

TORQUE GUIDE

FOR COMMON SIZES OF THREAD AND BOLT TENSILE CLASSES.

These figures are intended as a guide to achieving optimum performance from your nuts and bolts.

Metric

Thread	Class 4.6	Class 8.8	Class 10.9	Class 12.9
M6	4 NM	9 NM	13 NM	17 NM
M8	9 NM	22 NM	32 NM	41 NM
M10	17 NM	44 NM	63 NM	81 NM
M12	30 NM	77 NM	109 NM	141 NM
M14		124 NM	150 NM	225 NM
M16	74 NM	190 NM	270 NM	350 NM
M18		250 NM		480 NM
M20	144 NM	372 NM	528 NM	680 NM
M22		498 NM	722 NM	925 NM
M24	249 NM	640 NM	914 NM	1170 NM
M27		940 NM		1700 NM
M30	496 NM	1280 NM	1817 NM	2325 NM
M36	864 NM	1987 NM	3173 NM	4050 NM

In the above table “NM” refers to Newton Metres of torque.
To convert to foot pounds use

Imperial

thread	Grade 5	Grade 8	FX180 bolt	FX180 nut
1/4UNC	7 ftlb	10 ftlb	10 ftlb	11 ftlb
5/16UNC	15 ftlb	21 ftlb	19 ftlb	21 ftlb
3/8UNC	27 ftlb	38 ftlb	30 ftlb	33 ftlb
7/16UNC	43 ftlb	60 ftlb	55 ftlb	60 ftlb
1/2UNC	66 ftlb	92 ftlb	85 ftlb	95 ftlb
9/16UNC	94 ftlb	133 ftlb	120 ftlb	140 ftlb
5/8UNC	130 ftlb	183 ftlb	170 ftlb	185 ftlb
3/4UNC	230 ftlb	325 ftlb	265 ftlb	290 ftlb
7/8UNC	370 ftlb	523 ftlb	475 ftlb	505 ftlb
1”UNC	558 ftlb	785 ftlb	550 ftlb	775 ftlb
1 1/8UNC	688 ftlb	1116 ftlb	1025 ftlb	1150 ftlb

1 1/4UNC	971 ftlb	1573 ftlb	1400 ftlb	1600 ftlb
1 1/2UNC	1690 ftlb	2738 ftlb	2600 ftlb	3250 ftlb
1/4UNF	8 ftlb	12 ftlb	12 ftlb	13 ftlb
5/16UNF	16 ftlb	23 ftlb	20 ftlb	23 ftlb
3/8UNF	31 ftlb	43 ftlb	35 ftlb	38 ftlb
7/16UNF	48 ftlb	67 ftlb	60 ftlb	65 ftlb
1/2UNF	73 ftlb	103 ftlb	95 ftlb	105ftlb
9/16UNF	105 ftlb	149 ftlb	135 ftlb	150 ftlb
5/8UNF	150 ftlb	207 ftlb	190 ftlb	205 ftlb
3/4UNF	260 ftlb	363 ftlb	330 ftlb	355 ftlb
7/8UNF	409 ftlb	577 ftlb	520 ftlb	585 ftlb
1"UNF	607 ftlb	859 ftlb	700 ftlb	900 ftlb
1 1/8UNF	771 ftlb	1251 ftlb	1150 ftlb	1325 ftlb
1 1/4UNF	1075 ftlb	1744 ftlb	1600 ftlb	1750 ftlb
1 1/2UNF	1900 ftlb	3083 ftlb	3300 ftlb	3650 ftlb

TIP

To avoid problems with failures of bolts always ensure that the hole it goes through has a small chamfer to clear the radius under the bolt head. This will make sure that the load is taken directly on the flat surface under the head.