



ASTM A325
**STRUCTURAL BOLT
ASSEMBLY**

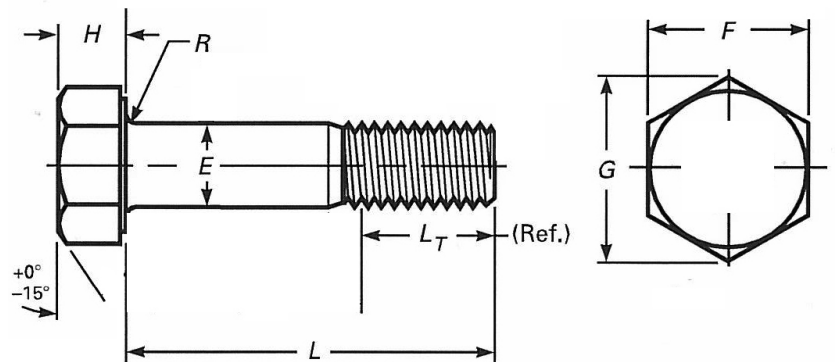
BAPP

Group of Companies

Bolt

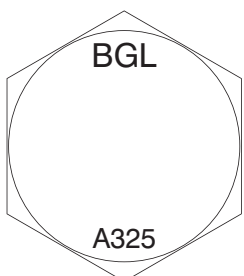
ASTM A325 Bolt Dimensions											
Diameter & Pitch	E		F		G		H		R		L _T
	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	ref.
1/2	0.515	0.482	0.875	0.850	1.010	0.969	0.323	0.302	0.031	0.009	1.00
5/8	0.642	0.605	1.062	1.031	1.227	1.175	0.403	0.378	0.062	0.021	1.25
3/4	0.768	0.729	1.250	1.212	1.443	1.383	0.483	0.455	0.062	0.021	1.38
7/8	0.895	0.852	1.438	1.394	1.660	1.589	0.563	0.531	0.062	0.031	1.50
1	1.022	0.976	1.625	1.575	1.876	1.796	0.627	0.591	0.093	0.062	1.75
1 1/8	1.149	1.098	1.812	1.756	2.093	2.002	0.718	0.658	0.093	0.062	2.00
1 1/4	1.277	1.223	2.000	1.938	2.309	2.209	0.813	0.749	0.093	0.062	2.00
1 3/8	1.404	1.345	2.188	2.119	2.526	2.416	0.878	0.810	0.093	0.062	2.25
1 1/2	1.531	1.470	2.375	2.300	2.742	2.622	0.974	0.902	0.093	0.062	2.25

Standard Specification	ASTM A325
Material	Alloy Steel
Strength Grade	120 ksi
Screw Thread	ASME B1.1 UNC 2A
Surface Finish	Plain as Processed
	Hot Dipped Galvanised

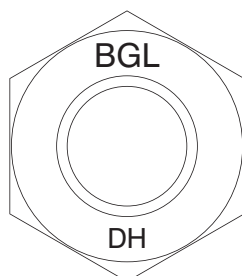


ASTM A325 Bolt Characteristics									
Diameter & Pitch	Stress Area (in ²)	Tensile (lbf)		Proof Load (lbf)		Hardness			
				Length Measurement method	Yield Strength Method	Brinell HB		Rockwell HRC	
		min.	max.			min.	min.	max.	min.
1/2	0.142	21300	24600	17050	18500	311	352	33	38
5/8	0.226	33900	39100	27100	29400				
3/4	0.334	50100	57800	40100	43400				
7/8	0.462	69300	79950	55450	60100				
1	0.606	90900	104850	72700	78800				
1 1/8	0.763	114450	132000	91550	99200				
1 1/4	0.969	145350	167650	116300	126000				
1 3/8	1.155	173250	199850	138600	150200				
1 1/2	1.405	210750	243100	168600	182600				

Bolt Head Marking



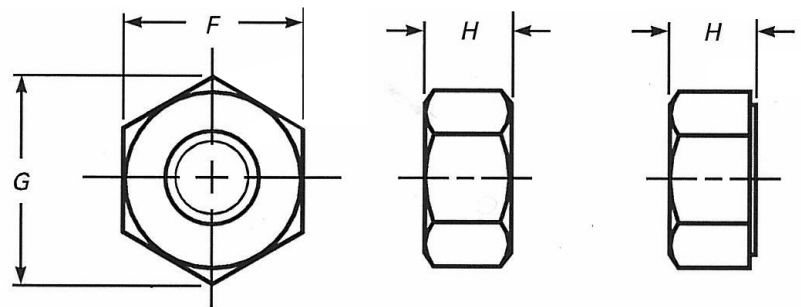
Nut Head Marking



Nut

ASTM A563 Nut Dimensions						
Diameter and Pitch	F		G		H	
	max.	min.	max.	min.	max.	min.
1/2	0.875	0.850	1.010	0.969	0.504	0.464
5/8	1.062	1.031	1.227	1.175	0.631	0.587
3/4	1.250	1.212	1.443	1.382	0.758	0.710
7/8	1.438	1.394	1.660	1.589	0.885	0.833
1	1.625	1.575	1.876	1.796	1.012	0.956
1 1/8	1.812	1.756	2.093	2.002	1.139	1.079
1 1/4	2.000	1.938	2.309	2.209	1.251	1.187
1 3/8	2.188	2.119	2.526	2.416	1.378	1.310
1 1/2	2.375	2.300	2.742	2.622	1.505	1.433

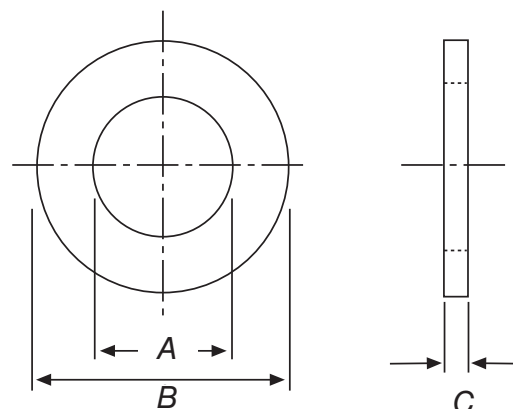
Standard Specification	ASTM A563
Material	Carbon & Alloy Steel
Strength Grade	DH
Screw Thread	ASME B1.1 UNC 2A
Surface Finish	Plain as Processed
	Hot Dipped Galvanised



Washer

ASTM F436 Washer Dimensions						
Diameter	A		B		C	
	max.	min.	max.	min.	max.	min.
1/2	0.563	0.531	1.095	1.031	0.177	0.097
5/8	0.720	0.688	1.345	1.281	0.177	0.122
3/4	0.845	0.813	1.500	1.436	0.177	0.122
7/8	0.970	0.938	1.782	1.718	0.177	0.136
1	1.126	1.063	2.063	1.937	0.177	0.136
1 1/8	1.251	1.188	2.313	2.187	0.177	0.136
1 1/4	1.438	1.375	2.563	2.437	0.177	0.136
1 3/8	1.563	1.500	2.813	2.687	0.177	0.136
1 1/2	1.688	1.625	3.063	2.937	0.177	0.136

Standard Specification	ASTM F436
Material	Hardened Steel
Material Hardness	38 to 45 HRC
Surface Finish	Plain as Processed
	Hot Dipped Galvanised



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