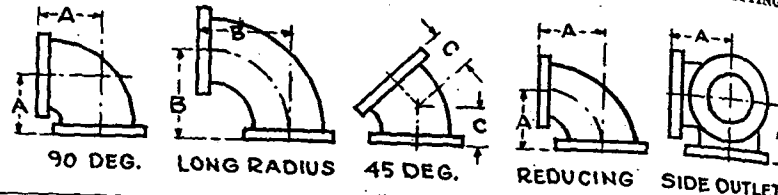


grades of brass. The material to be used depends on the character of the service and the pressure.

As in the case of pipe, there are several weights of fittings manufactured, designed to be used with pipe of corresponding grade. These variations in weights are known as (1) low-pressure fittings for steam working pressures of 25 lb, (2) standard fittings for steam working pressures of 125 lb, and extra heavy fittings for steam working pressures of 250 lb. The latter fittings are suitable for water working pressures of 350 lb, and are usually tested to twice the steam working pressure or 500 lb cold hydrostatic.

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



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

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.

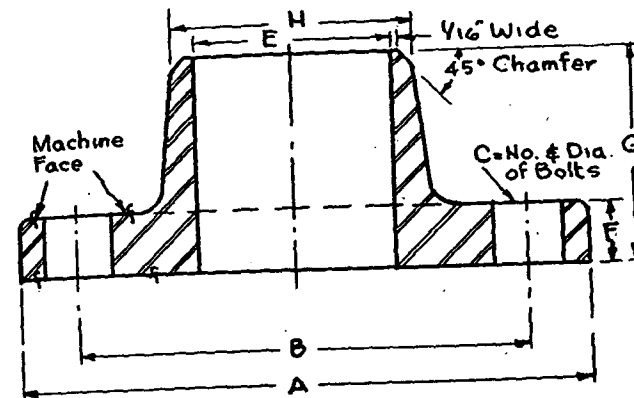
^cSpecial degree elbows, ranging from 1 to 45 deg., inclusive, have the same center to face dimensions given in 45 deg. elbows and those over 45 deg. and up to 90 deg. inclusive, shall have the same center to face dimensions given for 90 deg. elbows. The angle designation of an elbow is its deflection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

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

Screwed Fittings

Screwed fittings include nipples or short pieces of pipe of varying lengths; couplings, usually of wrought iron only; elbows for turning angles of either 45 deg or 90 deg; return bends, which may be of either the close or open pattern, and may be cast with either a back or side outlet; tees; crosses; laterals or Y branches; and a variety of plugs, bushings, caps, lock-nuts, flanges and reducing fittings. Reducing fittings as well as bushings, both of which are used in changing from one pipe size to another, may have the smaller connection tapped eccentrically to permit free drainage of the water of condensation in steam lines or free escape of air in water lines. Reducing fittings as well as bushings, both of which are used in changing from one pipe size to another, may have the smaller connection tapped eccentrically to permit free drainage of the water of condensation in steam lines or free escape of air in water lines.

TABLE 6. DIMENSIONS OF WELDING NECK FLANGES FOR STANDARD PIPE^b



NOMINAL PIPE SIZE	A	DRILLING		E STANDARD PIPE	F	G	H
		B	C				
2	6	4 3/4	4-5/8	2 1/16	5/8	2 1/2	2 1/2
2 1/2	7	5 1/2	4-5/8	2 15/32	11/16	2 3/4	3
3	7 1/2	6	4-5/8	3 1/16	3/4	2 3/4	3 3/8
4	9	7 1/2	8-5/8	4 1/32	15/16	3	4 5/8
5	10	8 1/2	8-3/4	5 1/16	1 1/16	3 1/2	5 11/16
6	11	9 1/2	8-3/4	6 1/16	1 1/8	3 1/2	6 3/4
8	13 1/2	11 3/4	8-3/4	8	1 1/2	4	8 3/4
10	16	14 1/4	12-7/8	10	1 3/4	4 1/2	10 7/8
12	19	17	12-7/8	12	1 7/8	5	12 7/8
14 O.D.	21	18 3/4	12-1	a	1 3/8	5	14 1/16
16 O.D.	23 1/2	21 1/4	16-1	a	1 7/8	5 1/2	16 1/4
18 O.D.	25	22 3/4	16-1 1/8	a	1 7/8	5 1/2	18 1/4

All dimensions given in inches.

^aOrders or inquiries should specify diameter of bore "E" required.

^bCopyright, 1929, by Heating and Piping Contractors National Association.