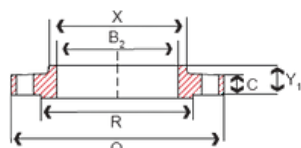




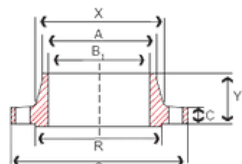
STAINLESS STEEL

FLANGES

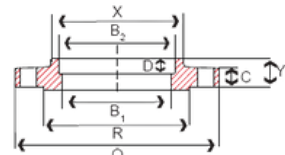
CLASS 150



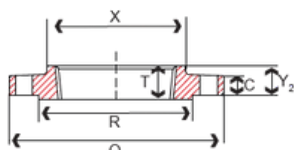
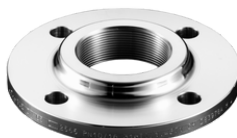
SLIP-ON



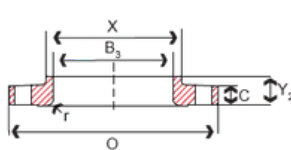
WELD NECK



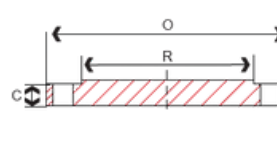
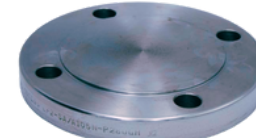
SOCKET WELDING



THREADED



LAP JOINT



BLIND

NOMINAL SIZE	COMMON DIMENSION				BORE			LENGTH THRU HUB		
	OUTSIDE DIAMETER	THICKNESS	RAISED FACED DIAMETER	FILLET RADIUS	WELD NECK SOCKET	SLIP ON	Lap Joint	Welding Neck	SLIP ON SOCKET	Lap Joint
	D	C	R	r	b ₁	b ₂	b ₃	Y ₁	Y ₂	Y ₃
1/2	3.50	0.44	1.38	0.12	*To be specified by purchaser.	0.88	0.90	1.88	0.62	0.62
3/4	3.88	0.50	1.69	0.12		1.09	1.11	2.06	0.62	0.62
1	4.25	0.56	2.00	0.12		1.36	1.38	2.19	0.69	0.69
1-1/4	4.62	0.62	2.50	0.19		1.70	1.72	2.25	0.81	0.81
1-1/2	5.00	0.69	2.88	0.25		1.95	1.97	2.44	0.88	0.88
2	6.00	0.75	3.62	0.31		2.44	2.46	2.50	1.00	1.00
2-1/2	7.00	0.88	4.12	0.31		2.94	2.97	2.75	1.12	1.12
3	7.50	0.94	5.00	0.38		3.57	3.60	2.75	1.19	1.19
3-1/2	8.50	0.94	5.50	0.38		4.07	4.10	2.81	1.25	1.25
4	9.00	0.94	6.19	0.44		4.60	4.60	3.00	1.31	1.31
5	10.00	0.94	7.31	0.44		5.66	5.69	3.50	1.44	1.44
6	11.00	1.00	8.50	0.50		6.72	6.75	3.50	1.56	1.56
8	13.50	1.12	10.62	0.50		8.72	8.75	4.00	1.75	1.75
10	16.00	1.19	12.75	0.50		10.88	10.92	4.00	1.94	1.94
12	19.00	1.25	15.00	0.50		12.88	12.92	4.50	2.19	2.19
14	21.00	1.38	16.25	0.50		14.14	14.18	5.00	2.25	3.12
16	23.50	1.44	18.50	0.50		16.16	16.19	5.00	2.50	3.44
18	25.00	1.56	21.00	0.50		18.18	18.20	5.50	2.69	3.81
20	27.50	1.69	23.00	0.50		20.20	20.25	5.69	2.88	4.06
24	32.00	1.88	27.25	0.50		24.25	24.25	6.00	3.25	4.38

NOMINAL PIPE SIZE	MIN THREAD LENGTH	DEPTH OF SOCKET	DIA. HUB AT BEVEL	HUB DIAMETER	DRILLING			APPROXIMATE WEIGHT			
					BOLT CIRCLE	DIA. HOLES	NO. OF HOLES	WELD NECK	SLIP ON THREADED & SOCKET WELD	Lap Joint	Blind
	T	D	A	X							
1/2	0.62	0.38	0.84	1.19	2.38	0.62	4	2	1	1	1
3/4	0.62	0.44	1.05	1.50	2.75	0.62	4	2	2	2	2
1	0.69	0.50	1.32	1.94	3.12	0.62	4	3	2	2	2
1-1/4	0.81	0.56	1.66	2.31	3.50	0.62	4	3	3	3	3
1-1/2	0.88	0.62	1.90	2.56	3.88	0.62	4	4	3	3	4
2	1.00	0.69	2.38	3.06	4.75	0.75	4	6	5	5	5
2-1/2	1.12	0.75	2.88	3.56	5.50	0.75	4	8	7	7	7
3	1.19	0.81	3.50	4.25	6.00	0.75	4	10	8	8	9
3-1/2	1.25	0.88	4.00	4.81	7.00	0.75	8	12	11	11	13
4	1.31	0.94	4.50	5.31	7.50	0.75	8	15	13	13	17
5	1.44	0.94	5.56	6.44	8.50	0.88	8	19	15	15	20
6	1.56	1.06	6.63	7.56	9.50	0.88	8	24	19	19	26
8	1.75	1.25	8.63	9.69	11.75	0.88	8	39	30	30	45
10	1.94	1.31	10.75	12.00	14.25	1.00	12	52	43	43	70
12	2.19	1.56	12.75	14.38	17.00	1.00	12	80	64	64	110
14	2.25	1.63	14.00	15.75	18.75	1.12	12	110	90	105	140
16	2.50	1.75	16.00	18.00	21.25	1.12	16	140	98	140	180
18	2.69	1.94	18.00	19.88	22.75	1.25	16	150	130	160	220
20	2.88	2.13	20.00	22.00	25.00	1.25	20	180	165	195	285
24	3.25	2.50	24.00	26.12	29.50	1.38	20	260	220	275	430

SPECIFICATION:

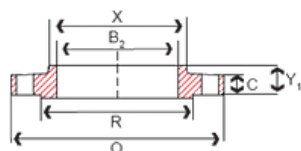
- Forged Stainless Steel Material conforms to ASME A182
- Forged Stainless Steel Flange Dimensions conform to ASME B16.5
- NPT Threads conform to ASME B1.20.1
- Manufacturing Facility is ISO 9001-2000
- Plate Stainless Steel Flange Dimensions conform to ASME B16.5 Class 150
- Plate Stainless Steel Flanges made from ASTM A240 Plate or cast in conformance with ASTM A351
- Independent lab verification that fittings meet applicable chemical & physical properties



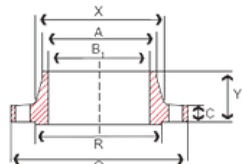
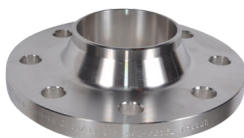
STAINLESS STEEL

FLANGES

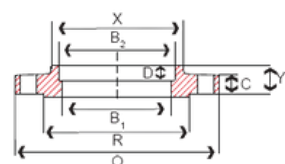
CLASS 300



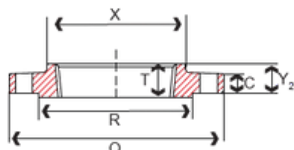
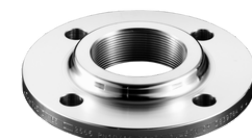
SLIP-ON



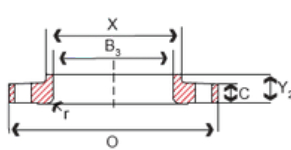
WELD NECK



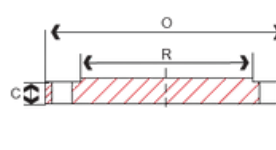
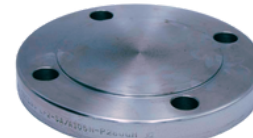
SOCKET WELDING



THREADED



LAP JOINT



BLIND

NOMINAL SIZE	COMMON DIMENSION				BORE			LENGTH THRU HUB		
	OUTSIDE DIAMETER	THICKNESS	RAISED FACED DIAMETER	FILLET RADIUS	WELD NECK SOCKET	SLIP ON	Lap Joint	Welding Neck	SLIP ON SOCKET	Lap Joint
	D	C	R	r	b ₁	b ₂	b ₃	Y ₁	Y ₂	Y ₃
1/2	3.75	0.56	1.38	0.12	To be specified by purchaser.	0.88	0.90	2.06	0.88	0.88
3/4	4.62	0.62	1.69	0.12		1.09	1.11	2.25	1.00	1.00
1	4.88	0.69	2.00	0.12		1.36	1.38	2.44	1.06	1.06
1-1/4	5.25	0.75	2.50	0.19		1.70	1.72	2.56	1.06	1.06
1-1/2	6.12	0.81	2.88	0.25		1.95	1.97	2.69	1.19	1.19
2	6.50	0.88	3.62	0.31		2.44	2.46	2.75	1.31	1.31
2-1/2	7.50	1.00	4.12	0.31		2.94	2.97	3.00	1.50	1.50
3	8.25	1.12	5.00	0.38		3.57	3.60	3.12	1.69	1.69
3-1/2	9.00	1.19	5.50	0.38		4.07	4.10	3.19	1.75	1.75
4	10.00	1.25	6.19	0.44		4.60	4.60	3.38	1.88	1.88
5	11.00	1.38	7.31	0.44		5.66	5.69	3.88	2.00	2.00
6	12.50	1.44	8.50	0.50		6.72	6.75	3.88	2.06	2.06
8	15.00	1.62	10.62	0.50		8.72	8.75	4.38	2.44	2.44
10	17.50	1.88	12.75	0.50		10.88	10.92	4.62	2.62	3.75
12	20.50	2.00	15.00	0.50		12.88	12.92	5.12	2.88	4.00
14	23.00	2.12	16.25	0.50		14.14	14.18	5.62	3.00	4.38
16	25.00	2.25	18.50	0.50		16.16	16.19	5.75	3.25	4.75
18	28.00	2.38	21.00	0.50		18.18	18.20	6.25	3.50	5.12
20	30.50	2.50	23.00	0.50		20.20	20.25	6.38	3.75	5.50
24	36.00	2.75	27.25	0.50		24.25	24.25	6.62	4.19	6.00

NOMINAL PIPE SIZE	MIN THREAD LENGTH	DIA. COUNTER BORE THREAD	DEPTH OF SOCKET	DIA. HUB AT BEVEL	HUB DIAMETER	DRILLING			APPROXIMATE WEIGHT		
						BOLT CIRCLE	DIA. HOLES	NO. OF HOLES	WELD NECK	SLIP ON THREADED & SOCKET WELD	Blind
	T	Q	D	A	X						
1/2	0.62	0.93	0.38	0.84	1.50	2.62	0.62	4	2	2	2
3/4	0.62	1.14	0.44	1.05	1.88	3.52	0.75	4	3	3	3
1	0.69	1.41	0.50	1.32	2.12	3.50	0.75	4	4	3	3
1-1/4	0.81	1.75	0.56	1.66	2.50	3.88	0.75	4	5	4	4
1-1/2	0.88	1.98	0.62	1.90	2.75	4.50	0.88	4	7	6	6
2	1.00	2.50	0.69	2.38	3.31	5.00	0.75	8	9	7	8
2-1/2	1.12	3.00	0.75	2.88	3.94	5.88	0.88	8	12	10	12
3	1.19	3.63	0.81	3.50	4.62	6.62	0.88	8	15	13	16
3-1/2	1.25	4.13	0.88	4.00	5.25	7.25	0.88	8	18	17	21
4	1.31	4.63	0.94	4.50	5.75	7.88	0.88	8	25	22	27
5	1.44	5.69	0.94	5.56	7.00	9.25	0.88	8	32	28	35
6	1.56	6.75	1.06	6.63	8.12	10.62	0.88	12	42	39	50
8	1.75	8.75	1.25	8.63	10.25	13.00	1.00	12	67	58	81
10	1.94	10.88	1.31	10.75	12.62	15.25	1.12	16	91	81	124
12	2.19	12.94	1.56	12.75	14.75	17.75	1.25	16	140	115	185
14	2.25	14.19	1.63	14.00	16.75	20.25	1.25	20	180	165	250
16	2.50	16.19	1.75	16.00	19.00	22.50	1.38	20	250	190	295
18	2.69	18.19	1.94	18.00	21.00	24.75	1.38	20	320	250	395
20	2.88	20.19	2.13	20.00	23.12	27.00	1.38	24	400	315	505
24	3.25	24.19	2.50	24.00	27.62	32.00	1.62	24	580	475	790

SPECIFICATION:

- Forged Stainless Steel Material conforms to ASME A182
- Forged Stainless Steel Flange Dimensions conform to ASME B16.5
- NPT Threads conform to ASME B1.20.1
- Manufacturing Facility is ISO 9001-2000
- Plate Stainless Steel Flange Dimensions conform to ASME B16.5 Class 150
- Plate Stainless Steel Flanges made from ASTM A240 Plate or cast in conformance with ASTM A351
- Independent lab verification that fittings meet applicable chemical & physical properties

STAINLESS STEEL FITTINGS

BUTTWELDING (ASTM A403M & ASME B16.9)

WELDED



90° ELBOW



45° ELBOW



STUB END TYPE



EQUAL TEE



END CAP

Product range and theoretical weights (kg)

DN	Schedule 10S					Schedule 40S				
	90° Elbow	45° Elbow	Equal tee	Stub end type B	End cap	90° Elbow	45° Elbow	Equal tee	Stub end type B	End cap
15	0.06	0.03	0.09	0.07	0.03	0.08	0.04	0.10	0.08	0.04
20	0.07	0.03	0.13	0.09	0.05	0.08	0.04	0.17	0.11	0.07
25	0.14	0.08	0.28	0.16	0.08	0.15	0.11	0.29	0.17	0.10
32	0.23	0.11	0.49	0.22	0.10	0.26	0.17	0.59	0.25	0.18
40	0.30	0.17	0.68	0.25	0.11	0.40	0.23	0.86	0.31	0.20
50	0.50	0.25	0.85	0.43	0.13	0.70	0.40	1.28	0.61	0.23
65	0.85	0.48	1.41	0.57	0.19	1.40	0.77	2.19	0.80	0.27
80	1.25	0.63	1.77	0.72	0.25	2.20	1.08	3.31	1.13	0.42
100	2.10	1.08	3.46	1.09	0.68	4.47	1.47	5.27	1.87	1.14
125	3.65	1.82	5.44	1.47	1.11	6.80	2.84	9.63	2.79	2.13
150	5.45	2.72	8.03	2.15	1.42	10.89	5.44	10.99	3.57	3.23
200	10.20	5.33	15.65	3.22	2.38	21.54	10.77	20.91	6.07	5.19
250	18.15	9.75	26.76	5.13	4.45	38.56	19.27	35.38	10.07	9.00
300	25.80	13.62	39.46	8.16	7.50	59.42	29.71	62.14	14.29	15.00
350	36.29	18.37	48.53	10.88	8.17	79.38	35.15	79.31	17.14	16.00
400	47.63	23.81	58.97	12.70	10.67	99.79	45.81	99.79	20.41	21.00
450	59.87	29.94	79.65	17.23	13.00	129.73	59.40	129.73	27.21	26.00
500	99.80	49.90	103.42	21.77	17.00	162.38	74.84	162.39	29.94	34.00
600	140.61	70.31	155.58	27.21	26.00	225.89	105.23	225.90	38.55	52.00

STAINLESS STEEL

FITTINGS

BUTTWELDING (ASTM A403M & ASME B16.9)

WELDED

Product range and theoretical weights (kg)

DN	Schedule 10S			Schedule 40S		
	Con reducer	Ecc reducer	Reducing tee	Con reducer	Ecc reducer	Reducing tee
20x15	0.10	0.10	0.11	0.14	0.14	0.15
25x15	0.12	0.12	0.25	0.15	0.15	0.26
25x20	0.13	0.13	0.25	0.16	0.16	0.27
32x20	0.18	0.18	0.44	0.22	0.22	0.52
32x25	0.18	0.18	0.45	0.22	0.22	0.53
40x20	0.18	0.18	0.58	0.24	0.24	0.74
40x25	0.19	0.19	0.60	0.26	0.26	0.76
40x32	0.21	0.24	0.61	0.28	0.28	0.77
50x25	0.28	0.28	0.73	0.40	0.40	1.10
50x32	0.30	0.30	0.74	0.44	0.44	1.13
50x40	0.31	0.31	0.76	0.45	0.45	1.15
65x40	0.44	0.44	1.24	0.76	0.76	1.94
65x50	0.47	0.47	1.25	0.80	0.80	1.98
80x40	0.51	0.51	1.52	0.94	0.94	2.85
80x50	0.55	0.55	1.56	1.00	1.00	2.91
80x65	0.59	0.59	1.59	1.08	1.08	2.98
100x40	0.68	0.68	2.90	1.36	1.36	4.53
100x50	0.78	0.78	2.94	1.57	1.57	4.48
100x65	0.83	0.83	2.97	1.66	1.66	4.54
100x80	0.87	0.87	3.04	1.74	1.74	4.64
125x100	1.49	1.49	5.49	2.98	2.98	8.47
150x80	1.82	1.82	6.86	3.98	3.98	11.94
150x100	1.96	1.96	7.10	4.07	4.07	9.68
150x125	2.00	2.00	7.27	4.07	4.07	9.99
200x100	3.01	3.01	13.46	6.55	6.55	17.98
200x150	3.19	3.19	14.08	6.94	6.94	18.82
250x100	4.73	4.73	22.75	10.52	10.52	30.07
250x150	5.00	5.00	23.55	11.12	11.12	31.13
250x200	5.20	5.20	24.08	11.56	11.56	31.84
300x200	7.67	7.67	34.73	15.98	15.98	54.43
300x250	7.98	7.98	35.52	16.63	16.63	55.79
350x300	15.29	15.29	43.96	30.58	30.58	71.21
400x200	16.70	16.70	49.90	33.40	33.40	84.82
400x250	17.22	17.22	50.80	35.43	35.43	85.73
400x300	18.35	18.35	51.71	36.70	36.70	87.54



CON. REDUCER



ECC. REDUCER



REDUCING TEE

STAINLESS STEEL

FITTINGS

BUTTWELDING (ASTM A403M & ASME B16.9)

SEAMLESS



Product range and theoretical weights (kg)									
DN	Schedule 10S			Schedule 40S			Schedule 80S		
	90° Elbow	45° Elbow	Equal tee	90° Elbow	45° Elbow	Equal tee	90° Elbow	45° Elbow	Equal tee
8	0.02	0.01	0.03	0.03	0.02	0.06	0.04	0.03	0.07
10	0.03	0.02	0.05	0.03	0.02	0.03	0.06	0.04	0.09
15	0.06	0.03	0.09	0.08	0.04	0.10	0.10	0.05	0.14
20	0.07	0.03	0.13	0.08	0.04	0.17	0.11	0.05	0.20
25	0.14	0.08	0.28	0.15	0.11	0.29	0.22	0.14	0.38
32	0.23	0.11	0.49	0.26	0.17	0.59	0.40	0.23	0.68
40	0.30	0.17	0.68	0.40	0.23	0.86	0.51	0.29	1.02
50	0.50	0.25	0.85	0.70	0.4	1.28	0.91	0.59	1.59
65	0.85	0.48	1.41	1.40	0.77	2.19	1.81	0.99	3.13
80	1.25	0.63	1.77	2.20	1.08	3.31	2.97	1.50	4.45
90	1.70	0.75	2.67	2.83	1.42	4.08	4.00	2.00	5.44
100	2.10	1.08	3.46	4.47	2.09	5.27	6.18	2.81	7.71
150	5.45	2.72	8.07	10.89	5.44	10.99	16.32	8.16	13.61
200	10.20	5.33	15.65	21.54	10.77	20.91	33.11	16.56	28.12
250	18.15	9.75	26.46	38.56	19.27	35.38	51.71	25.86	49.90
300	25.80	13.62	39.46	59.42	29.71	62.14	79.38	39.69	83.91

Product range and theoretical weights (kg)									
DN	Schedule 10S			Schedule 40S			Schedule 80S		
	Con reducer	Ecc reducer	Reducing tee	Con reducer	Ecc reducer	Reducing tee	Con reducer	Ecc reducer	Reducing tee
40x.25	0.19	0.19	0.60	0.26	0.26	0.76	0.34	0.34	0.90
50x25	0.28	0.28	0.73	0.40	0.40	1.10	0.54	0.54	1.37
50x40	0.31	0.31	0.76	0.45	0.45	1.15	0.59	0.59	1.43
80x.50	0.55	0.55	1.56	1.00	1.00	2.91	1.79	1.79	3.91
100x50	0.78	0.78	2.94	1.50	1.50	4.48	1.95	1.95	6.55
100x80	0.87	0.87	3.04	1.74	1.74	4.64	2.33	2.33	6.79
150x80	1.82	1.82	6.86	3.95	3.95	9.68	5.51	5.51	11.57
150x100	1.96	1.96	7.10	4.07	4.07	11.94	5.96	5.96	11.97
200x100	3.01	3.01	13.46	6.55	6.55	17.98	9.23	9.23	24.18
200x150	3.19	3.19	14.08	6.74	6.74	18.82	10.12	10.12	25.31