



## uPVC PIPES TECHNICAL MANUAL



Patent Pending

## New Technology

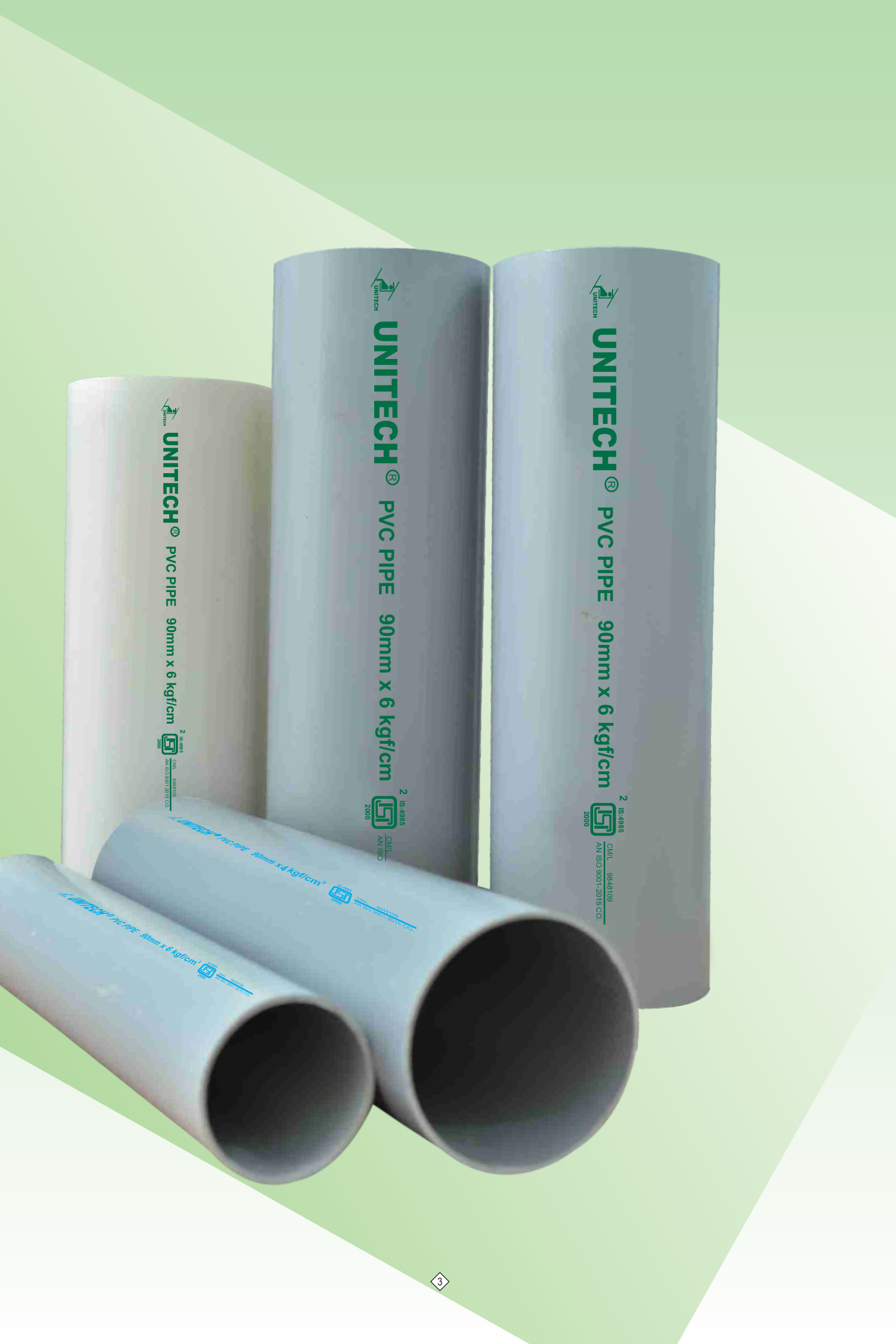
By Efforts of Unitech research and development(R &D) team Unitech has designed New Column Pipe which helps in

In places where the yield to water from the bore well is less. the pump starts running dry after something which may heat up the connected Unitech Riser / Drop pipe.

In places where the submer sible pump gets heated up and may damage the first connected Unitech Riser/Drop Pipe.

Case of Wrong installation or in case of Pipe breakage it will not let the bore to fall down.







# Index

## 01

About Unitech	07
Certifications	08
Technology	09
Media	10

## 02

Why Unitech Column Pipes ?	11
Specification of Unitech Column/Riser/Drop Pipes	12
Installation Guide	14

## 03

Sewerage Waste & Rainwater (SWR) Pipes	15
UPVC Pressure Pipes	16
ASTM (UPVC) Pipes	18

## 04

Sub Dealer Scheme	19
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**UNITECH**® PVC PIPE 110mm x 4 kgf/cm<sup>2</sup>

**UNITECH**® PVC PIPE 90mm x 6 kgf/cm<sup>2</sup>

**UNITECH**® PVC PIPE 1" (33.27mm OD) SCHD. 80 ASTM-D-1785

**UNITECH**® PVC PIPE 1/2" (21.24mm OD) SCHD. 80 ASTM-D-1785

**UNITECH**® ISO 9001:2008 CERTIFIED COMPANY MEDIUM 50 mm Normal Size [60mm OD] H FOR SUBMERSIBLE PUMPS WITH MAXIMUM DELIVERY PRESSURE 18 kgf/cm<sup>2</sup>

**UNITECH**® ISO 9001:2008 CERTIFIED COMPANY MEDIUM 50 mm Normal Size [60mm OD] HI-TECH HI-TENSILE COLUMN PIPES FOR SUBMERSIBLE PUMPS WITH MAXIMUM DELIVERY PRESSURE 18 kgf/cm<sup>2</sup>

## About Unitech

Unitech Pipes has been relentless in its commitment to quality and service. The product base has been enhanced through the years so as to suit the customer's requirements better. With its base in Punjab Unitech Pipes is an ISO 9001-2015 Certified company with a constant endeavour towards achieving the highest level of customer satisfaction.



### Unitech Pipes Assures Quality Management

- **Advanced Machinery For Superior Quality**
- **100% Incoming Raw Material Inspection**
- **Stringent Quality Checks at Every Level of Productions**
- **Every Batch of Products Lab Tested**
- **Regular External Lab Testing of Products In India**
- **High Dimensional Accuracy To Maintain Quality of Each Pipe, To Ensure 100% Customer Satisfaction**
- **State of The Art Manufacturing Facility**
- **100% Finished Goods Inspection**



# Certifications

## Recommendation

This is to certify that the quality management system of

### **Shri Balajee Polymers Industries**

**Khudi Road, Barnala,  
Punjab, India**

Has been assessed successfully and recommended for  
ISO 9001:2015 Certification

#### *Scope of Certification*

**“Manufacturer and Supplier of PVC Pipe, Conduit / Casing / Rigid Column &  
Deep Tubewell Pipes, Submersible Winding Wire, PVC Solvent Solution &  
Accessories”**



Authorised Signatories

Issue date: 30/11/2016

Note: Kindly check your co.name, address & scope, so that we can issue you the formal certificate



### **Bureau of International Quality Standard**

Regional Office: Old No. 81 (New No. 157), 2nd Floor, Coral Merchant Street, Chennai - 600 001

Branch Office: 909, 9th Floor, Hemkunt Tower, Rajendra Place, New Delhi - 110 008

Contact: +91 9717023536, 9814002036

Email: questcert@yahoo.com, Website: www.biqs.org

**BUREAU OF INTERNATIONAL QUALITY STANDARD**



# Technology

Unitech has a dedicated research and development(R &D) team which has made pipe extrusion process flawless. Unitech is using japanese and german technology to ensure better quality,our technical teams visits different countries to provide quality product to customer and always adopt latest technology



## KISAN PUNE 2014



## PUNJAB AGRICULTURE FEST NABHA

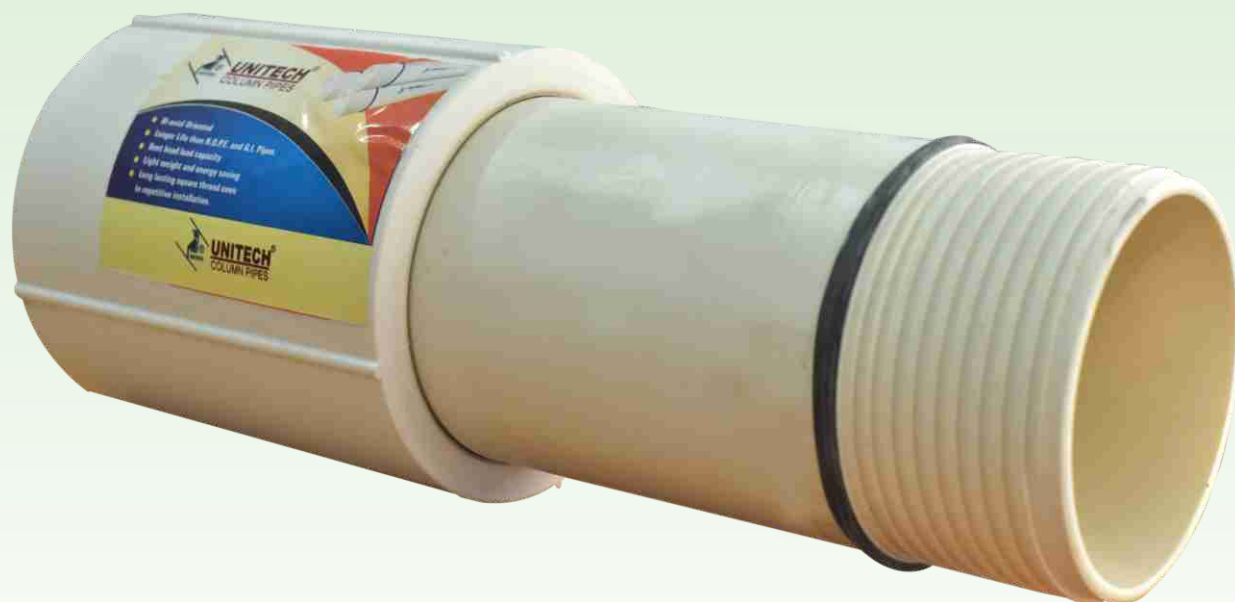


## PUNJAB AGRICULTURE FEST BATHINDA



## Why uPVC Column Pipes?

Property Requirement for Drop/Riser/Column Pipes	UNITECH uPVC COLUMN Pipes	Mild Steel or Galvanized Steel Pipes
Long Life	UNITECH uPVC Column pipes do not react with acidic or alkaline water and have a long life in the bore wells.	Steel pipes are prone to rust, corrosion & ultimately get damaged and need to be replaced quickly.
Light Weight	Pipes are Light in weight and are easy to handle, install and remove.	Pipes are heavy and a great effort is required for installation or maintenance. Difficult to handle.
Smooth Internal Surface	Internal surface is smooth, therefore low head loss due to friction & results in higher discharge of water.	Rough internal surface and head loss is high resulting in less discharge of Water.
Leak Proof Joints	Rubber seals are provided with the thread at every joint ensuring 100% leak proof	Not pressure tight, No rubber seal & hence NOT Leak Proof.
Strong Threaded Joints	Specially designed square Threads which DO NOT corrode, rust or deteriorate.	Threads are prone to rust and corrosion easily.



# Specification of Unitech Column/Riser/Drop Pipes

Nominal Size (Inch)	Nominal Size (mm)	Type	Wall Thickness (mm)				Average Outside Diameter (OD) (mm)	Length of Thick Portion at Both Side (mm)	Nominal Effective Length (mm)	Ultimate Breaking Load (Kg)	Safe Pulling Load with Chain Pulley (Kg)	Safe Allowable Hydrostatic Pressure (Kg/cm <sup>2</sup> )	Safe Total Pump Delivery Head (m)
			End Side		Middle/Berral Side								
			Min	Max	Min	Max							
1"	25 mm	V4 (12.5 kg/cm <sup>3</sup> )	3.9	4.1	1.6	1.7	33.0 ± 0.10	300 ± 20	3000 + 10	800	440	12.5	125
		Medium	4.5	4.9	3.0	3.3							
		Standard	5.2	5.6	4.2	4.6							
1 ¼"	32 mm	V4 (12.5 kg/cm <sup>3</sup> )	4.3	4.5	2.1	2.2	42.0 ± 0.10	300 ± 20	3000 + 10	1340	740	12.5	125
		Medium	5.5	5.9	3.2	3.5							
		Standard	6.8	7.2	4.3	4.6							
		Heavy	7.9	8.3	5.4	5.9							
1 ½"	40 mm	V4 (12.5 kg/cm <sup>3</sup> )	4.7	4.9	2.4	2.5	48.0 ± 0.10	300 ± 20	3000 + 10	1760	970	12.5	125
		Medium	5.3	5.7	3.8	4.2							
		Standard	6.2	6.6	4.3	4.6							
		Heavy	8.1	8.5	6.1	6.5							
2"	50 mm	Medium	4.8	5.3	2.6	2.8	60.0 ± 0.13	300 ± 20	3000 + 10	2900	1550	13	130
		Standard	6.4	6.8	4.1	4.4							
		Heavy	7.9	8.4	5.5	5.8							
		Super Heavy (35 Kg/cm <sup>3</sup> )	9.3	9.5	6.8	7.0							
2 ½"	65 mm	Medium	5.4	6.0	2.8	3.1	75.2 ± 0.13	300 ± 20	3000 + 10	3550	1930	10	100
		Standard	6.7	7.1	4.2	4.5							
		Heavy	9.0	9.5	6.5	6.9							
		Super Heavy (35 Kg/cm <sup>3</sup> )	10.8	11.1	8.6	8.8							
3"	80 mm	Medium	5.9	6.3	3.4	3.6	88.0 ± 0.15	300 ± 20	3000 + 10	5100	2800	11	110
		Standard	7.5	8.0	5.2	5.6							
		Heavy	10.0	10.5	7.5	7.9							
4"	100 mm	Medium	6.4	6.9	4.0	4.4	113.0 ± 0.15	300 ± 20	3000 + 10	7500	4100	10	100
		Standard	8.5	9.0	5.9	6.3							
		Heavy	12.1	12.6	9.6	10.1							

# Installation Guide

## INSERT MS FLANGE

Insert one MS Flange to Bottom Adaptor from bottom side



## FIX THE ADAPTOR

Fix the Adaptor to Pump with wrench support, tightly



## WASH WITH SOAP & CLEAN WATER

Wash PVC SM Piece male and female Threads with plain water and insert in Adaptor Square Threads.



## INSERT PIPES

Clean the male and female Threads with plain water and insert pipe to pipe till last pipe.



## FIX WITH PUMPS

Drop the pump with one after another pipe with a support of LOWERING ZIG and manpower.



## FIX WINDING WIRE

Tie the cable to pipe outer walls, with a winding wire loosely, with an extra length of one foot approximately to each pipe to sustain the Vibration jerks.



## FIX TOP ADAPTOR FOR USAGE

Fix TOP ADAPTOR to final pipe coupler, adjust with GI coupler and bend for regular usage.



# UPVC Pressure Pipes

**Unitech Agriculture UPVC Pipe & Fittings** are manufacturing from high impact unplasticised polyvinyl chloride compound that is capable of withstanding the most rigorous on-site conditions and exceeding the most stringent requirements of Indian & International standards. The product range is manufactured in accordance with Indian standards IS: 4985 / 2000. These pipes & fittings are a perfect choice for potable water supply, where ease of installation, maintenance & zero leakages are a priority.

## Applications

- Agriculture & Irrigation
- Potable water supply
- Construction
- Industrial & Chemical Effluent disposal
- Tube well casing
- Telecom & power cable / ducting

## Features

- Economical
- Easy installation
- Corrosion resistant
- Flexibility
- Perfect dimensional standards
- Fire resistant
- Chemical resistant
- Hygienic
- High flow characteristic
- Low thermal conductivity

Colour: Grey.

**Table 1 Dimensions of Unplasticised PVC Pipes  
(Classes 7.1.1 and 7.1.2)  
All dimensions in millimeters**

Nominal Outside Diameter (Nominal Size)	Mean Outside Diameter		Outside Diameter At Any Point		Working Pressure, MPa																		
	Min	Max	Min	Max	Class 1 0.25			Class 2 0.40			Class 3 0.60			Class 4 0.80			Class 5 1.00			Class 6 1.25			
					Avg Max	Min	Max	Avg Max	Min	Max	Avg Max	Min	Max	Avg Max	Min	Max	Avg Max	Min	Max	Avg Max	Min	Max	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	
20	20.0	20.3	19.5	20.5														1.5	1.1	1.5	1.8	1.4	1.8
25	25.0	25.0	24.5	25.5														1.8	1.4	1.8	2.1	1.7	2.1
32	32.0	32.3	31.5	32.5										1.6	1.2	1.6	1.8	1.4	1.8	2.1	1.7	2.1	
40	40.0	40.3	39.5	40.5										1.9	1.5	1.9	2.2	1.8	2.2	2.7	2.2	2.7	
50	50.0	50.3	49.4	50.6							1.8	1.4	1.8	2.2	1.8	2.2	2.7	2.2	2.7	3.3	2.8	3.3	
63	63.0	63.3	62.2	63.8							2.1	1.7	2.1	2.8	2.3	2.8	3.3	2.8	3.3	4.0	3.4	4.0	
75	75.0	75.3	74.1	75.9				1.9	1.5	1.9	3.7	2.2	2.7	3.3	2.8	3.3	4.1	3.5	4.1	5.0	4.3	5.0	
90	90.0	90.3	88.9	91.1				2.2	1.8	2.8	3.1	2.6	3.1	4.0	3.4	4.0	4.9	4.2	4.9	5.9	5.1	5.9	
110	110.0	110.4	108.6	111.4	1.7	1.3	1.7	2.6	2.1	2.6	3.7	3.1	3.7	4.6	4.0	4.6	5.7	5.0	5.7	7.0	6.1	7.1	
125	125.0	125.4	123.5	126.5	2.0	1.6	2.0	3.0	2.5	3.0	4.3	3.7	4.3	5.6	4.9	5.6	7.0	6.1	7.1	8.5	7.5	8.7	
140	140.0	140.5	138.3	141.7	2.2	1.8	2.2	3.4	2.9	3.4	5.0	4.3	5.0	6.4	5.6	6.4	7.8	6.9	8.0	9.6	8.5	9.8	
160	160.0	160.5	158.0	162.0	2.4	2.0	2.4	3.8	3.2	3.8	5.5	4.8	5.5	7.2	6.3	7.3	8.7	7.7	8.9	10.7	9.5	11.0	
180	180.0	180.6	177.8	182.2	2.8	2.3	2.8	4.3	3.7	4.3	6.3	5.4	6.2	8.2	7.2	8.3	9.9	8.8	10.2	12.2	10.9	12.6	
200	200.0	200.6	197.6	202.4	3.1	2.6	3.1	4.9	4.2	4.9	7.0	6.1	7.1	9.0	8.0	9.2	11.1	9.9	11.4	13.7	12.2	14.1	
225	225.0	225.7	222.3	227.7	3.4	2.9	3.4	5.3	4.6	5.3	7.7	6.8	7.9	10.0	8.9	10.3	12.3	11.0	12.7	15.2	13.6	15.7	
250	250.0	250.8	247.0	253.0	3.9	3.3	3.9	6.0	5.2	6.0	8.6	7.6	8.8	11.2	10.0	11.5	13.9	12.4	14.3	17.1	15.3	17.6	
					4.2	3.6	4.2	6.5	5.7	6.5	9.6	8.5	9.8	12.4	11.2	12.9	15.4	13.8	15.9	18.9	17.0	19.6	



## SEWERAGE WASTE AND RAINWATER (SWR) PIPES & FITTINGS

**Unitech Sewerage Waste Rainwater (SWR) Pipes & Fittings** are manufactured from a specially Formulated unplasticised polyvinyl chloride compound. These pipes & fittings are tough and durable with high tensile and impact strength and are manufactured in accordance to IS: 13592 – 1992 & fittings to IS: 14735 – 1999. Rubber rings confirm to IS:5382.

### Applications

Precision Sewerage Waster Rainwater (SWR) Pipes / Fittings are available with 'O' ring joint for quick, efficient & Leak free Waste Discharge systems for Homes, Apartments, Hotels, Commercial complex, Hospitals etc.

**Type A:** For Rain Water Discharge. **Type B:** For Soil & Waste Discharge.

### Features

- High Quality
- Time tested Operational life 50 years
- Economical Low Maintenance, Quick & Easy Installation
- UV stabilized Weather Proof
- Corrosion & Weather Proof
- Corrosion & Chemical resistance
- Easy Flow due to smooth inner surface
- Hygienic & Environment friendly
- Easy access for cleaning and clearing and clearing obstructions

**Colour:** Grey

### DIMENSIONS FOR SWR PIPES

Nominal Diameter	Mean Outside Diameter		Outside Diameter at Any Point		Wall Thickness			
					Type A		Type B	
DN	Min	Max	Min	Max	Min	Max	Min	Max
75 mm	75.00	75.30	74.10	75.90	1.80	2.20	3.20	3.80
110 mm	110.00	110.40	108.60	111.40	2.20	2.70	3.20	3.80







## ASTM (UPVC) PIPES & FITTINGS FOR COLD WATER APPLICATIONS

**Unitech ASTM (UPVC) Pipes & Fittings** are manufactured from a specially formulated unplasticised polyvinyl chloride compound. These pipes & fittings are tough and durable with high tensile and impact strength and are manufactured in accordance to ASTM D – 1785 SCH 40 & SCH 80 and fittings to ASTM D 2467 – SCH80.

### Applications

Channelising potable water supply in Homes, Apartments, Hotels, Commercial Complex, Hospitals etc.

### Features

- Various diameters & grades to suit different applications & conditions
- Time tested operational life of 50 years
- Economical, Maintenance free & Easy to Install
- Heat Efficient & Lower Installation Cost
- Corrosion free & Chemical resistant
- Fire Retardant
- Low Thermal Expansion
- Hygienic & Environment friendly
- Service Temperature upto 60°C.

**Colour :** White.

ASTM D 1785 / SCH 40 PIPES					
N.B.Size		Nominal	Wall Thickness		Pressure Rating at 23 <sup>o</sup>
Inch	mm	OD mm	Min	Max	Kg/cm <sup>2</sup>
½	15	21.24	2.77	3.28	41.4
¾	20	26.57	2.87	3.38	33.1
1	25	33.27	3.38	3.89	31.0
1¼	32	42.03	3.56	4.07	25.5
1½	40	48.11	3.68	4.19	22.8
2	50	60.17	3.91	4.42	19.3

ASTM D 1785 / SCH 80 PIPES					
N.B.Size		Nominal	Wall Thickness		Pressure Rating at 23 <sup>o</sup>
Inch	mm	OD mm	Min	Max	Kg/cm <sup>2</sup>
½	15	21.24	3.73	4.24	58.6
¾	20	26.57	3.91	4.42	47.6
1	25	33.27	4.55	5.08	43.4
1¼	32	42.03	4.85	5.43	35.9
1½	40	48.11	5.08	5.69	32.4
2	50	60.17	5.54	6.20	27.6

**Scheme Period**  
This Scheme is valid from 1st April 2015  
**Product Range**

uPVC Pipes & Fittings, SWR Pipes, Column Pipes, UPVC Plumbing Pipes, Agriculture Pipes



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250,000		2500,000	Foreign Tour
500,000			



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Khuddi Road, BARNALA (Pb.)

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