

# STEEL & STAINLESS FLANGE

Authorized to display the Korean  
Industrial Standards  mark.



녹산플랜지 주식회사  
NOKSAN FLANGE CO.,LTD

# GREETING

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귀사의 도우심과 배려로 함께 발전하며  
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그동안 축적된 경험과 기술을 바탕으로  
조선 산업설비 및 건설분야 등에 고품질의 플랜지를  
공급해 왔으며, 꾸준하고 지속적인 국내외 투자를  
통하여 최고의 기술로 우수한 품질을 만들어  
고객을 만족시키며 고객감동으로 최선을  
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감사합니다.

**녹 산 플 랜 지(주)**

대표이사 김 현 수

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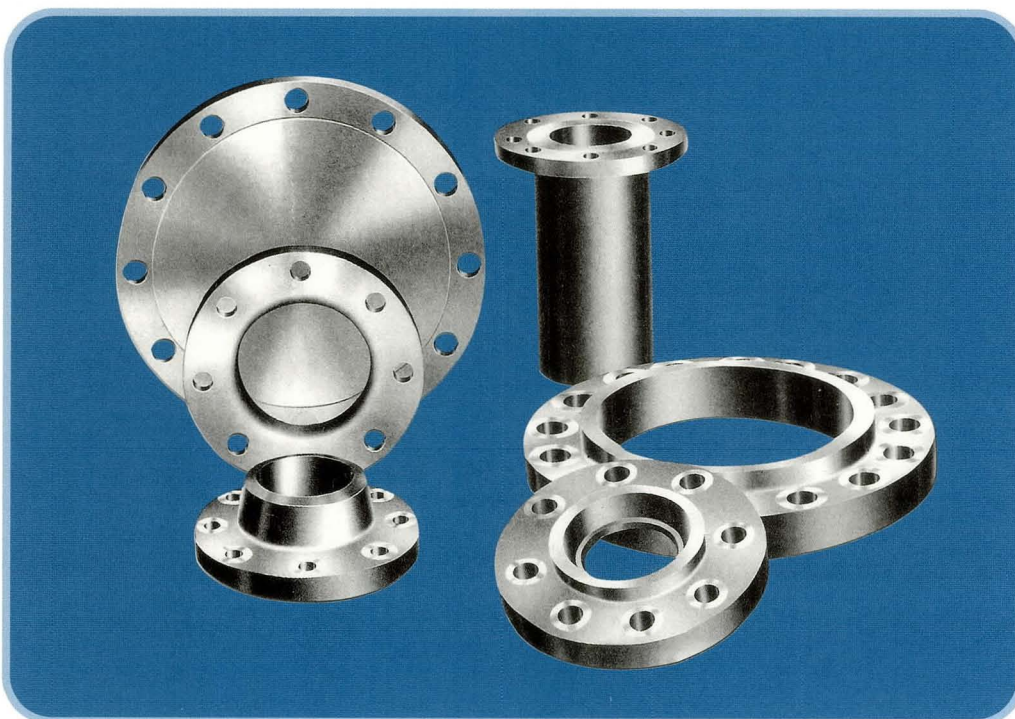
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# KS & JIS FLANGE

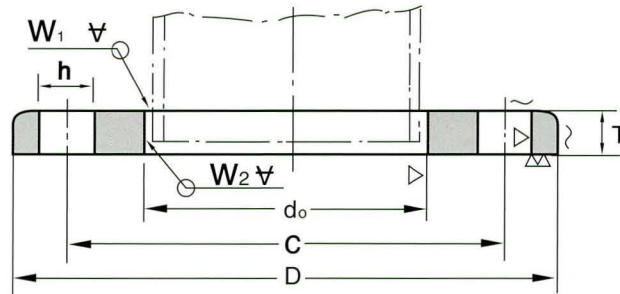
- **1Kg/Cm<sup>2</sup>** (KS V 7805. JIS F 7805)
- **2Kg/Cm<sup>2</sup>** (KS B 1511. JIS F 2220)
- **5Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2220)
- **10Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2220)
- **16Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2220)
- **20Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2220)
- **30Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2220)
- **40Kgf/Cm<sup>2</sup>** (KS B 1503. JIS B 2216)
- **210Kgf/Cm<sup>2</sup>** (KS B 1521. JIS B 2291)
- **280Kgf/Cm<sup>2</sup>** (JIS F 7806)
- **350Kgf/Cm<sup>2</sup>** (JIS F 7806)
- **SET-ON Flange 5Kg/Cm<sup>2</sup>** (JIS B 2220)
- **SET-ON Flange 10Kg/Cm<sup>2</sup>** (JIS B 2220)
- **KS B 2332 Sluice valves for water works**(수도용 제수밸브용 플랜지)
- **KS B 2333 Butterfly valves for water works**(수도용 버터플라이 밸브용 플랜지)
- **KS D 3578 Fittings of Coated Steel Pipes for Water Serves**  
(수도용 도복장 강관 이형관용 플랜지) F12(10Kgf/Cm<sup>2</sup>). F15(16kgf/Cm<sup>2</sup>)
- **KS D 3578 Fittings of Coated Steel Pipes for Water Serves**  
(수도용 도복장 강관 이형관용 플랜지) F20(20Kgf/Cm<sup>2</sup>)
- **KS B 6216 스프링 안전밸브의 설치 플랜지**(전량식) 10K. 20K. 30K(kgf/Cm<sup>2</sup>)



# 1K

KS V 7805 JIS F 7805  
SLIP-ON FLANGES

## FLANGE FOR EXH. GAS PIPE (F-TYPE)

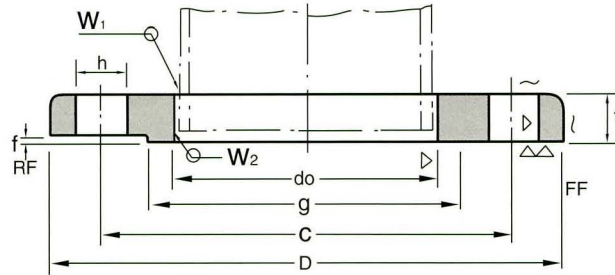


Unit:mm

N/D	PIPE		FLANGE		BOLT HOLE			BOLT (M)	W' T (KG)
	O/D(d)	D	I/D(do)	T	C	N	H		
25	34.0	95	34.5	10	75	4	12	M10	0.45
(32)	42.7	115	43.2	12	90	4	15	M12	0.73
40	48.6	120	49.1	12	95	4	15	M12	0.83
50	60.5	130	61.1	14	105	4	15	M12	1.06
65	76.3	155	77.1	14	130	4	15	M12	1.48
80	89.1	180	90.0	14	145	4	19	M16	1.97
100	114.3	200	115.4	16	165	8	19	M16	2.35
125	139.8	235	141.2	16	200	8	19	M16	3.20
150	165.2	265	166.6	16	230	8	19	M16	3.90
200	216.3	320	218.0	16	280	8	23	M20	5.00
250	267.4	385	269.5	16	345	12	23	M20	6.83
300	318.5	430	321.0	16	390	12	23	M20	7.45
350	355.6	480	358.1	16	435	12	25	M22	9.45
400	406.4	540	409.0	16	495	16	25	M22	11.43
450	457.2	605	460.0	16	555	16	25	M22	14.40
500	508.0	655	511.0	16	605	16(20)	25	M22	15.73
(550)	555.8	660	562.0	16	620	16	23	M20	12.00
600	609.6	710	613.0	16	670	16	23	M20	12.12
(650)	660.4	760	664.0	16	720	16	23	M20	12.15
700	711.2	815	715.0	16	775	16	23	M20	14.26
750	762.0	865	766.0	16	825	20	23	M20	14.88
800	812.8	915	817.0	16	875	20	23	M20	15.70
(850)	863.6	965	868.0	16	925	20	23	M20	16.50
900	914.4	1025	919.0	18	980	20	25	M22	21.48
(950)	962.0	1075	967.0	18	1030	20	25	M22	21.97
1000	1016.0	1125	1021.0	18	1080	20	25	M22	23.38
1050	1062.0	1175	1067.0	18	1130	24	25	M22	25.21
1100	1117.6	1225	1122.0	18	1180	24	25	M22	25.16
1150	1162.0	1275	1167.0	18	1230	24	25	M22	26.64
1200	1219.0	1325	1224.0	18	1280	24	25	M22	27.60
1250	1262.0	1375	1267.0	18	1330	28	25	M22	29.72
1300	1312.0	1425	1317.0	18	1380	28	25	M22	30.92
1350	1371.6	1475	1376.0	18	1430	28	25	M22	32.38
1400	1412.0	1525	1417.0	20	1480	28	25	M22	37.02
1450	1462.0	1595	1467.0	20	1540	28	27	M24	45.81
1500	1524.0	1645	1529.0	20	1590	28	27	M24	46.88
1600	1612.0	1745	1617.0	20	1690	28	27	M24	50.54
1700	1712.0	1845	1717.0	20	1790	28	27	M24	53.70
1800	1812.0	1950	1817.0	20	1895	32	27	M24	58.90
1900	1912.0	2050	1917.0	20	1995	32	27	M24	62.18
2000	2012.0	2150	2017.0	20	2095	36	27	M24	65.10
2100	2116.0	2250	2121.0	24	2195	36	27	M24	79.55
2200	2216.0	2350	2221.0	24	2295	40	27	M24	82.94
2300	2316.0	2450	2321.0	24	2395	40	27	M24	86.75
2400	2416.0	2550	2421.0	24	2495	40	27	M24	89.71
2500	2516.0	2650	2521.0	24	2595	48	27	M24	93.52
2600	2616.0	2750	2621.0	24	2695	48	27	M24	97.34

# 2Kg/Cm<sup>2</sup>

KS B 1511 - 1987. JIS B 2220 - 1977  
SLIP - ON FLANGE



Unit:mm

Nominal Bore of Flange	Outside Diam, of Applicable Pipe	Inside Diam, of Flange $do$	Sectional Dimensions		Bolt Hole			Nominal Bolt Size
			t	D	C	h	N	
450A	457.2	460	22	605	555	23	16	M20
500A	508.0	511	22	655	605	23	20	M20
550A	558.8	562	24	720	665	25	20	M22
600A	609.6	613	24	770	715	25	20	M22
650A	660.4	664	24	825	770	25	24	M22
700A	711.2	715	24	875	820	25	24	M22
750A	762.0	766	24	945	880	27	24	M24
800A	812.8	817	24	995	930	27	24	M24
(850A)	863.6	868	24	1,045	980	27	24	M24
900A	914.4	919	24	1,095	1,030	27	24	M24
1000A	1016.0	1,021	26	1,195	1,130	27	28	M24
(1100A)	1117.6	1,123	26	1,305	1,240	27	28	M24
1200A	1219.2	1,224	26	1,420	1,350	27	32	M24
1350A	1371.6	1,377	26	1,575	1,505	27	32	M24
1500A	1524.0	1,529	28	1,730	1,660	27	36	M24

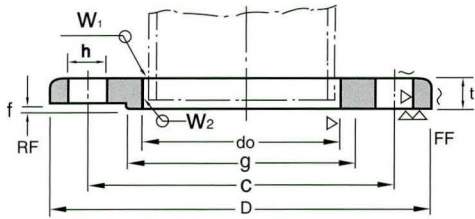
- 비고: 1. ( )를 붙인 크기의 호칭인 것은 되도록 사용하지 않는 것이 좋다.  
 2. 최고 사용압력은 JIS B 2201의 규정에 의한다.  
 3. 크기의 호칭 400이하의 기본치수는 JIS B 2211 5kg/cm<sup>2</sup> 철강재 관 플랜지의 기본치수를 적용한다.

# 5Kg/Cm<sup>2</sup>

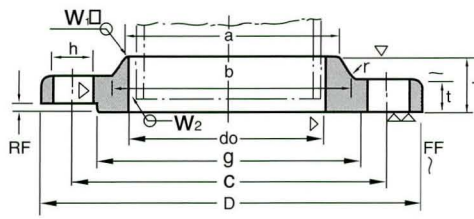
JIS B 2220-1984(KS B 1503-1999)

5Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES

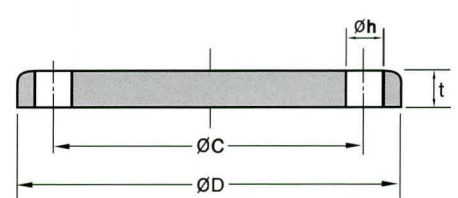
**SOP TYPE**  
NOMINAL SIZE 10-1000A



**SOH TYPE**  
NOMINAL SIZE 450-1000A



**BL TYPE**  
NOMINAL SIZE 10-750A



Unit:mm

Nominal Bore of Flange	Outside Diam. of Appli-Cable Pipe	Inside Diam. of Flange do	Outside Diam. of Flange D	Sectional Dimensions of Flange							Dia. of Bolt			Nominal Bolt Size	Weight(kg)		
				t	T	Diam. of Hub		Rad -ius r	Raised Face f	Diam. of Raised face g	Diam. of Bolt Circle C	Number of Bolt Holes	Hole Diam. h		SOP	BL	SOH
						a	b										
(10)	17.3	17.8	75	9	-	-	-	-	1	39	55	4	12	M10	0.26	0.28	-
15	21.7	22.2	80	9	-	-	-	-	1	44	60	4	12	M10	0.30	0.32	-
(20)	27.2	27.7	85	10	-	-	-	-	1	49	65	4	12	M10	0.36	0.41	-
25	34.0	34.5	95	10	-	-	-	-	1	59	75	4	12	M10	0.45	0.52	-
(32)	42.7	43.2	115	12	-	-	-	-	2	70	90	4	15	M12	0.77	0.91	-
40	48.6	49.1	120	12	-	-	-	-	2	75	95	4	15	M12	0.82	1.00	-
50	60.5	61.1	130	14	-	-	-	-	2	85	105	4	15	M12	1.06	1.38	-
65	76.3	77.1	155	14	-	-	-	-	2	110	130	4	15	M12	1.48	2.00	-
80	89.1	90.0	180	14	-	-	-	-	2	121	145	4	19	M16	1.97	2.67	-
(90)	101.6	102.6	190	14	-	-	-	-	2	131	155	4	19	M16	2.08	2.99	-
100	114.3	115.4	200	16	-	-	-	-	2	141	165	8	19	M16	2.35	3.66	-
125	139.8	141.2	235	16	-	-	-	-	2	176	200	8	19	M16	3.20	5.16	-
150	165.2	166.6	265	18	-	-	-	-	2	206	230	8	19	M16	4.39	7.47	-
(175)	190.7	192.1	300	18	-	-	-	-	2	232	260	8	23	M20	5.42	9.52	-
200	216.3	218.0	320	20	-	-	-	-	2	252	280	8	23	M20	6.24	12.1	-
(225)	241.8	243.7	345	20	-	-	-	-	2	277	305	12	23	M20	6.57	13.9	-
250	267.4	269.5	385	22	-	-	-	-	2	317	345	12	23	M20	9.39	19.2	-
300	318.5	321.0	430	22	-	-	-	-	3	360	390	12	23	M20	10.2	24.2	-
350	355.6	358.1	480	24	-	-	-	-	3	403	435	12	25	M22	14.0	33.0	-
400	406.4	409.0	540	24	-	-	-	-	3	463	495	16	25	M22	16.9	41.7	-
450	457.2	460.0	605	24	40	495	500	5	3	523	555	16	25	M22	21.4	52.7	24.9
500	508.0	511.0	655	24	40	546	552	5	3	573	605	20	25	M22	23.0	61.6	27.0
550	558.8	562.0	720	26	42	597	603	5	3	630	665	20	27	M24	30.1	80.8	34.5
600	609.6	613.0	770	26	44	648	654	5	3	680	715	20	27	M24	32.5	92.7	37.8
650	660.4	664.0	825	26	48	702	708	5	3	735	770	24	27	M24	35.6	106	43.2
700	711.2	715.0	875	26	48	751	758	5	3	785	820	24	27	M24	38.0	120	45.9
750	762.0	766.0	945	28	52	802	810	5	3	840	880	24	33	M30	48.4	150	57.7
800	812.8	817.0	995	28	52	854	862	5	3	890	930	24	33	M30	51.2	-	61.3
(850)	863.6	868.0	1045	28	54	904	912	5	3	940	980	24	33	M30	53.9	-	65.3
900	914.4	919.0	1095	30	56	956	964	5	3	990	1030	24	33	M30	60.7	-	73.1
1000	1016.0	1021.0	1195	32	60	1058	1066	5	3	1090	1130	28	33	M30	70.1	-	84.8
*(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 B 1509 (JIS B 2202)1984.
3. Nominal diameter over 1000 is manufacturer's standard(\*)

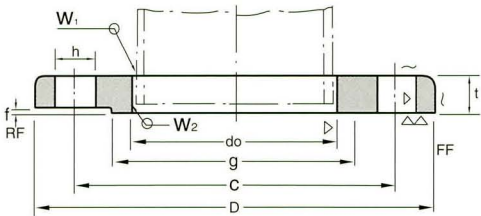


# 10Kg/Cm<sup>2</sup>

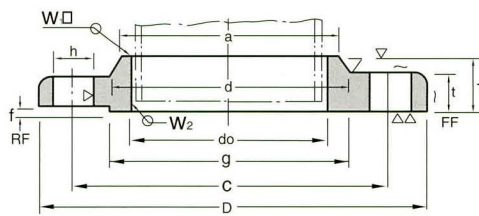
JIS B 2220-1984(KS B 1503-1999)

10Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES

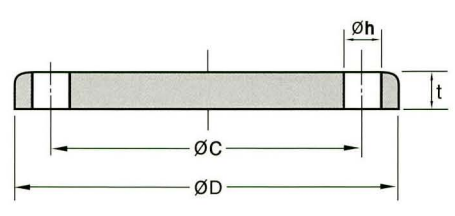
**SOP TYPE**  
NOMINAL SIZE 10-800A



**SOH TYPE**  
NOMINAL SIZE 250-1000A



**BL TYPE**  
NOMINAL SIZE 10-800A



## NORMAL THICKNESS FLANGE

Unit: mm

Nominal Diam. of Flange	Outside Diam. of Steel Pipe	Inside Diam. of Flange do	Outside Diam. of Flange D	Sectional Dimensions of Flange							Dia. of Bolt			Nomi- nal Bolt Size	Weight(Kg)		
				t	T	Diam. of Hub		Rad- ius r	Raised Face f	Diam. of Raised face g	Bolt Circle Diam. C	Num- ber of Bolt Holes	Hole Dia. h		SOP	BL	SOH
						a	b										
10	17.3	17.8	90	12	-	-	-	-	1	46	65	4	15	M12	0.51	0.53	
15	21.7	22.2	95	12	-	-	-	-	1	51	70	4	15	M12	0.56	0.60	
20	27.2	27.7	100	14	-	-	-	-	1	56	75	4	15	M12	0.72	0.79	
25	34.0	34.5	125	14	-	-	-	-	1	67	90	4	19	M16	1.12	1.22	
32	42.7	43.2	135	16	-	-	-	-	2	76	100	4	19	M16	1.47	1.66	
40	48.6	49.1	140	16	-	-	-	-	2	81	105	4	19	M16	1.55	1.79	
50	60.5	61.1	155	16	-	-	-	-	2	96	120	4	19	M16	1.86	2.23	
65	76.3	77.1	175	18	-	-	-	-	2	116	140	4	19	M16	2.58	3.24	
80	89.1	90	185	18	-	-	-	-	2	126	150	8	19	M16	2.58	3.48	
(90)	101.6	102.6	195	18	-	-	-	-	2	136	160	8	19	M16	2.73	3.90	
100	114.3	115.4	210	18	-	-	-	-	2	151	175	8	19	M16	3.10	4.57	
125	139.8	141.2	250	20	-	-	-	-	2	182	210	8	23	M20	4.73	7.18	
150	165.2	166.6	280	22	-	-	-	-	2	212	240	8	23	M20	6.30	10.1	
(175)	190.7	192.1	305	22	-	-	-	-	2	237	265	12	23	M20	6.75	11.8	
200	216.3	218	330	22	-	-	-	-	2	262	290	12	23	M20	7.46	13.9	
(225)	241.8	243.7	350	22	-	-	-	-	2	282	310	12	23	M20	7.70	15.8	-
250	267.4	269.5	400	24	36	288	292	6	2	324	355	12	25	M22	11.8	22.6	12.7
300	318.5	321	445	24	38	340	346	6	3	368	400	16	25	M22	12.6	27.8	13.8
350	355.6	358.1	490	26	42	380	386	6	3	413	445	16	25	M22	16.3	36.9	18.2
400	406.4	409	560	28	44	436	442	6	3	475	510	16	27	M24	23.3	52.1	25.8
450	457.2	460	620	30	48	496	502	6	3	530	565	20	27	M24	29.3	68.4	33.4
500	508	511	675	30	48	548	554	6	3	585	620	20	27	M24	33.3	81.6	38.0
(550)	558.8	562	745	32	52	604	610	6	3	640	680	20	33	M30	42.9	105	49.4
600	609.6	613	795	32	52	656	662	6	3	690	730	24	33	M30	45.4	120	52.6
(650)	660.4	664	845	34	56	706	712	6	3	740	780	24	33	M30	51.8	144	60.2
700	711.2	715	905	34	58	762	770	6	3	800	840	24	33	M30	62.5	176	70.2
(750)	762	766	970	36	62	816	824	6	3	855	900	24	33	M30	76.9	214	86.5
800	812.8	817	1020	36	64	868	876	6	3	905	950	28	33	M30	84.5	249	92.0
(850)	863.6	868	1070	36	66	920	928	6	3	955	1000	28	33	M30	-	-	98.7
900	914.4	919	1120	38	70	971	979	6	3	1005	1050	28	33	M30	-	-	110
1000	1016	1021	1235	40	74	1073	1081	6	3	1110	1160	28	39	M36	-	-	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	-	-	-

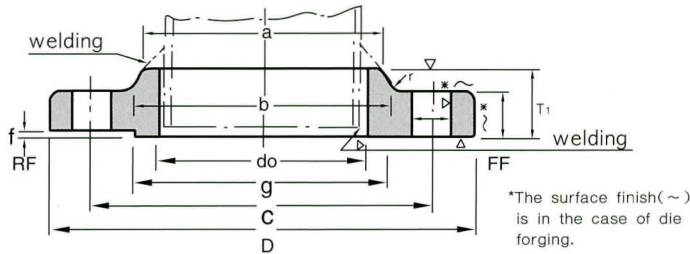
1. Flanges of parenthesized nominal diameter had letter not be used.
2. The facing of flanges shall conform to KS B 1509 (JIS B 2202)1984.
3. Nominal diameter over 1000 is manufacturer's standard(\*)

# 16Kg/Cm<sup>2</sup>

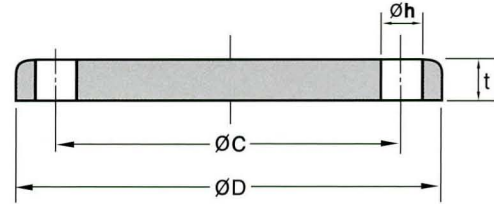
JIS B 2220-1984(KS B 1503-1999)

## 16Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES

**SOH TYPE  
NOMINAL SIZE 10-600A**



**BL TYPE  
NOMINAL SIZE 10-600A**



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

Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Weight(Kg)		
			Outside Diameter of Flange D	t	T	Diam. of Hub		Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h		SOP	BL	SOH
						a	b										
10	17.3	17.8	90	12	16	26	28	4	1	46	65	4	15	M12	0.52	0.53	0.52
15	21.7	22.2	95	12	16	30	32	4	1	51	70	4	15	M12	0.57	0.60	0.58
20	27.2	27.7	100	14	20	38	42	4	1	56	75	4	15	M12	0.73	0.79	0.75
25	34.0	34.5	125	14	20	46	50	4	1	67	90	4	19	M16	1.13	1.22	1.16
32	42.7	43.2	135	16	22	56	60	5	2	76	100	4	19	M16	1.48	1.66	1.53
40	48.6	49.1	140	16	24	62	66	5	2	81	105	4	19	M16	1.56	1.79	1.64
50	60.5	61.1	155	16	24	76	80	5	2	96	120	8	19	M16	1.8	2.09	1.83
65	76.3	77.1	175	18	26	94	98	5	2	116	140	8	19	M16	2.5	3.08	2.58
80	89.1	90.0	200	20	28	108	112	6	2	132	160	8	23	M20	3.5	4.41	3.61
(90)	101.6	102.6	210	20	30	120	124	6	2	145	170	8	23	M20	3.7	4.92	3.89
100	114.3	115.4	225	22	34	134	138	6	2	160	185	8	23	M20	4.5	6.29	4.87
125	139.8	141.2	270	22	34	164	170	6	2	195	225	8	25	M22	6.5	9.21	7.09
150	165.2	166.6	305	24	38	196	202	6	2	230	260	12	25	M22	8.7	12.7	9.57
200	216.3	218.0	350	26	40	244	252	6	2	275	305	12	25	M22	10.9	18.4	12.0
250	267.4	269.5	430	28	44	304	312	6	2	345	380	12	27	M24	18.0	30.4	20.1
300	318.5	321.0	480	30	48	354	364	8	3	395	430	16	27	M24	21.5	40.5	24.3
350	355.6	358.1	540	34	52	398	408	8	3	440	480	16	33	M30×3	30.8	57.5	34.4
400	406.4	409.0	605	38	60	446	456	10	3	495	540	16	33	M30×3	42.8	81.7	47.7
450	457.2	460.0	675	40	64	504	514	10	3	560	605	20	33	M30×3	55.1	107	61.8
500	508.0	511.0	730	42	68	558	568	10	3	615	660	20	33	M30×3	65.1	132	73.7
(550)	558.8	562.0	795	44	70	612	622	10	3	670	720	20	39	M36×3	77.9	163	87.9
600	609.6	613.0	845	46	74	666	676	10	3	720	770	24	39	M36×3	86.0	192	98.4
(650)	660.4	664	895	48	77	704	726	10	5	770	820	24	39	M36×3	96.3	-	-
700	711.2	715	960	50	80	754	776	10	5	820	875	24	42	M39×3	114.1	-	-
(750)	762.0	766	1020	52	83	806	832	10	5	880	935	24	42	M39×3	132.7	-	-
800	812.8	817	1085	54	86	865	885	10	5	930	990	24	48	M45×3	152.1	-	-
(850)	863.6	868	1135	56	89	916	936	10	5	980	1040	24	48	M45×3	166.5	-	-
900	914.4	919	1185	58	93	968	986	10	5	1030	1090	28	48	M45×3	178.1	-	-
1000	1016.0	1021	1320	62	99	1070	1098	12	5	1140	1210	28	56	M52×3	235.3	-	-
1100	1117.6	1123	1420	66	105	1180	1200	12	5	1240	1310	32	56	M52×3	267.9	-	-
1200	1219.2	1225	1530	70	112	1282	1302	12	5	1350	1420	32	56	M52×3	321.1	-	-
1300	1320.8	1326.0	1645	74	-	-	-	-	5	1450	1530	32	62	-	378.6	-	-
1350	1371.6	1377.0	1700	76	-	-	-	-	5	1510	1590	32	62	-	410.0	-	-
1400	1422.4	1428.0	1755	78	-	-	-	-	5	1560	1640	36	62	-	436.0	-	-
1500	1524.0	1529.0	1865	80	-	-	-	-	5	1670	1750	36	62	-	496.4	-	-

REMARKS:1. Flanges of parenthesized nominal diameter had better not be used.

2. For dimensional tolerance, refer to JIS B 2203.

3. In principle material shall be SS400 specified in JIS G 3101, SF390A(or SF440A) specified in JIS G 3201, or S20C(or S25C) specified in JIS G 4051, and shall be fit for welding.

# 20Kg/Cm<sup>2</sup>

JIS B 2220-1984(KS B 1503-1999)

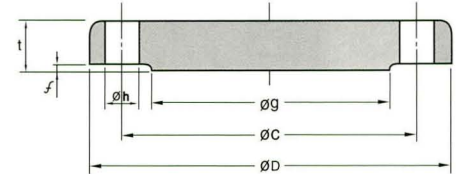
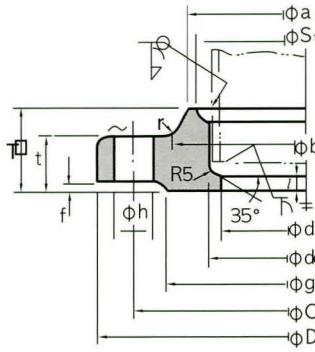
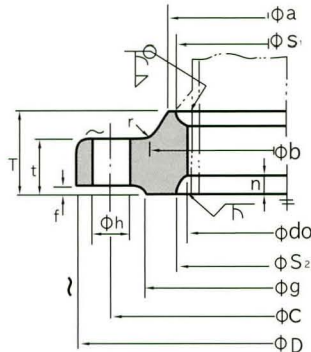
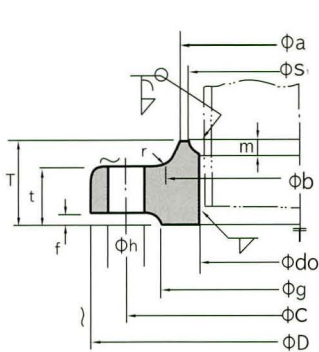
## 20Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES

A-TYPE  
NOMINAL SIZE 10~50A

B-TYPE  
NOMINAL SIZE 10~50A

C-TYPE  
NOMINAL SIZE 65~600A

BL TYPE  
NOMINAL SIZE 10-600A



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

Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange									Bolt Hole				Reference					Weight(Kg)			
				t	T	Diameter of Hub		Rad-ius r	f	g	d	Bolt Circle Dia-meter C	Number of Bolt Holes	Hole Dia-meter h	Nominal Bolt Size	S <sub>1</sub>	m	S <sub>2</sub>	n	l	SOP	BL	SOH A TYPE	SOH B-C TYPE	
						a	b																		
10	17.3	17.8	90	14	20	30	32	4	1	46	-	65	4	15	M12	27	4	27	4	-	0.6	0.59	0.58	0.58	
15	21.7	22.2	95	14	20	34	36	4	1	51	-	70	4	15	M12	31	4	31	4	-	0.7	0.67	0.64	0.64	
20	27.2	27.7	100	16	22	40	42	4	1	56	-	75	4	15	M12	37	4	37	4	-	0.8	0.86	0.80	0.80	
25	34.0	34.5	125	16	24	48	50	4	1	67	-	90	4	19	M16	44	4	44	4.5	-	1.3	1.34	1.26	1.26	
32	42.7	43.2	135	18	26	56	60	5	2	76	-	100	4	19	M16	52	4	53	5	-	1.6	1.73	1.58	1.57	
40	48.6	49.1	140	18	26	62	66	5	2	81	-	105	4	19	M16	58	4	59	5.5	-	1.7	1.87	1.68	1.66	
50	60.5	61.1	155	18	26	76	80	5	2	96	-	120	8	19	M16	70	4	72	5.5	-	1.9	2.20	1.89	1.86	
65	76.3	77.1	175	20	30	100	104	5	2	116	65.9	140	8	19	M16	94	6	85	6	6	2.6	3.24	2.73	2.81	
80	89.1	90.0	200	22	34	113	117	6	2	132	78.1	160	8	23	M20	107	6	-	-	6	3.8	4.63	3.85	3.95	
(90)	101.6	102.6	210	24	36	126	130	6	2	145	90.2	170	8	23	M20	120	6	-	-	6	4.4	5.67	4.47	4.59	
100	114.3	115.4	225	24	36	138	142	6	2	160	102.3	185	8	23	M20	132	6	-	-	6	4.9	6.61	5.03	5.18	
125	139.8	141.2	270	26	40	166	172	6	2	195	126.6	225	8	25	M22	160	7	-	-	6	7.8	10.5	7.94	8.15	
150	165.2	166.6	305	28	42	196	202	6	2	230	151.0	260	12	25	M22	186	8	-	-	6	10.1	14.4	10.4	10.7	
200	216.3	218.0	350	30	46	244	252	6	2	275	199.9	305	12	25	M22	237	9	-	-	6	12.6	20.8	13.1	13.6	
250	267.4	269.5	430	34	52	304	312	6	2	345	248.8	380	12	27	M24	290	10	-	-	6	21.9	36.2	23.1	23.8	
300	318.5	321.0	480	36	56	354	364	8	3	395	297.9	430	16	27	M24	345	11	-	-	6	25.8	47.4	27.2	28.1	
350	355.6	358.1	540	40	62	398	408	8	3	440	333.4	480	16	33	M30×3	384	12	-	-	6	36.2	66.1	38.4	39.5	
400	406.4	409.0	605	46	70	446	456	10	3	495	381.0	540	16	33	M30×3	437	13	-	-	7	51.7	97.0	53.9	55.6	
450	457.2	460.0	675	48	78	504	514	10	3	560	431.8	605	20	33	M30×3	490	15	-	-	7	66.1	126	71.0	72.9	
500	508.0	511.0	730	50	84	558	568	10	3	615	482.6	660	20	33	M30×3	544	16	-	-	7	77.4	155	84.6	86.7	
(550)	558.8	562.0	795	52	90	612	622	10	3	670	533.4	720	20	39	M36×3	595	16	-	-	7	92.2	190	102	104	
600	609.6	613.0	845	54	96	666	676	10	3	720	584.2	770	24	39	M36×3	646	18	-	-	7	101.1	223	115	117	
(650)	660.4	664.0	945	60	-	-	-	5	5	790	-	850	24	48	M45×3						147.6	-	-	-	
700	711.2	715.0	995	64	-	-	-	5	5	840	-	900	24	48	M45×3						168.0	-	-	-	
(750)	762.0	766.0	1080	68	-	-	-	5	5	900	-	970	24	56	M52×3						212.7	-	-	-	
800	812.8	817.0	1140	72	-	-	-	5	5	960	-	1030	24	56	M52×3						248.5	-	-	-	
(850)	863.6	868.0	1200	74	-	-	-	5	5	1020	-	1090	24	56	M52×3						280.5	-	-	-	
900	914.6	919.0	1250	76	-	-	-	5	5	1070	-	1140	28	56	M52×3						296.9	-	-	-	

REMARKS:1. Flanges of parenthesized nominal diameters had better not be used.

2. The Flange gasket surface is based on large raised facing specified in JIS B 2202.

3. Size d is an example of pipe thickness for schedule 40 of JIS G 3454. and JIS G 3456. But customers can order for other size as occasion demand.

4. For dimensional tolerance, refer to JIS B 2203.

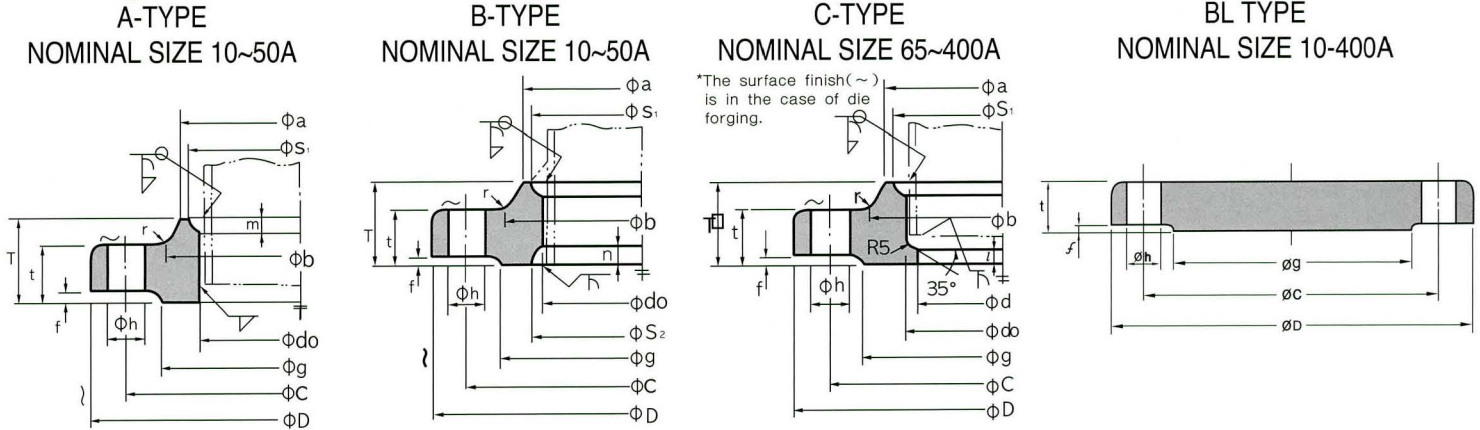
5. In principle, material shall be SS400 specified in JIS G 3101, SF390A(or SF440A) specified in JIS G 3201, or S20C(or S25C) specified in JIS G 4051. Material shall be fit for welding.

\*The surface finish is the case of forging(▽:in other cases)

# 30Kg/Cm<sup>2</sup>

JIS B 2220-1984(KS B 1503-1999)

## 30Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES



Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Approx Weight (kg)		
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	s1	m	s2	n	l	SOH A TYPE	SOH B-C TYPE	BL
						a	b																
10	17.3	17.8	110	16	24	30	34	4	1	52	-	75	4	19	M16	-	-	-	-	-	1.00	1.00	1.00
15	21.7	22.2	115	18	26	36	40	5	1	55	-	80	4	19	M16	31	4	40	5	-	1.24	1.22	1.25
20	27.2	27.7	120	18	28	42	46	5	1	60	-	85	4	19	M16	37	5	44	5	-	1.36	1.34	1.38
25	34.0	34.5	130	20	30	50	54	5	1	70	-	95	4	19	M16	44	6	52	5	-	1.77	1.75	1.84
32	42.7	43.2	140	22	32	60	64	6	2	80	-	105	4	19	M16	52	6	60	5	-	2.17	2.15	2.32
40	48.6	49.1	160	22	34	66	70	6	2	90	-	120	4	23	M20	58	6	66	5	-	2.82	2.79	3.00
50	60.5	61.1	165	22	36	82	86	6	2	105	-	130	8	19	M16	70	6.5	78	5	-	2.89	2.86	3.14
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	4.88	4.96	5.50
80	89.1	90.0	210	28	44	115	121	8	2	140	78.1	170	8	23	M20	109	9.5	-	-	6	5.70	5.80	6.63
(90)	101.6	102.6	230	30	46	128	134	8	2	150	90.2	185	8	25	M22	122	9.5	-	-	6	7.13	7.25	8.55
100	114.3	115.4	240	32	48	141	147	8	2	160	102.3	195	8	25	M22	135	9.5	-	-	6	8.01	8.16	10.0
125	139.8	141.2	275	36	54	166	172	8	2	195	126.6	230	8	25	M22	160	9.5	-	-	6	11.6	11.9	15.3
150	165.2	166.6	325	38	58	196	204	8	2	235	151.0	275	12	27	M24	186	9.5	-	-	6	17.0	17.3	22.2
200	216.3	218.0	370	42	64	248	256	8	2	280	199.9	320	12	27	M24	237	9.5	-	-	6	22.2	22.6	32.6
250	267.4	269.5	450	48	72	306	314	10	2	345	248.8	390	12	33	M30×3	290	10	-	-	6	36.8	37.5	55.2
300	318.5	321.0	515	52	78	360	370	10	3	405	297.9	450	16	33	M30×3	345	12	-	-	6	49.1	50.0	77.9
350	355.6	358.1	560	54	84	402	412	12	3	450	333.4	495	16	33	M30×3	383	13	-	-	6	60.4	61.5	96.9
400	406.4	409.0	630	60	92	456	468	15	3	510	381.0	560	16	39	M36×3	435	14	-	-	7	82.0	83.7	136

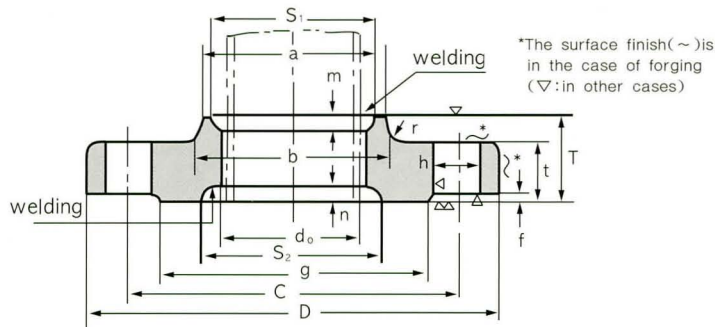
- REMARKS: 1. As far as possible, nominal diameter in parenthesis should be avoid from use.  
 2. The dimensional tolerance shall confirm to JIS B 2203.  
 3. The flange gasket surface is based on large raised facing specified in JIS B 2202. But, if necessary, facings other than the large raised facing specified in JIS B 2201 can be designated by customers.  
 4. Size d is an example of pipe thickness for schedule 40 of JIS G 3454 and JIS B 3456. When other size is necessary, customers can order it at will.  
 5. Material  
 Carbon Steel:S25C specified in JIS G 4051, or SF440A specified in JIS G 3201.  
 Molybdeum Steel: 1/2Mo Steel specified in tables 1 and 2 of JIS B 2215.  
 Chromium-Molybdenum Steel: 1/4 Cr 1/2 Mo Steel specified in tables 1 and 2 of JIS B 2215.  
 \*The surface finish is in the case of forging(Δ:in other cases)

# 40Kg/Cm<sup>2</sup>

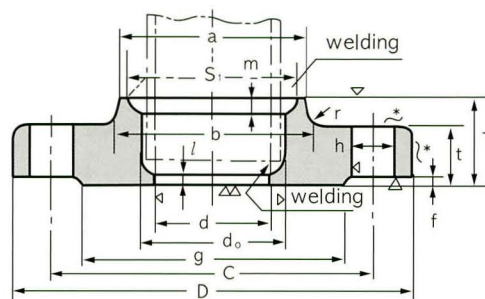
JIS B2216

40Kg/Cm<sup>2</sup> SLIP-ON WELDING STEEL PIPE FLANGES

B-TYPE  
NOMINAL SIZE 10-50A



C-TYPE  
NOMINAL SIZE 65-400A



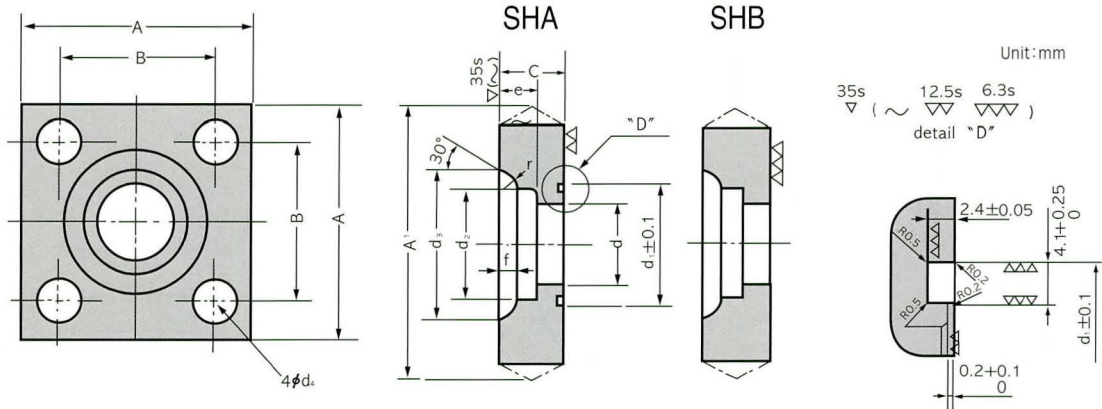
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Approx Weight (kg)	
				t	T	Diameter of Hub		Rad-ius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	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	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	115.4	250	36	52	145	151	8	2	165	97.1	205	8	25	M22	133.0	8.5	133.0	7			10.78
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

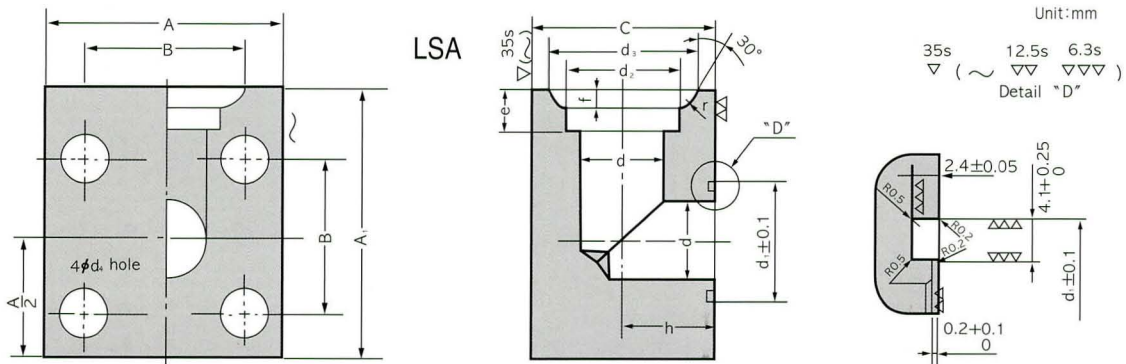
- REMARKY: 1. As far as possible, nominal diameter in parenthesis should be avoid from use.  
 2. The dimensional tolerance shall confirm to JIS B2203.  
 3. The flange gasket surface is based on large raised facing specified in JIS B2202. But, if necessary, facings other than the large raised facing 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 B3456. When other size is necessary, customers can order it at will.  
 5. Refer to JIS B2216.

# 210Kg/Cm<sup>2</sup>

(JIS B2291-1970)  
FLANGE FOR OIL PRESSURE



Nominal Boree	A		A' (MAX)	B		C		d	d1	d2		e	d3	d4	f	r	Weight (kg)	REMARK		
		±																O RING	BOLT	
15	63	±1	67	40	±0.2	22	0	16	30	±0.1	22.2	+0.2 0	11	32	11	3.5	5	0.6	G25	JM10
20	68		72	45		22	-1	20	35		27.7		12	38	11	4.0	5	0.7	G30	M10
25	80	±1.2	85	53	±0.2	28	0	25	40	±0.1	34.5	+0.3 0	14	45	13	4.0	5	1.2	G35	M12
32	90		95	63		28	-1.5	31.5	45		43.2		16	56	13	6.0	5	1.5	G40	M12
40	100	±1.5	106	70	±0.4	36	0	37.5	55	±0.1	49.1	+0.3 0	18	63	18	7.0	5	2.4	G50	M16
50	112		118	80		36	0	47.5	65		61.1		20	75	18	7.0	5	2.8	G60	M16
65	140	±2	148	100	±0.4	45	-2	60	80	±0.1	77.1	+0.4 0	22	95	22	9.5	6	5.3	G75	M20
80	155		163	112		45	-2	71	90		90.0		25	108	24	11.0	6	6.2	G85	M22



Nominal Boree	A		A1	B		C		h	d	d1	d2	e	d3	d4	f	r	Weight (kg)	REMARK		
		±																BOLT	O-RING	
15	54	±1	63	36	±0.2	40	0	20	16	30	22.2	+0.2 0	11	32	11	3.5	5	1.0	M10	G25
20	58		70	40		22.5		20	35	27.7	12		38	11	4.0	5	1.3	M10	G30	
25	68	±1.2	82	48	±0.2	50	0	25	25	40	34.5	+0.3 0	14	45	13	4.0	5	1.9	M12	G35
32	76		92	56		31.5		31.5	45	43.2	16		56	13	6.0	5	2.9	M12	G40	
40	92	±1.5	110	65	±0.4	71	-2	35.5	37.5	55	49.1	+0.3 0	18	63	18	7.0	5	4.7	M16	G50
50	100		125	73		42.5		47.5	65	61.1	20		75	18	7.0	5	6.8	M16	G60	
65	128	±2	150	92	±0.4	106	0	53	60	80	77.1	+0.4 0	22	95	22	9.0	6	12.8	M20	G75
80	140		170	103		59		71	90	90.0	25		108	24	11.0	6	17.0	M22	G85	

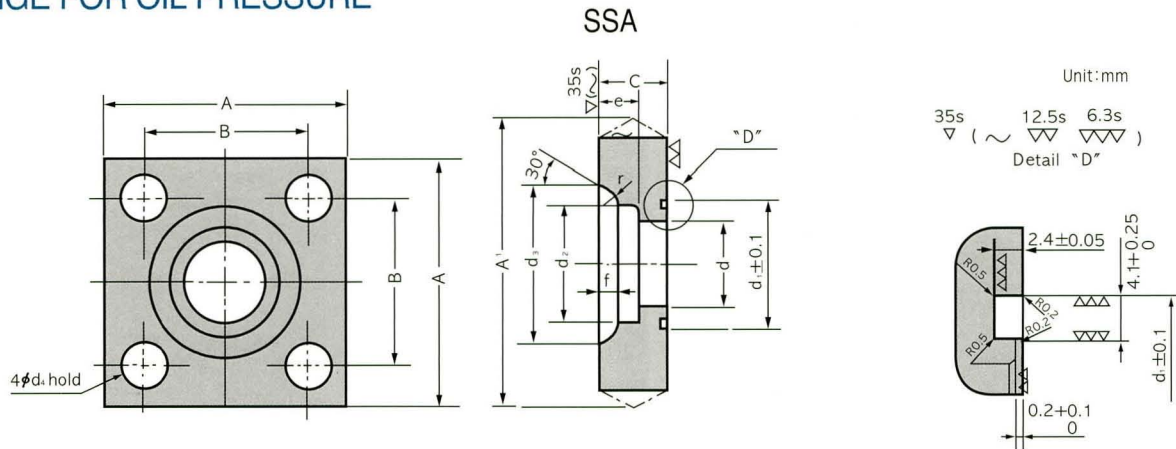
• SS41, S20C, S22C, S25C  
• BOLT: 인장강도 80Kg/cm<sup>2</sup> MIN, 신율 15% MIN

• NUT: 60Kg/cm<sup>2</sup> MIN, 신율 10% MIN  
• ORING: JIS B2401의 고정용

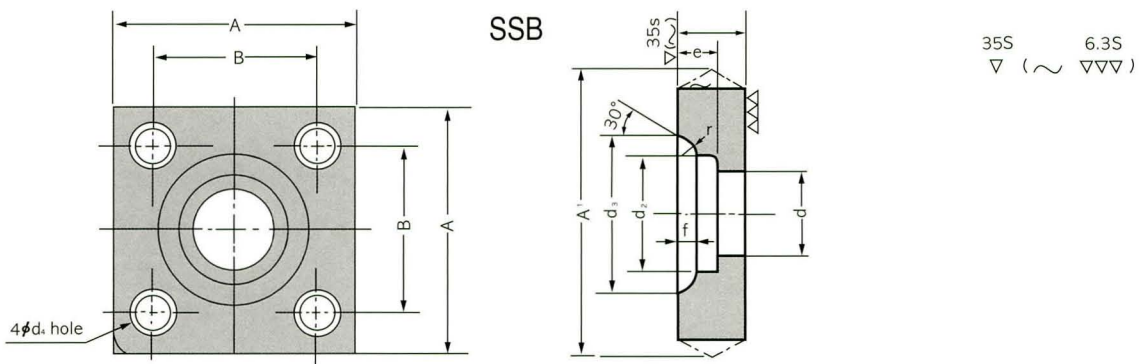
# 210Kgf/Cm<sup>2</sup>

(JIS B2291-1970)

FLANGE FOR OIL PRESSURE



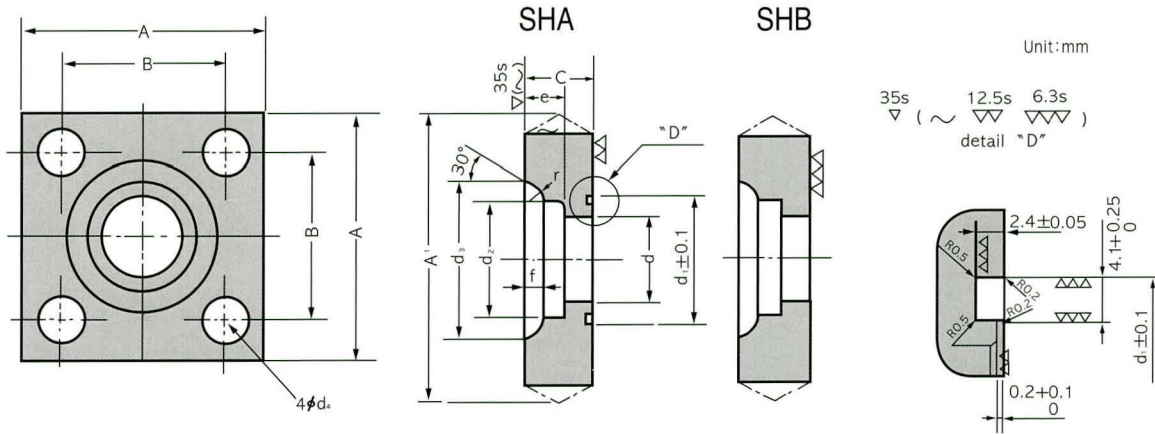
Nominal Bore	A		A' (MAX)	B		C		d	d1	d2	e	d3	d4	f	r	Weight (kg)	REMARK		
															BOLT		O-RING		
15	54	±1	58	36	±0.2	22	0	16	30	22.2	+0.2	11	32	11	3.5	5	0.5	M10	G25
20	58		62	40		22	-1	20	35	27.7	0	12	38	11	4.0	5	0.6	M10	G30
25	68		73	48		28	0	25	40	34.5	±0.3	14	45	13	4.0	5	0.8	M12	G35
32	76	±1.2	81	56	28	-1.5	31.5	45	43.2	16		56	13	6.0	5	1.0	M12	G40	
40	92		98	65	36	±0.4	0	37.5	55	49.1		18	63	18	7.0	5	1.9	M16	G50
50	100	±1.5	106	73	36		0	47.5	65	61.1	20	75	18	7.0	5	2.0	M16	G60	
65	128		136	92	45		0	60	80	77.1	±0.4	22	95	22	9.5	6	4.1	M20	G75
80	140	±2	148	103	45	0	71	90	90.0	0		25	108	24	11.0	6	4.7	M22	G85



Nominal Bore	A		A' (MAX)	B		C		d	d2	e	d3	d4	f	r	Weight (kg)	
15	54	±1	58	36	±0.2	22	0	16	22.2	+0.2	11	32	M10	3.5	5	0.5
20	58		62	40		22	-1	20	27.7	0	12	38	M10	4.0	5	0.6
25	68		73	48		28	0	25	34.5	±0.3	14	45	M12	4.0	5	0.8
32	76	±1.2	81	56	28	-1.5	31.5	43.2	16		56	M12	6.0	5	1.0	
40	92		98	65	36	±0.4	0	37.5	49.1		18	63	M16	7.0	5	1.9
50	100	±1.5	106	73	36		0	47.5	61.1	20	75	M16	7.0	5	2.0	
65	128		136	92	45		-20	60	77.1	+0.4	22	95	M20	9.5	6	4.1
80	140	±2	148	103	45	0	71	90.0	0	25	108	M22	11.0	6	4.7	

# 280Kgf/Cm<sup>2</sup>

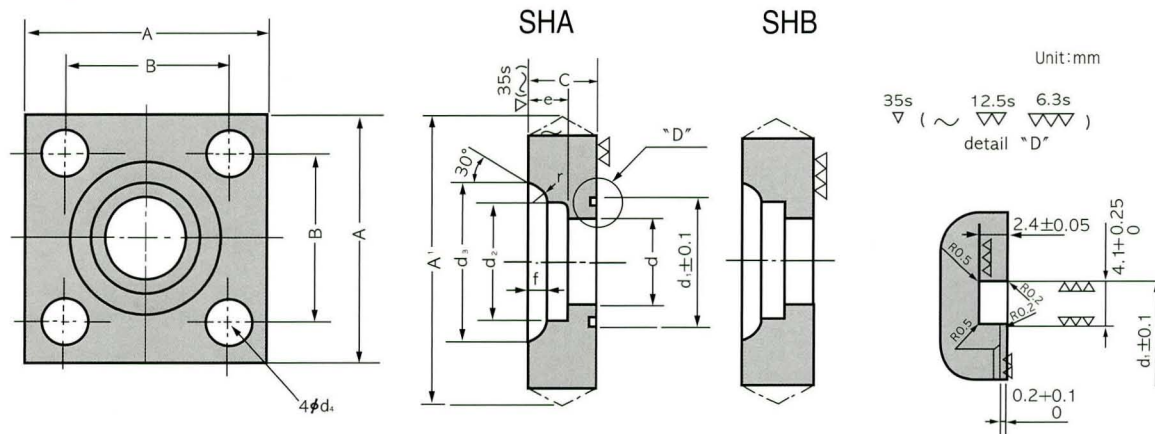
## FLANGE FOR OIL PRESSURE



Nominal Bore	A	A' (MAX)	B	C		d	d1	d2		e	d3	d4	f	r	Weight (kg)	
15	66	±1	70	43	22	0	12.3	24	22.2	+0.2	12	34	11	4.0	5	0.63
20	75		76	48	25	-1	16.2	30	27.7	0	12	40	11	4.5	5	0.85
25	85	±1.2	91	58	35	0	21.2	35	34.5	+0.3	14	48	13.5	5.0	5	1.64
32	98		104	68	35	-1.5	29.9	45	43.2		0	18	60	17.5	6.5	5
40	105	±1.5	112	74	40	0	34.4	50	49.1	+0.4	20	66	17.5	7.5	5	2.66
50	130		139	90	50		61.1	20	79		22	8.0	5	5.14		
65	150	±2	161	108	60	-2	57.3	75	77.1	0	25	100	24	10.0	6	7.95
80	170		181	120	65	66.9	85	90.0	0	25	114	26	12.0	6	11.0	

# 350Kgf/Cm<sup>2</sup>

## FLANGE FOR OIL PRESSURE

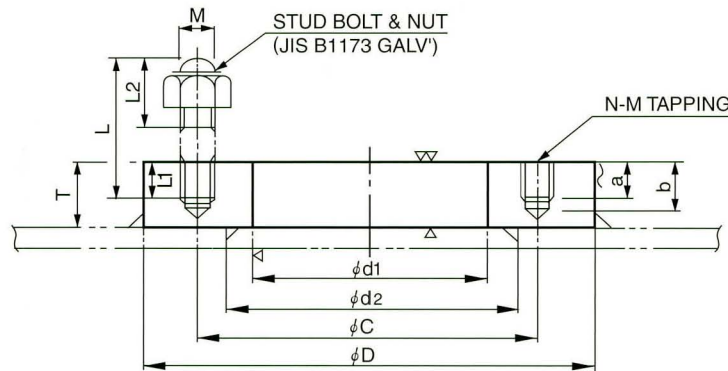


Nominal Bore	A	A' (MAX)	B	C		d	d1	d2		e	d3	d4	f	r	Weight (kg)	
15	68	±1.2	73	45	28	0	12.3	24	22.2	+0.2	12	37.5	11	4	5	0.88
20	82		87	55	30		30	16.2	30	27.7	0	12	43.5	13.5	5	5
25	95	±1.5	101	65	35	-1.5	21.2	35	34.5	+0.3	14	53	17.5	5.5	6	2.02
32	100		106	70	35	43.2	18	63	17.5		7	6	2.16			
40	105	±1.5	112	75	42	0	28.2	45	49.1	+0.4	20	70	17.5	8	6	2.84
50	132		140	92	50		61.1	25	84		22	9	6	5.30		
65	160	±2	170	112	60	-2	48.3	65	77.1	0	30	105	26	12	7	9.92
80	190		202	130	68	58.7	75	90.0	0	30	120	33	13.5	7	14.8	



# 5K SET-ON FLANGE

JIS B 2220 – 1984

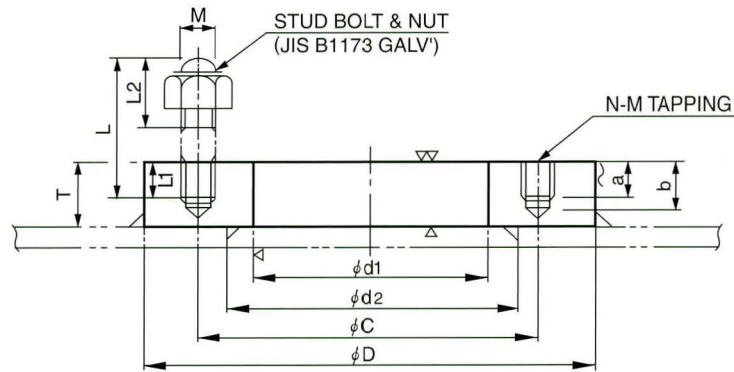


Unit: mm

Nominal Bore of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	75	55	17.8	16	10	12	4	M10	32	CONTINUOUS THREAD		0.47
15A	80	60	22.2	16	10	12	4	M10	32	CONTINUOUS THREAD		0.53
20A	85	65	27.7	16	10	12	4	M10	32	CONTINUOUS THREAD		0.60
25A	95	75	34.5	16	10	12	4	M10	32			0.72
32A	115	90	43.2	22	12	16	4	M12	40	22	12	1.45
40A	120	95	49.1	22	12	16	4	M12	40	22	12	1.54
50A	130	105	61.1	22	12	16	4	M12	45	22	12	1.70
65A	155	130	77.1	22	12	16	4	M12	45	22	12	2.36
80A	180	145	90.0	26	16	19	4	M16	50	28	16	3.74
100A	200	165	115.4	26	16	19	8	M16	55	28	16	4.01
125A	235	200	141.2	26	16	19	8	M16	55	28	16	5.38
150A	265	230	166.6	26	16	19	8	M16	55	28	16	6.52
200A	320	280	218.0	30	20	23	8	M20	65	36	20	9.66
250A	385	345	269.5	30	20	23	12	M20	65	36	20	13.25
300A	430	390	321.0	30	20	23	12	M20	65	36	20	14.41
350A	480	435	358.1	34	22	25	12	M22	75	40	22	20.55
400A	540	495	409.0	34	22	25	16	M22	75	40	22	24.85
450A	605	555	460.0	34	22	25	16	M22	75	40	22	31.15

# 10K SET-ON FLANGE

JIS B 2220 – 1984



Unit: mm

Nominal Bore of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	90	65	17.8	22	12	16	4	M12	40	22	12	0.97
15A	95	70	22.2	22	12	16	4	M12	40	22	12	1.07
20A	100	75	27.7	22	12	16	4	M12	40	22	12	1.17
25A	125	90	34.5	26	16	19	4	M16	50	28	16	2.27
32A	135	100	43.2	26	16	19	4	M16	50	28	16	2.57
40A	140	105	49.1	26	16	19	4	M16	50	28	16	2.67
50A	155	120	61.1	26	16	19	4	M16	50	28	16	3.07
65A	175	140	77.1	26	16	19	4	M16	55	28	16	3.11
80A	185	150	90.0	26	16	19	8	M16	55	28	16	3.87
100A	210	175	115.4	26	16	19	8	M16	55	28	16	4.67
125A	250	210	141.2	30	20	23	8	M20	65	36	20	7.36
150A	280	240	166.6	30	20	23	8	M20	70	36	20	8.84
200A	330	290	218.0	30	20	23	12	M20	70	36	20	10.64
250A	400	355	269.5	34	22	25	12	M22	75	40	22	17.51
300A	445	400	321.0	34	22	25	16	M22	75	40	22	18.63

# KS B 2332 – 1994

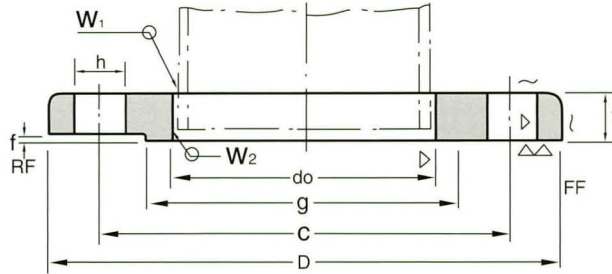
수도용 제수밸브용 플랜지

Sluice valves for water works flange

# KS B 2333 – 1995

수도용 버터플라이 밸브용 플랜지

Butterfly valves for water works flange

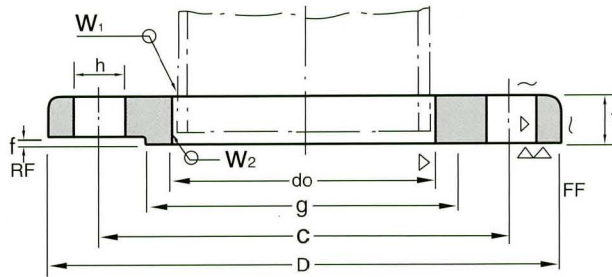


Unit:mm

Nominal Bore of Flange	Inside Diam, of Flange do	KS B 2332 - 1994 수도용 제수밸브용 플랜지 Sluice valves for water works flange Sectional Dimensions of Flange								KS B 2333 - 1994 수도용 버터플라이 밸브용 플랜지 Butterfly valves for water works flange Sectional Dimensions of Flange							
		T	D	C	g	f	Dia, of Bolt		T	D	C	g	f	Dia, of Bolt			
							h	N						h	N		
50A	61.1	20	155	120	100	2	19	4									
80A	90.0	24	200	160	133	3	19	4									
100A	115.4	25	220	180	153	3	19	8									
125A	141.2	25	250	210	183	3	19	8									
150A	166.6	26	285	240	209	3	23	8									
200A	218.0	27	340	295	264	3	23	8	24	340	295	264	3	23	8		
250A	269.5	29	395	350	319	3	23	12	25	395	350	319	3	23	12		
300A	321.0	31	445	400	367	4	23	12	27	445	400	367	4	23	12		
350A	358.1	32	505	460	427	4	23	16	28	505	460	427	4	23	16		
400A	409.0	34	565	515	477	4	28	16	29	565	515	477	4	28	16		
450A	460.0	35	615	565	527	4	28	20	30	615	565	527	4	28	20		
500A	511.0	36	670	620	582	4	28	20	31	670	620	582	4	28	20		
600A	613.0	40	780	725	692	4	31	20	32	780	725	692	4	31	20		
700A	715.0	46	895	840	797	4	31	24	34	895	840	797	4	31	24		
800A	817.0	49	1015	950	904	5	34	24	36	1015	950	904	5	34	24		
900A	919.0	51	1115	1050	1004	5	34	28	38	1115	1050	1004	5	34	28		
1000A	1021.0	55	1230	1160	1111	5	37	28	40	1230	1160	1111	5	37	28		
1100A	1122.0	61	1366	1270	1200	5	37	32	42	1366	1270	1200	5	37	32		
1200A	1224.0	63	1470	1387	1304	5	37	32	44	1470	1387	1304	5	37	32		
1350A	1376.0	68	1642	1552	1462	6	38	36	48	1642	1552	1462	6	38	36		
1500A	1529.0	74	1800	1710	1620	6	38	36	50	1800	1710	1620	6	38	36		
1600A	1617.0								50	1915	1820	1760	6	40	40		
1650A	1682.0								50	1950	1860	1770	6	40	40		
1800A	1817.0								50	2115	2020	1960	6	48	44		
2000A	2017.0								54	2325	2230	2170	6	48	48		

# 수도용 도복장 강관 이형관용(KS D 3578 - 1997) 플랜지

Fittings of Coated Steel Pipes for Water Service

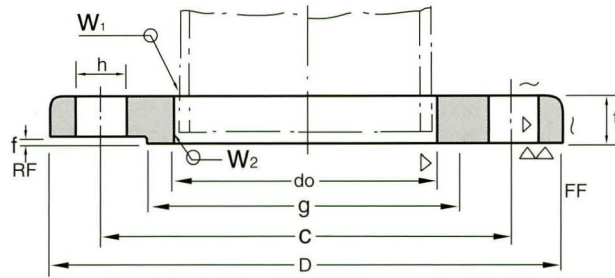


Unit:mm

Nominal Bore of Flange	Inside Diam. of Flange do	F12 KS D 3578 10kgf/cm <sup>2</sup> Sectional Dimensions of RF Flange								F15 KS D 3578 16kgf/cm <sup>2</sup> Sectional Dimensions of RF Flange							
		T	D	C	g	f	Bolt Hole		Weight (kg)	T	D	C	g	f	Bolt Hole		Weight (kg)
							h	N							h	N	
80A	90.0	18	211	160	133	2	19	4	3.59	18	211	160	133	2	19	4	3.59
100A	115.4	18	238	180	153	2	19	8	4.14	18	238	180	153	2	19	8	4.14
125A	141.2	20	263	210	183	2	19	8	5.36	20	263	210	183	2	19	8	5.36
150A	166.6	22	290	240	209	2	23	8	6.69	22	290	240	209	2	23	8	6.69
200A	218.0	22	342	295	264	2	23	8	8.41	22	342	295	264	2	23	8	8.41
250A	269.5	24	410	350	319	3	23	12	12.2	24	410	350	319	3	23	12	12.2
300A	321.0	24	464	400	367	3	23	12	14.5	24	464	400	367	3	23	12	17.81
350A	358.1	26	530	460	427	3	23	16	21.7	26	530	460	427	3	23	16	21.7
400A	409.0	26	582	515	477	3	27	16	24.1	28	582	515	477	3	27	16	26.1
450A	460.0	28	652	565	518	3	27	20	32.2	30	652	565	518	3	27	20	34.6
500A	511.0	28	706	620	582	3	27	20	36.3	30	706	620	582	3	27	20	39.1
600A	613.0	30	810	725	682	3	30	20	46.1	34	810	725	682	3	30	20	52.7
700A	715.0	32	928	840	797	3	30	24	62.1	34	928	840	797	3	30	24	66.2
800A	817.0	34	1034	950	904	3	33	24	76.0	36	1034	950	904	3	33	24	80.7
900A	919.0	36	1156	1050	1004	3	33	28	98.8	38	1156	1050	1004	3	33	28	105
1000A	1021.0	38	1262	1160	1111	3	36	28	117	42	1262	1160	1111	3	36	28	130
1100A	1122.0	41	1366	1270	1200	3	36	32	138	43	1366	1270	1200	3	36	32	145
1200A	1224.0	43	1470	1387	1304	3	36	32	160	45	1470	1387	1304	3	36	32	168
1350A	1376.0	45	1642	1552	1462	3	40	36	201	51	1642	1552	1462	3	40	36	229
1500A	1529.0	48	1800	1710	1620	3	40	36	244	53	1800	1710	1620	3	40	36	271
1600A	1617.0	53	1915	1820	1760	3	40	40	305	58	1915	1820	1760	3	40	40	334
1650A	1682.0	53	1965	1870	1770	3	40	40	292	58	1965	1870	1770	3	40	40	321
1800A	1817.0	55	2115	2020	1960	3	49	44	337	59	2115	2020	1960	3	49	44	362
1900A	1912.0	55	2220	2126	2066	4	49	44	378	59	2220	2126	2066	3	49	44	389
2000A	2017.0	58	2325	2230	2170	4	49	48	401	62	2325	2230	2170	4	49	48	430
2100A	2121.0	59	2440	2340	2240	4	49	48	448	64	2440	2340	2240	4	49	48	487
2200A	2221.0	61	2655	2440	2370	4	56	52	487	68	2550	2440	2370	4	56	52	545
2300A	2321.0	62	2640	2540	2440	4	56	52	522	69	2650	2540	2440	4	56	52	583
2400A	2121.0	64	2760	2650	2570	4	56	56	570	70	2760	2650	2570	4	56	56	625
2500A	2521.0	68	2860	2750	2670	5	56	56	624	72	2860	2750	2670	5	56	56	662
2600A	2621.0	68	2960	2850	2780	5	56	60	643	72	2960	2850	2780	5	56	60	682
2700A	2721.0	71	3080	2960	2850	5	56	60	740								
2800A	2821.0	72	3180	3070	3000	5	56	64	779								
2900A	2946.0	74	3292	3180	3104	5	56	64	861								
3000A	3021.0	76	3405	3290	3210	5	56	64	952								

# 수도용 도복장 강관 이형관용(KS D 3578 - 1997) 플랜지

Fittings of Coated Steel Pipes for Water Service



Unit:mm

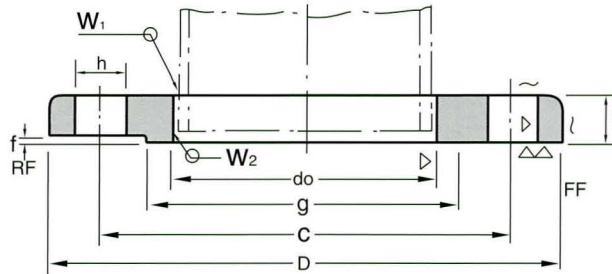
Nominal Bore of Flange	Inside Diam, of Flange do	F20 KS D 3578 20kgf/cm <sup>2</sup> Sectional Dimensions of RF Flange								F20 KS D 3578 20kgf/cm <sup>2</sup> Sectional Dimensions of Blind Flange							
		T	D	C	g	f	Bolt Hole		Weight (kg)	T	D	C	g	f	Bolt Hole		Weight (kg)
							h	N							h	N	
80A	90.0	22	200	160	135	2	23	8	3.56	12	211	160	60	2	19	4	2.80
100A	115.4	22	225	185	160	2	23	8	4.26	12	238	180	85	2	19	8	3.50
125A	141.2	23	270	225	195	2	25	8	6.49	12	263	210	110	2	19	8	4.33
150A	166.6	27	305	260	230	2	25	12	9.27	12	290	240	135	2	23	8	5.25
200A	218.0	27	350	305	275	2	25	12	10.9	14	342	295	185	2	23	8	9.00
250A	269.5	28	430	380	345	2	27	12	17.7	16	410	350	235	2	23	12	15.0
300A	321.0	30	480	430	395	3	27	16	20.5	19	464	400	285	3	23	12	22.8
350A	358.1	34	540	480	440	3	33	16	29.5	21	530	460	325	3	23	16	32.9
400A	409.0	38	605	540	495	3	33	16	41.1	23	582	515	375	3	27	16	43.8
450A	460.0	40	675	605	560	3	33	20	53.2	26	652	565	425	3	27	20	62.8
500A	511.0	42	730	660	615	3	33	20	63.1	28	706	620	475	3	27	20	80.0
600A	613.0	46	845	770	720	3	39	24	83.8	33	810	725	580	3	30	20	126
700A	715.0	50	960	875	820	5	42	24	109	37	928	840	680	3	30	24	186
800A	817.0	54	1085	990	930	5	48	24	146	42	1034	950	780	3	33	24	264
900A	919.0	58	1185	1090	1030	5	48	28	171	47	1156	1050	880	3	33	28	370
1000A	1021.0	64	1320	1210	1140	5	56	28	235	51	1262	1160	980	3	36	28	480
1100A	1122.0	67	1420	1310	1240	5	56	32	264								
1200A	1224.0	70	1530	1420	1350	5	56	32	313								
1350A	1376.0	76	1700	1590	1510	5	62	32	400								
1500A	1529.0	80	1865	1750	1670	5	62	36	485								

Nominal Bore of Flange	Inside Diam, of Flange do	F12 KS D 3578 10kgf/cm <sup>2</sup> Sectional Dimensions of Blind Flange								F15 KS D 3578 16kgf/cm <sup>2</sup> Sectional Dimensions of Blind Flange							
		T	D	C	g	f	Bolt Hole		Weight (kg)	T	D	C	g	f	Bolt Hole		Weight (kg)
							h	N							h	N	
80A	90.0	13	185	160	60	2	19	4	2.51	18	200	160	60	2	23	8	3.81
100A	115.4	13	210	180	85	2	19	8	3.12	18	225	185	85	2	23	8	4.77
125A	141.2	14	250	210	110	2	19	8	4.80	18	270	225	110	2	25	8	6.95
150A	166.6	14	280	240	135	2	23	8	5.95	22	305	260	135	2	25	12	10.9
200A	218.0	16	330	295	185	2	23	8	9.75	22	350	305	185	2	25	12	14.8
250A	269.5	17	400	350	235	2	23	12	15.2	23	430	380	235	2	27	12	23.8
300A	321.0	19	445	400	285	3	23	12	21.3	26	480	430	285	3	27	16	33.4
350A	358.1	22	490	460	325	3	23	16	30.0	28	540	480	325	3	33	16	45.1
400A	409.0	25	560	515	375	3	27	16	44.5	32	605	540	375	3	33	16	65.8
450A	460.0	27	620	565	425	3	27	20	59.4	36	675	605	425	3	33	20	92.9
500A	511.0	30	675	620	475	3	27	20	78.9	39	730	660	475	3	33	20	119
600A	613.0	35	795	725	580	3	30	20	129	45	845	770	580	3	39	24	183
700A	715.0	40	905	840	680	3	30	24	192								
800A	817.0	45	1020	950	780	3	33	24	276								
900A	919.0	50	1120	1032	880	3	33	28	371								
1000A	1021.0	62	1235	1160	980	3	36	28	561								

# KS B 6216 - 1998

## JIS B 8210 - 1978 스프링 안전밸브의 설치 플랜지

전량정식 및 전량식 안전밸브 플랜지(온양정식 및 온양식)



Unit:mm

Pressure kgf/cm <sup>2</sup>	Nominal Bore of Flange	Inside Diam. of Flange	Sectional Dimensions of Flange				Bolt Hole		
			T	D	g	f	C	h	N
10K	20A	27.7	22	125	70	1	90	19	4
	25A	34.5	22	130	75	1	95	19	4
	32A	43.2	24	140	85	2	105	19	4
	40A	49.1	24	155	100	2	120	19	8
	50A	61.1	26	165	110	2	130	19	8
	65A	77.1	28	200	135	2	160	23	8
	80A	90.0	30	210	145	2	170	23	8
	100A	115.4	32	245	180	2	205	23	8
	125A	141.2	34	280	205	2	235	25	12
	150A	166.6	36	325	250	2	280	25	12
200A	218.0	38	385	300	2	335	27	12	
20K	20A	27.7	22	130	70	1	95	19	4
	25A	34.5	22	135	75	1	100	19	4
	32A	43.2	24	160	90	2	120	23	4
	40A	49.1	24	165	105	2	130	19	8
	50A	61.1	26	185	115	2	145	23	8
	65A	77.1	30	210	140	2	170	23	8
	80A	90.0	32	230	150	2	185	25	8
	100A	115.4	36	265	185	2	220	25	8
	125A	141.2	38	290	210	2	245	25	12
	150A	166.6	42	350	260	2	300	27	12
200A	218.0	46	410	310	2	350	33	12	
30K	20A	27.7	24	130	70	1	95	19	4
	25A	34.5	24	135	75	1	100	19	4
	32A	43.2	26	160	90	2	120	23	4
	40A	49.1	28	165	105	2	130	19	8
	50A	61.1	30	185	115	2	145	23	8
	65A	77.1	34	210	140	2	170	23	8
	80A	90.0	36	230	150	2	185	25	8
	100A	115.4	40	285	190	2	235	27	8
	125A	141.2	44	315	215	2	265	27	12
	150A	166.6	48	375	265	2	315	33	12
200A	218.0	54	435	315	2	370	36	12	

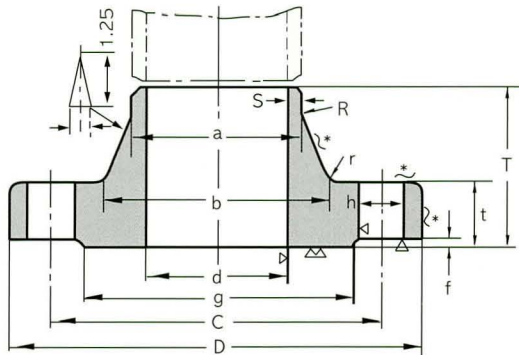
# WELDING NECK FLANGE

- 10Kgf/Cm<sup>2</sup>
- 16Kgf/Cm<sup>2</sup>
- 20Kgf/Cm<sup>2</sup>
- 30Kgf/Cm<sup>2</sup>
- 40Kgf/Cm<sup>2</sup>
- 63Kgf/Cm<sup>2</sup>
- FACING 2



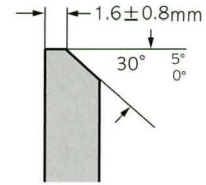
# 10Kg/Cm<sup>2</sup>

## WELDING NECK FLANGES



\*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

Unit:mm

Nominal Diam of Flange	Outside Diam of Steel Pipe	Inside Diam of Flange d	Outside Diam of Flange D	Sectional Dimensions of Flange					Dia of Bolt				Nominal Bolt Size	Length of wecr Depat P *4	Approx Weight (kg)	
				t	T *1	Diam of Hub		Radius r *3	Raised Face f	Diam of Raised Face g	Bolt Circle Bolt Holes	Number of Bolt Holes				Hole Dia h
						a	b									
10	17.3	To be specified by purchaser	90	12	28.9	17.3	25	4	1	46	65	4	15	M12	3.5	
15	21.7		95	12	30.6	21.7	33	4	1	51	70	4	15	M12	4.5	
20	27.2		100	14	33.9	27.2	38	4	1	56	75	4	15	M12	6.4	
25	34		125	14	36.3	34.0	47	4	1	67	90	4	19	M16	6.0	
32	42.7		135	16	40.3	42.7	57	5	2	76	100	4	19	M16	6.4	
40	48.6		140	16	41.2	48.6	64	5	2	81	105	4	19	M16	5.9	
50	60.5		155	16	42.9	60.5	77	5	2	96	120	4	19	M16	6.3	
65	76.3		175	18	53.0	76.3	97	5	2	116	140	4	19	M16	9.1	
80	89.1		185	18	53.0	89.1	109	6	2	126	150	8	19	M16	9.6	
(90)	101.6		195	18	50.6	101.6	120	6	2	136	160	8	19	M16	9.6	
100	114.3		210	18	54.3	114.3	135	6	2	151	175	8	19	M16	10.4	
125	139.8		250	20	56.2	139.8	160	6	2	182	210	8	23	M20	10.9	
150	165.2		280	22	65.3	165.2	190	6	2	212	240	8	23	M20	12.3	
(175)	190.7		305	22	66.1	190.7	215	6	2	237	265	12	23	M20	13.7	
200	216.3		330	22	66.1	216.3	240	6	2	262	290	12	23	M20	14.4	
(225)	241.8		350	22	62.3	241.8	262	6	2	282	310	12	23	M20	15.0	
250	267.4		400	24	70.7	267.4	292	6	2	324	355	12	25	M22	15.9	
300	318.5		445	24	75.9	318.5	346	6	3	268	400	16	25	M22	17.5	
350	355.6		490	26	83.0	355.6	386	8	3	413	445	16	25	M22	19.0	
400	406.4		560	28	94.4	406.4	442	8	3	475	510	16	27	M24	21.9	
450	457.2		620	30	107.9	457.2	502	10	3	530	565	20	27	M24	21.9	
500	508		675	30	110.2	508.0	554	10	3	585	620	20	27	M24	22.7	
550	558.8		745	32	119.9	558.8	610	10	3	640	680	20	33	M30	23.9	
600	609.6		795	32	123.6	609.6	662	10	3	690	730	24	33	M30	26.1	

1. \*1 \*2 \*4 DIMENSIONS OF "T" "r" "S" "P" ARE MAKER, JUNG ANG' S STANDARD.

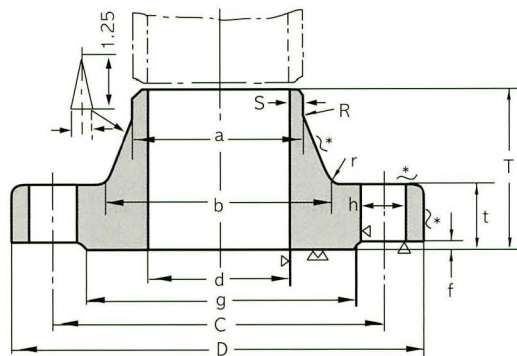
2. \*2 UNDER NOMINAL SIZE 225m/m & UNDER DIMENSION OF "b" IS MAKER, JUNG ANG' S STANDARD.

3. ALL DIMENSIONS OF FLANGE WAS DESIGNED ON JIS B2220 & B1503 BASE



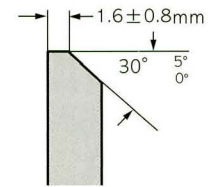
# 20Kg/Cm<sup>2</sup>

## WELDING NECK STEEL PIPE FLANGES



\*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

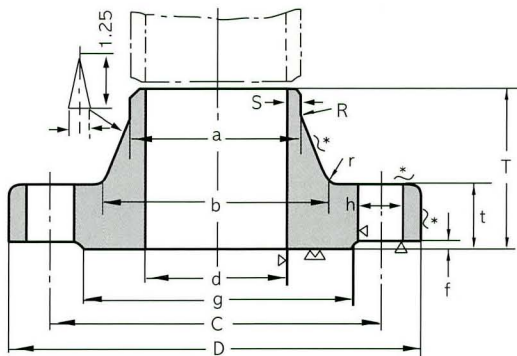
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight (kg)
			t	d	a	b	S	T	P	Radius	f	g	Bolt Diameter Circle C	Number of Bolt Holes	Diameter of Hole h		
10	17.3	90	14	To be specified by purchaser.	17.3	32	To be specified by purchaser.	35.9	3.5	4	1	46	65	4	15	M12	
15	21.7	95	14		21.7	36		36.4	4.5	4	1	51	70	4	15	M12	
20	27.2	100	16		27.2	42		40.9	6.4	4	1	56	75	4	15	M12	
25	34.0	125	16		34.0	50		42.0	6.0	4	1	67	90	4	19	M16	
32	42.7	135	18		42.7	60		46.0	6.4	5	2	76	100	4	19	M16	
40	48.6	140	18		48.6	66		45.7	5.9	5	2	81	105	4	19	M16	
50	60.5	155	18		60.5	80		48.7	6.3	5	2	96	120	8	19	M16	
65	76.3	175	20		76.3	104		63.7	9.1	5	2	116	140	8	19	M16	
80	89.1	200	22		89.1	117		66.5	9.6	6	2	132	160	8	23	M20	
90	101.6	210	24		101.6	130		68.9	9.4	6	2	145	170	8	23	M20	
100	114.3	225	24		114.3	142		69.0	10.4	6	2	160	185	8	23	M20	
125	139.8	270	26		139.8	172		77.2	10.9	6	2	195	225	8	25	M22	
150	165.2	305	28		165.2	202		86.3	123	6	2	230	260	12	25	M22	
200	216.3	350	30		216.3	252		89.0	14.4	6	2	275	305	12	25	M22	
250	267.4	430	34		267.4	312		105.7	15.9	6	2	345	380	12	27	M24	
300	318.5	480	36		318.5	364		110.4	17.5	8	3	395	430	16	27	M24	
350	355.6	540	40	355.6	408	124.5	19.0	8	3	440	480	16	33	M30×3			
400	406.4	605	46	406.4	456	129.9	21.9	10	3	495	540	16	33	M30×3			
450	457.2	675	48	457.2	514	140.9	21.9	10	3	560	605	20	33	M30×3			
500	508.0	730	50	508.0	568	147.7	22.7	10	3	615	660	20	33	M30×3			
550	558.8	795	52	558.8	622	154.9	23.9	10	3	670	720	20	39	M36×3			
600	609.6	845	54	609.6	676	163.1	26.1	10	3	720	770	24	39	M36×3			

NOTE: DIMENSIONS ARE MAKER JUNG ANG STANDARD AND DESIGN BASE IS JIS B2220-1984

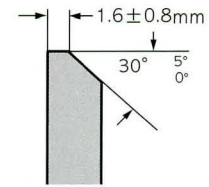
# 30Kg/Cm<sup>2</sup>

## JIS B2220-1984(KSB 1503-1999) WELDING NECK STEEL PIPE FLANGES



\*The surface finish shown above is in the case of forging (▽marks:in other cases)

### Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

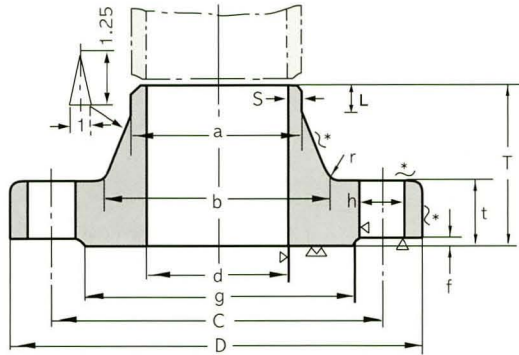
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight (kg)
			t	d	a	b	s	T	R	Rad-ius r	f	g	Bolt Dia-meter Circle C	Number of Bolt Holes	Hole Dia-meter h		
15	21.7	115	18	15.8	22.0	40	3.1	45	20	6	1	55	80	4	19	M16	1.33
20	27.2	120	18	21.1	27.5	44	3.2	45	20	6	1	60	85	4	19	M16	1.47
25	34.0	130	20	26.8	34.4	52	3.8	48	20	6	1	70	95	4	19	M16	1.95
32	42.7	140	22	35.1	43.1	62	4.0	52	30	6	2	80	105	4	19	M16	2.43
40	48.6	160	22	40.7	49.1	70	4.2	54	30	6	2	90	120	4	23	M20	3.16
50	60.5	165	22	52.2	61.0	84	4.4	57	30	8	2	105	130	8	19	M16	3.33
65	76.3	200	26	65.3	76.9	104	5.8	69	30	8	2	130	160	8	23	M20	5.91
80	89.1	210	28	77.5	89.7	118	6.1	73	30	8	2	140	170	8	23	M20	7.05
(90)	101.6	230	30	89.5	102.3	130	6.4	74	30	8	2	150	185	8	25	M22	8.54
100	114.3	240	32	101.5	115.1	142	6.8	76	30	8	2	160	195	8	25	M22	9.72
125	139.8	275	36	125.7	140.7	172	7.5	86	50	10	2	195	230	8	25	M22	14.4
150	165.2	325	38	150.0	166.2	202	8.1	95	50	10	2	235	275	12	27	M24	20.6
200	216.3	370	42	198.7	217.5	254	9.4	102	50	10	2	280	320	12	27	M24	28.7
250	267.4	450	48	247.5	268.7	312	10.6	118	50	12	2	345	390	12	33	M30×3	47.3
300	318.5	515	52	296.4	320.0	366	11.8	127	50	15	3	405	450	16	33	M30×3	62.8
350	355.6	560	54	331.8	357.2	406	12.7	134	80	15	3	450	495	16	33	M30×3	77.0
400	406.4	630	60	379.1	408.3	462	14.6	149	80	20	3	510	560	16	39	M36×3	108.0

- REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.  
 2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.  
 3. Size d and Size S are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for other sizes.  
 4. For dimensional tolerance, refer to JIS B2203.  
 5. Material  
 Carbon Steel: S25C specified in JIS G4051, or SF45 specified in JIS G3201.  
 Molybdenum Steel: ½Mo Steel specified in tables 1 and 2 of JIS B2215.  
 Chromium-Molybdenum Steel: 1¼ Cr ½ Mo Steel specified in tables 1 and 2 of JIS B2215.

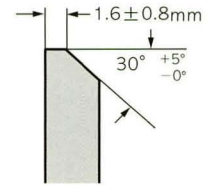
# 40Kg/Cm<sup>2</sup>

## JIS B2219-1984 WELDING NECK STEEL PIPE FLANGES



\*The surface finish shown above is in the case of forging (▽marks:in other cases)

### Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

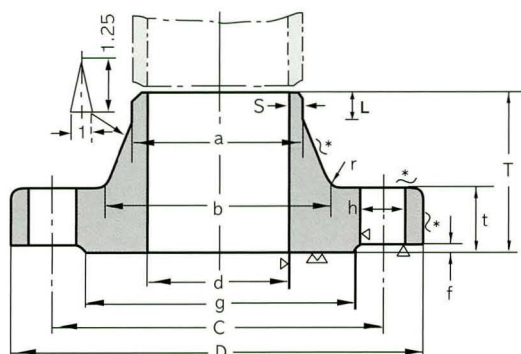
Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	s	T	L	Radius r	f	g	Bolt Diameter Circle C	Number of Bolt Holes	Diameter of Hole h		#40	#80
15	21.7	115	20	15.8	21.7	40	3.1	50	10	6	1	55	80	4	19	M16	1.53	1.55
20	27.2	120	20	21.1	27.2	44	3.2	50	10	6	1	60	85	4	19	M16	1.72	1.74
25	34.0	130	22	26.8	34.0	52	3.8	52	12	6	1	70	95	4	19	M16	2.24	2.28
32	42.7	140	24	35.1	42.7	62	4.0	56	14	6	2	80	105	4	19	M16	2.24	2.86
40	48.6	160	24	40.7	48.6	70	4.2	60	14	6	2	90	120	4	23	M20	2.93	3.01
50	60.5	165	26	52.2	60.5	84	4.4	64	16	8	2	105	130	8	19	M16	4.2	4.41
65	76.3	200	30	65.3	76.3	104	5.8	75	18	8	2	130	160	8	23	M20	7.32	7.52
80	89.1	210	32	77.5	89.1	118	6.1	80	18	8	2	140	170	8	23	M20	8.47	8.80
(90)	104.6	230	34	89.5	104.6	130	6.4	88	18	8	2	150	185	8	25	M22	9.4	-
100	114.3	250	36	101.5	114.3	148	6.8	90	24	8	2	165	205	8	25	M22	13.25	13.82
125	139.8	300	40	125.7	139.8	186	7.5	108	26	10	2	200	250	8	27	M24	21.64	22.5
150	165.2	355	44	150.0	165.2	218	8.1	122	30	10	2	240	295	12	33	M30	32.45	35.1
200	216.3	405	50	198.7	216.3	272	9.4	132	38	10	2	290	345	12	33	M30	45.5	47.2
250	267.4	475	56	247.5	267.4	338	10.6	138	44	12	2	355	410	12	33	M30	69.6	-
300	318.5	540	60	296.4	318.5	400	11.8	159	48	15	3	410	470	16	39	M36	96.0	-
350	355.6	585	64	331.8	355.6	432	12.7	168	50	15	3	455	515	16	39	M36	115.0	-
400	406.4	645	70	379.1	406.4	466	14.6	181	50	20	3	515	570	16	39	M36	143.0	-

- REMARKS:1. Flange of parenthesized nominal diameter had better not be used.  
 2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.  
 3. Size d and Size S are example for schedule 40 of JIS G3456. Customers can also order for other sizes.  
 4. For dimensional tolerance, refer to JIS B2203.  
 5. T of 125 nominal Diameter is maker's standard.

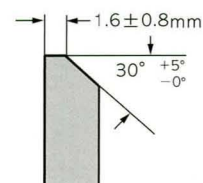
# 63Kg/Cm<sup>2</sup>

JIS B2220-1984(KSB 1503-1999)  
WELDING NECK STEEL PIPE FLANGES



\*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



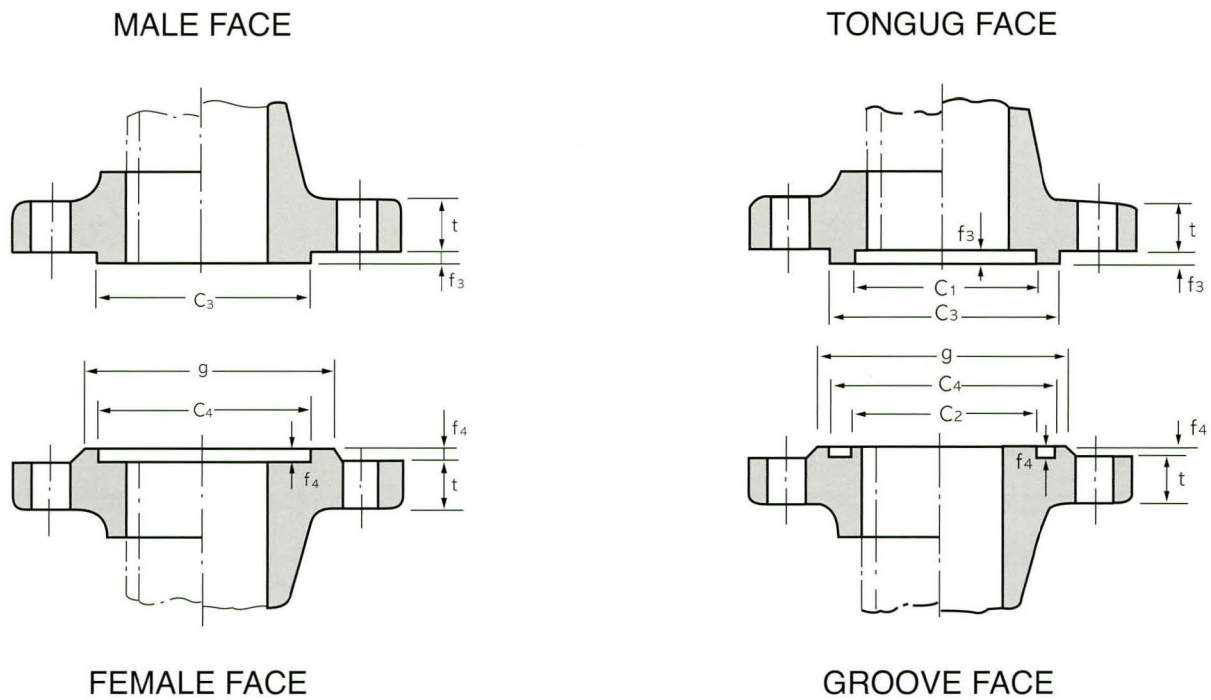
When particularly necessary, customers can order another beveling form the above.

Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	s	T	L	Radius r	f	g	Bolt Diameter Circle C	Number of Bolt Holes	Diameter of Hole h		#80	#160
15	21.7	120	23	To be specified by purchaser.	21.7	45	3.1	60	10	6	1	55	85	4	19	M16	2.07	2.09
20	27.2	135	25		27.2	50	3.2	62	12	6	1	60	95	4	23	M20	2.80	2.85
25	34.0	140	27		34.0	54	3.8	62	13	6	1	70	100	4	23	M20	3.29	3.33
32	42.7	150	31		42.7	64	4.0	66	13	6	2	80	110	4	23	M20	4.12	4.2
40	48.6	175	33		48.6	78	4.2	78	14	6	2	90	130	4	25	M22	6.17	6.31
50	60.5	185	35		60.5	92	4.4	84	16	8	2	105	145	8	23	M20	7.35	7.85
65	76.3	220	39		76.3	114	5.8	96	18	10	2	130	175	8	25	M22	11.85	12.22
80	89.1	230	41		89.1	126	6.1	98	18	10	2	140	185	8	25	M22	13.23	13.82
(90)	101.6	255	42		101.6	140	6.4	126	18	10	2	150	205	8	27	M24	15.2	15.8
100	114.3	270	45		114.3	154	6.8	107	20	10	2	165	220	8	27	M24	19.45	20.65
125	139.8	325	51		(139.8)	(190)	7.5	(128)	24	12	2	200	265	8	33	M30	31.40	34.0
150	165.2	365	55		165.2	224	8.1	142	26	15	2	240	305	12	33	M30	45.0	48.5
200	216.3	425	61		216.3	274	9.4	151	30	15	2	290	360	12	33	M30	63.60	70.7
250	267.4	500	69		267.4	340	10.6	175	38	20	2	355	430	12	39	M36	144.0	-
300	318.5	560	78		318.5	402	11.8	286	44	23	3	410	485	16	39	M36	154.0	-
350	355.6	615	82		355.6	438	12.7	301	48	25	3	455	530	16	46	M43	191	-
400	406.4	680	81		406.4	490	14.6	314	48	25	3	515	590	16	46	M43	247	-

- REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.  
 2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.  
 3. Size d and Size are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for oterh sizes.  
 4. For dimensional tolerance, refer to JIS B2203.  
 5. The dimensime of ( ) are maker's standard.

# FACING 2



Unit:mm

Nominal Dia. of Flange	Male & Female Type				Tongue & Groove Type					
	C <sub>3</sub>	C <sub>4</sub>	f <sub>3</sub>	f <sub>4</sub>	C <sub>1</sub>	C <sub>3</sub>	f <sub>3</sub>	C <sub>2</sub>	C <sub>4</sub>	f <sub>4</sub>
10	38	39	6	5	28	38	6	27	39	5
15	42	43	6	5	32	42	6	31	43	5
20	50	51	6	5	38	50	6	37	51	5
25	60	61	6	5	45	60	6	44	61	5
32	70	71	6	5	55	70	6	54	71	5
40	75	76	6	5	60	75	6	59	76	5
50	90	91	6	5	70	90	6	69	91	5
65	110	111	6	5	90	110	6	89	111	5
80	120	121	6	5	100	120	6	99	121	5
90	130	131	6	5	110	130	6	109	131	5
100	145	146	6	5	125	145	6	124	146	5
125	175	176	6	5	150	175	6	149	176	5
150	215	216	6	5	190	215	6	189	216	5
200	260	261	6	5	230	260	6	229	261	5
250	325	326	6	5	295	325	6	294	326	5
300	375	376	6	5	340	375	6	339	376	5
350	415	416	6	5	380	415	6	379	416	5
400	475	476	6	5	440	475	6	439	476	5

1. f<sub>3</sub> and f<sub>4</sub> dimensions can be made a little larger depending on gasket type.
2. Size g, for male & female type and tongue & groove type, shall correspond to size g of large raised facing with each of nominal pressures stated in facing 1.
3. Dimensional tolerances for pipe flange facing are based on KS B1502(JIS B2203).

# ANSI FLANGES

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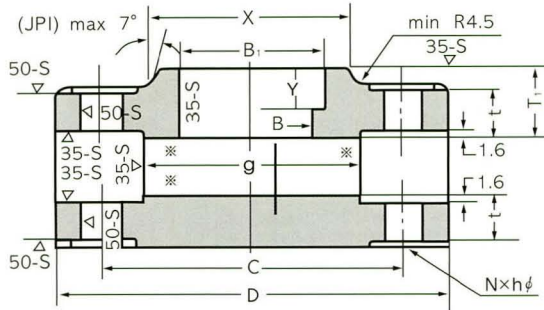
- Class 150 Flanges
- Class 300 Flanges
- Class 400 Flanges
- Class 600 Flanges
- Class 900 Flanges
- Class 1500 Flanges
- Class 2500 Flanges



# CLASS 150-300 FLANGES

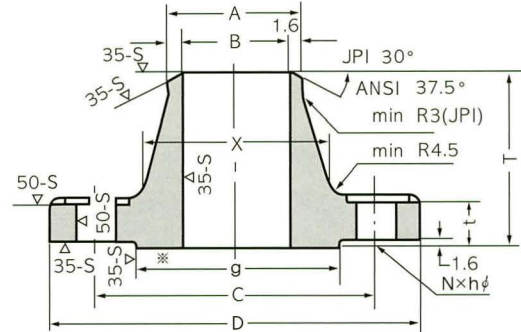
JIP 7S-15-84 & ANSI 16.5

SLIP-ON • SOCKET-WELDING



BLIND

WELDING-NECK



## Class 150

UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore											Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r <sub>2</sub>	
		Slip-on Socket, B <sub>1</sub>		Lap-Joint B <sub>2</sub>		Welding-Neck, Socket B												
		JPI	ANSI	JPI	ANSI	JPI			ANSI									
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r <sub>2</sub>
15	1/2	89	22.2	22.4	23.4	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	30.2	35.1	11.2	3
20	3/4	98	27.7	27.7	28.9	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	38.1	42.9	12.7	3
25	1	108	34.5	34.6	35.6	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	49.3	50.8	14.3	3
(32)	(1 1/4)	117	43.2	43.2	44.3	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	58.7	63.5	15.9	5
40	1 1/2	127	49.1	49.6	50.4	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	65.0	73.2	17.5	6
50	2	152	61.1	62.0	62.7	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	77.8	91.9	19.1	8
65	2 1/2	178	77.1	74.7	78.7	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	90.4	104.6	22.3	8
80	3	191	90.0	90.7	91.6	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	108.0	127.0	23.9	10
(90)	(3 1/2)	216	102.6	103.4	104.1	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	122.2	139.7	23.9	10
100	4	229	115.4	116.1	116.9	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	134.9	157.2	23.9	11
(125)	(5)	254	141.2	143.8	143.0	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	163.6	185.7	23.9	11
150	6	279	166.6	170.7	168.4	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	192.1	215.9	25.4	13
200	8	343	218.0	221.5	219.5	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	246.1	269.7	28.6	13
250	10	406	269.5	276.4	271.7	277.4	248.8	237.2	210.2	254.4	242.9	215.9	267.4	273.1	304.8	323.9	30.2	13
300	12	483	321.0	327.2	322.8	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	365.1	381.0	31.8	13
350	14	533	358.1	358.1	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	400.1	412.8	35.0	13
400	16	597	409.0	409.0	-	411.3	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	457.2	469.9	36.6	13
450	18	635	460.0	460.0	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	504.8	533.4	39.7	13
500	20	699	511.0	511.0	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	558.8	584.2	42.9	13
600	24	815	613.0	613.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	663.6	692.2	47.7	13

## Class 300

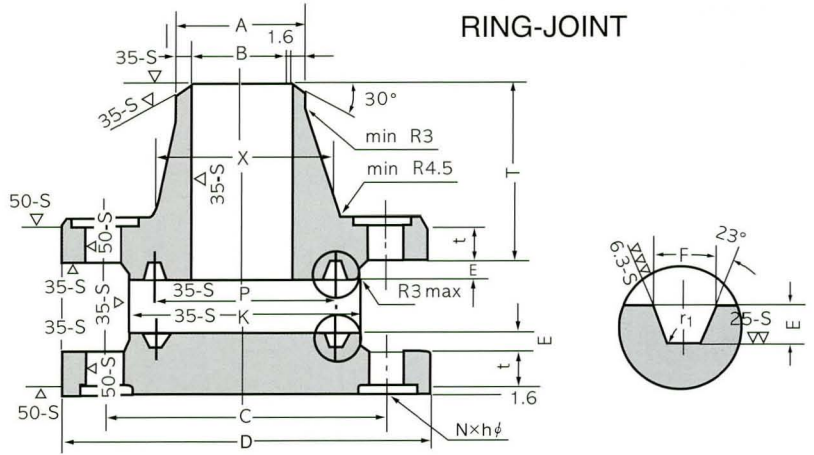
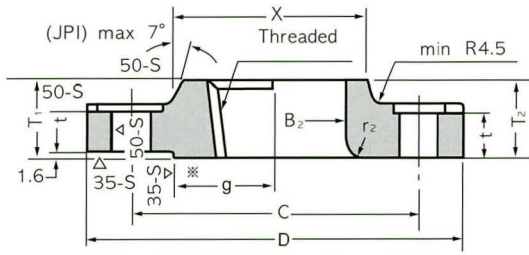
UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia of Bore											Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r <sub>2</sub>	
		Slip-on Socket, B <sub>1</sub>		Lap-Joint B <sub>2</sub>		Welding-Neck, Socket B												
		JPI	ANSI	JPI	ANSI	JPI			ANSI									
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r <sub>2</sub>
15	1/2	95	22.2	22.4	23.4	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	35.1	14.3	3
20	3/4	117	27.7	27.7	28.9	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	47.6	42.9	15.9	3
25	1	124	34.5	34.6	35.6	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	54.0	50.8	17.5	3
(32)	(1 1/4)	133	43.2	43.2	44.3	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	19.1	5
40	1 1/2	156	49.1	49.6	50.4	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.2	20.6	6
50	2	165	61.1	62.0	62.7	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	84.1	91.9	22.4	8
65	2 1/2	191	77.1	74.7	78.7	75.5	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	100.0	104.6	25.4	8
80	3	210	90.0	90.7	91.6	91.4	78.1	73.9	66.9	77.9	73.7	66.7	89.1	88.9	117.5	127.0	28.6	10
(90)	(3 1/2)	229	102.6	103.4	104.1	104.2	90.2	85.4	76.2	90.1	85.5	-	101.6	101.6	133.4	139.7	30.2	10
100	4	254	115.4	116.1	116.9	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	146.1	157.2	31.8	11
(125)	(5)	279	141.2	143.8	143.0	144.6	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	177.8	185.7	35.1	11
150	6	318	166.6	170.7	168.4	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	206.4	215.9	36.6	13
200	8	381	218.0	221.5	219.5	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	260.4	269.7	41.3	13
250	10	445	269.5	276.4	271.7	277.4	248.8	237.2	210.2	254.4	242.9	215.9	267.4	273.1	320.7	323.9	47.8	13
300	12	521	321.0	327.2	322.8	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	374.7	381.0	50.8	13
350	14	584	358.1	358.1	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	425.5	412.8	54.0	13
400	16	650	409.0	409.0	-	411.3	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	482.6	469.9	57.2	13
450	18	710	460.0	460.0	-	462.4	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	533.4	533.4	60.4	13
500	20	775	511.0	511.0	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	587.4	584.2	63.5	13
600	24	914	613.0	613.0	-	616.0	574.6	547.8	490.6	574.7	547.7	490.6	609.6	609.6	701.7	692.2	69.9	13

**THREADED**

**LAP-JOINT**

**RING-JOINT**



**Class 150**

UNIT : mm

Length thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T <sub>1</sub>	T <sub>2</sub>	T	Y	C	N	h	K(min)	P	E	F	r <sub>1</sub>							
15.9	15.9	47.6	9.5	60.5	4	16	-	-	-	-	-	0.50	0.41	0.42	0.43	15	1/2	
15.9	15.9	52.4	11.1	70.0	4	16	-	-	-	-	-	0.75	0.57	0.58	0.62	20	3/4	
17.5	17.5	55.6	12.7	79.5	4	16	63.5	47.62	R15	6.35	8.74	0.8	1.02	0.78	0.80	0.87	25	1
20.6	20.6	57.1	14.3	89.0	4	16	73.0	57.15	R17	6.35	8.74	0.8	1.33	1.03	1.06	1.16	(32)	(1 1/4)
22.2	22.2	61.9	15.9	98.5	4	16	82.5	69.07	R19	6.35	8.74	0.8	1.72	1.32	1.35	1.54	40	1 1/2
25.4	25.4	63.5	17.5	120.5	4	19	102	82.55	R22	6.35	8.74	0.8	2.59	2.09	2.13	2.46	50	2
28.6	28.6	69.8	19.0	139.5	4	19	121	101.60	R25	6.35	8.74	0.8	4.06	3.25	3.35	3.99	65	2 1/2
30.2	30.2	69.8	20.6	152.5	4	19	133	114.30	R29	6.35	8.74	0.8	4.95	3.91	4.02	4.98	80	3
31.8	31.8	71.4	22.2	178.0	8	19	154	131.78	R33	6.35	8.74	0.8	6.08	4.86	4.99	6.20	(90)	(3 1/2)
33.3	33.3	76.2	23.8	190.5	8	19	171	149.22	R36	6.35	8.74	0.8	6.91	5.35	5.99	7.05	100	4
36.5	36.5	88.9	23.8	216.0	8	22	194	171.45	R40	6.35	8.74	0.8	8.75	6.22	6.68	8.67	(125)	(5)
39.7	39.7	88.9	27.0	241.5	8	22	219	193.68	R43	6.35	8.74	0.8	10.8	7.76	7.99	11.3	150	6
44.5	44.5	101.6	31.8	298.5	8	22	273	247.65	R48	6.35	8.74	0.8	18.0	12.6	13.29	19.9	200	8
49.2	49.2	101.6	33.3	362.0	12	25	330	304.80	R52	6.35	8.74	0.8	24.9	17.6	19.50	29.0	250	10
55.6	55.6	114.3	39.7	432.0	12	25	406	381.00	R56	6.35	8.74	0.8	38.6	27.8	29.03	43.7	300	12
57.2	*79.3	127.0	41.3	476.0	12	29	425	396.88	R59	6.35	8.74	0.8	50.6	35.2	38.56	58.6	350	14
63.5	*87.4	127.0	44.5	539.5	16	29	483	454.02	R64	6.35	8.74	0.8	63.9	45.3	44.49	76.6	400	16
68.3	*96.8	139.7	49.2	578.0	16	32	546	517.52	R68	6.35	8.74	0.8	74.9	49.7	54.43	94.5	450	18
73.0	*103.1	144.5	54.0	635.0	20	32	597	558.80	R72	6.35	8.74	0.8	93.5	63.5	70.31	123	500	20
82.6	*111.3	152.4	63.5	749.5	20	35	711	673.10	R76	6.35	8.74	0.8	133	90.5	95.25	188	600	24

**Class 300**

UNIT : mm

Length thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T <sub>1</sub>	T <sub>2</sub>	T	Y	C	N	h	K(min)	P	E	F	r <sub>1</sub>							
22.2	22.2	52.4	9.7	66.5	4	16	51.0	34.14	R11	5.56	7.14	0.8	0.80	0.65	0.67	0.65	15	1/2
25.4	25.4	57.2	11.2	82.6	4	19	63.5	42.88	R13	6.35	8.74	0.8	1.25	1.10	1.12	1.09	20	3/4
27.0	27.0	61.9	12.7	88.9	4	19	70.0	50.80	R16	6.35	8.74	0.8	1.58	1.35	1.39	1.38	25	1
27.0	27.0	65.1	14.2	98.6	4	19	79.5	60.32	R18	6.35	8.74	0.8	2.05	1.69	1.74	1.82	(32)	(1 1/4)
30.2	30.2	68.3	15.8	114.3	4	22	90.5	68.28	R20	6.35	8.74	0.8	2.93	2.54	2.60	2.70	40	1 1/2
33.3	33.3	69.8	17.5	127.0	8	19	108	82.55	R23	7.92	11.91	0.8	3.40	2.92	3.02	3.18	50	2
38.1	38.1	76.2	19.1	149.4	8	22	127	101.60	R26	7.92	11.91	0.8	5.10	4.24	4.43	4.86	65	2 1/2
42.9	43.9	79.4	20.6	168.1	8	22	146	123.82	R31	7.92	11.91	0.8	7.01	5.94	6.21	6.90	80	3
44.5	44.5	81.0	22.4	184.2	8	22	159	131.78	R34	7.92	11.91	0.8	8.71	7.90	-	8.79	(90)	(3 1/2)
47.6	47.6	85.7	23.9	200.2	8	22	175	149.22	R37	7.92	11.91	0.8	11.3	9.71	-	11.6	100	4
50.8	50.8	98.4	23.9	235.0	8	22	210	180.98	R41	7.92	11.91	0.8	15.1	12.4	-	15.5	(125)	(5)
52.4	52.4	98.4	26.9	269.7	12	22	241	211.12	R45	7.92	11.91	0.8	19.6	16.2	-	21.2	150	6
61.9	61.9	111.1	31.8	330.2	12	26	302	269.88	R49	7.92	11.91	0.8	30.3	24.8	-	34.5	200	8
66.7	95.3	117.5	33.3	387.3	16	29	356	323.85	R53	7.92	11.91	0.8	44.3	35.9	-	53.9	250	10
73.0	101.6	130.2	39.6	450.9	16	32	413	381.004	R57	7.92	11.91	0.8	64.1	51	-	78.9	300	12
76.2	*111.3	142.9	41.4	514.4	20	32	457	419.10	R61	7.92	11.91	0.8	88.3	70.1	-	106	350	14
82.6	*120.7	146.0	44.5	571.5	20	35	508	469.90	R65	7.92	11.91	0.8	113	90.4	-	139	400	16
89.9	*130.0	158.8	49.3	628.7	24	35	575	533.40	R69	7.92	11.91	0.8	138	109	-	175	450	18
95.2	*139.7	161.9	54.1	735.8	24	35	635	584.20	R73	9.52	13.49	1.5	169	136	-	222	500	20
106.4	*152.4	168.3	63.5	812.8	24	42	749	692.15	R77	11.13	16.66	1.5	248	204	-	340	600	24

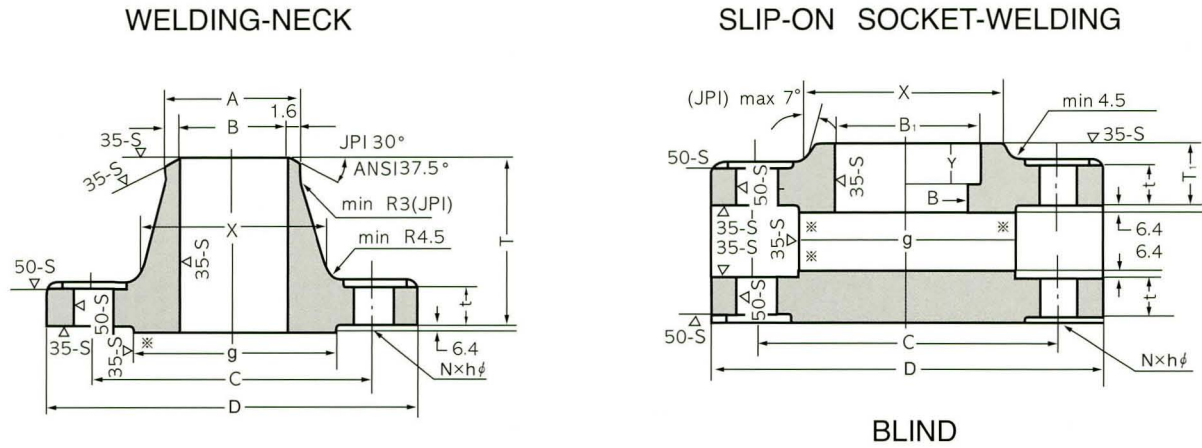






# CLASS 900 FLANGES

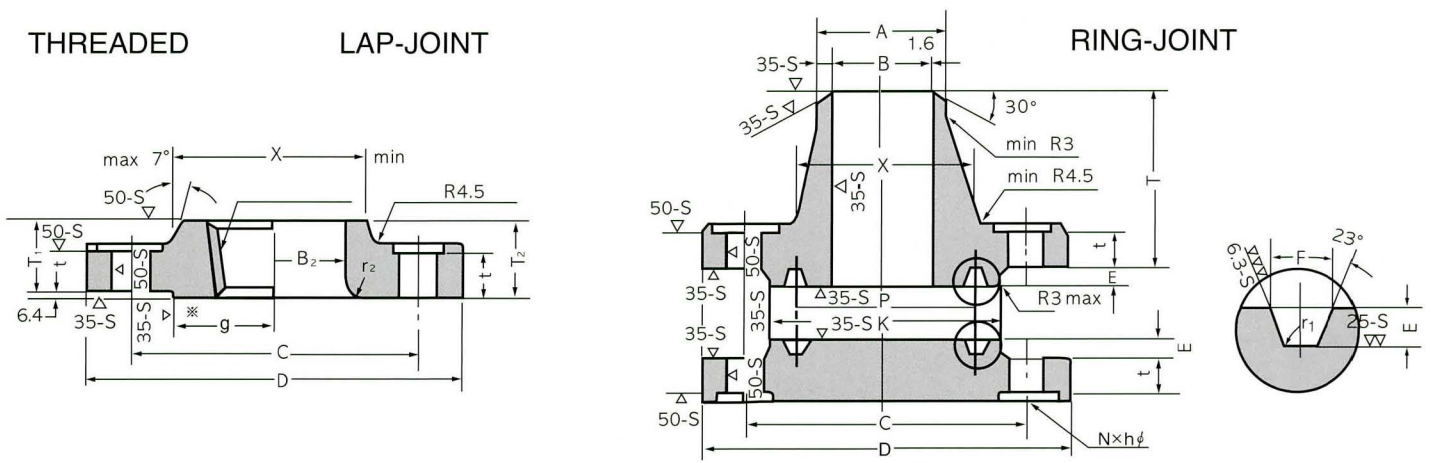
JIP 7S-15-84 & ANSI B 16.5



## Class 900

UNIT : mm

Nominal Pipe Size	Outside Dia. of Flanges	Dia. of Bore	Dia. of Bore										Dia. of Hub at Bevel A	Dia. of Hub at Base X	Dia. of Raised Face g	Thick of Flanges t	Radius of Fillet r <sub>2</sub>	
			Slip-on Socket, B <sub>1</sub>		Lap-Joint B <sub>2</sub>		Welding-Neck, Socket B											
			JPI	ANSI	JPI	ANSI	JPI			ANSI								
A	B	D	JPI	ANSI	JPI	ANSI	SCH40	SCH80	SCH160	SCH40	SCH80	SCH160	JPI	ANSI	X	g	t	r <sub>2</sub>
15	1/2	121	22.2	22.4	-	22.9	16.1	14.3	12.3	15.8	13.9	11.8	21.7	21.3	38.1	34.9	22.4	3
20	3/4	130	27.7	27.7	-	28.2	21.4	19.4	16.2	20.9	18.8	15.6	27.2	26.7	44.5	42.9	25.4	3
25	1	149	34.5	34.5	-	35.1	27.2	25.0	21.2	26.6	24.3	20.7	34.0	33.5	52.3	50.8	28.4	3
(32)	(1 1/4)	159	43.2	43.2	-	43.7	35.5	32.9	29.9	35.1	32.5	29.5	42.7	42.2	63.5	63.5	28.4	5
40	1 1/2	178	49.1	49.5	-	50.0	41.2	38.4	34.4	40.9	38.1	34.0	48.6	48.3	69.9	73.0	31.8	6
50	2	216	61.1	62.0	-	62.5	52.7	49.5	43.1	52.5	49.3	42.9	60.5	60.5	104.6	92.1	38.1	8
65	2 1/2	244	77.1	74.7	-	75.4	65.9	62.3	57.3	62.7	59.0	54.0	76.3	73.2	124.0	104.8	41.1	8
80	3	241	90.0	90.7	-	91.4	78.1	73.9	66.9	77.9	73.7	66.9	89.1	88.9	127.0	127.0	38.1	10
(90)	3 1/2	-	-	-	-	-	90.2	85.4	76.2	90.1	85.5	-	-	-	-	-	-	-
100	4	292	115.4	116.1	-	116.9	102.3	97.1	87.3	102.3	97.2	87.3	114.3	114.3	158.8	157.2	44.5	11
(125)	(5)	349	141.2	143.8	-	144.5	126.6	120.8	108.0	128.2	122.3	109.6	139.8	141.2	190.5	185.7	50.8	11
150	6	381	166.6	170.7	-	171.5	151.0	143.2	128.8	154.1	146.3	131.8	165.2	168.4	235.0	215.9	55.6	13
200	8	470	218.0	221.5	-	222.3	199.9	190.9	170.3	202.7	193.7	173.1	216.3	219.2	298.5	269.9	63.5	13
250	10	546	269.5	276.4	-	277.4	248.8	237.2	210.2	254.5	242.9	215.9	267.4	273.1	368.3	323.8	69.9	13
300	12	610	321.0	327.2	-	328.2	297.9	283.7	251.9	303.2	288.9	257.2	318.5	323.9	419.1	381.0	79.2	13
350	14	641	358.1	358.1	-	360.2	333.4	317.6	284.2	333.3	317.5	284.2	355.6	355.6	450.9	412.8	85.9	13
400	16	705	409.0	409.0	-	411.2	381.0	363.6	325.4	381.0	363.6	325.5	406.4	406.4	508.0	469.9	88.9	13
450	18	787	460.0	460.0	-	462.3	428.6	409.6	366.8	428.7	409.6	366.7	457.2	457.2	565.2	533.4	101.6	13
500	20	857	511.0	511.0	-	514.4	477.8	455.6	408.0	477.8	455.6	408.0	508.0	508.0	622.3	584.2	108.0	13
600	24	1041	613.0	613.0	-	616.0	574.6	547.8	490.6	574.6	547.6	490.6	609.6	609.6	749.3	692.2	139.7	13

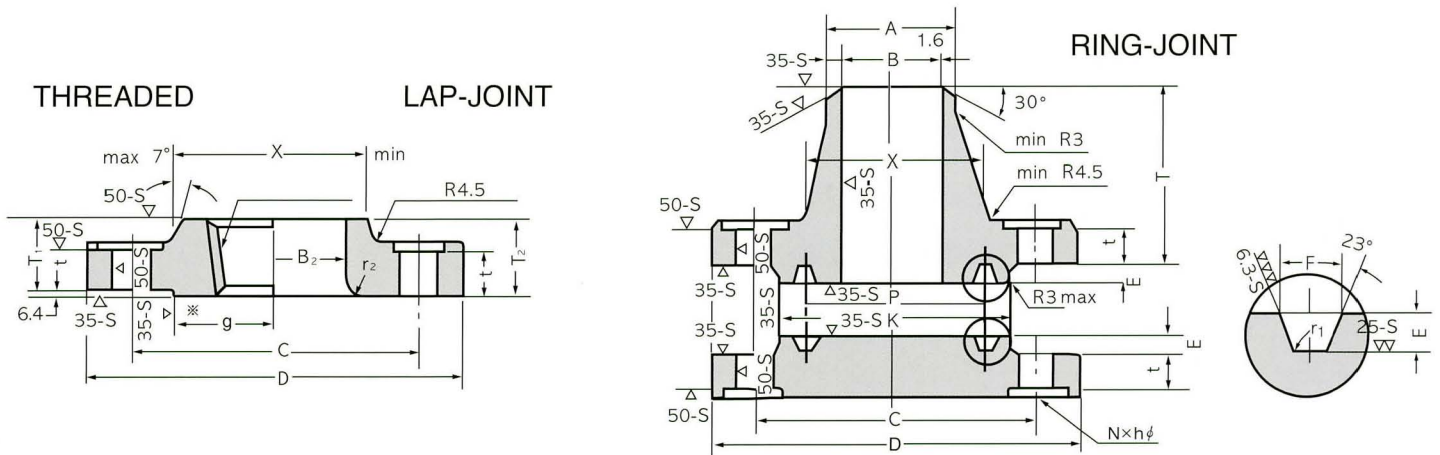


**Class 900**

UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L		
T <sub>1</sub>	T <sub>2</sub>	T	Y	C	N	h	K(min)	P	E	F	r <sub>1</sub>					A	B	
31.8	32	60.5	9.5	82.6	4	23	60.5	39.67	R12	6.35	8.74	0.8	1.98	1.76	1.81	1.88	15	1/2
35.1	35	69.9	11.1	88.9	4	23	66.5	44.45	R14	6.35	8.74	0.8	2.64	2.32	2.39	2.50	20	3/4
41.1	41	73.2	12.7	101.6	4	26	71.5	50.80	R16	6.35	8.74	0.8	3.84	3.44	3.56	3.68	25	1
41.1	41	773.2	14.3	111.3	4	26	81.0	60.32	R18	6.35	8.74	0.8	4.47	3.95	4.11	4.19	(32)	(1 1/4)
44.5	44	82.6	15.9	124.0	4	29	92.0	68.28	R20	6.35	8.74	0.8	6.13	5.41	5.61	5.92	40	1 1/2
57.2	57	101.6	17.5	165.1	8	26	124	95.25	R24	7.92	11.91	0.8	11.3	9.92	10.3	10.5	50	2
69.9	64	104.6	19	190.5	8	29	137	107.95	R27	7.92	11.91	0.8	15.3	13.5	14.2	14.2	65	2 1/2
53.8	54	101.6	20.6	190.5	8	26	156	123.82	R31	7.92	11.91	0.8	14.2	11.6	-	13.7	80	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
69.9	70	114.3	23.8	235.0	8	32	181	149.2	R37	7.92	11.91	0.8	23.1	19.8	-	22.7	100	4
79.2	79	127.0	23.8	279.4	8	35	216	180.98	R41	7.92	11.91	0.8	37.4	32.4	-	37.5	(125)	(5)
85.9	86	139.7	27.0	317.5	12	32	241	211.12	R45	7.92	11.91	0.8	49.3	42.1	-	48.7	150	6
101.6	114.3	162.1	31.8	393.7	12	39	308	269.88	R49	7.92	11.91	0.8	83.7	71.6	-	84.0	200	8
108.0	127.0	184.2	33.3	469.9	16	39	362	323.85	R53	7.92	11.91	0.8	124	102	-	124	250	10
117.3	142.7	200.2	39.7	533.4	20	39	419	381.00	R57	7.92	11.91	0.8	168	136	-	176	300	12
130.0	155.4	212.9	44.3	558.8	20	42	467	419.10	R62	11.13	16.66	1.5	194	153	-	213	350	14
133.4	165.1	215.9	44.5	616.0	20	45	524	469.90	R66	11.13	16.66	1.5	239	186	-	269	400	16
152.4	190.5	228.6	49.2	685.8	20	51	594	533.40	R70	12.70	19.84	1.5	326	258	-	382	450	18
158.8	209.6	247.7	54.0	749.3	20	54	648	584.20	R74	12.70	19.84	1.5	410	317	-	481	500	20
203.2	266.7	292.1	63.5	901.7	20	67	772	692.15	R78	15.58	26.97	2.4	758	608	-	914	600	24





**Class 1500**

UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T <sub>1</sub>	T <sub>2</sub>	T	Y	C	N	h	K(min)	P	E	F	r <sub>1</sub>							
31.8	31.8	60.5	9.5	82.6	4	23	60.5	39.67	R12	6.35	8.74	0.8	1.98	1.76	1.81	1.88	615	1/2
35.1	35.1	69.9	11.1	88.9	4	23	66.5	44.45	R14	6.35	8.74	0.8	2.64	2.32	2.39	2.50	20	3/4
41.1	41.1	73.2	12.7	101.6	4	26	71.5	50.80	R16	6.35	8.74	0.8	3.84	3.44	3.56	3.68	25	1
41.1	41.1	73.2	14.3	111.3	4	26	81.0	60.32	R18	6.35	8.74	0.8	4.47	3.95	4.11	4.29	(32)	(1 1/4)
44.5	44.5	82.6	15.9	124.0	4	29	92.0	68.28	R20	6.35	8.74	0.8	6.13	5.41	5.61	5.92	4	1 1/2
57.2	57.2	101.6	17.5	165.1	8	26	124	95.25	R24	7.92	11.91	0.8	11.3	9.92	10.3	10.5	50	2
63.5	63.5	104.6	19.0	190.5	8	29	137	107.95	R27	7.92	11.91	0.8	15.3	13.5	14.2	14.4	65	2 1/2
73.2	73.2	117.3	20.6	203.2	8	32	168	136.52	R35	7.92	11.91	0.8	20.7	18.1	-	20.0	80	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
90.4	90.4	124.0	23.8	241.3	8	35	194	161.92	R39	7.92	11.91	0.8	30.8	27.8	-	30.8	100	4
104.6	104.6	155.4	27.8	292.1	8	42	229	193.68	R44	7.92	11.91	0.8	58.6	52.6	-	60.0	(125)	(5)
119.1	119.1	171.5	27.0	317.5	12	39	248	211.12	R46	9.52	13.49	1.5	70.7	62.1	-	73.7	150	6
142.7	142.7	212.9	31.8	393.7	12	45	318	269.88	R50	11.13	16.66	1.5	121	105	-	125	200	8
158.8	177.8	254.0	33.3	482.6	12	51	371	323.85	R54	11.13	16.66	1.5	211	180	-	216	250	10
180.8	218.9	282.4	39.7	571.5	16	54	438	381.00	R58	14.27	23.01	1.5	318	271	-	330	300	12
-	241.3	298.5	41.3	635.0	16	61	489	419.10	R63	15.88	26.97	2.4	415	-	-	437	350	14
-	260.4	311.2	44.5	704.9	16	67	546	469.90	R67	17.48	30.18	2.4	535	-	-	582	400	16
-	276.4	327.2	49.2	774.7	16	74	613	533.40	R71	17.48	30.18	2.4	702	-	-	769	450	18
-	292.1	355.6	54.0	831.9	16	80	673	584.20	R75	17.48	33.32	2.4	871	-	-	1001	500	20
-	330.2	406.4	63.5	990.6	16	93	794	692.15	R79	20.62	36.53	2.4	1405	-	-	1628	600	24

**Class 2500**

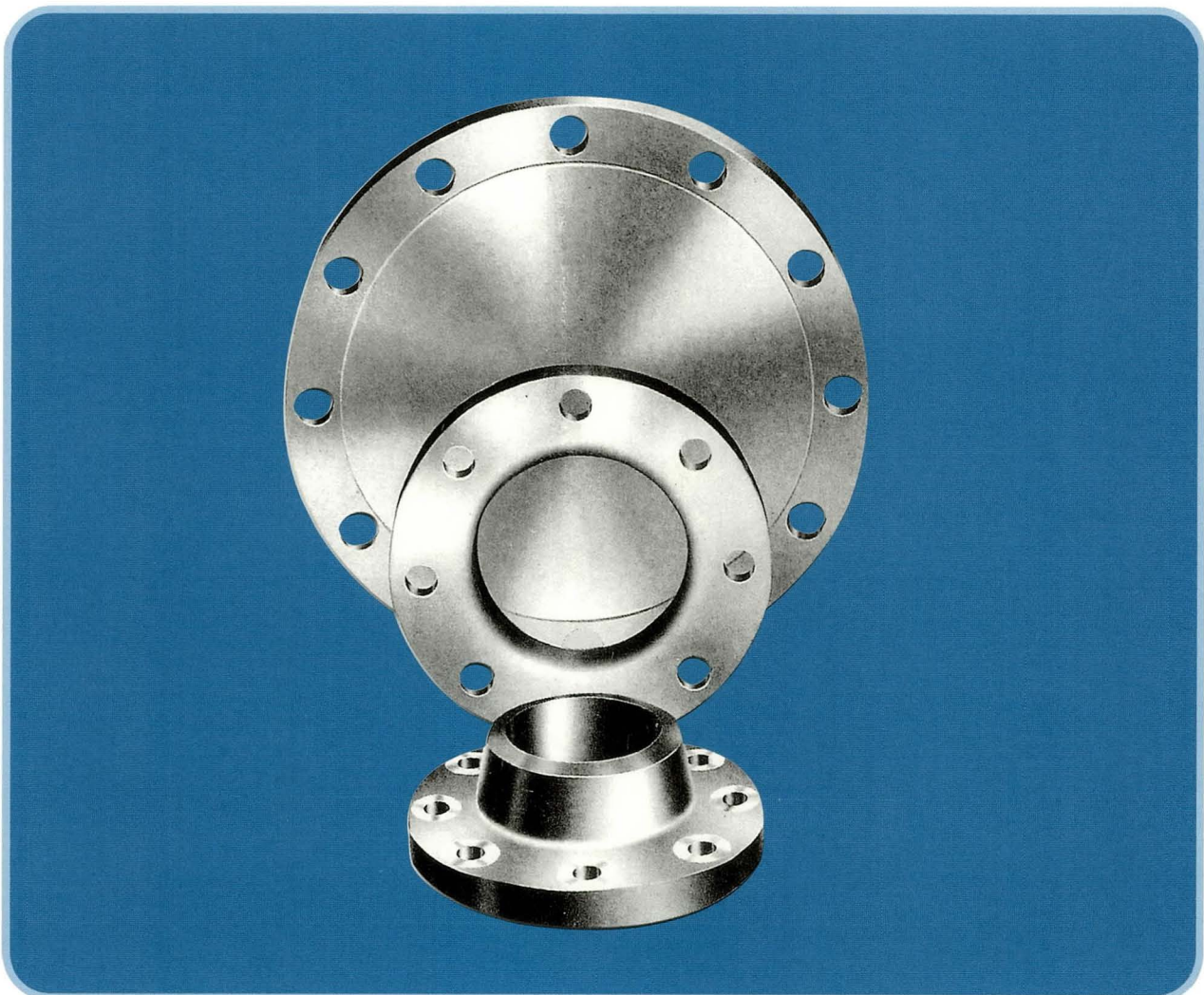
UNIT : mm

Length Thru Hub			Depth of Socket	Drilling			Dia. of Raised Face for Ring Joint	Pitch Dia. of Ring & Groove	Ring No.	RTJ Type			Approx. Weight(kg)				Nominal Pipe Size	
Slip-on Socket Thread	Lap Joint	Welding Neck		Dia. of Bolt Circle	Number of Bolt	Dia. of Bolt Hole				Depth of Groove	Width of Groove	Radius of Groove	W.N	S.O	S.W	B.L	A	B
T <sub>1</sub>	T <sub>2</sub>	T	Y	C	N	h	K(min)	P	E	F	r <sub>1</sub>							
39.6	39.6	73.2	9.5	88.9	4	23	65.0	42.88	R13	6.35	8.74	0.8	3.28	3.2	-	3.09	15	1/2
42.9	42.9	79.2	11.1	95.3	4	23	73.0	50.80	R16	6.35	8.74	0.8	3.86	3.6	-	3.66	20	3/4
47.8	47.8	88.9	12.7	108.0	4	26	82.5	60.32	R18	6.35	8.74	0.8	5.40	5.0	-	5.14	25	1
52.3	52.3	95.3	14.3	130.0	4	29	102	72.24	R21	7.92	11.91	0.8	8.13	7.3	-	7.74	(32)	(1 1/4)
60.5	60.5	111.3	15.9	146.1	4	32	114	82.55	R23	7.92	11.91	0.8	6.13	11.3	-	10.8	40	1 1/2
69.9	69.9	127.0	17.5	171.5	8	29	133	101.60	R26	7.92	11.91	0.8	16.7	17.2	-	16.1	50	2
79.2	79.2	142.7	19.0	196.9	8	32	149	112.12	R28	9.52	13.49	1.5	24.5	24.9	-	23.7	65	2 1/2
91.9	92.9	168.1	20.6	228.6	8	35	168	127.00	R32	9.52	13.49	1.5	37.4	37.6	-	36.0	85	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(90)	(3 1/2)
108	108	190.5	23.8	273.1	8	42	203	157.18	R38	11.13	16.66	1.5	57.3	56.7	-	55.9	100	4
130	130	228.6	23.8	323.9	8	48	241	190.50	R42	12.70	19.84	1.5	96.1	95.3	-	94.1	(125)	(5)
152.4	152.4	273.1	27.0	368.3	8	54	279	228.60	R47	12.70	19.84	1.5	149	147.4	-	146	150	6
177.8	179.8	317.5	31.8	438.2	12	54	340	279.40	R51	14.27	23.01	1.5	222	220.0	-	220	200	8
228.6	228.6	419.1	33.3	540.0	12	67	425	342.90	R55	17.48	30.18	2.4	434	421.8	-	429	250	10
254.0	254.0	463.6	39.7	619.3	12	74	495	404.40	R60	17.48	33.32	2.4	610	499.0	-	609	300	12

# DIN FLANGES

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- 6-BAR(DIN 2573, 2527, 2631)
- 10-BAR(DIN 2576, 2527, 2632)
- 16-BAR(DIN 2543, 2527, 2633)
- 25-BAR(DIN 2544, 2527, 2634)
- 40-BAR(DIN 2545, 2527, 2635)

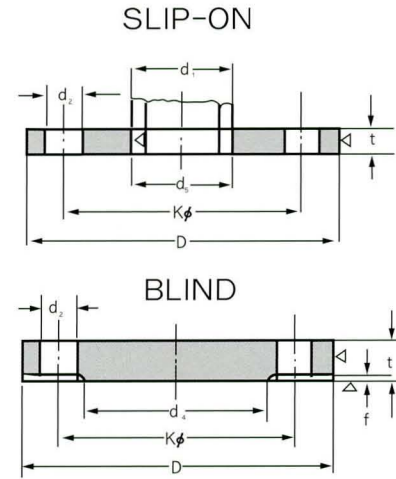
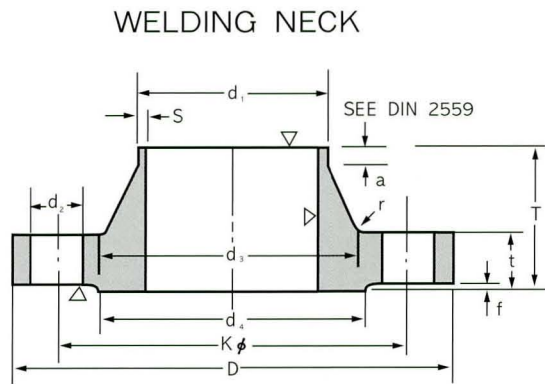


# 6BAR

DIN 2573 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

DIN 2631 WELDING NECK FLANGES



Unit: mm

Bore		Common Dimension					Hub				Raised Face		Drilling			Approx. Weight (kg)			
Nominal Bore	d <sub>1</sub>	D	t			k	T	d <sub>3</sub>	s	r	a ≈	d <sub>4</sub>	f	Number of Bolt	Dia. of Bolt		d <sub>2</sub>	DIN 2573	DIN 2631
			Welding Neck	Slip-on	Blind														
10	14 17.2*	75	12	12	12	50	28	22 26	1.8	4	6	35	2	4	M10	-	11.5	0.036	0.335
15	20 21.3*	80	12	12	12	55	30	28 30	2.0	4	6	40	2	4	M10	-	11.5	0.410	0.392
20	25 26.9*	90	14	14	14	65	32	35 38	2.3	4	6	50	2	4	M10	-	11.5	0.600	0.592
25	30 33.7*	100	14	14	14	75	35	40 42	2.6	4	6	60	2	4	M10	-	11.5	0.740	0.747
32	38 42.4*	120	14	16	14	90	35	50 55	2.6	6	6	70	2	4	M12 (1/2")	14	1.19	1.05	
40	44.5 48.3*	130	14	16	14	100	38	58 62	2.6	6	7	80	3	4	M12 (1/2")	14	1.39	1.18	
50	57 60.3*	140	14	16	14	110	38	70 74	2.9	6	8	90	3	4	M12 (1/2")	14	1.35	1.34	
65	76.1*	160	14	16	14	130	38	88	2.9	6	9	110	3	4	M12 (1/2")	14	1.89	1.67	
80	88.9*	190	16	18	16	150	42	102	3.2	8	10	128	3	4	M16 (5/8")	18	2.98	2.71	
100	108 114.3*	210	16	18	16	170	45	122 130	3.6	8	10	148	3	4	M16 (5/8")	18	3.46	3.24	
125	133 139.7*	240	18	20	18	200	48	148 155	4.0	8	10	178	3	8	M16 (5/8")	18	4.60	4.49	
150	159 168.3*	265	18	20	18	225	48	172 184	4.5	10	12	202	3	8	M16 (5/8")	18	5.22	5.15	
200	216 219.1*	320	20	22	20	280	55	230 236	5.9	10	15	258	3	8	M16 (5/8")	18	7.15	7.78	
250	267 273*	375	22	24	22	335	60	282 290	6.2	12	15	312	3	12	M16 (5/8")	18	9.61	10.8	
300	318 323.9*	440	22	24	22	395	62	335 342	7.1	12	15	365	4	12	M20 (3/4")	23	12.6	14.0	
350	355.6* 368	490	22	26	22	445	62	385	7.1	12	15	415	4	12	M20 (3/4")	23	15.6	16.1	
400	406.4* 419	540	22	28	22	495	65	438	7.1	12	15	455	4	16	M20 (3/4")	23	18.4	18.3	
500	508* 521	645	24	30	24	600	68	538	7.1	12	15	570	4	20	M20 (3/4")	23	24.5	24.6	
600	609.6* 622	755	24			705	70	640	7.1	12	16	670	5	20	M24 (7/8")	27			
700	711.2* 720	860	24			810	70	740	7.1	12	16	775	5	24	M24 (7/8")	27			
800	812.8* 820	975	24			920	70	842	7.1	12	16	880	5	24	M27 (1")	30			
900	914.4* 920	1075	26			1020	70	942	7.1	12	16	980	5	24	M27 (1")	30			
1000	1016* 1020	1175	26			1120	70	1045	7.1	16	16	1080	5	28	M27 (1")	30			

NOTE \*Out side diameter of pipe complies with ISO recommendation R64

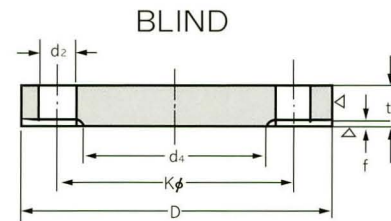
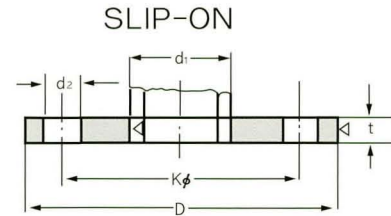
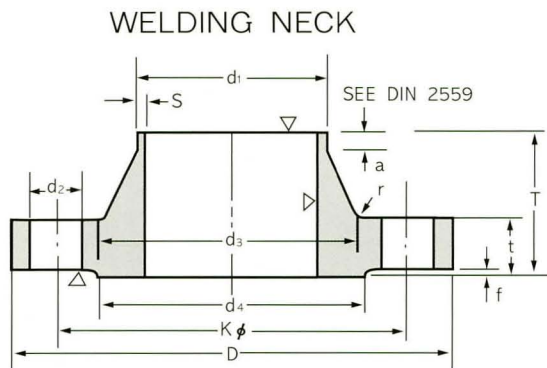


# 10BAR

DIN 2576 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

DIN 2632 WELDING NECK FLANGES



Unit:mm

Bore		Common Dimension					Hub				Raised Face		Drilling			Approx. Weight (kg)			
Nominal Bore	d <sub>1</sub>	D	t			k	T	d <sub>3</sub>	s	r	a ≈	d <sub>4</sub>	f	Number of Bolt	Dia. of Bolt		d <sub>2</sub>	DIN 2576	DIN 2632
			Welding Neck	Slip-on	Blind														
10	14 17.2 <sup>*</sup>	90	14	14	14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.163	0.580	
15	20 21.3 <sup>*</sup>	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.675	0.648	
20	25 26.9 <sup>*</sup>	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	0.947	0.952	
25	30 33.7 <sup>*</sup>	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.14	1.14	
32	38 42.4 <sup>*</sup>	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.66	1.69	
40	44.5 48.3 <sup>*</sup>	150	16	16	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	1.89	1.86	
50	57 60.3 <sup>*</sup>	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.51	2.53	
65	76.1 <sup>*</sup>	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.00	3.06	
80	88.9 <sup>*</sup>	200	20	20	20	160	50	105	3.2	8	10	138	3	4	M16 (5/8")	18	3.79	3.70	
100	108 114.3 <sup>*</sup>	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	4.20	4.62	
125	133 139.7 <sup>*</sup>	250	22	22	22	210	55	150 156	4.0	8	12	188	3	8	M16 (5/8")	18	5.71	6.30	
150	159 168.3 <sup>*</sup>	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	6.72	7.75	
200	216 219.1 <sup>*</sup>	340	24	24	24	295	62	232 235	5.9	10	16	268	3	8	M20 (3/4")	23	9.50	11.3	
250	267 273 <sup>*</sup>	395	26	26	26	350	68	285 292	6.3	12	16	320	3	12	M20 (3/4")	23	12.5	14.7	
300	318 323.9 <sup>*</sup>	445	26	26	28	400	68	335 344	7.1	12	16	370	4	12	M20 (3/4")	23	14.4	17.6	
350	355.6 <sup>*</sup> 368	505	26	28	30	460	68	385	7.1	12	16	430	4	16	M20 (3/4")	23	20.6	21.4	
400	406.4 <sup>*</sup> 419	565	26	32	32	515	72	440	7.1	12	16	482	4	16	M24 (7/8")	27	27.9	26.1	
500	508 <sup>*</sup> 521	670	28	38	34	620	75	542	7.1	12	16	585	4	20	M24 (7/8")	27	41.1	34.7	
600	609.6 <sup>*</sup> 622	780	28			725	80	642	7.1	12	18	685	5	20	M27 (1")	30			
700	711.2 <sup>*</sup> 720	895	30			840	80	745	8.0	12	18	800	5	24	M27 (1")	30			
800	812.8 <sup>*</sup> 820	1015	32			950	90	850	8.0	12	18	905	5	24	M30 (1 1/8")	33			
900	914.4 <sup>*</sup> 920	1115	34			1050	95	950	10.0	12	20	1005	5	28	M30 (1 1/8")	33			
1000	1016 <sup>*</sup> 1020	1230	34			1160	95	1052	10.0	16	20	1110	5	28	M33 (1 1/4")	36			

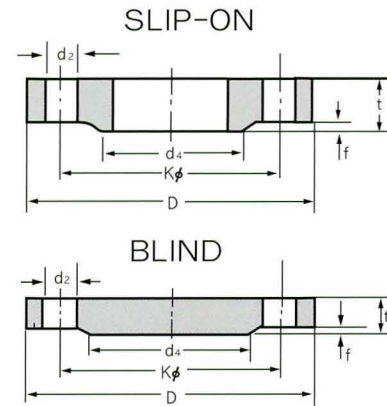
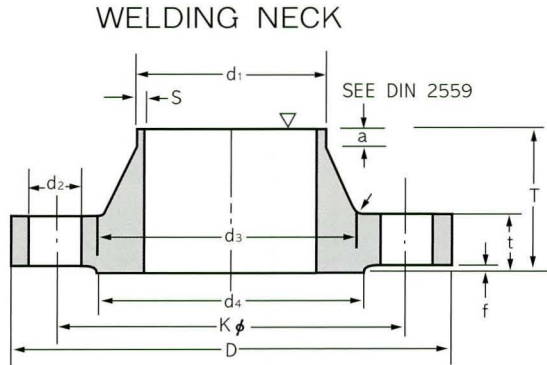
NOTE \*Out side diameter of pipe complies with ISO recommendation R64

# 16BAR

DIN 2543 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

DIN 2633 WELDING NECK FLANGES



Unit: mm

Bore		Common Dimension						Hub				Raised Face		Drilling			Approx. Weight (kg)	
Nominal Bore	d <sub>1</sub>	D	t			k	T	d <sub>3</sub>	s	r	a ≈	d <sub>4</sub>	f	Number of Bolt	Dia. of Bolt	d <sub>2</sub>	DIN 2543	DIN 2633
			Welding Neck	Slip-on	Blind													
10	14 17.2*	90	14		14	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.63	0.580
15	20 21.3*	95	14	14	14	65	35	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.72	0.648
20	25 26.9*	105	16	16	16	75	38	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.01	0.952
25	30 33.7*	115	16	16	16	85	38	42 45	2.6	4	6	68	2	4	M12 (1/2")	14	1.23	1.14
32	38 42.4*	140	16	16	16	100	40	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	1.80	1.69
40	44.5 48.3*	150	16	16	16	110	42	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.09	1.86
50	57 60.3*	165	18	18	18	125	45	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	2.88	2.53
65	76.1*	185	18	18	18	145	45	90	2.9	6	10	122	3	4	M16 (5/8")	18	3.66	3.06
80	88.9*	200	20	20	20	160	50	105	3.2	8	10	138	3	8	M16 (5/8")	18	4.77	3.70
100	108 114.3*	220	20	20	20	180	52	125 131	3.6	8	12	158	3	8	M16 (5/8")	18	5.65	4.62
125	133 139.7*	250	22	22	22	210	55	150 156	4.0	8	12	188	3	8	M16 (5/8")	18	8.42	6.30
150	159 168.3*	285	22	22	22	240	55	175 184	4.5	10	12	212	3	8	M20 (3/4")	23	10.4	7.75
200	216 219.1*	340	24	24	24	295	62	232 235	5.9	10	16	268	3	12	M20 (3/4")	23	16.1	11.0
250	267 273	405	26	26	26	355	70	285 292	6.3	12	16	320	3	12	M24 (7/8")	27	24.9	15.6
300	318 323.9*	460	28	28	28	410	78	338 344	7.1	12	16	378	4	12	M24 (7/8")	27	35.1	22.0
350	355.6* 368	520	30	30	30	470	82	390	8.0	12	16	438	4	16	M24 (7/8")	27	47.8	28.7
400	406.4* 419	580	32	32	32	525	85	445	8.0	12	16	490	4	16	M27 (1")	30	63.5	36.3
500	508* 521	715	34	36	34	650	90	548	8.0	12	16	610	4	20	M30 (1 1/8")	33	102.0	59.3
600	609.6* 622	840	36	40		770	95	652	8.8	12	18	725	5	20	M33 (1 1/4")	36		
700	711.2* 720	910	36			840	100	755	8.8	12	18	795	5	24	M33 (1 1/4")	36		
800	812.8* 820	1025	38			950	105	855	10.0	12	20	900	5	24	M36 (1 3/8")	39		
900	914.4* 920	1125	40			1050	110	955	10.0	12	20	1000	5	28	M36 (1 3/8")	39		
1000	1016* 1020	1255	42			1170	120	1058	10.0	16	20	1115	5	28	M39 (1 1/2")	42		

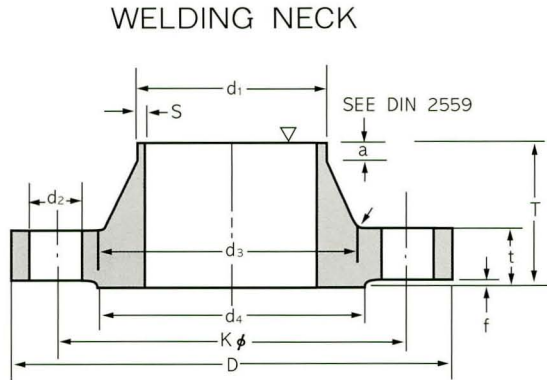
NOTE \*Out side diameter of pipe complies with ISO recommendation R64

# 25BAR

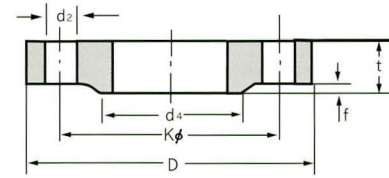
DIN 2544 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

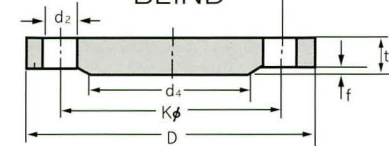
DIN 2634 WELDING NECK FLANGES



SLIP-ON



BLIND



Unit: mm

Bore		Common Dimention						Hub				Raised Face	Drilling			Approx. Weight (kg)		
Nominal Bore	d <sub>1</sub>	D	t			k	T	d <sub>3</sub>	s	r	a ≈	d <sub>4</sub>	f	Number of Bolt	Dia. of Bolt	d <sub>2</sub>	DIN 2544	DIN 2634
			Welding Neck	Slip-on	Blind													
10	14 17.2*)	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.72	0.661
15	20 21.3*)	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.81	0.746
20	25 26.9*)	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.24	1.06
25	30 33.7*)	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.38	1.29
32	38 42.4*)	140	18	18	18	100	45	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	2.03	1.88
40	44.5 48.3*)	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.35	2.34
50	57 60.3*)	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	3.20	2.82
65	76.1*)	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	4.29	3.74
80	88.9*)	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	5.88	4.75
100	108 114.3*)	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20 (3/4")	23	7.54	6.52
125	133 139.7*)	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24 (7/8")	27	10.8	9.07
150	159 168.3*)	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	14.5	11.8
200	216 219.1*)	360	30	30	30	310	80	240 244	6.3	10	16	278	3	12	M24 (7/8")	27	22.3	17.0
250	267 273*)	425	32	32	32	370	88	292 298	7.1	12	18	335	3	12	M27 (1")	30	33.5	24.4
300	318 323.9*)	485	34	34	34	430	92	345 352	8.0	12	18	395	4	16	M27 (1")	30	46.3	31.2
350	355.6*) 368	555	38	38	38	490	100	398	8.0	12	20	450	4	16	M30 (1 1/8")	33	68.0	45.0
400	406.4*) 419	620	40	40	40	550	110	452	8.8	12	20	505	4	16	M33 (1 1/4")	36	89.7	58.7
500	508*) 521	730	44	44	44	660	125	558	10.0	12	20	615	4	20	M33 (1 1/4")	36	138.0	86.1
600	609.6*) 622	845	46			770	125	660	11.0	12	20	720	5	20	M36 (1 3/8")	39		101.0
700	721.2*) 720	960	46			875	125	760	12.5	12	20	820	5	24	M39 (1 1/2")	42		134.0
800	812.8*) 820	1085	50			990	135	865	14.2	12	22	930	5	24	M45 (1 3/4")	48		183.0
900	914.4*) 930	1185	54			1090	145	968	16.0	12	24	1030	5	28	M45 (1 3/4")	48		232.0
1000	1016*) 1020	1320	58			1210	155	1070	17.5	16	24	1140	5	28	M52 (2")	56		302.0

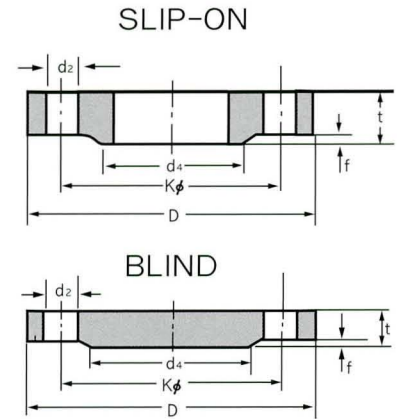
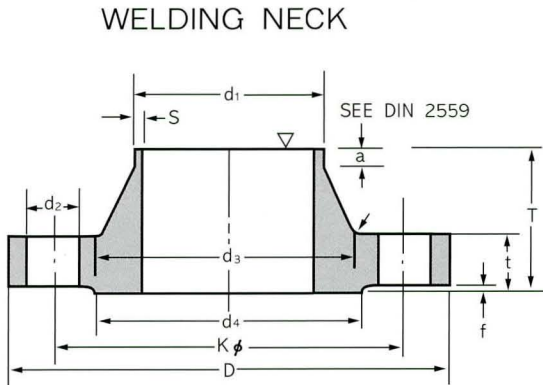
NOTE \*Out side diameter of pipe complies with ISO recommendation R64

# 40BAR

DIN 2545 SLIP-ON FLANGES

DIN 2527 BLIND FLANGES

DIN 2635 WELDING NECK FLANGES



Unit:mm

Bore		Common Dimension					Hub				Raised Face		Drilling			Approx. Weight (kg)		
Nominal Bore	d1	D	t			k	T	d3	s	r	a ≈	d4	f	Number of Bolt	Dia. of Bolt	d2	DIN 2545	DIN 2635
			Welding Neck	Slip-on (No-Hub)	Blind													
10	14 17.2*	90	16		16	60	35	25 28	1.8	4	6	40	2	4	M12 (1/2")	14	0.72	0.661
15	20 21.3*	95	16	16	16	65	38	30 32	2.0	4	6	45	2	4	M12 (1/2")	14	0.81	0.746
20	25 26.9*	105	18	18	18	75	40	38 40	2.3	4	6	58	2	4	M12 (1/2")	14	1.24	1.06
25	30 33.7*	115	18	18	18	85	40	42 46	2.6	4	6	68	2	4	M12 (1/2")	14	1.38	1.29
32	38 42.4*	140	18	18	18	100	42	52 56	2.6	6	6	78	2	4	M16 (5/8")	18	2.03	1.88
40	44.5 48.3*	150	18	18	18	110	45	60 64	2.6	6	7	88	3	4	M16 (5/8")	18	2.35	2.33
50	57 60.3*	165	20	20	20	125	48	72 75	2.9	6	8	102	3	4	M16 (5/8")	18	3.20	2.82
65	76.1*	185	22	22	22	145	52	90	2.9	6	10	122	3	8	M16 (5/8")	18	4.29	3.74
80	88.9*	200	24	24	24	160	58	105	3.2	8	12	138	3	8	M16 (5/8")	18	5.88	4.75
100	108 114.3*	235	24	24	24	190	65	128 134	3.6	8	12	162	3	8	M20 (3/4")	23	7.54	6.52
125	133 139.7*	270	26	26	26	220	68	155 162	4.0	8	12	188	3	8	M24 (7/8")	27	10.8	9.07
150	159 168.3*	300	28	28	28	250	75	182 192	4.5	10	12	218	3	8	M24 (7/8")	27	14.5	11.80
(175)	191 193.7*	350	32	32	32	295	82	215 218	5.6	10	15	260	3	12	M27 (1")	30	22.1	18.2
200	216 219.1*	375	34	34	34	320	88	240 244	6.3	10	16	285	3	12	M27 (1")	30	27.2	21.5
250	267 273*	450	38	38	38	385	105	298 306	7.1	12	18	345	3	12	M30 (1 1/8")	33	43.8	34.9
300	318 323.9*	515	42	42	42	450	115	352 362	8.0	12	18	410	4	16	M30 (1 1/8")	33	63.3	49.7
350	355.6* 368	580	46	46	46	510	125	408	8.8	12	20	465	4	16	M33 (1 1/4")	36	89.5	68.1
400	406.4* 419	660	50	50	50	585	135	462	11.0	12	20	535	4	16	M36 (1 3/8")	39	127.0	96.5
500	508* 521	755	52	52	52	670	140	562	14.2	12	20	615	4	20	M39 (1 1/2")	42	172.0	117.0

NOTE \*Out side diameter of pipe complies with ISO recommendation R64

# MATERIAL SPECIFICATIONS

## ANSI B16.5(ASTM STANDARD)

ASTM	Grade	Classification	CHEMICAL COMPOSITION								MECHANICAL PROPERTIES					
			C%	Mn%	P Max.%	S Max.%	Si%	Ni%	Cr%	Mo%	T.S Min. psi (kg/mm)	Y.S Min. psi (kg/mm)	EL. Min. %	Red Min. %	HB	
A-105	*	Carbon Steel	MAX 0.35	0.60~ 1.05	0.035	0.040	0.10~ 0.35					70.000 (49.2)	36.000 (25.3)	22	30	MAX 187
A-181	60	Carbon Steel	MAX 0.35	MAX 0.90	0.050	0.050	MAX 0.35					60.000 (49.2)	30.000 (21.1)	22	35	
A-181	70	Carbon Steel	MAX 0.35	MAX 0.90	0.050	0.050	MAX 0.35	MAX 0.40	MAX 0.30	MAX 0.12		70.000 (49.2)	36.000 (25.3)	18	24	
A-182	F1	1/2Mo	MAX 0.28	0.6~ 0.90	0.045	0.045	0.15~ 0.35				0.44~ 0.65	70.000 (49.2)	40.000 (28.1)	20	30	143~ 192
A-182	F5	5 <sub>cr</sub> -1/2Mo	MAX 0.15	0.30~ 0.60	0.030	0.030	MAX 0.50	MAX 0.50	4.0~ 6.00	0.44~ 0.65	70.000 (49.2)	40.000 (28.1)	20	35	143~ 217	
A-182	F5a	5 <sub>cr</sub> -1/2Mo	MAX 0.25	MAX 0.6	0.040	0.030	MAX 0.50	MAX 0.50	4.0~ 6.0	0.44~ 0.65	90.000 (63.3)	65.000 (45.7)	22	50	187~ 248	
A-182	F6	13 <sub>cr</sub>	MAX 0.12	MAX 1.00	0.040	0.030	MAX 1.00	MAX 0.50	11.5~ 13.5			85.000 (59.8)	55.000 (38.7)	25	50	167~ 229
A-182	F7	7 <sub>cr</sub> -1/2Mo	MAX 0.15	0.30~ 0.60	0.030	0.030	0.50~ 1.00		6.0~ 8.0	0.44~ 0.65	70.000 (49.2)	40.000 (28.1)	20	35	197~ 217	
A-182	F9	9 <sub>cr</sub> -1Mo	MAX 0.15	0.30~ 0.60	0.030	0.030	0.5~ 1.00		8.0~ 10.00	0.90~ 1.10	85.000 (59.8)	55.000 (38.7)	20	40	179~ 217	
A-182	F11	11/4 <sub>cr</sub> -1/2Mo	0.10~ 0.20	0.30~ 0.60	0.040	0.040	0.5~ 1.00		1.00 ~1.50	0.44~ 0.65	70.000 (49.2)	40.000 (28.1)	20	30	143~ 207	
A-182	F12	1 <sub>cr</sub> -1/2Mo	0.10~ 0.20	0.30~ 0.80	0.040	0.040	0.1~ 0.6		0.8~ 1.25	0.44~ 0.65	70.000 (49.2)	40.000 (28.1)	20	30	143~ 207	
A-182	F22	21/4 <sub>cr</sub> -1Mo	MAX 0.15	0.30~ 0.60	0.040	0.040	MAX 0.50		2.00~ 2.50	0.87~ 1.13	75.000 (52.7)	45.000 (31.6)	20	30	156~ 207	
A-182	F304	18 <sub>cr</sub> -8Ni	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	8.00~ 11.00	18.00~ 20.00			75.000 (52.7)	30.000 (21.1)	30	50	
A-182	F304L	18 <sub>cr</sub> -8Ni Low	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	8.00~ 13.00	18.00~ 20.00			70.000 (49.2)	25.000 (17.6)	30	50	
A-182	F316	18 <sub>cr</sub> -8Ni Mo	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	10.00~ 14.00	16.00~ 18.00	2.00~ 3.00		75.000 (52.7)	30.000 (21.7)	30	50	
A-182	F316L	18 <sub>cr</sub> -8Ni Mo-Low	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	10.00~ 15.00	16.00~ 18.00	2.00~ 3.00		65.000 (45.7)	25.000 (17.6)	30	50	
A-182	F321	18 <sub>cr</sub> -8Ni Ti	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~ 12.00	Min 17.00			75.000 (52.7)	30.000 (21.1)	30	50	
A-182	F347	18 <sub>cr</sub> -8Ni Cb	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~ 13.00	17.00~ 20.00			75.000 (52.7)	30.000 (21.1)	30	50	
A-350	LF1	Carbon Steel	MAX 0.30	0.75~ 1.05	0.035	0.040	0.15~ 0.30	MAX 0.40	MAX 0.30	MAX 0.12		60.000~ 85.000 (42.2~59.7)	30.000 (21.1)	25	38	
A-350	LF2	Carbon Steel	MAX 0.30	MAX 1.35	0.035	0.040	0.15~ 0.30	MAX 0.40	MAX 0.30	MAX 0.12		70.000~ 95.000 (49.2~66.8)	36.000 (25.3)	22	30	
A-350	LF3	31/2Ni	MAX 0.20	MAX 0.90	0.035	0.040	0.20~ 0.35	3.25 3.75	MAX 0.30	MAX 0.12		70.000~ 95.000 (49.2~66.8)	37.500 (26.4)	22	35	
※ 5 MSS SP-44 F42	max 0.35	※ 5 C.E.(MSS SP-44, F42, F52, F60, F65, F70)														
※ 5 MSS SP-44 F52	max 0.35															
※ 5 MSS SP-44 F60	max 0.35	$C.E.\% = C\% + \frac{Mn\%}{6} + \frac{Cr\% + Mo\% + V\%}{5} + \frac{Ni\% + Cu\%}{15} \leq 0.50\%$														
※ 5 MSS SP-44 F65	max 0.35															
※ 5 MSS SP-44 F70	max 0.35	-	-	-	-	-	-	-	-	C.E max 50	min 70 ksi	min 80 ksi	18	-	-	

# JIS MATERIAL SPECIFICATIONS

(JIS. KS Standard)

Code	Material Spec		CHEMISTRY							MECHANICAL PROPERTIES					
			C%	Si%	Mn	P	S	Ni	Cr	Mo	Y.S% (N/mm)	T.S (N/mm)	EL. min %	RED min.%	HB
JIS B 2220 / KSB 1503	KS-D3503 JIS G3101 (SS400)	16mm below	-	-	-	max 0.05	max 0.05	-	-	-	min 245	400-510	17	-	-
		16mm~40mm	-	-	-	max 0.05	max 0.05	-	-	-	min 235	400-510	21	-	-
		40mm over	-	-	-	max 0.05	max 0.05	-	-	-	min 215	400-510	23	-	-
	KS-D3515 JIS G3106 SM400A	50mm below	max 0.23	-	min 2.5xc	max 0.035	max 0.035	-	-	-	min 235	400-510	22	-	-
		50mm over	max 0.25	-	min 2.5xc	max 0.035	max 0.035	-	-	-	min 215	400-510	24	-	-
	KS-D3515 JIS G3106 SM400B	50mm below	max 0.20	max 0.35	0.60 ~1.40	max 0.035	max 0.035	-	-	-	min 235	400-510	22	-	-
		50mm over	max 0.22	max 0.35	0.60 ~1.40	max 0.035	max 0.035	-	-	-	min 215	400-510	24	-	-
	JIS G4051 & KS-D3751 S20C		0.18 ~ 0.23	0.15 ~ 0.35	0.30 ~ 0.60	max 0.030	max 0.035	-	-	-	min 245	402	28	-	114 ~ 153
		JIS G4051 & KS-D3751 S25C	0.22 ~ 0.28	0.15 ~ 0.35	0.30 ~ 0.60	max 0.030	max 0.035	-	-	-	min 265	441	27	-	121 ~ 183
	JIS G3201 & KS-D3710 SF440A		max 0.60	0.15 ~ 0.50	0.30 ~ 1.20	max 0.03	max 0.035	-	-	-	min 225	440-540	24	45	min 121
JIS G3201 & KS-D3710 SF490A		max 0.60	max 0.15 ~ 0.50	0.30 ~ 1.20	max 0.03	max 0.035	-	-	-	min 245	490-590	22	40	min 134	
JIS G3202 & KS-D4122 SFVC 1		max 0.30	max 0.35	0.40 ~ 1.35	max 0.030	max 0.030	-	-	-	min 205	410-560	21	38	-	
	JIS G3202 & KS-D4122 SFVC 2A	max 0.35	max 0.35	0.40 ~ 1.10	max 0.030	max 0.030	-	-	-	min 245	490-640	18	33	-	
JIS G3203 & KS-D4123 SFVC F1		max 0.30	max 0.35	0.60 ~ 0.90	max 0.030	max 0.030	-	-	0.45 ~ 0.65	min 275	480-660	18	35	-	
	JIS G3203 & KS-D4123 SFVA F11A	max 0.20	0.50 ~ 1.0	0.30 ~ 0.80	max 0.030	max 0.030	-	1.0 ~ 1.5	0.45 ~ 0.65	min 275	480-660	18	35	-	
JIS G4304 & KS-D3705 SUS 304		max 0.08	max 1.0	max 2.0	max 0.045	max 0.03	8.0 ~ 10.5	18.0 ~ 20.0	-	min 205	min 520	40	-	max 187	
	JIS G4304 & KS-D3705 SUS 316	max 0.08	max 1.0	max 2.0	max 0.045	max 0.03	10.0 ~ 14.0	16.0 ~ 18.0	2.0 ~ 3.0	min 205	min 520	40	-	max 187	
	JIS G4304 & KS-D3705 SUS 304L	max 0.03	max 1.0	max 2.0	max 0.045	max 0.03	9.0 ~ 13.0	18.0 ~ 20.0	-	min 175	min 480	40	-	max 187	
	JIS G4304 & KS-D3705 SUS 316L	max 0.03	max 1.0	max 2.0	max 0.045	max 0.03	12.0 ~ 15.0	16.0 ~ 18.0	2.0 ~ 3.0	min 175	min 480	40	-	max 187	

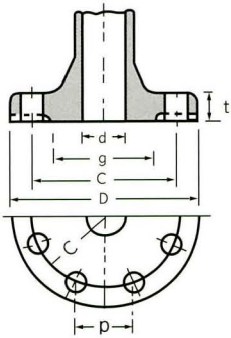
Type of Materials	JIS B 2220 (2001)				Material Group Code
	Rolling Steel		Forging Steel		
	Code	Material Code	Code	Material Code	
Carbon Steel	JIS G 3101	SS400	JIS G 3201	SF390A	001
	JIS G 4051	S20C	JIS G 3202	SFVC1	
	JIS G 4051	S25C	JIS G 3201	SF440A	
Molybdenum Steel			JIS G 3202	SFVC2A	003a
Crommolybdenum Steel			JIS G 3203	SFVAF1	013a
Stainless Steel	JIS G 4304	SUS304	JIS G 3203	SFVAF11A	015a
	JIS G 4305	SUS304	JIS G 3214	SUSF304	021a
	JIS G 4304	SUS316	KS-D 4115		
	JIS G 4305	SUS316	JIS G 3214	SUSF316	022a
	JIS G 4304	SUS304L	KS-D 4115		
	JIS G 4305	SUS304L	JIS-G 3214	SUSF304L	023a
	JIS G 4304	SUS316L	KS-D 4115		
	JIS G 4305	SUS316L	JIS-G 3214	SUSF316L	023b

KSB 1506 (2000)				
Nominal pressure	Type of Flange	Type of Materials	Materials	
			Code	Material
10K	Slip-On Flange	Stainless Steel	KS D 3705 JIS G 4304	SUS 304
20K	Blind Flange			SUS 316
30K	W/N Flange			SUS 304L SUS 316L

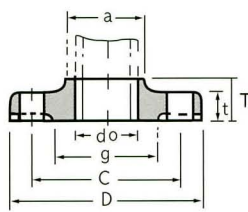
# TOLERANCE

## ANSI B16.5 FORGED FLANGES

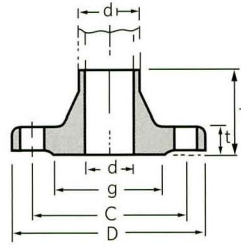
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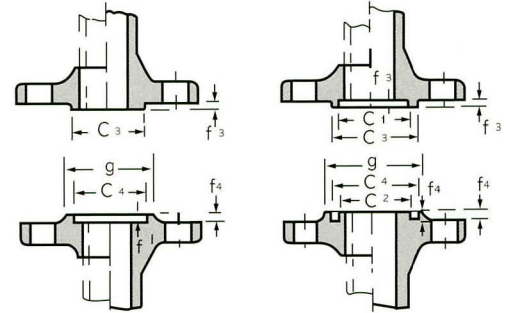
SLIP-ON



WELDING NECK



TYPE OF GASKET SURFACE



MALE & FEMALE TYPE

TONGUE & GROOVE TYPE

### THREAD, SOCKET-WELDING, SLIP-ON LAP JOINT AND BLIND.

Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*
	When O.D. is Over 24"	$\pm 1/8"$ (3.2mm)*
Inside Diameter	Threaded	Within limits on boring gauge
	Socket-Welding Slip-on and Lap joint	10" & Smaller $+1/32"$ (0.8mm), -0" 12" & Larger $+1/16"$ (1.6mm), -0"
Outside Diameter of Hub	5" and Smaller	$+3/32"$ (2.4mm)* $-1/32"$ (0.8mm)
	6" and Larger	$+5/32"$ (4.0mm) $+1/32"$ (0.8mm)
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)
Diameter of Counterbore	Same as for Inside Diameter	
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" Smaller $1/32"$ (0.8mm) Max. 3" & Larger $1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*
Thickness	18" and Smaller	$+1/8"$ (3.2mm), -0"
	20" and Larger	$+3/16"$ (4.8mm), -0"
	10" and Smaller	$\pm 1/16"$ (1.6mm)
Length Thru Hub	12" and Larger	$\pm 1/8"$ (3.2mm)

### WELDING NECK

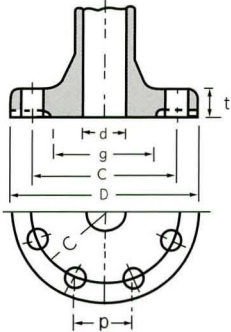
Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*
	When O.D. is Over 24"	$\pm 1/8"$ (3.2mm)*
Inside Diameter	10" and Smaller	$\pm 1/32"$ (0.8mm)
	12" thru 18"	$\pm 1/16"$ (1.6mm)
	20" and Larger	$+1/8"$ (3.2mm) $-1/16"$ (1.6mm)
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)
Diameter of Hub at Base	When Hub Base is 24" or Smaller	$\pm 1/16"$ (1.6mm)
	When Hub Base is Over 24"	$\pm 1/8"$ (3.2mm)
Diameter of Hub at point of Welding	5" and Smaller	$+3/32"$ (2.4mm)* $-1/32"$ (0.8mm)
	6" and Larger	$+5/32"$ (4.0mm) $+1/32"$ (0.8mm)
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" Smaller $1/32"$ (0.8mm) Max. 3" & Larger $1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*
Thickness	18" and Smaller	$+1/8"$ (3.2mm), -0"
	20" and Larger	$+3/16"$ (4.8mm), -0"
	10" and Smaller	$\pm 1/16"$ (1.6mm)
Length Thru Hub	12" and Larger	$\pm 1/8"$ (3.2mm)

Notes : \*This tolerance is not covered in ANSI B16.5, But maker's option.

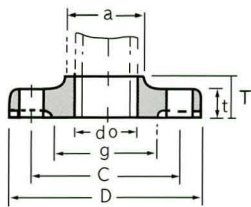
# TOLERANCE FOR PIPE FLANGES

KS B1502  
JIS B2203

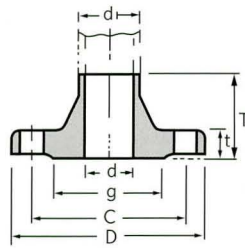
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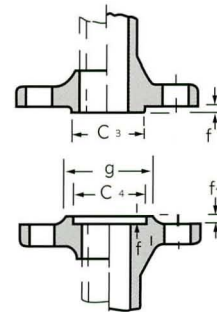
SLIP-ON



WELDING NECK

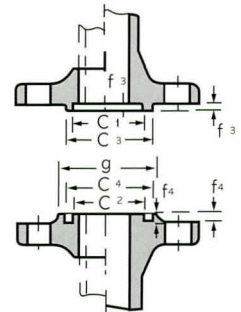


TYPE OF GASKET



MALE & FEMALE TYPE

SURFACE



TONGUE & GROVE TYPE

Unit:mm

Flange Section		Surface Condition	Basic Size	Dimensional Tolerance		
Outside Diameter	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		
			over 600 thru 1000	±2		
			over 1000 thru 1500	±2.5		
Inside Diameter	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 Hole	Slip-on Flange (a) and 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
		Finish	220 & below	+1 0
			over 220 thru 450	+1.5 0
			over 450 thru 650	+2 0
			over 650 thru 850	+2.5 0
			over 850 thru 1000	+3 0
			over 1000	+3.5 0
Gasket Seat	C1, C2, C3, C4	Finish	500 & below	±0.3
			over 500 thru 1000	±0.35
			over 1000 thru 1500	±0.4
	f4, f3	Finish	8 & below	±0.2
			over 8	±0.25
			g	±0.5
Thickness' t	One-side Finish	200 & below	±0.8	
		over 200 thru 650	±0.9	
		over 650 thru 1000	±1	
	Both-side Finish	20 & below	±1.2	
		over 20 thru 50	+1.5 0	
		over 50 thru 100	+2 0	
Hub Height T	Flange with Pipe Inserted	Finish	20 & below	+1 0
			over 20 thru 50	+1.5 0
	Flange with Butt-welded Pipe	Finish	50 & below	±1
			over 50 thru 100	±1.5

- 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 socket welding type flange illustrate the cases of large raised face flange.



# COMPARSION FLANGE BORES OF WELDING NECK FLANGE FOR ANSI WITH JIS

Unit:mm

NOMINAL PIPE SIZE	O.D		SCH10		SCH20		SCH30		STD	SCH40		SCH60		XH	SCH80		SCH100		SCH120		SCH140		SCH160		XXH
	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	ANSI	JIS	ANSI	JIS	ANSI	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS
1/2"	21.7	21.34	-	-	-	-	-	-	15.798	16.1	15.798	15.3	-	13.87	14.3	13.87	-	-	-	-	-	-	12.3	11.84	6.4
3/4"	27.2	26.67	-	-	-	-	-	-	20.929	21.4	20.929	20.4	-	18.85	19.4	18.85	-	-	-	-	-	-	16.2	15.60	11.02
1"	34.0	33.40	-	-	-	-	-	-	26.65	27.2	26.65	26.2	-	24.31	25.0	24.31	-	-	-	-	-	-	21.2	20.70	15.22
1 1/4"	42.7	42.16	-	-	-	-	-	-	35.05	35.5	35.05	33.7	-	32.46	32.9	32.46	-	-	-	-	-	-	29.9	29.47	22.76
1 1/2"	48.6	48.26	-	-	-	-	-	-	40.89	41.2	40.89	39.6	-	38.10	38.4	38.1	-	-	-	-	-	-	34.4	33.99	27.94
2"	60.5	60.33	-	-	54.1	-	-	-	52.5	52.7	52.50	50.7	-	49.25	49.5	49.25	-	-	-	-	-	-	43.1	42.90	38.18
2 1/2"	76.3	73.03	-	-	67.3	-	-	-	62.713	65.9	62.71	64.3	-	59.00	62.3	59.00	-	-	-	-	-	-	57.3	53.98	44.98
3"	89.1	88.90	-	-	80.1	-	-	-	77.93	78.1	77.93	75.9	-	73.66	73.9	73.66	-	-	-	-	-	-	66.9	66.65	58.42
3 1/2"	101.6	101.60	-	-	92.6	-	-	-	90.12	90.2	90.12	87.6	-	85.45	85.4	85.45	-	-	-	-	-	-	76.2	-	-
4"	114.3	114.30	-	-	104.5	-	-	-	102.26	102.3	102.26	100.1	-	97.18	97.1	96.18	-	-	92.1	92.05	-	-	87.3	87.33	80.06
5"	139.8	141.30	-	-	129.6	-	-	-	128.19	126.6	128.19	123.6	-	122.25	120.8	122.25	-	-	114.4	115.90	-	-	108.0	109.55	103.20
6"	165.2	168.28	-	-	154.2	-	-	-	154	151	154.0	146.6	-	146.33	143.2	146.33	-	-	136.6	139.73	-	-	128.8	131.8	124.38
8"	216.3	219.08	-	-	203.5	206.38	202.3	205.0	202.72	199.9	202.72	195.7	198.45	193.68	190.9	193.68	186.1	188.95	179.9	182.60	175.1	177.83	170.3	173.05	174.63
10"	267.4	273.05	-	-	254.5	260.35	251.7	257.45	254.51	248.7	254.51	242.0	247.65	247.65	237.2	242.93	230.9	236.58	224.5	230.23	216.5	222.25	210.2	215.90	-
12"	318.5	323.85	-	-	305.7	311.15	301.7	307.09	304.8	297.9	303.23	289.9	295.30	298.45	283.7	288.95	275.7	281.03	267.7	273.05	261.3	266.7	251.9	257.20	-
14"	355.6	355.60	342.8	342.9	339.8	339.70	336.6	336.55	336.55	333	333.35	325.4	325.48	330.2	317.6	317.50	308.0	308.0	300.0	300.08	292.0	292.1	284.2	284.18	-
16"	406.4	406.40	393.6	393.7	390.6	390.53	387.4	387.35	387.35	381.0	381.0	373.4	373.07	381.0	363.6	363.58	353.0	354.03	344.6	344.53	333.4	333.35	325.4	325.48	-
18"	457.2	457.20	444.4	444.5	441.4	441.33	435.0	434.95	438.15	428.6	428.65	419.2	419.1	431.8	409.6	409.6	398.4	398.4	387.4	387.35	377.8	377.85	366.8	366.73	-
20"	508.0	508.0	495.2	495.3	489.0	489.95	482.6	482.60	488.95	477.8	477.88	466.8	466.75	482.6	455.6	455.63	443.0	442.93	431.8	431.80	419.2	419.10	408.0	408.03	-
24"	-	609.6	-	-	-	590.55	-	581.05	590.55	-	574.8	-	560.43	584.2	-	547.73	-	531.83	-	517.55	-	504.85	-	490.58	-
30"	-	762.0	-	-	-	736.6	-	730.25	742.95	-	-	-	-	736.6	-	-	-	-	-	-	-	-	-	-	-