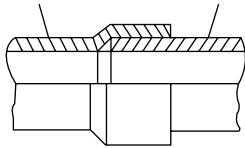


Assembling Types and Instructions



a. Solvent Cement Joint

Socketed Pipe Plain Spigot Pipe

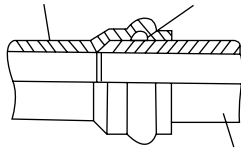


Nominal Diameters (mm)										
40	50	63	75	90	110	160	225	315	355	400

- Mark the socket length on the pipe
- Clean both surfaces
- Apply Solvent cement inside socket and then to the spigot
- Whilst pushing, quarter turn until the mark length

b. Rubber Ring Joint

Bell Formed Pipe Rubber Ring Plain Spigot Pipe

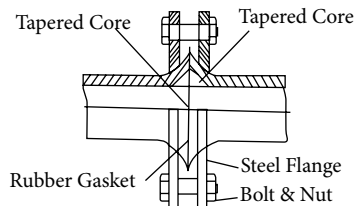


Nominal Diameters (mm)										
63	72	90	110	160	225	160	225	280	315	355

- Clean both surfaces which are to be joined and the rubber ring.
- Place the rubber ring correctly, apply lubricant on spigot end, rubber ring and insert at bell end.
- Ready for use as soon as the joint is completed. Rubber ring is easy to install but it cannot end loaded.

c. Tapered Core And Flanged Joint

Tapered Core Tapered Core Rubber Gasket Steel Flange Bolt & Nut



Nominal Diameters (mm)										
40	50	63	75	90	110	160	225	280	315	355

- Clean both surfaces which are to be joined and the rubber gasket. Place the gasket correctly and tighten the bolts and nuts diagonally.
- Tapered flanged joints are used to join flanged fitting or non PVC pipe and can be end loaded.

Marking on Pipes and Fittings



a. Marking on Pipes

uPVC 40 x 2.4 PN_T 11W  147

Un-plasticized
Polyvinyl chloride

Pipe Nominal
Diameter

Pipe Pressure Class

SLS Standard
Reference



b. Marking on Fittings

S-lon PN_T 11 32mm ELBOW  659

Company
Logo

Pressure Class

Size

Item Name

SLS Standard
Reference



S-Ion uPVC Pipes Pressure Pipes & Fittings



INTRODUCTION

PVC pressure pipes are manufactured from unplasticized polyvinyl chloride polymer (a thermoplastic material) using the extrusion process. PVC (also known as uPVC and PVC-U) pipes were introduced to Sri Lanka in the late 1950s by S-Ion and are now widely accepted for use in water supply, irrigation and sewerage rising mains.



The good flow characteristics are the result of the smooth bore and good a resistance to abrasion. It is light in weight, easy to join together, making uPVC a good alternative to the more traditional materials. Their high strength to weight ratio together with exceptional resistance to corrosion or chemical attack makes these pipes ideal for major infrastructure applications.



MATERIALS

S-Ion uPVC is stabilized with compounds conforming to the International safety levels (Non Lead) for vinyl chloride monomer (VCM) and the WRAS requirements for use with potable water.

COLOUR

uPVC products are recognized by their light grey colour.

CHEMICAL RESISTANCE

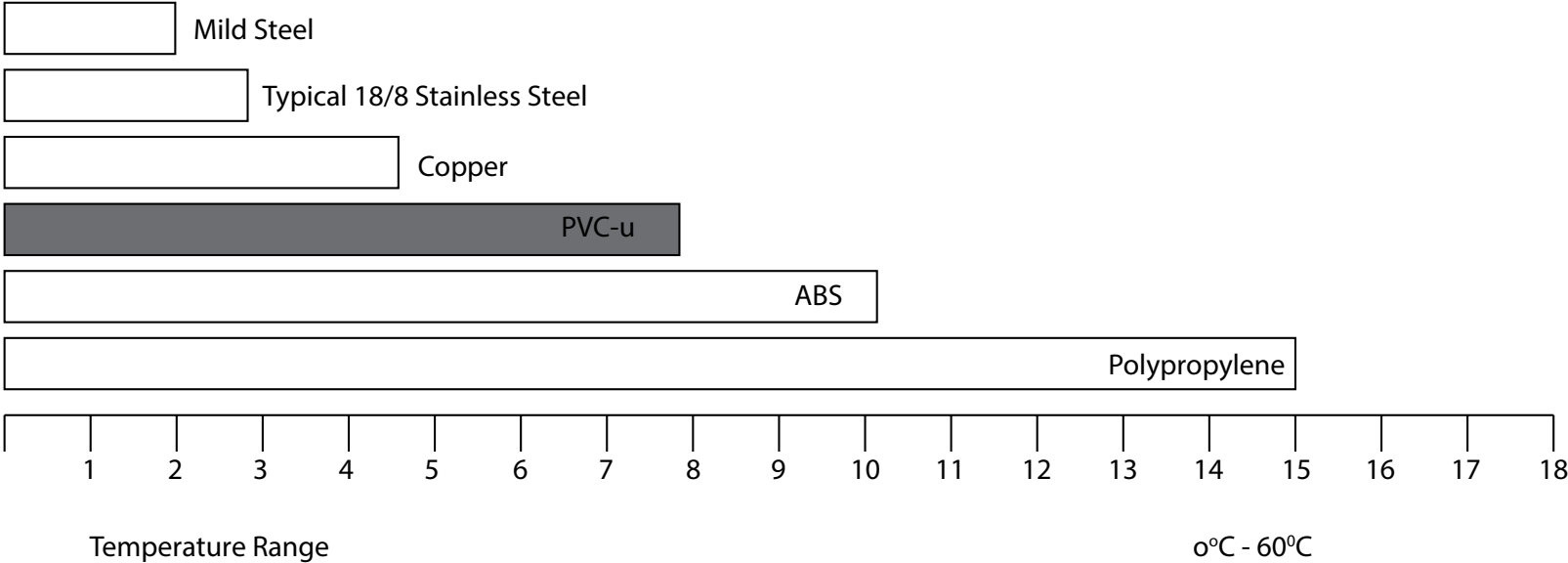
The chemical resistance properties of uPVC is excellent: it is resistant to most solutions of acids, alkalis and salts and to solvents that can be mixed with water. uPVC is not resistant to aromatic and chlorinated hydrocarbons.

S-Ion uPVC Pipes Pressure Pipes & Fittings



Thermal Expansion

The thermal coefficient of linear expansion for uPVC is $7.8 \times 10^{-5} \text{m/m} \cdot ^\circ\text{C}$
It is necessary in certain situations to make special provision for this expansion and contraction.
Thermal expansion of uPVC is compared with other materials, in the following chart.



S-Ion uPVC Pipes Pressure Pipes & Fittings



STANDARDS

Individual products are in compliance with appropriate Standards:

Pipe (mm size)	SLS 147:2013 , BS EN ISO 1452-2:2009
Fittings (mm size)	SLS 659:2015 , BS EN ISO 1452-3:2009
Sealing Rings	BS EN 681-1
Bends	SLS 659:2015 , BS EN ISO 1452-3:2009



QUALITY MANAGEMENT SYSTEM

Pipes, fittings and other accessories are manufactured in an environment, which operates a Quality Assurance System assessed to ISO 9001.

DRINKING WATER/ APPROVAL TO USE IN CONTACT

In any situation which could result in the PVC-U pipes, fittings and solvent cement coming into contact with water which is intended for human consumption. This shall be in accordance with the requirements of BS 6920 Part 1.

WRAS-UK (Water Regulations Advisory Scheme) certified that S-Ion uPVC pressure pipes are suitable for use in contact with water intended for human consumption with regards to their effect on the quality of the water.

S-Ion uPVC pipes are listed in the WRAS website under 'Product and Material' category.



S-Ion uPVC Pipes Pressure Pipes & Fittings



WHY PVC FOR PRESSURE APPLICATIONS?

S-Ion PVC pressure pipe systems offer many advantages when compared to traditional products, namely:



- Enhanced hydraulic performance.
- Durability and toughness – resistance to handling and installation damage.
- Corrosion resistance – greater service life.
- Lower mass – ease of handling and installation, particularly suited to labour intensive projects.
- Locked-in sealing ring system – no specialist installation skills required.
- Savings on installation time.
- Manufactured within internationally accepted standards.
- Service performance in excess of 50 years.
- Highly recyclable - Waste generated during manufacturing is pulverized and reprocessed.
- Unique combination of properties:
 - Toughness
 - Stiffness
 - High tensile and hoop strength
 - Excellent resistance to creep
- Savings on transport cost.
- Energy efficient - PVC pipe production consumes less energy during manufacturing than steel, clay or ductile iron.



S-lon uPVC Pipes Pressure Pipes & Fittings



SLS 147:2013

SPECIFICATION FOR UNPLASTICIZED POLYVINYL CHLORIDE PIPES FOR WATER SUPPLY THROUGH BURIED AND ABOVE GROUND DRAINAGE AND SEWERAGE UNDER PRESSURE (Third Revision)

DIAMETER

PVC pressure pipes are specified by their nominal size (i.e. outside diameter) in millimeters. For design purposes, reference should be made to tables detailing the internal diameters as calculated from the average wall thicknesses of the particular pressure class of pipe.

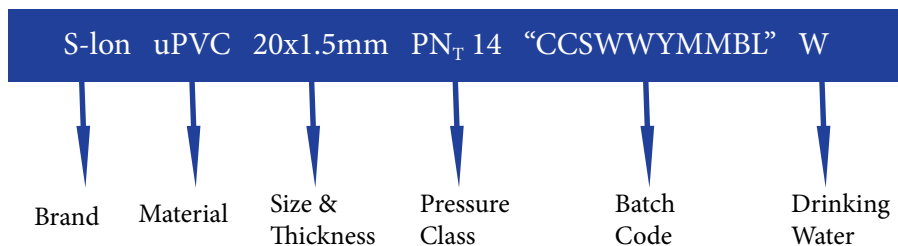
PRESSURE CLASS

A range of pressure “classes” is available in each size. These classes are based on the pipe’s recommended maximum working pressure in bar. For example, a class PN_T 14 pipe has a recommended maximum working pressure of 14 bar, or 14 metres head at a temperature of 30°C.

S-lon unplasticized PVC (PVC-U) pressure pipe is a tried and tested system demonstrating a long track record in the water reticulation sector. S-lon pressure pipes are manufactured to the SLS 147 specification, incorporating the traditional design stresses of 10 and 12.5 MPa. The product is ideally suited to applications in both pumping and gravity designs.

MARKING

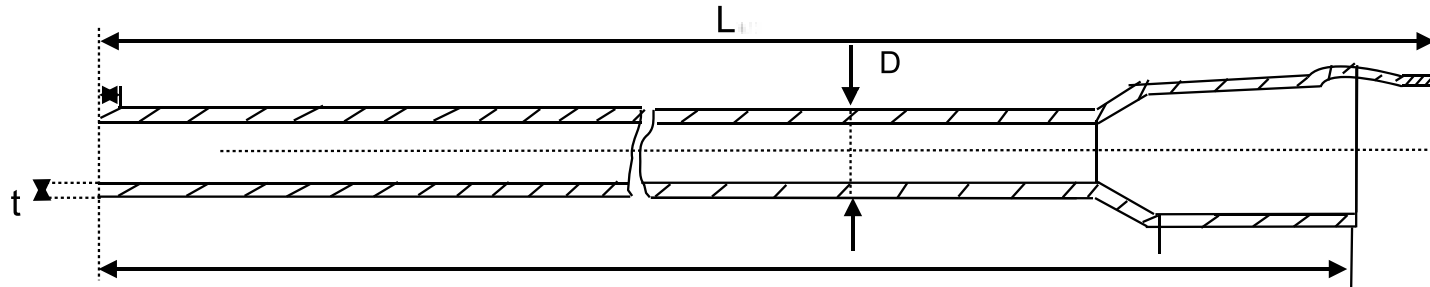
Eg: S-lon 20 mm PN_T 14 uPVC pipe



Dimensions of S-Ion uPVC Pipes



uPVC Pipes for human consumption and for general purposes as well as sewerage under pressure. SLS 147: 2013

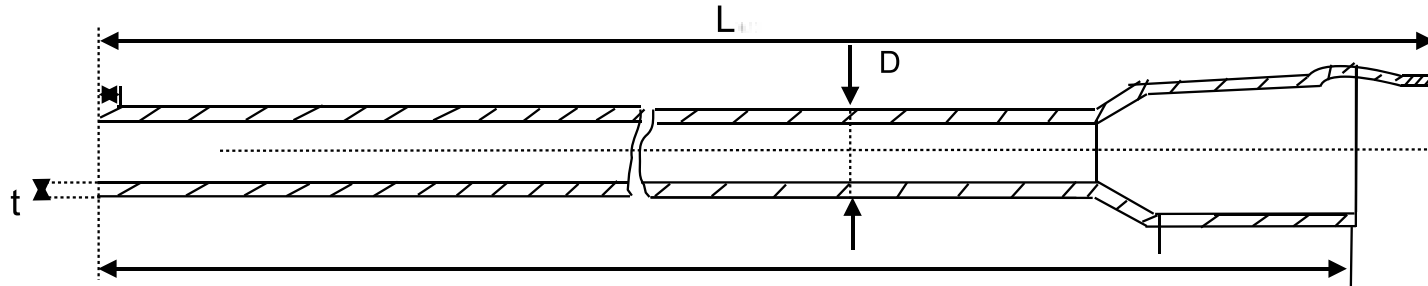


Nominal Diameter (dn)	Mean Outer Diameter d_{em}		Wall Thickness (t)										Length (L)
			S-12.5		S-10		S-8		S-6.3		S-5		
			SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		
			PN _T 7		PN _T 9		PN _T 11		PN _T 14		PN _T 18		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
20	20.0	20.2	-	-	-	-	-	-	1.5	1.9	1.9	2.3	4000
25	25.0	25.2	-	-	-	-	1.5	1.9	1.9	2.3	2.3	2.8	4000
32	32.0	32.2	1.5	1.9	1.6	2.0	1.9	2.3	2.4	2.9	2.9	3.4	4000
40	40.0	40.2	1.6	2.0	1.9	2.3	2.4	2.9	3.0	3.5	3.7	4.3	4000
50	50.0	50.2	2.0	2.4	2.4	2.9	3.0	3.5	3.7	4.3	4.6	5.3	4000
63	63.0	63.3	2.5	3.0	3.0	3.5	3.8	4.4	4.7	5.4	5.8	6.6	4000
75	75.0	75.3	2.9	3.4	3.6	4.2	4.5	5.2	5.6	6.4	6.8	7.7	4000
90	90.0	90.3	3.5	4.1	4.3	5.0	5.4	6.2	6.7	7.6	8.2	9.3	4000

Dimensions of S-Ion uPVC Pipes



uPVC Pipes for human consumption and for general purposes as well as sewerage under pressure. SLS 147: 2013



Nominal Diameter (<i>dn</i>)	Mean Outer Diameter <i>d_{em}</i>		Wall Thickness (<i>t</i>)										Length (<i>L</i>)
			S-16		S-12.5		S-10		S-8		S-6.3		
			SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		
			PN _T 7		PN _T 9		PN _T 11		PN _T 14		PN _T 18		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
110	110.0	110.4	3.4	4.0	4.2	4.9	5.3	6.1	6.6	7.5	8.1	9.2	6000
140	140.0	140.5	4.3	5.0	5.4	6.2	6.7	7.6	8.3	9.4	10.3	11.6	6000
160	160.0	160.5	4.9	5.6	6.2	7.1	7.7	8.7	9.5	10.7	11.8	13.2	6000
225	225.0	225.7	6.9	7.8	8.6	9.7	10.8	12.1	13.4	15.0	16.6	18.5	6000
280	280.0	280.9	8.6	9.7	10.7	12.0	13.4	15.0	16.6	18.5	20.6	22.9	6000
315	315.0	316.0	9.7	10.9	12.1	13.6	15.0	16.8	18.7	20.8	23.2	25.8	6000
355	355.0	356.1	10.9	12.2	13.6	15.2	16.9	18.8	21.1	23.5	26.1	29.0	6000

PN_T - Nominal Pressure for temperature at 30°C

Note :The preferred nominal length would be 4m or 6m which does not include the depth of socket.

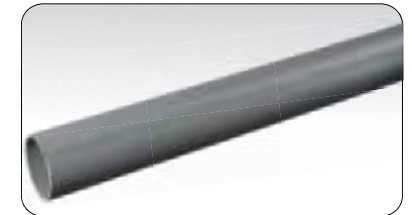
S-Ion uPVC Pipes For Potable Cold Water Supply



Available Diameters, Pressure Classes & Types

Nominal Diameter	PN _T 7		PN _T 9		PN _T 11		PN _T 14		PN _T 18		Standard Length+/-	
	●	●	●	●	●	●	●	●	●	●		
20								●	●			4m
25						●	●					4m
32		●	●		●	●		●	●			4m
40		●	●		●	●		●	●			4m
50		●	●		●	●		●	●			4m
63		●	●	●	●	●	●	●	●	●		4m
75		●	●	●	●	●	●	●	●	●		4m
90		●	●	●	●	●	●	●	●	●		6m
110		●	●	●	●	●	●	●	●	●		6m
140		●	●	●	●	●	●	●	●	●		6m
160		●	●	●	●	●	●	●	●	●		6m
225		●	●	●	●	●	●	●	●	●		6m
280		●	●	●	●	●	●	●	●	●		6m
315		●	●	●	●	●	●	●	●	●		6m
355												6m

● Plain Ended Pipes



● One End Socketed for Rubber Ring Joint



● One End Socketed for Solvent Cement Joint

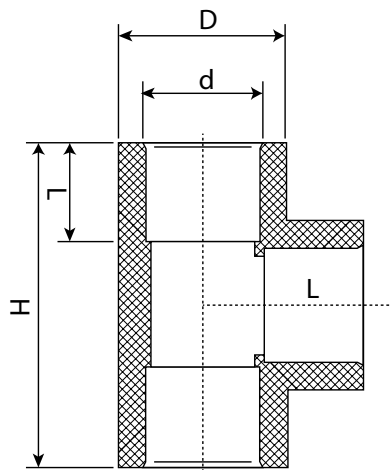


S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Equal Tee 90° - Plain SS



Size	L	Z	D	H	Weight	Pack Size
d *	mm	mm	mm	mm	g	nos
20	16	11	28	54	27	50
25	19	14	34	65	37	50
32	22	17	42	78	59	25
40	26	21	51	94	90	10
50	31	26	61	114	140	100
63	38	33	75	141	274	75
75	44	39	89	165	490	01
90	51	46	106	194	720	02
110	61	56	129	234	1180	01
140	76	71	163	294	2940	01
160	86	81	186	334	4954	01
225	119	114	258	466	9800	01

*PN_T 11 and PN_T 14 for 20 mm

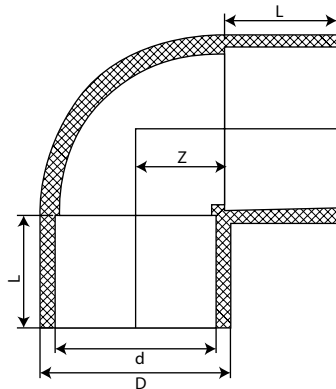
SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Elbow 90° - Plain SS



Size	L	Z	D	Weight	Pack Size
d *	mm	mm	mm	g	nos
20	16	11	28	19	50
25	19	14	34	30	50
32	22	17	39	45	25
40	26	21	51	68	200
50	31	26	59	110	100
63	38	33	75	226	75
75	44	39	89	335	01
90	51	46	106	528	02
110	61	56	129	916	01
140	76	71	163	1360	01
160	86	81	186	3322	01
225	119	114	258	6950	01

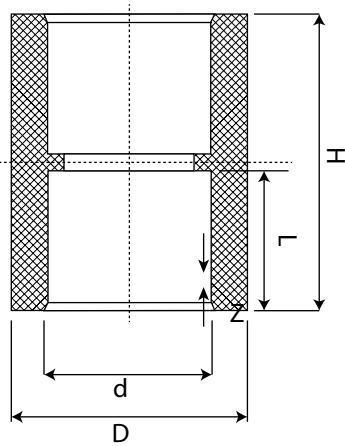
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Socket - Plain SS



Size	L	Z	D	H	Weight	Pack Size
d *	mm	mm	mm	mm	g	nos
20	16	3	27	38	12	50
25	19	3	32	43	18	50
32	22	3	39	49	26	50
40	26	3	47	60	40	10
50	31	3	57	70	55	200
63	38	3	72	83	105	100

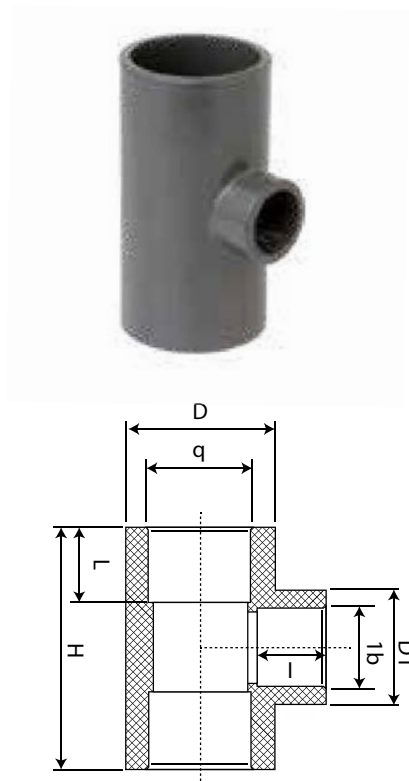
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Reducing Tee- Plain SS



Size	L	l	Z	D	d	H	Weight	Pack Size
D ₁ X d ₁ *	mm	mm	mm	mm	mm	mm	g	nos
25x20	19	16	14	31	26	52	37	50
32x20	22	16	17	38	26	82	53	25
32X25	22	19	17	38	31	82	56	25
40X20	26	16	21	47	27	100	87	10
40x25	26	19	21	47	32	100	92	10
40x32	26	22	21	47	39	100	92	10
50x20	31	16	26	57	27	120	130	10
50x25	31	19	26	57	27	120	130	10
50x32	31	22	26	57	39	120	139	10
50x40	31	26	26	57	47	120	139	10
63x20	38	16	33	72	27	146	255	05
63x25	38	19	33	72	32	146	255	05
63x32	38	22	33	72	39	146	260	05
63x40	38	26	33	72	47	146	260	05
63x50	38	31	33	72	57	146	261	05
90x40	51	26	47	46	49	196	629	02
90x50	51	31	47	46	60	196	659	02
90x63	51	38	47	46	74	196	651	02
90x75	51	44	47	46	87	196	626	02
110x50	61	31	57	56	60	236	1050	01
110x63	61	38	57	56	74	236	1053	01
110x75	61	44	57	56	87	236	1080	01
110x90	61	51	57	56	104	236	1105	01

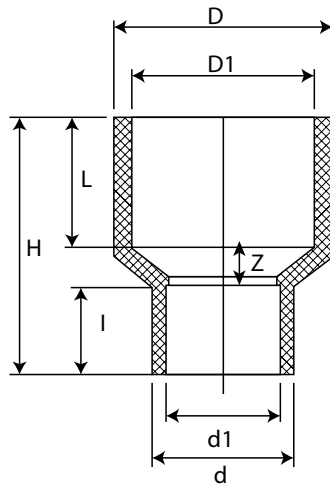
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Reducing Socket - Plain SS



Size	L	l	Z	D	d	H	Weight	Pack Size
D ₁ X d ₁ *	mm	mm	mm	mm	mm	mm	g	nos
25x20	19	16	6	31	26	42	17	50
32x20	22	16	8	38	26	46	22	50
32x25	22	19	8	38	31	49	24	50
40x20	26	16	10	46	26	52	32	10
40x25	26	19	10	46	31	55	34	10
40x32	26	22	10	46	38	58	38	10
50x20	31	16	15	56	26	57	44	10
50x25	31	19	15	56	31	65	46	10
50x32	31	22	15	56	38	68	51	10
50x40	31	26	15	56	46	72	58	10
63x20	38	16	20	72	26	74	87	10
63x25	38	19	20	72	39	146	260	05
63x32	38	22	17	72	38	77	95	10
63x40	38	26	17	72	46	81	98	10
63x50	38	31	17	72	56	86	106	10
90x40	51	26	25	103	46	102	237	02
90x50	51	31	23	103	56	105	246	02
90x63	51	38	23	103	71	112	265	02
90x75	51	44	23	103	86	118	299	02
110x50	61	31	30	126	56	122	403	02
110x63	61	38	27	126	72	126	415	02
110x75	61	44	27	126	86	132	447	02
110x90	61	51	27	126	103	139	508	02

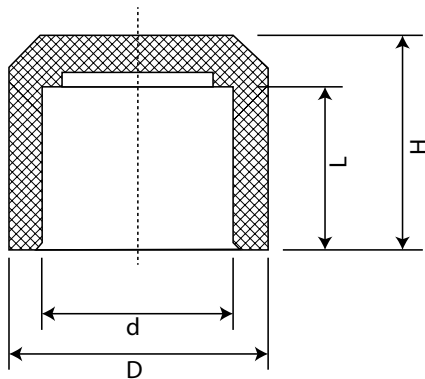
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Cap - Plain SS



Size	L	H	D	Weight	Pack Size
d *	mm	mm	mm	g	nos
20	16	19	26	9	100
25	19	22	31	12	100
32	22	25	38	17	50
40	26	16	21	47	27
50	31	34	56	36	10
63	38	43	72	72	10
75	44	50	86	173	01
90	51	57	103	241	02
110	61	68	125	385	02

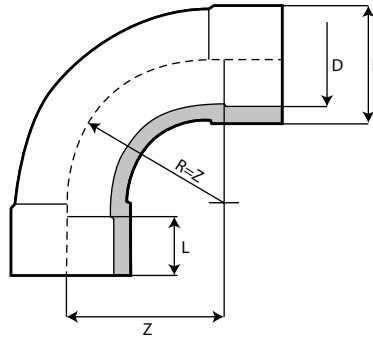
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Bend 90° – Plain SS (Injection moulded)

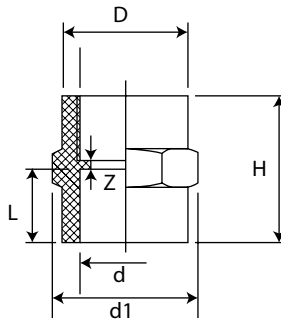


Size	L	Z/R	E	Weight	Pack Size
D *	mm	mm	mm	g	nos
32	22	64	38	67	200

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket



Faucet Socket – Threaded/SS



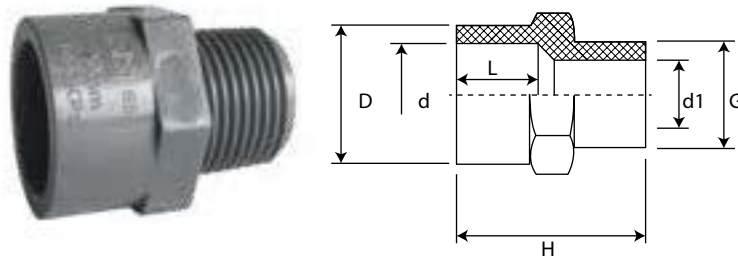
Size	L	Z	D	d1	H	Weight	Pack Size
d*	mm	mm	mm	mm	mm	g	nos
20	16	3	21	31	32	15	50
25	19	3	26	35	36	20	50
32	22	3	33	45	42	31	50
40	26	3	41	55	48	43	10
50	31	3	51	65	53	66	01
63	38	3	72	82	64	106	10
75	44	4	84	95	75	219	200
90	51	5	100	104	86	302	02
110	61	6	124	138	103	448	02

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket
Threads as per ISO 7-1

S-Ion uPVC Pressure Fittings Technical Details

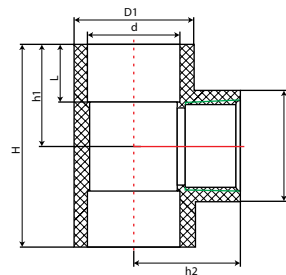
Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

Valve Socket – Threaded/SS



Size	L	H	D1	D	Weight	Pack Size
d*	mm	mm	mm	mm	g	nos
20	16	13	12	21	14	50
25	19	14	17	26	18	50
32	22	17	24	33	31	50
40	26	19	32	41	44	10
50	31	19	36	51	60	200
63	38	23	49	72	108	100
75	44	27	64	84	130	50
90	51	30	68	100	311	02
110	61	36	90	124	489	02

Faucet Tee- Threaded/SS



Size	L	Z	D1	D2	h1	h2	H	Weight	Pack Size
d *	mm	mm	mm	mm	mm	mm	mm	g	nos
20	16	10	21	27	28	26	57	27	50

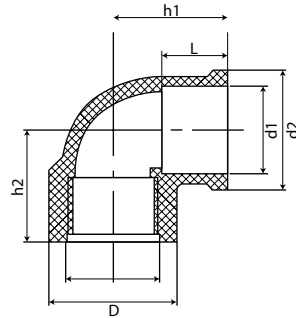
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details



Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015

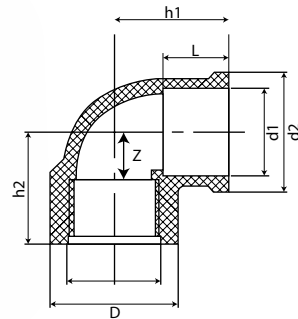
Faucet Elbow- Threaded/SS



Size	L	Z	D	d1	d2	h1	h2	Weight	Pack Size
d1*	mm	mm	mm	mm	mm	mm	mm	g	nos
20	16	11	26	19	26	24	27	22	50

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

Reducing Faucet Elbow- Threaded/SS



Size	L	Z	D1	D2	h1	h2	Weight	Pack Size
d x Rc*	mm	mm	mm	mm	mm	mm	g	nos
25x20	19	11	31	31.6	24	30	38	50

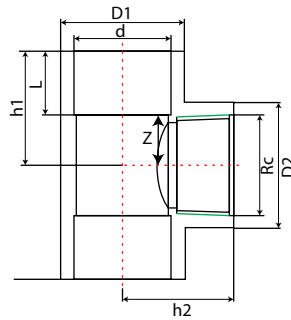
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details

Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015



Faucet Elbow- Threaded/SS

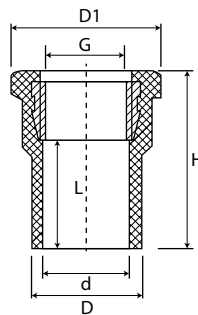


Size	L	Z	D1	D2	h1	h2	H	Weight	Pack Size
d x Rc*	mm	mm	mm	mm	mm	mm	mm	g	nos
25x20	19	14	32	27	34	29	27	38	50

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket



Brass Faucet Socket- Threaded/SS



Size	G	L	D	D1	H	Weight	Pack Size
d*		mm	mm	mm	mm	g	nos
20	½"	16	26	33	32	28	10

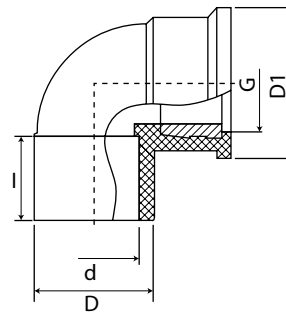
*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

S-Ion uPVC Pressure Fittings Technical Details

Unplasticized Polyvinyl Chloride Pipe Joints And Fittings For Potable Cold Water Supplies. SLS 659:2015



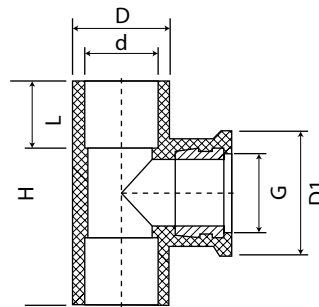
Brass Faucet Elbow- Threaded/SS



Size	G	L	D	D1	Weight	Pack Size
d*		mm	mm	mm	g	nos
20	½"	18	26	29	32	10

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

Brass Faucet Tee- Threaded/SS



Size	G	L	D	D1	H	Weight	Pack Size
d*		mm	mm	mm	mm	g	nos
20	½"	18	26	29	61	41	10

*PN_T 11 and PN_T 14 for 20 mm SS – Solvent Socket

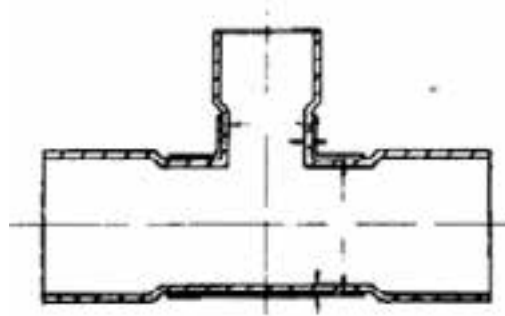
S-lon uPVC Special Fabricated fittings for Potable Cold Water System



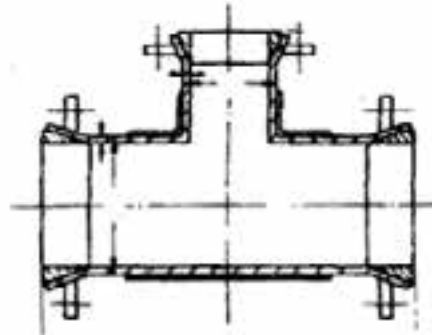
Fabricated fittings are available in all pressure classes of $PN_T 7$, $PN_T 9$, $PN_T 11$, $PN_T 14$ and $PN_T 18$. we can provide any type of PVC joining system upon request and could also provide customized specials.



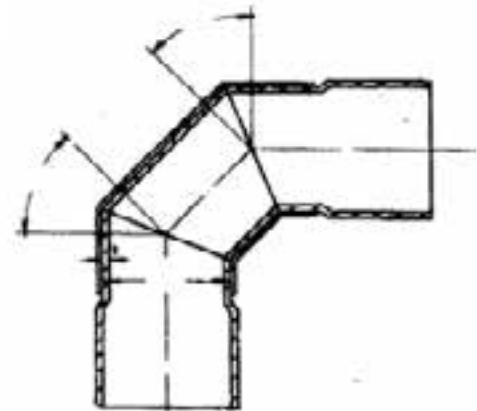
TEE



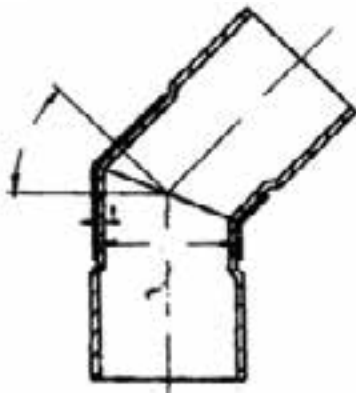
FLANGED TEE



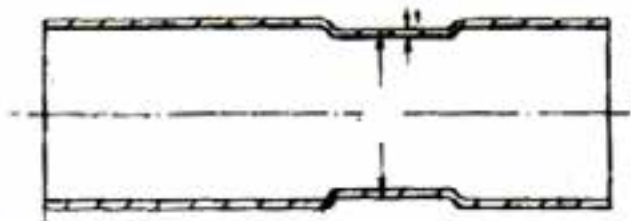
90° SEGMENTED ELBOW



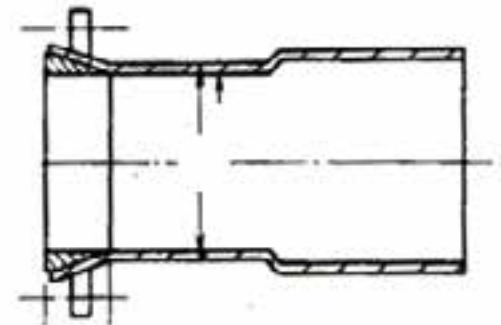
45° SEGMENTED ELBOWS



REPAIR SOCKET



FLANGED AND SOCKETED SHORT PIPE



S-Ion uPVC Pipes For Drainage Application



S-Ion non pressure uPVC pipes comply with the requirements of SLS 1286 (ISO 4435) and are SLS marked in accordance with the SLSI certification scheme. S-Ion pipes are supplied in grey colour with plain ended, solvent socketed and rubber ring joints and standard length 6 metres.



SLS 1286 standard specifies the requirements for uPVC pipes, intended for use for non-pressure underground drainage and sewerage for the conveyance of soil and waste water discharge of domestic and industrial origin, as well as surface water.



Nominal Diameter	Mean OD		(Out of roundness) Ovality	For socketed pipes										Wall thickness of pipes (e)											
				Solvent cement sockets and spigots				Elastomeric ring seal sockets and spigots				Wall thickness of sockets													
				Socket		Spigot		Socket		Spigot		SN2	SN4	SN8	SN2	SN4	SN8								
				Mean inside diameter of a socket	Length of a solvent cement socket	length of Spigot	Length of Chamfer	Mean inside diameter of a socket	Length of engagement	depth of sealing zone	Length of spigot	Length of Chamfer	SDR 51		SDR 41		SDR 34		SDR 51		SDR 41		SDR 34		
													Socket e2	Groove e3	Socket e2	Groove e3	Socket e2	Groove e3	e	Mean em	e	Mean em	e	Mean em	
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
110	110.0	110.3	110° 2.64	110.2	110.6	48	54	6	110.4	32	26	60	6	-	-	2.9	2.4	2.9	2.4	-	-	3.2	3.8	3.2	3.8
160	160.0	160.4	160° 3.84	160.3	160.8	58	74	7	160.5	42	32	81	7	2.9	2.4	3.6	3	4.3	3.6	3.2	3.8	4.0	4.6	4.7	5.4
315	315.0	315.6	315° 7.56	-	-	-	-	-	316.0	62	70	132	12	5.6	4.7	6.9	5.8	8.3	6.9	6.2	7.1	7.7	8.7	9.2	10.4
355	355.0	355.7	355° 8.52	-	-	-	-	-	356.1	66	70	136	13	6.3	5.3	7.8	6.6	9.4	7.8	7.0	7.9	8.7	9.8	10.4	11.7

S-Ion Sewerage and Waste Water Pipes & Fittings



S-Ion Soil, Waste and Vent pipes and fittings are manufactured from UV stabilized uPVC which is tough and resilient. uPVC, the major material component is self-extinguishing and will not support combustion. Furthermore, uPVC is unaffected by coastal or industrial atmospheres, or by the use of domestic cleaning agents. S-Ion soil and waste uPVC pipes and fittings comply with the requirements of SLS 1325 (ISO 3633). Pipes are in Grey colour and supplied in 6m lengths.



SLS 1325 Standard specifies the requirements for uPVC pipes and fittings for soil and waste discharge (low and high temperature) inside buildings, as well as the system itself.



Nominal Diameter	Mean OD		Out Roundness maximum (ovality)*	For socketed pipes											Thickness	
				Elastomeric ring seal joints sockets						Solvent Cement sockets and spigots						
	Mean inside diameter of socket (minimum)	Mean Outside diameter of spigot		Lengths of sockets and spigots			Mean outside diameter of spigot		Mean Inside diameter of socket		Length of sockets and spigots (Minimum)	At any point e	Mean em			
				Length of Engagement A	Depth C	Length L ₁								Min	Max	Min
Min	Max		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
32	32.0	32.2	0.77	32.3	32.0	32.2	24.0	18.0	42.0	32.0	32.2	32.1	32.4	22.0	3.0	3.5
40	40.0	40.2	0.96	40.3	40.0	40.2	26.0	18.0	44.0	40.0	40.2	40.1	40.4	26.0	3.0	3.5
50	50.0	50.2	1.20	50.3	50.0	50.2	28.0	18.0	46.0	50.0	50.2	50.1	50.4	30.0	3.0	3.5
63	63.0	63.2	1.51	63.3	63.0	63.2	31.0	20.0	49.0	63.0	63.2	63.1	63.4	36.0	3.0	3.5
75	75.0	75.3	1.80	75.4	75.0	75.3	33.0	20.0	51.0	75.0	75.30	75.2	75.5	40.0	3.0	3.5
90	90.0	90.3	2.20	90.4	90.0	90.3	36.0	22.0	56.0	90.0	90.30	90.2	90.5	46.0	3.0	3.5
110	110.0	110.3	2.64	110.4	110.4	110.0	110.3	40.0	26.0	60.0	110.0	110.30	110.6	48.0	3.2	3.8
140	140.0	140.4	3.36	140.5	140.0	144	46.0	26.0	70.0	140.0	140.40	140.3	140.8	54.0	3.2	3.8
160	160.0	160.4	3.84	160.5	160.0	160.4	50.0	32.0	81.0	160.0	160.40	160.3	160.8	58.0	3.2	3.8
315	315.0	315.6	7.56	-	-	-	-	-	-	315.0	315.60	315.5	316.0	60.0	6.2	7.1

* Shall measure directly after production

S-Ion Sewerage and Waste Water Pipes & Fittings



Selecting a Drainage System

The main factors influencing the choice of pipes & fittings for an underground drainage system should include

- * The performance characteristics of pipes and fittings
- * Availability of a full range of fittings/components
- * The total cost of a complete system
- * The environmental impact of the system



Drainage Planning

The design and layout of a drainage system should be kept as simple as possible and should be capable of conveying and discharging its contents without causing nuisance or danger to health and safety from blockage or surcharge throughout its anticipated life time. The pipe route selected should make full use of the natural slopes of the ground or any adjustment thereto, so as to achieve the required gradients with minimum excavation. Changes of direction and gradient should be minimized.

For housing it is preferable for drains to be laid externally where provision can be made for easy detection of blockages and their removal. Pipe work laid under the building should be limited and short branched and the drain trench should not impair the stability of the building.

Requirement

GRADIENT - Pipes should be laid to even gradients and any change in gradient should be combined with an access point.

DIRECTION - Pipes should be laid in straight lines where practicable but may be laid to slight curves if it could be cleared of blockages.

JUNCTIONS - Bends should be positioned in or adjacent to terminal fitting, inspection chambers or manholes and at the foot of the discharge stacks. Bends should have a large radius as practicable.

VENTILATION - The system should be ventilated or positioned near the main drain to allow free passage of air throughout.

TRAPS - Appliances should be fitted with integral traps at the point of discharge. If not a trap must be provided using either a trapped gully or low back trap. Special precautions should be taken to accommodate the effects of settlement where pipes run under or near a building or in unstable ground.

General

It is important that drainage runs correctly sized so that the flow is discharged off the siphon in an efficient manner. Undersized drains result in the flow running at too high a level with serious risk of surcharge at times. In addition, build-up of potentially dangerous sewer gases could occur as a result of inadequate ventilation. Oversized drains reduce the depth of flow in the systems causing settlement of solids, silt or grit, which could result in blockages.

S-Ion Sewerage and Waste Water Pipes & Fittings



Solvent type reducing fittings available for S-Ion pipes



DOOR BEND (TS)



PLAIN FLOOR TRAP



MULTI FLOOR TRAP



PIPE CLIP



S-Ion Sewerage and Waste Water Pipes & Fittings



Solvent type reducing fittings available for S-Ion pipes

SINGLE 'T' WITH DOOR



BEND 89°



MULTI FLOOR TRAP BASE



DOOR TEE



TOP TILE SET



SWEPT 'T'



EQUAL TEE



DOOR BEND 45°



SWEPT DOOR TEE



BEND 45°



SINGLE Y



DOOR BEND 89°



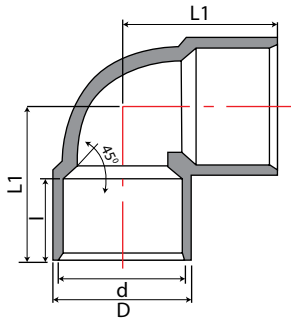
SINGLE DOOR Y



S-Ion Sewerage and Waste Water Fittings

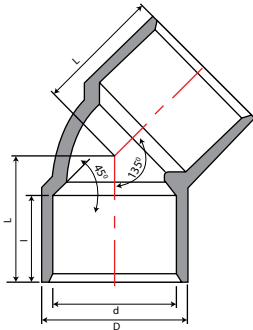


Dn Bend- 89°



Nominal Size	D	d	l	L1
40	50	40.25	26	60
50	60	50.25	30	70
63	73	63.25	36	80
110	120	110.40	48	125

Dn Bend- 45°

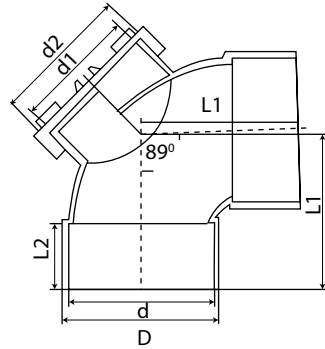


Nominal Size	D	d	l	L
40	50	40.25	26	60
50	60	50.25	30	70
63	73	63.25	36	80
110	120	110.40	48	125

S-Ion Sewerage and Waste Water Fittings

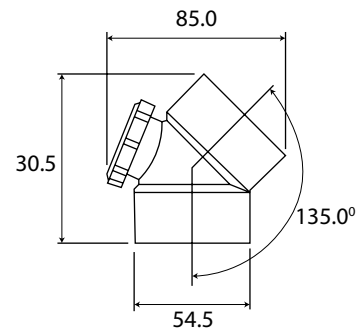


Dn Door Bend- 89°



Nominal Size	D	d	L1	L2	d1	D1
40	47	40.25	60	26	40	52
50	57	50.25	70	30	40	52
63	70	63.25	80	36	40	52
110	120	110.40	125	48	90	106

Dn Door Bend- 45°

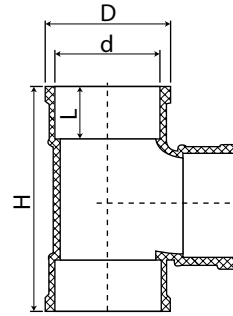


Nominal Size	D	L	H
40	47	40.25	105
50	57	50.25	120
63	70	63.25	150
110	120	110.40	220

S-Ion Sewerage and Waste Water Fittings

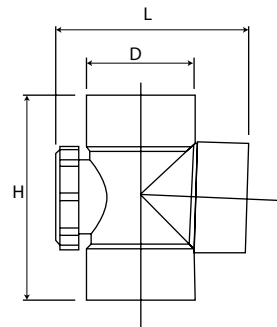


Dn Equal Tee



Nominal Size	D	d	L	H
40	47	40.25	26	120
50	57	50.25	30	140
63	70	63.25	36	160
110	120	110.40	48	240

Dn Door Tee

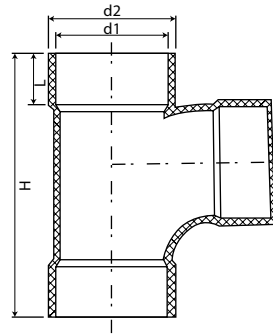


Nominal Size	D	l	L	H
40	47	40.25	26	120
50	57	50.25	30	140
63	70	63.25	36	160
110	120	110.40	48	240

S-Ion Sewerage and Waste Water Fittings

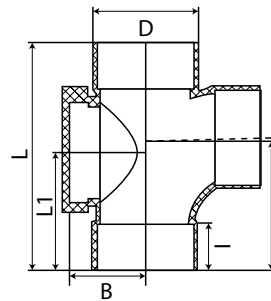


Dn Swept Tee



Nominal Size	d1	d2	L	H
40	40.25	47	40.25	120
50	50.25	57	50.25	140
110	110.40	120	110.40	240

Dn Swept Door Tee

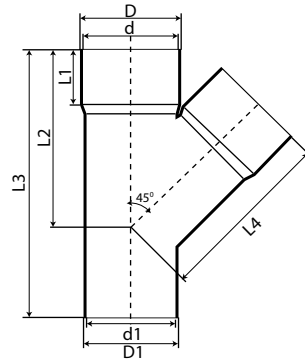


Nominal Size	D	l	L	L1	B
40	47	40.25	120	70	120
50	57	50.25	140	140	140
110	120	110.40	240		240

S-Ion Sewerage and Waste Water Fittings

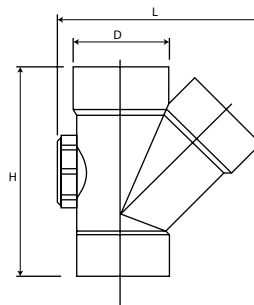


Dn Y Junction



Nominal Size	D1	d1	D	d	L1	L2	L3	L4
40	40	34	47	40.25	26	82	130	82
50	50	44	57	50.25	30	100	150	100
63	63	56	70	63.25	36	120	180	120
110	110	113	120	110.40	48	190	278	190

Dn Door Y Junction

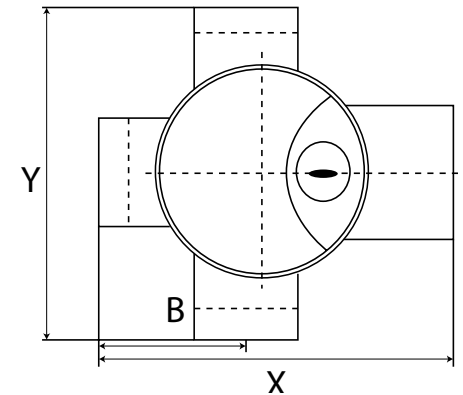
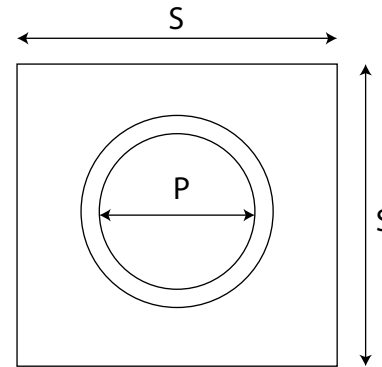
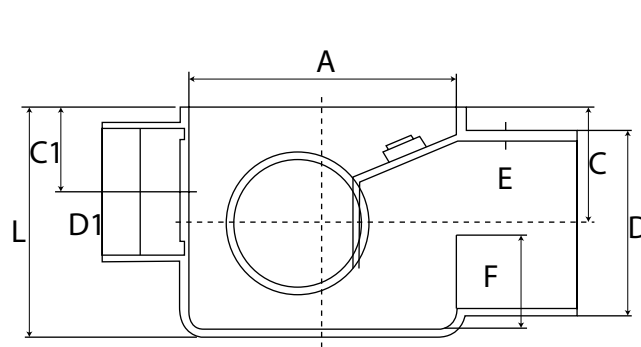


Nominal Size	D1	d1	D	L	H
40	40	34	47	82	130
50	50	44	57	100	150
63	63	56	70	120	180
110	110	113	120	190	278

S-Ion Sewerage and Waste Water Fittings



Multi Floor Trap



Nominal Size	Dimensions mm												
	L	A	D	D1	C	C1	Emin	B	X	Y	F	P	S
110	100	100.6	70	50.4	47.5	32.6	2.6	73.5	183	175	36.6	109	148