

MINIMUM ULTIMATE TENSILE LOADS & PROOF LOADS

Ref: ISO 898/1-1978
Metric Bolts, Screws and Studs

COARSE THREADS

TENSILE LOADS							PROOF LOADS									
PROPERTY CLASS							NOM. THREAD DIA. mm	PITCH OF THE THREAD mm	NOM. STRESS AREA mm ²	PROPERTY CLASS						
5.6	5.8	6.8	8.8	9.8	10.9	12.9				5.6	5.8	6.8	8.8	9.8	10.9	12.9
Minimum ultimate tensile load (As x Rm), N										Proof Load (As x SP), N						
2510	2620	3020	4020	4530	5230	6140	3	0.5	5.03	1410	1910	2210	2920	3270	4180	4880
3390	3530	4070	5420	6100	7050	8270	3.5	0.6	6.78	1900	2580	2980	3940	4410	5630	6580
4390	4570	5270	7020	7900	9130	10700	4	0.7	8.78	2460	3340	3860	5100	5710	7290	8520
7100	7380	8520	11350	12800	14800	17300	5	0.8	14.2	3980	5400	6250	8230	9230	11800	13800
10000	10400	12100	16100	18100	20900	24500	6	1	20.1	5630	7640	8840	11600	13100	16700	19500
14100	15000	17300	23100	26000	30100	35300	7	1	28.9	8090	11000	12700	16800	18800	24000	28000
18300	19000	22000	29200	32900	38100	44600	8	1.25	36.6	10200	13900	16100	21200	23800	30400	35500
29000	30200	34800	46400	52200	60300	70800	10	1.5	58.0	16200	22000	25500	33700	37700	48100	56300
42200	43800	50600	67400	75900	87700	103000	12	1.75	84.3	23600	32000	37100	48900	54800	70000	81100
57500	59800	69000	92000	104000	120000	140000	14	2	115	32200	43700	50600	66700	74800	95500	112000
78500	81600	94000	125000	141000	163000	192000	16	2	157	44000	59700	69100	91000	102000	130000	152000
96000	99800	115000	159000	-	200000	234000	18	2.5	192	53800	73000	84500	115000	-	159000	186000
122000	127000	147000	203000	-	255000	299000	20	2.5	245	68600	93100	108000	147000	-	203000	238000
152000	158000	182000	252000	-	315000	370000	22	2.5	303	84800	115000	133000	182000	-	252000	294000
176000	184000	212000	293000	-	367000	431000	24	3	353	98800	134000	155000	212000	-	293000	342000
230000	239000	275000	381000	-	477000	560000	27	3	459	128000	174000	202000	275000	-	381000	445000
280000	292000	337000	466000	-	583000	684000	30	3.5	561	157000	213000	247000	337000	-	466000	544000
347000	361000	416000	576000	-	722000	847000	33	3.5	694	194000	264000	305000	416000	-	570000	673000
408000	425000	490000	678000	-	850000	997000	36	4	817	229000	310000	359000	490000	-	678000	792000
488000	508000	586000	810000	-	1020000	1200000	39	4	976	273000	371000	429000	586000	-	810000	947000

FINE THREADS

TENSILE LOADS							PROOF LOADS									
PROPERTY CLASS							NOM. THREAD DIA. mm	PITCH OF THE THREAD mm	NOM. STRESS AREA mm ²	PROPERTY CLASS						
5.6	5.8	6.8	8.8	9.8	10.9	12.9				5.6	5.8	6.8	8.8	9.8	10.9	12.9
Minimum ultimate tensile load (As x Rm), N										Proof Load (As x SP), N						
19600	20400	23500	31360	353000	40800	47800	8	1	39.2	11000	14900	17200	22700	25500	32500	38000
30600	31800	36700	49000	551000	63600	74700	10	1.25	61.2	17100	233000	26900	35500	39800	50800	59400
46000	47900	553000	73700	829000	95800	112000	12	1.25	92.1	25800	35000	40500	53400	59900	76400	89300
62500	65000	75000	100000	112000	130000	152000	14	1.5	125	35000	47500	55000	72500	81200	104000	121000
83500	86800	100000	134000	150000	174000	204000	16	1.5	167	46800	63500	73500	96900	109000	139000	162000
108000	112000	130000	179000	-	225000	264000	18	1.5	216	60500	82100	95000	130000	-	179000	210000
136000	141000	163000	226000	-	283000	332000	20	1.5	272	76200	103000	120000	163000	-	226000	264000
166000	173000	200000	276000	-	346000	406000	22	1.5	333	93200	126000	146000	200000	-	276000	323000
192000	200000	230000	319000	-	399000	469000	24	2	384	108000	146000	169000	233000	-	319000	372000
248000	258000	298000	412000	-	516000	605000	27	2	496	139000	188000	218000	298000	-	412000	481000
310000	323000	373000	515000	-	646000	758000	30	2	621	174000	236000	273000	373000	-	515000	602000
380000	396000	457000	632000	-	791000	928000	33	2	761	213000	289000	335000	457000	-	632000	738000
432000	450000	519000	718000	-	900000	1050000	36	3	865	242000	329000	381000	519000	-	718000	838000
515000	536000	618000	855000	-	1070000	1260000	39	3	1030	288000	391000	453000	618000	-	855000	999000