



Basic Tightening Torque Table

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Grade	Bolt Size	Bolt Diameter mm	Pitch mm	Tightening torque without lubricant							
				Hexagon head bolt				Hexagon flange bolt			
				N-m	kg-m	ft-lb	in-lb	N-m	kg-m	ft-lb	in-lb
4T	M6	6.0	1.0	5.5	0.56	4	49	7	0.71	5	62
	M8	8.0	1.25	13.5	1.4	10	~	17	1.7	13	~
			1.0	13.5	1.4	10	~	17	1.7	13	~
	M10	10.0	1.5	28	2.9	21	~	35	3.6	26	~
			1.25	28	2.9	21	~	35	3.6	26	~
	M12	12.0	1.75	45	4.6	33	~	55	5.6	41	~
1.25			45	4.6	33	~	65	6.6	48	~	
M14	14.0	1.5	80	8.2	59	~	100	10	74	~	
7T	M6	6.0	1.0	9	0.92	7	80	11	1.1	8	97
	M8	8.0	1.25	22	2.2	16	~	28	2.9	21	~
			1.0	22	2.2	16	~	28	2.9	21	~
	M10	10.0	1.5	45	4.6	33	~	55	5.6	41	~
			1.25	45	4.6	33	~	55	5.6	41	~
	M12	12.0	1.75	80	8.2	59	~	100	10	74	~
1.25			80	8.2	59	~	100	10	74	~	
M14	14.0	1.5	130	13	96	~	170	17	125	~	
9T	M6	6.0	1.0	11	1.1	8	~	13.5	1.4	10	~
	M8	8.0	1.25	28	2.9	21	~	35	3.6	26	~
			1.0	28	2.9	21	~	35	3.6	26	~
	M10	10.0	1.5	55	5.6	41	~	80	8.2	59	~
			1.25	55	5.6	41	~	80	8.2	59	~
	M12	12.0	1.75	100	10	74	~	130	13	96	~
1.25			100	10	74	~	130	13	96	~	
M14	14.0	1.5	170	17	125	~	210	21	155	~	