

APPENDIX B: Common Flange Dimensions/Drilling Chart
 For: Expansion Joints, Rubber Pipe, Retaining Rings, Control Units

NOMINAL PIPE SIZE EXPANSION JOINT I.D.	25/125/150 LB. DRILLING									250/300 DRILLING				NAVY DRILLING							
	Specifications									Specifications				Specifications							
	ANSI B16.1-1975 Class 25..... B			ANSI B15.1-1975 Class 125..... A			ANSI B16.24-1971..... A			AWWA C207-78, Tbl 1 & 2, Class D, Tbl 3, Class E..... C			ANSI B16.1-1975 Class 250				MIL-F-20042C - 50 lb.				
	ANSI B16.24-1971..... A			AWW C207-78 Tbl 1 & 2, Class B..... D			ANSI B16.5 Class 125/150..... C			ANSI B16.24-1971 300 lb				MIL-F 20042C - 150 lb							
COMMON SIZE			BOLT HOLE SIZE						O.D.	B.C.	No. Of Holes	Hole Dia.	O.D.	B.C.	No. Of Holes	Hole Dia.	O.D.	B.C.	No. Of Holes	Hole Dia.	
O.D.	B.C.	No. Of Holes	Drilling Column																		
			A	B	C	D	E														
1/4	2-1/2	1-11/16	4	7/16																	
3/8	2-1/2	1-11/16	4	7/16																	
1/2	3-1/2	2-3/8	4	5/8																	
3/4	3-7/8	2-3/4	4	5/8																	
1	4-1/4	3-1/8	4	5/8																	
1-1/4	4-5/8	3-1/2	4	5/8																	
1-1/2	5	3-7/8	4	5/8																	
2	6	4-3/4	4	3/4																	
2-1/2	7	5-1/2	4	3/4																	
3	7-1/2	6	4	3/4																	
3-1/2	8-1/2	7	8	3/4																	
4	9	7-1/2	8	3/4																	
4-1/2	9-1/4	7-3/4	8	7/8																	
5	10	8-1/2	8	7/8																	
5-1/2																					
6	11	9-1/2	8	7/8																	
6-1/2	12-1/2	10-3/4	8	7/8																	
7																					
7-1/2	13-1/2	11-3/4	8	7/8																	
8																					
8-1/2																					
9	15	13-1/4	12																		
9-1/2																					
10	16	14-1/4	12	1																	
11																					
12	19	17	12	1	3/4	1	3/4	1	17-1/2	15-1/4	16	1-1/8									
14	21	18-3/4	12	1-1/8	7/8	1	7/8	1	20-1/2	17-3/4	16	1-1/4	17-5/8	16-1/16	18	13/16					
15	22-1/4	20	16	1-1/8	7/8	1-1/8	7/8	1-1/8	23	20-1/4	20	1-1/4	19-1/8	17-3/8	19	15/16					
16	23-1/2	21-1/4	16	1-1/8	7/8	1-1/8	7/8	1-1/8	25-1/2	22-1/2	20	1-3/8	21-3/16	19-7/16	20	15/16					
18	25	22-3/4	16	1-1/4	7/8	1-1/4	7/8	1-1/4	28	24-3/4	24	1-3/8	23-1/4	21-1/2	22	15/16					
20	27-1/2	25	20	1-1/4	7/8	1-1/4	7/8	1-1/4	30-1/2	27	24	1-3/8	25-13/16	23-13/16	24	1-1/16					
22	29-1/2	27-1/4	20	1-3/8	7/8	1-3/8	7/8	1-3/8	33	29-1/4	24	1-5/8	27-7/8	25-7/8	26	1-1/16					
24	32	29-1/2	20	1-3/8	7/8	1-3/8	7/8	1-3/8	36	32	24	1-5/8	30	28	28	1-1/16					
25																					
26	34-1/4	31-3/4	24																		
28	36-1/2	34	28	1-3/8	7/8	1-3/8	7/8	1-3/8	40-3/4	37	28	1-3/4	34-11/16	32-7/16	32	1-3/16					
30	38-3/4	36	28	1-3/8	1	1-1/2	43	39-1/4	43	39-1/4	28	2*	36-13/16	34-9/16	35	1-3/16					
32	41-3/4	38-1/2	28	1-5/8	1	1-5/8	45-1/4	41-1/2	45-1/4	41-1/2	28	2	39	36-3/4	36	1-3/16					
33																					
34	43-3/4	40-1/2	32	1-5/8	1	1-5/8	47-1/2	43-1/2	47-1/2	43-1/2	28	2	41	37-3/4	36	1-3/16					
35																					
36	46	42-3/4	32	1-5/8	1	1-5/8	50	46	50	46	32	2-1/4*	42-7/8	40-3/8	36	1-5/16					
38	48-3/4	45-1/4	32	1-5/8	1	1-5/8	56	43	56	43	32	1-5/8	43-7/8	41-3/8	36	1-5/16					
40	50-3/4	47-1/4	36	1-5/8	1-1/8	1-5/8	1	1-3/4	48-3/4	45-1/2	32	1-3/4	46-1/8	43-5/8	36	1-5/16					
42	53	49-1/2	36	1-5/8	1-1/8	1-5/8	1-1/8	1-3/4	57*	52-3/4*	36*	2-1/4*	48-1/8	45-5/8	36	1-5/16					

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	Specifications									Specifications				Specifications						
	ANSI B16.1-1975 Class 25..... B			ANSI B15.1-1975 Class 125..... A			ANSI B16.24-1971..... A			AWWA C207-78, Tbl 1 & 2, Class D, Tbl 3, Class E..... C			ANSI B16.1-1975 Class 250				MIL-F-20042C - 50 lb.			
	ANSI B16.24-1971..... A			AWW C207-78 Tbl 1 & 2, Class B..... D			ANSI B16.5 Class 125/150..... C			ANSI B16.24-1971 300 lb				MIL-F 20042C - 150 lb						
COMMON SIZE			BOLT HOLE SIZE						O.D.	B.C.	No. Of Holes	Hole Dia.	O.D.	B.C.	No. Of Holes	Hole Dia.	O.D.	B.C.	No. Of Holes	Hole Dia.
O.D.	B.C.	No. Of Holes	Drilling Column																	
			A	B	C	D	E													
44	55-1/4	51-3/4	40																	
46	57-1/4	53-3/4	40																	
48	59-1/2	56	44	1-5/8	1-1/8	1-5/8	1-1/8	1-3/4	53-1/4	49-3/4	32	1-5/8	54-1/2	52	40	2	2-1/4*			
50	61-3/4	58-1/4	44	1-7/8	1-1/4	1-7/8	1-1/4	1-7/8	55-3/4	52	28	2	56*	54	40*	32	2-1/8			
52	64	60-1/2	44	1-7/8	1-1/4	1-7/8	1-1/4	1-7/8	60-1/4	56-1/4	32	2-1/8	62-1/4	58-1/4	32	2-1/8				
54	66-1/4	62-3/4	44	2	1-1/8	1-7/8	1-3/8	1-7/8	65-1/4	61	28	2-3/8	67-1/4	63	28	2-3/8				
56	68-3/4	65	48						67-1/4	63	32	2-3/8	69-1/4	65	32	2-3/8				
58	71	67-1/4	48						71-1/4	67	32	2-3/8	73-1/4	69	32	2-3/8				
60	73	69-1/4	52	2	1-1/4	1-7/8	1-3/8	1-7/8	75	71	32	2-3/8	77-1/4	73	32	2-3/8				
62	75-3/4	71-3/4	52						79-1/4	75	32	2-3/8	81-1/4	77	32	2-3/8				
64	78	74	52						83-1/4	79	32	2-3/8	85-1/4	81	32	2-3/8				
66	80	76	52						87-1/4	83	32	2-3/8	89-1/4	85	32	2-3/8				
68	82-1/4	78-1/4	56						91-1/4	87	32	2-3/8	93-1/4	89	32	2-3/8				
70	84-1/4	80-1/2	56						95-1/4	91	32	2-3/8	97-1/4	93	32	2-3/8				
72	86-1/2	82-1/2	60	2	1-1/4	1-7/8	1-3/8	1-7/8	99-1/4	95	32	2-3/8	101-1/4	97	32	2-3/8				
74	88-1/2	84-1/2	60						103-1/4	99	32	2-3/8	105-1/4	101	32	2-3/8				
76	90-3/4	86-1/2	60						107-1/4	103	32	2-3/8	109-1/4	105	32	2-3/8				
78*	93	89	64						111-1/4	107	32	2-3/8	113-1/4	109	32	2-3/8				
80	95-1/4	91	60						115-1/4	111	32	2-3/8	117-1/4	113	32	2-3/8				
82	97-1/2	93-1/4	60						119-1/4	115	32	2-3/8	121-1/4	117	32	2-3/8				
84	99-3/4	95-1/2	64	2-1/4	1-3/8	2-1/8	1-5/8	2-1/8	123-1/4	119	32	2-1/4	125-1/4	121	32	2-1/4				
86	102	97-3/4	64						127-1/4	123	32	2-1/4	129-1/4	125	32	2-1/4				
88	104-1/4	100	68						131-1/4	127	32	2-1/4	133-1/4	129	32	2-1/4				
90*	106-1/2	102	68						135-1/4	131	32	2-1/4	137-1/4	133	32	2-1/4				
92	108-3/4	104-1/2	68						139-1/4	135	32	2-1/4	141-1/4	137	32	2-1/4				
94	111	106-1/4	68						143-1/4	139	32	2-1/4	145-1/4	141	32	2-1/4				
96	113-1/4	108-1/2	68	2-1/2	1-3/8	2-3/8	1-7/8	2-1/4	147-1/4	143	32	2-1/4	149-1/4	145	32	2-1/4				
98	115-1/2	110-3/4	68						151-1/4	147	32	2-1/4	153-1/4	149	32	2-1/4				
100	117-3/4	113	68						155-1/4	151	32	2-1/4	157-1/4	153	32	2-1/4				
102	120	114-1/2	72						159-1/4	155	32	2-1/4	161-1/4	157	32	2-1/4				
108	126-3/4	120-3/4	72						163-1/4	159	32	2-1/4	165-1/4	161	32	2-1/4				
120	140-1/4	132-3/4	76			</														