



PRODUCT CATALOGUE





## COMPANY PROFILE

DIPLAST has started manufacturing of uPvc Conduit Pipes in the year 1972 with registering continuous growth year by year, the company has since then grown large into manufacturing a wide range of uPvc Pressure Pipes & uPvc Fittings, Plumbing Pipes & Fittings, Column Pipes ,SWR Pipes & fittings, Conduit Pipes & Fittings, Water Tanks, Toilet ,Sitting Bench, Dustbin, Trolley Blow Moulded Tanks,Compost Bin, CPVC Pipes & Fittings, PP-R Pipes & Fittings etc. The basic objective of the company is to provide the service to our customer with better quality products and better commitments.

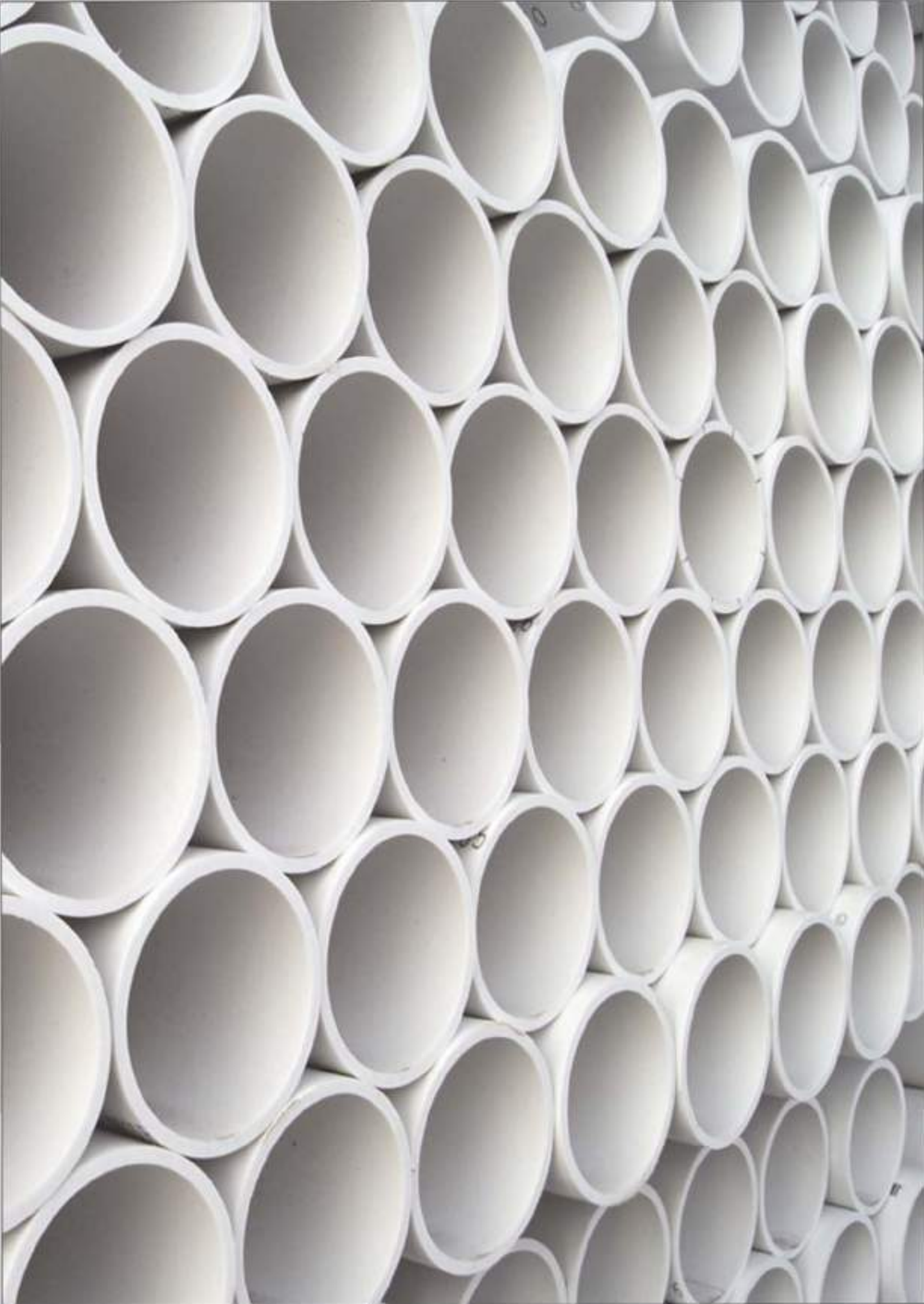
The company is well famous in the market for its commitments to customer and for best delivery of products to the customer. The company has plants located in Mohali (Punjab) & Kala Amb (Himachal Pradesh) with high technology and automatic machines, well qualified and skilled manpower, best policies and superior laboratory with the objective to minimize the product cost and provide competitive Price of products in the market. The strength of company is its committed management team, and supreme combination of experienced, technical and good decision makers.

### **OUR MISSION**

The company has self-assurance to become the largest manufacturer and supplier of plastic industries on national and Global level. Target to achieve the total turnover of more than 100 crore.

### **OUR VISIONS**

To serve the people, society and nation by providing world class quality products.





## Our Assurance for Quality

Quality being the for most concern of our organisation, we lay stress on the production of only qualitative range of products.

Our team of quality experts ensures zero defects at customer end as they stringently check the entire lot before dispatch.

## Certification & Accreditations



## Research & Development



At DIPLAST learning is a continuous process. With this in mind, we set up our own ISO certified research and development unit, which integrates technology, understanding of the market and consumer needs and demands, to bring out excellent, effective & efficient designs. Our R & D department is equipped with latest technique. Our special testing laboratory develops & tests products for efficiency. A highly skilled team of mechanical & plastic engineers work round the clock to manufacture products of the highest quality.

## Our Quality



Ensures long term prosperity. Delivering a long term prosperity and exponential growth, by delivering efficient solutions is a result of the supreme quality ingrained in the vision and in each process of the production.

### **We believe in quality.**

The supreme quality ingrained in the vision as well as in each process of the production has helped us deliver long term prosperity and exponential growth.

At DIPLAST We believe in quality. We adhere to the most stringent quality check at every stage of our production process. Every product at DIPLAST undergoes an array of energy efficient test, before coming out of the plant. Quality Assurance at DIPLAST is backed by team of well qualified and well trained engineers.

Our fully automatic testing laboratory confirms the quality of the final product. We also conduct inspection from certified agency such as BIS to ensure the highest level of quality. We strictly adhere to the various national & international norms & standards like ISI, ASTM and ISO.

## Our Services



Answer to your needs for efficient growth

DIPLAST, we believe that our valuable relation with our patrons begin once we deliver our products, because we value our customer's needs in understanding, and also in maintaining our products. We have a specialized team of customer service provider which comprise of the most qualified and experienced technocrats; they cater to every technical as well as non- technical assistance for our customer's delight.

# Un-Plasticized Polyvinyl chloride Pipe for Portable water supplies (UPvc Pipes)

**Range:** 20mm to 315 mm Outer Diameter

**Pressure Rating:** 2.5 Kgf/cm<sup>2</sup> to 12.0 Kgf/cm<sup>2</sup>

**Standard:** IS 4985:2000

**Colour:** Light Grey, Off White

**Length:** available in 10', 12' and 20'

**Types:** Plain ended



Socketed pipe for solvent cement jointing

## Features

- Suitable for portable water supplies
- Light weight and fittings greatly reduce handling, transportation and installation costs.
- DIPLAST uPVC Pressure pipes system offers a reliable piping system, which is highly resilient tough & durable and long lasting
- Smooth inside surface provide high flow characteristics than GI, CI and AC Pipes
- Hygienic & odourless for portable water
- Termite Proof
- Very Low Friction Losses
- Easy installation & handling
- Corrosion free
- inert to chemical

## Application

- Water supply for agriculture and irrigation systems.
- Power & telecommunication cable ducting.
- Rural & urban water supplies, gas and oil supplies.
- Building water supply application.

## Special Features & Identity

- Internal surfaces are very smooth which reduces friction loss.
- Specification followed : IS 4985:2000
- UV stabilized for use in sunlight
- Elastomeric sealing ring pipes to prevent leakage.
- Very high pressure resistant capacity.

## Technical parameters IS 4985:2000

(All Dimension in mm)

Pipe Size	Nominal Size (OD)	Mean outside diameter Min/Max	OD at any point Min/Max	Class-1 0.25 Mpa (2.5 Kg/cm <sup>2</sup> ) Min/Max	Class-1 0.40 Mpa (6 kgf/cm <sup>2</sup> ) Min/Max	Class-1 0.6 Mpa (8 Kgf/cm <sup>2</sup> ) Min/Max	Class-1 0.8 Mpa (8 Kgf/cm <sup>2</sup> ) Min/Max	Class-1 1.00 Mpa (10 Kgf/cm <sup>2</sup> ) Min/Max	Class-1 1.25 Mpa (12.5 Kgf/cm <sup>2</sup> ) Min/Max
0.5"	20	20.0 - 20.3	19.5 - 20.5					1.1 - 1.5	1.4 - 1.8
0.75"	25	25.0 - 25.3	24.5 - 25.5				1.2 - 1.6	1.4 - 1.8	1.7 - 2.1
1.0"	32	32.0 - 32.3	31.5 - 32.5				1.5 - 1.9	1.8 - 2.2	2.2 - 2.7
1.25"	40	40.0 - 40.3	39.5 - 40.5			1.4 - 1.8	1.8 - 2.2	2.2 - 2.7	2.8 - 3.3
1.5"	50	50.0 - 50.3	49.5 - 50.5			1.7 - 2.1	2.3 - 2.8	2.8 - 3.3	3.4 - 4.0
2.0"	63	63.0 - 63.3	62.2 - 63.8		1.5 - 1.9	2.2 - 2.7	2.8 - 3.3	3.5 - 4.1	4.3 - 5.0
2.5"	75	75.0 - 75.3	74.1 - 75.9		1.8 - 2.2	2.6 - 2.7	3.4 - 4.0	4.2 - 4.9	5.1 - 5.9
3.0"	90	90.0 - 90.3	88.9 - 91.1	1.3 - 1.7	2.1 - 2.6	3.1 - 3.7	4.0 - 4.6	5.0 - 5.7	6.1 - 7.1
4.0"	110	110.0 - 110.4	108.6 - 111.4	1.6 - 2.0	2.5 - 3.0	3.7 - 4.3	4.9 - 5.6	6.1 - 7.1	7.5 - 8.7
4.5"	125	125.0 - 125.4	123.5 - 126.5	1.8 - 2.2	2.9 - 3.4	4.3 - 5.0	5.6 - 6.4	6.9 - 8.0	8.5 - 9.8
5.0"	140	140.0 - 140.5	138.3 - 141.7	2.0 - 2.4	3.2 - 3.8	4.8 - 5.5	6.3 - 7.3	7.7 - 8.9	9.5 - 11.0
6.0"	160	160.0 - 160.5	158.0 - 162.0	2.3 - 2.8	3.7 - 4.3	5.4 - 6.2	7.2 - 8.3	8.8 - 10.2	10.9 - 12.6
7.0"	180	180.0 - 180.6	177.8 - 182.2	3.6 - 3.1	4.2 - 4.9	6.1 - 7.1	8.0 - 9.2	9.9 - 11.4	12.2 - 14.1
8.0"	200	200.0 - 200.6	197.6 - 202.4	2.9 - 3.4	4.6 - 5.3	6.8 - 7.9	8.9 - 10.3	11.0 - 12.7	13.6 - 15.7
9.0"	225	225.0 - 225.7	222.3 - 202.4	3.3 - 3.9	5.2 - 6.0	7.6 - 8.8	10.0 - 11.5	12.4 - 14.3	15.3 - 17.6
10.0"	250	250.0 - 250.8	247.0 - 253.0	3.6 - 4.2	5.7 - 6.5	8.5 - 9.8	11.2 - 12.9	13.8 - 15.9	17.0 - 19.6
11.0"	280	280.0 - 280.9	276.6 - 283.4	4.1 - 4.8	6.4 - 7.4	9.5 - 11.0	12.5 - 14.4	15.4 - 17.8	19.0 - 21.9
12.0"	315	315.0 - 316.0	311.2 - 318.8	4.6 - 5.3	7.2 - 8.3	10.7 - 12.4	10.7 - 12.4	17.3 - 19.9	21.4 - 24.7

## PVC Pipe Fitting

### Salient Features:

General Dimension are conforming to IS 7834-87

Wall thickness is designed to meet required working Pressure

Made to close dimensional tolerance

Different working Pressure rating up to 10Kg/cm<sup>2</sup> for different sizes.

### Socket

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
20-315mm	4,6

**Application:** These are used for joining of two uPvc Pipes.



### Plain Elbow 90°

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
40-160mm	4,6

**Application:** These are used for short turns of 90°. These are not advisable on large pipeline involving high Pressure



### Equal Tee

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
40-160mm	4,6

**Application:** These are used for bypass and taking equal size service line out of main line at 90°.



### Elbow 45°

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
90-110mm	4,6

**Application:** These are used for short turns of 45°.



### Off Set Bend

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
90-110mm	4,6

**Application:** These are used for short turns of 45°.





### Reducing Elbow

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
110x90mm	4,6

**Application:** These are used for bypass and taking lower diameter service line out of main line.



### Reducing Tee

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
110x90mm	4,6

**Application:** These are used for bypass and taking lower diameter service line out of main line.



### Door Elbow

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
75-110mm	4,6

**Application:** Function is same as a plain elbow with a threaded door for cleaning.



### Door Tee

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
75-110mm	4,6

**Application:** Function is same as a plain tee with a threaded door for cleaning purpose.



## Reducer Socket

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
40x25	10,12
50x40	6,10
75x63	4,6,10
90x75	4,6,10

**Application:** These are used to convert the service line into small extra small line.



## End Cap

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
20-250mm	4,6

**Application:** These are used to close the end of pipe line.



## Vent Cowel

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
63-110mm	4,6

**Application:** Use as a cap on the top of the Vertical line. Also help in release of foul gases.



## P. Trap

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
125x110mm	4,6
110x110mm	4,6

**Application:** To provide water seal & efficient functioning of the drainage system.



## Nahni Trap

Size in mm	Available Pressure Rating in Kg/cm <sup>2</sup>
110x110mm	4,6
110x90mm	4,6
110x75mm	4,6
110x63mm	4,6

**Application:** For draining waste from Bathroom / Wash basin out of the main line.



## Diplast Solvent Cement

DIPLAST is leading manufacturer to produce reliable solvent cements for use with PVC & CPVC Pipe & fittings. Each formulation has been developed for a specific application and is subject to the strictest quality control program in the industry. This program guarantees the most consistent and highest quality solvent cements commercially available.

To make consistently good joints, the following points should be clearly understood:-

1. Check the pipe & fitting for dry fit before cementing. For proper interference fit, fitting should go over end of pipe easily but become tight about 1/3 to 2/3 of the way on. Too tight a fit is not desirable; you must be able to fully bottom the pipe in the socket during assembly. If the pipe and fitting are not out of round, a satisfactory joint can be made.
2. The joining surfaces must be softened and made semifluid.
3. Sufficient cement must be applied to fill gap between the pipe & fitting.
4. Assembly of pipe and fittings must be made while the surfaces are still wet and cement is still fluid.
5. Joint strength develops as the cement dries. In the tight part of the joint the surfaces will tend to fuse together in the loose part, the cement will bond to both surfaces.



## Jointing Procedure for DIPLAST PVC PRESSURE PIPES

Procedure for cutting of pipe and application of solvent cement

The professional installer should be able to successfully assemble Rigid PVC Pipe and fittings by following The Diplast solvent cementing with primer instructions listed below.

1. As pipe diameter increases, so does the difficulty in installing it
2. Use of proper size applicator Brush is even more necessary to ensure enough cement is applied to fill the larger gap that exists between the pipe and fittings.
3. End of pipe must be cut square and chamfered.
4. Clean the pipe properly before applying solvent cement.
5. Increase size of joining crew:-

**4"-6" : 1-2 Persons**

**6"-8" : 2-3 Persons**

**10"-12" : 3-4 Persons**

6. It is important in large diameter jointing that the primer and cement be applied simultaneously to the pipe and fittings. Make sure to apply a second, full layer of cement to the pipe.
7. Large diameter pipe and fittings require longer set and cure times. \*(in cold weather, a heat blanket may be used to speed up the set and cure times).
8. If pipe is to be buried, make as many joints as possible above ground, then after joints have cured, carefully lower into trench. Never bury empty cans, brushes cans or anything else containing wet cement, primer or cleaner next to the pipe.

Depending upon temperature , different sizes requires different timings as shown in the table:-

### Average Initial Set Schedule

Temperature Range	Pipe sizes ½" to 1¼"	Pipe sizes ½" to 2"	Pipe sizes 2¼" to 8"	Pipe sizes 10" to 15"
60°-100° F	2 Minutes	5 Minutes	30 Minutes	2 Hours
40°-60° F	5 Minutes	10 Minutes	2 Hours	8 Hours
0°-40° F	10 Minutes	15 Minutes	12 Hours	24 Hours

**Note:** Initial set schedule is the necessary time to allow before the joint can be carefully handled. In damp or humid allow 50% more set time.

## Storage & Handling

Store in the shade between 40° F and 110° F (5°C and 44°C )or as specified on label. Keep away from heat, dark , open flame and other source of ignition. Keep container closed when not in use. If the unopened container is subjected to freezing, it may become extremely thick or jelled. This cement can be placed in a warm area, where after a period of time, it will return to its original usable condition. But such is not the case when jelling has taken place because of actual solvent loss- for example, when the container was left open too long during use or not properly sealed after use. Cement in this condition should not be used and should be properly discard.

DIPLAST solvent cement are formulated to be "used as received" in original containers. Adding thinners or primers to change viscosity is not recommended. If the cement is found to be jelly like and not free flowing, it should not be used. Containers of cement should be shaken or stirred before using.

**Use only DIPLAST Solvent cement with DIPLAST PVC & CPVC Pipes for long life & durable Joints.**

**Packing Available in Solvent cement is 100ml, 250 ml, 500ml & 1000ml**

### Consumption of solvent cement

(All Dimension in mm)

Diameter of Pipe (mm)	20	25	32	40	50	63	75	90	110	140	160	180	200	225	250	280	315
Appx No. of Joints which can be made per liter of solvent cement	354	270	225	180	130	125	103	79	54	36	27	25	15	12	9	7	5

# DIPLAST uPVC Plumbing Pipes & Fittings

**Product Name:** ASTM (Plumbing) Pipes & Fittings

**Pipe :** As Per ASTM –D 1785 Schedule 40 & 80

**Fitting :** As Per ASTM –D 2467 Schedule 80

**Range :** 0.5" to 2"

**Colour :** White

**Length :** Available in 3Meter & 6 Meter

**Types :** Plain & Thread ended

**Standard working Temperature:** up to 60° C continuously and upto 90° C for short time.



DIPLAST uPVC Plumbing Pipes & Fittings

## Features

- The pipes are odourless and hygienic thus extremely suitable for portable supplies .
- Allows seamless operation up-to 60° C continuously and upto 90° C for short time
- Light weight
- Resistant to corrosion
- Non toxic
- Weather resistance
- Easy to installation
- Fire proof and termite proof
- Good thermal and electrical insulation
- Inert to chemical

## Application

- Cold water supply in buildings
- Industrial processing lines
- Swimming pools
- Salt water lines
- Aggressive /corrosive fluid transportation.
- Dye ,chrome, zinc plating and tanning plants
- Sugar, paper and distillery industries
- Coal washing and ash handling

## Technical parameters

Nominal Diameter		Outside Diameter (mm)		Schedule 40				Schedule 80			
inch	mm			Wall Thickness (mm)	Working Pressure		Wall Thickness (mm)	Working Pressure			
		Mpa	Psi		Mpa	Psi					
0.50"	15	21.3	+/- 0.10	2.77		2.07	300	3.73	+/- 0.51	2.90	420
0.75"	20	26.7	+/- 0.10	2.87	+/- 0.51	1.65	240	3.91	+/- 0.51	2.34	340
1.00"	25	33.4	+/- 0.13	3.38	+/- 0.51	1.55	225	4.55	+/- 0.53	2.21	320
1.25"	32	42.2	+/- 0.13	3.56	+/- 0.51	1.27	185	4.85	+/- 0.58	1.79	260
1.50"	40	48.3	+/- 0.15	3.68	+/- 0.51	1.14	165	5.08	+/- 0.61	1.65	240
2.00"	50	60.3	+/- 0.15	3.91	+/- 0.51	0.96	140	5.54	+/- 0.66	1.38	200

## PVC Plumbing Fitting

DIPLAST uPVC Pipe Fittings in SCH 80 AS per ASTM D 2467

### Elbow 90°

Size(inch )	I.D.(mm)	Std.Packing
½"	21.34	100
¾"	26.67	60
1"	33.40	30
1 ¼"	42.16	18



### Tee

Size(inch )	I.D.(mm)	Std.Packing
½"	21.34	100
¾"	26.67	60
1"	33.40	30
1 ¼"	42.16	18



### Socket

Size(inch )	I.D.(mm)	Std.Packing
½"	21.34	100
¾"	26.67	60
1"	33.40	30
1 ¼"	42.16	18



# Diplast uPVC Electrical Pipes & Fittings

We are one of the leading and biggest uPVC Electrical Conduits & accessories manufactures of North India.



Rigid PVC Conduits Confirming To Indian Standards:

DIPLAST Rigid PVC Conduits are manufactured in accordance with Bureau of Indian Standard specification IS: 9537(Part 3) in the range of 20mm to 50mm with light, medium and heavy ranges

## Dimensional Details of uPVC Conduits as per IS 9537(part 3)

O. Din mm	Tolerance in mm	Light			Medium			Heavy		
		Min I.D	Min Wall Thickness	Max Wall Thickness	Min I.D	Min Wall Thickness	Max Wall Thickness	Min I.D	Min Wall Thickness	Max Wall Thickness
20	-0.3	17.4	1.15	1.30	16.9	1.40	1.55	15.80	1.95	2.10
25	-0.3	22.3	1.25	1.45	21.40	1.60	1.80	20.60	2.00	2.20
32	-0.4	28.6	1.50	1.70	27.80	1.90	2.40	26.60	2.50	2.70
40	-0.4	35.8	1.90	2.10	35.40	2.10	2.30	34.40	2.60	2.80
50	-0.5	45.1	2.2	2.45	44.80	2.60	2.85	43.20	3.15	3.40

## Dimensional details of Rigid uPVC Non ISI Conduit pipes:

Size	Wall Thickness	Wall Thickness	Wall Thickness	Wall Thickness	Wall Thickness	Wall Thickness
19mm	1.0	1.2	1.4	1.6	2.0	
25mm	1.0	1.2	1.4	1.6	2.0	
32mm				1.9	2.2	
40mm				2.0	2.1	2.5
50mm					2.0	
63mm						3.0

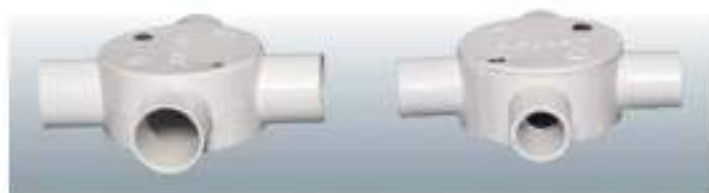


All the above Pipes are available in the standard length of 3 mtrs only.

# DIPLAST uPVC Conduit Pipe Fittings

## 1) Junction Boxes

- 1 Way Terminal
- 2 Way Through
- 3 Way Tee
- 4 Way Intersection



## 2) Deep Junction Boxes From 20mm to 25mm

- 1 Way Terminal
- 2 Way Through
- 3 Way Tee
- 4 Way Intersection



## 2) Bends Availability

20mm to 63mm



## Advantages:

**High corrosion Resistance:** DIPLAST Rigid PVC Conduits are non-corrosive by nature and are not attacked by corrosive, salty atmosphere & excessive humidity. They are immune to chemical and galvanic corrosion, hence they are ideal electrical Conduits.

### Fire Retardant

DIPLAST Rigid PVC Conduits do not support combustion and when the source of ignition is removed they are self-extinguishing hence they are safer than other pipes.

### Conductivity

DIPLAST Rigid PVC Conduits do not support combustion and when the source of ignition is removed they are self-extinguishing hence they are safer than other pipes.

### Lightweight

DIPLAST Rigid uPVC Conduits have low specific gravity which implies that it is much lighter than the pipes made from more traditional materials. DIPLAST pipes are therefore easier to handle and longer or larger sections can be installed easily. This results in reduced transportation & installation costs.



## Easy Wiring

Diplast conduits have smooth interior walls which help in reduced friction thus helping in easy wiring.

## Easy installation

Diplast rigid uPVC conduits can be shaped & joined without difficulty. DIPLAST pipes are joined by solvent cement which is simpler, cheaper & easier.

## Strength

Diplast rigid uPVC electrical conduit have high mechanical strength that is attested by tests conducted as specified IS 9537(part 3) of 1983. Hence they can be used both in open /surface and concealed installation

## No Maintenance

DIPLAST Conduits need no maintenance due to their excellent weathering properties.

## Durability

Diplast Rigid electrical conduit last for a year.

## High Corrosion Resistance

DIPLAST Rigid uPVC Conduits are non-corrosive by nature and are not attacked by corrosive, salty atmosphere & excessive humidity. They are immune to chemical and galvanic corrosion .hence they are ideal electrical Conduits.



## DIPLAST PP-R Pipes & Fittings

The raw material of DIPLAST Pipes and fittings is polypropylene random co-polymer(PP-R). This material due to high quality, is the most reliable system to be employed in plumbing and water supply systems. DIPLAST PP-R Products are physically superior, hygienically safe and non –carcinogenic. Polypropylene (PP) is general polyolefin plastic. It has excellent heat resistant and has higher pressure resistance. PPR – Pipes & fittings are growing fast in China and Turkey, due to this system approach. PP-R has more impact strength than other materials, PP-R also has more long term heat resistance and creep performance. At the same temperature and internal pressure PP-R have longer useful life. PP-R pipes & fittings is the best water supply material because it can operate 50 years at 70% and long term internal pressure.

### Application

- DIPLAST PP-R pipes & fittings network for cold and hot installation, i.e.; in Residential Buildings, Hospitals,
- Hotels, Office & School buildings, Solar Plants floor heating etc.
- DIPLAST Pipe networks for compressed Air Plants
- DIPLAST Pipe network for swimming pool Facilities..
- DIPLAST Pipe networks for industry i.e.; Transportation of Aggressive Fluids(Acids etc.)
- Transport of Liquid Foods as DIPLAST PP-R pipes and fittings are food grade

### Properties

- Non corrosive.
- Leak proof and frost proof.
- Non decaying non-deforming.
- Non contracting diameter.
- More than 50 years service life.
- Wide variety ranging form 16mm to 110mm to suit your diverse needs
- Smooth inner surface thus reducing the operational pressure required by the motor/pump.
- High chemical resistance.
- No bacterial and moss reproduction within the pipes.
- Resistance to high temperature (95°C).
- Heat preservative and energy saving(no need for installation)
- Taste odour neutral.
- No reaction with salts and acids.
- UV stabilizer
- Recyclable- for the benefit of environment
- The pipe is used for conveying Hot & Cold Water /fluids/chemical/compressed air in various plumbing installation.
- Double layer PP-R pipes for indoor/outdoor installations.
- Outer layer (Green color) PP-R is UV resistant, which makes pipe suitable for use under direct sunlight inner layer(white color) PP-R is antimicrobial which provides hygiene and protection from internal bacterial growth



## Comparison between PP-R Pipes & Galvanized Pipe

S. No.	Property/Parameter	PP-R Pipes	Galvanized iron
1	Service Life(Years)	>50	5-15
2	Standard length(meter)	3-6	6
3	Joining method	Simple Thermal Fusion	Threaded joint
4	Skill	Do it Yourself	Requires expert Plumber
5	Joining Time	Few second	Few hours
6	Strength of joints	Fusion of Material- Perfect Homogeneity	Surface Homogeneity
7	Line Commissioning Time	More than 4 hrs/ Half day	Takes longer
8	Minimum Labor	One person required	2 person required
9	Brittleness Characteristics	Highly resistant	Resistant
10	Corrosion resistance	Non corrosive	Very weak
11	Chemical resistant	Excellent	Poor
12	Installation convenience	Simple & convenient	Difficult
13	Joining Reliability	Excellent	Good
14	Hygienic Factor	Food grade- No Leeching- Bacteriology Neutral	Unhygienic due to Zinc oxide Formation
15	Inner surface smoothness	Excellent	Semi smooth
16	Easiness in repair & Maintenance	Very easy	Troublesome
17	Wall thickness OD 20mm	3.4mm	2.6mm
18	Water Freezing Inside Pipeline	Does not burst	Burst
19	Joint Leak Profness	100% Leak Proof Entire Service Life	Average- Leaks With Time
20	Eco-Friendliness	Eco-Friendly, No Harmful Substances Produced During Processing	No

## DIPLAST PP-R Pipes Specification as per IS

S.NO	Product	Dimension		Thickness		
		mm	inch	SDR11/PN10	SDR7.4/PN16	SDR6/PN20
1	Pipe 20mm	20	¾"	1.9	2.8	3.4
2	Pipe 25mm	25	¾"	2.3	3.5	4.2
3	Pipe 32mm	32	1"	2.9	4.4	5.4
4	Pipe 40mm	40	1-1/4"	3.7	5.5	6.7
5	Pipe 50mm	50	1-1/2"	4.6	6.9	8.3
6	Pipe 63mm	63	2"	5.8	8.6	10.5
7	Pipe 75mm	75	2-1/2"	6.8	10.3	12.5
8	Pipe 90mm	90	3"	8.2	12.3	15.0
9	Pipe 110mm	110	4"	10.0	15.1	18.3

## DIPLAST PP-R Pipes & Fittings

S.NO	Product	Dimension	Application
1	Coupler	20mm-110mm	The coupler is used to join two pipes to each other by means of fusion welding. Its advantage allows for the joining of short length pipes or replacing faulty pieces of pipes.



S.NO	Product	Dimension	Application
2	Elbow	20mm-110mm	The elbow is used at where pipelines makes a turn of 90°.



S.NO	Product	Dimension	Application
3	Tee	20mm-110mm	Tee is used to take an outlet/ branch at 90° from main line.



S.NO	Product	Dimension	Application
4	Cross	20mm-110mm	Cross is used to take branches outlets at 90° from pipelines at the same junction but in the opposite directions.



S.NO	Product	Dimension	Application
5	Tank Nipple	20mm-110mm	This is used to take outlet from a tank.



S.NO	Product	Dimension	Application
6	Wall Clamp	20mm-110mm	This is used to secure the pipe line at its installed position on the wall.



S.NO	Product		Application
7	End Cap	20mm-110mm	End Cap is used as a stopper at the end of pipeline..It also seals the top end of pipeline for pressure leakage test after completion of piping work



S.NO	Product		Application
8	Union	20mm-110mm	Plain union is used to join two pipes co-axially. It Provides facility of repairing the joint, basically for maintenance.



S.NO	Product		Application
9	Gate Valve	20mm-110mm	Gate valve is used to start , regulate and stop the water flow in pipeline



S.NO	Product		Application
10	Ball Valve	20mm-110mm	Ball Valve is used to start regulate and stop the water flow in pipeline.



S.NO	Product		Application
11	Reducing Tee	20mmx16mm -90x50mm	This is used to take a smaller size branch pipe at 90°.



S.NO	Product		Application
12	Reducing Elbow	20mmx16mm -90x50mm	This is used to join two different sizes of pipes at a 90° corner/ turn.



S.NO	Product		Application
13	Female Threaded Coupler	16x1/2"-63x2"	This is used to join male threaded metallic fittings with a PP-R C Pipe line.



S.NO	Product		Application
14	Male Threaded Coupler	16x1/2"-63x2"	This is used to join female threaded metallic fittings with a PP-R C Pipe line.



S.NO	Product		Application
15	Female Threaded Elbow	16mmx½"-63mmx2"	This is used to join male threaded metallic fitting with PP-R line at 90° cornerturn



S.NO	Product		Application
16	Male Threaded Elbow	16mmx½"-63mmx2"	This is used to join female threaded metallic fitting with PP-R line at 90° cornerturn



S.NO	Product		Application
17	Female Threaded Tee	16mmx½"-63mmx2"	This is used to take out an outlet from a PP-R line ,using a male threaded metallic fitting at 90°.



S.NO	Product		Application
18	Male Threaded Tee	16mmx½"-63mmx2"	This is used to take out an outlet from a PP-R line ,using a female threaded metallic fitting at 90°.



S.NO	Product		Application
19	Reducer	20x16mm-90x50mm	This is used to co-axially join a bigger diameter pipe to a small diameter pipe



S.NO	Product		Application
20	Long Plug	½"-1"	This is used to seal pipe ends having a female threaded fitting ,it is also used for testing the pipeline



S.NO	Product		Application
21	Short Plug	½"-¾"	This is used to seal pipe ends having a female threaded fitting ,it is also used for testing the pipeline



S.NO	Product		Application
22	Pipe Cutter	20mm-32mm	This is used for cutting pp-R pipes very smoothly.



S.NO	Product		Application
23	Joining Machine	20mm-32mm	This is used for joining of PP-R pipes & Fittings.



## Joining Procedure

The joining between PP-R Pipes & Fittings is made by welding them together using a fusion welder. These ends come into contact, usually the external surface of pipe and the internal one of fittings.

Special equipment is necessary: a fusion welder and some heating tools. Please refer to the manufacturer's instruction. Here we shall limit our suggestions to setting the thermostat to the right temperature for PP-R 260° C and checking its functioning frequently.

## Operating Sequence

### **CUTTING:**

Cut the Pipe Perpendicular and free it from any residual burrs.

### **CONDUCTIVITY :**

DIPLAST Rigid PVC Conduits do not support combustion and when the source of ignition is removed they are self-extinguishing hence they are safer than other pipes.

### **CLEANING:**

Prior to welding, the Pipe and fitting should be dried and properly cleaned.

### **MARKING:**

Draw a line on the pipe in order to limit the welding depth.

### **HEATING:**

When the Fusion Welder is ready (Warning Light of Heating Off), Insert Pipe and fitting into the corresponding heating tools at the same axis , without twisting them

### **WELDING:**

Once the heating time shown in the table has passed, quickly removed the Pipe and fitting from the template and press them together up to the limit marked on the pipe.

### **COOLING:**

Wait for the amount of time shown in the table before welding, holding the Pieces in place firmly. Check that is no residues of molten material on the templates after each welding operations.



## CPVC Pipes & Fittings

DIPLAST is a potable water distribution system made of chlorinated Polyvinyl Chloride (CPVC) for use single & Multi Family Homes, apartments, high-rises, Hotel /motels and commercial installation. It has a history of superior performance and competitive prices compared to metal and other alternative piping systems.

In a sentence DIPLAST CPVC pipe is the highest Quality and best- valued hot and cold potable water piping system available. DIPLAST has a design registered for alignment on the plastic fittings.

### Ideal for use in Hot & Cold water applications in:

- Villas and Individual Homes
- Residential Apartments
- Office complexes
- Commercial buildings
- Hotels Hospitals

### Features & Benefits of DIPLAST CPVC Piping System

- Quick ,easy & aesthetic installation
- No corrosion ,leakage ,scaling, pitting
- Tough & reliable
- Freedom from toxicity ,odours and tastes
- Cost effective
- Low thermal expansion
- Fire retardant
- Low thermal conductivity
- Proven operational life of minimum 50 years
- Suitable for use up to 93\* C
- Being used & trusted across the world for over 5 decades
- Energy saver
- Quick easy & aesthetic installation





CPVC System is light in weight, which reduces the transportation, handling and installation costs. Diplast CPVC Pipes & Fittings have seamless interior walls and require no special tools for cutting.

- No corrosion, Leakage, scaling, pitting  
DIPLAST CPVC Pipes have excellent corrosion resistance, preventing contamination bad taste, bad odour & discolouration of the water .with CPVC there is no corrosive by product ensuring the purest form of water to the very last drop. CPVC pipes are unaffected by the low pH of water, coast; air or corrosive soils.
- Lowest Bacterial Growth  
As compared to other piping systems bacterial growth in CPVC is far lower.
- Tough & Reliable  
DIPLAST CPVC products are highly resilient, tough and durable with high tensile and high impact strength

The standard for the pipe and fitting is given in the table below:

### Dimensions for CPVC Pipes as per IS 15778-2007

Nominal Size(mm)	Size	Nominal Outside Diameter	Mean Outside Diameter		Outside Diameter at any Point		Class 1, SDR 11		
			Min	Max	Min	Max	Avg. Max	Min	Max
20	¾	22.2	22.1	22.3	22.0	22.4	2.5	2.0	2.5
25	1	28.6	28.5	28.7	28.4	28.8	3.1	2.6	3.1
32	1 ¼	34.9	34.8	35.0	34.7	35.1	3.7	3.2	3.7
40	1 ½	41.3	41.2	41.4	41.1	41.5	4.3	3.8	4.3

## CPVC FITTINGS

### Coupler

Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



### Brass Elbow 90°

Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



### Elbow 90°

Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



### Brass Tee

Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Tee	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Brass MTA	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Reducer Coupler	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Brass FTA	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



End Cap	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Tank Nipple	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Ball Valve	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Union	
Size (mm)	Size (inch)
20	¾
25	1
32	1 ¼
40	1 ½



Reducer Elbow	
Size (mm)	Size (inch)
25 x 20	1 x ¾



Reducer Tee	
Size (mm)	Size (inch)
25 x 20	1 x ¾





## Dimensions for CPVC Pipes as per IS 15778-2007

Properties	DIPLAST CPVC	Copper	GI	PP-R
Corrosion No Effect due to superb	No Effect due to superb chemical resistance	Will corrode over a period time	Corrodes faster & deteriorates	Has certain amount of chemical resistance on quality.
Scaling ,Pitting and Leaching and full bore Flow	Absence of scaling ,pitting and leads to full bore flow	Scaling, pitting and leaching leads to reduce bore flow	Severe scaling, pitting and leaching leads to reduced bore flow	Scaling ,pitting and leaching can occur and reduce bore flow
Thermal conductivity & insulation levels	Lower thermal conductivity reduces heat loss & requires reduced insulation levels	Very high thermal conductivity increases heat loss & requires	Very high thermal conductivity increases heat Loss & requires high insulation levels	Higher thermal conductivity than CPVC, more heat loss & requires higher insulation levels.
Bacterial growth	Extremely low	More than in CPVC	More than copper	Higher than Cpvc
Fire resistance	LOI of is 60% and hence does not catch fire or sustain burning	Being metallic system has better fire resistance	Being metallic system has better fire resistance	LOI is 18%, hence can easily catch fire and sustain buring
Fire resistance	LOI of is 60% and hence does not catch fire or sustain burning	Being metallic system has better fire resistance	Being metallic system has better fire resistance	LOI is 18%, hence can easily catch fire and sustain buring
Installation	Easy, through cold welding, requiring fewer man hours. No electric /heat source required, hence cost effective	Requires highly skilled manpower & electric/heat source.	Very slow and cumbersome, require more man-hours.	Joining process is by heat fusion, requires greater skill & electric /heat source.
Leakage	Leakage installation for the entire life span of the piping system.	Leakage provided carried out by highly trained manpower.	Always susceptible to leakage from day one of installation	Relatively leak free provided high degree of skilled man power is required
Thermal Expansion	Lower ,Leads to less pipe expansions, less looping and offsets	Although thermal expansion is lower, the stresses induced are far greater.	Although thermal expansion is lower, the stresses induced are far greater.	Higher expansion requires more looping/offsets.
Range of fittings	Wide range of fitting makes layout easier and compact for the architects, consultants, builders and end users	Limited range of fitting involves frequent cutting/ welding to achieve the desired layout	Limited range of fittings	Nominal range of fittings
Special Tools	Simple cutter or hex- Saw blade and CPVC solvent cement is adequate for 100% leak proof joint and satisfactory plumbing	Needs special tools like metal cutting flame torch,solder,flux,etc, to carry out the desired plumbing	Needs heavy tools for pipe cutting, threading	Needs special electrical heater to achieve the desired hot welded joint. Any failure can result in poor plumbing

## Joining Procedure of DIPLAST CPVC PIPE & FITTINGS



### Cutting:

In order to make a proper and neat joint, measure the pipe length accurately and make a small mark. Ensure that the pipe and fittings are size compatible. You can easily cut with a wheel type plastic pipe cutter.

### De- Burring /Bevelling:

Burrs and filing can prevent proper contact between tube and fitting during assembly and should be removed from the outside and inside of the pipe. A pocket knife or file is suitable for this purpose. A slight bevel on the end of the tubing will ease entry of the tubing into the fitting socket.

### Fitting Preparation:

Using a clean, dry rag, wipe dirt and moisture from the fittings sockets and tubing end. The tubing should make contact with the socket wall 1/3rd to 2/3rd of the way into the fitting socket.

### Solvent Cement Application:

Use Only CPVC cement or an all – purpose cement confirming to ASTM- 493 or joint failure may result. When making a joint, apply a heavy, even coat of cement to the pipe end .use the same applicator without additional cement to apply a thin coat inside the fitting socket. Too much cement can cause clogged water ways.

### Assembly:

Immediately insert the tubing into the fitting socket, rotate the tube 1/4 to 1/2 turn while inserting. This motion ensures even distribution of cement within the joint. Properly align the fitting. Hold the assembly for approximately 10 seconds, allowing the joint to set up.

### Set and cure Times:

Solvent cement set and cure times are a function of pipe size, temperature and relative humidity. Curing time is shorter for drier environments, smaller sizes and g=higher temperatures. It requires 10 to 20 minutes for perfect joint.

### Approximate Number of joints that can be made with one Solvent Cement Can

Nominal Size	Inch	1/2"	3/4"	1"	1- 1/4"	1- 1/2"	2"
	mm	15	20	25	32	40	50
Approx. Number of joints per can	50ml Can	35	23	15	14	10	07
	118ml Can	82	55	34	33	23	17
	237ml Can	164	110	68	66	46	34
	437ml Can	328	220	136	132	92	68
	946ml Can	656	440	272	264	184	136

## DIPLAST uPVC COLUMN PIPES

Diplast uPVC column pipes for submersible pumps are designed on latest technology, crafted on the most sophisticated equipment to deliver the desired performance, meeting the challenges of tough & long duty cycle upto 50yrs with an unmatched.

### Salient Features:

- Corrosion Free & inert To chemicals
- Very Low friction Losses (10 to 30% more water)
- Cost effective
- Energy saver
- Long Life
- No Electriolytic Deposition
- Easy installation & handling
- Non Toxic

### Application:

- Water rising for submersible and jet pump for irrigation, domestic, industrial mining, chemical distribution.
- A wise replacement for MS ,P P-R, GI, HDPE and SS Column Pipes.
- uPVC snearly inert towards corrosion, chemical reaction and erosion due to which, it is ideally used in salty, sandy and chemically aggressive water without any effect over the years.
- Installation: vertical, horizontal or inclined.

### Special features & identity

Surface finish of this pipe is extremely smooth which reduces the hydraulic



## DIPLAST SWR PIPES & FITTINGS



Diplast Swr Pipes & Fittings

### Product Specification

DIPLAST SWR ISI marked pipes are available in both ring fit & self-fit pipes with two different class of pipe named as "Type A & Type B. Type A Pipes are recommended for use in ventilation and rain water application while Type B pipes are recommended for soil and waste discharge application. Pipes are available in all sizes in different lengths with single & double socket.

Ring fit pipes are socketed on automatic online socketing machine with very high degree of accuracy. The socket has groove inside for rubber ring. The rubber ring ensures trouble free water tight joint with allowance to thermal expansion /contraction. One end of the pipes is plain and the other is self socketed with an integral groove to hold the rubber gasket. When joined with a rubber ring, the joint formed is a trouble free, water tight one, ready to take care of thermal expansion/ contraction.

Nominal Diameter	Mean Outside Diameter		Type A Wall Thickness		Type B Wall Thickness	
	Min	Max	Min	Max	Min	Max
70	75.0	75.3	1.8	2.2	3.2	3.8
90	90.0	90.3	1.9	2.3	3.2	3.8
110	110.0	110.3	2.2	2.7	3.2	3.8

All dimension are in mm and are same for ring fit and selffit Pipes. Only socket geometry is different.



## DIPLAST SWR Fittings

DIPLAST SWR fitting are available in both grooved ring and pasting type in full range starting from 75 mm to 110 mm and are fully compatible with DIPLAST SWR Pipes.

UPVC SWR Conventional System for soil waste & Rain Water



### Testing Requirements

DIPLAST SWR uPVC Pipes & Fittings are subject to strict and continuous control on raw materials, Production, dimensions & identification. The rigorous testing and quality control throughout the entire process ensures that DIPLAST SWR system is highly reliable and effective in working.

### Pipes are subject to tests like

- Tensile strength
- Impact strength
- Reversion
- Stress relief test
- Vicat softening temp test
- Water tightness of joint
- Exposure to sunlight
- Resistance to H<sub>2</sub>S<sub>0</sub>4
- Axial Shrinkage

These acceptance criteria for test results obtained are as per widely accepted international and national standards.

### Thermal expansion and contraction:

Diplast SWR piping system will undergo thermal expansion and contraction like any other thermoplastic materials. The thermal expansion & contraction depends on the co-efficient of thermal expansion ( $5.4 \times 10^{-5} \text{ mm}/^\circ\text{C}$  for PVC), Length of piping and temperature difference encountered by the piping. Normally for drainage & sewerage system temperature difference of atmosphere will effect more to thermal movements of piping rather than effluent temperature as full bore discharge are normally not happened for prolong time and also these discharges are periodic in nature. For solvent cement weld systems change in direction, offset or expansion loops are recommended while for ring fit joining systems specially designed rubber rings and proper joining of pipes and fittings will take care of length change.

Please refer joining method section of this catalogue for more details:

Pipe Clip Spacing Distance			
Size (in mm)	75	90	110
Horizontal (in mtr.)	0.9	0.9	0.9
Vertical (in mtr.)	1.8	1.8	1.8

## DIPLAST SWR Grooved Ring Fittings



Plain Tee

D	75	90	110
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Application: Required to connect Branch Soil/waste line to main line at an angle of 87.5°



Single Tee With Door

D	75	90	110
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Application: Same as plain tee with option of door for cleaning purpose



Bend

D	75	90	110
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Application: Required to connect adjacent Branch line to main line at an angle of 87.5°/92.5°



Cross Tee With Door

D	75	90	110
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Application: Same as plain Cross Tee with option of door for cleaning purpose



Single Y

D	75	90	110
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To Connect a branch soil waste pipeline to the main Vertical line at an angle of 45 degree



Reducing Door Tee

D	110 x 75	110 x 90
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To Connect a reducing soil waste line to the main line at angle of 87.5 degree.





### Bend 45°

D	75	90	110
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Mostly used as a shoe for rain water drainage line. Can also be used for providing a 45° turn to the pipe line.



### Bend With Door

D	75	90	110
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Function is same as a plain bend with a threaded door for cleaning purpose



### Reducer

D	75	90	110
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Used to reduce a main line



### Coupler

D	75	90	110
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To Connection two Length of Pipe.