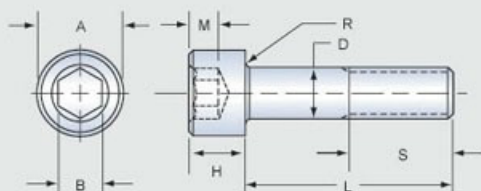


- Dimensions
- Mechanical Properties
- Application Data

ISO 4762 / DIN 912 : Hexagon Socket Head Cap Screws



Various SEMS Washer is available.

Dimensions (mm)

Nom. Size	A	H	D	B	M min.	S min.	R min.	R.S. Torque (N·m)	12.9	10.9
M1.6	2.86 - 3.14	1.46 - 1.60	1.46 - 1.60	1.520 - 1.580	0.70	15	0.10	0.30	0.25	
M2	3.62 - 3.98	1.86 - 2.00	1.86 - 2.00	1.520 - 1.580	1.00	16	0.10	0.63	0.50	
M2.5	4.32 - 4.68	2.36 - 2.50	2.36 - 2.50	2.020 - 2.080	1.10	17	0.10	1.27	1.03	
M3	5.32 - 5.68	2.86 - 3.00	2.86 - 3.00	2.520 - 2.580	1.30	18	0.10	2.20	1.83	
M4	6.78 - 7.22	3.82 - 4.00	3.82 - 4.00	3.020 - 3.080	2.00	20	0.20	4.83	4.27	
M5	8.28 - 8.72	4.82 - 5.00	4.82 - 5.00	4.020 - 4.095	2.50	22	0.20	10.0	8.64	
M6	9.78 - 10.22	5.70 - 6.00	5.82 - 6.00	5.020 - 5.140	3.00	24	0.25	16.8	14.7	
M8	12.73 - 13.27	7.64 - 8.00	7.78 - 8.00	6.020 - 6.140	4.00	28	0.40	41.0	35.6	
M10	15.73 - 16.27	9.64 - 10.00	9.78 - 10.00	8.025 - 8.175	5.00	32	0.40	81.0	70.6	
M12	17.73 - 18.27	11.57 - 12.00	11.73 - 12.00	10.025 - 10.175	6.00	36	0.60	142	123	
M14	20.67 - 21.33	13.57 - 14.00	13.73 - 14.00	12.032 - 12.212	7.00	40	0.60	226	195	
M16	23.67 - 24.33	15.57 - 16.00	15.73 - 16.00	14.032 - 14.212	8.00	44	0.60	350	305	
M18	26.67 - 27.33	17.57 - 18.00	17.73 - 18.00	14.032 - 14.212	9.00	48	0.60	485	420	
M20	29.67 - 30.33	19.48 - 20.00	19.67 - 20.00	17.050 - 17.230	10.00	52	0.80	685	596	
M22	32.61 - 33.39	21.48 - 22.00	21.67 - 22.00	17.050 - 17.230	11.00	56	0.80	930	811	
M24	35.61 - 36.39	23.48 - 24.00	23.67 - 24.00	19.065 - 19.275	12.00	60	0.80	1180	1031	
M27	39.61 - 40.39	26.48 - 27.00	26.67 - 27.00	19.065 - 19.275	13.50	66	1.00	1730	1508	
M30	44.61 - 45.39	29.48 - 30.00	29.67 - 30.00	22.065 - 22.275	15.50	72	1.00	2380	2048	
M33	49.61 - 50.39	32.38 - 33.00	32.61 - 33.00	24.065 - 24.275	18.00	78	1.00	3262	2787	
M36	53.54 - 54.46	35.38 - 36.00	35.61 - 36.00	27.065 - 27.275	19.00	84	1.00	4190	3580	
M39	57.54 - 58.46	38.38 - 39.00	38.61 - 39.00	27.065 - 27.275	21.00	90	1.00	5420	4633	

- Notes : 1. Above dimension A (Head Diameter) for Knurled Heads. Dimensions for Plain Heads, please see Table 1.
 2. Thread Class : 5g6g for property class 12.9 ; 6g for other property classes.
 3. Length Tolerance : See Table 2.
 4. R. S. Torque=Recommended Seating Torque.
 5. Working Temperature : -50°C ~ +300°C.

Mechanical Properties

Property Class	10.9	12.9
Hardness (HRC)	32-39	39-44
tensile Strength (Mpa)	1040 min.	1220 min.
Yield Strength at 0.2% Offset (Mpa)	940 min.	1100 min.
Elongation (%)	9 min.	8 min.
Decarburization and Carburization (See Page 17)	E = 2/3H1	E = 3/4H1

Table 1 Head Diameter: A for Plain Heads

Nom. Size	Tolerance	Nom. Size	Tolerance	Nom. Size	Tolerance
M1.6	2.86 - 3.00	M8	12.73 - 13.00	M22	32.61 - 33.00
M2	3.62 - 3.80	M10	15.73 - 16.00	M24	35.61 - 36.00
M2.5	4.32 - 4.50	M12	17.73 - 18.00	M27	39.61 - 40.00
M3	5.32 - 5.50	M14	20.67 - 21.00	M30	44.61 - 45.00
M4	6.78 - 7.00	M16	23.67 - 24.00	M33	49.61 - 50.00
M5	8.28 - 8.50	M18	26.67 - 27.00	M36	53.54 - 54.00
M6	9.78 - 10.00	M20	29.67 - 30.00	M39	57.54 - 58.00

Table 2 Length Tolerance

Nom. Length	Tolerance	Nom. Length	Tolerance
L ≤ 3	± 0.20	80 < L ≤ 120	± 0.70
3 < L ≤ 6	± 0.24	120 < L ≤ 180	± 0.80
6 < L ≤ 10	± 0.29	180 < L ≤ 250	± 0.90
10 < L ≤ 18	± 0.35	250 < L ≤ 315	± 1.05
18 < L ≤ 30	± 0.42	315 < L ≤ 400	± 1.15
30 < L ≤ 50	± 0.50	L > 400	± 1.25
50 < L ≤ 80	± 0.60		

Typical Application Fixture

Socket head cap screws are designed to be used with the head protruding or counter bored. They should be used where high strength and ease of installation are required.

