

Solid Sawn and Glulam Beam Joist Hangers

SAE Face Mount Joist Hanger

The SAE face mount joist hanger is designed for applications where extra load resistance is needed.

- May be fastened to the header material with either nails or bolts.
- Can be installed on timber header or concrete/masonry wall.
- Stainless steel versions available for applications that require a superior level of corrosion resistance.

Material: 2.0mm thick; Stainless steel versions 1.5mm thick.

Finish: Galvanised. Some models available in AISI Type 316L stainless steel. See Corrosion Information.

Installation

- Use all specified fasteners. See General Notes.
- Verify that the header can take the 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.
- The hangers have bolt holes for 10mm or 12mm fasteners into the face.
- The timber bolted capacity to be determined according to the relevant standards. Do not exceed the load values given in the table.
- 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.

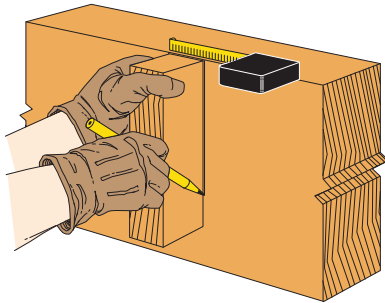
Note

- These hangers cannot be skewed.

Typical Installation

STEP 1: Locate the SAE and install specified fasteners into the carrying member.

PLEASE NOTE: Don't combine bolts and nails.



STEP 2: Place the joist and install specified fasteners into the joist.

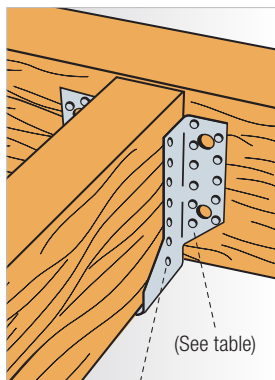
OPTION 1: All holes

OPTION 2: Some holes

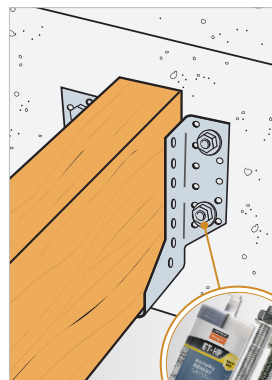
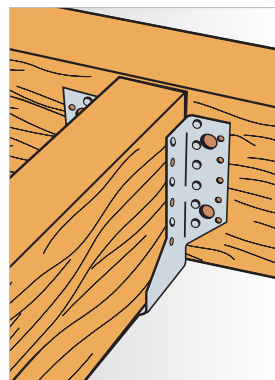
OPTION 3: Concrete/masonry

OPTION 4: I-joist

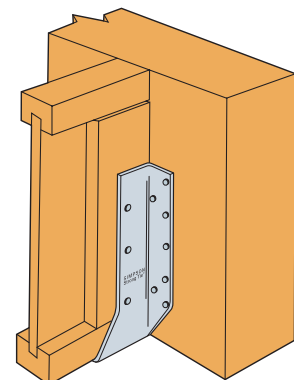
If top of I-joist passes top of connector, you will be required to properly attached web stiffeners.



(See table)



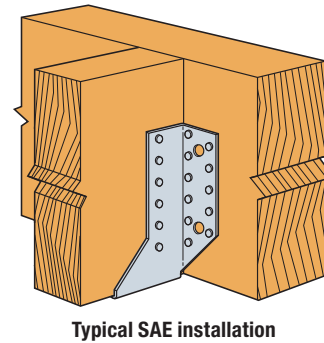
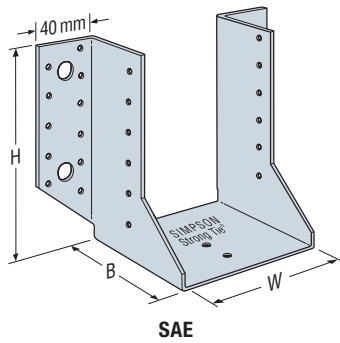
Install options see page 100



SAE



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SAE Technical Data

Joist Size (mm)		Model No.	Dimensions ^a (mm)			Fasteners (No. – Length x Dia., mm)		Country	Design Capacity (kN)			
Width	Height		W	H	B	Face	Joist		Uplift	Download		
									Floor	Roof		
35	90–120	SAE200/38/2	38	81	84	8 – 40 x 3.75	5 – 40 x 3.75	AU	$k_1 = 1.14$ 3.98	$k_1 = 0.69$ 6.25	$k_1 = 0.77$ 6.50	
								NZ	$k_1 = 1.0$ 3.75	$k_1 = 0.80$ 5.70	$k_1 = 0.80$ 5.70	
	115–155	SAE250/38/2	38	106	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$ 5.57	$k_1 = 0.69$ 7.27	$k_1 = 0.77$ 7.27	
								NZ	$k_1 = 1.0$ 5.24	$k_1 = 0.80$ 6.84	$k_1 = 0.80$ 6.84	
	165–225	SAE340/38/2	38	151	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$ 9.55	$k_1 = 0.69$ 13.06	$k_1 = 0.77$ 13.06	
								NZ	$k_1 = 1.0$ 8.99	$k_1 = 0.80$ 13.06	$k_1 = 0.80$ 13.06	
	185–225	SAE380/38/2	38	171	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$ 9.55	$k_1 = 0.69$ 13.06	$k_1 = 0.77$ 13.06	
								NZ	$k_1 = 1.0$ 8.99	$k_1 = 0.80$ 13.06	$k_1 = 0.80$ 13.06	
	240–340	SAE500/38/2	38	231	84	34 – 40 x 3.75	18 – 40 x 3.75	AU	$k_1 = 1.14$ 14.33	$k_1 = 0.69$ 15.35	$k_1 = 0.77$ 15.35	
								NZ	$k_1 = 1.0$ 13.49	$k_1 = 0.80$ 14.44	$k_1 = 0.80$ 14.44	
	300–475	SAE620/38/2	38	291	75	40 – 40 x 3.75	22 – 40 x 3.75	AU	$k_1 = 1.14$ 17.51	$k_1 = 0.69$ 24.55	$k_1 = 0.77$ 24.55	
								NZ	$k_1 = 1.0$ 16.48	$k_1 = 0.80$ 23.11	$k_1 = 0.80$ 23.11	
45	90–120	SAE200/46/2	45	77	84	8 – 40 x 3.75	4 – 40 x 3.75	AU	$k_1 = 1.14$ 3.18	$k_1 = 0.69$ 6.25	$k_1 = 0.77$ 6.50	
								NZ	$k_1 = 1.0$ 3.00	$k_1 = 0.80$ 5.70	$k_1 = 0.80$ 5.70	
	115–150	SAE250/46/2	45	102	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$ 5.57	$k_1 = 0.69$ 7.27	$k_1 = 0.77$ 7.27	
								NZ	$k_1 = 1.0$ 5.24	$k_1 = 0.80$ 6.84	$k_1 = 0.80$ 6.84	
	160–220	SAE340/46/2	45	147	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$ 9.55	$k_1 = 0.69$ 13.06	$k_1 = 0.77$ 13.06	
								NZ	$k_1 = 1.0$ 8.99	$k_1 = 0.80$ 13.06	$k_1 = 0.80$ 13.06	
	240–340	SAE500/46/2	46	227	84	34 – 40 x 3.75	18 – 40 x 3.75	AU	$k_1 = 1.14$ 14.33	$k_1 = 0.69$ 18.60	$k_1 = 0.77$ 18.60	
								NZ	$k_1 = 1.0$ 13.49	$k_1 = 0.80$ 18.60	$k_1 = 0.80$ 18.60	
	300–475	SAE620/44/2	45	288	75	40 – 40 x 3.75	22 – 40 x 3.75	AU	$k_1 = 1.14$ 17.51	$k_1 = 0.69$ 24.55	$k_1 = 0.77$ 24.55	
								NZ	$k_1 = 1.0$ 16.48	$k_1 = 0.80$ 23.11	$k_1 = 0.80$ 23.11	
	50	90–115	SAE200/50/2	50	75	84	8 – 40 x 3.75	4 – 40 x 3.75	AU	$k_1 = 1.14$ 3.18	$k_1 = 0.69$ 6.25	$k_1 = 0.77$ 6.50
									NZ	$k_1 = 1.0$ 3.00	$k_1 = 0.80$ 5.70	$k_1 = 0.80$ 5.70
115–150		SAE250/50/2	50	100	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$ 5.57	$k_1 = 0.69$ 7.27	$k_1 = 0.77$ 7.27	
								NZ	$k_1 = 1.0$ 5.24	$k_1 = 0.80$ 6.84	$k_1 = 0.80$ 6.84	
160–215		SAE340/50/2	50	145	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$ 9.55	$k_1 = 0.69$ 13.06	$k_1 = 0.77$ 13.06	
								NZ	$k_1 = 1.0$ 8.99	$k_1 = 0.80$ 13.06	$k_1 = 0.80$ 13.06	

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SAE Technical Data (cont.)

Joist Size (mm)		Model No.	Dimensions ^s (mm)			Fasteners (No. – Length x Dia., mm)		Country	Design Capacity (kN)			
Width	Height		W	H	B	Face	Joist		Uplift	Download		
									Floor	Roof		
63	90–100	SAE200/64/2	64	68	84	8 – 40 x 3.75	4 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	3.18	6.26	6.50	
	115–135	SAE250/64/2	64	93	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	5.57	7.27	7.27	
	130–175	SAE300/64/2	64	118	84	18 – 40 x 3.75	10 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	6.37	9.07	9.07	
	170–205	SAE340/64/2	64	138	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	9.55	13.06	13.06	
	170–235	SAE380/64/2	64	158	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	8.99	13.06	13.06	
	225–340	SAE500/64/2	64	218	84	34 – 40 x 3.75	18 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	14.33	18.60	18.60	
	285–460	SAE620/64/2	64	279	75	40 – 40 x 3.75	22 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	17.51	24.55	24.55	
	70	170–225	SAE380/70/2	70	155	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	9.55	13.06	13.06
	75	95–130	SAE250/76/2	76	87	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	5.57	7.27	7.27
		115–150	SAEL300/76/2	76	112	84	16 – 40 x 3.75	8 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	6.37	7.27	7.27
		165–225	SAE380/76/2	76	152	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	5.99	6.84	6.84
		225–340	SAE500/76/2	76	212	84	34 – 40 x 3.75	18 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	9.55	13.06	13.06
285–450		SAE620/76/2	76	273	75	40 – 40 x 3.75	22 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	8.99	13.06	13.06	
90		160–215	SAE380/90/2	90	145	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	9.55	13.06	13.06
45		115–150	SAE250/46/1.5SS	46	102	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	5.57	8.74	8.90
160–220		SAE340/46/1.5SS	46	147	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	5.24	8.38	8.38	
50		115–150	SAE250/50/1.5SS	50	100	84	12 – 40 x 3.75	7 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$
									NZ	10.67	11.01	11.01
160–215		SAE340/50/1.5SS	50	145	84	22 – 40 x 3.75	12 – 40 x 3.75	AU	$k_1 = 1.14$	$k_1 = 0.69$	$k_1 = 0.77$	
								NZ	10.67	11.01	11.01	

1. Design Capacity is the lesser of (1) the Characteristic Capacity multiplied by the Australian Capacity Factor, or the NZ Strength Reduction Factor ϕ , and applicable the k modification factors following AS 1720.1 and NZS 3603 and (2) the Serviceability Capacity which is the load at 3.2mm joint slip. Design Capacity is the minimum of test data and structural joint calculation.
2. For Australia, the Capacity Factor (ϕ) is 0.85 for nails and screws for structural joints in a Category 1 application. Reduce tabulated values where other Category applications govern. For NZ, the Strength Reduction Factor (ϕ) is 0.80 for nails in lateral loading.
3. Duration of Load Factor (k_1) is as shown. Reduce Duration of Load Factor where applicable. Capacities may not be increased.
4. Timber species for joint design is seasoned Radiata Pine, which is Australia Joint Group JD4 per AS 1720.1 Table H2.4 and New Zealand Joint Group J5 per NZS 3603 Table 4.1.
5. Dimensions W, H and B are for the interior of the hanger.

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