

**SAE AND SAI RANGES ARE HEAVY-DUTY HANGERS DESIGNED FOR APPLICATIONS REQUIRING ADDITIONAL STRENGTH.**

- SAE hangers have bolt holes for 12mm fasteners into the face.
- SAE Timber Bolted capacity to be determined according to the relevant standards. Do not exceed the load values given in the Bolt Attachment table.
- SAI hangers are not recommended for bolted applications.
- The hanger depth is to be at least 60% of the carried member depth to prevent rotation, unless additional lateral restraint is added to the top of the carried member.

**MATERIAL:**

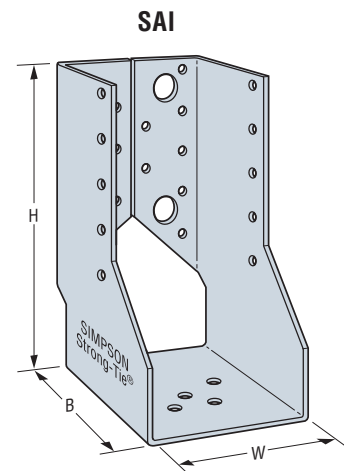
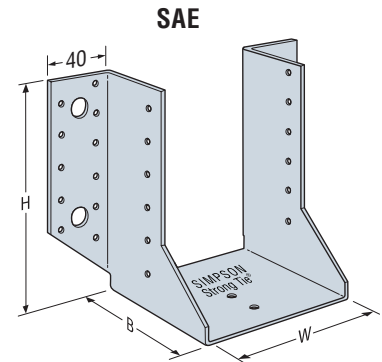
SAE and SAI—2.0mm pre-galvanised mild steel.

**INSTALLATION:**

- Use all specified fasteners. Verify that the header can take the required fasteners specified in the table.
- SAE hangers can be installed by filling all round holes, or all bolt holes, with the specified fasteners. A combination of the two would not give any increase to the performance values.

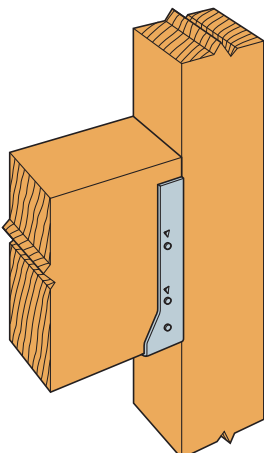
**OPTIONS:**

- Other widths of the SAE hangers are available to order.
- Slope and skew options available for all SAE hangers (without bolt holes).
- For special SAE Hangers, the fastener specifications and performance values may differ from the normal hanger specifications. See SAE Hanger Specials table (page 37) for details.
- Skews right or left up to 67.5° and slopes up or down up to 45°.
- Hangers with skews greater than 15° may have all joist nailing on the outside angle.
- For SAE hangers with combined skews and slopes the maximum SWL is 80% of the medium term loads stated within the table.
- Concealed flanges available on some models. See SAI table for Hanger Range.
- Sloped and skew options can be manufactured, however these would not include bolt holes. Please refer to the “SAE Hangers Specials” table opposite.

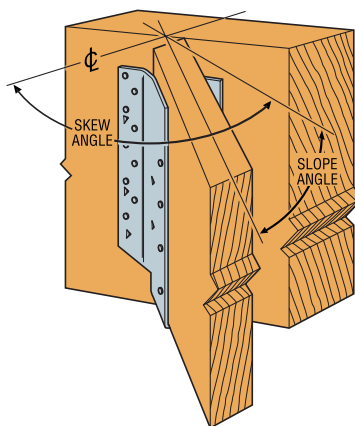


**Not suitable for bolted applications.**

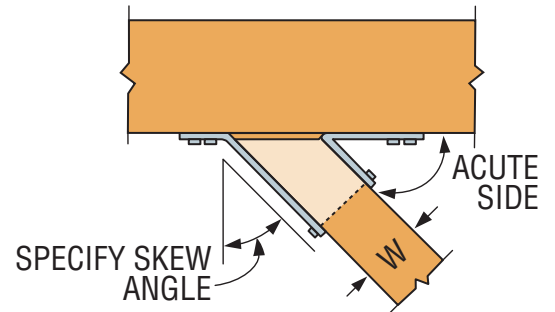
**Typical SAI Installation on a Post**



**Typical SAE(X) Sloped Down, Skewed Right installation (no bolt holes)**



**Top View SAE(X) Hanger Skewed Right (no bolt holes)**





**SAE HANGERS**

Joist Width (mm)	Model No.	Dimensions			Number of Fasteners (Use 3.75mm x 30mm)		Safe Working Load (kN)				Characteristic Capacity (kN)
		W	H	B	Header	Joist	C16		LVL		
							Long Term	Medium Term	Long Term	Medium Term	Download (C24)
38	SAE380/38	38	171	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/38	38	231	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/38	38	291	75	40	22	15.40	17.30	16.90	18.90	17.20
45	SAE380/45	45	168	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/45	45	228	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/45	45	288	75	40	22	15.40	17.30	16.90	18.90	17.20
50	SAE250/50	50	100	84	12	7	4.60	5.20	5.10	5.70	2.90
	SAE380/50	50	165	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/50	50	225	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/50	50	285	75	40	22	15.40	17.30	16.90	18.90	17.20
64	SAE380/64	64	159	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/64	64	219	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/64	64	279	75	40	22	15.40	17.30	16.90	18.90	17.20
76	SAE380/76	76	153	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/76	76	213	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/76	76	273	75	40	22	15.40	17.30	16.90	18.90	17.20
100	SAE380/100	100	140	85	22	12	8.50	9.50	9.30	10.40	8.80
	SAE500/100	100	200	85	34	18	13.10	14.70	14.30	16.10	17.20
	SAE620/100	100	260	75	40	22	15.40	17.30	16.90	18.90	17.20
125	SAE500/125	125	188	78	30	16	11.60	13.00	12.60	14.20	17.20
	SAE620/125	125	248	75	40	22	15.40	17.30	16.90	18.90	17.20
150	SAE500/150	150	175	78	32	16	11.60	13.00	12.60	14.20	17.20
	SAE620/150	150	235	75	40	22	15.40	17.30	16.90	18.90	17.20
200	SAE590/200	200	195	78	30	18	11.60	13.00	12.60	14.20	17.20

**SAI HANGERS**

Joist Width (mm)	Model No.	Dimensions			Number of Fasteners (Use 3.75mm x 30mm)		Safe Working Load (kN)		Characteristic Capacity (kN)
		W	H	B	Header	Joist	C16	LVL	
									Download (C24)
100	SAI380/100	100	140	85	20	10	7.00	7.60	8.50
	SAI500/100	100	200	85	28	18	13.10	14.30	16.80
	SAI620/100	100	260	75	40	22	15.40	16.90	11.70
125	SAI500/125	125	188	78	30	18	11.60	12.70	16.80
	SAI620/125	125	248	75	40	22	15.40	16.90	13.20
150	SAI500/150	150	175	78	32	18	11.60	12.70	14.40
	SAI620/150	150	235	75	40	22	15.40	16.90	13.20
200	SAI590/200	200	195	78	32	18	13.10	14.30	10.00

**SAE HANGERS - BOLT ATTACHMENT**

Model No.	Number of Fasteners		Safe Working Load (kN)					
			Timber Support		Masonry Support			
	Support <sup>4</sup>	Carried Member <sup>5</sup>	Long Term	Medium Term	2.8 N/mm <sup>2</sup>	3.5 N/mm <sup>2</sup>	7 N/mm <sup>2</sup>	20 N/mm <sup>2</sup>
SAE380 - All	4 M12	12	6.95	7.94	1.80	2.20	4.00	4.00
SAE500/38-100	6 M12	18	10.10	11.54	3.60	4.40	8.00	16.00
SAE500/125-150	6 M12	18	7.99	9.13	3.60	4.40	8.00	16.00
SAE620/38-100	8 M12	22	13.03	14.89	3.60	4.40	8.00	16.00
SAE620/125-150	8 M12	22	10.86	12.41	3.60	4.40	8.00	16.00

- Safe working loads apply to bolt attachment only.
- Timber support safe working loads are based upon calculation from BS 5268 Part 2 with grade 4.6 12mm bolts into C16 timber and load testing performed at Simpson Strong-Tie testing facility. Timber support safe working loads apply to a minimum support member thickness of 72mm. Safe working loads for smaller support members must be reduced in accordance with BS 5268 Part 2. Bolts are to be installed in accordance with recommendations within BS 5268: Part 2.
- Masonry support safe working loads are based upon calculation with Rawl R-KF2 and 12mm stud anchors. Select and install fixings according to manufacturers' recommendations. Other manufacturers' anchors can be used. The designer is to check the alternate fixing suitability and reduce the safe working load where limited by the fixing. Contact Simpson Strong-Tie for bolt hole locations.
- M12 Bolts.
- 3.75mm x 30mm Square Twist Nails

**SAE(X) Hanger - SPECIALS TABLE**

Model No.	Dimensions			Number of Fasteners (Use 3.75mm x 30mm)		Safe Working Load (kN)
	W	H	B	Header	Joist	
						Long Term Download
SAE380X	38 - 100	140 - 175	64	14	6	5.40
SAE500X	38 - 150	175 - 235	64	18	8	7.00
SAE620X	38 - 150	235 - 290	64	28	10	10.80

- These hangers are based upon Composite Wood style SAE hangers and contain round and triangular nail holes only. ie. No Bolt Holes.
- SWLs are based upon a maximum nailing schedule—all round and triangular holes filled.
- Skews right or left up to 67.5° and slopes up or down up to 45°.
- For combined skew and sloped hangers the maximum SWL is 90% of the stated loads.
- Enables hangers to be manufactured for any combination of widths and heights listed for a model number.
- To order specify model number, width, height, skew and/or slope.eg SAE380/63 Skewed Right at 15° becomes SAE380X, W = 63, H = 159, SKR = 15° (for no skewed/sloped options please specify skew = 0° & slope = 0°).