



SAE and SAI ranges are heavy-duty hangers designed for applications requiring additional strength.



[UK-DoP-e06/0270](#), [ETA-06/0270](#)

FEATURES

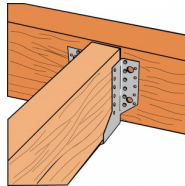
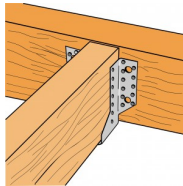


Material

Pre-galvanised mild steel.

Advantage

- Quick and simple installation.



APPLICATIONS

Header member

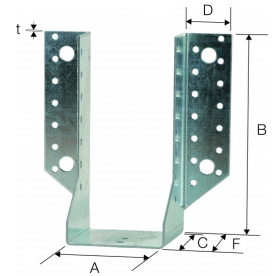
- Solid Timber
- I-Joists
- Steel

For Use With

- Solid sawn timber joists.
- Purlins.

TECHNICAL DATA

Dimensions



References	Joist Size				Dimensions [mm]							Header holes		Joist holes
	Width		Height		A	B	C	D	F	t	Ø5 [mm]	Ø13 [mm]	Ø5 [mm]	
	Min	Max.	Min	Max.										
SAE380/38	36	38	-	-	38	171	84	41.5	86	2	22	4	12	
SAE500/38	36	38	-	-	38	231	84	41.5	86	2	34	6	18	
SAE620/38	36	38	-	-	38	291	84	41.5	86	2	40	8	22	
SAE250/40	38	40	-	-	40	105	84	41.5	86	2	12	2	7	
SAE250/46	44	46	112	153	46	102	84	41.5	86	2	12	2	7	
SAE380/45	43	45	-	-	45	167.5	84	41.5	86	2	22	4	12	
SAE500/46	44	46	-	-	46	227	84	41.5	86	2	34	6	18	
SAE620/44	42	45	-	-	44	288	84	41.5	86	2	40	8	22	
SAE250/50	47	50	-	-	50	100	84	41.5	86	2	12	2	7	
SAE380/50	47	50	-	-	50	165	84	41.5	86	2	22	4	12	
SAE500/50	47	50	-	-	50	225	84	41.5	86	2	34	6	18	
SAE620/50	47	50	-	-	50	285	84	41.5	86	2	40	8	22	
SAE380/64	62	64	-	-	64	158	84	41.5	86	2	22	4	12	
SAE500/64	62	64	-	-	64	218	84	41.5	86	2	34	6	18	
SAE620/64	62	64	-	-	64	278	84	41.5	86	2	40	8	22	
SAE380/66	64	66	-	-	66	157	84	41.5	86	2	22	4	12	
SAE500/66	64	66	-	-	66	217	84	41.5	86	2	34	6	18	
SAE250/76	74	76	-	-	76	87	84	41.5	86	2	12	2	7	
SAE380/76	74	76	-	-	76	152	84	41.5	86	2	22	4	12	
SAE500/76	74	76	-	-	76	212	84	41.5	86	2	34	6	18	
SAE620/76	74	76	-	-	76	272	84	41.5	86	2	40	8	22	
SAE380/92	2x45	92	-	-	92	144	84	41.5	86	2	22	4	12	
SAE500/90	88	2x45	-	-	90	205	84	41.5	86	2	34	6	18	
SAE620/91	2x45	91	-	-	91	264.5	84	41.5	86	2	40	8	22	
SAE380/100	98	100	-	-	100	140	84	41.5	86	2	22	4	12	
SAE500/100	98	100	-	-	100	200	84	41.5	86	2	34	6	18	
SAE620/100	98	100	-	-	100	260	84	41.5	86	2	40	8	22	
SAE620/116	114	116	-	-	116	252	84	41.5	86	2	40	8	22	
SAE500/125	123	125	-	-	125	187.5	84	41.5	86	2	30	6	16	
SAE620/125	123	125	-	-	125	247.5	84	41.5	86	2	40	8	22	
SAEL500/150	148	150	-	-	150	175	84	41.5	86	2	30	6	16	
SAE620/150	148	150	-	-	150	235	84	41.5	86	2	40	8	22	
SAE590/200	198	200	-	-	200	195	84	41.5	86	2	30	6	20	

Product Capacities

References	Characteristic capacities - Timber to timber - Full nailing							
	Fasteners		Product characteristic capacities - Timber C24 [kN]			Safe Working Load		
	Header	Joist	R _{1,k}		R _{2,k}	R _{1,SWL,Long term}		R _{2,SWL,Short term}
	Qty	Qty	N3.75x30 - C16 Header	N3.75x30 - C16 Header	N3.75x30 - C16 Joist	C16 header N3.75x30	C24 header N3.75x30	C16 Joist N3.75x30
SAE380/38	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/38	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/38	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE250/40	12	7	12.7	13.5	5.9	5.3	5.6	3
SAE250/46	12	7	12.7	13.5	5.9	5.3	5.6	3
SAE380/45	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/46	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/44	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE250/50	12	7	12.7	13.5	5.9	5.3	5.6	3
SAE380/50	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/50	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/50	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE380/64	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/64	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/64	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE380/66	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/66	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE250/76	12	7	12.7	13.5	5.9	5.3	5.6	3
SAE380/76	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/76	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/76	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE380/92	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/90	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/91	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE380/100	22	12	20.3	21.6	10.2	8.4	9	5.1
SAE500/100	34	18	35.5	37.8	15.2	14.8	15.8	7.6
SAE620/100	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE620/116	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE500/125	30	16	29.4	31.4	13.6	12.3	13.1	6.8
SAE620/125	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAEL500/150	30	16	29.4	31.4	13.6	12.3	13.1	6.8
SAE620/150	40	22	46.9	50.1	18.6	19.6	20.9	9.3
SAE590/200	30	20	29.4	31.4	16.9	12.3	13.1	8.5

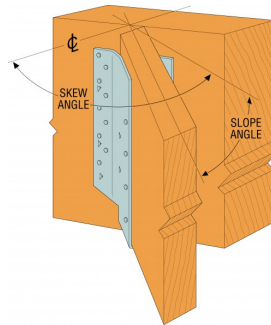
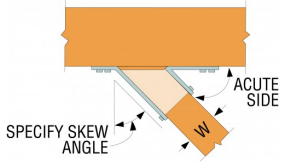
SAE Hangers - Bolt Attachment

References	Fasteners qty		Safe Working Loads [kN]					
	Support ⁽⁴⁾	Carried Member ⁵	Timber Support		Masonry support			
			Long Term	Medium term	2.8 N/mm ²	3.5 N/mm ²	7 N/mm ²	20 N/mm ²
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

1. Safe working loads apply to bolt attachment only.
2. 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.
3. 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.

- 4. M12 Bolts.
- 5. 3.75 x 30mm Square Twist Nails

SAE(X) Made to Order Specials



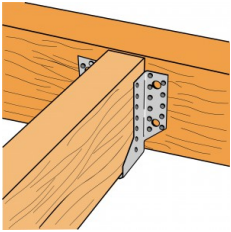
References	Dimensions [mm]						Fasteners		Safe Working Load		
	A	B	C	D	F	t	Header	Joist	R _{1,SWL,Long term}		R _{2,SWL,Short term}
							Qty	Qty	C16 header N3.75x30	C24 header N3.75x30	C16 Joist N3.75x30
SAE380X	38 - 100	140 - 175	84	41.5	86	2	14	6	-	5.4	-
SAE500X	38 - 150	175 - 235	84	41.5	86	2	18	8	-	7	-
SAE620X	38 - 150	235 - 290	84	41.5	86	2	28	10	-	10.8	-

1. These hangers are based upon Composite Wood style SAE hangers and contain round and triangular nail holes only. (ie. **No Bolt Holes**).
2. SWL's are based upon a maximum nailing schedule—all round and triangular holes filled.
3. 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 80% of the stated loads.
4. Enables hangers to be manufactured for any combination of widths and heights listed for a model number.
5. To order specify model number, width, height, skew and/or slope. eg SAE380/63 Skewed Right at 15° becomes SAE380X, A = 63, B = 159, SKR = 15° (for no skewed/sloped options please specify skew = 0° & slope = 0°).

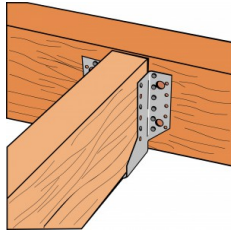
INSTALLATION

Fasteners

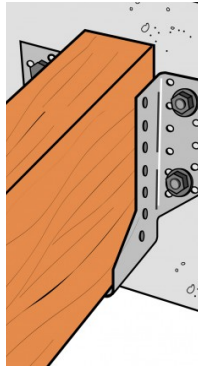
- Install using 3.75 x 30mm square twist nails.



Clouage total
sur bois



Clouage partiel
sur bois



Fixation sur
support rigide

TECHNICAL NOTES