

螺栓扭矩速查表 — M10

M10 · 6 property classes · 5 friction states · N·m (typ / min-max) · coarse + fine thread

M10

N·m · As 58 mm²

性能等级	Rp0.2 (MPa)	目标预紧力 (kN)	干态/发黑 K 0.18–0.22 · N·m	电镀锌 K 0.15–0.2 · N·m	热镀锌 K 0.18–0.25 · N·m	涂油 K 0.12–0.15 · N·m	蜡/PTFE/防咬合 K 0.08–0.12 · N·m
4.8	340	13.8	28 25–30	23 21–28	30 25–35	18 17–21	14 11–17
8.8	640	26	52 47–57	44 39–52	57 47–65	34 31–39	26 21–31
10.9	940	38.2	76 69–84	65 57–76	84 69–95	50 46–57	38 31–46
12.9	1100	44.7	89 80–98	76 67–89	98 80–112	58 54–67	45 36–54
A2-70	450	18.3	37 33–40	31 27–37	40 33–46	24 22–27	18 15–22
A4-80	600	24.4	49 44–54	41 37–49	54 44–61	32 29–37	24 19–29

扭矩按 K 系数法 $T = K \cdot D \cdot F$ 计算：D 为公称直径，F 为目标预紧力 = 70% Rp0.2 × 螺纹应力截面积（M10 As = 58 mm²）；等级屈服强度取 ISO 898-1（碳钢/合金钢）与 ISO 3506-1（不锈钢 A2/A4）公开值。K 为螺母系数，按摩擦状态取公开经验区间（Machinery's Handbook；蜡/PTFE/防咬合档 K≈0.10 依 Machine Design 实验值）。润滑脂/MoS2 档（K≈0.11）与防咬合档接近，未单列，可在计算器中选择。

细牙扭矩矩阵

性能等级	Rp0.2 (MPa)	目标预紧力 (kN)	干态/发黑 K 0.18–0.22 · N·m	电镀锌 K 0.15–0.2 · N·m	热镀锌 K 0.18–0.25 · N·m	涂油 K 0.12–0.15 · N·m	蜡/PTFE/防咬合 K 0.08–0.12 ·
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