Dimension table DIN 912 / ISO 4762 — hexagon socket head cap screws

Dimensions in mm to DIN 912 (superseded by ISO 4762; interchangeable). Tightening torques are guide values from VDI 2230 at a friction coefficient of 0.10 and 90 % utilisation of the yield strength; verify them for critical joints.

Dimensions

size	pitch P	head diameter dk	head height k	key size s
M3	0.5	5.5	3	2.5
M4	0.7	7	4	3
M5	0.8	8.5	5	4
M6	1	10	6	5
M8	1.25	13	8	6
M10	1.5	16	10	8
M12	1.75	18	12	10
M14	2	21	14	12
M16	2	24	16	14
M20	2.5	30	20	17
M24	3	36	24	19

Tightening torques (Nm)

size	8.8	10.9	12.9
M3	1.15	1.68	1.97
M4	2.64	3.88	4.55
M5	5.2	7.6	9
M6	9	13.2	15.4
M8	21.5	32	37.5
M10	42.5	62.5	73.5
M12	73.5	108	126
M14	118	173	202
M16	180	264	310
M20	362	520	605
M24	625	890	1040

Property classes (ISO 898-1)

8.8	tensile strength 800 N/mm², yield strength 640 N/mm²
10.9	1,000 N/mm², yield strength 900 N/mm²
12.9	1,200 N/mm², yield strength 1,080 N/mm²
A2-70 / A4-70	stainless steel, tensile strength 700 N/mm² (ISO 3506-1)