

FLANGE/BOLT CHART

@PIPINGTECHNICALOFFICE

SIZE	QTY OF BOLTS	125#/150#					SIZE	QTY OF BOLTS	250#/300#		
		HEX BOLT SIZE	THICKNESS						HEX BOLT SIZE	THICKNESS	
			CLASS D RING	CLASS E RING	AWWA C110	AWWA C153				CLASS F RING	AVK 350# GATE VALVE
3"	4	5/8" X 2-1/2"	0.625		0.75 ± .12	0.60 ± .12	3"	8	3/4" X 3-1/2"		
4"	8	5/8" X 3"	0.625	1.125	0.94 ± .12	0.63 ± .12	4"	8	3/4" X 3-3/4"	1.13	1.25
6"	8	3/4" X 3-1/4"	0.688	1.313	1.00 ± .12	0.63 ± .12	6"	12	3/4" X 4"	1.31	1.44
8"	8	3/4" X 3-1/2"	0.688	1.500	1.12 ± .12	0.70 ± .12	8"	12	7/8" X 4-1/2"	1.31	1.62
10"	12	7/8" X 3-3/4"	0.688	1.563	1.19 ± .12	0.75 ± .12	10"	16	1" X 5-1/4"	1.50	1.88
12"	12	7/8" X 4"	0.812	1.750	1.25 ± .12	0.81 ± .12	12"	16	1-1/8" X 5-1/2"	1.63	2.00
14"	12	1" X 4-1/4"	0.938	1.875	1.38 ± .19	0.87 ± .19	14"	20	1-1/8" X 6"	1.94	
16"	16	1" X 4-1/2"	1.000	2.000	1.44 ± .19	0.90 ± .19	16"	20	1-1/4" X 6-1/4"	2.14	
18"	16	1-1/8" X 4-3/4"	1.062	2.125	1.56 ± .19	0.93 ± .19	18"	24	1-1/4" X 6-1/2"	2.25	
20"	20	1-1/8" X 5"	1.125	2.375	1.69 ± .19	0.96 ± .19	20"	24	1-1/4" X 6-3/4"	2.33	
24"	20	1-1/4" X 5-1/2"	1.250	2.625	1.88 ± .19	1.00 ± .19	24"	24	1-1/2" X 7-3/4"	2.69	
30"	28	1-1/4" X 6-1/4"	1.375	2.875	2.12 ± .19	2.12 ± .25	30"	28	1-3/4" X 8-1/2"	3.15	
36"	32	1-1/2" X 7"	1.625	3.125	2.38 ± .19	2.38 ± .25	36"	32	2" X 9-1/2"	3.46	
42"	36	1-1/2" X 7-1/2"	1.750	3.375	2.62 ± .19	2.62 ± .25	42"	36	2" X 10-1/4"	3.81	
48"	44	1-1/2" X 7-3/4"	1.875	3.500	2.75 ± .19	2.75 ± .25	48"	40	2" X 10-3/4"	4.50	

WRENCH CHART

BOLT SIZE	STANDARD HEX HEAD	HEAVY HEX HEAD
5/8"	15/16"	1-1/16"
3/4"	1-1/8"	1-1/4"
7/8"	1-5/16"	1-7/16"
1"	1-1/2"	1-5/8"
1-1/8"	1-11/16"	1-13/16"
1-1/4"	1-7/8"	2"
1-3/8"	2-1/16"	2-3/16"
1-1/2"	2-1/4"	2-3/8"
1-5/8"	2-7/16"	2-9/16"
1-3/4"	2-5/8"	2-3/4"
1-7/8"	2-13/16"	2-15/16"
2"	3"	3-1/8"

MECHANICAL JOINTS

SIZE	QTY OF BOLTS	T-BOLT BOLT SIZE
3"	4	5/8" X 3"
4"	4	3/4" X 3-1/2"
6"	6	3/4" X 4"
8"	6	3/4" X 4"
10"	8	3/4" X 4"
12"	8	3/4" X 4"
14"	10	3/4" X 4-1/2"
16"	12	3/4" X 4-1/2"
18"	12	3/4" X 4-1/2"
20"	14	3/4" X 4-1/2"
24"	16	3/4" X 5"
30"	20	1" X 6"
36"	24	1" X 6"
42"	28	1-1/4" X 8-1/2"
48"	32	1-1/4" X 8-1/2"