



Nominal Size or Basic Product Diameter [Note (2)]	Body Diameter, E (See Para. 3.5)		Width Across Flats, F (See Para. 2.1.2)			Width Across Corners, G		Head Height, H ₁ [Note (3)]		Mid-height, H [Note (3)]	Radius of Fillet, R		Maximum Unthreaded Length, S [Note (4)]	Nominal Thread Length for Bolt Lengths, L _T [Note (4)]		
	Max.	Min.	Basic	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	Max.	Min.		6 in. and Shorter	Over 6 in.	
1/4	0.3750	0.388	0.360	9/16	0.562	0.544	0.795	0.747	0.317	0.277	0.250	0.03	0.01	0.250	1.000	1.250
1/2	0.5000	0.515	0.482	3/8	0.750	0.725	1.061	0.995	0.411	0.371	0.328	0.03	0.01	0.312	1.250	1.500
3/4	0.6250	0.642	0.605	1/2	0.938	0.906	1.326	1.244	0.520	0.480	0.422	0.06	0.02	0.344	1.500	1.750
7/8	0.7500	0.768	0.729	5/8	1.125	1.088	1.591	1.494	0.614	0.574	0.500	0.06	0.02	0.406	1.750	2.000
1	0.8750	0.895	0.852	1 1/16	1.312	1.269	1.856	1.742	0.723	0.683	0.594	0.06	0.02	0.438	2.000	2.250
1	1.0000	1.022	0.976	1 1/2	1.500	1.450	2.121	1.991	0.801	0.761	0.656	0.09	0.03	0.500	2.250	2.500

NOTES:

- Bearing Surface.** A die seam across the bearing surface is permissible. Angle of bearing surface with respect to shank is based on the 2 in. 12 slope of the inner flange of American Standard beams and channels.
- Thread Series.** Askew head bolts are only available with unified course (UNC) threads.
- Head Height.** Midheight, H, is a reference dimension and equals the basic head height of square bolts as given in Table 2. Head height, H₁, is computed as H + 0.0833 times the specified maximum width across flats, F. Tolerance on H₁ is ±0.020 in. from computed head height.
- Thread Length.** All askew head bolts of nominal lengths equal to or shorter than the nominal thread length, L_T, plus the unthreaded length, S, shall be threaded for full length. The distance from the bearing surface of the head, as measured at midheight of head to the last scratch of thread, shall not exceed S. The distance from the bearing surface of the head, as measured at midheight, to the first complete (full form) thread, as measured with a nonchamfered GO thread ring gage assembled by hand as far as the thread will permit, shall not exceed S plus a length of 2 1/2 threads.

Table 5 Length Tolerances for Bolts

Nominal Length	Nominal Size					
	1/4 to 3/8	7/16 and 1/2	9/16 to 3/4	7/8 and 1	1 1/8 to 1 1/2	Over 1 1/2
Up to 1 in., incl.	+0.02 -0.03	+0.02 -0.03	+0.02 -0.03
Over 1 in. to 2 1/2 in., incl.	+0.02 -0.04	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.12 -0.12	+0.18 -0.18
Over 2 1/2 in. to 4 in., incl.	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.10 -0.14	+0.16 -0.16	+0.20 -0.20
Over 4 in. to 6 in., incl.	+0.06 -0.10	+0.08 -0.10	+0.10 -0.10	+0.12 -0.16	+0.18 -0.18	+0.22 -0.22
Longer than 6 in.	+0.10 -0.18	+0.12 -0.18	+0.14 -0.18	+0.16 -0.20	+0.22 -0.22	+0.24 -0.24