

BS 3692

ISO METRIC PRECISION HEXAGON BOLTS AND SCREWS

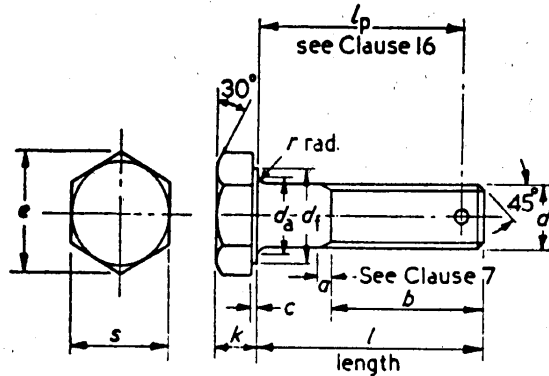


Fig. 2. Hexagon head bolt, washer faced

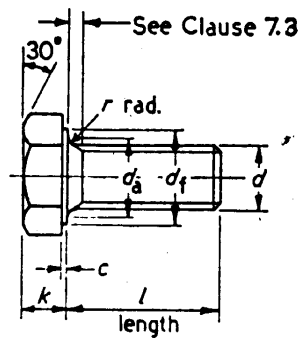


Fig. 3. Hexagon head screw, washer faced

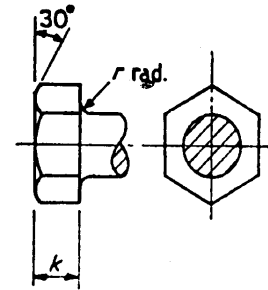


Fig. 4. Full bearing head
Alternative type of head permissible
on bolts and screws

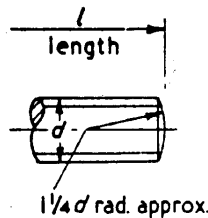


Fig. 5. Rounded end

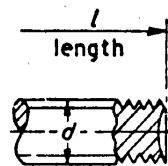


Fig. 6. Rolled thread end

Alternative types of end permissible on bolts and screws

All dimensions in millimetres

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Nominal size and thread dia. d	Pitch of thread (coarse pitch series)	Thread runout a	Diameter of unthreaded shank d_s		Width across flats s		Width across corners e		Diameter of washer face d_f		Depth of washer face c	Transition diameter* d_a	Radius under head* r		Height of head k		Eccentricity of head max.	Eccentricity of shank and split pin hole to the thread max.
M1.6	0.35	0.8	1.6	1.46	3.2	3.08	3.7	3.48	—	—	—	2.0	0.2	0.1	1.225	0.975	0.18	0.14
M2	0.4	1.0	2.0	1.86	4.0	3.88	4.6	4.38	—	—	—	2.6	0.3	0.1	1.525	1.275	0.18	0.14
M2.5	0.45	1.0	2.5	2.36	5.0	4.88	5.8	5.51	—	—	—	3.1	0.3	0.1	1.825	1.575	0.18	0.14
M3	0.5	1.2	3.0	2.86	5.5	5.38	6.4	6.08	5.08	4.83	0.1	3.6	0.3	0.1	2.125	1.875	0.18	0.14
M4	0.7	1.6	4.0	3.82	7.0	6.85	8.1	7.74	6.55	6.30	0.1	4.7	0.35	0.2	2.925	2.675	0.22	0.18
M5	0.8	2.0	5.0	4.82	8.0	7.85	9.2	8.87	7.55	7.30	0.2	5.7	0.35	0.2	3.650	3.35	0.22	0.18
M6	1	2.5	6.0	5.82	10.0	9.78	11.5	11.05	9.48	9.23	0.3	6.8	0.4	0.25	4.15	3.85	0.22	0.18
M8	1.25	3.0	8.0	7.78	13.0	12.73	15.0	14.38	12.43	12.18	0.4	9.2	0.6	0.4	5.65	5.35	0.27	0.22
M10	1.5	3.5	10.0	9.78	17.0	16.73	19.6	18.90	16.43	16.18	0.4	11.2	0.6	0.4	7.18	6.82	0.27	0.22
M12	1.75	4.0	12.0	11.73	19.0	18.67	21.9	21.10	18.37	18.12	0.4	14.2	1.1	0.6	8.18	7.82	0.33	0.27
(M14)	2	5.0	14.0	13.73	22.0	21.67	25.4	24.49	21.37	21.12	0.4	16.2	1.1	0.6	9.18	8.82	0.33	0.27
M16	2	5.0	16.0	15.73	24.0	23.67	27.7	26.75	23.27	23.02	0.4	18.2	1.1	0.6	10.18	9.82	0.33	0.27
(M18)	2.5	6.0	18.0	17.73	27.0	26.67	31.2	30.14	26.27	26.02	0.4	20.2	1.1	0.6	12.215	11.785	0.33	0.27
M20	2.5	6.0	20.0	19.67	30.0	29.67	34.6	33.53	29.27	28.80	0.4	22.4	1.2	0.8	13.215	12.785	0.33	0.33
(M22)	2.5	6.0	22.0	21.67	32.0	31.61	36.9	35.72	31.21	30.74	0.4	24.4	1.2	0.8	14.215	13.785	0.39	0.33
M24	3	7.0	24.0	23.67	36.0	35.38	41.6	39.98	34.98	34.51	0.5	26.4	1.2	0.8	15.215	14.785	0.39	0.33
(M27)	3	7.0	27.0	26.67	41.0	40.38	47.3	45.63	39.98	39.36	0.5	30.4	1.7	1.0	17.215	16.785	0.39	0.33
M30	3.5	8.0	30.0	29.67	46.0	45.38	53.1	51.28	44.98	44.36	0.5	33.4	1.7	1.0	19.26	18.74	0.39	0.33
(M33)	3.5	8.0	33.0	32.61	50.0	49.38	57.7	55.80	48.98	48.36	0.5	36.4	1.7	1.0	21.26	20.74	0.39	0.39
M36	4	10.0	36.0	35.61	55.0	54.26	63.5	61.31	53.86	53.24	0.5	39.4	1.7	1.0	23.26	22.74	0.46	0.39
(M39)	4	10.0	39.0	38.61	60.0	59.26	69.3	66.96	58.86	58.24	0.6	42.4	1.7	1.0	25.26	24.74	0.46	0.39
M42	4.5	11.0	42.0	41.61	65.0	64.26	75.1	72.61	63.76	63.04	0.6	45.6	1.8	1.2	26.26	25.74	0.46	0.39
(M45)	4.5	11.0	45.0	44.61	70.0	69.26	80.8	78.26	68.76	68.04	0.6	48.6	1.8	1.2	28.26	27.74	0.46	0.39
M48	5	12.0	48.0	47.61	75.0	74.26	86.6	83.91	73.76	73.04	0.6	52.6	2.3	1.6	30.26	29.74	0.46	0.39
(M52)	5	12.0	52.0	51.54	80.0	79.26	92.4	89.56	—	—	—	56.6	2.3	1.6	33.31	32.69	0.46	0.46
M56	5.5	19.0	56.0	55.54	85.0	84.13	98.1	95.07	—	—	—	63.0	3.5	2.0	35.31	34.69	0.54	0.46
(M60)	5.5	19.0	60.0	59.54	90.0	89.13	103.9	100.72	—	—	—	67.0	3.5	2.0	38.31	37.69	0.54	0.46
M64	6	21.0	64.0	63.54	95.0	94.13	109.7	106.37	—	—	—	71.0	3.5	2.0	40.31	39.69	0.54	0.46
(M68)	6	21.0	68.0	67.54	100.0	99.13	115.5	112.02	—	—	—	75.0	3.5	2.0	43.31	42.69	0.54	0.46

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ISO METRIC PRECISION HEXAGON NUTS AND THIN NUTS

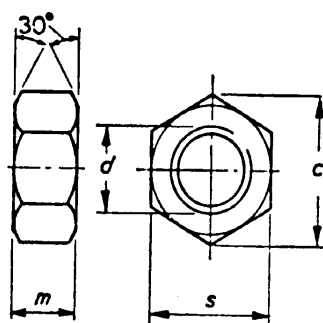


Fig. 7. Normal thickness nut

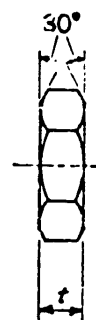


Fig. 8. Thin nut

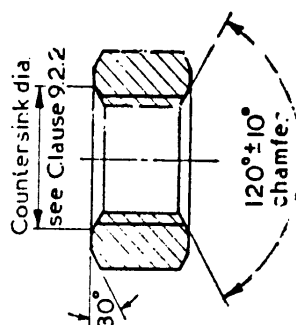


Fig. 9. Enlarged view of nut countersink

All dimensions in millimetres

1	2	3	4	5	6	7	8	9	10	11	12
Nominal size and thread diameter d	Pitch of thread (coarse pitch series)	Width across flats s		Width across corners e		Thickness of normal nut m		Tolerance on squareness of thread to face of nut ^a	Eccentricity of hexagon	Thickness of thin nut t	
		max.	min.	max.	min.	max.	min.	max.	max.	max.	min.
M1.6	0.35	3.20	3.08	3.70	3.48	1.30	1.05	0.05	0.14	—	—
M2	0.4	4.00	3.88	4.60	4.38	1.60	1.35	0.06	0.14	—	—
M2.5	0.45	5.00	4.88	5.80	5.51	2.00	1.75	0.08	0.14	—	—
M3	0.5	5.50	5.38	6.40	6.08	2.40	2.15	0.09	0.14	—	—
M4	0.7	7.00	6.85	8.10	7.74	3.20	2.90	0.11	0.18	—	—
M5	0.8	8.00	7.85	9.20	8.87	4.00	3.70	0.13	0.18	—	—
M6	1	10.00	9.78	11.50	11.05	5.00	4.70	0.17	0.18	—	—
M8	1.25	13.00	12.73	15.00	14.38	6.50	6.14	0.22	0.22	5.0	4.70
M10	1.5	17.00	16.73	19.60	18.90	8.00	7.64	0.29	0.22	6.0	5.70
M12	1.75	19.00	18.67	21.90	21.10	10.00	9.64	0.32	0.27	7.0	6.64
(M14)	2	22.00	21.67	25.4	24.49	11.00	10.57	0.37	0.27	8.0	7.64
M16	2	24.00	23.67	27.7	26.75	13.00	12.57	0.41	0.27	8.0	7.64
(M18)	2.5	27.00	26.67	31.20	30.14	15.00	14.57	0.46	0.27	9.0	8.64
M20	2.5	30.00	29.67	34.60	33.53	16.00	15.57	0.51	0.33	9.0	8.64
(M22)	2.5	32.00	31.61	36.90	35.72	18.00	17.57	0.54	0.33	10.0	9.64
M24	3	36.00	35.38	41.60	39.98	19.00	18.48	0.61	0.33	10.0	9.64
(M27)	3	41.00	40.38	47.3	45.63	22.00	21.48	0.70	0.33	12.0	11.57
M30	3.5	46.00	45.38	53.1	51.28	24.00	23.48	0.78	0.33	12.0	11.57
(M33)	3.5	50.00	49.38	57.70	55.80	26.00	25.48	0.85	0.39	14.0	13.57
M36	4	55.00	54.26	63.50	61.31	29.00	28.48	0.94	0.39	14.0	13.57
(M39)	4	60.00	59.26	69.30	66.96	31.00	30.38	1.03	0.39	16.0	15.57
M42	4.5	65.00	64.26	75.10	72.61	34.00	33.38	1.11	0.39	16.0	15.57
(M45)	4.5	70.00	69.26	80.80	78.26	36.00	35.38	1.20	0.39	18.0	17.57
M48	5	75.00	74.26	86.60	83.91	38.00	37.38	1.29	0.39	18.0	17.57
(M52)	5	80.00	79.26	92.40	89.56	42.00	41.38	1.37	0.46	20.0	19.48
M56	5.5	85.00	84.13	98.10	95.07	45.00	44.38	1.46	0.46	—	—
(M60)	5.5	90.00	89.13	103.90	100.72	48.00	47.38	1.55	0.46	—	—
M64	6	95.00	94.13	109.70	106.37	51.00	50.26	1.63	0.46	—	—
(M68)	6	100.00	99.13	115.50	112.02	54.00	53.26	1.72	0.46	—	—