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.*











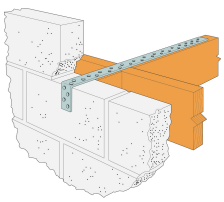

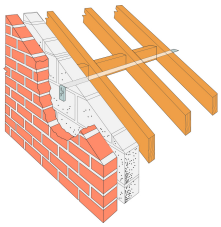

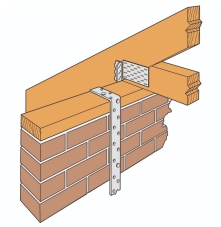

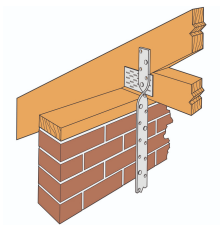





Features

Material

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

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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

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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.

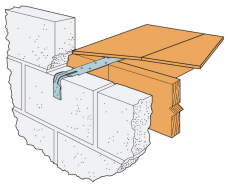
Fixing to longitudinal binder to truss rafter

- 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).

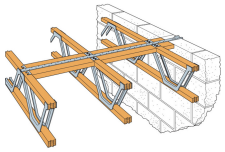
- Fix straps to bracing with eight 3.75 x 30mm square twist nails, evenly distributed along the length of the strap (For NHBC warrantied buildings, in accordance with NHBC Standards 2017, section 7.2.8, eight 25mm x 4mm steel screws shall be used instead of the square twist nails).
- Strap to be of sufficient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

Vertical application

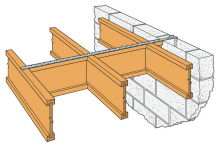
- Fix LES or L strap to wall plate with 3 no. 3.75 x 30mm square twist nails and to masonry with 5 off dia. 5.5 x 50mm wood screws, plugged and screwed into masonry.
- The lowest fixing should be located within 150mm of the bottom of the vertical strap.
- Where L strap is fixed to truss, install with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



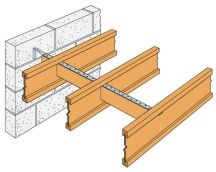
Installation - Floor (5)



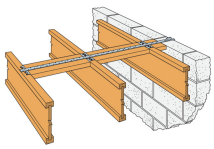
Installation - Floor (4)

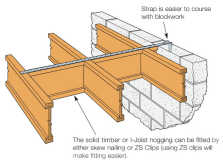


Installation - Floor (2)

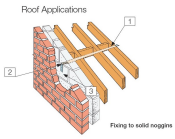


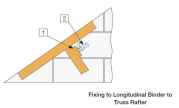
Installation - Floor (3)

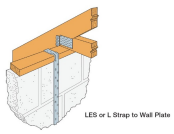


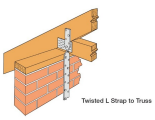


Installation - Floor (1)









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