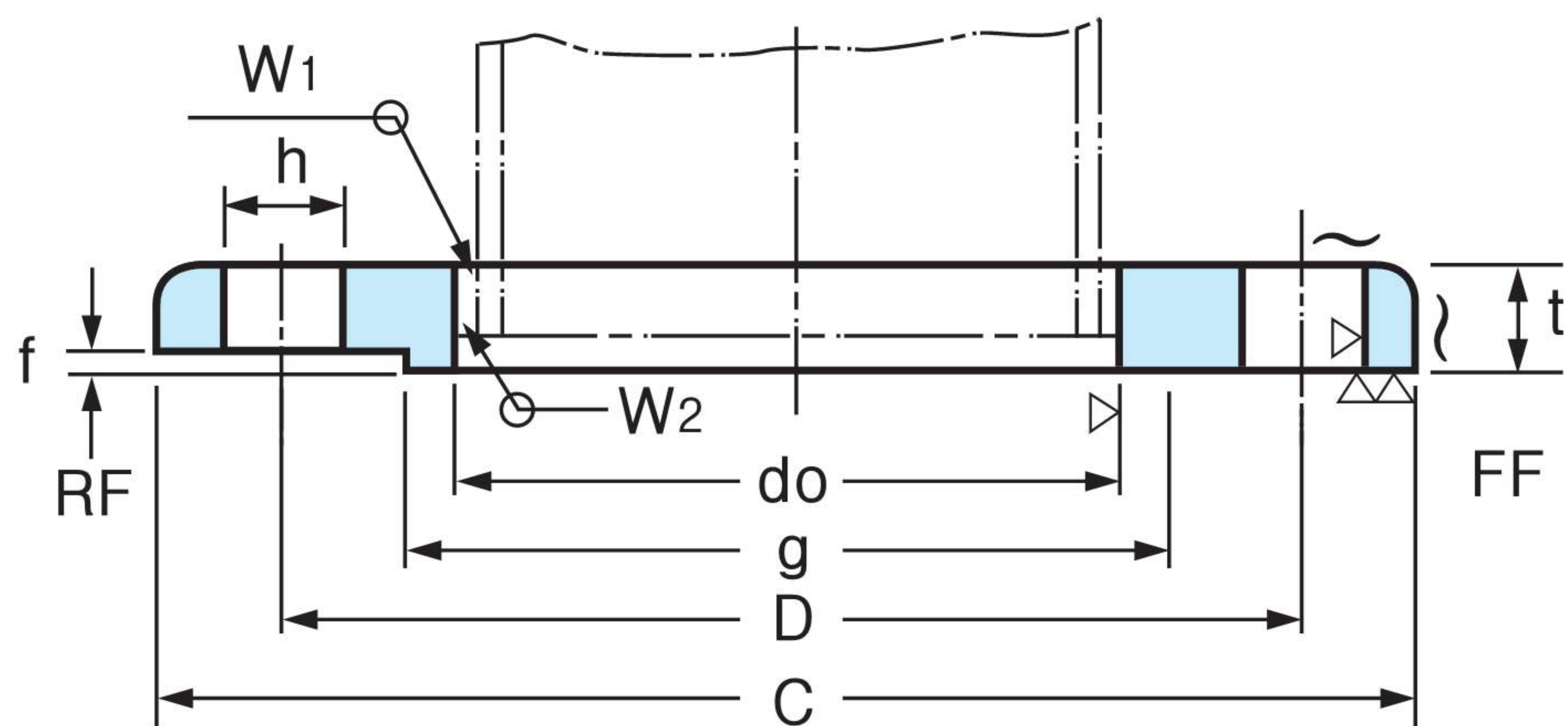


JIS & KS FLANGES

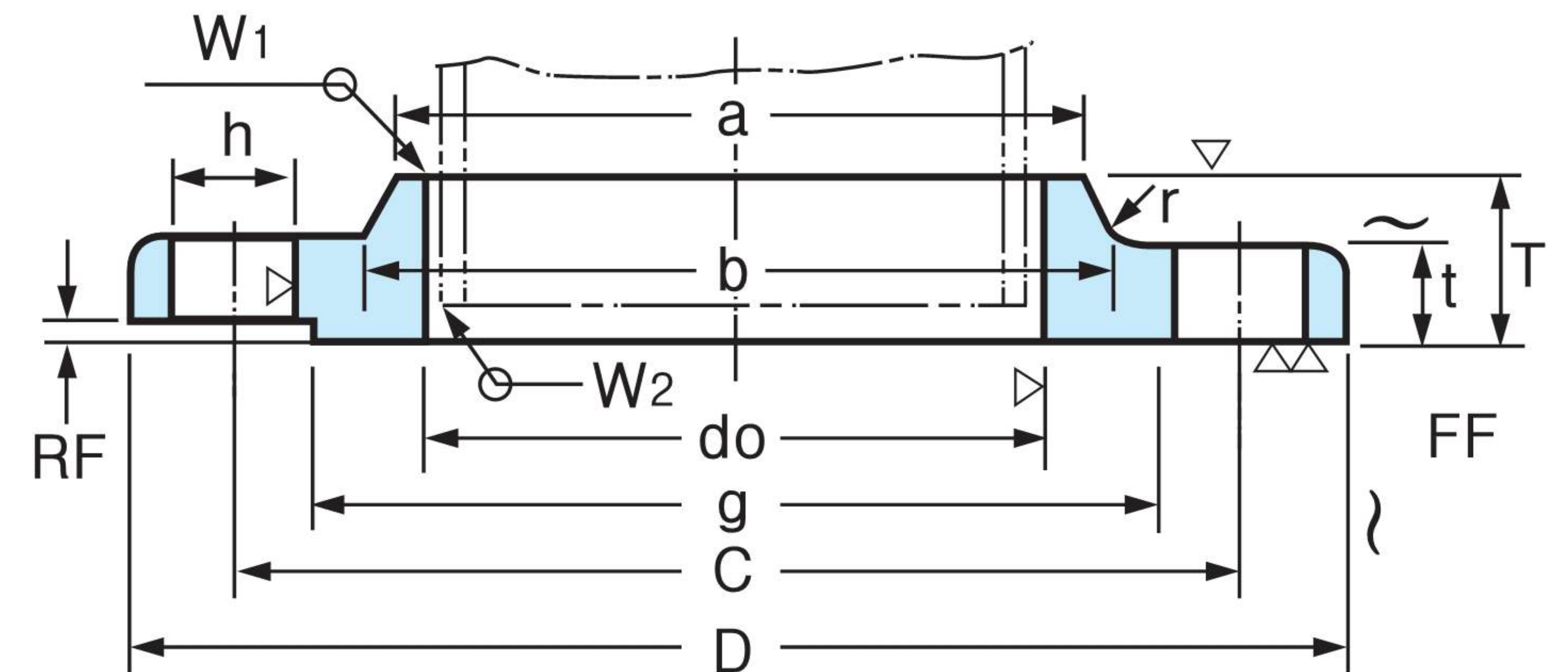
- Class 5K FLANGES
- Class 10K FLANGES
- Class 16K FLANGES
- Class 20K FLANGES
- Class 30K FLANGES
- Class 40K FLANGES

5K K S B1503 JIS B2220

NOMINAL SIZE 10–400mm



NOMINAL SIZE 450–1000mm



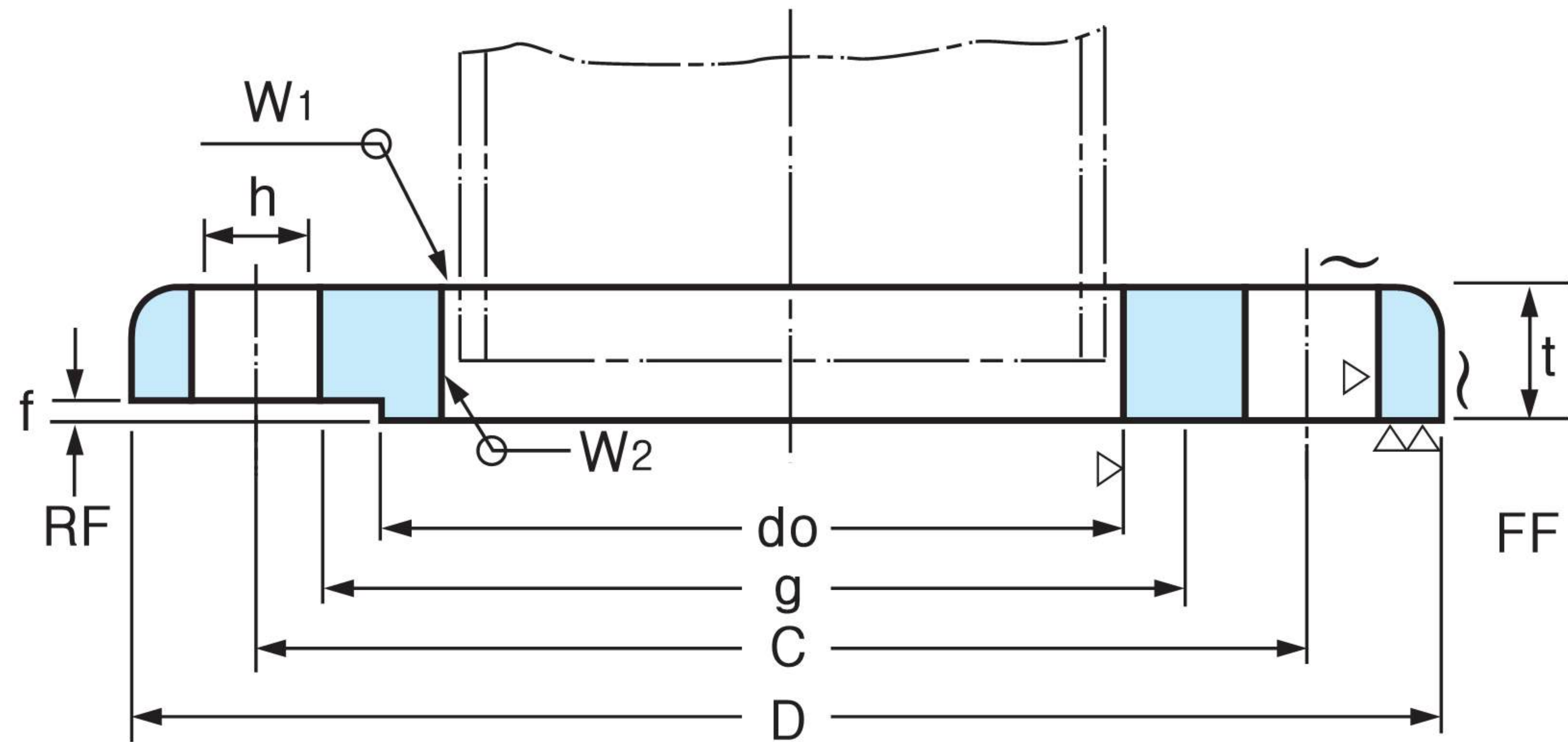
Unit : mm

Nominal Bore of Flange	Outside Dia. of Appli-Cable Pipe	Inside Dia. of Flange do	Outside Dia. of Flange D	Sectional Dimensions of Flange							Dia. of Bolt			Welding		Weight (Kg)	
				t	T	Dia. of Hub		Rad-ius r	Raised Face f	Dia.of Raised Face g	Dia.of Bolt Circle C	Number of Bolt Holes	Hole Dia. h	Nomi-nal Bolt Size	W1		W2
						a	b										
(10)	17.3	17.8	75	9	-	-	-	-	1	39	55	4	12	M10	5	2.5	0.27
15	21.7	22.2	80	9	-	-	-	-	1	44	60	4	12	M10	5	3	0.30
(20)	27.2	27.7	85	10	-	-	-	-	1	49	65	4	12	M10	5	3	0.37
25	34.0	34.5	95	10	-	-	-	-	1	59	75	4	12	M10	5	3	0.45
(32)	42.7	43.2	115	12	-	-	-	-	2	70	90	4	15	M12	6	3	0.78
40	48.6	49.1	120	12	-	-	-	-	2	75	95	4	15	M12	6	3	0.83
50	60.5	61.1	130	14	-	-	-	-	2	85	105	4	15	M12	6	3	1.07
65	76.3	77.1	155	14	-	-	-	-	2	110	130	4	15	M12	6	4	1.49
80	89.1	90.0	180	14	-	-	-	-	2	121	145	4	19	M16	6	4	1.99
(90)	101.6	102.6	190	14	-	-	-	-	2	131	155	4	19	M16	6	4	2.09
100	114.3	115.4	200	16	-	-	-	-	2	141	165	8	19	M16	7	4	2.39
125	139.8	141.2	235	16	-	-	-	-	2	176	200	8	19	M16	7	4	3.23
150	165.2	166.6	265	18	-	-	-	-	2	206	230	8	19	M16	7	5	4.41
(175)	190.7	192.1	300	18	-	-	-	-	2	232	260	8	23	M20	7.5	5	5.51
200	216.3	218.0	320	20	-	-	-	-	2	252	280	8	23	M20	8.5	6	6.33
(225)	241.8	243.7	345	20	-	-	-	-	2	277	305	12	23	M20	9	6	6.64
250	267.4	269.5	385	22	-	-	-	-	2	317	345	12	23	M20	10	6	9.45
300	318.5	321.0	430	22	-	-	-	-	3	360	390	12	23	M20	10	6	10.30
350	355.6	358.1	480	24	-	-	-	-	3	403	435	12	25	M22	12	7	14.00
400	406.4	409.0	540	24	-	-	-	-	3	463	495	16	25	M22	12	7	16.90
450	457.2	460.0	605	24	40	495	500	5	3	523	555	16	25	M22	12	7	24.80
500	508.0	511.0	655	24	40	546	552	5	3	573	605	20	25	M22	12	7	26.90
550	558.8	562.0	720	26	42	597	603	5	3	630	665	20	27	M24	12	7	34.10
600	609.6	613.0	770	26	44	648	654	5	3	680	715	20	27	M24	12	7	37.50
650	660.4	664.0	825	26	48	702	708	5	3	735	770	24	27	M24	12	7	42.80
700	711.2	715.0	875	26	48	751	758	5	3	785	820	24	27	M24	12	7	45.40
750	762.0	766.0	945	28	52	802	810	5	3	840	880	24	33	M30	12	7	57.40
800	812.8	817.0	995	28	52	854	862	5	3	890	930	24	33	M30	13	8	60.80
850	863.6	868.0	1045	28	54	904	912	5	3	940	980	24	33	M30	13	8	63.50
900	914.4	919.0	1095	30	56	956	964	5	3	990	1030	24	33	M30	13	8	75.30
1000	1016.0	1021.0	1195	32	60	1058	1066	5	3	1090	1130	28	33	M30	14	9	88.50
*(1100)	1117.6	1123	1305	32	-	-	-	-	3	1200	1240	28	33	M30			
* 1200	1219.2	1225	1420	34	-	-	-	-	3	1305	1350	32	33	M30			
* 1350	1371.6	-	1575	34	-	-	-	-	3	1460	1505	32	33	M30			
* 1500	1524.0	-	1730	36	-	-	-	-	3	1615	1660	36	33	M30			

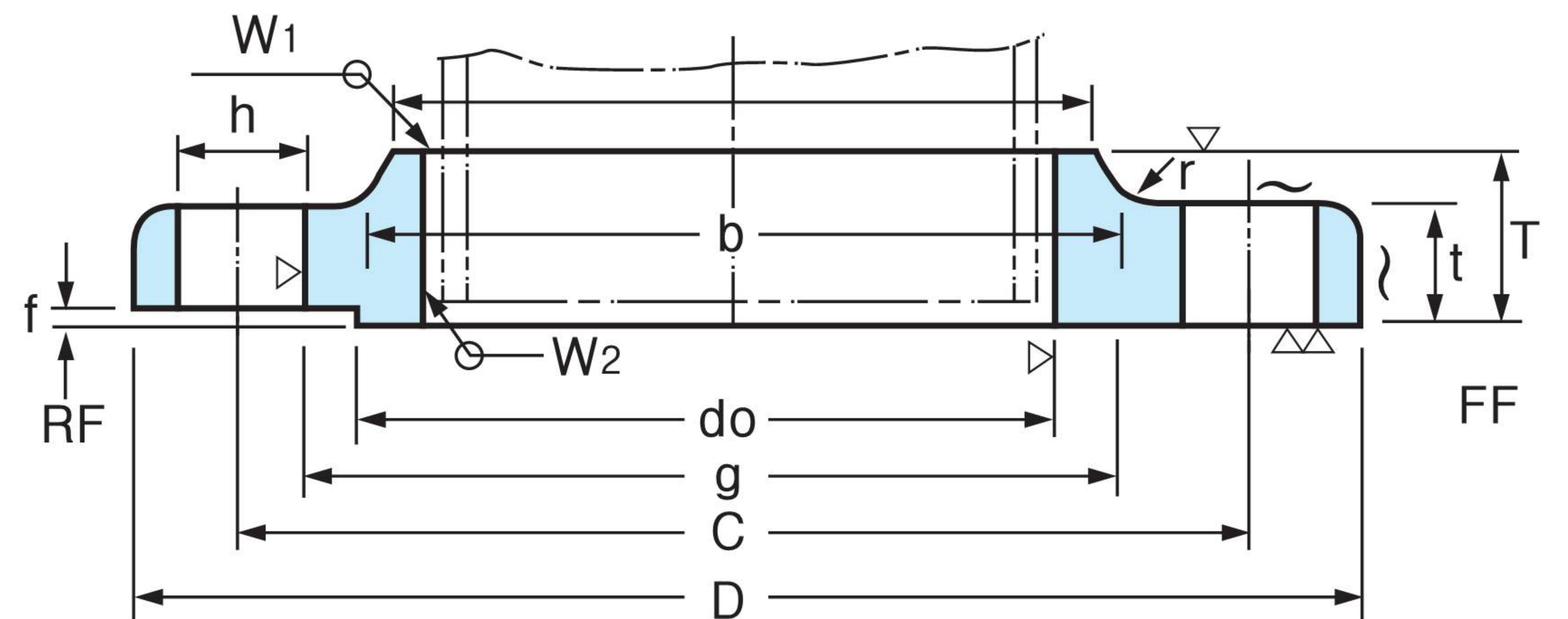
1. Flanges of parenthesized nominal diameter had letter not be used.
2. The facing of flanges shall conform to KS B1519(JIS B2202) 1987.
3. Nominal diameter over 1000 is manufacturer's standard(*).

10K KS B1503 JIS B2220

NOMINAL SIZE 10–225mm



NOMINAL SIZE 250–1000mm



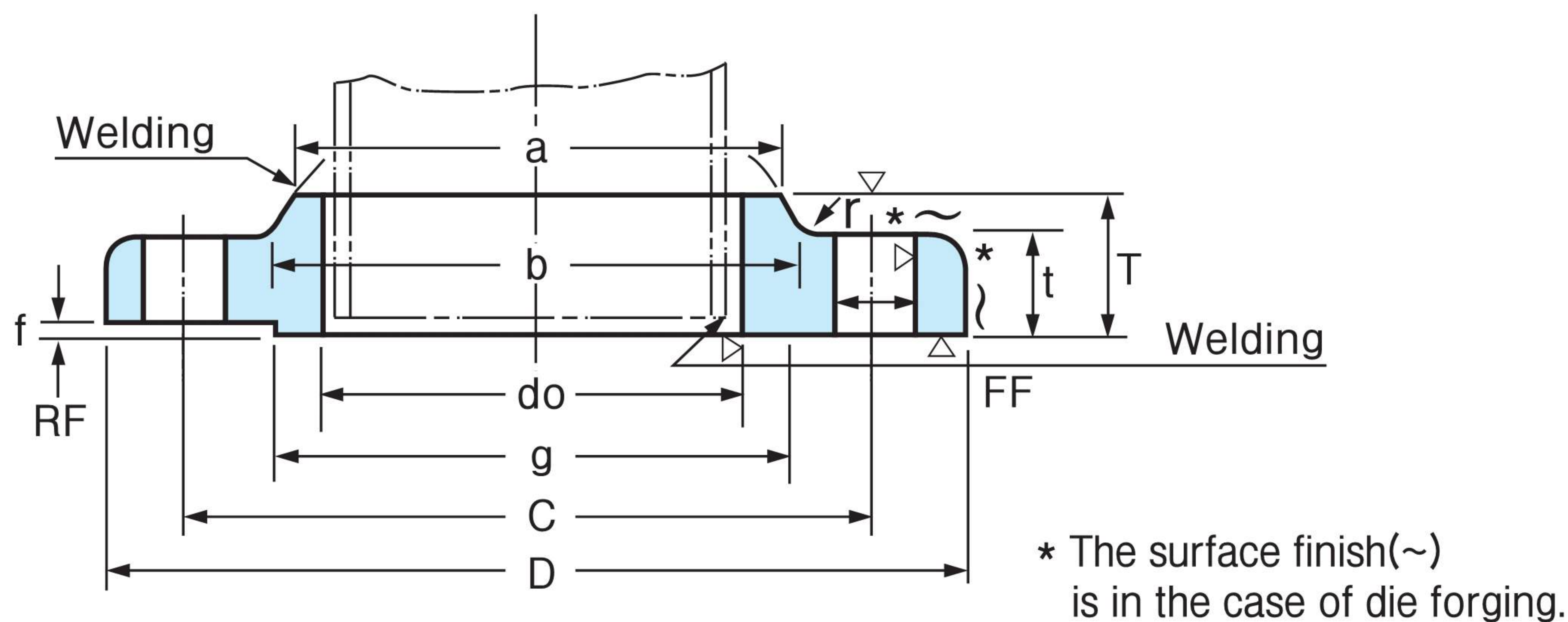
Unit : mm

Nominal Dia. of Flange	Outside Dia. of Steel Pipe	Inside Dia. of Flange do	Outside Dia. of Flange D	Sectional Dimensions of Flange							Bolt Hole			Nominal Bolt Size	Weld Length (Reference)		Approx. Weight (Kg/w)
				t	T	Dia. of Hub		Rad-ius r	Raised Face f	Dia. of Raised Face g	Bolt Circle Dia. C	Number of Bolt Holes	Hole Dia. h		W1	W2	
						a	b										
10	17.3	17.8	90	12	-	-	-	-	1	46	65	4	15	M12	5	2.5	0.52
15	21.7	22.2	95	12	-	-	-	-	1	51	70	4	15	M12	5	3	0.57
20	27.2	27.7	100	14	-	-	-	-	1	56	75	4	15	M12	5	3	0.73
25	34.0	34.5	125	14	-	-	-	-	1	67	90	4	19	M16	5	3	1.13
32	42.7	43.2	135	16	-	-	-	-	2	76	100	4	19	M16	6	3	1.48
40	48.6	49.1	140	16	-	-	-	-	2	81	105	4	19	M16	6	3	1.56
50	60.5	61.1	155	16	-	-	-	-	2	96	120	4	19	M16	6	3	1.88
65	76.3	77.1	175	18	-	-	-	-	2	116	140	4	19	M16	6.5	4	2.6
80	89.1	90.0	185	18	-	-	-	-	2	126	150	8	19	M16	6.5	4	2.61
(90)	101.6	102.6	195	18	-	-	-	-	2	136	160	8	19	M16	6.5	4	2.76
100	114.3	115.4	210	18	-	-	-	-	2	151	175	8	19	M16	7	4	3.14
125	139.8	141.2	250	20	-	-	-	-	2	182	210	8	23	M20	7.5	4	4.77
150	165.2	166.6	280	22	-	-	-	-	2	212	240	8	23	M20	8	5	6.34
(175)	190.7	192.1	305	22	-	-	-	-	2	237	265	12	23	M20	9	5	6.82
200	216.3	218.0	330	22	-	-	-	-	2	262	290	12	23	M20	9	6	7.53
(225)	241.8	243.7	350	22	-	-	-	-	2	282	310	12	23	M20	9	6	7.74
250	267.4	269.5	400	24	36	288	292	6	2	324	355	12	25	M22	10	6	12.7
300	318.5	321.0	445	24	38	340	346	6	3	368	400	16	25	M22	10	6	13.8
350	355.6	358.1	490	26	42	380	386	6	3	413	445	16	25	M22	12	7	18.2
400	406.4	409.0	560	28	44	436	442	6	3	475	510	16	27	M24	12	7	25.2
450	457.2	460.0	620	30	48	496	502	6	3	530	565	20	27	M24	14	8	33
500	508.0	511.0	675	30	48	548	554	6	3	585	620	20	27	M24	14	8	37.6
550	558.8	562.0	745	32	52	604	610	6	3	640	680	20	33	M30	15	9	49.7
600	609.6	613.0	795	32	52	656	662	6	3	690	730	24	33	M30	16	10	52.6
650	660.4	664.0	845	34	56	706	712	6	3	740	780	24	33	M30	16	10	60.6
700	711.2	715.0	905	34	58	762	770	6	3	800	840	24	33	M30	17	10	70.6
750	762.0	766.0	970	36	62	816	824	6	3	855	900	24	33	M30	18	11	85.8
800	812.8	817.0	1020	36	64	868	876	6	3	905	950	28	33	M30	19	12	91.2
(850)	863.6	868.0	1070	36	66	920	928	6	3	955	1000	28	33	M30	19	12	98.6
900	914.4	919.0	1120	38	70	971	979	6	3	1005	1050	28	33	M30	22	14	109
1000	1016.0	1021.0	1235	40	74	1073	1081	6	3	1110	1160	28	39	M36	22	14	133
*(1100)	1117.6	1123	1345	42	76	-	-	-	3	1220	1270	28	39	M36			
* 1200	1219.2	1225	1465	44	78	-	-	-	3	1325	1380	32	39	M36			
* 1350	1371.6	-	1630	48	82	-	-	-	3	1480	1540	36	45	M42			
* 1500	1524.0	-	1795	50	90	-	-	-	3	1635	1700	40	45	M42			

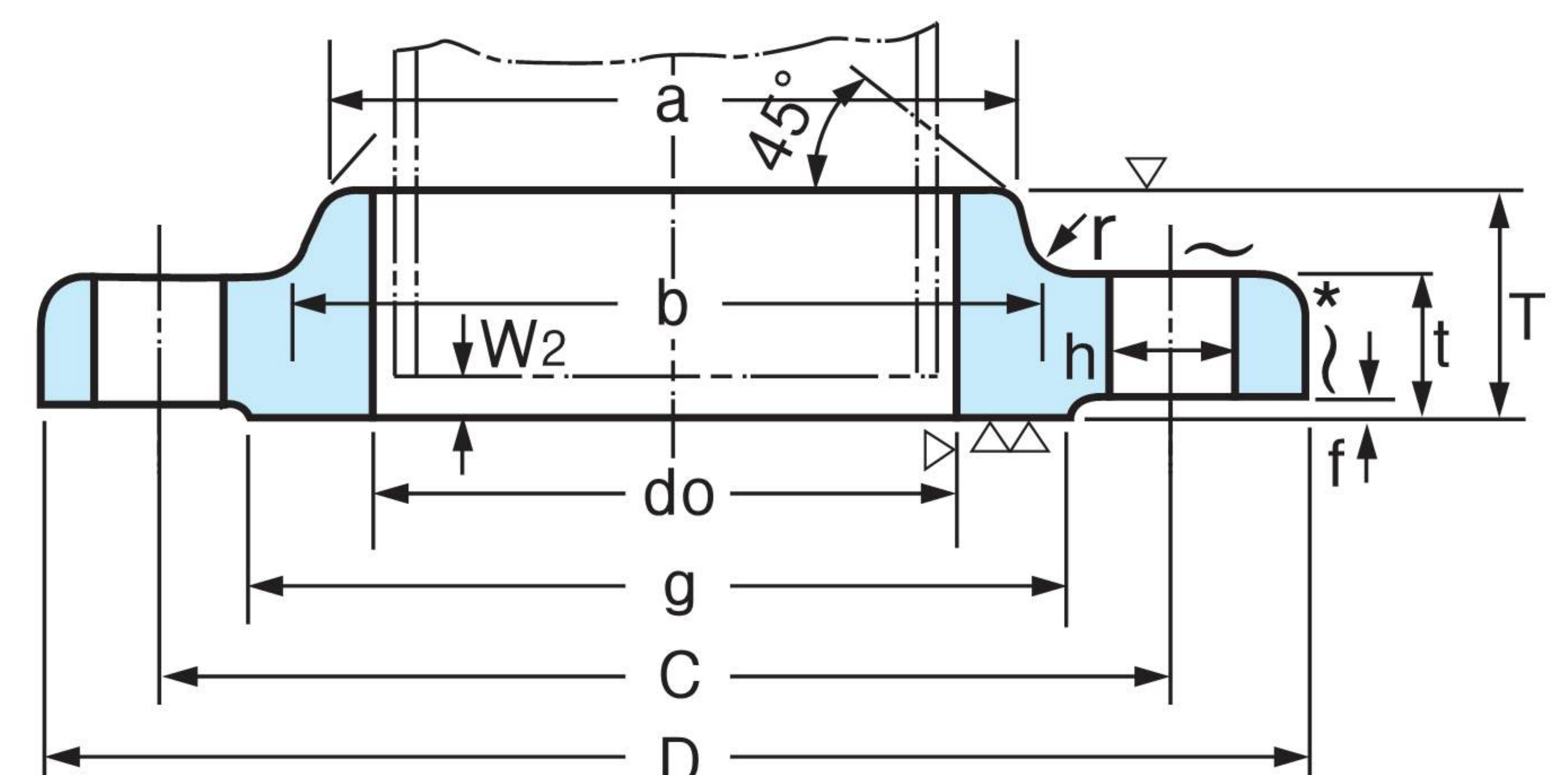
1. Flanges of parenthesized nominal diameter had letter not be used.
2. The facing of flanges shall conform to KS B1519(JIS B2202) 1987.
3. Nominal diameter over 1000 is manufacturer's standard(*).

16K K S B1503 JIS B2220

NOMINAL SIZE 10–600mm



NOMINAL SIZE 650–1200mm



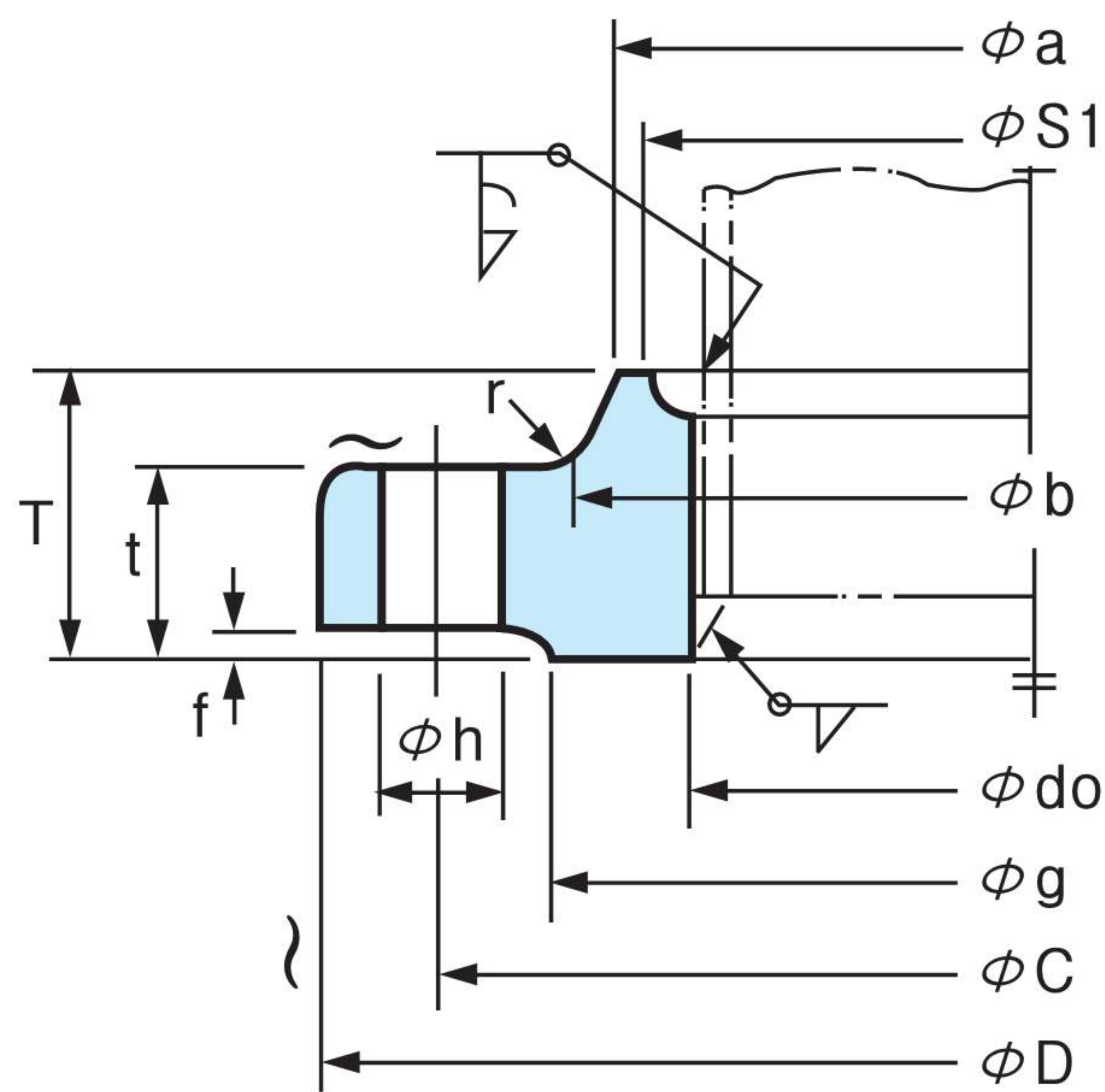
Unit : mm

Nominal Dia. of Flange	Outside Dia. of Steel Pipe	Inside Dia. of Flange do	Outside Dia. of Flange D	Sectional Dimensions of Flange							Bolt Hole			Nominal Bolt Size	Approx. Weight (Kg)
				t	T	Dia. of Hub		Radius r	Raised Face f	Dia. of Raised Face g	Bolt Circle dia. C Dia.	Number of Bolt Holes	Hole Dia. h		
						a	b								
10	17.3	17.8	90	12	16	26	28	4	1	46	65	4	15	M12	0.52
15	21.7	22.2	95	12	16	30	32	4	1	51	70	4	15	M12	0.58
20	27.2	27.7	100	14	20	38	42	4	1	56	75	4	15	M12	0.75
25	34.0	34.5	125	14	20	46	50	4	1	67	90	4	19	M16	1.16
32	42.7	43.2	135	16	22	56	60	5	2	76	100	4	19	M16	1.53
40	48.6	49.1	140	16	24	62	66	5	2	81	105	4	19	M16	1.64
50	60.5	61.1	155	16	24	76	80	5	2	96	120	8	19	M16	1.83
65	76.3	77.1	175	18	26	94	98	5	2	116	140	8	19	M16	2.58
80	89.1	90.0	200	20	28	108	112	6	2	132	160	8	23	M20	3.66
(90)	101.6	102.6	210	20	30	120	124	6	2	145	170	8	23	M20	3.95
100	114.3	115.4	225	22	34	134	138	6	2	160	185	8	23	M20	4.94
125	139.8	141.2	270	22	34	164	170	6	2	195	225	8	25	M22	7.00
150	165.2	166.6	305	24	38	196	202	6	2	230	260	12	25	M22	9.62
200	216.3	218.0	350	26	40	244	252	6	2	275	305	12	25	M22	12.1
250	267.4	269.5	430	28	44	304	312	6	2	345	380	12	27	M24	20.0
300	318.5	321.0	480	30	48	354	364	8	3	395	430	16	27	M24	24.4
350	355.6	358.1	540	34	52	398	408	8	3	440	480	16	33	M30×3	35.0
400	406.4	409.0	605	38	60	446	456	10	3	495	540	16	33	M30×3	46.2
450	457.2	460.0	675	40	64	504	514	10	3	560	605	20	33	M30×3	61.9
500	508.0	511.0	730	42	68	558	568	10	3	615	660	20	33	M30×3	73.25
(550)	558.8	562.0	795	44	70	612	622	10	3	670	720	20	39	M36×3	88.1
600	609.6	613.0	845	46	74	666	676	10	3	720	770	24	39	M36×3	98.8
(650)	660.4	664	895	48	77	704	726	10	5	770	820	24	39	M36×3	101
700	711.2	715	960	50	80	754	776	10	5	820	875	24	42	M39×3	120
750	762.0	766	1020	52	83	806	832	10	5	880	935	24	42	M39×3	141
800	812.8	817	1085	54	86	865	885	10	5	930	990	24	48	M45×3	161
850	863.6	868	1135	56	89	916	936	10	5	980	1040	24	48	M45×3	177
900	914.4	919	1185	58	93	968	986	10	5	1030	1090	28	48	M45×3	191
1000	1016.0	1021	1320	62	99	1070	1098	12	5	1140	1210	28	56	M52×3	230
(1100)	1117.6	1123	1420	66	105	1180	1200	12	5	1240	1310	32	56	M52×3	289
1200	1219.2	1225	1530	70	112	1282	1302	12	5	1350	1420	32	56	M52×3	348

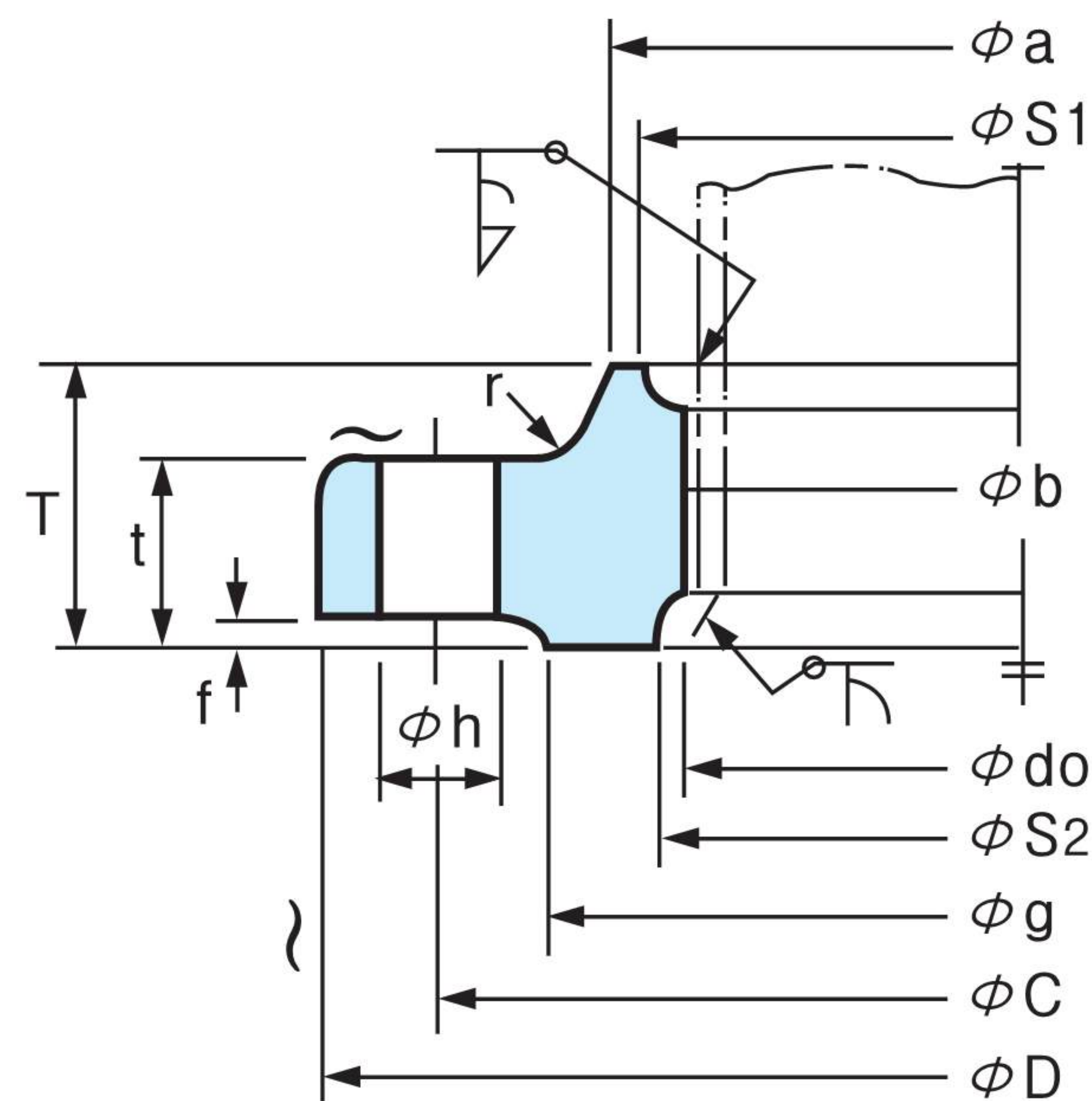
1. Flanges of parenthesized nominal diameter had better not be used.
2. The facing of flanges shall conform to KS B1519 (JIS B2202) 1987.
3. The dimension of flange of 650A and larger in nominal sizes excluding 850A, are in accordance with the nominal pressure 25 BAR specified in ISO2084-1974.

20K K S B1503 JIS B2220

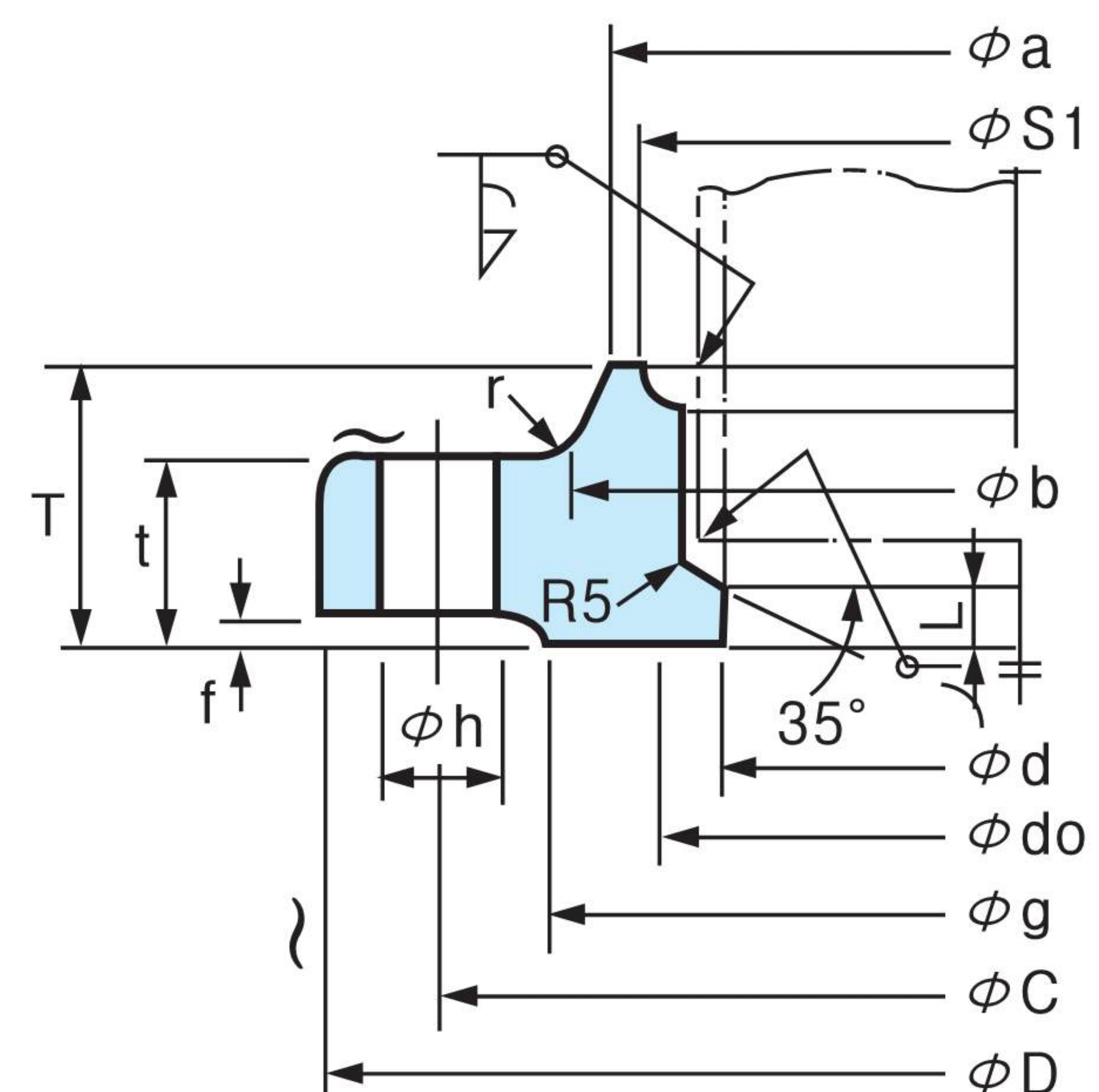
TYPE A
NOMINAL SIZE 10–50mm



TYPE B
NOMINAL SIZE 10–50mm



TYPE C
NOMINAL SIZE 65–600mm



* The surface finish(～) is in the case of die forging.

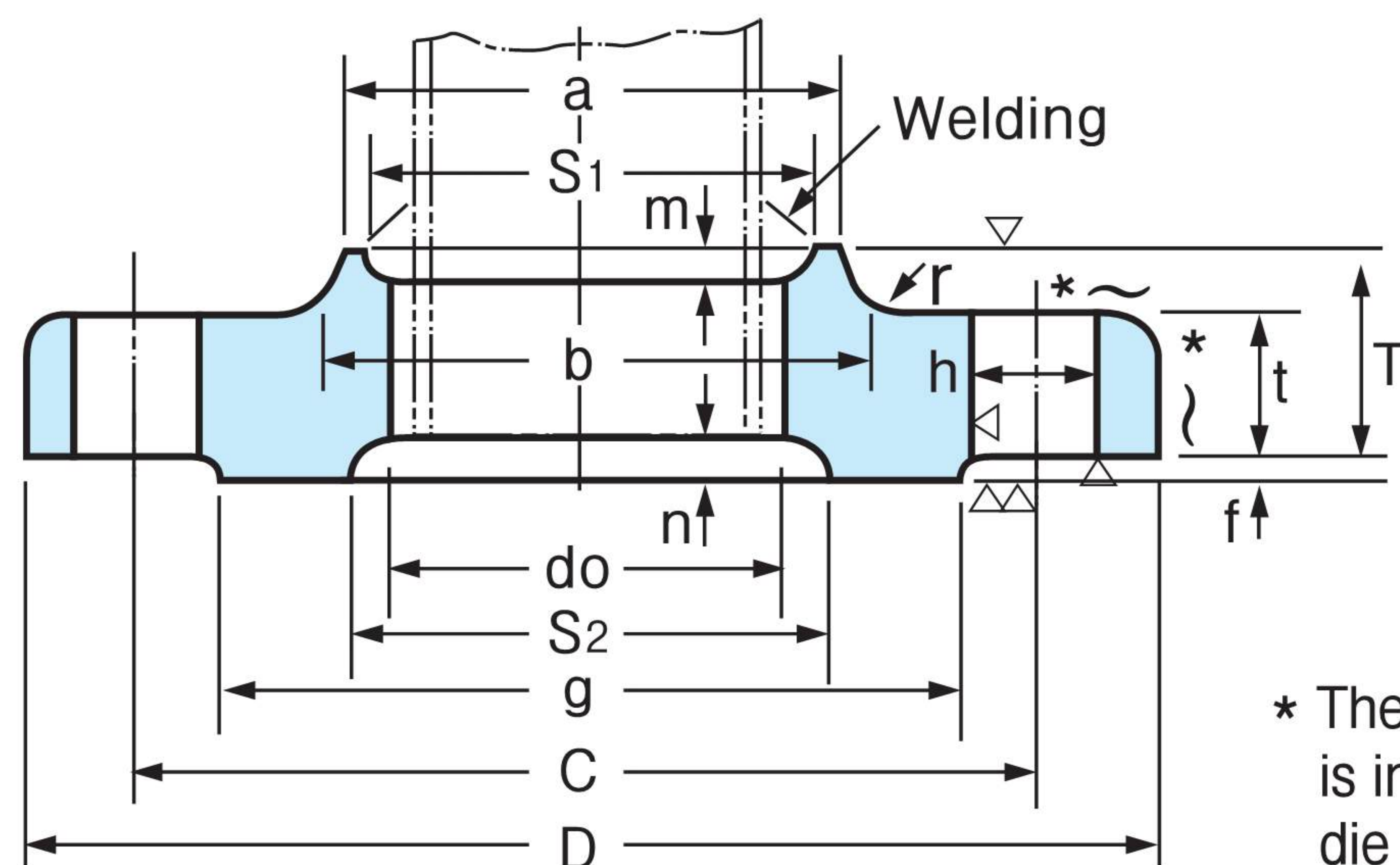
Unit : mm

Nominal Dia. of Flange	Outside Dia. of Steel Pipe	Inside Dia. of Flange ϕ_{do}	Outside Dia. of Flange D	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Reference					Approx. Weight (Kg)
				t	T	Dia. of Hub		Rad-ius r	Raised Face f	Dia. of Raised Face g	Inside Dia. of Flange d	Dia. of Bolt Circle C	Num-ber of Bolt Holes	Hole Dia. h		S ₁	m	S ₂	n	l	
						a	b														
10	17.3	17.8	90	14	20	30	32	4	1	46	—	65	4	15	M12	27	4	27	4	—	0.59
15	21.7	22.2	95	14	20	34	36	4	1	51	—	70	4	15	M12	31	4	31	4	—	0.65
20	27.2	27.7	100	16	22	40	42	4	1	56	—	75	4	15	M12	37	4	37	4	—	0.81
25	34.0	34.5	125	16	24	48	50	4	1	67	—	90	4	19	M16	44	4	44	4.5	—	1.29
32	42.7	43.2	135	18	26	56	60	5	2	76	—	100	4	19	M16	52	4	53	5	—	1.60
40	48.6	49.1	140	18	26	62	66	5	2	81	—	105	4	19	M16	58	4	59	5.5	—	1.69
50	60.5	61.1	155	18	26	76	80	5	2	96	—	120	8	19	M16	70	4	72	5.5	—	1.89
65	76.3	77.1	175	20	30	100	104	5	2	116	65.9	140	8	19	M16	94	6	—	—	6	2.60
80	89.1	90.0	200	22	34	113	117	6	2	132	78.1	160	8	23	M20	107	6	—	—	6	3.93
(90)	101.6	102.6	210	24	36	126	130	6	2	145	90.2	170	8	23	M20	120	6	—	—	6	4.56
100	114.3	115.4	225	24	36	138	142	6	2	160	102.3	185	8	23	M20	132	6	—	—	6	5.13
125	139.8	141.2	270	26	40	166	172	6	2	195	126.6	225	8	25	M22	160	7	—	—	6	8.30
150	165.2	166.6	305	28	42	196	202	6	2	230	151.0	260	12	25	M22	186	8	—	—	6	10.6
200	216.3	218.0	350	30	46	244	252	6	2	275	199.9	305	12	25	M22	237	9	—	—	6	13.3
250	267.4	269.5	430	34	52	304	312	6	2	345	248.8	380	12	27	M24	290	10	—	—	6	23.4
300	318.5	321.0	480	36	56	354	364	8	3	395	297.9	430	16	27	M24	345	11	—	—	6	27.7
350	355.6	358.1	540	40	62	398	408	8	3	440	333.4	480	16	33	M30×3	384	12	—	—	6	39.2
400	406.4	409.0	605	46	70	446	456	10	3	495	381.0	540	16	33	M30×3	437	13	—	—	7	54.2
450	457.2	460.0	675	48	78	504	514	10	3	560	431.8	605	20	33	M30×3	490	15	—	—	7	71.7
500	508.0	511.0	730	50	84	558	568	10	3	615	482.6	660	20	33	M30×3	544	16	—	—	7	86.2
(550)	558.8	562.0	795	52	90	612	622	10	3	670	533.4	720	20	39	M36×3	595	16	—	—	7	105
600	609.6	613.0	845	54	96	666	676	10	3	720	584.2	770	24	39	M36×3	646	18	—	—	7	119
* 650	660.4	664	945	60						790		850	24	48	M45×3						
* 700	711.2	715	995	64						840		900	24	48	M45×3						
* 750	762.0	766	1080	68						900		970	24	56	M52×3						
* 800	812.8	817	1140	72						960		1030	24	56	M52×3						
* 850	863.6	868	1200	74						1020		1090	24	56	M52×3						
* 900	941.4	919	1250	76						1070		1140	28	56	M52×3						

1. Flanges of parenthesized nominal diameter had better not be used.
2. "d" is an example of pipe thickness for schedule 40 for nominal diameter 400 and under, and for schedule 12.7mm for 450 through 600 of KS D3562 and KS D3507 (JIS G3454, JIS G3456).
3. The dimension of the notch (m, N, S₁, S₂) for welding can decided between concerned parties.
4. Nominal diameter over 600 is manufacturer's standard.

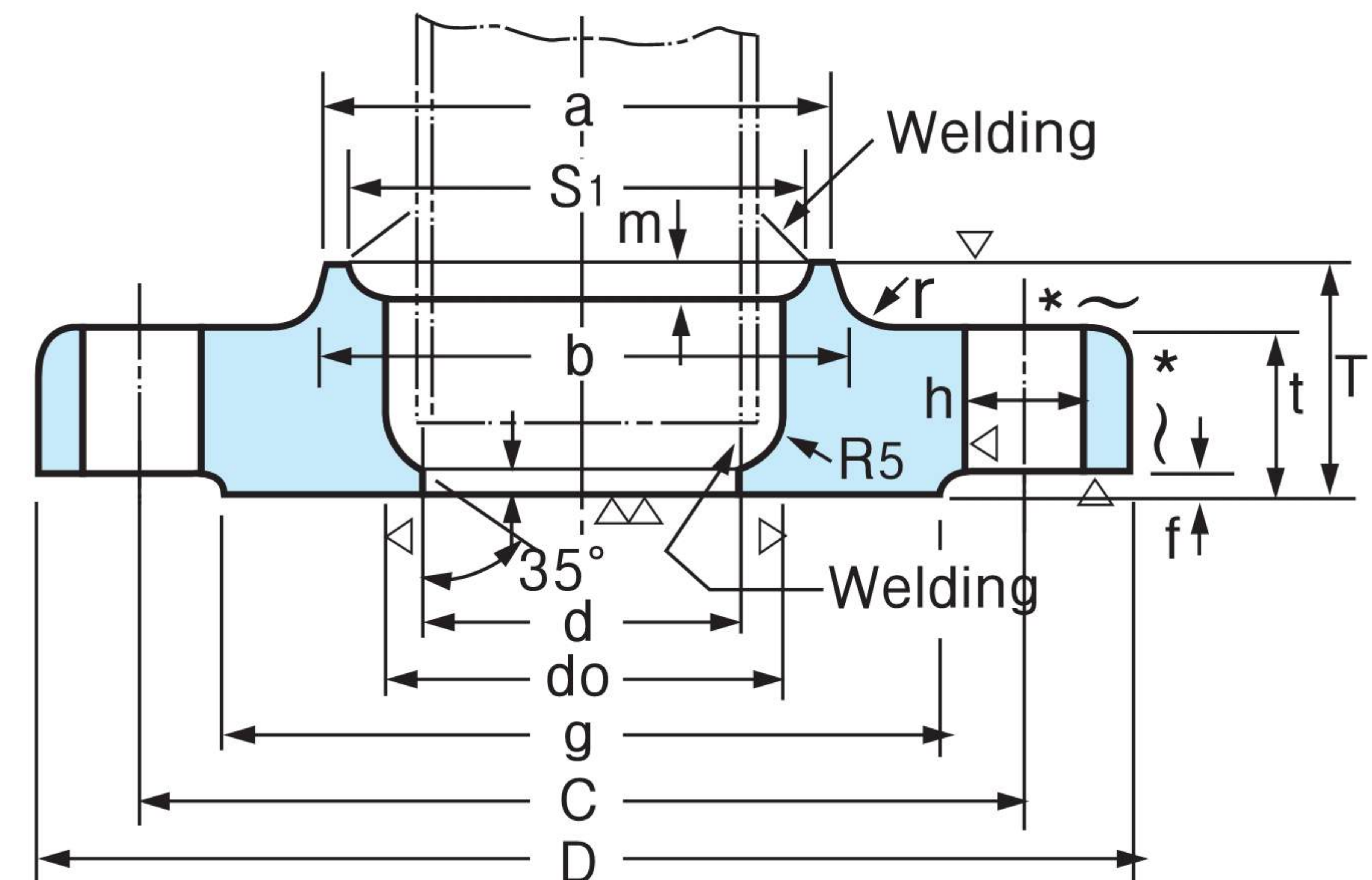
30K K S B1503 JIS B2220 Slip-On

NOMINAL SIZE 10–50mm (TYPE B)



* The surface finish(~) is in the case of die forging.

NOMINAL SIZE 65–400mm (TYPE C)

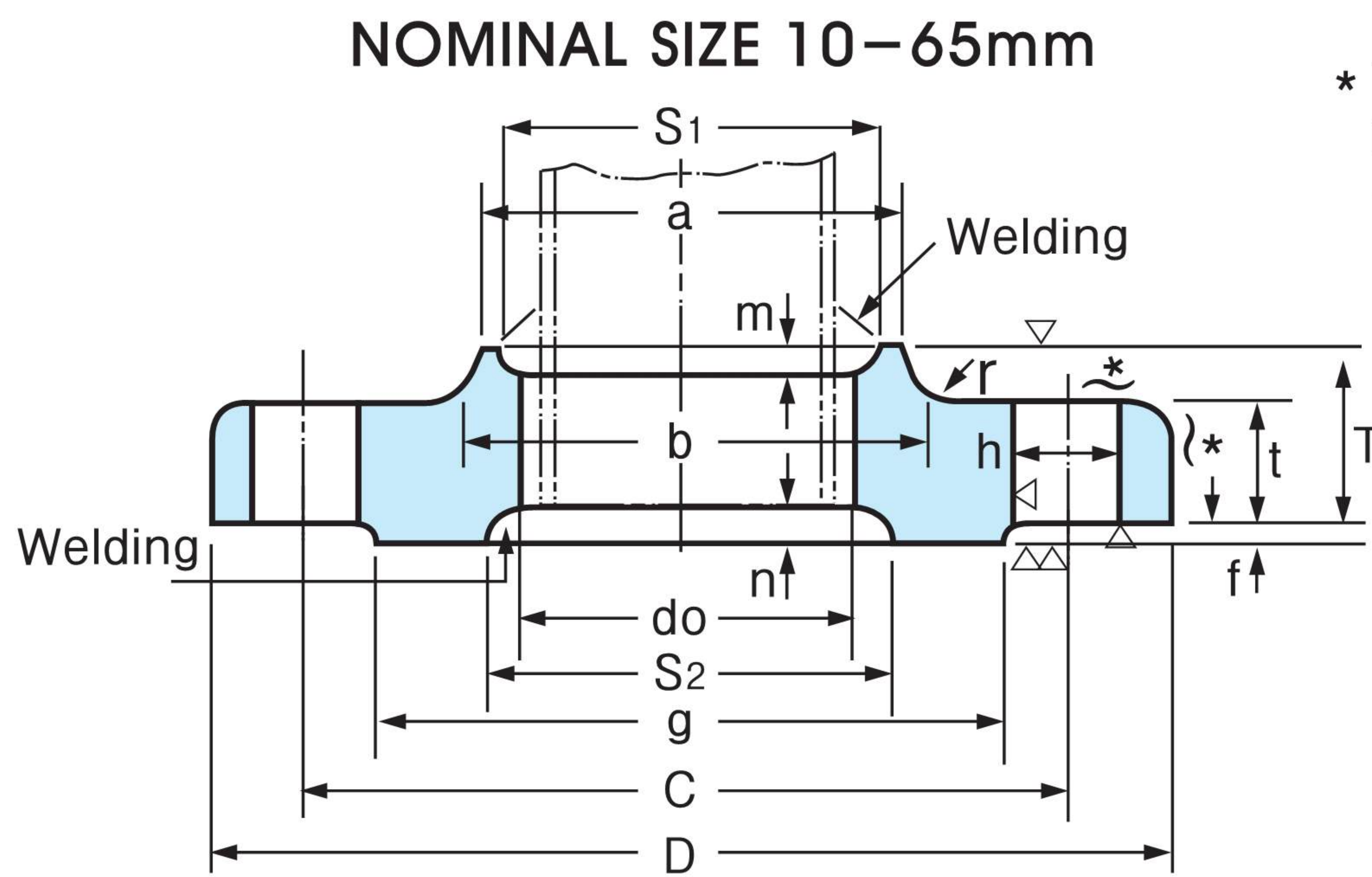


Unit : mm

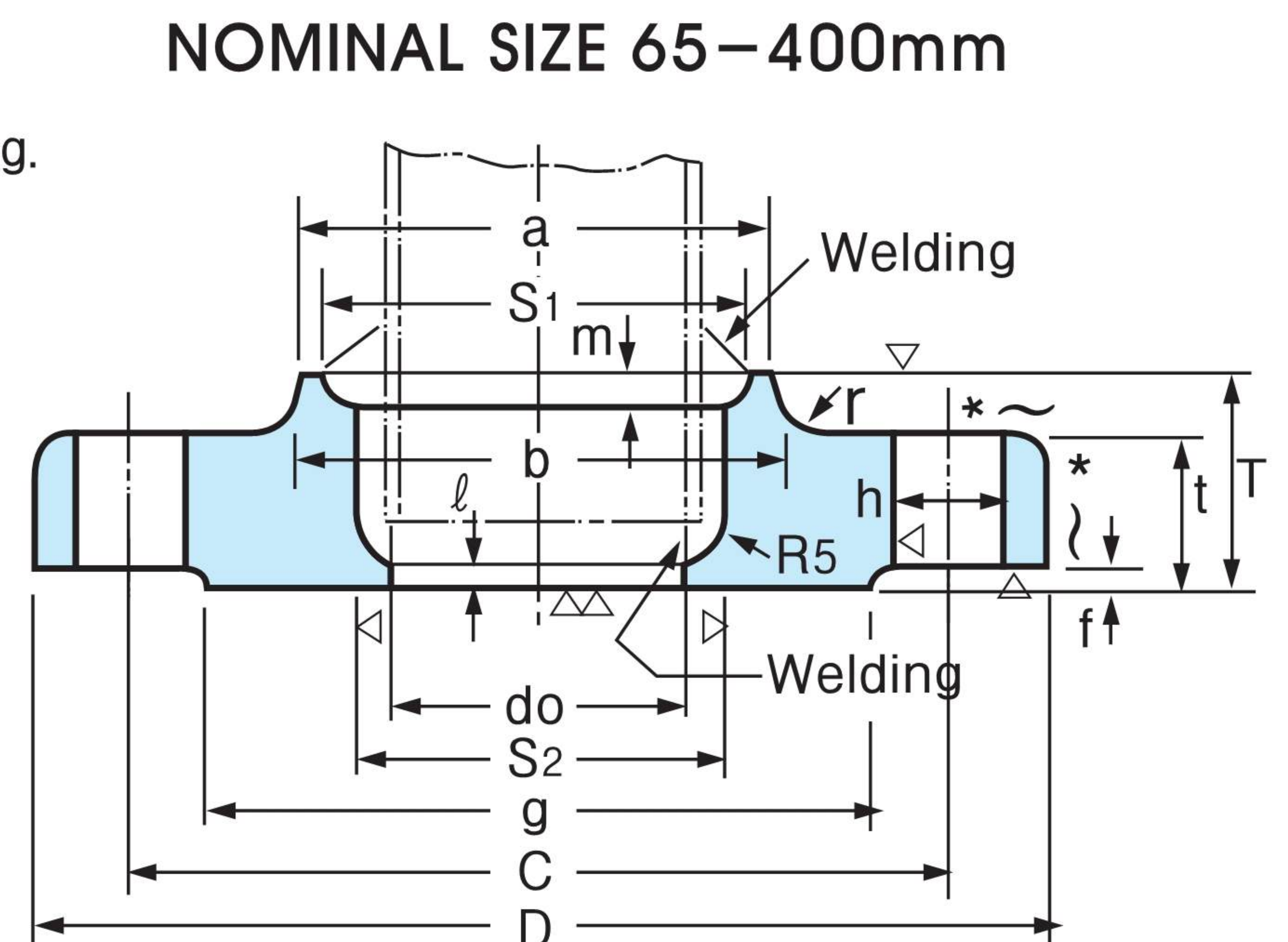
Nominal Dia. of Flange	Outside Dia. of Steel Pipe	Inside Dia. of Flange do	Outside Dia. of Flange D	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Reference					Approx. Weight (Kg)
				t	T	Dia. of Hub		Rad-ius r	f	g	d	Bolt Circle Dia. C	Num-ber of Bolt Holes	Hole Dia. h		S1	m	S2	n	l	
						a	b														
10	17.3	17.8	110	16	24	30	34	4	1	52	—	75	4	19	M16	—	—	—	—	—	0.99
15	21.7	22.2	115	18	26	36	40	5	1	55	—	80	4	19	M16	31	4	40	5	—	1.23
20	27.2	27.7	120	18	28	42	46	5	1	60	—	85	4	19	M16	37	5	44	5	—	1.34
25	34.0	34.5	130	20	30	50	54	5	1	70	—	95	4	19	M16	55	6	52	5	—	1.76
32	42.7	43.2	140	22	32	60	64	6	2	80	—	105	4	19	M16	52	6	60	5	—	2.15
40	48.6	49.1	160	22	34	66	70	6	2	90	—	120	4	23	M20	58	6	66	5	—	2.82
50	60.5	61.1	165	22	36	82	86	6	2	105	—	130	8	19	M16	70	6.5	78	5	—	2.89
65	76.3	77.1	200	26	40	102	106	8	2	130	65.9	160	8	23	M20	96	9.5	94	5	6	4.70
80	89.1	90.0	210	28	44	115	121	8	2	140	78.1	170	8	23	M20	109	9.5	—	—	6	5.36
(90)	101.6	102.6	230	30	46	128	134	8	2	150	90.2	185	8	25	M22	122	9.5	—	—	6	6.85
100	114.3	115.4	240	32	48	141	147	8	2	160	102.3	195	8	25	M22	135	9.5	—	—	6	7.89
125	139.8	141.2	275	36	54	166	172	8	2	195	126.6	230	8	25	M22	160	9.5	—	—	6	11.4
150	165.2	166.6	325	38	58	196	204	8	2	235	151.0	275	12	27	M24	186	9.5	—	—	6	16.7
200	216.3	218.0	370	42	64	248	256	8	2	280	199.9	320	12	27	M24	237	9.5	—	—	6	20.6
250	267.4	269.5	450	48	72	306	314	10	2	345	248.8	390	12	22	M30	290	10	—	—	6	36.1
300	318.5	321.0	515	52	78	360	370	10	3	405	297.9	450	16	33	M30	345	12	—	—	6	49.9
350	355.6	358.1	560	54	84	402	412	12	3	450	333.4	495	16	33	M30	383	13	—	—	6	61.2
400	406.4	409.0	630	60	92	456	468	15	3	510	381.0	560	16	39	M36	435	14	—	—	7	85.2

- Flanges of parenthesized nominal diameter had better not be used.
- "d" is an example of pipe thickness for schedule 40 of KS D3562 and KS D3507 (JIS G3454, JIS G3456). if required, purchaser can specify for other pipe wall thickness.
- This diameters of bolt holes(h) shall be in accordance with Class 3 of KS B1007 (Grade 3 of JIS B1001) where the nominal designation of screw thread of bolt is not more than M16, and in accordance with Class 2 of KS B1007 (Grade 2 of JIS B1001) where the nominal designation of screw thread of bolt is not less than M30×3.
- The dimension of the notch (m, n, S₁, S₂) for welding can decide between concerned parties agreement between parties concerned.

40 Kg/Cm² JIS B2216 40Kg/cm² SLIP-ON WELDING PIPE FLANGES



* The surface finish is in the case of forging. (△:In other cases)



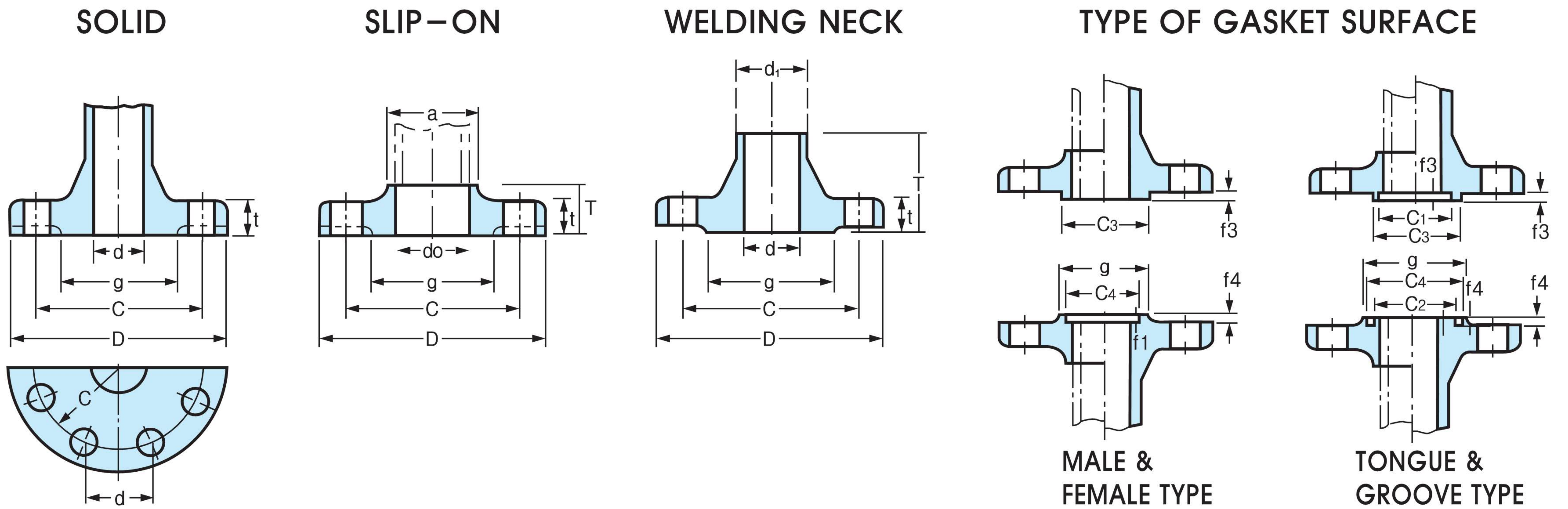
Unit : mm

Nominal Diameter of Flange	Outside Dia. of Steel Pipe	Inside Dia. of Flange do	Outside Dia. of Flange D	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Reference					Approx. Weight (Kg)
				t	T	Dia. of Hub		Rad-ius r	f	g	d	Bolt Circle Dia. C	Num-ber of Bolt Holes	Hole Dia. h		S1	m	S2	n	l	
						a	b														
10	17.3	17.8	110	18	26	34	38	5	1	52	-	75	4	19	M16	28.0	6	28.0	5		1.11
15	21.7	22.2	115	20	30	39	43	5	1	55	-	80	4	19	M16	32.5	6	32.5	5		1.39
20	27.2	27.7	120	20	30	45	49	5	1	60	-	85	4	19	M16	38.0	6	38.0	5		1.51
25	34.0	34.5	130	22	32	55	59	5	1	70	-	95	4	19	M16	47.8	6	47.8	5		1.97
32	42.7	43.2	140	24	35	64	68	6	2	80	-	105	4	19	M16	56.5	6	56.5	5		2.50
40	48.6	49.1	160	24	35	70	74	6	2	90	-	120	4	23	M20	62.5	6	62.5	5		3.26
50	60.5	61.1	165	26	38	86	90	6	2	105	-	130	8	19	M16	74.5	6	74.5	5.5		3.47
65	76.3	77.1	200	30	44	106	110	8	2	130	62.3	160	8	23	M20	91.5	7	91.5	7		5.97
80	89.1	90.3	210	32	46	118	124	8	2	140	73.9	170	8	23	M20	105.5	7.5	105.5	7		6.76
100	114.3	115.5	250	36	52	145	151	8	2	165	97.1	205	8	25	M22	133.0	8.5	133.0	7		10.48
125	139.8	141.4	300	40	58	182	188	8	2	200	120.8	250	8	27	M24	160.5	9.5	160.5	7		16.97
150	165.2	167.0	355	44	64	200	208	8	2	240	143.2	295	12	33	M30	188.0	11	188.0	7		22.6
200	216.3	218.2	405	50	72	255	263	8	2	290	190.9	345	12	33	M30	243.0	13	243.0	7		34.9
250	267.4	269.5	475	56	80	310	318	10	2	355	237.2	410	12	33	M30	298.0	15	298.0	7		41.1

REMARKS :

1. As far as possible, nominal diameter in parenthesis should be avoid from use.
2. The dimensional tolerance shall confirm to JIS B2203.
3. The flange gasket surface is based on large raised facing specified in JIS B2202. But, if necessary, facings other than the large raised facing specified in JIS B2201 can be designated by customers.
4. Size d is an example of pipe thickness for schedule 40 of JIS G3454 and JIS G3456. When other size is necessary, customer can order it at will.
5. Refer to JIS B2216.

TOLERANCE FOR PIPE FLANGES



Unit : mm

Flange Section		Surface Condition	Basic Size	Dimensional Tolerance
Outside Dia. D	As Forged (1)		300 & below	+Not Specified
			over 300 thru 600	-2.0
			over 600 thru 1000	+Not Specified
			over 1000 thru 1500	-3.0
	Finish		300 & below	±1
			over 300 thru 600	±1.5
Inside Dia.	Solid Flange d(2)	As Forged (1)	16 & below	±1
			over 16 thru 63	±1.5
			over 63 thru 125	±2
			over 125 thru 150	±2.5
			over 250 thru 500	±3
			over 500 thru 1000	±4
	Slip-on Flange do	Finish	100 & below	+0.5 0
			over 100 thru 400	+1 0
			over 400 thru 600	+1.5 0
			over 600 thru 800	+2 0
			over 800 thru 1000	+2.5 0
			over 1000	+3 0
Welding Neck Flange d	Finish	100 & below	0 -0.5	
		over 100 thru 400	0 -1	
		over 400 thru 600	0 -1.5	
		over 600 thru 800	0 -2	
		over 800 thru 1000	0 -2.5	
		over 1000	0 -3	
Bolt Hole	Bolt Circle Dia. C		250 & below	±0.5
			over 250 thru 550	±0.6
			over 550 thru 950	±0.8
			over 950 thru 1350	±1
			over 1350	±1.5

Flange Section		Surface Condition	Basic Size	Dimensional Tolerance	
Bolt Hole	Pitch of Hole p	Drilling Hole	—	±0.5	
Dia of Hub	Slip-on Flange (a) Welding Neck Flange (d1)	As Forged	220 & below	+2 0	
			over 220 thru 450	+3 0	
			over 450 thru 650	+4 0	
			over 650 thru 850	+6 0	
			over 850 thru 1000	+7 0	
			over 1000	+8 0	
	Gasket Seat	C1, C2 C3, C4	Finish	220 & below	+1 0
				over 220 thru 450	+1.5 0
				over 450 thru 650	+2 0
		f4 f3		over 650 thru 850	+2.5 0
				over 850 thru 1000	+3 0
				over 1000	+3.5 0
Thickness t	g	Finish	500 & below	±0.3	
			over 500 thru 1000	±0.35	
			over 1000 thru 1500	±0.4	
	f4 f3		8 & below	±0.2	
			over 8	±0.25	
			200 & below	±0.8	
Hub Height T	Flange with Pipe Inserted	Finish	over 200 thru 650	±0.9	
			over 650 thru 1000	±1	
			over 1000	±1.2	
	Flange with Butt-welded Pipe		20 & below	+1.5 0	
			over 20 thru 50	+2 0	
			over 50 thru 100	+3 0	
		Both-side Finish	20 & below	+1 0	
			over 20 thru 50	+1.5 0	
			over 50 thru 100	+2 0	
		Finish	50 & below	±1	
			over 50 thru 100	±1.5	
			over 100 thru 200	±2	
		Finish	over 200 & below	+2 0	
			over 200 thru 300	+3 0	

Notes:

- (1) This dimensional tolerance applies to the machined surface, as required.
- (2) This dimension d has been specified only for the flange, of which the bore part is cylindrical in shape.

Remarks

- (1) The dimensions d of bore part of the solid flanges with surface, as forged of valves, pumps, etc. are allowed up to plus 100% of the above dimensional tolerance. Provided that the required thickness shall be free from its influence.
- (2) The thickness of flange of valve and the like, of which the dimension between flange faces is limited to a fixed value, are allowed up to plus 100% of the above dimensional tolerance in the column of thickness.
- (3) In the case of spot facing of the single surface finishing, the thickness of spot facing is allowed up to 70% of the dimensional tolerance in the above column of thickness in negative side.
- (4) The chain double-dashed lines in the figures of solid flange and socket welding type flange illustrate the cases of large raised face flange.