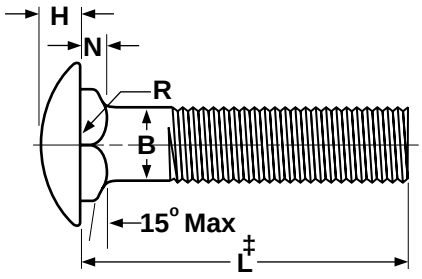
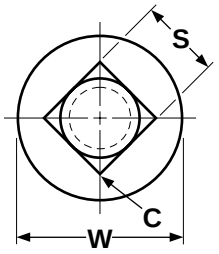
Cap Screws & Bolts — *Carriage Bolts* — Short Neck





Carriage Bolts, Short Neck

ANSI/ASME B18.5

Nominal Size or Basic Bolt Diameter		B		W		H		S		N		C	R
		Body Diameter		Head Diameter		Head Height		Square Width		Square Depth		Corner Radius on Square	Fillet Radius
		Max	Min	Max	MIn	Max	Min	Max	Min	Max	Min	Max	Max
1/4	0.2500	0.260	0.213	0.594	0.563	0.145	0.125	0.260	0.245	0.124	0.093	0.031	0.031
5/16	0.3125	0.324	0.272	0.719	0.688	0.176	0.156	0.324	0.307	0.124	0.093	0.031	0.031
3/8	0.3750	0.388	0.329	0.844	0.782	0.208	0.188	0.388	0.368	0.156	0.125	0.047	0.031
7/16	0.4375	0.452	0.385	0.969	0.907	0.239	0.219	0.452	0.431	0.156	0.125	0.047	0.031
1/2	0.5000	0.515	0.444	1.094	1.032	0.270	0.250	0.515	0.492	0.156	0.125	0.047	0.031
5/8	0.6250	0.642	0.559	1.344	1.219	0.344	0.313	0.642	0.616	0.218	0.187	0.078	0.062
3/4	0.7500	0.768	0.678	1.594	1.469	0.406	0.375	0.768	0.741	0.218	0.187	0.078	0.062

Tolerance on Length	Nominal Bolt Size	Nominal Screw Length									
		Up to 1 in., incl.		Over 1 in. to 2 1/2 in., incl.		Over 2 1/2 in. to 4 in., incl.		Over 4 in. to 6 in., incl.		Over 6 in.	
	No. 10 thru 3/8	+0.02	-0.03	+0.02	-0.04	+0.04	-0.06	+0.06	-0.10	+0.10	-0.18
	7/16 and 1/2	+0.02	-0.03	+0.04	-0.05	+0.06	-0.08	+0.08	-0.10	+0.12	-0.18
	9/16 thru 3/4	+0.02	-0.03	+0.06	-0.08	+0.08	-0.10	+0.10	-0.10	+0.14	-0.18
	7/8 and 1	....	....	+0.08	-0.10	+0.10	-0.14	+0.12	-0.16	+0.16	-0.20
	1-1/8 thru 1-1/2	....	....	+0.12	-0.12	+0.16	-0.16	+0.18	-0.18	+0.22	-0.22

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

Description	A round head bolt with a short, square shoulder under the head, and a unified thread pitch. The bolt is made from low or medium carbon steel.
Applications/ Advantages	Carriage bolts are designed to keep the bolt from turning when a nut is being tightened. The short neck variety is used in sheet metal where a standard sized neck would create an obstruction.
Material	AISI 1006 - 1050 or equivalent steel
Hardness	Rockwell B70 - 100
Proof Load	33,000 psi.
Tensile Strength	60,000 psi. minimum
Yield Strength	36,000 psi. minimum
Elongation	18% minimum
Reduction of Area	35% minimum
Minimum Thread Length	The minimum length of thread shall be equal to twice the basic bolt diameter plus 0.25 in. for bolts 6 in. or shorter, and twice the diameter plus 0.50 in. for bolts longer than 6 in..
Plating	See Appendix-A for plating information.

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