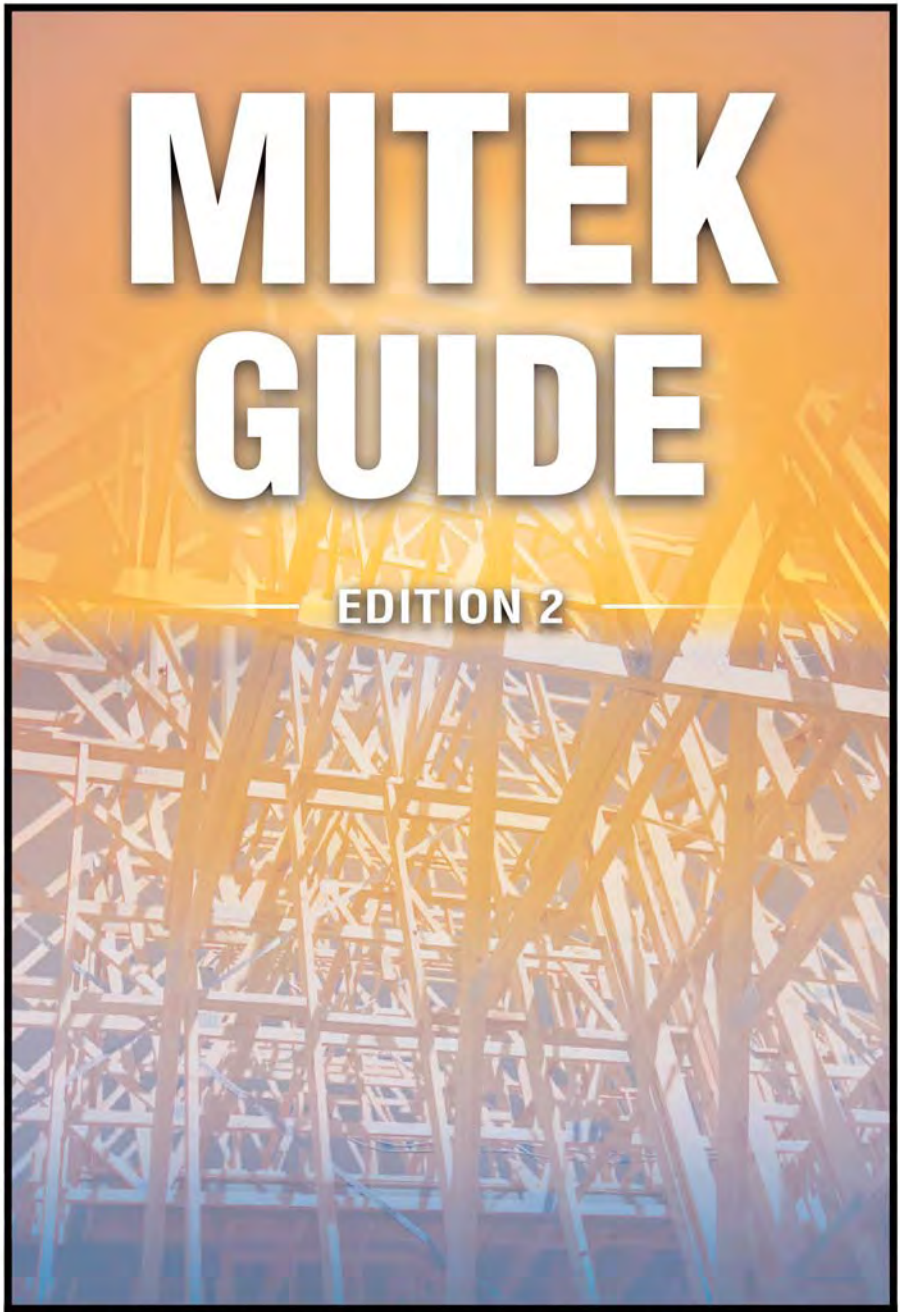
MITEK GUIDE

EDITION 2



A quick reference handbook for Builders, Designers and Building Surveyors

MITEK GUIDE

to
Connectors for
AS1684.2 and AS4440
Compliance

2nd Edition

HOME OF **GANG-NAIL** BUILDING SYSTEMS

MiTek®

creating the **advantage**

The MiTek Guide is designed to be a quick reference handbook to assist in the determination of the relevant MiTek fasteners and bracing products which comply with Australian Standards AS1684.2 and AS4440.

This publication is meant to be read in conjunction with the above codes and does not replace the need for users to reference either of these documents.

The information provided on fastener types and sizes is a MiTek recommendation and does not necessarily provide the same type of connector specified in the code. Should there be any conflict with the above codes or with any connection detail specified by the building documentation then these will take precedence over details in this publication.

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FOREWORD

MiTek Australia Ltd is part of the worldwide MiTek network of companies. The company is a subsidiary of MiTek Inc, a USA company, which is, in turn, part of the Berkshire Hathaway group, one of the largest and most successful investment companies in the world.

In Australia the company was founded as a consortium of timber merchants in 1963, trading as Automated Building Components (Aust.) Pty Ltd which had, at that time, the sole purpose of developing a prefabricated timber roof truss industry in Australia. During the 1970's the company name was changed to Gang-Nail Australia Ltd. It was and still remains the market leader in the prefabrication industry in Australia. The term 'gang nail' has become generic for multi-toothed metal connector plates, the key to the efficient manufacture of prefabricated timber floor and roof trusses. Prefabrication is now indisputably the most popular and effective way of building houses in Australia. The company once again changed its name in 2000, to MiTek Australia Ltd, to reflect its growth into the wider range of building fasteners and structural systems for the construction industry.

MiTek as a global company, and MiTek Australia in particular, is committed to continuous and on-going research and development of new products, software and equipment (saws, jigs, presses etc.) to create new and innovative systems for the benefit of the building industry. Forward planning and the development of new ideas and technologies are essential for the viability of an industry heavily reliant on the efficient use of natural resources. MiTek therefore invests considerable time and resources on R & D, and is continually searching for systems and solutions that will minimise wastage and improve productivity, thus making building more sustainable and more efficient and affordable in the future.

More information about MiTek and its products or services is available at our web site, **www.mitek.com.au**

USE ONLY BUILDING PRODUCTS WITH TECHNICAL SUPPORT

An area of major concern for builders is ensuring that the products they use in construction meet the desired design criteria for which they are intended. Using the wrong product which is not supported by engineering data often results in re-work being ordered by building authorities and is a major threat to a builder's profitability and long term reputation.

One way builders can be certain that they are not compromising the structural integrity of their job is by insisting on using only engineered building products. Reputable suppliers support their products with technical data sheets and can provide engineering assistance should you be required to substantiate your work at a later date.

MiTek Australia has data sheets on all engineered building products, which provide a ready-made document specific to on-site needs. All are designed, engineered and manufactured to the ISO9001 Standard and are rigorously tested and re-tested to ensure they pass and in most cases, exceed Australian Standards.

By using the recommendations provided in this publication and by using MiTek Engineered Building Products, you can be sure you are meeting the requirements of the Building Code of Australia and all relevant Australian Standards. Such practice will not only illicit confidence from Building Authorities in the approval process but will also give confidence to both you and to any third party should a question be raised at a later date. MiTek Australia has a vast library of technical data sheets (available in the electronic catalogue 'EasyCat' at www.mitek.com.au) to support it's engineered building products and can provide structural engineering advice on any building query to support your work.

The use of technically unsupported 'generic' products can severely compromise the safety and structural integrity of the building being erected and create on-site problems that can easily be avoided.

SCOPE

The information provided in this publication is only suitable for use with residential structures (BCA Classes 1,2,3,&10) and similar light commercial structures. The detail provided is only suitable for single or two storey construction in non-cyclonic areas N1-N4 and where the building plans are essentially rectangular, square, L-shaped or a combination of these shapes. Buildings which are rectangular with splayed or boomerang shapes are also suitable.

In addition the following limitations apply:

Building Width (maximum)	16000mm
Wall Height (maximum)	3000mm
Roof Pitch (maximum)	35°

Note the following tables are not suitable for buildings where snow loads determined in accordance with AS1170.3 exceed 0.2kPa.

Where connections are not fully protected from the weather by the building envelope special corrosion protection of the connectors and preservative treatment of timber members may be required. The preservative treatment selected for exposed nailed type joints should prevent moisture from penetrating the timber. Refer to Corrosion Protection Selection Chart on page 86.

GENERAL NOTES

The tables contained in this publication are designed to provide a ready reference for the selection of connectors which will meet the load requirements of AS1684.2 the standard for “Residential timber-framed construction” and AS4440 the standard for “Installation of nailplated roof trusses”. The tables, because of their concise format may, in some instances provide a more conservative connection size or type compared with the connector information derived by using the codes or by using specific engineering designs.

To use the following tables it is necessary to determine:

1. **Wind Classification**
   The Australian Standard AS1684.2 uses the simplified wind classification described in AS4055 the Australian Standard - ‘Wind loads for housing'. The Wind Classifications N1, N2, N3 and N4 used in this publication are defined in the above codes. However the building authority will normally determine which wind classification is applicable for each project. The applicable Wind Classification should be confirmed before using the following tables.

2. **Member Load**
   The following tables use the general load descriptions 'Tiles' or 'Sheet'. These are as defined in AS1684.2 clause 1.4.10 and Appendix B. The 'Tiles' load allows for maximum roof mass of 60kg/m^2 and 'Sheet' - 20kg/m^2, (these loads do not include self weight).

   To fully define the load on a particular connection it is also necessary to define the Load Width. Most of the tables contained in this publication provide

connections which restrain wind uplift forces. Therefore the Uplift Load Width (ULW) is the appropriate Load Width to be used in most cases. Note this may vary from other Load Widths such as RLW used in AS1684.2. To determine the correct ULW refer to the Load Width Diagrams in the following section.

3. Joint Strength Group

The effectiveness of mechanical fasteners in timber depends on the particular timber species being connected. Generally the higher the timber density the better the mechanical fasteners perform. To simplify the design of timber fasteners, the Timber Structures Code AS1720 has devised a Joint Strength Group classification system which groups timber species with similar joint strength capacities. These are commonly known as Joint Groups and have the nomenclature J1 to J6 for unseasoned timber and JD1 to JD6 for seasoned timber. Groups J1 and JD1 contain timber species having the highest joint strength capacities whereas J6 and JD6 have the lowest. AS1720 Tables 2.1 and 2.2 contain the Joint Strength classification of structural timber species used in Australia. The following table contains a list of Joint Groups for the more commonly used structural timber.

Joint Classification for Common Structural Timber

Timber Species or Group	Description	AS1720.1 Joint Group
Unseasoned Australian Hardwoods	Mixed Australian Hardwoods (excluding rainforest species) from South Australia and southern NSW visually or machine stress graded.	J3
	Ash type Hardwoods from NSW Highlands, Victoria and Tasmania visually or machine stress graded.	J3
	Non Ash type Eucalypts from Queensland and NSW visually or machine stress graded.	J2
Seasoned Australian Hardwoods	Mixed Australian Hardwoods (excluding rainforest species) from South Australia and southern NSW visually or machine stress graded.	JD3
	Ash type Hardwoods from NSW Highlands, Victoria and Tasmania visually or machine stress graded.	JD3
	Non Ash type Eucalypts from Queensland and NSW visually or machine stress graded.	JD2
Seasoned Pine	Australian or New Zealand grown heart-in, visually stress graded.	JD5
	Australian or New Zealand grown heart-excluded, visually stress graded.	JD4
	Machine stress graded in accordance with AS1720 MGP10 MGP12 MGP15	JD5 JD4 JD4

Notes: 1. When designing connections where the Joint Groups of the members being joined are different adopt fastener recommendations for the species which has the lowest Joint Group capacity. For example, if fastening JD4 timber to JD5 timber, adopt the recommendation for JD5 as the fastener capacity of JD5 is less than JD4.

2. For engineered wood products like LVL and wood I-Beams refer to manufacturers recommendations for Joint Strength Group classification.

HOW TO USE MITEK GUIDE TABLES

As MiTek has a wide range of fastener types, many of which perform similar functions and which may be used as an alternative product in a specific joint design, we have designed the tables in the MiTek Guide to specify a group of fasteners that will satisfy the requirement of AS1684.2 or AS4440. Therefore the tables will specify a fastener group, ie 'Group A', 'Group B' etc which will comply with the relevant code for the specific load requirements.

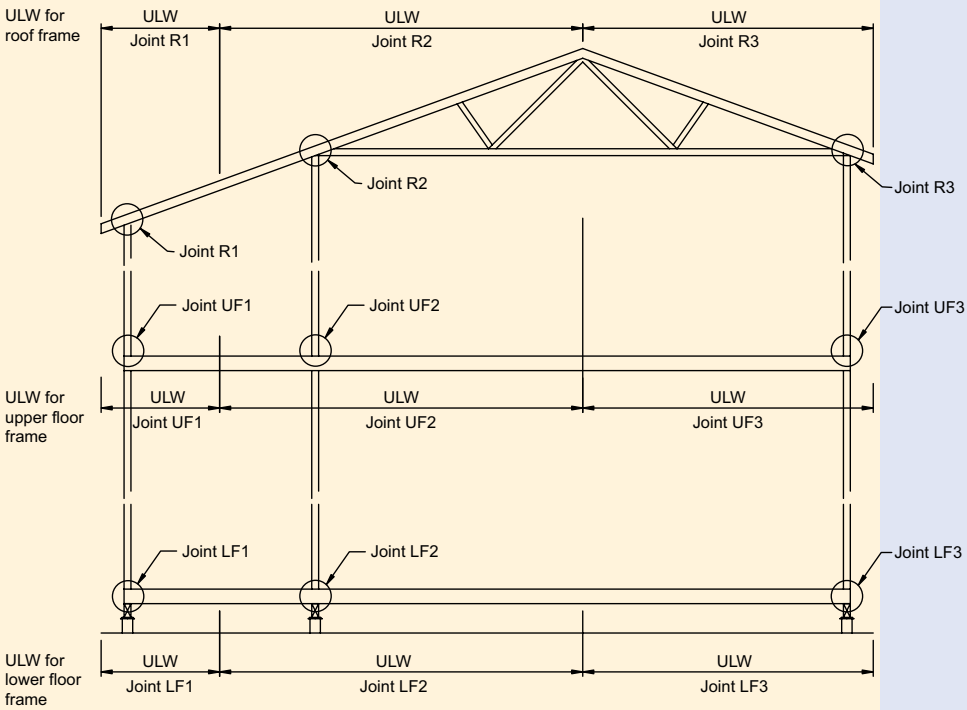
The General Procedure to be adopted in using these tables is:

1. Determine Member Load type, e.g. Tiles or Sheet - refer to General Notes.
2. Determine ULW - refer Load Width Diagrams.
3. Determine Wind Classification - refer to checking authority or project specification.
4. Determine Joint Strength Group for timber members to be connected - refer General Notes.
5. Find appropriate table number for connection type to be designed use the Quick Reference Diagram - refer pages 12 and 13.
6. Turn to appropriate connection table.
7. Select the appropriate load table e.g. Tiles.
8. Select the appropriate Wind Classification column, e.g. N2, and Joint Group column, e.g. JD4.
9. Move down the selected column until the correct ULW and fastener spacing is obtained.
10. This will now determine the appropriate Fastener Group, e.g. 'A', 'B', 'C', 'D' etc. If the Fastener Group is N/A then there is no appropriate MiTek fastener available for these conditions. In this case you should refer to the relevant code or seek advice from a suitably qualified structural engineer.
11. Refer to the Joint Details page adjacent to the referenced table to determine the fastener details which will comply with the relevant code.

    Note: - The Fastener code derived from the table will provide the minimum fastener appropriate for the connection under consideration. e.g. if fastener Group 'B' is specified in the table then any connector detailed in Group 'B' on the Details page adjacent will comply.

    A higher capacity group, e.g. 'D', 'E' or 'F' may be used in lieu of 'B' , however a lower capacity group, i.e. 'A' cannot be used as a substitute for Group 'B' fastener.

LOAD WIDTH DIAGRAM



QUICK JOINT REFERENCE DIAGRAM

MiTek

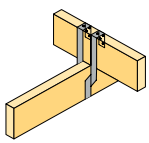
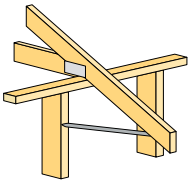


Table 24b
Sprocket Hold Down
(Standard truss)



See
Overhang Strutting

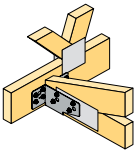


Table 23
Standard Truss to
Girder Truss

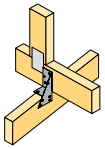


Table 25
Saddle Trusses to
Standard Trusses

Table 29
Batten to
Truss/Rafter
(within 1200mm
of roof edges)

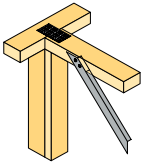


Table 16
Internal Braced
Panels to External
Walls

Table 28
Batten to
Truss/Rafter
(General Are

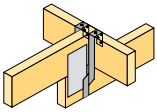


Table 24a
Sprocket Hold Down
(End Gable truss)

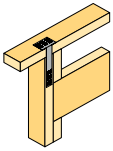
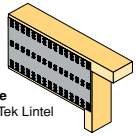


Table 12
Header or Stud to Wall Plates



See
MiTek Lintel

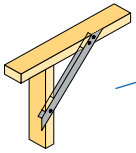


Table 15
Side Wall Bracing for Buildings
with Gable Ends

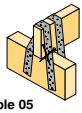


Table 05
Floor Joist to Bearer (Lower
Storey of 2 Storeys)

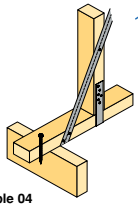


Table 04
Braced Panel to
Timber Floor

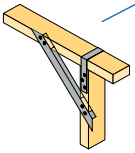


Table 14
Side Wall Bracing for
Buildings with Hip Ends

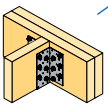


Table 10
Floor Joist Trimmer
to Floor Beam

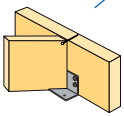


Table 09
Floor Joist to Beam

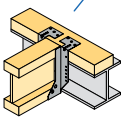


Table 08
PosiStrut or I-Joist to Beam

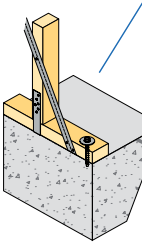
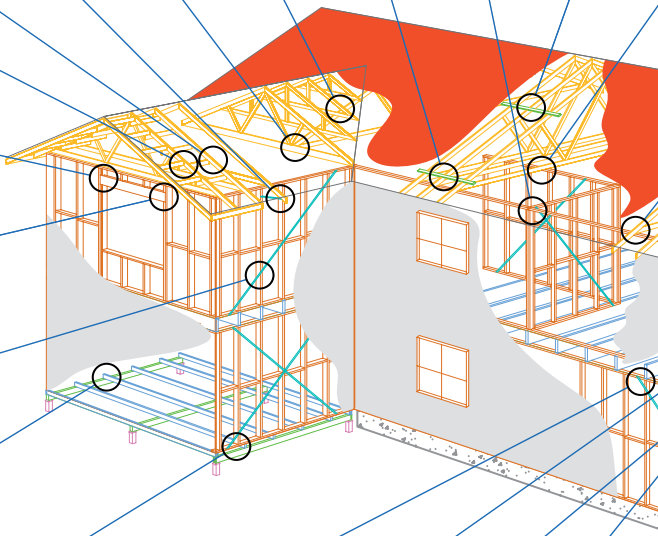


Table 03
Braced Panel to Slab



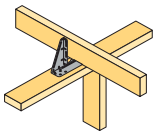


Table 17
Internal Braced Panel to Ceiling

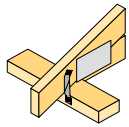
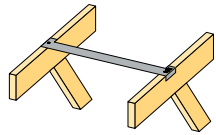
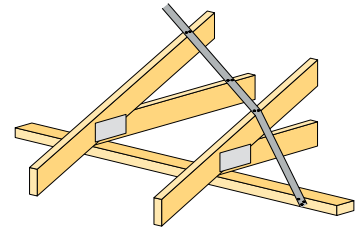


Table 18
Truss/Rafter to Wall Plate



See
Roof Bracing (Temporary)



See
Roof Bracing (Permanent)

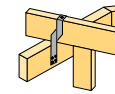


Table 22
Hip Truss to Truncated Girder Truss

Table 19
Jack Truss TC to Hip Truss

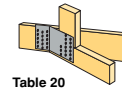


Table 20
Jack Truss BC to Hip Truss

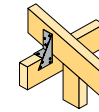


Table 21
Jack Truss to Truncated Girder Truss

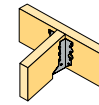


Table 26
Rafter to Ridge Beam

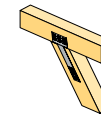
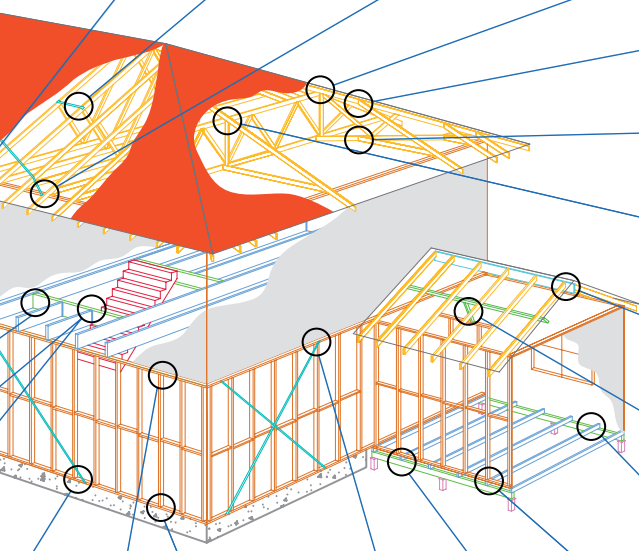


Table 27
Rafter to Underpurlin and Underpurlin to Strut



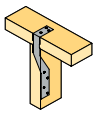


Table 11
Wall Plate to Stud

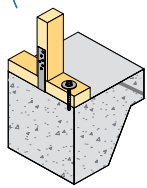


Table 01
Wall Frame to Slab (Single Storey or Lower of 2 Storeys)

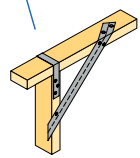


Table 13
End Wall Bracing for Buildings with Hip or Gable Roofs

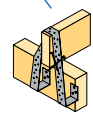


Table 06
Floor Joist to Bearer (Single Storey or Upper Storey of 2 Storeys)

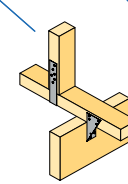


Table 02
Wall Frame to Timber Floor (Single Storey or 2 Storeys)

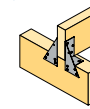
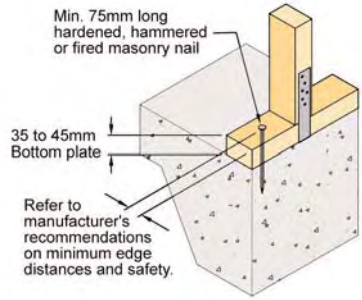


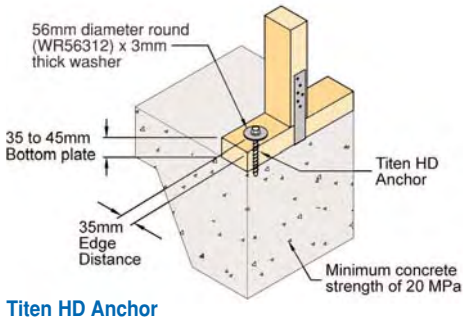
Table 07
Floor Joist to Bearers (Shear Connection)

Group A



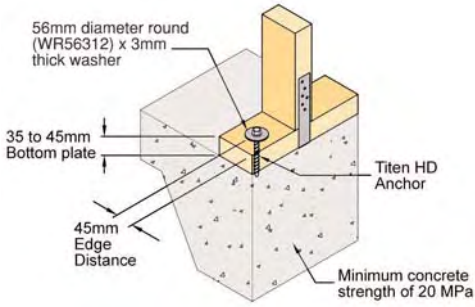
Concrete Nail

Group B



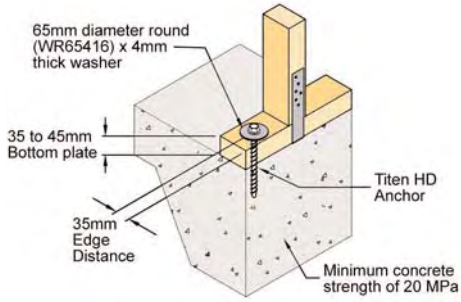
Titen HD Anchor
Product Code: THD37400H

Group C



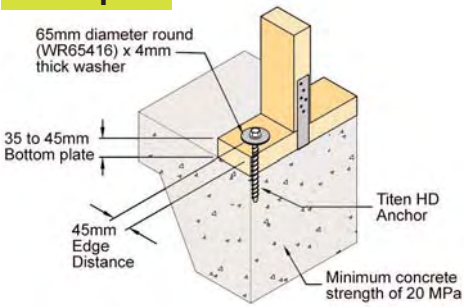
Titen HD Anchor
Product Code: THD37400H

Group D



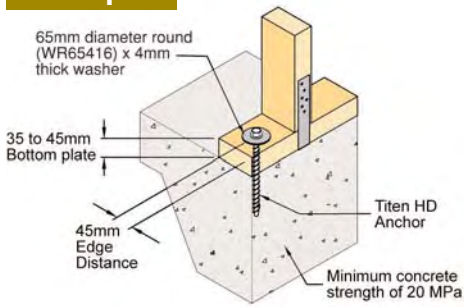
Titen HD Anchor
Product Code: THD50600H

Group E



Titen HD Anchor
Product Code: THD50600H

Group F



Titen HD Anchor
Product Code: THD50800H

NOTES: 1. Refer to table 11 for Stud to Plate connections.
2. Check that the Titen HD Anchor penetration is suitable for slab thickness.

N/A **No available connector - seek alternative advice.**

01 Table — Wall Frame to Slab (Single Storey or Lower of 2 Storeys)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	A
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	B
	1350	B	B	B	B	B	B	B	B	B	B	B	B
	1800	B	B	B	B	B	B	B	B	B	B	B	B
	3000	B	B	B	B	B	B	B	B	B	B	B	B
3000	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	B
	1350	B	B	B	B	B	B	B	B	B	B	B	B
	1800	B	B	B	B	B	B	B	B	B	B	B	B
	3000	B	B	B	B	B	B	B	B	B	E	E	E
4500	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	B
	1350	B	B	B	B	B	B	B	B	B	C	C	D
	1800	B	B	B	B	B	B	B	B	B	D	D	D
	3000	B	B	B	B	B	B	C	C	C	F	F	N/A
6000	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	C	C	D
	1350	B	B	B	B	B	B	B	B	B	D	D	D
	1800	B	B	B	B	B	B	B	B	B	F	F	N/A
	3000	B	B	B	B	B	B	C	C	D	N/A	N/A	N/A
7500	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	C	C	D
	1200	A	A	A	A	A	A	B	B	B	E	E	E
	1350	B	B	B	B	B	B	B	B	B	E	E	F
	1800	B	B	B	B	B	B	C	C	C	F	F	N/A
	3000	B	B	B	B	B	B	E	E	F	N/A	N/A	N/A

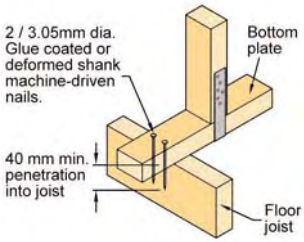
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	B
	1350	B	B	B	B	B	B	B	B	B	B	B	B
	1800	B	B	B	B	B	B	B	B	B	B	B	B
	3000	B	B	B	B	B	B	B	B	B	C	C	C
3000	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	B	B	B	B	B	B	B	B	B
	1200	A	A	A	B	B	B	B	B	B	B	B	B
	1350	B	B	B	B	B	B	B	B	B	B	B	B
	1800	B	B	B	B	B	B	B	B	B	C	C	D
	3000	B	B	B	B	B	B	C	C	D	F	F	N/A
4500	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	B	B	B	B	B	B	B	B	B
	900	A	A	A	B	B	B	B	B	B	B	B	B
	1200	A	A	A	B	B	B	B	B	B	C	C	D
	1350	B	B	B	B	B	B	B	B	B	D	D	D
	1800	B	B	B	B	B	B	C	C	C	E	E	F
	3000	B	B	B	B	B	B	E	E	F	N/A	N/A	N/A
6000	450	A	A	A	B	B	B	B	B	B	B	B	B
	600	A	A	A	B	B	B	B	B	B	B	B	B
	900	A	A	A	B	B	B	B	B	B	C	C	D
	1200	A	A	A	B	B	B	B	B	B	E	E	F
	1350	B	B	B	B	B	B	C	C	C	E	E	F
	1800	B	B	B	B	B	B	C	C	D	F	F	N/A
	3000	B	B	B	B	B	B	F	F	N/A	N/A	N/A	N/A
7500	450	A	A	A	B	B	B	B	B	B	B	B	B
	600	A	A	A	B	B	B	B	B	B	C	C	C
	900	A	A	A	B	B	B	B	B	B	E	E	E
	1200	A	A	A	B	B	B	C	C	D	F	F	N/A
	1350	B	B	B	B	B	B	C	C	D	F	F	N/A
	1800	B	B	B	B	B	B	E	E	F	N/A	N/A	N/A
	3000	B	B	B	C	C	D	N/A	N/A	N/A	N/A	N/A	N/A

Reference AS1684.2 Table 9.8

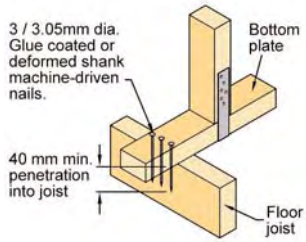
NOTE: Maximum spacing for Group A fastener is 1200 mm refer AS1684.2 Table 9.4

Group A



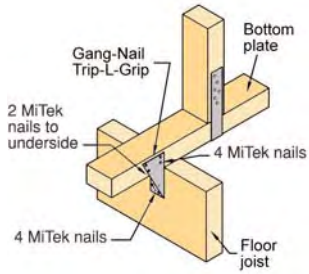
2/3.05mm Gun Driven Nails

Group B



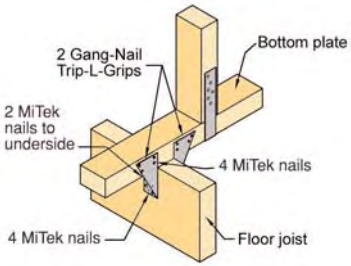
3/3.05mm Gun Driven Nails

Group C



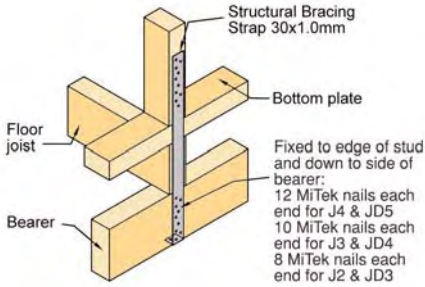
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group D



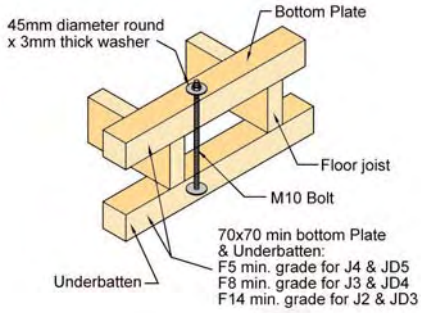
2 off Trip-L-Grips
Product Codes: TGL, TGR, TGU

Group E



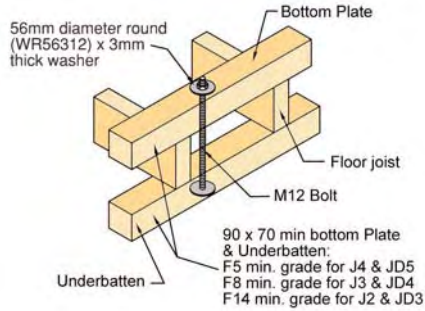
Structural Bracing Strap
Product Codes: PS2030

Group F



M10 Bolt

Group G



M12 Bolt

N/A **No available connector - seek alternative advice.**

02 Table — Wall Frame to Timber Floor (Single Storey or 2 Storeys)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	B	C
	600	A	A	A	A	A	A	A	A	B	B	C	C
	900	A	A	A	A	A	A	A	B	C	C	C	C
	1200	A	A	A	A	A	A	A	C	C	C	C	C
	1350	A	A	A	A	A	A	B	C	C	C	C	D
	1800	A	A	A	A	A	A	B	C	C	C	D	D
	3000	A	A	A	A	A	A	C	C	D	D	F	G
3000	450	A	A	A	A	A	A	A	B	C	C	C	C
	600	A	A	A	A	A	A	A	C	C	C	C	C
	900	A	A	A	A	A	A	B	C	C	C	D	D
	1200	A	A	A	A	A	A	C	C	C	D	D	E
	1350	A	A	A	A	A	A	C	C	C	D	D	E
	1800	A	A	A	A	A	A	C	C	D	D	F	G
	3000	A	A	A	A	A	A	D	D	E	F	G	G
4500	450	A	A	A	A	A	A	B	C	C	C	C	D
	600	A	A	A	A	A	A	B	C	C	C	D	D
	900	A	A	A	A	A	A	C	C	C	D	D	E
	1200	A	A	A	A	A	A	C	C	D	D	F	G
	1350	A	A	A	A	A	A	C	D	D	F	F	G
	1800	A	A	A	A	A	A	C	D	D	F	G	G
	3000	A	A	A	A	A	A	D	F	G	G	G	N/A
6000	450	A	A	A	A	A	A	B	C	C	C	D	D
	600	A	A	A	A	A	A	C	C	C	D	D	E
	900	A	A	A	A	A	A	C	C	D	D	F	G
	1200	A	A	A	A	A	A	C	D	D	F	F	G
	1350	A	A	A	A	A	A	C	D	D	F	G	G
	1800	A	A	A	A	A	A	D	F	G	F	G	G
	3000	A	A	A	A	A	A	F	F	G	G	N/A	N/A
7500	450	A	A	A	A	A	A	C	C	C	C	D	D
	600	A	A	A	A	A	A	C	C	D	D	F	G
	900	A	A	A	A	A	A	C	D	D	F	F	G
	1200	A	A	A	A	A	A	D	D	E	F	G	G
	1350	A	A	A	A	A	A	D	F	G	F	G	G
	1800	A	A	A	A	A	A	D	F	G	G	G	N/A
	3000	A	A	A	A	A	A	F	G	G	N/A	N/A	N/A

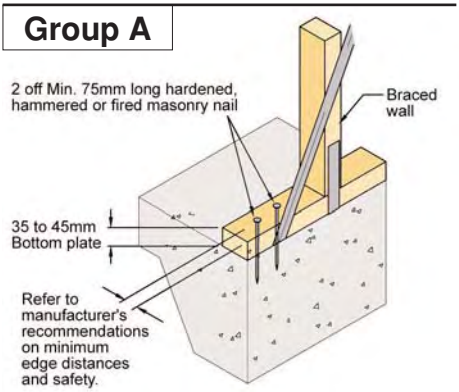
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	C	B	C	C
	600	A	A	A	A	A	A	A	B	C	B	C	C
	900	A	A	A	A	A	B	B	C	C	C	C	C
	1200	A	A	A	A	B	C	C	C	C	C	C	D
	1350	A	A	A	A	B	C	C	C	C	C	D	D
	1800	A	A	A	B	C	C	C	C	D	C	D	D
	3000	A	A	A	C	C	C	C	D	D	D	F	G
3000	450	A	A	A	A	A	B	B	C	C	C	C	C
	600	A	A	A	A	B	C	C	C	C	C	C	D
	900	A	A	A	A	C	C	C	C	D	C	D	D
	1200	A	A	A	B	C	C	C	D	D	D	F	G
	1350	A	A	A	C	C	C	C	D	D	D	F	G
	1800	A	A	A	C	C	C	D	D	E	F	F	G
	3000	A	A	A	C	D	D	F	F	G	G	G	N/A
4500	450	A	A	A	A	B	C	C	C	C	C	D	D
	600	A	A	A	A	C	C	C	C	D	C	D	D
	900	A	A	A	C	C	C	C	D	D	D	F	G
	1200	A	A	A	C	C	C	D	D	E	F	F	G
	1350	A	A	A	C	C	C	D	F	G	F	G	G
	1800	A	A	A	C	C	D	D	F	G	F	G	G
	3000	A	A	A	D	D	D	F	G	G	G	N/A	N/A
6000	450	A	A	A	A	C	C	C	C	C	C	D	D
	600	A	A	A	B	C	C	C	C	D	D	F	G
	900	A	A	A	C	C	C	C	D	D	F	F	G
	1200	A	A	A	C	C	C	D	D	E	F	G	G
	1350	A	A	A	C	C	D	D	F	G	F	G	G
	1800	A	A	A	C	C	D	D	F	G	F	G	G
	3000	A	A	A	D	F	G	G	G	N/A	G	N/A	N/A
7500	450	A	A	A	C	C	C	C	C	D	C	D	D
	600	A	A	A	C	C	D	C	D	D	D	F	G
	900	A	A	A	C	D	D	D	F	G	F	F	G
	1200	A	A	A	D	D	E	D	F	G	F	G	G
	1350	A	A	A	D	F	G	D	F	G	F	G	G
	1800	A	A	A	D	F	G	F	G	G	G	G	N/A
	3000	A	A	A	F	G	G	G	G	G	N/A	N/A	N/A

Reference AS1684.2 Table 9.11

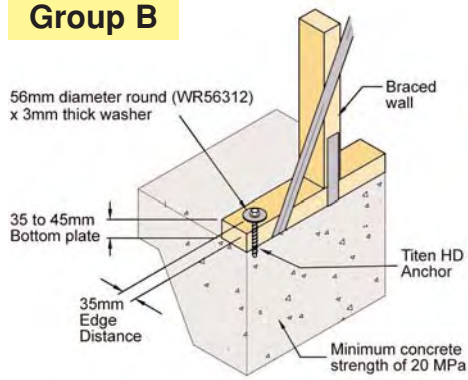
Braced Panel to Slab

Group A



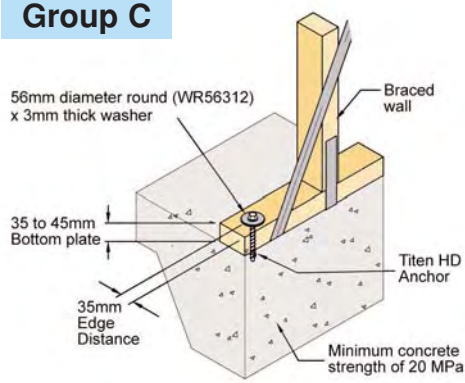
2 off Concrete Nails

Group B



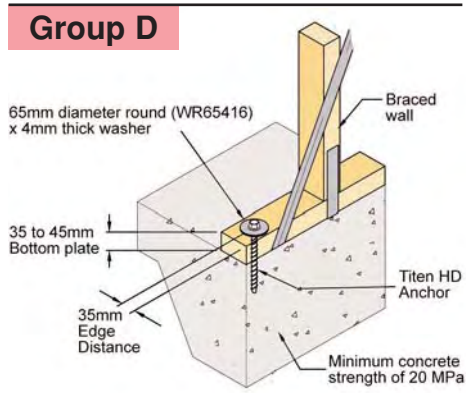
Titen HD Anchor
Product Code: THD37400H

Group C



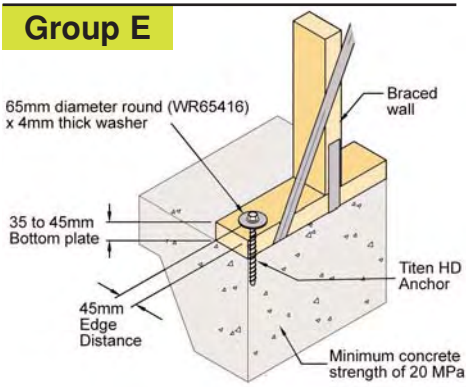
Titen HD Anchor
Product Code: THD37500H

Group D



Titen HD Anchor
Product Code: THD50600H

Group E



Titen HD Anchor
Product Code: THD50600H

NOTE: Check that the Titen HD Anchor penetration is suitable for slab thickness.

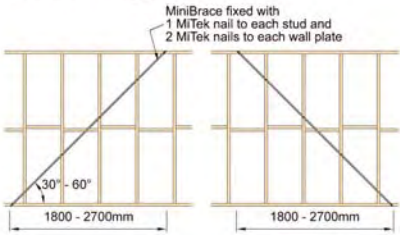
Braced Panel to Slab

Height of Braced Panel		2400 mm			2700 mm			3000 mm			3300 mm			3600 mm		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Nominal Bracing Panel Capacity kN/m																
0.8		A	A	A	B	B	B	B	B	B	B	B	B	B	B	B
1.5		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
2.1		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
3		B	B	B	C	C	C	C	C	D	D	D	D	D	D	D
3.4		C	C	C	C	C	D	D	D	D	D	D	D	E	E	E

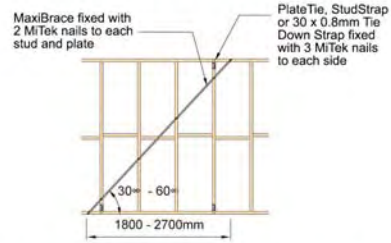
NOTES:

1. Although AS1684.2 only specifies nominal fixings to floors where the braced wall capacity does not exceed 3.0 kN/m, it is good practice to fix braced panels using connectors which are capable of restraining the uplift generated by bracing loads as specified in AS1684.2 Table 8.23.
2. The above chart is based on the uplift forces specified in AS1684.2 Table 8.23 due to bracing loads. These fixings should be used in addition to any other fixings required to restrain direct uplift loads from the structure above the braced panel.

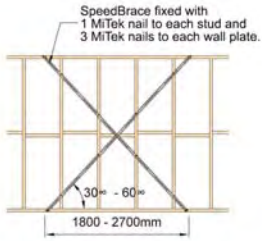
0.8kN/m Bracing Type - Pair of Gang-Nail MiniBraces in opposing directions.



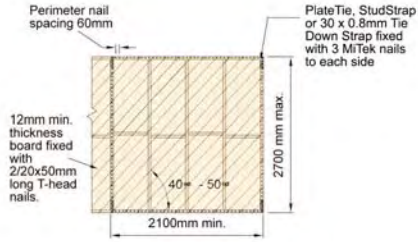
1.5kN/m Bracing Type - Gang-Nail MaxiBrace



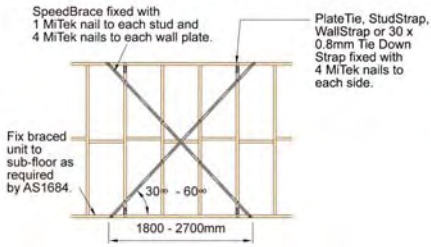
1.5kN/m Bracing Type - Gang-Nail SpeedBrace



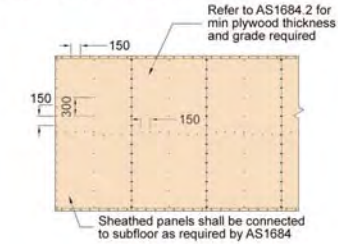
2.1kN/m Bracing Type - Diagonal Timber Wall Lining



3.0kN/m Bracing Type - Gang-Nail SpeedBrace

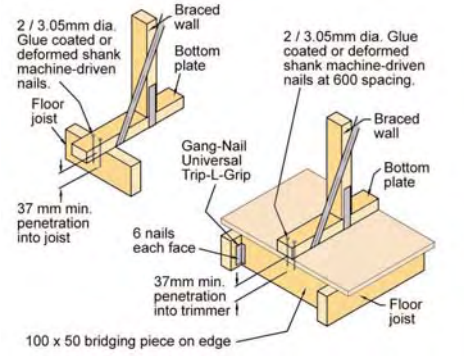


3.4kN/m Bracing Type - Plywood Brace



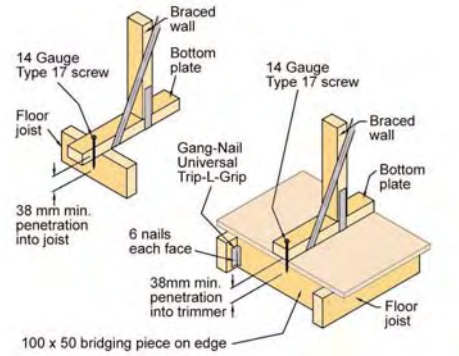
Braced Panel to Timber Floor

Group A - Nominal Fixing



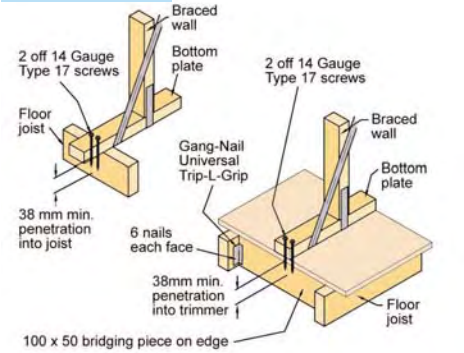
2 off 3.05mm Gun Driven Nails

Group B



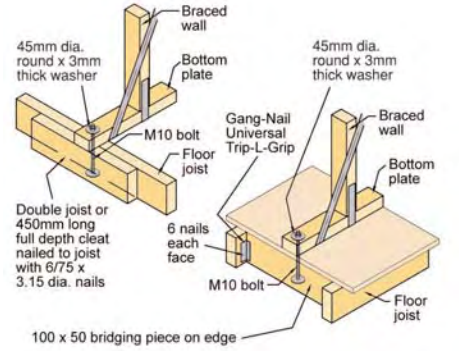
14 gauge Type 17 Screw

Group C



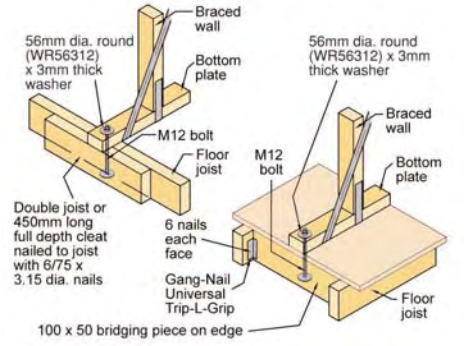
2 off 14 gauge Type 17 Screws

Group D



M10 Bolt

Group E



M12 Bolt

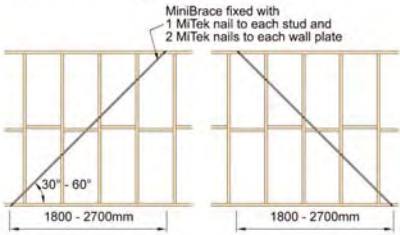
Braced Panel to Timber Floor

Height of Braced Panel		2400 mm			2700 mm			3000 mm			3300 mm			3600 mm		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Nominal Bracing Panel Capacity kN/m																
0.8		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
1.5		B	B	B	B	B	C	B	B	C	B	C	C	B	C	C
2.1		B	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3		C	C	C	C	C	D	C	C	D	C	D	D	C	D	D
3.4		C	C	D	C	D	D	C	D	D	D	D	D	D	D	N/A

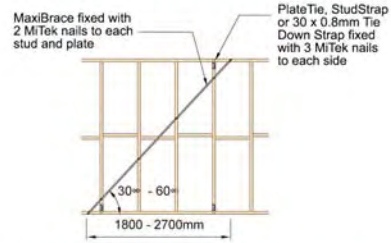
NOTES:

1. Although AS1684.2 only specifies nominal (Group A) fixings to floors where the braced wall capacity does not exceed 3.0 kN/m, it is good practice to fix braced panels using connectors which are capable of restraining the uplift generated by bracing loads as specified in AS1684.2 Table 8.23.
2. The above chart is based on the uplift forces specified in AS1684.2 Table 8.23 due to bracing loads. These fixings should be used in addition to any other fixings required to restrain direct uplift loads from the structure above the braced panel.

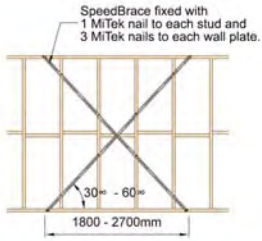
0.8kN/m Bracing Type - Pair of Gang-Nail MiniBraces in opposing directions.



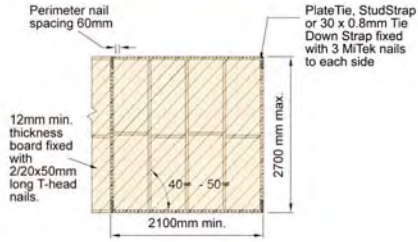
1.5kN/m Bracing Type - Gang-Nail MaxiBrace



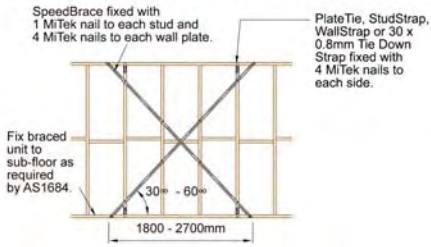
1.5kN/m Bracing Type - Gang-Nail SpeedBrace



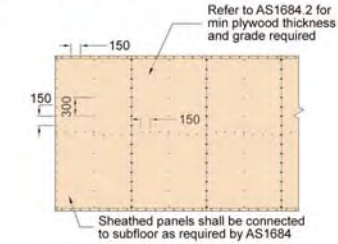
2.1kN/m Bracing Type - Diagonal Timber Wall Lining



3.0kN/m Bracing Type - Gang-Nail SpeedBrace

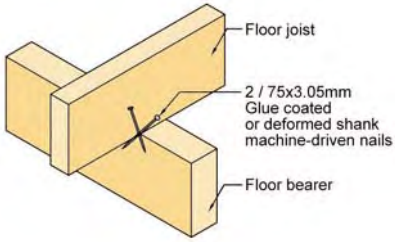


3.4kN/m Bracing Type - Plywood Brace



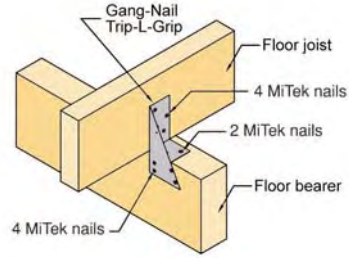
Floor Joist to Bearer (Lower of 2 Storeys)

Group A



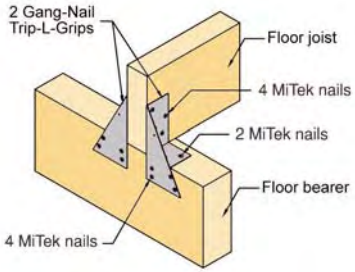
2 off 3.05mm Gun Driven Nails

Group B



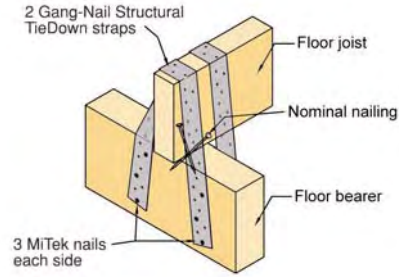
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group C



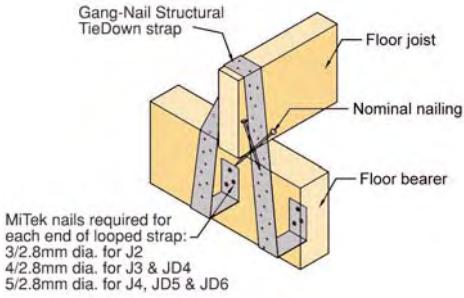
2 off Trip-L-Grips
Product Codes: TGL, TGR, TGU

Group D



2 off Structural TieDown Straps
Product Codes: TD223015, TD223030

Group E



Structural TieDown Strap
Product Codes: TD223015, TD223030

05 Table — Floor Joist to Bearer (Lower of 2 Storeys)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	B
	600	A	A	A	A	A	A	A	A	A	A	B	B
	900	A	A	A	A	A	A	A	A	A	A	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
	1800	A	A	A	A	A	A	A	A	A	B	B	B
3000	450	A	A	A	A	A	A	A	A	A	A	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	C
	1200	A	A	A	A	A	A	A	A	A	B	C	C
	1800	A	A	A	A	A	A	A	A	A	B	C	C
4500	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	C
	900	A	A	A	A	A	A	A	A	A	B	C	C
	1200	A	A	A	A	A	A	A	A	A	C	C	D
	1800	A	A	A	A	A	A	A	A	A	C	D	E
6000	450	A	A	A	A	A	A	A	A	A	B	B	C
	600	A	A	A	A	A	A	A	A	A	B	C	C
	900	A	A	A	A	A	A	A	A	A	C	C	D
	1200	A	A	A	A	A	A	A	A	A	C	D	E
	1800	A	A	A	A	A	A	A	A	A	C	D	E
7500	450	A	A	A	A	A	A	A	A	A	B	B	C
	600	A	A	A	A	A	A	A	A	A	B	C	C
	900	A	A	A	A	A	A	A	A	A	C	D	E
	1200	A	A	A	A	A	A	A	A	A	D	E	E
	1800	A	A	A	A	A	A	A	A	A	D	E	E

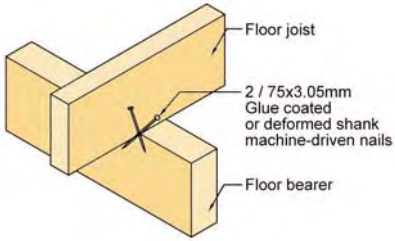
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	B
	600	A	A	A	A	A	A	A	A	A	A	B	B
	900	A	A	A	A	A	A	A	A	A	A	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
	1800	A	A	A	A	A	A	A	A	A	B	B	B
3000	450	A	A	A	A	A	A	A	A	A	A	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	C
	1200	A	A	A	A	A	A	A	A	A	B	C	C
	1800	A	A	A	A	A	A	A	A	A	B	C	C
4500	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	C
	900	A	A	A	A	A	A	A	A	A	B	C	C
	1200	A	A	A	A	A	A	A	A	A	C	C	D
	1800	A	A	A	A	A	A	A	A	A	C	D	E
6000	450	A	A	A	A	A	A	A	A	A	B	B	C
	600	A	A	A	A	A	A	A	A	A	B	C	C
	900	A	A	A	A	A	A	A	A	A	C	C	D
	1200	A	A	A	A	A	A	A	A	A	C	D	E
	1800	A	A	A	A	A	A	A	A	A	C	D	E
7500	450	A	A	A	A	A	A	A	A	A	B	B	C
	600	A	A	A	A	A	A	A	A	A	B	C	C
	900	A	A	A	A	A	A	A	A	A	C	D	E
	1200	A	A	A	A	A	A	A	A	A	D	E	E
	1800	A	A	A	A	A	A	A	A	A	D	E	E

Reference AS1684.2 Table 9.7

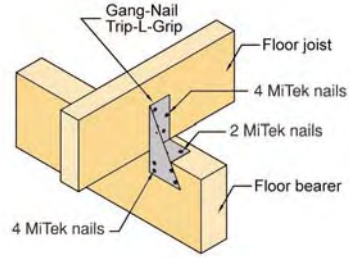
Floor Joist to Bearer (Single Storey or Upper Storey of 2 Storeys)

Group A



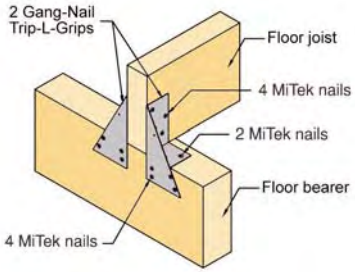
2 off 3.05mm Gun Driven Nails

Group B



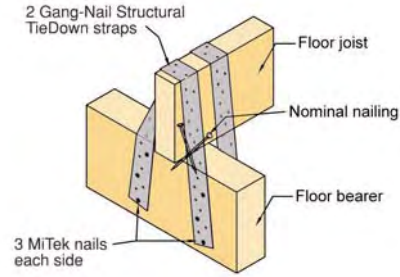
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group C



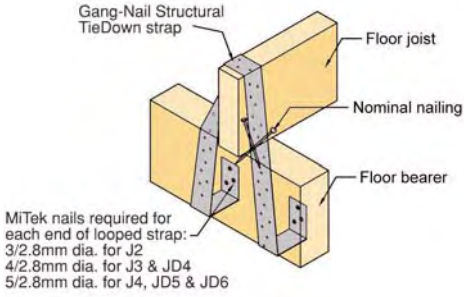
2 off Trip-L-Grips
Product Codes: TGL, TGR, TGU

Group D



2 off Structural TieDown Straps
Product Codes: TD223015, TD223030

Group E



Structural TieDown Strap
Product Codes: TD223015, TD223030

N/A **No available connector - seek alternative advice.**

06 Table Floor Joist to Bearer (Single Storey or Upper Storey of 2 Storeys)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	B	B
	600	A	A	A	A	A	A	A	A	B	A	B	B
	900	A	A	A	A	A	A	A	B	B	B	B	B
	1200	A	A	A	A	A	A	A	B	B	B	B	B
	1350	A	A	A	A	A	A	A	B	B	B	B	D
3000	450	A	A	A	A	A	A	A	B	B	B	B	B
	600	A	A	A	A	A	A	A	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	D	D
	1200	A	A	A	A	A	A	B	B	B	D	D	D
	1350	A	A	A	A	A	A	B	B	B	D	D	D
4500	450	A	A	A	A	A	A	A	B	B	B	B	D
	600	A	A	A	A	A	A	B	B	B	B	D	D
	900	A	A	A	A	A	A	B	B	B	D	D	D
	1200	A	A	A	A	A	A	B	B	D	D	D	E
	1350	A	A	A	A	A	A	B	D	D	D	E	E
6000	450	A	A	A	A	A	A	B	B	B	B	D	D
	600	A	A	A	A	A	A	B	B	B	D	D	D
	900	A	A	A	A	A	A	B	B	D	D	D	E
	1200	A	A	A	A	A	A	B	D	D	D	E	E
	1350	A	A	A	A	A	A	B	D	D	D	E	E
7500	450	A	A	A	A	A	A	B	B	B	B	D	D
	600	A	A	A	A	A	A	B	B	D	D	D	E
	900	A	A	A	A	A	A	B	D	D	D	E	E
	1200	A	A	A	A	A	A	D	D	D	D	E	E
	1350	A	A	A	A	A	A	D	D	E	N/A	N/A	N/A

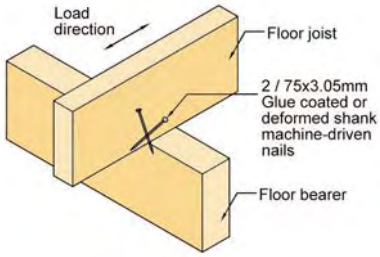
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	B	A	B	B
	600	A	A	A	A	A	A	A	B	B	B	B	B
	900	A	A	A	A	A	A	A	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	D
	1350	A	A	A	A	A	A	B	B	B	B	D	D
3000	450	A	A	A	A	A	A	A	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	D
	900	A	A	A	A	A	A	B	B	D	B	D	D
	1200	A	A	A	A	A	A	B	D	D	D	D	E
	1350	A	A	A	A	A	A	B	D	D	D	D	E
4500	450	A	A	A	A	A	A	B	B	B	B	D	D
	600	A	A	A	A	A	A	B	B	D	B	D	D
	900	A	A	A	A	A	A	B	D	D	D	D	E
	1200	A	A	A	A	A	A	D	D	D	D	E	E
	1350	A	A	A	A	A	A	D	D	E	D	E	E
6000	450	A	A	A	A	A	A	B	B	D	B	D	D
	600	A	A	A	A	A	A	B	D	D	D	D	E
	900	A	A	A	A	A	A	D	D	D	D	E	E
	1200	A	A	A	A	A	A	D	D	E	E	E	E
	1350	A	A	A	A	A	A	D	D	E	N/A	N/A	N/A
7500	450	A	A	A	A	A	A	B	B	D	D	D	E
	600	A	A	A	A	A	A	B	D	D	D	D	E
	900	A	A	A	A	A	A	D	D	E	D	E	E
	1200	A	A	A	A	A	A	D	E	E	N/A	N/A	N/A
	1350	A	A	A	A	A	A	D	E	E	N/A	N/A	N/A

Reference AS1684.2 Table 9.10

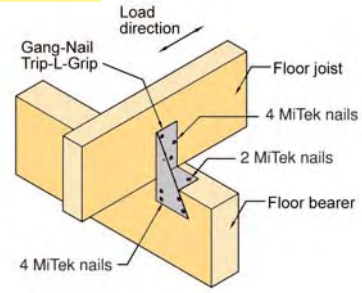
Floor Joist to Bearers - Shear Connection

Group A



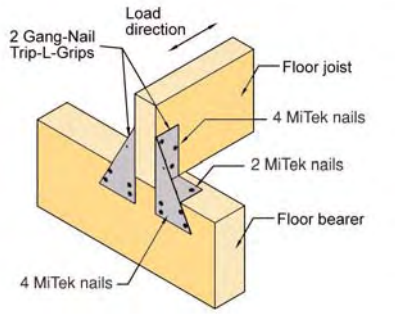
2 off 3.05 Gun Driven Nails

Group B



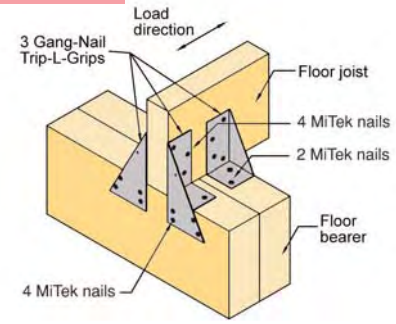
Trip-L-Grip
Product Code: TGL, TGR, TGU

Group C



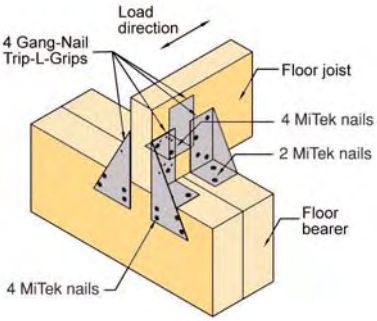
2 off Trip-L-Grips
Product Code: TGL, TGR, TGU

Group D



3 off Trip-L-Grips
Product Code: TGL, TGR, TGU

Group E



4 off Trip-L-Grips
Product Code: TGL, TGR, TGU

N/A **No available connector - seek alternative advice.**

07 Table — Floor Joist to Bearers - Shear Connection

MiTek

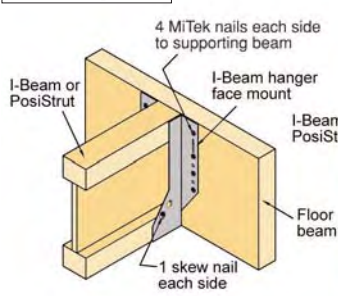
Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Projected Wall Height above Floor	Floor Joist Spacing (mm)												
3000	300	A	A	A	A	A	A	A	B	B	B	B	B
	450	A	A	A	A	A	A	B	B	B	C	C	C
	600	A	A	A	A	A	A	C	C	C	C	C	C
	1200	A	A	A	A	A	A	D	D	D	E	E	E
3500	300	A	A	A	A	A	A	B	B	B	B	B	C
	450	A	A	A	A	A	A	B	B	C	C	C	C
	600	A	A	A	A	A	A	C	C	C	C	C	D
	1200	A	A	A	A	A	A	D	D	D	E	E	N/A
4000	300	A	A	A	A	A	A	B	B	B	C	C	C
	450	A	A	A	A	A	A	C	C	C	C	C	C
	600	A	A	A	A	A	A	C	C	C	D	D	D
	1200	A	A	A	A	A	A	D	D	E	N/A	N/A	N/A
4500	300	A	A	A	A	A	A	B	B	B	C	C	C
	450	A	A	A	A	A	A	C	C	C	C	C	C
	600	A	A	A	A	A	A	C	C	C	D	D	D
	1200	A	A	A	A	A	A	E	E	E	N/A	N/A	N/A
5000	300	A	A	A	A	A	A	B	B	B	C	C	C
	450	A	A	A	A	A	A	C	C	C	C	C	D
	600	A	A	A	A	A	A	C	C	C	D	D	D
	1200	A	A	A	A	A	A	E	E	E	N/A	N/A	N/A

Reference AS1684.2 Clause 9.7.5 and Table 9.26

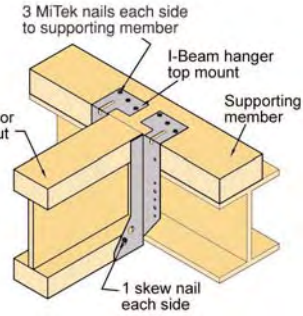
NOTE: For most situations the provision of nominal fixing and/or specific tie-down and the fixing of bracing walls may be adequate. Refer to AS1684.2 Clause 9.7.1

PosiStrut or I-Joist to Beam

Group A

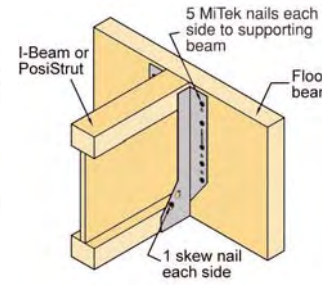


200mm FaceFix I-Beam Hanger
Product Code: IBHF



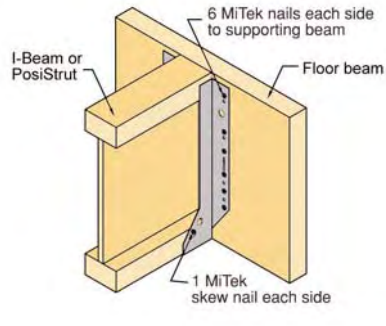
200mm TopFix I-Beam Hanger
Product Code: IBHT

Group B



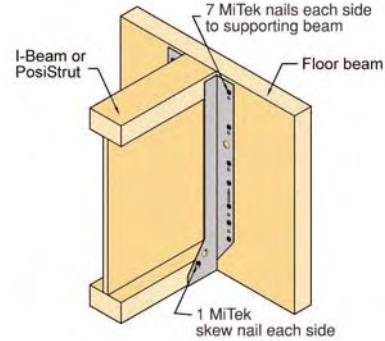
240mm FaceFix I-Beam Hanger
Product Code: IBHF

Group C



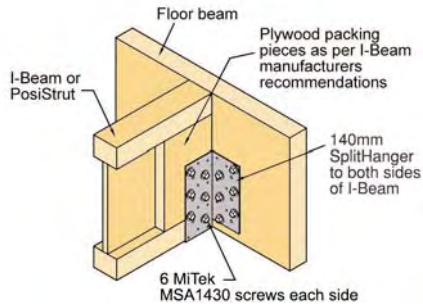
300mm FaceFix I-Beam Hanger
Product Code: IBHF

Group D



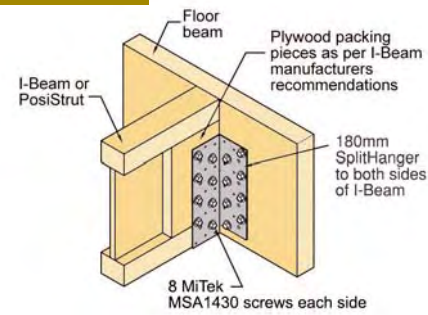
360mm FaceFix I-Beam Hanger
Product Code: IBHF

Group E



140mm SplitHanger
Product Code: SPH140

Group F



180mm SplitHanger
Product Code: SPH180

PosiStrut or I-Joist to Beam

MiTek

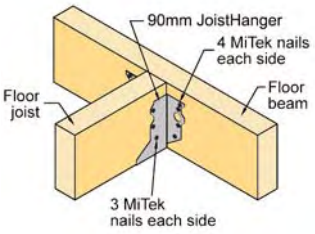
Loading		General Domestic			Balcony		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Floor Load Width (mm)	Floor Joist Spacing (mm)						
750	300	A	A	A	A	A	A
	450	A	A	A	A	A	A
	600	A	A	A	A	A	A
1500	300	A	A	A	A	A	A
	450	A	A	A	A	A	A
	600	A	A	A	A	A	A
2250	300	A	A	A	A	A	A
	450	A	A	A	A	A	A
	600	A	A	A	A	A	B
3000	300	A	A	A	A	A	A
	450	A	A	A	A	A	B
	600	A	A	C	A	B	D
3750	300	A	A	A	A	A	A
	450	A	A	B	A	B	C
	600	A	B	D	A	C	E

Reference AS1684.2 Clause 4.3.2.5

NOTE: Refer AS1684.2 Cl 2.6 for definition of floor load width.

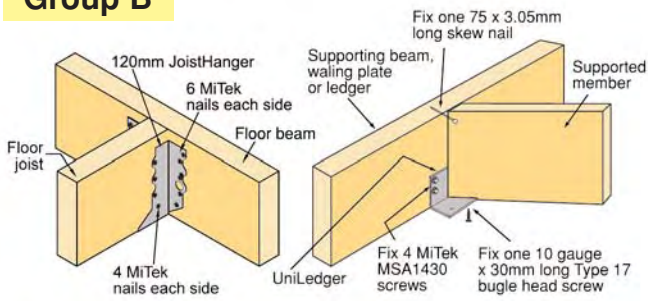
Floor Joist to Beam

Group A



90mm JoistHangers
Product Codes: JH3590, JH4090, JH4590, JH5090

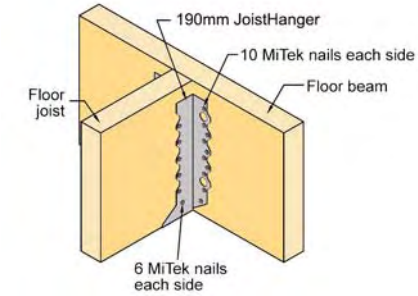
Group B



120mm JoistHangers
Product Codes: JH35120, JH40120, JH45120, JH50120

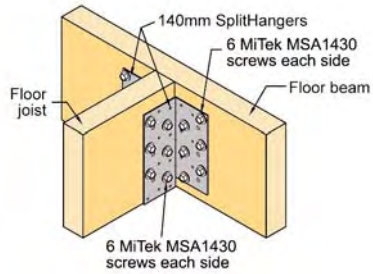
UniLedger
(support floor joists at an angle to beam)
Product Code: UL7550

Group C



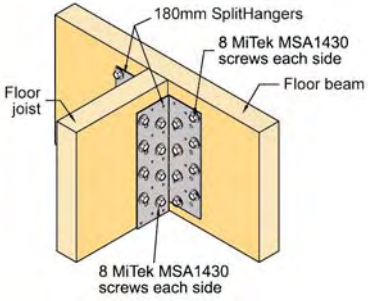
190mm JoistHangers
Product Codes: JH40190, JH45190, JH50190

Group D



140mm SplitHanger
Product Code: SPH140

Group E



180mm SplitHanger
Product Code: SPH180

Floor Joist to Beam

MiTek

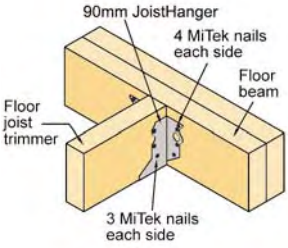
Loading		General Domestic			Balcony		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Floor Load Width (mm)	Floor Joist Spacing (mm)						
750	300	A	A	A	A	A	A
	450	A	A	A	A	A	A
	600	A	A	A	A	A	A
1500	300	A	A	A	A	A	A
	450	A	A	A	A	A	A
	600	A	A	A	A	A	B
2250	300	A	A	A	A	A	A
	450	A	A	B	A	A	C
	600	A	B	C	A	B	C
3000	300	A	A	A	A	A	B
	450	A	B	C	A	B	C
	600	A	C	D	B	C	D
3750	300	A	A	B	A	B	C
	450	A	B	C	B	C	D
	600	B	C	D	C	D	D

Reference AS1684.2 Clause 4.3.2.5

NOTE: Refer AS1684.2 Cl 2.6 for definition of floor load width.

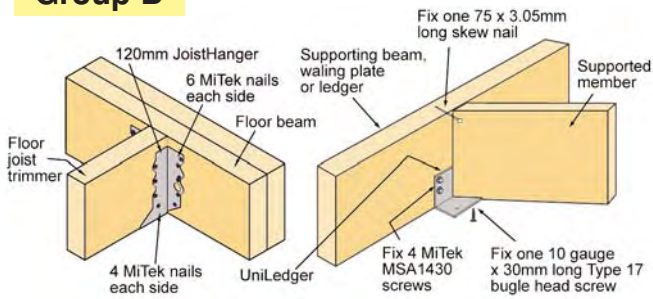
Floor Joist Trimmer to Floor Beam

Group A



90mm JoistHangers
Product Codes: JH3590, JH4090, JH4590, JH5090

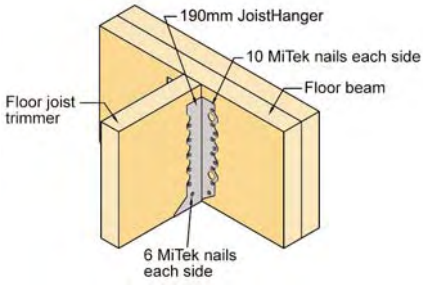
Group B



120mm JoistHangers
Product Codes: JH35120, JH40120, JH45120, JH50120

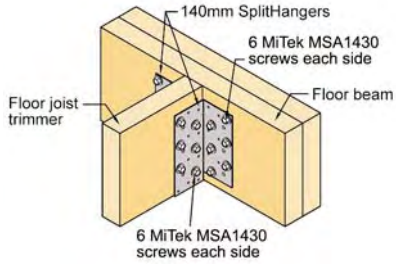
UniLedger
(support floor joists at an angle to beam)
Product Code: UL7550

Group C



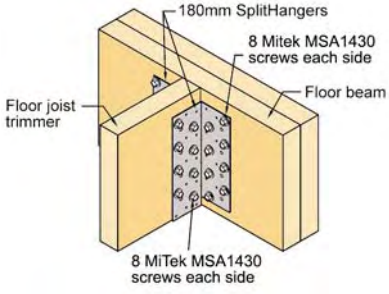
150 - 190mm JoistHangers
Product Codes: JH40190, JH45190, JH50190, JH65165, JH70160, JH95150

Group D



140mm SplitHanger
Product Code: SPH140

Group E



180mm SplitHanger
Product Code: SPH180

N/A **No available connector - seek alternative advice.**

10 Table — Floor Joist Trimmer to Floor Beam

MiTek

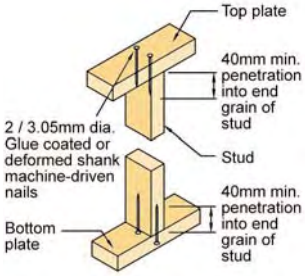
Loading		General Domestic			Balcony		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Floor Joist Load Width (mm)	Trimmer Span (mm)						
750	1200	A	A	A	A	A	A
	1800	A	A	A	A	A	A
	2400	A	A	A	A	A	B
	3000	A	A	B	A	B	C
	3600	A	B	C	A	B	C
1500	1200	A	A	A	A	A	B
	1800	A	B	C	A	B	C
	2400	A	C	D	B	C	D
	3000	B	C	D	C	D	D
	3600	C	D	D	C	D	D
2250	1200	A	B	C	A	B	C
	1800	B	C	D	C	D	D
	2400	C	D	D	C	D	D
	3000	C	D	D	D	D	E
	3600	D	D	E	D	D	N/A
3000	1200	A	C	D	B	C	D
	1800	C	D	D	C	D	D
	2400	D	D	D	D	D	E
	3000	D	D	E	D	E	N/A
	3600	D	E	N/A	D	N/A	N/A
3750	1200	B	C	D	C	D	D
	1800	C	D	D	D	D	E
	2400	D	D	E	D	E	N/A
	3000	D	E	N/A	D	N/A	N/A
	3600	D	N/A	N/A	E	N/A	N/A

Reference AS1684.2 Clause 4.3.2.5

NOTE: Refer AS1684.2 Cl 2.6 for definition of floor joist load width.

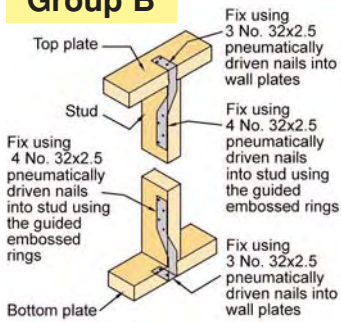
Wall Plate to Stud

Group A

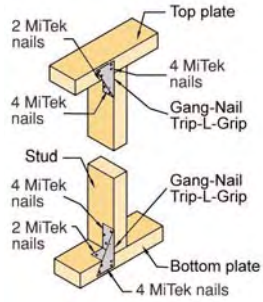


2/3.05mm Gun Driven Nails

Group B

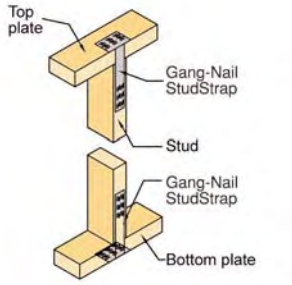


WallStrap
Product Codes: WSL, WSR



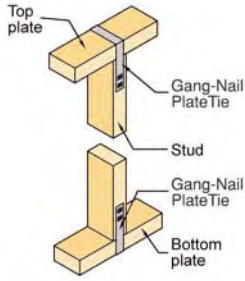
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group C



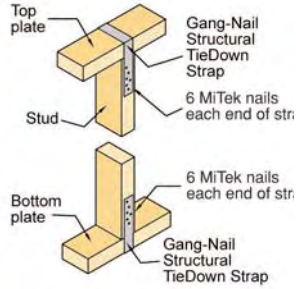
StudStrap
Product Code: SS

Group D



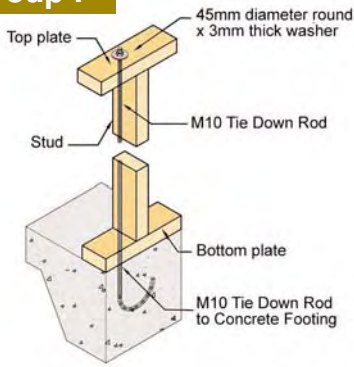
PlateTies
Product Codes: PT407, PT409, PT30

Group E



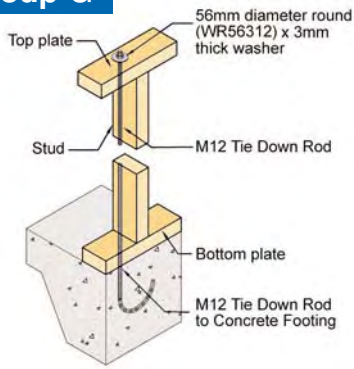
Structural TieDown Strap
Product Codes: TD223015, TD223030

Group F



M10 Cyclone Rod

Group G



M12 Cyclone Rod

N/A **No available connector - seek alternative advice.**

Wall Plate to Stud

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing												
1500	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	C
	1350	A	A	A	A	A	A	B	B	B	B	B	C
	1800	A	A	A	A	A	A	B	B	B	C	C	C
3000	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	C
	900	A	A	A	A	A	A	B	B	B	C	C	C
	1200	A	A	A	A	A	A	B	B	C	D	D	D
	1350	A	A	A	A	A	A	B	C	C	D	D	D
	1800	A	A	A	A	A	A	C	C	C	E	F	F
4500	450	A	A	A	A	A	A	B	B	B	B	B	C
	600	A	A	A	A	A	A	B	B	B	C	C	C
	900	A	A	A	A	A	A	B	C	C	D	D	D
	1200	A	A	A	A	A	A	C	C	C	E	F	F
	1350	A	A	A	A	A	A	C	C	C	E	F	F
	1800	A	A	A	A	A	A	D	D	F	F	F	G
6000	450	A	A	A	A	A	A	B	B	B	C	C	C
	600	A	A	A	A	A	A	B	B	C	D	D	D
	900	A	A	A	A	A	A	C	C	C	E	F	F
	1200	A	A	A	A	A	A	D	D	D	E	F	F
	1350	A	A	A	A	A	A	D	D	F	F	F	G
	1800	A	A	A	A	A	A	E	F	F	F	G	N/A
7500	450	A	A	A	A	A	A	B	B	C	C	C	C
	600	A	A	A	A	A	A	C	C	C	D	D	F
	900	A	A	A	A	A	A	D	D	D	E	F	F
	1200	A	A	A	A	A	A	D	D	F	F	F	G
	1350	A	A	A	A	A	A	E	F	F	F	G	N/A
	1800	A	A	A	A	A	A	E	F	F	G	N/A	N/A

Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing												
1500	450	A	B	B	B	B	B	B	B	B	B	B	B
	600	A	B	B	B	B	B	B	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	B	B	B	C
	1200	B	B	B	B	B	B	B	B	B	B	C	C
	1350	B	B	B	B	B	B	B	B	C	C	C	C
	1800	B	B	B	B	B	B	B	B	C	C	C	C
3000	450	B	B	B	B	B	B	B	B	B	B	B	C
	600	B	B	B	B	B	B	B	B	B	B	C	C
	900	B	B	B	B	B	B	B	B	C	C	C	C
	1200	B	B	B	B	B	C	C	C	C	D	D	F
	1350	B	B	B	B	B	C	C	C	C	E	F	F
	1800	B	B	B	C	C	C	D	D	F	E	F	F
4500	450	B	B	B	B	B	B	B	B	C	C	C	C
	600	B	B	B	B	B	B	B	B	C	C	C	C
	900	B	B	B	B	B	C	C	C	C	E	F	F
	1200	B	B	B	C	C	C	D	D	F	E	F	F
	1350	B	B	C	C	C	C	D	D	F	F	F	G
	1800	B	B	C	C	C	C	E	F	F	F	G	N/A
6000	450	B	B	B	B	B	B	B	B	C	C	C	C
	600	B	B	B	B	B	C	C	C	C	D	D	F
	900	B	B	B	C	C	C	D	D	F	E	F	F
	1200	B	B	C	C	C	C	E	F	F	F	F	G
	1350	B	B	C	C	C	C	E	F	F	F	G	N/A
	1800	C	C	C	D	D	F	F	F	G	G	N/A	N/A
7500	450	B	B	B	B	B	B	C	C	C	D	D	F
	600	B	B	B	B	B	C	C	C	C	E	F	F
	900	B	B	C	C	C	C	E	F	F	F	F	G
	1200	B	C	C	D	D	D	E	F	F	G	G	N/A
	1350	C	C	C	D	D	F	F	F	G	G	N/A	N/A
	1800	C	C	C	E	F	F	F	G	N/A	N/A	N/A	N/A

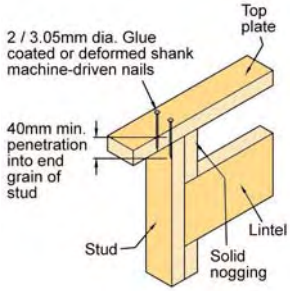
Reference AS1684.2 Table 9.13

NOTE: Maximum spacing of connections for wall plates to studs (top plate to bottom plate) is 1800 mm.

Header or Stud to Wall Plates

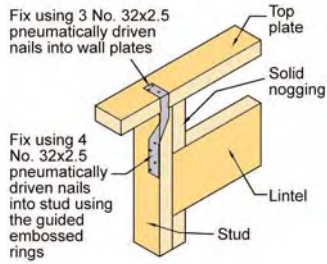
MiTek

Group A

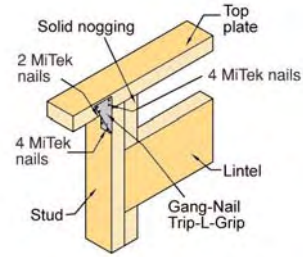


2/3.05mm Gun Driven Nails

Group B

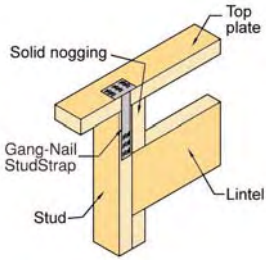


WallStrap
Product Codes: WSL, WSR



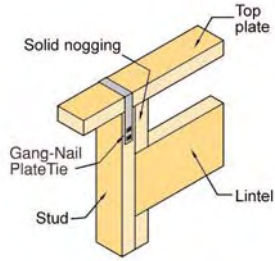
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group C



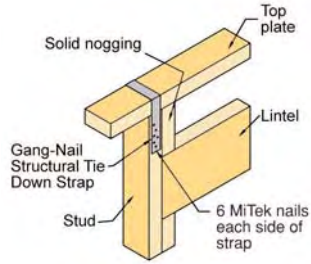
StudStrap
Product Code: SS

Group D



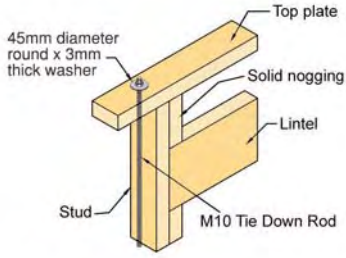
PlateTies
Product Codes: PT407, PT409, PT30

Group E



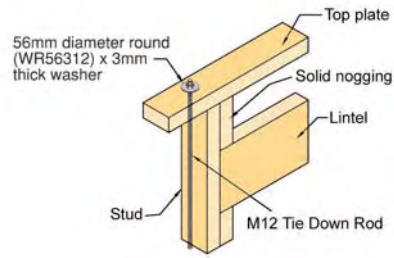
Structural TieDown Strap
Product Codes: TD223015, TD223030

Group F



M10 Cyclone Rod

Group G



M12 Cyclone Rod

N/A **No available connector - seek alternative advice.**

12 Table — Header or Stud to Wall Plates

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	C
	1350	A	A	A	A	A	A	B	B	B	B	B	C
	1800	A	A	A	A	A	A	B	B	B	C	C	C
	3000	A	A	A	A	A	A	C	C	C	D	D	F
3000	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	C
	900	A	A	A	A	A	A	B	B	B	C	C	C
	1200	A	A	A	A	A	A	B	B	C	D	D	D
	1350	A	A	A	A	A	A	B	C	C	D	D	D
	1800	A	A	A	A	A	A	C	C	C	E	F	F
	3000	A	A	A	A	A	A	D	D	F	F	F	G
4500	450	A	A	A	A	A	A	B	B	B	B	B	C
	600	A	A	A	A	A	A	B	B	B	C	C	C
	900	A	A	A	A	A	A	B	C	C	D	D	D
	1200	A	A	A	A	A	A	C	C	C	E	F	F
	1350	A	A	A	A	A	A	C	C	C	E	F	F
	1800	A	A	A	A	A	A	D	D	F	F	F	G
	3000	A	A	A	A	A	A	E	F	F	G	N/A	N/A
6000	450	A	A	A	A	A	A	B	B	B	C	C	C
	600	A	A	A	A	A	A	B	B	C	D	D	D
	900	A	A	A	A	A	A	C	C	C	E	F	F
	1200	A	A	A	A	A	A	D	D	D	E	F	F
	1350	A	A	A	A	A	A	D	D	F	F	F	G
	1800	A	A	A	A	A	A	E	F	F	F	G	N/A
	3000	A	A	A	A	A	A	F	G	G	N/A	N/A	N/A
7500	450	A	A	A	A	A	A	B	B	C	C	C	C
	600	A	A	A	A	A	A	C	C	C	D	D	F
	900	A	A	A	A	A	A	D	D	D	E	F	F
	1200	A	A	A	A	A	A	D	D	F	F	F	G
	1350	A	A	A	A	A	A	E	F	F	F	G	N/A
	1800	A	A	A	A	A	A	E	F	F	G	N/A	N/A
	3000	A	A	A	A	A	A	G	G	N/A	N/A	N/A	N/A

Roof Load Sheet

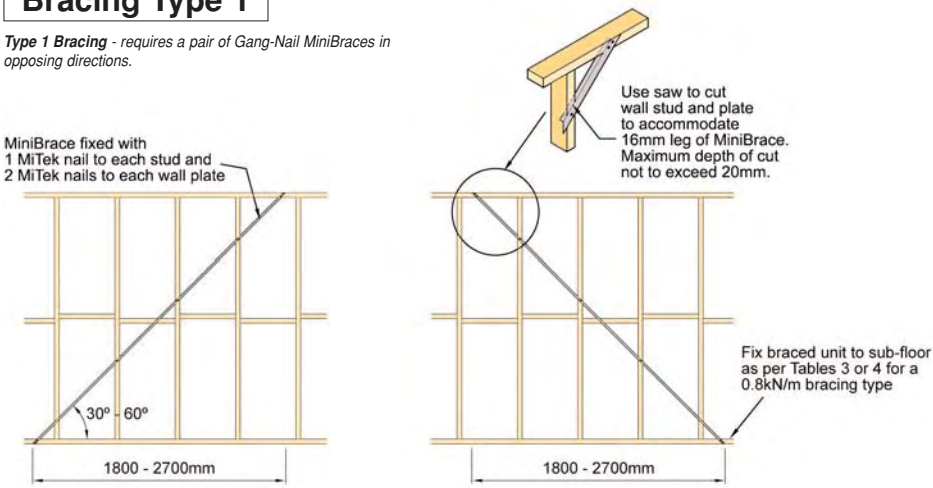
Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Fixing Spacing (mm)												
1500	450	A	B	B	B	B	B	B	B	B	B	B	B
	600	A	B	B	B	B	B	B	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	B	B	B	C
	1200	B	B	B	B	B	B	B	B	B	B	C	C
	1350	B	B	B	B	B	B	B	B	C	C	C	C
	1800	B	B	B	B	B	B	B	B	C	C	C	C
	3000	B	B	B	B	B	C	C	C	C	E	F	F
3000	450	B	B	B	B	B	B	B	B	B	B	B	C
	600	B	B	B	B	B	B	B	B	B	B	C	C
	900	B	B	B	B	B	B	B	B	C	C	C	C
	1200	B	B	B	B	B	C	C	C	C	D	D	F
	1350	B	B	B	B	B	C	C	C	C	E	F	F
	1800	B	B	B	C	C	C	D	D	F	E	F	F
	3000	B	C	C	D	D	D	E	F	F	G	G	N/A
4500	450	B	B	B	B	B	B	B	B	C	C	C	C
	600	B	B	B	B	B	B	B	B	C	C	C	C
	900	B	B	B	B	B	C	C	C	C	E	F	F
	1200	B	B	B	C	C	C	D	D	F	E	F	F
	1350	B	B	C	C	C	C	D	D	F	F	F	G
	1800	B	B	C	C	C	C	E	F	F	F	G	N/A
	3000	C	C	C	E	F	F	F	G	N/A	N/A	N/A	N/A
6000	450	B	B	B	B	B	B	B	B	C	C	C	C
	600	B	B	B	B	B	C	C	C	C	D	D	F
	900	B	B	B	C	C	C	D	D	F	E	F	F
	1200	B	B	C	C	C	C	E	F	F	F	F	G
	1350	B	B	C	C	C	C	E	F	F	F	G	N/A
	1800	C	C	C	D	D	F	F	F	G	G	N/A	N/A
	3000	D	D	F	F	F	G	G	N/A	N/A	N/A	N/A	N/A
7500	450	B	B	B	B	B	B	C	C	C	D	D	F
	600	B	B	B	B	B	C	C	C	C	E	F	F
	900	B	B	C	C	C	C	E	F	F	F	F	G
	1200	B	C	C	D	D	D	E	F	F	G	G	N/A
	1350	C	C	C	D	D	F	F	F	G	G	N/A	N/A
	1800	C	C	C	E	F	F	F	G	N/A	N/A	N/A	N/A
	3000	E	F	F	F	G	G	N/A	N/A	N/A	N/A	N/A	N/A

Reference AS1684.2 Table 9.13

NOTES: 1. Fixing spacing for headers is the header span.
2. Similar strength connection required at fixing to bottom plate. Refer Table 2.

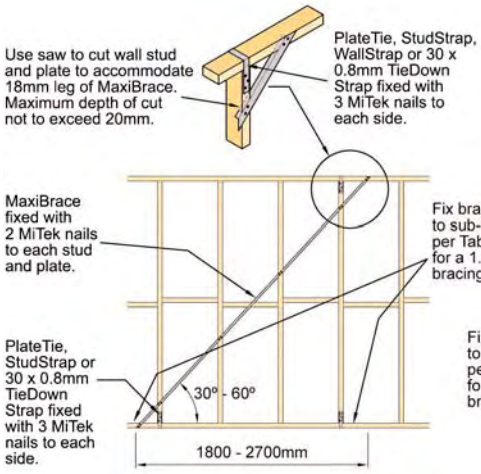
Bracing Type 1

Type 1 Bracing *- requires a pair of Gang-Nail MiniBraces in opposing directions.*



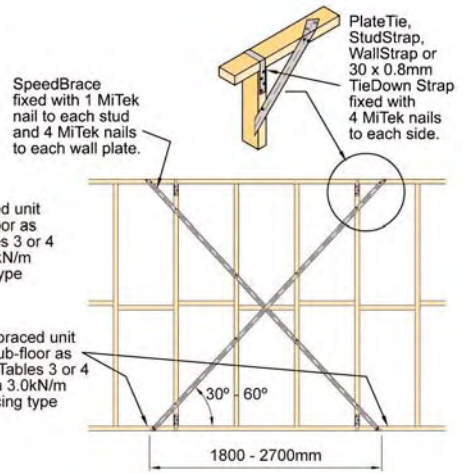
MiniBrace
Product Codes: MIB3.0, MIB3.3, MIB3.6, MIB3.9, MIB4.2, MIB4.8

Bracing Type 2



MaxiBrace
Product Codes: MAB3.0, MAB3.3, MAB3.6, MAB4.2

Bracing Type 3



SpeedBrace
Product Codes: SB3.6, SB4.0, SB5.0, SB6.0

13 Table End Wall Bracing for Buildings with Hip or Gable Roofs

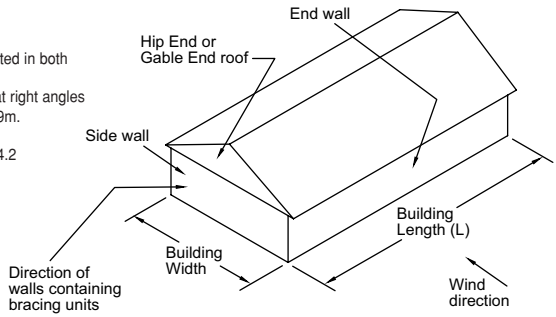
MiTek

	Wind Classification		N1			N2			N3			N4		
		Roof Pitch Range	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30
Level of applied bracing	Bracing Type	Building Width (m)	Total Length of Panels Bracing side walls (metres) = Building length (L) x (M) from table below											
Single Storey or Upper Storey	1	4	0.50	0.63	0.88	0.75	0.88	1.25	1.13	1.38	1.94	1.69	2.06	2.81
		6	0.50	0.75	1.00	0.75	1.06	1.44	1.13	1.63	2.25	1.69	2.44	3.38
		8	0.50	0.88	1.19	0.75	1.25	1.75	1.13	1.94	2.69	1.69	2.88	4.06
		10	0.50	0.94	1.38	0.69	1.38	2.00	1.13	2.19	3.13	1.69	3.25	4.69
		12	0.50	1.06	1.56	0.69	1.56	2.25	1.13	2.44	3.56	1.69	3.63	5.31
		14	0.50	1.19	1,75	0.69	1.69	2.50	1.13	2.63	3.94	1.69	3.94	5.88
		16	0.50	1.31	1.94	0.69	1.81	2.75	1.13	2.88	4.31	1.69	4.25	6.25
	2	4	0.53	0.67	0.93	0.80	0.93	1.33	1.20	1.47	2.07	1.80	2.20	3.00
		6	0.53	0.80	1.07	0.80	1.13	1.53	1.20	1.73	2.40	1.80	2.60	3.60
		8	0.53	0.93	1.27	0.80	1.33	1.87	1.20	2.07	2.87	1.80	3.07	4.33
		10	0.53	1.00	1.47	0.73	1.47	2.13	1.20	2.33	3.33	1.80	3.47	5.00
		12	0.53	1.13	1.67	0.73	1.67	2.40	1.20	2.60	3.80	1.80	3.87	5.67
		14	0.53	1.27	1.87	0.73	1.80	2.67	1.20	2.80	4.20	1.80	4.20	6.27
		16	0.53	1.40	2.07	0.73	1.93	2.93	1.20	3.07	4.60	1.80	4.53	6.67
	3	4	0.27	0.33	0.47	0.40	0.47	0.67	0.60	0.73	1.03	0.90	1.10	1.50
		6	0.27	0.33	0.47	0.40	0.57	0.77	0.60	0.87	1.20	0.90	1.30	1.80
		8	0.27	0.40	0.53	0.40	0.67	0.93	0.60	1.03	1.43	0.90	1.53	2.17
		10	0.27	0.47	0.63	0.37	0.73	1.07	0.60	1.17	1.67	0.90	1.73	2.50
		12	0.27	0.50	0.73	0.37	0.83	1.20	0.60	1.30	1.90	0.90	1.93	2.83
		14	0.27	0.57	0.83	0.37	0.90	1.33	0.60	1.40	2.10	0.90	2.10	3.13
		16	0.27	0.63	0.93	0.37	0.97	1.47	0.60	1.53	2.30	0.90	2.27	3.33
Lower Storey of Two Storeys or Highset	1	4	1.69	1.75	2.13	2.31	2.38	2.94	3.63	3.75	4.63	5.38	5.56	6.88
		6	1.69	1.81	2.31	2.31	2.50	3.19	3.63	3.88	4.94	5.38	5.75	7.50
		8	1.69	1.88	2.44	2.31	2.63	3.38	3.63	4.13	5.31	5.44	6.13	8.13
		10	1.69	2.00	2.63	2.31	2.81	3.63	3.63	4.38	5.63	5.44	6.25	8.13
		12	1.69	2.13	2.81	2.31	2.94	3.88	3.63	4.63	6.00	5.44	6.88	8.75
		14	1.69	2.25	3.00	2.31	3.13	4.13	3.63	4.88	6.25	5.44	7.50	9.38
		16	1.69	2.38	3.19	2.31	3.31	4.44	3.63	5.13	6.88	5.44	7.50	10.00
	2	4	1.80	1.87	2.27	2.47	2.53	3.13	3.87	4.00	4.93	5.73	5.93	7.33
		6	1.80	1.93	2.47	2.47	2.67	3.40	3.87	4.13	5.27	5.73	6.13	8.00
		8	1.80	2.00	2.60	2.47	2.80	3.60	3.87	4.40	5.67	5.80	6.53	8.67
		10	1.80	2.13	2.80	2.47	3.00	3.87	3.87	4.67	6.00	5.80	6.67	8.67
		12	1.80	2.27	3.00	2.47	3.13	4.13	3.87	4.93	6.40	5.80	7.33	9.33
		14	1.80	2.40	3.20	2.47	3.33	4.40	3.87	5.20	6.67	5.80	8.00	10.00
		16	1.80	2.53	3.40	2.47	3.53	4.73	3.87	5.47	7.33	5.80	8.00	10.67
	3	4	0.90	0.93	1.13	1.23	1.27	1.57	1.93	2.00	2.47	2.87	2.97	3.67
		6	0.90	0.97	1.23	1.23	1.33	1.70	1.93	2.07	2.63	2.87	3.07	4.00
		8	0.90	1.00	1.30	1.23	1.40	1.80	1.93	2.20	2.83	2.90	3.27	4.33
		10	0.90	1.07	1.40	1.23	1.50	1.93	1.93	2.33	3.00	2.90	3.33	4.33
		12	0.90	1.13	1.50	1.23	1.57	2.07	1.93	2.47	3.20	2.90	3.67	4.67
		14	0.90	1.20	1.60	1.23	1.67	2.20	1.93	2.60	3.33	2.90	4.00	5.00
		16	0.90	1.27	1.70	1.23	1.77	2.37	1.93	2.73	3.67	2.90	4.00	5.33

Reference AS1684.2
Tables F1(C), F2(C), F3(C) & F4(C)

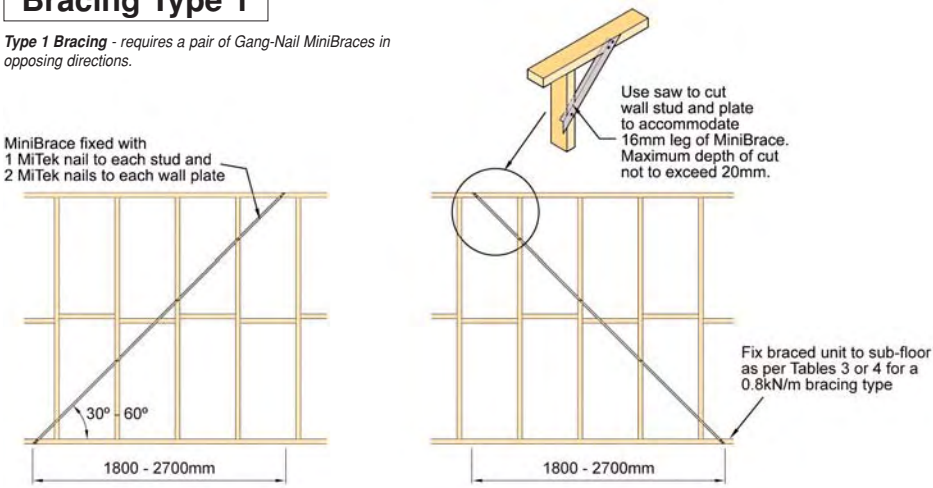
NOTES:

1. Braced panels are to be generally evenly distrubuted in both directions.
2. The max. distance between braced walls/panels at right angles to the building length or width should not exceed 9m.
3. For N3 and N4 wind classifications the maximum distance may be less than 9.0m. Refer to AS 1684.2 Table 8.20 and 8.21.
4. Total length of panels calculated for a wall height of 2700mm. For wall heights between 2700mm - 3000mm increase total panel length by 15%.



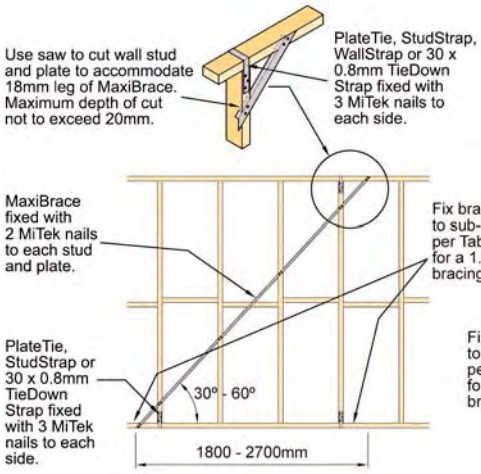
Bracing Type 1

Type 1 Bracing *- requires a pair of Gang-Nail MiniBraces in opposing directions.*



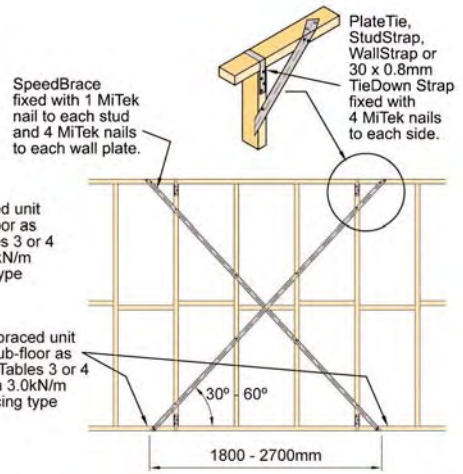
MiniBrace
Product Codes: MIB3.0, MIB3.3, MIB3.6, MIB3.9, MIB4.2, MIB4.8

Bracing Type 2



MaxiBrace
Product Codes: MAB3.0, MAB3.3, MAB3.6, MAB4.2

Bracing Type 3



SpeedBrace
Product Codes: SB3.6, SB4.0, SB5.0, SB6.0

14 Table Side Wall Bracing for Buildings with Hip Ends

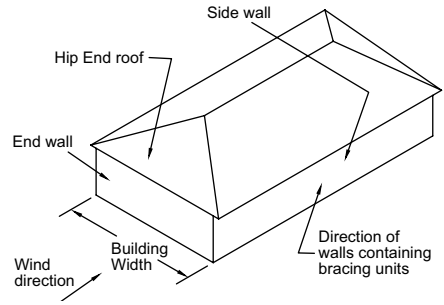
MiTek

	Wind Classification		N1			N2			N3			N4		
		Roof Pitch Range	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30
Level of applied bracing	Bracing Type	Building Width (m)	Total Length of Panels Bracing end walls (M)											
Single Storey or Upper Storey	1	4	2	3	3	3	3	4	5	5	6	8	8	9
		6	3	4	5	5	6	7	8	9	11	11	13	16
		8	5	6	8	6	8	10	10	13	16	14	19	23
		10	6	8	10	8	11	14	12	18	22	18	26	33
		12	7	11	13	9	14	18	14	23	29	22	33	43
		14	8	13	17	11	18	23	17	28	36	26	41	54
		16	9	16	21	13	21	28	19	33	44	29	50	66
	2	4	2	3	3	3	4	4	5	6	7	8	9	10
		6	4	4	5	5	6	7	8	9	11	12	14	17
		8	5	6	8	7	9	11	11	14	17	15	21	25
		10	6	9	11	8	12	15	13	19	23	19	28	35
		12	7	11	14	10	15	19	15	24	31	23	35	45
		14	9	14	18	11	19	25	18	29	39	27	44	57
		16	9	17	22	13	23	30	21	35	47	31	53	71
	3	4	1	1	2	2	2	2	3	3	3	4	4	5
		6	6	6	7	3	3	4	4	5	6	6	7	8
		8	8	8	9	3	4	5	5	7	8	8	10	12
		10	10	11	12	4	6	7	6	9	12	10	14	17
		12	12	13	15	5	8	10	8	12	15	12	18	23
		14	14	16	18	6	9	12	9	15	19	14	22	29
		16	16	18	21	7	11	15	10	18	24	15	27	35
Lower Storey of Two Storeys or Highset	1	4	8	8	8	10	10	11	16	16	17	23	24	26
		6	11	11	13	15	16	17	24	24	27	35	36	39
		8	14	16	17	20	21	24	31	33	37	47	50	55
		10	18	20	22	25	28	31	39	43	48	59	64	71
		12	22	24	28	31	34	38	48	53	59	71	79	89
		14	26	29	34	36	41	46	55	64	73	82	95	108
		16	30	34	40	41	48	55	63	75	86	94	112	129
	2	4	8	8	9	11	11	11	17	17	18	25	25	27
		6	11	12	13	16	17	18	25	26	29	37	39	42
		8	15	17	18	21	23	25	33	35	39	50	53	59
		10	19	21	23	27	29	33	42	46	51	63	68	76
		12	23	26	29	33	36	41	51	57	63	75	84	95
		14	27	31	36	38	43	49	59	68	77	87	101	115
		16	32	37	43	43	51	59	67	80	92	100	119	137
	3	4	4	4	4	5	5	6	8	9	9	12	13	14
		6	6	6	7	8	8	9	13	13	14	19	19	21
		8	8	8	9	11	11	13	17	18	20	25	27	29
		10	10	11	12	13	15	16	21	23	25	31	34	38
		12	12	13	15	16	18	20	25	28	32	38	42	47
		14	14	16	18	19	22	25	29	34	39	44	51	58
		16	16	18	21	22	26	29	34	40	46	50	60	69

Reference AS1684.2
Tables F1(B), F2(B), F3(B) & F4(B)

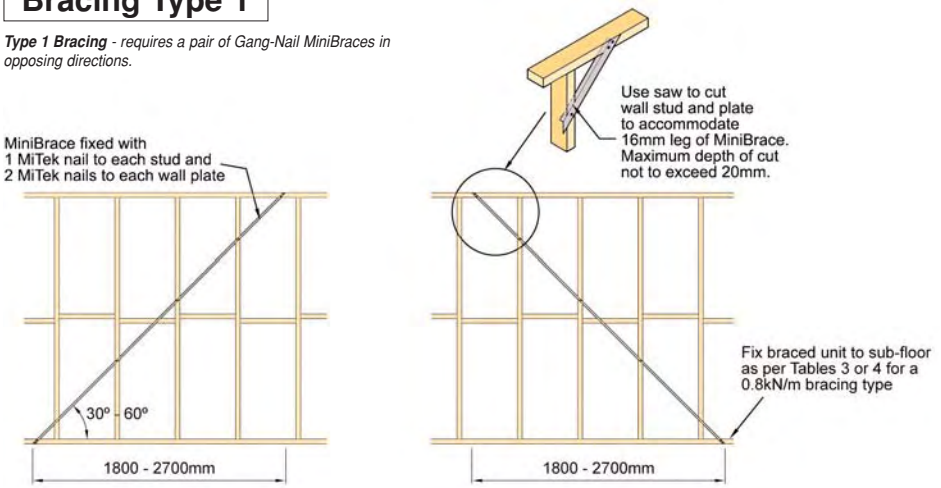
NOTES:

1. Braced panels are to be generally evenly distrubuted in both directions.
2. The max. distance between braced walls/panels at right angles to the building length or width should not exceed 9m.
3. For N3 and N4 wind classifications the maximum distance may be less than 9.0m. Refer to AS 1684.2 Table 8.20 and 8.21.
4. Total length of panels calculated for a wall height of 2700mm. For wall heights between 2700mm - 3000mm increase total panel length by 15%.



Bracing Type 1

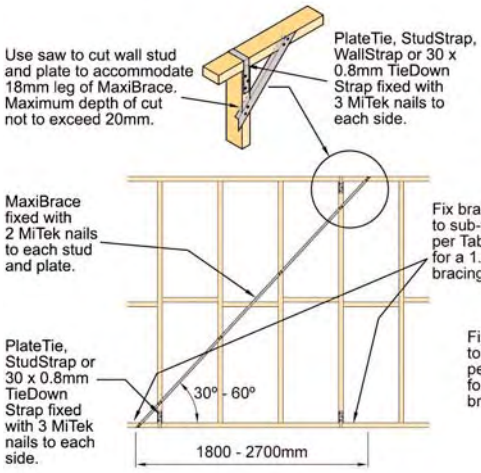
Type 1 Bracing *- requires a pair of Gang-Nail MiniBraces in opposing directions.*



MiniBrace

Product Codes: MIB3.0, MIB3.3, MIB3.6, MIB3.9, MIB4.2, MIB4.8

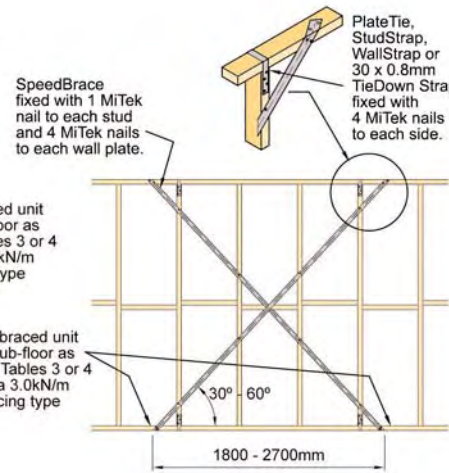
Bracing Type 2



MaxiBrace

Product Codes: MAB3.0, MAB3.3, MAB3.6, MAB4.2

Bracing Type 3



SpeedBrace

Product Codes: SB3.6, SB4.0, SB5.0, SB6.0

15 Table Side Wall Bracing for Buildings with Gable Ends

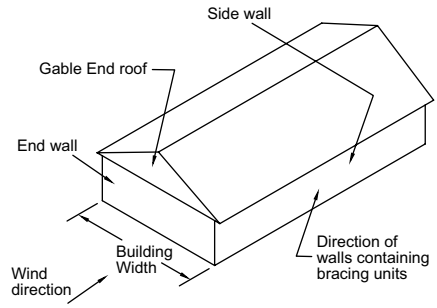
MiTek

	Wind Classification		N1			N2			N3			N4		
		Roof Pitch Range	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30	0 to 10	11 to 20	21 to 30
Level of applied bracing	Bracing Type	Building Width (m)	Total Length of Panels Bracing end walls (M)											
	1	4	2	3	3	4	4	4	6	6	7	8	9	11
		6	4	5	5	6	6	8	9	10	12	13	15	18
		8	5	7	8	8	9	11	13	15	18	18	23	27
		10	7	9	11	11	13	16	16	21	25	24	30	38
		12	9	12	15	13	17	21	20	26	33	30	39	49
		14	11	14	19	16	21	27	25	33	43	37	49	63
		16	13	18	23	19	26	34	29	41	53	44	60	78
Single Storey or Upper Storey	2	4	3	3	3	4	4	5	6	7	7	9	10	11
		6	4	5	6	6	7	8	9	11	13	14	16	19
		8	6	7	9	9	10	12	13	16	19	19	24	29
		10	7	9	12	11	14	17	17	22	27	25	32	40
		12	9	13	16	14	18	23	21	28	35	32	42	53
		14	12	15	20	17	23	29	27	35	45	39	53	67
		16	14	19	25	20	27	36	31	43	56	47	64	83
	3	4	1	1	2	2	2	2	3	3	4	4	5	6
		6	6	7	7	3	3	4	5	5	6	7	8	9
		8	8	9	10	4	5	6	7	8	10	10	12	14
		10	11	12	13	6	7	9	9	11	13	13	16	20
		12	13	14	16	7	9	11	11	14	18	16	21	26
		14	15	17	20	8	11	14	13	18	23	20	26	34
		16	18	21	24	10	14	18	16	22	28	23	32	42
Lower Storey of Two Storeys or Highset	1	4	8	8	8	11	11	11	16	17	18	24	25	26
		6	11	13	13	16	17	18	25	26	28	37	39	42
		8	16	17	16	22	23	26	34	36	39	51	54	59
		10	20	22	24	28	30	33	43	48	52	64	71	78
		12	24	27	31	34	38	42	53	59	66	78	88	98
		14	29	33	37	40	46	51	63	71	80	93	106	119
		16	34	39	44	47	54	61	73	84	96	108	124	143
	2	4	8	9	9	11	11	12	17	18	19	26	27	28
		6	12	13	14	17	18	19	27	28	30	39	42	45
		8	17	18	19	23	25	27	36	39	42	54	58	63
		10	21	23	26	29	32	35	46	51	55	69	75	83
		12	26	29	33	36	40	45	56	63	70	83	93	104
		14	31	35	39	43	49	55	67	75	85	99	113	127
		16	36	41	47	50	57	65	77	89	102	115	133	152
	3	4	4	4	4	6	6	6	9	9	9	13	13	14
		6	6	7	7	9	9	10	13	14	15	20	21	22
		8	8	9	10	12	12	14	18	19	21	27	29	31
		10	11	12	13	15	16	18	23	25	28	34	38	41
		12	13	14	16	18	20	22	28	31	35	42	47	52
		14	15	17	20	21	24	27	33	38	43	50	56	64
		16	18	21	24	25	29	33	39	45	51	58	66	76

Reference AS1684.2
Tables F1(A), F2(A), F3(A) & F4(A)

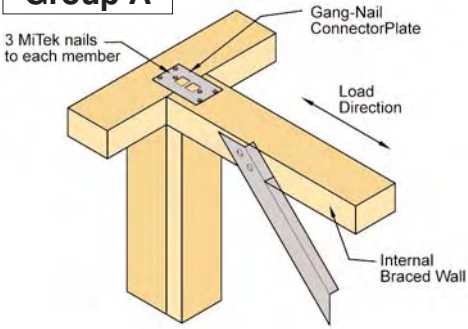
NOTES:

1. Braced panels are to be generally evenly distrubuted in both directions.
2. The max. distance between braced walls/panels at right angles to the building length or width should not exceed 9m.
3. For N3 and N4 wind classifications the maximum distance may be less than 9.0m. Refer to AS 1684.2 Table 8.20 and 8.21.
4. Total length of panels calculated for a wall height of 2700mm. For wall heights between 2700mm - 3000mm increase total panel length by 15%.



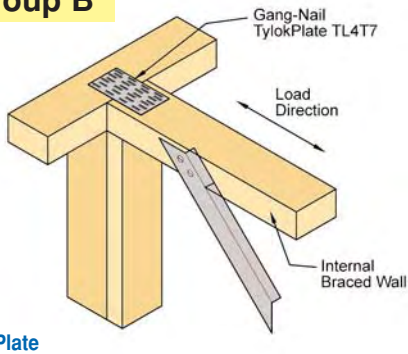
Internal Braced Panels to External Walls

Group A

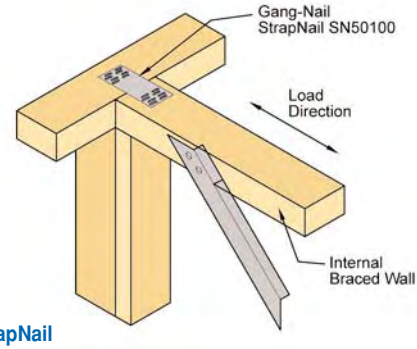


ConnectorPlate
Product Code: CP60100

Group B

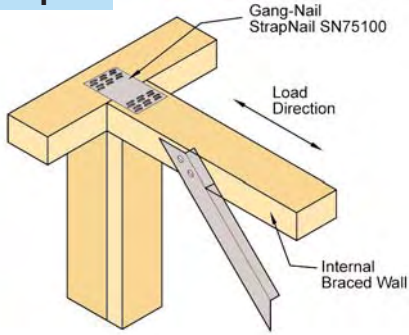


TylokPlate
Product Code: TL4T7



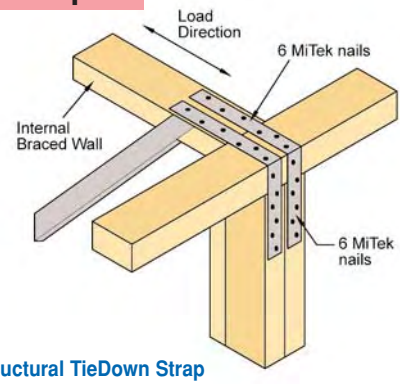
StrapNail
Product Code: SN50100

Group C



StrapNail
Product Code: SN75100

Group D



Structural TieDown Strap
Product Codes: TD332015, TD223030

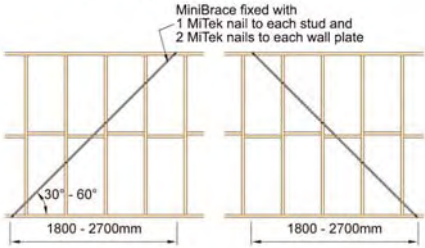
N/A **No available connector - seek alternative advice.**

Internal Braced Panels to External Walls

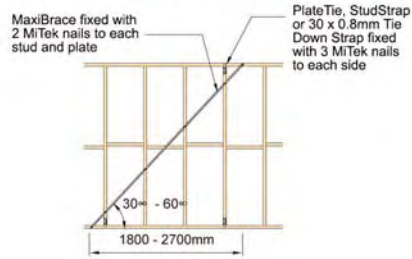
Length of Braced Panel		1000 mm			1500 mm			2000 mm			2500 mm			3000 mm		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Bracing Type Capacity kN/m																
0.8		A	A	A	A	B	B	A	B	C	B	C	D	C	C	D
1.5		A	A	A	A	A	B	A	B	C	B	C	D	C	C	D
2.1		A	A	B	A	B	C	C	C	D	C	D	D	D	D	D
3		A	B	C	C	C	D	C	D	D	D	D	D	D	D	D
3.4		B	C	C	C	C	D	D	D	D	D	D	N/A	D	N/A	N/A

Reference AS1684.2 Clause 8.3.6.9

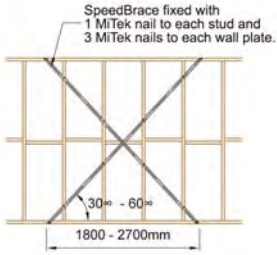
0.8kN/m Bracing Type - Pair of Gang-Nail MiniBraces in opposing directions.



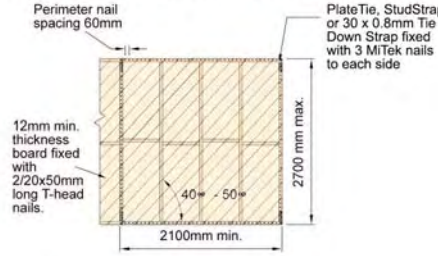
1.5kN/m Bracing Type - Gang-Nail MaxiBrace



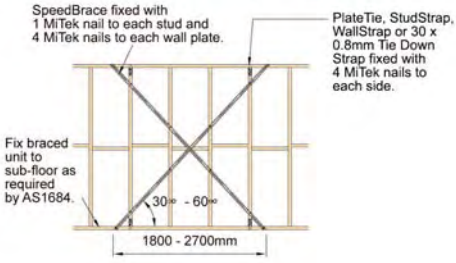
1.5kN/m Bracing Type - Gang-Nail SpeedBrace



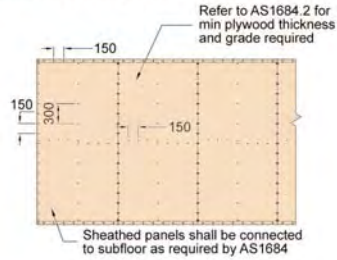
2.1kN/m Bracing Type - Diagonal Timber Wall Lining



3.0kN/m Bracing Type - Gang-Nail SpeedBrace

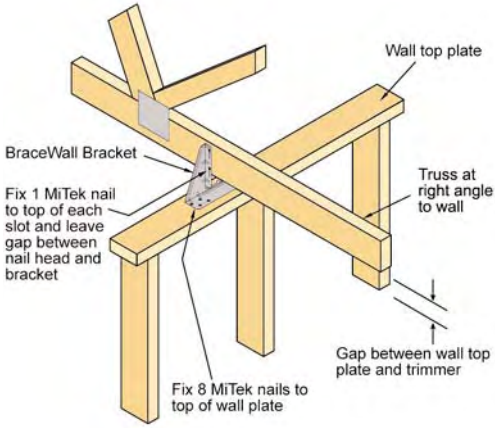


3.4kN/m Bracing Type - Plywood Brace



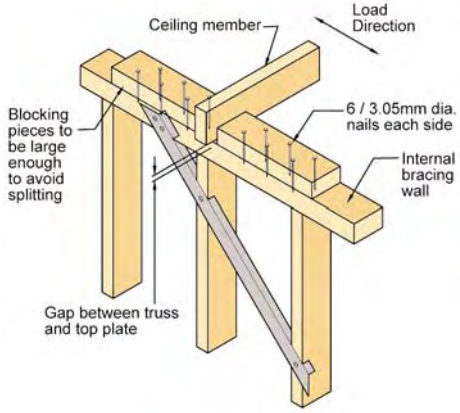
Internal Braced Panels to Ceiling

Group A



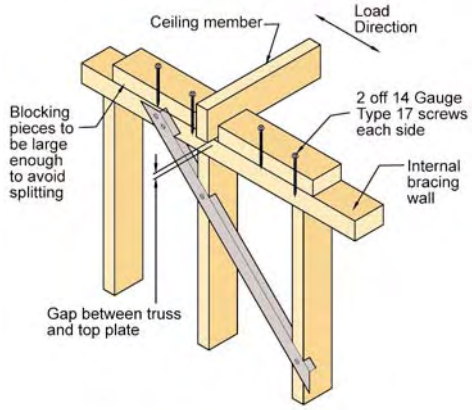
BraceWall Bracket
Product Code: BWB35

Group B



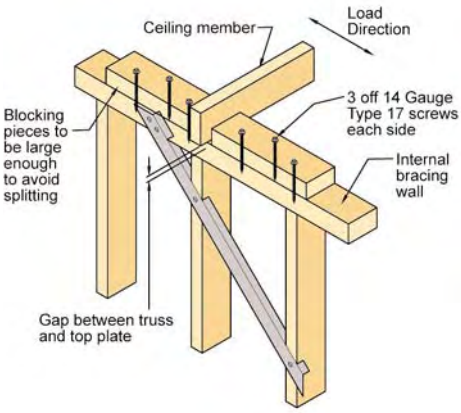
6 off 3.05mm Nails

Group C



2 off 14 gauge Type 17 Screws

Group D



3 off 14 gauge Type 17 Screws

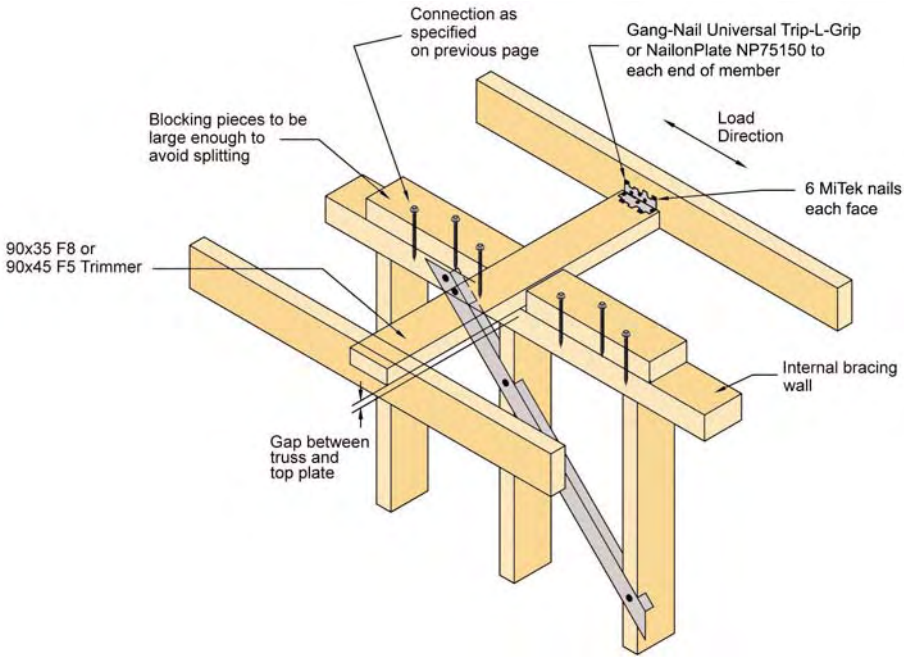
N/A **No available connector - seek alternative advice.**

Internal Braced Panels to Ceiling

Length of Braced Panel		1000 mm			1500 mm			2000 mm			2500 mm			3000 mm		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Bracing Type Capacity kN/m																
0.8		A	A	A	A	A	A	A	A	A	B	B	B	B	B	C
1.5		A	A	A	A	A	A	A	A	A	B	B	B	B	B	C
2.1		A	A	A	A	A	A	B	B	B	B	C	D	B	C	D
3		A	A	A	B	B	C	B	C	D	C	D	N/A	C	D	N/A
3.4		A	A	A	B	C	D	C	C	D	C	D	N/A	D	N/A	N/A

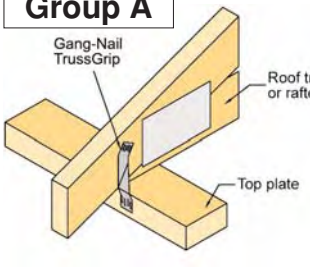
Reference AS1684.2 Clause 8.3.6.9

NOTE: For cases where trusses run parallel to internal braced walls use the following detail in conjunction with the details on the previous page.



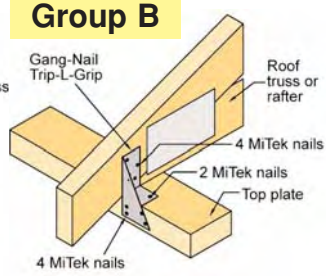
Truss-Rafter to Wall Plate

Group A



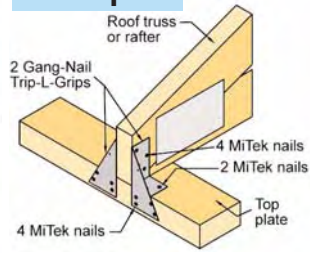
TrussGrip
Product Code: TRG

Group B



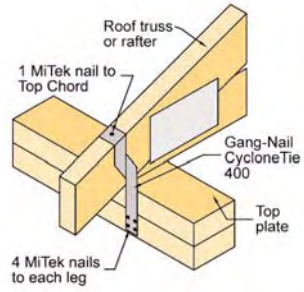
Trip-L-Grip
Product Codes: TGL, TGR, TGU

Group C



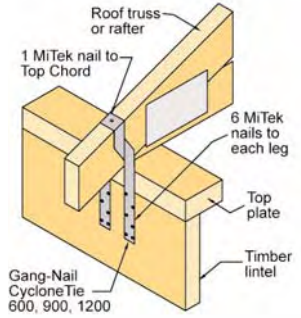
2 off Trip-L-Grips
Product Codes: TGL, TGR, TGU

Group C



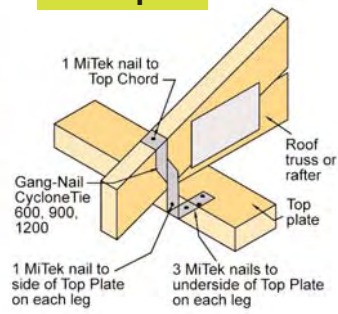
CycloneTie 400
Product Code: CT400

Group D



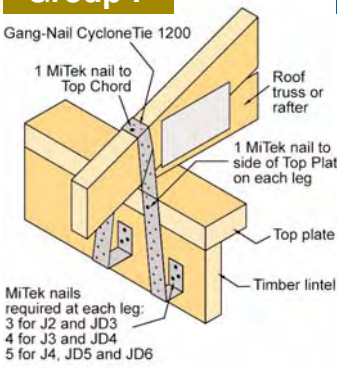
CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

Group E



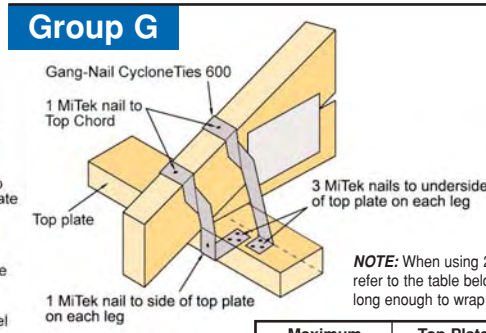
CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

Group F



CycloneTie 1200
Product Code: CT1200

Group G



2 off CycloneTies 600
Product Code: CT600

NOTE: When using 2 CycloneTies (CT600), refer to the table below to ensure the ties are long enough to wrap under the top plate.

Maximum Top Chord size	Top Plate size	Maximum Pitch (degree)
140 x 35 140 x 45	90 x 35 90 x 35	26.0 22.5
140 x 35 140 x 45	90 x 45 90 x 45	19.0 16.0
90 x 35 90 x 45	2 / 90 x 35 2 / 90 x 35	37.5 33.5
90 x 35 90 x 45	2 / 90 x 45 2 / 90 x 45	22.5 19.0

N/A **No available connector - seek alternative advice.**

Truss-Rafter to Wall Plate

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	B
	600	A	A	A	A	A	A	A	A	A	A	B	B
	900	A	A	A	A	A	A	A	A	B	B	B	B
	1200	A	A	A	A	A	A	A	B	B	B	B	C
3000	450	A	A	A	A	A	A	A	A	B	B	B	B
	600	A	A	A	A	A	A	A	B	B	B	B	C
	900	A	A	A	A	A	A	B	B	B	B	C	D
	1200	A	A	A	A	A	A	B	B	C	C	C	E
4500	450	A	A	A	A	A	A	B	B	B	B	B	C
	600	A	A	A	A	A	A	B	B	B	B	C	D
	900	A	A	A	A	A	A	B	C	C	C	D	E
	1200	A	A	A	A	A	A	C	C	D	D	E	F
6000	450	A	A	A	A	A	A	B	B	B	B	C	D
	600	A	A	A	A	A	A	B	B	C	C	C	E
	900	A	A	A	A	A	A	C	C	D	D	E	F
	1200	A	A	A	A	A	A	C	D	E	E	F	F
7500	450	A	A	A	A	A	A	B	B	C	C	C	D
	600	A	A	A	A	A	A	B	C	C	C	D	F
	900	A	A	A	A	A	A	C	C	E	D	F	F
	1200	A	A	A	A	A	A	C	E	F	G	G	N/A

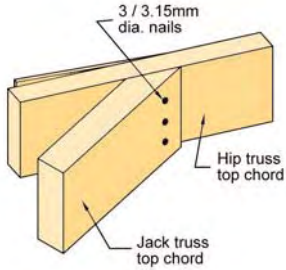
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	B	B
	600	A	A	A	A	A	A	A	A	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	C
	1200	A	A	A	A	A	B	B	B	B	B	C	C
3000	450	A	A	A	A	A	A	B	B	B	B	B	C
	600	A	A	A	A	A	B	B	B	B	B	C	C
	900	A	A	B	B	B	B	B	B	C	C	C	D
	1200	A	B	B	B	B	C	B	C	D	C	D	F
4500	450	A	A	A	A	B	B	B	B	C	B	C	C
	600	A	A	B	B	B	B	B	B	C	C	C	D
	900	B	B	B	B	B	C	C	C	D	C	E	F
	1200	B	B	B	B	C	C	C	D	E	D	F	F
6000	450	A	A	B	B	B	B	B	B	C	C	C	D
	600	A	B	B	B	B	C	B	C	D	C	D	F
	900	B	B	B	B	C	C	C	D	E	D	F	F
	1200	B	B	C	C	C	D	D	E	F	G	G	N/A
7500	450	A	B	B	B	B	B	B	C	C	C	D	F
	600	B	B	B	B	B	C	C	C	E	D	E	F
	900	B	B	C	C	C	D	D	E	F	G	G	G
	1200	B	C	C	C	D	E	D	F	F	G	G	N/A

Reference AS1684.2 Table 9.13

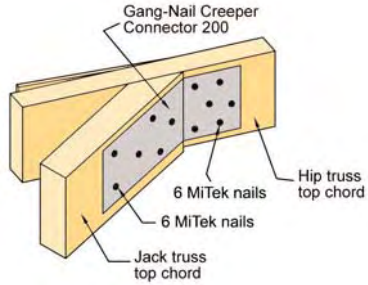
Jack Truss Top Chord to Hip Truss

Group A



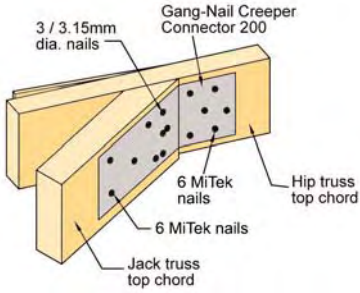
3/3.15mm dia. nails

Group B



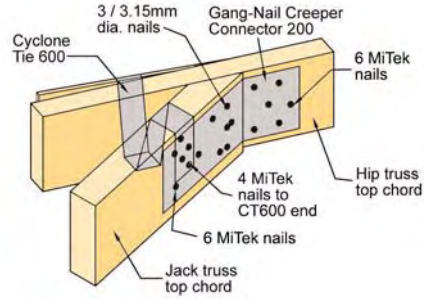
CreeperConnector 200
Product Codes: CC200L, CC200R

Group C



CreeperConnector 200
Product Codes: CC200L, CC200R

Group D



CreeperConnector 200 & CycloneTie 600
Product Codes: CC200L, CC200R, CT600

N/A **No available connector - seek alternative advice.**

19 Table — Jack Truss Top Chord to Hip Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Jack Station	Rafter/Truss Spacing (mm)												
600	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1200	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	B	A	A	B	A	A	B	B	B	B
	900	A	B	B	A	B	B	A	B	B	B	B	B
	1200	A	B	B	A	B	B	A	B	B	B	B	B
1800	450	A	A	B	A	A	B	A	A	B	B	B	B
	600	A	B	B	A	B	B	A	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	B	B	B	B
	1200	B	B	C	B	B	C	B	B	C	B	B	C
2400	450	C	C	C	C	C	C	C	C	C	C	C	C
	600	C	C	C	C	C	C	C	C	C	C	C	C
	900	C	C	C	C	C	C	C	C	C	C	C	C
	1200	C	C	N/A	C	C	N/A	C	C	N/A	C	C	N/A
3000	450	C	C	C	C	C	C	C	C	C	D	D	D
	600	C	C	C	C	C	C	C	C	C	D	D	D
	900	C	C	C	C	C	C	C	C	C	D	D	D
	1200	C	C	N/A	C	C	N/A	C	C	N/A	D	D	N/A

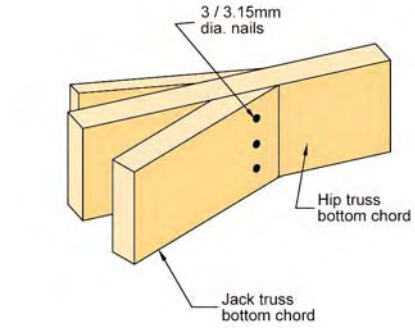
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Jack Station	Rafter/Truss Spacing (mm)												
600	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1200	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	B	A	A	B	A	A	B	B	B	B
	1200	A	B	B	A	B	B	A	B	B	B	B	B
1800	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	B	A	A	B	A	A	B	B	B	B
	900	A	B	B	A	B	B	A	B	B	B	B	B
	1200	B	B	B	B	B	B	B	B	B	B	B	B
2400	450	C	C	C	C	C	C	C	C	C	C	C	C
	600	C	C	C	C	C	C	C	C	C	C	C	C
	900	C	C	C	C	C	C	C	C	C	C	C	C
	1200	C	C	C	C	C	C	C	C	C	C	C	C
3000	450	C	C	C	C	C	C	C	C	C	D	D	D
	600	C	C	C	C	C	C	C	C	C	D	D	D
	900	C	C	C	C	C	C	C	C	C	D	D	D
	1200	C	C	C	C	C	C	C	C	C	D	D	D

Reference AS4440 and MiTek 20/20

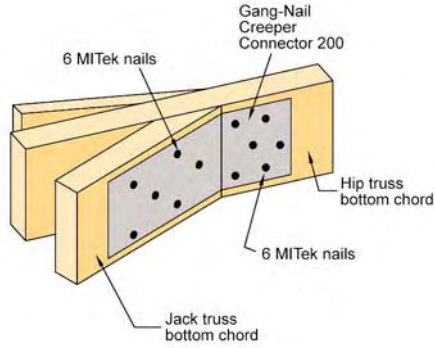
Jack Truss Bottom Chord to Hip Truss

Group A



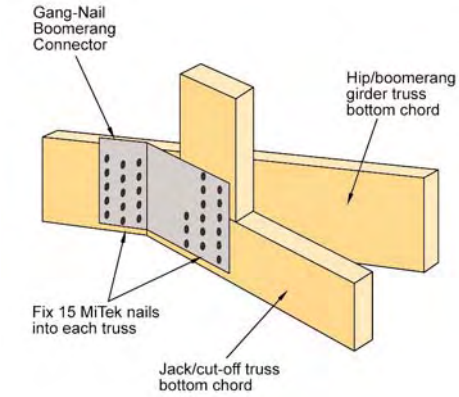
3/3.15mm Nails

Group B



CreeperConnector 200
Product Code: CC200

Group C



Boomerang Connector
Product Code: BC200

N/A **No available connector - seek alternative advice.**

20 Table — Jack Truss Bottom Chord to Hip Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Jack Station	Rafter/Truss Spacing (mm)												
600	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1200	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1800	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	B	A	A	B	A	A	B	B	B	B
	1200	A	A	B	A	A	B	A	A	B	B	B	B
2400	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	B	A	A	B	A	A	B	B	B	B
	1200	A	B	B	A	B	B	A	B	B	B	B	B
3000	450	A	A	A	A	A	A	A	A	A	C	C	C
	600	A	A	B	A	A	B	A	A	B	C	C	C
	900	A	B	B	A	B	B	A	B	B	C	C	C
	1200	A	B	B	A	B	B	A	B	B	C	C	C

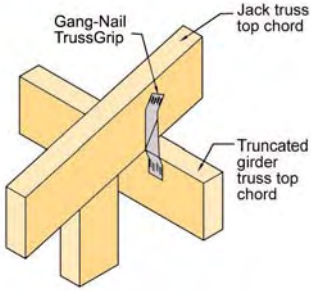
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Jack Station	Rafter/Truss Spacing (mm)												
600	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1200	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	A	A	A	A	A	A	A	B	B	B
1800	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	A	A	A	A	A	A	A	B	B	B
	1200	A	A	B	A	A	B	A	A	B	B	B	B
2400	450	A	A	A	A	A	A	A	A	A	B	B	B
	600	A	A	A	A	A	A	A	A	A	B	B	B
	900	A	A	B	A	A	B	A	A	B	B	B	B
	1200	A	B	B	A	B	B	A	B	B	B	B	B
3000	450	A	A	A	A	A	A	A	A	A	C	C	C
	600	A	A	A	A	A	A	A	A	A	C	C	C
	900	A	A	B	A	A	B	A	A	B	C	C	C
	1200	A	B	B	A	B	B	A	B	B	C	C	C

Reference AS4440 Figures 5.1, 5.2, 5.3, 5.4 and MiTek 20/20

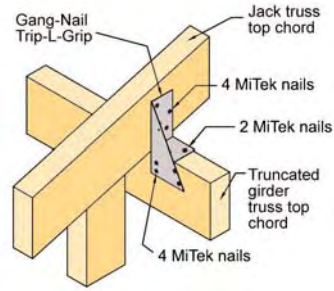
Jack Truss to Truncated Girder Truss

Group A



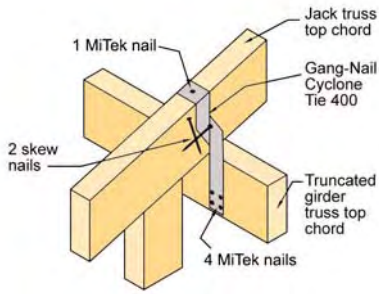
TrussGrip
Product Code: TRG

Group B

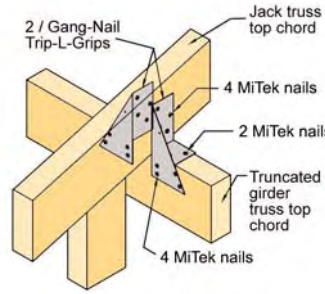


Trip-L-Grip
Product Code: TGL, TGR, TGU

Group C

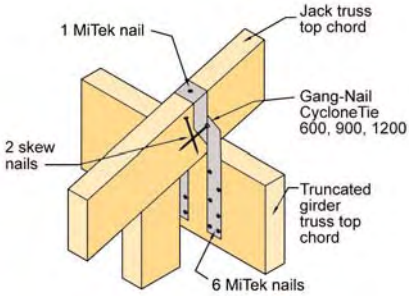


CycloneTie 400
Product Code: CT400



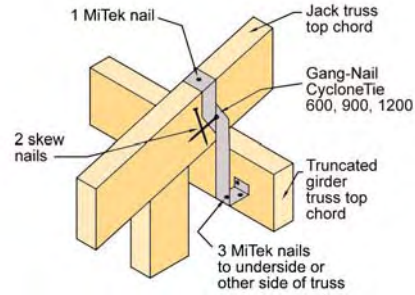
2 off Trip-L-Grips
Product Code: TGL, TGR, TGU

Group D



CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

Group E



CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

21 Table — Jack Truss to Truncated Girder Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
TG Station	Rafter/Truss Spacing (mm)												
1200	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	B
	1200	A	A	A	A	A	A	B	B	B	B	B	C
1800	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	C
	1200	A	A	A	A	A	A	B	B	B	B	C	C
2400	450	A	A	A	A	A	A	B	B	B	B	B	B
	600	A	A	A	A	A	A	B	B	B	B	B	B
	900	A	A	A	A	A	A	B	B	B	B	B	C
	1200	A	A	A	A	A	B	B	B	C	C	C	D
3000	450	B	B	B	B	B	B	B	B	B	E	E	E
	600	B	B	B	B	B	B	B	B	B	E	E	E
	900	B	B	B	B	B	B	B	B	B	E	E	E
	1200	B	B	B	B	B	B	B	B	C	E	E	E
3600	450	B	B	B	B	B	B	B	B	B	E	E	E
	600	B	B	B	B	B	B	B	B	B	E	E	E
	900	B	B	B	B	B	B	B	B	C	E	E	E
	1200	B	B	B	B	B	B	B	C	C	E	E	E

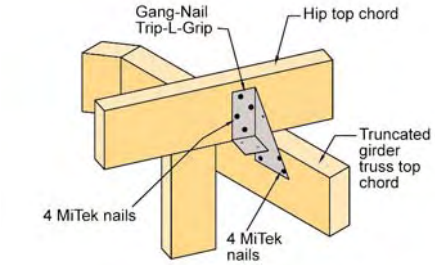
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
TG Station	Rafter/Truss Spacing (mm)												
1200	450	B	B	B	B	B	B	B	B	B	B	B	B
	600	B	B	B	B	B	B	B	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	B	B	B	C
	1200	B	B	B	B	B	B	B	B	B	B	C	C
1800	450	B	B	B	B	B	B	B	B	B	B	B	B
	600	B	B	B	B	B	B	B	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	B	B	B	C
	1200	B	B	B	B	B	B	B	B	C	B	C	D
2400	450	B	B	B	B	B	B	B	B	B	B	B	B
	600	B	B	B	B	B	B	B	B	B	B	B	B
	900	B	B	B	B	B	B	B	B	C	B	C	C
	1200	B	B	B	B	B	B	B	C	C	C	C	E
3000	450	B	B	B	B	B	B	B	B	B	E	E	E
	600	B	B	B	B	B	B	B	B	B	E	E	E
	900	B	B	B	B	B	B	B	B	C	E	E	E
	1200	B	B	B	B	B	C	B	C	C	E	E	E
3600	450	B	B	B	B	B	B	B	B	B	E	E	E
	600	B	B	B	B	B	B	B	B	B	E	E	E
	900	B	B	B	B	B	B	B	B	C	E	E	E
	1200	B	B	B	B	B	C	C	C	D	E	E	E

Reference AS4440 and MiTek 20/20

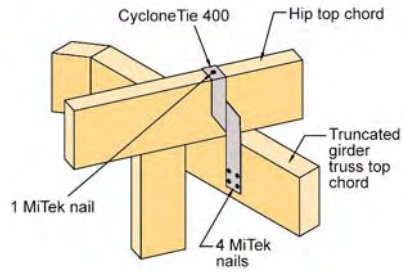
Hip Truss to Truncated Girder Truss

Group A



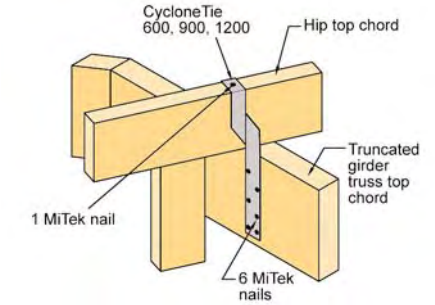
Trip-L-Grip
Product Code: TGL, TGR, TGU

Group B



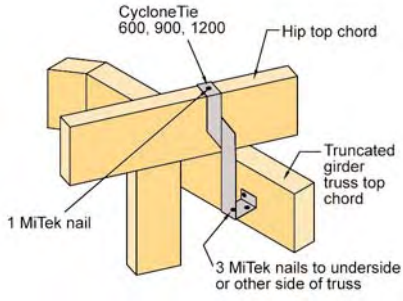
CycloneTie 400
Product Code: CT400

Group C



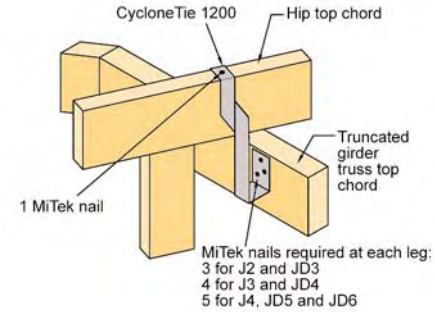
CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

Group D



CycloneTie 600, 900, 1200
Product Code: CT600, CT900, CT1200

Group E



CycloneTie 1200
Product Code: CT1200

N/A **No available connector - seek alternative advice.**

22 Table — Hip Truss to Truncated Girder Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
TG Station	Rafter/Truss Spacing (mm)												
1200	450	A	A	A	A	A	A	A	A	A	D	D	D
	600	A	A	A	A	A	A	A	A	A	D	D	D
	900	A	A	A	A	A	A	A	A	A	D	D	D
	1200	A	A	A	A	A	A	A	A	A	D	D	D
1800	450	A	A	A	A	A	A	A	A	A	D	D	D
	600	A	A	A	A	A	A	A	A	A	D	D	D
	900	A	A	A	A	A	A	A	A	A	D	D	D
	1200	A	A	A	A	A	A	A	A	A	D	D	D
2400	450	A	A	A	A	A	A	A	A	A	D	D	D
	600	A	A	A	A	A	A	A	A	B	D	D	D
	900	A	A	A	A	A	A	A	A	B	D	D	D
	1200	A	A	A	A	A	A	A	B	B	D	D	D
3000	450	A	A	A	A	A	A	A	B	B	D	D	D
	600	A	A	A	A	A	A	A	B	B	D	D	D
	900	A	A	A	A	A	A	A	B	C	D	D	E
	1200	A	A	A	A	A	A	B	B	C	D	D	E
3600	450	A	A	A	A	A	B	B	B	C	D	D	E
	600	A	A	A	A	A	B	B	B	D	D	E	E
	900	A	A	A	A	A	B	B	C	D	D	E	E
	1200	A	A	A	A	A	B	B	C	E	N/A	N/A	N/A

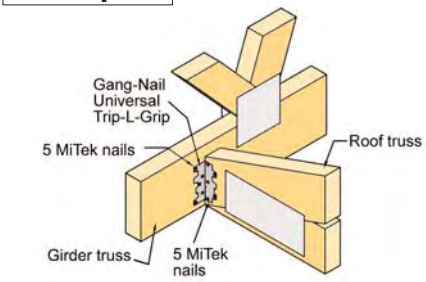
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
TG Station	Rafter/Truss Spacing (mm)												
1200	450	A	A	A	A	A	A	A	A	A	D	D	D
	600	A	A	A	A	A	A	A	A	A	D	D	D
	900	A	A	A	A	A	A	A	A	A	D	D	D
	1200	A	A	A	A	A	A	A	A	A	D	D	D
1800	450	A	A	A	A	A	A	A	A	A	D	D	D
	600	A	A	A	A	A	A	A	A	A	D	D	D
	900	A	A	A	A	A	A	A	A	B	D	D	D
	1200	A	A	A	A	A	A	A	A	B	D	D	D
2400	450	A	A	A	A	A	A	A	A	B	D	D	D
	600	A	A	A	A	A	A	A	A	B	D	D	D
	900	A	A	A	A	A	A	A	B	B	D	D	D
	1200	A	A	A	A	A	B	B	B	C	D	D	E
3000	450	A	A	A	A	A	B	A	B	C	D	D	E
	600	A	A	A	A	A	B	B	B	C	D	D	E
	900	A	A	A	A	B	B	B	C	D	D	D	E
	1200	A	A	A	A	B	B	B	C	E	D	E	E
3600	450	A	A	A	A	B	B	B	C	E	D	E	E
	600	A	A	A	A	B	B	B	C	E	E	E	E
	900	A	A	A	B	B	C	C	D	E	N/A	N/A	N/A
	1200	A	A	A	B	B	C	C	D	E	N/A	N/A	N/A

Reference AS4440 and MiTek 20/20

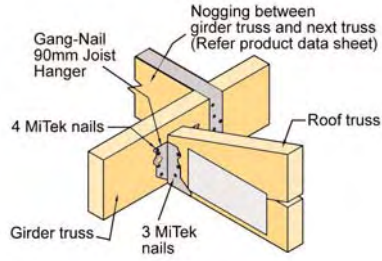
Standard Truss to Girder Truss

Group A



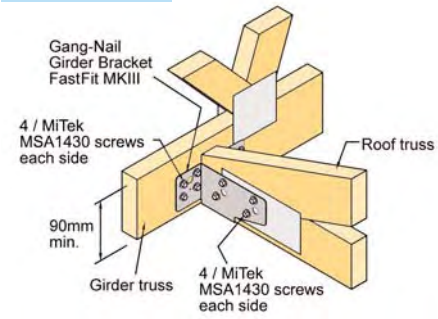
Universal Trip-L-Grip
Product Code: TGU

Group B



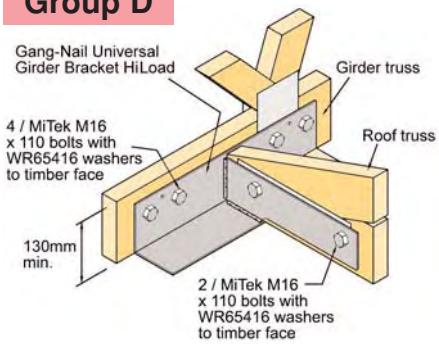
90mm JoistHanger - with nogging
Product Codes: JH3590, JH4090, JH4590, JH5090

Group C



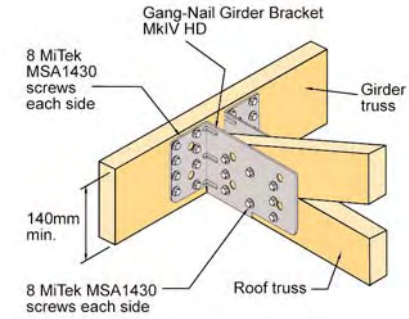
Girder Bracket FastFit MKIII
Product Codes: GB340, GB350

Group D



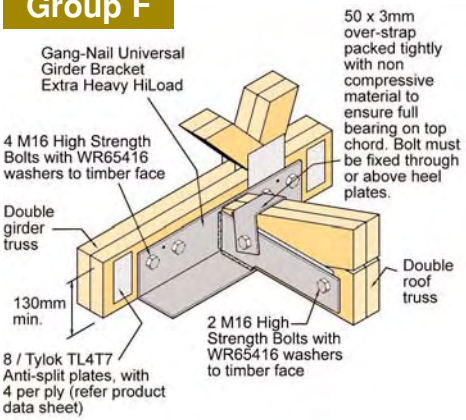
Universal Girder Bracket HiLoad
Product Code: GBH

Group E



Girder Bracket MkIV HD
Product Code: GB440

Group F



Universal Girder Bracket Extra Heavy HiLoad
Product Code: GBXH

23 Table — Standard Truss to Girder Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	B	A	A	B	A	A	B	A	A	B
	600	A	B	B	A	B	B	A	B	B	A	B	B
	900	A	B	C	A	B	C	A	B	C	A	B	C
	1200	B	B	C	B	B	C	B	B	C	B	B	C
3000	450	A	B	C	A	B	C	A	B	C	A	B	C
	600	B	B	C	B	B	C	B	B	C	B	B	C
	900	B	C	C	B	C	C	B	C	C	B	C	C
	1200	C	C	C	C	C	C	C	C	C	C	C	D
4500	450	B	B	C	B	B	C	B	B	C	B	B	C
	600	B	C	C	B	C	C	B	C	C	B	C	C
	900	C	C	C	C	C	C	C	C	C	C	C	E
	1200	C	C	D	C	C	D	C	C	D	C	D	E
6000	450	B	C	C	B	C	C	B	C	C	B	C	C
	600	C	C	C	C	C	C	C	C	C	C	C	D
	900	C	C	D	C	C	D	C	C	D	C	D	E
	1200	C	D	E	C	D	E	C	D	E	D	E	E
7500	450	B	C	C	B	C	C	B	C	C	B	C	D
	600	C	C	C	C	C	C	C	C	C	C	C	E
	900	C	C	E	C	C	E	C	C	E	D	E	E
	1200	D	D	F	D	D	F	D	D	F	D	E	F

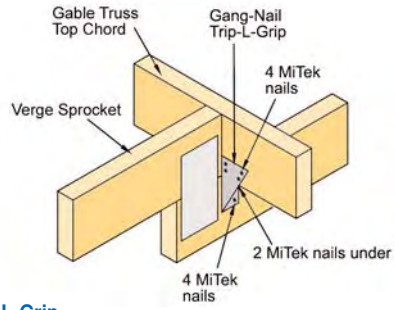
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	B	A	A	B	A	A	B	A	A	B
	600	A	A	B	A	A	B	A	A	B	A	A	B
	900	A	A	B	A	A	B	A	A	B	A	A	B
	1200	A	B	B	A	B	B	A	B	B	A	B	C
3000	450	A	A	B	A	A	B	A	A	B	A	A	B
	600	A	B	B	A	B	B	A	B	B	A	B	C
	900	A	B	C	A	B	C	A	B	C	B	C	D
	1200	B	B	C	B	B	C	B	C	C	C	C	E
4500	450	A	B	B	A	B	B	A	B	B	A	B	C
	600	A	B	C	A	B	C	A	B	C	B	C	D
	900	B	B	C	B	B	C	B	C	C	C	D	E
	1200	B	C	C	B	C	C	C	C	E	D	E	E
6000	450	A	B	C	A	B	C	A	B	C	B	C	D
	600	B	B	C	B	B	C	B	C	C	C	C	E
	900	B	C	C	B	C	C	C	C	E	D	E	E
	1200	C	C	C	C	C	C	C	D	E	D	E	E
7500	450	B	B	C	B	B	C	B	B	C	C	C	E
	600	B	C	C	B	C	C	B	C	D	C	D	E
	900	C	C	C	C	C	C	C	D	E	D	E	E
	1200	C	C	D	C	C	E	D	E	E	E	E	E

Sprocket Hold-down

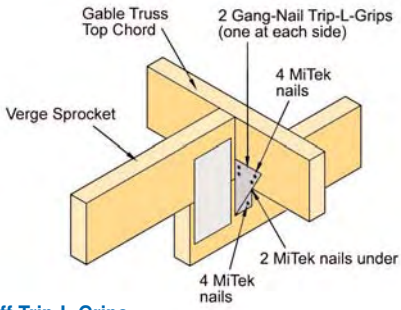
Sprocket to End Gable Truss

Group A



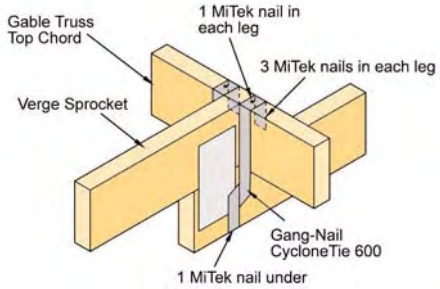
Trip-L-Grip
Product Code: TGL, TGR

Group B



2 off Trip-L-Grips
Product Code: TGL, TGR

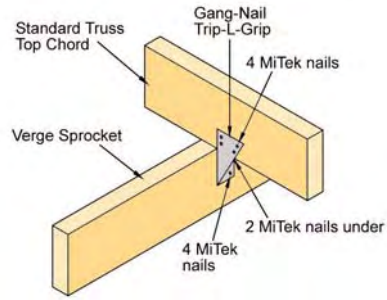
Group C



CycloneTie 600
Product Code: CT600

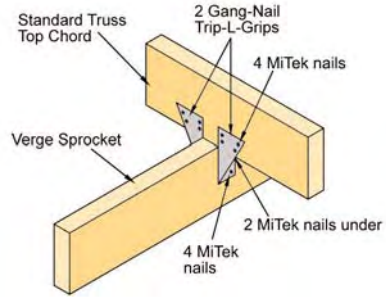
Sprocket to Standard Truss

Group A



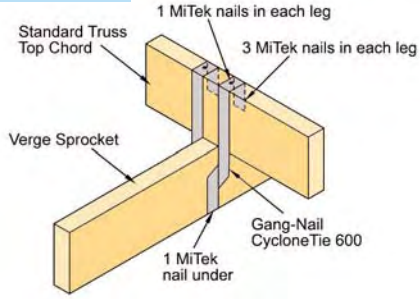
Trip-L-Grip
Product Code: TGL, TGR

Group B



2 off Trip-L-Grips
Product Code: TGL, TGR

Group C



CycloneTie 600
Product Code: CT600

24a Table — Sprocket to End Gable Truss

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Sprocket Overhang	Rafter/Truss Spacing (mm)												
700	600	A	A	B	A	A	B	A	A	B	A	A	B
	900	A	A	B	A	A	B	A	A	B	A	A	B
	1200	A	A	B	A	A	B	A	A	B	A	A	B
850	600	A	A	B	A	A	B	A	A	B	A	A	B
	900	A	B	B	A	B	B	A	B	B	A	B	B

Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Sprocket Overhang	Rafter/Truss Spacing (mm)												
700	600	A	A	B	A	A	B	A	A	B	A	A	B
	900	A	A	B	A	A	B	A	A	B	A	A	B
	1200	A	A	B	A	A	B	A	A	B	A	A	B
850	600	A	A	B	A	A	B	A	A	B	A	A	B
	900	A	A	B	A	A	B	A	A	B	A	A	B

24b Table — Sprocket to Standard Truss

MiTek

Roof Load Tiles

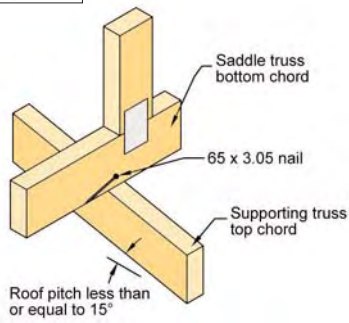
Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Sprocket Overhang	Rafter/Truss Spacing (mm)												
700	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A
	1200	A	A	A	A	A	A	A	A	A	A	A	A
850	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A

Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Sprocket Overhang	Rafter/Truss Spacing (mm)												
700	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A
	1200	A	A	A	A	A	A	A	A	A	A	A	A
850	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A

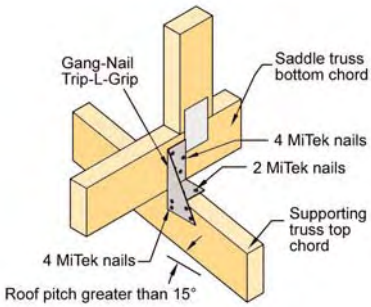
Saddle Trusses to Standard Trusses

Group A

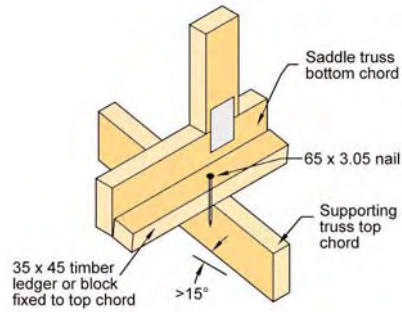


65 x 3.05mm dia. nail

Group B

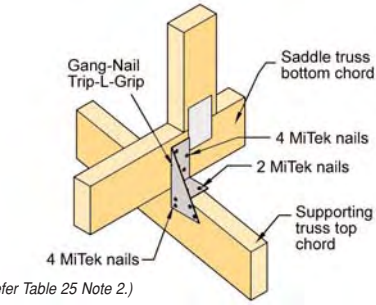


Trip-L-Grip
Product Code: TGL, TGR



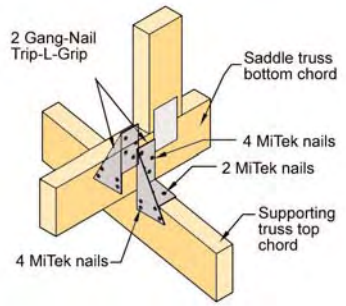
Timber Ledger with 65 x 3.05mm nail

Group C



(Refer Table 25 Note 2.)

Trip-L-Grip
Product Code: TGL, TGR



2 off Trip-L-Grips
Product Code: TGL, TGR

25 Table — Saddle Trusses to Standard Trusses

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Roof Pitch	Rafter/Truss Spacing (mm)												
<=15°	600	A	A	A	A	A	A	A	A	A	C	C	C
	900	A	A	A	A	A	A	A	A	A	C	C	C
	1200	A	A	A	A	A	A	A	A	A	C	C	C
>15°	600	B	B	B	B	B	B	B	B	B	C	C	C
	900	B	B	B	B	B	B	B	B	B	C	C	C
	1200	B	B	B	B	B	B	B	B	B	C	C	C

Roof Load Sheet

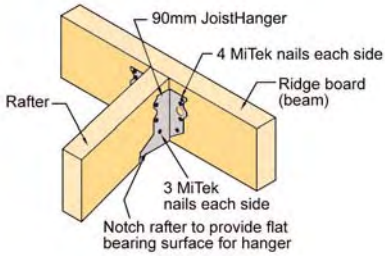
Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Roof Pitch	Rafter/Truss Spacing (mm)												
<=15°	600	A	A	A	A	A	A	A	A	A	C	C	C
	900	A	A	A	A	A	A	A	A	A	C	C	C
	1200	A	A	A	A	A	A	A	A	A	C	C	C
>15°	600	B	B	B	B	B	B	B	B	B	C	C	C
	900	B	B	B	B	B	B	B	B	B	C	C	C
	1200	B	B	B	B	B	B	B	B	B	C	C	C

Reference AS4440 Clauses 5.4.1 & 5.4.2

NOTES:
1. Refer to Clause 5.4.1 & 5.4.2 of AS4440 for block infill detail where the valley truss cantilevers more than 450mm, or where the valley truss is not supported by two truss top chords.
2. Detail C requires the use of 2 Trip-L-Grips instead of 1 when the supporting trusses do not have ceiling fixed.

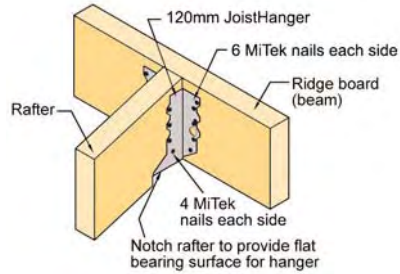
Rafter to Ridge Beam

Group A



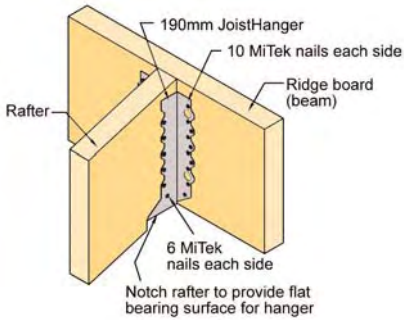
90mm JoistHangers
Product Codes: JH3590, JH4090, JH4590, JH5090

Group B



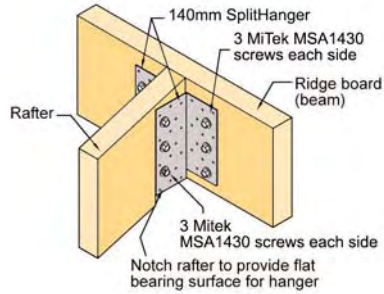
120mm JoistHangers
Product Codes: JH35120, JH40120, JH45120, JH50120

Group C



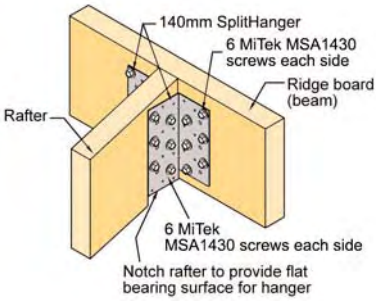
190mm JoistHangers
Product Codes: JH40190, JH45190, JH50190

Group D



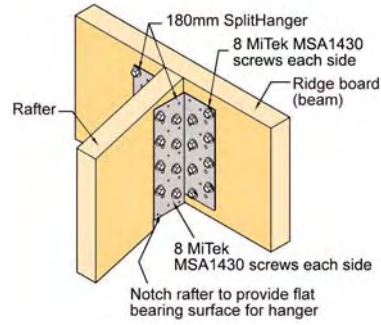
140mm SplitHangers
Product Code: SPH140

Group E



140mm SplitHangers
Product Code: SPH140

Group F



180mm SplitHangers
Product Code: SPH180

Rafter to Ridge Beam

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	A
	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A
	1200	A	A	A	A	A	A	A	A	A	A	A	A
3000	450	A	A	A	A	A	A	A	A	A	A	A	A
	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	B	C	A	B	C	A	B	C	A	B	C
	1200	B	B	D	B	B	D	B	B	D	B	B	D
4500	450	A	A	B	A	A	B	A	A	B	A	A	B
	600	A	B	C	A	B	C	A	B	C	A	B	C
	900	B	C	E	B	C	E	B	C	E	B	C	E
	1200	B	D	E	B	D	E	B	D	E	C	D	E
6000	450	A	B	C	A	B	C	A	B	C	A	B	C
	600	B	B	D	B	B	D	B	B	D	B	B	D
	900	B	D	E	B	D	E	B	D	E	C	D	E
	1200	D	E	E	D	E	E	D	E	E	D	E	E
7500	450	A	B	C	A	B	C	A	B	C	A	B	D
	600	B	C	E	B	C	E	B	C	E	B	C	E
	900	D	E	E	D	E	E	D	E	E	D	E	E
	1200	E	E	F	E	E	F	E	E	F	E	E	F

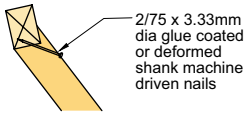
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing (mm)												
1500	450	A	A	A	A	A	A	A	A	A	A	A	A
	600	A	A	A	A	A	A	A	A	A	A	A	A
	900	A	A	A	A	A	A	A	A	A	A	A	A
	1200	A	A	A	A	A	A	A	A	A	A	A	B
3000	450	A	A	A	A	A	A	A	A	A	A	A	A
	600	A	A	A	A	A	A	A	A	A	A	A	B
	900	A	A	A	A	A	A	A	A	B	A	B	D
	1200	A	A	A	A	A	A	A	A	C	B	D	D
4500	450	A	A	A	A	A	A	A	A	A	A	A	B
	600	A	A	A	A	A	A	A	A	B	A	B	D
	900	A	A	B	A	A	B	A	B	C	B	D	D
	1200	A	B	C	A	B	C	B	C	D	D	D	D
6000	450	A	A	A	A	A	A	A	A	B	A	B	D
	600	A	A	A	A	A	A	A	A	C	B	D	D
	900	A	B	C	A	B	C	B	C	D	D	D	D
	1200	B	B	D	B	B	D	C	D	D	D	D	E
7500	450	A	A	A	A	A	A	A	A	B	B	C	D
	600	A	A	B	A	A	B	A	B	D	C	D	D
	900	A	B	D	A	B	D	C	D	D	D	D	E
	1200	B	C	E	B	C	E	D	D	E	E	E	E

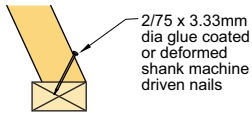
Underpurlin to Strut

Group A - Nominal Fixing

Strut to Underpurlin (typical)



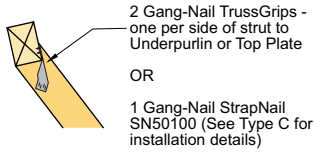
Strut to Top Plate (typical)



2/3.33mm Gun Driven Nails

Group B

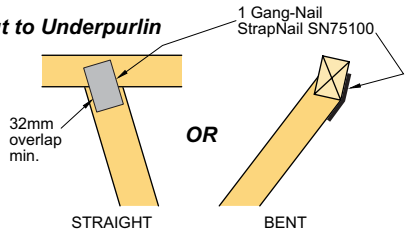
Strut to Underpurlin or Top Plate



TrussGrip or StrapNail
Product Codes: TRG, SN50100

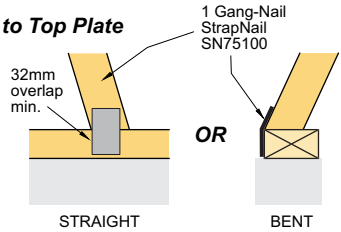
Group C

Strut to Underpurlin



StrapNail
Product Code: SN75100

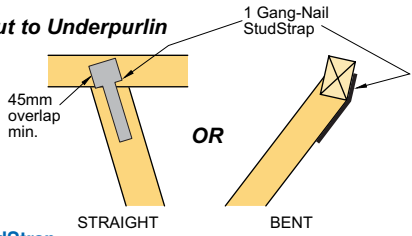
Strut to Top Plate



StrapNail
Product Code: SN75100

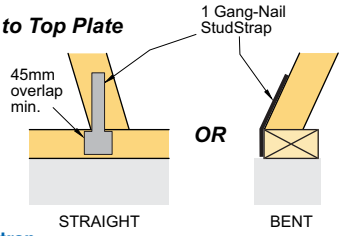
Group D

Strut to Underpurlin



StudStrap
Product Code: SS

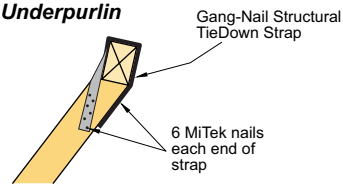
Strut to Top Plate



StudStrap
Product Code: SS

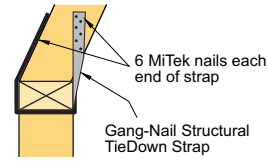
Group E

Strut to Underpurlin



Structural TieDown Strap
Product Codes: TD223015, TD223030

Strut to Top Plate



N/A **No available connector - seek alternative advice.**

Underpurlin to Strut

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing												
2000	1500	A	A	A	A	A	A	B	C	C	C	D	D
	1800	A	A	A	A	A	A	C	C	C	E	E	N/A
	2400	A	A	A	A	A	A	C	C	D	E	E	N/A
	2700	A	A	A	A	A	A	C	D	D	E	N/A	N/A
2800	1500	A	A	A	A	A	A	C	C	D	E	E	N/A
	1800	A	A	A	A	A	A	C	D	D	E	N/A	N/A
	2400	A	A	A	A	A	A	E	E	N/A	E	N/A	N/A
	2700	A	A	A	A	A	A	E	E	N/A	N/A	N/A	N/A
3400	1500	A	A	A	A	A	A	C	D	D	E	N/A	N/A
	1800	A	A	A	A	A	A	C	D	D	E	N/A	N/A
	2400	A	A	A	A	A	A	E	E	N/A	N/A	N/A	N/A
	2700	A	A	A	A	A	A	E	N/A	N/A	N/A	N/A	N/A

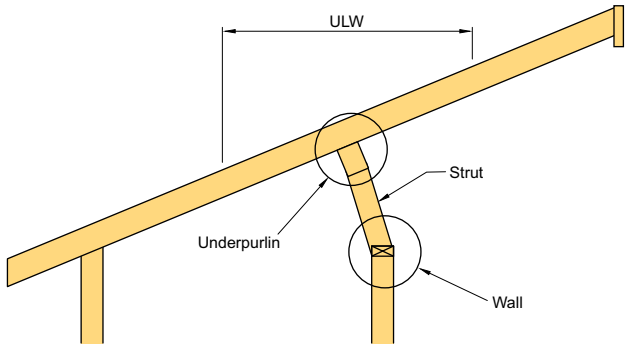
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Load Width ULW	Rafter/Truss Spacing												
2000	1500	A	B	B	B	B	C	C	C	D	E	E	N/A
	1800	B	B	B	B	C	C	C	D	D	E	E	N/A
	2400	B	B	C	C	C	C	E	E	N/A	E	N/A	N/A
	2700	B	B	C	C	C	D	E	E	N/A	E	N/A	N/A
2800	1500	B	B	B	B	C	C	C	D	D	E	N/A	N/A
	1800	B	B	C	C	C	D	E	E	N/A	E	N/A	N/A
	2400	B	C	C	C	D	D	E	N/A	N/A	N/A	N/A	N/A
	2700	C	C	C	C	D	D	E	N/A	N/A	N/A	N/A	N/A
3400	1500	B	B	C	C	C	D	E	E	N/A	E	N/A	N/A
	1800	B	C	C	C	D	D	E	E	N/A	N/A	N/A	N/A
	2400	C	C	C	C	D	D	E	N/A	N/A	N/A	N/A	N/A
	2700	C	C	D	E	E	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Reference AS1684.2 Clause 7.2.15.2

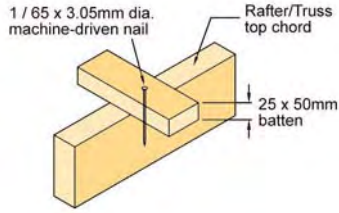
NOTES:

1. To be used for tied and braced strut systems where struts are located at an angle exceeding 30° to the vertical.
2. This connection only applies to struts which are located at an angle exceeding 30° to the vertical. For intermediate rafter connections to underpurlins and for hold-down requirements for this connection, refer to Table 18.
3. No chocks have been shown to the top plate for the purpose of clarity.
4. ULW for connection to be determined as shown.

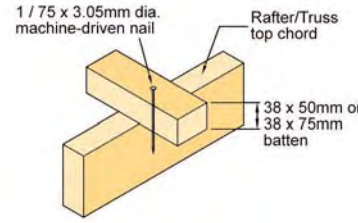


Batten to Truss-Rafter (General Area)

Group A

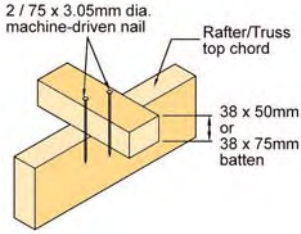


65x3.05 Gun Nails



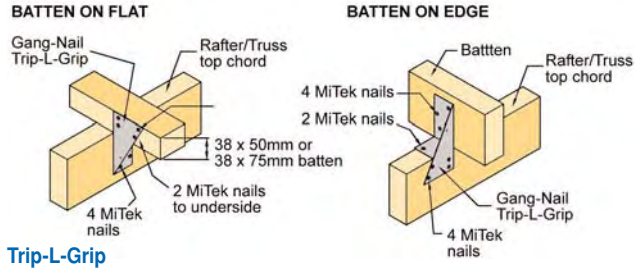
75x3.05 Gun Nails

Group B



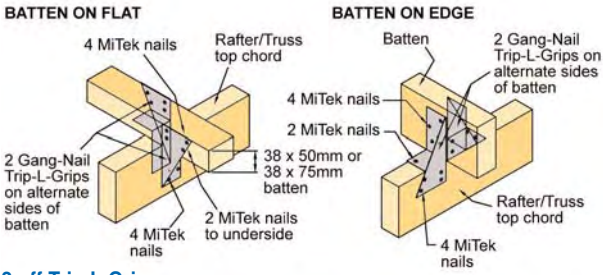
75x3.05 Gun Nails

Group C

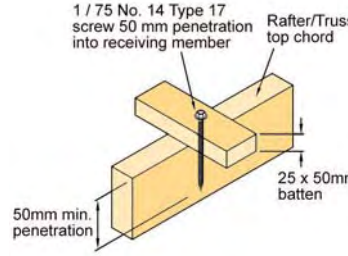


Trip-L-Grip
Product Code: TGL, TGR, TGU

Group D

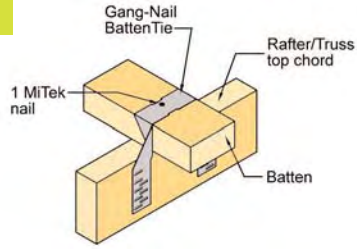


2 off Trip-L-Grips
Product Code: TGL, TGR, TGU



14 gauge Type 17 Screw

Group E



BattenTie
Product Code: BT

NOTE:
Wind pressures given in AS1170.2 and AS1684.2 vary dependent on the section of the roof being considered. General Areas include any sections of roof which are greater than 1200mm away from the edges of a roof. Edges of a roof include hips, ridges, fascias and barges. Sections of a roof which are greater than 1200mm away from the edges of roof experience lower wind pressures.

28 Table — Batten to Truss-Rafter (General Area)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Rafter Spacing (mm)	Batten Spacing (mm)												
450	350	A	A	A	A	A	A	A	A	A	A	A	B
	450	A	A	A	A	A	A	A	A	B	A	B	B
	600	A	A	A	A	A	A	A	A	B	B	B	C
	900	A	A	A	A	A	B	A	B	C	B	C	C
	1200	A	A	A	A	A	B	B	B	C	C	C	C
600	350	A	A	A	A	A	A	A	A	B	A	B	B
	450	A	A	A	A	A	A	A	A	B	B	B	C
	600	A	A	A	A	A	A	A	B	C	B	C	C
	900	A	A	A	A	A	B	B	B	C	C	C	C
	1200	A	A	A	A	B	B	B	C	C	C	C	C
900	350	A	A	A	A	A	A	A	B	B	B	B	C
	450	A	A	A	A	A	B	A	B	C	B	C	C
	600	A	A	A	A	A	B	B	B	C	C	C	C
	900	A	A	B	A	B	C	B	C	C	C	C	C
	1200	A	A	B	B	B	C	C	C	C	C	C	C
1200	350	A	A	A	A	A	B	A	B	C	B	C	C
	450	A	A	A	A	A	B	B	B	C	C	C	C
	600	A	A	A	A	B	B	B	C	C	C	C	C
	900	A	A	B	B	B	C	C	C	C	C	C	C
	1200	A	B	B	B	C	C	C	C	C	C	C	D
1800	350	A	A	A	A	B	B	B	C	C	C	C	C
	450	A	A	B	A	B	C	B	C	C	C	C	C
	600	A	A	B	B	B	C	C	C	C	C	C	C
	900	A	B	C	B	C	C	C	C	C	C	C	D
	1200	B	B	C	C	C	C	C	C	D	C	D	D

Roof Load Sheet

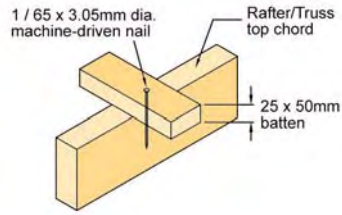
Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Rafter Spacing (mm)	Batten Spacing (mm)												
450	350	A	A	A	A	A	A	A	A	B	A	B	B
	450	A	A	A	A	A	A	A	A	B	A	B	C
	600	A	A	A	A	A	B	A	B	C	B	C	C
	900	A	A	B	A	B	B	B	B	C	B	C	C
	1200	A	B	B	B	B	C	B	C	C	C	C	C
600	350	A	A	A	A	A	A	A	B	B	A	B	C
	450	A	A	A	A	A	B	A	B	C	B	C	C
	600	A	A	B	A	B	B	B	B	C	B	C	C
	900	A	B	B	B	B	C	B	C	C	C	C	C
	1200	A	B	C	B	C	C	C	C	C	C	C	C
900	350	A	A	B	A	A	B	A	B	C	B	C	C
	450	A	A	B	A	B	B	B	B	C	B	C	C
	600	A	B	B	B	B	C	B	C	C	C	C	C
	900	B	B	C	B	C	C	C	C	C	C	C	C
	1200	B	C	C	C	C	C	C	C	C	C	C	D
1200	350	A	A	B	A	B	B	B	C	C	B	C	C
	450	A	B	B	B	B	C	B	C	C	C	C	C
	600	A	B	C	B	C	C	C	C	C	C	C	C
	900	B	C	C	C	C	C	C	C	C	C	C	D
	1200	B	C	C	C	C	C	C	C	C	C	C	D
1800	350	A	B	C	B	B	C	B	C	C	C	C	C
	450	B	B	C	B	C	C	C	C	C	C	C	C
	600	B	C	C	C	C	C	C	C	C	C	C	D
	900	C	C	C	C	C	C	C	C	D	C	D	D
	1200	C	C	C	C	C	C	C	C	D	D	D	E

Reference AS1684.2 Table 9.14

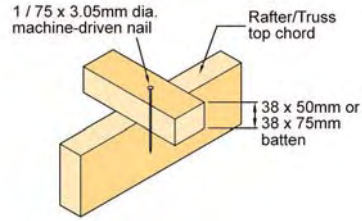
Batten to Truss-Rafter (Within 1200mm of Roof Edges)

MiTek

Group A

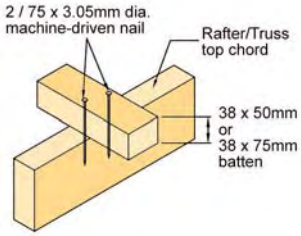


65x3.05 Gun Nails



75x3.05 Gun Nails

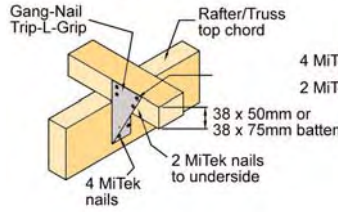
Group B



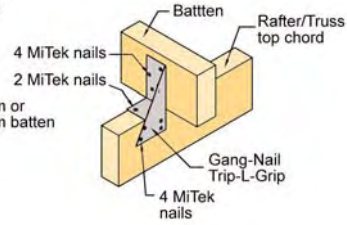
75x3.05 Gun Nails

Group C

BATTEN ON FLAT



BATTEN ON EDGE

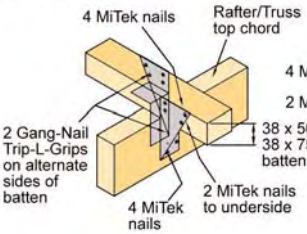


Trip-L-Grip

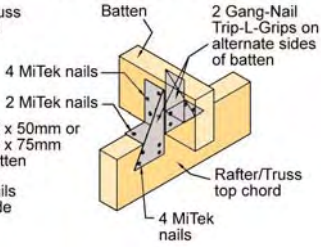
Product Code: TGL, TGR, TGU

Group D

BATTEN ON FLAT

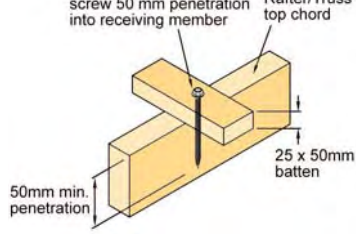


BATTEN ON EDGE



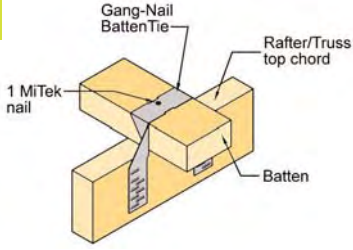
2 off Trip-L-Grips

Product Code: TGL, TGR, TGU



14 gauge Type 17 Screw

Group E



BattenTie

Product Code: BT

N/A **No available connector - seek alternative advice.**

NOTE:
Wind pressures given in AS1170.2 and AS1684.2 vary dependent on the section of the roof being considered. Roof edges experience higher uplift forces due to wind than General Areas. Roof edges are defined as those areas within 1200mm of a roof edge. Edges of a roof include ridges, fascias and barges.

29 Table Batten to Truss-Rafter (Within 1200mm of Roof Edges)

MiTek

Roof Load Tiles

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Rafter Spacing (mm)	Batten Spacing (mm)												
450	350	A	A	A	A	A	B	A	B	B	B	B	C
	450	A	A	A	A	A	B	A	B	C	B	C	C
	600	A	A	B	A	B	B	B	C	C	C	C	C
	900	A	B	B	B	B	C	C	C	C	C	C	C
	1200	A	B	C	B	C	C	C	C	C	C	C	C
600	350	A	A	A	A	A	B	B	B	C	B	C	C
	450	A	A	B	A	B	B	B	C	C	C	C	C
	600	A	B	B	A	B	C	B	C	C	C	C	C
	900	A	B	C	B	C	C	C	C	C	C	C	C
	1200	B	C	C	C	C	C	C	C	C	C	C	D
900	350	A	A	B	A	B	C	B	C	C	C	C	C
	450	A	B	B	B	B	C	C	C	C	C	C	C
	600	A	B	C	B	C	C	C	C	C	C	C	C
	900	B	C	C	C	C	C	C	C	C	C	C	D
	1200	B	C	C	C	C	C	C	C	D	C	D	D
1200	350	A	B	B	B	B	C	C	C	C	C	C	C
	450	A	B	C	B	C	C	C	C	C	C	C	C
	600	B	C	C	C	C	C	C	C	C	C	C	D
	900	B	C	C	C	C	C	C	C	D	C	D	D
	1200	C	C	C	C	C	C	C	D	D	D	D	E
1800	350	B	B	C	B	C	C	C	C	C	C	C	D
	450	B	C	C	C	C	C	C	C	C	C	C	D
	600	B	C	C	C	C	C	C	C	D	C	D	D
	900	C	C	C	C	C	C	C	D	D	D	N/A	N/A
	1200	C	C	C	C	C	D	D	D	E	N/A	N/A	N/A

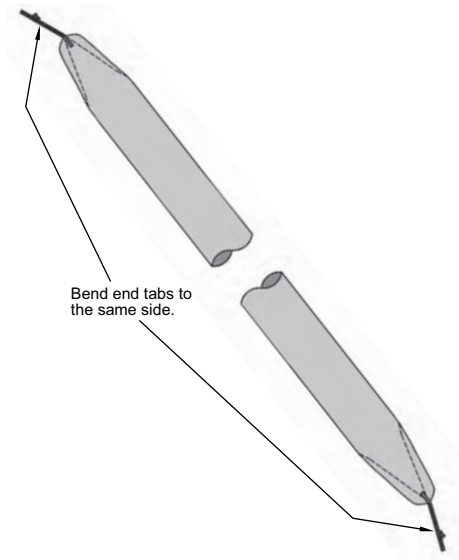
Roof Load Sheet

Wind Classification		N1			N2			N3			N4		
Joint Group	Dry Green	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4	JD3 J2	JD4 J3	JD5 J4
Rafter Spacing (mm)	Batten Spacing (mm)												
450	350	A	A	A	A	A	B	A	B	C	B	C	C
	450	A	A	B	A	B	B	B	B	C	B	C	C
	600	A	B	B	A	B	C	B	C	C	C	C	C
	900	B	B	C	B	C	C	C	C	C	C	C	C
	1200	B	C	C	B	C	C	C	C	C	C	C	C
600	350	A	A	B	A	B	B	B	B	C	B	C	C
	450	A	B	B	A	B	C	B	C	C	C	C	C
	600	A	B	C	B	C	C	C	C	C	C	C	C
	900	B	C	C	B	C	C	C	C	C	C	C	C
	1200	B	C	C	C	C	C	C	C	C	C	C	D
900	350	A	B	B	B	B	C	B	C	C	C	C	C
	450	B	B	C	B	C	C	C	C	C	C	C	C
	600	B	C	C	B	C	C	C	C	C	C	C	C
	900	C	C	C	C	C	C	C	C	C	C	D	D
	1200	C	C	C	C	C	C	C	C	D	C	D	E
1200	350	B	B	C	B	C	C	C	C	C	C	C	C
	450	B	C	C	B	C	C	C	C	C	C	C	C
	600	B	C	C	C	C	C	C	C	C	C	C	D
	900	C	C	C	C	C	C	C	C	D	C	D	E
	1200	C	C	C	C	C	D	C	D	D	D	N/A	N/A
1800	350	B	C	C	C	C	C	C	C	C	C	C	D
	450	C	C	C	C	C	C	C	C	C	C	D	D
	600	C	C	C	C	C	C	C	C	D	C	D	E
	900	C	C	C	C	C	D	C	D	E	D	N/A	N/A
	1200	C	C	D	C	D	D	D	N/A	N/A	N/A	N/A	N/A

Reference AS1684.2 Table 9.14

OVERHANG STRUTTING

Matrix webs can be used as a strut to support rafter or truss overhang for the following applications and conditions:

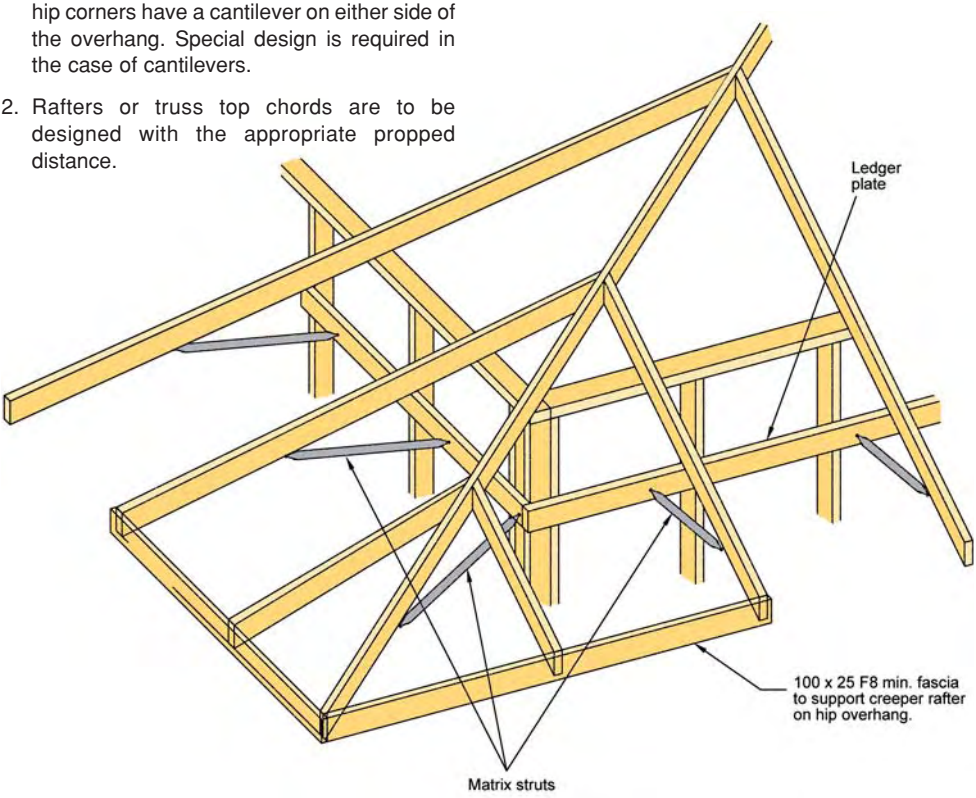


LOADS

Roof Materials:	Concrete tile or sheet
Standard Roof Pitch:	15° to 30°
Truss Centres:	600mm for tile, 900mm for sheet
Wind Classification:	Up to N3 and C2
Overhang:	900mm max. for standard rafters/trusses 750mm max. for hip rafters/trusses
Overhang Strut:	Matrix MWS450
Fastener:	MiTek MSA1430 screw

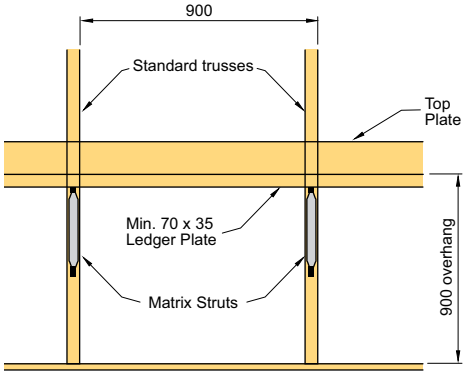
Notes:

1. Matrix overhang strut is not suitable where hip corners have a cantilever on either side of the overhang. Special design is required in the case of cantilevers.
2. Rafters or truss top chords are to be designed with the appropriate propped distance.

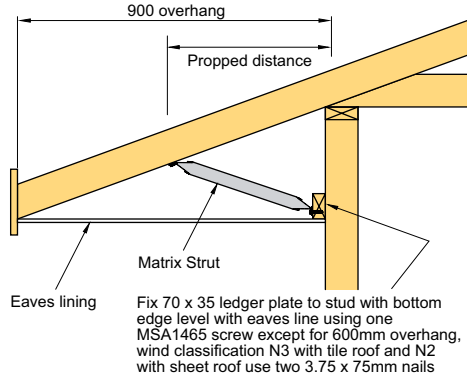


OVERHANG STRUTTING

STANDARD RAFTERS/TRUSSES

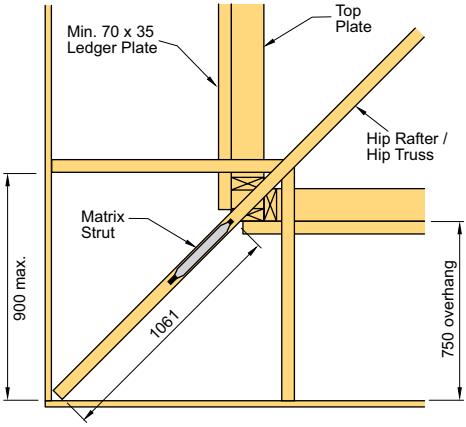


PLAN

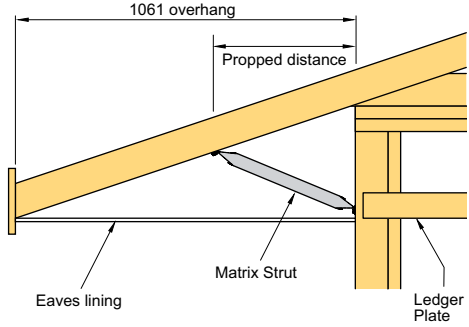


SECTION

HIP RAFTER/TRUSS



PLAN



SECTION

ROOF BRACING - TEMPORARY

All trusses must be temporarily braced during erection. If trusses are not adequately temporarily braced during installation then:-

1. Trusses may collapse during erection

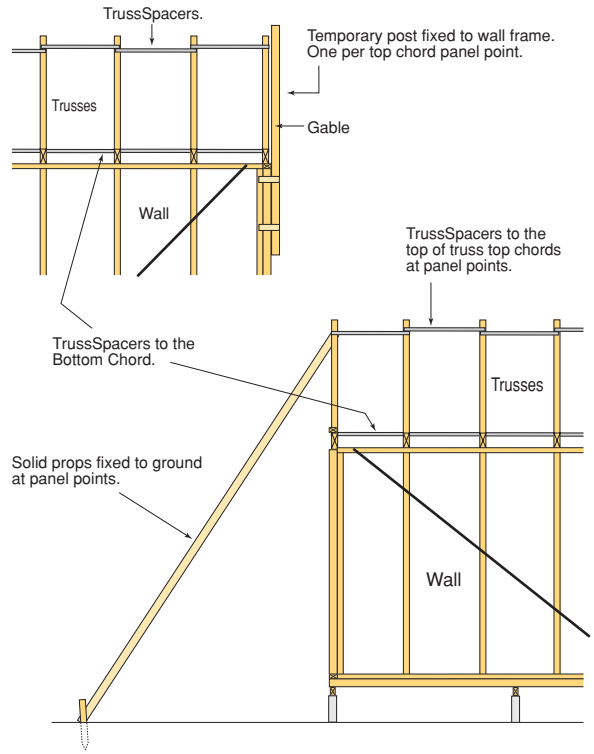
2. Erection tolerance may be exceeded, causing overloading, buckling and possible permanent damage reducing the strength and serviceability of the roof structure.

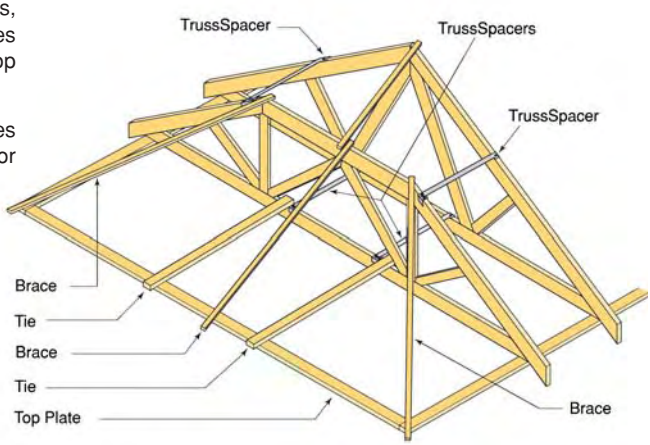
The exact details of erection bracing will, for practical purposes, differ from job to job. The following recommendations are for guidance only as the details employed are the erectors responsibility.

The first truss should be erected straight and plumb to the erection tolerances given previously and temporarily braced to a rigid element, e.g. wall or ground as shown on diagram following.

Each successive truss should be spaced using TrussSpacers. TrussSpacers are recommended in lieu of a gauging rod or timber ties, as these can be fixed to the trusses prior to lifting trusses on to top plates.

Do not stand on a truss that does not have all its TrussSpacers or temporary ties fixed.





ROOF BRACING - TEMPORARY

The purpose of temporary bracing is to hold trusses straight and plumb prior to fixing permanent bracing. All permanent bracing, ties, hold downs, etc. must be fixed prior to loading roof.

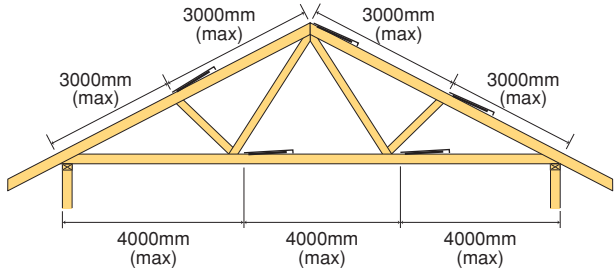
Code requirements - Australian Standard for the installation of nailplated trusses AS4440 requires that temporary ties are to be used on top chords at spacings no greater than 3000mm and on bottom chords at spacings no greater then 4000mm. However, it is good practice to place top chord ties at each top chord panel point.

The TrussSpacer is designed to replace the temporary chord ties as required by AS4440. To conform with AS4440 requirements use TrussSpacers as follows.

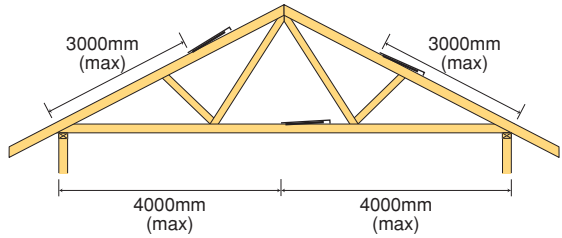
See TrussSpacer Installation Instructions for further information.

Important Note

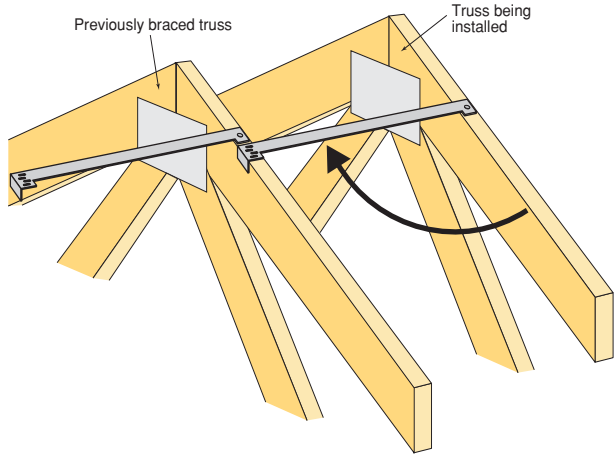
These recommendations are a guide only for the erection of standard gable trusses up to 13000mm span, and spaced at centres not exceeding 1200mm. For trusses beyond these conditions, consult your truss fabricator.



Standard Layout



Alternative Layout



Bottom Chord Bracing

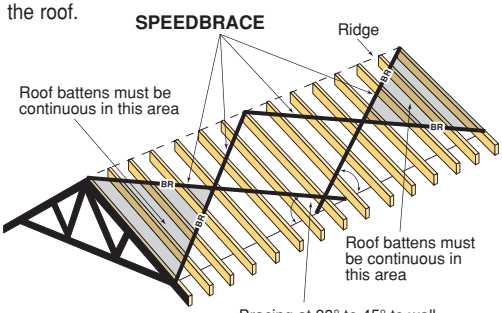
When plasterboard ceilings are fixed direct to the bottom chords of trusses or via battens in accordance with AS1684, the horizontal wind load on the roof and walls of a house is normally transferred to the bracing walls through the diaphragm action of the plasterboard ceiling. This structural ceiling diaphragm also provides lateral restraint to the truss bottom chords of the trusses.

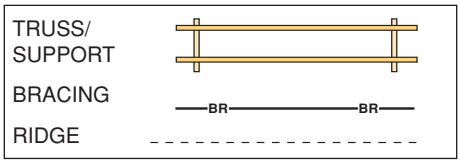
If there is no ceiling attached to the bottom chord, or if the ceiling is suspended or fixed using furring channels that are clipped to the bottom chord, then an alternative bottom chord bracing system is required to provide truss stability and building stability. Where plasterboard is not fixed direct or via battens then:

1. Truss stability is achieved by using bottom chord binders and diagonal bracing on the bottom chord similar to roof bracing. The bottom chord binders should be spaced in accordance with the truss design. The ends of both bottom chord binders and diagonal bracing are to be anchored to a rigid building element.
2. A structural engineer should be consulted for specific design of a bottom chord bracing system which is suitable for the particular requirements of the building.

Top Chord Bracing

The bracing layout is related to the span and shape of the roof.



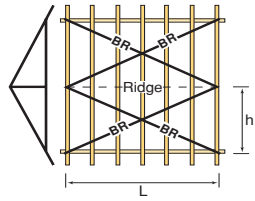


Roof spans less than 8000mm

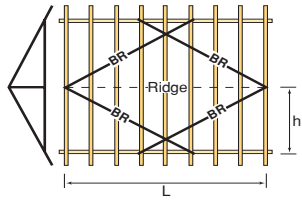
The forces in a roof of less than 8000mm span are relatively low and may be restrained by the use of a single SpeedBrace in a "V" configuration. The angle of SpeedBrace to wall frame should be between 30° and 45°, and each truss should be crossed with a least two braces.

For roof lengths less than half span (h) use detail for Very Short Roofs below.

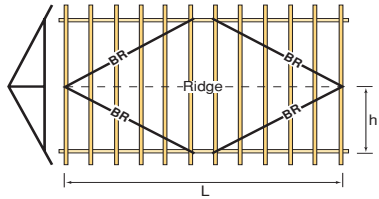
1. **Very Short Roof –** where the roof length "L" is 1 to 1½ times the half span "h" of the roof truss.



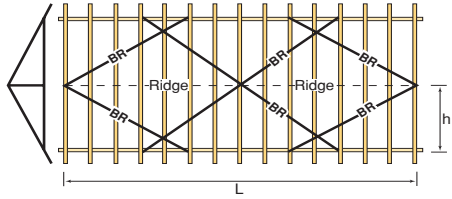
2. **Short Roof –** where the roof length "L" is 1½ to 3½ times the half span "h" of the roof truss.



3. **Long Roof –** where the roof length "L" is 3½ to 4 times the half span "h" of the roof truss.



4. **Very Long Roof –** where the roof length "L" is more than 4 times the half span "h" of the roof truss.



Roof Spans 8000mm to 13000mm

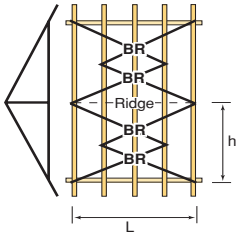
The increase in span increases the forces to be restrained requiring the use of SpeedBrace in an "X" configuration. The angle of the SpeedBrace to the frame should be between 30° and 45°. Use a single SpeedBrace with maximum overall truss length not exceeding values in the table below.

Maximum truss span (m) for single SpeedBrace of roof spans 8m to 13m

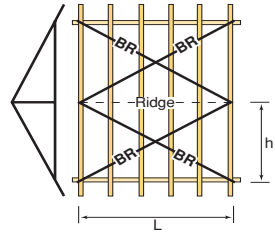
Roof Pitch	Wind Classification		
	N3 (W41N), C1 (W41C)	N4 (W50N), C2 (W50C)	C3 (W60C)
< 15°	13.0	13.0	12.0
15° to 20°	13.0	13.0	11.0
21° to 30°	12.5	10.5	8.5
31° to 35°	11.5	9.5	Not Suitable
36° to 45°	9.5	8.0	Not Suitable

Each truss should be crossed with at least four braces and bracing bays should extend from the end trusses of the building unless noted otherwise

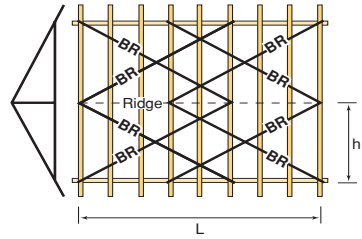
1. **Very Short Roofs.** Where the roof length "L" is very short compared to the half span "h" of the roof trusses and would result in a brace angle greater than 45°, a diagonal bracing arrangement is required each side of the ridge line as given below. Bracing bays should be spaced across roof such that the brace angle is always between 30° and 45°.



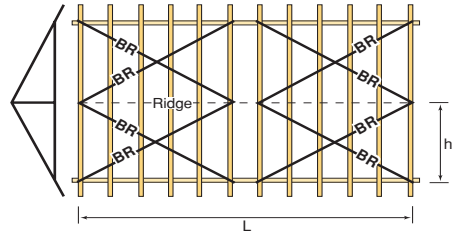
2. **Short Roofs.** Where the roof length "L" is of length to give a brace angle between 30° and 45° then only one bay of bracing is required each side of the ridge line as shown.



3. **Long Roofs.** Where the roof length "L" is long compared to the half span "h" of the roof trusses and would result in a brace angle less than 30°, two or more crossed bracing bays are required each side of the ridge to ensure the brace angle is between 30° and 45° as shown.

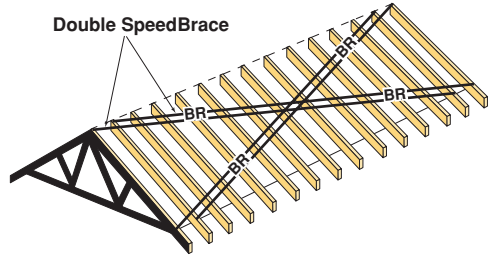


4. **Very Long Roofs.** As for long roofs, except continue bracing for length of building such that each truss is crossed with at least four braces.



For a roof with overall truss span greater than the maximum values specified in the table on page 77, but less than 13.0m, use a double SpeedBrace as shown below.

Double SpeedBrace

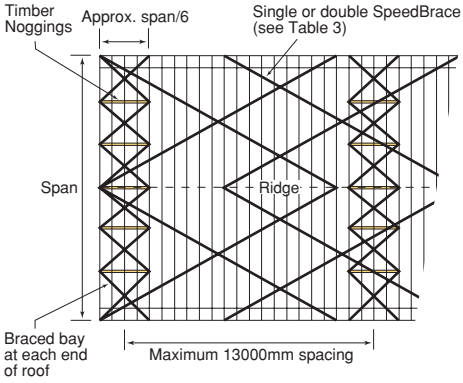


Roof Spans 13000mm to 16000mm

a) For standard trusses, refer to the table below to determine whether single or double SpeedBrace can be used in an 'X' configuration over the whole roof with an additional braced bay at each end as shown.

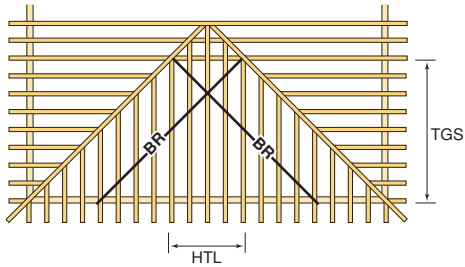
Maximum truss span (m) for single and double SpeedBrace of roof spans 13m to 16m

Roof Pitch	Wind Classification		
	N3 (W41N), C1 (W41C)	N4 (W50N), C2 (W50C)	C3 (W60C)
Single Brace			
< 15°	16.0	15.5	Not Suitable
15° to 20°	16.0	13.0	Not Suitable
Double Brace			
< 15°	16.0	16.0	16.0
15° to 20°	16.0	16.0	15.5
21° to 30°	16.0	14.5	Not Suitable
31° to 35°	16.0	13.5	Not Suitable
36° to 45°	13.5	Not Suitable	Not Suitable

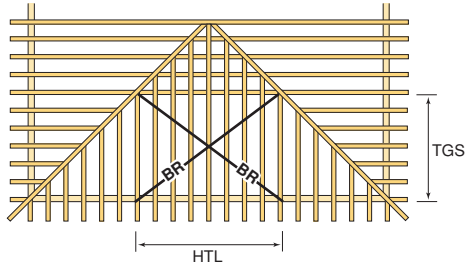


b) For jack trusses or rafters, use single SpeedBrace in an 'X' configuration and the angle of SpeedBrace to end wall should be between 30° and 45°.

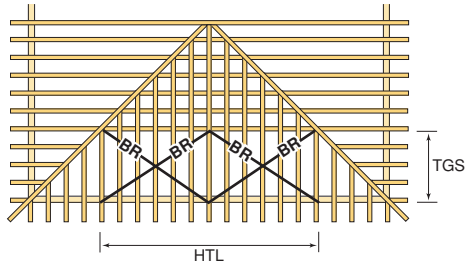
1. Where the horizontal top chord length (HTL) is less than the truncated girder station (TGS).



2. Where the horizontal top chord length (HTL) is 1 to 1.5 times the truncated girder station (TGS).



3. Where the horizontal top chord length (HTL) is longer than 1.5 times the truncated girder station (TGS).



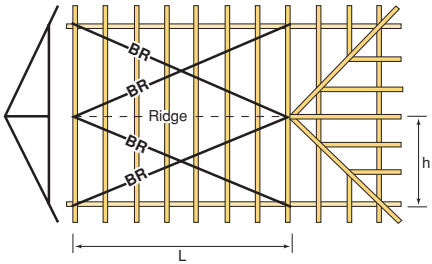
Typical Bracing Layouts

Gable Roof

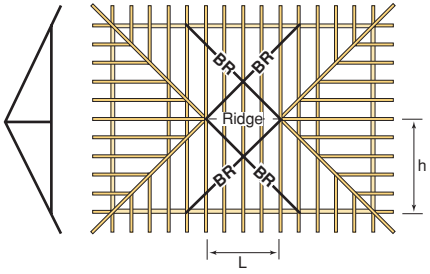
Select a roof layout such that the angle between the ridge line and the brace is between 30° and 45°. There are eight basic bracing arrangements to consider depending on truss span and building length as given above. Bracing bays should extend from end trusses on the building.

Hip Roof

For roofs on buildings of rectangular plan with trussed hip ends or dutch hip ends, bracing is required between apex of hip ends only. In such cases the roof length "L" is taken as being the distance between the two intersections of hip and ridgeline, at each end of the building. One of the recommended bracing layouts for gable roof then can be applied as shown in (a) for roof length "L" ≥ half span "h" of the roof truss, except where the roof length "L" of standard truss is less than the half span "h" of the roof truss, in which case bracing should be arranged as shown in (b).



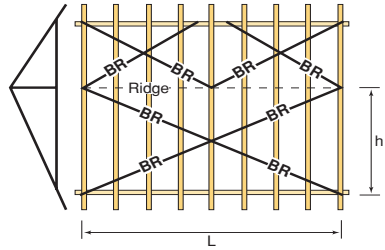
(a) Roof length "L" ≥ half span "h" of the roof truss



(b) Roof length "L" <half span "h" of the roof truss

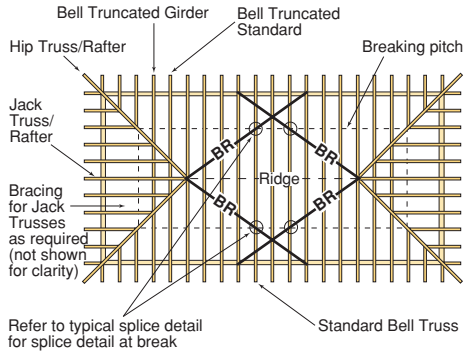
Dual Pitched

On dual pitched roofs and cut-off roofs where the ridge line is not central on the building it may be necessary to determine bracing layout from a combination of 1, 2, 3 and 4 above. In such cases each side of the ridge shall be considered as a separate case.



Bell Roof

Bell trusses should be braced as shown. The SpeedBrace should be spliced at bell breaks.



Skillion

Where the roof consists of half trusses, the span of the half truss should be taken as the half span "h" when using the above recommendations, and the apex braced to supporting structure. See section on Treatment of Internal Supports etc.

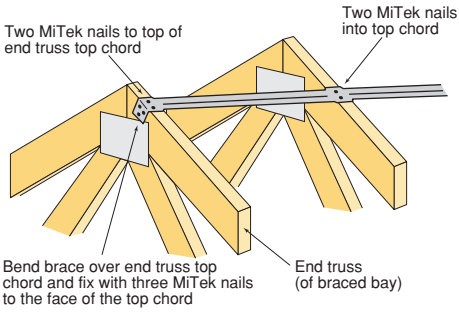
NOTE:

The previous bracing layout diagrams are typical layouts for common roofs. However, for special circumstances, e.g. small spans and complex roof shapes, bracing layouts should be supplied by the truss designer or manufacturer.

SpeedBrace Fixing Details

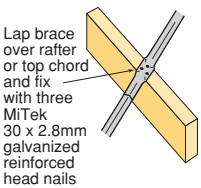
1. Always use 30mm long x 2.8mm dia. MiTek Galvanized Reinforced Head Nails when fixing SpeedBrace.
2. At each truss, fix SpeedBrace to the top of the top chord with two nails. Select nail holes most central to the timber edge. Flatten bracing while nailing to avoid interference with battens.
3. At the end of the truss, fix off the SpeedBrace as shown. A pair of tinsnips will cut the brace. After fixing to top of top chord use a hammer to form a tight bend and fix to face of top chord with three nails.

Typical End Fixing Details

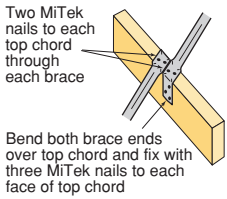


4. To splice SpeedBrace, overlap or wrap around over one truss and fix with three MiTek nails. Splice to be located at least 3500mm from heel end fixing, measured along brace.

Typical Splice Detail (Overlap Splice)

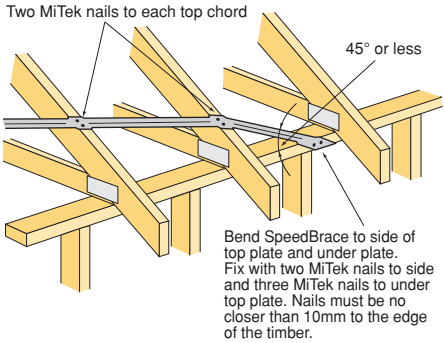


Typical Splice Detail (Wrap-around Splice)



5. At the heel, SpeedBrace should be fixed in one of the following ways:- The simplest method, where roof geometry permits, is to fix directly to the wall top plate as shown below. The brace must be kept straight between the last braced truss and wall top plate. Also the angle between the brace and the wall top plate must not exceed 45°, i.e. 1:1 slope.

Heel End Fixing Details

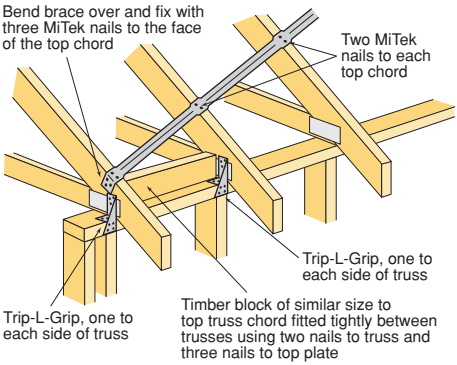


CAUTION

The SpeedBrace must be positively fixed to the top plate otherwise the bracing will be ineffective.

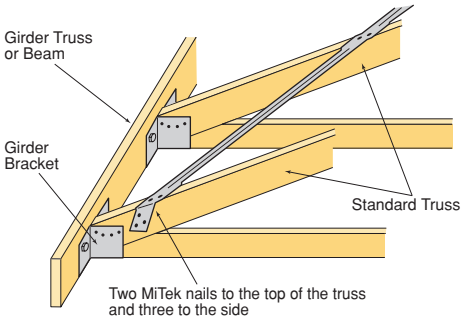
An alternative method can be used where it is desired to extend the brace to the last truss or where the angles do not permit ready fixing to the top plate. The last two trusses should be fixed to the wall top plate with a minimum of two Trip-L-Grips to each truss, and timber block between trusses as shown.

Alternative Heel End Fixing Detail



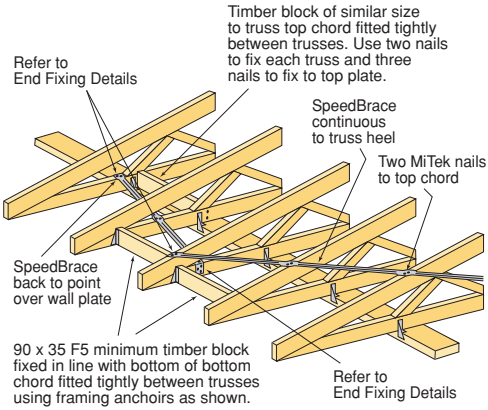
ROOF BRACING - PERMANENT

Where the standard trusses are supported by a girder truss or a beam rather than a wall top plate, fix SpeedBrace at truss heel as shown below.



Treatment at Cantilevers

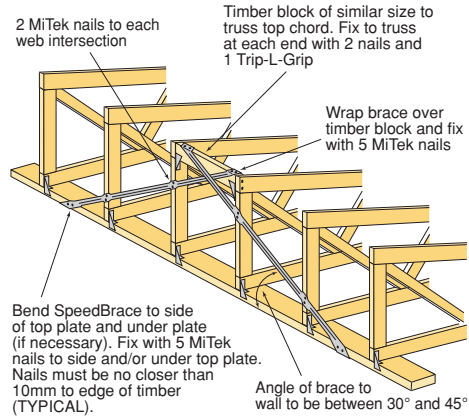
The force in the top chord bracing must be carried through to the wall plate by diagonal bracing from the top chord to wall plate, as shown below.

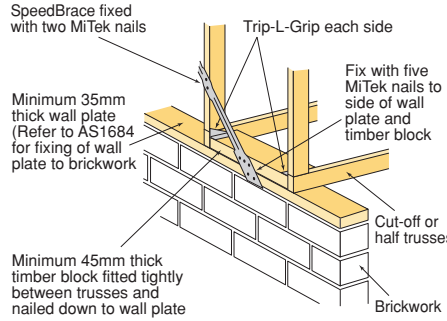


Treatment at Cut-off or Half trusses

In addition to top chord bracing, cut-off and half trusses require bracing from top chord to top plate at end nearest apex. Apply one bay of diagonal bracing at each end of the run of trusses and intermediate bays at 10m centres for long runs of trusses.

End Bracing for Cut-off and Half Trusses





Introduction

The MiTek Lintel is an engineered lintel manufactured by pressing a specially designed tooth plate into the side of timber flanges to form a structural member. As MiTek Lintels may be manufactured in line with the assembly of pre-fabricated wall frames, the existing top plate of the frame may be used as the top flange of the MiTek Lintel, thereby reducing material cost.

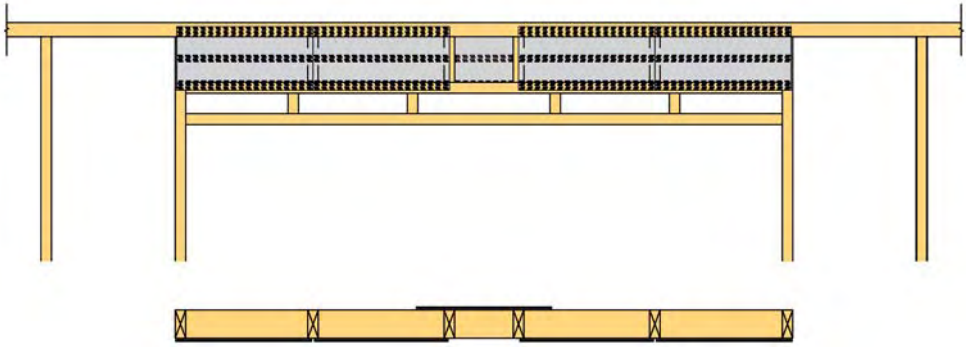


Fig 1. MiTek Lintel Utilising Top Plate as Top Flange

Advantages

MiTek Lintels offer the following advantages over solid timber or steel lintels. They are:

- Cost effective and easy to manufacture
- Reduce the cost of stock holding
- Reduce the cost of materials as they do not require secondary jamb studs (prop studs)
- Light weight
- Easy to handle
- Will not shrink
- In many cases no top plate ties are needed at sides of opening.

MiTek Lintel Plate

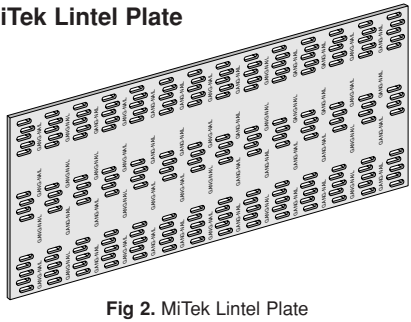


Fig 2. MiTek Lintel Plate

The MiTek Lintel Plate is available in 150, 200, 225, 250, 275 and 300mm nominal width and has a length of 450mm. A half size MiTek Lintel Plate with a nominal length 225mm (except GNL150) is available for wall openings, which are not modules of 450 mm.

MiTek Lintel Plate Widths & Lengths

Product Code	Width (mm)	ActualPlate Length (mm)
GNL150	152	457
GNL200	203	457
GNL200225	203	228
GNL225	228	457
GNL225225	228	228
GNL250	254	457
GNL250225	254	228
GNL275	279	457
GNL275225	279	228
GNL300	304	457
GNL300225	304	228

Using the standard width MiTek Lintel Plates it is possible to design most of the lintels required by prefabricated wall framing plants. This eliminates the need to stock the multitude of sections and lengths required with other lintel types.

Lintel Types

MiTek Lintel depth will vary according to the size of timber used in the flanges. The table below provides the overall depth for the various common flange sizes.

Material Specification

Steel: Grade G300
Thickness: 1.0mm, *1.2mm for GNL300
Coating: Galvanised coating Z275

Product Code	Overall Lintel Depth					
	Top Plate Thickness 45mm	Bottom Flange Thickness 35mm	Top Plate Thickness 35mm	Bottom Flange Thickness 35mm	Top Plate Thickness 45mm	Bottom Flange Thickness 45mm
GNL150	175		165		185	
GNL200	226		216		236	
GNL225	251		241		261	
GNL250	276		266		286	
GNL275	302		292		312	
GNL300*	327		317		337	

Design of MiTek Lintels

The following MiTek Lintel Span charts contain a limited range of standard roof and wind load conditions. Where lintels are required to support girder trusses or truncated girder trusses and for other special point loads, MiTek Lintels should be designed using MiTek's AutoBeam software package.

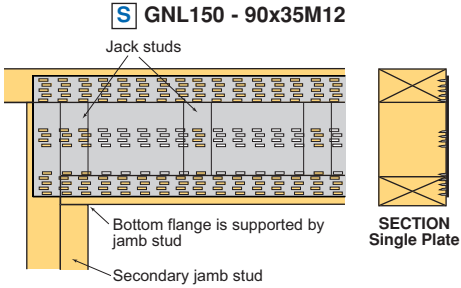
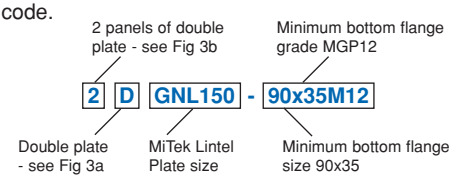


Fig 3. MiTek Lintel Plate with Stiffened Ends at each support

MiTek Lintel Design Charts

In the MiTek Lintel selection charts, lintel designs are designated using the following code.



With some large span lintels or heavily loaded lintels, MiTek Lintel Plates are required to be stiffened or placed on both sides of lintel at the supporting studs only. These are designated as follows: -

Note: Top flange size is fixed for each selection chart. Therefore select the appropriate chart for the size being used for wall top plate.

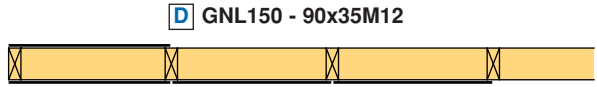


Fig 3a. Double MiTek Lintel Plate at each support

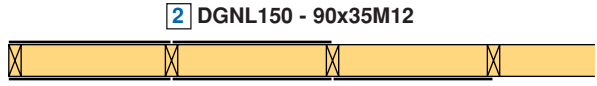


Fig 3b. Two panels of Double MiTek Lintel Plate at each support

Maximum Span Chart for MiTek Lintels

Roof Load Tiles - Rafter or Trusses @ 600mm Centres

Wind Classification		N1 - N3			
	Top Plate	70x35 MGP10 Top Plate [2]	70x45 MGP10 Top Plate [2]	90x35 MGP10 Top Plate [2]	90x45 MGP10 Top Plate [2]
Load Width ULW	Opening Width (mm)				
3000	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M12	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2100	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2400	GNL150-70x45M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2700	GNL200-70x35M12	GNL200-70x35M12	GNL200-90x35M12	GNL150-90x45M12
	3000	***SGNL200-70x45M12***	GNL200-70x45M12	GNL200-90x35M12	GNL200-90x35M12
3600	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M10
	2100	GNL150-70x45M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2400	GNL200-70x35M12	GNL150-70x45M12	GNL150-90x45M12	GNL150-90x35M12
	2700	GNL200-70x45M12	GNL200-70x35M12	GNL200-90x35M12	GNL200-90x35M12
	3000	SGNL225-70x45M12	***SGNL200-70x45M12***	SGNL200-90x45M12	SGNL200-90x35M12
4200	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2100	GNL200-70x35M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2400	GNL200-70x35M12	SGNL200-70x35M12	***SGNL150-90x45M12***	SGNL150-90x45M12
	2700	***SGNL200-70x45M12***	SGNL200-70x45M12	SGNL200-90x35M12	SGNL200-90x35M12
	3000	***SGNL250-70x45M12***	SGNL225-70x45M12	SGNL225-90x45M12	SGNL200-90x45M12
4800	1500	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M12
	2100	SGNL200-70x35M12	SGNL150-70x45M12	SGNL150-90x45M12	SGNL150-90x35M12
	2400	DGNL200-70x45M12	SGNL200-70x35M12	SGNL200-90x35M12	SGNL200-90x35M12
	2700	SGNL225-70x45M12	SGNL225-70x45M12	SGNL200-90x45M12	SGNL200-90x45M12
	3000	***DGNL250-70x45M12***	DGNL250-70x45M12	***DGNL225-90x45M12***	DGNL225-90x45M12
5400	1500	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M10
	1800	GNL150-70x45M12	SGNL150-70x35M12	GNL150-90x45M12	SGNL150-90x35M12
	2100	SGNL200-70x35M12	SGNL200-70x35M12	***SGNL150-90x45M12***	SGNL200-90x35M12
	2400	SGNL200-70x45M12	SGNL200-70x45M12	SGNL200-90x35M12	SGNL200-90x35M12
	2700	DGNL250-70x45M12	DGNL225-70x45M12	***DGNL200-90x45M12***	DGNL200-90x45M12
	3000	***DGNL275-70x45M12***	***DGNL275-70x45M12***	DGNL250-90x45M12	***DGNL225-90x45M12***
6000	1500	GNL150-70x35M12	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M12
	1800	SGNL200-70x35M12	SGNL150-70x45M12	SGNL150-90x35M12	SGNL150-90x35M12
	2100	SGNL200-70x45M12	SGNL200-70x35M12	DGNL200-90x35M12	SGNL200-90x35M12
	2400	***DGNL200-70x45M12***	DGNL200-70x45M12	DGNL200-90x35M12	DGNL200-90x35M12
	2700	DGNL250-70x45M12	DGNL250-70x45M12	DGNL250-90x45M12	DGNL225-90x45M12
	3000		[2]***DGNL300-70x45M12***	[2]***DGNL250-90x45M12***	[2]DGNL250-90x45M12

LOADING:

1. Maximum Roof DL based on Concrete Tiles weight = 0.508 kPa and Chord Self Weight = 0.037 kN/m.
2. Maximum Ceiling DL based on 13mm Plaster Direct weight = 0.115 kPa and Chord Self Weight = 0.032 kN/m.
3. Maximum design wind speed based on a Wind Classification of N3 as per AS4055 'Wind Loads for housing'.

GENERAL NOTES:

1. The following lintel designs require a specific top plate size and grade.
2. All top plates are MGP10 unless lintel size is specified in ***bold italics*** eg. ***DGNL200-70x35M12*** where MGP 12 is required.
3. Jamb studs size, grade as specified by AS1684.

Maximum Span Chart for MiTek Lintels

Roof Load Sheet - Rafter or Trusses @ 900mm Centres

Wind Classification		N1 - N3			
		70x35 MGP10 Top Plate [2]	70x45 MGP10 Top Plate [2]	90x35 MGP10 Top Plate [2]	90x45 MGP10 Top Plate [2]
Load Width ULW	Fixing Spacing (mm)				
3000	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2100	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2400	***GNL150-70x35M12***	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M10
	2700	***GNL150-70x35M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	GNL150-90x35M12
	3000	***GNL200-70x35M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	***GNL150-90x35M12***
3600	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2100	***GNL150-70x35M12***	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M10
	2400	***GNL150-70x35M12***	GNL150-70x35M12	***GNL150-90x35M12***	GNL150-90x35M12
	2700	***GNL150-70x45M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	***GNL150-90x35M12***
	3000	***GNL200-70x45M12***	***GNL150-70x45M12***	***GNL150-90x35M12***	***GNL150-90x35M12***
4200	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2100	***GNL150-70x35M12***	GNL150-70x35M12	GNL150-90x45M10	GNL150-90x35M10
	2400	***GNL150-70x35M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	GNL150-90x35M12
	2700	***GNL200-70x45M12***	***GNL150-70x45M12***	***GNL150-90x35M12***	***GNL150-90x35M12***
	3000	***GNL200-70x45M12***	***GNL150-70x45M12***	***GNL150-90x45M12***	***GNL150-90x45M12***
4800	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	***GNL150-70x35M10***	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	2100	***GNL150-70x35M12***	GNL150-70x35M12	***GNL150-90x35M12***	GNL150-90x35M12
	2400	***GNL150-70x45M12***	***GNL150-70x45M12***	***GNL150-90x35M12***	GNL150-90x35M12
	2700	***SGNL200-70x45M12***	***GNL150-70x45M12***	***GNL150-90x45M12***	***GNL150-90x35M12***
	3000	***GNL225-70x45M12***	***GNL200-70x45M12***	***GNL200-90x35M12***	***GNL150-90x45M12***
5400	1500	GNL150-70x35M10	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	***GNL150-70x35M12***	GNL150-70x35M12	GNL150-90x35M10	GNL150-90x35M10
	2100	***GNL150-70x35M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	GNL150-90x35M12
	2400	***GNL150-70x45M12***	***GNL150-70x45M12***	***GNL150-90x35M12***	***GNL150-90x35M12***
	2700	***GNL200-70x45M12***	***GNL200-70x45M12***	***GNL200-90x35M12***	***GNL150-90x45M12***
	3000	-	***GNL200-70x45M12***	***GNL200-90x45M12***	***GNL150-90x45M12***
6000	1500	***GNL150-70x35M12***	GNL150-70x35M10	GNL150-90x35M10	GNL150-90x35M10
	1800	***GNL150-70x35M12***	GNL150-70x35M12	GNL150-90x35M12	GNL150-90x35M10
	2100	***GNL150-70x35M12***	***GNL150-70x35M12***	***GNL150-90x35M12***	GNL150-90x35M12
	2400	***GNL200-70x35M12***	***GNL150-70x45M12***	***GNL150-90x45M12***	***GNL150-90x35M12***
	2700	***GNL225-70x45M12***	***GNL200-70x45M12***	***GNL200-90x35M12***	***GNL150-90x45M12***
	3000	-	-	***SGNL225-90x45M12***	***SGNL200-90x45M12***

LOADING:

1. Maximum Roof DL based on Steel Sheet weight = 0.114 kPa and Chord Self Weight = 0.032 kN/m.
2. Maximum Ceiling DL based on 13mm Plaster Battened weight = 0.156 kPa and Chord Self Weight = 0.040 kN/m.
3. Maximum design wind speed based on a Wind Classification of N3 as per AS4055 'Wind Loads for housing'.

GENERAL NOTES:

1. The following lintel designs require a specific top plate size and grade.
2. All top plates are MGP10 unless lintel size is specified in ***bold italics*** eg. ***DGNL200-70x35M12*** where MGP 12 is required.
3. Jamb studs size, grade as specified by AS1684.

ZONE DEFINITIONS

Sea Spray Zone - Less than 1km from surf coast or 100m from bayside areas.

Coastal Zone - 1km to 10km from surf coast or 100m to 1km from bayside areas.

Industrial Zone - Close proximity to industrial complexes where corrosive gases may be emitted. eg. Port Pirie and Newcastle.

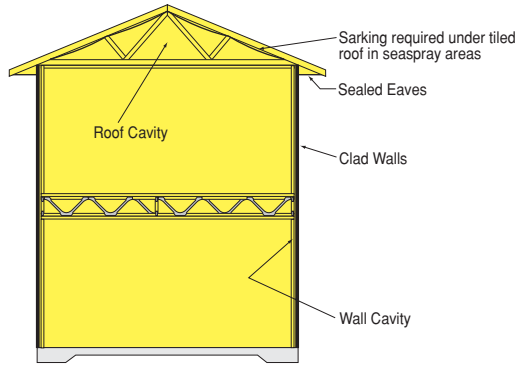
Hazardous Zone - The environment within a building may also adversely affect the durability of connectors. For example within enclosed swimming pools chloramines may cause rapid corrosion of metal products, including stainless steel. Chemical storage buildings and buildings housing animals can also pose specific corrosion problems, and will need consideration which is beyond the scope of this document.

Low Hazard Zone - Generally locations not described by the above.

EXPOSURE CONDITIONS

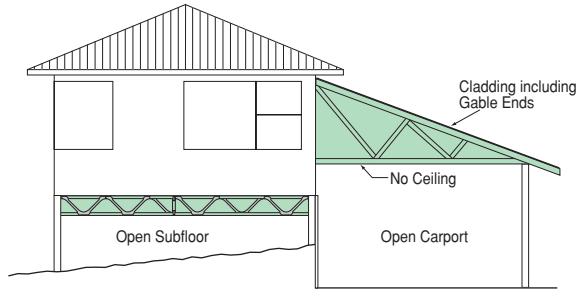
CLOSED

"Connectors not exposed to rain or ground moisture and wind blown corrosive salts."



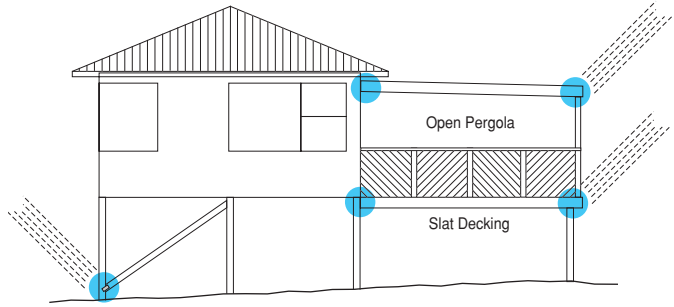
SHELTERED

"Connectors not washed by direct or wind blown rain but may be subjected to wind blown corrosive salts."

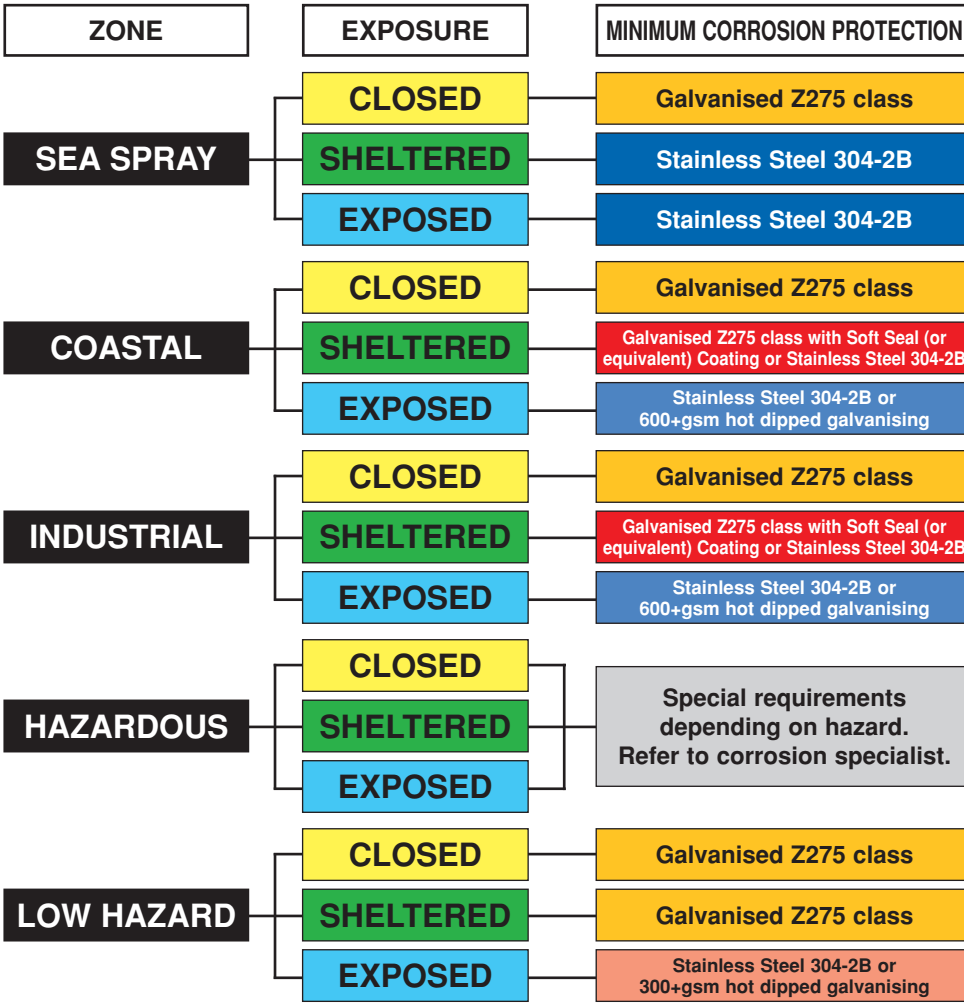


EXPOSED

"Connectors are exposed to weather and washed by direct or wind blown rain."



MITEK CONNECTOR DURABILITY FLOW CHART



IMPORTANT NOTES:

1. This chart is only to be used to determine the appropriate corrosion protection required for MiTek connectors. Other factors such as the durability of timber and the long term structural integrity of the connection is beyond the scope of this document.
2. This chart is only applicable for connectors used with timber which has not been treated with corrosive chemicals, eg. C.C.A. treatments (If C.C.A. treated timber is re-dried before fabrication and kept dry throughout its service life, it may be used with galvanised connectors as recommended in the 'Connector Durability Flow-Chart'). L.O.S.P. treatments to H2 level may be used with above chart. However although L.O.S.P. treatment is not corrosive to galvanised connectors, H3 level treatment may reduce the structural performance of some types of fastener. Where H3 level treatment is to be used consult MiTek engineers.
3. Unless otherwise noted all MiTek connectors are manufactured using Z275 class galvanised coating.
4. Care should be taken when designing timber connections exposed to the weather. Some types of connectors may not be effective in circumstances where timber expands and contracts due to weathering. For example the use of stainless steel connector plates and C.C.A. treated timber which is exposed to the weather is not recommended.
5. "Soft Seal' protective coating is a clear spray-on coating which is to be applied to metal connectors after installation. This product is available through CRC Industries Pty Ltd. To find out details of suppliers in your area contact CRC Customer Service on phone **1800 111 556**

ADDITIONAL INFORMATION ON CONNECTORS

Apart from the connectors specified in the MiTek Guide, there are many more fasteners and brackets available from MiTek that have been designed for specific applications. Details of MiTek's extensive range of fasteners, brackets and bracing products along with Load Data and Installation instructions is available in either printed form or from our electronic catalogue 'EasyCat'. For a copy of either a printed data sheet or EasyCat, contact your local MiTek office, listed in the front of this Guide, or log onto our web site at ***www.mitek.com.au***. The following is a brief summary of the range of products currently available.

ROOF TIE DOWNS

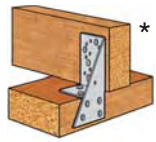
JoistStrap

used as a means of fixing ceiling joists to hanging beams, rafters to beams or floor joists to bearers.

CeilingTie also available in stainless steel.

Trip-L-Grip* & Universal Trip-L-Grip

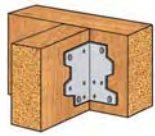
There are a variety of Trip-L-Grips, all designed to simplify the joining of timber in roof, wall, ceiling and floor members. TLG's provide a structurally engineered joint.



Universal Trip-L-Grip also available in stainless steel.

MiniGrip™

Can be used where timber is joined at right angles and nominal loads are expected. Ideal for pergolas, timber railing, decorative fences, etc.



MultiGrip™

A versatile low cost framing anchor which can be bent on-site to form a two or three dimensional fixing for countless timber connections.

TrussGrip™

A very quick and effective way of anchoring trusses to top plates. They are manufactured as left and right hand and are marked 'L' and 'R'.

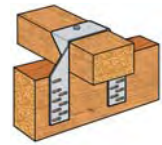
CycloneTie

Used to secure purlins, rafters and trusses to top plates in areas subject to cyclonic and high wind loading. Available in 400mm, 600mm, 900mm and 1200mm lengths.

Also available in stainless steel.

BattenTie

Galvanized steel timber connectors utilising integral teeth for roof secuirty under extreme wind conditions. Batten Ties are a quick and effective method of anchoring battens to rafters or trusses.



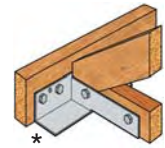
CreeperConnector

Designed to connect jack trusses to hip trusses. They may also be used to connect small span half or cut-off trusses to boomerang girder trusses. They conform with AS4440 requirements.

GIRDER BRACKETS

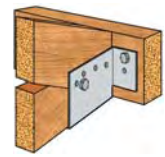
Universal MidLoad, HiLoad* & Boomerang, Girder Bracket

Designed to secure heavily loaded trusses like truncated girders and secondary trusses, to primary girder trusses.



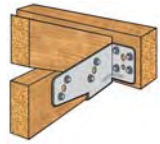
MkII Girder Bracket

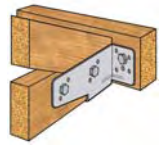
Designed to fix trusses to the bottom chord of girder trusses or to the face of beams. An integral tongue prevents rotation of girder truss bottom chord when trusses are loaded.



ADDITIONAL INFORMATION ON CONNECTORS

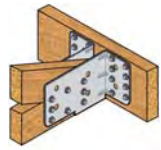
FastFit MkIII Girder Bracket





Designed to fix standard trusses to the side of girder truss bottom chords, using either self tapping MiTek screws or alternatively M12 bolts. With the addition of washers and supplementary screws they are suitable to restrain large uplift loads experienced in cyclonic areas.

FastFit MkIV HD Girder Bracket

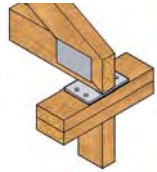


Designed to connect heavily loaded trusses to girder trusses or beams with either self tapping MiTek screws or M12 bolts. They are also able to resist very high uplift loads.

Boomerang Connector

Used in truss-to-truss connections where the trusses meet at an irregular angle. One size fits both left hand and right hand truss intersection.

Bearing Plate



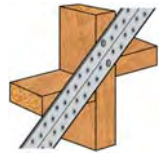
Used to improve the crushing resistance of wall plates under heavily loaded trusses.

BRACING PRODUCTS

SpeedBrace™

Designed for bracing roof trusses in both low wind speed and cyclonic areas. No tensioning required.

SpeedBrace™



Designed for bracing wall frames in both low wind speed and cyclonic areas. No tensioning required.

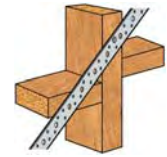
MaxiBrace (20 x 18 x 1.2mm)™

A high strength cold formed steel angle section, designed to brace timber framed walls in domestic construction. MaxiBrace™ is effective both as a compression or tension bracing system conforming with AS1684 Type A single bracing unit.

MiniBrace (18 x 16 x 1.2mm)™

A cold formed steel angle section, designed to brace timber framed walls in domestic construction conforming with AS1684 Type A double bracing unit.

Structural BracingStrap



Suitable for a wide range of bracing applications where a guaranteed performance is essential. Structural Bracing Strap is ideal for fastening timber framed walls to bracing panels to supporting structures.

TrussSpacer

Provides a fast and accurate method for the spacing and temporary bracing of roof trusses during installation. TrussSpacers speed up truss installation and improve on site safety.

WALL FRAME TIES

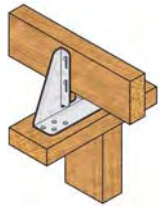
StudStrap

Designed to secure top and bottom plates to studs in high wind areas. They can be fixed to the outside of stud wall frames, providing an even internal surface for plastering. Can also be used in braced panels to comply with Type A and B bracing specifications.

ADDITIONAL INFORMATION ON CONNECTORS

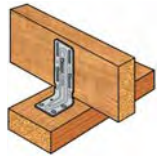
MiTek

BraceWall Bracket



Developed to connect the ceiling diapragm to the top of non-loadbearing walls and enables lateral loads to be distributed into bracing walls in accordance with AS1684.

Internal Wall Bracket



Used to fasten the top of internal non load bearing walls to trusses. Internal Wall Brackets are designed to restrain walls while allowing the truss to clear span.

WallStrap

A fast and easy method for the fastening of wall plates to frames in prefabricated timber walls. Designed to be used with pneumatically driven nails, Wall Straps need only be fixed to one side of the frame, avoiding the need to turn the frame over.

Structural TieDown Strap

A fast effective method of securing many building components, and is ideal for fastening rafters to top plates, top plates to studs, or purlins to rafters.

Also available in stainless steel.

PlateTie

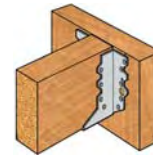
Used to secure top and bottom plates to studs in high wind areas. Plate Ties can also be used to secure studs in braced panels to comply with Type B bracing specifications.

Masonry Anchor

Titen HD is a high strength self tapping screw anchor used to secure braced wall frames to concrete slabs. Ideal for situations where frames are located on the edge of the slab, precluding the use of expanding masonary anchors.

HANGERS

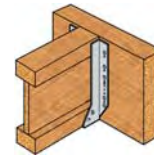
JoistHangers

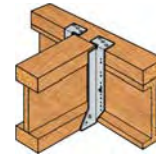


Provide a simple but effective way to fasten PosiStrut floor trusses and roof trusses to the face of beams and girders. A quick and efficient method to fix timber pergolas to existing timber or steel fascia boards.

Also available in stainless steel.

I-Beam Hanger FaceFix* & TopFix



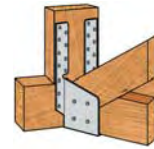


Developed to provide an effective method of fixing timber I-Beams to timber and steel supporting beams. Available in a wide range of sizes including Heavy Duty and variable angle applications.

UniLedger

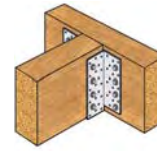
Provides a seat to support joists at an angle to floor beams. Also used to support hip end trusses in small poly end roofs.

45 Degree JoistHanger



Designed to connect supported members at a 45 degree angle. Also provides a wrap around fixing option.

SplitHanger

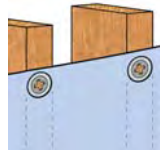


Versatile hangers that provide a strong connection for various timber beam widths to supporting beams.

ADDITIONAL INFORMATION ON CONNECTORS

SMALL FASTENERS

FoilFastener

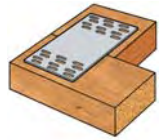


Quick and easy way of fixing foil insulation products to timber structures. Large surface area gives a superior hold compared with staples or clouts.

MiniNail

Suitable for light timber connections. Mininail is ideal for fixing flywire screens, cupboards and frames etc.

StrapNail



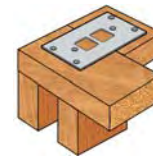
Versatile fasteners with integral teeth for use where one timber member is to be butted against another eg: joining timber wall frames, bay window frames, cupboards and benches.

NailonPlate

Ideal for many applications, including framing for formwork and house frames, joining wall frames at top plate level, manufacture of trusses, gates and fences and repairs to timber structures.

Also available in stainless steel.

ConnectorPlate

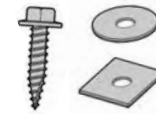


A quick simple, economical and easy to use method of joining timber plates normally joined by more time consuming conventional methods. Designed to enable a chisel to pull two members tightly together.

TylokPlate™

Used extensively for joining timber wall frames, and can be used to manufacture roof trusses. Tylok™ Plates do not require special pressing equipment.

Nails, Screws, Bolts and Washers



MiTek supply a range of Nails, Screws, Washers and Bolts designed and engineered for use with MiTek Building Products.

Unless otherwise noted, MiTek nails are 30 x 2.8mm diameter hot dipped galvanized reinforced head nails and MiTek nails that are used in I-Beam Hangers are 35 x 3.75mm diameter hot dipped galvanized nails.

Stainless Steel

MiTek also has a large range of building products in stainless steel for use in highly corrosive areas.