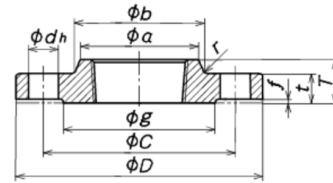
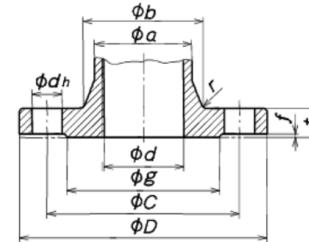




JIS B2239 CAST IRON & DUCTILE IRON FLANGES



TR nominal diameter 15A to 150A



IT nominal diameter 10A to 600A

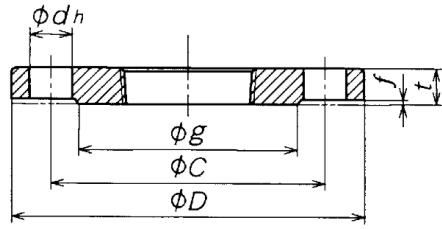
5K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange																		Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size
		Dia. of Bolt Circle C	Dia. of Raised Face g	Ductile Cast Iron t		Grey Cast Iron t		T TR		Dia. of Hub						Radius r		Inner Dia. d	Raised Face Height f			
				TR	IT	IT	TR	Cast Iron	Ductile Iron	a TR	a IT		b TR	b IT		TR	IT					
											Cast Iron	Ductile Iron		Cast Iron	Ductile Iron							
10	75	55	39	-	9	12	-	-	-	-	18	16	-	22	20	-	4	10	1	12	4	M10
15	80	60	44	9	9	12	12	13	13	29	23	21	30	27	25	4	4	15	1	12	4	M10
20	85	65	49	10	10	14	14	15	15	35	28	26	37	32	30	5	5	20	1	12	4	M10
25	95	75	59	10	10	14	14	17	17	43	34	32	45	38	37	5	5	25	1	12	4	M10
32	115	90	70	12	12	16	16	19	19	52	41	40	54	45	45	5	5	32	2	15	4	M12
40	120	95	75	12	12	16	16	20	20	58	50	48	60	54	54	5	5	40	2	15	4	M12
50	130	105	85	14	14	16	16	24	24	70	61	59	72	65	66	5	5	50	2	15	4	M12
65	155	130	110	14	14	18	18	27	27	89	77	76	91	81	82	5	5	65	2	15	4	M12
80	180	145	121	14	14	18	18	30	30	102	93	92	104	99	98	6	6	80	2	19	4	M16
100	200	165	141	16	16	20	20	36	36	128	117	113	130	121	122	6	6	100	2	19	8	M16
125	235	200	176	16	16	20	20	40	40	156	143	140	158	148	148	6	6	125	2	19	8	M16
150	265	230	206	18	18	22	22	40	40	184	170	166	186	175	174	6	6	150	2	19	8	M16
200	320	280	252	-	20	24	-	-	-	-	224	218	-	230	228	-	-	200	2	23	8	M20
250	385	345	317	-	22	26	-	-	-	-	278	272	-	284	282	-	-	250	2	23	12	M20
300	430	390	360	-	22	28	-	-	-	-	332	326	-	338	336	-	-	200	2	23	12	M20

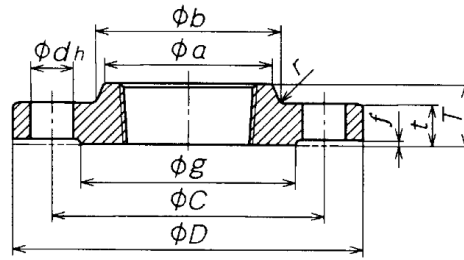
Notes: (1) TR - Threaded Type Flanges
 (2) IT - Integral Flanges
 Pressure Rating K = Kg/cm²



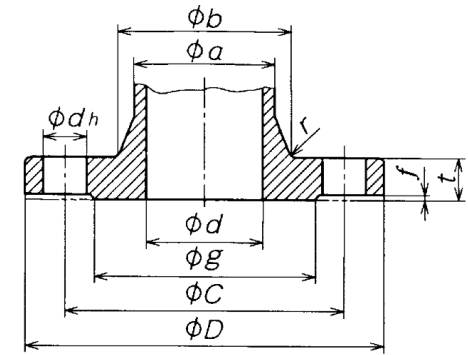
JIS B2239 CAST IRON & DUCTILE IRON FLANGES



TR G2 nominal diameter 15A to 40A



TR G2 nominal diameter 50A to 150A
TR D1, M1 nominal diameter 15A to 150A



IT nominal diameter 10A to 1500A

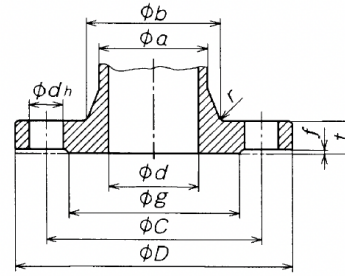
10K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange																				Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	Dia. of Raised Face g	Ductile Cast Iron t		Grey Cast Iron t		T TR		Dia. of Hub								Radius r			Inner Dia. d				Raised Face Height f
				TR	IT	IT	TR	Cast Iron	Ductile Iron	a TR		a IT		b TR		b IT		TR Cast Iron	TR Ductile Iron	IT					
										Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron								
10	90	65	46	-	12	14	-	-	-	-	19	16	-	-	25	23	-	-	4	10	1	15	4	M12	
15	95	70	51	12	12	16	16	-	13	-	29	24	-	30	30	28	-	4	4	15	1	15	4	M12	
20	100	75	56	14	14	18	18	-	15	-	35	29	-	37	35	33	-	5	5	20	1	15	4	M12	
25	125	90	67	14	14	18	18	-	17	-	43	35	-	45	41	40	-	5	5	25	1	19	4	M16	
32	135	100	76	16	16	20	20	-	19	-	52	43	-	54	48	48	-	5	5	32	2	19	4	M16	
40	140	105	81	16	16	20	20	-	20	-	58	52	-	60	58	56	-	5	5	40	2	19	4	M16	
50	155	120	96	16	16	20	20	24	24	70	70	64	59	72	72	70	68	5	5	5	50	2	19	4	M16
65	175	140	116	18	18	22	22	27	27	89	89	80	76	91	91	86	84	5	5	5	65	2	19	4	M16
80	185	150	126	18	18	22	22	30	30	102	102	96	92	104	104	106	102	6	6	6	80	2	19	8	M16
100	210	175	151	18	18	24	24	36	36	128	128	118	113	130	130	126	124	6	6	6	100	2	19	8	M16
125	250	210	182	20	20	24	24	40	40	156	156	146	140	158	158	157	152	6	6	6	125	2	23	8	M20
150	280	240	212	22	22	26	26	40	40	184	184	174	166	186	186	184	178	6	6	6	150	2	23	8	M20
200	330	290	262	-	22	26	-	-	-	-	-	228	218	-	-	240	234	-	-	200	2	23	12	M20	
250	400	355	324	-	24	30	-	-	-	-	-	284	272	-	-	294	288	-	-	250	2	25	12	M22	
300	445	400	368	-	24	32	-	-	-	-	-	338	326	-	-	346	340	-	-	300	3	25	16	M22	

Notes: (1) G2 - Cast Iron
(2) D - Ductile Iron



JIS B2239 CAST IRON & DUCTILE IRON FLANGES



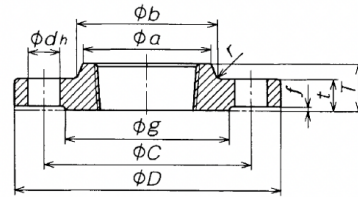
IT nominal diameter 10A to 400A

10K (thin type) FLANGE DIMENSIONS (mm)

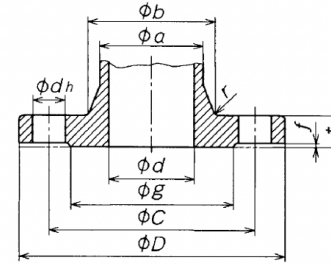
Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange										Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	Dia. of Raised Face g	Ductile Iron Thickness t	Grey Cast Iron Thickness t	Dia. of Hub				Radius r	Inner Dia. d IT				Raised Face Height f
						a		b							
						Cast Iron	Ductile Iron	Cast Iron	Ductile Iron						
10	90	65	46	9	12	18	16	23	20	4	10	1	12	4	M10
15	95	70	51	9	12	23	21	27	25	4	15	1	12	4	M10
20	100	75	56	10	14	28	26	32	31	5	20	1	12	4	M10
25	125	90	67	12	16	34	32	38	37	5	25	1	15	4	M12
32	135	100	76	12	18	41	40	45	45	5	32	2	15	4	M12
40	140	105	81	12	18	50	48	54	54	5	40	2	15	4	M12
50	155	120	96	14	18	61	59	65	66	5	50	2	15	4	M12
65	175	140	116	14	18	77	76	81	82	6	65	2	15	4	M12
80	185	150	126	14	18	93	92	99	98	6	80	2	15	8	M12
100	210	175	151	16	20	117	113	121	122	6	100	2	15	8	M12
125	250	210	182	18	22	143	140	150	148	6	125	2	19	8	M16
150	280	240	212	18	22	170	166	178	174	6	150	2	19	8	M16
200	330	290	262	20	24	224	218	232	228	8	200	2	19	12	M16
250	400	355	324	22	26	278	272	286	282	8	250	2	23	12	M20
300	445	400	368	22	28	332	326	340	336	8	300	3	23	16	M20



JIS B2239 CAST IRON & DUCTILE IRON FLANGES



TR nominal diameter 25A to 150A



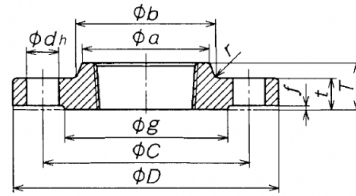
IT nominal diameter 10A to 600A

16K FLANGE DIMENSIONS (mm)

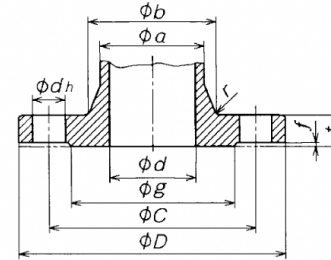
Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange																				Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	Dia. of Raised Face g	Ductile Cast Iron t		Grey Cast Iron t		T TR		Dia. of Hub								Radius r			Inner Dia. d				Raised Face Height f
				IT	TR	IT	TR	Cast Iron	Ductile Iron	a TR		a IT		b TR		b IT		TR Cast Iron	TR Ductile Iron	IT					
										Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron								
10	90	65	46	-	12	14	-	-	-	-	19	16	-	-	25	23	-	-	4	10	1	15	4	M12	
15	95	70	51	-	12	16	-	-	-	-	24	21	-	-	30	28	-	-	4	15	1	15	4	M12	
20	100	75	56	-	14	18	-	-	-	-	29	26	-	-	35	33	-	-	5	20	1	15	4	M12	
25	125	90	67	-	14	18	-	-	19	-	32	35	32	-	38	41	40	-	5	5	25	1	19	4	M16
32	135	100	76	-	16	20	-	-	21	-	40	43	40	-	46	48	48	-	5	5	32	2	19	4	M16
40	140	105	81	-	16	20	-	-	23	-	49	52	48	-	55	58	56	-	5	5	40	2	19	4	M16
50	155	120	96	-	16	20	-	-	26	-	60	64	59	-	66	73	68	-	6	6	50	2	19	8	M16
65	175	140	116	-	18	22	-	-	29	-	77	80	76	-	84	89	84	-	6	6	65	2	19	8	M16
80	200	160	132	-	20	24	-	-	32	-	94	96	92	-	102	108	102	-	6	6	80	2	23	8	M20
100	225	185	160	-	22	26	-	-	38	-	116	118	113	-	124	130	124	-	6	6	100	2	23	8	M20
125	270	225	195	-	22	26	-	-	42	-	142	146	140	-	156	158	152	-	8	8	125	2	25	8	M22
150	305	260	230	-	24	28	-	-	42	-	168	174	168	-	186	188	182	-	8	8	150	2	25	12	M22
200	350	305	275	-	26	30	-	-	-	-	228	220	-	-	242	236	-	-	8	200	2	25	12	M22	
250	430	380	345	-	28	34	-	-	-	-	284	274	-	-	302	294	-	-	10	250	2	27	12	M24	
300	480	430	395	-	30	36	-	-	-	-	338	326	-	-	356	348	-	-	10	300	3	27	16	M24	



JIS B2239 CAST IRON & DUCTILE IRON FLANGES



TR nominal diameter 40A to 125A



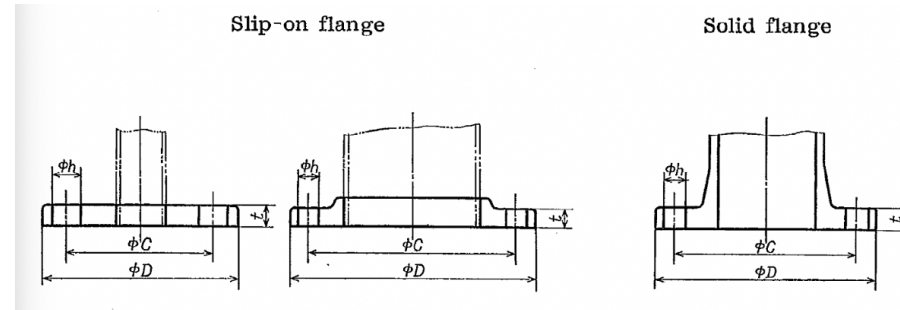
IT nominal diameter 10A to 600A

20K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange																				Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	Dia. of Raised Face g	Ductile Cast Iron t		Grey Cast Iron t		T TR		Dia. of Hub								Radius r			Inner Dia. d				Raised Face Height f
				TR	IT	IT	TR	a		b		TR		IT		TR Cast Iron	TR Ductile Iron	IT							
								Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron	Cast Iron	Ductile Iron				Cast Iron	Ductile Iron					
10	90	65	46	-	14	16	-	-	-	-	19	17	-	-	25	23	-	-	4	10	1	15	4	M12	
15	95	70	51	-	14	16	-	-	-	-	24	22	-	-	30	28	-	-	4	15	1	15	4	M12	
20	100	75	56	-	16	18	-	-	-	-	30	27	-	-	35	33	-	-	5	20	1	15	4	M12	
25	125	90	67	-	16	20	-	-	-	-	36	33	-	-	41	40	-	-	5	25	1	19	4	M16	
32	135	100	76	-	18	20	-	-	-	-	44	41	-	-	50	48	-	-	5	32	2	19	4	M16	
40	140	105	81	18	18	22	22	26	26	60	60	54	50	62	62	60	56	5	5	5	40	2	19	4	M16
50	155	120	96	18	18	22	22	27	27	72	72	66	61	74	74	75	70	6	6	6	50	2	19	8	M16
65	175	140	116	20	20	24	24	31	31	90	90	82	78	93	93	92	86	6	6	6	65	2	19	8	M16
80	200	160	132	22	22	26	26	34	34	105	105	100	94	108	108	111	104	6	6	6	80	2	23	8	M20
100	225	185	160	24	24	28	28	40	40	132	132	122	116	136	136	132	126	6	6	6	100	2	23	8	M20
125	270	225	195	26	26	30	30	44	44	159	159	150	144	164	164	160	155	8	8	8	125	2	25	8	M22
150	305	260	230	-	28	32	-	-	-	-	-	182	170	-	-	192	184	-	-	8	150	2	25	12	M22
200	350	305	275	-	30	34	-	-	-	-	-	240	224	-	-	250	240	-	-	8	200	2	25	12	M22
250	430	380	345	-	34	38	-	-	-	-	-	298	278	-	-	308	300	-	-	10	250	2	27	12	M24
300	480	430	395	-	36	40	-	-	-	-	-	356	334	-	-	366	356	-	-	10	300	3	27	16	M24



JIS B2240 COPPER ALLOY PIPE FLANGES



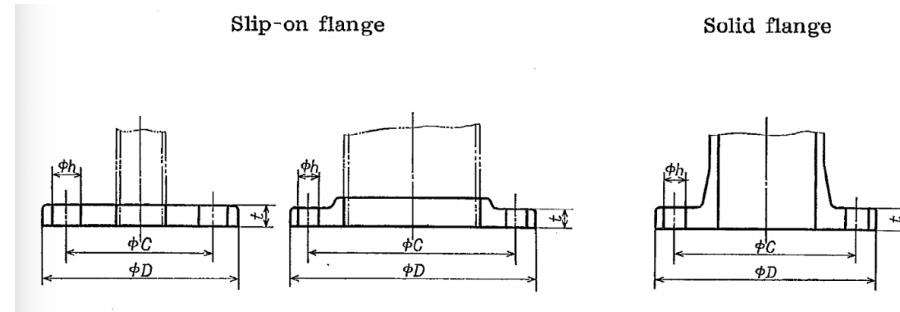
5K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	t	SOF T	Dia. of Hub				Radius SF r	Radius SOF r	Bore SF d	Bore SOF d			Hole Dia. H
					SOF a	SF a	SF b	SOF b							
10	75	55	9	-	-	18	24	-	5	-	10	13.2	12	4	M10
15	80	60	9	-	-	23	29	-	5	-	15	16.4	12	4	M10
20	85	65	10	-	-	28	36	-	5	-	20	22.7	12	4	M10
25	95	75	10	-	-	33	41	-	6	-	25	29.1	12	4	M10
32	115	90	12	-	-	42	50	-	6	-	32	35.4	15	4	M12
40	120	95	12	-	-	50	58	-	6	-	40	41.8	15	4	M12
50	130	105	14	-	-	60	70	-	6	-	50	54.5	15	4	M12
65	155	130	14	-	-	75	85	-	6	-	65	67.2	15	4	M12
80	180	145	14	-	-	92	102	-	6	-	80	79.9	19	4	M16
(90)	190	155	14	-	-	102	112	-	6	-	(90)	-	19	4	M16
100	200	165	16	-	-	112	124	-	6	-	100	105.8	19	8	M16
125	235	200	16	-	-	139	149	-	8	-	125	131.2	19	8	M16
150	265	230	18	28	168	164	176	174	8	6	150	156.6	19	8	M16
200	320	280	20	-	-	216	228	-	8	-	200	-	23	8	M20
250	385	345	22	-	-	268	282	-	8	-	250	-	23	12	M20
300	430	390	22	-	-	320	334	-	8	-	300	-	23	12	M20

NOTE: The flanges with a nominal diameter given in parentheses shall not be used as far as possible



JIS B2240 COPPER ALLOY PIPE FLANGES



10K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	t	SOF T	Dia. of Hub				Radius SF r	Radius SOF r	Bore SF d	Bore SOF d			Hole Dia. H
					SOF a	SF a	SF b	SOF b							
10	90	65	12	-	-	18	28	-	5	-	10	13.2	15	4	M12
15	95	70	12	-	-	25	33	-	5	-	15	16.4	15	4	M12
20	100	75	14	-	-	30	40	-	5	-	20	22.7	15	4	M12
25	125	90	14	-	-	35	45	-	6	-	25	29.1	19	4	M16
32	135	100	16	-	-	44	54	-	6	-	32	35.4	19	4	M16
40	140	105	16	-	-	52	62	-	6	-	40	41.8	19	4	M16
50	155	120	16	-	-	62	74	-	6	-	50	54.5	19	4	M16
65	175	140	18	-	-	77	89	-	6	-	65	67.2	19	4	M16
80	185	150	18	-	-	94	106	-	6	-	80	79.9	19	8	M16
(90)	195	160	18	-	-	104	116	-	6	-	(90)	-	19	8	M16
100	210	175	18	-	-	114	128	-	6	-	100	105.8	19	8	M16
125	250	210	20	30	146	141	155	152	8	6	125	131.2	23	8	M20
150	280	240	22	32	172	168	182	178	8	6	150	156.6	23	8	M20
200	330	290	22	-	-	222	236	-	8	-	200	-	23	12	M20
250	400	355	24	-	-	274	290	-	8	-	250	-	25	12	M22
300	445	400	24	-	-	328	342	-	8	-	300	-	25	12	M22

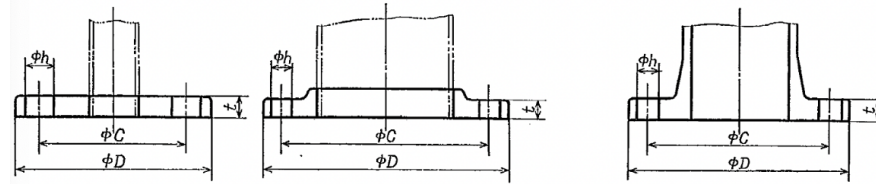
NOTE: The flanges with a nominal diameter given in parentheses shall not be used as far as possible



JIS B2240 COPPER ALLOY PIPE FLANGES

Slip-on flange

Solid flange



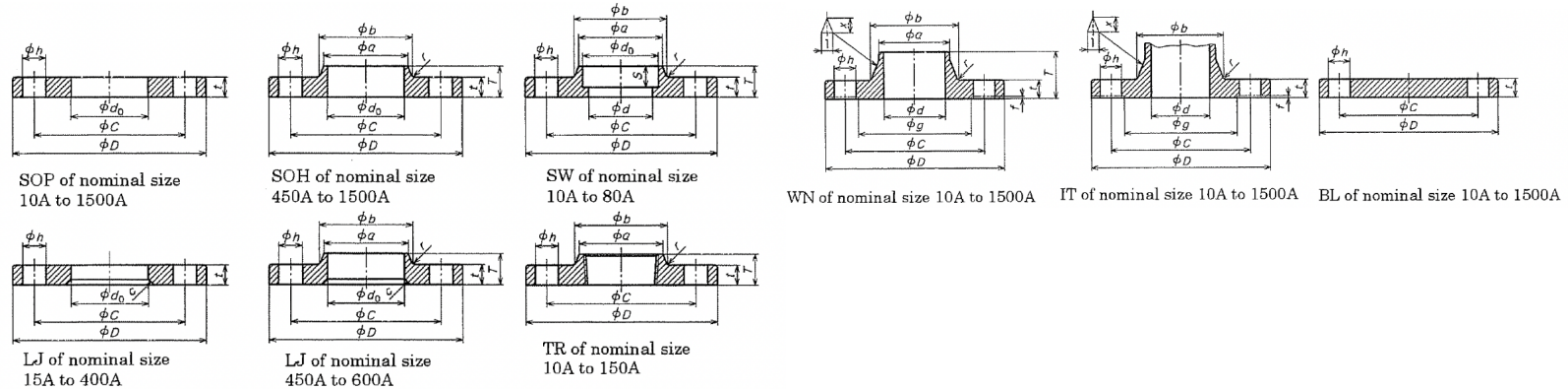
16K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	
		Dia. of Bolt Circle C	t	SOF T	Dia. of Hub				Radius SF r	Radius SOF r	Bore SF d	Bore SOF d			Hole Dia. H
					SOF a	SF a	SF b	SOF b							
10	90	65	12	20	22	18	28	26	5	4	10	13.2	15	4	M12
15	95	70	12	20	26	25	33	30	5	4	15	16.4	15	4	M12
20	100	75	14	22	33	30	40	37	5	4	20	22.7	15	4	M12
25	125	90	14	22	39	35	45	43	6	4	25	29.1	19	4	M16
32	135	100	16	24	45	44	54	49	6	4	32	35.4	19	4	M16
40	140	105	16	24	52	52	62	56	6	4	40	41.8	19	4	M16
50	155	120	16	26	67	62	74	71	6	6	50	54.5	19	8	M16
65	175	140	18	28	81	79	91	85	6	6	65	67.2	19	8	M16
80	200	160	20	30	95	96	108	101	6	6	80	79.9	23	8	M20
(90)	210	170	20	-	-	106	120	-	6	-	(90)	-	23	8	M20
100	225	185	22	32	121	118	132	127	6	6	100	105.8	23	8	M20
125	270	225	22	34	148	145	159	154	8	8	125	131.2	25	8	M22
150	305	260	24	36	176	172	188	182	8	8	150	156.6	25	12	M22
200	350	305	26	-	-	226	242	-	8	-	200	-	25	12	M22
250	430	380	28	-	-	280	298	-	10	-	250	-	27	12	M24
300	480	430	30	-	-	334	352	-	10	-	300	-	27	16	M24

NOTE: The flanges with a nominal diameter given in parentheses shall not be used as far as possible



JIS B2220 STEEL PIPE FLANGES



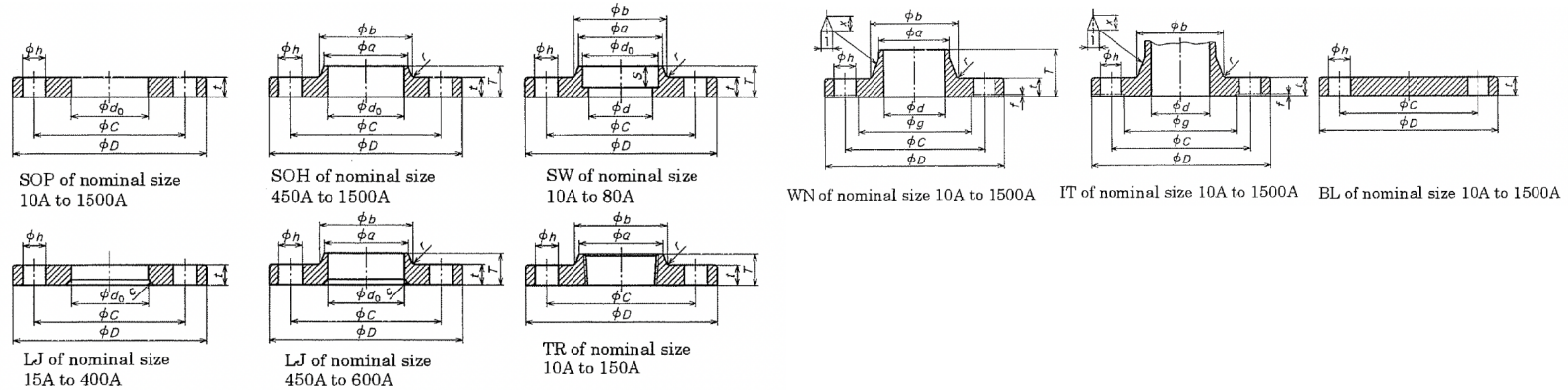
5K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	Inner Dia. of flange					
		Dia. of Bolt Circle C	Dia. of Raised Face g	Thickness of flange t	T		Dia. of Hub				Radius r				Raised Face Height f	Hole Dia. H	SOP, SOH, SW	LJ	SW, WN	IT
					All type except WN	Weld Neck (WN)	a All type except WN	a Weld Neck (WN)	b All type except WN	b Weld Neck (WN)	All type except WN	Weld Neck (WN)								
10	75	55	39	9	13	24	23	17.3	26	26	4	4	1	12	4	M10	17.8	-	12.7	10
15	80	60	44	9	13	25	27	21.7	30	31	4	4	1	12	4	M10	22.2	23.4	16.1	15
20	85	65	49	10	15	28	33	27.2	36	38	4	4	1	12	4	M10	27.7	28.9	21.6	20
25	95	75	59	10	17	30	41	34	44	46	4	4	1	12	4	M10	34.5	35.6	27.6	25
32	115	90	70	12	19	33	50	42.7	53	55	4	4	2	15	4	M12	43.2	44.3	35.7	32
40	120	95	75	12	20	34	56	48.6	60	62	4	4	2	15	4	M12	49.1	50.4	41.6	40
50	130	105	85	14	24	36	69	60.5	73	73	4	4	2	15	4	M12	61.1	62.7	52.9	50
65	155	130	110	14	27	39	86	76.3	91	91	4	4	2	15	4	M12	77.1	78.7	67.9	65
80	180	145	121	14	30	41	99	89.1	105	105	4	4	2	19	4	M16	90	91.6	80.7	80
90	190	155	131	14	-	41	-	101.6	-	117	-	4	2	19	4	M16	102.6	104.1	93.2	90
100	200	165	141	16	36	41	127	114.3	130	128	4	4	2	19	8	M16	115.4	116.9	105.3	100
125	235	200	176	16	40	43	154	139.8	161	156	4	4	2	19	8	M16	141.2	143	130.8	125
150	265	230	206	18	40	49	182	165.2	189	184	4	4	2	19	8	M16	166.6	168.4	155.2	150
175	300	260	232	18	-	49	-	190.7	-	209	-	4	2	23	8	M20	192.1	-	180.1	175
200	320	280	252	20	-	53	-	216.3	-	235	-	4	2	23	8	M20	218	219.5	204.7	200
225	345	305	277	20	-	54	-	241.8	-	261	-	4	2	23	12	M20	243.7	-	229.4	225
250	385	345	317	22	-	61	-	267.4	-	290	-	4	2	23	12	M20	269.5	271.7	254.2	250
300	430	390	360	22	-	62	-	318.5	-	342	-	4	3	23	12	M20	321	322.8	304.7	300

Note: (1) Adjustment shall be made according to the inside diameter of the steel pipes to be joined with.
 (2) JIS B2220 is interchangeable with KS B1503
 Pressure Rating = Kg/cm²
 JIS B2220 - 1984 and KS B1503 are manufactured to the same specifications



JIS B2220 STEEL PIPE FLANGES



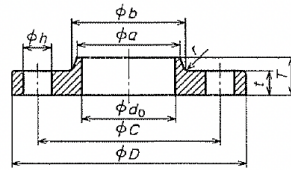
10K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	Inner Dia. of flange					
		Dia. of Bolt Circle C	Dia. of Raised Face g	Thickness of flange t	T		Dia. of Hub				Radius r				Raised Face Height f	Hole Dia. H	d ₀	d ₁	d ¹	d
					All type except WN	Weld Neck (WN)	a All type except WN	a Weld Neck (WN)	b All type except WN	b Weld Neck (WN)	All type except WN	Weld Neck (WN)					SOP, SOH, SW	LJ	SW, WN	IT
10	90	65	46	12	16	29	23	17.3	26	28	4	4	1	15	4	M12	17.8	-	12.7	10
15	95	70	51	12	16	31	27	21.7	30	33	4	4	1	15	4	M12	22.2	23.4	16.1	15
20	100	75	56	14	20	32	33	27.2	36	38	4	4	1	15	4	M12	27.7	28.9	21.6	20
25	125	90	67	14	20	36	41	34	44	47	4	4	1	19	4	M16	34.5	35.6	27.6	25
32	135	100	76	16	22	38	50	42.7	53	56	4	4	2	19	4	M16	43.2	44.3	35.7	32
40	140	105	81	16	24	38	56	48.6	60	62	4	4	2	19	4	M16	49.1	50.4	41.6	40
50	155	120	96	16	24	40	69	60.5	73	75	4	4	2	19	4	M16	61.1	62.7	52.9	50
65	175	140	116	18	27	44	86	76.3	91	92	4	4	2	19	4	M16	77.1	78.7	67.9	65
80	185	150	126	18	30	45	99	89.1	105	105	4	5	2	19	8	M16	90	91.6	80.7	80
90	195	160	136	18	-	45	-	101.6	-	117	-	5	2	19	8	M16	102.6	104.1	93.2	90
100	210	175	151	18	36	45	127	114.3	130	130	4	5	2	19	8	M16	115.4	116.9	105.3	100
125	250	210	182	20	40	47	154	139.8	161	156	4	5	2	23	8	M20	141.2	143	130.8	125
150	280	240	212	22	40	53	182	165.2	189	184	4	5	2	23	8	M20	166.6	168.4	155.2	150
175	305	265	237	22	-	55	-	190.7	-	210	-	5	2	23	12	M20	192.1	-	180.1	175
200	330	290	262	22	-	58	-	216.3	-	238	-	5	2	23	12	M20	218	219.5	204.7	200
225	350	310	282	22	-	58	-	241.8	-	261	-	5	2	23	12	M20	243.7	-	229.4	225
250	400	355	324	24	36	65	288	267.4	292	292	6	6	2	25	12	M22	269.5	271.7	254.2	250
300	445	400	368	24	38	68	340	318.5	346	345	6	6	3	25	16	M22	321	322.8	304.7	300

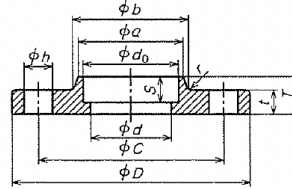
Note: (1) Adjustment shall be made according to the inside diameter of the steel pipes to be joined with.



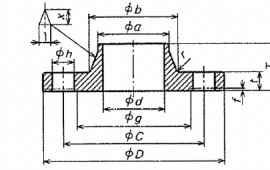
JIS B2220 STEEL PIPE FLANGES



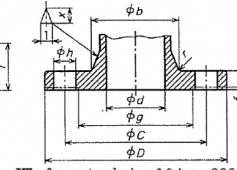
SOH of nominal size 10A to 600A



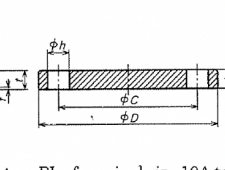
SW of nominal size 10A to 80A



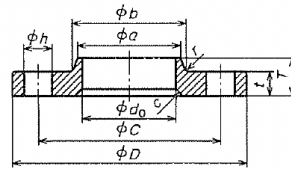
WN of nominal size 10A to 600A



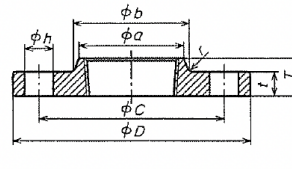
IT of nominal size 10A to 600A



BL of nominal size 10A to 600A



LJ of nominal size 15A to 600A



TR of nominal size 10A to 150A

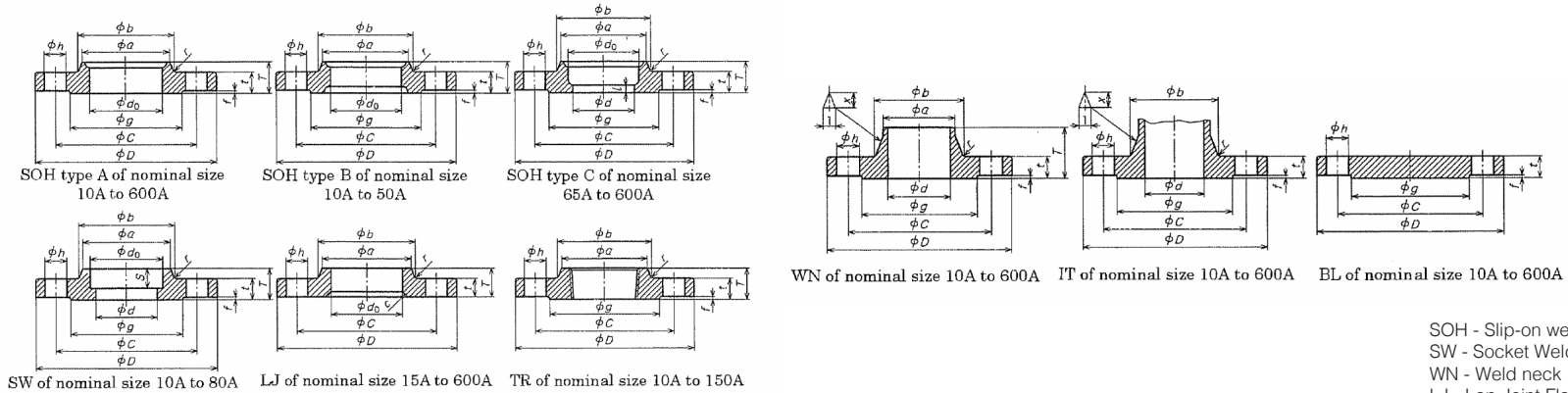
16K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	Inner Dia. of flange					
		Dia. of Bolt Circle C	Dia. of Raised Face g	Thickness of flange t	T		Dia. of Hub				Radius r				Raised Face Height f	Hole Dia. H	d ₀	d ₁	d	
					All type except WN	Weld Neck (WN)	a	a	b	b	All type except WN	Weld Neck (WN)								
																				SOP, SOH, SW
10	90	65	46	12	16	16	31	26	17.3	28	29	4	1	15	4	M12	17.8	-	12.7	10
15	95	70	51	12	16	16	32	30	21.7	32	34	4	1	15	4	M12	22.2	23.4	16.1	15
20	100	75	56	14	20	20	34	38	27.2	42	39	4	1	15	4	M12	27.7	28.9	21.6	20
25	125	90	67	14	20	20	36	46	34	50	47	4	1	19	4	M16	34.5	35.6	27.6	25
32	135	100	76	16	22	22	39	56	42.7	60	56	5	2	19	4	M16	43.2	44.3	35.7	32
40	140	105	81	16	24	24	39	62	48.6	66	62	5	2	19	4	M16	49.1	50.4	41.6	40
50	155	120	96	16	24	24	40	76	60.5	80	75	5	2	19	8	M16	61.1	62.7	52.9	50
65	175	140	116	18	26	27	46	94	76.3	98	92	5	2	19	8	M16	77.1	78.7	67.9	65
80	200	160	132	20	28	30	49	108	89.1	112	105	6	2	23	8	M20	90	91.6	80.7	80
90	210	170	145	20	30	-	50	120	101.6	124	118	6	2	23	8	M20	102.6	104.1	93.2	90
100	225	185	160	22	34	36	56	134	114.3	138	134	6	2	23	8	M20	115.4	116.9	105.3	100
125	270	225	195	22	34	40	60	164	139.8	170	162	6	2	25	8	M22	141.2	143	130.8	125
150	305	260	230	24	38	40	69	196	165.2	202	192	6	2	25	12	M22	166.6	168.4	155.2	150
200	350	305	275	26	40	-	73	244	216.3	252	244	6	2	25	12	M22	218	219.5	204.7	200
250	430	380	345	28	44	-	81	304	267.4	312	298	6	2	27	12	M24	269.5	271.7	254.2	250
300	480	430	395	30	48	-	88	354	318.5	364	352	8	3	27	16	M24	321	322.8	304.7	300
250	400	355	324	24	36	65	288	267.4	292	292	6	6	2	25	12	M22	269.5	271.7	254.2	250
300	445	400	368	24	38	68	340	318.5	346	345	6	6	3	25	16	M22	321	322.8	304.7	300

Note: (1) Adjustment shall be made according to the inside diameter of the steel pipes to be joined with.



JIS B2220 STEEL PIPE FLANGES



SOH - Slip-on welding hubbed flange
 SW - Socket Welding flange
 WN - Weld neck
 LJ - Lap Joint Flange
 TR - Threaded Flange

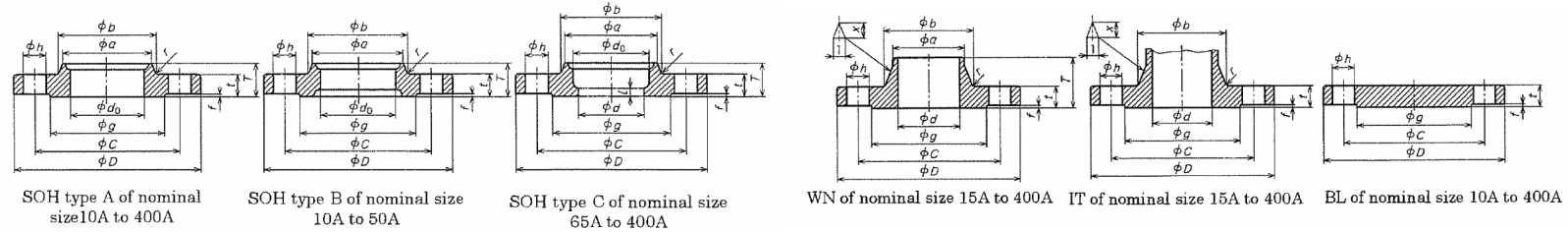
20K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange											Number of Bolt Holes	Nominal Bolt Size	Inner Dia. of flange							
		Dia. of Bolt Circle C	Dia. of Raised Face g	Thickness of flange t	T		Dia. of Hub				Radius r				Raised Face Height f	Hole Dia. H	d ₀	d ₁	d ₂	d ₃		
					All type except WN	Weld Neck (WN)	a	a	b	b	All type except WN	Weld Neck (WN)					All type except WN	Weld Neck (WN)	SOP, SOH, SW	LJ	SW, WN	IT
																			All type except WN	Weld Neck (WN)	All type except WN	Weld Neck (WN)
10	90	65	46	14	20	33	30	17.3	32	29	4	1	15	4	M12	-	17.8	-	12.7	10		
15	95	70	51	14	20	34	34	21.7	36	34	4	1	15	4	M12	-	22.2	23.4	16.1	15		
20	100	75	56	16	22	36	40	27.2	42	39	4	1	15	4	M12	-	27.7	28.9	21.6	20		
25	125	90	67	16	24	38	48	34	50	47	4	1	19	4	M16	-	34.5	35.6	27.6	25		
32	135	100	76	18	26	41	56	42.7	60	56	5	2	19	4	M16	-	43.2	44.3	35.7	32		
40	140	105	81	18	26	41	62	48.6	66	62	5	2	19	4	M16	-	49.1	50.4	41.6	40		
50	155	120	96	18	26	42	76	60.5	80	75	5	2	19	8	M16	-	61.1	62.7	52.9	50		
65	175	140	116	20	30	48	100	76.3	104	92	5	2	19	8	M16	6	77.1	78.7	67.9	65		
80	200	160	132	22	34	51	113	89.1	117	105	6	2	23	8	M20	6	90	91.6	80.7	80		
90	210	170	145	24	36	54	126	101.6	130	118	6	2	23	8	M20	6	102.6	104.1	93.2	90		
100	225	185	160	24	36	58	138	114.3	142	134	6	2	23	8	M20	6	115.4	116.9	105.3	100		
125	270	225	195	26	40	64	166	139.8	172	162	6	2	25	8	M22	6	141.2	143	130.8	125		
150	305	260	230	28	42	73	196	165.2	202	192	6	2	25	12	M22	6	166.6	168.4	155.2	150		
200	350	305	275	30	46	77	244	216.3	252	244	6	2	25	12	M22	6	218	219.5	204.7	200		
250	430	380	345	34	52	87	304	267.4	312	298	6	2	27	12	M24	6	269.5	271.7	254.2	250		
300	480	430	395	36	56	94	354	318.5	364	352	8	3	27	16	M24	6	321	322.8	304.7	300		
250	400	355	324	24	36	65	288	267.4	292	292	6	6	2	25	12	M22	269.5	271.7	254.2	250		
300	445	400	368	24	38	68	340	318.5	346	345	6	6	3	25	16	M22	321	322.8	304.7	300		

Note: (1) Adjustment shall be made according to the inside diameter of the steel pipes to be joined with.



JIS B2220 STEEL PIPE FLANGES



SOH - Slip-on welding hubbed flange
 SW - Socket Welding flange
 WN - Weld neck

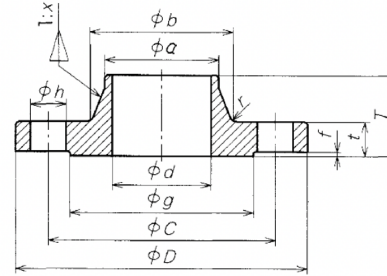
30K SLIP ON FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange																Stopper I		
		Dia. of Bolt Circle C	Dia. of Raised Face g	Thickness of flange t SOH, WN, IT, IT'	T		Dia. of Hub				Radius r		Raised Face Height f	Bore d			Hole Dia. H		Number of Bolt Holes	Nominal Bolt Size
					SCH	WN	a SOH	a WN	b SOH	b WN, IT	SOH	WN, IT		WN, SOH	SOH'	IT				
10	110	75	52	16	24	-	30	-	-	34	4	-	1	-	17.3	-	19	4	M16	-
15	115	80	55	18	26	45	36	21.7	40	40	5	6	1	16.1	21.7	15	19	4	M16	-
20	120	85	60	18	28	45	42	27.2	44	46	5	6	1	21.4	27.2	20	19	4	M16	-
25	130	95	70	20	30	48	50	34	52	54	5	6	1	27.2	34	25	19	4	M16	-
32	140	105	80	22	32	52	60	42.7	62	64	6	6	2	35.5	42.7	32	19	4	M16	-
40	160	120	90	22	34	54	66	48.6	70	70	6	6	2	41.2	48.6	40	23	4	M20	-
50	165	130	105	22	36	57	82	60.5	84	86	6	8	2	52.7	60.5	50	19	8	M16	-
65	200	160	130	26	40	69	102	76.3	105	106	8	8	2	65.9	76.3	65	23	8	M20	6
80	210	170	140	28	44	73	115	89.1	118	21	8	8	2	78.1	89.1	80	23	8	M20	6
90	230	185	150	30	46	74	128	101.6	130	134	8	8	2	90.2	101.6	90	25	8	M22	6
100	240	195	160	32	48	76	141	114.3	142	147	8	8	2	102.3	114.3	100	25	8	M22	6
125	275	230	195	36	54	86	166	139.8	172	172	8	10	2	126.6	139.8	125	25	8	M22	6
150	325	275	235	38	58	95	196	165.2	202	204	8	10	2	151	165.2	150	27	12	M24	6
200	370	320	280	42	64	102	248	216.3	254	256	8	10	2	199.9	216.3	200	27	12	M24	6
250	450	390	345	48	72	118	306	267.4	312	314	10	12	2	248.8	267.4	250	33	12	M30	6
300	515	450	405	52	78	127	360	318.5	366	370	10	15	3	297.9	318.5	300	33	16	M30	6

Note: (1) Adjustment shall be made according to the inside diameter of the steel pipes to be joined with.



JIS B2241 ALUMINIUM ALLOY BUTT WELDING TYPE FLANGES (WN)



Butt welding type flanges (WN)

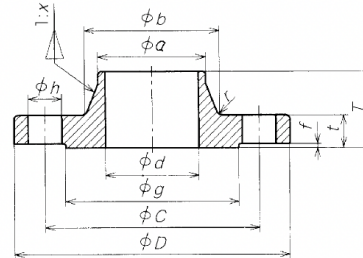
5K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Dia. of Bolt Circle C	Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	Inner Dia. d(1)	Raised Face		Thickness of flange t	Dia. of Hub		Taper of the hub min. x	Full length of flange T (2)	Radius r
							Dia. of Raised Face g	Raised Face Height f		a	b			
10	75	55	12	4	M10	14	39	1	12	17.3	28	1.25	28	3
15	80	60	12	4	M10	17.5	44	1	12	21.7	32	1.25	29	3
20	85	65	12	4	M10	23	49	1	12	27.2	39	1.25	30	3
25	95	75	12	4	M10	28.4	59	1	12	34	44	1.25	30	3
32	115	90	15	4	M12	37.1	70	2	14	42.7	55	1.25	34	3
40	120	95	15	4	M12	43	75	2	14	48.6	61	1.25	34	3
50	130	105	15	4	M12	54.9	85	2	14	60.5	75	1.25	37	3
65	155	130	15	4	M12	70.3	110	2	14	76.3	90	1.25	37	3
80	180	145	19	4	M16	83.1	121	2	16	89.1	105	1.25	41	3
90	190	155	19	4	M16	95.6	131	2	16	101.6	118	1.25	41	3
100	200	165	19	8	M16	108.3	141	2	19	114.3	130	1.25	44	3
125	235	200	19	8	M16	133	176	2	19	139.8	157	1.25	46	4
150	265	230	19	8	M16	158.4	206	2	19	165.2	184	1.25	48	4
200	320	280	23	8	M20	208.3	252	2	22	216.3	236	1.25	53	4
250	385	345	23	12	M20	259.4	317	2	24	267.4	291	1.25	60	4
300	430	390	23	12	M20	309.5	360	3	24	318.5	344	1.25	63	4
350	480	435	25	12	M22	346	403	3	24	355.6	382	1.5	71	4
400	540	495	25	16	M22	396.8	463	3	26	406.4	435	1.5	77	4
450	605	555	25	16	M22	447.6	523	3	26	457.2	486	1.75	84	5
500	655	605	25	20	M22	497	573	3	26	508	539	1.75	89	5
550	720	665	27	20	M24	547.8	630	3	29	558.8	590	1.75	92	5
600	770	715	27	20	M24	596.8	680	3	29	609.6	639	1.75	92	5

Notes: (1) It is adjusted in accordance with the inside diameter of pipe to be connected.
 (2) It is the numerical value corresponding to the minimum hub taper as shown in the table, and informative.



JIS ALUMINIUM ALLOY BUTT WELDING TYPE FLANGES (WN)



Butt welding type flanges (WN)

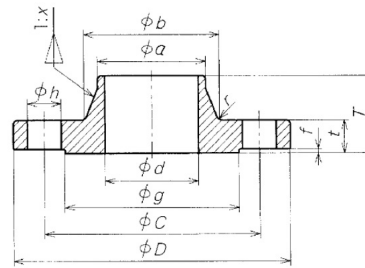
10K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Dia. of Bolt Circle C	Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	Inner Dia. d(1)	Raised Face		Thickness of flange t	Dia. of Hub		Taper of the hub min. x	Full length of flange T (2)	Radius r
							Dia. of Raised Face g	Raised Face Height f		a	b			
10	90	65	15	4	M12	13.3	46	1	15	17.3	31	1.25	36	3
15	95	70	15	4	M12	16.7	51	1	15	21.7	35	1.25	36	3
20	105	75	15	4	M12	22.2	56	1	15	27.2	42	1.25	38	3
25	125	90	19	4	M16	28	67	1	18	34	48	1.25	40	3
32	135	100	19	4	M16	36.7	76	2	18	42.7	59	1.25	43	3
40	140	105	19	4	M16	42.6	81	2	18	48.6	65	1.25	43	3
50	155	120	19	4	M16	53.5	96	2	18	60.5	78	1.25	46	4
65	175	140	19	4	M16	69.3	116	2	18	76.3	93	1.25	46	4
80	185	150	19	8	M16	81.1	126	2	21	89.1	107	1.25	50	4
90	195	160	19	8	M16	93.6	136	2	21	101.6	120	1.25	50	4
100	210	175	19	8	M16	106.3	151	2	21	114.3	134	1.25	52	5
125	250	210	23	8	M20	129.8	182	2	24	139.8	160	1.25	57	5
150	280	240	23	8	M20	155.2	212	2	24	165.2	187	1.25	59	5
200	330	290	23	12	M20	203.3	262	2	25	216.3	239	1.25	64	5
250	400	355	25	12	M22	254.4	324	2	26	267.4	294	1.25	69	6
300	445	400	25	16	M22	305.5	368	3	27	318.5	348	1.25	74	6
350	490	445	25	16	M22	339.8	413	3	27	355.6	386	1.25	77	6
400	560	510	27	16	M24	390.6	475	3	28	406.4	439	1.5	89	6
450	620	565	27	20	M24	441.4	530	3	30	457.2	489	1.5	90	6
500	675	620	27	20	M24	489	585	3	30	508	539	1.5	91	6
550	745	680	33	20	M30	539.8	640	3	36	558.8	594	1.5	104	6
600	795	730	33	24	M30	590.6	690	3	38	609.6	645	1.5	106	6

Notes: (1) It is adjusted in accordance with the inside diameter of pipe to be connected.
 (2) It is the numerical value corresponding to the minimum hub taper as shown in the table, and informative.



JIS ALUMINIUM ALLOY BUTT WELDING TYPE FLANGES (WN)



Butt welding type flanges (WN)

16K FLANGE DIMENSIONS (mm)

Nominal Dia. of Flange	Outside Dia. of Flange D	Dia. of Bolt Circle C	Hole Dia. H	Number of Bolt Holes	Nominal Bolt Size	Inner Dia. d(1)	Raised Face		Thickness of flange t	Dia. of Hub		Taper of the hub min. x	Full length of flange T (2)	Radius r
							Dia. of Raised Face g	Raised Face Height f		a	b			
10	90	65	15	4	M12	12.7	46	1	16	17.3	33	1.25	40	3
15	95	70	15	4	M12	16.1	51	1	16	21.7	38	1.25	41	3
20	105	75	15	4	M12	21.4	56	1	16	27.2	43	1.25	41	3
25	125	90	19	4	M16	27.2	67	1	18	34	51	1.25	45	3
32	135	100	19	4	M16	35.5	76	2	18	42.7	62	1.25	48	3
40	140	105	19	4	M16	41.2	81	2	18	48.6	69	1.25	50	3
50	155	120	19	8	M16	52.7	96	2	22	60.5	81	1.25	54	4
65	175	140	19	8	M16	65.9	116	2	22	76.3	96	1.25	55	4
80	200	160	23	8	M20	78.1	132	2	25	89.1	110	1.25	60	4
90	210	170	23	8	M20	90.2	145	2	25	101.6	122	1.25	60	4
100	225	185	23	8	M20	102.3	160	2	25	114.3	136	1.25	62	5
125	270	225	25	8	M22	126.6	195	2	26	139.8	165	1.25	68	5
150	305	260	25	12	M22	151	230	2	30	165.2	193	1.25	76	5
200	350	305	25	12	M22	199.9	275	2	30	216.3	246	1.25	80	6
250	430	380	27	12	M24	248.8	345	2	30	267.4	301	1.25	86	6
300	480	430	27	16	M24	297.9	395	3	31	318.5	354	1.25	91	8
350	540	480	33	16	M30X3	333.4	440	3	38	355.6	395	1.25	104	8
400	605	540	33	16	M30X3	381	495	3	38	406.4	447	1.25	108	10
450	675	605	33	20	M30X3	428.6	560	3	41	457.2	499	1.25	115	10
500	730	660	33	20	M30X3	477.8	615	3	41	508	550	1.5	127	10
550	795	720	39	20	M36X3	527	670	3	47	558.8	603	1.5	138	10
600	845	770	39	24	M36X3	574.8	720	3	50	609.6	655	1.5	145	10

Notes: (1) It is adjusted in accordance with the inside diameter of pipe to be connected.
 (2) It is the numerical value corresponding to the minimum hub taper as shown in the table, and informative.