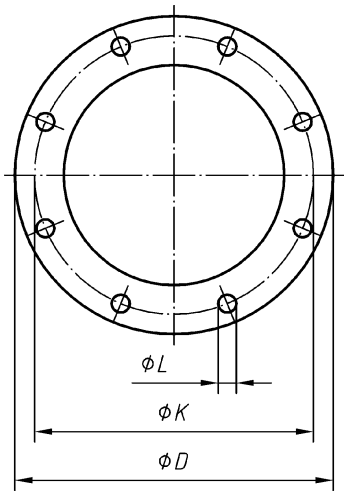
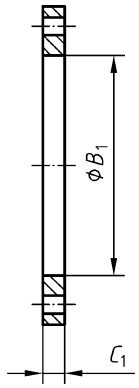
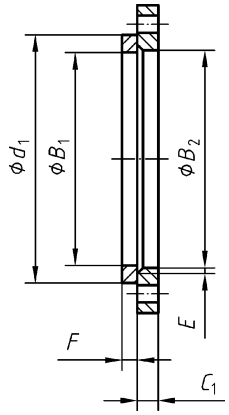


a)

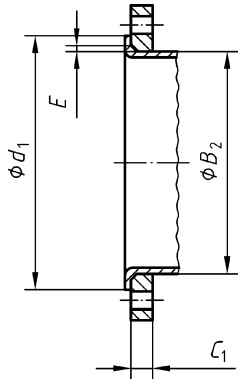
This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.
Refer to the column "Bolting Number" in Table 13 for the actual number.



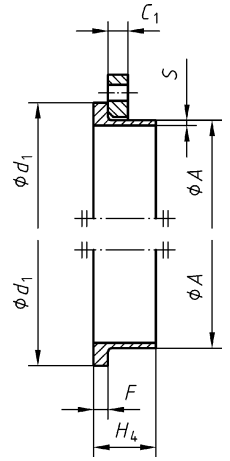
b) Type 01



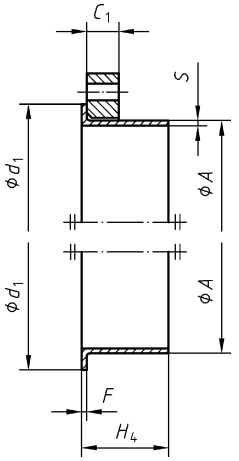
c) Type 02 and 32



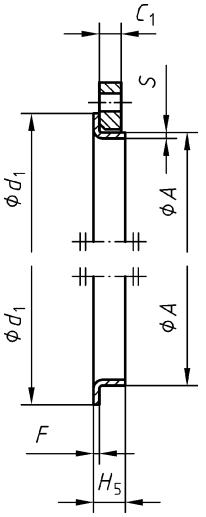
d) Type 02 and 33



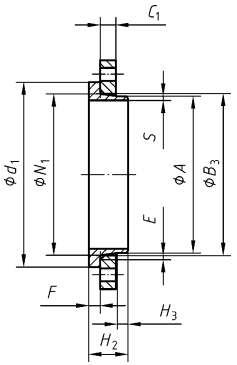
e) Type 02 and 35



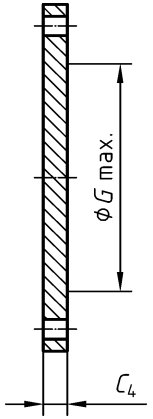
f) Type 02 and 36



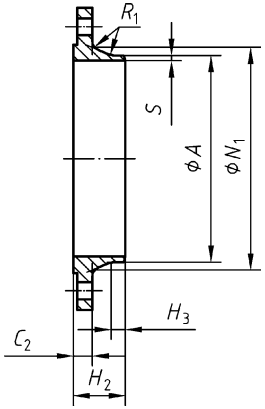
g) Type 02 and 37



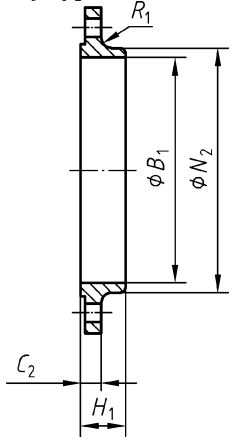
h) Type 04 and 34



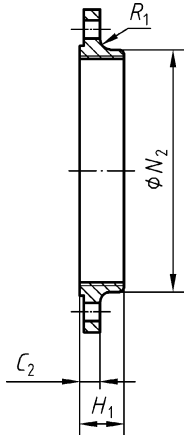
i) Type 05



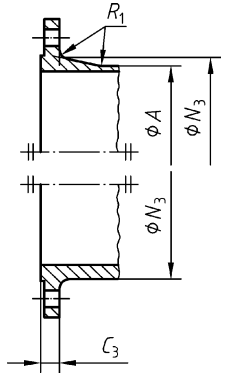
j) Type 11



k) Type 12



l) Type 13



m) Type 21

NOTE 1 Dimensions N_1, N_2 and N_3 are measured at the intersection of the hub draft angle and the back face of the flange.
NOTE 2 For dimension d_1, see Table 8.
NOTE 3 For dimensions G_{max} refer to NOTE 1 of 5.6.1.
NOTE 4 Type 33; lapped pipe end without determination of thickness and height.

Figure 8 — Dimensions of PN 16 flanges

Table 13 — Dimensions of PN 16 flanges

Dimensions in millimetres

DN	Mating dimensions					Outside diameter of neck	Bore diameters			Flange thickness				Chamfer	Collar thickness				Centre portion	Length						Neck diameters			Corner radii	Wall thickness (see 5.6.1)	
	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolting																											
	D	K	L	Number	Size	A	B_1	B_2	B_3	C_1	C_2	C_3	C_4	E	F				G_{max}	H_1	H_2	H_3	H_4		H_5	N_1	N_2	N_3	R_1	S	
	Flange type																													
	01, 02, 04, 05, 11, 12, 13, 21					11 21 [a] 34 [d] 35 - 37	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34 [d]	35	36	37	05	12 13	11 34 [c,d]	11 34 [c,d]	35	36	37	11 34 [c, d]	12 13	21	11 12 13 21, 34 [d]	34 [d]	11, 35 to 37
10	90	60	14	4	M12	17,2	18,0	21	31	14	16	16	16	3	12	5	2	2,5	—	22	35	6	35	35	7	28	30	28	4	1,8	See Annex A
15	95	65	14	4	M12	21,3	22,0	25	35	14	16	16	16	3	12	5	2	2,5	—	22	38	6	38	38	7	32	35	32	4	2,0	
20	105	75	14	4	M12	26,9	27,5	31	42	16	18	18	18	4	14	6	2,5	3	—	26	40	6	40	40	8	40	45	40	4	2,3	
25	115	85	14	4	M12	33,7	34,5	38	49	16	18	18	18	4	14	7	2,5	3	—	28	40	6	40	40	10	46	52	50	4	2,6	
32	140	100	18	4	M16	42,4	43,5	47	59	18	18	18	18	5	14	8	3	3	—	30	42	6	42	42	12	56	60	60	6	2,6	
40	150	110	18	4	M16	48,3	49,5	53	67	18	18	18	18	5	14	8	3	3	—	32	45	7	45	45	15	64	70	70	6	2,6	
50	165	125	18	4	M16	60,3	61,5	65	77	20	18	18	18	5	16	8	3	3	—	28	45	8	45	45	20	74	84	84	6	2,9	
65	185	145	18	8 [b]	M16	76,1	77,5	81	96	20	18	18	18	6	16	8	3	3	55	32	45	10	45	45	20	92	104	104	6	2,9	
80	200	160	18	8	M16	88,9	90,5	94	108	20	20	20	20	6	16	10	3	3	70	34	50	10	50	50	25	105	118	120	6	3,2	
100	220	180	18	8	M16	114,3	116,0	120	134	22	20	20	20	6	18	10	4	4	90	40	52	12	52	52	25	131	140	140	8	3,6	
125	250	210	18	8	M16	139,7	141,5	145	162	22	22	22	22	6	18	10	4	4	115	44	55	12	55	55	25	156	168	170	8	4,0	
150	285	240	22	8	M20	168,3	170,5	174	188	24	22	22	22	6	20	10	5	5	140	44	55	12	55	55	25	184	195	190	10	4,5	
200	340	295	22	12	M20	219,1	221,5	226	240	26	24	24	24	6	20	11	6	6	190	44	62	16	62	62	30	235	246	246	10	6,3	
250	405	355	26	12	M24	273,0	276,5	281	294	29	26	26	26	8	22	12	10	—	235	46	70	16	70	68	—	292	298	296	12	6,3	
300	460	410	26	12	M24	323,9	327,5	333	348	32	28	28	28	8	24	14	10	—	285	46	78	16	78	68	—	344	350	350	12	7,1	
350	520	470	26	16	M24	355,6	359,5	365	400	35	30	30	30	8	26	18	10	—	330	57	82	16	82	68	—	390	400	410	12	8,0	

DN	Mating dimensions					Outside diameter of neck	Bore diameters			Flange thickness				Chamfer	Collar thickness				Centre portion	Length						Neck diameters			Corner radii	Wall thickness (see 5.6.1)	
	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolting																											
	D	K	L	Number	Size	A	B_1	B_2	B_3	C_1	C_2	C_3	C_4	E	F				G_{max}	H_1	H_2	H_3	H_4	H_5	N_1	N_2	N_3	R_1	S	
	Flange type																													
	01, 02, 04, 05, 11, 12, 13, 21					11 21 [a] 34 [d] 35 - 37	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34 [d]	35	36	37	05	12 13	11 34 [c,d]	11 34 [c,d]	35	36	37	11 34 [c, d]	12 13	21	11 12 13 21, 34[d]	34 [d]	11, 35 to 37
400	580	525	30	16	M27	406,4	411,0	416	454	38	32	32	32	8	28	20	10	—	380	63	85	16	85	72	—	445	456	458	12	8,0	
450	640	585	30	20	M27	457,0	462,0	467	500	42	34	40	40	8	30	22	—	—	425	68	83	16	87	—	—	490	502	516	12	8,0	
500	715	650	33	20	M30	508,0	513,5	519	556	46	36	44	44	8	32	22	—	—	475	73	84	16	90	—	—	548	559	576	12	8,0	
600	840	770	36	20	M33	610,0	616,5	622	660	55	40	54	54	8	32	24	—	—	575	83	88	18	95	—	—	670	658	690	12	8,8	
700	910	840	36	24	M33	711,0		721	—	63	40		58	8	—	26	—	—	670	83	104	18	100	—	—	755	760	760	12	—	
800	1 025	950	39	24	M36	813,0	[c]	824	—	74	41	[c]	62	8	—	28	—	—	770	90	108	20	105	—	—	855	864	862	12	—	
900	1 125	1 050	39	28	M36	914,0		926	—	82	48		64	8	—	30	—	—	860	94	118	20	110	—	—	955	968	962	12	—	
1 000	1 255	1 170	42	28	M39	1 016,0	[c]	1 030	—	90	59		68	8	—	35	—	—	960	100	137	22	120	—	—	1 058	1 072	1 076	16	—	
1 200	1 485	1 390	48	32	M45	1 219,0	—	—	—		78		—	—	—	—	—	—	1 160	—	160	30	—	—	—	1 262	—	1 282	16	—	
1 400	1 685	1 590	48	36	M45	1 422,0	—	—	—		84		—	—	—	—	—	—	1 346	—	177	30	—	—	—	1 465	—	1 482	16	—	
1 600	1 930	1 820	56	40	M52	1 626,0	—	—	—	[c]	102	[c]	—	—	—	—	—	—	1 546	—	204	35	—	—	—	1 668	—	1 696	16	—	
1 800	2 130	2 020	56	44	M52	1 829,0	—	—	—		110		—	—	—	—	—	—	1 746	—	218	35	—	—	—	1 870	—	1 896	16	—	
2 000	2 345	2 230	62	48	M56	2 032,0	—	—	—		124		—	—	—	—	—	—	1 950	—	238	40	—	—	—	2 072	—	2 100	16	—	

[a] For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter and the nominal value dimensions A, N3 and R1 and their tolerances are included for guidance only.

[b] According to EN 1092-2 (Cast iron flanges) and EN 1092-3 (Copper alloy flanges), the flanges in this DN and PN may be supplied with 4 holes. Where steel flanges are required with 4 holes, these may be supplied by agreement between flange manufacturer and purchaser.

[c] To be specified by the purchaser.

[d] Use is limited up to DN 600.

See Annex A