



AQUAFIT[®]

Agriculture Piping Systems

AN EVERGREEN SOLUTION.



#Lead free pipes & fittings*

Pipes as per
IS 4985



Fittings as per
IS 7834

*except brass fittings

Overview

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/cm², 4 Kg/cm², 6 Kg/cm², 8 Kg/cm², 10 Kg/cm², 12.5 Kg/cm² & 16 Kg/cm² 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.

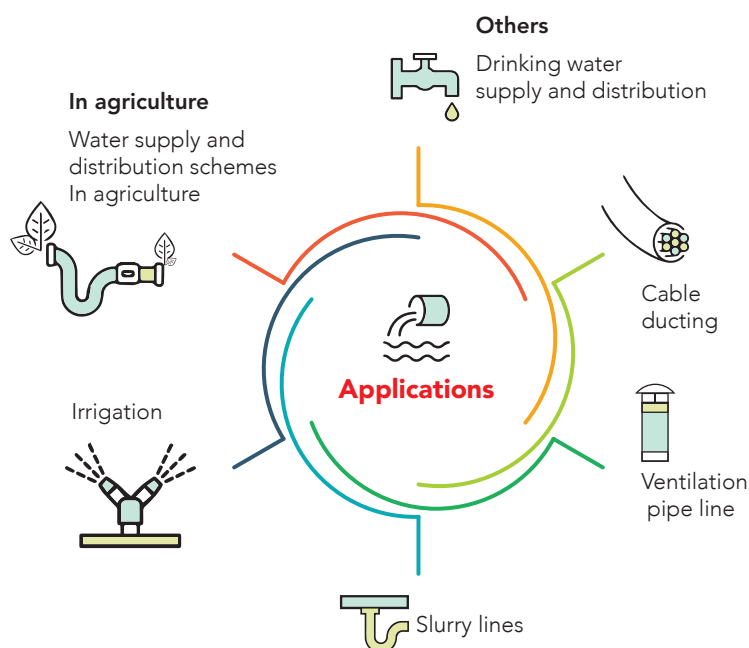
They are available in light grey colour and nominal length of 6 mtrs.

Product range

• **Pipes:** 20 to 400 mm • **Fittings:** 20 to 250 mm

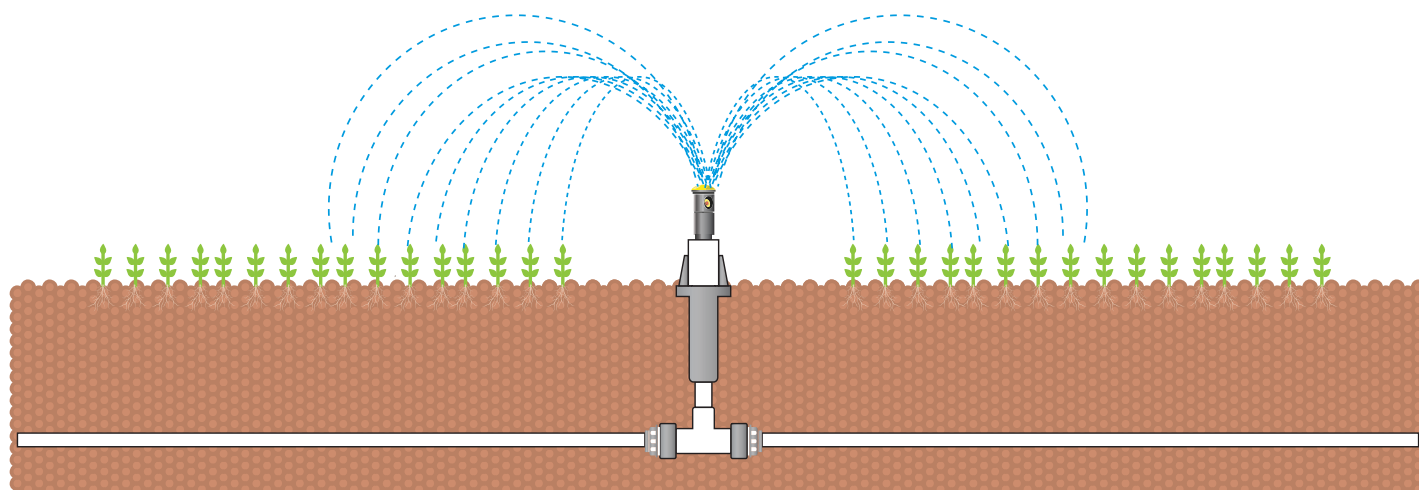
Standards

Pipes				Fittings			
Size (mm)	Working Pressure (Kg/cm ²)	Standard	End Connection	Size (mm)	Working Pressure (Kg/cm ²)	Standard	End Connection
20 to 400	2.5, 4, 6, 8, 10 & 12.5	IS 4985	Solvent Joint	20 to 250	4, 6, 10 & 16	IS 7834	Solvent Joint, Threads (For transition fittings)



Features and benefits

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



Dimensions for Aquafit pipes

Nominal Outside Diameter (Nominal Size)	Mean Outside Diameter		Wall Thickness												Mean Socket Internal Diameter of Mid Point of Socket Length	
			Class 1 0.25 MPa 2.5 Kg/cm²		Class 2 0.40 MPa 4.0 Kg/cm²		Class 3 0.60 MPa 6.0 Kg/cm²		Class 4 0.80 MPa 8.0 Kg/cm²		Class 5 1.00 MPa 10.0 Kg/cm²		Class 6 1.25 MPa 12.5 Kg/cm²			
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
20	20.0	20.3	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8	20.1	20.3
25	25.0	25.0	-	-	-	-	-	-	1.2	1.6	1.4	1.8	1.7	2.1	25.1	25.3
32	32.0	32.3	-	-	-	-	-	-	1.5	1.9	1.8	2.2	2.2	2.7	32.1	32.3
40	40.0	40.3	-	-	-	-	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	-	-	-	-	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	-	-	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	-	-	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	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	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	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	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	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	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	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	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	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	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	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	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	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 400 mm.

Properties of UPVC Pipes

Mechanical

Tensile Strength	:	415 - 525 Kg/cm ²
Compression Strength	:	550 - 910 Kg/cm ²
Flexural Strength	:	680 - 1100 Kg/cm ²
Izod Impact Strength	:	4 - 5 Kg/cm ²
Shore Hardness	:	D 65 - 85

Thermal

Co-efficient of Linear Expansion:	0.08 mm/M°C
Vicat Softening Temperature	: >78°C
Max. Operating Temperature	: 60°C

Standards, Quality Control and Testing

The manufacturing and testing is done for pipes in accordance with IS: 4985

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 Co-efficient	150	130	110	100

Pressure Rating vs Temperature Derating Factor

Temp Deg (C)	Derating factor
0-25	1
27	0.95
30	0.89
35	0.79
40	0.71
45	0.63
50	0.42
55	0.34
60	0.25

As the temperature of fluid flowing through installation increases, the pressure withstanding capacity of installation wall decreases. So to find out the pressure rating of PVC Pipes & Fittings at required temperature, multiply, the pressure rating of Pipes & Fittings by derating factor given in table.

Example:

Rated pressure of installed system 10 Kg,
Up to 25°C, the system can stand 10 Kg pressure,
If Temperature is 40°C, derating factor is 0.71,
Therefore $10 \times 0.71 = 7.1$ Kg.
So, the system can withstand 7.1 Kg.