Galvanised Structural Bracing Strap

AS1684 - Residential Timber Framed Construction allows the use of punched metal strapping in structural wall bracing for residential timber-framed construction. Hobson supply strapping that complies with the technical requirements of AS1684 Section 8.3.6 Wall Bracing.
We use a minimum steel grade of G300 for superior strength and a minimum corrosion protection of Z275 for extended durability. Our straps are performance verification tested in our NATA lab to Australian Standards, and our tensioners are also performance tested in our NATA lab.

Material	G300 **G300 Roll Formed Structural Steel**
Finish	Z275 **Galvanised Z275** Minimum 275 GM per square metre. Equates to a minimum thickness of 20 µm per side.

Applications

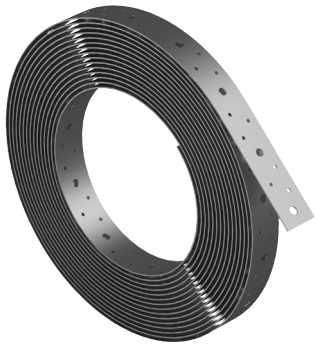
Designed to brace timber framed walls in domestic building. Applicable to single and two-storey construction.

Tie down and bracing connections such as:

- Structural wall bracing
- Roof truss to top plate
- Bearer to post
- Floor joist to bearer or top plate
- Beam to lintel

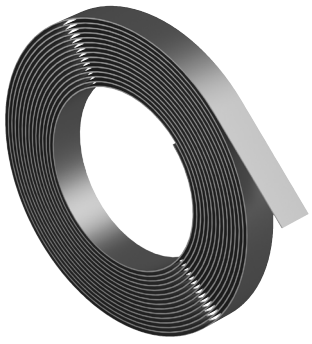
Builders Strapping

Bracing Strap Punched AS1684



Part	QFind	Length	Width	Thickness	Yield Load	Tensile Capacity*
		L (m)	**W** (mm)	**T** (mm)	(kN)	(kN)
GSBMG08P3020	S08P3020	20	30	0.8	4.9	5.6
GSBMG08P3030	S08P3030	30				
GSBMG08P3050	S08P3050	50				
GSBMG10P3020	S10P3020	20		1.0	6.2	7.0
GSBMG10P3030	S10P3030	30				
GSBMG10P3050	S10P3050	50				
GSBMG12P3030	S12P3030	30		1.2	7.4	8.4

Bracing Strap Unpunched AS1684

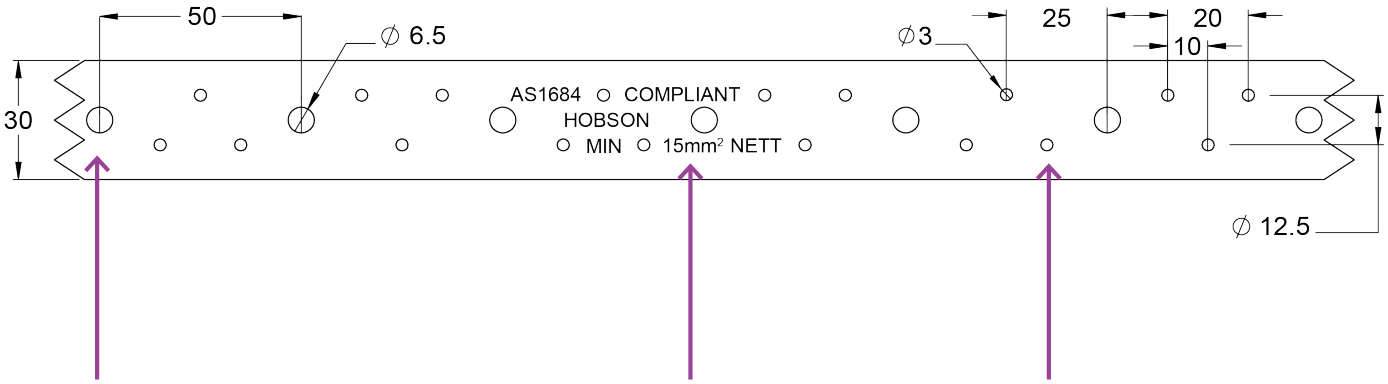


Part	QFind	Length	Width	Thickness	Yield Load	Tensile Capacity*
		L (m)	**W** (mm)	**T** (mm)	(kN)	(kN)
GSBMG08U3030	S08U3030	30	30	0.8	5.6	6.4

*Note: capacity reduction factors have NOT been applied.

Galvanised Structural Bracing Strap

Builders Strapping



Tensioner Holes
6.5mm diameter holes to accommodate HOBSON standard tensioner

Nett Cross Section Area
(For 0.8mm thickness)

Nail Holes
3mm diameter holes to suit 2.8mm or 3.15mm nails

Designed to be used with structural bracing strap:

TENSIONER FOR BRACING STRAP
GALVANISED Z275 / HEC / ASSEMBLED

Part	QFind	Size (mm)	Pack Qty
GSTMGFW30	**ST30**	30	10

Tensioner Body: Plate thickness 2.5mm - G300 roll formed structural steel.

Load capacities for non-cyclonic and cyclonic areas

Structural Wall Bracing

Wall height up to 2.7m. For wall heights > 2.7 m and ≤ 4.2 m use the height multiplier in Table 8.19 as shown below:

AS 1684 Residential Timber – Framed Construction		PART 2: non-cyclonic areas PART 3: cyclonic areas	
Table	**Type**	**Strap Size**	**Minimum Capacity**
8.18 (b)	A	30mm x 0.8mm	1.5 kN/m
8.18 (d)	B	30mm x 1.0mm	3.0 kN/m
8.18 (d)	B	30mm x 1.2mm	3.0 kN/m

AS1684 Table 8.19 Bracing wall capacity/height multiplier	
Wall Height (mm)	**Multiplier**
3000	0.90
3300	0.80
3600	0.75
3900	0.70
4200	0.64

Structural Wall Bracing

Maximum Wall Height 2.7m

AS 1684 Residential Timber – Framed Construction		PART 4: simplified non-cyclonic areas
Table	**Type**	**Strap Size**
8.3 (b)	A	30mm x 0.8mm
8.3 (d)	B	30mm x 1.0mm
8.3 (d)	B	30mm x 1.2mm

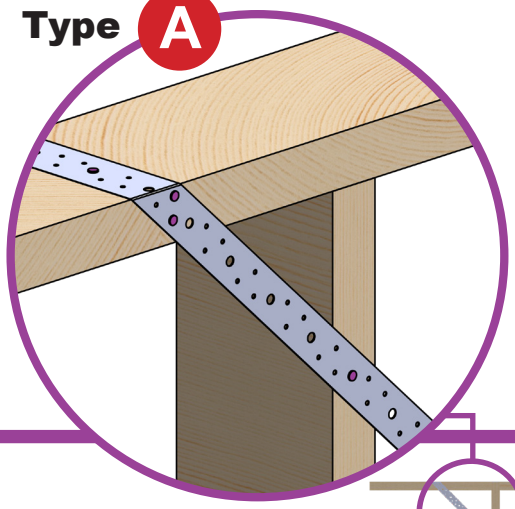
Galvanised Structural Bracing Strap

Structural Bracing - Installation and Load Capacities

Strapping						
Type	Size	Hobson Code	Minimum Net Section Area	Bracing (Racking) Capacity	Steel Grade	Corrosion Protection
A	30mm x 0.8mm	GSBMG08P	15 mm²	1.5 kN/m	G300	Z275
B	30mm x 1.0mm	GSBMG10P	21 mm²	3.0 kN/m	G300	Z275
B	30mm x 1.2mm	GSBMG12P	27 mm²	3.0 kN/m	G300	Z275

Note: bracing wall length limit min. 1800mm – 2700mm max (see figures A and B below).

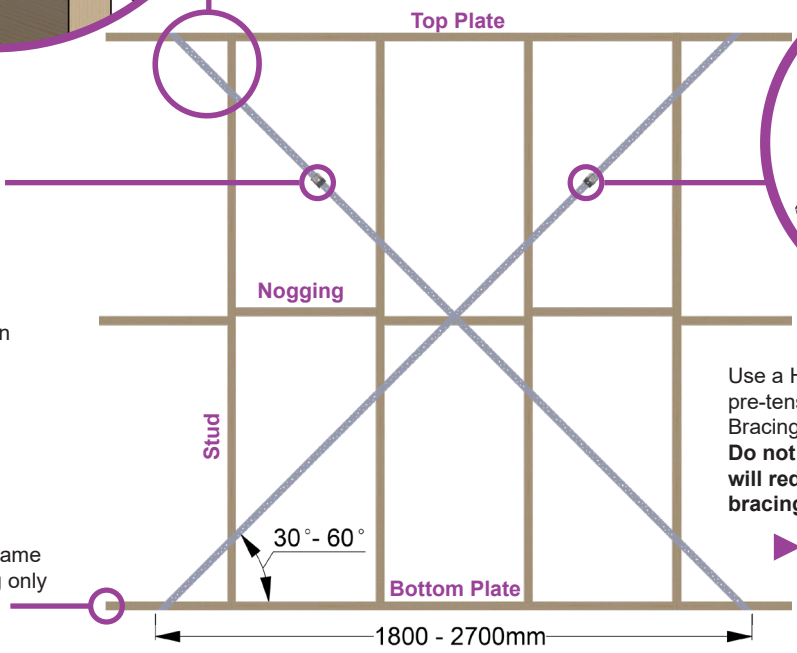
Type A



Metal straps, tensioned

Installation

1. Fix first end into position using mechanical galvanised connector plain shank nails as detailed in Type A and Type B layouts.
2. Stretch Structural Bracing Strap tightly over entire panel to be braced.
3. Fix second end while maintaining tension on the strap.
4. Fix second brace in the same manner to form 'X' bracing.
5. Fix one Tensioner in each leg to remove any remaining slack.
6. After tightening with the tensioner, fix Structural Bracing Strap to each stud and nogging in each braced panel with mechanical galvanised connector plain shank nails, as shown in Type A or Type B accordingly.



30 x 0.8mm tensioned metal brace fixed to studs with 1/30 x 2.8mm mechanical galvanised connector plain shank nails and to plate with 3/30 x 2.8mm mechanical galvanised connector plain shank nails and metal strap, fixed as above with a net sectional area not less than 15mm².

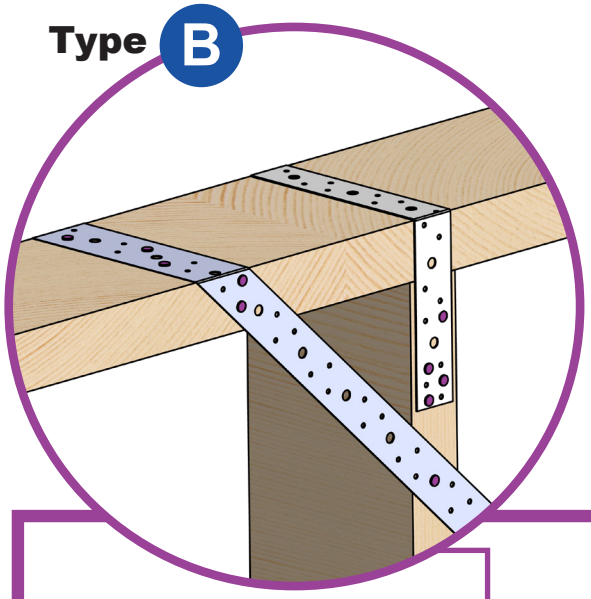
Fix bottom plate to floor frame or slab with nominal fixing only (see AS1684 Table 9.4).

Use a Hobson Tensioner to pre-tension the Hobson Structural Bracing Strap during installation. **Do not over tension as this will reduce the capacity of the bracing strap.**

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

Galvanised Structural Bracing Strap

Type B



Metal straps, tensioned with stud straps

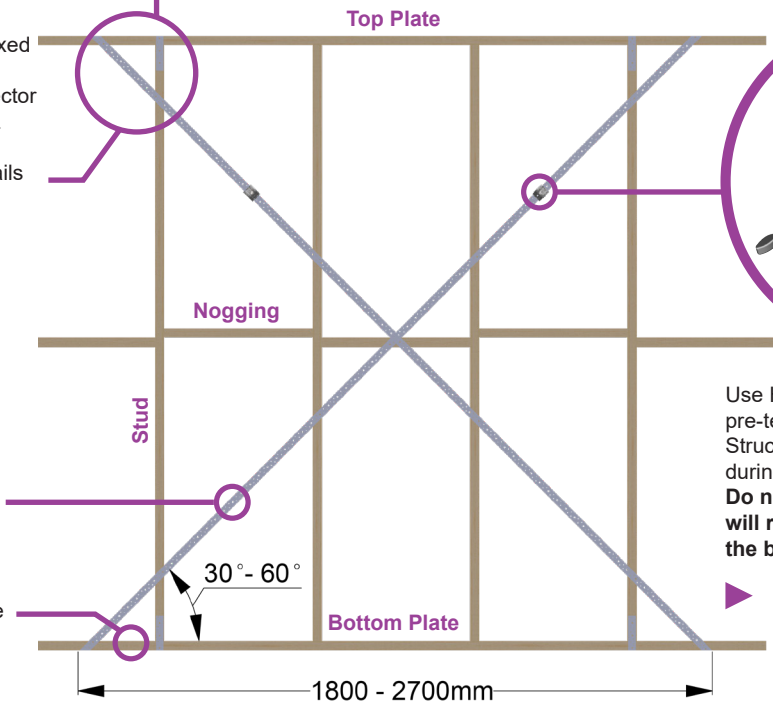
Installation

1. Fix first end into position using mechanical galvanised connector plain shank nails as detailed in Type A and Type B layouts.
2. Stretch Structural Bracing Strap tightly over entire panel to be braced.
3. Fix second end while maintaining tension on the strap.
4. Fix second brace in the same manner to form “X” bracing.
5. Fix one Tensioner in each leg to remove any remaining slack.
6. After tightening with the tensioner, fix Structural Bracing Strap to each stud and nogging in each braced panel with mechanical galvanised connector plain shank nails, as shown in Type A or Type B accordingly.

30 x 0.8mm galvanised metal strap looped over plate and fixed to stud with 4/30 x 2.8mm Ø mechanical galvanised connector plain shank nails to each end. Alternatively, provide single straps to both sides, with 4 nails per strap end, or equivalent anchors or other fasteners.

30 x 0.8mm tensioned metal strap fixed to studs with one 30 x 2.8mm Ø mechanical galvanised connector plain shank nails and to plates with 4/30 x 2.8mm Ø mechanical galvanised connector plain shank nails and metal strap fixed as above with a net sectional area not less than 21mm^2.

Fix bottom plate to floor frame or slab, with nominal fixing requirement.



Use Hobson Tensioner to pre-tension the Hobson Structural Bracing Strap during installation.
Do not over tension as this will reduce the capacity of the bracing strap.

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