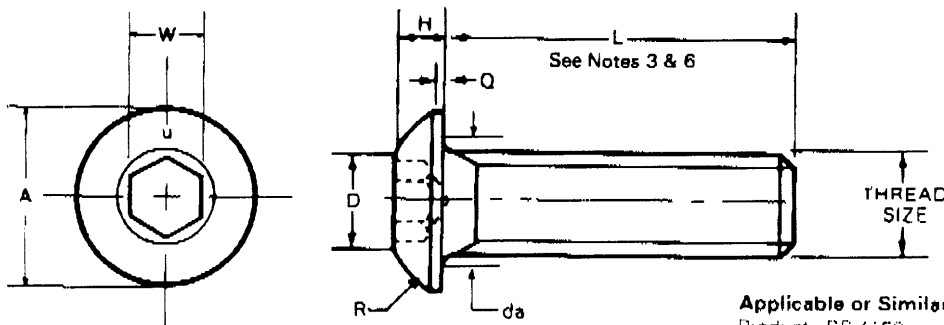


BUTTON HEAD SOCKET SCREWS — ISO Metric



Applicable or Similar Specifications:

Product BS 4156

Grade BS 6104 Grade 12.9
ISO 898/1 Grade 12.9

DIMENSIONS AND TIGHTENING TORQUES — ISO Metric Threads

Thread Size	Pitch	A Max.	da Max.	D Max.	H Max.	Q Max.	R Ref.	W Nom.	Maximum Tightening Torques				Tensile Loads
									Unplated		Plated		
									Nm	lbf.in.	Nm	lbf.in.	
M3	0.50	5.70	3.60	3.31	1.65	.38	3.00	2.0	1.4	12	1.1	9	5.28
M4	0.70	7.60	4.70	3.93	2.20	.38	4.20	2.5	3.4	30	2.6	22	9.22
M5	0.80	9.50	5.70	4.50	2.75	.50	5.20	3.0	6.8	60	5.1	45	14.90
M6	1.00	10.50	6.80	5.90	3.30	.80	5.60	4.0	11.0	97	8.3	73	21.10
M8	1.25	14.00	9.20	7.00	4.40	.80	7.50	5.0	28.0	248	21.0	186	38.40
M10	1.50	17.50	11.20	8.20	5.50	.80	10.00	6.0	55.0	486	41.0	363	60.90
M12	1.75	21.00	13.70	10.50	6.60	.80	11.00	8.0	95.0	840	71.0	630	88.50

ALL DIMENSIONS IN MILLIMETRES

MECHANICAL PROPERTIES

Material Unbrako High Grade Alloy Steel
Heat Treatment Rc 39.44
Shear Strength 630 N/mm²
Min. Elongation 9%

NOTES:

1. Thread Class — 4g 6g.
2. da — Transition diameter.
3. Full thread length to within 2½ pitches of head.
4. Max. Working Temperature — +300°C.
5. Torques calculated in accordance with VDI 2230 "Systematic calculation of high duty bolted joints" with $\sigma_{0.2} = 720 \text{ N/mm}^2$ and $\mu = 0.125$ for plain finish and $\mu = 0.094$ for plated.
6. Length tolerance $\pm 0.25 \text{ mm}$.

14 part no 7180822

N.B. Because of their head configurations, button head screws may not meet the minimum ultimate tensile load for property class 12.9, specified in table 6 OF BS 6104: Part 1: 1981. They are nevertheless required to meet the other material and property requirements for property class 12.9 in BS 6104: Part 1.