



CARRIAGE BOLTS, RIBBED NECK

ASME B18.5-1998

Nominal Size or Basic Bolt Diameter		B		W		H		M		Number of Ribs	V	D			R
		Body Diameter		Head Diameter		Head Height		Head to Ribs			Diameter Over Ribs	Depth Over Ribs			Fillet Radius
								For Lengths of				For Lengths of			
		7/8 and Shorter	1 in. and Longer	7/8 and Shorter	1 in. and 1-1/8	1-1/4 and Longer									
Max	Min	Max	Min	Max	Min	± 0.031*	Approx	Min	±0.031			Max			
No. 10	0.1900	0.199	0.182	0.469	0.438	0.114	0.094	0.031	0.063	9	0.210	0.250	0.407	0.594	0.031
1/4	0.2500	0.260	0.237	0.594	0.563	0.145	0.125	0.031	0.063	10	0.274	0.250	0.407	0.594	0.031
5/16	0.3125	0.324	0.298	0.719	0.688	0.176	0.156	0.031	0.063	12	0.340	0.250	0.407	0.594	0.031
3/8	0.3750	0.388	0.360	0.844	0.782	0.208	0.188	0.031	0.063	12	0.405	0.250	0.407	0.594	0.031
7/16	0.4375	0.452	0.421	0.969	0.907	0.239	0.219	0.031	0.063	14	0.470	0.250	0.407	0.594	0.031
1/2	0.5000	0.515	0.483	1.094	1.032	0.270	0.250	0.031	0.063	16	0.534	0.250	0.407	0.594	0.031
5/8	0.6250	0.642	0.605	1.344	1.219	0.344	0.313	0.094	0.094	19	0.660	0.313	0.438	0.625	0.062
3/4	0.7500	0.768	0.729	1.594	1.469	0.406	0.375	0.094	0.094	22	0.785	0.313	0.438	0.625	0.062
Tolerance on Length		Nominal Screw 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.

*Tolerance on #10 through 1/2" sizes for nominal lengths of 7/8" and shorter shall be +0.031 and -0.000.

Description	A round head bolt with a ribbed or serrated shoulder made from low carbon steel.
Applications/Advantages	For use in soft, ductile metals, wood and plastics to keep the bolt from turning when nut is being tightened.
Material	Bolts shall be made from a carbon steel which conforms to the following chemical composition requirements-- <i>Carbon:</i> 0.55% maximum; <i>Phosphorus:</i> 0.048% maximum; <i>Sulfur:</i> 0.058% maximum
Hardness	Rockwell B70 - 100
Tensile Strength	60,000 psi. minimum
Yield Strength	36,000 psi. minimum
Elongation	18% minimum
Reduction of Area	35% minimum
Plating	See Appendix-A for plating information.