



BAPPP

Group of Companies

SQ SQ HOLDING DOWN BOLTS
BS EN 7419 GRADES 4.6 & 8.8

SQ SQ HOLDING DOWN BOLTS

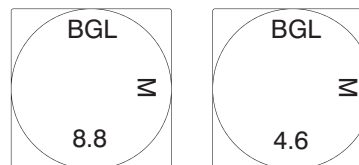
BS EN 7419 GRADES 4.6 & 8.8

BS 7419 Sq Sq Bolt Dimensions. Classes 4.6 & 8.8														
Thread Size d	Pitch of Thread p	Thread Length t		Diameter of Unthreaded Shank d_s		Thickness of Head h		Radius Under Head r	Width Across Flats a_f		Depth of Washer Face s		Width Across Square sq	
		min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.
M16	2.0	116	16.70	15.30	10.75	9.25	0.6	24.00	23.16	8.75	7.25	16.70	15.30	
M20	2.5	120	20.84	19.16	13.40	11.60	0.8	30.00	29.16	10.75	9.25	20.84	19.16	
M24	3.0	124	24.84	23.16	15.90	14.10	0.8	36.00	35.00	12.90	11.10	24.84	23.16	
M30	3.5	130	30.84	29.16	19.75	17.65	1.0	46.00	45.00	15.90	14.10	30.84	29.16	
M36	4.0	136	37.00	35.00	23.55	21.45	1.0	55.00	53.80	18.90	17.10	37.00	35.00	
M42	4.5	142	43.00	41.00	27.05	24.95	1.2	65.00	63.10	22.05	19.95	43.00	41.00	
M48	5.0	148	49.00	47.00	31.05	28.95	1.6	75.00	73.10	25.05	22.95	49.00	47.00	
M56	5.5	156	57.20	54.80	36.25	33.75	2.0	85.00	82.00	29.05	26.95	57.20	54.80	
M64	6.0	164	65.20	62.80	41.25	38.75	2.0	95.00	92.80	33.25	30.75	65.20	62.80	

Material		Steel
General Requirements		BS ISO 8992
Thread	Tolerance	8g ^a
	International Standards	BS 3643-1 and BS 3643-2
Mechanical Properties	Property Classes	d ≤39mm: 4.6, 8.8 d >39mm: as agreed ^b
	European Standard	BS EN ISO 898-1
Tolerances	Product Grade	C
	European Standard	BS EN ISO 4759-1
Finish - Coating	Normal	As processed ^c
	Hot dip galvanized	BS EN ISO 10684
	Sherardized	BS 7371-8
	Zinc electroplated	BS EN ISO 4042
	Others	To be agreed ^d
Associated nuts	Standards	BS EN ISO 4032 & BS EN ISO 4034
	Property classes	5, 8, 10 ^e
	Standard	BS EN ISO 898-2
	Thread tolerance	6H, 7H or 6AZ
	Standards	BS 3643-2 or BS ISO 965-5
Associated washers (if required)	Standards	BS EN ISO 7091 or BS 4320 Form G
	Others	to be agreed ^f
Acceptability	Standard	BS EN ISO 3269
Suitability test	Standard	BS EN 15048-2

^a The tolerance class specified applies before hot dip galvanizing or coating with any thick protective coating.
^b The designation symbol for the property classes according to BS EN ISO 898-1 may also be used for thread sizes above M39, provided that the finished product has all the properties assigned to the designation symbols in BS EN ISO 898-1.
^c As processed means the normal finish resulting from manufacture with a light oil coating.
^d Other coatings may be negotiated between the purchaser and the manufacturer provided they do not impair the mechanical properties or the functional characteristics. Coatings of cadmium or cadmium alloy are not permitted.
^e Recommended bolt and nut combinations are shown in BS 7419.
^f Other washers may be supplied by agreement between the purchaser and the manufacturer.

BS 7419 Head Markings

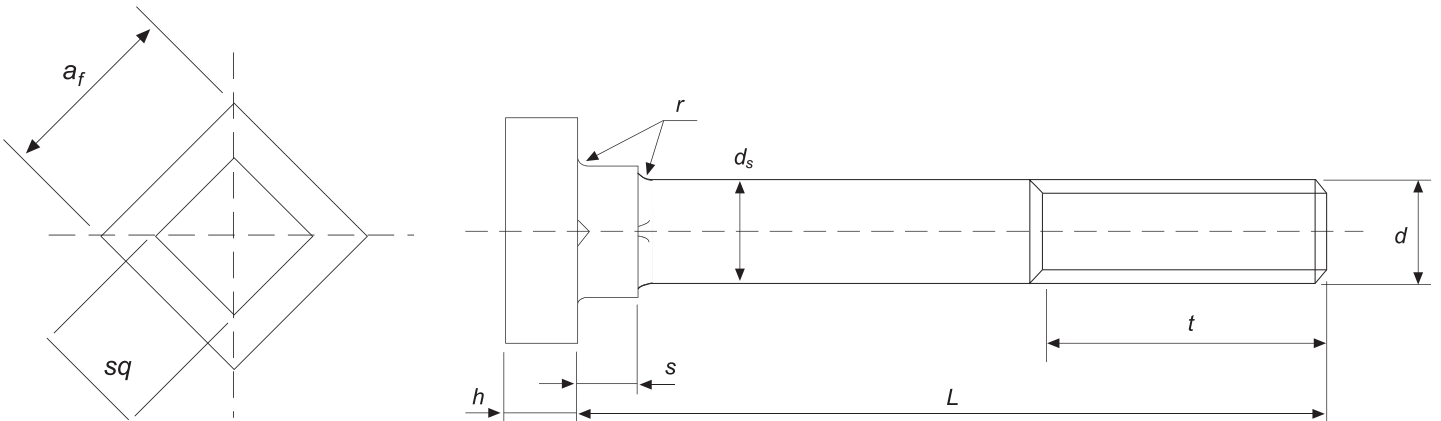


BS 7419 Ultimate Tensile Load & Hardness

Nominal Dia <i>d</i>	Stress Area	Property Class 4.6			Property Class 8.8		
		Tensile Load min	Hardness Rockwell HRB		Tensile Load min	Hardness Rockwell HRC	
	mm ²	kN	min	max	kN	min	max
M16	157	62.80	67	95	130	23	34
M20	245	98.00	67	95	203	23	34
M24	353	141.0	67	95	293	23	34
M30	561	224.0	67	95	466	23	34
M36	817	327.0	67	95	678	23	34

BS7419 Machined Test Requirements

Property Class	Tensile Strength (N/mm ²)	Elongation (%)	Reduction of area (%)
	min.	min.	min.
4.6	400	22	
8.8	830	12	52



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