**Technical Sheet**

H/L

# Heavy/Light Restraint Straps

*The H and L straps are designed to The Building Regulations for horizontal and vertical restraint.*

- *Heavy restraint straps meet requirements for lateral restraint of roof trusses, rafters and joists tied into masonry walls.*
- *Light restraint straps are designed for vertical loads such as wall plates on top of masonry walls.*
- *All common sizes in stock from 500 to 2000mm long, 50mm increments. Longer lengths avaialble to order; contact technical support.*

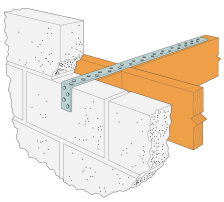


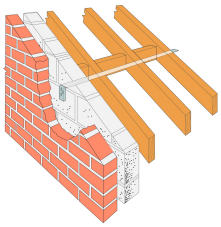


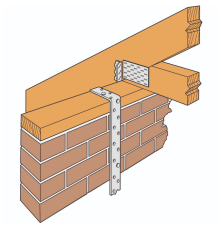


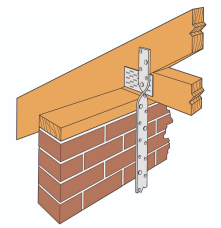
















## Features

### Material

- Pre-galvanised mild steel
- Stainless steel straps are available, to order

**Technical Sheet**

H/L
**Heavy/Light Restraint Straps**

# Technical Data

## Common Bent Straps

| Reference | Connector Dimensions | | | | | | | Masonry capacity |
|---|---|---|---|---|---|---|---|---|
| | Other | Product Dimensions[mm] | | | | Holes[mm] | Flange B1 | Dimensions |
| | Installation Type | A[mm] | B[mm] | B1[mm] | t[mm] | Round | Round | Overall Length |
| | | | | | | Ø6 | Ø6 | |
| H06B10 | Horizontal | 28 | 600 | 100 | 4 | 23 | 3 | 600 |
| H08B10 | Horizontal | 28 | 800 | 100 | 4 | 31 | 3 | 800 |
| H10B10 | Horizontal | 28 | 1000 | 100 | 4 | 39 | 3 | 1000 |
| H12B10 | Horizontal | 28 | 1200 | 100 | 4 | 47 | 3 | 1200 |
| H15B10 | Horizontal | 28 | 1500 | 100 | 4 | 59 | 3 | 1500 |
| H08B15 | Horizontal | 28 | 800 | 150 | 4 | 31 | 5 | 800 |
| H10B15 | Horizontal | 28 | 1000 | 150 | 4 | 39 | 5 | 1000 |
| H12B15 | Horizontal | 28 | 1200 | 150 | 4 | 47 | 5 | 1200 |
| H16B15 | Horizontal | 28 | 1600 | 150 | 4 | 63 | 5 | 1600 |
| L06B10 | Vertical | 28 | 600 | 100 | 2 | 23 | 3 | 600 |
| L12B10 | Vertical | 28 | 1200 | 100 | 2 | 47 | 3 | 1200 |

## Common Twisted Straps

| Reference | Connector Dimensions | | | | | |
|---|---|---|---|---|---|---|
| | Product Dimensions[mm] | | | | Holes[mm] | Flange B1 |
| | A[mm] | B[mm] | T1[mm] | t[mm] | Round | Round |
| | | | | | Ø6 | Ø6 |
| H06T15 | 28 | 600 | 150 | 4 | 22 | 6 |
| H10T15 | 28 | 1000 | 150 | 4 | 38 | 6 |
| L06T10 | 28 | 600 | 100 | 2 | 22 | 4 |
| L10T10 | 28 | 1000 | 100 | 2 | 38 | 4 |
| L12T10 | 28 | 1200 | 100 | 2 | 46 | 4 |
| L12T15 | 28 | 1200 | 150 | 2 | 46 | 6 |

## Common Flat Straps

| Reference | Connector Dimensions | | | | Masonry capacity |
|---|---|---|---|---|---|
| | Product Dimensions[mm] | | | Holes[mm] | Dimensions |
| | A[mm] | B[mm] | t[mm] | Round | Overall Length |
| | | | | Ø6 | |
| H10F00 | 28 | 1000 | 4 | 40 | 1000 |
| H12F00 | 28 | 1200 | 4 | 48 | 1200 |
| L10F00 | 28 | 1000 | 2 | 40 | 1000 |
| L12F00 | 28 | 1200 | 2 | 48 | 1200 |

# Technical Sheet

H/L
## Heavy/Light Restraint Straps

SIMPSON Strong-Tie

### Performance Values

| Reference | Masonry capacity | | | |
|---|---|---|---|---|
| | Number of Fasteners | | | Characteristic Capacity[N] |
| | Masonry | Floor Joist / Rafter | Wall Plate | Characteristic Load[kN] |
| | ø5.5x50 | N3.75x30 | N3.75x30 | |
| HxxBxx | - | - | 8 | 8 |
| LxxBxx | 5 | 3 | - | 4 |

# Installation

## Installation

- Use all specified fasteners.
- Horizontal lateral restraint straps should be spaced not more than 2m centres and attached to at least 3 timber members through the use of noggings and packing.
- Attach to timber members using specified fasteners. The bend length should be a minimum of 100mm and should be positioned at the centre of an uncut block or brick.
- Vertical restraint strapping should be at least 1m long.
- Where straps are fixed to masonry, hardened nails Ø4mm x 75mm long or wood screws into plastic plugs Ø5.5 x 50mm long should be used. The lowest fixing should be located within 150mm of the bottom of the vertical strap.

**Non standard straps are available to order.**

- To order: Specify model series, overall length, bend (B) dimension and/or twist (T) dimension.
- Example: Heavy strap that has an overall length of 1m, a bend at 10cm and a twist at 20cm. (See illustration for detail on measuring bend & twist dimensions).

| **H** | **10** | **B10** | **T20** |
|---|---|---|---|
| **Strap Type** | **Strap Length (dm)** | **Bend Length (cm)** | **Twist Length (cm)** |

- Horizontal lateral restraint straps should be spaced not more than 2m centres and attached to at least 3 timber members through the use of noggings and packing.
- Attach to timber members using a minimum of 8 no. 3.75 x 30mm square twist nails. The bend length should be a minimum of 100mm and should be positioned at the centre of an uncut block or brick.
- The downturn of strap is to be held tight against the cavity face of the inner leaf of blockwork.

**Fixing to solid noggings**

- Straps to be installed at not more than 2m centres (or 1.25m where appropriate) along pitch of gable end.
- Ensure the position of the straps coincides with the block bed joint.
- Install HES or H strap to underside of solid noggings. Noggings to be fixed horizontally to avoid twisting of the restraint straps. (1)
- The downturn of strap is to be held tight against the cavity face of the inner leaf of blockwork (2), preferably located and bedded on a substantial piece of blockwork, i.e. over the centre of a full block, with a single cut block over the strap. (3)
- Fix straps to noggings/trusses with eight 3.75 x 30mm square twist nails, evenly distributed along the length of the strap. (For NHBC warrantied buildings, in accordance with NHBC Standards 2017, section 7.2.8, four 50mm (minimum) x 4mm steel screws or four 75mm x 4mm round wire nails, with one fixing into the third rafter, shall be used instead of the square twist nails).
- Strap to be of sufficient length to be fixed to a minimum of three trusses.

**Fixing to longitudinal binder to truss rafter**

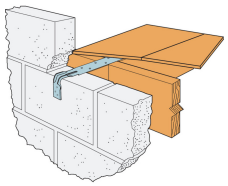
- Straps to be installed at not more than 2m centres (or 1.25m where appropriate) along pitch of gable end.
- Install HES or H strap on the 25 x 100mm longitudinal Rafter bracing (1).
- Where the position of the strap does not coincide with an existing longitudinal binder, and block bed joint, then the strap can be fixed to an additional 25 x 100mm binder. The binder is to be fixed over four trusses and nailed twice to each rafter with 3.35 x 65mm round wire nails.
- Ensure the position of the additional binder and strap coincide with the block bed joint.
- The downturn of strap is to be held tight against the cavity face of the inner leaf of blockwork (2), preferably located and bedded on a substantial piece of blockwork, i.e. over the centre of a full block, with a single cut block over the strap (3) (notch the block to accommodate the twist of the strap and ensure notch is fully mortared).

H/L
# Heavy/Light Restraint Straps

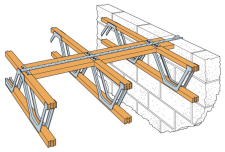
- Fix straps to bracing with eight 3.75 x 30mm square twist nails, evenly distributed along the length of the strap (For NHBC warrantied buildings, in accordance with NHBC Standards 2017, section 7.2.8, eight 25mm x 4mm steel screws shall be used instead of the square twist nails).
- Strap to be of sufficient length to be fixed to a minimum of three trusses.

**Vertical application**

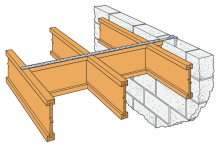
- Fix LES or L strap to wall plate with 3 no. 3.75 x 30mm square twist nails and to masonry with 5 off dia. 5.5 x 50mm wood screws, plugged and screwed into masonry.
- The lowest fixing should be located within 150mm of the bottom of the vertical strap.
- Where L strap is fixed to truss, install with 3.75 x 30mm square twist nails, quantity depending on required uplift values.



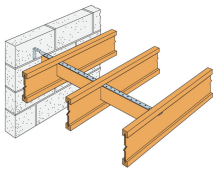
*Installation - Floor (5)*



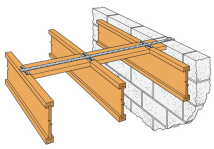
*Installation - Floor (4)*

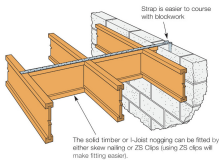


*Installation - Floor (2)*

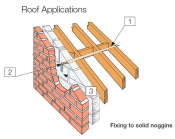


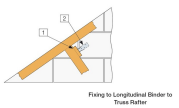
*Installation - Floor (3)*

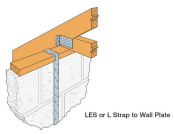


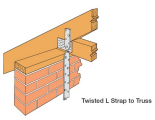



*Installation - Floor (1)*




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