

# MSC Multiple Seat Connector

Job No: \_\_\_\_\_ Take Off By: \_\_\_\_\_ Date Needed: \_\_\_\_\_ Date Ordered: \_\_\_\_\_

Model Number: \_\_\_\_\_ Quantity: \_\_\_\_\_

**RIDGE INFORMATION**

**ACTUAL DIMENSIONS:** (Provide lumber dimensions in inches)

Joist Width (Fig. 1 or 2) = \_\_\_\_\_

Joist Height (Fig. 1 or 2) = \_\_\_\_\_  
(Example: 4x6 = 3.5" x 5.5" actual size)

**VALLEY INFORMATION**

**ACTUAL DIMENSIONS:** (Provide lumber dimensions in inches)

Joist Width (Fig. 1 or 2) = \_\_\_\_\_

Joist Height (Fig. 1 or 2) = \_\_\_\_\_  
(Example: 4x6 = 3.5" x 5.5" actual size)  
(Net Height is computed by Simpson unless specified otherwise.  
Both Valley members must be equal dimensions)

Hip/Valley Skew (45° MAX)

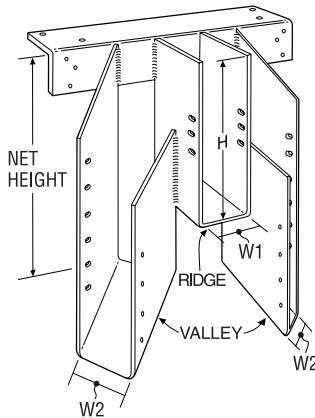
Angle = \_\_\_\_\_  
(Specify degree)

Hip/Valley Slope (45° MAX)

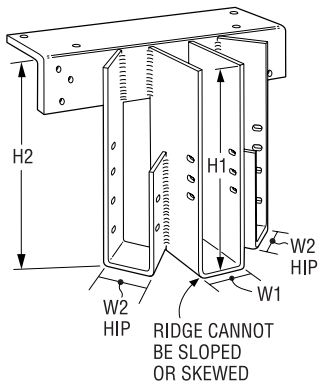
Angle = \_\_\_\_\_ Direction = UP or DOWN  
(Specify degree, not the pitch) (Circle one)

When hips are sloped, a hip/valley rafter condition is present.  
See hip/valley rafter roof pitch conversion chart on back.

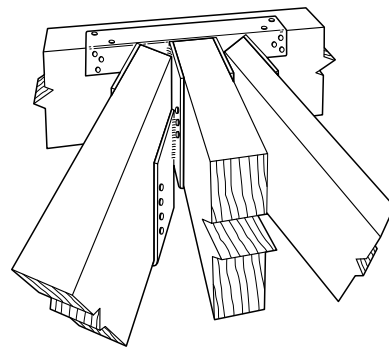
**Figure 1 - Sloped down and skewed**



**Figure 2 - Skewed only**



**Typical MSC Installation (Sloped down and skewed)**



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**Home Office**  
4120 Dublin Blvd., Ste 400  
Dublin, CA 94568  
FAX: 925/833-1496

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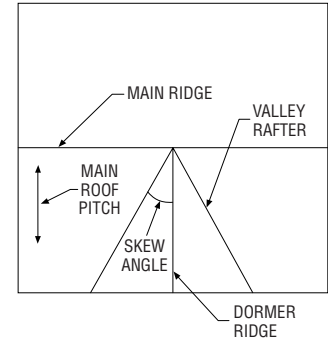


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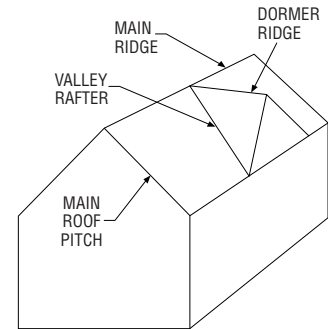
## Hip/Valley Rafter Roof Pitch Conversion Chart

Skew Angle (deg.)	Effective Valley Rafter Slope (deg. s)											
	Main Roof Pitch (Rise:Run)											
	1:12	2:12	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
0	4.8	9.5	14.0	18.4	22.6	26.6	30.3	33.7	36.9	39.8	42.5	45.0
1	4.8	9.5	14.0	18.4	22.6	26.6	30.3	33.7	36.9	39.8	42.5	45.0
2	4.8	9.5	14.0	18.4	22.6	26.6	30.2	33.7	36.9	39.8	42.5	45.0
3	4.8	9.4	14.0	18.4	22.6	26.5	30.2	33.7	36.8	39.8	42.5	45.0
4	4.8	9.4	14.0	18.4	22.6	26.5	30.2	33.6	36.8	39.7	42.4	44.9
5	4.7	9.4	14.0	18.4	22.5	26.5	30.2	33.6	36.8	39.7	42.4	44.9
6	4.7	9.4	14.0	18.3	22.5	26.4	30.1	33.5	36.7	39.7	42.4	44.8
7	4.7	9.4	13.9	18.3	22.5	26.4	30.1	33.5	36.7	39.6	42.3	44.8
8	4.7	9.4	13.9	18.3	22.4	26.3	30.0	33.4	36.6	39.5	42.2	44.7
9	4.7	9.3	13.9	18.2	22.4	26.3	29.9	33.4	36.5	39.5	42.2	44.6
10	4.7	9.3	13.8	18.2	22.3	26.2	29.9	33.3	36.4	39.4	42.1	44.6
11	4.7	9.3	13.8	18.1	22.2	26.1	29.8	33.2	36.4	39.3	42.0	44.5
12	4.7	9.3	13.7	18.1	22.2	26.1	29.7	33.1	36.3	39.2	41.9	44.4
13	4.6	9.2	13.7	18.0	22.1	26.0	29.6	33.0	36.2	39.1	41.8	44.3
14	4.6	9.2	13.6	17.9	22.0	25.9	29.5	32.9	36.0	39.0	41.7	44.1
15	4.6	9.1	13.6	17.8	21.9	25.8	29.4	32.8	35.9	38.8	41.5	44.0
16	4.6	9.1	13.5	17.8	21.8	25.7	29.3	32.7	35.8	38.7	41.4	43.9
17	4.6	9.1	13.4	17.7	21.7	25.6	29.2	32.5	35.6	38.6	41.2	43.7
18	4.5	9.0	13.4	17.6	21.6	25.4	29.0	32.4	35.5	38.4	41.1	43.6
19	4.5	9.0	13.3	17.5	21.5	25.3	28.9	32.2	35.3	38.2	40.9	43.4
20	4.5	8.9	13.2	17.4	21.4	25.2	28.7	32.1	35.2	38.1	40.7	43.2
21	4.4	8.8	13.1	17.3	21.3	25.0	28.6	31.9	35.0	37.9	40.6	43.0
22	4.4	8.8	13.1	17.2	21.1	24.9	28.4	31.7	34.8	37.7	40.4	42.8
23	4.4	8.7	13.0	17.1	21.0	24.7	28.2	31.5	34.6	37.5	40.2	42.6
24	4.4	8.7	12.9	16.9	20.8	24.5	28.1	31.3	34.4	37.3	39.9	42.4
25	4.3	8.6	12.8	16.8	20.7	24.4	27.9	31.1	34.2	37.1	39.7	42.2
26	4.3	8.5	12.7	16.7	20.5	24.2	27.7	30.9	34.0	36.8	39.5	41.9
27	4.2	8.4	12.6	16.5	20.4	24.0	27.5	30.7	33.8	36.6	39.2	41.7
28	4.2	8.4	12.4	16.4	20.2	23.8	27.3	30.5	33.5	36.3	39.0	41.4
29	4.2	8.3	12.3	16.3	20.0	23.6	27.0	30.2	33.3	36.1	38.7	41.2
30	4.1	8.2	12.2	16.1	19.8	23.4	26.8	30.0	33.0	35.8	38.4	40.9
31	4.1	8.1	12.1	15.9	19.7	23.2	26.6	29.7	32.7	35.5	38.2	40.6
32	4.0	8.0	12.0	15.8	19.5	23.0	26.3	29.5	32.5	35.2	37.9	40.3
33	4.0	8.0	11.8	15.6	19.3	22.8	26.1	29.2	32.2	34.9	37.6	40.0
34	4.0	7.9	11.7	15.4	19.1	22.5	25.8	28.9	31.9	34.6	37.2	39.7
35	3.9	7.8	11.6	15.3	18.8	22.3	25.5	28.6	31.6	34.3	36.9	39.3
36	3.9	7.7	11.4	15.1	18.6	22.0	25.3	28.3	31.2	34.0	36.6	39.0
37	3.8	7.6	11.3	14.9	18.4	21.8	25.0	28.0	30.9	33.6	36.2	38.6
38	3.8	7.5	11.1	14.7	18.2	21.5	24.7	27.7	30.6	33.3	35.8	38.2
39	3.7	7.4	11.0	14.5	17.9	21.2	24.4	27.4	30.2	32.9	35.5	37.9
40	3.7	7.3	10.8	14.3	17.7	21.0	24.1	27.1	29.9	32.6	35.1	37.5
41	3.6	7.2	10.7	14.1	17.5	20.7	23.8	26.7	29.5	32.2	34.7	37.0
42	3.5	7.1	10.5	13.9	17.2	20.4	23.4	26.4	29.1	31.8	34.3	36.6
43	3.5	6.9	10.4	13.7	16.9	20.1	23.1	26.0	28.7	31.4	33.8	36.2
44	3.4	6.8	10.2	13.5	16.7	19.8	22.8	25.6	28.3	30.9	33.4	35.7
45	3.4	6.7	10.0	13.3	16.4	19.5	22.4	25.2	27.9	30.5	33.0	35.3

1. Valley Slope Angle:  $\phi = \tan^{-1} [(Rise \times \cos \theta)/Run]$ ,  $\theta =$  Skew Angle.



Roof Plan View for Dormer



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