



# rare plastics



[www.rare.co.za](http://www.rare.co.za)



## Introduction

Rare Plastics manufacture and distribute HDPE pipe, fittings and backing rings from our factory in Meyerton, Gauteng. Pipes are manufactured to SANS ISO 4427 standards and sizes range from 16mm to 1000mm. The PE100 raw material is sourced from reputable manufacturers who comply to SANS ISO 4427 Part 1.

Rare Plastics is also accredited to manufacture SANS ISO 4437.2 gas pipe.

Rare is a proud member of SAPPMA (Southern African Plastic Pipe Manufacturers Association) and IFPA (Installation and Fabrication Plastics Pipe Association).

Rare has in-house fabrication facilities allowing us to fabricate and supply fittings to customer specific isometric drawings. Our fabrication capabilities include HDPE fabricated fittings such as segmented bends, tees, laterals, Y-pieces, elbows and saddle fusion reducing tees.

Stub and flanging of pipe is also offered as an additional service to customers by our in-house IFPA accredited welders.

The company also holds an ISO 9001:2015 accreditation.

## Benefits

HDPE piping systems offer many benefits when compared to most other materials; which typically include the following:

- High impact strength
- Resistance against chemicals, corrosion and abrasion
- Chemically inert and unaffected by acidic soil conditions
- Biologically inert against micro organisms
- Available in long lengths, reducing the number of joints
- Flexibility and toughness
- Inherent resistance to the effect of ground water movement
- Excellent hydraulic properties with low friction resistance throughout life
- Non-toxic and safe for drinking water
- Low installation cost and maintenance free
- Environmentally friendly
- Can be fusion welded, ensuring absolutely leak free joints
- Very suitable for rehabilitation of old pipelines

## Coil Dimensions

SIZE mm	LENGTH m	ID	WIDTH
20	100	700	225
25	100	700	280
32	100	700	350
40	100	1260	350
50	50	1600	275
50	100	1600	350
63	50	1600	330
63	100	1600	425
75	50	2000	315
75	100	2000	395
90	50	2000	380
90	100	2000	480
110	50	2000	445
110	100	2000	570

Ongoing engineering design efforts may affect the technical information listed in our publications.

## Applications

Some typical applications of HDPE pipe include the following:

- Mining (surface and underground)
- Water supply
- Agriculture / irrigation
- High temperature liquids and gases – usually not above 60°C
- Corrosive water and effluents
- Dewatering
- Drainage and sub-soil drainage
- Protection of electrical and telephone cables
- Hydraulic transport
- Pipeline rehabilitation



**DIMENSIONS OF PE 100 HDPE PIPES ISO / SANS 4427-2:2008 - SDR 7.4 TO SDR 17**

**DIMENSIONS OF PE100 HDPE GAS PIPES ISO / SANS 4437-2:2014**

SDR RATING		SDR 7.4						SDR 9						SDR 11						SDR 13.6						SDR 17	
PE 80		20		25		16		20		12.5		16		10		12.5		8		10							
OD	OD	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS	WALL THICKNESS	NOM	MASS					
min	max	min	Avg	max	ID	Kg/M	min	Avg	max	ID	Kg/M	min	Avg	max	ID	Kg/M	min	Avg	max	ID	Kg/M	min	Avg	max	ID	Kg/M	
16	16.3	2.3	2.5	2.7	11.15	0.10	2.0	2.15	2.3	11.85	0.09	2	2.15	2.3	15.9	0.12											
20	20.3	3	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											
25	25.3	3.5	3.75	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						
32	32.3	4.4	4.7	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	0.23	2	2.15	2.3	27.9	0.19	
40	40.3	5.5	5.85	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	0.29	
50	50.3	6.9	7.3	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	
63	63.4	8.6	9.1	9.6	45	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	
75	75.5	10.3	10.9	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	
90	90.6	12.3	13	13.7	64.3	3.02	10.1	10.7	11.3	68.9	2.56	8.2	8.7	9.2	72.9	2.13	6.7	7.1	7.5	76.1	1.78	5.4	5.75	6.1	78.8	1.46	
110	110.7	15.1	15.95	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	
125	125.8	17.1	18.05	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	
140	140.9	19.2	20.25	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	
160	161	21.9	23.05	24.2	114.4	9.53	17.9	18.85	19.8	122.8	8.04	14.6	15.4	16.2	129.7	6.72	11.8	12.45	13.1	135.6	5.55	9.5	10.05	10.6	140.4	4.55	
180	181.1	24.6	25.9	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	5.76	
200	201.2	27.4	28.85	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	8.64	11.9	12.55	13.2	175.5	7.10	
225	226.4	30.8	32.4	34	160.9	18.85	25.2	26.55	27.9	172.6	15.91	20.5	21.6	22.7	182.5	13.28	16.6	17.5	18.4	190.7	10.97	13.4	14.15	14.9	197.4	9.01	
250	251.5	34.2	36	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	13.51	14.8	15.6	16.4	219.6	11.04	
280	281.7	38.3	40.3	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	16.93	16.6	17.5	18.4	245.9	13.87	
315	316.9	43.1	45.35	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	
355	357.2	48.5	51	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	316	22.36	
400	402.4	54.7	57.5	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	
450	452.7	61.5	64.65	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	
500	503						55.8	58.65	61.5	384.2	78.17	45.4	47.75	50.1	406	65.21	36.8	38.7	40.6	424.1	53.90	29.7	31.25	32.8	439	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	67.63	33.2	34.95	36.7	491.8	55.41	
630	633.8						70.3	73.9	77.5	484.1	124.10	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	70.17	
710	716.4						79.3	83.35	87.4	545.3	158.00	64.5	67.8	71.1	576.4	131.70	52.2	54.9	57.6	602.2	108.77	42.1	44.3	46.5	623.4	89.18	
800	807.2						89.3	93.85	98.4	623.4	200.47	72.6	76.3	80	649.4	167.01	58.8	61.8	64.8	678.4	137.97	47.4	49.85	52.3	702.3	113.09	
900	908.1											81.7	85.85	90	730.3	211.40	66.1	69.6	73	762.8	174.79	53.3	56.05	58.8	789.9	143.05	
1000	1009.0											90.2	94.8	99.4	812.4	259.55	73.5	76.2	79.9	849.6	212.89	59.3	62.35	65.4	877.3	176.80	

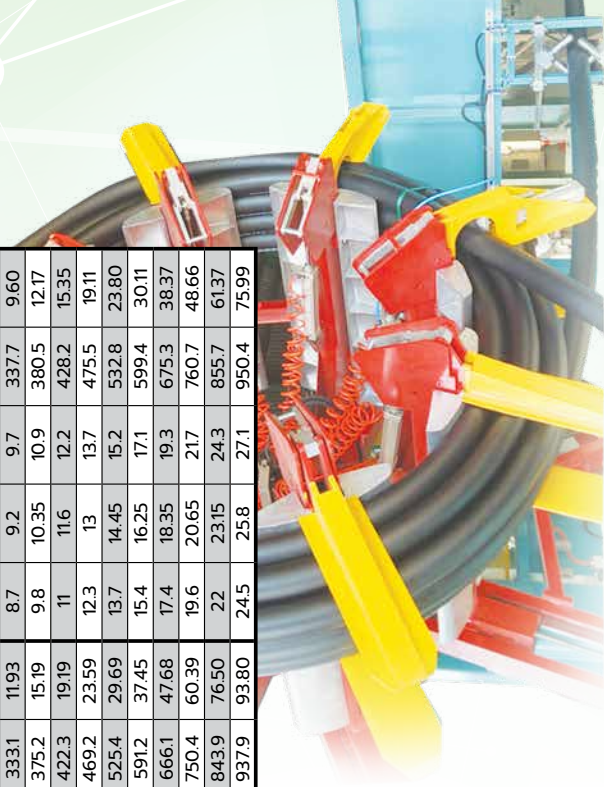
Ongoing engineering design efforts may affect the technical information listed in our publications.

The preferred series of pipes are SDR11 and SDR17 for gas applications

**DIMENSIONS OF PE 100 HDPE PIPES ISO / SANS 4427-2:2008 - SDR 21 TO SDR 41**

SDR RATING		SDR 21						SDR 26						SDR 33						SDR 41					
PE 80		6		8				5		6		4		5		3.2		4		4					
OD	max	WALL THICKNESS		NOM	MASS	WALL THICKNESS		NOM	MASS	WALL THICKNESS		NOM	MASS	WALL THICKNESS		NOM	MASS	WALL THICKNESS		NOM	MASS				
min	16.3	min	Avg	ID	Kg/M	min	Avg	ID	Kg/M	min	Avg	ID	Kg/M	min	Avg	ID	Kg/M	min	Avg	ID	Kg/M				
20	20.3																								
25	25.3																								
32	32.3																								
40	40.3	2	2.15	2.3	0.25																				
50	50.3	2.4	2.6	2.8	0.37	2.0	2.3	2.3	0.31																
63	63.4	3	3.2	3.4	0.58	2.5	2.7	2.9	0.49																
75	75.5	3.6	3.85	4.1	0.83	2.9	3.1	3.3	0.67																
90	90.6	4.3	4.6	4.9	1.19	3.5	3.75	4.0	0.97																
110	110.7	5.3	5.65	6	1.78	4.2	4.5	4.8	1.43																
125	125.8	6	6.35	6.7	2.27	4.8	5.1	5.4	1.85																
140	140.9	6.7	7.1	7.5	2.85	5.4	5.75	6.1	2.33																
160	161	7.7	8.15	8.6	3.74	6.2	6.6	7.0	3.06																
180	181.1	8.6	9.1	9.6	4.69	6.9	7.3	7.7	3.81																
200	201.2	9.6	10.15	10.7	5.82	7.7	8.15	8.6	4.72																
225	226.4	10.8	11.4	12	7.35	8.6	9.1	9.6	5.93																
250	251.5	11.9	12.55	13.2	8.99	9.6	10.15	10.7	7.35																
280	281.7	13.4	14.15	14.9	11.36	10.7	11.3	11.9	9.17																
315	316.9	15	15.8	16.6	14.27	12.1	12.8	13.5	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	18.12	13.6	14.35	15.1	14.76	10.9	11.5	12.1	333.1	11.93	8.7	9.2	9.7	337.7	9.60						
400	402.4	19.1	20.15	21.2	23.11	15.3	16.15	17.0	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	29.22	17.3	18.2	19.1	23.66	13.8	14.55	15.3	422.3	19.19	11	11.6	12.2	428.2	15.35						
500	503	23.9	25.15	26.4	36.06	19.1	20.15	21.2	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	45.13	21.4	22.55	23.7	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	57.01	24.1	25.4	26.7	58.11	19.3	20.35	21.4	591.2	37.45	15.4	16.25	17.1	599.4	30.11						
710	716.4	33.9	35.65	37.4	72.69	27.2	28.65	30.1	65.47	21.8	22.95	24.1	666.1	47.68	17.4	18.35	19.3	675.3	38.37						
800	807.2	38.1	40.1	42.1	92.14	30.6	32.2	33.8	73.76	24.5	25.8	27.1	750.4	60.39	19.6	20.65	21.7	760.7	48.66						
900	908.1	42.9	45.1	47.3	116.59	34.4	36.35	38.3	829.3	27.6	29.05	30.5	843.9	76.50	22	23.15	24.3	855.7	61.37						
1000	1009.0	47.7	50.15	52.6	144.04	38.2	40.2	42.2	921.6	30.6	32.05	33.5	937.9	93.80	24.5	25.8	27.1	950.4	75.99						

Ongoing engineering design efforts may affect the technical information listed in our publications.



# FLANGE & BOLT SPECIFICATIONS

FLANGE DIMENSIONS									FASTENERS				
FLANGE SIZE	OD	ID	THK	PCD	NO.	HOLE	e x 45	KG/PC	RARE RECOMMENDATION				
									D2	P-P HEX BOLT	P-S HEX BOLT	P-P STUD BOLT	P-S STUD BOLT
<b>BS T/D</b>													
25mm	101,6	38	10	73	4	14,3	4	0,50	M12	65	55	85	70
32mm	114,3	45	10	82,6	4	14,3	4	0,63	M12	65	55	85	70
40mm	120,7	51	10	87,3	4	14,3	4	0,69	M12	65	55	85	70
50mm	133,4	63	10	98,4	4	14,3	4	0,80	M12	65	55	85	70
63mm	152,4	78	10	114,3	4	17,5	4	0,98	M16	70	60	95	80
75mm	165,1	92	10	127	4	17,5	4	1,09	M16	70	60	95	80
90mm	184,1	110	10	146	4	17,5	4	1,27	M16	90	65	110	90
110mm	215,9	136	10	177,8	4	17,5	4	1,66	M16	100	75	125	95
125mm	215,9	136	10	177,8	4	17,5	4	1,66	M16	100	75	125	95
140mm	254	158	12	209,6	8	17,5	6	2,75	M16	110	75	125	100
160mm	279,4	190	12	235	8	17,5	6	2,93	M16	120	85	145	110
180mm	279,4	190	12	235	8	17,5	6	2,93	M16	120	85	145	110
200mm	336,3	237	12	292,1	8	17,5	6	4,04	M16	120	85	145	110
225mm	336,3	237	12	292,1	8	17,5	6	4,04	M16	140	95	165	120
250mm	406,4	279	16	355,6	8	22,2	8	8,23	M20	160	110	180	140
280mm	406,4	292	16	355,6	8	22,2	8	7,51	M20	160	110	180	140
315mm	457,2	330	19	406,4	12	22,2	8	11,10	M20	180	130	210	150
355mm	527,1	376	22	469,9	12	25,4	8	17,50	M24	200	140	240	180
400mm	577,9	430	22	520,7	12	25,4	8	19,20	M24	210	150	250	180
450mm	641,4	476	25	584,2	12	25,4	8	27,30	M24	220	150	250	190
500mm	704,9	533	28	641,4	16	25,4	8	35,00	M24	240	170	270	200
560mm	762	592	28	698	16	28,6	8	37,50	M24	240	170	270	200
630mm	825,5	662	30	755,7	16	28,6	8	46,80	M24	240	170	270	200
<b>SANS 1123 - T1000</b>													
50mm	150	63	10	110	4	18	4	1,07	M16	70	60	95	80
63mm	165	78	10	125	4	18	4	1,23	M16	70	60	95	80
75mm	185	92	12	145	4	18	4	1,82	M16	75	65	100	85
90mm	200	110	12	160	8	18	4	1,88	M16	90	70	115	95
110mm	220	136	12	180	8	18	4	2,03	M16	110	75	125	100
125mm	220	136	12	180	8	18	4	2,03	M16	110	75	125	100
140mm	250	158	14	210	8	18	6	3,02	M16	110	80	130	105
160mm	285	190	16	240	8	22	6	4,08	M20	140	100	160	130
180mm	285	190	16	240	8	22	6	4,08	M20	140	100	160	130
200mm	340	237	18	295	8	22	6	6,17	M20	140	100	170	130
225mm	340	237	18	295	8	22	6	6,17	M20	160	110	190	140
250mm	395	279	20	350	12	22	8	8,93	M20	160	120	190	150
280mm	395	292	20	350	12	22	8	8,02	M20	160	120	190	150
315mm	445	330	22	400	12	22	8	11,30	M20	190	130	210	160
355mm	505	376	25	460	16	22	8	16,40	M20	200	140	230	170
400mm	565	430	25	515	16	26	8	19,10	M24	220	150	250	190
450mm	615	476	30	565	20	26	8	25,60	M24	230	160	260	200
500mm	670	533	30	620	20	26	8	28,10	M24	240	170	270	200
560mm	730	592	35	675	20	26	8	36,50	M24	250	180	280	210
630mm - 725 PCD	780	662	36	725	20	26	8	39,80	M24	250	180	280	210
630mm - 780 PCD	835	662	36	780	20	26	8	54,60	M24	250	180	280	210
710mm	895	737	40	840	24	26	8	59,70	M24	260	190	290	220
800mm	1015	840	45	950	24	33	8	82,90	M30	280	210	320	250
900mm	1115	942	50	1050	28	33	8	100,40	M30	290	220	330	260
1000mm	1230	1045	55	1160	28	33	8	132,50	M30	300	230	340	270
<b>ASA 150#</b>													
32mm	107,9	45	10	79,4	4	15,9	4	0,53	M12	65	55	85	70
40mm	117,5	51	10	88,9	4	15,9	4	0,63	M12	65	55	85	70
50mm	127	63	10	98,4	4	15,9	4	0,69	M12	70	60	95	80
63mm	152,4	78	12	120,6	4	19	4	1,16	M16	75	60	95	85
75mm	177,8	92	12	139,7	4	19	4	1,61	M16	75	65	100	85
90mm	190,5	103	12	152,4	4	19	4	1,80	M16	90	70	115	95
110mm	228,6	136	15	190,5	8	19	4	2,86	M16	110	90	135	105
125mm	228,6	136	15	190,5	8	19	4	2,86	M16	110	90	135	105
140mm	254	158	16	215,9	8	22,2	6	3,52	M20	120	90	150	120
160mm	279,4	190	20	241,3	8	22,2	6	4,69	M20	140	110	170	140
180mm	279,4	190	20	241,3	8	22,2	6	4,69	M20	140	110	170	140
200mm	342,9	237	20	298,4	8	22,2	6	7,10	M20	140	110	170	140
225mm	342,9	237	20	298,4	8	22,2	6	7,10	M20	160	120	190	150
250mm	406,4	279	25	361,9	12	25,4	8	12,30	M24	180	130	210	170
280mm	406,4	292	25	361,9	12	25,4	8	11,20	M24	180	130	210	170
315mm	482,6	330	28	431,8	12	25,4	8	20,10	M24	200	150	240	180
355mm	533,4	376	30	476,2	12	28,6	8	24,70	M24	220	160	250	190
400mm	596,9	430	30	539,8	16	28,6	8	29,30	M24	230	160	260	200
450mm	635	476	35	577,8	16	31,9	8	34,70	M30	250	180	280	220
500mm	698,5	533	38	635	20	31,9	8	43,10	M30	260	190	300	230
560mm	812,8	592	40	749,3	20	34,9	8	70,60	M33	270	200	310	240
630mm	812,8	662	40	749,3	20	34,9	8	54,40	M33	270	200	310	240
710mm	927,1	737	52,4	863,6	28	34,9	8	122,00	M33	300	230	340	270
800mm	1060,4	840	57,1	977,9	28	41,3	8	170,00	M39	310	240	360	290
900mm	1168,4	942	60,3	1085,8	32	41,3	8	211,00	M39	320	250	370	300
1000mm	1289	1045	63,5	1200,1	36	41,3	8	279,90	M39	320	250	370	300

## FLANGE & BOLT SPECIFICATIONS

FLANGE DIMENSIONS									FASTENERS				
FLANGE SIZE	OD	ID	THK	PCD	NO.	HOLE	e x 45	KG/PC	RARE RECOMMENDATION				
									D2	P-P HEX BOLT	P-S HEX BOLT	P-P STUD BOLT	P-S STUD BOLT
<b>SANS 1123 - T1600</b>													
25mm	105	38	10	75	4	14	4	0,55	M12	65	55	85	70
32mm	115	45	10	85	4	14	4	0,65	M12	65	55	85	70
40mm	140	51	10	100	4	18	4	0,97	M16	70	60	95	80
50mm	150	63	10	110	4	18	4	1,07	M16	70	60	95	80
63mm	165	78	12	125	4	18	4	1,47	M16	75	60	95	85
75mm	185	92	12	145	4	18	4	1,82	M16	80	65	100	85
90mm	200	110	14	160	8	18	4	2,19	M16	100	75	115	95
110mm	220	136	14	180	8	18	4	2,36	M16	110	80	130	105
125mm	220	136	14	180	8	18	4	2,36	M16	110	80	130	105
140mm	250	158	16	210	8	18	6	3,45	M16	110	85	135	110
160mm	285	190	18	240	8	22	6	4,59	M20	140	100	170	130
180mm	285	190	18	240	8	22	6	4,59	M20	140	100	170	130
200mm	340	237	22	295	12	22	6	7,28	M20	150	110	170	140
225mm	340	237	22	295	12	22	6	7,28	M20	170	120	190	150
250mm	405	279	25	355	12	26	8	12,05	M24	180	130	210	170
280mm	405	292	25	355	12	26	8	10,90	M24	180	130	210	170
315mm	460	330	28	410	12	26	8	16,40	M24	200	150	240	180
355mm	520	376	30	470	16	26	8	21,90	M24	220	160	250	190
400mm	580	430	32	525	16	26	8	27,80	M24	230	170	270	200
450mm	640	476	35	585	20	26	8	36,60	M24	240	170	270	210
500mm	715	533	40	650	20	33	8	50,70	M30	270	200	310	240
560mm	775	592	40	710	20	33	8	56,40	M30	270	200	310	240
630mm	840	662	50	770	20	33	8	82,70	M30	290	220	330	260
710mm	910	737	50	840	24	33	8	79,90	M30	290	220	330	260
800mm	1025	840	60	950	24	39	8	114,30	M36	310	240	360	290
900mm	1125	942	65	1050	28	39	8	134,70	M36	320	250	370	300
1000mm	1255	1045	70	1170	28	39	8	190,30	M36	330	260	380	310
<b>SANS 1123 - T2500</b>													
90mm	200	103	22	160	8	18	4	3,64	M16	110	90	135	115
110mm	235	136	25	190	8	22	4	5,07	M20	140	110	160	140
125mm	235	136	25	190	8	22	4	5,07	M20	140	110	160	140
140mm	270	158	28	220	8	26	4	7,35	M24	150	120	180	150
160mm	300	190	30	250	8	26	6	8,98	M24	170	130	200	170
180mm	300	190	30	250	8	26	6	8,98	M24	170	130	200	170
200mm	360	237	28	310	12	26	6	11,30	M24	160	130	200	160
225mm	360	237	28	310	12	26	6	11,30	M24	180	140	220	170
250mm	425	279	30	370	12	26	8	17,60	M24	190	140	220	180
280mm	425	292	30	370	12	26	8	16,20	M24	190	140	220	180
315mm	485	330	32	430	16	26	8	22,80	M24	210	160	250	190
355mm	555	376	35	490	16	33	8	32,30	M30	240	180	270	210
400mm	620	430	40	550	16	33	8	45,00	M30	260	190	290	230
450mm	670	476	45	600	20	33	8	55,70	M30	270	200	300	240
500mm	730	533	50	660	20	33	8	70,10	M30	290	220	330	260
560mm	785	594	55	710	20	39	8	79,10	M36	300	230	350	280

Ongoing engineering design efforts may affect the technical information listed in our publications.

## FLANGE & BOLT SPECIFICATIONS

FLANGE DIMENSIONS									FASTENERS				
FLANGE SIZE	OD	ID	THK	PCD	NO.	HOLE	e x 45	KG/PC	RARE RECOMMENDATION				
									D2	P-P HEX BOLT	P-S HEX BOLT	P-P STUD BOLT	P-S STUD BOLT
<b>SANS 1123 - T1000 BLANK</b>													
63mm	165		12	125	4	18		1,92	M16		60		90
75mm	185		12	145	4	18		2,44	M16		70		90
90mm	200		14	160	8	18		3,23	M16		80		100
110mm	225		14	180	8	18		3,96	M16		80		110
125mm	225		14	180	8	18		3,96	M16		80		110
140mm	250		16	210	8	18		5,92	M16		90		110
160mm	285		18	240	8	22		8,59	M20		100		130
180mm	285		18	240	8	22		8,59	M20		100		130
200mm	340		18	295	8	22		12,41	M20		100		130
225mm	340		18	295	8	22		12,41	M20		110		140
250mm	395		20	350	12	22		18,60	M20		120		150
280mm	395		20	350	12	22		18,60	M20		120		150
315mm	445		22	400	12	22		26,10	M20		130		160
355mm	505		25	460	16	22		38,20	M20		140		170
400mm	565		25	515	16	26		47,60	M24		150		190
450mm	615		30	565	20	26		67,50	M24		160		200
500mm	670		32	620	20	26		86,00	M24		170		210
560mm	730		35	675	20	26		112,20	M24		180		210
630mm - 725 PCD	780		38	725	20	26		139,50	M24		190		220
630mm - 780 PCD	835		38	780	20	26		160,30	M24		190		220
<b>SANS 1123 - T1600 BLANK</b>													
50mm	150		10	110	4	18		1,31	M16		60		80
63mm	165		12	125	4	18		1,92	M16		60		90
75mm	185		12	145	4	18		2,44	M16		70		90
90mm	200		14	160	8	18		3,23	M16		80		100
110mm	220		14	180	8	18		3,60	M16		80		110
125mm	220		14	180	8	18		3,60	M16		80		110
140mm	250		16	210	8	18		5,92	M16		90		110
160mm	285		18	240	8	22		8,60	M20		100		130
180mm	285		18	240	8	22		8,60	M20		100		130
200mm	340		22	295	12	22		14,90	M20		110		140
225mm	340		22	295	12	22		14,90	M20		120		150
250mm	405		25	355	12	26		24,10	M24		130		170
280mm	405		25	355	12	26		24,10	M24		130		170
315mm	460		28	410	12	26		35,20	M24		150		180
355mm	520		30	470	16	26		48,10	M24		160		190
400mm	580		35	525	16	26		70,40	M24		170		210
450mm	640		40	585	20	26		97,80	M24		180		220
500mm	715		40	650	20	33		120,80	M30		200		240
560mm	775		40	710	20	33		142,90	M30		200		240
630mm	840		50	770	20	33		211,00	M30		220		260

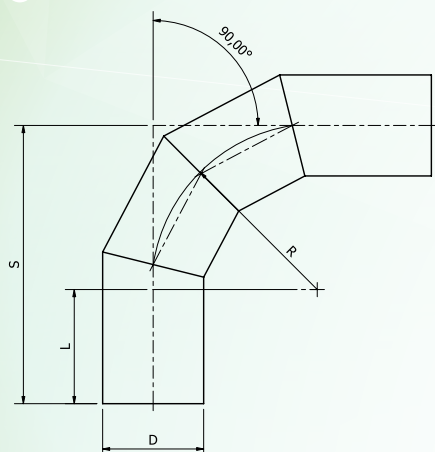
Ongoing engineering design efforts may affect the technical information listed in our publications.

# Fitting Dimensions

Fittings can be manufactured in a wide variety of Diameters and pressure ratings (PN). The most popular diameters begin from 75mm (OD) and PN 6 or higher. Permissible working pressure is 60% of the nominal pressure of the pipe used to fabricate the fitting. E.g. A PN10 pipe yields a PN6 fabricated fitting.

## Segmented Bends

### 90° Bend

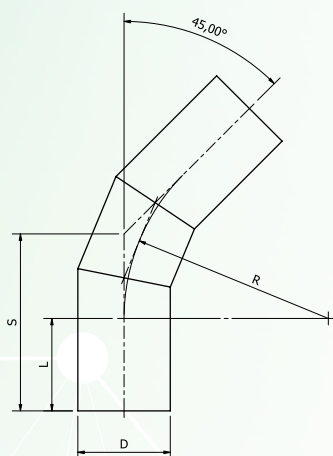


Derating factor for segmented bends:

Cut Angle $\beta$	Derating Factor $f\beta$
$\leq 7.5^\circ$	1.0
$7.5^\circ < \beta \leq 15^\circ$	0.8

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### 45° Bend



Derating factor for segmented bends:

Cut Angle $\beta$	Derating Factor $f\beta$
$\leq 7.5^\circ$	1.0
$7.5^\circ < \beta \leq 15^\circ$	0.8

D mm	L mm	R mm	S mm
90	150	323	499
110	150	333	509
125	150	339	517
140	150	346	524
160	150	356	534
180	150	374	553
200	150	383	563
225	250	394	676
250	250	406	688
280	250	420	703
315	300	436	771
355	300	584	931
400	300	614	963
450	300	645	997
500	350	681	1085
560	350	726	1134
630	350	793	1206

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D mm	L mm	R mm	S mm
90	150	472	346
110	150	482	350
125	150	490	353
140	150	497	356
160	150	507	360
180	150	517	364
200	150	527	368
225	250	540	474
250	250	552	479
280	250	567	485
315	300	585	542
355	300	856	655
400	300	879	664
450	300	904	674
500	350	929	735
560	350	959	747
630	350	1044	782

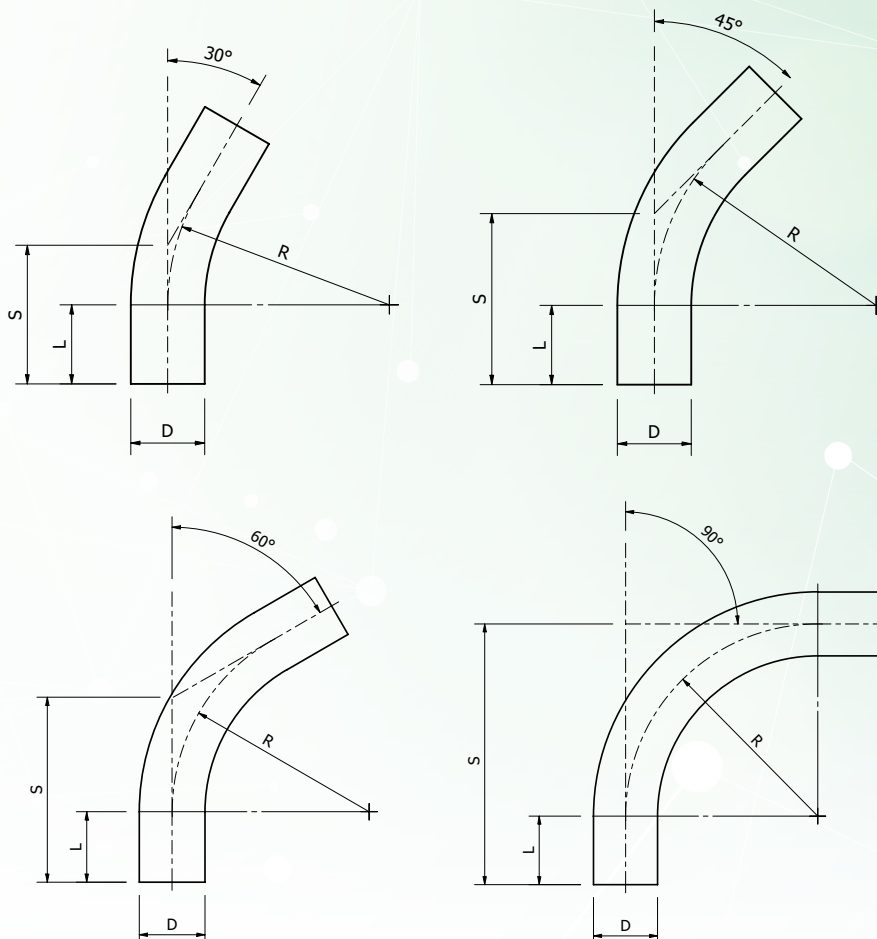
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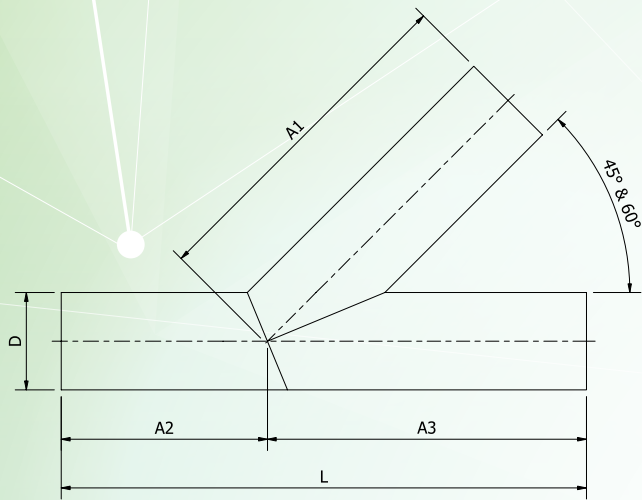
# Bend Dimensions

D mm	L mm	R mm	S-30° mm	S-45° mm	S-60° mm	S-90° mm
50	80	150	-	142	-	230
63	80	189	-	158	-	269
75	80	225	-	173	-	305
90	150	270	222	262	306	420
110	150	330	238	287	341	480
125	150	375	250	305	367	525
140	175	420	288	349	417	595
160	200	480	329	399	477	680
180	200	540	345	424	512	740
200	225	600	386	474	571	825
225	270	675	451	550	660	945
250	270	750	471	581	703	1020
280	300	840	525	648	785	1140
315	420	945	673	811	966	1365
355	420	1065	705	861	1035	1485
400	370	1200	692	867	1063	1570
450	400	1350	762	959	1179	1750
500	480	1500	882	1101	1346	1980
560	520	1680	970	1216	1490	2200
630	580	1890	1086	1363	1671	2470

Ongoing engineering design efforts may affect the technical information listed in our publications.  
Other SDR's available on request.



## Fabricated Laterals



Derating factor for Laterals:

$$PN = 0,5 \times PN$$

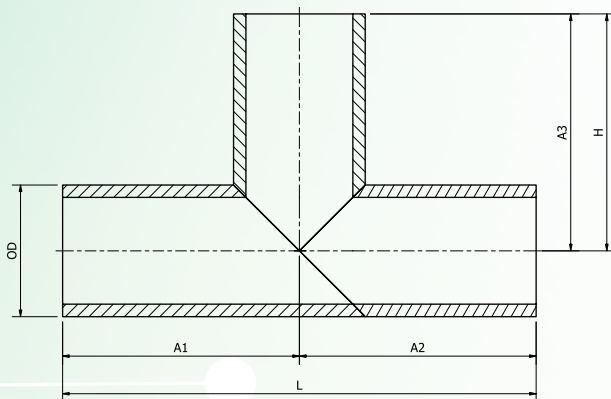
(PN = Nominal Pressure)

OD mm	A1 mm	A2 mm	A3 mm	S mm
90	475	370	580	950
110	475	370	580	950
125	475	370	580	950
140	475	370	580	950
160	475	370	580	950
180	875	530	820	1350
200	875	530	820	1350
225	875	530	820	1350
250	875	530	820	1350
280	900	700	1100	1800
315	900	700	1100	1800
355	900	700	1100	1800
400	900	700	1100	1800
450	1100	870	1330	2200
500	1330	870	1330	2200
560	1450	950	1450	2400
630	1450	950	1450	2400

Ongoing engineering design efforts may affect the technical information listed in our publications.

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## Fabricated T-Pieces



Derating factor for Tee Piece:

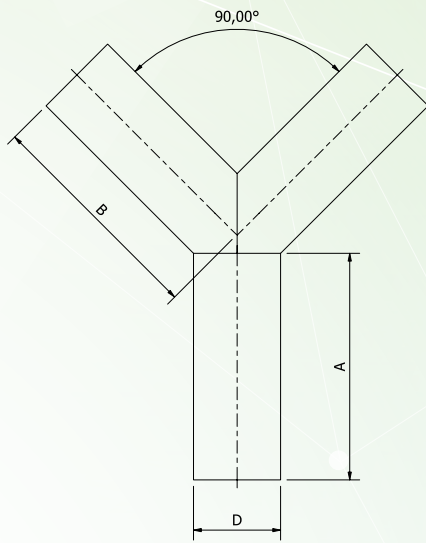
$$PN = 0,5 \times PN$$

(PN = Nominal Pressure)

OD mm	A1 mm	A2 mm	A3 mm	L mm	H mm
90	400	400	400	800	400
110	400	400	400	800	400
125	400	400	400	800	400
140	400	400	400	800	400
160	400	400	400	800	400
180	400	400	400	800	400
200	450	450	450	900	450
225	450	450	450	900	450
250	450	450	450	900	450
280	450	450	450	900	450
315	650	650	650	1300	650
355	650	650	650	1300	650
400	650	650	650	1300	650
450	850	850	850	1700	850
500	850	850	850	1700	850
560	900	900	900	1800	900
630	900	900	900	1800	900

Ongoing engineering design efforts may affect the technical information listed in our publications.

## True Y-Pieces



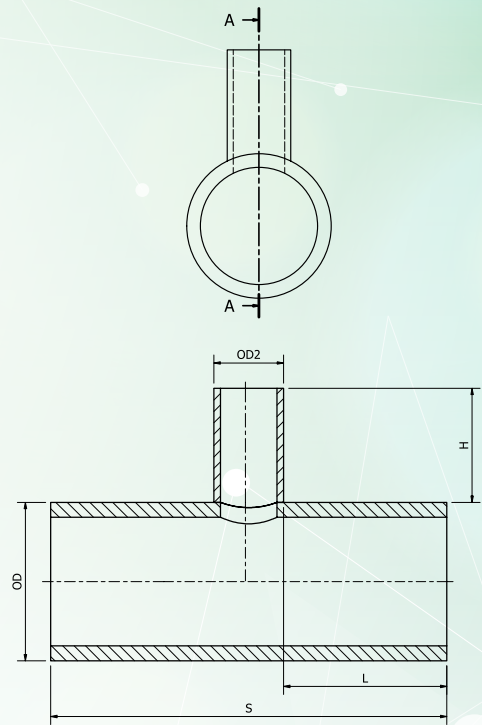
Derating factor for True Y Piece:
$PN = 0,5 \times PN$
(PN = Nominal Pressure)

D mm	A mm	B mm
90	200	300
110	250	350
125	250	450
140	500	500
160	500	500
180	500	500
200	500	500
225	550	550
250	650	650
280	650	650
315	700	700
355	700	700
400	1100	950
450	1100	1000
500	1200	1400
560	1200	1400
630	1200	1440

Ongoing engineering design efforts may affect the technical information listed in our publications.

## Saddle T-Pieces

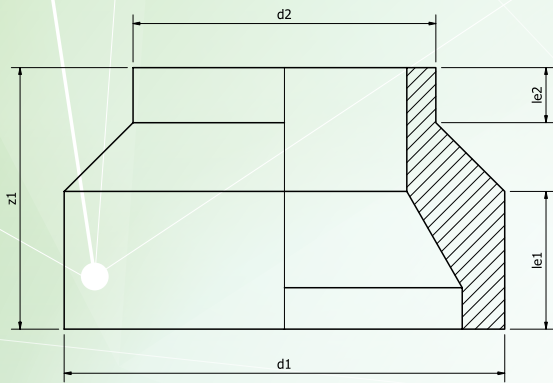
Header OD mm	Branch OD2 mm	S mm	L mm	H mm
90	50	350	175	180
110	50	350	175	180
125	50-63	363	181,5	180
140	50-63-75	375	187,5	180
160	50-63-75	375	187,5	180
180	50-63-75-90	390	195	180
200	50-63-75-90	390	195	180
225	50-63-75-90-110	410	205	180
250	50-63-75-90-110-125	625	312,5	180
280	50-63-75-90-110-125-140	640	320	180
315	50-63-75-90-110-125-140-160	760	380	180
355	90-110-125-140-160	760	380	200
400	90-110-125-140-160-180-200	800	400	200
450	90-110-125-140-160-180-200-225	825	412,5	200
500	90-110-125-140-160-180-200-225-250	950	475	200
560	90-110-125-140-160-180-200-225-250-280	980	490	200
630	90-110-125-140-160-180-200-225-250-280-315	1015	507,5	200
710*	225-250-280-315-355	1400	700	600
800*	225-250-280-315-355-400	1400	700	600
900*	225-250-280-315-355-400-450	1650	825	600
1000*	225-250-280-315-355-400-450-500	1900	950	600
1200*	225-250-280-315-355-400-450-500-560-630	2230	1115	600



Derating factor for Saddle Tee Piece:
$PN = 1 \times PN$
(PN = Nominal Pressure)

\*For information purposes only  
Ongoing engineering design efforts may affect the technical information listed in our publications.

## Butt Weld Concentric Reducers



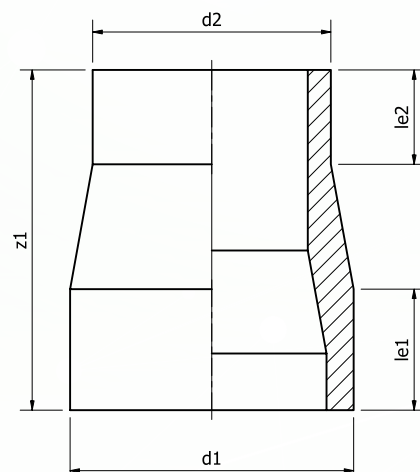
## Elongated Concentric Reducers

d1 mm	d2 mm	le1 mm	le2 mm	z1 mm	SDR	Weight kg	
						SDR17	SDR11
63	50	64	58	152	11   17	0,09	0,13
75	50	70	55	155	11   17	0,12	0,18
75	63	70	65	171	11   17	0,15	0,22
90	63	79	70	182	11   17	0,21	0,31
90	75	79	70	182	11   17	0,23	0,33
110	75	84	74	185	11   17	0,31	0,45
110	90	84	81	186	11   17	0,34	0,50
125	90	91	90	200	11   17	0,45	0,66
125	110	90	90	200	11   17	0,50	0,73
140	110	116	90	230	11   17	0,68	0,99
140	125	117	96	235	11   17	0,74	1,10
160	110	110	89	254	11   17	0,92	1,33
160	125	110	95	254	11   17	0,96	1,42
160	140	110	106	254	11   17	0,91	1,51
180	125	105	87	245	17	1,11	-
180	140	115	90	260	11   17	1,25	2,27
180	160	126	125	279	11   17	1,44	2,12
200	140	123	114	279	17	1,55	-
200	160	122	122	277	11   17	1,64	2,42
200	180	126	120	279	11   17	1,80	2,65
225	200	126	120	272	11   17	2,21	3,25
250	200	151	116	324	11   17	3,06	4,51
250	225	155	122	330	11   17	3,34	4,93
280	225	142	122	335	17	3,96	-
280	250	139	135	340	11   17	4,25	6,63
315	225	150	125	365	17	5,29	-
315	250	150	134	365	11   17	5,49	7,93
315	280	150	145	365	11   17	5,84	8,49
355	315	170	170	380	11   17	7,68	9,35
400	355	180	170	390	11   17	10,04	14,77
450	400	190	180	410	11   17	13,38	19,71
500	450	200	190	430	11   17	17,50	25,76
560	500	210	200	450	11   17	22,91	33,69

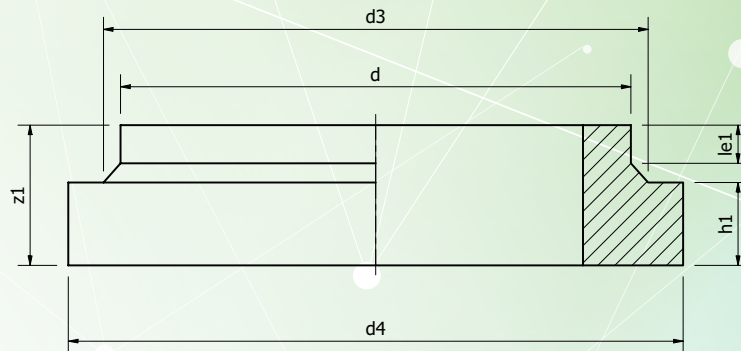
Ongoing engineering design efforts may affect the technical information listed in our publications. Other SDR's available on request.

d1 mm	d2 mm	le1 mm	le2 mm	z1 mm	SDR	Weight kg	
						SDR17	SDR11
63	50	32	25	90	11   17	0,07	0,10
75	50	32	25	90	11   17	0,11	0,13
75	63	32	25	90	11   17	0,10	0,14
90	63	32	28	95	11   17	0,18	0,20
90	75	32	28	95	11   17	0,14	0,20
110	75	40	28	95	11   17	0,22	0,25
110	90	40	30	95	11   17	0,22	0,27
125	90	40	30	95	11   17	0,33	0,33
125	110	40	30	95	11   17	0,27	0,37
140	110	50	20	95	11   17	0,42	0,54
140	125	50	20	95	11   17	0,38	0,52
160	110	50	20	95	11   17	0,65	0,72
160	125	50	20	95	11   17	0,55	0,71
160	140	50	20	95	11   17	0,42	0,68
180	125	50	20	95	17	0,72	-
180	140	50	20	95	11   17	0,68	0,87
180	160	50	20	95	11   17	0,61	0,84
200	140	50	20	95	17	0,88	-
200	160	50	20	95	11   17	0,82	1,07
200	180	50	20	95	11   17	0,75	1,04
225	200	50	20	95	11   17	0,95	1,30
250	200	50	20	110	11   17	1,21	1,61
250	225	60	25	110	11   17	1,33	1,84
280	225	60	30	120	17	1,93	-
280	250	60	30	120	11   17	1,81	2,50
315	225	65	30	120	17	2,52	-
315	250	65	30	120	11   17	2,46	3,24
315	280	65	30	120	11   17	2,31	3,18
355	315	70	30	120	11   17	2,95	4,06
400	355	70	35	140	11   17	3,76	5,53
450	400	70	35	140	11   17	4,76	7,08
500	450	70	35	140	11   17	5,93	8,76
560	500	70	35	140	11   17	7,58	11,14

Ongoing engineering design efforts may affect the technical information listed in our publications. Other SDR's available on request.



## Butt Weld/Short Spigot HDPE Stub Dimensions



d mm	d3 mm	d4 mm	le1 mm	h1 mm	z1 mm	Weight kg	
						SDR17	SDR11
50	63	83	15	20	50	0,09	0,10
63	74	98	15	20	50	0,13	0,14
75	86	110	15	20	50	0,17	0,19
90	103	129	15	20	50	0,23	0,26
110	127	158	18	27	60	0,41	0,47
125	133	158	18	27	60	0,38	0,46
140	157	186	18	27	60	0,54	0,64
160	177	217	15	35	65	0,89	1,03
180	188	217	20	35	70	0,80	0,99
200	217	270	20	35	70	1,54	1,81
225	233	270	20	45	80	1,46	1,78
250	267	320	30	45	90	2,28	2,70
280	288	320	30	45	90	2,06	2,66
315	330	370	30	55	100	3,34	4,17
355	373	430	30	60	110	5,15	6,31
400	427	482	30	65	110	6,65	8,13
450	474	540	30	65	110	8,10	9,98
500	530	585	30	70	115	9,99	12,40
560	592	645	30	70	115	11,81	14,83
630*	642	685	30	70	115	11,76	15,60
630**	642	725	30	70	115	14,87	18,71
710	737	800	30	70	115	14,87	18,71
800	840	905	30	70	115	21,48	24,46
900	945	1005	30	70	120	27,91	36,10
1000	1047	1110	30	70	140	37,93	49,48

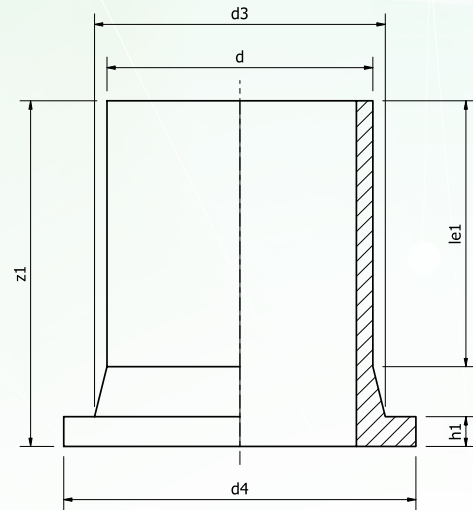
\* 630 HDPE STUB: FLANGES: SANS1123-T1000 (725 PCD); ASA 150#

\*\* 630 HDPE STUB: FLANGES: B/S T/D; SANS1123-T1000 (780 PCD); SANS1123-T1600; SANS1123-T2500

Ongoing engineering design efforts may affect the technical information listed in our publications.

Other SDR's available on request.

# Elongated HDPE Stub Dimensions



d mm	d3 mm	d4 mm	le1 mm	z1 mm	h1 mm	Weight kg
SDR11						
50	63	83	77	112	20	0,15
63	74	98	88	123	20	0,22
75	86	110	94	129	20	0,29
90	103	129	100	138	20	0,44
110	125	158	113	160	18	0,71
125	132	158	116	170	25	0,88
140	155	188	128	182	25	1,26
160	175	212	155	208	25	1,79
180	186	212	168	202	30	1,97
200	232	268	140	206	32	3,06
225	235	268	135	201	32	3,19
250	285	320	138	219	35	4,88
280	291	320	152	231	35	5,37
315	335	370	158	239	35	7,29
355	373	430	170	240	40	9,67
400	427	482	180	266	46	13,74
450	474	540	190	295	60	19,51
500	530	585	200	310	60	24,60
560	592	645	320	405	70	38,50
630*	642	685	305	390	70	43,60
630**	662	725	305	390	70	46,55
710	737	800	355	440	70	64,70
800	840	905	425	510	70	93,60
900	945	1005	435	525	70	120,50
1000	1047	1110	470	580	70	162,10

d mm	d3 mm	d4 mm	le1 mm	z1 mm	h1 mm	Weight kg
SDR17						
50	63	83	77	112	20	0,12
63	74	98	88	123	20	0,18
75	86	110	94	129	20	0,23
90	103	129	100	138	20	0,34
110	125	158	113	158	18	0,54
125	132	158	122	170	18	0,61
140	153	188	130	173	18	0,83
160	175	212	160	208	18	1,24
180	186	212	140	200	20	1,34
200	232	268	133	199	24	2,17
225	235	268	135	201	24	2,22
250	285	320	148	220	25	3,44
280	291	320	154	230	25	3,68
315	335	370	166	242	25	5,09
355	373	430	170	240	40	7,14
400	427	482	180	266	46	10,16
450	474	540	190	295	60	14,48
500	530	585	200	310	60	18,10
560	592	645	320	405	70	27,50
630*	642	685	305	390	70	30,60
630**	662	725	305	390	70	33,55
710	737	800	355	440	70	46,10
800	840	905	425	510	70	66,20
900	945	1005	435	525	70	84,60
1000	1047	1110	470	580	70	114,20

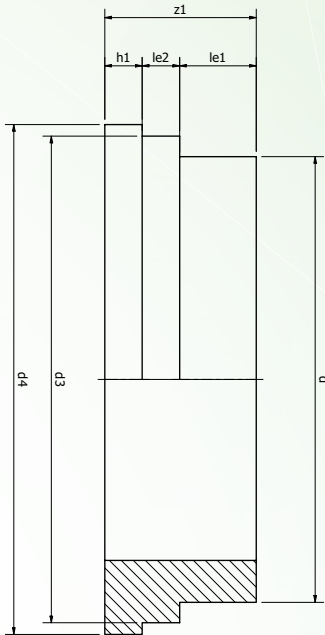
\* 630 HDPE STUB: FLANGES: SANS1123-T1000 (725 PCD); ASA 150#

\*\* 630 HDPE STUB: FLANGES: B/S T/D; SANS1123-T1000 (780 PCD); SANS1123-T1600; SANS1123-T2500

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Other SDR's available on request.

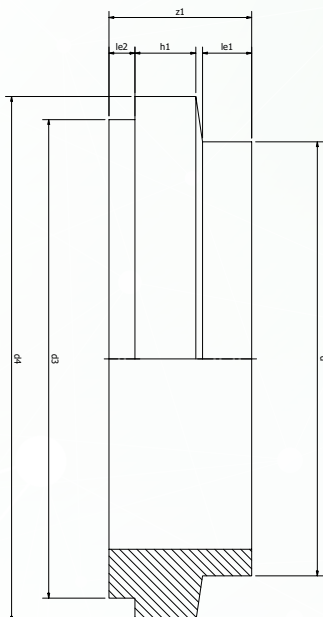
## Shouldered stubs



d	d3	d4	le1	le2	h1	z1	SDR	Weight kg	
								SDR17	SDR11
50	62	68,5	22	10	16	48	11   17	0,06	0,07
63	85	97	20	15	16	51	11   17	0,14	0,15
75	90	97	20	15	16	51	11   17	0,12	0,15
90	115	124,5	24,5	15	16,5	56	11   17	0,23	0,27
110	115	124,5	24,5	15	16,5	56	11   17	0,17	0,23
125	161	178,5	14	15	17	46	17	0,45	-
140	161	178,5	14	15	17	46	11   17	0,38	0,46
160	160	160	0	29	17	46	11   17	0,29	0,39
200	218	231,5	43	21	21	85	11   17	0,92	1,21
225	273	286	43	21	21	85	17	1,62	-
250	273	286	43	21	21	85	11   17	1,41	1,86

Ongoing engineering design efforts may affect the technical information listed in our publications.

## Tak Stubs



d	d3	d4	le1	le2	h1	z1	SDR	Weight kg	
								SDR17	SDR11
50	62	68,5	22	10	16	48	11   17	0,06	0,07
63	85	97	20	15	16	51	11   17	0,14	0,15
75	90	97	20	15	16	51	11   17	0,12	0,15
90	115	124,5	24,5	15	16,5	56	11   17	0,23	0,27
110	115	124,5	24,5	15	16,5	56	11   17	0,17	0,23
125	161	178,5	14	15	17	46	17	0,45	-
140	161	178,5	14	15	17	46	11   17	0,38	0,46
160	160	160	0	29	17	46	11   17	0,29	0,39
200	218	231,5	43	21	21	85	11   17	0,92	1,21
225	273	286	43	21	21	85	17	1,62	-
250	273	286	43	21	21	85	11   17	1,41	1,86

Ongoing engineering design efforts may affect the technical information listed in our publications.

## Handling, storage and transportation

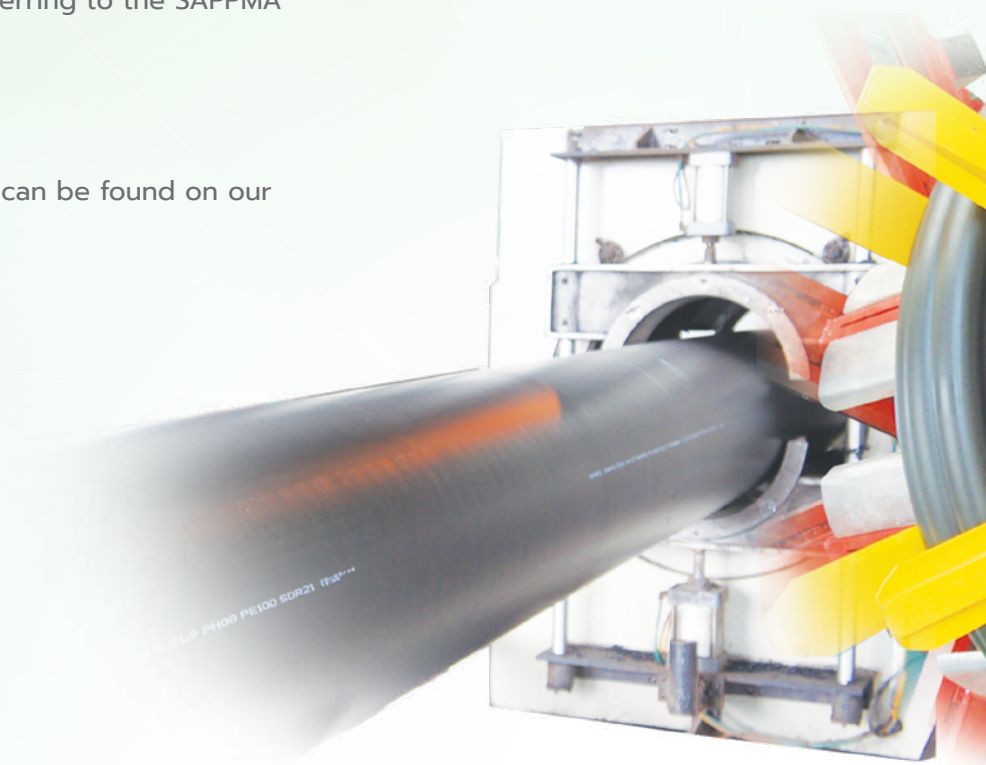
As SAPPMA members we suggest referring to the SAPPMA technical manual.

## Accreditations

The latest revisions of accreditations can be found on our website or provided on request.

**i-cert**  
ISO 9001: 2015

**SATAS**  
SANS ISO 4427.2  
SANS ISO 4437.2



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