TOURQUE TABLE ASTM A325M

Physical Properties			
		Type '1'	Type '1'
Nominal Thread Size		M12 to M24	M25 <36
Tensile Strength (Min.)	(N/mm2)	830	830
Yield Strength (Min.)	(N/mm2)	660	660
Proof Load Stress (Min.)	(N/mm2)	600	600
On GL = 2" Elongation (Min.)	[%]	12	12
Reduction of Area (Min.)	[%]	35	35
Hardness	[HR]	Bolt length <2D C25-C34	Bolt length <3D C19-C30
		Bolt length 2D and over C34 (Max.)	Bolt length 3D and over C30 (Max.)

Rotational Capacity Test for Zinc Coated Bolts	
Bolt length in	Nominal Nut rotation degree (Turn)
2D and Shorter	180 (1/2)
Over 2D to 3D Incl.	240 (2/3)
Over 3D to 4D Incl.	300 (7/8)
Over 4D to 8D Incl.	360 (1)
Over 8D	420 (1-1/8)

Recommended Tightening Torques and Induced Loads			
Thread Size and Pitch	Stress Area	Un-lubricated Finish	Induced Load
	MM2	Nm	KN
M12-1.75	84.30	93.47	38.9
M16-2.00	157	232-11	72.534
M20-2.50	245	452.76	112.19
M22-2.50	303	615.94	139.99
M24-3.00	353	782.81	163.09
M27-3.00	459	1,145.11	212.06
M30-3.50	561	1,555.10	259.18
M36-4.00	817	2,717.67	377.45

Metric Series - Dimensions:

Note:

- The Bolts will generally conform to ANSI/ASME B 18.2.3.7M Metric Heavy Hex Structural Bolts.
- Thread will conform to Class 6g of ANSI B1.13M Coarse Series.
- Material: High Grade Carbon/Alloy Steel.
- Heat Treatment as per ASTM A 325M or ASTM F 568M Class 8.8.
- Thread length LT

LT1 for L<100

LT2 for L>100

Nominal Thread Size	Pitch	F Max.	G Max.	B Max.	H Max.	R Max.	Length of Thread		Length Range
							LT1	LT2	
M12	1.75	22.00	25.40	12.70	8.0	0.6	25	--	30-200
M16	2.00	27.00	31.18	16.70	10.0	0.6	31	38	50-200
M20	2.50	34.00	39.18	20.84	12.5	0.8	36	43	50-200
M22	2.50	36.00	41.57	22.84	14.0	0.8	38	45	70-200
M24	3..00	41.00	47.34	24.84	15.0	1.0	41	48	70-200
M27	3.00	46.00	51.12	27.84	17.0	1.2	44	51	80-200
M30	3.50	50.00	5774	30.84	18.7	1.2	49	56	100-200
M36	4.00	60.00	69.28	37.84	22.5	1.5	56	63	100-200

all dimensions are in millimeters.