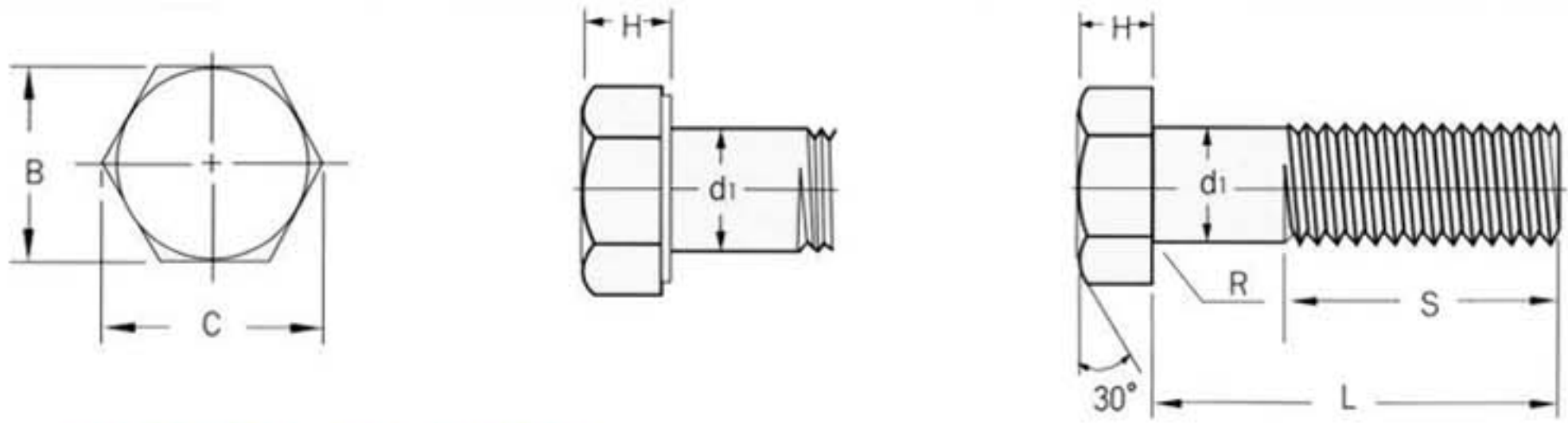


# Hex Bolts & Hex Cap Screws



## Metric KS B1002, JIS B1180

Unit : mm

Bolt Diameter and Pitch		Basic	d <sub>1</sub>			Basic	H			Basic	B			C	R	S		
			Fin	Semi Fin	Regu		Fin	Semi Fin	Regu		Fin	Semi Fin	Regu			App	Min	L ≤ 125
M6 × 1	-	6	0	0	+0.15	4	±0.15	±0.25	±0.6	10	0	0	0	11.5	0.25	18	-	-
M8 × 1.25	M8 × 1	8	0	-0.2	+0.7	5.5	±0.15	±0.25	±0.6	13	0	0	0	15	0.4	22	-	-
M10 × 1.5	M10 × 1.25	10	-0.15	-0.2	-0.2	7	±0.2	±0.3	±0.8	17	-0.25	-0.7	-0.7	19.6	0.4	26	-	-
M12 × 1.75	M12 × 1.25	12	0	0	+0.9	8	±0.2	±0.3	±0.8	19	0	0	0	21.9	0.6	30	36	-
M14 × 2	(M14 × 1.5)	14	0	-0.25	-0.2	9	±0.2	±0.3	±0.8	22	0	0	0	25.4	0.6	34	40	-
M16 × 2	M16 × 1.5	16	0	-0.25	-0.2	10	±0.2	±0.3	±0.8	24	-0.35	-0.8	-0.8	27.7	0.6	38	44	-
(M18 × 2.5)	(M18 × 1.5)	18	0	-0.2	-0.2	12	±0.2	±0.3	±0.8	27	0	0	0	31.2	0.6	42	48	-
M20 × 2.5	M20 × 1.5	20	-0.2	-0.2	-0.2	13	±0.2	±0.3	±0.8	30	0	0	0	34.6	0.8	46	52	-
(M22 × 2.5)	(M22 × 1.5)	22	0	0	+0.95	14	±0.2	±0.3	±0.8	32	0	0	0	37	0.8	50	56	-
M24 × 3	M24 × 2	24	-0.35	-0.35	-0.35	15	±0.2	±0.3	±0.8	36	0	0	0	41.6	0.8	54	60	-
(M27 × 3)	(M27 × 2)	27	0	0	+1.2	17	±0.25	±0.4	±1.0	41	-0.4	-1.0	-1.0	47.3	1	60	66	79
M30 × 3.5	M30 × 2	30	-0.25	-0.4	-0.4	19	±0.25	±0.4	±1.0	46	0	0	0	53.1	1	66	72	85
(M33 × 3.5)	(M33 × 2)	33	0	0	+1.2	21	±0.25	±0.4	±1.0	50	0	0	0	57.7	1	72	78	91
M36 × 4	M36 × 3	36	-0.25	-0.4	-0.4	23	±0.25	±0.4	±1.0	55	0	0	0	63.5	1	78	84	97
(M39 × 4)	(M39 × 3)	39	0	0	+1.2	25	±0.25	±0.4	±1.0	60	0	0	0	69.3	1	84	90	103
M42 × 4.5	-	42	-0.25	-0.4	-0.4	26	±0.25	±0.4	±1.0	65	0	0	0	75	1.2	90	96	109
(M45 × 4.5)	-	45	-0.25	-0.4	-0.4	28	±0.25	±0.4	±1.0	70	-0.45	-1.2	-1.2	80.8	1.2	96	102	115
M48 × 5	-	48	-0.25	-0.4	-0.4	30	±0.25	±0.4	±1.0	75	-0.45	-1.2	-1.2	86.5	1.6	102	108	121
(M52 × 5)	-	52	0	0	+1.2	33	±0.25	±0.4	±1.0	80	0	0	0	92.4	1.6	-	116	129
M56 × 5.5	-	56	0	0	+1.2	35	±0.25	±0.4	±1.0	85	0	0	0	98.1	2	-	124	137
(M60 × 5.5)	-	60	0	0	+1.2	38	±0.25	±0.4	±1.0	90	0	0	0	104	2	-	132	145
M64 × 6	-	64	0	0	+1.2	40	±0.25	±0.4	±1.0	95	0	0	0	110	2	-	140	153
(M68 × 6)	-	68	-0.3	-0.45	-	43	±0.3	±0.5	-	100	-0.55	-1.4	-	115	2	-	148	161
-	M72 × 6	72	-0.3	-0.45	-	45	±0.3	±0.5	-	105	-0.55	-1.4	-	121	2	-	156	169
-	(M76 × 6)	76	-0.3	-0.45	-	48	±0.3	±0.5	-	110	-0.55	-1.4	-	127	2	-	164	177
-	M80 × 6	80	-0.3	-0.45	-	50	±0.3	±0.5	-	115	-0.55	-1.4	-	133	2	-	172	185

## Unified ASME B18.2.1

Unit : inch

Nominal Size of Basic Bolt Dia		d <sub>1</sub>	B				C		H			R		S	
			Width Across Flats				Width Across Corners		Head Height			Radius of Fillet		Thread Length for Bolt Lengths	
		Max	Basic	Max	Min	Max	Min	Basic	Max	Min	Max	Min	Basic	Basic	
1/4	0.2500	0.260	7/16	0.438	0.425	0.505	0.484	11/64	0.188	0.150	0.03	0.01	0.750	1.000	
5/16	0.3125	0.324	1/2	0.500	0.484	0.577	0.552	7/32	0.235	0.195	0.03	0.01	0.875	1.125	
3/8	0.3750	0.388	9/16	0.562	0.544	0.650	0.620	1/4	0.268	0.226	0.03	0.01	1.000	1.250	
7/16	0.4375	0.452	5/8	0.625	0.603	0.722	0.687	19/64	0.316	0.272	0.03	0.01	1.125	1.375	
1/2	0.5000	0.515	3/4	0.750	0.725	0.866	0.826	11/32	0.364	0.302	0.03	0.01	1.250	1.500	
5/8	0.6250	0.642	15/16	0.938	0.906	1.083	1.033	27/64	0.444	0.378	0.06	0.02	1.500	1.750	
3/4	0.7500	0.768	1 1/8	1.125	1.088	1.299	1.240	1/2	0.524	0.455	0.06	0.02	1.750	2.000	
7/8	0.8750	0.895	1 5/16	1.312	1.269	1.516	1.447	37/64	0.604	0.531	0.06	0.02	2.000	2.250	
1	1.0000	1.022	1 1/2	1.500	1.450	1.732	1.653	43/64	0.700	0.591	0.09	0.03	2.250	2.500	
1 1/8	1.1250	1.149	1 11/16	1.688	1.631	1.949	1.859	3/4	0.780	0.658	0.09	0.03	2.500	2.750	
1 1/4	1.2500	1.277	1 7/8	1.875	1.812	2.165	2.066	27/32	0.876	0.749	0.09	0.03	2.750	3.000	
1 3/8	1.3750	1.404	2 1/16	2.062	1.994	2.382	2.273	29/32	0.940	0.810	0.09	0.03	3.000	3.250	
1 1/2	1.5000	1.531	2 1/4	2.250	2.175	2.598	2.480	1	1.036	0.902	0.09	0.03	3.250	3.500	
1 3/4	1.7500	1.785	2 5/8	2.625	2.538	3.031	2.893	1 5/32	1.196	1.054	0.12	0.04	3.750	4.000	
2	2.0000	2.039	3	3.000	2.900	3.464	3.306	1 11/32	1.388	1.175	0.12	0.04	4.250	4.500	
2 1/4	2.2500	2.305	3 3/8	3.375	3.262	3.897	3.719	1 1/2	1.548	1.327	0.19	0.06	4.750	5.000	
2 1/2	2.5000	2.559	3 3/4	3.750	3.625	4.330	4.133	1 21/32	1.708	1.479	0.19	0.06	5.250	5.500	
2 3/4	2.7500	2.827	4 1/8	4.125	3.988	4.763	4.546	1 13/16	1.869	1.632	0.19	0.06	5.750	6.000	
3	3.0000	3.081	4 1/2	4.500	4.330	5.196	4.959	2	2.060	1.815	0.19	0.06	6.250	6.500	
3 1/4	3.2500	3.335	4 7/8	4.875	4.712	5.629	5.372	2 3/16	2.251	1.936	0.19	0.06	6.750	7.000	
3 1/2	3.5000	3.589	5 1/4	5.250	5.075	6.062	5.786	2 5/16	2.380	2.057	0.19	0.06	7.250	7.500	
3 3/4	3.7500	3.858	5 5/8	5.625	5.437	6.495	6.198	2 1/2	2.572	2.241	0.19	0.06	7.750	8.000	
4	4.0000	4.111	6	6.000	5.800	6.928	6.612	2 11/16	2.764	2.424	0.19	0.06	8.250	8.500	