

Metric Screws and Bolts – Torque Values

Nom Dia	Normal Pitch								Fine Pitch							
	Pitch	Stress Area	Max Force (kg)			Torque (kgm)			Pitch	Stress Area	Max Force (kg)			Torque (kgm)		
			8.8	10.9	12.9	8.8	10.9	12.9			8.8	10.9	12.9	8.8	10.9	12.9
4	0.7	8.78	393	553	664	0.28	0.40	0.48	-	-	-	-	-	-	-	-
5	0.8	14.2	636	895	1074	0.57	0.80	0.97	-	-	-	-	-	-	-	-
6	1.0	20.1	900	1266	1520	0.97	1.37	1.64	-	-	-	-	-	-	-	-
8	1.25	36.6	1640	2306	2767	2.36	3.32	4.00	1.0	39.2	1756	2470	2964	3.53	3.56	4.2
10	1.50	58.0	2598	3654	4385	4.68	6.58	7.89	1.25	61.2	2742	3856	4627	4.93	6.94	8.3
12	1.75	84.3	3777	5311	6373	8.16	11.5	13.8	1.25	92.1	4126	5802	6963	8.9	12.5	15.0
(14)	2.0	115	5152	7245	8694	13.0	18.2	21.9	1.50	125	5600	7875	9450	14.1	19.8	23.8
16	2.0	157	7034	9891	11869	20.2	28.5	34.2	1.50	167	7482	10521	12625	21.5	30.3	39.4
(18)	2.5	192	8602	12096	14515	27.9	39.2	47.0	1.50	210	9408	13230	15876	30.5	42.9	51.4
20	2.5	245	10976	15435	18522	39.5	55.5	66.7	1.50	272	12186	17136	20563	43.9	61.7	74.0
(22)	2.5	303	13574	19089	22907	53.7	75.6	90.7	1.50	333	14918	20979	25175	59.0	83	99.7
24	3.0	353	15814	22239	26687	68.2	96.0	115	2.0	384	17203	24192	29030	74.3	104	125
(27)	3.0	459	20563	28917	34700	99.9	140	168	2.0	496	22221	31248	37498	108	152	182
30	3.5	561	25133	35343	42412	136	191	229	2.0	621	27821	39123	46948	150	211	253

For torque or diameters not given above, the following formula may be used

$$\text{Torque (kgm)} = 0.2 \times \text{Bolt Load (kgf)} \times \text{Nom Dia (mm)} / 1000$$

Where 0.2 = Friction Constant, Bolt Load = Required load in bolt, 1000 = conversion from mm to