BOLT SIZE mm	PITCH mm	STRESS AREA mm²	BOLT/SCREW ASTM A490M-1									NUT ASTM A563M 10S						
			SHANK DIAMETER mm	WIDTH ACCROS FLATS mm	HEAD HEIGHT mm	PROOF STRESS Mpa	PROOF LOAD KN	TENSILE STRESS Mpa	TORQUE * N-m	HARDNESS HRC	ELONG-ATION # %	WIDTH ACCROSS FLATS mm	HEAD HEIGHT mm	PROOF STRESS Mpa		PROOF LOAD KN		HARDNESS HRC
														PLAIN	HDG	PLAIN	HDG	
M6	1	20.1																
M8	1.25	36.6																
M10	1.5	58.8																
M12	1.75	84.3				830	70.0	1040-1210	112.7	33-39	14-	20.16~21.00	11.90~12.30	1245	1165	105	98	26~38
M14	2.0	115.0				830	95.5	1040-1210	179.4	33-39	14-	23.16~24.00	13.60~14.30	1245	1165	143	134	26~38
M16	2.0	157.0	15.30~16.70	26.16~27.00	9.25~10.75	830	130.3	1040-1210	279.9	33-39	14-	26.16~27.00	16.40~17.10	1245	1165	195	183	26~38
M18	2.5	192.0				830	159.4	1040-1210	385.1	33-39	14-			1245	1165	239	224	26~38
M20	2.5	245.0	19.16~20.84	33.00~34.00	11.60~13.40	830	203.4	1040-1210	546.0	33-39	14-	33.00~34.00	19.40~20.70	1245	1165	305	285	26~38
M22	2.5	303.0	21.16~22.84	35.00~36.00	13.10~14.90	830	251.5	1040-1210	742.8	33-39	14-	35.00~36.00	22.30~23.60	1245	1165	377	353	26~38
M24	3.0	353.0	23.16~24.84	40.00~41.00	14.10~15.90	830	293.0	1040-1210	944.0	33-39	14-	40.00~41.00	22.90~24.20	1245	1165	439	411	26~38
M27	3.0	459.0	26.16~27.84	45.00~46.00	16.10~17.90	830	381.0	1040-1210	1,381	33-39	14-	45.00~46.00	26.30~27.60	1245	1165	571	535	26~38
M30	3.5	561.0	29.16~30.84	49.00~50.00	17.65~19.75	830	465.6	1040-1210	1,875	33-39	14-	49.00~50.00	29.10~30.70	1245	1165	698	654	26~38
M33	3.5	694.0				830	576.0	1040-1210	2,552	33-39	14-			1245	1165	864	809	26~38
M36	4.0	817.0	35.00~37.00	58.80~60.00	21.45~23.55	830	678.1	1040-1210	3,277	33-39	14-	58.80~60.00	35.00~36.00	1245	1165	1,017	952	26~38
M39	4.0	976.0																
M42	4.5	1,120.0																
M45	4.5	1,310.0																
M48	5.0	1,470.0																
M52	5.0	1,760.0																
M56	5.5	2,030.0																
M60	5.5	2,360.0																
M64	6.0	2,680.0																
M68	6.0	3,060.0																
M72	6.0	3,460.0																
M76	6.0	3,890.0																
M80	6.0	4,340.0																
M85	6.0	4,950.0																
M90	6.0	5,590.0																
M95	6.0	6,270.0																
M100	6.0	6,990.0																
Dimensions			HEAVY HEX as per ANSI/ASME B18.2.4.7M									HEAVY HEX as per ANSI/ASME B18.2.4.6M						
Markings			'FPI' 'A490M' '10S'									'FPI' '10S'						
Carbon			0.30-0.48/0.35-0.53									0.20-0.55						
Manganese			-1.65									0.30-						
Sulfur			-0.04									-0.05						
Silicon			-0.6															
Chromium			-3.99															
Molybdenum																		
Nickle																		
Vanadium																		
Boron																		
Copper																		
Nitrogen																		
Phosphorus			-0.04									-0.04						
Material			Alloy Steel									Medium Carbon/Alloy Steel						

Notes:
Left hand side of '-' is minium value
right hand side of '-' is maximam value
Eg. 0.5-0.7 min is 0.5 and max is 0.7
Eg. -0.8 max is 0.8 no minimam value
Eg. 2.0- min is 2.0 no maximam value

* Torque value based on 75% of proof load and finish as received steel
\# Elongation in 50mm length min

While every care has been taken in preparation of the information, the company accepts no liability for any loss or damage either direct or consequential, Please refer Original standards for details.