



Applicable Specifications:  
BS 3643  
DIN 7984

Dimensions and Tightening Torques - ISO Metric Threads

Thread Size (B Max)	Pitch	A Max.	da Max.	F Min.	H Max.	T Min.	W	Maximum Tightening Torques				Induced Load	
								Unplated		Plated		kN	lbf.
								Nm	lbf. in.	Nm	lbf. in.		
M4	0.70	7.0	4.7	1.48	2.8	20	3	3.8	33.6	2.9	25.7	5.65	1270
M5	0.80	8.5	5.7	1.85	3.5	22	4	8.0	70.8	6.0	53.1	9.20	2068
M6	1.00	10.0	6.8	2.09	4.0	24	5	13.0	115.0	9.8	86.7	13.00	2920
M8	1.25	13.0	9.2	2.48	5.0	28	6	32.0	283.0	24.0	212.0	23.90	5370
M10	1.50	16.0	11.2	3.36	6.5	32	8	64.0	566.0	48.0	425.0	38.00	8540
M12	1.75	18.0	14.2	4.26	8.0	36	10	110.0	974.0	83.0	735.0	55.50	12470
M16	2.00	24.0	18.2	4.76	10.0	44	12	275.0	2434.0	206.0	1820.0	105.00	23600
M20	2.50	30.0	22.4	6.07	12.5	52	14	540.0	4870.0	405.0	3585.0	164.00	36800

ALL DIMENSIONS IN MILLIMETRES

MECHANICAL PROPERTIES

Material Unbrako High Grade Alloy Steel  
Heat Treatment Rc 33-40  
Tensile Strength 1040 N/mm<sup>2</sup>  
Yield Strength 940 N/mm<sup>2</sup>  
Shear Strength 624 N/mm<sup>2</sup>  
Min. Elongation 9%

NOTES

1. Thread Class - 4g 6g
2. da - transition diameter.
3. Working Temperature -50°C to +300°C
4. Sizes M5 and larger are stamped U 10.9  
Torques calculated in accordance with VDI 2230 "Systematic calculation of high duty bolted joints" with  $\sigma_{0.2} = 900 \text{ N/mm}^2$  and  $\mu = 0.125$  for plain finish and  $\mu = 0.094$  for plated.