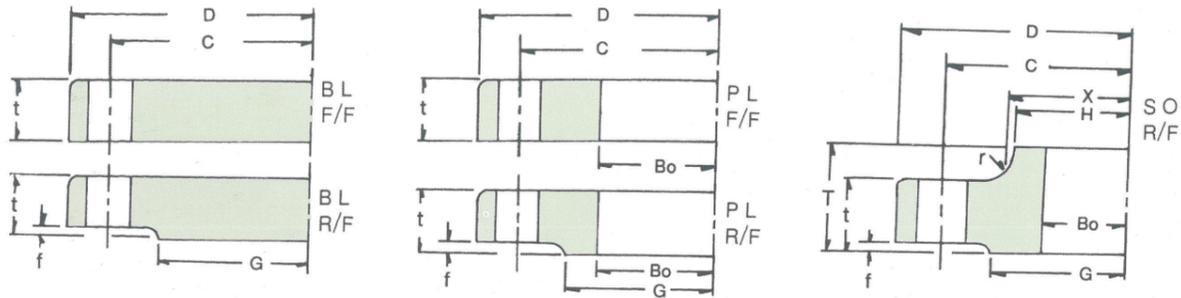


STEEL PIPE FLANGES



[5K]-1

DIMENSIONS IN MM

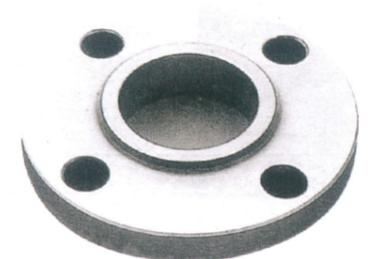
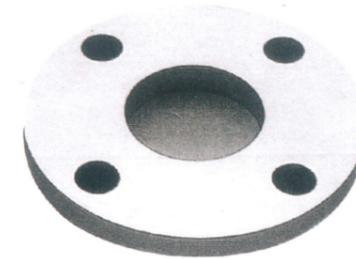
PIPE		PIPE	BO (2)	D (2)		t (2)	T (2)	G (2)	
B	A								
3/8	10	17.3	17.8	75		9	-	42	
1/2	15	21.7	22.2	80		9	-	48	
3/4	20	27.2	27.7	85		10	-	52	
1	25	34.0	34.5	95		10	-	62	
1 1/4	32	42.7	43.2	115		12	-	72	
1 1/2	40	48.6	49.1	120		12	-	78	
2	50	60.5	61.1	130	+1.0	14	-	88	± 0.8
2 1/2	65	76.3	77.1	155	-0	14	+1.0	112	
3	80	89.1	90.0	180		14	-0	125	
3 1/2	90	101.6	102.6	190		14	-	135	
4	100	114.3	115.4	200		16	-	145	
5	125	139.8	141.2	235		16	-	180	
6	150	165.2	166.6	265		18	-	210	
7	175	190.7	192.1	300	+1.0	18	-	235	
8	200	216.3	218.0	320	-0	20	-	255	
9	225	241.8	243.7	345		20	-	280	
10	250	267.4	269.5	385	+1.5	22	32	320	
12	300	318.5	321.0	430	-0	22	34	365	
14	350	355.6	358.1	480		24	36	405	± 0.9
16	400	406.4	409.0	540		24	36	465	
18	450	457.2	460.0	605	+1.5	24	40	525	± 1.0
20	500	508.0	511.0	655	-0	24	40	575	
22	550	558.8	562.0	720		26	42	630	
24	600	609.6	613.0	770		26	44	680	
26	650	660.4	664.0	825	+2.0	26	48	735	
28	700	711.2	715.0	875	-0	26	48	785	
30	750	762.0	766.0	945		28	52	840	
32	800	812.8	817.0	995		28	52	890	± 1.0
34	850	863.6	868.0	1045	+2.5	28	54	940	
36	900	914.4	919.0	1095	-0	30	56	990	
40	1000	1016.0	1021.0	1195	+2.5	32	60	1090	
44	1100	1117.6	1123.0	1305	-0	32	-	1200	
48	1200	1219.2	1224.0	1420	+3.0	34	-	1305	± 1.2
54	1350	1371.6	1377.0	1575	-0	34	-	1460	
60	1500	1524.0	1529.0	1730	+3.0	36	-	1615	

STEEL PIPE FLANGES

BLIND

PLATE

SLIP-ON

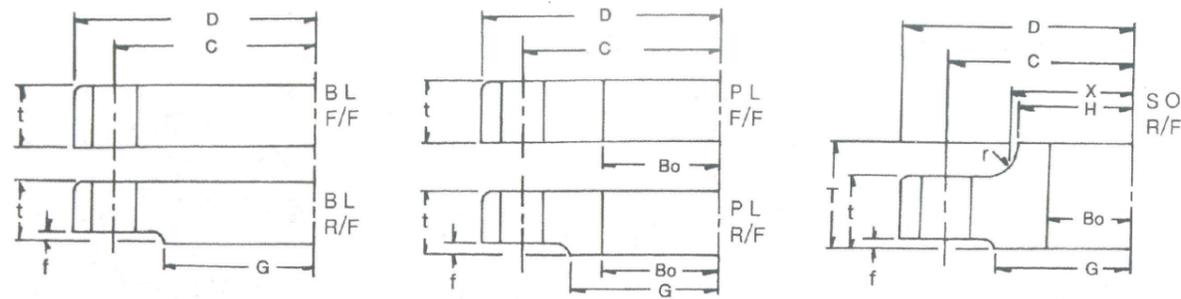


[5K]-2

DIMENSIONS IN MM

F	R	H (2)	X (2)	C (2)	NUMBER OF HOLES	DIA. OF BOLT HOLES	KG/PC		
							PL	SO	BL
1	-	-	-	55	4	12	0.3	-	0.3
1	-	-	-	60	4	12	0.3	-	0.4
1	-	-	-	65	4	12	0.4	-	0.5
1	-	-	-	75	4	12	0.5	-	0.6
2	-	-	-	90	4	15	0.8	-	0.9
2	-	-	-	95	4	15	0.9	-	1.0
2	-	-	-	105	4	15	1.1	-	1.4
2	-	-	-	130	4	15	1.5	-	2.0
2	-	-	-	145	4	19	2.0	-	2.7
2	-	-	-	155	4	19	2.1	-	3.0
2	-	-	-	165	8	19	2.4	-	3.7
2	-	-	-	200	8	19	3.3	-	5.2
2	-	-	-	230	8	19	4.4	-	7.5
2	-	-	-	260	8	23	5.5	-	9.5
2	-	-	-	280	8	23	6.4	-	12.2
2	-	-	-	305	12	23	6.7	-	14.0
2	5	286	290	345	12	23	9.5	10.1	19.3
3	5	338	342	390	12	23	10.3	11.3	24.3
3	5	378	+2.0	435	12	25	14.0	14.0	33.2
3	5	432	-0	495	16	25	16.9	18.3	41.9
3	5	495		555	16	25	21.6	24.8	53.0
3	5	546		605	20	25	23.1	26.9	61.9
3	5	597		665	20	27	30.3	34.1	81.2
3	5	648		715	20	27	32.7	37.5	93.2
3	5	702	+2.5	770	24	27	35.9	42.8	106.9
3	5	751	-0	820	24	27	38.2	45.4	120.6
3	5	802		880	24	33	48.7	57.4	150.5
3	5	854		930	24	33	51.6	60.8	167.4
3	5	904	+3.0	980	24	33	54.4	63.5	185.1
3	5	956	-0	1030	24	33	61.1	75.3	218.1
3	5	1058	+3.5	1130	28	33	70.5	88.5	277.3
3	-	-	-	1240	28	33	81.7	-	331.9
3	-	-	-	1350	32	33	102.0	-	417.8
3	-	-	-	1505	32	33	115.9	-	515.6
3	-	-	-	1660	36	33	157.4	-	659.2

STEEL PIPE FLANGES



[10K]-1

DIMENSIONS IN MM

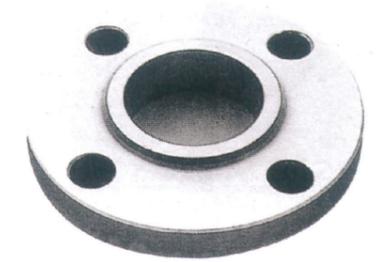
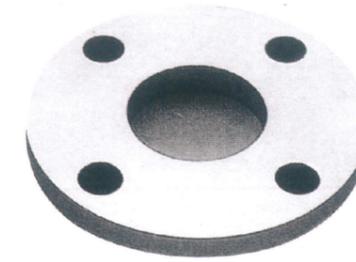
PIPE		PIPE	Bo	(2)	D	(2)	t	(2)	T	(2)	G	(2)
B	A											
3/8	10	17.3	17.8		90		12		-		48	
1/2	15	21.7	22.2		95		12		-		52	
3/4	20	27.2	27.7		100		14		-		58	
1	25	34.0	34.5		125		14		-		70	
1 1/4	32	42.7	43.2	+0.5	135		16		-		80	
1 1/2	40	48.6	49.1	-0	140	+1.0	16	+1.0	-		85	
2	50	60.5	61.1		155	-0	16	-0	-		100	± 0.8
2 1/2	65	76.3	77.1		175		18		-		120	
3	80	89.1	90.0		185		18		-		130	
3 1/2	90	101.6	102.6		195		18		-		140	
4	100	114.3	115.4		210		18		-		155	
5	125	139.8	141.2		250		20		-		185	
6	150	165.2	166.6		280		22		-		215	
7	175	190.7	192.1	+1.0	305		22		32		240	
8	200	216.3	218.0	-0	330		22		32		265	
9	225	241.8	243.7		350	+1.5	22		34		285	
10	250	267.4	269.5		400	-0	24		36		325	
12	300	318.5	321.0		445		24		38	± 1.0	370	± 0.9
14	350	355.6	358.1		490		26		42		415	
16	400	406.4	409.0		560		28		44		475	
18	450	457.2	460.0	+1.5	620		30		48		530	
20	500	508.0	511.0	-0	675		30		48		585	
22	550	558.8	562.0		745	+2.0	32	+1.5	52		640	
24	600	609.6	613.0		795	-0	32	-0	52		690	
26	650	660.4	664.0	+2.0	845		34		56		740	
28	700	711.2	715.0	-0	905		34		58		800	± 1.0
30	750	762.0	766.0		970		36		62		855	
32	800	812.8	817.0		1020		36		64		905	
34	850	863.6	868.0	+2.5	1070		36		66		955	
36	900	914.4	919.0	-0	1120	+2.5	38	+1.5	70	± 1.5	1005	
40	1000	1016.0	1021.0		1235	-0	40		74		1110	
44	1100	1117.6	1123.0	+3.0	1345		42		78		1220	± 1.2
48	1200	1219.2	1224.0	-0	1465		44		82		1325	
54	1350	1371.6	1377.0		1630	+3.0	48		88		1480	
60	1500	1524.0	1529.0	-0	1795	-0	50		90		1635	

STEEL PIPE FLANGES

BLIND

PLATE

SLIP-ON

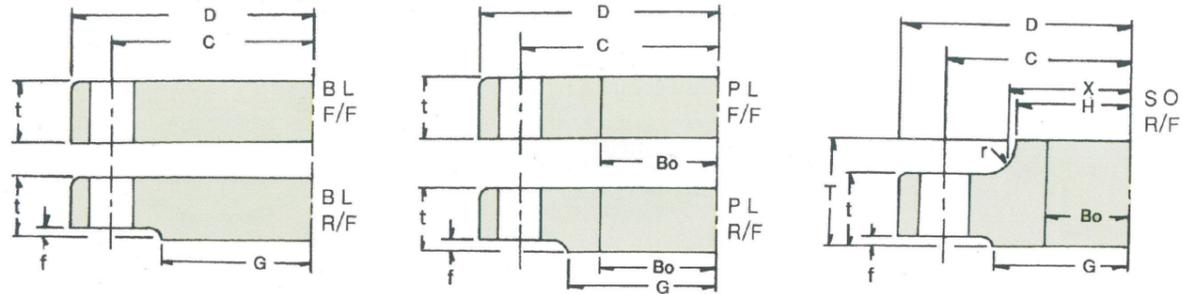


[10K]-2

DIMENSIONS IN MM

f	r	H	(2)	X	(2)	C	(2)	NUMBER OF HOLES	DIA. OF BOLT HOLES	KG/PC		
										PL	SO	BL
1	-	-		-		65		4	15	0.5	-	0.6
1	-	-		-		70		4	15	0.6	-	0.7
1	-	-		-		75		4	15	0.8	-	0.9
1	-	-		-		90		4	19	1.2	-	1.3
2	-	-		-		100		4	19	1.5	-	1.7
2	-	-		-		105		4	19	1.6	-	1.8
2	-	-		-		120	± 0.5	4	19	1.9	-	3.3
2	-	-		-		140		4	19	2.6	-	3.3
2	-	-		-		150		8	19	2.6	-	3.5
2	-	-		-		160		8	19	2.8	-	4.0
2	-	-		-		175		8	19	3.2	-	4.6
2	-	-		-		210		8	23	4.8	-	7.3
2	-	-		-		240		8	23	6.4	-	10.1
2	6	208		212		265		12	23	6.8	7.3	11.8
2	6	234		238		290		12	23	7.6	8.1	14.0
2	6	260	+1.5	264		310		12	23	7.8	8.5	15.8
2	6	288	-0	292	+1.5	355	± 0.6	12	25	11.8	12.7	22.7
3	6	340		346	-0	400		16	25	13.6	13.8	30.4
3	6	380		386		445		16	25	16.4	18.2	37.1
3	6	436		442		510		16	27	23.0	25.2	52.5
3	6	496	+2.0	502	+2.0	565		20	27	29.5	33.0	68.8
3	6	548	-0	554	-0	620		20	27	33.5	37.6	82.1
3	6	604		610		680		20	33	43.1	49.7	105.8
3	6	656		662		730		24	33	45.7	52.6	120.2
3	6	706	+2.5	712	+2.5	780	± 0.8	24	33	52.1	60.6	145.0
3	6	762	-0	770	-0	840		24	33	59.5	70.6	167.2
3	6	816		824		900		24	33	73.2	85.8	204.2
3	6	868	+3.0	876	+3.0	950		28	33	76.4	91.2	225.4
3	6	920	-0	928	-0	1000		28	33	80.7	98.6	248.8
3	6	971		979		1050		28	33	89.4	109.0	288.4
3	6	1073		1081		1160	± 1.0	28	39	109.2	133.0	367.7
3	8	1175	+3.5	1185	+3.5	1270		28	39	131.6	163.0	460.0
3	8	1278	-0	1290	-0	1380		32	39	163.5	199.0	572.2
3	8	1432		1450		1540	± 1.5	36	45	204.7	250.0	769.0
3	8	1585		1600		1700		40	45	250.2	297.0	974.9

STEEL PIPE FLANGES

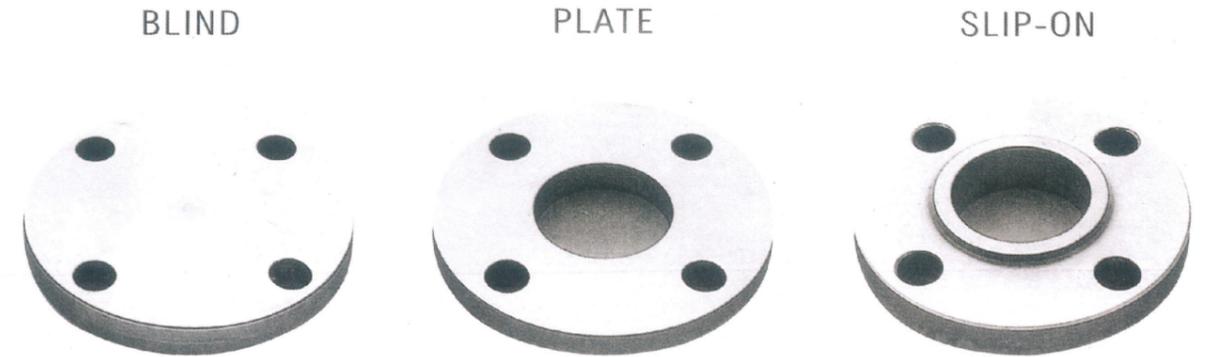


[16K]-1

DIMENSIONS IN MM

PIPE		PIPE	Bo	(2)	D	(2)	t	(2)	T	(2)	G	(2)
B	A											
3/8	10	17.3	17.8		90		12		16		48	
1/2	15	21.7	22.2		95		12		16		52	
3/4	20	27.2	27.7		100		14		20		58	
1	25	34.0	34.5		125		14		20		70	
1 1/4	32	42.7	43.2	+0.5	135		16		22		80	
1 1/2	40	48.6	49.1	-0	140		16	+1.0	24		85	±0.8
2	50	60.5	61.1		155	+1.0	16		24		100	
2 1/2	65	76.3	77.1		175	-0	18		26		120	
3	80	89.1	90.0		200		20		28		135	
3 1/2	90	101.6	102.6		210		20		30	±1.0	145	
4	100	114.3	115.4		225		22		34		160	
5	125	139.8	141.2		270		22		34		195	
6	150	165.2	166.6		305		24		38		230	
7	175	190.7	192.1		325		26		40		250	
8	200	216.3	218.0	+1.0	350		26		40		275	
9	225	241.8	243.7	-0	385	+1.5	26		40		325	
10	250	267.4	269.5		430	-0	28		44		345	±0.9
11	300	318.5	321.0		480		30	+1.5	48		395	
14	350	355.6	358.1		540		34	-0	52		440	
16	400	406.4	409.0		605		38		60		495	
18	450	457.2	460.0		675		40		64		560	
20	500	508.0	511.0	+1.5	730		42		68		615	
22	550	558.8	562.0	-0	795	+2.0	44		70		670	
24	600	609.6	613.0		845	-0	46		74		720	
26	650	660.4	664.0		895		48		77	±1.5	770	
28	700	711.2	715.0	+2.0	960		50		80		820	±1.0
30	750	762.0	766.0	-0	1020		52		83		880	
32	800	812.8	817.0		1085		54		86		930	
34	850	863.6	868.0	+2.5	1135	+2.5	56		89		980	
36	900	914.4	919.0	-0	1185	-0	58		93		1030	
40	1000	1016.0	1021.0		1320		62		99		1140	
44	1100	1117.6	1123.0		1420		66		105		1240	
48	1200	1219.2	1225.0		1530		70	+2.0	112		1350	
52	1300	1320.8	1326.0	+3.0	1645		74	-0	-	±2.0	1450	±1.2
54	1350	1371.6	1377.0	-0	1700	+3.0	76		-		1510	
56	1400	1422.4	1428.0		1755	-0	78		-		1560	
60	1500	1524.0	1529.0		1865		80		-		1670	

STEEL PIPE FLANGES

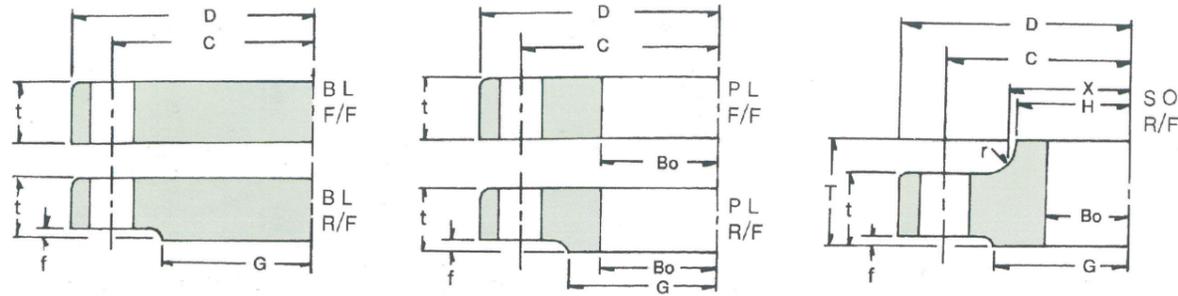


[16K]-2

DIMENSIONS IN MM

F	R	H	(2)	X	(2)	C	(2)	NUMBER OF HOLES	DIA. OF BOLT HOLES	KG/PC		
										PL	SO	BL
1	4	26		28		65		4	15	0.5	0.5	0.6
1	4	30		32		70		4	15	0.6	0.6	0.6
1	4	38		42		75		4	15	0.7	0.8	0.8
1	4	46		50		90		4	19	1.2	1.2	1.3
2	5	56		60		100		4	19	1.5	1.6	1.7
2	5	62		66	+1.0	105		4	19	1.6	1.7	1.8
2	5	76	+1.0	80	-0	120	±0.5	8	19	1.7	1.8	2.1
2	5	94	-0	98		140		8	19	2.4	2.6	3.1
2	6	108		112		160		8	23	3.5	3.7	4.5
2	6	120		124		170		8	23	3.7	4.0	5.0
2	6	134		138		185		8	23	4.5	4.9	6.3
2	6	164		170		225		8	25	6.5	7.0	9.2
2	6	196		202		260		12	25	8.7	9.6	12.8
2	6	216		222		280		12	25	10.7	10.9	16.5
2	6	244		252		305		12	25	10.9	12.1	18.6
2	6	266		272	+1.5	335		12	27	13.9	14.1	23.1
2	6	304	+1.5	312	-0	380	±0.6	12	27	18.0	20.0	30.6
3	8	354	-0	364		430		16	27	21.5	24.4	40.7
3	8	398		408		480		16	33	30.8	35.0	57.8
3	10	446		456		540		16	33	42.8	46.2	82.2
3	10	504		514	+2.0	605		20	33	55.1	61.9	107.6
3	10	558	+2.0	568	-0	660		20	33	65.1	73.3	133.1
3	10	612	-0	622		720		20	39	77.9	88.1	164.1
3	10	666		676		770	±0.8	24	39	86.0	98.8	193.2
5	10	704	+2.5	726	+2.5	820		24	39	96.3	101.0	227.5
5	10	754	-0	776	-0	875		24	42	114.1	120.0	272.6
5	10	806		832		935		24	42	132.7	141.0	321.9
5	10	865	+3.0	885	+3.0	990		24	48	152.1	161.0	375.6
5	10	916	-0	936	-0	1040		24	48	166.5	177.0	428.1
5	10	968		986		1090	±1.0	28	48	178.1	191.0	481.8
5	12	1070		1098		1210		28	56	235.3	230.0	636.0
5	12	1180		1200		1310		32	56	267.9	289.0	784.0
5	12	1282		1302		1420		32	56	321.1	348.0	972.4
5	-	-	+3.5	-	+3.5	1530		32	62	378.6	-	1185.2
5	-	-	-0	-	-0	1590	±1.5	32	62	410.0	-	1303.8
5	-	-		-		1640		36	62	436.0	-	1422.5
5	-	-		-		1750		36	62	496.4	-	1656.6

STEEL PIPE FLANGES



[20K]-1

DIMENSIONS IN MM

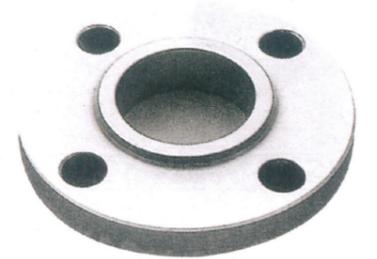
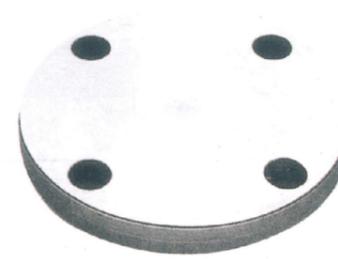
PIPE		PIPE	BO (2)	D (2)	t (2)	T (2)	G (2)
B	A						
3/8	10	17.3	17.8	90	14	20	48
1/2	15	21.7	22.2	95	14	20	52
3/4	20	27.2	27.7	100	16	22	58
I	25	34.0	34.5	125	16	24	70
1 1/4	32	42.7	43.2	135	18	26	80
1 1/2	40	48.6	49.1	140	18	26	85
2	50	60.5	61.1	155	18	26	100
2 1/2	65	76.3	77.1	175	20	30	120
3	80	89.1	90.0	200	22	34	135
3 1/2	90	101.6	102.6	210	24	36	145
4	100	114.3	115.4	225	24	36	160
5	125	139.8	141.2	270	26	40	195
6	150	165.2	166.6	305	28	42	230
7	175	190.7	192.1	325	30	46	250
8	200	216.3	218.0	350	30	46	275
9	225	241.8	243.7	385	32	48	300
10	250	267.4	269.5	430	34	52	345
12	300	318.5	321.0	480	36	56	395
14	350	355.6	358.1	540	40	62	440
16	400	406.4	409.0	605	46	70	495
18	450	457.2	460.0	675	48	78	560
20	500	508.0	511.0	730	50	84	615
22	550	558.8	562.0	795	52	90	670
24	600	609.6	613.0	845	54	96	720
26	650	660.4	664.0	945	60	-	790
28	700	711.2	715.0	995	64	-	840
30	750	762.0	766.0	1080	68	-	900
32	800	812.8	817.0	1140	72	-	960
34	850	863.6	868.0	1200	74	-	1020
36	900	914.4	919.0	1250	76	-	1070

STEEL PIPE FLANGES

BLIND

PLATE

SLIP-ON



[20K]-2

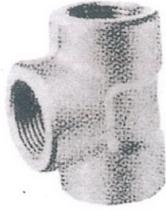
DIMENSIONS IN MM

f	r	H (2)	X (2)	C (2)	Number of Holes	Bolt Diameter	kg/pc		
							PL	SO	BL
1	4	30	32	65	4	15	0.6	0.6	0.6
1	4	34	36	70	4	15	0.7	0.7	0.7
1	4	40	42	75	4	15	0.8	0.8	0.9
1	4	48	50	90	4	19	1.3	1.3	1.5
2	5	56	60	100	4	19	1.6	1.6	1.8
2	5	62	66	105	4	19	1.7	1.7	2.0
2	5	76	80	120	8	19	1.9	1.9	2.4
2	5	100	104	140	8	19	2.6	2.6	3.4
2	6	113	117	160	8	23	3.8	3.9	4.9
2	6	126	130	170	8	23	4.4	4.6	6.0
2	6	138	142	185	8	23	4.9	5.1	6.9
2	6	166	172	225	8	25	7.8	8.3	11.0
2	6	196	202	260	12	25	10.1	10.6	14.9
2	6	218	226	280	12	25	12.0	12.1	19.0
2	6	244	252	305	12	25	12.6	13.3	21.4
2	6	266	274	335	12	27	16.0	16.3	28.5
2	6	304	312	380	12	27	21.9	23.4	37.2
3	8	354	364	430	16	27	25.8	27.7	48.8
3	8	398	408	480	16	33	36.2	39.2	68.0
3	10	446	456	540	16	33	51.7	54.2	99.4
3	10	504	514	605	20	33	66.1	71.7	129.1
3	10	558	568	660	20	33	77.4	86.2	158.4
3	10	612	622	720	20	39	92.2	105.0	194.0
3	10	666	676	770	24	39	101.1	119.0	226.9
5	-	-	-	850	24	48	147.6	-	311.6
5	-	-	-	900	24	48	168.0	-	370.9
5	-	-	-	970	24	56	212.7	-	460.1
5	-	-	-	1030	24	56	248.5	-	546.5
5	-	-	-	1090	24	56	280.5	-	626.2
5	-	-	-	1140	28	56	296.9	-	694.9

**90° ELBOW  
THREADED**



**TEE  
THREADED**



**45° ELBOW  
THREADED**

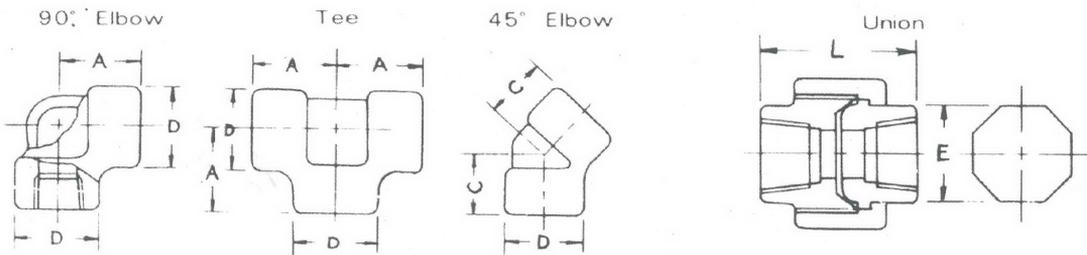


**UNION  
SOCKET WELD**



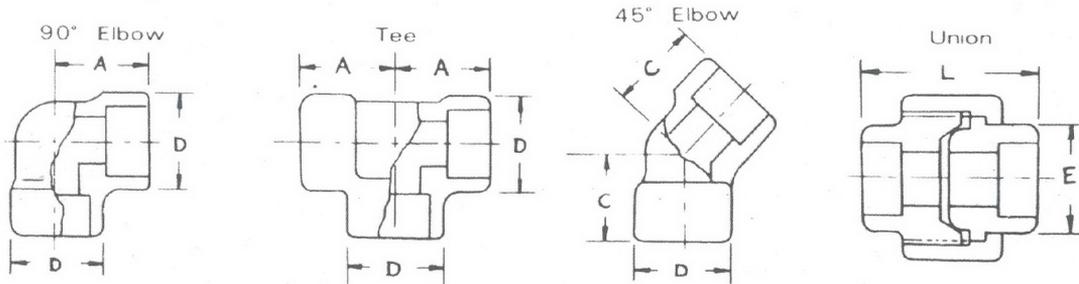
**FORGED STEEL SCREW END FITTINGS**

for 2000, 3000 lbs service



**FORGED STEEL SOCKET WELD END FITTINGS**

for 2000, 3000 lbs service fit to schedule 40.80 pipe



NOMINAL PIPE SIZE (INCH)	SCREW END					SOCKET WELD END				
	A	C	D	L	E	A	C	D	L	E
	2000#	2000#	2000#	-	-	2000#	2000#	2000#	-	-
	3000#	3000#	3000#	3000#	3000#	3000#	3000#	3000#	3000#	3000#
1/2	15/16	1	1 1/2	1 1/2	1 1/8	1 1/8	7/8	1 5/16	2	1 3/16
3/4	1 1/2	1 1/8	1 13/16	1 13/16	1 3/8	1 5/16	1	1 1/2	2 1/4	1 13/32
1	1 3/4	1 5/16	2 3/16	2 1/16	1 5/8	1 1/2	1 1/8	1 13/16	2 1/2	1 23/32
1 1/4	2	1 3/8	2 7/16	2 1/8	2	1 3/4	1 5/16	2 3/16	2 7/8	2 3/32
1 1/2	2 3/8	1 11/16	2 31/32	2 3/16	2 1/4	2	1 3/8	2 7/16	3 1/8	2 11/32
2	2 1/2	1 23/32	3 5/16	2 11/16	2 3/4	2 3/8	1 11/16	2 31/32	3 1/2	2 7/8
2 1/2	3 1/4	2 1/16	4	3 1/2	3 3/8	3	2 1/16	3 5/8	4 5/8	3 1/2
3	3 3/4	2 1/2	4 3/4	4	4	3 3/8	2 1/2	4 5/16	4 3/4	4 3/16