



PIPES AND FITTINGS SUPPLY CATALOGUE

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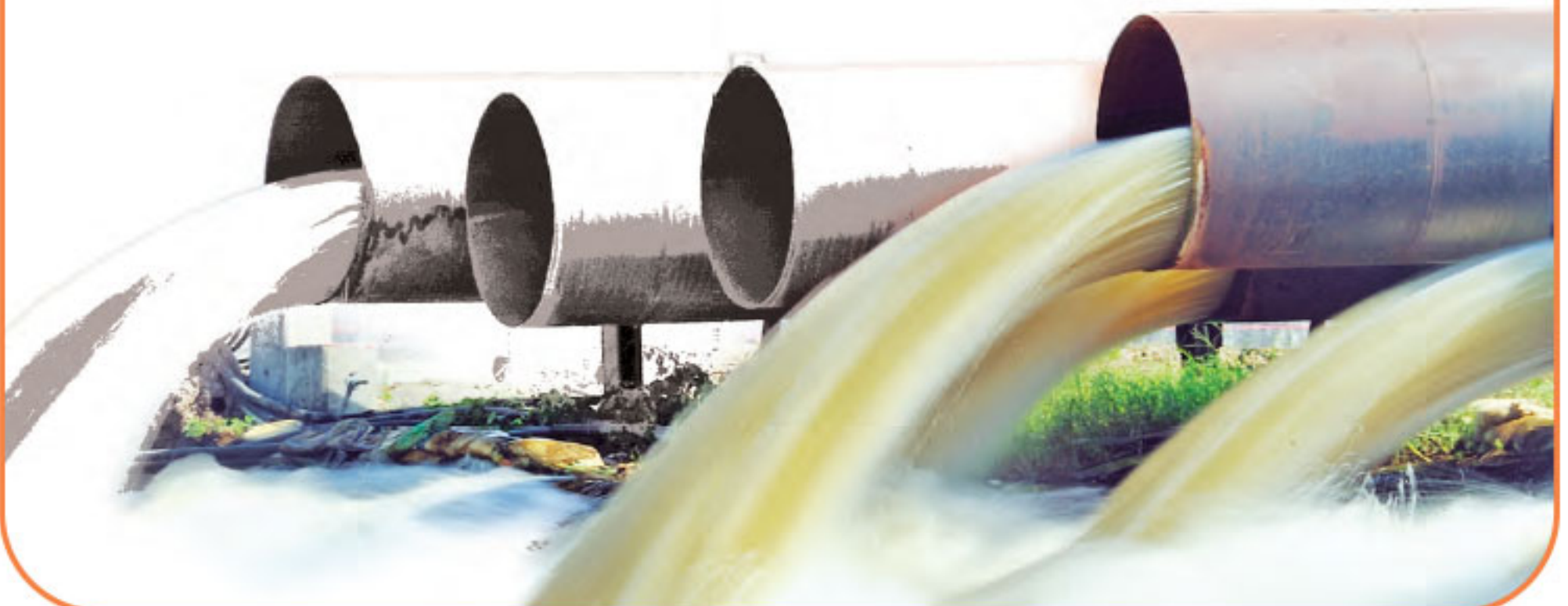
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RARE is a distributor and service provider of piping and related products covering the entire fluid conveyance cycle, across all fluid sectors. The company has evolved through management buyout and acquisitions from a specialist pipe supplier in 1975 through to the listed entity, RARE Holdings in 2007 and ultimately the current B-BBEE-accredited and transformed RARE Group.

The company is JSE AltX-listed with an ISO 9001:2008 accreditation.

The geographical footprint includes a head office in Kliprivier and RARE Plastics, a HDPE Pipe Manufacturing facility in Meyerton Gauteng. Furthermore RARE is represented in Zambia and Ghana. The company carries an extensive stock range for the petrochemical, mining and water market sectors at its eleven hectare premises in Kliprivier.



SEAMLESS PIPE

ASME / ANSI B36.10 SEAMLESS AND API 5L WELDED



Nominal Bore in	Nominal bore mm	Outside diameter mm	Wall thickness mm	Internal diameter mm	Mass (approx.) kg/m	Wall Designation	Schedule
1/8	6	10,3	1,727	6,846	0,36	(STD)	40
			2,413	5,474	0,46	(XS)	80
1/4	8	13,7	2,235	9,230	0,63	(STD)	40
			3,023	7,654	0,80	(XS)	80
3/8	10	17,1	2,311	12,478	0,85	(STD)	40
			3,200	10,700	1,10	(XS)	80
1/2	15	21,3	2,769	15,762	1,27	(STD)	40
			3,374	13,832	1,62	(XS)	80
			4,775	11,750	1,94		160
			7,468	6,364	2,56	(XXS)	-
3/4	20	26,7	2,870	20,960	1,68	(STD)	40
			3,912	18,876	2,19	(XS)	80
			5,563	15,574	2,89		160
			7,823	11,054	3,64	(XXS)	-
1	25	33,4	3,378	26,644	2,50	(STD)	40
			4,547	24,306	3,23	(XS)	80
			6,350	20,700	4,23		160
			9,093	15,214	5,45	(XXS)	-
1 1/4	32	42,2	3,556	35,088	3,38	(STD)	40
			4,851	32,498	4,46	(XS)	80
			6,350	29,500	5,61		160
			9,703	22,794	7,74	(XXS)	-
1 1/2	40	48,3	3,683	40,934	4,05	(STD)	40
			5,08	38,14	5,40	(XS)	80
			7,14	34,02	7,22		160
			10,16	27,98	9,55	(XXS)	-
2	50	60,3	3,91	52,48	5,43	(STD)	40
			5,54	49,22	5,43	(XS)	80
			8,74	42,82	11,09		160
			11,07	38,16	13,45	(XXS)	-
2 1/2	65	73,0	5,16	62,68	8,62	(STD)	40
			7,01	58,98	11,40	(XS)	80
			9,53	53,94	14,90		160
			14,02	44,96	20,38	(XXS)	-
3	80	88,9	5,49	77,92	11,29	(STD)	40
			7,62	73,66	15,25	(XS)	80
			11,13	6,64	21,33		160
			15,24	58,42	27,66	(XXS)	-
3 1/2	90	101,6	5,74	90,12	13,57	(STD)	40
			8,08	85,44	18,62	(XS)	80
4	100	114,3	6,02	102,26	16,07	(STD)	40
			8,56	97,18	22,31	(XS)	80
			11,13	92,04	28,25		120
			13,49	87,32	33,49		160
			17,12	80,06	40,98	(XXS)	-
5	125	141,3	6,55	128,20	21,78	(STD)	40
			9,53	122,24	30,92	(XS)	80
			12,70	115,90	40,24		120
			15,88	109,54	49,05		160
			19,05	103,20	57,38	(XXS)	-

Note: Dimensions according to ANSI B36.10

SEAMLESS PIPE

ASME / ANSI B36.10 SEAMLESS AND API 5L WELDED



Nominal bore in	Nominal bore mm	Outside diameter mm	Wall thickness mm	Internal diameter mm	Mass (approx.) kg/m	Wall Designation	Schedule
6	150	168,3	7,11	154,08	28,26	(STD)	40
			10,97	146,36	42,56	(XS)	80
			14,27	139,76	54,17		120
			18,26	131,78	67,49		160
			21,95	124,40	79,10	(XXS)	-
8	200	219,1	6,35	206,40	33,31		20
			7,04	205,02	36,79		30
			8,18	202,74	42,53	(STD)	40
			10,31	198,48	53,10		60
			12,70	193,70	64,63	(XS)	80
			15,09	188,92	75,82		100
			18,26	182,58	90,36		120
			20,62	177,86	100,86		140
			22,23	174,64	107,78	(XXS)	-
			23,01	173,08	111,16		160
10	250	273,0	6,35	260,30	41,77		20
			7,80	257,40	51,00		30
			9,27	254,46	60,29	(STD)	40
			12,70	247,60	81,54	XS	60
			15,09	242,82	95,90		80
			18,26	236,48	114,64		100
			21,44	230,12	132,88		120
			25,40	222,20	154,96	(XXS)	140
			28,58	215,84	172,09		160
12	300	323,8	6,35	311,10	49,72		20
			8,38	307,04	65,20		30
			9,52	304,76	73,82	STD	-
			10,31	303,18	79,72		40
			12,70	298,40	97,44	XS	-
			14,27	295,26	108,86		60
			17,48	288,84	131,89		80
			21,44	280,92	159,72		100
			25,40	273,00	186,75	XXS	120
			28,58	266,64	207,85		140
14	350	355,6	6,35	342,90	54,68		10
			7,92	339,76	67,94		20
			9,52	336,56	81,28	STD	30
			11,13	333,34	94,40		40
			12,70	330,20	107,38	XS	-
			15,09	325,42	126,58		60
			19,05	317,50	157,95		80
			23,82	307,96	194,82		100
			27,79	300,02	224,42		120
			31,75	292,10	253,14		140
35,71	284,18	281,38		160			

Note: Dimensions according to ANSI B36.10

SEAMLESS PIPE

ASME / ANSI B36.10 SEAMLESS AND API 5L WELDED



Nominal bore in	Nominal bore mm	Outside diameter mm	Wall thickness mm	Internal diameter mm	Mass (approx.) kg/m	Wall Designation	Schedule
16	400	406,4	6,35	392,70	62,63	STD XS	10
			7,92	390,56	77,86		20
			9,52	387,36	93,21		30
			12,70	381,00	123,29		40
			16,66	373,08	160,05		60
			21,44	363,52	203,32		80
			26,19	354,02	245,32		100
			30,96	344,48	286,44		120
			36,52	333,36	332,62		140
			40,49	325,42	364,85		160
			18	450	457,2		6,35
7,92	441,36	87,79				20	
9,52	438,16	105,14				-	
11,13	434,94	122,36				30	
12,70	431,80	139,19				-	
14,27	428,66	155,91				40	
19,05	419,10	205,62				60	
23,83	409,54	254,38				80	
29,36	398,48	309,44				100	
34,92	387,36	363,19				120	
39,69	377,82	408,01				140	
45,24	366,72	459,18	160				
20	500	508,0	6,35	495,30	78,54	STD XS	10
			9,52	488,96	117,07		20
			12,70	482,60	155,10		30
			15,09	477,82	183,15		40
			20,63	466,74	247,78		60
			26,19	455,62	310,82		80
			32,54	442,92	381,04		100
			38,10	431,80	440,93		120
			44,45	419,10	507,54		140
			50,01	407,98	564,14		160
22	550	558,8	6,35	546,10	86,50	STD XS	10
			9,52	539,76	129,01		20
			12,70	533,40	171,01		30
			22,23	514,34	293,81		60
			28,58	501,64	373,26		80
24	600	609,6	6,35	596,90	94,45	STD XS	10
			9,52	590,56	140,94		20
			12,70	584,20	186,92		-
			14,27	581,06	209,54		30
			17,48	574,64	254,93		40
			24,61	560,38	354,74		60
			30,96	547,68	441,90		80
			38,89	531,82	546,92		100
			46,02	517,56	639,18		120
			52,39	504,82	718,94		140
			59,34	490,52	806,61		160

Note: Dimensions according to ANSI B36.10

Nominal Diameter mm	Outside Diameter mm	DIN	Approx. Mass in kg/m				
			4,5	6,0	8,0	10	12
200	219,1	ERW	23.81	31.53	41.63	51.55	61.62
250	273,1	ERW	29.80	39.51	52.29	64.87	81.54
300	323,9	ERW	35.48	47.06	62.35	77.45	97.51
350	355,6	ERW	39.01	51.80	68.67	85.34	107.54
400	406,4	ERW	44.56	59.20	78.53	97.67	123.20
*	457	ERW	50.22	66.74	88.60	110.25	139.17
500	508	ERW	55.88	74.29	98.66	122.83	155.15
600	610	SPIRAL	67.21	89.39	118.79	147.99	186.00
700	711	SPIRAL	78.42	104.33	138.72	172.90	219.00
*	762	SPIRAL		111.80	148.78	185.48	235.00
800	813	SPIRAL		119.43	158.84	198.06	250.00
900	914	SPIRAL		134.37	178.77	222.97	282.00
1000	1016	SPIRAL		149.47	198.90	248.13	315.00

Pipe can be supplied, flanged P.E. with various corrosion protection systems.

Pipe Weights tabulated are 5% greater than the theoretical weight.

Standard pipe lengths are 6,1 mts, 9,144 mts & 12.192 mts.

Lengths 6 & 9 mt

Medium			
NB	OD Min / mm	Mass Uncpe Kg/m	Wall Min / mm
15	21.1	1.085	2.30
20	26.6	1.401	2.30
25	33.4	2.164	2.80
32	42.1	2.767	2.80
40	48.0	3.151	2.80
50	59.8	4.509	3.20
65	75.4	5.762	3.20
80	88.1	7.372	3.50
100	113.3	10.62	3.90
125	136.7	14.037	4.20
150	164.1	16.668	4.20

Heavy			
NB	OD Min / mm	Mass Uncpe Kg/m	Wall Min / mm
15	21.1	1.287	2.80
20	26.6	1.671	2.80
25	33.4	2.644	3.50
32	42.1	3.398	3.50
40	48.0	3.878	3.50
50	59.8	5.428	3.90
65	75.4	6.955	3.90
80	88.1	8.774	4.20
100	113.3	12.075	4.70
125	138.7	15.65	4.70
150	164.1	18.594	4.70

Note:

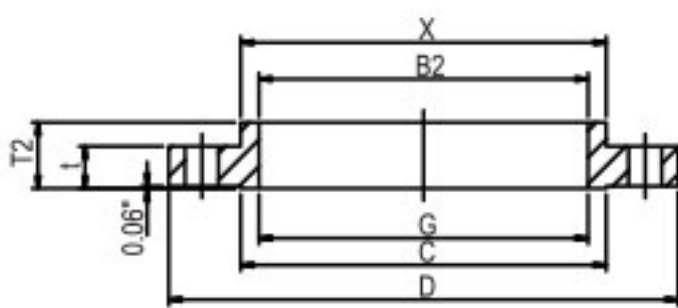
Corrosion protection, galvanising, painting or rubbering to customer's requirements.

FLANGES

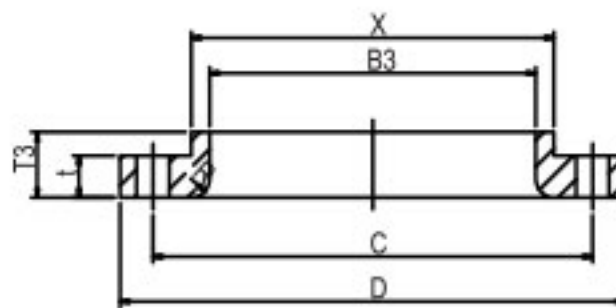
ANSI FLANGE - (B 16.5)



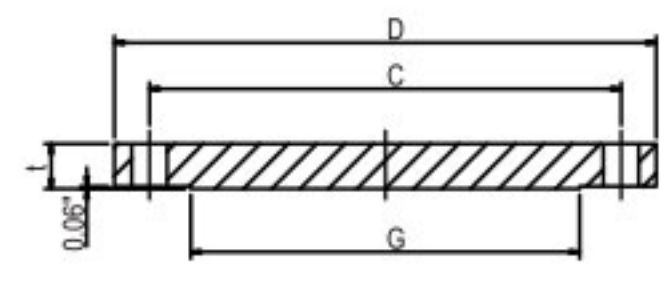
CLASS 150



SLIP-ON (6) (10)



LAP JOINT (10)



BLIND (10)

Nominal Pipe Size	Outside Diam.	(6) (17) Thick-ness	O.D. of Raised Face	Diam. at Base of Hub	BORE			LENGTH THRU HUB			(5) Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					(2)(3)(4) Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	(6) Welding Neck	(6) Slip-on Threaded Socket Welding	Lap Joint			
	D	t	G	X	B1	B2	B3	T1	T2	T3	A	R	T2
½	3,50	0,44	1,38	1,19	0,62	0,88	0,90	1,88	0,62	0,62	0,84	0,12	0,62
¾	3,88	0,50	1,69	1,50	0,82	1,09	1,11	2,06	0,62	0,62	1,05	0,12	0,62
1	4,25	0,56	2,00	1,94	1,05	1,36	1,38	2,19	0,69	0,69	1,32	0,12	0,69
1¼	4,62	0,62	2,50	2,30	1,38	1,70	1,72	2,25	0,81	0,81	1,66	0,19	0,81
1½	5,00	0,69	2,88	2,56	1,61	1,95	1,97	2,44	0,88	0,88	1,90	0,25	0,88
2	6,00	0,75	3,62	3,06	2,07	2,44	2,46	2,50	1,00	1,00	2,38	0,31	1,00
2½	7,00	0,88	4,12	3,56	2,47	2,94	2,97	2,75	1,12	1,12	2,88	0,31	1,12
3	7,50	0,94	5,00	4,25	3,07	3,57	3,60	2,75	1,19	1,19	3,50	0,38	1,19
3½	8,50	0,94	5,50	4,81	3,55	4,07	4,10	2,81	1,25	1,25	4,00	0,38	1,25
4	9,00	0,94	6,19	5,31	4,03	4,57	4,60	3,00	1,31	1,31	4,50	0,44	1,31
5	10,00	0,94	7,31	6,44	5,05	5,66	5,69	3,50	1,44	1,44	5,56	0,44	1,44
6	11,00	1,00	8,50	7,56	6,07	6,72	6,75	3,50	1,56	1,56	6,63	0,50	1,56
8	13,50	1,12	10,62	9,69	7,98	8,72	8,75	4,00	1,75	1,75	8,63	0,50	1,75
10	16,00	1,19	12,75	12,00	10,02	10,88	10,92	4,00	1,94	1,94	10,75	0,50	1,94
12	19,00	1,25	15,00	14,38	12,00	12,88	12,92	4,50	2,19	2,19	12,75	0,50	2,19
14	21,00	1,38	16,25	15,75	13,25	14,14	14,18	5,00	2,25	3,12	14,00	0,50	2,25
16	23,50	1,44	18,50	18,00	15,25	16,16	16,19	5,00	2,50	3,44	16,00	0,50	2,50
18	25,00	1,56	21,00	19,88	17,25	18,18	18,20	5,00	2,69	3,81	18,00	0,50	2,69
20	27,50	1,69	23,00	22,00	19,25	20,20	20,25	5,69	2,88	4,06	20,00	0,50	2,88
24	32,00	1,88	27,25	26,12	23,25	24,25	24,25	6,00	3,25	4,38	24,00	0,50	3,25

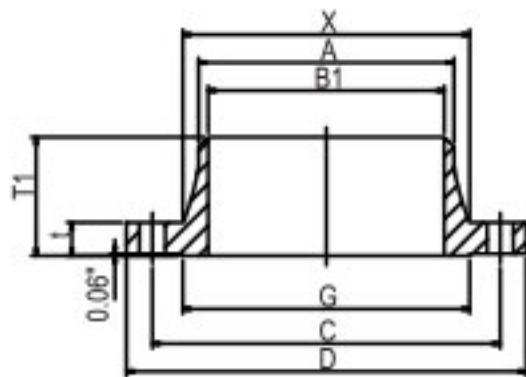
Dimensions stated in Inches (1" = 25,4 mm)

FLANGES

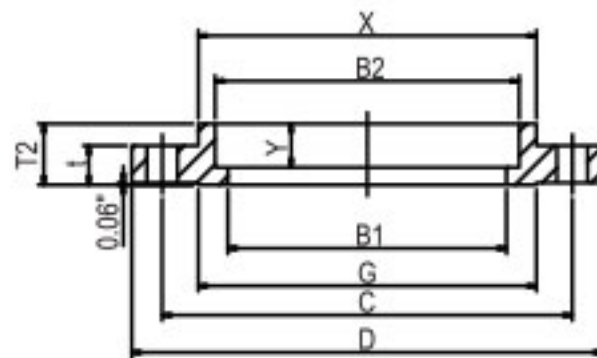
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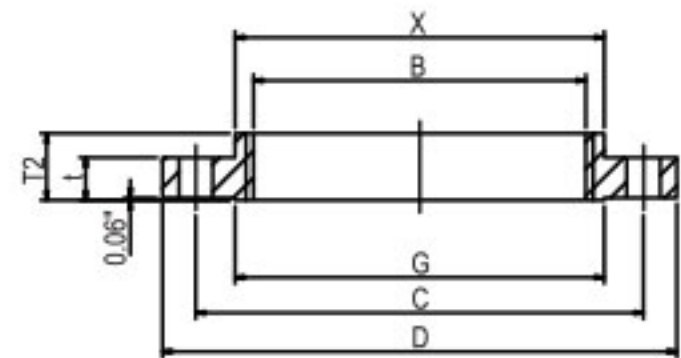
CLASS 150



WELDING NECK (6) (11)



SOCKET WELDING (6) (10) (18)



THREADED (6) (10) (16)

Nominal Pipe Size	(18) Depth of Socket Y	DRILLING			BOLTING				APPROXIMATE WEIGHT EACH - POUNDS				
		Bolt Circle Diam. PCD C	Number of Holes	Diam. of Holes	Diam. of Bolts	Machine Bolt Length Raised Face	Stud Bolt Length		Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
							Raised Face	Ring Joint					
½	0,38	2,38	4	0,62	½	2,00	2,50	-	2	1	1	1	1
¾	0,44	2,75	4	0,62	¾	2,25	2,50	-	2	2	2	2	2
1	0,50	3,12	4	0,62	½	2,25	2,75	3,25	3	2	2	2	2
1½	0,56	3,50	4	0,62	½	2,50	2,75	3,25	3	3	3	3	3
1½	0,62	3,88	4	0,62	½	2,50	3,00	3,50	4	3	3	4	3
2	0,69	4,75	4	0,75	s	2,75	3,25	3,75	6	5	5	5	5
2½	0,75	5,50	4	0,75	s	3,00	3,50	4,00	8	7	7	7	7
3	0,81	6,00	4	0,75	s	3,25	3,75	4,25	10	8	8	9	8
3½	0,88	7,00	8	0,75	s	3,25	3,75	4,25	12	11	11	13	11
4	0,94	7,50	8	0,75	s	3,25	3,75	4,25	15	13	13	17	13
5	0,94	8,50	8	0,88	¾	3,25	4,00	4,50	19	15	15	20	15
6	1,06	9,50	8	0,88	¾	3,50	4,00	4,50	24	19	19	26	19
8	1,25	11,75	8	0,88	¾	3,75	4,25	4,75	39	30	30	45	30
10	1,31	14,25	12	1,00	d	4,00	4,75	5,25	52	43	43	70	43
12	1,56	17,00	12	1,00	d	4,25	4,75	5,25	80	64	64	110	64
14	1,63	18,75	12	1,12	1,00	4,50	5,25	5,75	110	90	105	140	90
16	1,75	21,25	16	1,12	1,00	4,75	5,50	6,00	140	98	140	180	98
18	1,94	22,75	16	1,25	18	5,00	6,00	6,50	150	130	160	220	130
20	2,13	25,00	20	1,25	18	5,50	6,25	6,75	180	165	195	285	165
24	2,50	29,50	20	1,38	14	6,00	7,00	7,50	260	220	275	430	220

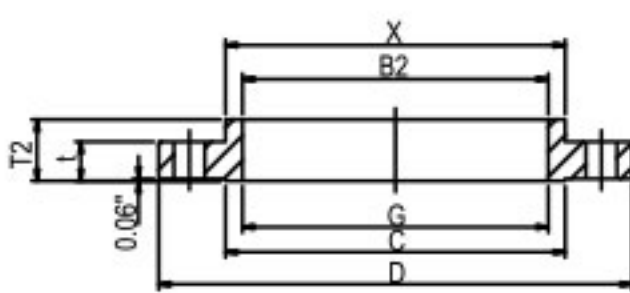
Dimensions stated in Inches (1" = 25,4 mm)

FLANGES

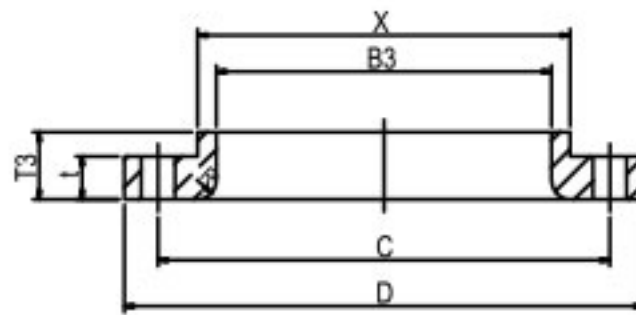
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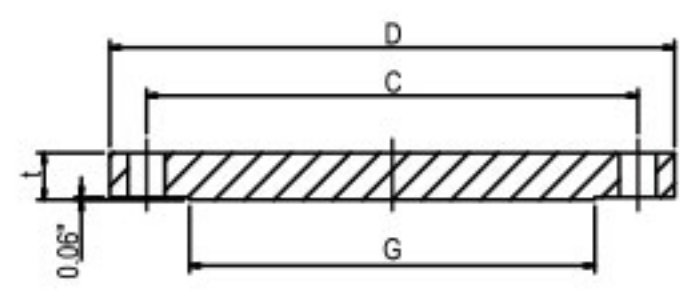
CLASS 300



SLIP-ON (6) (10)



LAP JOINT (10)



BLIND (10)

Nominal Pipe Size	Outside Diam.	(6) (17) Thick-ness	O.D. of Raised Face	Diam. at Base of Hub	BORE				LENGTH THRU HUB			(5) Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					(2)(3)(4) Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Count-er Bore Min.	(6) Welding Neck	(6) Slip-on Threaded Socket Welding	Lap Joint			
	D	t	G	X	B1	B2	B3	B	T1	T2	T3	A	R	Q
½	3,75	0,56	1,38	1,50	0,62	0,88	0,90	0,93	2,06	0,88	0,88	0,84	0,12	0,62
¾	4,62	0,62	1,69	1,88	0,82	1,09	1,11	1,14	2,25	1,00	1,00	1,05	0,12	0,62
1	4,88	0,69	2,00	2,12	1,05	1,36	1,38	1,41	2,44	1,06	1,06	1,32	0,12	0,69
1¼	5,25	0,75	2,50	2,50	1,38	1,70	1,72	1,75	2,56	1,06	1,06	1,66	0,19	0,81
1½	6,12	0,81	2,88	2,75	1,61	1,95	1,97	1,99	2,69	1,19	1,19	1,90	0,25	0,88
2	6,50	0,88	3,62	3,31	2,07	2,44	2,46	2,50	2,75	1,31	1,31	2,38	0,31	1,12
2½	7,50	1,00	4,12	3,94	2,47	2,94	2,97	3,00	3,00	1,50	1,50	2,88	0,31	1,25
3	8,25	1,12	5,00	4,62	3,07	3,57	3,60	3,63	3,12	1,69	1,69	3,50	0,38	1,25
3½	9,00	1,19	5,50	5,25	3,55	4,07	4,10	4,13	3,19	1,75	1,75	4,00	0,38	1,44
4	10,00	1,25	6,19	5,75	4,03	4,57	4,60	4,63	3,38	1,88	1,88	4,50	0,44	1,44
5	11,00	1,38	7,31	7,00	5,05	5,66	5,69	5,69	3,88	2,00	2,00	5,56	0,44	1,69
6	12,50	1,44	8,50	8,12	6,07	6,72	6,75	6,75	3,38	2,06	2,06	6,63	0,50	1,81
8	15,00	1,62	10,62	10,25	7,98	8,72	8,75	8,75	4,38	2,44	2,44	8,63	0,50	2,00
10	17,50	1,88	12,75	12,62	10,02	10,88	10,92	10,88	4,62	2,62	3,75	10,75	0,50	2,19
12	20,50	2,00	15,00	14,75	12,00	12,88	12,92	12,94	5,12	2,88	4,00	12,75	0,50	2,38
14	23,00	2,12	16,25	16,75	13,25	14,14	14,18	14,19	5,62	3,00	4,38	14,00	0,50	2,50
16	25,50	2,25	18,50	19,00	15,25	16,16	16,19	16,19	5,75	3,25	4,75	16,00	0,50	2,69
18	28,00	2,38	21,00	21,00	17,25	18,18	18,20	18,19	6,25	3,50	5,12	18,00	0,50	2,75
20	30,50	2,50	23,00	23,12	19,25	20,20	20,25	20,19	6,38	3,75	5,50	20,00	0,50	2,88
24	36,00	2,75	27,25	27,62	23,25	24,25	24,25	24,19	6,62	4,19	6,00	24,00	0,50	3,25

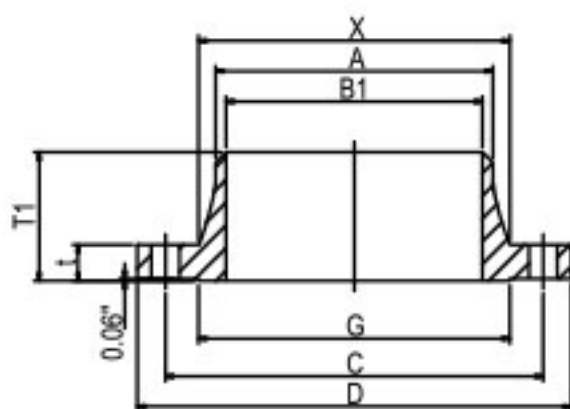
Dimensions stated in Inches (1" = 25,4 mm)

FLANGES

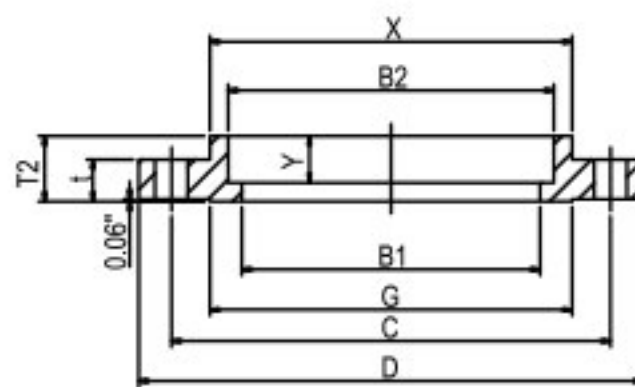
ANSI FLANGES - (B16.5)



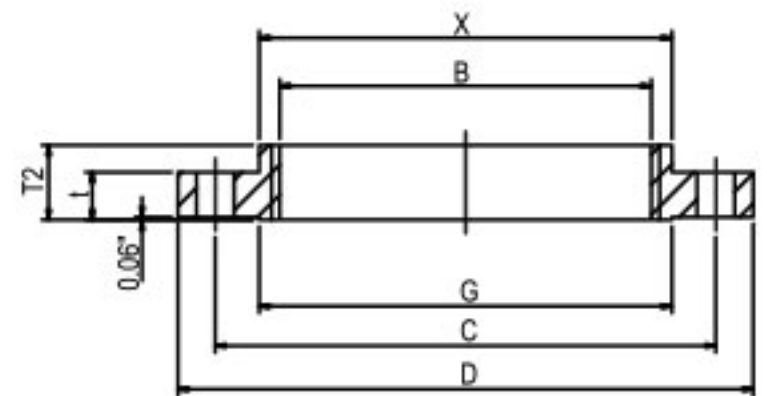
CLASS 300



WELDING NECK (6) (11)



SOCKET WELDING (6) (10) (18)



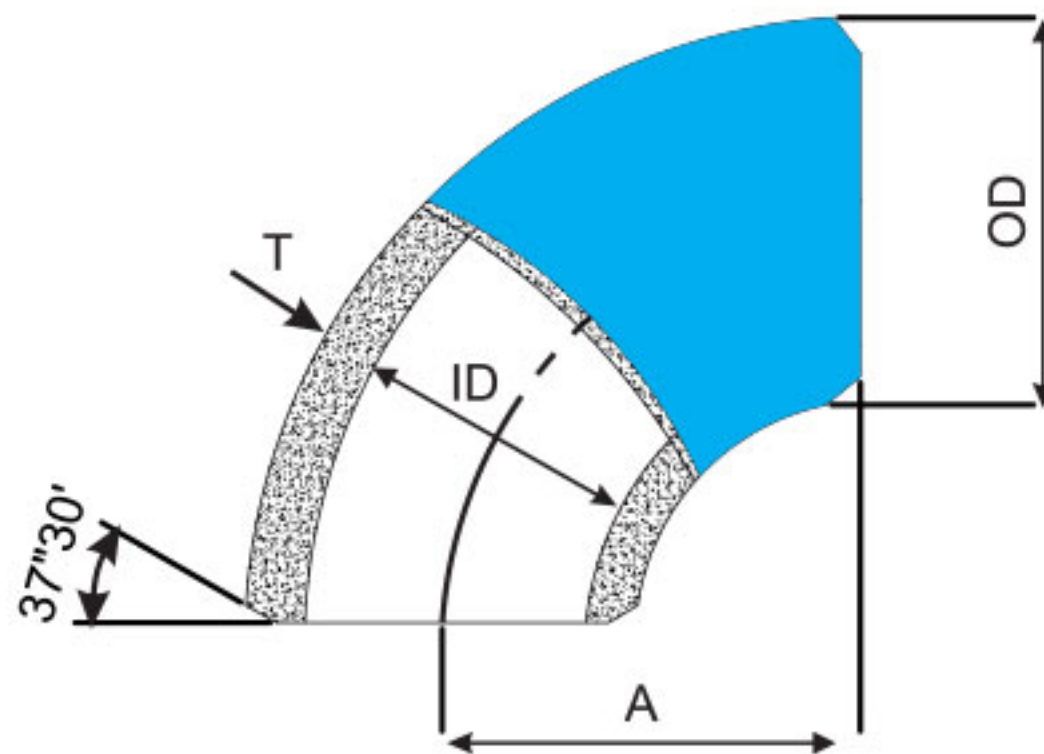
THREADED (6) (10) (16)

Nominal Pipe Size	(18) Depth of Socket	DRILLING			BOLTING				APPROXIMATE WEIGHT EACH - POUNDS				
		Bolt Circle Diam. PCD	Number of Holes	Diam. of Holes	Diam. of Bolts	Machine Bolt Length Raised Face	Stud Bolt Length		Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
							Raised Face	Ring Joint					
		Y	C										
½	0,38	2,62	4	0,62	½	2,25	2,75	3,00	2	2	2	2	2
¾	0,44	3,25	4	0,75	s	2,50	3,00	3,50	3	3	3	3	3
1	0,5	3,50	4	0,75	s	2,75	3,25	3,75	4	3	3	3	3
1¼	0,56	3,88	4	0,75	s	2,75	3,25	3,75	5	4	4	4	4
1½	0,62	4,50	4	0,88	¾	3,00	3,75	4,25	7	6	6	6	6
2	0,69	5,00	8	0,75	s	3,00	3,50	4,25	9	7	7	8	7
2½	0,75	5,88	8	0,88	¾	3,50	4,00	4,75	12	10	10	12	10
3	0,81	6,62	8	0,88	¾	3,75	4,25	5,00	15	13	13	16	13
3½	0,88	7,25	8	0,88	¾	3,75	4,50	5,25	18	17	17	21	
4	0,94	7,88	8	0,88	¾	4,00	4,50	5,25	25	22	22	27	
5	0,94	9,25	8	0,88	¾	4,25	4,75	5,50	32	28	28	35	
6	1,06	10,62	12	0,88	¾	4,25	5,00	5,75	42	39	39	50	
8	1,25	13,00	12	1,00	d	4,75	5,50	6,25	67	58	58	81	
10	1,31	15,25	16	1,12	1	5,50	6,25	7,00	91	81	91	125	
12	1,56	17,25	16	1,25	1½	6,00	6,75	7,50	140	115	140	185	
14	1,63	20,25	20	1,25	1½	6,25	7,00	7,75	180	165	190	250	
16	1,75	22,50	20	1,38	1¾	6,50	7,50	8,25	250	190	250	295	
18	1,94	24,75	24	1,38	1¾	6,75	7,75	8,50	320	250	295	395	
20	2,13	27,00	24	1,38	1¾	7,25	8,25	9,00	400	315	370	505	
24	2,50	32,00	24	1,62	1¾	8,00	9,25	10,25	580	475	550	790	

Dimensions stated in Inches (1" = 25,4 mm)

BUTTWELD FITTINGS

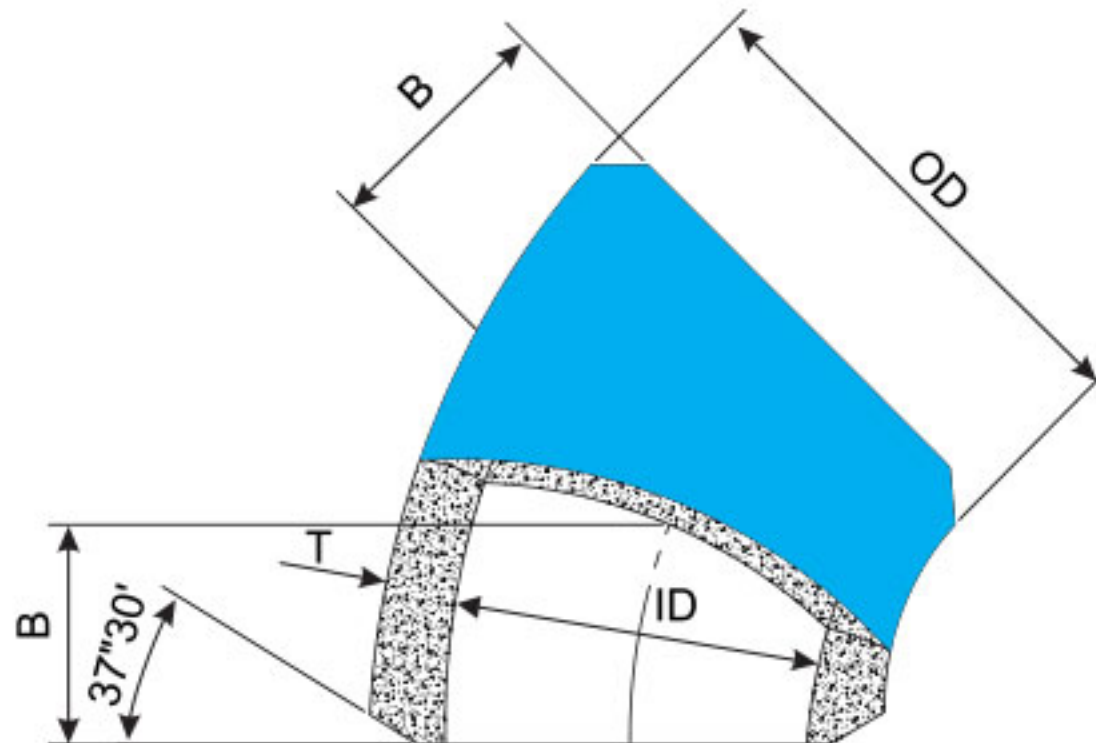
90° ELBOWS LONG RADIUS TO ANSI B16.9



Nominal Pipe size mm	Outside Diameter OD mm	Centre to end A mm	Standard			Schedule 80		
			Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg	Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg
15	21,3	38,1	15,80	2,77	0,1	13,87	3,73	0,1
20	26,7	28,6	20,93	2,87	0,1	18,85	3,91	0,1
25	33,4	38,1	26,64	3,38	0,2	24,31	4,55	0,2
32	42,2	47,6	35,05	3,56	0,3	32,46	4,85	0,3
40	48,3	57,2	40,89	3,68	0,4	38,10	5,08	0,5
50	60,3	76,2	52,50	3,91	0,7	49,25	5,54	0,9
65	73,0	95,3	62,71	5,16	1,3	59,00	7,01	1,7
80	88,9	114,3	77,93	5,49	2,0	73,66	7,62	2,7
90	101,6	133,4	90,12	5,74	2,8	85,45	8,08	3,9
100	114,3	152,4	102,26	6,02	3,8	97,18	8,56	5,3
125	141,3	190,5	128,19	6,55	6,5	122,25	9,53	9,3
150	168,3	228,6	154,05	7,11	10,1	146,33	10,97	15,3
200	219,1	304,8	202,72	8,18	20,3	193,68	12,70	30,9
250	273,0	381,0	254,51	9,27	36,0	242,87	15,09	57,4
300	323,9	457,2	304,80	9,53	53,0	288,90	17,48	94,7
350	355,6	533,4	336,55	9,53	68,0	317,50	19,05	132,0
400	406,4	609,6	387,35	9,53	89,2	363,52	21,44	195,0
450	457,2	685,8	438,15	9,53	113,0	409,55	23,83	274,0
500	508,0	762,0	488,95	9,53	140,0	455,63	26,19	372,0
600	609,6	914,4	590,55	9,53	202,0	547,67	30,96	634,0

BUTTWELD FITTINGS

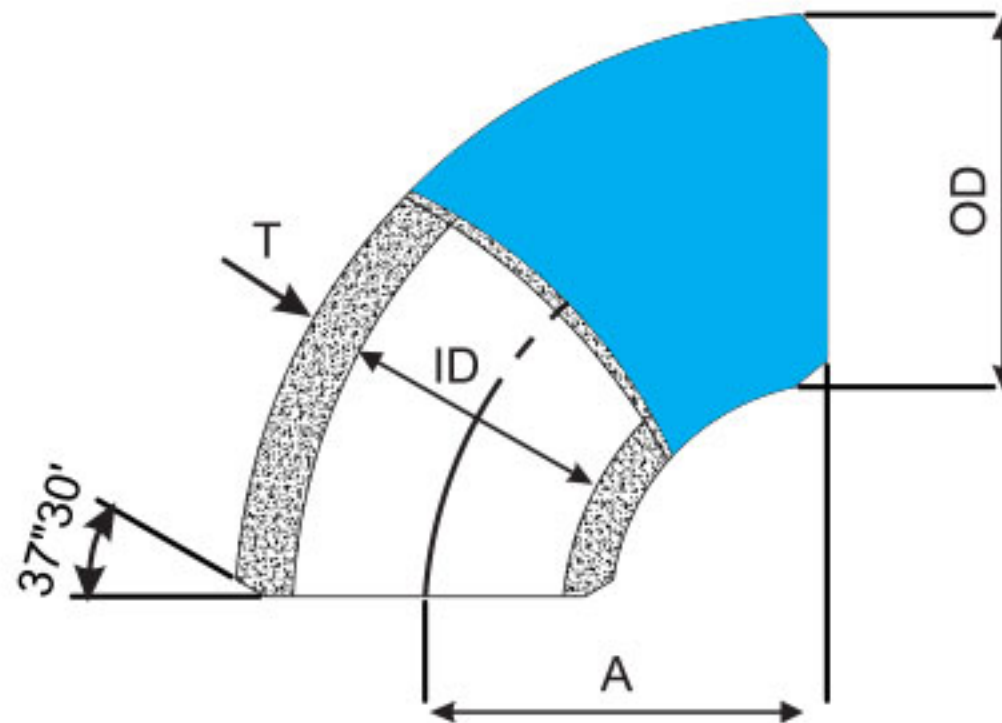
45° ELBOWS LONG RADIUS TO ANSI B16.9



Nominal Pipe size mm	Outside Diameter OD mm	Centre to end A mm	Standard			Schedule 80		
			Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg	Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg
15	21,3	15,9	15,80	2,77	0,1	13,87	3,73	0,05
20	26,7	11,11	20,93	2,87	0,1	18,85	3,91	0,05
25	33,4	22,2	26,64	3,38	0,1	24,31	4,55	0,10
32	42,2	25,4	35,05	3,56	0,1	32,46	4,85	0,20
40	48,3	28,6	40,89	3,68	0,2	38,10	5,08	0,24
50	60,3	34,9	52,50	3,91	0,3	49,25	5,54	0,50
65	73,0	44,5	62,71	5,16	0,7	59,00	7,01	0,90
80	88,9	50,8	77,93	5,49	1,0	73,66	7,62	1,40
90	101,6	57,2	90,12	5,74	1,4	85,45	8,08	2,00
100	114,3	63,5	102,26	6,02	1,9	97,18	8,56	2,67
125	141,3	79,4	128,19	6,55	3,3	122,25	9,53	4,62
150	168,3	95,3	154,05	7,11	5,1	146,33	10,97	7,07
200	219,1	127,0	202,72	8,18	10,2	193,68	12,70	15,40
250	273,0	158,8	254,51	9,27	18,0	242,87	15,09	28,70
300	323,9	190,5	304,80	9,53	26,5	288,90	17,48	47,40
350	355,6	222,3	336,55	9,53	39,6	317,50	19,05	66,00
400	406,4	254,0	387,35	9,53	59,0	363,52	21,44	97,50
450	457,2	285,8	438,15	9,53	84,0	409,55	23,83	137,00
500	508,0	317,5	488,95	9,53	110,0	455,63	26,19	186,00
600	609,6	381,0	590,55	9,53	183,0	547,67	30,96	317,00

BUTTWELD FITTINGS

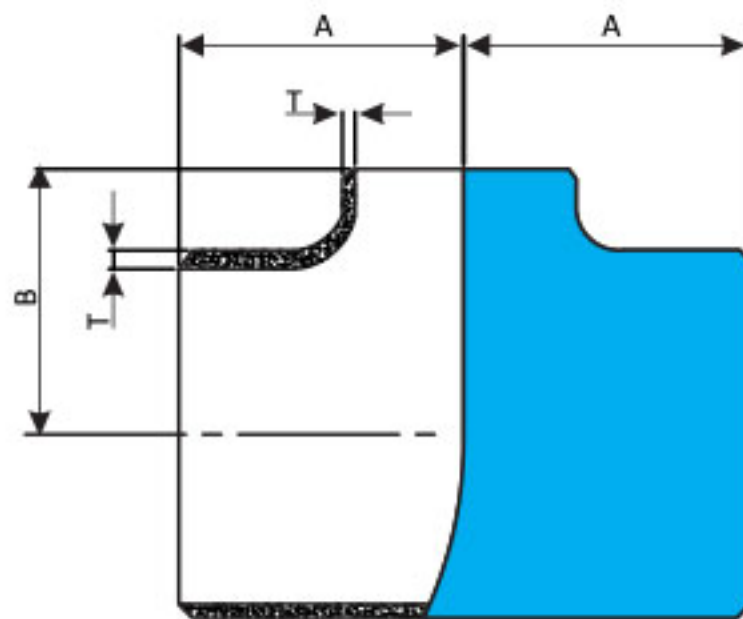
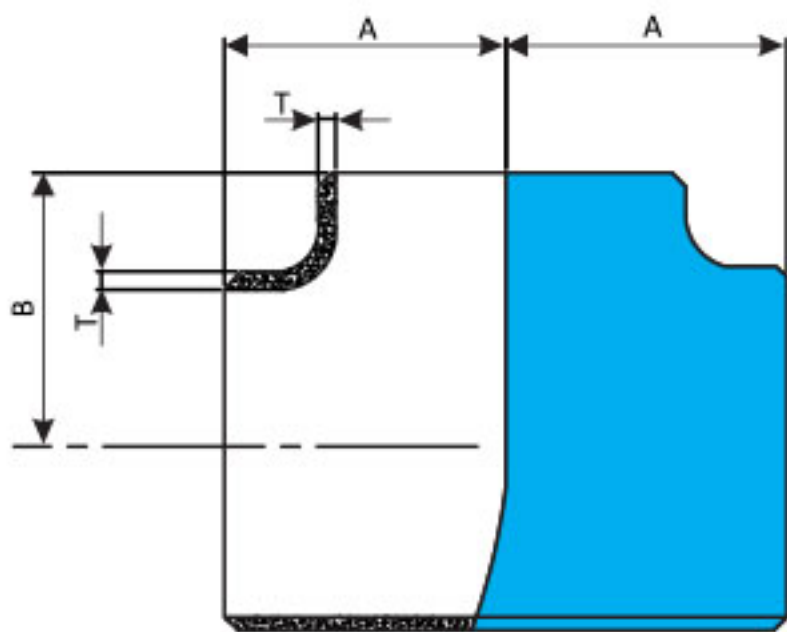
90° ELBOWS SHORT RADIUS TO ANSI B16.9



Nominal Pipe size mm	Outside Diameter OD mm	Centre to end A mm	Standard			Schedule 80		
			Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg	Inside Diameter ID mm	Wall Thickness T mm	Mass (approx.) kg
25	33,4	25,4	26,64	3,38	0,1	33,40	4,55	0,1
32	42,2	31,8	35,05	3,56	0,2	42,16	4,85	0,2
40	48,3	38,1	40,89	3,68	0,2	38,10	5,08	0,3
50	60,3	50,8	52,50	3,91	0,4	49,25	5,54	0,6
65	73,0	63,5	62,71	5,16	0,9	59,00	7,01	1,1
80	88,9	76,2	77,93	5,49	1,4	73,66	7,62	1,8
90	101,6	88,9	90,12	5,74	1,9	85,45	8,08	2,6
100	114,3	101,6	102,26	6,02	2,6	97,18	8,56	3,6
125	141,3	127,0	128,19	6,55	4,3	122,25	9,53	6,2
150	168,3	152,4	154,05	7,11	6,8	146,33	10,97	10,2
200	219,1	203,2	202,72	8,18	13,6	193,68	12,70	20,6
250	273,0	254,0	254,51	9,27	24,0	242,87	15,09	38,2
300	323,9	304,8	304,80	9,53	35,3	288,90	17,48	63,2
350	355,6	355,6	336,55	9,53	45,4	317,50	19,05	88,2
400	406,4	406,4	387,35	9,53	59,4	363,52	21,44	130,0
450	457,2	457,2	438,15	9,53	75,4	409,55	23,83	183,0
500	508,0	508,0	488,95	9,53	93,3	455,63	26,19	248,0
600	609,6	609,6	590,55	9,53	138,5	547,67	30,96	440,0

BUTTWELD FITTINGS

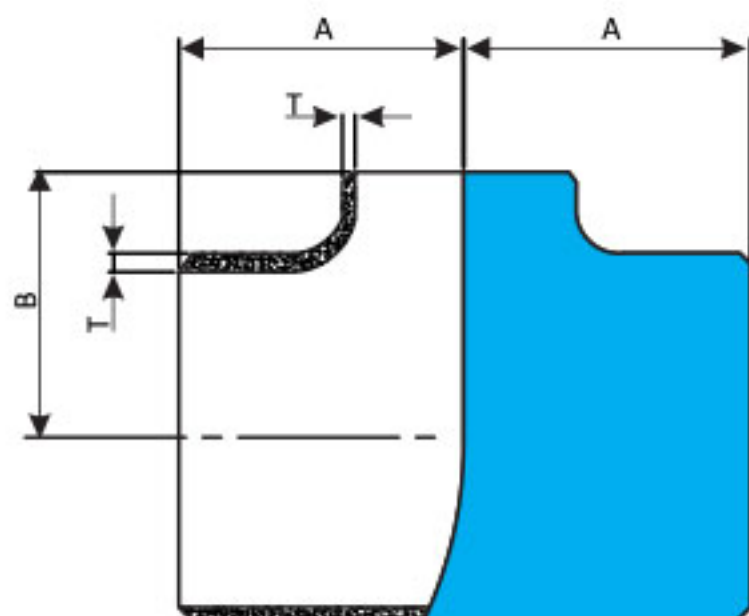
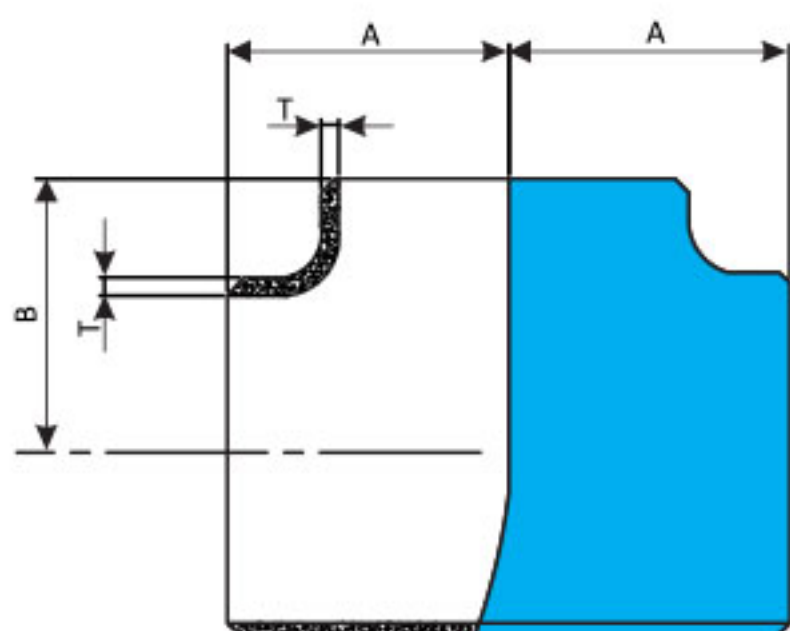
TEES EQUAL AND UNEQUAL TO B16.9 AND BS 1640



Nominal Pipe Size		Centre to End		Mass (approx.)	
Run	Branch	Run	Branch	Standard	Schedule
mm	mm	A	B	mass	80
		mm	mm	kg	kg
15	15	25,4	25,4	0,08	0,11
	10	25,4	25,4	0,06	0,09
	8	25,4	25,4	0,04	0,06
20	20	28,6	28,6	0,11	0,16
	15	28,6	28,6	0,16	0,15
	10	28,6	28,6	0,16	0,13
25	25	38,1	38,1	0,24	0,32
	20	38,1	38,1	0,23	0,29
	15	38,1	38,1	0,23	0,28
	10	38,1	38,1	0,20	0,26
32	32	47,6	47,6	0,46	0,55
	25	47,6	47,6	0,39	0,51
	20	47,6	47,6	0,37	0,48
	15	47,6	47,6	0,35	0,46
40	40	57,1	57,1	0,71	0,80
	32	57,1	57,1	0,68	0,77
	25	57,1	57,1	0,55	0,72
	20	57,1	57,1	0,52	0,69
	15	57,1	57,1	0,50	0,66
50	50	63,5	63,5	0,99	1,19
	40	63,5	60,5	0,93	1,11
	32	63,5	53,9	0,89	1,07
	25	63,5	50,8	0,74	1,02
	20	63,5	44,4	0,70	1,00
65	65	76,2	76,2	1,90	2,19
	50	76,2	69,9	1,53	1,99
	40	76,2	66,7	1,47	1,90
	32	76,2	63,5	1,56	1,86
	25	76,2	57,1	1,50	1,82
	20	76,2	50,8	1,47	1,78
80	80	85,7	85,7	2,85	3,24
	65	85,7	82,5	2,27	3,04
	50	85,7	76,2	2,14	2,85
	40	85,7	73,0	2,08	2,76
	32	85,7	69,8	2,05	2,68
	25	85,7	66,7	2,00	2,60
	20	85,7	63,5	1,97	2,56
90	90	95,2	95,2	4,47	5,07
	80	95,2	92,0	4,88	4,88
	65	95,2	88,9	4,53	4,63
	50	95,2	82,5	4,35	4,35
	40	95,2	79,4	4,26	4,27
100	100	104,8	104,8	4,83	5,77
	90	104,8	101,6	4,62	6,25
	80	104,8	98,4	3,82	5,33
	65	104,8	95,2	3,69	5,14
	50	104,8	88,9	3,55	4,95
	40	104,8	85,7	3,50	4,85
125	125	123,8	123,8	8,00	9,28
	100	123,8	117,5	6,18	8,69
	90	123,8	114,3	6,34	8,81
	80	123,8	111,1	8,10	8,59
	65	123,8	107,9	6,08	8,38
	50	123,8	104,8	6,00	8,20

BUTTWELD FITTINGS

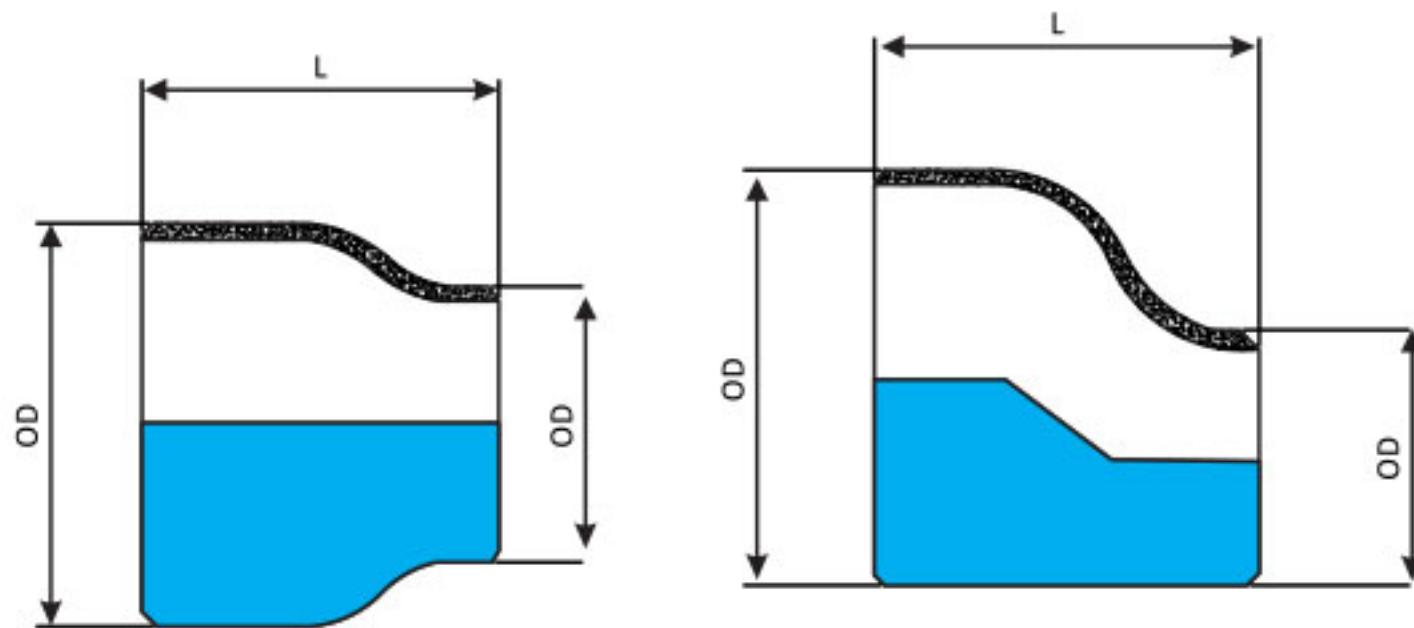
TESS EQUAL AND UNEQUAL TO B16.9 AND BS 1640



Nominal Pipe Size		Centre to End		Mass (approx.)	
Run	Branch	Run	Branch	Standard	Schedule
mm	mm	A	B	mass	80
		mm	mm	kg	kg
150	150	142,9	142,9	10,20	15,90
	125	142,9	136,5	9,22	14,00
	100	142,9	130,2	8,81	13,50
	90	142,9	127,0	8,93	13,10
	80	142,9	123,8	8,52	12,90
	65	142,9	120,6	8,45	12,70
	50	142,9	117,5	8,37	12,60
200	200	177,8	177,8	22,90	29,00
	150	177,8	168,3	18,80	27,00
	125	177,8	161,9	18,40	26,20
	100	177,8	155,6	18,00	25,60
	90	177,8	152,4	17,90	25,00
	80	177,8	152,4	17,85	24,85
250	250	215,9	215,9	36,60	60,80
	200	215,9	203,2	32,40	43,90
	150	215,9	193,7	30,50	42,00
	125	215,9	190,5	30,10	41,30
	100	215,9	184,1	29,90	40,00
	90	215,9	177,8	29,85	39,40
300	300	254,0	254,0	58,40	95,80
	250	254,0	241,3	55,20	71,80
	200	254,0	228,6	53,10	62,90
	150	254,0	219,1	51,20	61,00
	125	254,0	215,9	50,00	59,50
	100	254,0	209,5	49,75	58,00
350	350	279,4	279,4	83,20	129,00
	300	279,4	269,9	79,40	89,50
	250	279,4	257,2	76,10	85,50
	200	279,4	247,6	63,70	78,30
	150	279,4	238,1	61,50	76,00
	400	400	304,8	304,8	96,30
350		304,8	304,8	89,50	108,00
300		304,8	295,3	85,70	105,00
250		304,8	282,6	82,40	101,00
200		304,8	273,0	80,00	96,00
150		304,8	263,5	77,50	90,00
450		450	342,9	342,9	131,00
	400	342,9	330,2	121,00	135,00
	350	342,9	330,2	118,00	135,00
	300	342,9	320,7	114,00	131,00
	250	342,9	308,0	110,00	128,00
	200	342,9	298,4	104,00	125,00
500	500	381,0	381,0	173,00	353,00
	450	381,0	368,3	167,00	168,00
	400	381,0	355,6	162,00	163,00
	350	381,0	355,6	161,00	162,00
	300	381,0	346,1	158,00	160,00
	250	381,0	333,4	152,00	159,50
	200	381,0	323,8	145,00	158,60
600	600	431,8	431,8	274,00	548,00
	500	431,8	431,8	263,00	263,00
	450	431,8	419,1	245,00	246,00
	400	431,8	406,4	235,00	236,00
	350	431,8	406,4	226,00	232,00
	300	431,8	396,9	218,00	230,00
	250	431,8	384,2	212,00	228,00

BUTTWELD FITTINGS

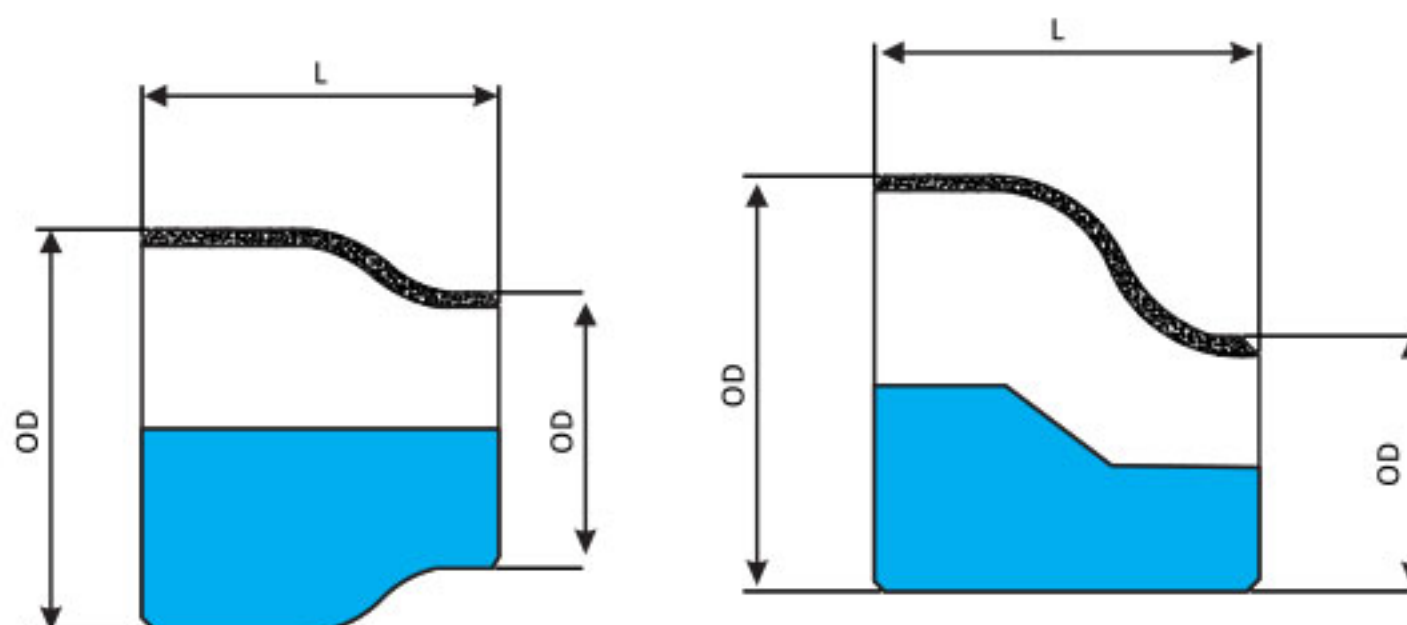
WELDING REDUCERS CONCENTRIC AND ECCENTRIC TO ANSI B16.9 AND BS 1640



Nominal Pipe Size mm	Outside Diameters OD mm	Length L mm	Mass (approx.)				
			Standard Mass kg	Extra Strong kg	Full Schedule 80 kg	Schedule 160 kg	Double Extra Strong kg
20 x 15	26,7 x 21,3	38,1	0,07	0,10		0,12	0,18
25 x 15	33,4 x 21,3	50,8	0,18	0,20		0,22	0,34
25 x 20	33,4 x 26,7	50,8	0,18	0,20		0,22	0,36
32 x 15	42,2 x 21,3	50,8	0,18	0,22			
32 x 20	42,2 x 26,7	50,8	0,18	0,22			
32 x 25	42,2 x 33,4	50,8	0,22	0,22			
40 x 15	48,3 x 21,3	63,5	0,22	0,30		0,33	0,56
40 x 20	48,3 x 26,7	63,5	0,25	0,31		0,34	0,62
40 x 25	48,3 x 33,4	63,5	0,28	0,34		0,36	0,68
40 x 32	48,3 x 42,2	63,5	0,31	0,35		0,43	0,68
50 x 15	60,3 x 21,3	76,2	0,31	0,40		0,65	0,90
50 x 20	60,3 x 26,7	76,2	0,31	0,45		0,65	0,90
50 x 25	60,3 x 33,4	76,2	0,34	0,50		0,68	0,97
50 x 32	60,3 x 42,2	76,2	0,38	0,52		0,68	1,02
50 x 40	60,3 x 48,3	76,2	0,40	0,54		0,72	1,08
65 x 25	73,0 x 33,4	88,9	0,56	0,80		1,00	1,60
65 x 32	73,0 x 42,2	88,9	0,56	0,84		1,02	1,63
65 x 40	73,0 x 48,8	88,9	0,62	0,86		1,02	1,76
65 x 50	73,0 x 60,3	88,9	0,68	0,90		1,13	1,81
80 x 25	88,9 x 33,4	88,9	0,68	1,02		1,40	2,04
80 x 32	88,9 x 42,2	88,9	0,72	1,08		1,40	2,15
80 x 40	88,9 x 48,3	88,9	0,77	1,13		1,45	2,22
80 x 50	88,9 x 60,3	88,9	0,81	1,18		1,54	2,26
80 x 65	88,9 x 73,0	88,9	0,90	1,24		1,67	2,72
100 x 25	114,3 x 33,4	101,6	1,24	1,59			
100 x 32	114,3 x 42,2	101,6	1,24	1,70			
100 x 40	114,3 x 48,3	101,6	1,30	1,81		2,40	3,63
100 x 50	114,3 x 60,3	101,6	1,36	1,92		2,45	3,74
100 x 65	114,3 x 73,0	101,6	1,47	1,98		2,50	3,85
100 x 80	114,3 x 88,9	101,6	1,53	2,04		2,90	4,08
125 x 50	141,3 x 60,3	127,0	2,26	2,94			
125 x 65	141,3 x 73,0	127,0	2,38	3,17			
125 x 80	141,3 x 88,9	127,0	2,50	3,40			
125 x 100	141,3 x 114,3	127,0	2,72	3,74			

BUTTWELD FITTINGS

WELDING REDUCERS CONCENTRIC AND ECCENTRIC TO ANSI B16.9 AND BS 1640



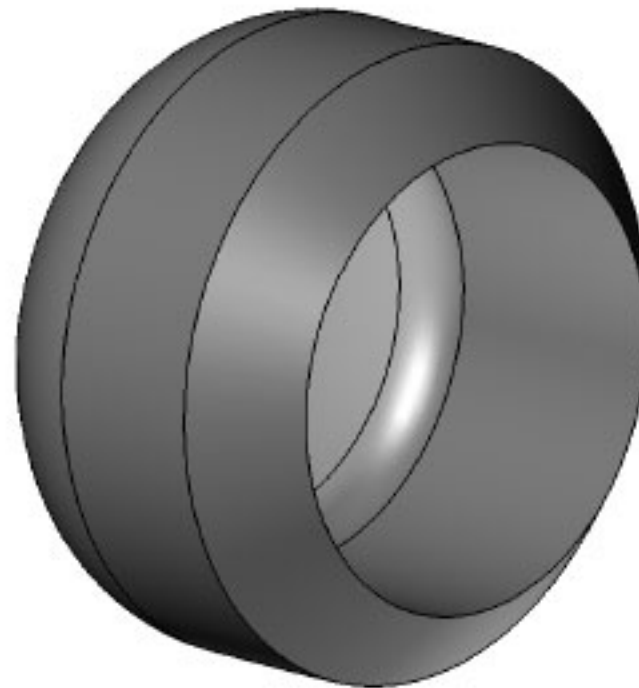
Nominal Pipe Size mm	Outside Diameters OD mm	Length L mm	Mass (approx.)				
			Standard Mass kg	Extra Strong kg	Full Schedule 80 kg	Schedule 160 kg	Double Extra Strong kg
150 x 50	168,3 x 60,3	139,7	3,17	4,30			
150 x 65	168,3 x 73,0	139,7	3,29	4,53		6,80	8,62
150 x 80	168,3 x 88,9	139,7	3,63	4,76		7,03	9,07
150 x 90	168,3 x 101,6	139,7	3,74	5,00			
150 x 100	168,3 x 114,3	139,7	3,74	5,21		7,50	9,98
150 x 125	168,3 x 141,3	139,7	3,85	5,44		8,50	10,43
200 x 80	219,1 x 88,9	152,4	5,00	7,25			
200 x 90	219,1 x 101,6	152,4	5,00	7,50			
200 x 100	219,1 x 114,3	152,4	5,00	7,71		10,67	14,97
200 x 125	219,1 x 141,3	152,4	5,44	8,16		12,36	15,86
200 x 150	219,1 x 168,3	152,4	6,01	8,50		14,06	16,33
*250 x 80	273,0 x 88,9	177,8	8,16	10,43			
250 x 100	273,0 x 114,3	177,8	9,07	11,56	17,00	22,68	
250 x 125	273,0 x 141,3	177,8	9,52	12,70	17,00	23,58	
250 x 150	273,0 x 168,3	177,8	9,75	13,38	17,00	24,50	
250 x 200	273,0 x 219,1	177,8	9,98	13,38	17,00	26,08	
*300 x 100	323,9 x 114,3	203,2	13,38	17,23			
300 x 125	323,9 x 141,3	203,2	13,60	17,70			
300 x 150	323,9 x 168,3	203,2	14,06	18,14	26,76	37,65	
300 x 200	323,9 x 219,1	203,2	14,51	19,05	26,76	39,46	
300 x 250	323,9 x 273,0	203,2	15,42	19,73	26,76	43,54	
350 x 150	355,6 x 168,3	330,2	26,30	35,40			
350 x 200	355,6 x 219,1	330,2	26,53	35,56			
350 x 250	355,6 x 273,0	330,2	26,87	35,94			
350 x 300	355,6 x 323,9	330,2	27,21	36,28			
400 x 200	406,4 x 219,1	355,6	31,11	40,16			
400 x 250	406,4 x 273,0	355,6	31,52	40,37			
400 x 300	406,4 x 323,9	355,6	31,75	40,82			
400 x 350	406,4 x 355,6	355,6	32,20	41,27			
450 x 300	457,2 x 323,9	381,0	37,65	51,25			
450 x 350	457,2 x 355,6	381,0	38,10	51,71			
450 x 400	457,2 x 406,4	381,0	38,55	52,16			
500 x 350	508,0 x 355,6	508,0	53,55	76,20			
500 x 400	508,0 x 406,4	508,0	56,24	76,65			
500 x 450	508,0 x 457,2	508,0	56,70	77,11			
600 x 400	609,6 x 406,4	508,0	65,77	86,18			
600 x 450	609,6 x 457,2	508,0	67,13	88,45			
600 x 500	609,6 x 508,0	508,0	68,04	90,72			

* Concentric only

BUTTWELD FITTINGS

WELDING CAPS

TO ANSI B16.9 AND BS 1640



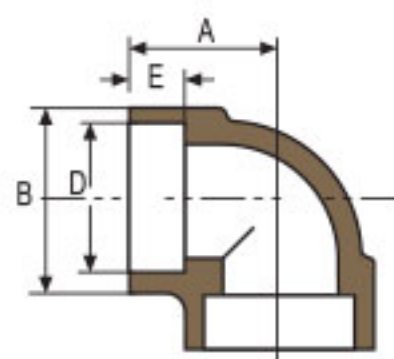
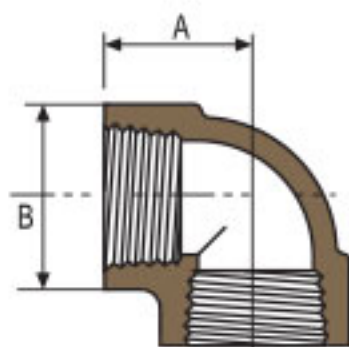
Nominal Pipe Size mm	Outside Diameter mm	Length mm	Standard Mass		Extra Strong	
			Wall thickness mm	Mass (approx.) kg	Wall thickness mm	Mass (approx.) kg
25	33,4	38,1	3,3	0,11	4,5	0,14
32	42,2	38,1	3,5	0,14	4,8	0,19
40	48,3	38,1	3,6	0,17	5,0	0,23
50	60,3	38,1	3,9	0,23	5,5	0,33
65	73,0	38,1	5,1	0,39	7,0	0,53
80	88,9	50,8	5,4	0,66	7,6	0,92
90	101,6	63,5	5,7	0,97	8,0	1,36
100	114,3	63,5	6,0	1,17	8,5	1,67
125	141,3	76,2	6,5	1,91	9,5	2,78
150	168,3	88,9	7,1	2,90	10,9	4,47
200	219,1	101,6	8,1	5,19	12,7	8,05
250	273,0	127,0	9,2	9,15	12,7	12,50
300	323,9	152,4	9,5	13,30	12,7	17,70
350	355,6	165,1	9,5	15,90	12,7	21,20
400	406,4	177,8	9,5	20,00	12,7	34,10
450	457,2	203,2	9,5	25,60	12,7	40,10
500	508,0	228,6	9,5	31,90	12,7	42,50
600	609,6	266,7	9,5	45,10	12,7	60,01

FORGED FITTINGS - (ANSI B 16.11)

3000 lb SERIES



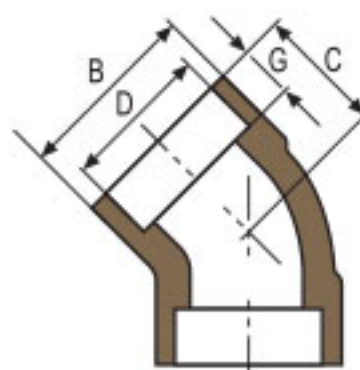
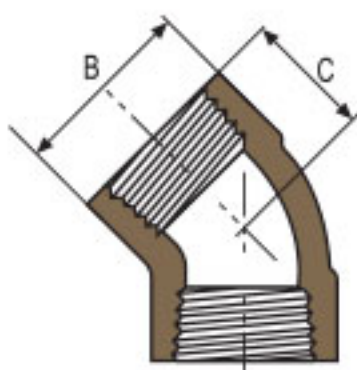
**Forged
90° Elbows
ASA B2₁**



Nominal bore	A mm	B mm	Mass (approx.) kg
8	24,5	25,5	0,140
10	28,5	33,5	0,270
15	33,5	38,0	0,415
20	38,0	46,0	0,650
25	44,5	55,5	1,035
32	51,0	62,0	1,305
40	60,5	75,5	2,215
50	63,5	84,0	2,470

Nominal bore	A mm	B mm	D mm	E mm	Mass (approx.) kg
8	24,5	25,5	14,0	9,5	0,120
10	24,5	25,5	17,5	11,0	0,104
15	28,5	33,5	21,7	12,5	0,218
20	33,5	38,0	27,1	14,5	0,308
25	38,0	46,0	33,8	16,0	0,467
32	44,5	55,5	42,6	17,5	0,671
40	51,0	62,0	48,7	19,0	0,902
50	60,5	75,5	61,1	22,0	1,361

**Forged
45° Elbows
ASA B2₁**



Nominal bore	B mm	C mm	Mass (approx.) kg
8	25,5	19,0	0,115
10	38,0	25,5	0,365
15	38,0	25,5	0,340
20	46,0	28,5	0,535
25	55,5	33,5	0,920
32	62,0	35,0	0,965
40	75,5	43,0	1,835
50	84,0	43,5	1,930

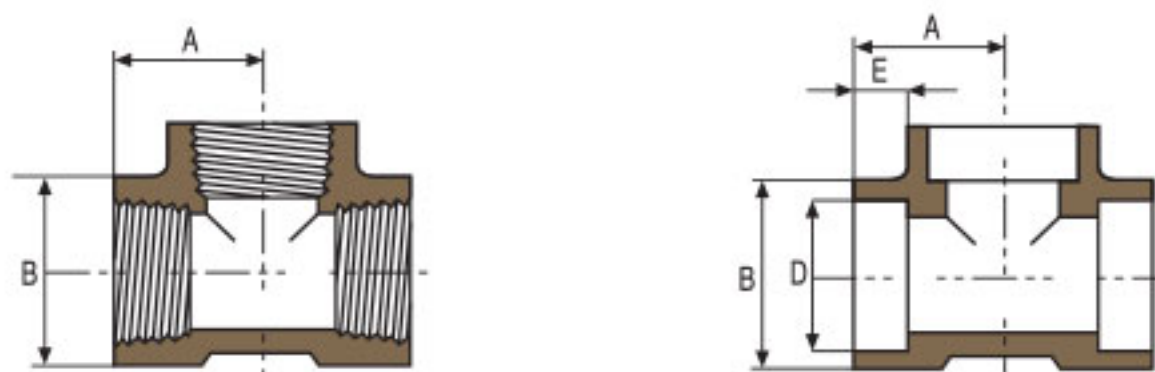
Nominal bore	B mm	C mm	D mm	G mm	Mass (approx.) kg
8	25,5	19,0	14,0	9,5	0,095
10	25,5	19,0	17,5	11,0	0,090
15	38,0	25,5	21,7	11,0	0,260
20	38,0	25,5	27,1	12,5	0,250
25	46,0	28,5	33,8	14,5	0,381
32	55,5	33,5	42,6	16,0	0,608
40	62,0	35,0	48,7	16,0	0,708
50	75,5	43,0	61,1	17,5	1,135

FORGED FITTINGS - (ANSI B 16.11)

3000 lb SERIES



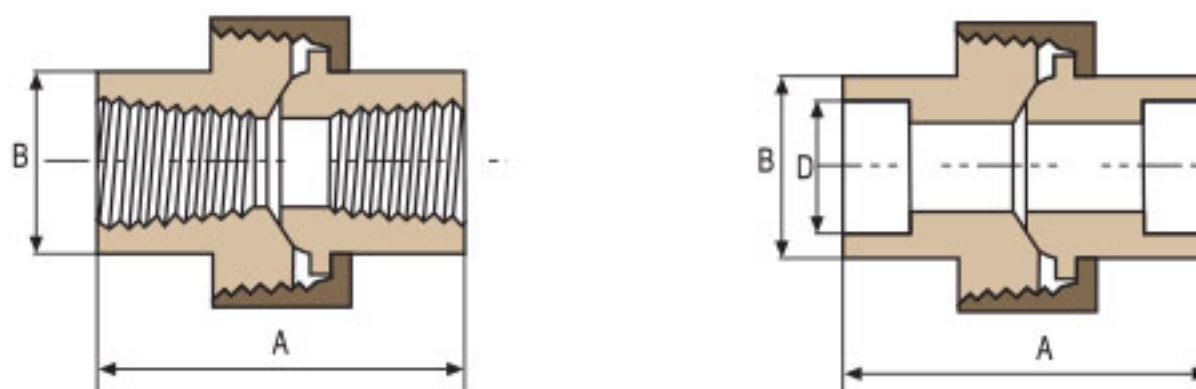
Forged Tees ASA B2₁



Nominal bore	A mm	B mm	Mass (approx.) kg
8	24,5	25,5	0,195
10	28,5	33,5	0,380
15	33,5	38,0	0,560
20	38,0	46,0	0,840
25	44,5	55,5	1,360
32	51,0	62,0	1,645
40	60,5	75,5	3,100
50	63,5	84,0	3,175

Nominal bore	A mm	B mm	D mm	E mm	Mass (approx.) kg
8	24,5	25,5	14,0	9,5	0,155
10	24,5	25,5	17,5	11,0	0,140
15	28,5	33,5	21,7	12,5	0,308
20	33,5	38,0	27,1	14,5	0,386
25	38,0	46,0	33,8	16,0	0,608
32	44,5	55,5	42,6	17,5	0,931
40	51,0	62,0	48,7	19,0	1,238
50	60,5	75,5	61,1	22,0	1,911

Forged Union Nuts ASA B2₁



Nominal bore	A mm	B mm	Mass (approx.) kg
8	44,5	22,0	0,140
10	47,5	25,5	0,200
15	54,0	32,0	0,350
20	58,5	38,0	0,425
25	63,5	44,5	0,650
32	71,5	57,0	0,975
40	79,5	63,5	1,255
50	92,0	76,0	2,010

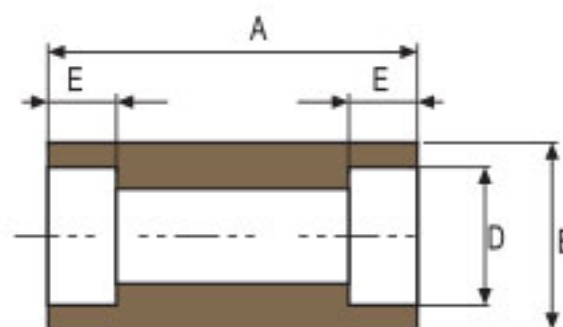
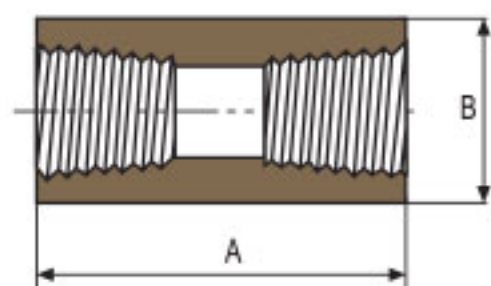
Nominal bore	A mm	B mm	D mm	E mm	Mass (approx.) kg
8	44,5	22,0	14,0	9,5	0,255
10	47,5	25,5	17,5	11,0	0,340
15	54,0	32,0	21,7	12,5	0,390
20	58,5	38,0	27,1	14,5	0,480
25	63,5	44,5	33,8	16,0	0,660
32	71,5	57,0	42,6	17,5	1,150
40	79,5	63,5	48,7	19,0	1,420
50	92,0	76,0	61,1	22,0	2,450

FORGED FITTINGS - (ANSI B 16.11)

3000 lb SERIES



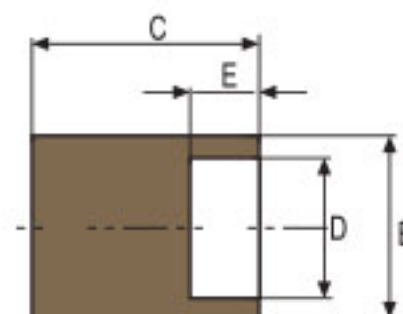
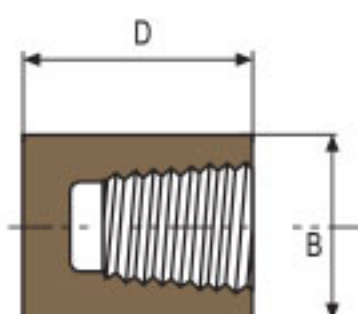
Forged Couplings ASA B2₁



Nominal bore	A mm	B mm	Mass (approx.) kg
8	35,0	19,0	0,045
10	38,0	22,0	0,059
15	47,5	29,0	0,127
20	51	35,0	0,191
25	60,5	44,5	0,386
32	66,5	57,0	0,680
40	79,5	63,5	0,993
50	85,5	76,0	1,370

Nominal bore	A mm	B mm	D mm	E mm	Mass (approx.) kg
8	25,5	22,0	14,0	9,5	0,005
10	28,5	25,5	17,5	11,0	0,064
15	35,0	31,5	21,7	12,5	0,127
20	38,0	38,0	27,1	14,5	0,186
25	44,5	44,5	33,8	16,0	0,263
32	47,5	57,0	42,6	17,5	0,477
40	51,0	63,5	48,7	19,0	0,568
50	63,5	76,0	61,1	22,0	0,922

Forged Caps ASA B2₁



Nominal bore	D mm	B mm	Mass (approx.) kg
8	25,5	19,0	0,041
10	25,5	22,0	0,050
15	32,0	29,0	0,109
20	36,5	35,0	0,177
25	41,5	44,5	0,327
32	44,5	57,0	0,599
40	44,5	63,5	0,698
50	47,5	76,0	1,060

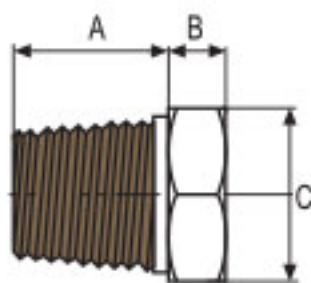
Nominal bore	C mm	B mm	D mm	E mm	Mass (approx.) kg
8	17,5	22,0	14,0	9,5	0,041
10	19,0	25,5	17,5	11,0	0,054
15	22,0	31,5	21,7	12,5	0,100
20	25,5	38,0	27,1	14,5	0,163
25	27,0	44,5	33,8	16,0	0,218
32	30,0	57,0	42,6	17,5	0,413
40	32,0	63,5	48,7	19,0	0,508
50	38,0	76,0	61,1	22,0	0,854

FORGED FITTINGS - (ANSI B 16.11)

6000 lb SERIES



Forged Hexagonal Head Plugs ASA B2¹



Nominal bore	A mm	B mm	C mm	Mass (approx.) kg
8	16,0	6,5	16,0	0,026
10	17,5	8,0	17,5	0,048
15	19,0	8,0	22,0	0,073
20	24,0	9,5	27,0	0,179
25	25,5	9,5	36,5	0,247
32	25,5	14,5	46,5	0,445
40	25,5	16,0	51,0	0,595
50	27,0	17,5	63,5	1,158

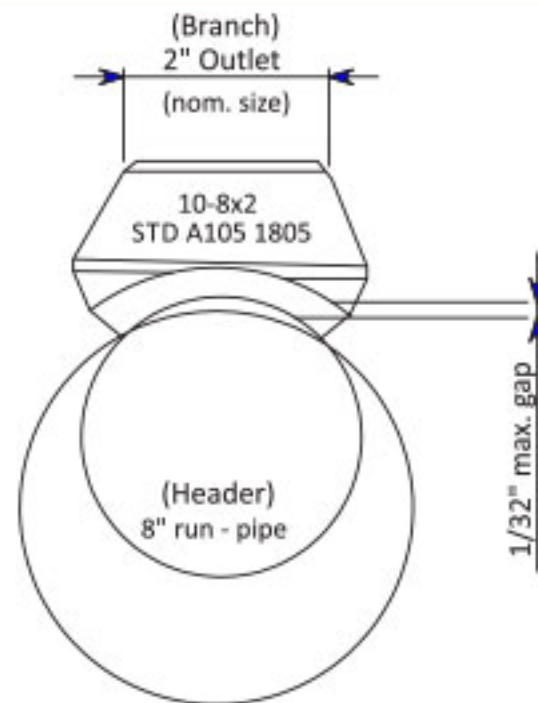
Forged Steel Fittings Pressure / Temperature Ratings

SERIES	Temp °C	2000	3000	4000	6000
		Pressure MPa			
ASTM 105 Carbon Steel	-29 to 39	14,00	21,00	28,00	42,00
	66	13,80	20,35	27,50	41,50
	93	13,60	20,40	27,20	40,70
	121	13,40	20,05	26,90	40,50
	149	13,30	19,90	26,50	39,90
	177	13,10	19,70	26,20	39,40
	204	13,00	19,40	25,90	38,80
	232	12,70	19,05	25,30	38,00
	260	12,20	18,25	24,30	36,50
	288	11,50	17,20	23,00	34,50
	316	10,80	16,20	21,50	32,30
	343	10,00	15,05	20,50	30,50
	371	9,15	13,70	18,30	27,50
	399	8,25	12,40	16,55	24,90
427	7,10	10,70	14,20	21,30	
Practical Carbon Steel Use Limit	454	5,80	8,75	11,65	17,50
	482	4,30	6,50	8,65	13,00
Usual Carbon Steel Use Limit	510	3,00	4,50	6,00	9,00
	538	1,65	2,50	3,35	5,00

Also Supplied in ASTM, ASME, A/SA 350 AND 182 Various Grades / Classes

WELDOLETS

RUN SIZES CONSOLIDATION



STANDARD WEIGHT & EXTRA STRONG WELDOLET - 3000 lbs - THREDOLET													
Outlet Size													
Run Sizes	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
	3/8	3/8	1/2	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
	1/2	1/2	1 - 3/4	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5
	1 - 3/4	1 - 3/4	2 1/2 - 1/4	1	1 1/2 - 1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
	22 - 14	2 1/2 - 1/4	36 - 3	1 1/2 - 1 1/4	2 1/2 - 2	2	2 1/2	3	4	4	5	6	8
	36 - 3	36 - 3	-	2 1/2 - 2	5 - 3	2 1/2	3 1/2 - 3	4 - 3 1/2	5	5	6	8	10
	-	-	-	8 - 3	12 - 6	3 1/2 - 3	5 - 4	6 - 5	6	6	8	10	14 - 12
	-	-	-	36 - 10	36 - 14	5 - 4	8 - 6	12 - 8	10 - 8	8	10	14 - 12	20 - 16
	-	-	-	-	-	10 - 6	18 - 10	24 - 14	18 - 12	12 - 10	14 - 12	20 - 16	36 - 24
	-	-	-	-	-	36 - 12	36 - 20	36 - 26	36 - 20	18 - 14	20 - 16	36 - 24	-
-	-	-	-	-	-	-	-	-	36 - 20	36 - 24	-	-	

SCH 160 & DOUBLE EXTRA STRONG - WELDOLET							6000 lbs THREDOLET & SOCKOLET					
Outlet Size							Outlet Size					
Run Sizes	1/2	3/4	1	1 1/4	1 1/2	2	1/2	3/4	1	1 1/4	1 1/2	2
	1/2	1 - 3/4	1	1 1/2 - 1 1/4	1 1/2	2	1 - 3/4	1	1 1/2 - 1 1/4	1 1/2	2	2 1/2
	1 1/4 - 3/4	2 - 1 1/4	2 - 1 1/4	2 1/2 - 2	2 1/2 - 2	2 1/2	2 - 1 1/4	2 1/2 - 1 1/4	2 1/2 - 2	2 1/2	2 1/2	3
	36 - 1 1/2	6 - 2 1/2	10 - 3	10 - 3	3 1/2 - 3	3 1/2 - 3	6 - 2 1/2	10 - 3	10 - 3	3 1/2 - 3	3 1/2 - 3	4
	-	36 - 8	36 - 12	36 - 12	8 - 4	5 - 4	36 - 8	36 - 12	36 - 12	8 - 4	5 - 4	5
	-	-	-	-	36 - 24	8 - 6	-	-	-	20 - 10	8 - 6	6
	-	-	-	-	-	18 - 10	-	-	-	36 - 24	18 - 10	10 - 8
	-	-	-	-	-	36 - 20	-	-	-	-	36 - 20	20 - 12
-	-	-	-	-	-	-	-	-	-	-	36 - 24	

STANDARD - EXTRA STRONG - 3000 lbs NIPOLET					
Outlet Size					
Run Size	1/2	3/4	1	1 1/2	2
	6 1/2	3 - 1 1/2	1 1/2	2	3
	36 - 8	36 - 4	2 1/2 - 3	3 1/2 - 3	4 - 3 1/2
	-	-	5 - 3	5 - 4	6 - 5
	-	-	36 - 6	12 - 6	12 - 8
-	-	-	36 - 14	36 - 14	

SCH 160 - DOUBLE EXTRA STRONG - 6000 lbs					
Outlet Size					
Run Size	1/2	3/4	1	1 1/2	2
	36 - 1 1/2	36 1 1/2	4 1 1/2	4 - 2	4 - 3
	-	-	36 - 6	36 - 6	8 - 5
	-	-	-	-	36 - 10
	-	-	-	-	-
-	-	-	-	-	

STANDARD - EXTRA STRONG - 3000 lbs - ELBOLET			
Outlet Size			
Run Sizes	1/4 ÷ 3/4	1 ÷ 1 1/2	2
	36 - 1 1/4	36 - 2	36 - 3

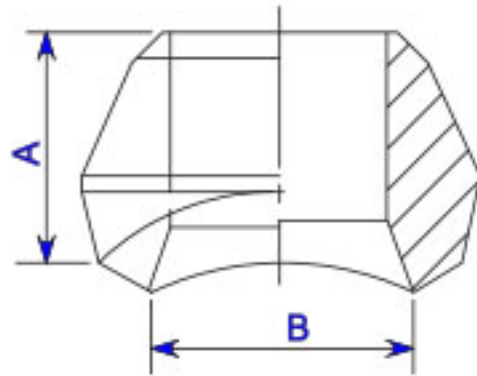
SCH 160 - DOUBLE EXTRA STRONG - 6000 lbs -			
Outlet Size			
Run Sizes	1/4 ÷ 1/2	3/4 ÷ 1 1/4	1 1/2
	36 - 1 1/4	36 - 2	36 - 3

STANDARD - EXTRA STRONG - 3000 lbs - LATROLET				
Outlet Size				
Run Sizes	1/4 ÷ 1/2	3/4	1 - 1 1/2	2
	2 1/2 - 1 1/4	1 1/2 - 1 1/4	2 1/2 - 2	5 - 4
	12 - 3	5 - 2	5 - 3	8 - 6
	-	12 - 6	12 - 6	12 - 10

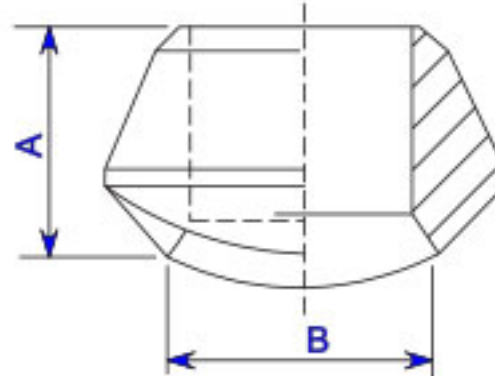
SCH 160 - XXS - 6000 lbs - LATROLET				
Outlet Size				
Run Sizes	1/4 ÷ 3/8	1/2	3/4 ÷ 1 1/4	1 1/2
	2 1/2 - 1 1/4	1 1/2 - 1 1/4	2 1/2 - 2	5 - 4
	12 - 3	5 - 2	5 - 3	8 - 6
	-	12 - 6	12 - 6	12 - 10

WELDOLETS

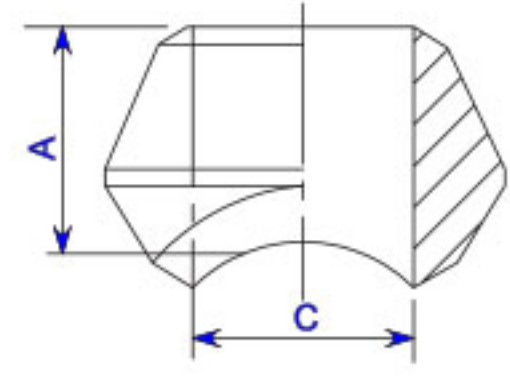
SCHEDULE 40 / STD



REDUCING SIZE



FULL SIZE



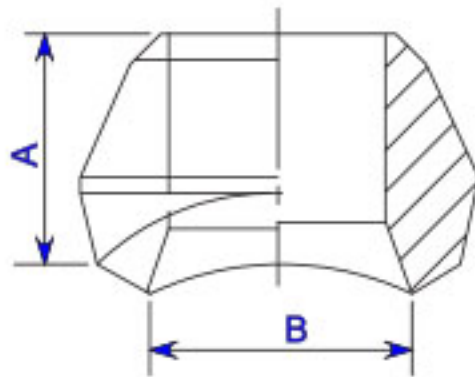
NOM. SIZE	REDUCING SIZE				Weight kg	FULL SIZE		
	A		B'			C		Weight kg
	mm	inch	mm	inch		mm	inch	
1/8	16	5/8	16	5/8	0,04	-	-	-
1/4	16	5/8	16	5/8	0,04	-	-	-
3/8	19	3/4	19	3/4	0,07	-	-	-
1/2	19	3/4	24	5/8	0,08	16	5/8	0,07
3/4	22	7/8	30	13/16	0,12	20,5	13/16	0,12
1	27	1 1/16	36,5	1 1/16	0,22	26	1 1/32	0,18
1 1/4	32	1 1/4	44,5	1 3/4	0,36	35	1 3/8	0,32
1 1/2	33,5	1 5/16	51	2	0,45	41	1 5/8	0,36
2	38	1 1/2	65	2 3/16	0,8	52,5	2 1/8	0,7
2 1/2	41,5	1 5/8	76	3	1,15	62	2 7/16	1,1
3	44,5	1 3/4	93,5	3 1/16	1,8	78	3 1/8	1,7
3 1/2	47,5	1 7/8	101,5	4	2,5	90,5	3 9/16	2,25
4	51	2	120,5	4 3/4	2,9	101,5	4	3,05
5	57	2 1/4	141	5 9/16	4,6	128,5	5 1/8	4,85
6	60,5	2 3/8	170	6 1/16	7	154	6 1/8	7,5
8	70	2 3/4	220,5	8 1/16	12	201,5	7 15/16	12,7
10	78	3 1/16	274,5	10 13/16	19,5	254	10	20
12	85,5	3 3/8	325,5	12 13/16	26,7	304,5	12	29,4
14	89	3 1/2	357	14 1/16	29,9	336,5	13 3/4	31,8
16	93,5	3 7/16	408	16 1/16	34	387,5	15 1/4	41,7
18	101,5	4	459	18 1/16	44	438	17 1/4	56,7
20	114,5	4 1/2	510	20 1/16	53,5	489	19 1/4	79,3
24	124	4 7/8	611	24 1/16	99,7	590,5	23 3/4	127

1). Same dimensions for reducing and full size.

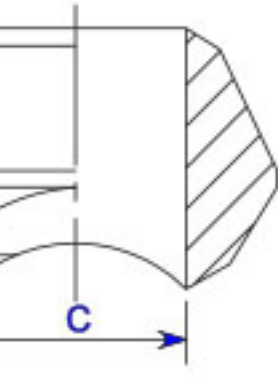
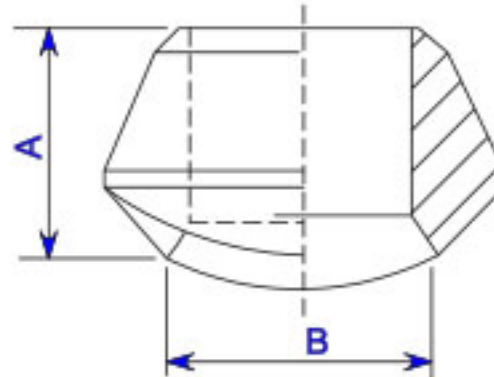
Up to and including 10" - dimensions are the same for Std Weight and Sch 40 outlets.
For 12" and over, sch 40 requires thicker walls. Fitting available, on request.

WELDOLETS

SCHEDULE XS / 80



REDUCING SIZE



FULL SIZE

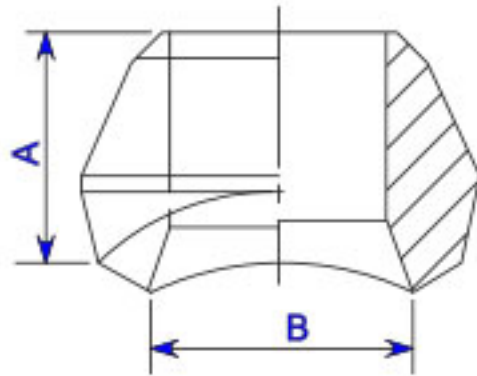
NOM. SIZE	REDUCING SIZE				Weight kg	FULL SIZE		Weight kg
	A		B ¹			C		
	mm	inch	mm	inch		mm	inch	
1/8	16	5/8	16	5/8	0,04	-	-	-
1/4	16	5/8	16	5/8	0,04	-	-	-
3/8	19	3/4	19	3/4	0,07	-	-	-
1/2	19	3/4	24	15/16	0,09	14	9/16	0,07
3/4	22	7/8	30	1 3/16	0,14	19	3/4	0,12
1	27	1 1/16	36,5	1 7/16	0,21	24	15/16	0,18
1 1/4	32	1 1/4	44,5	1 3/4	0,4	32	1 1/4	0,32
1 1/2	33,5	1 5/16	51	2	0,5	38	1 1/2	0,4
2	38	1 1/2	65	2 9/16	0,79	49	1 15/16	0,72
2 1/2	41,5	1 5/8	76	3	1,18	59	2 5/16	1,13
3	44,5	1 3/4	93,5	3 1/16	1,85	73,5	2 7/8	1,85
3 1/2	47,5	1 7/8	101,5	4	2,54	85	3 5/16	2,3
4	51	2	120,5	4 3/4	2,9	97	3 13/16	3,4
5	57	2 1/4	141	5 9/16	4,7	122	4 13/16	5,0
6	78	3 1/16	170	6 1/16	10,4	146	5 3/4	10,4
8	87,5	3 7/16	220,5	8 1/16	20,4	193,5	7 5/8	21
10	93,5	3 11/16	265	10 7/16	24,8	247 1/2	9 3/4	25,4
12	100	3 15/16	316	12 7/16	35	298 1/2	11 3/4	35
14	105	4 1/8	351	13 13/16	37,7	330	13	39
16	113	4 3/8	402	15 13/16	46,2	381	15	52
18	119	4 1/2	452	17 13/16	58,9	432	17	59
20	127	5	503	19 13/16	71,5	482 1/2	19	84,7
24	140	5 1/2	605	23 13/16	141	584	23	146

1). Same dimensions for reducing and full size.

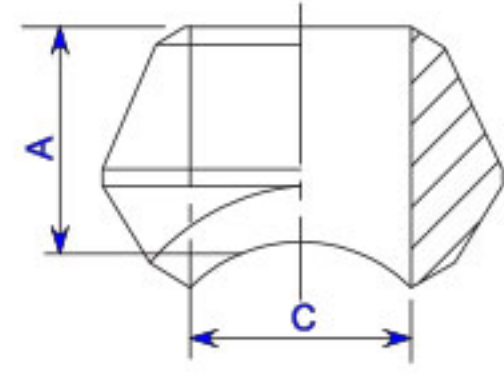
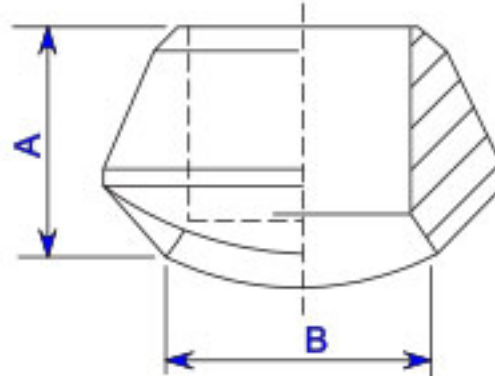
Up to and including 8" - dimensions are the same for XS and Sch80 outlets.
For 10" and over, Sch80 requires thicker walls. Fitting available, on request.

WELDOLETS

SCHEDULED. 160 & DOUBLE EXTRA STRONG (XXS)



REDUCING SIZE



FULL SIZE

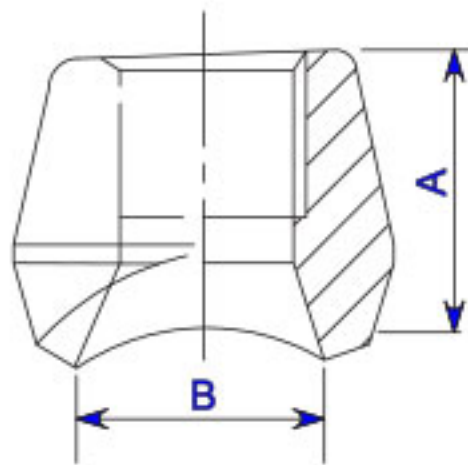
NOM. SIZE	REDUCING SIZE				Weight kg	FULL SIZE		Weight kg
	A		B ¹			C*		
	mm	inch	mm	inch		mm	inch	
½	28,5	1 ⅛	14	⅝	0,15	11,5	⅞	0,15
¾	31,5	1 ¼	19	¾	0,32	15,5	⅝	0,32
1	38	1 ½	25,5	1	0,38	21	⅜	0,38
1 ¼	44,5	1 ¾	33,5	1 ⅛	0,55	29,5	1 ⅜	0,6
1 ½	51	2	38	1 ½	0,8	34	1 ⅝	0,85
2	55,5	2 ⅜	43	1 ⅞	0,97	43	1 ⅞	1
2 ½	62	2 ⅞	54	2 ⅞	1,55	54	2 ⅞	1,7
3	73	2 ⅞	73	2 ⅞	2,85	66,5	2 ⅞	2,95
4	84	3 ⅝	98,5	3 ⅞	4,75	87	3 ⅞	4,95
5	93,5	3 ⅞	122	4 ⅜	6,5	109,5	4 ⅝	6,8
6	105	4 ⅞	146	5 ¼	12,7	132	5 ⅞	13,7
8	Dimensions available on request							
10								
12								
14								
16								

* Suitable for Sch 160 run pipe. For XXS pipes, dimension "C" varies to meet in valve of values.

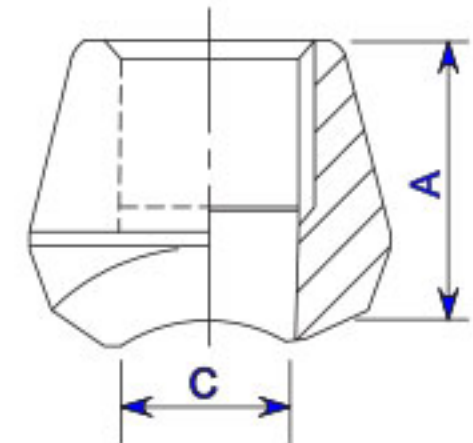
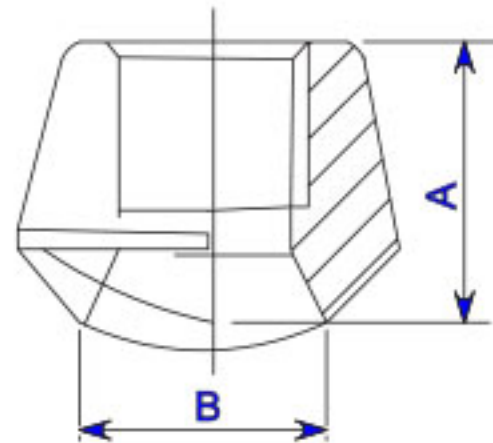
Outlet sizes listed in the chart are suitable for Sch 160 and XXS run pipes.
For 8" outlet and over, always specify run pipe thickness.

WELDOLETS

SCHEDULED. 160 & DOUBLE EXTRA STRONG (XXS)



REDUCING SIZE



FULL SIZE

3000 lbs

NOM. SIZE	REDUCING SIZE					FULL SIZE		
	A		B ¹		Weight kg	C*		Weight kg
	mm	inch	mm	inch		mm	inch	
1/8	19	3/4	16	5/8	0,06	-	-	-
1/4	19	3/4	16	5/8	0,06	-	-	-
3/8	20,5	13/16	19	3/4	0,09	-	-	-
1/2	25,5	1	24	15/16	0,11	14	9/16	0,12
3/4	27	1 1/16	30	1 3/16	0,17	19	3/4	0,19
1	33,5	1 5/16	36,5	1 7/16	0,29	24	15/16	0,31
1 1/4	33,5	1 5/16	44,5	1 3/4	0,41	32	1 1/4	0,45
1 1/2	35	1 3/8	51	2	0,46	38	1 1/2	0,5
2	38	1 1/2	65	2 3/16	0,8	49	1 15/16	0,87
2 1/2	46	1 13/16	76	3	1,4	59	2 5/16	1,5
3	51	2	93,5	3 1/16	2,00	73,5	2 7/8	2,15
3 1/2	54	2 1/8	101,5	4	2,6	85	2 5/16	2,85
4	57	2 1/4	120,5	4 3/4	3,35	97	3 13/16	3,6

* Suitable for Std. Wt & XS run pipes.

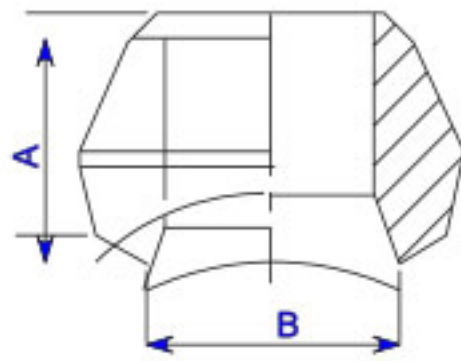
6000 lbs

NOM. SIZE	REDUCING SIZE				
	A		B		Weight kg
	mm	inch	mm	inch	
1/4	28,5	1 1/8	14	9/16	0,20
3/8	28,5	1 1/8	14	9/16	0,20
1/2	31,5	1 1/4	19	3/4	0,30
3/4	36,5	1 7/16	25,5	1	0,50
1	39,5	1 9/16	33,5	1 1/16	0,90
1 1/4	39,5	1 9/16	38	1 1/2	0,85
1 1/2	43	1 11/16	49	1 15/16	1,45
2	52,5	2 1/16	59	2 5/16	2,75

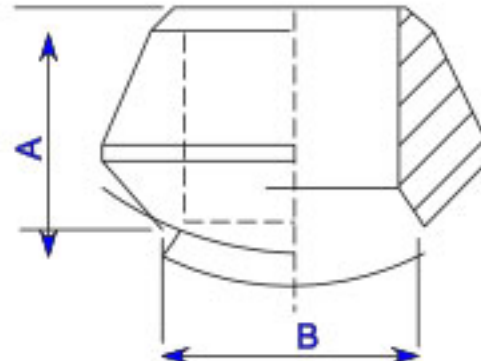
Available only for reducing size outlet.

WELDOLETS

SCHEDULED. 160 & DOUBLE EXTRA STRONG (XXS)



REDUCING SIZE



FULL SIZE

3000 lbs

NOM. SIZE	REDUCING SIZE					FULL SIZE		
	A		B		Weight	C*		Weight
	mm	inch	mm	inch	kg	mm	inch	kg
1/8	19	3/4	16	5/8	0,06	-	-	-
1/4	19	3/4	16	5/8	0,06	-	-	-
3/8	20,5	13/16	19	3/4	0,09	-	-	-
1/2	25,5	1	24	15/16	0,11	14	9/16	0,12
3/4	27	1 1/16	30	1 3/16	0,17	19	3/4	0,19
1	33,5	1 5/16	36,5	1 7/16	0,29	24	15/16	0,31
1 1/4	33,5	1 5/16	44,5	1 3/4	0,41	32	1 1/4	0,45
1 1/2	35	1 3/8	51	2	0,46	38	1 1/2	0,5
2	38	1 1/2	65	2 9/16	0,80	49	1 15/16	0,87
2 1/2	46	1 13/16	76	3	1,40	59	2 5/16	1,50
3	51	2	93,5	3 1/16	2,00	73,5	2 7/8	2,15
3 1/2	54	2 1/8	101,5	4	2,60	85	3 5/16	2,80
4	57	2 1/4	120,5	4 3/4	3,30	97	3 13/16	3,50

* Suitable for Std. Wt & XS run pipes.

6000 lbs

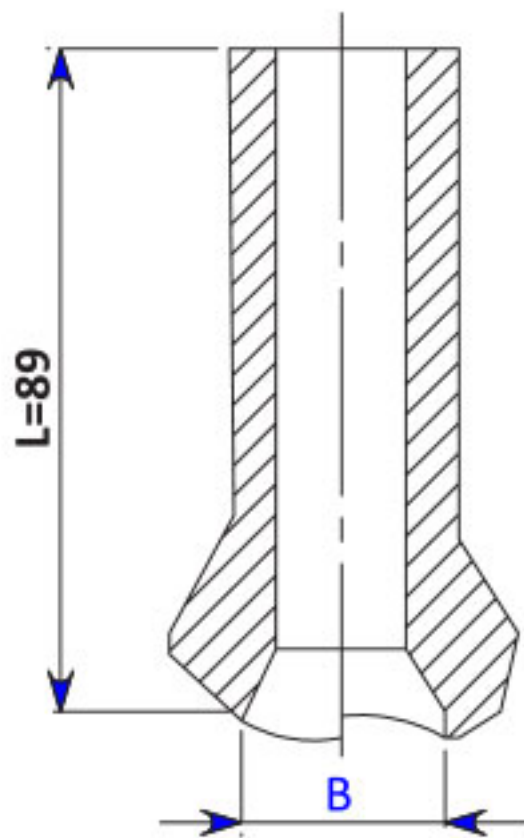
NOM. SIZE	REDUCING SIZE				
	A		B		Weight
	mm	inch	mm	inch	kg
1/4	28,5	1 1/8	14	9/16	0,20
3/8	28,5	1 1/8	14	9/16	0,20
1/2	31,5	1 1/4	19	3/4	0,30
3/4	36,5	1 7/16	25,5	1	0,50
1	39,5	1 9/16	33,5	1 5/16	0,90
1 1/4	39,5	1 9/16	38	1 1/2	0,85
1 1/2	43	1 11/16	49	1 15/16	1,45
2	52,5	2 1/8	59	2 5/16	2,75

* Suitable for Std. Wt & XS run pipes.

9000 lbs

NOM. SIZE	REDUCING SIZE				
	A		B		Weight
	mm	inch	mm	inch	kg
1/2	31,5	4	19	3/4	0,32
3/4	36,5	1 7/16	25,5	1	0,55
1	39,5	1 9/16	33,5	1 5/16	0,95
1 1/2	43	1 11/16	49	1 5/16	1,50
2	52,5	2 1/8	59	2 5/16	2,90

* Fitting hole to suit XXS pipe. 2) Available only for reducing size outlet.



The use of this fitting is particularly indicated where a valve, gage or similar, need to be installed in a branch connection, quite close to the header.

Fitting design suggests its used where line vibrations, cyclic stresses etc., may result in fatigue fracture.

It is also suggested from an economical point of view as, for the same application, a pipe nipple and a weld is avoided with consequent NDE inspection.

Threaded, SW, BW end

NOM. SIZE	3000 lbs			6000 lbs		
	B		Weight kg	B		Weight kg
	mm	inch		mm	inch	
¼	16	5/8	0,2	-	-	-
¾	19	¾	0,23	-	-	-
½	24	1 5/16	0,25	14	9/16	0,25
¾	30	1 3/16	0,40	19	¾	0,50
1	36,5	1 7/16	0,65	25,5	1	0,70
1 ¼	44,5	1 ¾	0,75	33,5	1 5/16	0,88
1 ½	50,8	2	0,95	38	1 ½	1,15
2	65	2 9/16	1,45	43	1 11/16	1,50

1) "L" dimension is the same for all sizes. Available on request, with lengths up to 6 1/2 inch. (165mm)

Nipple portion thickness for 3000 lb is related to Sch. 80 pipe; for 6000 lb, the reference is made to Sch. 160.

Available on request, with XXS thk.

DIMENSION OF PE 100 HDPE PIPES ISO / SANS 4427-2:2007 (E)



SDR RATING		SDR 7.4						SDR 9						SDR 11						SDR 13.6						SDR 17					
PE 63		-						-						10						8						-					
PE 80		20						16						12.5						10						8					
PE 100		25						20						16						12.5						10					
OD	min	max	min	Avg	max	NOM ID	MASS Kg/M	min	Avg	max	NOM ID	MASS Kg/M	min	Avg	max	NOM ID	MASS Kg/M	min	Avg	max	NOM ID	MASS Kg/M	min	Avg	max	NOM ID	MASS Kg/M				
16	16.3	2.3	2.5	3.2	3.4	13.75	0.16	2.3	2.5	2.7	15.15	0.13	2	2.15	2.3	15.9	0.12	2	2.15	2.3	15.9	0.12	2	2.15	2.3	15.9	0.12				
20	20.3	3	3.2	3.4	3.4	17.7	0.24	3.0	3.2	3.4	18.8	0.21	2.3	2.5	2.7	20.2	0.17	2	2.15	2.3	20.9	0.15	2	2.15	2.3	20.9	0.15				
25	25.3	3.5	3.75	4	5	22.8	0.39	3.6	3.85	4.1	24.5	0.33	3	3.2	3.4	25.8	0.28	2.4	2.6	2.8	27.0	0.23	2	2.15	2.3	27.0	0.23				
32	32.3	4.4	4.7	5	6.2	28.5	0.60	4.5	4.8	5.1	30.6	0.51	3.7	3.95	4.2	32.3	0.43	3	3.25	3.5	33.7	0.36	2.4	2.6	2.8	35.0	0.29				
40	40.3	5.5	5.85	6.2	7.7	35.6	0.94	5.6	5.95	6.3	38.3	0.79	4.6	4.9	5.2	40.4	0.67	3.7	3.95	4.2	42.3	0.55	3	3.2	3.4	43.8	0.45				
50	50.3	6.9	7.3	7.7	9.6	45.0	1.48	7.1	7.55	8.0	48.1	1.26	5.8	6.15	6.5	50.9	1.06	4.7	5	5.3	53.2	0.88	3.8	4.05	4.3	55.1	0.72				
63	63.4	8.6	9.1	9.6	11.5	53.5	2.11	8.4	8.9	9.4	57.5	1.78	6.8	7.2	7.6	60.9	1.47	5.6	5.95	6.3	63.4	1.24	4.5	4.8	5.1	65.7	1.02				
75	75.5	10.3	10.9	11.5	13.7	64.3	3.02	10.1	10.7	11.3	68.9	2.56	8.2	8.7	9.2	72.9	2.14	6.7	7.1	7.5	76.1	1.78	5.4	5.75	6.1	78.8	1.46				
90	90.6	12.3	13	13.7	16.8	78.5	4.53	12.3	13	13.7	84.4	3.81	10	10.55	11.1	89.3	3.17	8.1	8.6	9.1	93.2	2.63	6.6	7	7.4	96.4	2.18				
110	110.7	15.1	15.95	16.8	19	89.3	5.83	14.0	14.8	15.6	95.8	4.93	11.4	12.05	12.7	101.3	4.11	9.2	9.75	10.3	105.9	3.39	7.4	7.85	8.3	109.7	2.78				
125	125.8	17.1	18.05	19	21.3	100.0	7.33	15.7	16.55	17.4	107.4	6.17	12.7	13.4	14.1	113.7	5.12	10.3	10.9	11.5	118.7	4.25	8.3	8.8	9.3	122.9	3.49				
140	140.9	19.2	20.25	21.3	24.2	114.4	9.54	17.9	18.85	19.8	122.8	8.04	14.6	15.4	16.2	129.7	6.73	11.8	12.45	13.1	135.6	5.55	9.5	10.05	10.6	140.4	4.55				
160	161	21.9	23.05	24.2	27.2	128.8	12.05	20.1	21.2	22.3	138.2	10.17	16.4	17.3	18.2	146.0	8.50	13.3	14.05	14.8	152.5	7.04	10.7	11.3	11.9	158.0	5.76				
180	181.1	24.6	25.9	27.2	30.3	142.9	14.91	22.4	23.6	24.8	153.4	12.57	18.2	19.2	20.2	162.2	10.48	14.7	15.5	16.3	169.6	8.63	11.9	12.55	13.2	175.5	7.10				
200	201.2	27.4	28.85	30.3	34	160.9	18.85	25.2	26.55	27.9	172.6	15.91	20.5	21.6	22.7	182.5	13.27	16.6	17.5	18.4	190.7	10.97	13.4	14.15	14.9	197.4	9.01				
225	226.4	30.8	32.4	34	37.8	178.8	23.27	27.9	29.35	30.8	192.1	19.56	22.7	23.9	25.1	203.0	16.32	18.4	19.4	20.4	212.0	13.51	14.8	15.6	16.4	219.6	11.04				
250	251.5	34.2	36	37.8	42.3	200.3	29.18	31.3	32.95	34.6	215.0	24.58	25.4	26.75	28.1	227.4	20.46	20.6	21.7	22.8	237.5	16.92	16.6	17.5	18.4	245.9	13.87				
280	281.7	38.3	40.3	42.3	47.6	225.3	36.93	35.2	37.05	38.9	241.9	31.10	28.6	30.1	31.6	255.8	25.90	23.2	24.45	25.7	267.1	21.45	18.7	19.7	20.7	276.6	17.56				
315	316.9	43.1	45.35	47.6	53.5	254.1	46.83	39.7	41.75	43.8	272.6	39.50	32.2	33.9	35.6	288.3	32.87	26.1	27.5	28.9	301.1	27.20	21.1	22.25	23.4	311.6	22.36				
355	357.2	48.5	51	53.5	60.3	286.2	59.48	44.7	47	49.3	307.2	50.10	36.3	38.2	40.1	324.8	41.73	29.4	30.95	32.5	339.3	34.49	23.7	24.95	26.2	351.3	28.25				
400	402.4	54.7	57.5	60.3	67.8	322.1	75.24	50.3	52.9	55.5	345.6	63.44	40.9	43	45.1	365.4	52.85	33.1	34.85	36.6	381.7	43.69	26.7	28.1	29.5	395.2	35.79				
450	452.7	61.5	64.65	67.8	75.24	365.4	88.2	45.4	47.75	50.1	406.0	65.21	36.8	38.7	40.6	424.1	53.90	29.7	31.25	32.8	439.0	44.23	29.7	31.25	32.8	439.0	44.23				
500	503							55.8	58.65	61.5	384.2	78.17	45.4	47.75	50.1	406.0	65.21	36.8	38.7	40.6	424.1	53.90	29.7	31.25	32.8	439.0	44.23				
560	563.4							62.5	65.7	68.9	430.3	98.08	50.8	53.4	56	454.9	81.69	41.2	43.35	45.5	475.0	67.63	33.2	34.95	36.7	491.8	55.41				
630	633.8							70.3	73.9	77.5	484.1	124.11	57.2	60.15	63.1	511.6	103.50	46.3	48.7	51.1	534.5	85.48	37.4	39.35	41.3	553.2	70.18				
710	714							79.3	83.35	87.4	545.3	157.70	64.5	67.8	71.1	576.4	131.45	52.2	54.9	57.6	602.2	108.57	42.1	44.3	46.5	623.4	89.02				
800	804							89.3	89.3	89.3	623.4	191.55	72.6	76.3	80	649.4	166.65	58.8	61.8	64.8	678.4	137.67	47.4	49.85	52.3	702.3	112.85				
900	904							81.7	85.85	90	730.3	210.88	66.2	69.6	73	762.8	174.36	53.3	56.05	58.8	789.9	142.70	53.3	56.05	58.8	789.9	142.70				
1000	1004							90.2	94.8	99.4	812.4	258.84	72.5	76.2	79.9	849.6	212.32	59.3	62.35	65.4	877.3	176.33	59.3	62.35	65.4	877.3	176.33				
1200	1204							88.2	92.7	97.2	1016.6	309.49	67.9	71.35	74.8	1059.3	242.79	67.9	71.35	74.8	1059.3	242.79	67.9	71.35	74.8	1059.3	242.79				

DIMENSION OF PE 100 HDPE PIPES ISO / SANS 4427-2:2007 (E)



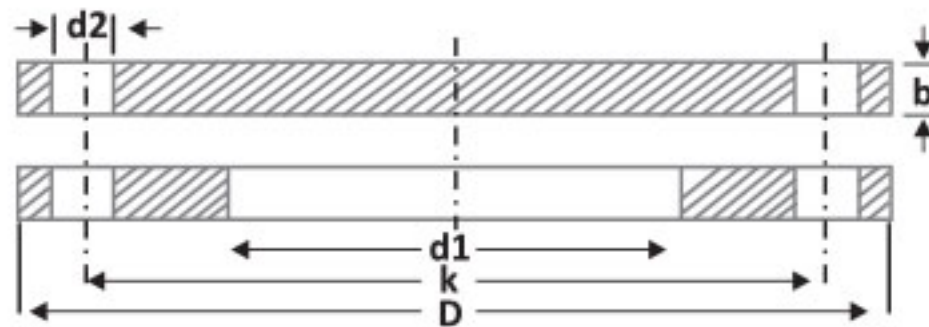
DIMENSIONS OF PE 100 HDPE PIPES ISO / SANS 4427-2:2007 (E)																							
SDR RATING		SDR 21				SDR 26				SDR 33				SDR 41									
		5				4				3.2				2.5									
		6				5				4				3.2									
		8				6				5				4									
OD	OD	WALL THICKNESS			NOM ID	MASS Kg/M	WALL THICKNESS			NOM ID	MASS Kg/M	WALL THICKNESS			NOM ID	MASS Kg/M	WALL THICKNESS			NOM ID	MASS Kg/M		
		min	Avg	max			min	Avg	max			min	Avg	max			min	Avg	max				
16	16.3																						
20	20.3																						
25	25.3																						
32	32.3																						
40	40.3	2	2.15	2.3	35.9	0.25																	
50	50.3	2.4	2.6	2.8	45.0	0.37	2.3	2.3	2.3	45.6	0.33												
63	63.4	3	3.2	3.4	56.8	0.58	2.5	2.7	2.9	57.8	0.49												
75	75.5	3.6	3.85	4.1	67.6	0.83	2.9	3.1	3.3	69.1	0.67												
90	90.6	4.3	4.6	4.9	81.1	1.19	3.5	3.75	4.0	82.8	0.98												
110	110.7	5.3	5.65	6	99.1	1.78	4.2	4.5	4.8	101.4	1.43												
125	125.8	6	6.35	6.7	112.7	2.28	4.8	5.1	5.4	115.2	1.85												
140	140.9	6.7	7.1	7.5	126.3	2.85	5.4	5.75	6.1	129.0	2.33												
160	161	7.7	8.15	8.6	144.2	3.74	6.2	6.6	7.0	147.3	3.06												
180	181.1	8.6	9.1	9.6	162.4	4.70	6.9	7.3	7.7	166.0	3.81												
200	201.2	9.6	10.15	10.7	180.3	5.82	7.7	8.15	8.6	184.3	4.72												
225	226.4	10.8	11.4	12	202.9	7.35	8.6	9.1	9.6	207.5	5.93												
250	251.5	11.9	12.55	13.2	225.7	9.00	9.6	10.15	10.7	230.5	7.35												
280	281.7	13.4	14.15	14.9	252.6	11.36	10.7	11.3	11.9	258.3	9.17												
315	316.9	15	15.8	16.6	284.4	14.27	12.1	12.8	13.5	290.4	11.68	9.7	10.25	10.8	295.5	9.43	7.7	8.15	8.6	299.7	7.55		
355	357.2	16.9	17.8	18.7	320.5	18.12	13.6	14.35	15.1	327.4	14.76	10.9	11.5	12.1	333.1	11.93	8.7	9.2	9.7	337.7	9.61		
400	402.4	19.1	20.15	21.2	360.9	23.11	15.3	16.15	17.0	368.9	18.72	12.3	13	13.7	375.2	15.19	9.8	10.35	10.9	380.5	12.17		
450	452.7	21.5	22.65	23.8	406.1	29.22	17.3	18.2	19.1	415.0	23.73	13.8	14.55	15.3	422.3	19.13	11	11.6	12.2	428.2	15.35		
500	503	23.9	25.15	26.4	451.2	36.06	19.1	20.15	21.2	461.2	29.19	15.3	16.15	17	469.2	23.59	12.3	13	13.7	475.5	19.11		
560	563.4	26.7	28.1	29.5	505.5	45.13	21.4	22.55	23.7	516.6	36.59	17.2	18.15	19.1	525.4	29.69	13.7	14.45	15.2	532.8	23.80		
630	633.8	30	31.55	33.1	568.8	57.01	24.1	25.4	26.7	581.1	46.36	19.3	20.35	21.4	591.2	37.46	15.4	16.25	17.1	599.4	30.11		
710	714	33.9	35.65	37.4	640.7	72.57	27.2	28.65	30.1	654.7	58.92	21.8	22.95	24.1	666.1	47.59	17.4	18.35	19.3	675.3	38.31		
800	804	38.1	40.1	42.1	721.8	91.95	30.6	32.2	33.8	737.6	74.60	24.5	25.8	27.1	750.4	60.27	19.6	20.65	21.7	760.7	48.56		
900	904	42.9	45.1	47.3	811.8	116.31	34.4	36.35	38.3	829.3	94.70	27.6	29.05	30.5	843.9	76.32	22	23.15	24.3	855.7	61.23		
1000	1004	47.7	50.15	52.6	901.7	143.67	38.2	40.2	42.2	921.6	116.37	30.6	32.05	33.5	937.9	93.56	24.5	25.8	27.1	950.4	75.80		
1200	1204	57.2	60.15	63.1	1081.7	206.71	45.9	48.25	50.6	1105.5	167.54	36.7	38.6	40.5	1124.8	135.15	29.4	30.95	32.5	1140.1	109.08		

Please note that all dimensions are expressed in millimeters (mm) (Density = 0.958) - OD based on GRADE B
(Critical Tolerance) as per ISO 11922-1 : 1997.

HOT DIPPED BACKING RINGS



SABS 1123, BS 4504, ASA 150 and BS 10 - Table "D"



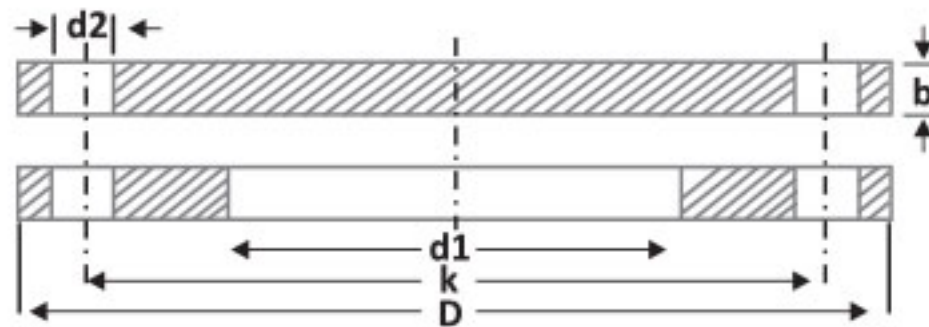
PIPE OD	BS 4504 10/3 - SABS 1123 1000/3								BS 4504 16/3 - SABS 1123 1600/3							
	DIMENSIONS				BOLTS				DIMENSIONS				BOLTS			
	D	d1	b	PCD (k)	Qty	d2	P-P	P-S	D	d1	b	PCD (k)	Qty	d2	P-P	P-S
20	95	30	10	65	4	M12	65	50	95	30	10	65	4	M12	65	50
25	105	38	10	75	4	M12	65	50	105	38	10	75	4	M12	65	50
32	115	45	10	85	4	M12	65	50	115	45	10	85	4	M12	65	50
40	140	52	10	100	4	M16	80	60	140	52	10	100	4	M16	80	60
50	150	63	10	110	4	M16	80	60	150	63	10	110	4	M16	80	60
63	165	74	12	125	4	M16	90	65	165	74	12	125	4	M16	90	65
75	185	86	12	145	4	M16	90	65	185	86	12	145	4	M16	90	65
90	200	103	12	160	8	M16	90	65	200	103	14	160	8	M16	90	65
110	220	136	12	180	8	M16	100	70	220	136	14	180	8	M16	100	70
125	220	136	12	180	8	M16	120	80	220	136	14	180	8	M16	120	80
140	250	158	14	210	8	M16	120	90	250	158	16	210	8	M16	120	90
160	285	190	16	240	8	M20	130	90	285	190	18	240	8	M20	130	90
180	285	190	16	240	8	M20	140	100	285	190	18	240	8	M20	140	100
200	340	237	18	295	8	M20	140	100	340	237	22	295	12	M20	150	100
225	340	237	20	295	8	M20	150	110	340	237	22	295	12	M20	160	120
250	395	279	18	350	12	M20	160	120	405	279	22	355	12	M24	170	120
280	395	292	20	350	12	M20	160	120	405	292	25	355	12	M24	170	130
315	445	330	22	400	12	M20	190	130	460	330	28	410	12	M24	190	140
355	505	376	25	460	16	M20	190	140	520	376	30	470	16	M24	200	150
400	565	430	25	515	16	M24	210	150	580	430	35	525	16	M24	240	170
450	615	476	30	565	20	M24	240	160	640	476	40	585	20	M24	250	180
500	670	533	30	620	20	M24	240	160								
560	730	592	35	675	20	M24	240	170								
630	835	662	36	725	20	M24	260	180								
710	895	737	40	840	24	M24	250	180								
800	1015	840	45	950	24	M30	280	210								
900	1115	942	50	1050	28	M30	310	240								
1000	1230	1045	55	1160	28	M30	340	250								

NOTE: The bolt diameters and length refer to flanges drilled to the above standard only - length of bolts allow for washers and gaskets

HOT DIPPED BACKING RINGS



SABS 1123, BS 4504, ASA 150 and BS 10 - Table "D"



PIPE OD	BS 10 TABLE "D"								ASA 150							
	DIMENSIONS				BOLTS				DIMENSIONS				BOLTS			
	D	d1	b	PCD (k)	Qty	d2	P-P	P-S	D	d1	b	PCD (k)	Qty	d2	P-P	P-S
20	95.3	30	5	66.7	4	M12	55	40	88.9	30	10	60.3	4	M12	65	50
25	101.6	38	5	73	4	M12	55	40	98.4	38	10	69.8	4	M12	65	50
32	114.3	45	5	82.6	4	M12	55	40	107.9	45	10	79.4	4	M12	65	50
40	120.7	52	6	87.3	4	M12	75	60	117.5	52	12	88.9	4	M12	90	65
50	133.4	63	6	98.4	4	M12	75	60	127	63	12	98.4	4	M16	90	65
63	152.4	74	8	114.3	4	M16	80	55	152.4	74	12	120.6	4	M16	90	65
75	165.1	86	8	127	4	M16	80	55	177.8	86	12	139.7	4	M16	90	65
90	184.1	103	10	146	4	M16	80	60	190.5	103	12	152.4	4	M16	90	65
110	215.9	136	10	177.8	4	M16	100	70	228.6	136	15	190.5	8	M16	110	80
125	215.9	136	10	177.8	4	M16	110	75	228.6	136	15	190.5	8	M16	120	90
140	254	158	13	209.6	8	M16	120	80	254	158	15	215.9	8	M20	120	90
160	279.4	190	13	235	8	M16	120	90	279.4	190	20	241.3	8	M20	140	100
180	279.4	190	13	235	8	M16	130	90	279.4	190	20	241.3	8	M20	150	110
200	336.6	237	13	292.1	8	M16	130	90	342.9	237	20	298.4	8	M20	150	110
225	336.6	237	13	292.1	8	M16	140	100	342.9	237	20	298.4	8	M20	160	110
250	406.4	279	16	355.6	8	M20	150	110	406.4	279	25	361.9	12	M24	170	130
280	406.4	292	16	355.6	8	M20	150	110	406.4	292	25	361.9	12	M24	170	130
315	457.2	330	19	406.4	12	M20	180	130	482.6	330	30	431.8	12	M24	220	150
355	527.1	376	22	469.9	12	M24	190	130	533.4	376	30	476.2	12	M24	200	150
400	577.9	430	22	520.7	12	M24	210	140	596.9	430	30	539.7	16	M24	220	160
450	641.4	476	25	584.2	12	M24	220	150	635	476	30	577.8	16	M30	240	160
500	704	533	29	641.4	16	M24	240	160	698.5	533	30	635	20	M30	240	160
560/600	825.5	592	30	755.7	16	M24	240	160	812.8	592	35	749.3	20	M32	240	170
630/650	825.5	662	32	755.7	16	M24	250	170								
710	908.1	737	35	844.6	20	M24	240	170								
800	-	-	-	-	-	-	-	-								
900	1174.7	942	48	1092.2	24	M32	310	220								
1000	1257.3	1045	51	1174.7	24	M32	330	240								

(All dimensions tabled in millimetres -mm)

HIGH PRESSURE SEAMLESS OR WELDED PIPES

PRESSURE/TEMPERATURE RATINGS FOR SEAMLESS CARBON-STEEL PIPE TO ASTM A 106 GRADE B*



Temperature °C	-29 to 343	371	399	413
Allowable stress Mpa	103	99	89	82

Nominal bore mm	Outside diameter mm	Schedule number	Wall Thickness mm	Maximum working pressure, Mpa			
				-29 to 343	371	399	413
15	21,3	(STD) 40	2,769	7,60	7,27	6,56	6,02
		(XS) 80	3,734	16,78	16,05	14,49	13,29
		160	4,775	27,21	26,03	23,50	21,55
		(XXS)	7,408	57,84	55,34	49,94	45,79
20	26,7	(STD) 40	2,870	6,87	6,58	5,94	5,45
		(XS) 80	3,912	14,56	13,93	12,58	11,53
		160	5,563	22,70	26,50	23,91	21,93
		(XXS)	7,823	47,86	45,78	41,32	37,89
25	33,4	(STD) 40	3,378	8,27	7,92	7,14	6,55
		(XS) 80	4,547	15,73	14,65	13,22	12,13
		160	6,350	26,70	25,55	23,06	21,14
		(XXS)	9,063	45,91	43,91	39,63	36,34
32	42,2	(STD) 40	3,556	7,43	7,12	6,42	5,90
		(XS) 80	4,851	13,37	12,79	11,54	10,58
		160	6,350	20,73	19,83	17,89	16,41
		(XXS)	9,703	38,51	36,84	33,23	30,48
40	48,3	(STD) 40	3,683	6,93	6,63	5,98	5,49
		(XS) 80	5,080	12,56	12,01	10,84	9,94
		160	7,140	21,33	20,40	18,42	16,89
		(XXS)	10,160	35,26	33,74	30,44	27,92
50	60,3	(STD) 40	3,91	6,24	5,97	5,38	4,94
		(XS) 80	5,54	11,45	10,96	9,89	9,07
		160	8,74	22,32	31,35	19,27	17,67
		(XXS)	11,07	30,89	29,55	26,67	24,46
65	73,0	(STD) 40	5,16	8,39	8,03	7,25	6,64
		(XS) 80	7,01	13,39	12,81	11,56	10,60
		160	9,53	20,41	19,52	17,62	16,15
		(XXS)	14,02	34,02	32,54	29,37	26,93
80	88,9	(STD) 40	5,49	7,54	7,21	6,51	5,97
		(XS) 80	7,62	12,26	11,73	10,58	9,70
		160	11,13	20,26	19,39	17,50	16,04
		(XXS)	15,24	30,39	29,07	26,23	24,06
90	101,6	(STD) 40	5,74	7,07	6,76	6,10	5,59
		(XS) 80	8,08	11,51	11,00	9,93	9,11
100	114,3	(STD) 40	6,02	9,88	9,45	8,53	7,82
		(XS) 80	8,50	14,31	13,69	12,36	11,33
		120	11,13	18,89	18,07	16,31	14,95
		160	13,49	23,30	22,29	20,11	18,58
		(XXS)	17,12	30,30	29,67	26,15	23,98
125	141,3	(STD) 40	6,55	8,68	8,31	7,49	6,87
		(XS) 80	9,43	12,80	12,25	11,05	10,13
		120	12,70	17,37	16,62	15,00	13,76
		160	15,88	22,07	21,11	19,06	17,47
		(XXS)	19,05	26,92	25,76	23,25	21,32
150	168,3	(STD) 40	7,11	7,88	7,52	6,81	6,24
		(XS) 80	10,97	12,36	11,82	10,67	9,79
		120	14,27	16,33	15,62	14,10	12,93
		160	18,26	21,25	20,32	18,35	16,82
		(XXS)	21,95	25,97	24,85	22,42	20,56
200	219,1	20	6,35	5,36	5,13	4,63	4,24
		30	7,04	5,94	5,68	5,12	4,70
		(STD) 40	8,18	6,94	6,64	5,99	5,50
		60	10,31	8,80	8,42	7,60	6,97
		(XS) 80	12,70	10,95	10,47	9,38	8,67
		100	15,09	13,10	12,53	11,31	10,37
		120	18,26	16,02	15,32	13,83	12,68
			20,62	18,25	17,46	15,76	
		(XXS)	22,23	19,77	18,91	17,07	15,65
		160	23,01	20,53	19,64	17,72	16,25
250	273,0	20	6,35	4,28	4,10	3,70	3,39
		30	7,80	5,28	5,05	4,56	4,18
		(STD) 40	9,27	6,29	6,01	5,43	4,98
		(XS) 60	12,70	8,71	8,34	7,52	6,89
		80	15,09	10,41	9,96	8,98	8,24
		100	18,26	12,70	12,15	10,96	10,05
		120	21,44	15,05	14,40	12,99	11,91
		(XXS) 140	25,40	18,10	17,23	15,55	14,26
		160	28,58	20,43	19,55	17,64	16,18

HIGH PRESSURE SEAMLESS OR WELDED PIPES

PRESSURE/TEMPERATURE RATINGS FOR SEAMLESS CARBON-STEEL PIPE TO ASTM A 106 GRADE B*



Temperature °C	-29 to 343	371	399	413
Allowable stress Mpa	103	99	89	82

Nominal bore mm	Outside diameter mm	Schedule number	Wall Thickness mm	Maximum working pressure, Mpa					
300	323,8	20	6,35	3,60	3,45	3,11	2,85		
		30	8,38	4,78	4,57	4,12	3,78		
		(STD)	9,52	5,43	5,20	4,69	4,30		
		40	10,31	5,89	5,63	5,09	4,66		
		(XS)	12,70	7,31	6,99	6,31	5,78		
		60	14,27	8,24	7,88	7,11	6,52		
		80	17,48	10,15	9,71	8,76	8,03		
		100	21,44	12,60	12,02	10,85	9,95		
		(XXS) 120	25,40	15,02	14,37	12,97	11,89		
		140	28,58	17,02	16,28	14,69	13,47		
		160	33,32	20,07	19,20	17,33	15,89		
		350	355,6	10	6,35	3,28	3,14	2,83	2,59
20	7,92			4,10	3,92	3,54	3,24		
(STD) 30	9,52			4,94	4,72	4,26	3,91		
40	11,13			5,78	5,54	4,99	4,58		
(XS)	12,70			6,64	6,35	5,73	5,25		
60	15,09			7,92	7,58	6,83	6,27		
80	19,05			10,07	9,63	8,69	7,97		
100	23,82			12,73	12,07	10,99	10,07		
120	27,79			14,96	14,31	12,91	11,84		
140	31,75			17,24	16,49	14,89	13,64		
160	35,71			19,55	18,70	16,88	15,47		
400	406,4			10	6,35	2,86	2,64	2,47	2,27
		20	7,92	3,58	3,42	3,09	2,83		
		(STD) 30	9,52	4,31	4,12	3,72	3,41		
		(XS) 40	12,70	5,79	5,54	5,00	4,59		
		80	16,66	7,64	7,31	6,60	6,05		
		80	21,44	9,92	9,49	8,56	7,85		
		100	26,19	12,21	11,68	10,54	9,67		
		120	30,96	14,57	13,94	12,50	11,53		
		140	36,52	17,36	16,60	14,98	13,74		
		160	40,49	19,39	18,55	16,73	15,35		
		450	457,2	10	6,35	2,54	2,43	2,19	2,01
				20	7,92	3,18	3,04	2,74	2,52
(STD)	9,52			3,83	3,66	3,30	3,03		
30	11,13			4,48	4,28	3,87	3,54		
(XS)	12,70			5,13	4,91	4,43	4,06		
40	14,27			5,78	5,53	4,99	4,58		
60	19,05			7,76	7,43	6,70	6,14		
80	23,83			9,79	9,37	8,45	7,75		
100	29,36			12,18	11,65	10,51	9,64		
120	34,92			14,60	13,98	12,61	11,56		
140	39,69			16,73	16,00	14,44	13,24		
160	45,24			19,24	18,40	16,60	15,22		
500	508,0	10	6,35	2,28	2,19	1,97	1,81		
		(STD) 20	9,52	3,44	3,29	2,96	2,72		
		(XS) 30	12,70	4,61	4,41	3,98	3,65		
		40	15,09	5,50	5,25	4,74	4,35		
		60	20,63	7,57	7,24	6,54	5,99		
		80	26,19	9,68	9,26	8,36	7,66		
		100	32,54	12,14	11,61	10,48	9,61		
		120	38,10	14,34	13,71	12,38	11,35		
		140	44,45	16,27	16,13	14,56	13,36		
		160	50,01	19,14	18,31	16,52	15,15		
		600	609,6	10	6,35	1,90	1,82	1,64	1,50
				(STD) 20	9,52	2,86	2,74	2,47	2,26
(XS)	12,70			3,83	3,67	3,31	3,03		
30	14,27			4,31	4,12	3,72	3,41		
40	17,48			5,30	5,07	4,57	4,19		
60	24,61			7,57	7,20	6,49	5,96		
80	30,96			9,54	9,12	8,23	7,55		
100	38,89			12,09	11,56	10,44	9,57		
120	46,02			14,43	13,81	12,46	11,42		
140	52,39			16,54	15,82	14,28	13,09		
160	59,34			18,98	18,15	16,38	15,02		