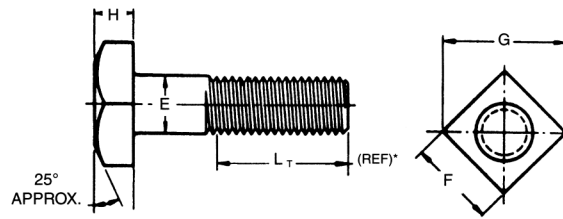
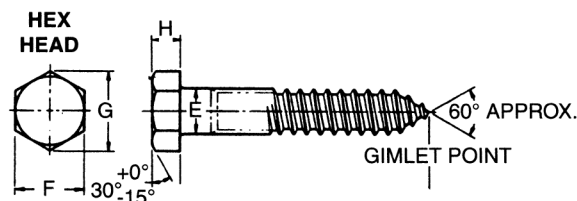


SQUARE HEAD BOLTS



Nominal Size or Basic Bolt Dia.	E		F				G		H			L _T (Ref)	
	Body Dia	Basic	Width Across Flats		Width Across Corners		Height			Thread Length For Bolt Lengths			
			Max	Basic	Max	Min	Max	Min	Basic	Max	Min	Less Than 6"	More Than 6"
1/4	0.260	3/8	0.375	0.362	0.530	0.498	11/64	0.188	0.156	0.750	1.000		
5/16	0.324	1/2	0.500	0.484	0.707	0.665	13/64	0.220	0.186	0.875	1.125		
3/8	0.388	9/16	0.562	0.544	0.795	0.747	1/4	0.268	0.232	1.000	1.250		
7/16	0.452	5/8	0.625	0.603	0.884	0.828	19/64	0.316	0.278	1.125	1.375		
1/2	0.515	3/4	0.750	0.725	1.061	0.995	21/64	0.348	0.308	1.250	1.500		
5/8	0.642	15/16	0.938	0.906	1.326	1.244	27/64	0.444	0.400	1.500	1.750		
3/4	0.768	1 1/8	1.125	1.088	1.591	1.494	1/2	0.524	0.476	1.750	2.000		
7/8	0.895	1 5/16	1.312	1.269	1.856	1.742	19/32	0.620	0.568	2.000	2.250		
1	1.022	1 1/2	1.500	1.450	2.121	1.991	21/32	0.684	0.628	2.250	2.500		
1 1/8	1.149	1 11/16	1.688	1.631	2.386	2.239	3/4	0.780	0.720	2.250	2.750		
1 1/4	1.277	1 7/8	1.875	1.812	2.652	2.489	27/32	0.876	0.812	2.750	3.000		
1 3/8	1.404	2 1/16	2.062	1.994	2.917	2.738	29/32	0.940	0.872	3.000	3.250		
1 1/2	1.531	2 1/4	2.250	2.175	3.182	2.986	1	1.036	0.964	3.250	3.500		

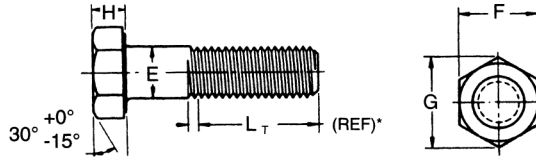
HEX HEAD LAG SCREWS



Nominal Size or Basic Product Dia	E		F			G		H			Threads per Inch
	Body or Shoulder Dia.		Width Across Flats			Width Across Corners		Hex Lag Screws Height			
	Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	
No. 10	0.199	0.178	9/32	0.281	0.271	0.323	0.309	1/8	0.140	0.110	11
1/4	0.260	0.237	3/8	0.375	0.362	-	-	-	-	-	10
1/4 **	0.260	0.237	7/16	0.438	0.425	0.505	0.484	11/64	0.188	0.150	10
5/16	0.324	0.298	1/2	0.500	0.484	0.577	0.552	7/32	0.235	0.195	9
3/8	0.388	0.360	9/16	0.562	0.544	0.650	0.620	1/4	0.268	0.226	7
7/16	0.452	0.421	5/8	0.625	0.603	0.722	0.687	19/64	0.316	0.272	7
1/2	0.515	0.482	3/4	0.750	0.725	0.866	0.826	11/32	0.364	0.302	6
5/8	0.642	0.605	15/16	0.938	0.906	1.083	1.033	27/64	0.444	0.378	5
3/4	0.768	0.729	1 1/8	1.125	1.088	1.299	1.240	1/2	0.524	0.455	4 1/2
7/8	0.895	0.852	1 15/16	1.312	1.269	1.516	1.447	37/64	0.604	0.531	4
1	1.022	0.976	1 1/2	1.500	1.450	1.732	1.653	43/64	0.700	0.591	3 1/2
1 1/8	1.149	1.098	1 11/16	1.688	1.631	1.949	1.859	3/4	0.780	0.658	3 1/4
1 1/4	1.277	1.223	1 7/8	1.875	1.812	2.165	2.066	27/32	0.876	0.749	3 1/4

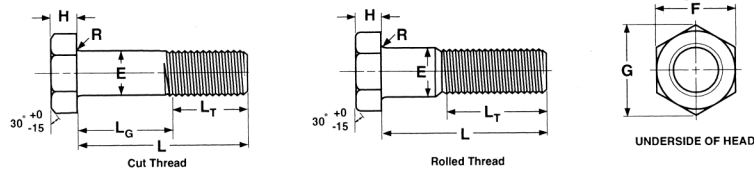
** Hex Lag Screw

HEX HEAD CAP SCREWS



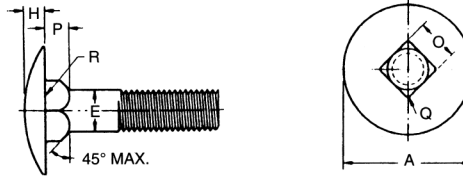
Nominal Size or Basic Product Dia.	E		F			G		H			L _T (Ref)	
	Body Diameter		Width Across Flats			Width Across Corners		Height			Thread Length For Screw Lengths	
	Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	Less than 6"	More than 6"
1/4	0.2500	0.2450	7/16	0.438	0.428	0.505	0.488	5/32	0.163	0.150	0.750	1.000
5/16	0.3125	0.3065	1/2	0.500	0.489	0.577	0.557	13/64	0.211	0.195	0.875	1.125
3/8	0.3750	0.3690	9/16	0.562	0.551	0.650	0.628	15/64	0.243	0.226	1.000	1.250
7/16	0.4375	0.4305	5/8	0.625	0.612	0.722	0.698	9/32	0.291	0.272	1.125	1.375
1/2	0.5000	0.4930	3/4	0.750	0.736	0.866	0.840	5/16	0.323	0.302	1.250	1.500
9/16	0.5625	0.5545	13/16	0.812	0.798	0.938	0.910	23/64	0.371	0.348	1.375	1.625
5/8	0.6250	0.6170	15/16	0.938	0.922	1.083	1.051	25/64	0.403	0.378	1.500	1.750
3/4	0.7500	0.7410	1 1/8	1.125	1.100	1.299	1.254	15/32	0.483	0.455	1.750	2.000
7/8	0.8750	0.8660	1 5/16	1.312	1.285	1.516	1.465	35/64	0.563	0.531	2.000	2.250
1	1.0000	0.9900	1 1/2	1.500	1.469	1.732	1.675	39/64	0.627	0.591	2.250	2.500
1 1/8	1.1250	1.1140	1 11/16	1.688	1.631	1.949	1.859	11/16	0.718	0.658	2.500	2.750
1 1/4	1.2500	1.2390	1 7/8	1.875	1.812	2.165	2.066	25/32	0.813	0.749	2.750	3.000
1 3/8	1.3750	1.3630	2 1/16	2.062	1.994	2.382	2.273	27/32	0.878	0.810	3.000	3.250
1 1/2	1.5000	1.4880	2 1/4	2.250	2.175	2.598	2.480	15/16	0.974	0.902	3.250	3.500
1 3/4	1.7500	1.7380	2 5/8	2.625	2.538	3.031	2.893	1 3/32	1.134	1.054	3.750	4.000
2	2.0000	1.9880	3	3.000	2.900	3.464	3.306	1 7/32	1.263	1.175	4.250	4.500
2 1/4	2.2500	2.2380	3 3/8	3.375	3.262	3.897	3.719	1 3/8	1.423	1.327	4.750	5.000
2 1/2	2.5000	2.4880	3 3/4	3.750	3.625	4.330	4.133	1 17/32	1.583	1.479	5.250	5.500
2 3/4	2.7500	2.7380	4 1/8	4.125	3.988	4.763	4.546	1 11/16	1.744	1.632	5.750	6.000
3	3.0000	2.9880	4 1/2	4.500	4.350	5.196	4.959	1 7/8	1.935	1.815	6.250	6.500

HEAVY HEX BOLTS



Nominal Size or Basic Product Dia.	E		F			G		H			R		L _T		
	Body Dia.		Width Across Flats			Width Across Corners		Head Height			Radius of Fillet		Thread Length For Bolt Lengths		
	Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	Max	Min	Less Than 6"	More Than 6"	
1/2	0.5000	0.515	0.482	7/8	0.875	0.850	1.010	0.969	11/32	0.364	0.302	0.03	0.01	1.250	1.500
5/8	0.6250	0.642	0.605	1-1/16	1.062	1.031	1.227	1.175	27/64	0.444	0.378	0.06	0.02	1.500	1.750
3/4	0.7500	0.768	0.729	1-1/4	1.250	1.212	1.443	1.383	1/2	0.524	0.455	0.06	0.02	1.750	2.000
7/8	0.8750	0.895	0.852	1-7/16	1.438	1.394	1.660	1.589	37/64	0.604	0.531	0.06	0.02	2.000	2.250
1	1.0000	1.022	0.976	1-5/8	1.625	1.575	1.876	1.796	43/64	0.700	0.591	0.09	0.03	2.250	2.500
1-1/8	1.1250	1.149	1.098	1-13/16	1.812	1.756	2.093	2.002	3/4	0.780	0.658	0.09	0.03	2.500	2.750
1-1/4	1.2500	1.277	1.223	2	2.000	1.938	2.309	2.209	27/32	0.876	0.749	0.09	0.03	2.750	3.000
1-3/8	1.3750	1.404	1.345	2-3/16	2.188	2.119	2.526	2.416	29/32	0.940	0.810	0.09	0.03	3.000	3.250
1-1/2	1.5000	1.531	1.470	2-3/8	2.375	2.300	2.742	2.622	1	1.036	0.902	0.09	0.03	3.250	3.500
1-3/4	1.7500	1.785	1.716	2-3/4	2.750	2.662	3.175	3.035	1-5/32	1.196	1.054	0.12	0.04	3.750	4.000
2	2.0000	2.039	1.964	3-1/8	3.125	3.025	3.608	3.449	1-11/32	1.388	1.175	0.12	0.04	4.250	4.500
2-1/4	2.2500	2.305	2.214	3-1/2	3.500	3.388	4.041	3.862	1-1/2	1.548	1.327	0.19	0.06	4.750	5.000
2-1/2	2.5000	2.559	2.461	3-7/8	3.875	3.750	4.474	4.275	1-21/32	1.708	1.479	0.19	0.06	5.250	5.500
2-3/4	2.7500	2.827	2.711	4-1/4	4.250	4.112	4.907	4.688	1-13/16	1.869	1.632	0.19	0.06	5.750	6.000
3	3.0000	3.081	2.961	4-5/8	4.625	4.475	5.340	5.102	2	2.060	1.815	0.19	0.06	6.250	6.500

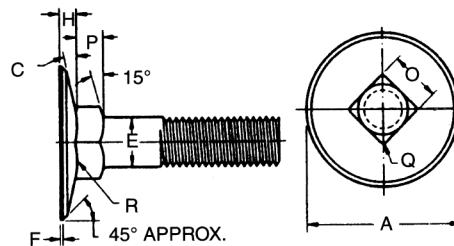
STEP BOLTS



Nominal Size ¹ or Basic Bolt Diameter	E		A		H		O		P		Q	R
	Body Diameter		Head Diameter		Head Height		Square Width		Square Depth		Corner Radius on Square	Fillet Radius
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Max
No.10	0.199	0.182	0.656	0.625	0.114	0.094	0.199	0.185	0.125	0.094	0.031	0.031
1/4	0.260	0.237	0.844	0.813	0.145	0.125	0.260	0.245	0.156	0.125	0.031	0.031
5/16	0.324	0.298	1.031	1.000	0.176	0.156	0.324	0.307	0.187	0.156	0.031	0.031
3/8	0.388	0.360	1.249	1.188	0.208	0.188	0.388	0.368	0.219	0.188	0.047	0.031
7/16	0.452	0.421	1.406	1.375	0.239	0.219	0.452	0.431	0.250	0.219	0.047	0.031
1/2	0.515	0.483	1.594	1.563	0.270	0.250	0.515	0.492	0.281	0.250	0.047	0.031

¹ Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

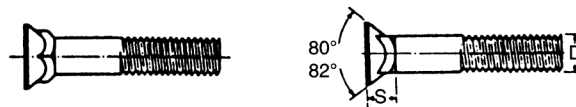
ELEVATOR BOLTS



Nominal Size ¹ or Basic Bolt Diameter	E		A			C	F	H		O		P		Q	R
	Body Diameter		Head Diameter			Head Angle	Flat on Min Dia. Head	Head Height		Square Width		Square Depth		Corner Radius On Square	Fillet Radius
	Max	Min	Max Edge Sharp	Min Edge Sharp	Min Edge Flat			Ref	Max	Max	Min	Max	Min		
No.10	0.199	0.182	0.790	0.750	0.740	9°	0.025	0.082	0.062	0.210	0.185	0.125	0.094	0.031	0.031
1/4	0.260	0.237	1.080	0.969	0.938	9°	0.035	0.098	0.078	0.280	0.245	0.219	0.188	0.031	0.031
5/16	0.324	0.298	1.227	1.188	1.157	9°	0.035	0.114	0.094	0.342	0.307	0.250	0.219	0.031	0.031
3/8	0.388	0.360	1.352	1.312	1.272	11°	0.040	0.145	0.125	0.405	0.368	0.250	0.219	0.047	0.031
7/16	0.452	0.421	1.477	1.438	1.397	13°	0.040	0.176	0.156	0.468	0.431	0.281	0.250	0.047	0.031
1/2	0.515	0.483	1.602	1.562	1.532	12°	0.040	0.176	0.156	0.530	0.492	0.281	0.250	0.047	0.031






¹ Where specifying nominal size in decimals, zeroes preceding decimal and in the fourth decimal place shall be omitted.

NO. 3 HEAD PLOW BOLTS



Nominal Diameter of Bolt	A			F	S		B	
	Diameter of Head			Feed Thickness	Depth of Square and Head		Width of Square	
	Max	Min Sharp	Abs. Min. With Flat	Max	Max	Min	Max	Min (Basic)
3/8	0.708	0.671	0.656	0.031	0.312	0.281	0.387	0.375
7/16	0.826	0.781	0.766	0.036	0.364	0.328	0.450	0.438
1/2	0.945	0.890	0.875	0.042	0.417	0.375	0.515	0.500
5/8	1.147	1.094	1.063	0.050	0.506	0.456	0.640	0.625

MECHANICAL REQUIREMENTS FOR BOLTS, SCREWS, STUDS, SEMS, AND U-BOLTS

Grade Designation	Products	Nominal Size Dia, In.	Full-Size Bolts, Screws, Studs, SEMS, Proof Load (Stress), psi	Full Size Bolts, Screws, Studs, SEMS, Tensile Strength (Stress) Min, psi	Machine Test Specimens of Bolts, Screws and Studs Yield Strength (Stress) Min, psi	Machine Test Specimens of Bolts, Screws, and Studs Tensile Strength (Stress) Min, psi	Surface Hardness Rockwell 30N Max	Core Hardness Rockwell Min	Core Hardness Rockwell Max	Grade Identification Marking
1	Bolts, Screws, Studs	1/4 thru 1-1/2	33,000	60,000	36,000	60,000	–	B70	B100	None
2	Bolts, Screws, Studs	1/4 thru 3/4	55,000	74,000	57,000	74,000	–	B80	B100	None
		Over 3/4 thru 1-1/2	33,000	60,000	36,000	60,000	–	B70	B100	
4	Studs	1/4 thru 1-1/2	65,000	115,000	100,000	115,000	–	C22	C32	None
5	Bolts, Screws, Studs	1/4 thru 1	85,000	120,000	92,000	120,000	54.50	C25	C34	
		Over 1 thru 1-1/2	74,000	105,000	81,000	105,000		C19	C30	
5.1	SEMS	No.4 thru 5/8	85,000	120,000	–	–	59.5	C25	C40	
5.2	Bolts, Screws	1/4 thru 1	85,000	120,000	92,000	120,000	56	C26	C36	
8	Bolts, Screws, Studs	1/4 thru 1-1/2	120,000	150,000	130,000	150,000	58.6	C33	C39	
8.1	Studs	1/4 thru 1-1/2	120,000	150,000	130,000	150,000	58.6	C33	C39	None
8.2	Bolts, Screws	1/4 thru 1	120,000	150,000	130,000	150,000	58.6	C33	C39	

TIGHTENING TORQUE FOR SCREWS, BOLTS AND NUTS

TORQUE COEFFICIENTS - K

Bolt Size	Theoretical ¹ K	Measured K (Average)	
		High-Point Torque	Mid-Point Torque
1/4-20	0.210	0.243	0.267
1/4-28	0.205	0.216	0.231
5/16-18	0.210	0.206	0.186
5/16-24	0.205	0.194	0.183
3/8-16	0.204	0.200	0.247
3/8-24	0.198	0.192	0.234
7/16-14	0.205	0.217	0.224
7/16-20	0.200	0.194	0.190
1/2-13	0.201	0.205	0.158
1/2-20	0.195	0.167	0.205
9/16-12	0.198	0.194	0.214
9/16-18	0.193	0.196	0.207
5/8-11	0.199	0.178	0.196
5/8-18	0.193	0.183	0.175
3/4-10	0.194	0.169	0.172
3/4-16	0.189	0.170	0.180
7/8-9	0.194	0.181	0.194
7/8-14	0.189	0.171	0.178
1- 8	0.193	0.188	0.204
1- 14	0.188	0.161	0.167
Average	0.198	0.191	0.201

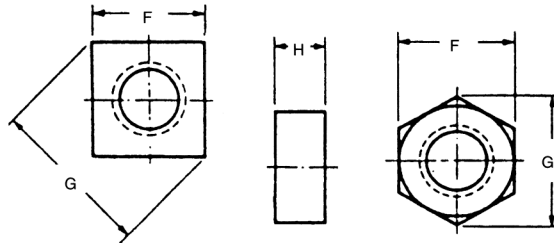
¹ Computed with coefficient of friction of 0.15 and the dimensions of American National Standard Hex Nuts.

TORQUE COEFFICIENTS - COMPUTED

Size	Hex Nut				Hex Cap Screw (Finished Hex Bolt)	Heavy Hex Screw
	K ₁	K ₂	K ₃	K	K	K
1/4-20	0.1055	0.0753	0.0318	0.213	0.213	0.223
1/4-28	0.1055	0.0786	0.0227	0.207	0.207	0.218
5/16-18	0.0993	0.0766	0.0284	0.204	0.204	0.213
5/16-24	0.0993	0.0790	0.0212	0.200	0.200	0.208
3/8-16	0.0950	0.0772	0.0265	0.199	0.199	0.213
3/8-24	0.0950	0.0802	0.0176	0.193	0.193	0.207
7/16-14	0.0980	0.0772	0.0260	0.201	0.196	0.207
7/16-20	0.0980	0.0800	0.0181	0.196	0.190	0.202
1/2-13	0.0950	0.0780	0.0245	0.198	0.198	0.208
1/2-20	0.0950	0.0811	0.0159	0.192	0.192	0.203
9/16-12	0.0970	0.0781	0.0235	0.199	0.195	0.202
9/16-18	0.0970	0.0811	0.0157	0.194	0.191	0.197
5/8-11	0.0950	0.0783	0.0231	0.196	0.196	0.205
5/8-18	0.0950	0.0816	0.0141	0.191	0.191	0.199
3/4-10	0.0950	0.0790	0.0212	0.195	0.195	0.203
3/4-16	0.0950	0.0819	0.0132	0.190	0.190	0.198
7/8-9	0.0950	0.0793	0.0201	0.194	0.194	0.201
7/8-14	0.0950	0.0819	0.0130	0.190	0.190	0.196
1- 8	0.0950	0.0795	0.0199	0.194	0.194	0.200
1- 14	0.0950	0.0826	0.0109	0.189	0.189	0.194
Average	-	-	-	0.197	0.196	0.205

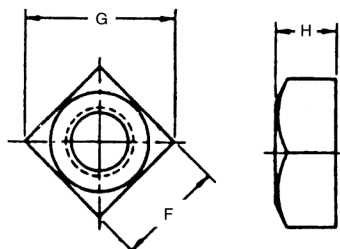
NOTE : K₁ + K₂ + K₃ = K

SQUARE AND HEX MACHINE SCREW NUTS

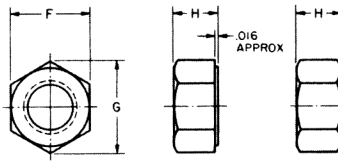


Nominal Size or Basic Thread Diameter		F			G		G ₁		H	
		Width Across Flats			Width Across Corners				Thickness	
		Basic	Max	Min	Square		Hex		Max	Min
					Max	Min	Max	Min		
2	0.0860	3/16	0.188	0.180	0.265	0.247	0.217	0.205	0.066	0.057
3	0.0990	3/16	0.188	0.180	0.265	0.247	0.217	0.205	0.066	0.057
4	0.1120	1/4	0.250	0.241	0.354	0.331	0.289	0.275	0.098	0.087
5	0.1250	5/16	0.312	0.302	0.442	0.415	0.361	0.344	0.114	0.102
6	0.1380	5/16	0.312	0.302	0.442	0.415	0.361	0.344	0.114	0.102
8	0.1640	11/32	0.344	0.332	0.486	0.456	0.397	0.378	0.130	0.117
10	0.1900	3/8	0.375	0.362	0.530	0.497	0.433	0.413	0.130	0.117
12	0.2160	7/16	0.438	0.423	0.619	0.581	0.505	0.482	0.161	0.148
1/4	0.2500	7/16	0.438	0.423	0.619	0.581	0.505	0.482	0.193	0.178
5/16	0.3125	9/16	0.562	0.545	0.795	0.748	0.650	0.621	0.225	0.208
3/8	0.3750	5/8	0.625	0.607	0.884	0.833	0.722	0.692	0.257	0.239

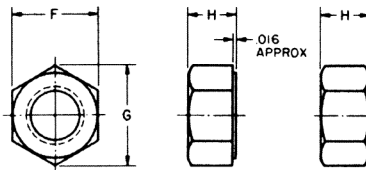
REGULAR SQUARE NUTS



Nominal Size or Basic Major Thread Diameter		F			G		H		
		Width Across Flats			Width Across Corners		Thickness		
		Basic	Max	Min	Max	Min	Basic	Max	Min
1/4	0.2500	7/16	0.438	0.425	0.619	0.584	7/32	0.235	0.203
5/16	0.3125	9/16	0.562	0.547	0.795	0.751	17/64	0.283	0.249
3/8	0.3750	5/8	0.625	0.606	0.884	0.832	21/64	0.346	0.310
7/16	0.4375	3/4	0.750	0.728	1.061	1.000	3/8	0.394	0.356
1/2	0.5000	13/16	0.812	0.788	1.149	1.082	7/16	0.458	0.418
5/8	0.6250	1	1.000	0.969	1.414	1.330	35/64	0.569	0.525
3/4	0.7500	1-1/8	1.125	1.088	1.591	1.494	21/32	0.680	0.632
7/8	0.8750	1-5/16	1.312	1.269	1.856	1.742	49/64	0.792	0.740
1	1.0000	1-1/2	1.500	1.450	2.121	1.991	7/8	0.903	0.847

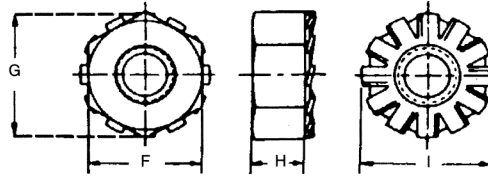
**FINISHED
HEX NUTS**


Nominal Size or Basic Major Thread Diameter	F			G		H			
	Width Across Flats			Width Across Corners		Thickness Hex Nuts			
	Basic	Max	Min	Max	Min	Basic	Max	Min	
1/4	0.2500	7/16	0.438	0.428	0.505	0.488	7/32	0.226	0.212
5/16	0.3125	1/2	0.500	0.489	0.577	0.557	17/64	0.273	0.258
3/8	0.3750	9/16	0.562	0.551	0.650	0.628	21/64	0.337	0.320
7/16	0.4375	11/16	0.688	0.675	0.794	0.768	3/8	0.385	0.365
1/2	0.5000	3/4	0.750	0.736	0.866	0.840	7/16	0.448	0.427
9/16	0.5625	7/8	0.875	0.861	1.010	0.982	31/64	0.496	0.473
5/8	0.6250	15/16	0.938	0.922	1.083	1.051	35/64	0.559	0.535
3/4	0.7500	1 1/8	1.125	1.088	1.299	1.240	41/64	0.665	0.617
7/8	0.8750	1 5/16	1.312	1.269	1.516	1.447	3/4	0.776	0.724
1	1.0000	1 1/2	1.500	1.450	1.732	1.653	55/64	0.887	0.831
1 1/8	1.1250	1 11/16	1.688	1.631	1.949	1.859	31/32	0.999	0.939
1 1/4	1.2500	1 7/8	1.875	1.812	2.165	2.066	1 1/16	1.094	1.030
1 3/8	1.3750	2 1/16	2.062	1.994	2.382	2.273	1 11/64	1.206	1.138
1 1/2	1.5000	2 1/4	2.250	2.175	2.598	2.480	1 9/32	1.317	1.245

**HEAVY
HEX
NUTS**


Nominal Size or Basic Major Thread Diameter	F			G		H			
	Width Across Flats			Width Across Corners		Thickness Heavy Hex Nuts			
	Basic	Max	Min	Max	Min	Basic	Max	Min	
1/4	0.2500	1/2	0.500	0.488	0.577	0.556	15/64	0.250	0.218
5/16	0.3125	9/16	0.562	0.546	0.650	0.622	19/64	0.314	0.280
3/8	0.3750	11/16	0.688	0.669	0.794	0.763	23/64	0.377	0.341
7/16	0.4375	3/4	0.750	0.728	0.866	0.830	27/64	0.441	0.403
1/2	0.5000	7/8	0.875	0.850	1.010	0.969	31/64	0.504	0.464
9/16	0.5625	15/16	0.938	0.909	1.083	1.037	35/64	0.568	0.526
5/8	0.6250	1 1/16	1.062	1.031	1.227	1.175	39/64	0.631	0.587
3/4	0.7500	1 1/4	1.250	1.212	1.443	1.382	47/64	0.758	0.710
7/8	0.8750	1 7/16	1.438	1.394	1.660	1.589	55/64	0.885	0.833
1	1.0000	1 5/8	1.625	1.575	1.876	1.796	63/64	1.012	0.956
1 1/8	1.1250	1 13/16	1.812	1.756	2.093	2.002	1 7/64	1.139	1.079
1 1/4	1.2500	2	2.000	1.938	2.309	2.209	1 7/32	1.251	1.187
1 3/8	1.3750	2 3/16	2.188	2.119	2.526	2.416	1 11/32	1.378	1.310
1 1/2	1.5000	2 3/8	2.375	2.300	2.742	2.622	1 15/32	1.505	1.433
1 5/8	1.6250	2 9/16	2.562	2.481	2.959	2.828	1 19/32	1.632	1.556
1 3/4	1.7500	2 3/4	2.750	2.662	3.175	3.035	1 23/32	1.759	1.679
1 7/8	1.8750	2 15/16	2.938	2.844	3.392	3.242	1 27/32	1.886	1.802
2	2.0000	3 1/8	3.125	3.025	3.608	3.449	1 31/32	2.013	1.925
2 1/4	2.2500	3 1/2	3.500	3.388	4.041	3.862	2 13/64	2.251	2.155
2 1/2	2.5000	3 7/8	3.875	3.750	4.474	4.275	2 29/64	2.505	2.401
2 3/4	2.7500	4 1/4	4.250	4.112	4.907	4.688	2 45/64	2.759	2.647
3	3.0000	4 5/8	4.625	4.475	5.340	5.102	2 61/64	3.013	2.893
3 1/4	3.2500	5	5.000	4.838	5.774	5.515	3 3/16	3.252	3.124
3 1/2	3.5000	5 3/8	5.375	5.200	6.207	5.928	3 7/16	3.506	3.370
3 3/4	3.7500	5 3/4	5.750	5.562	6.640	6.341	3 11/16	3.760	3.616
4	4.0000	6 1/8	6.125	5.925	7.073	6.755	3 15/16	4.014	3.862

“K” LOCK NUTS



Nominal Size or Basic Thread Diameter	F				G		H		I
	Width Across Flats				Width Across Corners		Thickness		Washer Diameter
	Basic	Max	Min	Hex	Max	Min	Max	Min	Ref
4	0.1120	1/4	0.250	0.241	0.289	0.275	0.098	0.087	0.281
6	0.1380	5/16	0.312	0.302	0.361	0.344	0.114	0.102	0.344
8	0.1640	11/32	0.344	0.332	0.397	0.378	0.130	0.117	0.375
10	0.1900	3/8	0.375	0.362	0.433	0.413	0.130	0.117	0.406
1/4	0.2500	7/16	0.438	0.423	0.505	0.482	0.193	0.178	0.500
5/16	0.3125	1/2	0.500	0.489	0.577	0.557	0.273	0.258	0.578
3/8	0.3750	9/16	0.562	0.551	0.650	0.628	0.385	0.365	0.656

METRIC THREAD AND DIN# INFORMATION

	Standard Thread	Fine Thread	Extra Fine Thread
Size	Pitch	Pitch	Pitch
2mm	0.40	–	–
3mm	0.50	–	–
4mm	0.70	–	–
5mm	0.80	–	–
6mm	1.00	–	–
7mm	1.00	–	–
8mm	1.25	1.00	–
10mm	1.50	1.25	1.00
12mm	1.75	1.50	–
14mm	2.00	1.50	–
16mm	2.00	1.50	–
18mm	2.50	1.50	–
20mm	2.50	2.00	1.50
22mm	2.50	1.50	–
24mm	3.00	2.00	–
27mm	3.00	–	–
30mm	3.50	–	–
33mm	3.50	–	–
36mm	4.00	–	–

Din#	Description	
931	Coarse Thread Cap Screws	(Partially Threaded)
933	Coarse Thread Cap Screws	(Fully Threaded)
960	Fine Thread Cap Screws	(Partially Threaded)
961	Fine Thread Cap Screws	(Fully Threaded)
84	Cheese (Fillister) Machine Screws	(Slotted)
85	Pan Head Machine Screws	(Slotted)
963	Flat Head Machine Screws	(Slotted)
964	Oval Head Machine Screws	(Slotted)
966	Oval Head Machine Screws	(Phillips)
7985	Fillister Head Machine Screws	(Phillips)
125	Flat Washers	
127	Split Lock Washers	
6797	Tooth Lock Washers	
936	Jam Nuts	
934	Finished Hex Nuts	
985	Nylon Stop Nuts	
912	Socket Cap Screw	
439	Hex Jam Nut	
916	Socket Set Screw	