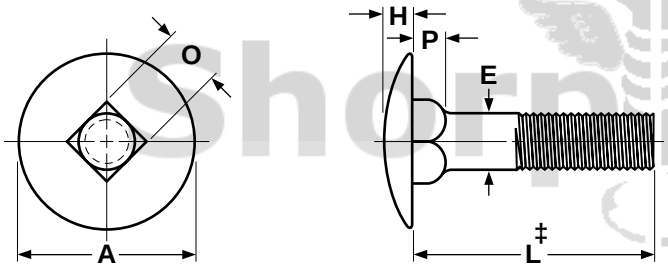
Cap Screws & Bolts — *Step Bolts*



‡Length of a step bolt is measured from the underhead bearing surface to the extreme end of the bolt.

STEP BOLTS

ANSI/ASME B18.5

Nominal Size	E		A		H		O		P	
	Body Diameter		Head Diameter		Head Height		Square Width		Square Depth	
	Max.	Min.	Max.	Min,	Max.	Min.	Max.	Min.	Max.	Min.
10	0.199	0.182	0.656	0.625	0.114	0.094	0.199	0.185	0.125	0.094
1/4	0.260	0.237	0.844	0.813	0.145	0.125	0.260	0.245	0.156	0.125
5/16	0.324	0.298	1.031	1.000	0.176	0.156	0.324	0.307	0.187	0.156
3/8	0.388	0.360	1.219	1.188	0.208	0.188	0.388	0.368	0.219	0.188

Tolerance on Length	Nominal Bolt Size	Nominal Bolt Length		
		Up to 1 in., incl.	Over 1 in. to 2-1/2 in., incl.	Over 2-1/2 in. to 4 in., incl.
	No. 10 thru 3/8	+0.02, -0.03	+0.02, -0.04	+0.04, -0.06

Description	Similar to a carriage bolt in bearing surface and square-neck design, but with a wider, lower-profile, round head.
Applications/ Advantages	Preferred for use where wood is bolted down as decking--the larger diameter head of the step bolt will not pull through the soft wood. Smooth, low, rounded head permits unrestricted movement over the surface.
Material	AISI 1006 - 1050 or equivalent steel.
Hardness	No. 10 through 3/8 in. diameter, all lengths: Rockwell B70 - B100
Proof Load	No. 10 through 3/8 in. diameter, all lengths: 33,000 psi.
Yield Strength	No. 10 through 3/8 in. diameter, all lengths: 36,000 psi. minimum
Tensile Strength	No. 10 through 3/8 in. diameter, all lengths: 54,000 psi. minimum
Elongation	18% minimum (all sizes)
Reduction of Area	35% minimum (all sizes)
Minimum Thread Length	The minimum length of thread shall be equal to twice the basic bolt diameter plus 0.25 in..
Plating	See Appendix-A for plating information.