

FASTENERS

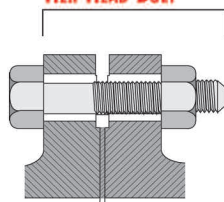
BOLT-UP CHARTS FOR FLANGES

NPS	N° of BOLTS	DIA. OF BOLTS (inches)	CLASS 150 FLANGES		
			LENGTH		HEX BOLTS .0625" RAISED FACE
			STUD BOLTS .0625" RAISED FACE	RING JOINT	
1/2	4	1/2	2.25	—	2.00
3/4	4	1/2	2.50	—	2.00
1	4	1/2	2.50	3.00	2.25
1 1/4	4	1/2	2.75	3.25	2.25
1 1/2	4	1/2	2.75	3.25	2.50
2	4	5/8	3.25	3.75	2.75
2 1/2	4	5/8	3.50	4.00	3.00
3	4	5/8	3.50	4.00	3.00
3 1/2	8	5/8	3.50	4.00	3.00
4	8	5/8	3.50	4.00	3.00
5	8	3/4	3.75	4.25	3.25
6	8	3/4	4.00	4.50	3.25
8	8	3/4	4.25	4.75	3.50
10	12	7/8	4.50	5.00	4.00
12	12	7/8	4.75	5.25	4.00
14	12	1	5.25	5.75	4.50
16	16	1	5.25	5.75	4.50
18	16	1 1/8	5.75	6.25	5.00
20	20	1 1/8	6.25	6.75	5.50
24	20	1 1/4	6.75	7.25	6.00

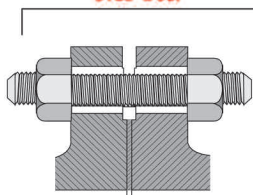
NPS	N° of BOLTS	DIA. OF BOLTS (inches)	CLASS 600 FLANGES	
			LENGTH OF STUD BOLTS	
			.250" RAISED FACE	RING JOINT
1/2	4	1/2	3.25	3.00
3/4	4	5/8	3.50	3.50
1	4	5/8	3.50	3.50
1 1/4	4	5/8	3.75	3.75
1 1/2	4	3/4	4.25	4.25
2	8	5/8	4.25	4.25
2 1/2	8	3/4	4.75	4.75
3	8	3/4	5.00	5.00
3 1/2	8	7/8	5.50	5.50
4	8	7/8	5.75	5.75
5	8	1	6.50	6.50
6	12	1	6.75	6.75
8	12	1 1/8	7.75	7.75
10	16	1 1/4	8.50	8.50
12	20	1 1/4	8.75	8.75
14	20	1 3/8	9.25	9.25
16	20	1 1/2	10.00	10.00
18	20	1 5/8	10.75	10.75
20	24	1 5/8	11.25	11.50
24	24	1 7/8	13.00	13.25

NPS	N° of BOLTS	DIA. OF BOLTS (inches)	CLASS 300 FLANGES		
			LENGTH		HEX BOLTS .0625" RAISED FACE
			STUD BOLTS .0625" RAISED FACE	RING JOINT	
1/2	4	1/2	2.50	3.00	2.25
3/4	4	5/8	3.00	3.50	2.50
1	4	5/8	3.00	3.50	2.50
1 1/4	4	5/8	3.25	3.75	2.75
1 1/2	4	3/4	3.50	4.00	3.00
2	8	5/8	3.50	4.00	3.00
2 1/2	8	3/4	4.00	4.50	3.25
3	8	3/4	4.25	4.75	3.50
3 1/2	8	3/4	4.25	5.00	3.75
4	8	3/4	4.50	5.00	3.75
5	8	3/4	4.75	5.25	4.25
6	12	3/4	4.75	5.50	4.25
8	12	7/8	5.50	6.00	4.75
10	16	1	6.25	6.75	5.50
12	16	1 1/8	6.75	7.25	5.75
14	20	1 1/8	7.00	7.50	6.25
16	20	1 1/4	7.50	8.00	6.50
18	24	1 1/4	7.75	8.25	6.75
20	24	1 1/4	8.00	8.75	7.25
24	24	1 1/2	9.00	10.00	8.00

HEX HEAD BOLT



STUD BOLT



- Length of Stud Bolt is measured 1st thread to 1st thread.
- Bolt sizes are in inches.

NPS	CLASS 900 FLANGES			
	N° of BOLTS	DIA. OF BOLTS (inches)	LENGTH OF STUD BOLTS	
			.250" RAISED FACE	RING JOINT
1/2	4	3/4	4.25	4.25
3/4	4	3/4	4.50	4.50
1	4	7/8	5.00	5.00
1 1/4	4	7/8	5.00	5.00
1 1/2	4	1	5.50	5.50
2	8	7/8	5.75	5.75
2 1/2	8	1	6.25	6.25
3	8	7/8	5.75	5.75
4	8	1 1/8	6.75	6.75
5	8	1 1/4	7.50	7.50
6	12	1 1/8	7.50	7.75
8	12	1 3/8	8.75	8.75
10	16	1 3/8	9.25	9.25
12	20	1 3/8	10.00	10.00
14	20	1 1/2	10.75	11.00
16	20	1 5/8	11.25	11.50
18	20	1 7/8	12.75	13.25
20	20	2	13.75	14.25
24	20	2 1/2	17.25	18.00

NPS	CLASS 1500 FLANGES			
	N° of BOLTS	DIA. OF BOLTS (inches)	LENGTH OF STUD BOLTS	
			.250" RAISED FACE	RING JOINT
1/2	4	3/4	4.25	4.25
3/4	4	3/4	4.50	4.50
1	4	7/8	5.00	5.00
1 1/4	4	7/8	5.00	5.00
1 1/2	4	1	5.50	5.50
2	8	7/8	5.75	5.75
2 1/2	8	1	6.25	6.25
3	8	1 1/8	7.00	7.00
4	8	1 1/4	7.75	7.75
5	8	1 1/2	9.75	9.75
6	12	1 3/8	10.25	10.50
8	12	1 5/8	11.50	12.75
10	12	1 7/8	13.25	13.50
12	16	2	14.75	15.25
14	16	2 1/4	16.00	16.75
16	16	2 1/2	17.50	18.50
18	16	2 3/4	19.50	20.75
20	16	3	21.25	22.25
24	16	3 1/2	24.25	25.50

NPS	CLASS 2500 FLANGES			
	N° of BOLTS	DIA. OF BOLTS (inches)	LENGTH OF STUD BOLTS	
			.250" RAISED FACE	RING JOINT
1/2	4	3/4	4.75	4.75
3/4	4	3/4	5.00	5.00
1	4	7/8	5.50	5.50
1 1/4	4	1	6.00	6.00
1 1/2	4	1 1/8	6.75	6.75
2	8	1	7.00	7.00
2 1/2	8	1 1/8	7.75	8.00
3	8	1 1/4	8.50	9.00
4	8	1 1/2	10.00	10.50
5	8	1 3/4	11.75	12.25
6	8	2	13.50	14.00
8	12	2	15.00	15.50
10	12	2 1/2	19.25	20.00
12	12	2 3/4	21.25	22.00