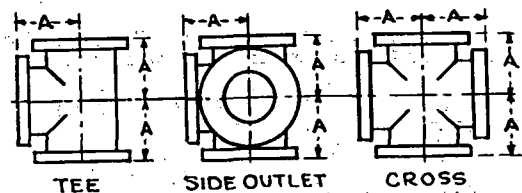


either cast-iron, cast-steel or some of the steel alloys are employed. Practically all iron or steel valves intended for steam or water work are bronze-mounted or trimmed, while valves for acids, ammonia and corrosive gases are of iron throughout.

Pressure Requirement

Brass, bronze and iron valves are generally designed for standard or extra heavy service, the former being used up to 125 lb and the latter up to 250 lb saturated steam working pressure, although most manufacturers also make valves for medium pressure up to 175 lb steam working

TABLE 4. DIMENSIONS OF TEES AND CROSSES (STRAIGHT SIZES) FOR 125 LB CAST IRON FLANGED FITTINGS



NOMINAL PIPE SIZE ^{a-b}	A CENTER TO FACE TEES AND CROSSES b-c	AA FACE TO FACE TEES AND CROSSES b-c	DIAMETER OF FLANGE	THICKNESS OF FLANGE, MIN.	METAL THICKNESS OF BODY, MIN.
1	3 1/2	7	4 1/4	7/16	3/16
1 1/4	3 3/4	7 1/2	4 5/8	1/2	4 5/8
1 1/2	4	8	5	9/16	1/2
2	4 1/2	9	6	5/8	1/2
2 1/2	5	10	7	1 1/16	1/2
3	5 1/2	11	7 1/2	3/4	1/2
3 1/2	6	12	8 1/2	13/16	1/2
4	6 1/2	13	9	1 5/16	1/2
5	7 1/2	15	10	1 5/16	1/2
6	8	16	11	1	9/16
8	9	18	13 1/2	1 1/8	5/8
10	11	22	16	1 3/16	3/4
12	12	24	19	1 1/4	13/16
14 O.D.	14	28	21	1 3/8	1 1/8
16 O.D.	15	30	23 1/2	1 7/16	1 1/8
18 O.D.	16 1/2	33	25	1 9/16	1 1/8
20 O.D.	18	36	27 1/2	1 11/16	1 1/8
24 O.D.	22	44	32	1 3/4	1 1/4
30 O.D.	25	50	38 3/4	2 1/8	1 7/16
36 O.D.	28	56	46	2 3/8	1 3/4
42 O.D.	31	62	53	2 5/8	1 13/16
48 O.D.	34	68	59 1/2	2 3/4	2

All dimensions given in inches.

^aSize of all fittings listed indicates nominal inside diameter of port.

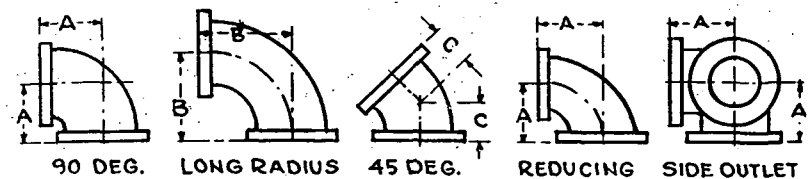
^bTees, side outlet tees, and crosses, 16 in. and smaller, reducing on the outlet, have the same dimensions center to face, and face to face as straight size fittings, corresponding to the size of the larger opening. Sizes 18 in. and larger, reducing on the outlet, are made in two lengths, depending on the size of the outlet.

^cTees and crosses, reducing on run only, carry same dimensions center to face and face to face as a straight size fitting of the larger opening.

pressure and cast-iron flanged valves for working pressures up to 25 lb steam. In practically all cases these valves are tested at a cold water pressure of twice the steam pressure, and may be used on cold water lines with a pressure 40 per cent in excess of the allowable rated steam pressure. Some manufacturers rate their standard valves at 150 lb steam working pressure instead of 125 lb. The more common types are gate valves or straightway valves, globe valves, angle valves, check valves and automatic valves, such as reducing and back-pressure valves.

A special class of valves is required for controlling the steam and hot water supply to radiators. These valves are of brass, usually of the angle

TABLE 5. DIMENSIONS OF ELBOWS FOR 125 LB. CAST-IRON FLANGED FITTINGS



NOMINAL PIPE SIZE ^a	A CENTER TO FACE ELBOW b-c-d	B CENTER TO FACE LONG RADIUS ELBOW b-c-d	C CENTER TO FACE 45 DEG ELBOW c	DIAMETER OF FLANGE	THICKNESS OF FLANGE, MIN.	METAL THICKNESS OF BODY, MIN.
1	3 1/2	5	1 3/4	4 1/4	7/16	3/16
1 1/4	3 3/4	5 1/2	2	4 5/8	1/2	4 5/8
1 1/2	4	6	2 1/4	5	9/16	1/2
2	4 1/2	6 1/2	2 1/2	6	5/8	1/2
2 1/2	5	7	3	7	1 1/16	1/2
3	5 1/2	7 3/4	3 1/2	7 1/2	3/4	1/2
3 1/2	6	8 1/2	4	8 1/2	13/16	1/2
4	6 1/2	9	4 1/2	9	1 5/16	1/2
5	7 1/2	10 1/4	5	10	1 5/16	1/2
6	8	11 1/2	5 1/2	11	1	9/16
8	9	14	6 1/2	13 1/2	1 1/8	5/8
10	11	16 1/2	7 1/2	16	1 3/16	3/4
12	12	19	8	19	1 1/4	13/16
14 O.D.	14	21 1/2	8 1/2	21	1 3/8	1 1/8
16 O.D.	15	24	9 1/2	23 1/2	1 7/16	1 1/8
18 O.D.	16 1/2	26 1/2	10	25	1 9/16	1 1/8
20 O.D.	18	29	11	27 1/2	1 11/16	1 1/8
24 O.D.	22	34	12	32	1 3/4	1 1/4
30 O.D.	25	41 1/2	13	38 3/4	2 1/8	1 7/16
36 O.D.	28	49	14	46	2 3/8	1 3/4
42 O.D.	31	56 1/2	15	53	2 5/8	1 13/16
48 O.D.	34	64	16	59 1/2	2 3/4	2

All dimensions given in inches.

^aSize of all fittings listed indicates nominal inside diameter of port.

^bReducing elbows and side outlet elbows carry same dimensions center to face as straight size elbows, corresponding to the size of the larger opening.

^cSpecial degree elbows, ranging from 1 to 45 deg, inclusive, have the same center to face dimensions given in 45 deg elbows and those over 45 deg and up to 90 deg inclusive, shall have the same center to face dimensions given for 90 deg elbows. The angle designation of an elbow is its deflection from straight line flow and is the angle between the flange faces.

^dSide outlet elbows shall have all openings on intersecting center-lines.