











# Standard Torque Value Chart








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Fastener	Type	Min. Tensile Strength	Material	Fastener Sizes																																	
				# 4	# 6	# 8	# 10	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1"	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	1-7/8	2"	2-1/4	2-1/2	2-3/4	3"								
	Machine Screws	55,000 PSI	Low Carbon Steel	5.5*	10*	21*	24*	79*	138*	252*		45																									
	SAE J429 Gr5	120,000 PSI	Medium Carbon Heat Treated Steel					10	19	33	54	78	114	154	257	382	587	974	1105	1500	1775	2425	3150	4200	4550	6550	7175	13000	16000								
	SAE J429 Gr8	150,000 PSI	Medium Carbon Alloy Steel					14	29	47	78	119	169	230	380	600	900	1430	1975	2650	3200	4400	5650	7600	8200	12000	17000	23000	29000								
	Socket Head Cap Screw	160,000 PSI	Alloy Steel					16	33	54	84	125	180	250	400	640	970	1520	2130	2850	3450	4700	6100	8200	8800	13000	18000	24000	31000								
	Socket Set Screw	212,000 PSI	Alloy Steel		9*	16*	30*	70*	140*	18	29	43	63	100	146																						
	Hex Cap Scr SS18-8	1/4 - 5/8 100,000 PSI 3/4 - 1" 85,000 PSI	303,304 Stainless Steel					6.3	11	19.6	31.3	43.1	56.8	92.5	127.5	194	286.6	34.4	40		74																
	Hex Cap Scr SS 316	1/4 - 5/8 100,000 PSI 3/4 - 1" 85,000 PSI	316 Stainless Steel					6.6	11.5	20.6	32.8	45.2	59.4	96.6	131.8	202.5	299.6	432	546		930																
	A325 Structural Bolt	1/2 - 1" 120,000 PSI 1 1/8 - 1 1/2 105,000 PSI	Medium Carbon Steel									79		155	275	448	670	825	1165	1535	2025																
	A193 B7 Bolts	1/4 - 2-1/4 125,000 PSI 2- 1/2 to 3" 115,000 PSI	Alloy Steel for Hi-Temp Service					10	21	38	61	93	134	186	329	530	796	1126	1590	2085	2767		4364		6563	9598	13125	16100	21268								
	ASTM A307 Grade B	60,000	Low Carbon Steel					4	7	13	21	32	46	64	113	166	250	354	500	655	870		1496		2250	3291	4500	6110	8060								

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				M-2	M-2.5	M-3	M4	M-5	M-6	M-7	M-8	M-10	M-12	M-14	M-16	M-18	M-20	M-22	M-24	M-27	M-30	M-33	M-36				
	Machine Screws	55,000 PSI	Low Carbon Steel			7*	17*	35*	60*			145*	288*														
	Hex Cap Ser DIN 931.933 Class8.8	120,000 PSI	Medium Carbon Steel					1.16	2.7	4.5	6.6	13	22.7	36.2	56.2	77.6	109.7	149.5	189.5	277.9	376.8	512.7	658.7				
	Hex Cap Ser DIN 931.933 Class10.9	150,000 PSI	Alloy Steel					4.31	7	11.7	16.9	33.5	58.4	93.3	144.7	200	282.7	385.4	488.4	716.1	970.9	1321.4	1697.5				
	Socket Head Cap Screw Din912 12.9	160,000 PSI	Alloy Steel			1.6	3.8	7.6	13	21.7	31.4	62.2	108.5	173.4	268.9	371.7	525.2	716.1	907.6	1330	1804	2455	3154				
	Socket Set Screw		Alloy Steel			1.6	1.5	3.5	5.7		13.1	25.8	42	92.9		185.7		309.5									
	Hex Cap Ser SSA2		303,304 Stainless Steel			8.9*	23	45.1	77		188*	372*	54	87	133	190	273	358	445								
	Hex Cap Ser SS A4		316 Stainless Steel			8.9*	23	45.1	77		188*	372*	54	87	133	190	273	358	445								

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