



ASTM A325M
**STRUCTURAL BOLT
ASSEMBLY**

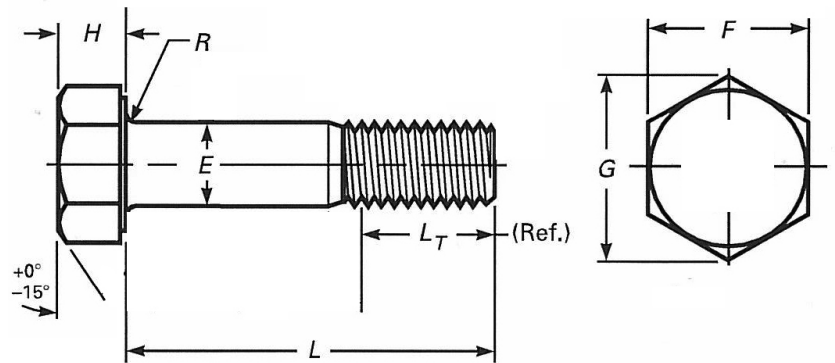
BAPP

Group of Companies

Bolt

ASTM A325M Bolt Dimensions										
Diameter & Pitch	E		F		G		H		R	L_T
	max.	min.	max.	min.	max.	min.	max.	min.	min.	ref.
M12 x 1.75	12.70	11.30	21.00	20.16	24.25	22.78	7.95	7.05	0.60	25
M16 x 2	16.70	15.30	27.00	26.16	31.18	29.56	10.75	9.25	0.60	31
M20 x 2.5	20.84	19.16	34.00	33.00	39.26	37.29	13.40	11.60	0.80	36
M22 x 2.5	22.84	21.16	36.00	35.00	41.57	39.55	14.90	13.10	0.80	38
M24 x 3	24.84	23.16	41.00	40.00	47.34	45.20	15.90	14.10	1.00	41
M27 x 3	27.84	26.16	46.00	45.00	53.12	50.85	17.90	16.10	1.20	44
M30 x 3.5	30.84	29.16	50.00	49.00	57.74	55.37	19.75	17.65	1.20	49
M36 x 4	37.00	35.00	60.00	58.80	69.28	66.44	23.55	21.45	1.50	56

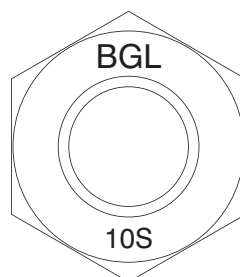
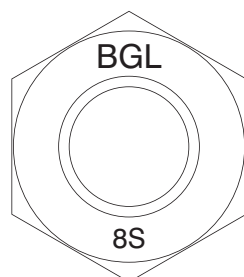
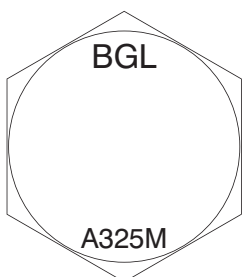
Standard Specification	ASTM A325M
Material	Medium Carbon Steel
Strength Grade	8.8
Screw Thread	ASME B1.13M MC 6g
Surface Finish	Plain as Processed
	Hot Dipped Galvanised



ASTM A325M Bolt Characteristics								
Diameter & Pitch	Stress Area (mm ²)	Tensile (kN)	Proof Load (kN)		Hardness			
			Length Measurement method	Yield Strength Method	Brinell HB		Rockwell HRC	
					min.	max.	min.	max.
M12 x 1.75	84.3	70	50.6	55.6	253	319	25	34
M16 x 2	157	130	94.2	104				
M20 x 2.5	245	203	147	162				
M22 x 2.5	303	251	182	200				
M24 x 3	353	293	212	233				
M27 x 3	459	381	275	303				
M30 x 3.5	561	466	337	370				
M36 x 4	817	678	490	539				

Bolt Head Marking

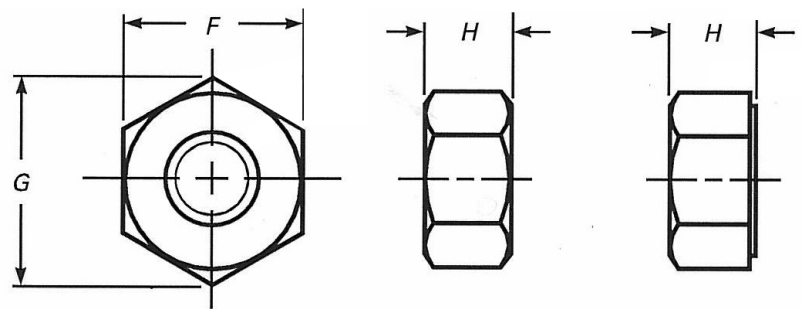
Nut Head Marking



Nut

ASTM A563M Nut Dimensions						
Diameter and Pitch	F		G		H	
	max.	min.	max.	min.	max.	min.
M12 x 1.75	21.00	20.16	24.25	22.78	12.3	11.9
M16 x 2	27.00	26.16	31.18	29.56	17.1	16.4
M20 x 2.5	34.00	33.00	39.26	37.29	20.7	19.4
M22 x 2.5	36.00	35.00	41.57	39.55	23.6	22.3
M24 x 3	41.00	40.00	47.34	45.20	24.2	22.9
M27 x 3	46.00	45.00	53.12	50.85	27.6	26.3
M30 x 3.5	50.00	49.00	57.74	55.37	30.7	29.1
M36 x 4	60.00	58.80	69.28	66.44	36.6	35.0

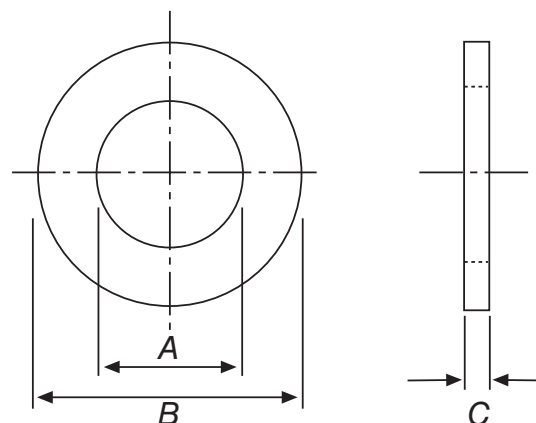
Standard Specification	ASTM A563M
Material	Carbon & Alloy Steel
Strength Grade	8S, 10S
Screw Thread	ASME B1.13M MC 6H
Surface Finish	Plain as Processed Hot Dipped Galvanised



Washer

ASTM F436M Washer Dimensions						
Diameter	A		B		C	
	max.	min.	max.	min.	max.	min.
M12	14.4	14.0	27.0	25.7	4.6	3.1
M16	18.4	18.0	34.0	32.4	4.6	3.1
M20	22.5	22.0	42.0	40.4	4.6	3.1
M22	24.5	24.0	44.0	42.4	4.6	3.4
M24	26.5	26.0	50.0	48.4	4.6	3.4
M27	30.5	30.0	56.0	54.1	4.6	3.4
M30	33.6	33.0	60.0	58.1	4.6	3.4
M36	39.6	39.0	72.0	70.1	4.6	3.4

Standard Specification	ASTM F436M
Material	Hardened Steel
Material Hardness	38 to 45 HRC
Surface Finish	Plain as Processed Hot Dipped Galvanised



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