

PRODUCT		TENSILE STRENGTH		SIZE RANGE				EQUIVALENT STANDARDS					
		Property Class		Diameter		Length							
		Psi. Min.	N/mm ²	Metric	Inch*	Metric	Inch*	IS	ISO	DIN	BS	ANSI	JIS
Socket Head Cap Screws		190000	1,300 (12.9)	M2 to M42	1/8 to 1"	6 to 300 mm	3/16" to 10"	2269	4762	912	4168 2470	B18.3.1M	B1176
Socket Countersunk Head Screws		160000	1,050 (12.9)	M3 to M24	3/16" to 5/16"	6 to 60 mm	3/8" to 1.1/4"	6761	--	7991	4168 2470	B18.3.5M	--
Socket Button Head Cap Screws		--	1,050 (12.9)	M3 to M12	--	6 to 50 mm	--	--	7380	9427	4168	B18.3.4M --	--
Socket Head Shoulder Screw		--	(12.9)	M6 to M24	--	10 to 120 mm	--	--	7379	9841	4168	--	--
Socket Set Screws Knurled Cup		Hardness HRc 45 Min.		M3 to M20	1/8" to 3/4"	3 to 85 mm	3/16" to 3"	6094 4026 4027 4028 4029	4026 914 915 916	913 914 915 916	4168 2470	B18.3.6M	B1177
Durlok Bolt		--	12.9	M6 to M20	--	12 to 100 mm	--	As Per Unbrako Specification					
Hex Wrenches		Hardness HRc 47 Min.		1.5 to 32 mm	1/16" to 3/4"	--	--	3082	2936	911	4168 2470	B18.3.2M	B4648
Hex Head Bolts		800/830 (8.8) 1,040 (10.9)	Grade R,S V	M4 to M42	1/4" to 2"	10 to 300 mm	1/2" to 12"	1364	4014 4017	931 933	1083 1768	B18.2.1	B1180
Hex Nuts		Nut Grade 8/10	Nut Grade 8/5	M6 to M72	1/4" to 1-1/2"	--	--	1364	4032	934	1083 1768	B18.2.4.1M B18.2.2	B1181
High Strength Structural Bolts, Nuts, Washers		Bolts 8.8/10.9 Nuts 8/10	--	M16 to M30	--	40 to 300 mm	--	3757 6623 6649	7412 4775 7415	6914 6915 6916	4395	B18.2.3.7M B18.2.4.6M	B1186
Stud With 2 Heavy nuts		Stud B7 Nut 2H		M12-M56	1/2" to 2-1/4"	60 to 500 mm	2.1/4" to 27"					A193 A194	
Special Products		--	800/830 (8.8) 1,040 (10.9)	M3 to M42	1/8" to 1"	6 to 410 mm	3/8" to 12"	As per customer specifications					

*Thread type in any of the following inch series : BSW, BA, UNC & UNF.

** Thread type in NPTF

Note : UNBRAKO standards meet, or in many instances, exceed the requirements of the standards listed.

Plating : No guarantee can be given for UNBRAKO products which have been plated by the users and / or outside plates, who may not have considered hydrogen embrittlement problem.

METRIC PRODUCTS							UNIFIED INCH PRODUCTS				B.S. INCH PRODUCTS					
SIZE	THREAD PITCH & T.P.I.				Major Dia		SIZE	T.P.I.		Major Dia	SIZE	T.P.I.		Major Dia	T.P.I.	Major Dia
	COARSE		FINE					UNC	UNF			inch	BSW			
	PITCH (mm)	T.P.I.	PITCH (mm)	T.P.I.	mm	Inch										
M3	0.50	51	—	—	3.00	0.118	#5	40	44	0.125	1/8	40	-	0.125		
							#6	32	40	0.138	5 BA				43.1	0.126
											4 BA				38.5	0.142
M4	0.70	36	—	—	4.00	0.157	#8	32	36	0.164	3 BA	24	32	0.187	34.8	0.161
M5	0.80	32	—	—	5.00	0.197	#10	24	32	0.190	3/16					
											2 BA				31.3	0.185
											1 BA				28.2	0.209
M6	1.0	25	—	—	6.00	0.236	1/4	20	28	0.250	1/4	20	26	0.250	25.4	0.236
											0 BA					
M8	1.25	20	1.00	25	8.00	0.315	5/16	18	24	0.313	5/16	18	22	0.313		
M10	1.50	17	1.25	20	10.00	0.394	3/8	16	24	0.375	3/8	16	20	0.375		
											7/16	14	18	0.438		
M12	1.75	14.5	1.25	20	12.00	0.472	1/2	13	20	0.500	1/2	12	16	0.500		
(M14)	2.00	12.5	1.50	17	14.00	0.551										
M16	2.00	12.5	1.50	17	16.00	0.630	5/8	11	18	0.625	5/8	11	14	0.625		
(M18)	2.50	10	1.50	17	18.00	0.709										
M20	2.50	10	1.50	17	20.00	0.787	3/4	10	16	0.750	3/4	10	12	0.750		
(M22)	2.50	10	1.50	17	22.00	0.866	7/8	9	14	0.875	7/8	9	11	0.875		
M24	3.00	8.5	2.00	13	24.00	0.945	1	8	12	1.000	1	8	10	1.000		
							1-1/8	7	12	1.125	1-1/8	7	9	1.125		
(M27)	3.00	8.50	2.00	13	27.00	1.063										
M30	3.50	7.25	2.00	13	30.00	1.181	1-1/4	7	12	1.250	1-1/4	7	9	1.250		
(M33)	3.50	7.25	2.00	13	33.00	1.299	1-1/2	6	12	1.500	1-1/2	6	8	1.500		
M36	4.00	6.40	3.00	8.5	36.00	1.417										
(M39)	4.00	6.40	3.00	8.5	39.00	1.535										
M42	4.50	5.60	3.00	8.5	42.00	1.653										

Note : Sizes in brackets are non-preferred standards

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1. **Specifications** : For Nuts with Metric Threads IS : 1364, ISO 4032
2. **Threads** : ISO Metric 6H as per is : 4218, iso 261, iso 965.
3. **Material Mechanical Properties** : Property Class as tabulated as per IS : 1367, ISO 898, Part-II.
4. **Note** : Size in brackets are non-preferred standards.
5. **Plating** : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.