MSC

Multiple-Seat Top-Flange Connector

The MSC supports the ridge and two valleys for roof construction. Ideal for dormer roof applications.

Material: Top flange — 3 gauge; stirrups — 11 gauge (MSC2 and MSC1.81), 7 gauge (MSC4 and MSC5)

Finish: Simpson Strong-Tie gray paint. HDG available; contact Simpson Strong-Tie.

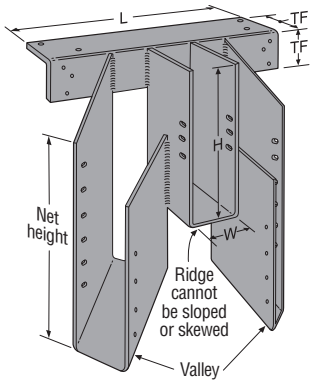
Installation:

- Distribute the total load evenly about the centerline to avoid eccentric loading
- Fasten all built-up members together as one unit
- Net height will be calculated based on specified valley member depth and slope by the factory unless noted otherwise

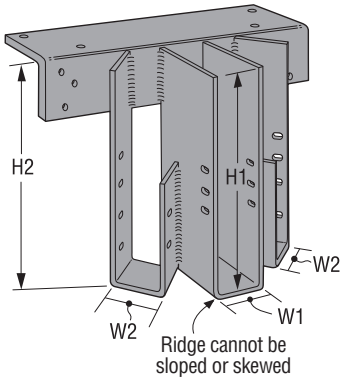
Sloped and/or Skewed Valleys

- The valley stirrups can be sloped down to 45° and skewed from 25° to 45°. (MSC5 skewed 20°–45°.)
- Reminder: Hip and valley slopes are typically much different than roof slopes. See **strongtie.com** Slope and Skew Calculator for assistance in computing slopes and skews.
- The total design load of the hanger is split between the ridge (20%) and each valley (40%).
- MSC connectors can be used for two valley connections with no ridge member. Divide the total load by two for each valley load.
- Hip/valley connections and many combinations of joist sizes, slopes and skews can be manufactured (refer to technical bulletin T-C-MSC-WS at **strongtie.com**).

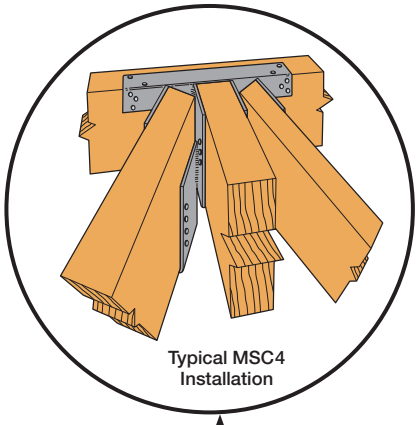
Codes: See p. 11 for Code Reference Key Chart



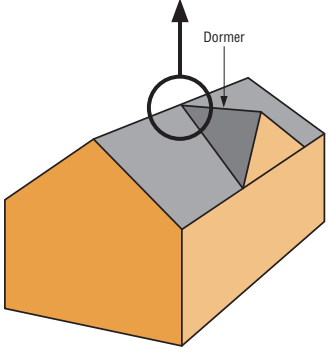
MSC4 with Valley Sloped and Skewed 45°



MSC1.81 with Valley Skewed 45° and Sloped 0°



Typical MSC4 Installation



These products are available with additional corrosion protection. For more information, see p. 14.

Model No.	Dimensions (in.) W	H (Min.)	TF	L	Fasteners (in.) Header	Joist	Hips Max. Skew	Max. Slope	Allowable Loads DF/SP Floor/Snow/Roof (100/115/125) Valley	Ridge	Total	Code Ref.
MSC2	1⁹⁄₁₆	5½	2⅞	12	(10) 0.162 x 3½	(18) 0.148 x 1½	45°	0°	2,270	1,130	5,670	—
						(26) 0.148 x 1½		45°	1,800	900	4,495	
MSC1.81	1 ¹³⁄₁₆	5½	2⅞	12	(10) 0.162 x 3½	(18) 0.148 x 1½	45°	0°	2,270	1,130	5,670	
						(26) 0.148 x 1½		45°	1,800	900	4,495	
MSC4	3⁹⁄₁₆	7½	2⅞	18	(10) 0.162 x 3½	(18) 0.148 x 3	45°	0°	2,985	1,490	7,460	
						(26) 0.148 x 3		45°	2,985	1,490	7,460	
MSC5	5¼	9½	2⅞	26	(13) 0.162 x 3½	(18) 0.162 x 3½	45°	0°	5,775	2,880	14,430	
						(26) 0.162 x 3½		45°	5,630	2,815	14,075	

1. Valley loads are for each valley.
2. Other valley-ridge load distributions are allowed, provided the load sum of all three carried members is distributed symmetrically about the center of the hanger and combined does not exceed the total load.
3. MSC4 is also available in 3⅛" glulam width.
4. MSC5 is also available in widths up to 5½". W_2 minimum width is 3⅛".
5. MSC4 is also available in widths down to 1⁹⁄₁₆". Use 0.148" x 1½" nails and MSC2 allowable loads.
6. Refer to technical bulletin T-C-MSC-WS at **strongtie.com** for the hip/valley rafter roof pitch conversion table.
7. **Fasteners:** Nail dimensions are listed diameter by length. See pp. 21–22 for fastener information.

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