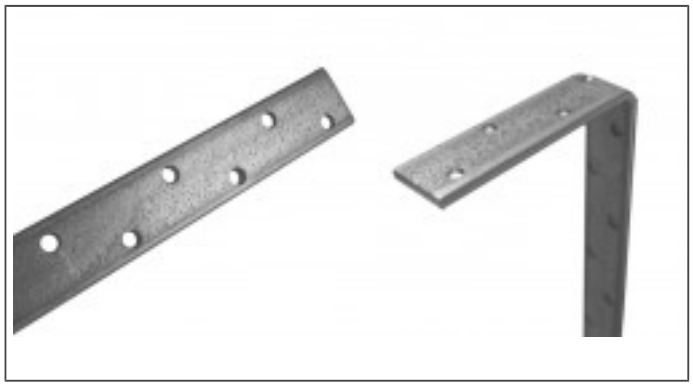
Technical data sheet

H/L - HEAVY/LIGHT RESTRAINT STRAPS



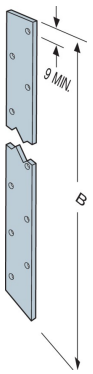
The H and L straps are designed to The Building Regulations for horizontal and vertical restraint.

UK-DoP-h13/0002

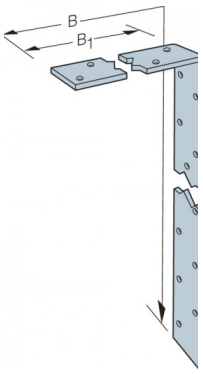
FEATURES

Material

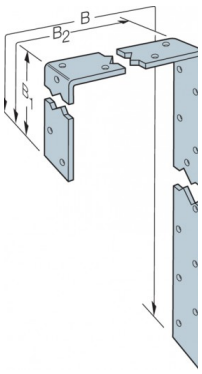
- Pre-galvanised mild steel
- Stainless steel straps are available, to order



Flat Strap



Strap with a Bend



Strap with a double bend.

Str twi

TECHNICAL DATA

Common Bent H Straps

References	Dimensions [mm]		Fasteners		Characteristic Capacity [kN]
	Overall Length [B]	B_1	Masonry	Floor Joist / Rafter N3.75x30	
H05B10	500	100	-	8	8
H05B15	500	150	-	8	8
H06B10	600	100	-	8	8
H06B15	600	150	-	8	8
H08B10	800	100	-	8	8
H08B15	800	150	-	8	8
H09B10	900	100	-	8	8
H09B15	900	150	-	8	8
H10B10	1000	100	-	8	8
H10B15	1000	150	-	8	8
H11B10	1100	100	-	8	8
H11B15	1100	150	-	8	8
H12B10	1200	100	-	8	8
H12B15	1200	150	-	8	8
H13B10	1300	100	-	8	8
H13B15	1300	150	-	8	8
H14B10	1400	100	-	8	8
H14B15	1400	150	-	8	8

References	Dimensions [mm]		Fasteners		Characteristic Capacity [kN]
	Overall Length [B]	B_1	Masonry	Floor Joist / Rafter N3.75x30	
H15B10	1500	100	-	8	8
H15B15	1500	150	-	8	8
H16B10	1600	100	-	8	8
H16B15	1600	150	-	8	8
H17B10	1700	100	-	8	8
H18B10	1800	100	-	8	8
H18B15	1800	150	-	8	8
H19B10	1900	100	-	8	8
H20B10	2000	100	-	8	8
H20B15	2000	150	-	8	8

Notes:

2. For rafter installation, 3.75x30mm Square Twist Nails can be exchanged for ø4.0x25mm wood screws

Common Twisted H Straps

References	Dimensions [mm]		Hole Dia. [mm]
	Overall Length [B]	T_1	
H06T10	600	100	6
H06T15	600	150	6
H08T10	800	100	6
H08T15	800	150	6
H09T10	900	100	6
H09T15	900	150	6
H10T10	1000	100	6
H10T15	1000	150	6
H12T10	1200	100	6
H14T10	1400	100	6
H15T10	1500	100	6
H15T15	1500	150	6
H16T10	1600	100	6
H16T15	1600	150	6
H17T10	1700	100	6
H18T10	1800	100	6
H19T15	1900	150	6

Common Flat H Straps

References	Overall Length [B]	Hole Dia. [mm]
H05F00	500	6
H06F00	600	6
H08F00	800	6
H09F00	900	6
H10F00	1000	6
H11F00	1100	6
H12F00	1200	6
H14F00	1400	6
H15F00	1500	6
H16F00	1600	6
H18F00	1800	6
H20F00	2000	6
H21F00	2100	6
H24F00	2400	6
H27F00	2700	6
H30F00	3000	6

Common Bend L Straps

References	Dimensions [mm]		Hole Dia. [mm]	Fasteners		Characteristic Capacity [kN]
	Overall Length [B]	B_1		Masonry ø5.5x50	Wall Plate N3.75x30	
L03B10	300	100	6	5	3	4
L04B10	400	100	6	5	3	4
L05B10	500	100	6	5	3	4
L06B10	600	100	6	5	3	4
L07B10	700	100	6	5	3	4
L08B10	800	100	6	5	3	4
L09B10	900	100	6	5	3	4
L10B10	1000	100	6	5	3	4
L11B10	1100	100	6	5	3	4
L12B10	1200	100	6	5	3	4
L13B10	1300	100	6	5	3	4
L14B10	1400	100	6	5	3	4
L16B10	1600	100	6	5	3	4
L19B10	1900	100	6	5	3	4
L20B10	2000	100	6	5	3	4

Notes:

2. For fixing into masonry, suitable wall plugs should be used for the ø5.5x50 (#12x50) wood screws

Common Twisted L Straps

References	Dimensions [mm]		Hole Dia. [mm]
	Overall Length [B]	T_1	
L05T10	500	100	6
L06T10	600	100	6
L06T15	600	150	6
L07T10	700	100	6
L08T10	800	100	6
L08T15	800	150	6
L09T10	900	100	6
L09T15	900	150	6
L10T10	1000	100	6
L10T15	1000	150	6
L11T10	1100	100	6
L12T10	1200	100	6
L12T15	1200	150	6
L14T10	1400	100	6
L15T10	1500	100	6
L15T15	1500	150	6
L16T15	1600	150	6
L20T15	2000	150	6

Common Flat L Straps

References	Overall Length [B]	Hole Dia. [mm]
L02F00	200	6
L04F00	400	6
L05F00	500	6
L06F00	600	6
L08F00	800	6
L09F00	900	6
L10F00	1000	6

H/L - HEAVY/LIGHT RESTRAINT STRAPS

References	Overall Length [B]	Hole Dia. [mm]
L11F00	1100	6
L12F00	1200	6
L13F00	1300	6
L14F00	1400	6
L15F00	1500	6
L16F00	1600	6
L18F00	1800	6
L30F00	3000	6

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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.