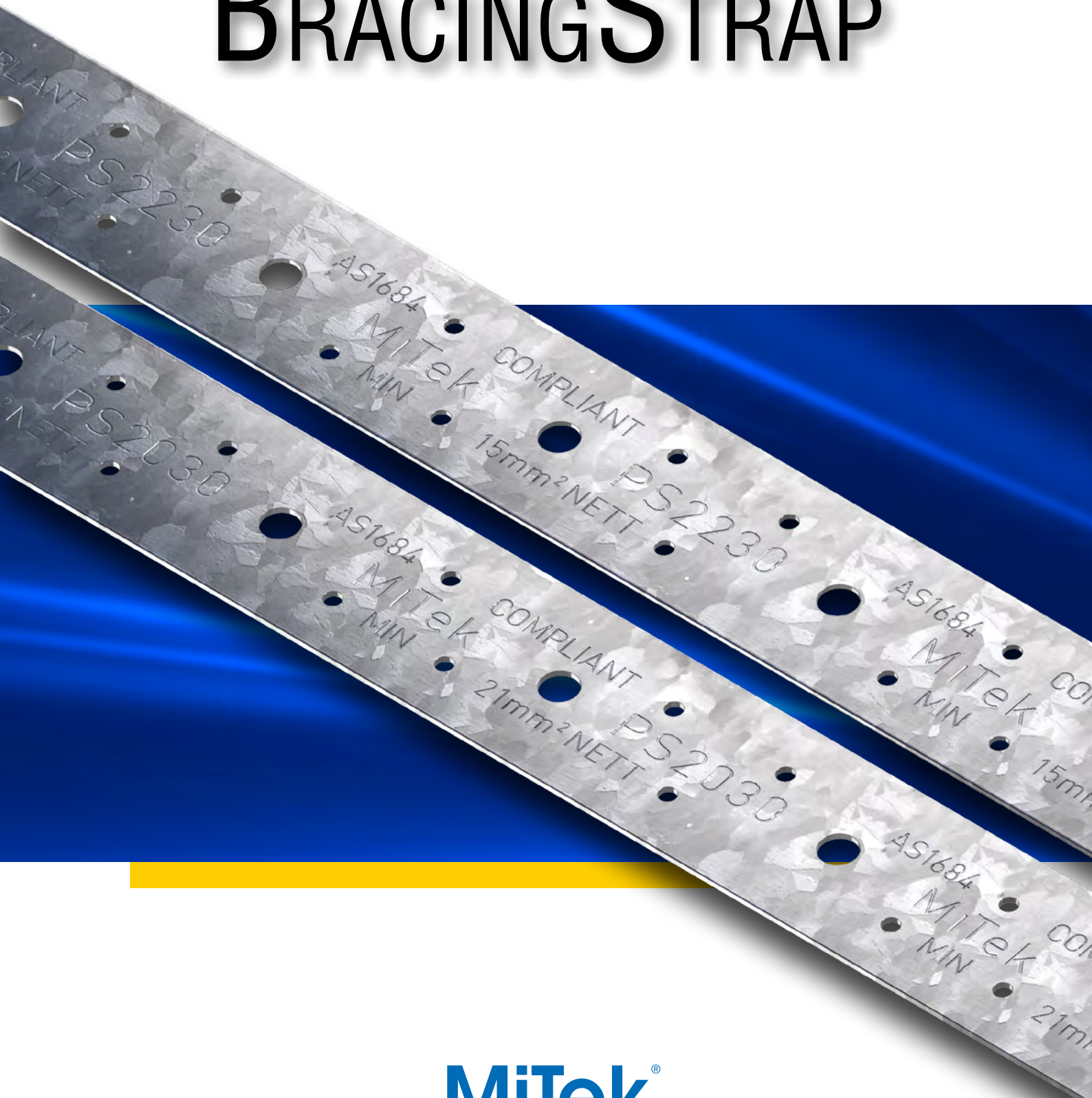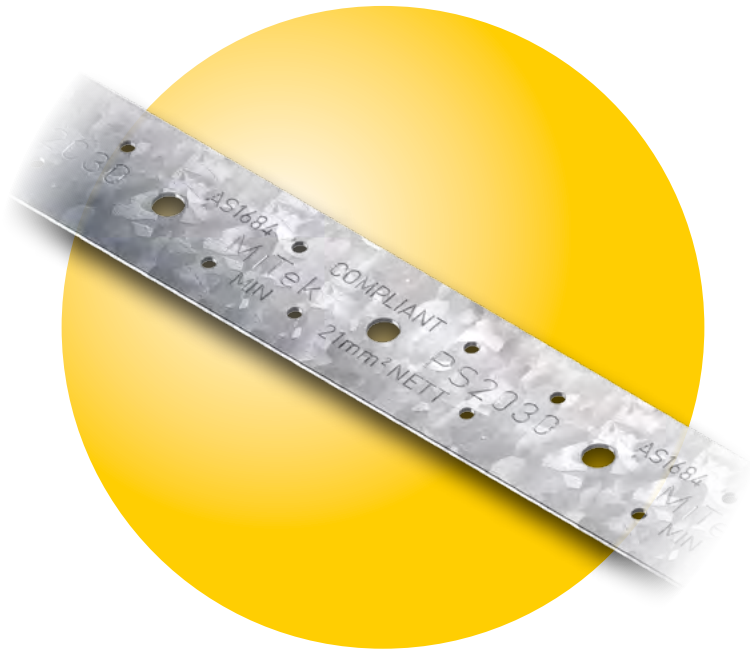# Structural
# BracingStrap

**MiTek**®

mitek.com.au

## THE VERSATILE BRACING SYSTEM

### APPLICATION:

Structural BracingStrap is designed to brace timber framed walls in domestic construction.

## USES

• Structural BracingStrap is suitable for a wide variety of bracing applications.

## ADVANTAGES

• Structural BracingStrap is particularly useful where braces cannot be cut into studs.

## SPECIFICATIONS:

| | |
|---|---|
| Steel Grade | G300 |
| Thickness (Total Coated) | 0.8mm or 1.0mm |
| Galvanized Coating | Z275 |
| Nails | MiTek 30 x 2.8mm hot dipped galvanized reinforced head. |
| Product Code | See Table |

For durability information, please refer to **Corrosion Resistance of MiTek Metal Connectors**, available on the MiTek website at **mitek.com.au**

**This Certified Engineering Building Product complies with the National Construction Code and Australian Standards.**

## COMPLIANCE

The Structural BracingStrap complies as a metal strap with a minimum net section area of 15mm² (0.8mm thick) or 21mm² (1.0mm thick) and the corresponding alternative capacities in AS 1684 may be used in designs within the confines of this standard.

## LOAD DATA

Allowable steel tension loads for a single strap are given in the table below.

3mm diameter holes to suit MiTek 30 x 2.8mm hot dipped galvanized reinforced head nails.

6.5mm diameter holes to accommodate MiTek TENS Standard Tensioner.

25 x 0.8, 30 x 0.8 and 30 x 1.0 Structural BracingStrap

## TYPE A BRACING

Minimum 25 x 0.8mm thick Structural BracingStrap fixed as specified, conforms to the codes given in Table 1.

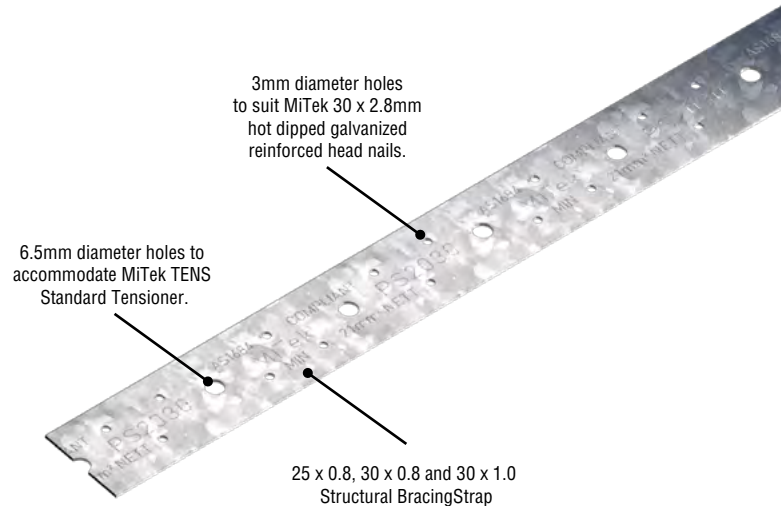| Table 1 - 25 x 0.8 mm or 30 x 0.8mm thick Structural BracingStrap | | |
|---|---|---|
| **Australian Standard** | **Reference** | **Bracing Capacity/ Bracing Type** |
| AS 1684.2 Residential timber-framed construction, Part 2 Non-cyclonic areas OR AS 1684.3 Residential timber-framed construction, Part 3 Cyclonic areas | Table 8.18(b) | 1.5 kN/m |
| AS 1684.4 Residential timber-framed construction, Part 4 Simplified - Non-cyclonic areas | Table 8.3(b) | A |

## TYPE B BRACING

30 x 1.0mm thick Structural BracingStrap fixed as specified, conforms to the codes given in Table 2.

| Table 2 - 30 x 1.0mm thick Structural BracingStrap | | |
|---|---|---|
| **Australian Standard** | **Reference** | **Bracing Capacity/ Bracing Type** |
| AS 1684.2 Residential timber-framed construction, Part 2 Non-cyclonic areas OR AS 1684.3 Residential timber-framed construction, Part 3 Cyclonic areas | Table 8.18(d) | 3.0 kN/m |
| AS 1684.4 Residential timber-framed construction, Part 4 Simplified - Non-cyclonic areas | Table 8.3(d) | B |

**Note:** The bracing capacity in Tables 1 and 2 are appropriate to wall heights up to and including 2700mm. For wall heights greater then 2700mm, the value in the table is proportioned downward relative to the wall heights. eg. For a wall height of 3000mm multiply the value in the table by 2700/3000 = 0.9.

Structural BracingStrap is supplied in 0.8mm and 1.0mm thicknesses, 25mm and 30mm widths and a variety of lengths. Please contact your local state office for the full range.

| Product Code | Size (mm) | Steel Limit State Design Capacity (kN) |
|---|---|---|
| PS222515 PS222530 | 25 x 0.8 | 4.0 |
| PS223010 PS223030 PS223050 | 30 x 0.8 | 5.0 |
| PS203010 PS203020 PS203030 PS203050 | 30 x 1.0 | 6.1 |

**Note:**

1. Do not apply adjustment factors to these design capacities.
2. For applications other than Type A or B braced panels end fixing to be designed using AS1720.1 values for 2.8mm diameter nails.

Structural BracingStrap is a tension brace and therefore should be pre-tensioned during installation with an approved Tensioner.

**NOTE:** Too much pre-tension will reduce the effectiveness of the BracingStrap.

1. Fix first end into position using MiTek 30 x 2.8 mm hot dipped galvanized reinforced head nails as detailed below.

2. Stretch Structural BracingStrap tightly over entire panel to be braced.

3. Fix second end while holding tension on brace.

4. Fix second brace in the same manner to form "X" bracing.

5. Fix one Tensioner in each leg to remove any remaining slack.

**NOTE:** Apply tension to each leg progressively to avoid distorting braced panel.

6. Fix Structural BracingStrap to each stud or rafter in each braced panel with one MiTek 30 x 2.8mm hot dipped galvanized reinforced head nail.

## FIXING 1: Bracing Type A

Bracing Capacity = 1.5kN/m

Typical Bracing Panel

Pair of 25mm or 30 x 0.8mm
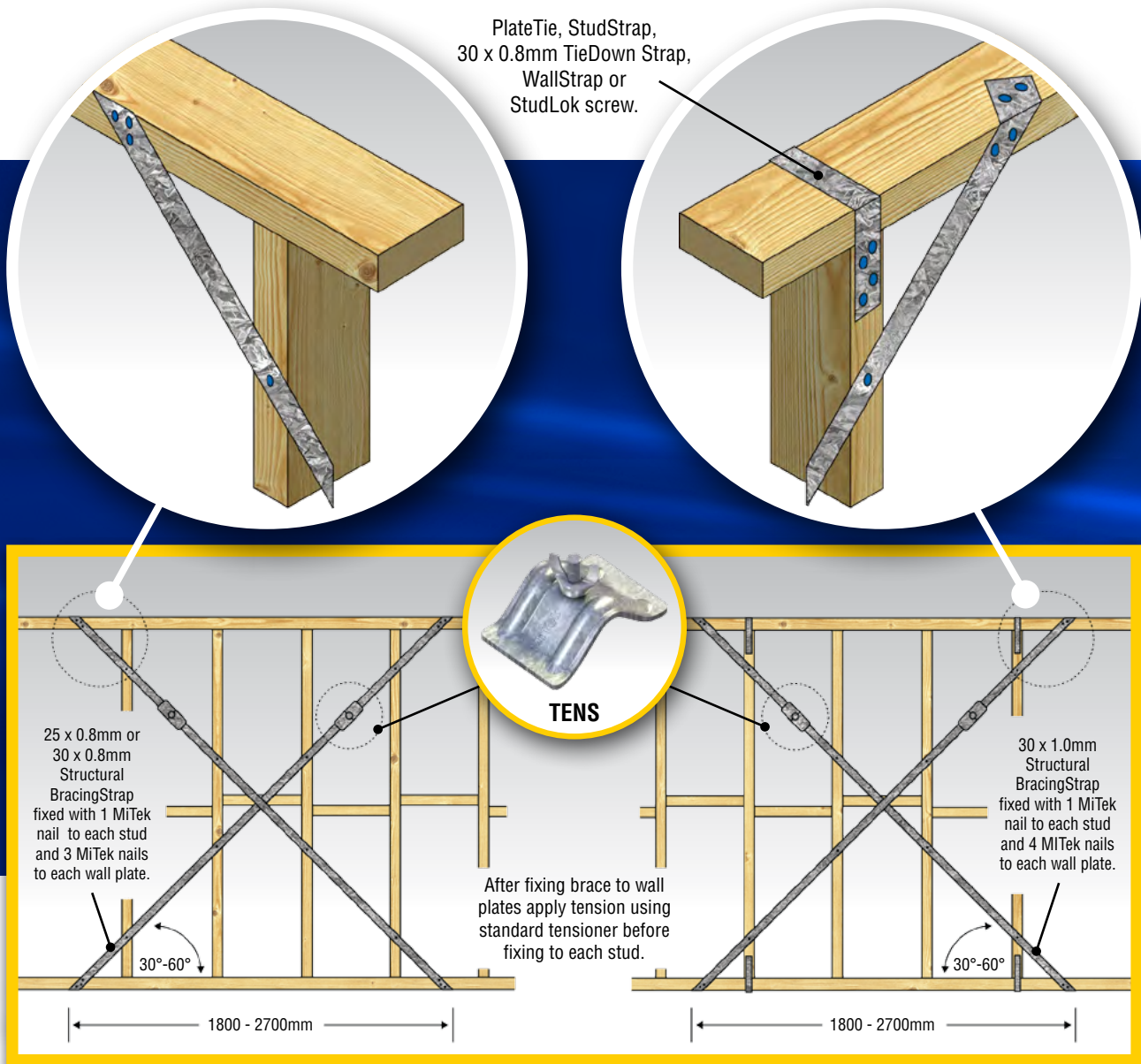
Structural BracingStraps in opposing directions.

## FIXING 2: Bracing Type B

Bracing Capacity = 3.0kN/m

Bracing Panel

Pair of 30 x 1.0mm

Structural BracingStraps in opposing directions.

PlateTie, StudStrap, 30 x 0.8mm TieDown Strap, WallStrap or StudLok screw.

**TENS**

25 x 0.8mm or 30 x 0.8mm Structural BracingStrap fixed with 1 MiTek nail to each stud and 3 MiTek nails to each wall plate.

30 x 1.0mm Structural BracingStrap fixed with 1 MiTek nail to each stud and 4 MITek nails to each wall plate.

After fixing brace to wall plates apply tension using standard tensioner before fixing to each stud.

30°-60°

1800 - 2700mm

30°-60°

1800 - 2700mm

For more information about MiTek's Engineered Building Products or any other MiTek products or your nearest licensed MiTek fabricator, please call your local state office or visit: **mitek.com.au**

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