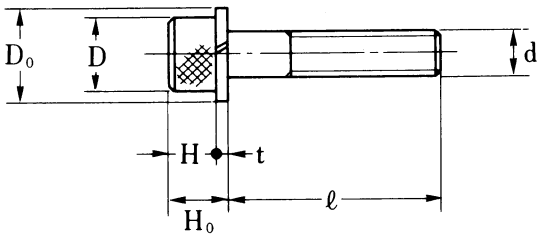
■Hexagon Socket Head Cap Screws and Spring Washers



Nominal Dia d	Pitch P	D_0	D	H_0	H	t	ℓ Min	ℓ Max	Hole size before threading
M 3	0.5	5.9	5.5	3.7	3	0.7	4	20	2.6
M 4	0.7	7.6	7	5	4	1	4	25	3.4
M 5	0.8	9.2	8.5	6.3	5	1.3	8	32	4.3
M 6	1	12.2	10	7.5	6	1.5	10	50	5.1
M 8	1.25	15.4	13	10	8	2	12	100	6.9
M10	1.5	18.4	16	12.5	10	2.5	14	125	8.6
M12	1.75	21.5	18	15	12	3	18	125	10.4
(M14)	2	24.5	21	17.5	14	3.5	20	160	12.2
M16	2	28	24	20	16	4	25	160	14.2
(M18)	2.5	31	27	22.6	18	4.6	28	180	15.7
M20	2.5	33.8	30	25.1	20	5.1	35	180	17.7

■Permissible Machining Deviations (JISB0405)

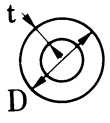
Division of Dimensions \ Grade	(Grade 12)	(Grade 14)	(Grade 16)	(Grade 18)
0.5 to 3incl.	±0.05	±0.1	—	—
Over 3 to 6incl.			±0.2	±0.9
Over 6 to 30incl.	±0.1	±0.2	±0.5	±1.6
Over 30 to 120incl.	±0.15	±0.3	±0.8	±2.8
Over 120 to 315incl.	±0.2	±0.5	±1.2	±4
Over 315 to 1000incl.	±0.3	±0.8	±2	±7
Over 1000 to 2000 incl.	±0.5	±1.2	±3	±11

■Formula for steel weight Unit : mm

- Shaft

$W(kgf/m) = r^2 \times 0.02466$

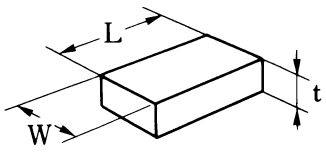
- Pipe



$W(kgf/m) = (D-t) \times t \times 0.02466$

- Plate

$W(kgf) = W \times t \times L \times 7.9 \times 10^{-6}$



(Ref) Al Weight≒Steel Weight×0.35