Suitable for use in parts too thin for standard Socket Head Cap Screw and for applications with limited clearance.

Equivalent Standards

DIN 7984 + 6912
(Except for Head & Socket Dims)

Mechanical Properties

Material: Unbrako High Grade Alloy Steel
Property Class: 10.9
Heat Treatment: Rc 33-39
Tensile Strength: 1040 N/mm²
Yield Strength: 940 N/mm²
Shear Strength: 624 N/mm²
Min. Elongation: 9%

NOTES:

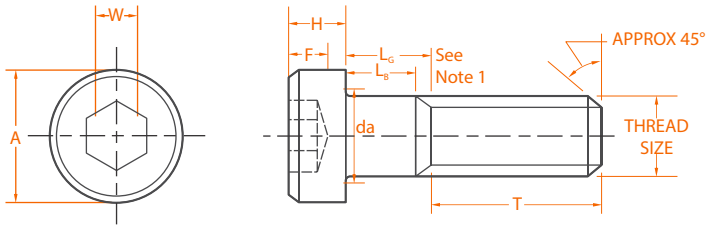
1. Body and Grip Lengths are same as metric Socket Head Cap Screws. (see page no.16)
2. Thread Class: 6g
3. Working Temperature: -50°C to +300°C
4. Sizes M5 and larger are stamped U 10.9. Torques calculated in accordance with VDI 2230 "Systematic calculation of high duty bolted joints" with σ 0.2 = 900 N/mm2 and μ = 0.125 for plain finish and μ = 0.094 for plated.

Length 'L' Tolerance (mm)

Screws Over	Up to and including	Tolerance
-	50	±0.25
50	80	±0.50
80	120	±0.70
120	250	±0.80
250	-	±1.00

Head Marking

Head markings may vary slightly depending on manufacturing practice. UNBRAKO and UNB are recognized identifications for M5 diameter & larger.



Product Dimensions

Thread size nom.	Pitch	Head Diameter A max	Hex Socket Size W nom.	Head Height H max	Key Depth F min.	Transition Diameter da max.	Thread Length T ref
M4	0.70	7	3	2.8	1.48	4.7	20
M5	0.80	8.5	4	3.5	1.85	5.7	22
M6	1.00	10	5	4.0	2.09	6.8	24
M8	1.25	13	6	5.0	2.48	9.2	28
M10	1.50	16	8	6.5	3.36	11.2	32
M12	1.75	18	10	8.0	4.26	13.7	36
M16	2.00	24	12	10.0	4.76	17.7	44
M20	2.50	30	14	12.5	6.07	22.4	52

Thread size nom.	Recommended Seating Torque				Induced Load	
	Unplated		Plated			
	N-m	lbf.ln.	N-m	lbf.ln.	kN	lbf.
M4	3.8	33.6	2.9	25.7	5.65	1,270
M5	8.0	70.8	6.0	53.1	9.20	2,068
M6	13.0	115.0	9.8	86.7	13.00	2,920
M8	32.0	283.0	24.0	212.0	23.90	5,370
M10	64.0	566.0	48.0	425.0	38.00	8,540
M12	110.0	974.0	83.0	735.0	55.50	12,470
M16	275.0	2,434.0	206.0	1,820.0	105.00	23,600
M20	550.0	4,870.0	405.0	3,585.0	164.00	36,800

as per Unbrako standard