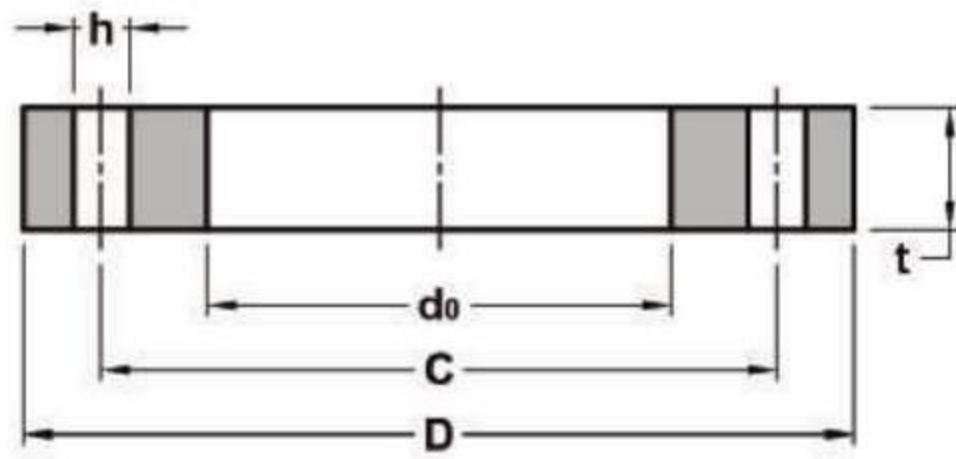
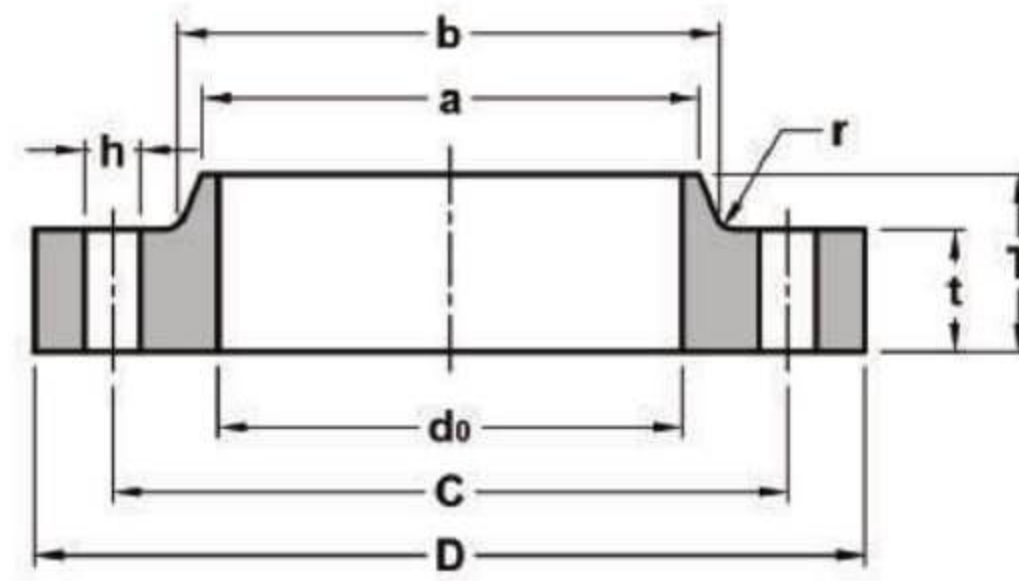




JIS B2220



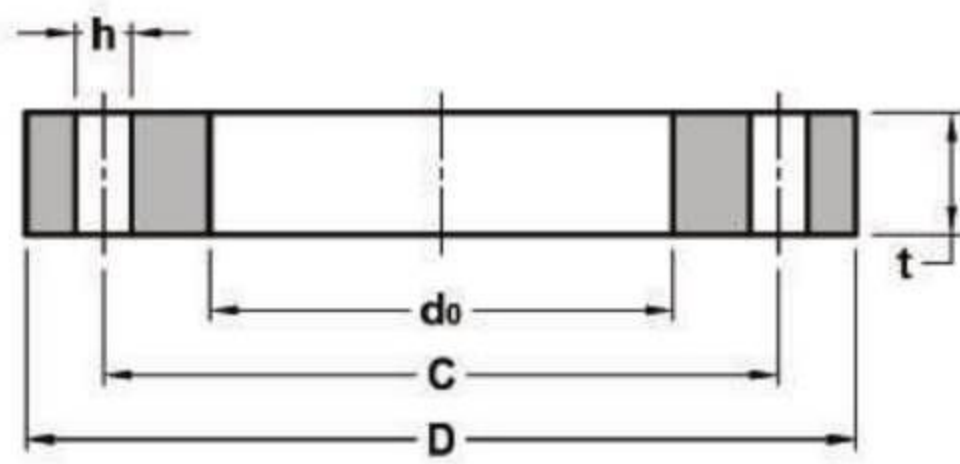
**SOP of nominal size
10A to 1500A**



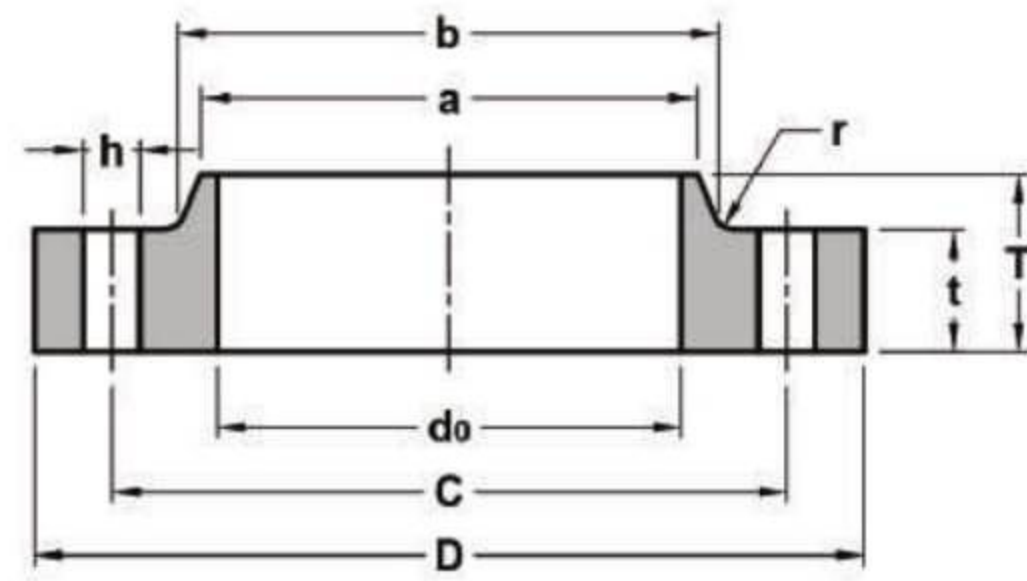
**SOH of nominal size
450A to 1500A**

Unit : mm

Normal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness		Total Lengh of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				SO	BL					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	do	t	t	T	a	b	r	f	g	C			
10	17.3	75	17.8	9	9	13	23	26	4	1	39	55	4	12	M10
15	21.7	80	22.2	9	9	13	27	30	4	1	44	60	4	12	M10
20	27.2	85	27.7	10	10	15	33	36	4	1	49	65	4	12	M10
25	34	95	34.5	10	10	17	41	44	4	1	59	75	4	12	M10
32	42.7	115	43.2	12	12	19	50	53	4	2	70	90	4	15	M12
40	48.6	120	49.1	12	12	20	56	60	4	2	75	95	4	15	M12
50	60.5	130	61.1	14	14	24	69	73	4	2	85	105	4	15	M12
65	76.3	155	77.1	14	14	27	86	91	4	2	110	130	4	15	M12
80	89.1	180	90	14	14	30	99	105	4	2	121	145	4	19	M16
90	101.6	190	102.6	14	14	-	-	-	-	2	131	155	4	19	M16
100	114.3	200	115.4	16	16	36	127	130	4	2	141	165	8	19	M16
125	139.8	235	141.2	16	16	40	154	161	4	2	176	200	8	19	M16
150	165.2	265	166.6	18	18	40	182	189	4	2	206	230	8	19	M16
175	190.7	300	192.1	18	18	-	-	-	-	2	232	260	8	23	M20
200	216.3	320	218	20	20	-	-	-	-	2	252	280	8	23	M20
225	241.8	345	243.7	20	20	-	-	-	-	2	277	305	12	23	M20
250	267.4	385	269.5	22	22	-	-	-	-	2	317	345	12	23	M20
300	318.5	430	321	22	22	-	-	-	-	3	360	390	12	23	M20
350	355.6	480	358.1	24	24	-	-	-	-	3	403	435	12	25	M22
400	406.4	540	409	24	24	-	-	-	-	3	463	495	16	25	M22
450	457.2	605	460	24	24	40	495	500	5	3	523	555	16	25	M22
500	508	655	511	24	24	40	546	552	5	3	573	605	20	25	M22
550	558.8	720	562	26	26	42	597	603	5	3	630	665	20	27	M24
600	609.6	770	613	26	26	44	648	654	5	3	680	715	24	27	M24
650	660.4	825	664	26	28	48	702	708	5	3	735	770	24	27	M24
700	711.2	875	715	26	30	48	751	758	5	3	785	820	24	27	M24
750	762	945	766	28	32	52	802	810	5	3	840	880	24	33	M30
800	812.8	995	817	28	34	52	854	862	5	3	890	930	24	33	M30
850	863.6	1045	868	28	36	54	904	912	5	3	940	980	24	33	M30
900	914.4	1095	919	30	36	56	956	964	5	3	990	1030	24	33	M30
1000	1016	1195	1021	32	40	60	1058	1066	5	3	1090	1130	28	33	M30
1100	1117.6	1305	1122	32	44	71	1158	1170	7	3	1200	1240	28	33	M30
1200	1219.2	1420	1224	34	48	77	1260	1272	7	3	1305	1350	32	33	M30
1350	1371.6	1575	1376	34	54	80	1414	1426	7	3	1460	1505	32	33	M30
1500	1524	1730	1529	36	58	86	1568	1580	7	3	1615	1660	36	33	M30



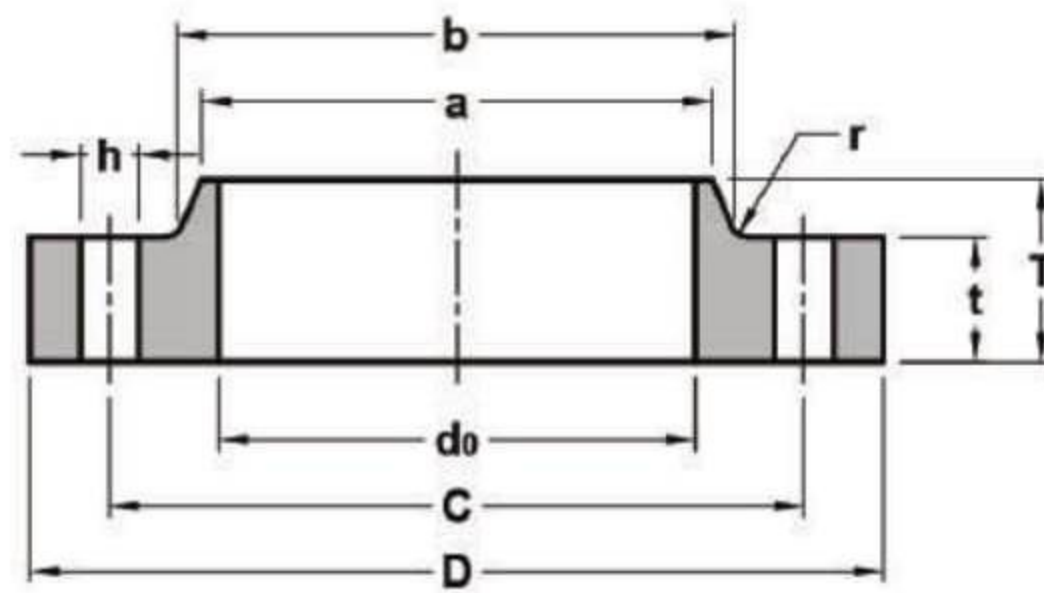
**SOP of nominal size
10A to 1500A**



**SOH of nominal size
250A to 1500A**

Unit : mm

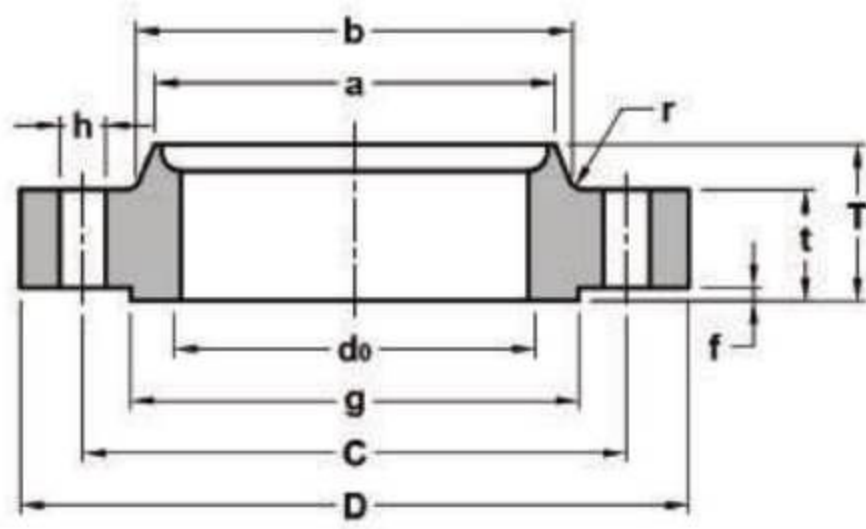
Nominal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness		Total Lengh of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				SO	BL					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	do	t	t	T	a	b	r	f	g	C			
10	17.3	90	17.8	12	12	16	23	26	4	1	46	65	4	15	M12
15	21.7	95	22.2	12	12	16	27	30	4	1	51	70	4	15	M12
20	27.2	100	27.7	14	14	20	33	36	4	1	56	75	4	15	M12
25	34	125	34.5	14	14	20	41	44	4	1	67	90	4	19	M16
32	42.7	135	43.2	16	16	22	50	53	4	2	76	100	4	19	M16
40	48.6	140	49.1	16	16	24	56	60	4	2	81	105	4	19	M16
50	60.5	155	61.1	16	16	24	69	73	4	2	96	120	4	19	M16
65	76.3	175	77.1	18	18	27	86	91	4	2	116	140	4	19	M16
80	89.1	185	90	18	18	30	99	105	4	2	126	150	8	19	M16
90	101.6	195	102.6	18	18	-	-	-	-	2	136	160	8	19	M16
100	114.3	210	115.4	18	18	36	127	130	4	2	151	175	8	19	M16
125	139.8	250	141.2	20	20	40	154	161	4	2	182	210	8	23	M20
150	165.2	280	166.6	22	22	40	182	189	4	2	212	240	8	23	M20
175	190.7	305	192.1	22	22	-	-	-	-	2	237	265	12	23	M20
200	216.3	330	218	22	22	-	-	-	-	2	262	290	12	23	M20
225	241.8	350	243.7	22	22	-	-	-	-	2	282	310	12	23	M20
250	267.4	400	269.5	24	24	36	288	292	6	2	324	355	12	25	M22
300	318.5	445	321	24	24	38	340	346	6	3	368	400	16	25	M22
350	355.6	490	358.1	26	26	42	380	386	6	3	413	445	16	25	M22
400	406.4	560	409	28	28	44	436	442	6	3	475	510	16	27	M24
450	457.2	620	460	30	30	48	496	502	6	3	530	565	20	27	M24
500	508	675	511	30	30	48	548	554	6	3	585	620	20	27	M24
550	558.8	745	562	32	34	52	604	610	6	3	640	680	20	33	M30
600	609.6	795	613	32	36	52	656	662	6	3	690	730	24	33	M30
650	660.4	845	664	34	38	56	706	712	6	3	740	780	24	33	M30
700	711.2	905	715	34	40	58	762	770	6	3	800	840	24	33	M30
750	762	970	766	36	44	62	816	824	6	3	855	900	24	33	M30
800	812.8	1020	817	36	46	64	868	876	6	3	905	950	28	33	M30
850	863.6	1070	868	36	48	66	920	928	6	3	955	1000	28	33	M30
900	914.4	1120	919	38	50	70	971	979	6	3	1005	1050	28	33	M30
1000	1016	1235	1021	40	56	74	1073	1081	6	3	1110	1160	28	39	M36
1100	1117.6	1345	1122	42	62	95	1175	1185	8	3	1220	1270	28	39	M36
1200	1219.2	1465	1224	44	66	101	1278	1290	8	3	1325	1380	32	39	M36
1350	1371.6	1630	1376	48	74	110	1432	1450	8	3	1480	1540	36	45	M42
1500	1524	1795	1529	50	82	123	1585	1605	8	3	1635	1700	40	45	M42



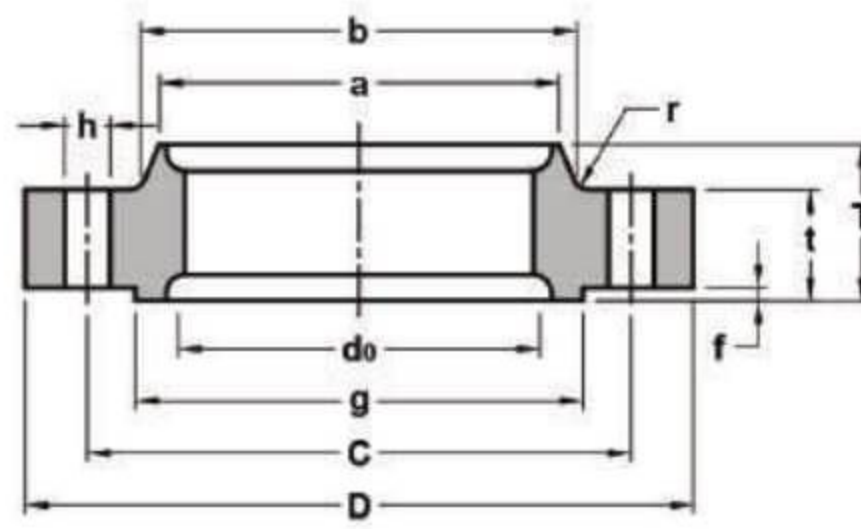
SOH of nominal size
10A to 600A

Unit : mm

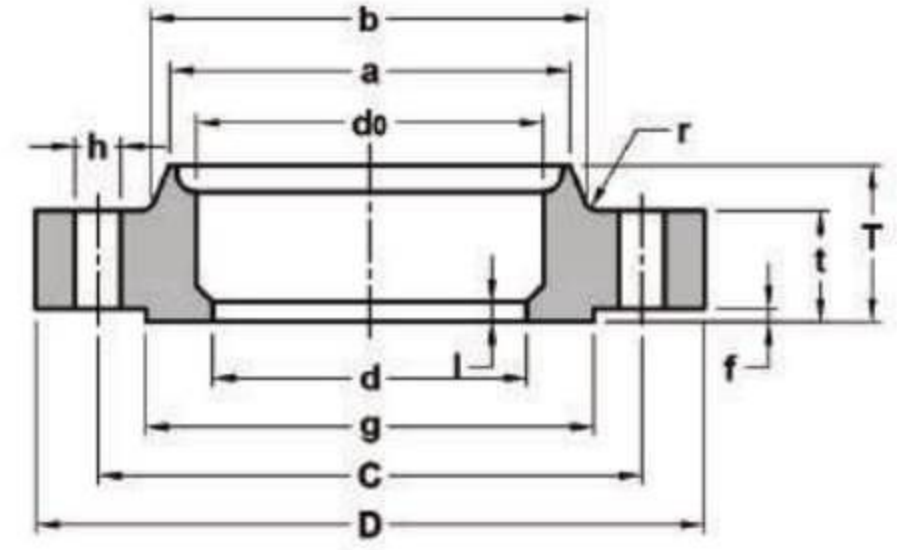
Nominal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness	Total Length of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				SO					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	do	t	T	a	b	r	f	g	C			
10	17.3	90	17.8	12	16	26	28	4	1	46	65	4	15	M12
15	21.7	95	22.2	12	16	30	32	4	1	51	70	4	15	M12
20	27.2	100	27.7	14	20	38	42	4	1	56	75	4	15	M12
25	34	125	34.5	14	20	46	50	4	1	67	90	4	19	M16
32	42.7	135	43.2	16	22	56	60	5	2	76	100	4	19	M16
40	48.6	140	49.1	16	24	62	66	5	2	81	105	4	19	M16
50	60.5	155	61.1	16	24	76	80	5	2	96	120	8	19	M16
65	76.3	175	77.1	18	26	94	98	5	2	116	140	8	19	M16
80	89.1	200	90	20	28	108	112	6	2	132	160	8	23	M20
90	101.6	210	102.6	20	30	120	124	6	2	145	170	8	23	M20
100	114.3	225	115.4	22	34	134	138	6	2	160	185	8	23	M20
125	139.8	270	141.2	22	34	164	170	6	2	195	225	8	25	M22
150	165.2	305	166.6	24	38	196	202	6	2	230	260	12	25	M22
200	216.3	350	218	26	40	244	252	6	2	275	305	12	25	M22
250	267.4	430	269.5	28	44	304	312	6	2	345	380	12	27	M24
300	318.5	480	321	30	48	354	364	8	3	395	430	16	27	M24
350	355.6	540	358.1	34	52	398	408	8	3	440	480	16	33	M30x3
400	406.4	605	409	38	60	446	456	10	3	495	540	16	33	M30x3
450	457.2	675	460	40	64	504	514	10	3	560	605	20	33	M30x3
500	508	730	511	42	68	558	568	10	3	615	660	20	33	M30x3
550	558.8	795	562	44	70	612	622	10	3	670	720	20	39	M36x3
600	609.6	845	613	46	74	666	676	10	3	720	770	24	39	M36x3



SOH type A of nominal size
10A to 600A



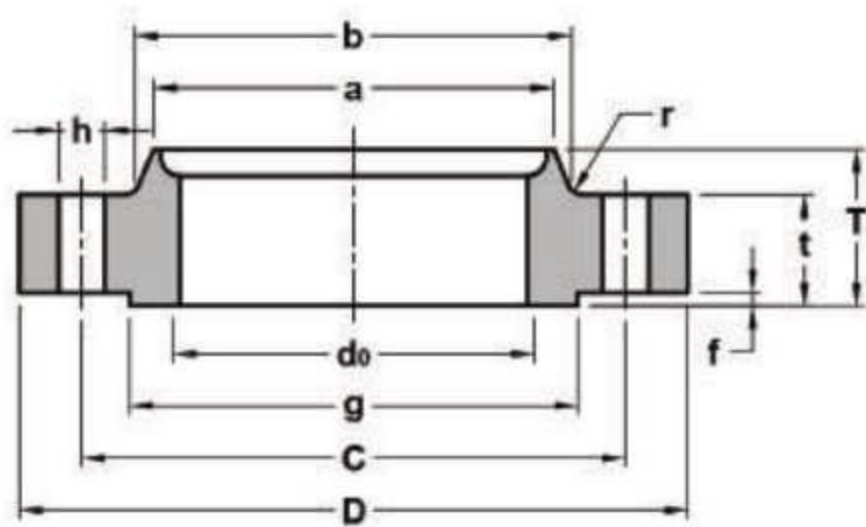
SOH type B of nominal size
10A to 50A



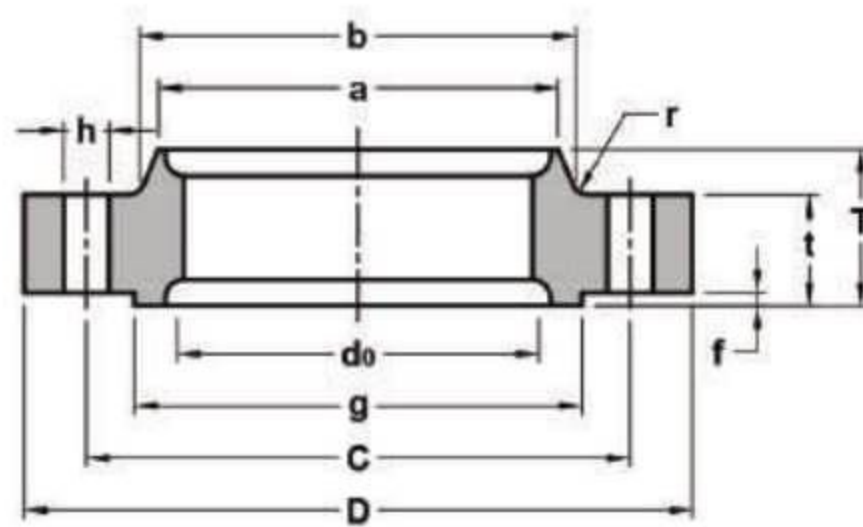
SOH type C of nominal size
65A to 600A

Unit : mm

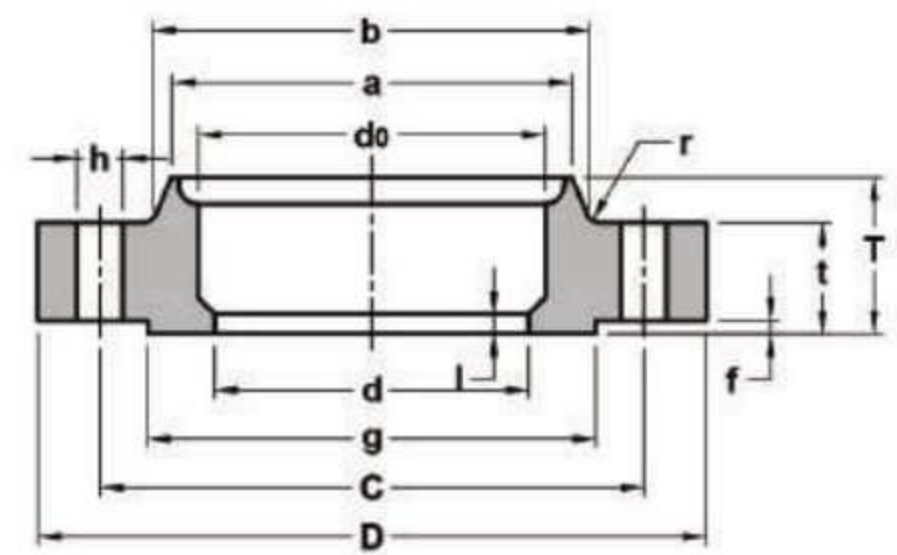
Normal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness		Total Lengh of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				SO	BL					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	d0	t	t	T	a	b	r	f	g	C			
10	17.3	90	17.8	14	14	20	30	32	4	1	46	65	4	15	M12
15	21.7	95	22.2	14	14	20	34	36	4	1	51	70	4	15	M12
20	27.2	100	27.7	16	16	22	40	42	4	1	56	75	4	15	M12
25	34	125	34.5	16	16	24	48	50	4	1	67	90	4	19	M16
32	42.7	135	43.2	18	18	26	56	60	5	2	76	100	4	19	M16
40	48.6	140	49.1	18	18	26	62	66	5	2	81	105	4	19	M16
50	60.5	155	61.1	18	18	26	76	80	5	2	96	120	8	19	M16
65	76.3	175	77.1	20	20	30	100	104	5	2	116	140	8	19	M16
80	89.1	200	90	22	22	34	113	117	6	2	132	160	8	23	M20
90	101.6	210	102.6	24	24	36	126	130	6	2	145	170	8	23	M20
100	114.3	225	115.4	24	24	36	138	142	6	2	160	185	8	23	M20
125	139.8	270	141.2	26	26	40	166	172	6	2	195	225	8	25	M22
150	165.2	305	166.6	28	28	42	196	202	6	2	230	260	12	25	M22
200	216.3	350	218	30	30	46	244	252	6	2	275	305	12	25	M22
250	267.4	430	269.5	34	34	52	304	312	6	2	345	380	12	27	M24
300	318.5	480	321	36	36	56	354	364	8	3	395	430	16	27	M24
350	355.6	540	358.1	40	40	62	398	408	8	3	440	480	16	33	M30x3
400	406.4	605	409	46	46	70	446	456	10	3	495	540	16	33	M30x3
450	457.2	675	460	48	48	78	504	514	10	3	560	605	20	33	M30x3
500	508	730	511	50	50	84	558	568	10	3	615	660	20	33	M30x3
550	558.8	795	562	52	52	90	612	622	10	3	670	720	20	39	M36x3
600	609.6	845	613	54	56	96	666	676	10	3	720	770	24	39	M36x3



SOH type A of nominal size
10A to 400A



SOH type B of nominal size
10A to 50A

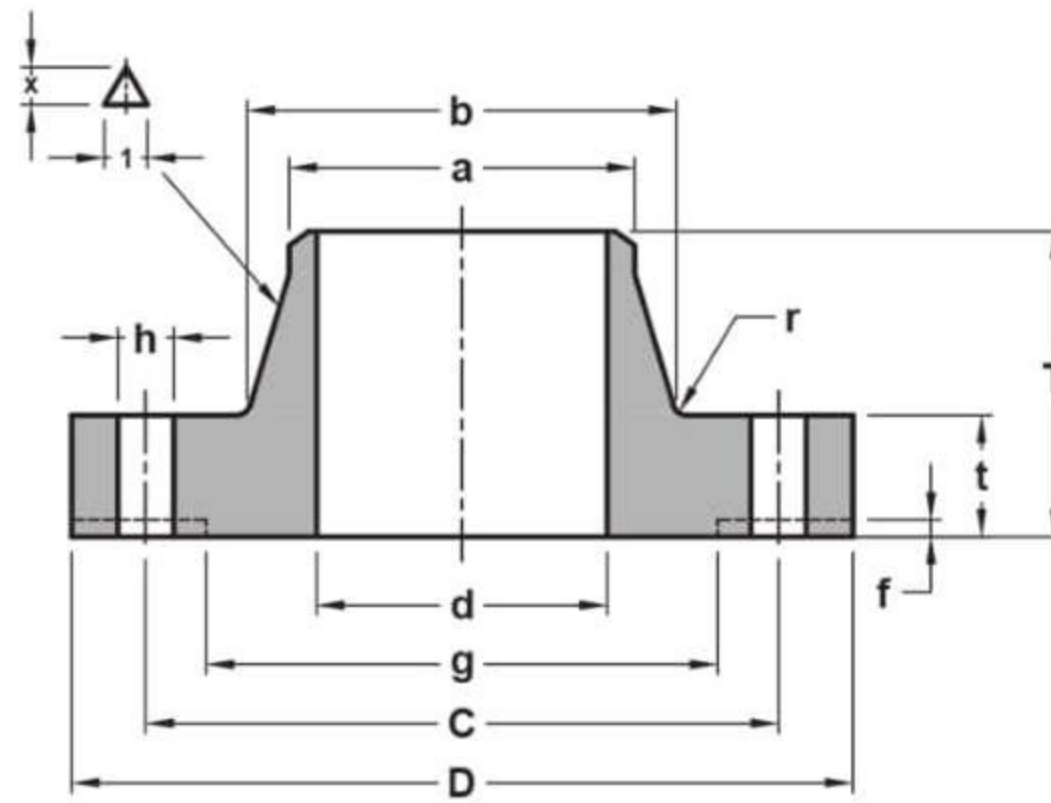


SOH type C of nominal size
65A to 400A

30K Slip-on Flange

Unit : mm

Nominal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness	Total Lengh of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				SO, BL					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	do	t	T	a	b	r	f	g	C			
10	17.3	110	17.8	16	24	30	34	4	1	52	75	4	19	M12
15	21.7	115	22.2	18	26	36	40	5	1	55	80	4	19	M12
20	27.2	120	27.7	18	28	42	46	5	1	60	85	4	19	M12
25	34	130	34.5	20	30	50	54	5	1	70	95	4	19	M16
32	42.7	140	43.2	22	32	60	64	6	2	80	105	4	19	M16
40	48.6	160	49.1	22	34	66	70	6	2	90	120	4	23	M16
50	60.5	165	61.1	22	36	82	86	6	2	105	130	8	19	M16
65	76.3	200	77.1	26	40	102	106	8	2	130	160	8	23	M16
80	89.1	210	90	28	44	115	121	8	2	140	170	8	23	M20
90	101.6	230	102.6	30	46	128	134	8	2	150	185	8	25	M20
100	114.3	240	115.4	32	48	141	147	8	2	160	195	8	25	M20
125	139.8	275	141.2	36	54	166	172	8	2	195	230	8	25	M22
150	165.2	325	166.6	38	58	196	204	8	2	235	275	12	27	M22
200	216.3	370	218	42	64	248	256	8	2	280	320	12	27	M22
250	267.4	450	269.5	48	72	306	314	10	2	345	390	12	33	M24
300	318.5	515	321	52	78	360	370	10	3	405	450	16	33	M24
350	355.6	560	358.1	54	84	402	412	12	3	450	495	16	33	M30x3
400	406.4	630	409	60	92	456	468	15	3	510	560	16	39	M30x3



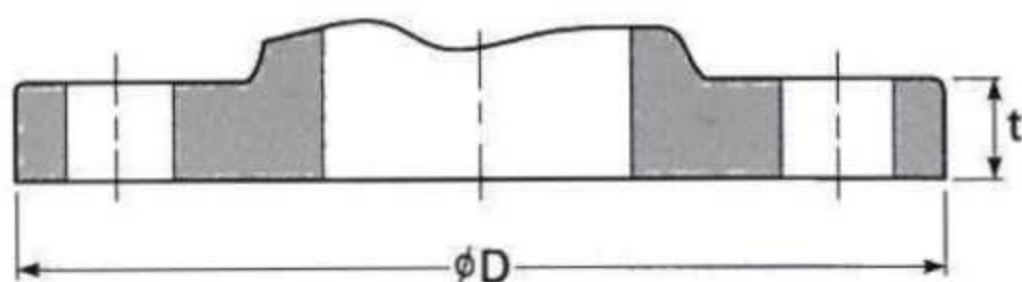
WN of nominal size 15A to 400A

30K Welding Neck Flange

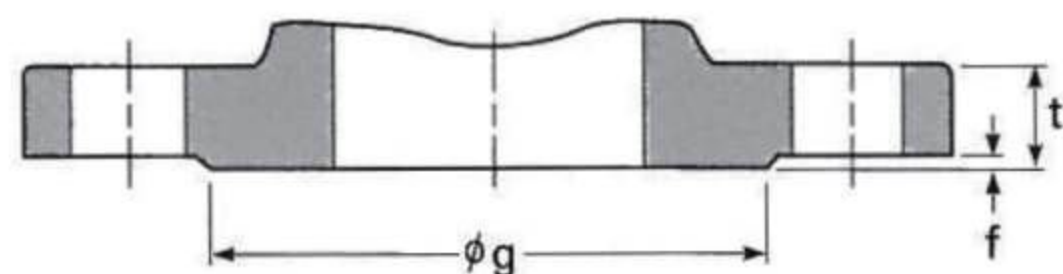
Unit : mm

Nominal Size	Outside Diam. Of Applicable Pipe	O.D of Flange	Diam. Of Bore	Thickness	Total Length of Flange	Diam. of Hub at Bevel	Diam. Of Hub	Radius of Fillet	Rasied Face		Drilling			Normal Bolt Size
				WN					Height	Diam.	Bolt Circle Diam.	Number of Holes	Diam. Of Holes	
A		D	do	t	T	a	b	r	f	g	C			
10	17.3	110	-	16	-	-	-	-	1	52	75	4	19	M12
15	21.7	115	16.1	18	45	45	40	6	1	55	80	4	19	M12
20	27.2	120	21.4	18	45	45	44	6	1	60	85	4	19	M12
25	34	130	27.2	20	48	48	52	6	1	70	95	4	19	M16
32	42.7	140	35.5	22	52	52	62	6	2	80	105	4	19	M16
40	48.6	160	41.2	22	54	54	70	6	2	90	120	4	23	M16
50	60.5	165	52.7	22	57	57	84	8	2	105	130	8	19	M16
65	76.3	200	65.9	26	69	69	104	8	2	130	160	8	23	M16
80	89.1	210	78.1	28	73	73	118	8	2	140	170	8	23	M20
90	101.6	230	90.2	30	74	74	130	8	2	150	185	8	25	M20
100	114.3	240	102.3	32	76	76	142	8	2	160	195	8	25	M20
125	139.8	275	126.6	36	86	86	172	10	2	195	230	8	25	M22
150	165.2	325	151	38	95	95	202	10	2	235	275	12	27	M22
200	216.3	370	199.9	42	102	102	254	10	2	280	320	12	27	M22
250	267.4	450	248.8	48	118	118	312	12	2	345	390	12	33	M24
300	318.5	515	297.9	52	127	127	366	15	3	405	450	16	33	M24
350	355.6	560	333.4	54	134	134	406	15	3	450	495	16	33	M30x3
400	406.4	630	381	60	149	149	462	20	3	510	560	16	39	M30x3

FACING 1



Full face(FF)

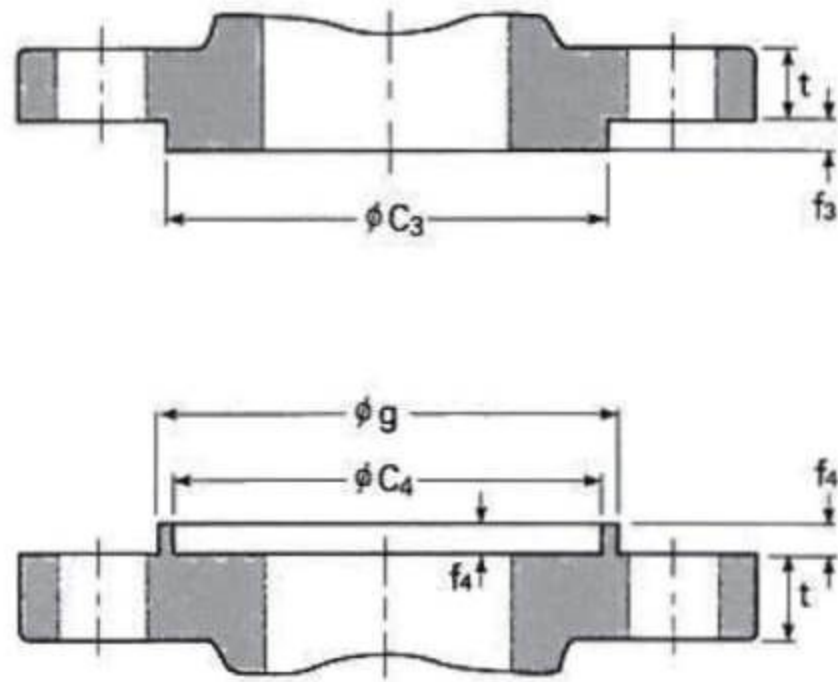


Raised face(RF)

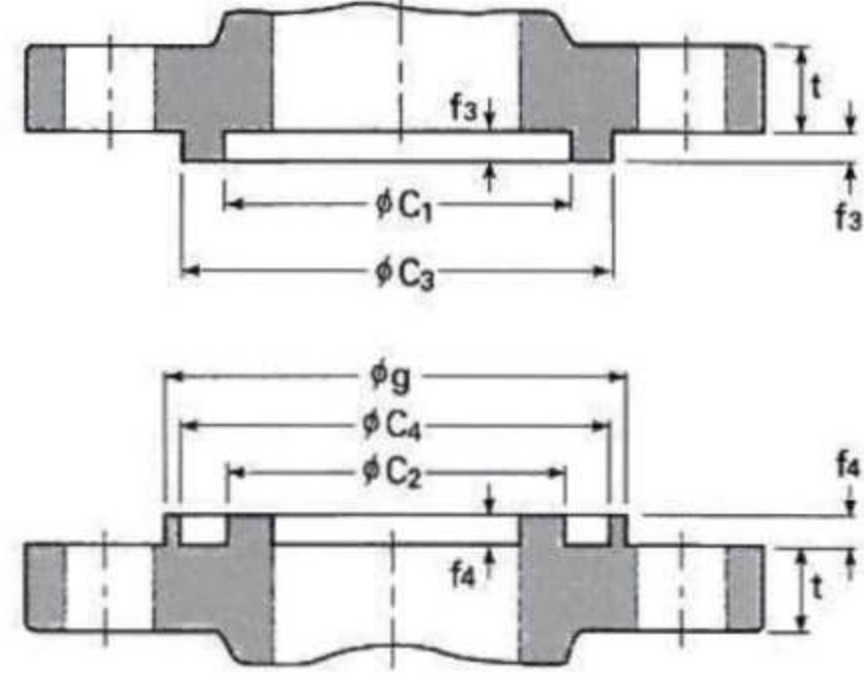
Unit : mm

Normal Size	Raised face (RF)									
	Normal Pressure									
	5K		10K		16K		20K		30K	
A	g	f	g	f	g	f	g	f	g	f
10	39	1	46	1	46	1	46	1	52	1
15	44	1	51	1	51	1	51	1	55	1
20	49	1	56	1	56	1	56	1	60	1
25	59	1	67	1	67	1	67	1	70	1
32	70	2	76	2	76	2	76	2	80	2
40	75	2	81	2	81	2	81	2	90	2
50	85	2	96	2	96	2	96	2	105	2
65	110	2	116	2	116	2	116	2	130	2
80	121	2	126	2	132	2	132	2	140	2
90	131	2	136	2	145	2	145	2	150	2
100	141	2	151	2	160	2	160	2	160	2
125	176	2	182	2	195	2	195	2	195	2
150	106	2	212	2	230	2	230	2	235	2
175	232	2	237	2	-	-	-	-	-	-
200	252	2	262	2	275	2	275	2	280	2
225	177	2	282	2	-	-	-	-	-	-
250	317	2	324	2	345	2	345	2	345	2
300	360	3	368	3	395	3	395	3	405	3
350	403	3	413	3	440	3	440	3	450	3
400	463	3	475	3	495	3	495	3	510	3
450	523	3	530	3	560	3	560	3	-	-
500	573	3	585	3	615	3	615	3	-	-
550	630	3	340	3	970	3	970	3	-	-
600	680	3	390	3	720	3	720	3	-	-
650	735	3	740	3	-	-	-	-	-	-
700	785	3	800	3	-	-	-	-	-	-
750	840	3	855	3	-	-	-	-	-	-
800	890	3	905	3	-	-	-	-	-	-
850	940	3	955	3	-	-	-	-	-	-
900	990	3	1005	3	-	-	-	-	-	-
1000	1090	3	1110	3	-	-	-	-	-	-
1100	1200	3	1220	3	-	-	-	-	-	-
1200	1305	3	1325	3	-	-	-	-	-	-
1350	1460	3	1480	3	-	-	-	-	-	-
1500	1615	3	1635	3	-	-	-	-	-	-

FACING 2



Male-female face(MF)



Tongue and groove(TG)

Unit : mm

Normal Size	Male, Female Face (MF)				Tongue and Groove (TG)					
	Male seat		Female seat		Tongue seat			Groove seat		
	(MF.M)		(MF.F)		(TG.T)			(TG.G)		
A	c	f	c	f	c	c	f	c	c	f
10	38	6	39	5	28	38	6	27	39	5
15	42	6	43	5	32	42	6	31	43	5
20	50	6	51	5	38	50	6	37	51	5
25	60	6	61	5	45	60	6	44	61	5
32	70	6	71	5	55	70	6	54	71	5
40	75	6	76	5	60	75	6	59	76	5
50	90	6	91	5	70	90	6	69	91	5
65	110	6	111	5	90	110	6	89	111	5
80	120	6	121	5	100	120	6	99	121	5
90	130	6	131	5	110	130	6	109	131	5
100	145	6	146	5	125	145	6	124	146	5
125	175	6	176	5	150	175	6	149	176	5
150	215	6	216	5	190	215	6	189	216	5
175	-	-	-	-	-	-	-	-	-	-
200	260	6	261	5	230	260	6	229	261	5
225	-	-	-	-	-	-	-	-	-	-
250	325	6	326	5	295	325	6	294	326	5
300	375	6	376	5	340	375	6	339	376	5
350	415	6	416	5	380	415	6	379	416	5
400	175	6	476	5	440	475	6	439	476	5
450	523	6	524	5	483	523	6	482	524	5
500	575	6	576	5	535	575	6	534	576	5
550	652	6	626	5	585	652	6	584	626	5
600	675	6	676	5	635	675	6	634	676	5
650	727	6	728	5	682	727	6	681	728	5
700	777	6	778	5	723	777	6	731	778	5
750	832	6	833	5	787	832	6	786	833	5
800	882	6	883	5	837	882	6	836	883	5
850	934	6	935	5	889	934	6	888	935	5
900	987	6	988	5	937	987	6	936	988	5
1000	1092	6	1094	5	1042	1092	6	1040	1094	5
1100	1192	6	1194	5	1142	1192	6	1140	1194	5
1200	1292	6	1294	5	1237	1292	6	1235	1294	5
1350	1442	6	1444	5	1387	1442	6	1385	1444	5
1500	1592	6	1594	5	1537	1592	6	1535	1594	5