

鋼製のボルト・小ねじの機械的性質 (JIS B 1051-1991 抜粋)

付表2 おねじ部品の最小引張荷重(メートル並目ねじの場合)

ねじの呼び	ピッチ mm	有効断面積 As mm ²	おねじ部品の強度区分									
			3.6	4.6	4.8	5.6	5.8	6.8	8.8	9.8	10.9	12.9
			最小引張荷重 N(kgf)									
M1.6	0.35	1.27	420 {42.8}	510 {52.0}	530 {54.0}	640 {65.3}	660 {67.3}	760 {77.5}	1020 {104}	1140 {116}	1320 {135}	1550 {158}
M 2	0.4	2.07	680 {69.3}	830 {84.6}	870 {88.7}	1040 {106}	1080 {110}	1240 {126}	1660 {169}	1860 {190}	2150 {219}	2530 {258}
M2.2	0.45	2.48	820 {83.6}	990 {101}	1040 {106}	1240 {126}	1290 {132}	1490 {152}	1980 {202}	1980 {227}	2580 {263}	3030 {309}
M2.5	0.45	3.39	1120 {114}	1360 {139}	1420 {145}	1700 {173}	1760 {179}	2030 {207}	2710 {276}	3050 {311}	3530 {360}	4140 {422}
M 3	0.5	5.03	1660 {169}	2010 {205}	2110 {215}	2510 {256}	2620 {267}	3020 {308}	4020 {410}	4530 {462}	5230 {533}	6140 {626}
M3.5	0.6	6.78	2240 {228}	2710 {276}	2850 {291}	3390 {346}	3530 {360}	4070 {415}	5420 {553}	6100 {622}	7050 {719}	8270 {843}
M 4	0.7	8.78	2900 {296}	3510 {358}	3690 {376}	4390 {448}	4570 {466}	5270 {537}	7020 {716}	7900 {806}	9130 {931}	10700 {1090}
M 5	0.8	14.2	4690 {478}	5680 {579}	5960 {608}	7100 {724}	7380 {753}	8520 {869}	11350 {1160}	12800 {1310}	14800 {1510}	17300 {1760}
M 6	1	20.1	6630 {676}	8040 {820}	8440 {861}	10000 {1020}	10400 {1060}	12100 {1230}	16100 {1640}	18100 {1850}	20900 {2130}	24500 {2500}
M 7	1	28.9	9450 {973}	11600 {1180}	12100 {1230}	14400 {1470}	15000 {1530}	17300 {1760}	23100 {2360}	26000 {2650}	30100 {3070}	35300 {3600}
M 8	1.25	36.6	12100 {1230}	14600 {1490}	15400 {1570}	18300 {1870}	19000 {1940}	22000 {2240}	29200 {2980}	32900 {3350}	38100 {3890}	44600 {4550}
M10	1.5	58.0	19100 {1950}	23200 {2370}	24400 {2490}	29000 {2960}	30200 {3080}	34800 {3550}	46400 {4730}	52200 {5320}	60300 {6150}	70800 {7220}
M12	1.75	84.3	27800 {2830}	33700 {3440}	35400 {3610}	42200 {4300}	43800 {4470}	50600 {5160}	67400* {6870}	75900 {7740}	87700 {8940}	103000 {10500}
M14	2	115	38000 {3870}	46000 {4690}	48300 {4930}	57500 {5860}	59800 {6100}	69000 {7040}	92000* {9380}	104000 {10600}	120000 {12200}	140000 {14300}
M16	2	157	51800 {5280}	62800 {6400}	65900 {6720}	78500 {8000}	81600 {8320}	94000 {9590}	125000* {12700}	141000 {14400}	163000 {16600}	192000 {19600}
M18	2.5	192	63400 {6470}	76800 {7830}	80600 {8220}	96000 {9790}	99800 {10200}	115000 {11700}	159000 {16200}	—	200000 {20400}	234000 {23900}
M20	2.5	245	80800 {8240}	98000 {9990}	103000 {10500}	122000 {12400}	127000 {13000}	147000 {15000}	203000 {20700}	—	255000 {26000}	299000 {30500}
M22	2.5	303	100000 {10200}	121000 {12300}	127000 {13000}	152000 {15500}	158000 {16100}	182000 {18600}	252000 {25700}	—	315000 {32100}	370000 {37700}
M24	3	353	116000 {11800}	141000 {14400}	148000 {15100}	176000 {17900}	184000 {18800}	212000 {21600}	293000 {29900}	—	367000 {37400}	431000 {43900}
M27	3	459	152000 {15500}	184000 {18800}	193000 {19700}	230000 {23500}	239000 {24400}	275000 {28000}	381000 {38900}	—	477000 {48600}	560000 {57100}
M30	3.5	561	185000 {18900}	224000 {22800}	236000 {24100}	280000 {28600}	292000 {29800}	337000 {34400}	466000 {47500}	—	583000 {59400}	684000 {69700}
M33	3.5	694	229000 {23300}	278000 {28300}	292000 {29800}	347000 {35400}	361000 {36800}	416000 {42400}	576000 {58700}	—	722000 {73600}	847000 {86400}
M36	4	817	270000 {27500}	327000 {33300}	343000 {35000}	408000 {41600}	425000 {43300}	490000 {50000}	678000 {69100}	—	850000 {86700}	997000 {102000}
M39	4	976	322000 {32800}	390000 {39800}	410000 {41800}	488000 {49800}	508000 {51800}	586000 {59800}	810000 {82600}	—	1020000 {104000}	1200000 {122000}

注* 鋼構造用ボルトの場合は、これらの値を次のようにする。

- 67400 N → 70000 N {7140 kgf}
- 92000 N → 95500 N {9740 kgf}
- 125000 N → 130000 N {13300 kgf}

〈備考〉 表中の網かけ()したねじの呼びに対する最小引張荷重は、ISO 898-1:1988の規定にないものである。