

Table 1

Major diameter d mm	Coarse Threads (MC)		Fine Threads (MF)	
	Pitch p mm	Tensile stress area A_t mm ²	Pitch p mm	Tensile stress area A_t mm ²
1	0.25	0.460	-	-
1.6	0.35	1.27	0.20	1.57
2	0.4	2.07	.25	2.45
2.5	0.45	3.39	.35	3.70
3	0.5	5.03	.35	5.61
4	0.7	8.78	.5	9.79
5	0.8	14.2	.5	16.1
6	1	20.1	.75	22
8	1.25	36.6	1	39.2
10	1.5	58.0	1.25	61.2
12	1.75	84.3	1.25	92.1
16	2	157	1.5	167
20	2.5	245	1.5	272
24	3	353	2	384
30	3.5	561	2	621
36	4	817	3	865
42	4.5	1121	-	-
48	5	1473	-	-

B. G. Hamrock, B. Jacobson, and S. R. Schmid, *Fundamentals of Machine Elements*, McGraw-Hill, New York, 1999.

Table 2

Major diameter, d in.	Coarse Threads (UNC)		Fine Threads (UNF)	
	Number of threads per inch, n	Tensile stress area, A_t in. ²	Number of threads per inch, n	Tensile stress area, A_t in. ²
0.0600	-	-	80	0.00180
0.0730	64	0.00263	72	0.00278
0.0860	56	0.00370	64	0.00394
0.0990	48	0.00487	56	0.00523
0.1120	40	0.00604	48	0.00661
0.1250	40	0.00796	44	0.00830
0.1380	32	0.00909	40	0.01015
0.1640	32	0.0140	36	0.01474
0.1900	24	0.0175	32	0.0200
0.2160	24	0.0242	28	0.0258
0.3500	20	0.0318	28	0.0364
0.3125	18	0.0524	24	0.0580
0.3750	16	0.0775	24	0.0878
0.4735	14	0.1063	20	0.1187
0.5000	13	0.1419	20	0.1599
0.5625	12	0.182	18	0.203
0.6250	11	0.226	18	0.256
0.7500	10	0.334	16	0.373
0.8750	9	0.462	14	0.509
1.000	8	0.606	12	0.663
1.125	7	0.763	12	0.856
1.250	7	0.969	12	1.073
1.375	6	1.155	12	1.315
1.500	6	1.405	12	1.581
1.750	5	1.90	-	-
2.000	4 1/2	2.50	-	-

B. G. Hamrock, B. Jacobson, and S. R. Schmid, *Fundamentals of Machine Elements*, McGraw-Hill, New York, 1999.

Table 3

Metric grade	Major diameter, d , mm	Ultimate			Proof strength, S_p , MPa
		tensile strength, S_u , MPa	Yield strength, S_y , MPa		
4.6	M5-M36	400	240	225	
4.8	M1.6-M16	420	340*	310	
5.8	M5-M24	520	415*	380	
8.8	M17-M36	830	660	600	
9.8	M1.6-M16	900	720*	650	
10.9	M6-M36	1040	940	830	
12.9	M1.6-M36	1220	1100	970	

* Yield strength approximate and not included in standard.

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Table 4

SAE grade	Range of major diameters, in.	Ultimate tensile strength, S_u , kpsi	Yield strength, S_y , kpsi	Proof strength, S_p , kpsi
1	1/4 - 1 1/2	60	36	33
2	1/4 - 3/4	74	57	55
	3/4 - 1 1/2	60	36	33
4	1/4 - 1 1/2	115	100	65
5	1/4 - 1	120	92	85
	1 - 1 1/2	105	81	74
7	1/4 - 1 1/2	133	115	105
8	1/4 - 1 1/2	150	130	120

B. G. Hamrock, B. Jacobson, and S. R. Schmid, *Fundamentals of Machine Elements*, McGraw-Hill, New York, 1999.