

Technical data sheet

SIMPSON

Strong-Tie

EWH

Engineered Wood Hanger

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

Features

Material

- 275 g/m² Pre-galvanised Mild Steel.

Features

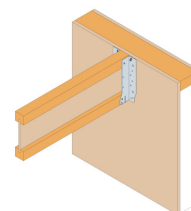
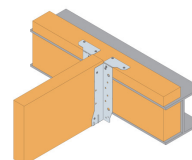
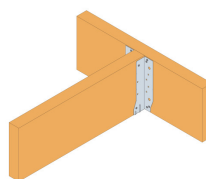
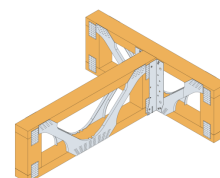
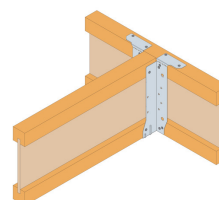
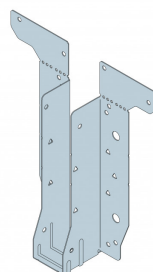
- Choice of installation options - Top Fix, Face Fix.
- Hanger supplied with top flange straight so that it can be bent on site to accommodate a range of joist heights.
- Perforations allow the top flange to be snapped off for face fix installation option.
- Optional triangular holes for increased download 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.

Suitability

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)



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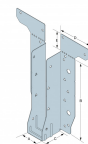
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Technical Data

Product Dimensions



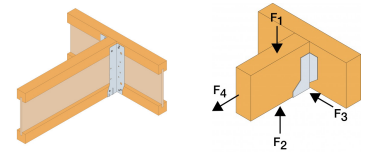
References	Equivalent IUSE	Dimensions [mm]						Holes					
		A	B	C	D	E	t	Flange B			Flange C		Flange E
								Ø5	Ø10	Tri	Ø5	Tri	Ø5
EWH195/47	IUSE199/48	47	195	49	80	40	0.9	8	4	6	4	4	4
EWH200/47	IUSE199/48	47	200	49	80	40	0.9	8	4	6	4	4	4
EWH200/61	IUSE199/61	61		49	80	40	0.9	8	4	6	4	4	4
EWH200/91	IUSE199/92	91		49	80	40	0.9	8	4	6	4	4	4
EWH219/47	IUSE219/48	47	219	49	80	40	0.9	8	4	8	4	4	4
EWH219/61	IUSE219/61	61		49	80	40	0.9	8	4	8	4	4	4
EWH219/91	IUSE219/92	91		49	80	40	0.9	8	4	8	4	4	4
EWH235/47	IUSE239/48	47	235	49	80	40	0.9	8	4	10	4	4	4
EWH235/61	IUSE239/61	61		49	80	40	0.9	8	4	10	4	4	4
EWH235/91	IUSE239/92	91		49	80	40	0.9	8	4	10	4	4	4
EWH240/47	IUSE239/48	47	240	49	80	40	0.9	8	4	10	4	4	4
EWH240/61	IUSE239/61	61		49	80	40	0.9	8	4	10	4	4	4
EWH240/91	IUSE239/92	91		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
EWH245/61	IUSE249/61	61		49	80	40	0.9	8	4	10	4	4	4
EWH245/91	IUSE249/92	91		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
EWH253/91	IUSE254/92	91		49	80	40	0.9	8	4	10	4	4	4
EWH300/47	IUSE299/48	47	300	49	80	40	0.9	8	4	10	4	4	4
EWH300/61	IUSE299/61	61		49	80	40	0.9	8	4	10	4	4	4
EWH300/91	IUSE299/92	91		49	80	40	0.9	8	4	10	4	4	4
EWH350/47	IUSE349/48	47	350	49	80	40	1.2	8	4	10	4	4	4
EWH350/91	-	91		49	80	40	1.2	8	4	10	4	4	4
EWH360/47	IUSE359/48	47	360	49	80	40	1.2	8	4	10	4	4	4
EWH360/61	IUSE359/61	61		49	80	40	1.2	8	4	10	4	4	4
EWH360/91	IUSE359/92	91		49	80	40	1.2	8	4	10	4	4	4
EWH400/47	IUSE399/48	47	400	49	80	40	1.2	8	4	10	4	4	4
EWH400/61	IUSE399/61	61		49	80	40	1.2	8	4	10	4	4	4
EWH400/91	IUSE399/92	91		49	80	40	1.2	8	4	10	4	4	4

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EWH Engineered Wood Hanger



Characteristic Loads - I-Joist Headers



References	Fasteners					Characteristic								
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		R _{1,k}								
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	LVL I-Joist 36mm		LVL I-Joist 39mm		SS I-Joist 45mm		LVL I-Joist Enhanced		SS Enh
						N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30
EWB (TF)	8	-	4	4	-	11	11	13	13	12.1	12.1	-	-	-
EWB (TF + 6 TRI)	8	6	4	4	-	-	-	-	-	-	-	18.3	18.3	18.2
EWB (TF + 8 TRI)	8	8	4	4	-	-	-	-	-	-	-	19.9	19.9	19.6
EWB (TF + 10 TRI)	8	10	4	4	-	-	-	-	-	-	-	20.3	20.3	20.6
EWB (FF)	8	-	-	4	-	6	6	9.2	9.2	8	8	-	-	-
EWB (FF + 6 TRI)	8	6	-	4	-	-	-	-	-	-	-	15.5	15.5	16.3
EWB (FF + 8 TRI)	8	8	-	4	-	-	-	-	-	-	-	16.9	16.9	16.6
EWB (FF + 10 TRI)	8	10	-	4	-	-	-	-	-	-	-	17.6	17.6	17.7

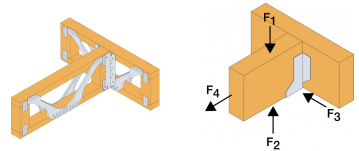
Footnote:

- (TF) = Top Fix | (FF) = Face Fix | (+6 TRI) = quantity of additional face nails installed through the tri
- For EWB > 300mm deep, a backer block installed onto the front face of the supporting I-joist is required for block is to be in accordance to the I-Joist manufacturers specification
- The enhanced installation requires a backer block to be installed onto the front face of the supporting I-joist the backer block is to be in accordance to the I-Joist manufacturers specification
- R_2 values relate to the joist type supported by the hanger

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EWH Engineered Wood Hanger



Characteristic Loads - Metal Web Headers

References	Fasteners					Characteristic Capacities [kN]								
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{1,k}$						$R_{2,k}$		
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	Metal Web			Metal Web Enhanced			Metal Web		LVL Solid S
						N3.75x30	CNA4.0x35	CSA5.0x50	N3.75x30	CNA4.0x35	CSA5.0x50	N3.75x30	CNA4.0x35	N3.75x30
EWB (TF)	8	-	4	4	-	13	13	16.4	-	-	-	3.5	3.5	3.5
EWB (TF + 6 TRI)	8	6	4	4	-	-	-	-	17.1	17.1	17.4	3.5	3.5	3.5
EWB (TF + 8 TRI)	8	8	4	4	-	-	-	-	18	18	18.3	3.5	3.5	3.5
EWB (TF + 10 TRI)	8	10	4	4	-	-	-	-	18.6	18.6	18.9	3.5	3.5	3.5
EWB (FF)	8	-	-	4	-	9.9	9.9	13.7	-	-	-	3.5	3.5	3.5
EWB (FF + 6 TRI)	8	6	-	4	-	-	-	-	15.5	15.5	16.6	3.5	3.5	3.5
EWB (FF + 8 TRI)	8	8	-	4	-	-	-	-	17.3	17.3	18.4	3.5	3.5	3.5
EWB (FF + 10 TRI)	8	10	-	4	-	-	-	-	19.1	19.1	20.2	3.5	3.5	3.5

Footnote:

→ (TF) = Top Fix | (FF) = Face Fix | (+6 TRI) = quantity of additional face nails installed through the tri holes

→ Enhanced installation requires a 18mm plywood gusset to be fixed to the face of the metal web joist. The plywood gusset is to be at least 400mm long and full depth of the metal web joist. The plywood gusset is installed with 8 ESCR8.0x80mm screws. The screws are to be positioned in accordance to illustration within the Installation Note section.

→ R_2 values relate to the joist type supported by the hanger

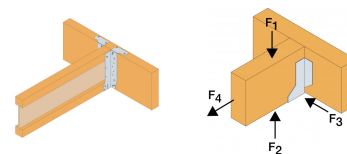
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Characteristic Loads - Solid Headers



References	Fasteners					Characteristic Capacities								
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{1,k}$								
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	LVL		Glulam		C24 Solid Sawn Timber		LVL I-Joist 36mm		LVL 3!
						N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30
EWB (TF)	8	-	4	4	-	15.5	15.5	12.9	12.9	12.8	12.8	2.3	2.3	2.5
EWB (TF + 6 TRI)	8	6	4	4	-	18.8	18.8	18.5	18.5	17.6	17.6	2.3	2.3	2.5
EWB (TF + 8 TRI)	8	8	4	4	-	19	19	19	19	18.5	18.5	2.3	2.3	2.5
EWB (TF + 10 TRI)	8	10	4	4	-	20.4	20.4	19.4	19.4	19.1	19.1	2.3	2.3	2.5
EWB (FF)	8	-	-	4	-	11.1	11.1	9	9	6.6	6.6	2.3	2.3	2.5
EWB (FF + 6 TRI)	8	6	-	4	-	18.7	18.7	16.3	16.3	13.4	13.4	2.3	2.3	2.5
EWB (FF + 8 TRI)	8	8	-	4	-	20.4	20.4	17.9	17.9	15.2	15.2	2.3	2.3	2.5
EWB (FF + 10 TRI)	8	10	-	4	-	21.3	21.3	18.6	18.6	17.1	17.1	2.3	2.3	2.5

Footnote:

- (TF) = Top Fix / (FF) = Face Fix / (+6 TRI) = quantity of additional face nails installed through the tri
- Solid timber refers to LVL, Glulam or Solid Sawn Timber
- R_2 values relate to the joist type supported by the hanger

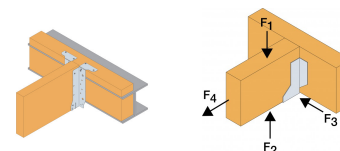
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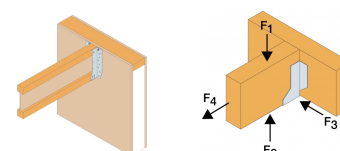


Characteristic Loads - Timber Nailer Headers

References	Fasteners					Characteristic Capacities [kN]									
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{1,k}$				$R_{2,k}$					
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	Timber Nailer				LVL I-Joist 36mm	LVL I-Joist 39mm		SS I-Joist 45mm		
						N3.75x30	N3.75x75	CNA4.0x35	CSA5.0x40	N3.75x30	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	
EWB (Nailer 38-74mm)	4	-	4	4	-	9.8	-	9.8	13.9	2.3	2.5	2.5	3.5	3.5	
EWB (Nailer 75-100mm)	4	-	4	4	-	9.8	13.5	9.8	13.9	2.3	2.5	2.5	3.5	3.5	

Footnote:

- Timber nailers can be either Solid Sawn Timber (C24 minimum grade), LVL or Glulam
- (38 - 50mm) refers to depth range of timber nailer
- Minimum width of timber nailer is 89mm
- R_2 values relate to the joist type supported by the hanger



Characteristic Loads - SIP Headers

References	Fasteners					Characteristic Capacities [kN]					
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{1,k}$	$R_{2,k}$				
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	SIP	LVL I-Joist 36mm	LVL I-Joist 39mm	SS I-Joist 45mm	Metal Web	LVL, Glulam Solid Sawn Timber
						CSA5.0x50	N3.75x30	N3.75x30	N3.75x30	N3.75x30	N3.75x30
EWB (11mm OSB)	4	-	-	4	-	9.7	2.3	2.5	3.5	3.5	3.5
EWB (15mm OSB)	4	-	-	4	-	10.2	2.3	2.5	3.5	3.5	3.5

Footnote:

- SIP requires a minimum 47mm deep top rail
- R_2 values relate to the joist type supported by the hanger

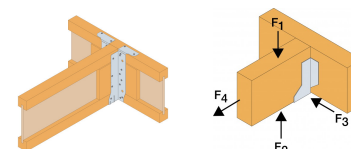
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Engineered Wood Hanger



Enhanced Uplift

References	Fasteners					Characteristic Loads [kN]					
	Face (Flange B)		Top (Flange E)	Joist (Flange C)		$R_{2,k}$					
	Ø5 Holes	Tri Holes	Ø5 Holes	Ø5 Holes	Tri Holes	I-Joist + Web Stiffener		Metal Web		LVL, Glulam Solid Sawn Timber	
						N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35	N3.75x30	CNA4.0x35
EWB (Enhanced Uplift)	4	6, 8 or 10	0, 4	4	4	8	8	8	8	8	8

Footnote:

- Fill all round and triangular holes with the relevant fastener.
- 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).
- R_2 values relate to the joist type supported by the hanger

Characteristic Loads - Solid Headers - SSH

References	Holes			Characteristic Capacities [kN]	
	Flange B	Flange C		$R_{1,k}$	$R_{2,k}$
	Ø10	Ø5	Tri	C24 Solid Sawn Timber	LVL, Glulam Solid Sawn Timber
				SSH8.0x40	SSH8.0x40
EWB	4	4	4	8.8	3.5

EWH Engineered Wood Hanger

Installation

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).

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.
2. Ensure hanger sides are vertical; fill all face round holes, starting from bottom upwards, with the specified fastener.
3. **For top fix installations**, 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 6mm 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 3mm between end of incoming joist and face of hanger) and fill all round holes in the side flanges.
6. 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.

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

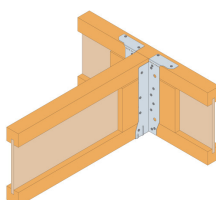
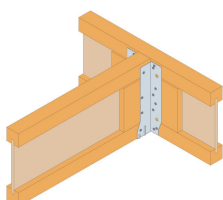
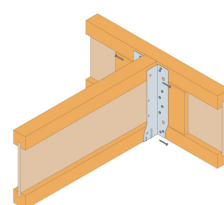
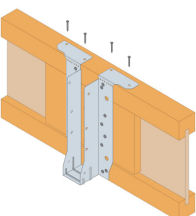
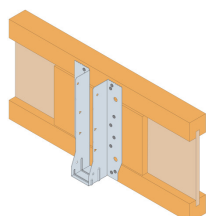
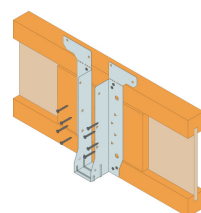
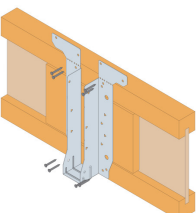
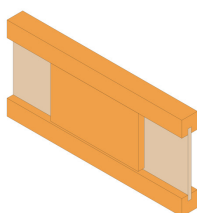
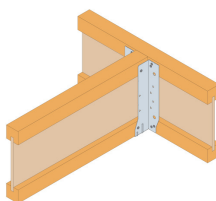
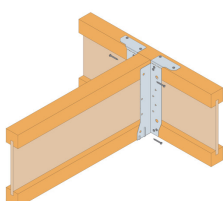
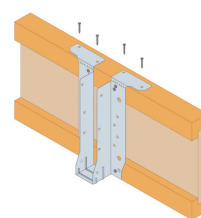
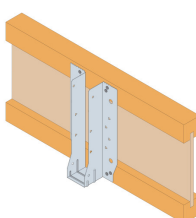
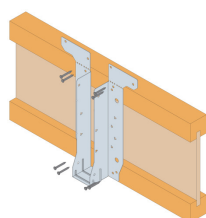
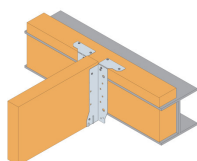
7. **Metal Web Headers Only:** Install an 18mm plywood gusset to the face of the metal web joist. The plywood gusset is to be at least 400mm long and full depth of the metal web joist. The plywood gusset is installed with 8 No ESCR8.0x80mm screws. The screws are to be positioned in accordance to illustration below.
8. **I-Joist Headers Only:** Install a backer block onto the front face of the I-Joist. The backer blocks size and installation requirements shall be in accordance to the relevant I-Joist manufacturer's specifications.
9. 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.
10. Ensure hanger sides are vertical and fill all face round holes then the triangular holes, starting from bottom upwards, with the specified fastener.
11. **For top fix installations**, 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 6mm above the perforation lines).
12. **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).
13. Insert the incoming joist, ensuring it is tight against the back of the EWH (maximum allowable gap is 3mm between end of incoming joist and face of hanger) and fill all round holes in the side flanges.
14. **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.

EWH Installation Instructions – SIP

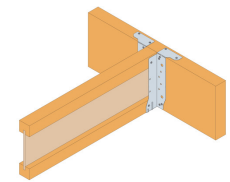
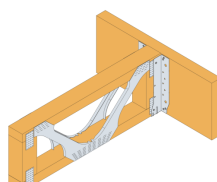
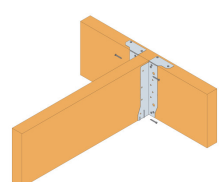
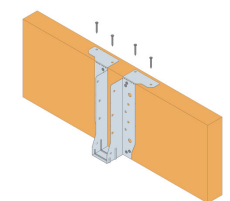
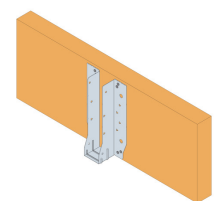
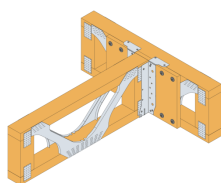
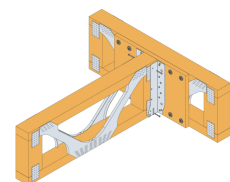
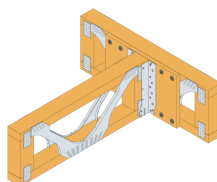
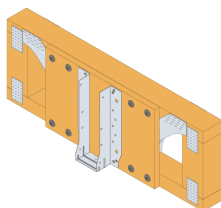
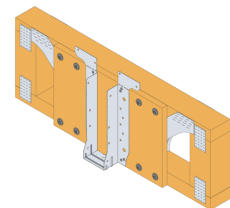
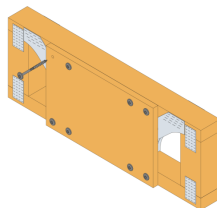
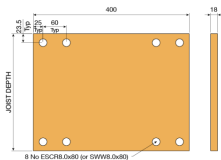
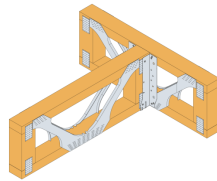
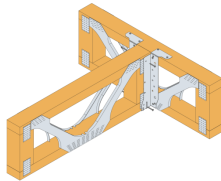
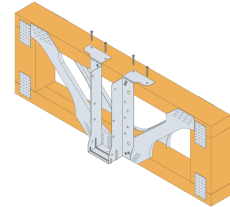
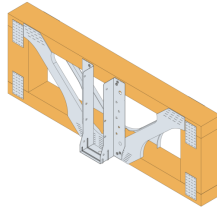
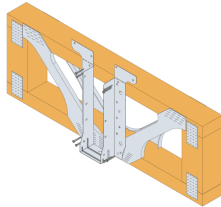
EWH

Engineered Wood Hanger

15. It is recommended for SIP installation that the EWH is installed face fix only.
16. Bend the seat tab upwards so the hanger fits tight against the face of the SIP.
17. 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.
18. Install 4 No CSA 5.0x50mm screws through the upper 4 round holes on the face of the EWH.
19. Tear off the hanger's top flange, along its perforation line.
20. Sit the carried member into the hanger and install 4 No 3.75x30mm square twist nails through the round holes into the side of the supported member.



EWH Engineered Wood Hanger



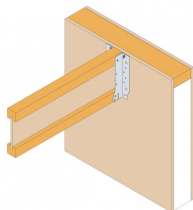
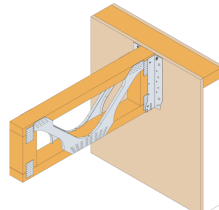
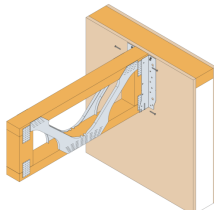
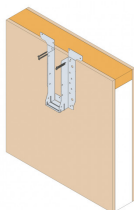
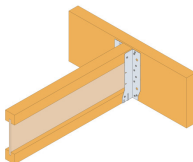
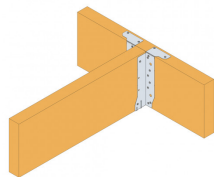
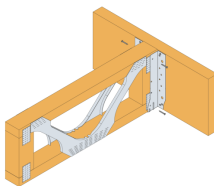
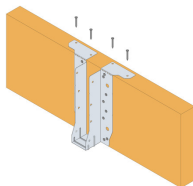
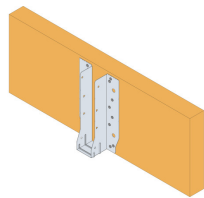
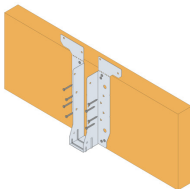
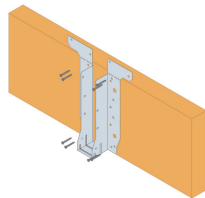
Technical data sheet

SIMPSON

Strong-Tie

EWH

Engineered Wood Hanger



EW
Engineered Wood Hanger



SIMPSON

Strong-Tie