



www.strongtie.com

Conversion Charts

**If Common
Rafter Roof
Pitch is...**

**Then Hip/Valley
Rafter Roof
Pitch becomes...**

Rise/Run	Slope	Rise/Run	Slope
1/12	5°	1/17	3°
2/12	10°	2/17	7°
3/12	14°	3/17	10°
4/12	18°	4/17	13°
5/12	23°	5/17	16°
6/12	27°	6/17	19°
7/12	30°	7/17	22°
8/12	34°	8/17	25°
9/12	37°	9/17	28°
10/12	40°	10/17	30°
11/12	42°	11/17	33°
12/12	45°	12/17	35°

Use this conversion table only for hip/valley rafters that are skewed 45° right or left. All other skews will cause the slope to change from that listed above.

Metric Conversion

Imperial	Metric
1 in	25.40 mm
1 ft	0.3048 m
1 lb	4.448N
1 Kip	4.448 kN
1 psi	6895 Pa

Bolt Diameter

in	mm
3/8	9.5
1/2	12.7
5/8	15.9
3/4	19.1
7/8	22.2
1	25.4

Also see [Cold Formed Steel Conversion Charts](#)
(mils)

US Standard Steel Gauge Equivalents in Nominal Dimensions

Ga	Min. Thick. (mils)	Approximate Dimensions		Decimals (in)		
		in	mm	Uncoated Steel	Galvanized Steel (G90)	ZMAX (G185)
3	229	¼	6.0	0.239	—	—
7	171	3/16	4.5	0.179	0.186	—
10	118	9/64	3.5	0.134	0.138	0.140
11	111	1/8	3.1	0.120	0.123	0.125
12	97	7/64	2.7	0.105	0.108	0.110
14	68	5/64	2.0	0.075	0.078	0.080
16	54	1/16	1.6	0.060	0.063	0.065
18	43	3/64	1.3	0.048	0.052	0.054
20	33	1/32	1.0	0.036	0.040	0.042
22	27	1/32	1.0	0.030	0.033	0.035

Steel thickness may vary according to industry mill standards.