

Hex Bolts Tightening Torque

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Tensile / Yield / Shear Strength Tightening Torque

METRIC HEX BOLTS - RECOMMENDED TIGHTENING TORQUE
CLASS 4.6

Size	Pitch	Stress Area	Core Area	Tensile Strength	Proof Strength	Shear Strength	Recommended Tightening Torque		
	(mm)	(mm)	(mm)	(kN)	(kN)	(kN)	**Plain** (Nm)	**Zinc** (Nm)	**HDG** (Nm)
M3	0.50	5.0	4.5	2.0	1.1	1.1	0.4	0.3	0.9
M4	0.70	8.8	7.8	3.5	2.0	1.9	1.0	0.7	2.2
M5	0.80	14.2	12.7	5.7	3.2	3.0	2.1	1.5	4.4
M6	1.00	20.1	17.9	8.0	4.5	4.3	3.5	2.5	7.4
M8	1.25	36.6	32.8	14.6	8.2	7.9	8.6	6.0	18.0
M10	1.50	58.0	52.3	23.2	13.1	12.6	17.0	11.9	35.6
M12	1.75	84.3	76.2	33.7	19.0	18.3	29.6	20.7	62.1
M14	2.00	115.0	104.7	46.0	25.9	25.1	47.1	33.0	98.9
M16	2.00	157.0	144.0	62.8	35.3	34.6	73.5	51.4	154.3
M18	2.50	192.0	175.0	76.8	43.2	42.0	101.1	70.8	212.3
M20	2.50	245.0	225.0	98.0	55.1	54.0	143.3	100.3	301.0
M22	2.50	303.0	281.0	121.2	68.2	67.4	195.0	136.5	409.5
M24	3.00	353.0	324.0	141.2	79.4	77.8	247.8	173.5	520.4
M27	3.00	459.0	427.0	183.6	103.3	102.5	362.5	253.7	761.2
M30	3.50	561.0	519.0	224.4	126.2	124.6	492.3	344.6	1033.8
M33	3.50	694.0	647.0	277.6	156.2	155.3	669.9	468.9	1406.8
M36	4.00	817.0	759.0	326.8	183.8	182.2	860.3	602.2	1806.6
M39	4.00	976.0	912.0	390.4	219.6	218.9	1113.4	779.4	2338.1
M42	4.50	1120.0	1050.0	448.0	252.0	252.0	1375.9	963.1	2889.4
M48	5.00	1470.0	1380.0	588.0	330.8	331.2	2063.9	1444.7	4334.1
M56	5.50	2030.0	1910.0	812.0	456.8	458.4	3325.1	2327.6	6982.8
M64	6.00	2680.0	2520.0	1072.0	603.0	604.8	5017.0	3511.9	10535.6



Note:
The tightening torque values given in the above table serve only as a guide. A k factor of 0.2 has been used which assumes threads are plain finish, burr free with a light oil coating. It should be noted that these figures are based on the first tightening of single assemblies in isolation.