

Table 7. American National Standard and Unified Standard Hex Nuts and Jam Nuts and Heavy Hex Nuts and Jam Nuts ANSI/ASME B18.2.2-1987 (R1999)

Nominal Size or Basic Major Dia. of Thread		Width Across Flats F			Width Across Corners G		Thickness, Nuts H			Thickness, Jam Nuts H_1		
		Basic	Max.	Min.	Max.	Min.	Basic	Max.	Min.	Basic	Max.	Min.
Hex Nuts (Fig. 5) and Hex Jam Nuts (Fig. 6)												
$\frac{1}{4}$	0.2500	$\frac{7}{16}$	0.438	0.428	0.505	0.488	$\frac{7}{32}$	0.226	0.212	$\frac{5}{32}$	0.163	0.150
$\frac{5}{16}$	0.3125	$\frac{1}{2}$	0.500	0.489	0.577	0.557	$\frac{17}{64}$	0.273	0.258	$\frac{3}{16}$	0.195	0.180
$\frac{3}{8}$	0.3750	$\frac{9}{16}$	0.562	0.551	0.650	0.628	$\frac{21}{64}$	0.337	0.320	$\frac{7}{32}$	0.227	0.210
$\frac{7}{16}$	0.4375	$\frac{11}{16}$	0.688	0.675	0.794	0.768	$\frac{3}{8}$	0.385	0.365	$\frac{1}{4}$	0.260	0.240
$\frac{1}{2}$	0.5000	$\frac{3}{4}$	0.750	0.736	0.866	0.840	$\frac{7}{16}$	0.448	0.427	$\frac{5}{16}$	0.323	0.302
$\frac{9}{16}$	0.5625	$\frac{7}{8}$	0.875	0.861	1.010	0.982	$\frac{31}{64}$	0.496	0.473	$\frac{5}{16}$	0.324	0.301
$\frac{5}{8}$	0.6250	$\frac{15}{16}$	0.938	0.922	1.083	1.051	$\frac{35}{64}$	0.559	0.535	$\frac{3}{8}$	0.387	0.363
$\frac{3}{4}$	0.7500	$1\frac{1}{8}$	1.125	1.088	1.299	1.240	$\frac{41}{64}$	0.665	0.617	$\frac{27}{64}$	0.446	0.398
$\frac{7}{8}$	0.8750	$1\frac{5}{16}$	1.312	1.269	1.516	1.447	$\frac{3}{4}$	0.776	0.724	$\frac{31}{64}$	0.510	0.458
1	1.0000	$1\frac{1}{2}$	1.500	1.450	1.732	1.653	$\frac{55}{64}$	0.887	0.831	$\frac{35}{64}$	0.575	0.519
$1\frac{1}{8}$	1.1250	$1\frac{11}{16}$	1.688	1.631	1.949	1.859	$\frac{31}{32}$	0.999	0.939	$\frac{39}{64}$	0.639	0.579
$1\frac{1}{4}$	1.2500	$1\frac{7}{8}$	1.875	1.812	2.165	2.066	$1\frac{1}{16}$	1.094	1.030	$\frac{23}{32}$	0.751	0.687
$1\frac{3}{8}$	1.3750	$2\frac{1}{16}$	2.062	1.994	2.382	2.273	$1\frac{11}{64}$	1.206	1.138	$\frac{25}{32}$	0.815	0.747
$1\frac{1}{2}$	1.5000	$2\frac{1}{4}$	2.250	2.175	2.598	2.480	$1\frac{9}{32}$	1.317	1.245	$\frac{27}{32}$	0.880	0.808
Heavy Hex Nuts (Fig. 5) and Heavy Hex Jam Nuts (Fig. 6)												
$\frac{1}{4}$	0.2500	$\frac{1}{2}$	0.500	0.488	0.577	0.556	$\frac{15}{64}$	0.250	0.218	$\frac{11}{64}$	0.188	0.156
$\frac{5}{16}$	0.3125	$\frac{9}{16}$	0.562	0.546	0.650	0.622	$\frac{19}{64}$	0.314	0.280	$\frac{13}{64}$	0.220	0.186
$\frac{3}{8}$	0.3750	$\frac{11}{16}$	0.688	0.669	0.794	0.763	$\frac{23}{64}$	0.377	0.341	$\frac{15}{64}$	0.252	0.216
$\frac{7}{16}$	0.4375	$\frac{3}{4}$	0.750	0.728	0.866	0.830	$\frac{27}{64}$	0.441	0.403	$\frac{17}{64}$	0.285	0.247
$\frac{1}{2}$	0.5000	$\frac{7}{8}$	0.875	0.850	1.010	0.969	$\frac{31}{64}$	0.504	0.464	$\frac{19}{64}$	0.317	0.277
$\frac{9}{16}$	0.5625	$\frac{15}{16}$	0.938	0.909	1.083	1.037	$\frac{35}{64}$	0.568	0.526	$\frac{21}{64}$	0.349	0.307
$\frac{5}{8}$	0.6250	$1\frac{1}{16}$	1.062	1.031	1.227	1.1175	$\frac{39}{64}$	0.631	0.587	$\frac{23}{64}$	0.381	0.337
$\frac{3}{4}$	0.7500	$1\frac{1}{4}$	1.250	1.212	1.443	1.382	$\frac{47}{64}$	0.758	0.710	$\frac{27}{64}$	0.446	0.398
$\frac{7}{8}$	0.8750	$1\frac{7}{16}$	1.438	1.394	1.660	1.589	$\frac{55}{64}$	0.885	0.833	$\frac{31}{64}$	0.510	0.458
1	1.0000	$1\frac{5}{8}$	1.625	1.575	1.876	1.796	$\frac{63}{64}$	1.012	0.956	$\frac{35}{64}$	0.575	0.519
$1\frac{1}{8}$	1.1250	$1\frac{13}{16}$	1.812	1.756	2.093	2.002	$1\frac{7}{64}$	1.139	1.079	$\frac{39}{64}$	0.639	0.579
$1\frac{1}{4}$	1.2500	2	2.000	1.938	2.309	2.209	$1\frac{7}{32}$	1.251	1.187	$\frac{23}{32}$	0.751	0.687
$1\frac{3}{8}$	1.3750	$2\frac{3}{16}$	2.188	2.119	2.526	2.416	$1\frac{11}{32}$	1.378	1.310	$\frac{25}{32}$	0.815	0.747
$1\frac{1}{2}$	1.5000	$2\frac{3}{8}$	2.375	2.300	2.742	2.622	$1\frac{15}{32}$	1.505	1.433	$\frac{27}{32}$	0.880	0.808
$1\frac{5}{8}$	1.6250	$2\frac{9}{16}$	2.562	2.481	2.959	2.828	$1\frac{19}{32}$	1.632	1.556	$\frac{29}{32}$	0.944	0.868
$1\frac{3}{4}$	1.7500	$2\frac{3}{4}$	2.750	2.662	3.175	3.035	$1\frac{23}{32}$	1.759	1.679	$\frac{31}{32}$	1.009	0.929
$1\frac{7}{8}$	1.8750	$2\frac{15}{16}$	2.938	2.844	3.392	3.242	$1\frac{27}{32}$	1.886	1.802	$1\frac{1}{32}$	1.073	0.989
2	2.0000	$3\frac{1}{8}$	3.125	3.025	3.608	3.449	$1\frac{31}{32}$	2.013	1.925	$1\frac{1}{32}$	1.138	1.050
$2\frac{1}{4}$	2.2500	$3\frac{1}{2}$	3.500	3.388	4.041	3.862	$2\frac{13}{64}$	2.251	2.155	$1\frac{13}{64}$	1.251	1.155
$2\frac{1}{2}$	2.5000	$3\frac{7}{8}$	3.875	3.750	4.474	4.275	$2\frac{29}{64}$	2.505	2.401	$1\frac{29}{64}$	1.505	1.401
$2\frac{3}{4}$	2.7500	$4\frac{1}{4}$	4.250	4.112	4.907	4.688	$2\frac{45}{64}$	2.759	2.647	$1\frac{37}{64}$	1.634	1.522
3	3.0000	$4\frac{5}{8}$	4.625	4.475	5.340	5.102	$2\frac{61}{64}$	3.013	2.893	$1\frac{45}{64}$	1.763	1.643
$3\frac{1}{4}$	3.2500	5	5.000	4.838	5.774	5.515	$3\frac{3}{16}$	3.252	3.124	$1\frac{13}{16}$	1.876	1.748
$3\frac{1}{2}$	3.5000	$5\frac{3}{8}$	5.375	5.200	6.207	5.928	$3\frac{7}{16}$	3.506	3.370	$1\frac{15}{16}$	2.006	1.870
$3\frac{3}{4}$	3.7500	$5\frac{3}{4}$	5.750	5.562	6.640	6.341	$3\frac{11}{16}$	3.760	3.616	$2\frac{1}{16}$	2.134	1.990
4	4.0000	$6\frac{1}{8}$	6.125	5.925	7.073	6.755	$3\frac{15}{16}$	4.014	3.862	$2\frac{3}{16}$	2.264	2.112

All dimensions are in inches.

Bold type shows nuts unified dimensionally with British and Canadian Standards.

Threads are Unified Coarse-, Fine-, or 8-thread series (UNC, UNF or 8UN), Class 2B. Unification of fine-thread nuts is limited to sizes 1 inch and under.

Table 8. American National Standard and Unified Standard Hex Flat Nuts and Flat Jam Nuts and Heavy Hex Flat Nuts and Flat Jam Nuts
ANSI/ASME B18.2.2-1987 (R1999)

Nominal Size or Basic Major Dia. of Thread		WidthAcross Flats <i>F</i>			WidthAcross Corners <i>G</i>		Thickness, Flat Nuts <i>H</i>			Thickness, Flat Jam Nuts <i>H</i> ₁		
		Basic	Max.	Min.	Max.	Min.	Basic	Max.	Min.	Basic	Max.	Min.
Hex Flat Nuts and Hex Flat Jam Nuts (Fig. 7)												
1⅛	1.1250	1⅞	1.688	1.631	1.949	1.859	1	1.030	0.970	⅝	0.655	0.595
1¼	1.2500	1⅞	1.875	1.812	2.165	2.066	1⅜ ₃₂	1.126	1.062	¾	0.782	0.718
1⅜	1.3750	2⅞	2.062	1.994	2.382	2.273	1⅜ ₆₄	1.237	1.169	⅜	0.846	0.778
1½	1.5000	2¼	2.250	2.175	2.598	2.480	1⅝ ₁₆	1.348	1.276	⅞	0.911	0.839
Heavy Hex Flat Nuts and Heavy Hex Flat Jam Nuts (Fig. 7)												
1⅛	1.1250	1⅜	1.812	1.756	2.093	2.002	1⅛	1.155	1.079	⅝	0.655	0.579
1¼	1.2500	2	2.000	1.938	2.309	2.209	1¼	1.282	1.187	¾	0.782	0.687
1⅜	1.3750	2⅜	2.188	2.119	2.526	2.416	1⅜	1.409	1.310	⅜	0.846	0.747
1½	1.5000	2⅝	2.375	2.300	2.742	2.622	1½	1.536	1.433	⅞	0.911	0.808
1¾	1.7500	2¾	2.750	2.662	3.175	3.035	1¾	1.790	1.679	1	1.040	0.929
2	2.0000	3⅛	3.125	3.025	3.608	3.449	2	2.044	1.925	1⅛	1.169	1.050
2¼	2.2500	3½	3.500	3.388	4.041	3.862	2¼	2.298	2.155	1¼	1.298	1.155
2½	2.5000	3⅞	3.875	3.750	4.474	4.275	2½	2.552	2.401	1½	1.552	1.401
2¾	2.7500	4¼	4.250	4.112	4.907	4.688	2¾	2.806	2.647	1⅝	1.681	1.522
3	3.0000	4⅝	4.625	4.475	5.340	5.102	3	3.060	2.893	1¾	1.810	1.643
3¼	3.2500	5	5.000	4.838	5.774	5.515	3¼	3.314	3.124	1⅞	1.939	1.748
3½	3.5000	5⅝	5.375	5.200	6.207	5.928	3½	3.568	3.370	2	2.068	1.870
3¾	3.7500	5¾	5.750	5.562	6.640	6.341	3¾	3.822	3.616	2⅞	2.197	1.990
4	4.0000	6⅛	6.125	5.925	7.073	6.755	4	4.076	3.862	2¼	2.326	2.112

All dimensions are in inches.

Bold type indicates nuts unified dimensionally with British and Canadian Standards.

Threads are Unified Coarse-thread series (UNC), Class 2B.

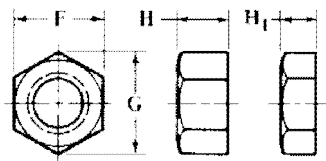


Fig. 7. Hex Flat Nuts, Heavy Hex Flat Nuts, Hex Flat Jam Nuts, and Heavy Hex Flat Jam Nuts (Table 8)

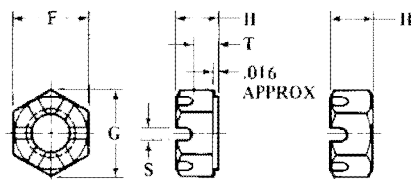


Fig. 8. Hex Slotted Nuts, Heavy Hex Slotted Nuts, and Hex Thick Slotted Nuts (Table 9)

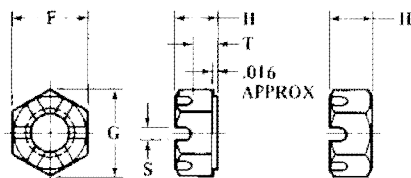


Fig. 9. Hex Thick Nuts (Table 10)

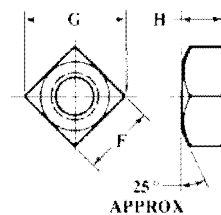


Fig. 10. Square Nuts, Heavy Square Nuts (Table 10)