

Table E Dimensions of plain, boss, integrally cast or forged, and welding neck flanges (for ratings see Table 2 and Annex B)

Flange size designation (nominal bore of pipe)	Approximate outside diameter of steel pipe A)	Diam-eter of flange	Bolt circle diam-eter	No. of bolts	Diam-eter of bolts B)	Dimensions of boss (Fig.4) C)			Dimensions of steel welding necks (Fig. 6)				Thickness of flange				
						Boss length	Diam-eter at small end of boss	Maxi-mum diam-eter at root of boss	Diam-eter at large end of neck D)	Diam-eter at small end of neck	Total length of neck	Length of taper	Grey cast iron integrally cast or screwed on with boss	Copper alloy cast or wrought integral or boss or plain (Fig. 3)	Wrought steel inter-etal or plain (Fig. 3) or boss (Fig. 4) or welding neck (Fig. 6) (except for valves)	Cast steel integral or plain (Fig. 3) or boss (Fig. 4) or welding neck (Fig. 6) (except for valves)	Forged or cast steel integral (Fig. 5) (for valves only)
in	H	D	P	N	O	A	B	E	J	K	L	M	T <sub>1</sub>	T <sub>3</sub>	T <sub>5</sub>	T <sub>6</sub>	T <sub>9</sub>
1/2	27/32	3 3/4	2 5/8	4	1/2	3/8	1 5/16	1 1/2	1 1/16	7/8	7/8	5/8	1/2	1/4	1/4 E)	3/8 E)	3/8
3/4	1 1/16	4	2 7/8	4	1/2	7/16	1 1/2	1 3/4	1 5/16	1 3/32	7/8	5/8	1/2	1/4	1/4 E)	3/8 E)	3/8
1	1 11/32	4 1/2	3 1/4	4	1/2	7/16	1 7/8	2 1/16	1 11/16	1 3/8	7/8	5/8	1/2	5/16	9/32 E)	3/8 E)	3/8
1 1/4	1 11/16	4 3/4	3 7/16	4	1/2	7/16	2 3/16	2 9/32	1 15/16	1 23/32	1	5/8	5/8	5/16	5/16 E)	1/2	1/2
1 1/2	1 29/32	5 1/4	3 7/8	4	1/2	1/2	2 7/16	2 3/4	2 5/16	1 15/16	1 1/8	3/4	5/8	3/8	1 1/32 E)	1/2	1/2
2	2 3/8	6	4 1/2	4	5/8	1/2	2 15/16	3 1/8	2 3/4	2 13/32	1 1/8	3/4	3/4	3/8	3/8 E)	9/16	9/16
2 1/2	3	6 1/2	5	4	5/8	5/8	3 9/16	3 21/32	3 1/4	3 1/32	1 1/4	7/8	3/4	7/16	13/32 E)	9/16	9/16
3	3 1/2	7 1/4	5 3/4	4	5/8	5/8	4 3/16	4 13/32	4	3 17/32	1 3/8	1	3/4	1/2	7/16 E)	9/16	9/16
3 1/2	4	8	6 1/2	8	5/8	1 1/16	4 11/16	5 1/8	4 1/2	4 1/16	1 3/8	1	3/4	9/16	15/32 E)	9/16	9/16
4	4 1/2	8 1/2	7 1/4	8	5/8	3/4	5 1/4	5 1/2	5 1/8	4 9/16	1 5/8	1 1/4	7/8	5/8	1/2	1 1/16	1 1/16
5	5 1/2	10	8 1/4	8	5/8	3/4	6 5/16	6 3/4	6	5 9/16	1 3/4	1 1/4	7/8	1 1/16	9/16	1 1/16	1 1/16
6	6 1/2	11	9 1/4	8	3/4	3/4	7 5/16	7 1/2	7 1/4	6 9/16	1 7/8	1 1/4	7/8	1 1/16	1 1/16	1 1/16	1 1/16
	6 5/8									6 23/32							
7	7 5/8	12	10 1/4	8	3/4	7/8	8 3/8	8 1/2	8 1/4	7 23/32	2	1 3/8	1	3/4	3/4	3/4	3/4
8	8 5/8	13 1/4	11 1/2	8	3/4	7/8	9 1/2	9 13/16	9 1/2	8 23/32	2	1 3/8	1	3/4	3/4	3/4	3/4
9	9 5/8	14 1/2	12 3/4	12	3/4	1	10 1/2	10 15/16	10 5/8	9 3/4	2 1/4	1 1/2	1	13/16	13/16	13/16	13/16
10	10 3/4	16	14	12	3/4	1 1/16	11 3/4	12 3/16	11 1/2	10 7/8	2 1/2	1 3/4	1	7/8	7/8	7/8	7/8
12	12 3/4	18	16	12	7/8	1 1/8	13 3/4	13 15/16	13 1/2	12 29/32	2 3/4	2	1 1/8	1	1	1	1
13	14	19 1/4	17 1/4	12	7/8	—	—	—	15	14 5/32	2 7/8	2 1/8	1 1/8	1	1	1	1
14	15 F)	20 3/4	18 1/2	12	7/8	—	—	—	16	15 5/32	2 7/8	2 1/8	1 1/4	1	1 1/8	1 1/8	1
15	16	21 3/4	19 1/2	12	7/8	—	—	—	17	16 3/16	3	2 1/4	1 1/4	1	1 1/4	1 1/4	1
16	—	22 3/4	20 1/2	12	7/8	—	—	—	—	—	—	—	1 1/4	1	1 1/4	1 1/4	1
17	18	24	21 3/4	12	7/8	—	—	—	—	—	—	—	1 3/8	1 1/8	1 3/8	1 3/8	1 1/8
18	—	25 1/4	23	16	7/8	—	—	—	—	—	—	—	1 3/8	1 1/8	1 3/8	1 3/8	1 1/8

Figure 4 Steel boss flange

