

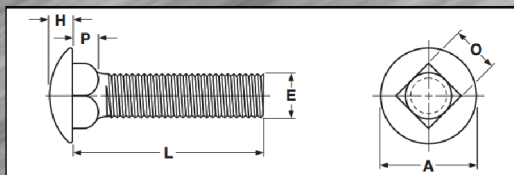


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Webster, NY 14580

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## SQUARE NECK CARRIAGE BOLTS—LOW CARBON & GALVANIZED



Basic Bolt Diameter		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
*6	0.1380	0.122	0.108	0.313	0.278	0.086	0.071	0.160	0.135	0.094	0.062
*8	0.1640	0.173	0.157	0.328	0.298	0.102	0.083	0.169	0.155	0.108	0.078
10	0.1900	0.199	0.182	0.469	0.436	0.114	0.094	0.199	0.185	0.125	0.094
*12	0.2160	.0225	0.206	0.500	0.468	0.149	0.125	0.215	0.197	0.135	0.105
1/4	0.2500	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	0.368	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
3/4	0.7500	0.768	0.729	1.594	1.469	0.406	0.375	0.768	0.741	0.406	0.375

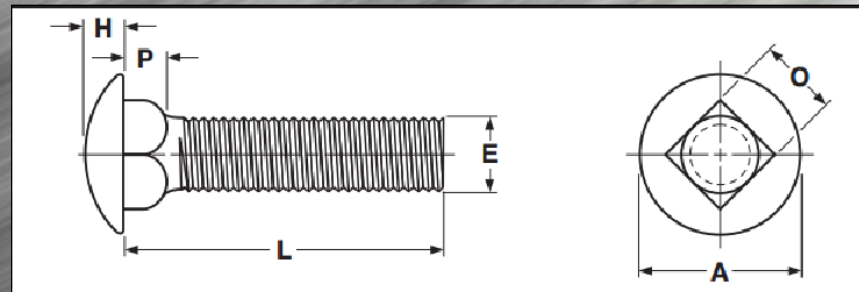


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		Nominal Bolt Length				
Nominal Bolt Size		Up to 1 in., incl.	Over 1 in. to 2-1/2 in., incl.	Over 2-1/2 in. to 4 in., incl.	Over 4 in. to 6 in., incl.	Over 6 in.
Tolerance on Length	#6 thru 3/8	+0.02	+0.02	+0.04	+0.06	+0.10
		-0.03	-0.04	-0.06	-0.10	-0.18
	7/16 and 1/2	+0.02	+0.04	+0.06	+0.08	+0.12
		-0.03	-0.05	-0.08	-0.10	-0.18
	9/16 thru 3/4	+0.02	+0.06	+0.08	+0.10	+0.14
		-0.03	-0.08	-0.10	-0.10	-0.18

- + / - Length of a cap screw is measured from the underhead bearing surface to the extreme end of the screw.
- ASME B18.5-1990 does not specify dimensions for the #6, #8, or #12 diameters. Data listed for these sizes is independent of the ASME specification



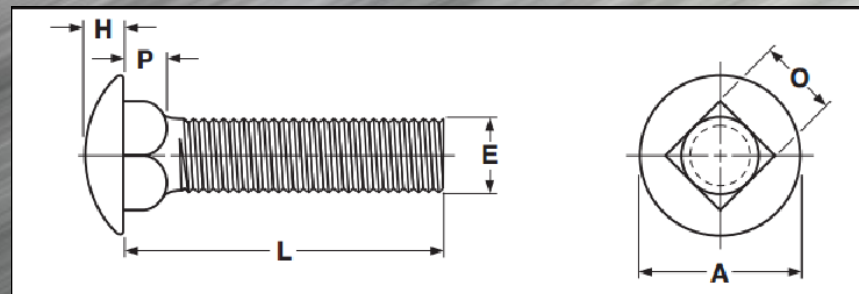


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## SQUARE NECK CARRIAGE BOLTS—LOW CARBON & GALVANIZED



**DESCRIPTION:** *Low Carbon Steel Carriage:* Round head bolt with a square neck under the head, and a unified thread pitch. Made low or medium carbon steel. *Hot-dipped 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-dipped Galvanized Steel Carriage:* Same design advantages as a low carbon carriage bolt but with a thicker protective coating for outdoor use. Often used in outdoor furniture.

**MATERIAL:** *Low Carbon Steel & Hot-dipped Galvanized Steel Carriage:* AISI 1006—1050 or equivalent steel.

**CORE HARDNESS:** *Low Carbon Steel & Hot-dipped 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 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 for bolts 6 in. or shorter, and twice the diameter plus 0.50 in. for bolts longer than 6 in.

\*These properties are tested only on machine specimens when the testing machine cannot provide for full testing of the parts.

\*\*Product standards require the manufacturers head marking to appear on the top of the bolts 1/4" diameter and greater. "X" represents one location where such a marking may appear.