

# Torque Figure Guide

## Torque Figures - Metric

Bolt Size	A/F Size	Torque lbs/ft (Tightening)	HTL Torque Wrench Required	HTL SPX Square Drive Torque Wrench Required	HTL SPX Low Profile Torque Wrench Required	Pneutorque Tool Required
M14	21mm	65	Hand	Hand	Hand	Hand
M16	24mm	100	Hand	Hand	Hand	Hand
M18	27mm	110	Hand	Hand	Hand	Hand
M20	30mm	195	Hand	Hand	Hand	PTM - 72 - 1000
M24	36mm	335	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 1000
M27	41mm	490	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 1000
M30	46mm	670	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 2000
M33	50mm	905	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 2000
M36	55mm	1165	HTL-W4	TWSD-3	TWLC-4	PTM - 72 - 2000
M39	60mm	1510	HTL-W4	TWSD-3	TWLC-4	PTM - 92 - 2700
M42	65mm	1875	HTL-W4	TWSD-3	TWLC-4	PTM - 92 - 2700
M45	70mm	2340	HTL-W8	TWSD-6	TWLC-8	PTM - 119 - 4500
M48	75mm	2820	HTL-W8	TWSD-6	TWLC-8	PTM - 119 - 4500
M52	80mm	3615	HTL-W8	TWSD-11	TWLC-8	PTM - 119 - 6000
M56	85mm	4515	HTL-W8	TWSD-11	TWLC-8	PT9 MTS
M64	95mm	6705	HTL-W8	TWSD-11	TWLC-15	PT9 MTS
M70	100mm	8825	HTL-W14	TWSD-25	TWLC-15	PT11 MTS
M76	110mm	11495	HTL-W30	TWSD-25	TWLC-30	PT11 MTS
M82	120mm	14645	HTL-W30	TWSD-50	TWLC-30	PT13 MTS
M90	130mm	19450	HTL-W30	TWSD-50	TWLC-30	PT13 MTS

## Torque Figures - Imperial

Bolt Size	A/F Size	Torque lbs/ft (Tightening)	HTL LPW Torque Wrench Required	HTL SPX Square Drive Torque Wrench Required	HTL SPX Low Profile Torque Wrench Required	Pneutorque Tool Required
1/2"	7/8"	50	Hand	Hand	Hand	Hand
5/8"	1 1/16"	100	Hand	Hand	Hand	Hand
3/4"	1 1/4"	175	Hand	Hand	Hand	PTM - 72 - 1000
7/8"	1 7/16"	275	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 1000
1"	1 5/8"	410	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 1000
1 1/8"	1 13/16"	600	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 2000
1 1/4"	2"	835	HTL-W2	TWSD-1	TWLC-2	PTM - 72 - 2000
1 3/8"	2 3/16"	1130	HTL-W4	TWSD-3	TWLC-4	PTM - 72 - 2000
1 1/2"	2 3/8"	1485	HTL-W4	TWSD-3	TWLC-4	PTM - 92 - 2700
1 5/8"	2 9/16"	1910	HTL-W4	TWSD-3	TWLC-4	PTM - 92 - 2700
1 3/4"	2 3/4"	2405	HTL-W8	TWSD-6	TWLC-6	PTM - 92 - 3500
1 7/8"	2 15/16"	2980	HTL-W8	TWSD-6	TWLC-6	PTM - 119 - 4500
2"	3 1/8"	3635	HTL-W8	TWSD-11	TWLC-8	PTM - 119 - 6000
2 1/4"	3 1/2"	5235	HTL-W8	TWSD-11	TWLC-8	PTM - 119 - 6000
2 1/2"	3 7/8"	7235	HTL-W14	TWSD-11	TWLC-15	PT9 MTS
2 3/4"	4 1/4"	9700	HTL-W30	TWSD-25	TWLC-15	PT11 MTS
3"	4 5/8"	12660	HTL-W30	TWSD-25	TWLC-30	PT11 MTS
3 1/4"	5"	16170	HTL-W30	TWSD-50	TWLC-30	PT13 MTS
3 1/2"	5 3/8"	20275	HTL-W30	TWSD-50	TWLC-30	PT13 MTS

# Cap Head Bolt Torque Figures

BOLT SIZE	AF	Grade 8.8		Grade 10.9		Grade 12.9	
		NM	LBS. FT	NM	LBS. FT	NM	LBS. FT
M12	10MM	90	66	126	95	150	112
M14	12MM	142	105	200	150	240	180
M16	14MM	215	160	300	220	360	265
M18	14MM	290	210	400	300	485	350
M20	17MM	416	310	585	430	700	520
M22	17MM	520	375	730	1000	880	640
M24	19MM	720	530	1012	750	1215	895
M27	19MM	1025	755	1440	1060	1730	1275
M30	22MM	1405	1035	1975	1460	2370	1750
M33	24MM	1870	1380	2630	1940	3160	2330
M36	27MM	2430	1790	3415	2520	4100	3025
M39	27MM (30MM)	3090	2280	4340	3200	5210	3845
M42	32MM	3860	2845	5425	4000	6500	4800
M45	/	4745	3495	6670	4920	8000	5900
M48	36MM	5760	4245	8095	5970	9715	7165
M52	36MM	7320	5400	10295	7590	12350	9110
M56	41MM	9140	6740	12855	9845	15430	11380
M60	46MM	10480	7600	12100	8800	17650	12850
M64	46MM	13645	70065	19190	14155	23030	16985
M68	50MM	15180	11050	21400	15600	25610	18650
M72	55MM	18020	13110	25350	18450	30400	22130
M76	60MM	22855	16855	32135	23705	35735	26355
M80	65MM	22460	16360	34750	25300	41700	30400
M85	70MM	29640	21570	41700	30350	50500	36400
M90	70MM (75MM)	37950	27990	53370	39365	64045	47240
M95	/	37610	27370	58200	42350	69800	50820
M100	85MM	48240	35120	67870	49400	81440	59250

THE ABOVE FIGURES ARE BASED ON A COEFFICIENT OF FRICTION OF 0.12

IF A LUBRICANT OF 0.1 IS GOING TO BE USED, A FIGURE OF -16.5% CAN BE DEDUCTED FROM THESE FIGURES TO GIVE A REASONABLE GUIDE

PLEASE NOTE: THE ABOVE FIGURES ARE A GUIDE ONLY - FOR ACCURATE TORQUE FIGURES, PLEASE CONTACT THE OFFICE