

# C.Z.IT DEVELOPMENT CO.,LTD














1134-HUAYING BUILDING CENTER AVENUE,TIANJIN FREE TRADE ZONE  
(AIRPORT ECONOMIC ZONE)TIANJIN,CHINA

Tel: 0086-22-66185520 Fax: 0086-22-66185520



JIS STANDARD CATALOGUE

👉 Website: [www.chinesefittings.com.cn](http://www.chinesefittings.com.cn)  
E-mail: [emily01@chinesefittings.com.cn](mailto:emily01@chinesefittings.com.cn)  
Tel/whatsapp/wechat: 13502159013

	TYPE	STANDARD	PRESSURE CLASS
 →	SLIP ON FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K 30K
 →	SLIP ON FLANGE (FLAT FACE)	JIS	5K 10K 16K 20K
 →	PLATE FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	PLATE FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	BLIND FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	BLIND FLANGE (FLAT FACE)	JIS	5K 10K 16K 20K
 →	SOCKET WELDING FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	SOCKET WELDING FLANGE (FLAT FACE)	JIS	5K 10K 16K 20K
 →	THREADED FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	THREADED FLANGE (FLAT FACE)	JIS	5K 10K 16K 20K
 →	WELDING NECK FLANGE (RAISED FACE)	JIS	5K 10K 16K 20K
 →	WELDING NECK FLANGE (FLAT FACE)	JIS	5K 10K 16K 20K
 →	SLIP-ON LAP JOINT FLANGE	JIS	5K 10K 16K 20K

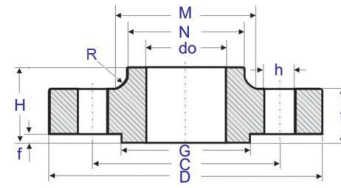
Code	Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Other
304	19Cr-10Ni	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	8.00~11.00	18.00~20.00	-	-
316	17Cr-12Ni-2.5Mo	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	10.00~14.00	16.00~18.00	2.00~3.00	-
304H	H * C-19Cr-10Ni	0.04~0.10	≤ 0.75	≤ 2.00	≤ 0.040	≤ 0.030	-	8.00~11.00	18.00~20.00	-	-
316H	H * C-17Cr-12Ni2-5Mo	0.04~0.10	≤ 0.75	≤ 2.00	≤ 0.030	≤ 0.030	-	11.00~14.00	16.00~18.00	2.00~3.00	-
321H	H* C-18Cr-11Ni-Ti	0.04~0.10	≤ 0.75	≤ 2.00	≤ 0.030	≤ 0.030	-	9.00~13.00	17.00~20.00	-	Ti 4xC%-0.60
347H	H * C-18Cr-11Ni-Nb	0.04~0.10	≤ 1.00	≤ 2.00	≤ 0.030	≤ 0.030	-	9.00~13.00	17.00~20.00	-	Nb+Ta 8xC%~1.00
348H	H * C-18Cr-11Ni-Nb(Ta)	0.04~0.10	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.03	-	9.00~13.00	17.00~20.00	-	Nb+Ta 8xC%~1.00 Ta < 0.10
304L	L*C-19Cr-11Ni	≤ 0.030	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	9.00~13.00	18.00~20.00	-	-
316L	L*C-17Cr-14Ni-25Mo	≤ 0.030	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	12.00~16.00	16.00~18.00	2.00~3.00	-
321	18Cr-11Ni-Ti	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	9.00~13.00	17.00~19.00	-	Ti ≥ 5XC%
347	18Cr-11Ni-Nb	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	9.00~13.00	17.00~19.00	-	Nb+Ta ≥ 10XC%
348	18Cr-11Ni-Nb(Ta)	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	9.00~13.00	17.00~20.00	-	Nb+Ta10XC%~1.00 Ta≤ 0.10
316 Cu	18Cr-12Ni-2Mo-2Cu	≤ .008	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	1.00~2.50	10.00~14.00	17.00~19.00	1.20~2.75	-
316CuL	L*C-18Cr-14Ni-2Mo-2Cu	≤ 0.030	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	1~2.50	12.00~16.00	17.00~19.00	1.20~2.75	-
317	19Cr-13Ni-3.5Mo	≤ 0.08	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	11.00~15.00	18.00~20.00	3.00~4.00	-
317L	L*C-19Cr-14Ni-3.5Mo	≤ 0.030	≤ 1.00	≤ 2.00	≤ 0.040	≤ 0.030	-	11.00~15.0	18.00~20.00	3.00~4.00	-
310S	25Cr-20Ni	≤ 0.15	≤ 1.50	≤ 2.00	≤ 0.040	≤ 0.030	-	19.00~22.00	24.00~26.00	-	-

**MECHANICAL PROPERTIES - JIS G3214**

Symbol of Class	Diameter or thickness at Heat treatment	Proof stress N/mm2	Tensile Strength N/mm <sup>2</sup>	Elongation No.14A test Piece %	Reduction of Area %	Hardness HB
	mm					
SUS F304	Under 130 130 ~ 200	205 min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUS F304H	Under 130 130 ~ 200	205 min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUS F304L	Under 130 130 ~ 200	175min.	520min. 480min.	29min.	50 min. 45 min.	187 max.
SUS F304N	Under 130 130 ~ 200	240min.	550min.	29min. 24min.	50 min. 45 min.	217 max.
SUSF304LN	Under 130 130 ~ 200	205min.	520min. 480min.	29min.	50 min. 45 min.	187 max.
SUS F310	Under 130 130 ~ 200	205min.	520min. 480min.	34min. 29min.	50 min. 45 min.	187 max.
SUS F316	Under 130 130 ~ 200	205min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUS F316H	Under 130 130 ~ 200	205min.	520min. 480min.	29min.	50 min. 45 min.	187 max.
SUS F316L	Under 130 130 ~ 200	175min.	520min. 480min.	29min. 24min.	50 min. 45 min.	187 max.
SUS F316N	Under 130 130 ~ 200	240min.	550min.	29min.	50 min. 45 min.	217 max.
SUSF316LN	Under 130 130 ~ 200	205min.	520min. 480min.	29min.	50 min. 45 min.	187 max.
SUS F317	Under 130 130 ~ 200	205min.	520min. 480min.	29min.	50 min.	187 max.
SUS F317L	Under 130 130 ~ 200	175min.	520min. 480min.	29min.	50 min.	187 max.
SUS F321	Under 130 130 ~ 200	205min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUS F321H	Under 130 130 ~ 200	205min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUS F347	Under 130 130 ~ 200	205min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.
SUSF347H	Under 130 130 ~ 200	205min.	520min. 480min.	43min. 29min.	50 min. 45 min.	187 max.

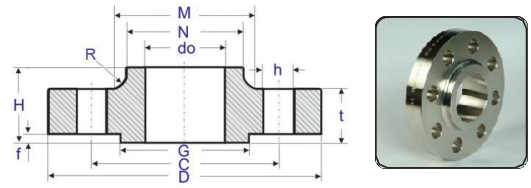
**FLANGE BORE AND DIAMETER OF HUB AT BEVEL -JPI-7S-15**

Nominal pipe size		Flange bore and thickness of hub at bevel																
		WN	SO SW	LJ	WN/SW													
					Sch 5S		Sch 10S		Sch 20S		Sch 40		Sch 80		Sch120		Sch 160	
A	B	A	B2	B3	W	B1	W	B1	W	B1	W	B1	W	B1	W	B1	W	B1
15	1/2"	21.7	22.2	23.4	1.65	18.4	2.1	17.5	2.5	16.7	2.8	16.1	3.7	14.3	-	-	4.7	12.3
20	3/4"	27.2	27.7	28.9	1.65	23.9	2.1	23.0	2.5	22.2	2.9	21.4	3.9	19.4	-	-	5.5	16.2
25	1"	34.0	34.5	35.6	1.65	30.7	2.8	28.4	3.0	28.0	3.4	27.2	4.5	25.0	-	-	6.4	21.2
32	1.1/4"	42.7	43.2	44.3	1.65	39.4	2.8	37.1	3.0	36.7	3.6	35.5	4.9	32.9	-	-	6.4	29.9
40	1.1/2"	48.6	49.1	50.4	1.65	45.3	2.8	43.0	3.0	42.6	3.7	41.2	5.1	38.4	-	-	7.1	34.4
50	2"	60.5	61.1	62.7	1.65	57.2	2.8	54.9	3.5	53.5	3.9	52.7	5.5	49.5	-	-	8.7	43.1
60	2.1/2"	76.3	77.1	78.7	2.1	72.1	3.0	70.3	3.5	69.3	5.2	65.9	7.0	62.3	-	-	9.5	57.3
80	3"	89.1	90.0	91.6	2.1	84.9	3.0	83.1	4.0	81.1	5.5	78.1	7.6	73.9	-	-	11.1	66.9
90	3.1/2"	101.6	102.6	104.1	2.1	97.4	3.0	95.6	4.0	93.6	5.7	90.2	8.1	85.4	-	-	12.7	76.2
100	4"	114.3	115.4	116.9	2.1	110.1	3.0	108.3	4.0	106.3	6.0	102.3	8.6	97.1	11.1	92.1	13.5	87.3
125	5"	139.8	141.2	143.0	2.8	134.2	3.4	133.0	5.0	129.8	6.6	126.6	9.5	120.8	12.7	114.4	15.9	108.0
150	6"	165.2	166.6	168.4	2.8	159.6	3.4	158.4	5.0	155.2	7.1	151.0	11.0	143.2	14.3	136.6	18.2	128.8
200	8"	216.3	218.0	219.5	2.8	210.7	4.0	208.3	6.5	203.3	8.2	199.9	12.7	190.9	18.2	179.9	23.0	170.3
250	10"	267.4	269.5	271.7	3.4	260.6	4.0	259.4	6.5	254.4	9.3	248.8	15.1	237.2	21.4	224.6	28.6	210.2
300	12"	318.5	321.0	322.8	4.0	310.5	4.5	309.5	6.5	305.5	10.3	197.9	17.4	283.7	25.4	267.7	33.3	251.9
350	14"	355.6	358.1	-	4.0	347.6	5.0	345.6	8.0	339.6	11.1	333.4	19.0	317.6	27.8	300.0	35.7	284.2
400	16"	406.4	409.	-	4.5	397.4	5.0	396.4	8.0	390.4	12.7	381.	21.4	363.6	30.9	344.6	40.5	325.4
450	18"	457.2	460.0	-	4.5	448.2	5.0	447.2	8.0	441.2	14.3	428.6	23.8	409.6	34.9	387.4	45.2	366.8
500	20"	508.0	511.0	-	4.8	498.0	5.5	497.0	9.5	489.0	15.1	477.8	26.2	455.6	38.1	431.8	50.0	408.0
600	24"	609.6	613.0	-	5.5	598.6	6.5	596.6	9.5	590.6	17.5	574.6	31.0	541.6	46.0	517.6	59.5	490.6



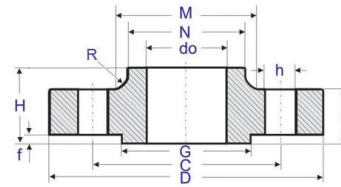
JIS STANDARD - 5K SOHRF

Nominal pipe size	Outside dia.(m)	Dia.of bolt circle(mm)	Dia.of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	g	f	t	N	M	H	R		
3/8"	10	75	55	12	4	17.8	39	1	9	23	26	13	4	-
1/2"	15	80	60	12	4	22.2	44	1	9	27	30	13	4	-
3/4"	20	85	65	12	4	27.7	49	1	10	33	36	15	4	-
1"	25	95	75	12	4	34.5	59	1	10	41	44	17	4	-
1.1/4"	32	115	90	15	4	43.2	70	2	12	50	53	19	4	-
1.1/2"	40	120	95	15	4	49.1	75	2	12	56	60	20	4	-
2"	50	130	105	15	4	61.1	85	2	14	69	73	24	4	-
2.1/2"	65	155	130	15	4	77.1	110	2	14	86	91	27	4	-
3"	80	180	145	19	4	90	121	2	14	99	105	30	4	-
3.1/2"	90	190	155	19	4	102.6	131	2	14	-	-	-	-	-
4"	100	200	165	19	8	115.4	141	2	16	127	130	36	4	-
5"	125	235	200	19	8	141.2	176	2	16	154	161	40	4	-
6"	150	265	230	19	8	166.6	206	2	18	182	189	40	4	-
7"	175	300	260	23	8	192.1	232	2	18	-	-	-	-	-
8"	200	320	280	23	8	218	252	2	20	-	-	-	-	-
9"	225	345	305	23	12	243.7	277	2	20	-	-	-	-	-
10"	250	385	345	23	12	269.5	317	2	22	-	-	-	-	-
12"	300	430	390	23	12	321	360	3	22	-	-	-	-	-
14"	350	480	435	25	12	358.1	403	3	24	-	-	-	-	-
16"	400	540	495	25	16	409	463	3	24	-	-	-	-	-
18"	450	605	555	25	16	460	523	3	24	495	500	40	5	24.9
20"	500	655	605	25	20	511	573	3	24	546	552	40	5	27.0
22"	550	720	665	27	20	562	630	3	26	597	603	42	5	34.5
24"	600	770	715	27	20	613	680	3	26	648	654	44	5	37.8
24"	600	770	715	27	20	613	680	3	26	648	654	44	5	37.8
26"	650	825	770	27	24	664	735	3	26	702	708	48	5	43.2
28"	700	875	820	27	24	715	785	3	26	751	758	48	5	45.8
30"	750	945	880	33	24	766	840	3	28	802	810	52	5	57.7
32"	800	995	930	33	24	817	890	3	28	854	862	52	5	61.3
34"	850	1045	980	33	24	868	940	3	28	904	912	54	5	65.3
36"	900	1095	1030	33	24	919	990	3	30	956	964	56	5	73.1
40"	1000	1195	1130	33	28	1021	1090	3	32	1058	1066	60	5	84.8
44"	1100	1305	1240	33	28	1122	1200	3	32	1158	1170	71	7	105.0
48"	1200	1420	1350	33	32	1224	1305	3	34	1260	1272	77	7	129.0
54"	1350	1575	1505	33	32	1376	1460	3	34	1414	1426	80	7	151.0
60"	1500	1730	1660	33	36	1529	1615	3	36	1568	1580	86	7	180.0



JIS STANDARD - 10K SOHRF

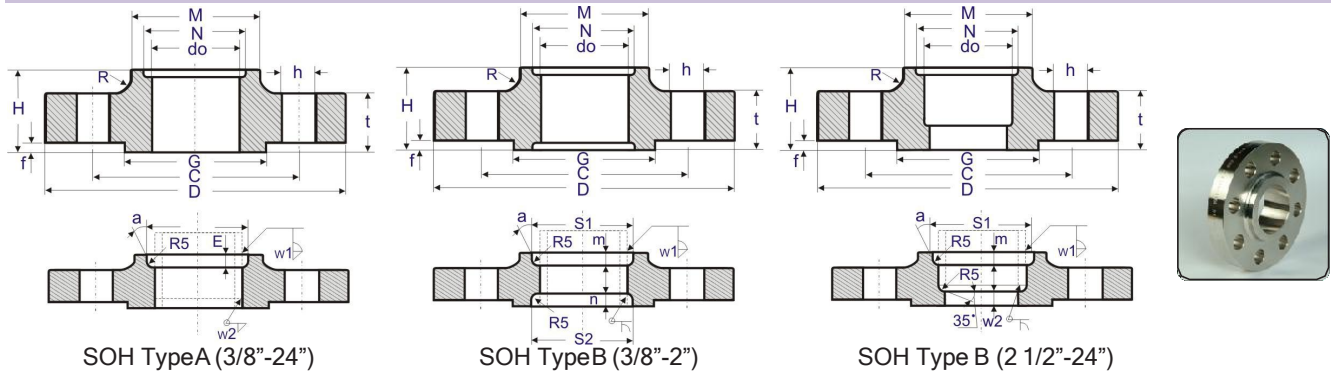
Nominal pipe size	Outside dia.(m m)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickn ess min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Lengt h Thru. Hub (mm)	Radiu s of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	g	f	t	N	M	H	R	
3/8"	10	90	65	4	17.8	46	1	12	23	26	16	4	-
1/2"	15	95	70	4	22.2	51	1	12	27	30	16	4	-
3/4"	20	100	75	4	27.7	56	1	14	33	36	20	4	-
1"	25	125	90	4	34.5	67	1	14	41	44	20	4	-
1.1/4"	32	135	100	4	43.2	76	2	16	50	53	22	4	-
1.1/2"	40	140	105	4	49.1	81	2	16	56	60	24	4	-
2"	50	155	120	4	61.1	96	2	16	69	73	24	4	-
2.1/2"	65	175	140	4	77.1	116	2	18	86	91	27	4	-
3"	80	185	150	8	90	126	2	18	99	105	30	4	-
3.1/2"	90	195	160	8	102.6	136	2	18	-	-	-	-	-
4"	100	210	175	8	115.4	151	2	18	127	130	36	4	-
5"	125	250	210	8	141.2	182	2	20	154	161	40	4	-
6"	150	280	240	8	166.6	212	2	22	182	189	40	4	-
7"	175	305	265	12	192.1	237	2	22	-	-	-	-	-
8"	200	330	290	12	218	262	2	22	-	-	-	-	-
9"	225	350	310	12	243.7	282	2	22	-	-	-	-	-
10"	250	400	355	12	269.5	324	2	24	288	292	36	6	12.7
12"	300	445	400	16	321	368	3	24	340	346	38	6	13.8
14"	350	490	445	16	358.1	413	3	26	380	386	42	6	18.2
16"	400	560	510	16	409	475	3	28	436	442	44	6	25.8
18"	450	620	565	20	460	530	3	30	496	502	48	6	33.4
20"	500	675	620	20	511	585	3	30	548	554	48	6	38.0
22"	550	745	680	20	562	640	3	32	604	610	52	6	49.4
24"	600	795	730	24	613	690	3	32	656	662	52	6	52.6
26"	650	845	780	24	664	740	3	34	706	712	56	6	60.2
28"	700	905	840	24	715	800	3	34	762	770	58	6	70.2
30"	750	970	900	24	766	855	3	36	816	824	62	6	86.5
32"	800	1020	950	28	817	905	3	36	868	876	64	6	92.0
34"	850	1070	1000	28	868	955	3	36	920	928	66	6	98.7
36"	900	1120	1050	28	919	1005	3	38	971	979	70	6	110
40"	1000	1235	1160	28	1021	1110	3	40	1073	1081	74	6	133
44"	1100	1345	1270	28	1122	1220	3	42	1175	1185	95	8	175
48"	1200	1465	1380	32	1224	1325	3	44	1278	1290	101	8	215
54"	1350	1630	1540	36	1376	1480	3	48	1432	1450	110	8	274
60"	1500	1795	1700	40	1529	1635	3	50	1585	1605	123	8	340



JIS STANDARD - 16K SOHRF

Nominal pipe size		Outside dia.(m)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickne ss min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Lengt h Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	g	f	t	N	M	H	R		
3/8"	10	90	65	15	4	17.8	46	1	12	26	28	16	4	0.52
1/2"	15	95	70	15	4	22.2	51	1	12	30	32	16	4	0.58
3/4"	20	100	75	15	4	27.7	56	1	14	38	42	20	4	0.75
1"	25	125	90	19	4	34.5	67	1	14	46	50	20	4	1.16
1.1/4"	32	135	100	19	4	43.2	76	2	16	56	60	22	5	1.53
1.1/2"	40	140	105	19	4	49.1	81	2	16	62	66	24	5	1.64
2"	50	155	120	19	8	61.1	96	2	16	76	80	24	5	1.83
2.1/2"	65	175	140	19	8	77.1	116	2	18	94	98	26	5	2.58
3"	80	200	160	23	8	90.0	132	2	20	108	112	28	6	3.61
3.1/2"	90	210	170	23	8	102.6	145	2	20	120	124	30	6	3.89
4"	100	225	185	23	8	115.4	160	2	22	134	138	34	6	4.87
5"	125	270	225	25	8	141.2	195	2	22	164	170	34	6	7.09
6"	150	305	260	25	12	166.6	230	2	24	196	202	38	6	9.57
8"	200	350	305	25	12	218.0	275	2	26	244	252	40	6	12.0
10"	250	430	380	27	12	269.5	345	2	28	304	312	44	6	20.1
12"	300	480	430	27	16	321.0	395	3	30	354	364	48	8	24.3
14"	350	540	480	33	16	358.1	440	3	34	398	408	52	8	34.4
16"	400	605	540	33	16	409	495	3	38	446	456	60	10	47.4
18"	450	675	605	33	20	460	560	3	40	504	514	64	10	61.8
20"	500	730	660	33	20	511	615	3	42	558	568	68	10	73.7
22"	550	795	720	39	20	562	670	3	44	612	622	70	10	87.9
24"	600	845	770	39	24	613	720	3	46	666	676	74	10	98.4



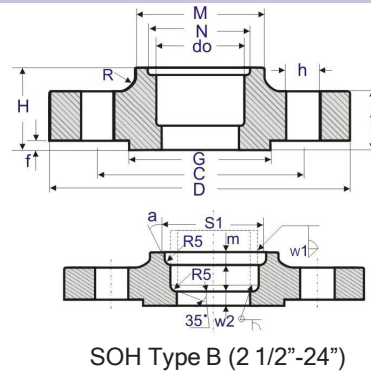
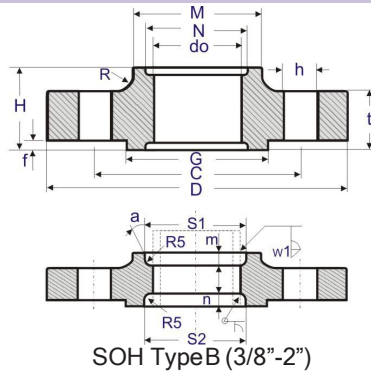
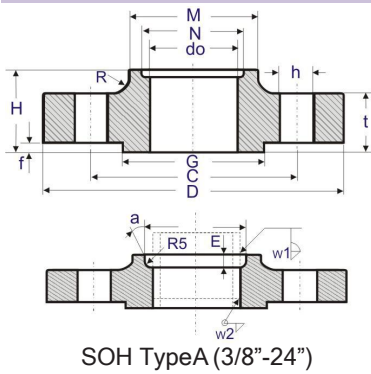


**JIS STANDARD -20K SOHRF**

Nominal pipe size	Outside dia.(m)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	g	f	t	N	M	H	R		
3/8"	10	90	65	15	4	17.8	46	1	14	30	32	20	4	0.58
1/2"	15	95	70	15	4	22.2	51	1	14	34	36	20	4	0.65
3/4"	20	100	75	15	4	27.7	56	1	16	40	42	22	4	0.81
1"	25	125	90	19	4	34.5	67	1	16	48	50	24	4	1.27
1.1/4"	32	135	100	19	4	43.2	76	2	18	56	60	26	5	1.58
1.1/2"	40	140	105	19	4	49.1	81	2	18	62	66	26	5	1.68
2"	50	155	120	19	8	61.1	96	2	18	76	80	26	5	1.89
2.1/2"	65	175	140	19	8	77.1	116	2	20	100	104	30	5	2.73
3"	80	200	160	23	8	90.0	132	2	22	113	117	34	6	3.85
3.1/2"	90	210	170	23	8	102.6	145	2	24	126	130	36	6	4.47
4"	100	225	185	23	8	115.4	160	2	24	138	142	36	6	5.03
5"	125	270	225	25	8	141.2	195	2	26	166	172	40	6	7.94
6"	150	305	260	25	12	166.6	230	2	28	196	202	42	6	10.4
8"	200	350	305	25	12	218.0	275	2	30	244	252	46	6	13.1
10"	250	430	380	27	12	269.5	345	2	34	304	312	52	6	23.1
12"	300	480	430	27	16	321.0	395	3	36	354	364	56	8	27.2
14"	350	540	480	33	16	358.1	440	3	40	398	408	62	8	38.4
16"	400	605	540	33	16	409	495	3	46	446	456	70	10	53.9
18"	450	675	605	33	20	460	560	3	48	504	514	78	10	71.0
20"	500	730	660	33	20	511	615	3	50	558	568	84	10	84.6
22"	550	795	720	39	20	562	670	3	52	612	622	90	10	102
24"	600	845	770	39	24	613	720	3	54	666	676	96	10	115

Nominal Pipe Size	S1	S2	m	n	a	Length of Weld		
						W1	W2	
3/8"	10	27	27	4	4	-	4	3
1/2"	15	31	31	4	4	-	4	3
3/4"	20	37	37	4	4	-	5	3
1"	25	44	44	4	4.5	-	6	3.5
1.1/4"	32	52	53	4	5	-	6	4
1.1/2"	40	58	59	4	5.5	-	6	4
2"	50	70	72	4	5.5	-	6.5	4
2.1/2"	65	94	-	6	-	20°	8	4
3"	80	107	-	6	-	20°	8	6
3.1/2"	90	120	-	6	-	20°	9	6
4"	100	132	-	6	-	20°	9	6
5"	125	160	-	7	-	30°	10	7
6"	150	186	-	8	-	30°	10	7
8"	200	237	-	9	-	30°	11	8
10"	250	290	-	10	-	30°	12	9
12"	300	345	-	11	-	30°	13	10
14"	350	384	-	12	-	35°	14	11
16"	400	437	-	13	-	35°	15	12
18"	450	490	-	15	-	35°	16	12
20"	500	544	-	16	-	35°	16	14
22"	550	595	-	16	-	35°	18	14
24"	600	646	-	18	-	35°	18	16

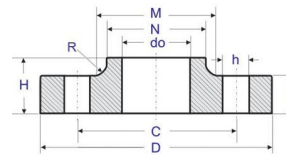




JIS STANDARD-30K SOHRF

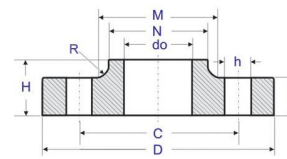
Nominal pipe size	Outside dia.(m)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	g	f	t	N	M	H	R	
3/8"	10	110	75	19	4	17.8	52	1	16	30	34	24	4
1/2"	15	115	80	19	4	22.2	55	1	18	36	40	26	5
3/4"	20	120	85	19	4	27.7	60	1	18	42	46	28	5
1"	25	130	95	19	4	34.5	70	1	20	50	54	30	5
1.1/4"	32	140	105	19	4	43.2	80	2	22	60	64	32	6
1.1/2"	40	160	120	23	4	49.1	90	2	22	66	70	34	6
2"	50	165	130	19	8	61.1	105	2	22	82	86	36	6
2.1/2"	65	200	160	23	8	77.1	130	2	26	102	106	40	8
3"	80	210	170	23	8	90.0	140	2	28	115	121	44	8
3.1/2"	90	230	185	25	8	102.6	150	2	30	128	134	46	8
4"	100	240	195	25	8	115.4	160	2	32	141	147	48	8
5"	125	275	230	25	8	141.2	195	2	36	166	172	54	8
6"	150	325	275	27	12	166.6	235	2	38	196	204	58	8
8"	200	370	320	27	12	218.0	280	2	42	248	256	64	8
10"	250	450	390	33	12	269.5	345	2	48	306	314	72	10
12"	300	515	450	33	16	321.0	405	3	52	360	370	78	10
14"	350	560	495	33	16	358.1	450	3	54	402	412	84	12
16"	400	630	560	39	16	409	510	3	60	456	468	92	15

Nominal Pipe Size		S1	S2	m	n	a	Length of Weld		
								W1	W2
3/8"	10	27	27	4	4	-	4	3	
1/2"	15	31	40	4	5	-	4	3	
3/4"	20	37	44	5	5	-	5	3.5	
1"	25	44	52	6	5	-	6	4	
1.1/4"	32	52	60	6	5	-	6	4	
1.1/2"	40	58	66	6	5	-	6	4	
2"	50	70	78	6.5	5	-	6.5	4	
2.1/2"	65	96	-	9.5	-	20°	10	6	
3"	80	109	-	9.5	-	20°	10	6	
3.1/2"	90	122	-	9.5	-	20°	10.5	6	
4"	100	135	-	9.5	-	20°	10.5	7	
5"	125	160	-	9.5	-	30°	10.5	7	
6"	150	186	-	9.5	-	30°	10.5	8	
8"	200	237	-	9.5	-	30°	11	9	
10"	250	290	-	10	-	30°	12	10	
12"	300	345	-	12	-	30°	13	11	
14"	350	385	-	13	-	35°	14	12	
16"	400	435	-	14	-	35°	15	13	



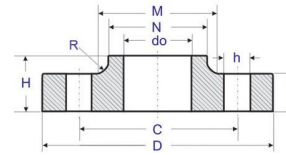
JIS STANDARD - 5K SOHFF

Nominal Pipe Size	Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	H	R		
3/8"	10	75	55	12	4	17.8	9	23	26	13	4	-
1/2"	15	80	60	12	4	22.2	9	27	30	13	4	-
3/4"	20	85	65	12	4	27.7	10	33	36	15	4	-
1"	25	95	75	12	4	34.5	10	41	44	17	4	-
1.1/4"	32	115	90	15	4	43.2	12	50	53	19	4	-
1.1/2"	40	120	95	15	4	49.1	12	56	60	20	4	-
2"	50	130	105	15	4	61.1	14	69	73	24	4	-
2.1/2"	65	155	130	15	4	77.1	14	86	91	27	4	-
3"	80	180	145	19	4	90	14	99	105	30	4	-
3.1/2"	90	190	155	19	4	102.6	14	-	-	-	-	-
4"	100	200	165	19	8	115.4	16	127	130	36	4	-
5"	125	235	200	19	8	141.2	16	154	161	40	4	-
6"	150	265	230	19	8	166.6	18	182	189	40	4	-
7"	175	300	260	23	8	192.1	18	-	-	-	-	-
8"	200	320	280	23	8	218	20	-	-	-	-	-
9"	225	345	305	23	12	243.7	20	-	-	-	-	-
10"	250	385	345	23	12	269.5	22	-	-	-	-	-
12"	300	430	390	23	12	321	22	-	-	-	-	-
14"	350	480	435	25	12	358.1	24	-	-	-	-	-
16"	400	540	495	25	16	409	24	-	-	-	-	-
18"	450	605	555	25	16	460	24	495	500	40	5	24.9
20"	500	655	605	25	20	511	24	546	552	40	5	27.0
22"	550	720	665	27	20	562	26	597	603	42	5	34.5
24"	600	770	715	27	20	613	26	648	654	44	5	37.8
26"	650	825	770	27	24	664	26	702	708	48	5	43.2
28"	700	875	820	27	24	715	26	751	758	48	5	45.8
30"	750	945	880	33	24	766	28	802	810	52	5	57.7
32"	800	995	930	33	24	817	28	854	862	52	5	61.3
34"	850	1045	980	33	24	868	28	904	912	54	5	65.3
36"	900	1095	1030	33	24	919	30	956	964	56	5	73.1
40"	1000	1195	1130	33	28	1021	32	1058	1066	60	5	84.8
44"	1100	1305	1240	33	28	1122	32	1158	1170	71	7	105.0
48"	1200	1420	1350	33	32	1224	34	1260	1272	77	7	129.0
54"	1350	1575	1505	33	32	1376	34	1414	1426	80	7	151.0
60"	1500	1730	1660	33	36	1529	36	1568	1580	86	7	180.0



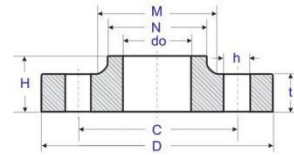
JIS STANDARD - 10K SOHFF

Nominal Pipe Size	Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	H	R		
3/8"	10	90	65	15	4	17.8	12	23	26	16	4	-
1/2"	15	95	70	15	4	22.2	12	27	30	16	4	-
3/4"	20	100	75	15	4	27.7	14	33	36	20	4	-
1"	25	125	90	19	4	34.5	14	41	44	20	4	-
1.1/4"	32	135	100	19	4	43.2	16	50	53	22	4	-
1.1/2"	40	140	105	19	4	49.1	16	56	60	24	4	-
2"	50	155	120	19	4	61.1	16	69	73	24	4	-
2.1/2"	65	175	140	19	4	77.1	18	86	91	27	4	-
3"	80	185	150	19	8	90	18	99	105	30	4	-
3.1/2"	90	195	160	19	8	102.6	18	-	-	-	-	-
4"	100	210	175	19	8	115.4	18	127	130	36	4	-
5"	125	250	210	23	8	141.2	20	154	161	40	4	-
6"	150	280	240	23	8	166.6	22	182	189	40	4	-
7"	175	305	265	23	12	192.1	22	-	-	-	-	-
8"	200	330	290	23	12	218	22	-	-	-	-	-
9"	225	350	310	23	12	243.7	22	-	-	-	-	-
10"	250	400	355	25	12	269.5	24	288	292	36	6	12.7
12"	300	445	400	25	16	321	24	340	346	38	6	13.8
14"	350	490	445	25	16	358.1	26	380	386	42	6	18.2
16"	400	560	510	27	16	409	28	436	442	44	6	25.8
18"	450	620	565	27	20	460	30	496	502	48	6	33.4
20"	500	675	620	27	20	511	30	548	554	48	6	38.0
22"	550	745	680	33	20	562	32	604	610	52	6	49.4
24"	600	795	730	33	24	613	32	656	662	52	6	52.6
26"	650	845	780	33	24	664	34	706	712	56	6	60.2
28"	700	905	840	33	24	715	34	762	770	58	6	70.2
30"	750	970	900	33	24	766	36	816	824	62	6	86.5
32"	800	1020	950	33	28	817	36	868	876	64	6	92.0
34"	850	1070	1000	33	28	868	36	920	928	66	6	98.7
36"	900	1120	1050	33	28	919	38	971	979	70	6	110
40"	1000	1235	1160	39	28	1021	40	1073	1081	74	6	133
44"	1100	1345	1270	39	28	1122	42	1175	1185	95	8	175
48"	1200	1465	1380	39	32	1224	44	1278	1290	101	8	215
54"	1350	1630	1540	45	36	1376	48	1432	1450	110	8	274
60"	1500	1795	1700	45	40	1529	50	1585	1605	123	8	340



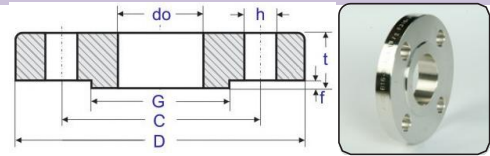
**JIS STANDARD - 16k SOHFF**

Nominal Pipe Size	Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	t	N	M	H	R	
3/8"	10	90	65	4	17.8	12	26	28	16	4	0.52
1/2"	15	95	70	4	22.2	12	30	32	16	4	0.58
3/4"	20	100	75	4	27.7	14	38	42	20	4	0.75
1"	25	125	90	4	34.5	16	46	50	20	4	1.16
1.1/4"	32	135	100	4	43.2	16	56	60	22	5	1.53
1.1/2"	40	140	105	4	49.1	16	62	66	24	5	1.64
2"	50	155	120	8	61.1	16	76	80	24	5	1.83
2.1/2"	65	175	140	8	77.1	18	94	98	26	5	2.58
3"	80	200	160	23	90.0	20	108	112	28	6	3.61
3.1/2"	90	210	170	23	102.6	20	120	124	30	6	3.89
4"	100	225	185	23	115.4	22	134	138	34	6	4.87
5"	125	270	225	25	141.2	22	164	170	34	6	7.09
6"	150	305	260	25	166.6	24	196	202	38	6	9.57
8"	200	350	305	25	218.0	26	244	252	40	6	12.0
10"	250	430	380	27	269.5	28	304	312	44	6	20.1
12"	300	480	430	27	321.0	30	354	364	48	8	24.3
14"	350	540	480	33	358.1	34	398	408	52	8	34.4
16"	400	605	540	33	409	38	446	456	60	10	47.4
18"	450	675	605	33	460	40	504	514	64	10	61.8
20"	500	730	660	33	511	42	558	568	68	10	73.7
22"	550	795	720	39	562	44	612	622	70	10	87.9
24"	600	845	770	39	613	46	666	676	74	10	98.4



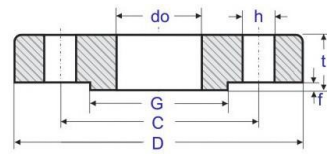
JIS STANDARD - 20K SOHFF

Nominal Pipe Size	Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	t	N	M	H	R	
3/8"	10	90	65	4	17.8	14	30	32	20	4	0.58
1/2"	15	95	70	4	22.2	14	34	36	20	4	0.65
3/4"	20	100	75	4	27.7	16	40	42	22	4	0.81
1"	25	125	90	4	34.5	16	48	50	24	4	1.27
1.1/4"	32	135	100	4	43.2	18	56	60	26	5	1.58
1.1/2"	40	140	105	4	49.1	18	62	66	26	5	1.68
2"	50	155	120	8	61.1	18	76	80	26	5	1.89
2.1/2"	65	175	140	8	77.1	20	100	104	30	5	2.73
3"	80	200	160	8	90.0	22	113	117	34	6	3.85
3.1/2"	90	210	170	8	102.6	24	126	130	36	6	4.47
4"	100	225	185	8	115.4	24	138	142	36	6	5.03
5"	125	270	225	8	141.2	26	166	172	40	6	7.94
6"	150	305	260	12	166.6	28	196	202	42	6	10.4
8"	200	350	305	12	218.0	30	244	252	46	6	13.1
10"	250	430	380	12	269.5	34	304	312	52	6	23.1
12"	300	480	430	16	321.0	36	354	364	56	8	27.2
14"	350	540	480	16	358.1	40	398	408	62	8	38.4
16"	400	605	540	16	409	46	446	456	70	10	53.9
18"	450	675	605	20	460	48	504	514	78	10	71.0
20"	500	730	660	20	511	50	558	568	84	10	84.6
22"	550	795	720	20	562	52	612	622	90	10	102
24"	600	845	770	24	613	54	666	676	96	10	115



JIS STANDARD-5K SOPRE

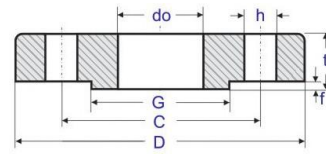
Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Raiced Face(mm)	Height Raised face(mm)	Approx weight(KG)
A		D	C	h		do	t	G	f	
3/8"	10	75	55	12	4	17.8	9	39	1	0.26
1/2"	15	80	60	12	4	22.2	9	44	1	0.30
3/4"	20	85	65	12	4	27.7	10	49	1	0.36
1"	25	95	75	12	4	34.5	10	59	1	0.45
1.1/4"	32	115	90	15	4	43.2	12	70	2	0.77
1.1/2"	40	120	95	15	4	49.1	12	75	2	0.82
2"	50	130	105	15	4	61.1	14	85	2	1.06
2.1/2"	65	155	130	15	4	77.1	14	110	2	1.48
3"	80	180	145	19	4	90	14	121	2	1.97
3.1/2"	90	190	155	19	4	102.6	14	131	2	2.08
4"	100	200	165	19	8	115.4	16	141	2	2.35
5"	125	235	200	19	8	141.2	16	176	2	3.20
6"	150	265	230	19	8	166.6	18	206	2	4.39
7"	175	300	260	23	8	192.1	18	232	2	5.42
8"	200	320	280	23	8	218	20	252	2	6.24
9"	225	345	305	23	12	243.7	20	277	2	6.57
10"	250	385	345	23	12	269.5	22	317	2	9.39
12"	300	430	390	23	12	321	22	360	3	10.2
14"	350	480	435	25	12	358.1	24	403	3	14.0
16"	400	540	495	25	16	409	24	463	3	16.9
18"	450	605	555	25	16	460	24	523	3	21.4
20"	500	655	605	25	20	511	24	573	3	23.0
22"	550	720	665	27	20	562	26	630	3	30.1
24"	600	770	715	27	20	613	26	680	3	32.5
26"	650	825	770	27	24	664	26	735	3	35.6
28"	700	875	820	27	24	715	26	785	3	38.0
30"	750	945	880	33	24	766	28	840	3	48.4
32"	800	995	930	33	24	817	28	890	3	51.2
34"	850	1045	980	33	24	868	28	940	3	53.9
36"	900	1095	1030	33	24	919	30	990	3	60.7
40"	1000	1195	1130	33	28	1021	32	1090	3	70.1
44"	1100	1305	1240	33	28	1122	32	1200	3	81.6
48"	1200	1420	1350	33	32	1224	34	1305	3	101.0
54"	1350	1575	1505	33	32	1376	34	1460	3	116.0
60"	1500	1730	1660	33	36	1529	36	1615	3	137.0



JIS STANDARD - 10KSOPRF

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Raised Face (mm)	Height Raised face (mm)	Approx weight (KG)
A		D	C	h		do	t	G	f	
3/8"	10	90	65	15	4	17.8	12	46	1	0.51
1/2"	15	95	70	15	4	22.2	12	51	1	0.56
3/4"	20	100	75	15	4	27.7	14	56	1	0.72
1"	25	125	90	19	4	34.5	14	67	1	1.12
1.1/4"	32	135	100	19	4	43.2	16	76	2	1.47
1.1/2"	40	140	105	19	4	49.1	16	81	2	1.55
2"	50	155	120	19	4	61.1	16	96	2	1.86
2.1/2"	65	175	140	19	4	77.1	18	116	2	2.58
3"	80	185	150	19	8	90.0	18	126	2	2.58
3.1/2"	90	195	160	19	8	102.6	18	136	2	2.73
4"	100	210	175	19	8	115.4	18	151	2	3.10
5"	125	250	210	23	8	141.2	20	182	2	4.73
6"	150	280	240	23	8	166.6	22	212	2	6.30
7"	175	305	265	23	12	192.1	22	237	2	6.75
8"	200	330	290	23	12	218.0	22	262	2	7.46
9"	225	350	310	23	12	243.7	22	282	2	7.70
10"	250	400	355	25	12	269.5	24	324	2	11.8
12"	300	445	400	25	16	321.0	24	368	3	12.6
14"	350	490	445	25	16	358.1	26	413	3	16.3
16"	400	560	510	27	16	409	28	475	3	23.2
18"	450	620	565	27	20	460	30	530	3	29.3
20"	500	675	620	27	20	511	30	585	3	33.3
22"	550	745	680	33	20	562	32	640	3	42.9
24"	600	795	730	33	24	613	32	690	3	45.4
26"	650	845	780	33	24	664	34	740	3	51.8
28"	700	905	840	33	24	715	34	800	3	59.0
30"	750	970	900	33	24	766	36	855	3	72.8
32"	800	1020	950	33	28	817	36	905	3	76.0
34"	850	1070	1000	33	28	868	36	955	3	80.1
36"	900	1120	1050	33	28	919	38	1005	3	88.9
40"	1000	1235	1160	39	28	1021	40	1110	3	109
44"	1100	1345	1270	39	28	1122	42	1220	3	131
48"	1200	1465	1380	39	32	1224	44	1325	3	163
54"	1350	1630	1540	45	36	1376	48	1480	3	204
60"	1500	1795	1700	45	40	1529	50	1635	3	248



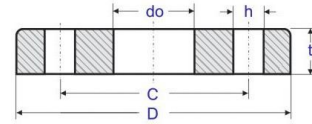


**JIS STANDARD - 16k SOPRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Raiced Face(mm)	Height Raised face(mm)	Approx weight( KG)
A		D	C	h		do	t	G	f	
3/8"	10	90	65	15	4	17.8	12	46	1	0.52
1/2"	15	95	70	15	4	22.2	12	51	1	0.58
3/4"	20	100	75	15	4	27.7	14	56	1	0.75
1"	25	125	90	19	4	34.5	14	67	1	1.16
1.1/4"	32	135	100	19	4	43.2	16	76	2	1.53
1.1/2"	40	140	105	19	4	49.1	16	81	2	1.64
2"	50	155	120	19	8	61.1	16	96	2	1.83
2.1/2"	65	175	140	19	8	77.1	18	116	2	2.58
3"	80	200	160	23	8	90	20	132	2	3.61
3.1/2"	90	210	170	23	8	102.6	20	145	2	3.89
4"	100	225	185	23	8	115.4	22	160	2	4.87
5"	125	270	225	25	8	141.2	22	195	2	7.09
6"	150	305	260	25	12	166.6	24	230	2	9.57
8"	200	350	305	25	12	218.0	26	275	2	12.0
10"	250	430	380	27	12	269.5	28	345	2	20.1
12"	300	480	430	27	12	321.0	30	395	3	24.3
14"	350	540	480	33	16	358.1	34	440	3	34.4
16"	400	605	540	33	16	409	38	495	3	47.4
18"	450	675	605	33	20	460	40	560	3	61.8
20"	500	730	660	33	20	511	42	615	3	73.7
22"	550	795	720	39	20	562	44	670	3	87.9
24"	600	845	770	39	24	613	46	720	3	98.4

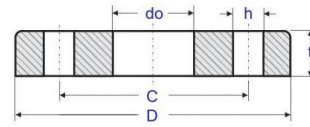
**JIS STANDARD - 20k SOPRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia. of Raiced Face(mm)	Height Raised face(mm)	Approx weight( KG)
A		D	C	h		do	t	G	f	
3/8"	10	90	65	15	4	17.8	14	46	1	0.58
1/2"	15	95	70	15	4	22.2	14	51	1	0.65
3/4"	20	100	75	15	4	27.7	16	56	1	0.81
1"	25	125	90	19	4	34.5	16	67	1	1.27
1.1/4"	32	135	100	19	4	43.2	18	76	2	1.58
1.1/2"	40	140	105	19	4	49.1	18	81	2	1.68
2"	50	155	120	19	8	61.1	18	96	2	1.89
2.1/2"	65	175	140	19	8	77.1	20	116	2	2.73
3"	80	200	160	23	8	90.0	22	132	2	3.85
3.1/2"	90	210	170	23	8	102.6	24	145	2	4.47
4"	100	225	185	23	8	115.4	24	160	2	5.03
5"	125	270	225	25	8	141.2	26	195	2	7.94
6"	150	305	260	25	12	166.6	28	230	2	10.4
8"	200	350	305	25	12	218.0	30	275	2	13.1
10"	250	430	380	27	12	269.5	34	345	2	23.1
12"	300	480	430	27	16	321.0	36	395	3	27.2
14"	350	540	480	33	16	358.1	40	440	3	38.4
16"	400	605	540	33	16	409	46	495	3	53.9
18"	450	675	605	33	20	460	48	560	3	71.0
20"	500	730	660	33	20	511	50	615	3	84.6
22"	550	795	720	39	20	562	52	670	3	102
24"	600	845	770	39	24	613	54	720	3	115



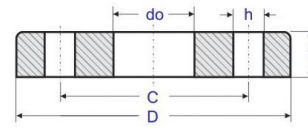
JIS STANDARD-5K SOPFF

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Approx Weight(KG)
A		D	C	h		do	t	
3/8"	10	75	55	12	4	17.8	9	0.26
1/2"	15	80	60	12	4	22.2	9	0.30
3/4"	20	85	65	12	4	27.7	10	0.36
1"	25	95	75	12	4	34.5	10	0.45
1.1/4"	32	115	90	15	4	43.2	12	0.77
1.1/2"	40	120	95	15	4	49.1	12	0.82
2"	50	130	105	15	4	61.1	14	1.06
2.1/2"	65	155	130	15	4	77.1	14	1.48
3"	80	180	145	19	4	90	14	1.97
3.1/2"	90	190	155	19	4	102.6	14	2.08
4"	100	200	165	19	8	115.4	16	2.35
5"	125	235	200	19	8	141.2	16	3.20
6"	150	265	230	19	8	166.6	18	4.39
7"	175	300	260	23	8	192.1	18	5.42
8"	200	320	280	23	8	218	20	6.24
9"	225	345	305	23	12	243.7	20	6.57
10"	250	385	345	23	12	269.5	22	9.39
12"	300	430	390	23	12	321	22	10.2
14"	350	480	435	25	12	358.1	24	14.0
16"	400	540	495	25	16	409	24	16.9
18"	450	605	555	25	16	460	24	21.4
20"	500	655	605	25	20	511	24	23.0
22"	550	720	665	27	20	562	26	30.1
24"	600	770	715	27	20	613	26	32.5
26"	650	825	770	27	24	664	26	35.6
28"	700	875	820	27	24	715	26	38.0
30"	750	945	880	33	24	766	28	48.4
32"	800	995	930	33	24	817	28	51.2
34"	850	1045	980	33	24	868	28	53.9
36"	900	1095	1030	33	24	919	30	60.7
40"	1000	1195	1130	33	28	1021	32	70.1
44"	1100	1305	1240	33	28	1122	32	81.6
48"	1200	1420	1350	33	32	1224	34	101.0
54"	1350	1575	1505	33	32	1376	34	116.0
60"	1500	1730	1660	33	36	1529	36	137.0



**JIS STANDARD- 10K SOPFF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Approx Weight(KG)
A		D	C	h		do	t	
3/8"	10	90	65	15	4	17.8	12	0.51
1/2"	15	95	70	15	4	22.2	12	0.56
3/4"	20	100	75	15	4	27.7	14	0.72
1"	25	125	90	19	4	34.5	14	1.12
1.1/4"	32	135	100	19	4	43.2	16	1.47
1.1/2"	40	140	105	19	4	49.1	16	1.55
2"	50	155	120	19	4	61.1	16	1.86
2.1/2"	65	175	140	19	4	77.1	18	2.58
3"	80	185	150	19	8	90.0	18	2.58
3.1/2"	90	195	160	19	8	102.6	18	2.73
4"	100	210	175	19	8	115.4	18	3.10
5"	125	250	210	23	8	141.2	20	4.73
6"	150	280	240	23	8	166.6	22	6.30
7"	175	305	265	23	12	192.1	22	6.75
8"	200	330	290	23	12	218.0	22	7.46
9"	225	350	310	23	12	243.7	22	7.70
10"	250	400	355	25	12	269.5	24	11.8
12"	300	445	400	25	16	321.0	24	12.6
14"	350	490	445	25	16	358.1	26	16.3
16"	400	560	510	27	16	409	28	23.2
18"	450	620	565	27	20	460	30	29.3
20"	500	675	620	27	20	511	30	33.3
22"	550	745	680	33	20	562	32	42.9
24"	600	795	730	33	24	613	32	45.4
26"	650	845	780	33	24	664	34	51.8
28"	700	905	840	33	24	715	34	59.0
30"	750	970	900	33	24	766	36	72.8
32"	800	1020	950	33	28	817	36	76.0
34"	850	1070	1000	33	28	868	36	80.1
36"	900	1120	1050	33	28	919	38	88.9
40"	1000	1235	1160	39	28	1021	40	109
44"	1100	1345	1270	39	28	1122	42	131
48"	1200	1465	1380	39	32	1224	44	163
54"	1350	1630	1540	45	36	1376	48	204
60"	1500	1795	1700	45	40	1529	50	248

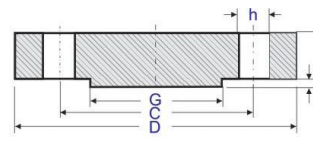


**JIS STANDARD-16K SOPFF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Approx Weight(KG)
A		D	C	h		do	t	
3/8"	10	90	65	15	4	17.8	12	0.52
1/2"	15	95	70	15	4	22.2	12	0.58
3/4"	20	100	75	15	4	27.7	14	0.75
1"	25	125	90	19	4	34.5	14	1.16
1.1/4"	32	135	100	19	4	43.2	16	1.53
1.1/2"	40	140	105	19	8	49.1	16	1.64
2"	50	155	120	19	8	61.1	16	1.83
2.1/2"	65	175	140	19	8	77.1	18	2.58
3"	80	200	160	23	8	90	20	3.61
3.1/2"	90	210	170	23	8	102.6	20	3.89
4"	100	225	185	23	8	115.4	22	4.87
5"	125	270	225	25	8	141.2	22	7.09
6"	150	305	260	25	12	166.6	24	9.57
8"	200	350	305	25	12	218.0	26	12
10"	250	430	380	27	12	269.5	28	20.1
12"	300	480	430	27	16	321.0	30	24.3
14"	350	540	480	33	16	358.1	34	34.4
16"	400	605	540	33	16	409	38	47.4
18"	450	675	605	33	20	460	40	61.8
20"	500	730	660	33	20	511	42	73.7
22"	550	795	720	39	20	562	44	87.9
24"	600	845	770	39	24	613	46	98.4

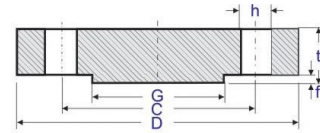
**JIS STANDARD-20K SOPRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Approx Weight(KG)
A		D	C	h		do	t	
3/8"	10	90	65	15	4	17.8	14	0.58
1/2"	15	95	70	15	4	22.2	14	0.65
3/4"	20	100	75	15	4	27.7	16	0.81
1"	25	125	90	19	4	34.5	16	1.27
1.1/4"	32	135	100	19	4	43.2	18	1.58
1.1/2"	40	140	105	19	4	49.1	18	1.68
2"	50	155	120	19	8	61.1	18	1.89
2.1/2"	65	175	140	19	8	77.1	20	2.73
3"	80	200	160	23	8	90.0	22	3.85
3.1/2"	90	210	170	23	8	102.6	24	4.47
4"	100	225	185	23	8	115.4	24	5.03
5"	125	270	225	25	8	141.2	26	7.94
6"	150	305	260	25	12	166.6	28	10.4
8"	200	350	305	25	12	218.0	30	13.1
10"	250	430	380	27	12	269.5	34	23.1
12"	300	480	430	27	16	321.0	36	27.2
14"	350	540	480	33	16	358.1	40	38.4
16"	400	605	540	33	16	409	46	53.9
18"	450	675	605	33	20	460	48	71.0
20"	500	730	660	33	20	511	50	84.6
22"	550	795	720	39	20	562	52	102
24"	600	845	770	39	24	613	54	115



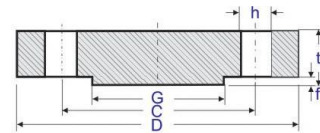
**JIS STANDARD - 5K BLRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Raised Face(mm)	Height Raised face(mm)	Thickness min. (mm)	Approx weight(KG)
A		D	C	h		G	f	t	
3/8"	10	75	55	12	4	39	1	9	0.28
1/2"	15	80	60	12	4	44	1	9	0.32
3/4"	20	85	65	12	4	49	1	10	0.41
1"	25	95	75	12	4	59	1	10	0.52
1.1/4"	32	115	90	15	4	70	2	12	0.91
1.1/2"	40	120	95	15	4	75	2	12	1.00
2"	50	130	105	15	4	85	2	14	1.38
2.1/2"	65	155	130	15	4	110	2	14	2.00
3"	80	180	145	19	4	121	2	14	2.67
3.1/2"	90	190	155	19	4	131	2	14	2.99
4"	100	200	165	19	8	141	2	16	3.66
5"	125	235	200	19	8	176	2	16	5.16
6"	150	265	230	19	8	206	2	18	7.47
7"	175	300	260	23	8	232	2	18	9.52
8"	200	320	280	23	8	252	2	20	12.1
9"	225	345	305	23	12	277	2	20	13.9
10"	250	385	345	23	12	317	2	22	19.2
12"	300	430	390	23	12	360	3	22	24.2
14"	350	480	435	25	12	403	3	24	33.0
16"	400	540	495	25	16	463	3	24	41.7
18"	450	605	555	25	16	523	3	24	52.7
20"	500	655	605	25	20	573	3	24	61.6
22"	550	720	665	27	20	630	3	26	80.8
24"	600	770	715	27	20	680	3	26	92.7
26"	650	825	770	27	24	735	3	28	114.0
28"	700	875	820	27	24	785	3	30	138.0
30"	750	945	880	33	24	840	3	32	171.0
32"	800	995	930	33	24	890	3	34	202.0
34"	850	1045	980	33	24	940	3	36	237.0
36"	900	1095	1030	33	24	990	3	36	260.0
40"	1000	1195	1130	33	28	1090	3	40	345.0
44"	1100	1305	1240	33	28	1200	3	44	454.0
48"	1200	1420	1350	33	32	1305	3	48	586.0
54"	1350	1575	1505	33	32	1460	3	54	814.0
60"	1500	1730	1660	33	36	1615	3	58	1060.0



**JIS STANDARD - 10K BLRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Raised Face (mm)	Height Raised face (mm)	Thickness min. (mm)	Approx weight (KG)
A		D	C	h		G	f	t	
3/8"	10	90	65	15	4	46	1	12	0.53
1/2"	15	95	70	15	4	51	1	12	0.60
3/4"	20	100	75	15	4	56	1	14	0.79
1"	25	125	90	19	4	67	1	14	1.22
1.1/4"	32	135	100	19	4	76	2	16	1.66
1.1/2"	40	140	105	19	4	81	2	16	1.79
2"	50	155	120	19	4	96	2	16	2.23
2.1/2"	65	175	140	19	4	116	2	18	3.24
3"	80	185	150	19	8	126	2	18	3.48
3.1/2"	90	195	160	19	8	136	2	18	3.90
4"	100	210	175	19	8	151	2	18	4.57
5"	125	250	210	23	8	182	2	20	7.18
6"	150	280	240	23	8	212	2	22	10.1
7"	175	305	265	23	12	237	2	22	11.8
8"	200	330	290	23	12	262	2	22	13.9
9"	225	350	310	23	12	282	2	22	15.8
10"	250	400	355	25	12	324	2	24	22.6
12"	300	445	400	25	16	368	3	24	27.8
14"	350	490	445	25	16	413	3	26	36.9
16"	400	560	510	27	16	475	3	28	52.1
18"	450	620	565	27	20	530	3	30	68.4
20"	500	675	620	27	20	585	3	30	81.6
22"	550	745	680	33	20	640	3	34	112
24"	600	795	730	33	24	690	3	36	134
26"	650	845	780	33	24	740	3	38	161
28"	700	905	840	33	24	800	3	40	196
30"	750	970	900	33	24	855	3	44	248
32"	800	1020	950	33	28	905	3	46	286
34"	850	1070	1000	33	28	955	3	48	330
36"	900	1120	1050	33	28	1005	3	50	377
40"	1000	1235	1160	39	28	1110	3	56	512
44"	1100	1345	1270	39	28	1220	3	62	675
48"	1200	1465	1380	39	32	1325	3	66	845
54"	1350	1630	1540	45	36	1480	3	74	1180
60"	1500	1795	1700	45	40	1635	3	82	1590



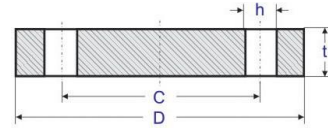
**JIS STANDARD - 16K BLRF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Raised Face(mm)	Height Raised face(mm)	Thickness min. (mm)	Approx weight(KG)
A	D	C	h		G	f	t		
3/8"	10	90	65	15	4	46	1	12	0.53
1/2"	15	95	70	15	4	51	1	12	0.60
3/4"	20	100	75	15	4	56	1	14	0.79
1"	25	125	90	19	4	67	1	14	1.22
1.1/4"	32	135	100	19	4	76	2	16	1.66
1.1/2"	40	140	105	19	4	81	2	16	1.79
2"	50	155	120	19	8	96	2	16	2.09
2.1/2"	65	175	140	19	8	116	2	18	3.08
3"	80	200	160	23	8	132	2	20	4.41
3.1/2"	90	210	170	23	8	145	2	20	4.92
4"	100	225	185	23	8	160	2	22	6.29
5"	125	270	225	25	8	195	2	22	9.21
6"	150	305	260	25	12	230	2	24	12.7
8"	200	350	305	25	12	275	2	26	18.4
10"	250	430	380	27	12	345	2	28	30.4
12"	300	480	430	27	16	395	3	30	40.5
14"	350	540	480	33	16	440	3	34	57.5
16"	400	605	540	33	16	495	3	38	81.7
18"	450	675	605	33	20	560	3	40	107
20"	500	730	660	33	20	615	3	42	132
22"	550	795	720	39	20	670	3	44	163
24"	600	845	770	39	24	720	3	46	192

**JIS STANDARD-20K BLRF**

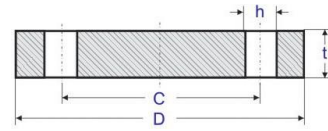
Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Raised Face(mm)	Height Raised face(mm)	Thickness min. (mm)	Approx weight(KG)
A	D	C	h		G	f	t		
3/8"	10	90	65	15	4	46	1	14	0.59
1/2"	15	95	70	15	4	51	1	14	0.67
3/4"	20	100	75	15	4	56	1	16	0.86
1"	25	125	90	19	4	67	1	16	1.34
1.1/4"	32	135	100	19	4	76	2	18	1.73
1.1/2"	40	140	105	19	4	81	2	18	1.87
2"	50	155	120	19	8	96	2	18	2.20
2.1/2"	65	175	140	19	8	116	2	20	3.24
3"	80	200	160	23	8	132	2	22	4.63
3.1/2"	90	210	170	23	8	145	2	24	5.67
4"	100	225	185	23	8	160	2	24	6.61
5"	125	270	225	25	8	195	2	26	10.5
6"	150	305	260	25	12	230	2	28	14.4
8"	200	350	305	25	12	275	2	30	20.8
10"	250	430	380	27	12	345	2	34	36.2
12"	300	480	430	27	16	395	3	36	47.4
14"	350	540	480	33	16	440	3	40	66.1
16"	400	605	540	33	16	495	3	46	97.0
18"	450	675	605	33	20	560	3	48	126
20"	500	730	660	33	20	615	3	50	155
22"	550	795	720	39	20	670	3	52	190
24"	600	845	770	39	24	720	3	56	231





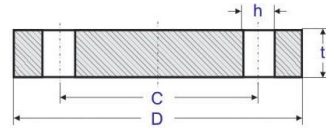
**JIS STANDARD-5K BLFF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Thickness min. (mm)	Approx weight(KG)
A		D	C	h		t	
3/8"	10	75	55	12	4	9	0.28
1/2"	15	80	60	12	4	9	0.32
3/4"	20	85	65	12	4	10	0.41
1"	25	95	75	12	4	10	0.52
1.1/4"	32	115	90	15	4	12	0.91
1.1/2"	40	120	95	15	4	12	1.00
2"	50	130	105	15	4	14	1.38
2.1/2"	65	155	130	15	4	14	2.00
3"	80	180	145	19	4	14	2.67
3.1/2"	90	190	155	19	4	14	2.99
4"	100	200	165	19	8	16	3.66
5"	125	235	200	19	8	16	5.16
6"	150	265	230	19	8	18	7.47
7"	175	300	260	23	8	18	9.52
8"	200	320	280	23	8	20	12.1
9"	225	345	305	23	12	20	13.9
10"	250	385	345	23	12	22	19.2
12"	300	430	390	23	12	22	24.2
14"	350	480	435	25	12	24	33.0
16"	400	540	495	25	16	24	41.7
18"	450	605	555	25	16	24	52.7
20"	500	655	605	25	20	24	61.6
22"	550	720	665	27	20	26	80.8
24"	600	770	715	27	20	26	92.7
26"	650	825	770	27	24	28	114.0
28"	700	875	820	27	24	30	138.0
30"	750	945	880	33	24	32	171.0
32"	800	995	930	33	24	34	202.0
34"	850	1045	980	33	24	36	237.0
36"	900	1095	1030	33	24	36	260.0
40"	1000	1195	1130	33	28	40	345.0
44"	1100	1305	1240	33	28	44	454.0
48"	1200	1420	1350	33	32	48	586.0
54"	1350	1575	1505	33	32	54	814.0
60"	1500	1730	1660	33	36	58	1060.0



JIS STANDARD-10k BLFF

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Thickness min. (mm)	Approx weight(KG)
A		D	C	h		t	
3/8"	10	90	65	15	4	12	0.53
1/2"	15	95	70	15	4	12	0.60
3/4"	20	100	75	15	4	14	0.79
1"	25	125	90	19	4	14	1.22
1.1/4"	32	135	100	19	4	16	1.66
1.1/2"	40	140	105	19	4	16	1.79
2"	50	155	120	19	4	16	2.23
2.1/2"	65	175	140	19	4	18	3.24
3"	80	185	150	19	8	18	3.48
3.1/2"	90	195	160	19	8	18	3.90
4"	100	210	175	19	8	18	4.57
5"	125	250	210	23	8	20	7.18
6"	150	280	240	23	8	22	10.1
7"	175	305	265	23	12	22	11.8
8"	200	330	290	23	12	22	13.9
9"	225	350	310	23	12	22	15.8
10"	250	400	355	25	12	24	22.6
12"	300	445	400	25	16	24	27.8
14"	350	490	445	25	16	26	36.9
16"	400	560	510	27	16	28	52.1
18"	450	620	565	27	20	30	68.4
20"	500	675	620	27	20	30	81.6
22"	550	745	680	33	20	34	112
24"	600	795	730	33	24	36	134
26"	650	845	780	33	24	38	161
28"	700	905	840	33	24	40	196
30"	750	970	900	33	24	44	248
32"	800	1020	950	33	28	46	286
34"	850	1070	1000	33	28	48	330
36"	900	1120	1050	33	28	50	377
40"	1000	1235	1160	39	28	56	512
44"	1100	1345	1270	39	28	62	675
48"	1200	1465	1380	39	32	66	845
54"	1350	1630	1540	45	36	74	1180
60"	1500	1795	1700	45	40	82	1590

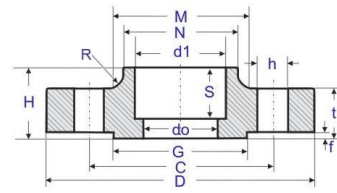


**JIS STANDARD - 16K BLFF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Thickness min. (mm)	Approx weight(KG)
A		D	C	h		t	
3/8"	10	90	65	15	4	12	0.53
1/2"	15	95	70	15	4	12	0.60
3/4"	20	100	75	15	4	14	0.79
1"	25	125	90	19	4	14	1.22
1.1/4"	32	135	100	19	4	16	1.66
1.1/2"	40	140	105	19	4	16	1.79
2"	50	155	120	19	8	16	2.09
2.1/2"	65	175	140	19	8	18	3.08
3"	80	200	160	23	8	20	4.41
3.1/2"	90	210	170	23	8	20	4.92
4"	100	225	185	23	8	22	6.29
5"	125	270	225	25	8	22	9.21
6"	150	305	260	25	12	24	12.7
8"	200	350	305	25	12	26	18.4
10"	250	430	380	27	12	28	30.4
12"	300	480	430	27	16	30	40.5
14"	350	540	480	33	16	34	57.5
16"	400	605	540	33	16	38	81.7
18"	450	675	605	33	20	40	107
20"	500	730	660	33	20	42	132
22"	550	795	720	39	20	44	163
24"	600	845	770	39	24	46	192

**JIS STANDARD - 20K BLFF**

Nominal Pipe Size		Outside Dia. (mm)	Dia. of Bolt Circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Thickness min. (mm)	Approx weight(KG)
A		D	C	h		t	
3/8"	10	90	65	15	4	14	0.59
1/2"	15	95	70	15	4	14	0.67
3/4"	20	100	75	15	4	16	03.86
1"	25	125	90	19	4	16	1.34
1.1/4"	32	135	100	19	4	18	1.73
1.1/2"	40	140	105	19	4	18	1.87
2"	50	155	120	19	8	18	2.20
2.1/2"	65	175	140	19	8	20	3.24
3"	80	200	160	23	8	22	4.63
3.1/2"	90	210	170	23	8	24	5.67
4"	100	225	185	23	8	24	6.61
5"	125	270	225	25	8	26	10.5
6"	150	305	260	25	12	28	14.4
8"	200	350	305	25	12	30	20.8
10"	250	430	380	27	12	34	36.2
12"	300	480	430	27	16	36	47.4
14"	350	540	480	33	16	40	66.1
16"	400	605	540	33	16	46	97.0
18"	450	675	605	33	20	48	126
20"	500	730	660	33	20	50	155
22"	550	795	720	39	20	52	190
24"	600	845	770	39	24	56	231

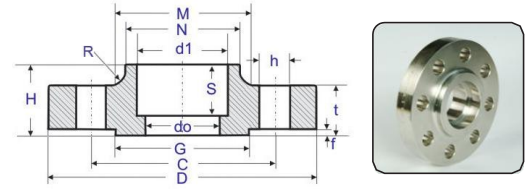


**JIS STANDARD - 5k SWRF**

Nominal pipe size	Outside Dia (mm)	Bolt circle Dia. (mm)	Dia. of Bolt Hole (mm)	Number of bolt holes	Bore of socket (mm)	Dia. of bore (mm)	Depth of socket (mm)	Dia. of raised face (mm)	Height of raised face (mm)	Thickness min. (mm)	Dia. of hub at small end (mm)	Dia. of hub at large end (mm)	Length thru. hub (mm)	Radius of fillet at base of hub (mm)	Approx weight (kg)	
A	D	C	h		d1	do	S	G	f	t	N	M	H	R		
3/8"	10	75	55	12	4	12.7	17.8	10	39	1	9	23	26	13	4	0.27
1/2"	15	80	60	12	4	16.1	22.2	10	44	1	9	27	30	13	4	0.31
3/4"	20	85	65	12	4	21.6	27.7	13	49	1	10	33	36	15	4	0.38
1"	25	95	75	15	4	27.6	34.5	13	59	1	10	41	44	17	4	0.48
1.1/4"	32	115	90	15	4	35.7	43.2	13	70	2	12	50	53	19	4	0.93
1.1/2"	40	120	95	15	4	41.6	49.1	13	75	2	12	56	60	20	4	0.90
2"	50	130	105	15	4	52.9	61.1	16	85	2	14	69	73	24	4	1.19
2.1/2"	65	155	130	15	4	67.9	77.1	16	110	2	14	86	91	27	4	1.72
3"	80	180	145	19	4	80.7	90	16	121	2	14	99	105	30	4	2.34

**JIS STANDARD - 10k SWRF**

Nominal pipe size	Outside Dia (mm)	Bolt circle Dia. (mm)	Dia. of Bolt Hole (mm)	Number of bolt holes	Bore of socket (mm)	Dia. of bore (mm)	Depth of socket (mm)	Dia. of raised face (mm)	Height of raised face (mm)	Thickness min. (mm)	Dia. of hub at small end (mm)	Dia. of hub at large end (mm)	Length thru. hub (mm)	Radius of fillet at base of hub (mm)	Approx weight (kg)	
A	D	C	h		d1	do	S	G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	12.7	17.8	10	46	1	12	23	26	16	4	0.52
1/2"	15	95	70	15	4	16.1	22.2	10	51	1	12	27	30	16	4	0.58
3/4"	20	100	75	15	4	21.6	27.7	13	56	1	14	33	36	20	4	0.75
1"	25	125	90	19	4	27.6	34.5	13	67	1	14	41	44	20	4	1.16
1.1/4"	32	135	100	19	4	35.7	43.2	13	76	2	16	50	53	22	4	1.53
1.1/2"	40	140	105	19	4	41.6	49.1	13	81	2	16	56	60	24	4	1.65
2"	50	155	120	19	4	52.9	61.1	16	96	2	16	69	73	24	4	1.97
2.1/2"	65	155	140	19	4	67.9	77.1	16	116	2	18	86	91	27	4	2.77
3"	80	180	150	19	8	80.7	90.0	16	126	2	18	99	105	30	4	2.89

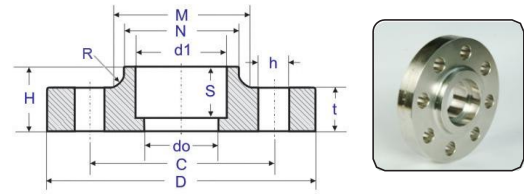


**JIS STANDARD - 16k SWRF**

Nominal pipe size		Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia. of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket (mm)	Dia.of raised face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru. hub(mm)	Radius of fillet at base of hub(mm)	Approx weight (kg)
A	D	C	h		d1	do	S	G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	12.7	17.8	10	46	1	12	26	28	16	4	0.53
1/2"	15	95	70	15	4	16.1	22.2	10	51	1	12	30	32	16	4	0.58
3/4"	20	100	75	15	4	21	27.7	13	56	1	14	38	42	20	4	0.76
1"	25	125	90	19	4	27.2	34.5	13	67	1	14	46	50	20	4	1.18
1.1/4"	32	135	100	19	4	35.5	43.2	13	76	2	16	56	60	22	5	1.56
1.1/2"	40	140	105	19	4	41.2	49.1	13	81	2	16	62	66	24	5	1.68
2"	50	155	120	19	8	52.7	61.1	16	96	2	16	76	80	24	5	1.88
2.1/2"	65	175	140	19	8	65.9	77.1	16	116	2	18	94	98	26	5	2.68
3"	80	200	160	23	8	78.1	90	16	132	2	14	108	112	28	6	3.76

**JIS STANDARD - 20k SWRF**

Nominal pipe size		Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia. of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket (mm)	Dia.of raised face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru. hub(mm)	Radius of fillet at base of hub(mm)	Approx weight (kg)
A	D	C	h		d1	do	S	G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	12.7	17.8	10	46	1	14	30	32	20	4	0.60
1/2"	15	95	70	15	4	16.1	22.2	10	51	1	14	34	36	20	4	0.67
3/4"	20	100	75	15	4	21	27.7	13	56	1	16	40	42	22	4	0.84
1"	25	125	90	19	4	27.2	34.5	13	67	1	16	48	50	24	4	1.31
1.1/4"	32	135	100	19	4	35.5	43.2	13	76	2	18	56	60	26	5	1.64
1.1/2"	40	140	105	19	4	41.2	49.1	13	81	2	18	62	66	26	5	1.74
2"	50	155	120	19	8	52.7	61.1	16	96	2	18	76	80	26	5	1.96
2.1/2"	65	175	140	19	8	65.9	77.1	16	116	2	20	100	104	30	5	2.92
3"	80	200	160	23	8	78.1	90	16	132	2	22	113	117	34	6	4.13

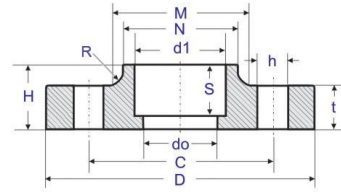


**JIS STANDARD - 5k SWFF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A	D	C	h		d1	do	S	t	N	M	H	R	
3/8"	10	75	55	4	12.7	17.8	10	9	23	26	13	4	0.27
1/2"	15	80	60	4	16.1	22.2	10	9	27	30	13	4	0.31
3/4"	20	85	65	4	21.6	27.7	13	10	33	36	15	4	0.38
1"	25	95	75	4	27.6	34.5	13	10	41	44	17	4	0.48
1.1/4"	32	115	90	4	35.7	43.2	13	12	50	53	19	4	0.93
1.1/2"	40	120	95	4	41.6	49.1	13	12	56	60	20	4	0.90
2"	50	130	105	4	52.9	61.1	16	14	69	73	24	4	1.19
2.1/2"	65	155	130	4	67.9	77.1	16	14	86	91	27	4	1.72
3"	80	180	145	4	80.7	90	16	14	99	105	30	4	2.34

**JIS STANDARD - 10k SWFF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A	D	C	h		d1	do	S	t	N	M	H	R	
3/8"	10	90	65	4	12.7	17.8	10	12	23	26	16	4	0.52
1/2"	15	95	70	4	16.1	22.2	10	12	27	30	16	4	0.58
3/4"	20	100	75	4	21.6	27.7	13	14	33	36	20	4	0.75
1"	25	125	90	4	27.6	34.5	13	14	41	44	20	4	1.16
1.1/4"	32	135	100	4	35.7	43.2	13	16	50	53	22	4	1.53
1.1/2"	40	140	105	4	41.6	49.1	13	16	56	60	24	4	1.65
2"	50	155	120	4	52.9	61.1	16	16	69	73	24	4	1.97
2.1/2"	65	175	140	4	67.9	77.1	16	18	86	91	27	4	2.77
3"	80	185	150	8	80.7	90	16	18	99	105	30	4	2.89



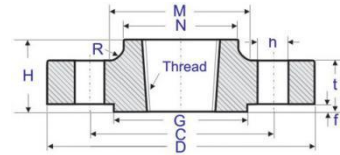
**JIS STANDARD - 16K SWFF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A	D	C	h		d1	do	S	t	N	M	H	R	
3/8"	10	90	65	4	12.7	17.8	10	12	26	28	16	4	0.53
1/2"	15	95	70	4	16.1	22.2	10	12	30	32	16	4	0.58
3/4"	20	100	75	4	21	27.7	13	14	38	42	20	4	0.76
1"	25	125	90	4	27.2	34.5	13	14	46	50	20	4	1.18
1.1/4"	32	135	100	4	35.5	43.2	13	16	56	60	22	5	1.56
1.1/2"	40	140	105	4	41.2	49.1	13	16	62	66	24	5	1.68
2"	50	155	120	8	52.7	61.1	16	16	76	80	24	5	1.88
2.1/2"	65	175	140	8	65.9	77.1	16	18	94	98	26	5	2.68
3"	80	200	160	8	78.1	90	16	14	108	112	28	6	3.76

**JIS STANDARD - 20K SWFF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Bore of socket(mm)	Dia.of bore(mm)	Depth of socket(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A	D	C	h		d1	do	S	t	N	M	H	R	
3/8"	10	90	65	4	12.7	17.8	10	14	30	32	20	4	0.60
1/2"	15	95	70	4	16.1	22.2	10	14	34	36	20	4	0.67
3/4"	20	100	75	4	21	27.7	13	16	40	42	22	4	0.84
1"	25	125	90	4	27.2	34.5	13	16	48	50	24	4	1.31
1.1/4"	32	135	100	4	35.5	43.2	13	18	56	60	26	5	1.64
1.1/2"	40	140	105	4	41.2	49.1	13	18	62	66	26	5	1.74
2"	50	155	120	8	52.7	61.1	16	18	76	80	26	5	1.96
2.1/2"	65	175	140	8	65.9	77.1	16	20	100	104	30	5	2.92
3"	80	200	160	8	78.1	90	16	22	113	117	34	6	4.13



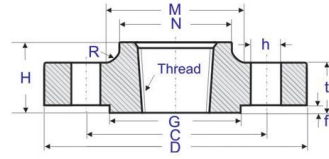


**JIS STANDARD - 5K THRF**

Nominal pipe size	Outside Dia(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Dia.of raise face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)	
A	D	C	h		G	f	t	N	M	H	R		
3/8"	10	75	55	12	4	39	1	9	23	26	13	4	0.28
1/2"	15	80	62	12	4	44	1	9	27	30	13	4	0.31
3/4"	20	85	65	12	4	49	1	10	33	36	15	4	0.39
1"	25	95	75	12	4	59	1	10	41	44	17	4	0.50
1.1/4"	32	115	90	15	4	70	2	12	50	53	19	4	0.84
1.1/2"	40	120	95	15	4	75	2	12	56	60	20	4	0.91
2"	50	130	105	15	4	85	2	14	69	73	24	4	1.20
2.1/2"	65	155	130	15	4	110	2	14	86	91	27	4	1.74
3"	80	180	145	19	4	121	2	14	99	105	30	4	2.35
3.1/2"	90	190	155	19	4	131	2	14	-	-	-	-	-
4"	100	200	165	19	8	141	2	16	127	130	36	4	2.99
5"	125	235	200	19	8	176	2	16	154	161	40	4	4.29
6"	150	265	230	19	8	206	2	18	182	189	40	4	5.74

**JIS STANDARD - 10K THRF**

Nominal pipe size	Outside Dia(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Dia.of raise face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)	
A	D	C	h		G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	46	1	12	23	26	16	4	0.52
1/2"	15	95	70	15	4	51	1	12	27	30	16	4	0.58
3/4"	20	100	75	15	4	56	1	14	33	36	20	4	0.75
1"	25	125	90	19	4	67	1	14	41	44	20	4	1.17
1.1/4"	32	135	100	19	4	76	2	16	50	53	22	4	1.54
1.1/2"	40	140	105	19	4	81	2	16	56	60	24	4	1.65
2"	50	155	120	19	4	96	2	16	69	73	24	4	1.99
2.1/2"	65	175	140	19	4	116	2	18	86	91	27	4	2.79
3"	80	185	150	19	8	126	2	18	99	105	30	4	2.90
3.1/2"	90	198	160	19	8	136	2	18	-	-	-	-	-
4"	100	210	175	19	8	151	2	18	127	130	36	4	3.70
5"	125	250	210	23	8	182	2	20	154	161	40	4	5.70
6"	150	280	240	23	8	212	2	22	182	189	40	4	7.48

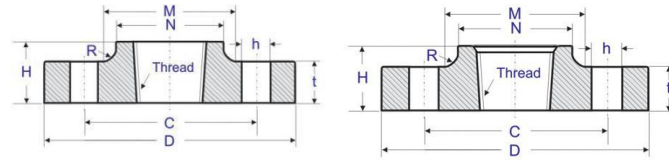


**JIS STANDARD - 16K THRF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Dia.of raised face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub (mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)	
A	D	C	h		G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	46	1	12	26	28	16	4	0.53
1/2"	15	95	70	15	4	51	1	12	30	32	16	4	0.59
3/4"	20	100	75	15	4	56	1	14	38	42	20	4	0.77
1"	25	125	90	19	4	67	1	14	46	50	20	4	1.19
1.1/4"	32	135	100	19	4	76	2	16	56	60	22	5	.57
1.1/2"	40	140	105	19	4	81	2	16	62	66	24	5	1.69
2"	50	155	120	19	8	96	2	16	76	80	24	5	1.90
2.1/2"	65	175	140	19	8	116	2	18	94	98	27	5	2.71
3"	80	200	160	23	8	132	2	20	108	112	30	6	3.81
3.1/2"	90	210	170	23	8	145	2	20	120	124	-	6	-
4"	100	225	185	23	8	160	2	22	134	138	36	6	5.18
5"	125	270	225	25	8	195	2	22	164	170	40	6	7.76
6"	150	305	260	25	12	230	2	24	196	202	40	6	10.2

**JIS STANDARD - 20K THRF**

Nominal pipe size	Outside Dia.(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Dia.of raised face(mm)	Height of raised face(mm)	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub (mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)	
A	D	C	h		G	f	t	N	M	H	R		
3/8"	10	90	65	15	4	46	1	14	30	32	20	4	0.60
1/2"	15	95	70	15	4	51	1	14	34	36	20	4	0.67
3/4"	20	100	75	15	4	56	1	6	40	42	22	4	0.84
1"	25	125	90	19	4	67	1	16	48	50	24	4	1.32
1.1/4"	32	135	100	19	4	76	2	18	56	60	26	5	1.64
1.1/2"	40	140	105	19	4	81	2	18	62	66	26	5	1.74
2"	50	155	120	19	8	96	2	18	76	80	26	5	1.97
2.1/2"	65	175	140	19	8	116	2	20	100	104	30	5	2.91
3"	80	200	160	23	8	132	2	22	113	117	34	6	4.08
3.1/2"	90	210	170	23	8	145	2	24	126	130	36	6	-
4"	100	225	185	23	8	160	2	24	138	142	36	6	5.35
5"	125	270	225	25	8	195	2	26	166	172	40	6	8.44
6"	150	305	260	25	8	230	2	28	196	202	42	6	11.1

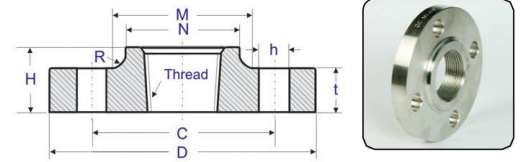


**JIS STANDARD - 5K THFF**

Nominal pipe size		Outside Dia(mm)	Dia.bolt of circle(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A		D	C	h		t	N	M	H	R	
3/8"	10	75	55	12	4	9	23	26	13	4	0.28
1/2"	15	80	60	12	4	9	27	30	13	4	0.31
3/4"	20	85	65	12	4	10	33	36	15	4	0.39
1"	25	95	75	15	4	10	41	44	17	4	0.50
1.1/4"	32	115	90	15	4	12	50	53	19	4	0.84
1.1/2"	40	120	95	15	4	12	56	60	20	4	0.91
2"	50	130	105	15	4	14	69	73	24	4	1.20
2.1/2"	65	155	130	15	4	14	86	91	27	4	1.74
3"	80	180	145	19	4	14	99	105	30	4	2.35
3.1/2"	90	190	155	19	4	14	-	-	-	-	-
4"	100	200	165	19	8	16	127	130	36	4	2.99
5"	125	235	200	19	8	16	154	161	40	4	4.29
6"	150	265	230	19	8	18	182	189	40	4	5.74

**JIS STANDARD - 10K THFF**

Nominal pipe size		Outside Dia(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Thickness min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub(mm)	Radius of fillet at base of hub(mm)	Approx weight(kg)
A		D	C	h		t	N	M	H	R	
3/8"	10	90	65	15	4	12	23	26	16	4	0.52
1/2"	15	95	70	15	4	12	27	30	16	4	0.58
3/4"	20	100	75	15	4	14	33	36	20	4	0.75
1"	25	125	90	19	4	14	41	44	20	4	1.16
1.1/4"	32	135	100	19	4	16	50	53	22	4	1.53
1.1/2"	40	140	105	19	4	16	56	60	24	4	1.65
2"	50	155	120	19	4	16	69	73	24	4	1.97
2.1/2"	65	175	140	19	4	18	86	91	27	4	2.77
3"	80	185	150	19	8	18	99	105	30	4	2.89
3.1/2"	90	195	160	19	8	18	-	-	-	-	-
4"	100	210	175	19	8	18	127	130	36	4	3.70
5"	125	250	210	23	8	20	154	161	40	4	5.70
6"	150	280	240	23	8	22	182	189	40	4	7.48

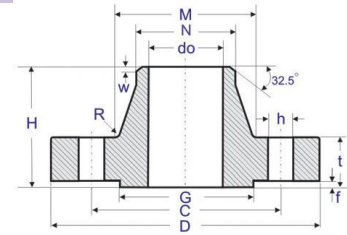


**JIS STANDAR- 16K THFF**

Nominal pipe size		Outside Dia(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Thicknes s min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub( mm)	Radius of fillet st base of hub(mm)	Approx weight(kg )
A		D	C	h		t	N	M	H	R	
3/8"	10	90	65	15	4	12	26	28	16	4	0.53
1/2"	15	95	70	15	4	12	30	32	16	4	0.59
3/4"	20	100	75	15	4	14	38	42	20	4	0.77
1"	25	125	90	19	4	14	46	50	20	4	1.19
1.1/4"	32	135	100	19	4	16	56	60	22	5	1.57
1.1/2"	40	140	105	19	4	16	62	66	24	5	1.69
2"	50	155	120	19	8	16	76	80	24	5	1.90
2.1/2"	65	175	140	19	8	18	94	98	27	5	2.71
3"	80	200	160	23	8	20	108	112	30	6	3.81
3.1/2"	90	210	170	23	8	20	120	124	-	6	-
4"	100	225	185	23	8	22	134	138	36	6	5.18
5"	125	270	225	25	8	22	164	170	40	6	7.76
6"	150	305	260	25	12	24	196	202	40	6	10.2

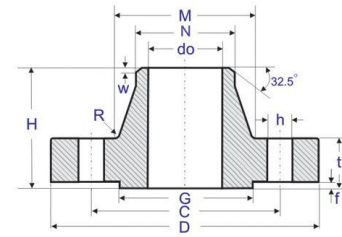
**JIS STANDARD - 20K THFF**

Nominal pipe size		Outside Dia(mm)	Bolt circle Dia.(mm)	Dia.of Bolt Holes(mm)	Number of bolt holes	Thicknes s min.(mm)	Dia.of hub at small end(mm)	Dia.of hub at large end(mm)	Length thru.hub( mm)	Radius of fillet st base of hub(mm)	Approx weight(kg )
A		D	C	h		t	N	M	H	R	
3/8"	10	90	65	15	4	14	30	32	20	4	0.60
1/2"	15	95	70	15	4	14	34	36	20	4	0.67
3/4"	20	100	75	15	4	16	40	42	22	4	0.84
1"	25	125	90	19	4	16	48	50	24	4	1.32
1.1/4"	32	135	100	19	4	18	56	60	26	5	1.64
1.1/2"	40	140	105	19	4	18	62	66	26	5	1.74
2"	50	155	120	19	8	18	76	80	26	5	1.97
2.1/2"	65	175	140	19	8	20	100	104	30	5	2.91
3"	80	200	160	23	8	22	113	117	34	6	4.08
3.1/2"	90	210	170	23	8	24	126	130	36	6	-
4"	100	225	185	23	8	24	138	142	36	6	5.35
5"	125	270	225	25	8	26	166	172	40	6	8.44
6"	150	305	260	25	12	28	196	202	42	6	11.1



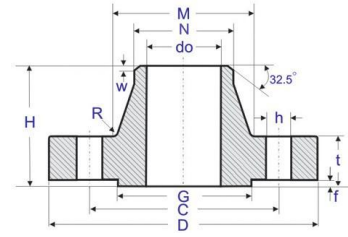
JIS STANDARD - 5k WNRF

Nominal pipe size	Outside dia. (mm)	Dia. of bolt circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia. of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	G	f	t	N	M	W	H	R	D	
3/8"	10	75	55	12	4	12.7	39	1	9	17.3	26	1.25	24	4	0.30
1/2"	15	80	60	12	4	16.1	44	1	9	21.7	31	1.25	25	4	0.35
3/4"	20	85	65	12	4	21.6	49	1	10	27.2	38	1.25	28	4	0.44
1"	25	95	75	12	4	27.6	59	1	10	34	46	1.25	30	4	0.56
1.1/4"	32	115	90	15	4	35.7	70	2	12	42.7	55	1.25	33	4	0.94
1.1/2"	40	120	95	15	4	41.6	75	2	12	48.6	62	1.25	34	4	1.03
2"	50	130	105	15	4	52.9	85	2	14	60.5	73	1.25	36	4	1.33
2.1/2"	65	155	130	15	4	67.9	110	2	14	76.3	91	1.25	39	4	1.92
3"	80	180	145	19	4	80.7	121	2	14	89.1	105	1.25	41	4	2.53
3.1/2"	90	190	155	19	4	93.2	131	2	14	101.6	117	1.25	41	4	2.70
4"	100	200	165	19	8	105.3	141	2	16	114.3	128	1.25	41	4	3.04
5"	125	235	200	19	8	130.8	176	2	16	139.8	156	1.25	43	4	4.17
6"	150	265	230	19	8	155.2	206	2	18	165.2	184	1.25	49	4	5.87
7"	175	300	260	23	8	180.1	232	2	18	190.7	209	1.25	49	4	7.16
8"	200	320	280	23	8	204.7	252	2	20	216.3	235	1.25	53	4	8.50
9"	225	345	305	23	12	229.4	277	2	20	241.8	261	1.25	54	4	9.30
10"	250	385	345	23	12	254.2	317	2	22	267.4	290	1.25	61	4	13.2
12"	300	430	390	23	12	304.7	360	3	22	318.5	342	1.25	62	4	15.1
14"	350	480	435	25	12	339.8	403	3	24	355.6	385	1.25	73	4	21.6
16"	400	540	495	25	16	390.6	463	3	24	406.4	438	1.25	76	4	26.2
18"	450	605	555	25	16	441.4	523	3	24	457.2	491	1.25	79	5	32.7
20"	500	655	605	25	20	492.2	573	3	24	508	541	1.25	79	5	35.4
22"	550	720	665	27	20	543	630	3	26	558.8	593	1.25	81	5	44.4
24"	600	770	715	27	20	593.8	680	3	26	609.6	643	1.25	81	5	47.8
26"	650	825	770	27	24	644.6	735	3	26	660.4	698	1.25	85	5	54.3
28"	700	875	820	27	24	695.4	785	3	26	711.2	748	1.5	94	5	60.6
30"	750	945	880	33	24	746.2	840	3	28	762	802	1.5	100	5	75.4
32"	800	995	930	33	24	797	890	3	28	812.8	852	1.5	100	5	79.5
34"	850	1045	980	33	24	847.8	940	3	28	863.6	902	1.75	108	5	87.0
36"	900	1095	1030	33	24	898.6	990	3	30	914.4	952	1.75	108	5	95.2
40"	1000	1195	1130	33	28	1000.2	1090	3	32	1016	1052	2	116	5	111.0
44"	1100	1305	1240	33	28	1098.6	1200	3	32	1117.6	1162	2	136	8	146.0
48"	1200	1420	1350	33	32	1200.2	1305	3	34	1219.2	1272	2	155	8	190.0
54"	1350	1575	1505	33	32	1346.2	1460	3	34	1371.6	1427	2	164	8	240.0
60"	1500	1710	1660	33	36	1498.6	1615	3	36	1524	1582	2	172	10	284.0



JIS STANDARD - 10K WNRF

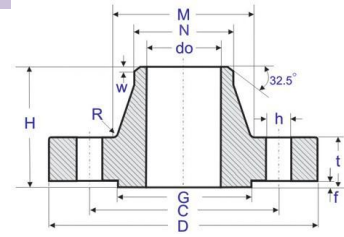
Nominal pipe size	Outside dia. (mm)	Dia. of bolt circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	G	f	t	N	M	W	H	R	D	
3/8"	10	90	65	15	4	12.7	46	1	12	17.3	28	1.25	29	4	0.55
1/2"	15	95	70	15	4	16.1	51	1	12	21.7	33	1.25	31	4	0.63
3/4"	20	100	75	15	4	21.6	56	1	14	27.2	38	1.25	32	4	0.80
1"	25	125	90	19	4	27.6	67	1	14	34.0	47	1.25	36	4	1.26
1.1/4"	32	135	100	19	4	35.7	76	2	16	42.7	56	1.25	38	4	1.67
1.1/2"	40	140	105	19	4	41.6	81	2	16	48.6	62	1.25	38	4	1.78
2"	50	155	120	19	4	52.9	96	2	16	60.5	75	1.25	40	4	2.18
2.1/2"	65	175	140	19	4	67.9	116	2	18	76.3	92	1.25	44	4	3.07
3"	80	185	150	19	8	80.7	126	2	18	89.1	105	1.25	45	5	3.17
3.1/2"	90	195	160	19	8	93.2	136	2	18	101.6	117	1.25	45	5	3.40
4"	100	210	175	19	8	105.3	151	2	18	114.3	130	1.25	45	5	3.89
5"	125	250	210	23	8	130.8	182	2	20	139.8	156	1.25	47	5	5.77
6"	150	280	240	23	8	155.2	212	2	22	165.2	184	1.25	53	5	7.86
7"	175	305	265	23	12	180.1	237	2	22	190.7	210	1.25	55	5	8.70
8"	200	330	290	23	12	204.7	262	2	22	216.3	238	1.25	58	5	10.1
9"	225	350	310	23	12	229.4	282	2	22	241.8	261	1.25	58	5	10.6
10"	250	400	355	25	12	254.2	324	2	24	267.4	292	1.25	65	6	16.0
12"	300	445	400	25	16	304.7	368	3	24	318.5	345	1.25	68	6	18.1
14"	350	490	445	25	16	339.8	413	3	26	355.6	388	1.25	79	6	24.8
16"	400	560	510	27	16	390.6	475	3	28	406.4	442	1.25	85	6	34.2
18"	450	620	565	27	20	441.4	530	3	30	457.2	495	1.25	90	6	42.7
20"	500	675	620	27	20	492.2	585	3	30	508.0	546	1.5	99	6	50.3
22"	550	745	680	33	20	543.0	640	3	32	558.8	597	1.75	111	6	64.4
24"	600	795	730	33	24	593.8	690	3	32	609.6	648	1.75	112	6	69.1
26"	650	845	780	33	24	644.6	740	3	34	660.4	700	1.75	116	6	78.7
28"	700	905	840	33	24	695.4	800	3	34	711.2	754	2	132	6	94.5
30"	750	970	900	33	24	746.2	855	3	36	762.0	807	2	139	6	114
32"	800	1020	950	33	28	797.0	905	3	36	812.8	858	2	139	6	120
34"	850	1070	1000	33	28	847.8	955	3	36	863.6	908	2	139	6	126
36"	900	1120	1050	33	28	898.6	1005	3	38	914.4	959	2	140	6	138
40"	1000	1235	1160	39	28	1000.2	1110	3	40	1016.0	1065	2	151	6	171
44"	1100	1345	1270	39	28	1098.6	1220	3	42	1117.6	1174	2	170	10	222
48"	1200	1465	1380	39	32	1200.2	1325	3	44	1219.2	1281	2	182	10	275
54"	1350	1630	1540	45	36	1346.2	1480	3	48	1371.6	1438	2	200	10	368
60"	1500	1795	1700	45	40	1498.6	1635	3	50	1524.0	1598	2	218	12	459



**JIS STANDARD - 16k WNRF**

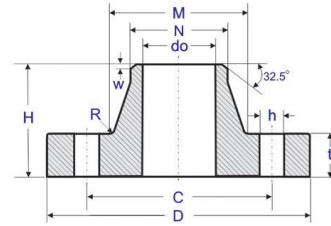
Nominal pipe size	Outside dia. (mm)	Dia. of bolt circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	G	f	t	N	M	W	H	R	D
3/8"	10	90	65	4	12.7	46	1	12	17.3	29	1.25	31	4	0.56
1/2"	15	95	70	4	16.1	51	1	12	21.7	34	1.25	32	4	0.64
3/4"	20	100	75	4	21.4	56	1	14	27.2	39	1.25	34	4	0.81
1"	25	125	90	4	27.2	67	1	14	34.0	47	1.25	36	4	1.27
1.1/4"	32	135	100	4	35.35	76	2	16	42.7	56	1.25	39	5	1.67
1.1/2"	40	140	105	4	41.2	81	2	16	48.6	62	1.25	39	5	1.79
2"	50	155	120	8	52.7	96	2	16	60.5	75	1.25	40	5	2.05
2.1/2"	65	175	140	8	65.9	116	2	18	76.3	92	1.25	46	5	3.00
3"	80	200	160	8	78.1	132	2	20	89.1	105	1.25	49	6	4.13
3.1/2"	90	210	170	8	90.2	145	2	20	101.6	118	1.25	50	6	4.53
4"	100	225	185	8	123	160	2	22	114.3	134	1.25	56	6	5.76
5"	125	270	225	8	126.6	195	2	22	139.8	162	1.25	60	6	8.39
6"	150	305	260	12	151.0	230	2	24	165.2	192	1.25	69	6	11.5
8"	200	350	305	12	199.9	275	2	26	216.3	244	1.25	73	6	15.3
10"	250	430	380	12	248.8	345	2	28	267.4	298	1.25	81	6	24.8
12"	300	480	430	16	297.9	395	3	30	318.5	352	1.25	88	8	31.3
14"	350	540	480	16	333.4	440	3	34	355.6	398	1.25	104	8	45.7
16"	400	605	540	16	381.0	495	3	38	406.4	452	1.25	115	10	63.6
18"	450	675	605	20	431.8	560	3	40	457.2	510	1.25	126	10	82.8
20"	500	730	660	20	482.6	615	3	42	508.0	561	1.25	128	10	96.3
22"	550	795	720	20	533.4	670	3	44	558.8	616	1.25	135	10	116
24"	600	845	770	24	584.2	720	3	46	609.6	670	1.25	141	10	130





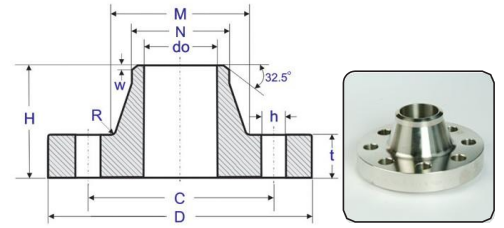
JIS STANDARD - 20K WNRF

Nominal pipe size		Outside dia. (mm)	Dia. of bolt circle (mm)	Dia. of Bolt Holes (mm)	Number of Bolt Holes	Dia. of Bore (mm)	Dia. of Raised Face (mm)	Height of Raised face (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub (mm)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A		D	C	h		do	G	f	t	N	M	W	H	R	D
3/8"	10	90	65	15	4	12.7	46	1	14	17.3	29	1.25	33	4	0.61
1/2"	15	95	70	15	4	16.1	51	1	14	21.7	34	1.25	34	4	0.70
3/4"	20	100	75	15	4	21.4	56	1	16	27.2	39	1.25	36	4	0.88
1"	25	125	90	19	4	27.2	67	1	16	34.0	47	1.25	38	4	1.37
1.1/4"	32	135	100	19	4	35.35	76	2	18	42.7	56	1.25	41	5	1.73
1.1/2"	40	140	105	19	4	41.2	81	2	18	48.6	62	1.25	41	5	1.85
2"	50	155	120	19	8	52.7	96	2	18	60.5	75	1.25	42	5	2.12
2.1/2"	65	175	140	19	8	65.9	116	2	20	76.3	92	1.25	48	5	3.11
3"	80	200	160	23	8	78.1	132	2	22	89.1	105	1.25	51	6	4.30
3.1/2"	90	210	170	23	8	90.2	145	2	24	101.6	118	1.25	54	6	5.08
4"	100	225	185	23	8	123	160	2	24	114.3	134	1.25	58	6	5.95
5"	125	270	225	25	8	126.6	195	2	26	139.8	162	1.25	64	6	9.31
6"	150	305	260	25	12	151.0	230	2	28	165.2	192	1.25	73	6	12.6
8"	200	350	305	25	12	199.9	275	2	30	216.3	244	1.25	77	6	16.6
10"	250	430	380	27	12	248.8	345	2	34	267.4	298	1.25	87	6	28.3
12"	300	480	430	27	16	297.9	395	3	36	318.5	352	1.25	94	8	34.9
14"	350	540	480	33	16	333.4	440	3	40	355.6	398	1.25	110	8	50.2
16"	400	605	540	33	16	381.0	495	3	46	406.4	452	1.25	123	10	71.7
18"	450	675	605	33	20	431.8	560	3	48	457.2	510	1.25	134	10	92.8
20"	500	730	660	33	20	482.6	615	3	50	508.0	561	1.25	136	10	108
22"	550	795	720	39	20	533.4	670	3	52	558.8	616	1.25	143	10	1128
24"	600	845	770	39	24	584.2	720	3	54	609.6	670	1.25	149	10	144



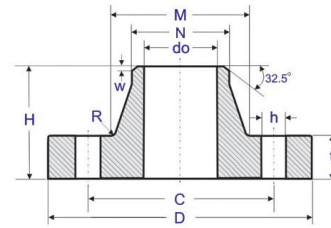
**JIS STANDARD - 5K WNFF**

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	W	H	R	D	
3/8"	10	75	55	12	4	12.7	9	17.3	26	1.25	24	4	0.30
1/2"	15	80	60	12	4	16.1	9	21.7	31	1.25	25	4	0.35
3/4"	20	85	65	12	4	21.6	10	27.2	38	1.25	28	4	0.44
1"	25	95	75	12	4	27.6	10	34	46	1.25	30	4	0.56
1.1/4"	32	115	90	15	4	35.7	12	42.7	55	1.25	33	4	0.94
1.1/2"	40	120	95	15	4	41.6	12	48.6	62	1.25	34	4	1.03
2"	50	130	105	15	4	52.9	14	60.5	73	1.25	36	4	1.33
2.1/2"	65	155	130	15	4	67.9	14	76.3	91	1.25	39	4	1.92
3"	80	180	145	19	4	80.7	14	89.1	105	1.25	41	4	2.53
3.1/2"	90	190	155	19	4	93.2	14	101.6	117	1.25	41	4	2.70
4"	100	200	165	19	8	105.3	16	114.3	128	1.25	41	4	3.04
5"	125	235	200	19	8	130.8	16	139.8	156	1.25	43	4	4.17
6"	150	265	230	19	8	155.2	18	165.2	184	1.25	49	4	5.87
7"	175	300	260	23	8	180.1	18	190.7	209	1.25	49	4	7.16
8"	200	320	280	23	8	204.7	20	216.3	235	1.25	53	4	8.50
9"	225	345	305	23	12	229.4	20	241.8	261	1.25	54	4	9.30
10"	250	385	345	23	12	254.2	22	267.4	290	1.25	61	4	13.2
12"	300	430	390	23	12	304.7	22	318.5	342	1.25	62	4	15.1
14"	350	480	435	25	12	339.8	24	355.6	385	1.25	73	4	21.6
16"	400	540	495	25	16	390.6	24	406.4	438	1.25	76	4	26.2
18"	450	605	555	25	16	441.4	24	457.2	491	1.25	79	5	32.7
20"	500	655	605	25	20	492.2	24	508	541	1.25	79	5	35.4
22"	550	720	665	27	20	543	26	558.8	593	1.25	81	5	44.4
24"	600	770	715	27	20	593.8	26	609.6	643	1.25	81	5	47.8
26"	650	825	770	27	24	644.6	26	660.4	698	1.25	85	5	54.3
28"	700	875	820	27	24	695.4	26	711.2	748	1.5	94	5	60.6
30"	750	945	880	33	24	746.2	28	762	802	1.5	100	5	75.4
32"	800	995	930	33	24	797	28	812.8	852	1.5	100	5	79.5
34"	850	1045	980	33	24	847.8	28	863.6	902	1.75	108	5	87.0
36"	900	1095	1030	33	24	898.6	30	914.4	952	1.75	108	5	95.2
40"	1000	1195	1130	33	28	1000.2	32	1016	1052	2	116	5	111.0
44"	1100	1305	1240	33	28	1098.6	32	1117.6	1162	2	136	8	146.0
48"	1200	1420	1350	33	32	1200.2	34	1219.2	1272	2	155	8	190.0
54"	1350	1575	1505	33	32	1346.2	34	1371.6	1427	2	164	8	240.0
60"	1500	1730	1660	33	36	1498.6	36	1524	1582	2	172	10	284.0



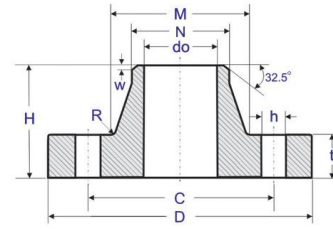
JIS STANDARD - 10K WNFF

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	W	H	R	D	
3/8"	10	90	65	15	4	12.7	12	17.3	28	1.25	29	4	0.55
1/2"	15	95	70	15	4	16.1	12	21.7	33	1.25	31	4	0.63
3/4"	20	100	75	15	4	21.6	14	27.2	38	1.25	32	4	0.80
1"	25	125	90	19	4	27.6	14	34.0	47	1.25	36	4	1.26
1.1/4"	32	135	100	19	4	35.7	16	42.7	56	1.25	38	4	1.67
1.1/2"	40	140	105	19	4	41.6	16	48.6	62	1.25	38	4	1.78
2"	50	155	120	19	4	52.9	16	60.5	75	1.25	40	4	2.18
2.1/2"	65	175	140	19	4	67.9	18	76.3	92	1.25	44	4	3.07
3"	80	185	150	19	8	80.7	18	89.1	105	1.25	45	5	3.17
3.1/2"	90	195	160	19	8	93.2	18	101.6	117	1.25	45	5	3.40
4"	100	210	175	19	8	105.3	18	114.3	130	1.25	45	5	3.89
5"	125	250	210	23	8	130.8	20	139.8	156	1.25	47	5	5.77
6"	150	280	240	23	8	155.2	22	165.2	184	1.25	53	5	7.86
7"	175	305	265	23	12	180.1	22	190.7	210	1.25	55	5	8.70
8"	200	330	290	23	12	204.7	22	216.3	238	1.25	58	5	10.1
9"	225	350	310	23	12	229.4	22	241.8	261	1.25	58	5	10.6
10"	250	400	355	25	12	254.2	24	267.4	292	1.25	65	6	16.0
12"	300	445	400	25	16	304.7	24	318.5	345	1.25	68	6	18.1
14"	350	490	445	25	16	339.8	26	355.6	388	1.25	79	6	24.8
16"	400	560	510	27	16	390.6	28	406.4	442	1.25	85	6	34.2
18"	450	620	565	27	20	441.4	30	457.2	495	1.25	90	6	42.7
20"	500	675	620	27	20	492.2	30	508.0	546	1.5	99	6	50.3
22"	550	745	680	33	20	543.0	32	558.8	597	1.75	111	6	64.4
24"	600	795	730	33	24	593.8	32	609.6	648	1.75	112	6	69.1
26"	650	845	780	33	24	644.6	34	660.4	700	1.75	116	6	78.7
28"	700	905	840	33	24	695.4	34	711.2	754	2	132	6	94.5
30"	750	970	900	33	24	746.2	36	762.0	807	2	139	6	114
32"	800	1020	950	33	28	797.0	36	812.8	858	2	139	6	120
34"	850	1070	1000	33	28	847.8	36	863.6	908	2	139	6	126
36"	900	1120	1050	33	28	898.6	38	914.4	959	2	140	6	138
40"	1000	1235	1160	39	28	1000.2	40	1016.0	1065	2	151	6	171
44"	1100	1345	1270	39	28	1098.6	42	1117.6	1174	2	170	10	222
48"	1200	1465	1380	39	32	1200.2	44	1219.2	1281	2	182	10	275
54"	1350	1630	1540	45	36	1346.2	48	1371.6	1438	2	200	10	368
60"	150	1795	1700	45	40	1498.6	50	1524.0	1598	2	218	12	459



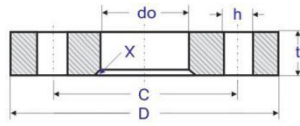
**JIS STANDARD - 16K WNFF**

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A		D	C	h		do	t	N	M	W	H	R	D
3/8"	10	90	65	15	4	12.7	12	17.3	29	1.25	31	4	0.56
1/2"	15	95	70	15	4	16.1	12	21.7	34	1.25	32	4	0.64
3/4"	20	100	78.5	15	4	21.4	14	27.2	39	1.25	34	4	0.81
1"	25	125	90	19	4	27.2	14	34.0	47	1.25	36	4	1.27
1.1/4"	32	135	100	19	4	35.5	16	42.7	56	1.25	39	5	1.67
1.1/2"	40	140	105	19	4	41.2	16	48.6	62	1.25	39	5	1.79
2"	50	155	120	19	8	52.7	16	65.9	75	1.25	40	5	2.05
2.1/2"	65	178	140	19	8	65.9	18	76.3	92	1.25	46	5	3.00
3"	80	200	160	23	8	78.1	20	89.1	105	1.25	49	6	4.16
3.1/2"	90	210	170	23	8	90.2	20	101.6	118	1.25	50	6	4.53
4"	100	225	185	23	8	102.3	22	114.3	134	1.25	56	6	5.76
5"	125	270	225	25	8	126.6	22	139.8	162	1.25	60	6	8.39
6"	150	305	260	25	12	151.0	24	165.2	192	1.25	69	6	11.5
8"	200	350	305	25	12	199.9	26	216.3	244	1.25	73	6	15.3
10"	250	430	380	27	12	248.8	28	267.4	298	1.25	81	6	24.8
12"	300	480	430	27	16	297.9	30	318.5	352	1.25	88	8	31.3
14"	350	540	480	33	16	333.4	34	355.6	398	1.25	104	8	45.7
16"	400	605	540	33	16	381.0	38	406.4	452	1.25	115	10	63.6
18"	450	675	605	33	20	431.8	40	457.2	510	1.25	126	10	82.8
20"	500	730	660	33	20	482.6	42	508.0	561	1.25	128	10	96.3
22"	550	795	720	39	20	533.4	44	558.8	616	1.25	135	10	116
24"	600	845	770	39	24	584.2	46	609.6	670	1.25	141	10	130

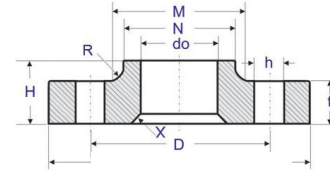


JIS STANDARD - 20K WNF

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m/m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	W	H	R	D	
3/8"	10	90	65	15	4	12.7	14	17.3	29	1.25	33	4	0.61
1/2"	15	95	70	15	4	16.1	14	21.7	34	1.25	34	4	0.70
3/4"	20	100	78.5	15	4	21.4	16	27.2	39	1.25	36	4	0.88
1"	25	125	90	19	4	27.2	16	34.0	47	1.25	38	4	1.37
1.1/4"	32	135	100	19	4	35.5	18	42.7	56	1.25	41	5	1.73
1.1/2"	40	140	105	19	4	41.2	18	48.6	62	1.25	41	5	1.85
2"	50	155	120	19	8	52.7	18	60.5	75	1.25	42	5	2.12
2.1/2"	65	178	140	19	8	65.9	20	76.3	92	1.25	48	5	3.11
3"	80	200	160	23	8	78.1	22	89.1	105	1.25	51	6	4.30
3.1/2"	90	210	170	23	8	90.2	24	101.6	118	1.25	54	6	5.08
4"	100	225	185	23	8	102.3	24	114.3	134	1.25	58	6	5.95
5"	125	270	225	25	8	126.6	26	139.8	162	1.25	64	6	9.31
6"	150	305	260	25	12	151.0	28	165.2	192	1.25	73	6	12.6
8"	200	350	305	25	12	199.9	30	216.3	244	1.25	77	6	16.6
10"	250	430	380	27	12	248.8	34	267.4	298	1.25	87	6	28.3
12"	300	480	430	27	16	297.9	36	318.5	352	1.25	94	8	34.9
14"	350	540	480	33	16	333.4	40	355.6	398	1.25	110	8	50.2
16"	400	605	540	33	16	381.0	46	406.4	452	1.25	121.3	1	71.7
18"	450	675	605	33	20	431.8	48	457.2	510	1.25	134	10	92.8
20"	500	730	660	33	20	482.6	50	508.0	561	1.25	136	10	108
22"	550	795	720	39	20	533.4	52	558.8	616	1.25	143	10	128
24"	600	845	770	39	24	584.2	54	609.6	670	1.25	149	10	144



Sizes 1/2" -16"

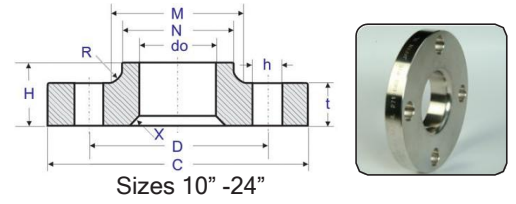


Sizes 18" -24"



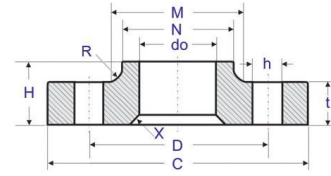
**JIS STANDARD - 5K LJFF**

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	t	N	M	W	H	R	D
1/2"	15	80	60	4	23.4	9	27	30	13	3	4	0.29
3/4"	20	85	65	4	28.9	10	33	36	15	3	4	0.36
1"	25	95	75	4	35.6	10	41	44	17	3	4	0.44
1.1/4"	32	115	90	4	44.3	12	50	53	19	4	4	0.76
1.1/2"	40	120	115	4	50.4	12	56	60	20	4	4	0.80
2"	50	130	120	4	62.7	14	69	73	24	4	4	1.03
2.1/2"	65	155	130	4	78.7	14	86	91	27	5	4	1.44
3"	80	180	155	4	91.6	14	99	105	30	5	4	1.92
3.1/2"	90	190	180	4	104.1	14	-	-	-	5	-	20.2
4"	100	200	190	8	116.9	16	127	130	36	5	4	2.28
5"	125	235	200	8	143	16	154	161	40	6	4	3.08
6"	150	265	235	8	168.4	18	182	189	40	6	4	4.25
7"	175	300	265	8	-	18	-	-	-	-	-	-
8"	200	320	300	8	219.5	20	-	-	-	6	-	6.06
9"	225	345	320	12	-	20	-	-	-	-	-	-
10"	250	385	345	12	271.7	22	-	-	-	6	-	9.11
12"	300	430	390	12	322.8	22	-	-	-	9	-	9.76
14"	350	480	435	12	360.2	24	-	-	-	9	-	13.4
16"	400	540	495	16	411.2	24	-	-	-	9	-	16.2
18"	450	605	555	16	462.3	24	495	500	40	9	5	23.9
20"	500	655	605	20	514.4	24	546	552	40	9	5	25.6
22"	550	720	665	20	565.2	26	597	603	42	9	5	33.0
24"	600	770	715	20	616	26	648	654	44	9	5	36.2



JIS STANDARD - 10K LJFF

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)	
A	D	C	h		do	t	N	M	W	H	R	D	
1/2"	15	95	70	15	4	23.4	12	27	30	16	3	4	0.56
3/4"	20	100	75	15	4	28.9	14	33	36	20	3	4	0.71
1"	25	125	90	19	4	35.6	14	41	44	20	3	4	1.11
1.1/4"	32	135	100	19	4	44.3	16	50	53	22	4	4	1.45
1.1/2"	40	140	105	19	4	50.4	16	56	60	24	4	4	1.53
2"	50	155	120	19	4	62.7	16	69	73	24	4	4	1.83
2.1/2"	65	175	140	19	4	78.7	18	86	91	27	5	4	2.53
3"	80	185	150	19	8	91.6	18	99	105	30	5	4	2.52
3.1/2"	90	195	160	19	8	104.1	18	-	-	-	5	-	2.66
4"	100	210	175	19	8	116.9	18	127	130	36	5	4	3.02
5"	125	250	210	23	8	143.0	20	154	161	40	6	4	4.60
6"	150	280	240	23	8	168.4	22	182	189	40	6	4	6.14
7"	175	305	265	23	12	-	22	-	-	-	-	-	-
8"	200	330	290	23	12	219.5	22	-	-	-	6	-	7.28
9"	225	350	310	23	12	-	22	-	-	-	-	-	-
10"	250	400	355	25	12	271.7	24	288	292	36	6	6	12.3
12"	300	445	400	25	16	322.8	24	340	346	38	9	6	13.2
14"	350	490	445	25	16	360.2	26	380	386	42	9	6	17.4
16"	400	560	510	27	16	411.2	28	436	442	44	9	6	24.8
18"	450	620	565	27	20	462.3	30	496	502	48	9	6	32.3
20"	500	675	620	27	20	514.4	30	548	554	48	9	6	36.4
22"	550	745	680	33	20	565.2	32	604	610	52	9	6	47.7
24"	600	795	730	33	24	616.0	32	656	662	52	9	6	50.8

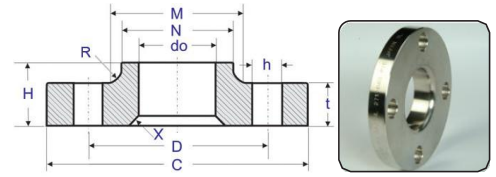


Sizes 1/2" -24"

JIS STANDARD - 16K LJFF

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	t	N	M	W	H	R	D
3/8"	10	90	65	4	-	12	26	28	16	-	4	-
1/2"	15	95	70	4	23.4	12	30	32	16	3	4	0.57
3/4"	20	100	75	4	28.9	14	38	42	20	3	4	0.74
1"	25	125	90	4	35.6	14	46	50	20	3	4	1.15
1.1/4"	32	135	100	4	44.3	16	56	60	22	4	5	1.50
1.1/2"	40	140	105	4	50.4	16	62	66	24	4	5	1.61
2"	50	155	120	8	62.7	16	76	80	24	4	5	1.79
2.1/2"	65	175	140	8	78.7	18	94	98	26	5	5	2.51
3"	80	200	160	8	91.6	20	108	112	28	5	6	3.53
3.1/2"	90	210	170	8	104.1	20	120	124	30	5	6	3.80
4"	100	225	185	8	116.9	22	134	138	34	5	6	4.76
5"	125	270	225	8	143.0	22	164	170	34	6	6	6.92
6"	150	305	260	12	168.4	24	196	202	38	6	6	9.35
8"	200	350	305	12	219.5	26	244	252	40	6	6	11.8
10"	250	430	380	12	271.7	28	304	312	44	6	6	19.6
12"	300	480	430	16	322.8	30	354	364	48	9	8	23.6
14"	350	540	480	16	360.2	34	398	408	52	9	8	33.5
16"	400	605	540	16	411.2	38	446	456	60	9	10	46.3
18"	450	675	605	20	462.3	40	504	514	64	9	10	60.5
20"	500	730	660	20	514.4	42	558	568	68	9	10	71.7
22"	550	795	720	20	565.2	44	612	622	70	9	10	85.8
24"	600	845	770	24	616.0	46	666	676	74	9	10	96.1



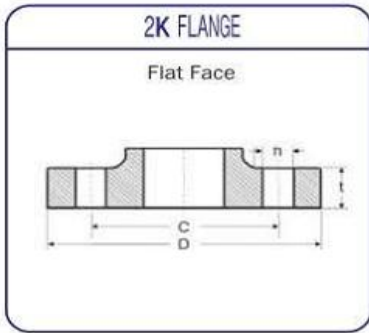


Sizes 1/2" -24"

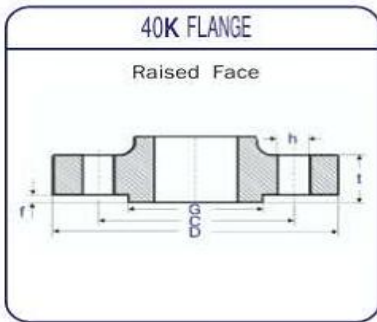
JIS STANDARD - 16K LJFF

Nominal pipe size	Outside dia.(mm)	Dia.of bolt circle(mm)	Dia.of Bolt Holes(mm)	Number of Bolt Holes	Dia. of Bore (mm)	Thickness min. (mm)	Dia of Hub at Small End (mm)	Dia. of Hub at Large End (mm)	Taper of hub(m m)	Length Thru. Hub (mm)	Radius of Fillet at Base of Hub (mm)	Approx. Weight (KG)
A	D	C	h		do	t	N	M	W	H	R	D
3/8"	10	90	65	4	-	14	30	32	20	-	4	-
1/2"	15	95	70	4	23.4	14	34	36	20	3	4	0.68
3/4"	20	100	75	4	28.9	16	40	42	22	3	4	0.84
1"	25	125	90	4	35.6	16	48	50	24	3	4	1.33
1.1/4"	32	135	100	4	44.3	18	56	60	26	4	5	1.70
1.1/2"	40	140	105	4	50.4	18	62	66	26	4	5	1.80
2"	50	155	120	8	62.7	18	76	80	26	4	5	2.00
2.1/2"	65	175	140	8	78.7	20	100	104	30	5	5	2.89
3"	80	200	160	8	91.6	22	113	117	34	5	6	4.04
3.1/2"	90	210	170	8	104.1	24	126	130	36	5	6	4.67
4"	100	225	185	8	116.9	24	138	142	36	5	6	5.24
5"	125	270	225	8	143.0	26	166	172	40	6	6	8.24
6"	150	305	260	12	168.4	28	196	202	42	6	6	10.8
8"	200	350	305	12	219.5	30	244	252	46	6	6	13.6
10"	250	430	380	12	271.7	34	304	312	52	6	6	23.7
12"	300	480	430	16	322.8	36	354	364	56	9	8	28.1
14"	350	540	480	16	360.2	40	398	408	62	9	8	39.7
16"	400	605	540	16	411.2	46	446	456	70	9	10	55.6
18"	450	675	605	20	462.3	48	504	514	78	9	10	73.1
20"	500	730	660	20	514.4	50	558	568	84	9	10	86.5
22"	550	795	720	20	565.2	52	612	622	90	9	10	104
24"	600	845	770	24	616.0	54	666	676	96	9	10	117

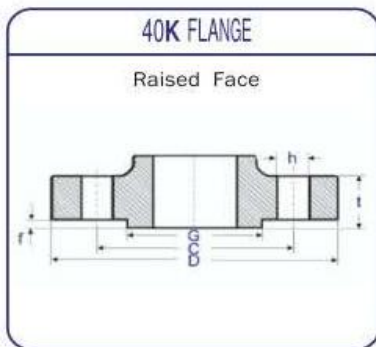
**BASIC DIMENSIONS OF JIS 2K, 40K AND 63K FLANGES**



Nominal Pipe Size	Outside Dia.	Bolt Circle Dia.	Dia. of Bolt Holes	Number of Bolt Holes	Thickness
A	D	C	h		t
18"	450	605	555	23	16
20"	500	655	605	23	20
22"	550	720	665	25	20
24"	600	770	715	25	20
26"	650	825	770	25	24
28"	700	875	820	25	24
30"	750	945	880	27	24
32"	800	995	930	27	24
34"	850	1045	980	27	24
36"	900	1095	1030	27	24
40"	1000	1195	1130	27	28
44"	1100	1305	1240	27	28
48"	1200	1420	1350	27	32
54"	1350	1575	1505	27	32
60"	1500	1730	1660	27	36



Nominal Pipe Size	Outside Dia.	Bolt Circle Dia.	Dia. of Bolt Holes	Number of Bolt Holes	Thickness	Raised Face	
						Diameter	Height
A	D	C	h		t	G	f
3/8"	10	110	75	19	4	52	1
1/2"	15	115	80	19	4	55	1
3/4"	20	120	85	19	4	60	1
1"	25	130	95	19	4	70	1
1.1/4"	32	140	105	19	4	80	2
1.1/2"	40	160	120	23	4	90	2
2"	50	165	130	19	8	105	2
2.1/2"	65	200	160	23	8	130	2
3"	80	210	170	23	8	140	2
3.1/2"	90	230	185	25	8	150	2
4"	100	250	205	25	8	165	2
5"	125	300	250	27	8	200	2
6"	150	355	295	33	12	240	2
8"	200	405	345	33	12	290	2
10"	250	475	410	33	12	355	2
12"	300	540	470	39	16	410	3
14"	350	585	515	39	16	455	3
16"	400	645	570	39	16	515	3



Nominal Pipe Size	Outside Dia.	Bolt Circle Dia.	Dia. of Bolt Holes	Number of Bolt Holes	Thickness	Raised Face	
						Diameter	Height
A	D	C	h		t	G	f
3/8"	10	115	80	19	4	52	1
1/2"	15	120	85	19	4	55	1
3/4"	20	135	95	23	4	60	1
1"	25	140	100	23	4	70	1
1.1/4"	32	150	110	23	4	80	2
1.1/2"	40	175	130	25	4	90	2
2"	50	185	145	23	8	105	2
2.1/2"	65	220	175	25	8	130	2
3"	80	230	185	25	8	140	2
3.1/2"	90	255	205	27	8	150	2
4"	100	270	220	27	8	165	2
5"	125	325	265	33	8	200	2
6"	150	365	305	33	12	240	2
8"	200	425	360	33	12	290	2
10"	250	500	430	39	12	355	2
12"	300	560	485	39	16	410	3
14"	350	615	530	46	16	455	3
16"	400	680	590	46	16	515	3