









SOKO® Range Tightening Torque Class 12.9

Metric Recommended Tightening Torque

Class	12.9		012.9		012.9		012.9		High Grade Alloy Steel		012.9	
	Socket Head		Low Head		Countersunk Head		Button Head		Socket Set Screw (Grub)		Shoulder Screw	
												
Size	Plain (Nm)	Zinc Plated (Nm)	Plain (Nm)	Zinc Plated (Nm)	Plain (Nm)	Zinc Plated (Nm)	Plain (Nm)	Zinc Plated (Nm)	Plain (Nm)	Zinc Plated (Nm)	Plain (Nm)	Zinc Plated (Nm)
M1.6	0.3	0.2							0.1	0.1		
M2	0.6	0.4							0.2	0.1		
M2.5	0.8	0.6							0.4	0.3		
M3	2.0	1.4	2.0	1.4	2.0	1.4	2.0	1.4	0.8	0.6		
M4	4.8	3.3	4.8	3.3	4.8	3.3	4.8	3.3	2.2	1.5	2.8	2.0
M5	9.6	6.7	9.6	6.7	9.6	6.7	9.6	6.7	4.6	3.2		
M6	16.4	11.5	16.4	11.5	16.4	11.5	16.4	11.5	7.8	5.5	7.0	4.9
M8	39.8	27.8	39.8	27.8	39.8	27.8	39.8	27.8	18.0	12.6	12.0	8.4
M10	78.8	55.1	78.8	55.1	78.8	55.1	78.8	55.1	36.0	25.2	29.0	20.3
M12	137.4	96.2	137.4	96.2	137.4	96.2	137.4	96.2	60.0	42.0	57.0	39.9
M14	218.6	153.0							62.0	43.4		
M16	341.1	238.8	341.1	238.8	341.1	238.8	341.1	238.8	150.0	105.0	100.0	70.0
M18	469.3	328.5										
M20	665.4	465.8	665.4	465.8	665.4	465.8	665.4	465.8	300.0	210.0	240.0	168.0
M22	905.2	633.7										
M24	1150.5	805.3	1150.5	805.3	1150.5	805.3	1150.5	805.3	475.0	332.5	470.0	329.0
M27	1683.0	1178.1										
M30	2285.5	1599.9										
M36	3994.1	2795.9										
M42	6388.0	4471.6										

Note:

The tightening torque values given in the above table serve only as a guide. A k factor of 0.2 has been used for threads with plain finish, burr-free with a light oil coating. A k factor of 0.14 has been used for zinc plated. Note that these figures are based on the first tightening of single assemblies in isolation. For reduced head class 012.9, clamp load is calculated for 420MPa bolt stress.

Please refer to our engineering team for more detailed systems of determining the correct tension in fasteners rather than just using the above guide, which is very general in nature. It does not account for the many variables that affect friction in real-world applications and hence tension in the fastener.

Bolt Tension | Anti-Vibration | Product Reliability | Traceability