



Allthread Tightening Torque

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Tensile / Yield / Shear Strength / Tightening Torque

HOBSON PRECISION SAMPSONROD® - RECOMMENDED TIGHTENING TORQUE CLASS 8.8

Size	Pitch (mm)	Stress Area (mm ²)	Core Area (mm ²)	Tensile Load (kN)	Proof Load (kN)	Shear Load (kN)	Recommended Tightening Torque		
							Plain (Nm)	Zinc (Nm)	HDG (Nm)
M3	0.50	5.0	4.5	4.0	2.9	2.1	1.1	0.8	2.4
M4	0.70	8.8	7.8	7.0	5.1	3.7	2.6	1.9	5.6
M5	0.80	14.2	12.7	11.4	8.2	6.1	5.4	3.7	11.2
M6	1.00	20.1	17.9	16.1	11.7	8.6	9.1	6.4	19.1
M8	1.25	36.6	32.8	29.3	21.2	15.7	22.1	15.5	46.4
M10	1.50	58.0	52.3	46.4	33.6	25.1	43.7	30.6	91.8
M12	1.75	84.3	76.2	67.4	48.9	36.6	76.3	53.4	160.2
M14	2.00	115.0	104.7	92.0	66.7	50.3	121.4	85.0	254.9
M16	2.00	157.0	144.0	125.6	91.1	69.1	189.4	132.6	397.8
M18	2.50	192.0	175.0	159.4	115.2	84.0	269.6	188.7	566.1
M20	2.50	245.0	225.0	203.4	147.0	108.0	382.2	267.5	802.6
M22	2.50	303.0	281.0	251.5	181.8	134.9	519.9	364.0	1091.9
M24	3.00	353.0	324.0	293.0	211.8	155.5	660.8	462.6	1387.7
M27	3.00	459.0	427.0	381.0	275.4	205.0	966.7	676.7	2030.0
M30	3.50	561.0	519.0	465.6	336.6	249.1	1312.7	918.9	2756.8
M33	3.50	694.0	647.0	576.0	416.4	310.6	1786.4	1250.4	3751.3
M36	4.00	817.0	759.0	678.1	490.2	364.3	2294.1	1605.9	4817.7
M39	4.00	976.0	912.0	810.1	585.6	437.8	2969.0	2078.3	6234.9
M42*	4.50	1120.0	1050.0	929.6	672.0	504.0	3669.1	2568.4	7705.2
M48*	5.00	1470.0	1380.0	1220.1	882.0	662.4	5503.7	3852.6	11557.7
M56*	5.50	2030.0	1910.0	1684.9	1218.0	916.8	8867.0	6206.9	18620.8
M64*	6.00	2680.0	2520.0	2224.4	1608.0	1209.6	13378.6	9365.0	28095.0

* Extrapolated



Note:

The tightening torque values given in the above table serve only as a guide. A k factor of 0.2 has been used for plain threads which assumes burr-free with a light oil coating. A k factor of 0.14 has been used for zinc plated and 0.42 for HDG coating. Note that these figures are based on the first tightening of single assemblies in isolation.

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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