

# FLANGE BOLTING



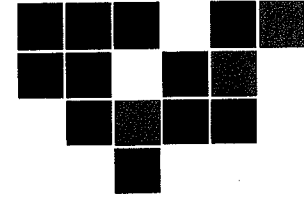
MACHINE BOLTS



STUD BOLTS



CAP SCREWS



Valve Type	Valve Size	Bolt Circle Dia.	Tapped Bolt Holes Per Body	Machine Bolts		Stud Bolts		Cap Screws		All Bolting	
				Needed Per Valve	Length	Needed Per Valve	Length	Needed Per Valve	Length	Diameter	Threads Per Inch and Class
Wafer	2	-	-	4	3-1/4	4	4-1/2	-	-	5/8	-
	2-1/2	-	-	4	4	4	4-3/4	-	-	5/8	-
	3	-	-	4	4-1/4	4	4-3/4	-	-	5/8	-
	4	-	-	8	4-3/4	8	5-1/2	-	-	5/8	-
	5	-	-	8	5	8	5-3/4	-	-	3/4	-
	6	-	-	8	5-1/4	8	6	-	-	3/4	-
	8	-	-	8	5-1/2	8	6-1/2	-	-	3/4	-
	10	-	-	12	6	12	7	-	-	7/8	-
	12	-	-	12	6-1/2	12	7-1/2	-	-	7/8	-
	14	18-3/4	4	12	7	12	8	8	2-1/2	1	8 UNC-2A
	16	21-1/4	4	16	8	16	9	8	2-3/4	1	8 UNC-2A
	18	22-3/4	4	16	9-1/2	16	10-1/2	8	2-3/4	1-1/8	7 UNC-2A
20	25	4	20	10	20	11	8	2-3/4	1-1/8	7 UNC-2A	
24	29-1/2	4	20	11-1/2	20	12-3/4	8	3	1-1/4	7 UNC-2A	
Lug	2	4-3/4	4	4	3-3/4	4	4-1/2	8	1-1/4	5/8	11 UNC-2A
	2-1/2	5-1/2	4	4	4	4	4-3/4	8	1-1/2	5/8	11 UNC-2A
	3	6	4	4	4-1/4	4	4-3/4	8	1-1/2	5/8	11 UNC-2A
	4	7-1/2	8	8	4-3/4	8	5-1/2	16	1-3/4	5/8	11 UNC-2A
	5	8-1/2	8	8	5	8	5-3/4	16	2	3/4	10 UNC-2A
	6	9-1/2	8	8	5-1/4	8	6	16	2	3/4	10 UNC-2A
	8	11-3/4	8	8	5-1/2	8	6-1/2	16	2-1/4	3/4	10 UNC-2A
	10	14-1/4	12	12	6	12	7	24	2-1/4	7/8	9 UNC-2A
	12	17	12	12	6-1/2	12	7-1/2	24	2-3/4	7/8	9 UNC-2A
	14	18-3/4	12	12	7	12	8	24	2-3/4	1	8 UNC-2A
	16	21-1/4	16	16	8	16	9	32	2-3/4	1	8 UNC-2A
	18	22-3/4	16	16	9-1/2	16	10-1/2	32	3-1/2	1-1/8	7 UNC-2A
20	25	20	20	10	20	11	See Note	See Note	1-1/8	7 UNC-2A	
24	29-1/2	20	20	11-1/2	20	12-3/4	40	3-1/2	1-1/4	7 UNC-2A	

**NOTES:**

Bolts should be square or heavy hexagon (ANSI B18.2.1).

Nuts should be heavy semi-finished hexagon (ANSI B18.2.2).

Threads on bolts and stud bolts for insertion through untapped holes (and all nuts) should be in the Unified Coarse Thread Series (UNC), Class A and Class B (ANSI B1.1).

\*14 thru 24 have blind holes tapped each side of stem - 4 each face.

Note: 20" size only requires eight 3" cap screws and thirty-two 3-1/2" cap screws.