EWH

Engineered Wood Hanger

SIMPSON Strong-Tie

Universal Joist Hanger for Timber to Timber Connections

Universal. Flexible. Simple.

Universal, flexible and simple to install, the EWH hanger is an engineered hanger that has been designed to fulfil a wide variety of installation options.

Suitable for use with combinations of the following:
Headers: I-Joists, Metal Web Joists, Solid Timber and SIP's.
Joists: I-Joists, Metal Web Joists, and Solid Timber.
Note: Solid timber refers to LVL, Glulam or Solid Sawn Timber.

Features:
- Choice of installation options - Top Fix, Face Fix
- Hanger supplied with top flange straight so that it can be bent on site to accommodate a range of joist heights
- Perforations allow the top flange to be snapped off for face fix installation option
- Optional triangular holes for increased download and uplift performances
- Seat tab for ease of installation
- Seat tab can be bent upwards for installations where the header is deeper than the joist

Material: Pre-galvanised mild steel.

Installation:
- Use all specified fasteners
- For STANDARD installation all round holes to be filled
- For ENHANCED installation, all round and triangular holes to be filled (excluding triangular hole in the hanger's seat tab)
- Refer to Installation Details section for more detailed information

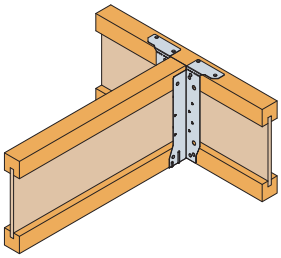
ETA-17/0554

Galvanised steel

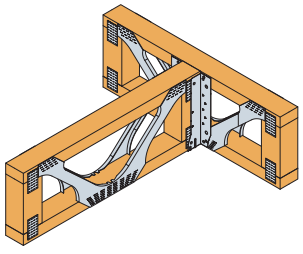
PATENT

Joist to Hanger Height and Width Suitability

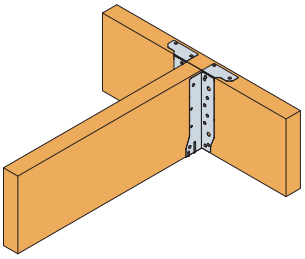
Joist Heights (mm)	Hanger Height (B) (mm)	Joist Widths [mm]												
		38 39	45	47	53	58	60	63	69 70	72	75 2x38 2x39	89 90 2x45	2x47	96 97
		Hanger Widths (A) [mm]												
		40	47	50	56	61	63	66	72	75	79	91	96	99
195, 200, 202	195	•	•	•	•	•	•		•	•	•	•	•	•
219, 220, 225	219	•	•	•	•	•	•	•	•	•	•	•	•	•
235, 240	235	•	•	•	•	•	•	•	•	•	•	•	•	•
245, 250	245	•	•	•		•		•		•	•	•	•	•
253, 254	253		•	•						•		•		•
295	295								•					•
300, 304	300	•	•	•	•	•	•	•	•	•	•	•	•	•
350, 356	350		•	•			•		•	•		•	•	•
360	360		•	•		•	•	•	•		•	•	•	•
373	370			•						•				•
400	400		•	•		•	•	•	•	•		•	•	•
417, 421	417			•						•				•



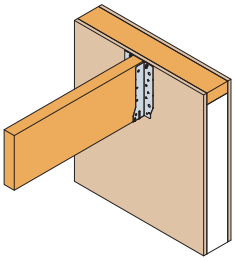
I-Joist to I-Joist



Metal Web Joist to Metal Web Joist



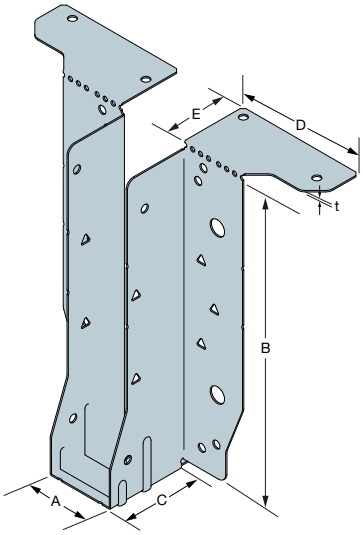
Solid Timber to Solid Timber



Solid Timber to SIP-Panel

Product Dimensions

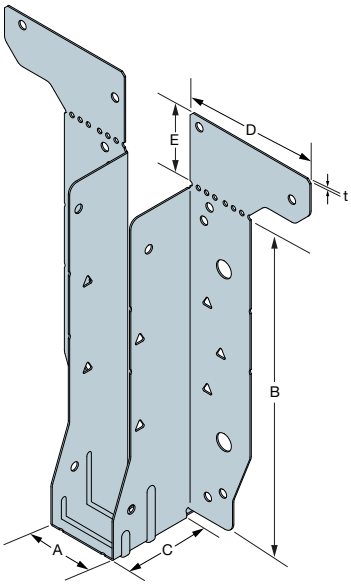
References	Hanger Dimensions [mm]						Holes						Nordic Stock*
							Flange B			Flange C		Flange E	
	A	B	C	D	E	t	Ø5.0	Ø10.0	Tri	Ø5.0	Tri	Ø5.0	
EWH195/40	40	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/40	40	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/40	40	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/40	40	245	49	80	40	0.9	8	4	10	4	4	4	
EWH300/40	40	300	49	80	40	0.9	8	4	10	4	4	4	
EWH195/47	47	195	49	80	40	0.9	8	4	6	4	4	4	•
EWH219/47	47	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/47	47	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/47	47	245	49	80	40	0.9	8	4	10	4	4	4	•
EWH253/47	47	253	49	80	40	0.9	8	4	10	4	4	4	
EWH300/47	47	300	49	80	40	0.9	8	4	10	4	4	4	•
EWH350/47	47	350	49	80	40	0.9	8	4	10	4	4	4	•
EWH360/47	47	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/47	47	400	49	80	40	0.9	8	4	10	4	4	4	
EWH195/50	50	195	49	80	40	0.9	8	4	6	4	4	4	•
EWH219/50	50	219	49	80	40	0.9	8	4	8	4	4	4	•
EWH235/50	50	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/50	50	245	49	80	40	0.9	8	4	10	4	4	4	•
EWH253/50	50	253	49	80	40	0.9	8	4	10	4	4	4	
EWH300/50	50	300	49	80	40	0.9	8	4	10	4	4	4	•
EWH350/50	50	350	49	80	40	0.9	8	4	10	4	4	4	•
EWH360/50	50	360	49	80	40	0.9	8	4	10	4	4	4	•
EWH370/50	50	370	49	80	40	0.9	8	4	10	4	4	4	
EWH400/50	50	400	49	80	40	0.9	8	4	10	4	4	4	•
EWH417/50	50	417	49	80	40	0.9	8	4	10	4	4	4	
EWH195/56	56	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/56	56	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/56	56	235	49	80	40	0.9	8	4	10	4	4	4	
EWH300/56	56	300	49	80	40	0.9	8	4	10	4	4	4	
EWH195/61	61	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/61	61	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/61	61	235	49	80	40	0.9	8	4	10	4	4	4	•
EWH245/61	61	245	49	80	40	0.9	8	4	10	4	4	4	•
EWH300/61	61	300	49	80	40	0.9	8	4	10	4	4	4	
EWH360/61	61	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/61	61	400	49	80	40	0.9	8	4	10	4	4	4	
EWH195/63	63	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/63	63	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/63	63	235	49	80	40	0.9	8	4	10	4	4	4	
EWH300/63	63	300	49	80	40	0.9	8	4	10	4	4	4	•
EWH350/63	63	350	49	80	40	0.9	8	4	10	4	4	4	•
EWH360/63	63	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/63	63	400	49	80	40	0.9	8	4	10	4	4	4	•
EWH219/66	66	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/66	66	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/66	66	245	49	80	40	0.9	8	4	10	4	4	4	
EWH300/66	66	300	49	80	40	0.9	8	4	10	4	4	4	
EWH360/66	66	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/66	66	400	49	80	40	0.9	8	4	10	4	4	4	



** Items that are not in Nordic stock can be supplied on demand - longer lead times should be expected.*

Product Dimensions

References	Hanger Dimensions [mm]						Holes						Nordic Stock*
							Flange B			Flange C		Flange E	
	A	B	C	D	E	t	Ø5.0	Ø10.0	Tri	Ø5.0	Tri	Ø5.0	
EWH195/72	72	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/72	72	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/72	72	235	49	80	40	0.9	8	4	10	4	4	4	
EWH295/72	72	295	49	80	40	0.9	8	4	10	4	4	4	
EWH300/72	72	300	49	80	40	0.9	8	4	10	4	4	4	
EWH350/72	72	350	49	80	40	0.9	8	4	10	4	4	4	
EWH360/72	72	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/72	72	400	49	80	40	0.9	8	4	10	4	4	4	
EWH195/75	75	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/75	75	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/75	75	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/75	75	245	49	80	40	0.9	8	4	10	4	4	4	
EWH253/75	75	253	49	80	40	0.9	8	4	10	4	4	4	
EWH300/75	75	300	49	80	40	0.9	8	4	10	4	4	4	
EWH350/75	75	350	49	80	40	0.9	8	4	10	4	4	4	
EWH370/75	75	370	49	80	40	0.9	8	4	10	4	4	4	
EWH400/75	75	400	49	80	40	0.9	8	4	10	4	4	4	
EWH417/75	75	417	49	80	40	0.9	8	4	10	4	4	4	
EWH195/79	79	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/79	79	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/79	79	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/79	79	245	49	80	40	0.9	8	4	10	4	4	4	
EWH300/79	79	300	49	80	40	0.9	8	4	10	4	4	4	
EWH360/79	79	360	49	80	40	0.9	8	4	10	4	4	4	
EWH195/91	91	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/91	91	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/91	91	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/91	91	245	49	80	40	0.9	8	4	10	4	4	4	
EWH253/91	91	253	49	80	40	0.9	8	4	10	4	4	4	
EWH300/91	91	300	49	80	40	0.9	8	4	10	4	4	4	•
EWH350/91	91	350	49	80	40	0.9	8	4	10	4	4	4	•
EWH360/91	91	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/91	91	400	49	80	40	0.9	8	4	10	4	4	4	•
EWH195/96	96	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/96	96	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/96	96	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/96	96	245	49	80	40	0.9	8	4	10	4	4	4	
EWH300/96	96	300	49	80	40	0.9	8	4	10	4	4	4	
EWH350/96	96	350	49	80	40	0.9	8	4	10	4	4	4	
EWH360/96	96	360	49	80	40	0.9	8	4	10	4	4	4	
EWH400/96	96	400	49	80	40	0.9	8	4	10	4	4	4	
EWH195/99	99	195	49	80	40	0.9	8	4	6	4	4	4	
EWH219/99	99	219	49	80	40	0.9	8	4	8	4	4	4	
EWH235/99	99	235	49	80	40	0.9	8	4	10	4	4	4	
EWH245/99	99	245	49	80	40	0.9	8	4	10	4	4	4	
EWH253/99	99	253	49	80	40	0.9	8	4	10	4	4	4	
EWH295/99	99	295	49	80	40	0.9	8	4	10	4	4	4	
EWH300/99	99	300	49	80	40	0.9	8	4	10	4	4	4	
EWH350/99	99	350	49	80	40	0.9	8	4	10	4	4	4	
EWH360/99	99	360	49	80	40	0.9	8	4	10	4	4	4	
EWH370/99	99	370	49	80	40	0.9	8	4	10	4	4	4	
EWH400/99	99	400	49	80	40	0.9	8	4	10	4	4	4	
EWH417/99	99	417	49	80	40	0.9	8	4	10	4	4	4	



** Items that are not in Nordic stock can be supplied on demand - longer lead times should be expected.*

Load Capacities

I-Joist Headers

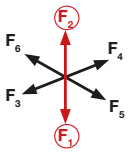
Performance Values: Standard I-Joist Header Installation Options

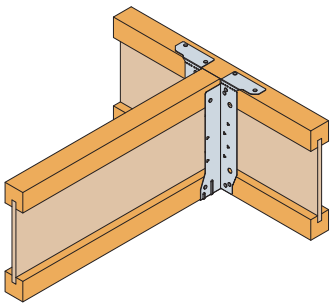
References	Installation	Fasteners					Characteristic Capacities [kN]			
							$R_{1,k}$			$R_{2,k}$
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		Header Type			Joist Type
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	LVL I-Joist 36 mm	LVL I-Joist 39 mm	SS I-Joist 45 mm	(1)
							CNA4.0X35	CNA4.0X35	CNA4.0X35	CNA4.0X35
EWH	Top Fix	8	-	4	4	-	11.0	13.0	12.1	2.3 to 3.5
	Face Fix	8	-	-	4	-	6.0	9.2	8.0	2.3 to 3.5

(1) Depends upon joist type (refer to SIP performance tables for performance values per option), page 8

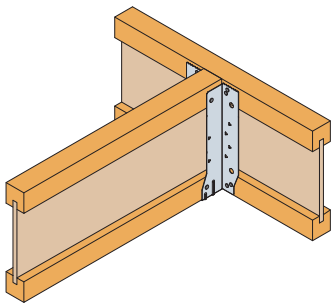
Performance Values: Enhanced I-Joist Header Installation Options

References	Installation	Fasteners					Characteristic Capacities [kN]		
							$R_{1,k}$		$R_{2,k}$
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		Header Type		Joist Type
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	LVL I-Joist Enhanced	SS I-Joist Enhanced	I-Joist + Web Stiffeners
							CNA4.0X35	CNA4.0X35	CNA4.0X35
EWH	Top Fix	8	6	4	4	-	18.3	18.2	-
		8	8	4	4	-	19.9	19.6	-
		8	10	4	4	-	20.3	20.6	-
		8	6 - 10	4	4	4	-	-	8.0
	Face Fix	8	6	-	4	-	15.5	16.3	-
		8	8	-	4	-	16.9	16.6	-
		8	10	-	4	-	17.6	17.7	-
		8	6 - 10	-	4	4	-	-	8.0

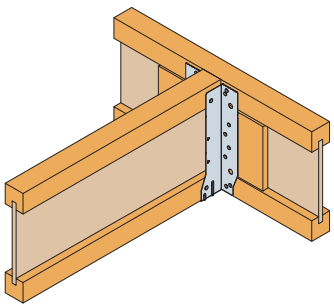




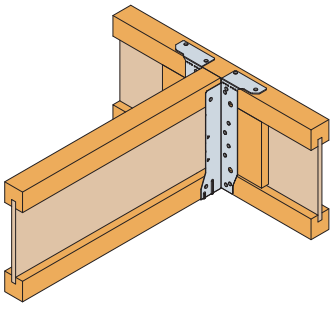
Top Fix: Standard Installation



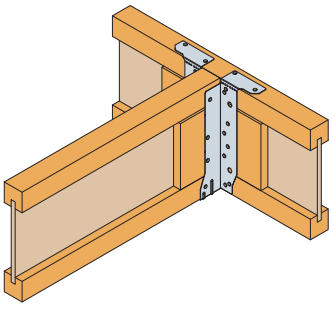
Face Fix: Standard Installation



Face Fix: Enhanced Installation



Top Fix: Enhanced Installation



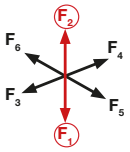
Top Fix: Enhanced Uplift Installation

Load Capacities

Metal Web Headers

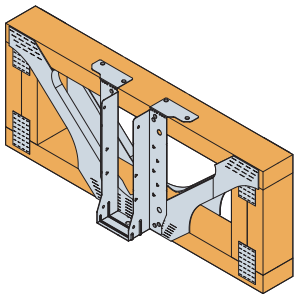
Performance Values: Standard Metal Web Header Installation Options

References	Installation	Fasteners					Characteristic Capacities [kN]		
							$R_{1,k}$		$R_{2,k}$
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		Header Type		Joist Type
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	Metal web		Metal web
							CNA4.0X35	CSA5.0x50	CNA4.0X35
EWH	Top Fix	8	-	4	4	-	13.0	16.4	3.5
	Face Fix	8	-	-	4	-	9.9	13.7	3.5

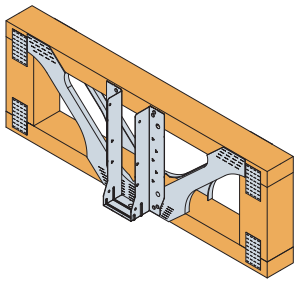


Performance Values: Enhanced Metal Web Header Installation Options

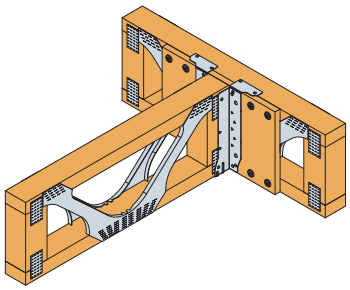
References	Installation	Fasteners					Characteristic Capacities [kN]		
							$R_{1,k}$		$R_{2,k}$
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		Header Type		Joist Type
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	Metal web Enhanced		Metal web Enhanced
							CNA4.0X35	CSA5.0x50	CNA4.0X35
EWH	Top Fix	8	6	4	4	-	17.1	17.4	3.5
		8	8	4	4	-	18.0	18.3	3.5
		8	10	4	4	-	18.6	18.9	3.5
		8	6 - 10	4	4	4	-	-	8.0
	Face Fix	8	6	-	4	-	15.5	16.6	3.5
		8	8	-	4	-	17.3	18.4	3.5
		8	10	-	4	-	19.1	20.2	3.5
		8	6 - 10	-	4	4	-	-	8.0



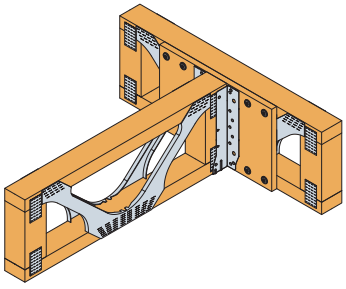
Top Fix: Standard Installation



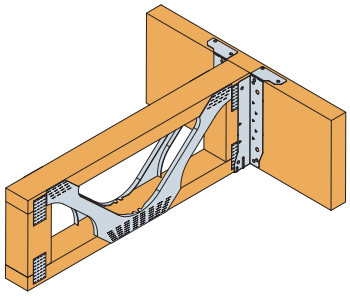
Face Fix: Standard Installation



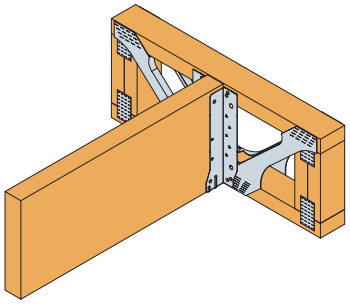
Top Fix: Enhanced Installation



Face Fix: Enhanced Installation



Top Fix: Metal Web Joist to Solid Header



Face Fix: Solid Timber to Metal Web Joist

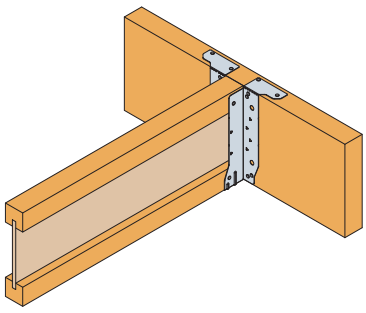
Load Capacities

Solid Headers

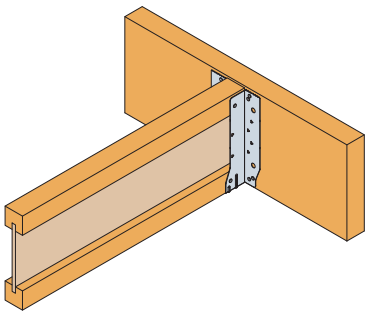
Performance Values: Solid Header Installation Options

References	Installation	Fasteners					Characteristic Capacities [kN]			
							$R_{1,k}$			$R_{2,k}$
		Face Nails (Flange B)		Top Nails (Flange E)	Joist Nails (Flange C)		Header Type			Joist Type
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	LVL	Glulam	Solid Sawn Timber	(1)
							CNA4,0x35	CNA4,0x35	CNA4,0x35	CNA4,0x35
EWH	Top Fix	8	-	4	4	-	15.5	12.9	12.8	2.3 to 3.5
		8	6	4	4	-	18.8	18.5	17.6	2.3 to 3.5
		8	8	4	4	-	19.0	19.0	18.5	2.3 to 3.5
		8	10	4	4	-	20.4	19.4	19.1	2.3 to 3.5
	Face Fix	8	-	-	4	-	11.1	9.0	6.6	2.3 to 3.5
		8	6	-	4	-	18.7	16.3	13.4	2.3 to 3.5
		8	8	-	4	-	20.4	17.9	15.2	2.3 to 3.5
			10	-	4	-	21.3	18.6	17.1	2.3 to 3.5

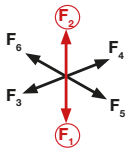
(1) Depends upon joist type (refer to SIP performance tables for performance values per option) page 8.



Top Fix: Standard Installation



Face Fix: Standard Installation

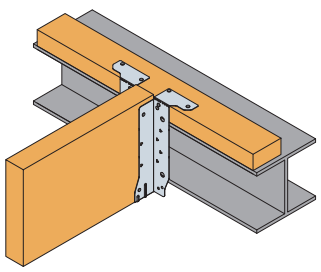


Timber Nailer Headers

EWH Timber Nailer Installation Options

References	Timber Nailer Depth [mm]	Fasteners					Characteristic Capacities [kN]		
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{1,k}$		$R_{2,k}$ (1)
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	CNA4.0X35	CSA5.0x40	CNA4.0X35
EWH	38 - 74	4	-	4	4	-	9.8	13.9	2.3 to 3.5
	75 - 100	4	-	4	4	-	9.8	13.9	2.3 to 3.5

(1) Depends upon joist type (refer to SIP performance tables for performance values per option).



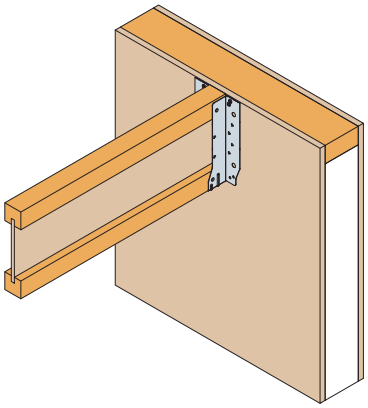
Typical Timber Nailer Installation

Load Capacities

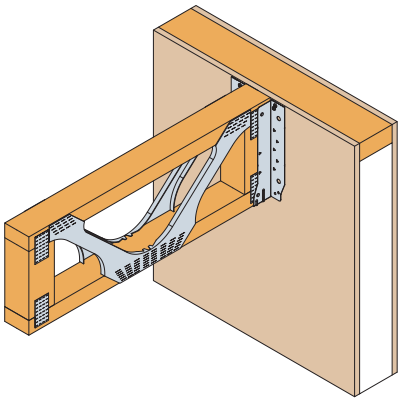
SIP Headers

Performance Values: SIP Header Installation Options

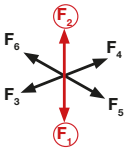
References	Installation	Fasteners					Characteristic Capacities [kN]					
							$R_{1,k}$	$R_{2,k}$				
		Face (Flange B)		Top (Flange E)	Joist (Flange C)		Header Type	Joist Type				
		Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	SIP	LVL I-Joist 36 mm	LVL I-Joist 39 mm	SS I-Joist 45 mm	Metal Web	Glulam, LVL, Solid Sawn
							CSA5.0x50	CNA4.0X35	CNA4.0X35	CNA4.0X35	CNA4.0X35	CNA4.0X35
EWH	11 mm	4	-	-	4	-	9.7	2.3	2.5	3.5	3.5	3.5
	15 mm	4	-	-	4	-	10.2	2.3	2.5	3.5	3.5	3.5

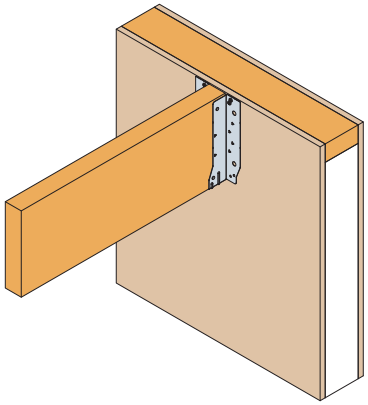


Typical SIP installation with I-Joist



Typical SIP installation with Metal Web



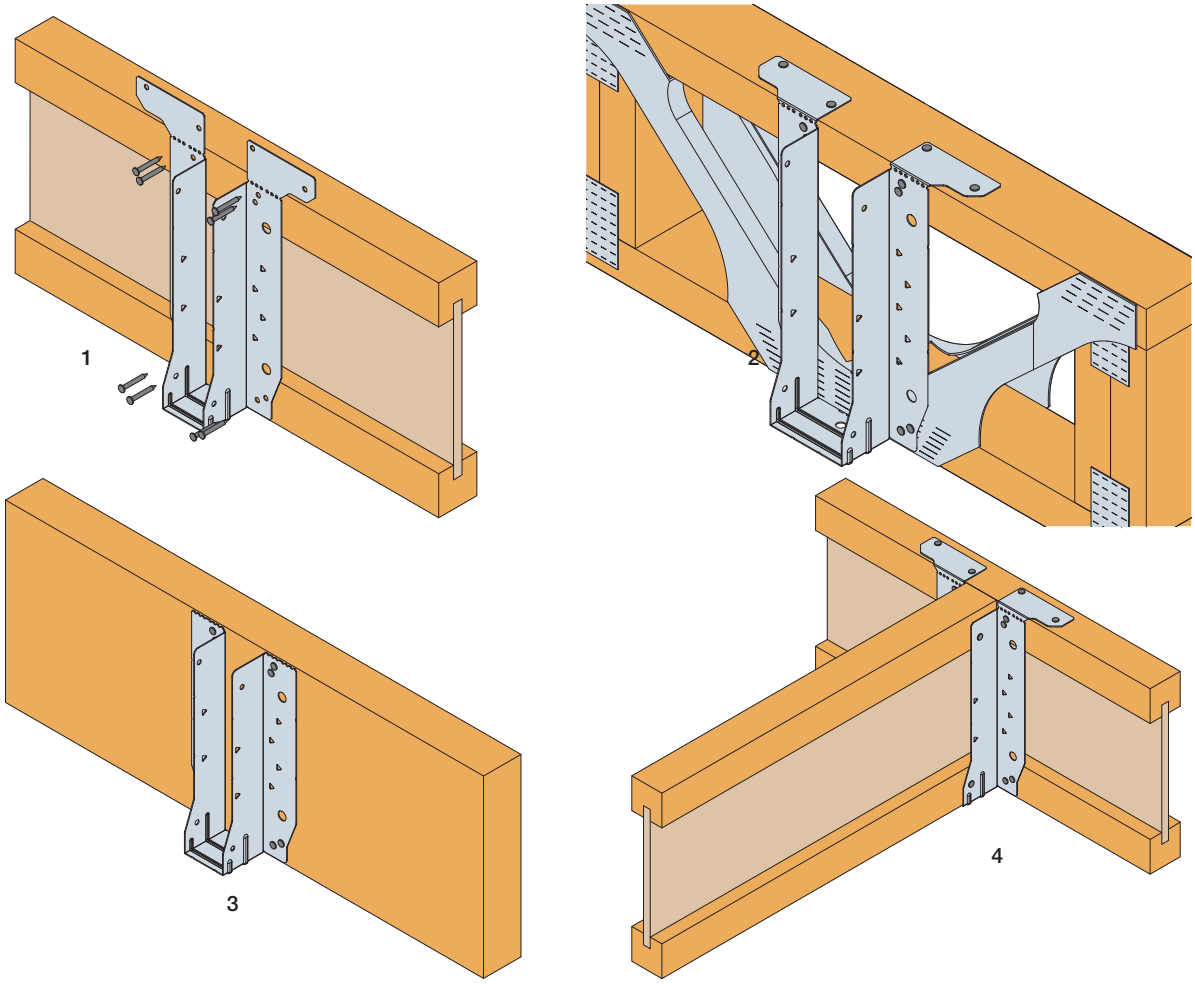


Typical SIP installation with Solid Joist

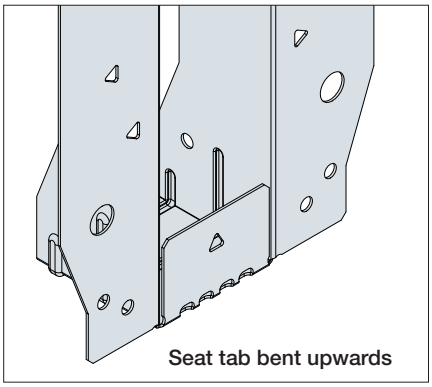
Standard Installation

EWH Standard Installation Instructions – Applicable to I-Joist, Metal Web Joist & Solid Timber Headers

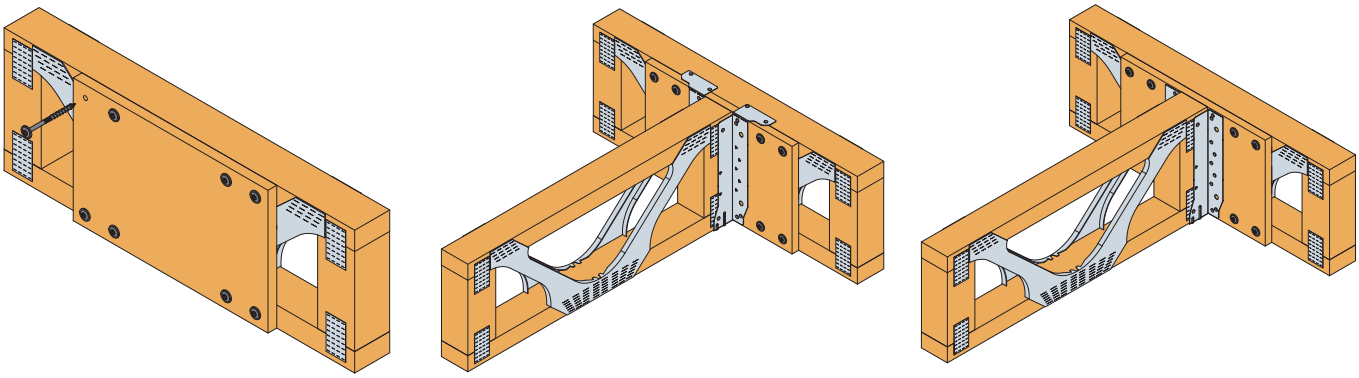
1. Position EWH hanger onto the face of the supporting joist, ensuring the seat tab is tight up against the underside of the supporting joist. Ensure hanger sides are vertical; **fill all face round holes**, starting from bottom upwards, with the specified fastener.

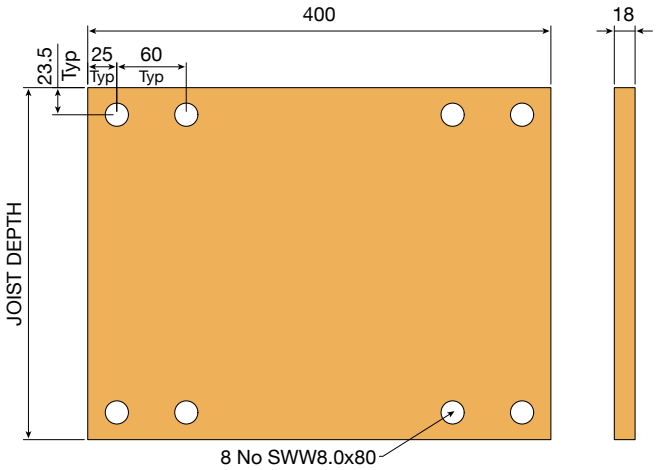


2. For top fix installation, fold over the top flange, ensuring a tight fold line along the top edge of the supporting timber, and **fill all top round holes** with the specified fasteners (NOTE: Depending upon the joist depth, the fold line may be up to 6 mm above the perforation lines).
3. For face fix installations, snap off the top flange along the perforation line (NOTE: The top flange may be snapped off pre or post installation).
4. Insert the incoming joist, ensuring it is tight against the back of the EWH (maximum allowable gap is 3 mm between end of incoming joist and face of hanger) and **fill all round holes** in the side flanges.
   For instances where the supporting member is deeper than the hanger, bend the seat tab upwards so the hanger fits tight against the face of the supporting member.


Seat tab bent upwards

Standard Installation

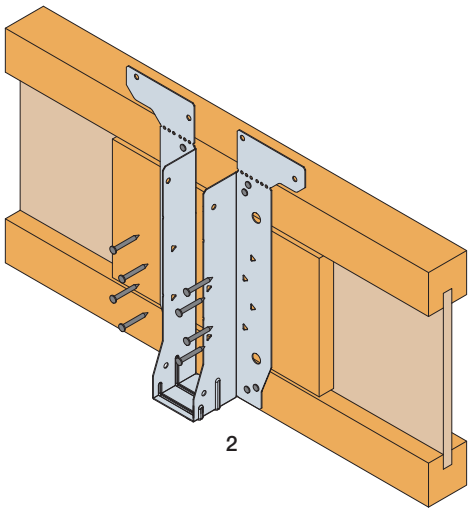




EWH Enhanced Installation Instructions – Applicable to I-Joist Headers, Metal Web Headers & Solid Timber

1. Metal Web Headers Only: Install an 18 mm plywood gusset to the face of the metal web joist. The plywood gusset is to be at least 400 mm long and full depth of the metal web joist. The plywood gusset is installed with 8 No SWW8.0x80 mm screws. The screws are to be positioned in accordance to illustration below.
2. I-Joist Headers Only: Install a backer block onto the front face of the I-Joist. The backer block's size and installation requirements shall be in accordance to the relevant I-Joist manufacturer's specifications.
   Position EWH hanger onto the face of the supporting joist, ensuring the seat tab is tight up against the underside of the supporting joist's bottom chord.
   Ensure hanger sides are vertical and **fill all face round holes then the triangular holes**, starting from bottom upwards, with the specified fastener.
3. For top fix installation, fold over the top flange, ensuring a tight fold line along the top edge of the supporting timber, and **fill the round holes** with the specified fasteners (NOTE: Depending upon joist depth, the fold line may be up to 6 mm above the perforation lines).
4. For face fix installations, snap off the top flange along the perforation line (NOTE: The top flange may be snapped off pre or post installation).
5. Insert the incoming joist, ensuring it is tight against the back of the EWH (maximum allowable gap is 3 mm between end of incoming joist and face of hanger) and **fill all round holes** in the side flanges.
6. For enhanced uplift installations, if the incoming joist is an I-Joist then web stiffeners are required. (The web stiffener's size and installation requirements shall be in accordance to relevant I-Joist manufacturer's specification). **Fill all round and triangular holes** with the relevant fastener.

Standard Installation



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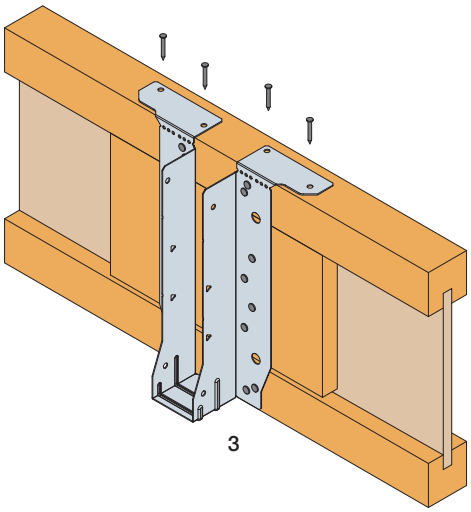

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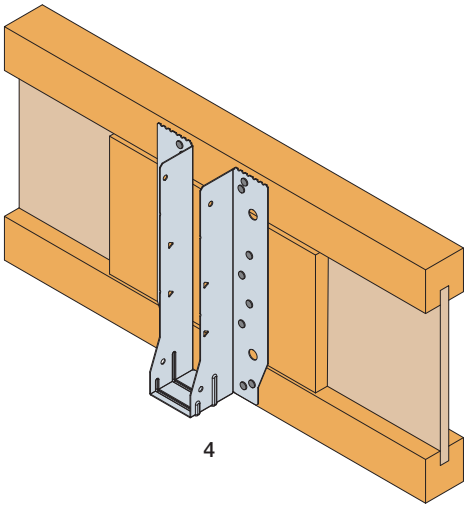

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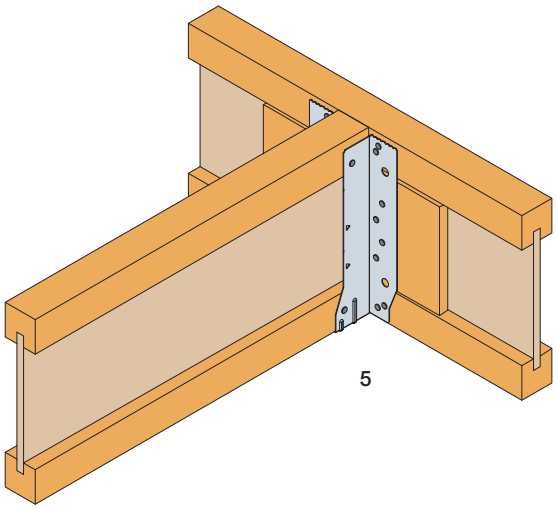

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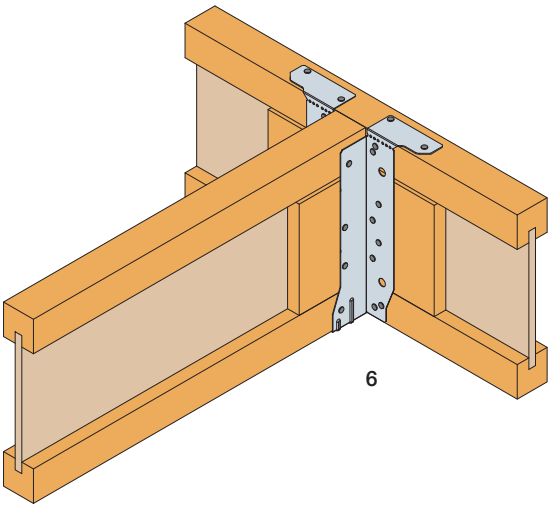

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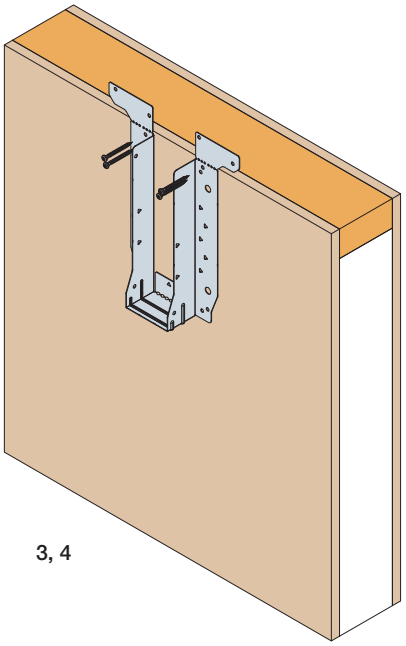
SIP Installation

EWH Installation Instructions – SIP

1. It is recommended for SIP installation that the EWH is installed face fix only.
2. Bend the seat tab upwards so the hanger fits tight against the face of the SIP.
3. Position the EWH hanger onto the face of the SIP so that the top of the carried member will finish level with the top of the SIP.
4. Install 4 CSA 5.0x50 mm screws through the upper 4 round holes on the face of the EWH.
5. Tear off the hanger's top flange, along its perforation line.
6. Sit the carried member into the hanger and install 4 CNA4.0x35 mm through the round holes into the side of the supported member.



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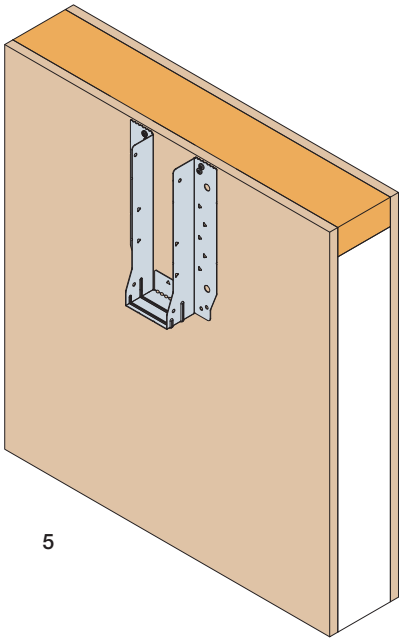

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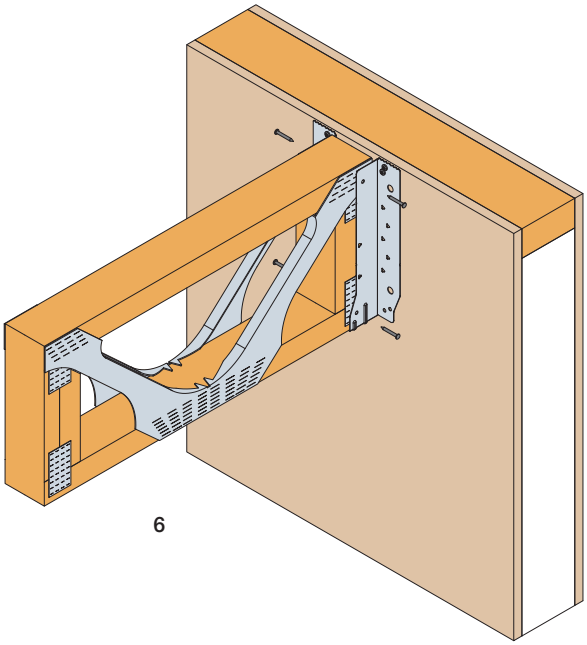

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