
JOINTING



JOINTING METHOD FOR uPvc AND mPvc PIPE WITH INTEGRAL Z-LOK JOINTS

All pressure pipes leave our factory with a 15 degree chamfered spigot and the depth of entry marked. It may, however, become necessary to cut a pipe in the field and should cut the length be required for further jointing, we recommend the following procedure for the spigot end.

- 1. Cleaning before jointing**
Remove shavings from the cut end of the pipe and smooth the pipe spigot if necessary. Clean and dry. The chamfer must be at 15 degrees to the pipe axis. While making the chamfer, the pipe wall thickness must not be reduced by more than half the original thickness.
- 2. Applying Z-Lok lubricant**
lubricate evenly around the spigot and the inside of the socket, paying attention to the seal with suitably approved lubricant over half the spigot length. Move the spigot pipe so that the leading edge is just engaging the socket mouth before insertion.
- 3. Aligning the pipes**
Make sure that the pipes align correctly in both planes. This is most important, i.e do not try to align the spigot at an angle. The flexibility of pipe in sizes 110mm and below may prevent correct alignment during assembly and therefore, the force required to assemble the joint should be applied as near to the spigot as possible with the socket held in position.
- 4. Assembling the joint**
Placing the tip of the spigot into the mouth of the socket, make certain both pipes are in alignment. Push the spigot into the socket, until it touches the seal. Ensure that contact is kept between spigot and seal and push firmly past the lip of the seal. Small bore pipes may be joined by hand but larger sizes may need an impact to push the spigot past the lip of the seal. Use a piece of wood or rubber to protect the end of the pipe being impacted to prevent damage to the pipe. Once the spigot has passed the lip of the seal the pipe will move easily into the socket.
- 5. The completed joint**
The spigot must be pushed into the socket up to the depth of entry mark.

COMPRESSION FITTING JOINTS

Assembly instructions

1. Cut the pipe square and clean. Partilly unscrew the nut.
2. Push the pipe into the fitting over the clamp ring until the first stop, meaning you have reached the seal.
3. Push the pipe through the seal until you reach the full insertion depth of the fitting.
4. Screw on the nut tightly toward the body of the fitting.

OTHER FITTINGS

SEWER AND DRAIN FITTINGS

Moulded fittings are available in 110mm and certain fittings in 160mm (*). A range of fabricated fittings are available in sizes 100mm to 500mm.

Included in the range are:

Bends, junctions (*), adaptors, caps (*), inspection pipes, P traps, gully heads, sockets, connectors and rodding eyes.

SOIL AND WASTE FITTINGS

Moulded fittings in 50mm are available in this range.

Included in this range are:

Bends, junctions, sockets and adaptors.

A range of fabricated fittings are also available.



PE-HD Piping

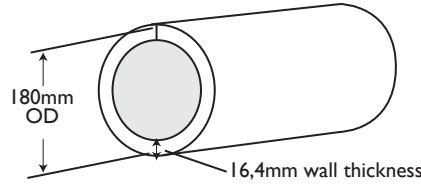


SDR Formula

$$SDR = \frac{\text{nominal (minimum) outside diameter}}{\text{minimum wall thickness}}$$

Example:

$$SDR 11 = \frac{180}{16,4}$$



Relationship between wall thickness and outside diameter (OD)

Technical Specifications

High Density Polyethylene - HDPE. Typical applications = Chemicals, Slurries, Potable Water and Compressed Air
 Applicable Standards - SABS ISO 4427: 1996 (Safety Factor PE 63 = 1.5, PE 80 = 1.25 and PE 100 = 1.25)

Nominal Diameter	STANDARD DIMENSIONAL RATIO - SDR ⁽¹⁾								
	SDR 21			SDR 13,6			SDR 11		
	NOMINAL PRESSURE - PN ⁽²⁾								
	PN 6,3			PN 10			PN 12,5		
OD mm	e	ID	kg/m	e	ID	kg/m	e	ID	kg/m
16	-	-	-	-	-	-	-	-	-
20	-	-	-	1,9	15,9	0,12	2,3	15,0	0,14
25	-	-	-	-	-	-	-	-	-
32	1,6	28,5	0,17	-	-	-	-	-	-
40	1,9	35,9	0,25	-	-	-	-	-	-
50	2,4	44,8	0,40	-	-	-	-	-	-
63	3,0	56,6	0,62	-	-	-	-	-	-
75	3,6	67,3	0,88	-	-	-	-	-	-

PE-HD (Black) pipe to SABS ISO 4427 and DIN 8074 (Supply of Water)
 PW 100, PE 80 & PE 63 Pipe Dimensions (SABS ISO 4427)

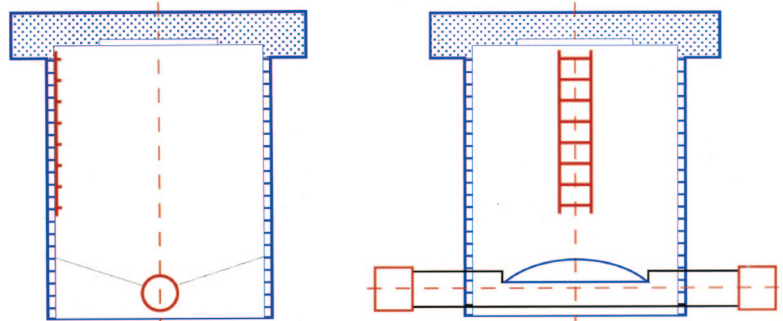
Nom OD	STANDARD DIMENSIONAL RATIO - SDR ⁽¹⁾ (PIPE SERIES)																							
	SDR 33 (S16)			SDR 26 (S 12,5)			SDR 21 (S 8,3)			SDR 17 (S 8)			SDR 13,6 (S 6,3)			SDR 11 (S 5)			SDR 9 (S 4)			SDR 7,4 (S 3,2)		
	NOMINAL PRESSURE - PN ⁽²⁾																							
	PE 63 PN 3,2			PE 63 PN 4			PE 100 PN 10			PE 100 PN 10			PE 100 PN 12,5			PE 100 PN 16			PE 100 PN 20			PE 100 PN 25		
ID																								
mm	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m	e	ID	Kg/m
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	2,3	15,1	0,1	2,3	15,1	0,1	2,3	15,1	0,1	2,8	14,1	0,2
25	-	-	-	-	-	-	-	-	-	2,3	20,1	0,2	2,3	20,1	0,2	2,3	20,1	0,2	2,8	19,1	0,2	3,5	17,6	0,2
32	-	-	-	-	-	-	-	-	-	2,3	27,1	0,2	2,4	26,9	0,2	3,0	25,6	0,3	3,6	24,4	0,3	4,4	22,7	0,4
40	-	-	-	2,3	35,1	0,3	-	-	-	2,4	34,9	0,3	3,0	33,7	0,4	3,7	32,2	0,4	4,5	30,5	0,5	5,5	28,3	0,6
50	-	-	-	2,3	45,1	0,4	-	-	-	3,0	43,7	0,5	3,7	42,4	0,6	4,6	40,2	0,7	5,6	38,1	0,8	6,9	35,3	1,1
63	2,3	58,1	0,5	2,5	57,7	0,5	-	-	-	3,8	55,0	0,7	4,7	53,0	0,9	5,8	50,7	1,1	7,1	47,9	1,3	8,6	44,7	1,5
75	2,3	70,2	0,6	2,9	69,0	0,7	-	-	-	4,5	65,6	1,0	5,6	63,2	1,3	6,8	60,6	1,5	8,4	57,2	1,8	10,3	53,1	2,1
90	2,8	84,2	0,8	3,5	82,7	1,0	4,3	81,0	1,2	5,4	78,6	1,5	6,7	75,8	1,8	8,2	72,6	2,2	10,1	68,5	2,6	12,3	63,8	3,1
110	3,4	103,0	1,2	4,2	101,3	1,4	5,3	99,0	1,8	6,6	96,2	2,2	8,1	92,9	2,7	10	88,8	3,2	12,3	83,9	3,9	15,1	77,9	4,6
125	3,9	117,0	1,5	4,8	115,0	1,9	6	112,5	2,3	7,4	109,4	2,8	9,2	105,6	3,4	11,4	100,8	4,2	14	95,3	5,0	17,1	87,8	6,0
140	4,3	131,2	1,9	5,4	128,8	2,4	6,7	126,0	2,9	8,3	122,6	3,5	10,3	118,3	4,3	12,7	113,1	5,2	15,7	106,7	6,3	19,2	98,3	7,6
160	4,9	149,9	2,5	6,2	146,1	3,1	7,7	143,9	3,8	9,5	140,0	4,6	11,8	135,1	5,6	14,6	129,0	6,9	17,9	121,2	8,3	21,9	112,4	9,9
180	5,5	168,7	3,1	6,9	165,7	3,9	8,6	162,1	4,8	10,7	157,5	5,9	13,3	152,0	7,2	16,4	144,5	8,8	20,1	136,4	10,5	24,6	126,5	12,5
200	6,2	187,3	3,9	7,7	184,0	4,8	9,6	179,9	5,9	11,9	175,0	7,2	14,7	168,9	8,8	18,2	160,6	10,9	22,4	151,4	13,0	27,4	140,4	15,4
225	6,9	210,8	4,9	8,6	207,2	6,0	10,8	202,4	7,5	13,4	196,8	9,2	16,6	189,2	11,4	20,5	180,6	13,8	25,2	170,3	16,5	30,8	158,0	19,5

Larger sizes up to 1000mm available

- (1) The standard ratio SDR corresponds to the quotient between the outside diameter and the wall thickness of the pipe. It is non-dimensional.
 - (2) The nominal pressure PN corresponds to the maximum permissible operating pressure of the pipe at 20°C, in bar.
 - (3) e = minimum Wall Thickness
- The above tables are based on the standards ISO 4427, DIN 8074, AS 4130 and ISO 4065/150 161/1**
 The weights are calculated at the base of average diameter and thickness values, according to tolerances specified in the standard
 A range of butt weld and electrofusion fittings are available for the above piping.

HDPE STRUCTURED WALLED MANHOLES

HDPE structured walled manholes are fabricated from piping and are complete with benching and pipe connections. Shaft diameters range from 350mm to 1800mm. Shaft stiffness selection, 2 kN/m², 4 kN/m², 8 kN/m², is based on the installation site and compactability of the backfill. Standard manhole covers and lids can be utilized with the system, and will be selected according to traffic loads. When required stepladders can be fitted inside the manhole.





uPvc PVC-U PRESSURE PIPES

uPvc Pipes are manufactured as follows:

- To SABS 966 Part I specifications
- Size range 20mm - 500mm outside diameter
- Pressure range - PN 4-PN25
- Plain edged in 20mm - 40mm sizes
- With integral socket in 50mm - 500mm sizes
- Design stress - 10 MPA in sizes up to 90mm and PN 4 to PN 20
- Design stress - 10 MPA in sizes 110mm - 500mm in PN 4
- Light blue in colour
- Lengths normally 6 metres

uPvc Pipe dimensions and mass SABS 966 PART I
PVC-U

Size														
OD	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
20									1.5	0.15	2.0	0.17		
25							0.15	0.19	1.9	0.23	2.5	0.27		
32					1.5	0.24	1.9	0.29	2.4	0.36	3.1	0.43		
40			1.5	0.30	1.8	0.36	2.3	0.45	3.0	0.56	3.0	0.63		
50	1.5	0.38	1.5	0.38	2.2	0.54	2.9	0.69	3.7	0.86	4.9	1.06		
63	1.5	0.49	1.9	0.60	2.8	0.85	3.6	1.08	4.7	1.37	6.1	1.67		
75	1.5	0.58	2.2	0.83	3.3	1.20	4.3	1.53	5.6	1.94	7.3	2.37		
90	1.8	0.82	2.7	1.20	3.9	1.68	5.1	2.17	6.7	2.77	8.7	3.40		
110	2.2	1.23	2.8	1.33	4.15	1.94	5.45	2.53	7.1	3.27	8.7	3.97	10.6	4.8
125	2.5	1.57	3.25	1.71	4.7	2.51	6.15	3.27	8.05	4.22	9.85	5.13	12.10	6.26
140	2.8	1.95	3.55	2.15	5.2	3.14	6.9	4.1	9	5.3	11	6.43	13.50	7.82
160	3.2	2.56	4.05	2.8	5.95	4.11	7.85	5.35	10.25	6.92	12.55	8.40	15.40	10.19
200	4.0	3.93	5.0	4.38	7.45	6.42	9.75	8.36	12.8	10.82	15.7	13.12	19.2	15.89

Larger sizes up to 500mm available

SEWER PIPES - PVC-U PIPES

Structured Walled Pvc Multi-layer Sewer Pipes are manufactured as follows:

- To SABS 1601
- With foamed core in a multi-layer configuration
- In sizes 110 mm - 250mm
- With pipe stiffness of 200 kPA and 400 kPA
- With plain ends in 110 mm
- With integral sockets - 100mm - 250mm
- Beige in colour

Structured wall PVC-U Sewer Pipes

Size	200KPA		400KPA	
OD	mm	Kg/m	mm	Kg/m
110	2.75	0.91	3.2	1.22
169	4.2	2.27	4.8	2.41
200	5.0	3.38	6.0	3.75
250	6.3	5.56	7.3	5.96

PVC SOIL, WASTE & VENT PIPE

PVC Soil, Waste and Vent Pipes are manufactured as follows:

- To SABS 967
- Size range 40 mm - 110mm
- Plain ended
- UV stabilized
- White in colour

PVC-U Soil and Vent Pipe

Size	Pipe Mass (kg/m)	Wall thickness (mm)
40	0.41	2.3
50	0.57	2.4
110	1.80	3.6

PVC-U SOLID WALL SEWER PIPES

Suprador Sewer Pipes are manufactured as follows:

- To SABS 791 specifications
- Size range 110mm - 500mm
- Pipe stiffness 100kPA (Class 51)
- Pipe stiffness 300kPA (Class 34)
- Plain ended 110mm
- With integral sockets - 110mm - 500mm
- Beige in colour

PVC-U Solid Wall Sewer Pipes

Size	Class 51-100KPA		Class 34-300KPA	
OD	mm	Kg/m	mm	Kg/m
110	2.2	1.23	3.2	1.74
160	3.2	2.56	4.7	3.65
200	3.9	3.93	5.9	5.7
250	4.9	6.	7.3	8.82
315	6.2	9.57	9.2	13.96
355	7.0	12.00	10.6	17.74
400	7.8	15.36	11.7	22.44
500	10	23.11	15.45	34.09

PVC-U MULTILAYER SOIL AND VENT PIPE

PVC Soil & Vent Pipes are manufactured as follows:

- To JASWIC and EN 1453-1
- Size range 110mm
- Plain ended
- UV stabilized
- White in colour

PVC-U Multilayer Soil and Vent Pipe

Size	Pipe Mass (kg/m)	Wall thickness (mm)
110	1.22	3.2



WAM GARDEN HOSES

WAM garden hoses have a PVC inner liner and outer cover, reinforced with polyester yarn

SABS 645-170 type II

WAM Industrial

10 year design life

Burst pressure of 4 000 kPa

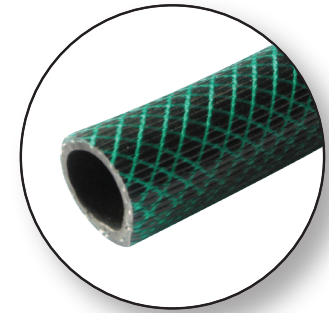
Internal Diameter (mm)	12	20	25
Mass per metre (g)	210	338	538

WAM Standard

6 year design life

Burst pressure of 2 800 kPa

Internal Diameter (mm)	12	20
Mass per metre (g)	100	200



WAM Medium

7 year design life

Burst pressure of 3 000 kPa

Internal Diameter (mm)	12	20
Mass per metre (g)	150	268

FITTINGS

Compression fittings and clamp saddles

Compression fittings range:

16mm - 110mm

Pressure rating: 16mm - 110mm PN16

Clamp saddle ranges and pressure rating:

PN10 unreinforced 20mm x 1/2" - 160mm x 2"

Clamp saddles with stainless steel reinforcing ring and Alprene flat gasket:

PN16 unreinforced 25mm x 1/2" - 160mm x 2"

PN10 bar unreinforced 20mm x 1/2" - 315mm x 2"

Quick coupling valve:

3/4" and 1"

Key for quick coupling valve: 3/4"

Polypropylene threaded fittings:

1/2" - 3"

NOTE: Refer to price list for details of full product range and dimensions, local and international certification and assembly instructions