

# Flange Bolts

- Inch sizes meet ASME B18.2.1 standards
- Grade E9 bolts meet IFI 115 standards
- Metric sizes meet DIN 6291 standards

Bolts have a circular flange under the head that acts like a washer to distribute pressure where the screw meets the surface.

**Serrated** flange bolts have teeth that grip surfaces to resist vibration and ensure a tight hold.

**Grade E9** bolts have a 12-pt. head design to handle higher torques.



Length	Thread Style	Flange Type	Tensile Strength	Head Height	Item No.	Pkg. Qty.
<b>Grade 5 Steel - Zinc Plated</b>						
<b>1/4"-20 Coarse</b>						
1/2"	Fully Threaded	Serrated	120,000 psi	3/8 in	2FB87	100
1/2"	Fully Threaded	Standard	120,000 psi	3/8 in	41MX89	50
5/8"	Fully Threaded	Serrated	120,000 psi	3/8 in	2FB89	100
3/4"	Fully Threaded	Serrated	120,000 psi	3/8 in	2FB91	100
1"	Fully Threaded	Standard	120,000 psi	3/8 in	41MX91	50
1"	Fully Threaded	Serrated	120,000 psi	3/8 in	2FB93	100
1 1/4"	Partially Threaded	Serrated	120,000 psi	3/8 in	2FB95	50
1 1/2"	Partially Threaded	Standard	120,000 psi	3/8 in	41MX94	50
1 1/2"	Partially Threaded	Serrated	120,000 psi	3/8 in	2FB97	50
<b>5/8"-18 Coarse</b>						
3/4"	Fully Threaded	Serrated	120,000 psi	2 1/4 in	2FE14	50
1"	Fully Threaded	Serrated	120,000 psi	2 1/4 in	2FE16	50
1 1/4"	Fully Threaded	Serrated	120,000 psi	2 1/4 in	2FE18	50
1 1/2"	Partially Threaded	Serrated	120,000 psi	2 1/4 in	2FE20	50
<b>3/8"-16 Coarse</b>						
1/2"	Fully Threaded	Standard	120,000 psi	2 5/8 in	41MY06	25
3/4"	Fully Threaded	Serrated	120,000 psi	2 5/8 in	2FE22	25
1"	Fully Threaded	Serrated	120,000 psi	2 5/8 in	2FE24	25
1 1/4"	Fully Threaded	Serrated	120,000 psi	2 5/8 in	2FE26	25
1 1/2"	Partially Threaded	Serrated	120,000 psi	2 5/8 in	2FE28	25
1 3/4"	Partially Threaded	Serrated	120,000 psi	2 5/8 in	2FE30	25
<b>1/2"-13 Coarse</b>						
1"	Fully Threaded	Serrated	120,000 psi	1 1/2 in	2FE33	10
1 1/4"	Fully Threaded	Serrated	120,000 psi	1 1/2 in	2FE35	10
1 1/2"	Fully Threaded	Serrated	120,000 psi	1 1/2 in	2FE37	10
2"	Partially Threaded	Standard	120,000 psi	1 1/2 in	41MY18	10
<b>Grade 8 Steel - Black Oxide</b>						
<b>1/4"-20 Coarse</b>						
1/2"	Fully Threaded	Standard	150,000 psi	3/8 in	22A408	100
3/4"	Fully Threaded	Standard	150,000 psi	3/8 in	22A409	100
1"	Fully Threaded	Standard	150,000 psi	3/8 in	22A410	100
<b>5/8"-18 Coarse</b>						
3/4"	Fully Threaded	Standard	150,000 psi	3/8 in	22A415	50
1"	Fully Threaded	Standard	150,000 psi	3/8 in	22A416	50
1 1/4"	Fully Threaded	Standard	150,000 psi	3/8 in	22A417	50
1 1/2"	Partially Threaded	Standard	150,000 psi	3/8 in	22A418	50
<b>3/8"-16 Coarse</b>						
1/2"	Fully Threaded	Standard	150,000 psi	3/8 in	22A421	25
3/4"	Fully Threaded	Standard	150,000 psi	3/8 in	22A422	25
1 1/4"	Fully Threaded	Standard	150,000 psi	3/8 in	22A423	25
1 1/2"	Partially Threaded	Standard	150,000 psi	3/8 in	22A424	25
2"	Partially Threaded	Standard	150,000 psi	3/8 in	22A425	25
<b>7/8"-14 Coarse</b>						
1"	Fully Threaded	Standard	150,000 psi	1 1/2 in	22A425	25
1 1/2"	Fully Threaded	Standard	150,000 psi	1 1/2 in	22A427	25
2"	Partially Threaded	Standard	150,000 psi	1 1/2 in	22A433	25
<b>1/2"-13 Coarse</b>						
1 1/2"	Fully Threaded	Standard	150,000 psi	1 1/2 in	2TJ81	25
2"	Partially Threaded	Standard	150,000 psi	1 1/2 in	2TJ83	25
<b>1/2"-20 Fine</b>						
1 1/4"	Fully Threaded	Standard	150,000 psi	1 1/2 in	22A448	25
1 1/2"	Fully Threaded	Standard	150,000 psi	1 1/2 in	22A449	25
2"	Partially Threaded	Standard	150,000 psi	1 1/2 in	22A451	25
<b>5/8"-11 Coarse</b>						
1 1/2"	Fully Threaded	Standard	150,000 psi	3/8 in	22A441	25
1 3/4"	Fully Threaded	Standard	150,000 psi	3/8 in	2TJ88	25
2"	Partially Threaded	Standard	150,000 psi	3/8 in	2TJ89	25
2 1/2"	Partially Threaded	Standard	150,000 psi	3/8 in	2TJ90	15
<b>5/8"-18 Fine</b>						
2 1/2"	Partially Threaded	Standard	150,000 psi	3/8 in	22A462	15
3"	Partially Threaded	Standard	150,000 psi	3/8 in	22A463	15
3 1/4"	Partially Threaded	Standard	150,000 psi	3/8 in	22A464	15
<b>3/4"-10 Coarse</b>						
2 1/2"	Partially Threaded	Standard	150,000 psi	4/64 in	2TJ95	15
3"	Partially Threaded	Standard	150,000 psi	4/64 in	22A446	15
3 1/2"	Partially Threaded	Standard	150,000 psi	4/64 in	22A436	10
4"	Partially Threaded	Standard	150,000 psi	4/64 in	22A437	10
<b>3/4"-16 Fine</b>						
2 1/4"	Partially Threaded	Standard	150,000 psi	4/64 in	22A470	15
3 1/2"	Partially Threaded	Standard	150,000 psi	4/64 in	22A473	10
<b>Grade 8 Steel - Phosphate and Oil</b>						
<b>5/8"-16 Coarse</b>						
1"	Fully Threaded	Standard	150,000 psi	2 5/8 in	41MY29	25
1 1/4"	Fully Threaded	Standard	150,000 psi	2 5/8 in	41MY30	25
1 1/2"	Partially Threaded	Standard	150,000 psi	2 5/8 in	41MY31	25
3 1/2"	Partially Threaded	Standard	150,000 psi	2 5/8 in	41MY38	25
<b>1 1/2"-13 Coarse</b>						
1 1/4"	Fully Threaded	Standard	150,000 psi	1 1/2 in	41MY41	25
1 1/2"	Fully Threaded	Standard	150,000 psi	1 1/2 in	41MY42	25
1 3/4"	Fully Threaded	Standard	150,000 psi	1 1/2 in	41MY43	25
2"	Partially Threaded	Standard	150,000 psi	1 1/2 in	41MY44	25
4 1/2"	Partially Threaded	Standard	150,000 psi	1 1/2 in	41MY51	10
<b>5/8"-11 Coarse</b>						
2"	Fully Threaded	Standard	150,000 psi	3/8 in	41MY56	10
2 1/2"	Partially Threaded	Standard	150,000 psi	3/8 in	157D82	70
3"	Partially Threaded	Standard	150,000 psi	3/8 in	157D84	60
<b>Grade E9 Alloy Steel - Plain</b>						
<b>1/4"-20 Coarse</b>						
3/4"	Fully Threaded	Standard	170,000 psi	1 1/64 in	21C341	100
1"	Fully Threaded	Standard	170,000 psi	1 1/64 in	2FA46	100
1 1/4"	Fully Threaded	Standard	170,000 psi	1 1/64 in	2FA48	50
2"	Partially Threaded	Standard	170,000 psi	1 1/64 in	2FA53	25
<b>1/4"-28 Fine</b>						
3/4"	Fully Threaded	Standard	170,000 psi	1 1/64 in	2FA55	100
1"	Fully Threaded	Standard	170,000 psi	1 1/64 in	2FA57	100

Length	Thread Style	Flange Type	Tensile Strength	Head Height	Item No.	Pkg. Qty.
<b>5/8"-18 Coarse</b>						
3/4"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA63	50
1"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA67	50
1 1/4"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA70	50
<b>5/8"-24 Fine</b>						
1"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA82	25
1 1/2"	Partially Threaded	Standard	170,000 psi	3/8 in	2FA86	25
<b>3/4"-16 Coarse</b>						
3/4"	Fully Threaded	Standard	170,000 psi	3/8 in	21C343	25
1"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA88	25
1 1/4"	Fully Threaded	Standard	170,000 psi	3/8 in	2FA91	25
1 1/2"	Partially Threaded	Standard	170,000 psi	3/8 in	2FA93	25
<b>3/8"-24 Fine</b>						
1"	Fully Threaded	Standard	170,000 psi	3/8 in	2FB15	25
1 1/2"	Partially Threaded	Standard	170,000 psi	3/8 in	2FB20	25
<b>1/2"-13 Coarse</b>						
1 1/4"	Fully Threaded	Standard	170,000 psi	1 1/2 in	2FB36	10
1 1/2"	Partially Threaded	Standard	170,000 psi	1 1/2 in	2FB38	10
2"	Partially Threaded	Standard	170,000 psi	1 1/2 in	2FB40	10
<b>1/2"-20 Fine</b>						
1 1/2"	Partially Threaded	Standard	170,000 psi	1 1/2 in	2FB51	10
2"	Partially Threaded	Standard	170,000 psi	1 1/2 in	2FB53	5
<b>5/8"-11 Coarse</b>						
1 3/4"	Fully Threaded	Standard	170,000 psi	3/8 in	2FB57	5
2"	Partially Threaded	Standard	170,000 psi	3/8 in	2FB59	5
3"	Partially Threaded	Standard	170,000 psi	3/8 in	2FB68	5
<b>3/4"-10 Coarse</b>						
2"	Fully Threaded	Standard	170,000 psi	3/4 in	2FB76	5
2 1/2"	Partially Threaded	Standard	170,000 psi	3/4 in	2FB78	5
Length	Thread Style	Flange Type	Tensile Strength	Head Height	Item No.	Pkg. Qty.
<b>Class 8.8 Steel - Zinc Plated</b>						
<b>M6-1.00 Coarse</b>						
12-mm	Fully Threaded	Standard	116,030 psi	6.6 mm	38CP93	100
16-mm	Fully Threaded	Serrated	116,030 psi	6.6 mm	38CP94	100
20-mm	Partially Threaded	Serrated	116,030 psi	6.6 mm	38CP95	100
<b>M8-1.25 Coarse</b>						
16-mm	Fully Threaded	Serrated	116,030 psi	8.1 mm	38CP98	100
20-mm	Fully Threaded	Standard	116,030 psi	8.1 mm	38CP99	100
25-mm	Partially Threaded	Standard	116,030 psi	8.1 mm	38CR01	100
<b>M10-1.50 Coarse</b>						
20-mm	Fully Threaded	Standard	116,030 psi	9.2 mm	38CR03	50
35-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CR06	50
40-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CR07	50
<b>M12-1.75 Coarse</b>						
20-mm	Fully Threaded	Standard	116,030 psi	11.5 mm	38CR08	50
35-mm	Partially Threaded	Standard	116,030 psi	11.5 mm	38CR11	50
40-mm	Partially Threaded	Standard	116,030 psi	11.5 mm	38CR12	50
<b>Class 8.8 Steel - Zinc Yellow</b>						
<b>M8-1.25 Coarse</b>						
25-mm	Partially Threaded	Standard	116,030 psi	8.1 mm	38CP41	100
30-mm	Partially Threaded	Standard	116,030 psi	8.1 mm	38CP42	100
35-mm	Partially Threaded	Standard	116,030 psi	8.1 mm	38CP43	100
<b>M10-1.50 Coarse</b>						
30-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CP52	50
35-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CP53	50
45-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CP55	50
50-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CP56	50
60-mm	Partially Threaded	Standard	116,030 psi	9.2 mm	38CP57	50
<b>M12-1.75 Coarse</b>						
30-mm	Fully Threaded	Standard	116,030 psi	11.5 mm	38CP62	50
50-mm	Partially Threaded	Standard	116,030 psi	11.5 mm	38CP66	50
70-mm	Partially Threaded	Standard	116,030 psi	11.5 mm	38CP68	25
<b>M16-2.00 Coarse</b>						
60-mm	Partially Threaded	Standard	116,030 psi	14.4 mm	156Y57	75
80-mm	Partially Threaded	Standard	116,030 psi	14.4 mm	38CP85	25
100-mm	Partially Threaded	Standard	116,030 psi	14.4 mm	38CP86	25
<b>M20-2.50 Coarse</b>						
50-mm	Partially Threaded	Standard	116,030 psi	17.1 mm	38CP87	10
60-mm	Partially Threaded	Standard	116,030 psi	17.1 mm	38CP88	10
90-mm	Partially Threaded	Standard	116,030 psi	17.1 mm	38CP91	10
<b>Class 10.9 Steel - Black Oxide</b>						
<b>M6-1.00 Coarse</b>						
20-mm	Partially Threaded	Standard	145,038 psi	6.6 mm	38CU41	100
<b>M8-1.25 Coarse</b>						
20-mm	Fully Threaded	Standard	145,038 psi	8.1 mm	38CU42	100
25-mm	Partially Threaded	Standard	145,038 psi	8.1 mm	38CU43	100
40-mm	Partially Threaded	Standard	145,038 psi	8.1 mm	38CU45	100
<b>M10-1.50 Coarse</b>						
25-mm	Fully Threaded	Standard	145,038 psi	9.2 mm	38CU48	50
60-mm	Partially Threaded	Standard	145,038 psi	9.2 mm	38CU52	50
70-mm	Partially Threaded	Standard	145,038 psi	9.2 mm	38CU53	50
<b>M12-1.75 Coarse</b>						
25-mm	Fully Threaded	Standard	145,038 psi	11.5 mm	38CU54	50
50-mm	Partially Threaded	Standard	145,038 psi	11.5 mm	38CU59	50
60-mm	Partially Threaded	Standard	145,038 psi	11.5 mm	38CU60	50