

Strap Brace

GALVANISED & SS316

Application

The Bremick® Strap Brace is galvanised steel pre-punched flat strap. When it is installed with a tensioner it is used to brace walls, roofs, ceilings, and floors. It is ideal for bracing applications where timber braces are not feasible.

Advantages

The Bremick® Strap Brace provides numerous benefits including:

- Compliance with the wall bracing rules of AS1684 Residential Timber-Framed Construction.
- Genuine Galvanised coating that provides appropriate corrosion protection.
- Used in lieu of an angle brace, there is no need to check the timber members prior to fitting the brace.
- Wide range available to suit the specific bracing application, thereby saving on wastage and funds.
- Quickly and easily tensioned using your preferred method. Driving the heavy hex bolt, the nut-sert tensioner can be used, or alternatively the claw of the hammer can be used to tension the brace using the wing nut tensioner.

Specifications

Steel Grade	G300
Coating	Z275 – Galvanised & SS316
Thickness	0.8mm, 1.0mm, 1.2mm
Width	25mm, 30mm, 32mm
Length	6m, 15m, 30m, 50m
Configuration	Punched
Fasteners	Bremick® 35 x 3.15mm Timber Connector Nails



Bremick® Ranging

Product Code	Dimensions	Coating	Pack Qty
TSBG015025084	0.8mm x 25mm x 15M	Z275 – Galvanised	1 coil
TSBG030025084	0.8mm x 25mm x 30M	Z275 – Galvanised	1 coil
TSBG006030084	0.8mm x 30mm x 6M	Z275 – Galvanised	1 coil
TSBG015030084	0.8mm x 30mm x 15M	Z275 – Galvanised	1 coil
TSBG030030084	0.8mm x 30mm x 30M	Z275 – Galvanised	1 coil
TSBG050030084	0.8mm x 30mm x 50M	Z275 – Galvanised	1 coil
TSBG006030104	1.0mm x 30mm x 6M	Z275 – Galvanised	1 coil
TSBG015030104	1.0mm x 30mm x 15M	Z275 – Galvanised	1 coil
TSBG030030104	1.0mm x 30mm x 30M	Z275 – Galvanised	1 coil
TSBG050030104	1.0mm x 30mm x 50M	Z275 – Galvanised	1 coil
TSBG015030124	1.2mm x 30mm x 15M	Z275 – Galvanised	1 coil
TSBG030030124	1.2mm x 30mm x 30M	Z275 – Galvanised	1 coil
TSBG050030124	1.2mm x 30mm x 50M	Z275 – Galvanised	1 coil
TSBG030032124	1.2mm x 32mm x 30M	Z275 – Galvanised	1 coil
TSB6015030084	0.8mm x 30mm x 15M	SS316	1 coil
TSB6030030084	0.8mm x 30mm x 30M	SS316	1 coil
TSB6015030104	1.0mm x 30mm x 15M	SS316	1 coil
TSB6030030104	1.0mm x 30mm x 30M	SS316	1 coil

Strap Brace Tensioner Kits

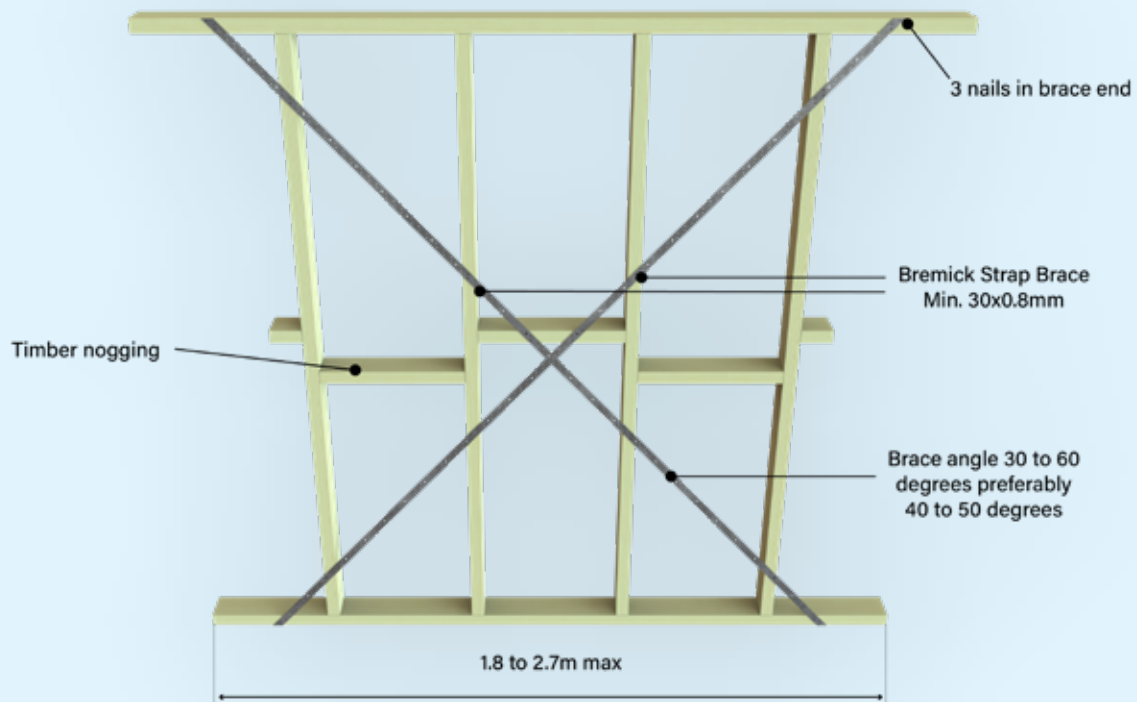
TSBTKITGBNW1C	Strap Brace Tensioner Kit (with wing nut, Flange bolt, and washer)	Z275 – Galvanised	6 per pack
TSBTKITGHHB1C	Strap Brace Tensioner Kit (with heavy hex bolt)	Z275 – Galvanised	6 per pack
TSBTKIT6BNW1C	Strap Brace Tensioner Kit (with wing nut, Flange bolt, and washer)	SS316	6 per pack



Installation Instructions – Wall Frames

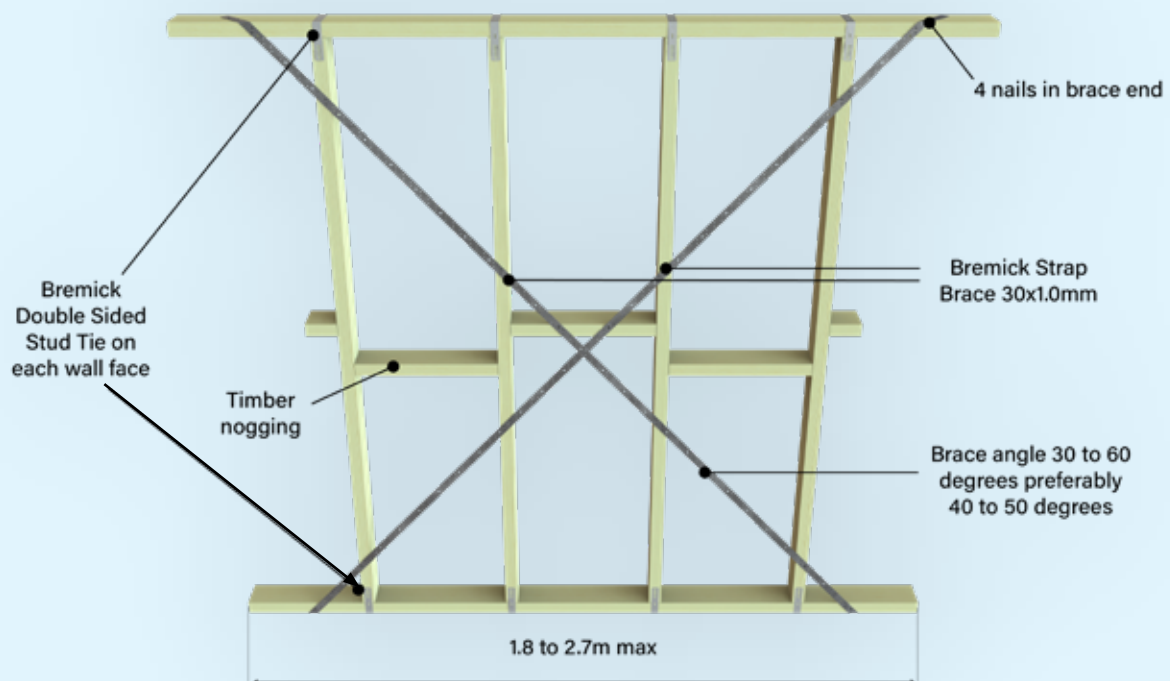
Wall Frames – Type A Bracing Unit – 1.5kN/m bracing capacity using Strap Brace

This Type A bracing unit comprises one section of the wall, with cross-over braces of Bremick Strap Brace as shown below. The minimum recommended strap brace size is 30mm x 0.8mm. It fully complies with AS1684.2:2010 and AS1684.3:2010 specifications. Maximum wall height in AS1684 is 3.0 m (except at gable or skillion ends). Design capacity is 1.5 kN/m for wall heights up to 2.7 m and 1.35 kN/m for 3.0 m height.

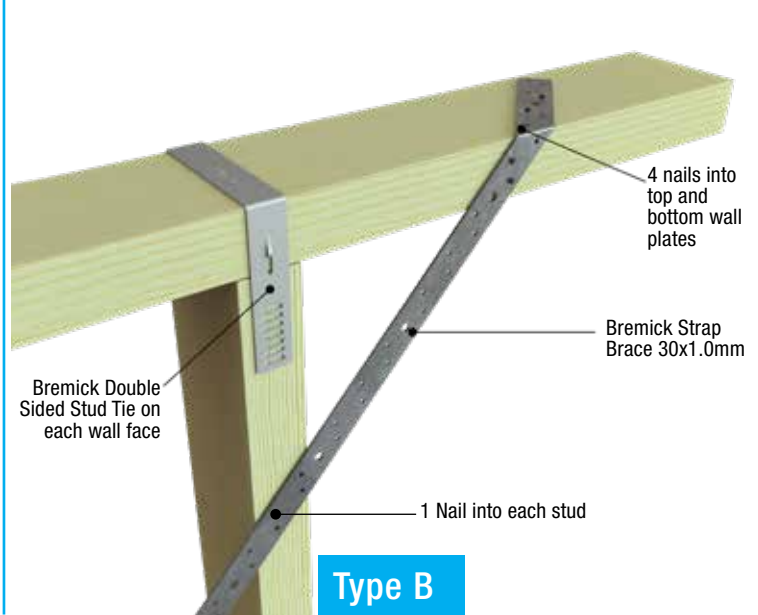
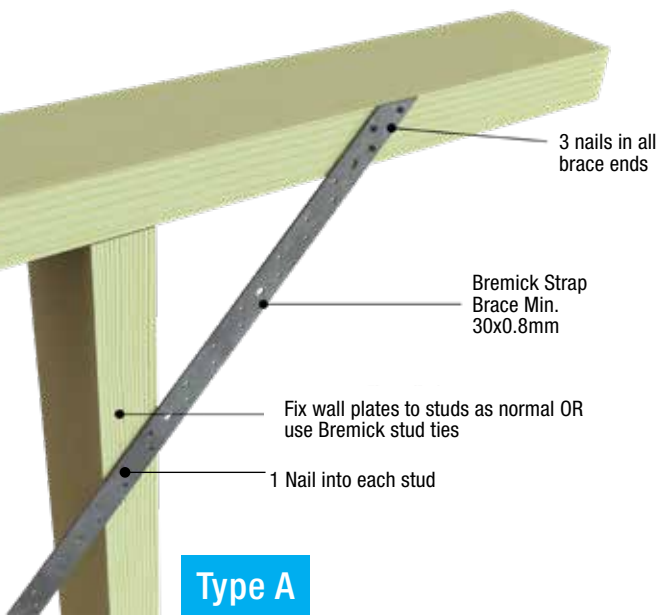


Wall Frames – Type B Bracing Unit – 3.0kN/m bracing capacity using Strap Brace

This Type B bracing unit comprises one section of the wall, with cross-over braces of Bremick® Strap Brace as shown below. The recommended strap brace size is 30mm x 1.0mm. It fully complies with AS1684.2:2010 and AS1684.3:2010 specifications. Maximum wall height in AS1684 is 3.0m (except at gable or skillion ends). Design capacity is 3.0 kN/m for wall heights up to 2.7m and 2.7kN/m for 3.0m height.



Installation Instructions – Wall Frames



1

Square up the wall or temporary frame ready for bracing.

2

- Secure first end of one piece of bracing into position using Bremick® Timber Connector nails. For Type B wall frame units, wrap the brace over the top plate. Nail the end of the Strap Brace to the top plate within 150 mm of a stud using:
 - 3 Bremick® Timber Connector Nails for Type A units or
 - 4 Bremick® Timber Connector Nails for Type B units

3

Stretch the strap bracing over the entire panel by pulling it down onto the bottom plate. It is to be braced at an angle of approximately 45°. Ensure the brace is taut.

4

- For Type B wall frame units, wrap the brace over the bottom plate. Fix the end of the Strap Brace to the plate within 150 mm of a stud using Bremick® Timber Connector Nails with:
 - 2 Bremick® Timber Connector Nails for Type A units or
 - 4 Bremick® Timber Connector Nails for Type B units
- Cut the strap brace to length.

5

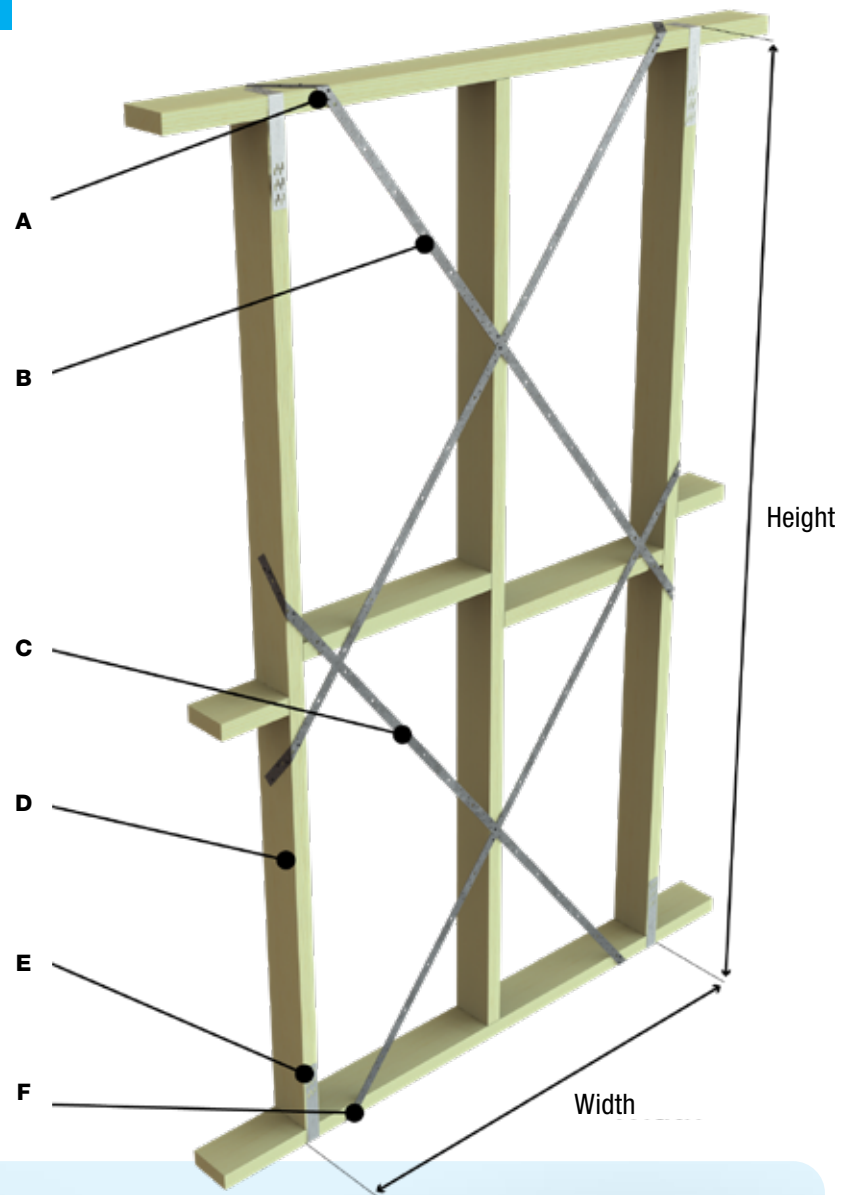
- Repeat this procedure for the second piece of flat tension bracing, ensuring an 'X' is formed.
- Fit and tighten the tensioners on both braces, with the tensioner facing into the frame. For the "nut-sert" tensioner, use a drill and bit. Alternatively, if using the "wing nut" tensioner, the claw of the hammer can be used to tension the brace. Adjust the tensioner as required or until the brace is taut.
- Note: Do not use Strap Brace to plumb the frame.

6

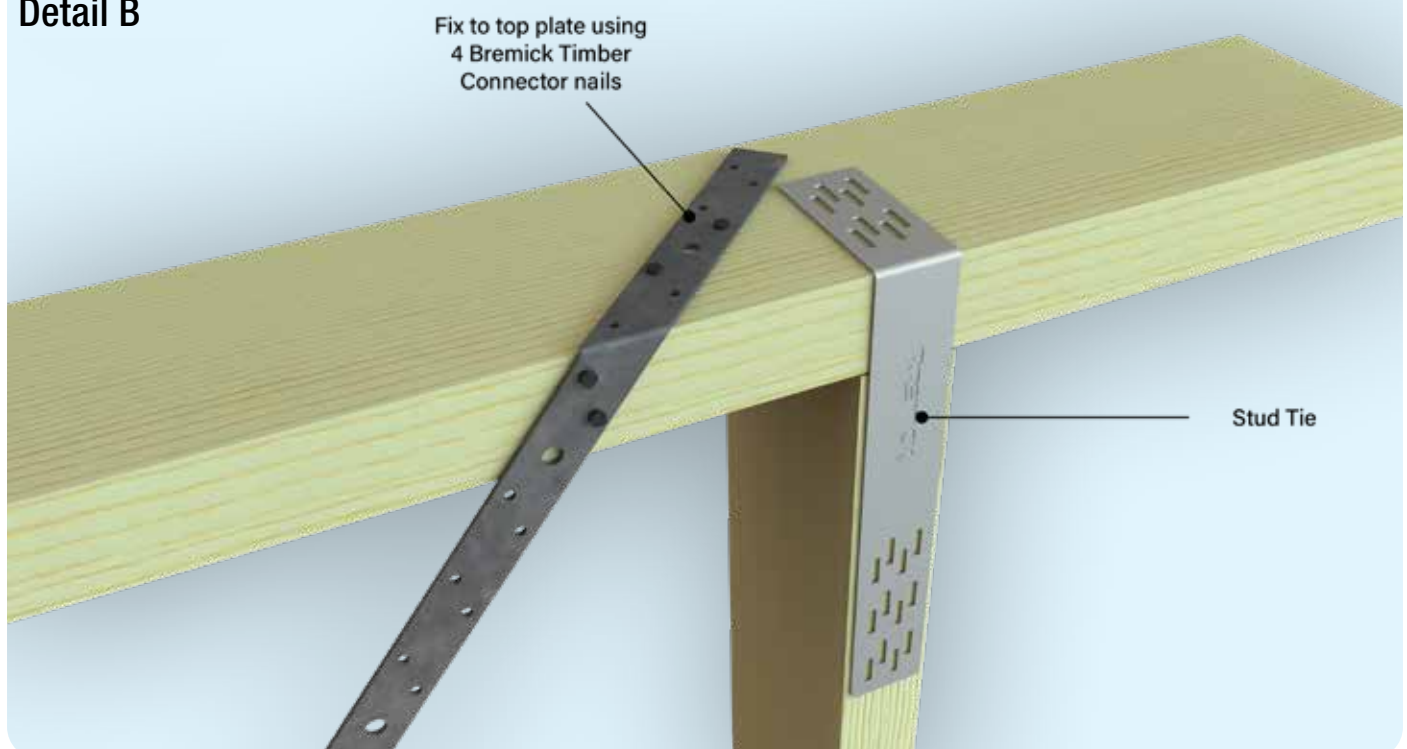
Nail both braces to every stud crossed using 1 Bremick® Timber Connector Nail for both Type A and Type B wall frame units.

Short Wall Bracing

- A.** Wrap ends of Strap Brace around plate and fix with Bremick® Timber Connector nails (Refer Detail B)
- B.** Attach minimum 30 x 1.0 Strap Brace with 2 x Bremick® Timber Connector nails into each stud
- C.** Install Strap Brace Tensioner to each strap
- D.** Minimum 70 x 35-F5 Timber Wall Stud
- E.** Install Bremick® Stud Ties on both sides of the wall frame
- F.** Tie-down as per AS1684/minimum M10 Concrete Anchor Screw



Short Wall Bracing Detail B



Installation Instructions – Roof Trusses

To brace standard trusses, rafters, or roof beams:

1

- If using strap brace to brace roof trusses, rafters, or beam, use only 32 x 1.2mm Bremick® Strap Brace.
- Refer to AS4440-2004 to establish whether single or double Strap Brace is required based on roof span, pitch, and wind speed.

2

Lay out diagonal opposing lengths of Strap Brace on top of the roof framing at a maximum angle of 30 degrees (measured on plan) to the ridge line. Braces are required on both sides of the ridge line and at both ends of the roof.

3

Fix Strap Brace at both ends by wrapping one end around the top wall plate and the other end around the rafter, roof beam or top chord of a truss at the ridge, and by nailing each end using the required number of Bremick® Timber Connector Nails.

4

Fit and tighten the tensioners on both braces, with the tensioner facing down into the roof space. Adjust the tensioner as required or until the brace is taut.

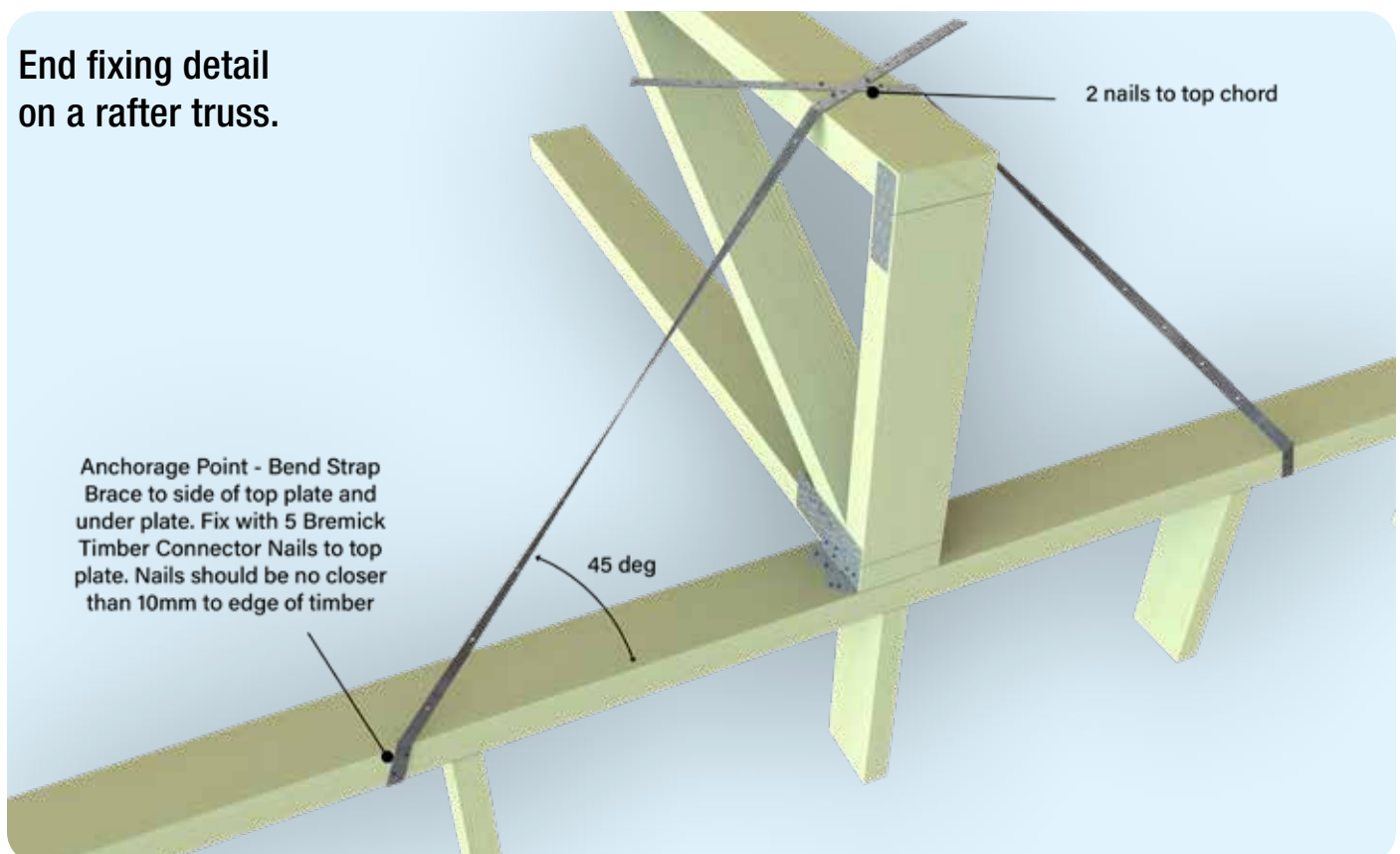
5

Nail both braces to every truss or rafter crossed using 2 Bremick® Timber Connector Nails per crossing.

6

For more details on bracing roof trusses using strap brace, refer to your truss supplier's installation guide or AS4400.

End fixing detail on a rafter truss.



Installation Instructions – Floor Bracing

To brace floor trusses, joists, or beams:

Bremick® Strap Brace, can be used as a herring-bone bracing for floor joists.

A tensioner is not required for this use.

1

Fix the ends of both lengths of Strap Brace to the top and bottom of the first joist with two Bremick® Timber Connector Nails per joint.

2

Pull each length of Strap Brace down from the top edge of the joist or up from the bottom onto the next joist. Use a screwdriver to tension the brace and then fix with one Bremick® Timber Connector Nail at each joist.

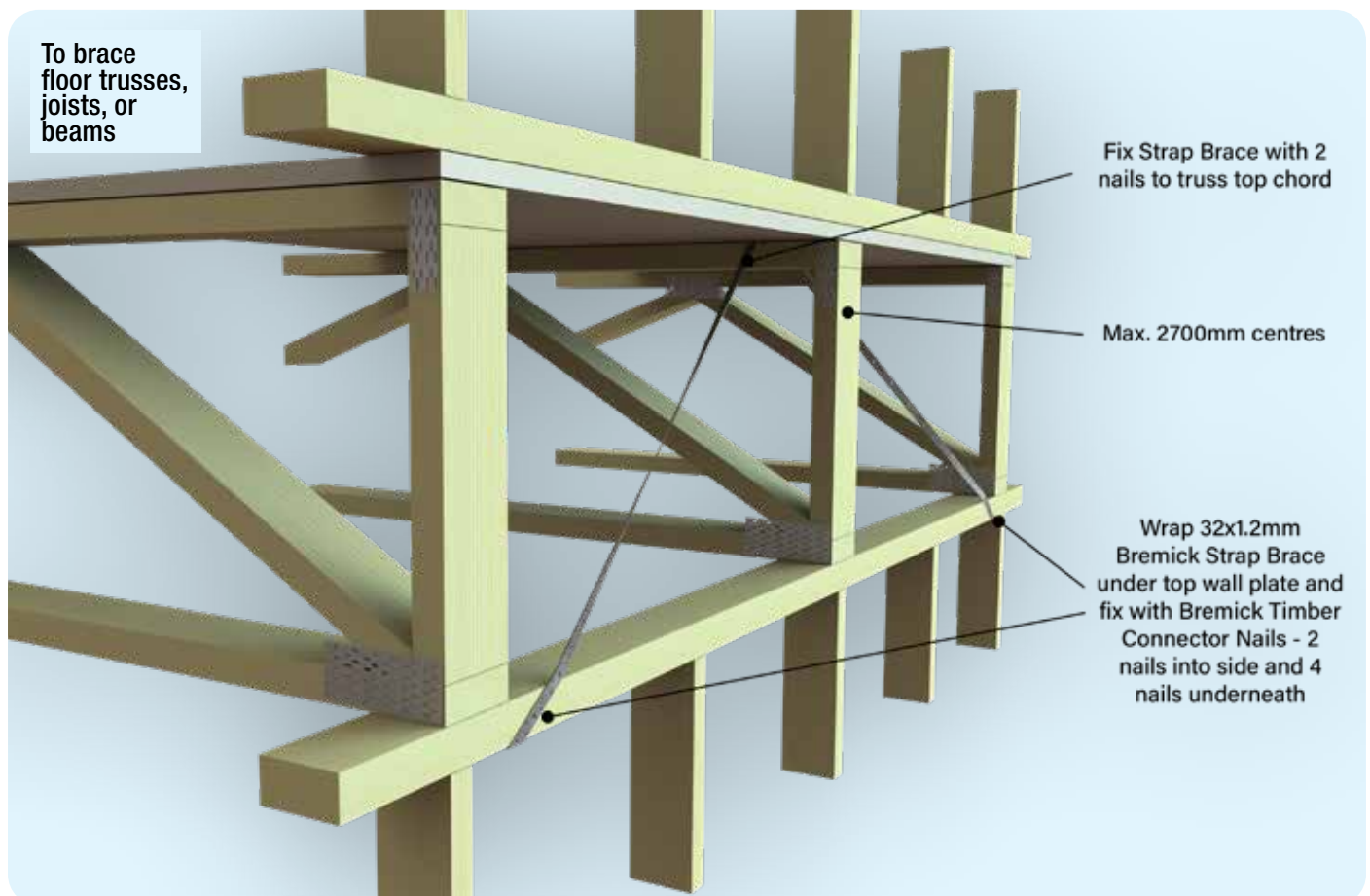
For floor systems with trusses, I-joists or deep beams, bracing is required for both:

1

Stability during construction and;

2

Wind resistance during the life of the building. The bracing can be Bremick® Strap Brace or Unpunched Strapping. It is to be fixed to the floor members and supporting structure with Bremick® Timber Connector Nails or power driven 2.5 mm or 2.87 mm nails.



Technical Data

STRAP BRACE (25mm X 0.8mm)

TSBG015025084 • TSBG030025084

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 1 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	1.9	2.6	3.1	3.8	3.8	3.8
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.3	1.7	2.2	3.1	3.8	3.8

TABLE 2 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.7	3.7	3.8	3.8	3.8	3.8
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.7	2.3	2.9	3.8	3.8	3.8

TABLE 3 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.6	3.8	3.8	3.8	3.8	3.8
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.1	2.9	3.7	3.8	3.8	3.8

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.

Technical Data

STRAP BRACE (30mm X 0.8mm)

TSBG006030084 • TSBG015030084 • TSBG030030084 • TSBG050030084

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 4 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	1.9	2.6	3.1	4.4	4.9	4.9
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.3	1.7	2.2	3.1	4.4	4.9

TABLE 5 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.7	3.7	4.4	4.9	4.9	4.9
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.7	2.3	2.9	4.1	4.9	4.9

TABLE 6 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.6	4.8	4.9	4.9	4.9	4.9
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.1	2.9	3.7	4.9	4.9	4.9

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.

Technical Data

STRAP BRACE (30mm X 1.0mm)

TSBG006030104 • TSBG015030104 • TSBG030030104 • TSBG050030104

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 7 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.3	3.2	3.8	5.3	6.1	6.1
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.5	2.1	2.7	3.8	5.3	6.1

TABLE 8 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.3	4.4	5.3	6.1	6.1	6.1
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.0	2.7	3.5	5.0	6.1	6.1

TABLE 9 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	4.3	5.8	6.1	6.1	6.1	6.1
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.5	3.5	4.5	6.1	6.1	6.1

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.

Technical Data

STRAP BRACE (30mm X 1.2mm)

TSBG015030124 • TSBG030030124 • TSBG050030124

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 10 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.3	3.2	3.8	5.3	6.7	7.3
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.5	2.1	2.7	3.8	5.3	6.7

TABLE 11 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.3	4.4	5.3	7.3	7.3	7.3
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.0	2.7	3.5	5.0	7.0	7.3

TABLE 12 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	4.3	5.8	6.9	7.3	7.3	7.3
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.5	3.5	4.5	6.3	7.3	7.3

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.

Technical Data

STAINLESS STEEL STRAP BRACE (30mm X 0.8mm)

TSB6015030084 • TSB6030030084

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 13 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	1.9	2.6	3.1	4.4	4.4	4.4
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.3	1.7	2.2	3.1	4.4	4.4

TABLE 14 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.7	3.7	4.4	4.4	4.4	4.4
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.7	2.3	2.9	4.1	4.4	4.4

TABLE 15 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.6	4.4	4.4	4.4	4.4	4.4
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.1	2.9	3.7	4.4	4.4	4.4

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.

Technical Data

STAINLESS STEEL STRAP BRACE (30mm X 1.0mm)

TSB6015030104 • TSB6030030104

LIMIT STATE WIND LOAD TENSILE CAPACITY

TABLE 16 UPLIFT CAPACITY: 4 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	2.3	3.2	3.8	5.3	5.5	5.5
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	1.5	2.1	2.7	3.8	5.3	5.5

TABLE 17 UPLIFT CAPACITY: 6 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	3.3	4.4	5.3	5.5	5.5	5.5
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.0	2.7	3.5	5.0	5.5	5.5

TABLE 18 UPLIFT CAPACITY: 8 - 3.15mm DIAMETER NAILS USED @ EACH END OF STRAP

JOINT GROUP	Seasoned Timber Capacity (kN)					
	JD6	JD5	JD4	JD3	JD2	JD1
	4.3	5.5	5.5	5.5	5.5	5.5
JOINT GROUP	Unseasoned Timber Capacity (kN)					
	J6	J5	J4	J3	J2	J1
	2.5	3.5	4.5	5.5	5.5	5.5

REMARKS

- Values for Category 1 (secondary members.) Values x 0.94 for Category 2 (primary members) and Category 3 Values x 0.88 for post disaster structures primary members
- Minimum nail length 35mm. Nails to be tight fit in holes.
- Capacity may be limited by tensioners when used – To be determined by test.