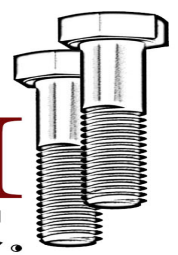




SHABBARII

TRADING L.L.C.



PROPERTIES OF GRADE 8.8 BOLT & NUT

BOLT SIZE	PITCH	STRESS AREA MM ²	BOLT/STUD/SCREW BS 3692 Gr. 8.8						NUT BS 3692 Gr. 8		
			PROOF STRESS N/MM ²	PROOF LOAD KN	TENSILE STRESS N/MM ²	TORQUE* N-m	HARDNESS HRC	ELONGATION# %	PROOF STRESS N/MM ²	PROOF LOAD KN	HARDNESS HRC
M6	1	20.1	580	11.7	800.0	9.4	22-32	12.0	800	16.1	-30
M8	1.25	36.6	580	21.2	800.0	22.8	22-32	12.0	800	29.3	-30
M10	1.5	58.8	580	34.1	800.0	45.8	22-32	12.0	800	47.0	-30
M12	1.75	84.3	600	50.6	830.0	78.8	22-34	12.0	800	67.4	-30
M14	2.0	115.0	600	69.0	830.0	125.4	22-34	12.0	800	92.0	-30
M16	2.0	157.0	600	94.2	830.0	195.6	22-34	12.0	800	125.6	-30
M18	2.5	192.0	600	115.2	830.0	278.4	23-34	12.0	800	153.6	-30
M20	2.5	245.0	600	147.0	830.0	394.7	23-34	12.0	800	196.0	-30
M22	2.5	303.0	600	181.8	830.0	536.9	23-34	12.0	800	242.4	-30
M24	3.0	353.0	600	211.8	830.0	682.4	23-34	12.0	800	282.4	-30
M27	3.0	459.0	600	275.4	830.0	998.3	23-34	12.0	800	367.2	-30
M30	3.5	561.0	600	336.6	830.0	1,356	23-34	12.0	800	448.8	-30
M33	3.5	694.0	600	416.4	830.0	1,845	23-34	12.0	800	555.2	-30
M36	4.0	817.0	600	490.2	830.0	2,369	23-34	12.0	800	653.6	-30
M39	4.0	976.0	600	585.6	830.0	3,066	23-34	12.0	800	780.8	-30
M42	4.5	1,120.0	600	672.00	830.0	3,789	23-34	12.0	800	896.0	-30
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									
DIMENSIONS	NORMAL HEX		NORMAL HEX						NORMAL HEX		
MARKINGS	'8.8'		'8.8'						'8.8'		
CARBON	0.25 - 0.55		0.25 - 0.55						-0.58		
MANAGENESE	-0.30		-0.30						-0.30		
SULPHUR	-0.15		-0.035						-0.15		
SILICON											
CHROMIUM											
MOLYDENUM											
NICKLE											
VANADIUM											
BORON	-0.003		-0.003						-0.06		
PHOSPHOROUS	-0.06		-0.035						-0.06		
MATERIAL	Carbon steel quenched & tempered		Carbon steel quenched & tempered						Medium Carbon Steel		

NOTES:

Left hand side of '-' is minimum value
 Right hand side of '-' is maximum value
 Eg. 0.5 - 0.7 min. is 0.5 and max is 0.7
 Eg. -0.8 max is 0.8 no minimum value
 Eg. 2.0- min. is 2.0 no maximum value

* Torque value based on 75% of proof load and finish as recieved steel