



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



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

## FEATURES

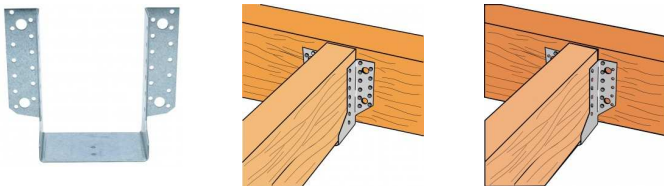


### Material

Pre-galvanised mild steel.

### Advantage

- Quick and simple installation.



## APPLICATIONS



### Header member

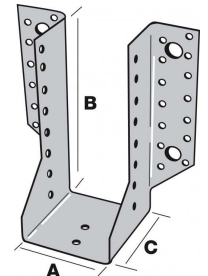
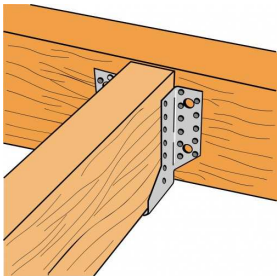
- Solid Timber
- I-Joists
- Steel

### For use with

- Solid sawn timber joists.
- Purlins.

TECHNICAL DATA

Full Nailing on timber



| References  | Joist<br>Width<br>[mm] | Dimensions [mm] |       |    |     | Fasteners |       |          | Safe Working Loads [kN]                           |                       |               | Characteristic values [kN]       |            |               |
|-------------|------------------------|-----------------|-------|----|-----|-----------|-------|----------|---|-----------------------|---------------|----------------------------------|------------|---------------|
|             |                        | A               | B     | C  | Th. | Qty       |       | Type     | Short<br>term<br>Uplift<br>(Joist<br>C16)<br>C16) | Long term<br>download |               | Uplift<br>(Joist<br>C16)<br>C16) | Download   |               |
|             |                        |                 |       |    |     | Header    | Joist |          |   | C16 Header            | C24<br>Header |                                  | C16 Header | C24<br>Header |
| SAE690X     | 201 - 300              | 201 - 300       | 195   | 78 | 2   | 30        | 20    | N3.75x30 | 8.5   | 12.3                  | 13.1          | 16.9                             | 29.4       | 31.4          |
| SAE380/38   | 38                     | 38              | 171   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/38   |                        | 38              | 231   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/38   |                        | 38              | 291   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE250/46   | 45                     | 46              | 102   | 84 | 2   | 12        | 7     | N3.75x30 | 3   | 5.3                   | 5.6           | 5.9                              | 12.7       | 13.5          |
| SAE380/45   |                        | 45              | 167.5 | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/46   |                        | 46              | 227   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/44   | 47-50                  | 44              | 288   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE250/50   |                        | 50              | 100   | 84 | 2   | 12        | 7     | N3.75x30 | 3   | 5.3                   | 5.6           | 5.9                              | 12.7       | 13.5          |
| SAE380/50   |                        | 50              | 165   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/50   | 63                     | 50              | 225   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/50   |                        | 50              | 285   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE380/64   |                        | 64              | 158   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/64   | 100                    | 64              | 218   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/64   |                        | 64              | 278   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE380/66   |                        | 66              | 157   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/66   | 115                    | 66              | 217   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE380/100  |                        | 100             | 140   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/100  |                        | 100             | 200   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/100  | 125                    | 100             | 260   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE620/116  |                        | 116             | 252   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE500/125  |                        | 125             | 187.5 | 84 | 2   | 30        | 16    | N3.75x30 | 6.8   | 12.3                  | 13.1          | 13.6                             | 29.4       | 31.4          |
| SAE620/125  | 150                    | 125             | 247.5 | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAEL500/150 |                        | 150             | 175   | 84 | 2   | 30        | 16    | N3.75x30 | 6.8   | 12.3                  | 13.1          | 13.6                             | 29.4       | 31.4          |
| SAE620/150  |                        | 150             | 235   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE590/200  | 75-76                  | 200             | 195   | 78 | 2   | 30        | 20    | N3.75x30 | 8.5   | 12.3                  | 13.1          | 16.9                             | 29.4       | 31.4          |
| SAE250/76   |                        | 76              | 87    | 84 | 2   | 12        | 7     | N3.75x30 | 3   | 5.3                   | 5.6           | 5.9                              | 12.7       | 13.5          |
| SAE380/76   |                        | 76              | 152   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/76   | 88-2<br>Ply 44         | 76              | 212   | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/76   |                        | 76              | 272   | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |
| SAE380/90   |                        | 90              | 145   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE380/92   | 91                     | 92              | 144   | 84 | 2   | 22        | 12    | N3.75x30 | 5.1   | 8.4                   | 9             | 10.2                             | 20.3       | 21.6          |
| SAE500/91   |                        | 91              | 204.5 | 84 | 2   | 34        | 18    | N3.75x30 | 7.6   | 14.8                  | 15.8          | 15.2                             | 35.5       | 37.8          |
| SAE620/91   |                        | 91              | 264.5 | 75 | 2   | 40        | 22    | N3.75x30 | 9.3   | 19.6                  | 20.9          | 18.6                             | 46.9       | 50.1          |

Dimensions A, B and C are for the interior of the hanger.

**SAE Hangers - Bolt Attachment**

| References     | Qty Fasteners        |                             | Safe Working Loads [kN] |        |                       |                       |                       |                      |
|----------------|----------------------|-----------------------------|-------------------------|--------|-----------------------|-----------------------|-----------------------|----------------------|
|                | Support <sup>4</sup> | Carried Member <sup>5</sup> | Timber Support          |        | Masonry Support       |                       |                       |                      |
|                |                      |                             | Long Term               | Medium | 2.8 N/mm <sup>2</sup> | 3.5 N/mm <sup>2</sup> | 7.0 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.
- 3.75 x 30mm Square Twist Nails

**SAE(X) Made to Order Specials**



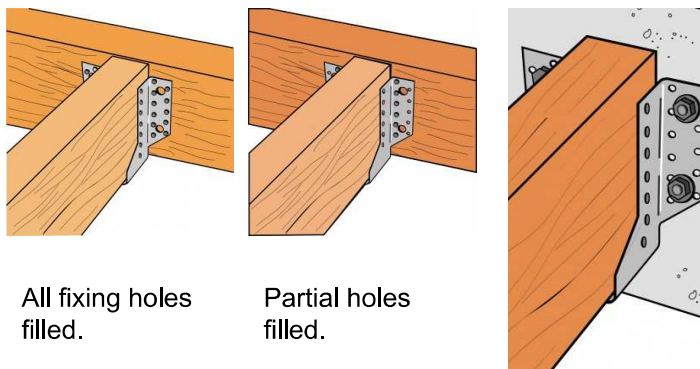
| References | Dimensions [mm] |         |    |     | Fasteners |       |         | Safe Working Load [kN] |
|------------|-----------------|---------|----|-----|-----------|-------|---------|------------------------|
|            | A               | B       | C  | Th. | Qty       |       | Type    | Long Term Download     |
|            |                 |         |    |     | Header    | Joist |         |                        |
| SAE380X    | 38-100          | 140-175 | 64 | 2   | 14        | 6     | 3.75x30 | 5.40                   |
| SAE500X    | 38-150          | 175-235 | 64 | 2   | 18        | 8     | 3.75x30 | 7.00                   |
| SAE620X    | 38-150          | 235-290 | 64 | 2   | 28        | 10    | 3.75x30 | 10.80                  |

- These hangers are based upon Composite Wood style SAE hangers and contain round and triangular nail holes only. (ie. **No Bolt Holes**).
- SWL's 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 80% 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°).

## INSTALLATION

### Fasteners

- Install using 3.75 x 30mm square twist nails.



All fixing holes  
filled.

Partial holes  
filled.

Support on  
concrete.

## TECHNICAL NOTES

[SAE position des percages.pdf](#)