



# AQUAFIT<sup>®</sup>

Agri Pressure & Non Pressure  
Pipes & Fittings

————— Pressure & Non Pressure —————  
Piping Systems

Pipes as per IS:4985    Fittings as per IS:7834



\*ZERO DEFECT MANUFACTURING PROCESS

# AQUAFIT® UPVC PRESSURE & NON-PRESSURE PIPES & FITTINGS

PRINCE offers the highest range of UPVC Pipes & Fittings with a wide range from 20mm to 250mm and working pressure of 16kg/cm<sup>2</sup>, 10kg/cm<sup>2</sup>, 6kg/cm<sup>2</sup> and 4kg/cm<sup>2</sup> as well as non-pressure Prestige Fittings.

PRINCE PIPES & FITTINGS is crafted to perfection with the highest range of ISI mark and are available through a wide-spread network of around 2500 dealers across the country.

<p><b>COUPLER - ISI</b></p>  <p>20mm to 160mm</p>	<p><b>COUPLER PN - 10</b></p>  <p>20mm to 32mm</p> <p><small>Also available in Coupler PN - 6 63mm</small></p>	<p><b>COUPLER LW</b></p>  <p>40mm to 250mm</p>	<p><b>COUPLER PRESTIGE</b></p>  <p>63mm to 110mm</p>	<p><b>ELBOW - ISI (ISI)</b></p>  <p>20mm to 110mm</p> <p><small>Also available in ELBOW 4KG (ISI) in sizes 90 &amp; 110mm</small></p>
<p><b>ELBOW PN6</b></p>  <p>40mm to 180mm</p> <p><small>Also available in ELBOW PN-10 in sizes 20, 25, 32 &amp; 110mm</small></p>	<p><b>ELBOW L.W.</b></p>  <p>40mm to 250mm</p>	<p><b>ELBOW PRESTIGE</b></p>  <p>63mm to 160mm</p>	<p><b>TEE - ISI</b></p>  <p>20mm to 160mm</p> <p><small>Also available in TEE 4KG (ISI) in sizes 90 &amp; 110mm</small></p>	<p><b>TEE PN-6</b></p>  <p>40mm to 250mm</p> <p><small>Also available TEE PN - 10 in sizes 20, 25, 32 &amp; 110mm</small></p>
<p><b>TEE L.W.</b></p>  <p>40mm to 200mm X 160mm</p>	<p><b>TEE PRESTIGE</b></p>  <p>63mm to 160mm</p>	<p><b>END CAP - ISI</b></p>  <p>20mm to 110mm</p>	<p><b>END CAP L.W.</b></p>  <p>63mm to 200mm</p>	<p><b>END CAP THREADED</b></p>  <p>20mm to 160mm</p>
<p><b>SERVICE SADDLE</b></p>  <p>40mm X 20mm to 225mm X 63mm</p>	<p><b>MALE THREADED ADAPTOR - HY</b></p>  <p>20mm to 160mm</p> <p><small>Also available in Male Threaded Adaptor from 20mm to 110mm</small></p>	<p><b>FEMALE THREADED ADAPTOR</b></p>  <p>20mm to 160mm</p>	<p><b>TAIL PIECE</b></p>  <p>63mm to 200mm</p>	<p><b>FLANGE</b></p>  <p>63mm to 110mm</p> <p><small>Also available Threaded Flange from 50mm to 90mm</small></p>
<p><b>REDUCER</b></p>  <p>25mm X 20mm to 250mm X 200mm</p>	<p><b>REDUCING BUSH</b></p>  <p>25mm X 20mm to 160mm X 140mm</p>	<p><b>REDUCING TEE</b></p>  <p>25mm X 20mm to 250mm X 200mm</p>	<p><b>FOUR WAY TEE</b></p>  <p>63mm X 32mm to 75mm X 75mm</p>	<p><b>REDUCING M.T.A.</b></p>  <p>75mm X 50mm to 90mm X 75mm</p>
<p><b>REDUCING F.T.A.</b></p>  <p>25 X 20mm to 140 X 110mm</p>	<p><b>REDUCING ELBOW</b></p>  <p>25mm X 20mm to 160mm X 110mm</p> <p><small>Also available Threaded Elbow from 20x20mm to 90x90mm</small></p>	<p><b>THREADED TEE</b></p>  <p>20mm X 20mm to 110mm X 110mm</p>	<p><b>UNION AGRI</b></p>  <p>20mm to 32mm</p>	<p><b>FEMALE THREADED ADAPTOR (METAL INSERTS)</b></p>  <p>25 X 1/2"</p>
<p><b>FEMALE THREADED ELBOW</b></p>  <p>25 X 1/2"</p>	<p><b>FEMALE THREADED TEE</b></p>  <p>25 X 1/2"</p>			

**Product range:**

20mm to 400mm for Pipes & 20mm to 250mm for Fittings

**Standard:**

IS 4985 for Pipes and IS 7834 for Fittings

**Applications:****In agriculture**

- Water supply and distribution schemes
- Irrigation

**Others**

- Drinking Water supply and distribution
- Cable ducting
- Ventilation pipe line
- Slurry lines

**Extensively used in:****Jointing method:****Solvent Joint**

- Cut the pipes of required length and clean the end.
- Chamfer the edge of the pipe for easy entry.
- Mark the depth of insertion on pipe end.
- Roughen the pipe insertion surface (externally) & socket of the fitting (internally) by using emery paper.
- Apply a thin coat of Prince PVC solvent cement on the roughened surface with brush. Avoid excess solvent cement.
- Insert the pipe end inside socket fitting fully and turn through 90° for even spreading of solvent cement. Hold the joint for about 1 minute.
- Cure the joint for 24 hrs for a proper and permanent joint.

**Threaded Joint**

- Clean the male and female threads.
- Apply teflon tape in the direction of the thread tightening.
- Tighten the threads firmly with hands.
- Tighten the joint slightly more using pipe wrench. Do not over-tighten.
- Use rubber packing while applying wrench to avoid scratch on the pipe.

**Note:** 1) Pressure rating of UPVC Pipes & Fittings is temperature related. Derating factor shall be applied during designing & operation for higher temperature applications. (For detailed data refer IS-4985 or contact us).  
2) Installation of UPVC pipeline shall be done in accordance with IS-7634 (Part-3).

**Major advantages:**

1. Light weight, easy to transport, store, handle and install. Saves labour.
2. Smooth bore ensures higher flow compared to G.I pipes and fittings of the same size. No clogging. Saves operational cost.
3. Solvent cement joint therefore quick installation.
4. Corrosion resistance, UPVC rustproof material therefore bore diameter remains constant, ensuring constant flow over a lifetime.
5. Long working life (if operated under normal/recommended working conditions).
6. Cost effective. Added value for your money.

**Specifications**

Material	Unplasticized Polyvinyl Chloride
Colour	Light Grey
Reference Standards	IS - 7834
Working Temperature	Up to - 60°C - Continuous Up to 90°C - Short time - up to 3 mins.
Test	Tested for potable water supply as per IS - 7834
Working Pressure	Available in 10 kg/cm <sup>2</sup> , 6 kg/cm <sup>2</sup> and 4 kg/cm <sup>2</sup>

A) ISI Marked fittings

Pressure rating of the fittings is mentioned on each fitting.

B) Non-ISI Marked fittings

Refer our Technical Specification Chart.

**Pressure & Non-Pressure Pipes** are manufactured in accordance with IS:4985 covering a complete range from 20 mm to 400 mm. They are available in pressure rating 2.5 kg/cm<sup>2</sup>, 4 kg/cm<sup>2</sup>, 6 kg/cm<sup>2</sup>, 8Kg/cm<sup>2</sup>, 10 kg/cm<sup>2</sup> & 12.5 kg/cm<sup>2</sup> as defined in IS:4985. The pipes are provided with plain socket and suitable for solvent cement jointing.

Their main application is in agriculture for water supply, drip irrigation & sprinkler lines etc. as well as for drinking water distribution. However, these can also be used in cable ducting, ventilation pipe lines & slurry lines etc.

They are available in light grey colour with nominal length of 6 mtrs.

## Dimensions for Aquafit Pipes.

Nominal Outside Diameter (Nominal Size)	Mean Outside Diameter		Outside Diameter at any point		Wall Thickness												Mean Socket Internal Diameter of Mid Point of Socket Length	
					Class 1 0.25 MPa 2.5 Kg/cm <sup>2</sup>		Class 2 0.40 MPa 4.0 Kg/cm <sup>2</sup>		Class 3 0.60 MPa 6.0 Kg/cm <sup>2</sup>		Class 4 0.80 MPa 8.0 Kg/cm <sup>2</sup>		Class 5 1.00 MPa 10.0 Kg/cm <sup>2</sup>		Class 6 1.25 MPa 12.5 Kg/cm <sup>2</sup>			
					Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min		
20	20.0	20.3	19.5	20.5	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8	20.1	20.3
25	25.0	25.0	24.5	25.5	-	-	-	-	-	-	1.2	1.6	1.4	1.8	1.7	2.1	25.1	25.3
32	32.0	32.3	31.5	32.5	-	-	-	-	-	-	1.5	1.9	1.8	2.2	2.2	2.7	32.1	32.3
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	40.1	40.3
50	50.0	50.3	49.4	50.6	-	-	-	-	1.7	2.1	2.3	2.8	2.8	3.3	3.4	4.0	50.1	50.3
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	63.1	63.3
75	75.0	75.3	74.1	75.9	-	-	1.8	2.2	2.6	3.1	3.4	4.0	4.2	4.9	5.1	5.9	75.1	75.3
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	90.1	90.3
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	110.1	110.4
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	125.1	125.4
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	140.2	140.5
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	160.2	160.5
180	180.0	180.6	177.8	182.2	2.6	3.1	4.2	4.9	6.1	7.1	8.0	9.2	9.9	11.4	12.2	14.1	180.2	180.5
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	200.3	200.6
225	225.0	225.7	222.7	227.7	3.3	3.9	5.2	6.0	7.6	8.8	10.0	11.5	12.4	14.3	15.3	17.6	225.3	225.7
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	250.4	250.8
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	280.4	280.9
315	315.0	316.0	311.2	318.8	4.6	5.3	7.2	8.3	10.7	12.4	14.0	16.1	17.3	19.9	21.4	24.7	315.4	316.0
355	355.0	356.1	350.7	359.3	5.1	5.9	8.1	9.4	12.0	13.8	15.8	18.2	19.6	22.6	24.1	27.8	355.4	356.0
400	400.0	401.2	395.2	404.8	5.8	6.7	9.1	10.5	13.5	15.6	17.8	20.5	22.0	25.3	27.2	31.3	400.4	401.0

Note: Pipes available with ISI mark except 400mm.

## Properties of PVC

<b>Mechanical</b>	
Tensile Strength	: 415 - 525 kg/cm <sup>2</sup>
Compression Strength	: 550 - 910 kg/cm <sup>2</sup>
Flexural Strength	: 680 - 1100 kg/cm <sup>2</sup>
Izod Impact Strength	: 4 - 5 kg/cm <sup>2</sup>
Shore Hardness	: D 65 - 85
<b>Thermal</b>	
Coefficient of Linear Expansion	: 0.08 mm/M°C
Vicat Softening Point	: >78°C
Max. Operating Temperature	: 60°C
<b>Physical</b>	
Specific Gravity	: 1.40 - 1.45
Water Absorption	: <4mg/cm <sup>3</sup>

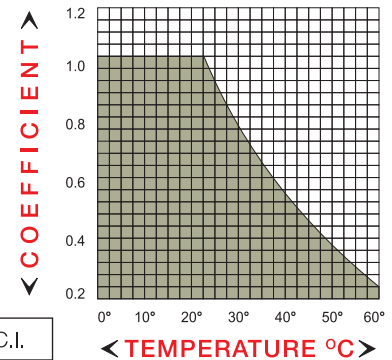
## Standards, Quality Control & Testing

The manufacturing and testing is done for Pipes in accordance with IS: 4985 - 2000

All the above pipes, except non-pressure pipes are tested for potable water supplies in accordance with their relevant standards and as per the test methods given in IS: 12235.

## Hazen - William's Flow Co-efficient Comparison

Pipe Material	PVC	A.C.	G.I.	C.I.
Flow Coefficient	150	130	110	100



## The Prince Piping Systems product portfolio:

**ULTRAFIT™**  
SWR Systems  
With World Class Seals

**SILENTFIT™**  
Drainage Systems

**DRAINFIT™**  
UPVC Underground Drainage Pipes

**FOAMFIT™**  
Underground Drainage Pipes

**AQUAFIT®**  
Agri Pressure & Non Pressure  
Pipes & Fittings

**GREENFIT®**  
PP-R Plumbing Systems

**EASYFIT®**  
UPVC Plumbing Systems

**SMARTFIT®**  
CPVC Plumbing Systems

**RAINFIT™**  
Roofwater Systems

**SAFEFIT™**  
Borewell Systems

**DURAFIT™**  
Manhole Covers With Frames

**TRUBORE®**  
PVC PIPES & FITTINGS

# PRINCE PIPES & FITTINGS PVT. LTD.

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