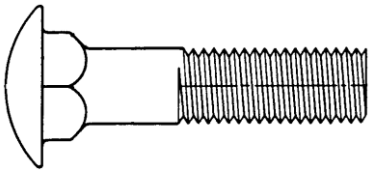
CARRIAGE BOLT



Basic Bolt Diameter		Body Diameter		Head Diameter		Head Height		Square Width		Square Depth	
		Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
8	0.1640	0.173	0.157	0.328	0.298	0.102	0.083	0.169	0.155	0.108	0.078
10	0.190	0.199	0.182	0.469	0.436	0.114	0.094	0.199	0.185	0.125	0.094
1/4	0.250	0.260	0.237	0.594	0.563	0.145	0.125	0.260	0.245	0.156	0.125
5/16	0.3125	0.324	0.298	0.719	0.688	0.176	0.156	0.324	0.307	0.187	0.156
3/8	0.3750	0.388	0.360	0.844	0.782	0.208	0.188	0.388	0.500	0.219	0.188
7/16	0.4375	0.452	0.421	0.969	0.907	0.239	0.219	0.452	0.431	0.250	0.219
1/2	0.5000	0.515	0.483	1.094	1.032	0.270	0.250	0.515	0.492	0.281	0.250
5/8	0.6250	0.642	0.605	1.344	1.219	0.344	0.313	0.642	0.616	0.344	0.313
3/8	0.7500	0.768	0.729	1.534	1.469	0.406	0.375	0.768	0.741	0.406	0.375

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.	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

Description	Low Carbon Steel Carriage: Round head bolt with a square neck under the head, and a unified thread pitch. Made from low or medium carbon steel. Hot-Dip Galvanized Steel Carriage: Carriage bolt made from low or medium carbon steel with a galvanic zinc finish applied.
Applications/ Advantages	Low Carbon Steel Carriage: The square neck is designed to keep the bolt from turning as a nut is tightened. Hot-Dip Galvanized Steel Carriage: Same design advantages as a low carbon carriage bolt but with a thicker protective coating for
Material	Low Carbon Steel & Hot-Dip Galvanized Steel Carriage: AISI 1006 - 1050 or equivalent steel.
Core Hardness	Low Carbon Steel & Hot-Dip Galvanized Steel Carriage: Rockwell B70 - B100
Proof Load	Low Carbon Steel Carriage: 33,000 psi.
Yield Strength	Low Carbon Steel Carriage: 36,000 psi. minimum
Tensile Strength	Low Carbon Steel Carriage: 60,000 psi. minimum
Elongation	Low Carbon Steel Carriage: 18% minimum
Reduction of Area	Low Carbon Steel Carriage: 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. 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 information on the plating of steel carriage bolts.