

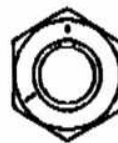
Technical data for hexagon head bolts, screws and nuts to BS 3692 Grade 8-8

Dimensions in Millimetres

Dia	Pitch of Thread ISO Coarse	A Width A/F Bolt Heads and Nuts	B Thickness of Bolt Heads	C Thickness of Nuts	D Shank Diameter	Shortest Bolt Length (Preferred)	Length of Thread
M5	0.80	max. 8.0 min. 7.85	3.85 3.35	4.00 3.70	5.00 4.82	20	Up to 125 mm long — 2 Dia + 8 mm Over 125 mm up to 200 mm long — 2 Dia + 12 mm Above 200 mm long — 2 Dia + 25 mm Threads are to BS.3643 : Part 2. Class of fit : Nuts 8H, Bolts 8g
M6	1.00	max. 10.0 min. 9.78	4.15 3.85	5.00 4.70	6.00 5.82	25	
M8	1.25	max. 13.0 min. 12.73	6.65 6.35	8.00 7.84	8.00 7.78	30	
M10	1.50	max. 17.0 min. 16.73	7.18 6.82	8.00 7.84	10.00 9.78	35	
M12	1.75	max. 19.0 min. 18.87	8.18 7.82	10.00 9.84	12.00 11.73	40	
M16	2.00	max. 24.0 min. 23.87	10.18 9.82	13.00 12.57	16.00 15.73	45	
M20	2.50	max. 30.0 min. 29.87	13.215 12.785	16.00 15.57	20.00 19.67	55	
M24	3.00	max. 38.0 min. 38.38	16.215 14.785	19.00 18.49	24.00 23.67	65	

IDENTIFICATION MARKING OF GRADE 8-8 BOLTS & GRADE 8 NUTS

High tensile precision hexagon head bolts and screws to BS.3692 grade 8-8. Grade 8 nuts are used with grade 8-8 bolts.



The marking of the nuts is in the form of a code symbol based on a clock face with a single dot indicating 12 o'clock. The second mark, a bar, indicates the grade, i.e. in the case of a Grade 8 nut the bar is at the 8 o'clock position. The marks on the nuts are indented.

PHYSICAL PROPERTIES OF HIGH TENSILE BOLTS

Grade	Minimum Ultimate Tensile Stress (N/mm ²)	Stress Under Proof Load (N/mm ²)	Recommended Grade of Nut
8-8	785	671	8
10-9	881	777	12
12-9	1 177	932	12

TORQUE DATA

Diameter	Tensile Stress Area (mm ²)	PROOF LOAD (kN)			APPROXIMATE TORQUE* (Nm)		
		Grade 8-8	Grade 10-9	Grade 12-9	Grade 8-8	Grade 10-9	Grade 12-9
M5	14.2	8.1	11.0	13.2	8.90	9.4	11.2
M6	20.1	11.6	15.6	18.7	11.70	15.9	19.1
M8	36.8	20.9	28.4	34.1	28	38	46.4
M10	58.0	33.1	45.1	54.1	58	77	92
M12	84.3	48.1	65.8	78.6	88	134	160
M16	157	89.6	122	148	241	332	397
M20	245	140	190	228	478	646	778
M24	353	201	274	329	822	1 120	1 342

* Approximate torque values have been calculated to induce a theoretical bolt load equal to 85% of the proof load. See notes on page 1 for bolt tightening information.