

Metric Hex. Head Screws.

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Product Data Sheet

Metric Hexagon Head Screws

KEY TO PART NUMBERS

933	DIN STANDARD	
3/4/5	FINISH	3 = HOT DIP GALVANISED 4 = STAINLESS STEEL 316 5 = ELECTRO ZINC PLATED
	THREAD	M6, M8, M10, M12, M16 X
	LENGTH	Length in mm.

EXAMPLE PART CODE AND DESCRIPTION HOT DIP GALVANISED TO BS EN ISO1461					
DIN	HOT DIP GALV	THREAD		LENGTH (mm)	
933	3	6	X	12	Code will be 93336X12
EXAMPLE PART CODE AND DESCRIPTION STAINLESS 316					
DIN	STAINLESS	THREAD		LENGTH (mm)	
933	4	6	X	12	Code will be 93346X12
EXAMPLE PART CODE AND DESCRIPTION ELECTRO ZINC PLATED					
DIN	ZINC PLATED	THREAD		LENGTH (mm)	
933	5	6	X	12	Code will be 93356X12

Selection of diameters - tightening torques & loads

Guideline values for screws in steel groups A2-70 and A4-70 with standard metric threads to DIN 13.

Diameter	Load	Initial stressing force	Tightening torque	Force in service N		
	Force at 0.2% yield point N	N	Nm	Axial static	Axial dynamic	Radial static or dynamic
M6	9040	5700	7.3	2440	1470	490
M8	16470	10380	17.7	4450	2670	890
M10	26100	16440	35.5	7050	4230	1410
M12	37930	23900	61.3	10240	6150	2050

When selecting the correct screw diameter it should be ensured that the total load on the screw does not exceed 90% of the standardised 0.2% yield stress. Care should be taken to ensure correct initial tensioning, with a torque wrench wherever possible.

Experience has shown that a utilisation of 70% of the total load is reasonable average for the initial stressing force to allow additional forces in service to be taken up.

****The table above is only intended as an aid for quick comparison****

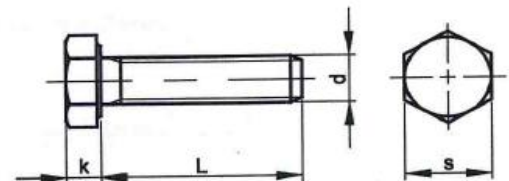
STEEL GRADE 8.8 HIGH TENSILE STRENGTH AND TORQUE FIGURES

ISOMETRIC COARSE THREADS	M6	M8	M10	M12
PITCH (mm)	1.00	1.25	1.50	1.75
STRESS AREA (mm sq)	20.10	36.60	58.00	84.30
BASIC EFFECT DIAMETER (mm)	5.35	7.19	9.03	10.86
ULTIMATE LOAD Kg	1642	2978	4731	6873
ULTIMATE LOAD KN	16.1	29.2	46.4	67.4
PROOF LOAD Kg	1183	2162	3436	5088
PROOF LOAD KN	11.6	21.2	33.7	49.9
SHEAR STRENGTH Kg (60% OF ULTIMATE LOAD)	985	1787	2839	4120
SHEAR STRENGTH KN	9.66	17.52	27.84	40.4
TORQUE TO INDUCE LOAD Kg / M	1.19	2.9	5.74	10
EQUAL TO 85% OF PROOF LOAD Nm	11.7	28	56	98
FOR BOLTS / SET NUTS IN UNPLATED CONDITION lbf / ft	8.63	21	42	72

Specification: Steel parts Manufactured to BS EN 4017 Grade 8.8

Finishes: Galvanized - Processed in accordance with BS EN ISO 10684
Zinc Plated to BS EN ISO 4042

No. Per Box: 100



Thread Type	k	s
M6	4mm	10mm
M8	5.3mm	13mm
M10	6.4mm	17mm
M12	7.5mm	19mm

UNISTRUT HEALTH & SAFETY DATA SHEET REF'S :

No. 001 - PLAIN STEEL, PRE-GALVANIZED, GALVANIZED AND STAINLESS STEEL COMPONENTS
No. 099 - HOT DIP GALVANIZING (CHANNEL & COMPONENTS)
No. 102 - STEEL