UV RESISTANT

Pb

Pb-Free

QA


A step towards
Brighter Future

ABOUT FLOWKEM

Flowkem started the journey from manufacturing Ball– valves and was incorporated in 2014 with a vision to provide best quality pipes and fittings across the country. Today we are an ISO 9001:2015 certified organisation whose aim is to make quality products available to every household and industry at best prices in the country.

Our manufacturing facility located at Ahmedabad (Gujarat) is equipped with modern and state of art machinery and infrastructure, covering a total area of 16 acres of which 22000 square meters of constructed area with 05 extrusion machines and 55 Injection moulding machines. Our products are produced in accordance with the Indian standards set by Bureau of Indian Standards (BIS) and other approving agencies.

We manufacture CPVC, UPVC, SWR pipes and fittings & Agriculture Pipes and Moulded fittings. The pipes and fittings are available in various sizes, pressure classes and diameters fit for diversified applications in both agricultural as well as non-agricultural sectors including housing, industrial and construction.

Under the leadership of Mr. Shailesh Patel, Managing Director, Flowkem has expanded into the plumbing industry. He is a person of great vision, exemplary talents and many achievements. His energy and enthusiasm have brought the Company to achieve many milestones. Beginning the journey from manufacturing Ball-valves in 2002 to venturing into plumbing and drainage systems, Flowkem has grown to be one of the popular brands in many markets in India.

We are growing at a fast pace and working with numerous channel partners across India which help us in reaching customers effectively. We also have an efficient marketing & sales infrastructure supported by professional team.

FLOWKEM aims to create its niche in plumbing and other water solution products. The customers' satisfaction is the most important goal for FLOWKEM.


Flowkem
Inspire A Better Tomorrow
FLOWKEM POLY PLAST PVT. LTD.
OFFICE AREA
Flowkem®
Inspire A Better Tomorrow

Certifications:

Thermoplastics – An Alphabet Soup

Distillation of Petroleum

Crude Benzene

Propylene

Ethylene

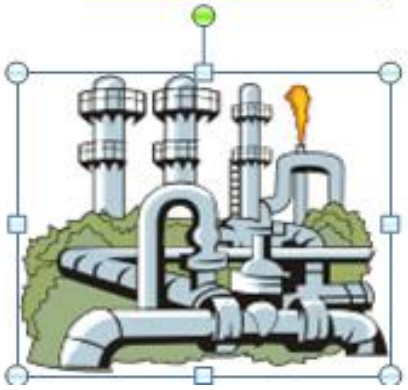
$+Cl_2$

VCM

PVC

PP

PE



$+Cl_2$

CPVC

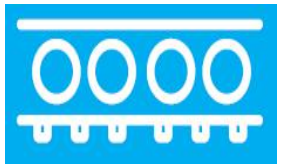
BASIC PROPERTIES OF UPVC ARE AS BELOW			
Sr. No.	Property	Units	Specified Value
1	Density	g/cm3	1.3-1.45
2	Thermal conductivity	w/(m.k)	0.14 - 0.28
3	Yield strength	MPa	31 - 60
4	Young's modulus	psi	4,90,000
5	Flexural strength (yield)	psi	10,500
6	Compression strength	psi	9500
7	Coefficient of thermal expansion (linear)	mm(mm"c)	5 x 10-5
8	Vicat B	°c	65-100
9	Resistivity	Qm	10^{16}
10	Surface resistivity	Q	10^{13} - 10^{14}

❖ ASSURANCES

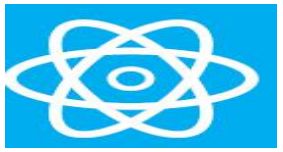
- STATE OF ART MANUFACTURING FACILITIES

- ADVANCED MACHINERY FOR CONDESCENDING QUALITY

- ADVANCED MATERIAL HANDLING SYSTEMS

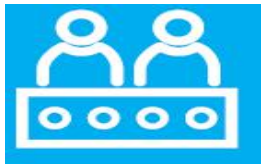


- 100% INCOMING RAW & PACKING MATERIALS INSPECTIONS



- HIGH DIMENSIONAL ACCURACY TO MAINTAIN QUALITY OF EACH PIECE, TO ENSURE A PRODUCT DEFFECT FREE

- STRICT QUALITY CHECKS AT EVERY STAGE OF PRODUCTION



- 100% FINISHED GOODS INSPECTION

- MULTIPLE QUALITY CHECKS FOR SWR MOULDED FITTINGS THAT DISPATCHES FROM THE FLOWKEM FACTORY

- LAB TESTS PERFORMED FOR EVERY BATCH PRODUCED

- ROUTINE TEST CARRIED OUT AT EXTERNAL LAB LIKE BIS & CIPET

BIS

CIPET

WHAT IS PVC AGRICULTURAL PIPES AND FITTINGS ?

AGRICULATURE PIPES

PVC-U Pipes for agriculture & potable water supply are manufactured in a wide range of sizes such as 20 mm to 250 mm and pressure classes. Their primary use is in agricultural, irrigation, water supply, industrial process lines, swimming pools etc. They are available in two types of joints – Selfit (solvent cement joint) & Ringfit (rubber ring joint). These pipes are superior to conventional CI and R.C.C. pipes. The advantages of these pipes such as lightweight, easy transportation and installation, high flow rate, high resistance to chemicals and corrosion ensuring an extended product life.

SELFIT PVC-U PIPES

One end of this pipe is self - socketed and the other is plain, so there is no required couplers. The strong solvent cement joints permanent and trouble-free. This eliminates the inconvenience of loose couplers and thereby saves both time and cost.

RINGFIT PVC-U PIPES

This unique range of PVC-U pipes introduced by FLOWKEM in India is specially designed for higher diameter requirements and eliminates the need for solvent cement. The sealing ring ensures leak-proof joints and easy installation. The range of sizes from 20 mm to 250 mm diameter, in 2.5,4,6,8 and 10 kgf/ cm2 working pressure classes.

MOULDED FITTINGS

PVC-U Fittings for agriculture & potable water supply are manufactured in a wide range of sizes. Their primary use is to join two length of pipes, to give a 90° / 45° turn to a pipeline, to connect male threaded CP/ Metal fittings like taps, showers, etc. to pipeline, to take a reducing bypass or a service line from the main line etc.

APPLICATIONS

- IRRIGATION SYSTEM.
- Rainwater Drainage system.
- Main to Branch line Sprinkler & Irrigation system.
- Tube / Bore well.
- Underground and Open Pipeline system.
- Telecommunication System
- Greenhouse Technology
- Surface Water Drainage system
- Chemical Conveying System

The limitations of PVC pipes.

PVC pipe can't handle near boiling temperatures for an extended period of time
It can deformed and leak on exposure to water coming out of a hot water heater.

WHY ONLY FLOWKEM PVC AGRICULTURAL PIPES AND FITTINGS?

- Easy handling, transportation and installation
- Long life (Higher shelf life ensuring high consistency)
- Excellent chemical resistant.
- Non conductive.
- Better flow and leak-proof joining.
- High strength and durability.
- UV stabilized.
- Cost Effective.

❖ **Low Maintenance Costs:** PVC pipes are lighter and easier to handle than pipes made of other materials. 12-15 times lighter than the pipes of D.I. , C.I. & G.I.

STANDARDS AND CODES.

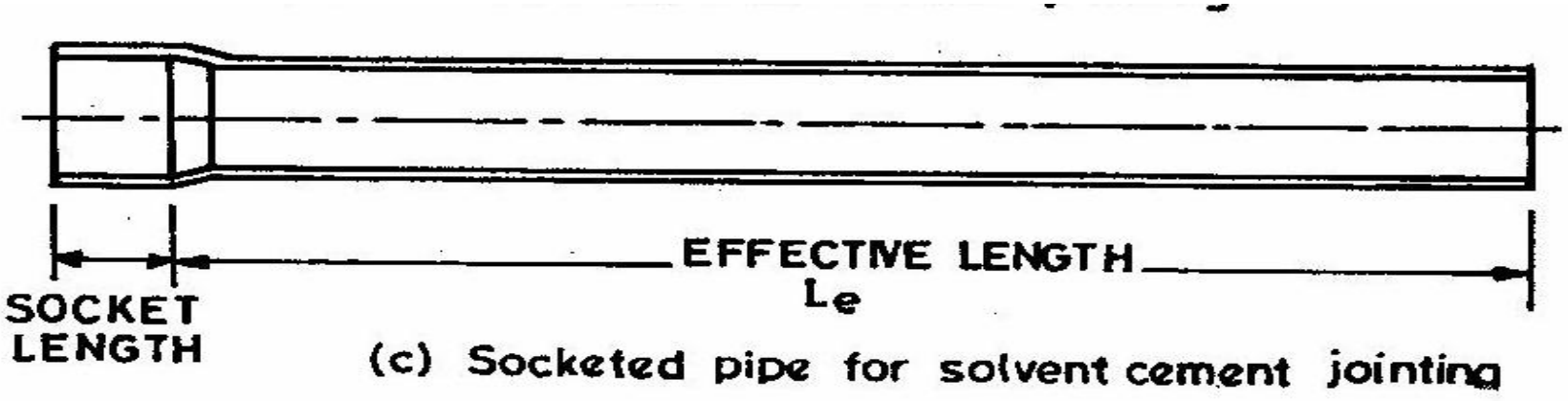
STANDARDS FOR PIPES AND FITTINGS

AGRI PIPES AND FITTINGS ARE MANUFACTURED IN SIZE 20 MM TO 250 MM AS PER IS 4985 AND FITTING AS PER IS 7834 IN DIFFERENT SIZE ,CLASSES AND PRESSURE RATING.

Class of pipes/ Fittings	Standard	Sizes available	Class of pipes/ Fittings	Standard	Sizes available
PVC AGRICULTURAL PIPE CLASS-1,2,3,4,5 AND PRESSURE RATING 2.5 KG, 4KG, 6KG, 8KG, 10KG.	IS 4985:2000	20 MM TO 250 MM SELF JET AND RING JET	PVC AGRICULTURAL FITTING CLASS-1 ,2,3 AND CLASS-5	IS 7834:1987	20 MM TO 200 MM

DIMENSIONS OF UNPLASTICIZED PVC PIPES(as per IS 4985:2000)
Clause : 7.1.1 & 7.1.2

NOMINAL OUTSIDE DIAMETER (MM)	MEAN OUTSIDE DIAMETER IN (MM)		OUTSIDE DIAMETER AT ANY POINT (MM)		CLASS-1 (2.5 kg/cm²)		CLASS-2 (4.0 kg/cm²)		CLASS-3 (6.0 kg/cm²)		CLASS-4 (8.0 kg/cm²)		CLASS-5 (10.0 kg/cm²)		CLASS-6 (12.5 kg/cm²)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
20	20.00	20.30	19.50	20.50	--------	--------	--------	--------	--------	--------	--------	--------	1.1	1.5	1.4	1.8
25	25.00	25.30	24.50	25.50	--------	--------	--------	--------	--------	--------	1.2	1.6	1.4	1.8	1.7	2.1
32	32.00	32.30	31.50	32.50	--------	--------	--------	--------	--------	--------	1.5	1.9	1.8	2.2	2.2	2.7
40	40.00	40.30	39.50	40.50	--------	--------	--------	--------	1.4	1.8	1.8	2.2	2.2	2.7	2.8	3.3
50	50.00	50.30	49.40	50.60	--------	--------	--------	--------	1.7	2.1	2.3	2.8	2.8	3.3	3.4	4
63	63.00	63.30	62.20	63.80	--------	--------	1.5	1.9	2.2	2.7	2.8	3.3	3.5	4.1	4.3	5
75	75.00	75.30	74.10	75.90	--------	--------	1.8	2.2	2.6	3.1	3.4	4.0	4.2	4.9	5.1	5.9
90	90.00	90.30	88.90	91.10	1.3	1.7	2.1	2.6	3.1	3.7	4.0	4.6	5.0	5.7	6.1	7.1
110	110.00	110.40	108.60	111.40	1.6	2.0	2.5	3.0	3.7	4.3	4.9	5.6	6.1	7.1	7.5	8.7
125	125.00	125.40	123.50	126.50	1.8	2.2	2.9	3.4	4.3	5.0	5.6	6.4	6.9	8.0	8.5	9.8
140	140.00	140.50	138.30	141.70	2.0	2.4	3.2	3.8	4.8	5.5	6.3	7.3	7.7	8.9	9.5	11.0
160	160.00	160.50	158.00	162.00	2.3	2.8	3.7	4.3	5.4	6.2	7.2	8.3	8.8	10.2	10.9	12.6
180	180.00	180.60	177.80	182.20	2.6	3.1	4.2	4.9	6.1	7.1	8.0	9.2	9.9	11.4	12.2	14.1
200	200.00	200.60	197.60	202.40	2.9	3.4	4.6	5.3	6.8	7.9	8.9	10.3	11.0	12.7	13.6	15.7
225	225.00	225.70	222.30	227.70	3.3	3.9	5.2	6.0	7.6	8.8	10.0	11.5	12.4	14.3	15.3	17.6
250	250.00	250.80	247.00	253.00	3.6	4.2	5.7	6.5	8.5	9.8	11.2	12.9	13.8	15.9	17.0	19.6
280	280.00	280.90	276.60	283.40	4.1	4.8	6.4	7.4	9.5	11.0	12.5	14.4	15.4	17.8	19.0	21.9
315	315.00	316.00	311.20	318.80	4.6	5.3	7.2	8.3	10.7	12.4	14.0	16.1	17.3	19.9	21.4	24.7



(c) Socketed pipe for solvent cement jointing

Dimensions of Sockets for Solvent Cement Joining

Clause 7.2.1.1

Sr. No.	Nominal Size (DN)	Socket Length (Ls) (mm)	Mean Socket Internal Diameter at Mid - Point of Socket Length, dim (mm)	
		Min	Min	Max
1	20	16.0	20.1	20.3
2	25	18.5	25.1	25.3
3	32	22.0	32.1	32.3
4	40	26.0	40.1	40.3
5	50	31.0	50.1	50.3
6	63	37.5	63.1	63.3
7	75	43.5	75.1	75.3
8	90	51.0	90.1	90.3
9	110	61.0	110.1	110.4
10	125	68.5	125.1	125.4
11	140	76.0	140.2	140.5
12	160	86.0	160.2	160.5
13	180	96.0	180.2	180.5
14	200	106.0	200.3	200.6
15	225	118.5	225.3	225.7
16	250	131.0	250.4	250.8
17	280	146.0	280.4	280.9
18	315	163.5	315.4	316.0

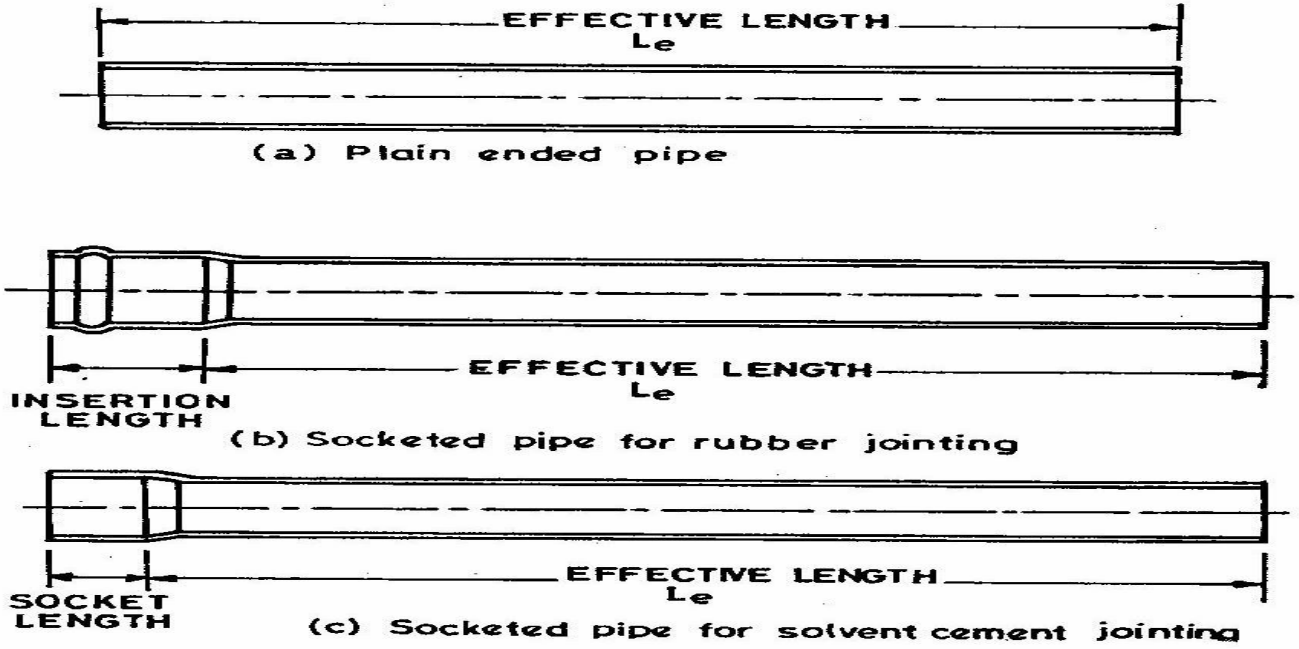
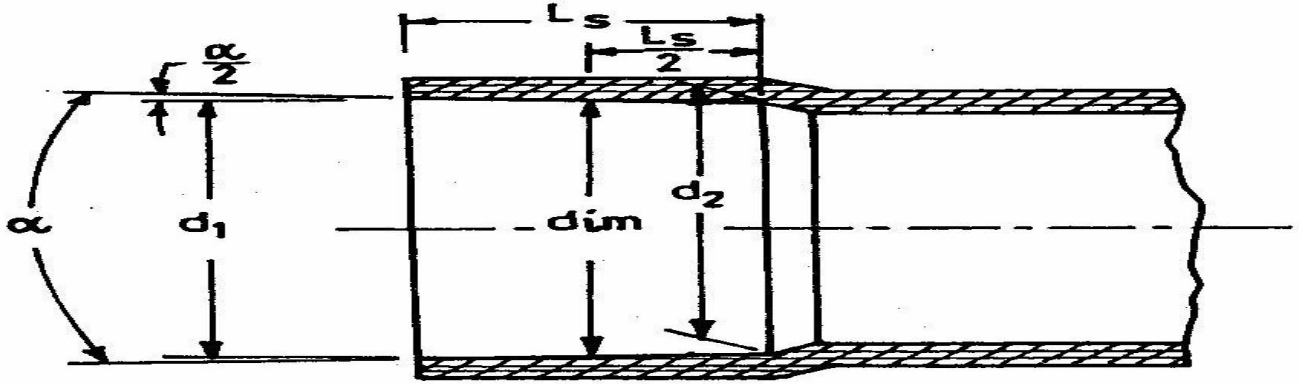


FIG. 2 EFFECTIVE LENGTHS OF PIPE



d_{im} = diameter at mid point of socket length
d_1 = diameter at mouth
d_2 = diameter at root
l_s = socket length
α = total included angle of taper

Hazen-Williams Equation to know the water flow behaviour

The **Hazen–Williams equation** is an empirical relationship which relates the flow of water in a pipe with the physical properties of the pipe and the pressure drop caused by friction. It is used in the design of water pipe systems such as fire sprinkler system, water supply network, and irrigation systems. It is named after Allen Hazen and Gardner Stewart Williams.

Roughness coefficient for different materials

Material	C Factor low	C Factor high	Reference
Asbestos-cement	140	140	-
Cast iron new	130	130	[10]
Cast iron 10 years	107	113	[10]
Cast iron 20 years	89	100	[10]
Cast iron 30 years	75	90	[10]
Cast iron 40 years	64	83	[10]
Cement-Mortar Lined Ductile Iron Pipe	140	140	–
Concrete	100	140	[10]
Copper	130	140	[10]
Steel	90	110	–
Galvanized iron	120	120	[10]
Polyethylene	140	140	[10]
Polyvinyl chloride (PVC)	150	150	[10]
Fibre-reinforced plastic (FRP)	150	150	[10]

Velocity Equation

$$V^{1.852} = k^{1.852}\, C^{1.852}\, R^{1.167}\, S$$

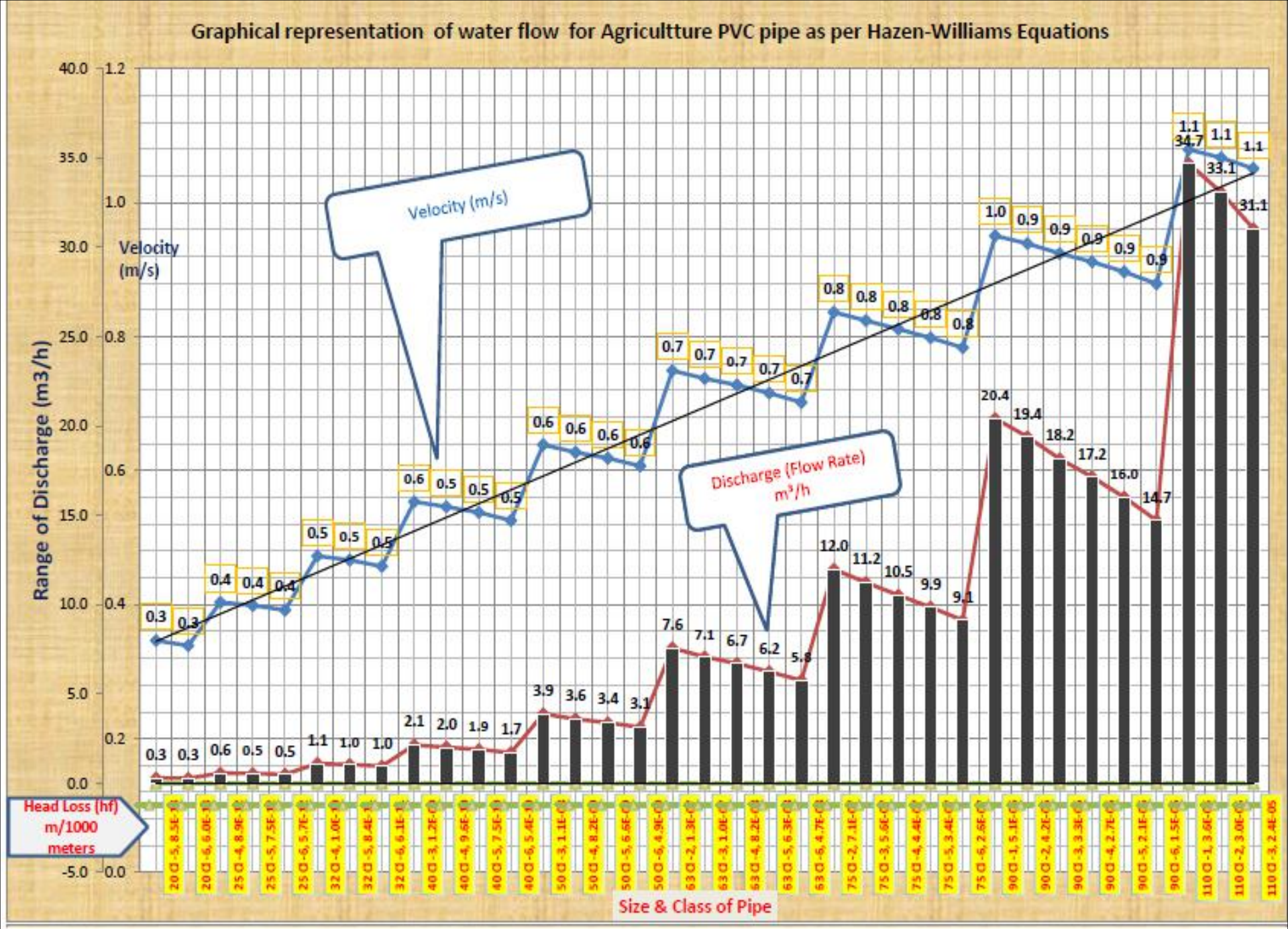
Head loss in meters (water) over the length of pipe-Equation

$$S = \frac{h_f}{L} = \frac{10.67\, Q^{1.852}}{C^{1.852}\, d^{4.8704}}$$

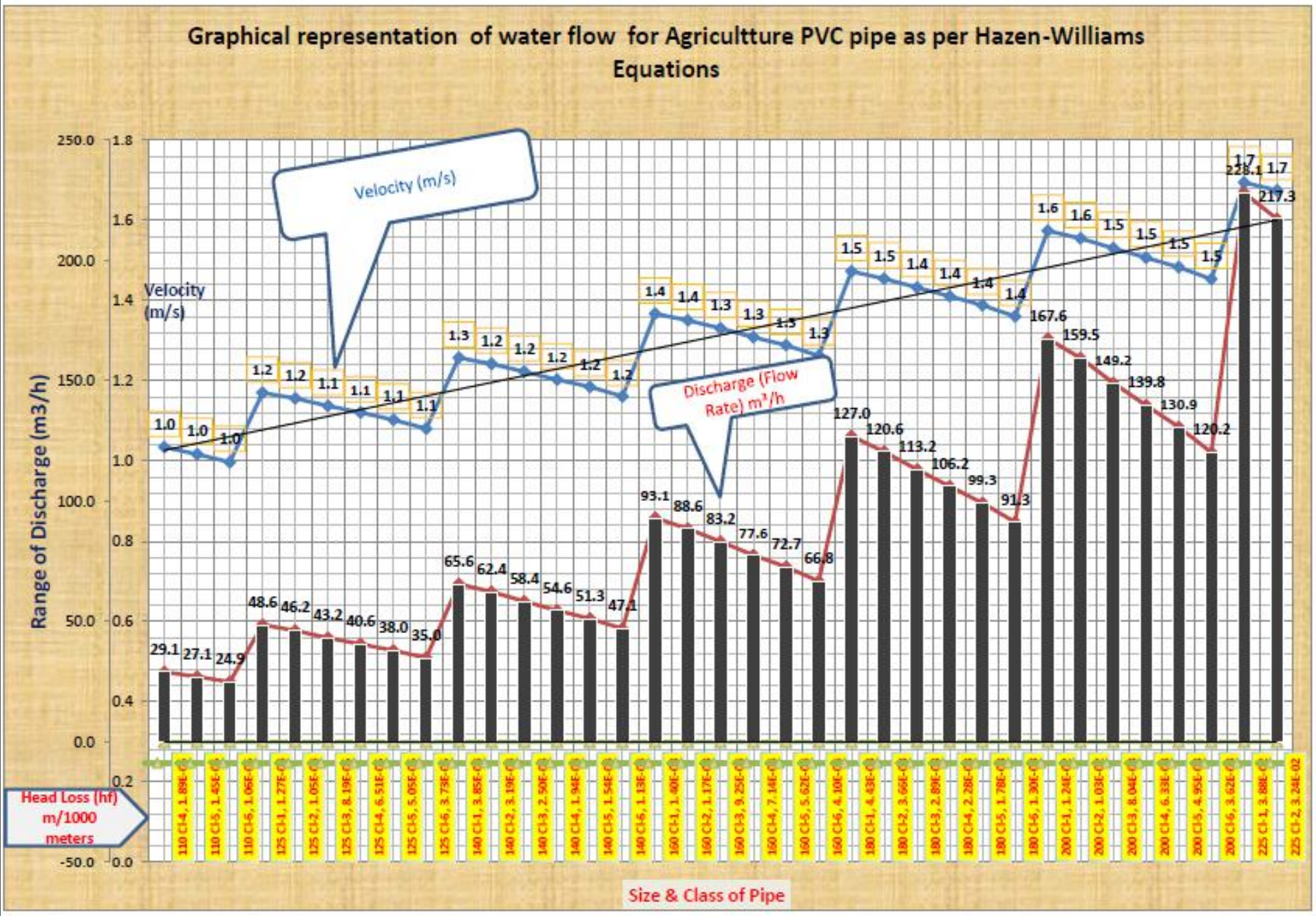
Where:

hf = head loss in meters (water) over the length of pipe
L = length of pipe in meters
Q = volumetric flow rate, m^3/s (cubic meters per second)
d = inside pipe diameter, m (meters)

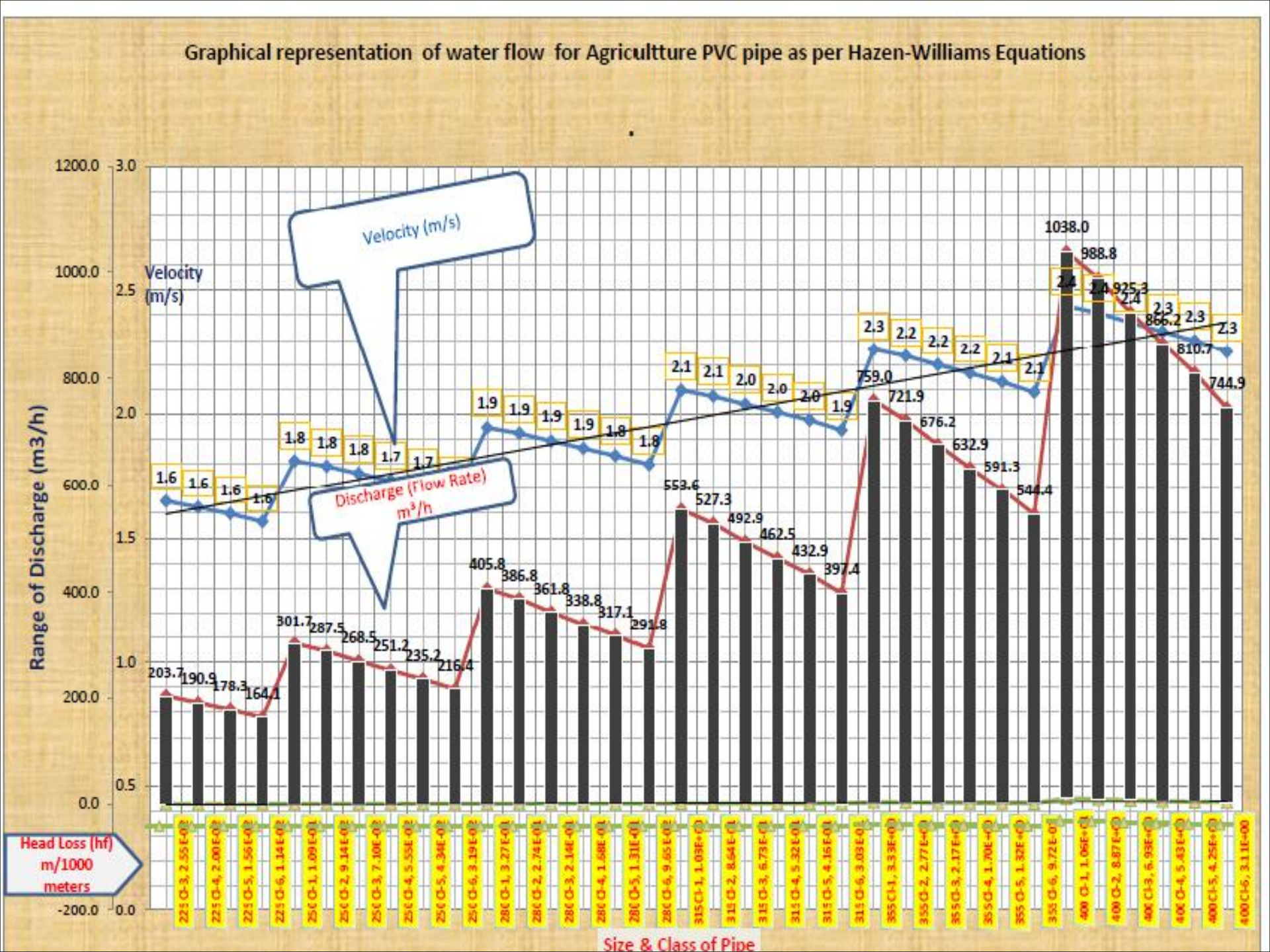
V : mean flow velocity, m/s
C : Hazen–Williams flow coefficient, dimensionless
S : is the slope of the energy line (head loss) per length of pipe or h_f/L), m/m, Hydraulic Radius , m/m
k is a conversion factor for the unit system (k = 1.318 for US customary units, k = 0.849 for SI units)


Graphical representation of water flow for Agricultture PVC pipe as per Hazen-Williams Equations
Velocity (m/s)
Range of Discharge (m3/h)
Velocity (m/s)
Discharge (Flow Rate) m³/h
Head Loss (hf) m/1000 meters
Size & Class of Pipe
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.3 0.3 0.4 0.4 0.4 0.5 0.5 0.5 0.6 0.5 0.5 0.5 0.6 0.6 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.8 0.8 0.8 0.8 0.8 1.0 0.9 0.9 0.9 0.9 0.9 1.1 1.1 1.1
0.3 0.3 0.6 0.5 0.5 1.1 1.0 1.0 2.1 2.0 1.9 1.7 3.9 3.6 3.4 3.1 7.6 7.1 6.7 6.2 5.8 12.0 11.2 10.5 9.9 9.1 20.4 19.4 18.2 17.2 16.0 14.7 34.7 33.1 31.1
20 D -5, 8.5E-1
20 D -6, 6.0E-1
25 D -4, 8.9E-1
25 D -5, 7.5E-1
25 D -6, 5.7E-1
32 D -4, 1.0E-1
32 D -5, 8.4E-1
32 D -6, 6.1E-1
40 D -3, 1.2E-0
40 D -4, 9.6E-1
40 D -5, 7.5E-1
40 D -6, 5.4E-1
50 D -3, 1.1E-0
50 D -4, 8.2E-0
50 D -5, 6.6E-0
50 D -6, 4.9E-0
63 D -2, 1.3E-0
63 D -3, 1.0E-0
63 D -4, 8.2E-0
63 D -5, 6.3E-0
63 D -6, 4.7E-0
75 D -2, 7.1E-0
75 D -3, 5.6E-0
75 D -4, 4.4E-0
75 D -5, 3.4E-0
75 D -6, 2.6E-0
90 D -1, 5.1E-0
90 D -2, 4.2E-0
90 D -3, 3.3E-0
90 D -4, 2.7E-0
90 D -5, 2.1E-0
90 D -6, 1.5E-0
110 D -1, 3.6E-0
110 D -2, 3.0E-0
110 D -3, 2.4E-05

Graphical representation of water flow for Agricultture PVC pipe as per Hazen-Williams Equations



Graphical representation of water flow for Agricultture PVC pipe as per Hazen-Williams Equations



Note : For the calculation of Slope of Hydraulic Gradient (S), considered height(H) 1 meter. (Drop by length of pipe) and Pipe length (L) 100 meters.

For the calculated data of velocity, flow rates and head loss due to friction, please contact our technical Team.

QC Checks SOP at Flowkem

The pipes and fittings manufactured at Flowkem follow a stringent quality control process before being rolled out to the market, in order to supply a defect free system to its users.

❖ **Visual Appearance**: To ensure that all pipes and fittings are uniform in colour and free visual effects such as black dots, scratches, burn marks, etc.

❖ **Dimensions:** To ensure that all pipe dimensions particularly wall thickness and outer dimensions (roundness), confirm to the appropriate standards.

❖ **Drop Impact test:** Weights are dropped on the pipe to observe any crack or failure.

❖ **Density:** The **density** of an object is one of its most important and easily-measured physical properties. **Densities** are widely used to identify pure substances and to characterize and estimate the composition of many kinds of mixtures**.**

❖ **Heat reversion test:** How much the pipe changes in length when heated in an oven and left to cool this is a measure of residual stresses left in the pipe during production process.

❖ **Tensile Strength**: The maximum stress that a pipe can withstand while being stretched or pulled.

❖ **Vicat Softening Point Test:** The temperature at which 1mm² needle penetrates 1 mm through the wall of the pipe .

Fittings

❖ **Opacity Test:** To measure the percentage of light flux passing through the wall of the pipe and to ensure it is below 0.2%

❖ **Stress Relief Test**: To determine the level of internal stress by heating the fitting in an air circulated oven @ 150oC. There should not be any blisters, weld line splitting or any cracking.

❖ **Hydrostatic pressure test:** System is to sustain up to 1 hour a pressure of 4.2 times Normal working pressure without Fracture , Swelling and leakage.

Handling and Storage

Proper Handling

❖ The pipes should be checked for any forms of transport damage due to shift in loads or improper handling/treatment. Visually examine the end of pipes for any cracks or damage.

❖ The tendency to throw or drop the pipes to the floor should be avoided. Do not drag or push the pipes from a truck bed. Contact of the pipes with any sharp object should be totally avoided.

❖ It is reasonable care that the pipe is lighter in weight than metal pipe. , furious contact with any sharp objects (rocks, iron angles, forks on forklifts, etc.) should be avoided.

❖ Removal of pipes shall start from the top layer and by pulling from one end. The pipes may also be placed alternately length and crosswise.

Storage of Pipes

- The Pipes should be stored indoors or below the shadow and dry area.

- If pipes of same diameter but different classes are being stacked together, place the thicker pipes below. i.e., stack higher class pipe below the lower class of pipe

- unplasticized PVC pipes shall be stored on horizontal racks supported throughout their lengths on a reasonably flat surface free from stones and sharp projections. Pipes shall not be stacked in large piles, especially under warm conditions. Socket and spigot pipes shall be stacked in layers with sockets placed at alternate ends of the stack to avoid top sided stack

Solvent Cementing Instructions

When apply solvent cement on the pipe, there are some basic safety point should be kept in your mind.

- After use of solvent cement on the pipe / fitting ensure to put the lid back on the solvent cement can and tighten the lid slightly to avoid evaporation or escape and dryness of solvent.

- Avoid prolonged breathing of solvent cement vapours. when joint together pipes and fittings

- Keep away from all sources of ignition, such as heat, sparks and open flame.

- Avoid eye and skin contact. In case of eye contact, flush with plenty of water for 15 minutes and call a doctor.

Note: Practice for Safe Handling of Solvent Cements is refer to ASTM F402

Installation Guidelines of PVC Agricultural Pipes and fittings

❖ **Cutting**: Take the measurement of pipe length accurately as per requirement & Ensure that the pipe and fittings are proper in size, then cut the pipe with a plywood cutting saw/ratchet cutter or a wheel cutter. Cutting of pipe should be square (as 90°) to provides proper bonding within joint area. Inspect pipe ends thoroughly prior to making a joint. If a crack or splintering is noticed cut-off a minimum of 25 mm beyond the visible crack before proceeding.

❖ **Deburring**：Burrs in and on pipe end can obstruct flow/proper contact between the pipe and socket of the fitting during assembly and should be removed from both in and outside of the pipe. A 15 mm dia half round file/a pen knife or a deburring tool are suitable for this purpose. A slight bevel on the end of the pipe will ease entry of the pipe into the socket of the fitting socket.

❖ **Fitting Preparation**: Using a clean dry rag, wipe the dirt and moisture from the fitting sockets and pipe end. Dry fit the pipe to ensure total entry into the bottom of the fittings socket and make a visible marking using a felt tip pen.

AGRICULTURAL FITTING AS PER IS 7834

Flowkem®

Inspire A Better Tomorrow

IS:7834

CM/L - 7200051693

Cost Effective

NO CORROSION

Corrosion Resistant

UV Resistant

www.flowkempipes.com

R PVC PIPE & FITTINGS

R PVC PIPE & FITTINGS

For Agriculture & Industrial Use

ABOUT AGRICULTURAL FITTINGS

PVC-U Fittings for agriculture & potable water supply are manufactured in a wide range of sizes. Their primary use is; to join two length of pipes, to give a 90°/45° turn to a pipeline, to connect male threaded CP/Metal fittings like taps, showers, etc. to pipeline, to take a reducing bypass or a service line from the main line.

SELFIT:

- ❖ Excellent flow characteristics.
- ❖ Lower installation time and cost.
- ❖ Non-reactive to acids, alkalis, effluents, salt, and minerals.
- ❖ Reduced inventory as the use of couplers is eliminated.
- ❖ Reduced number of joints results in substantial savings in labour costs.
- ❖Smooth inner wall minimizes frictional losses and scaling due to precipitation.

Product Portfolio of PVC Agricultural Fittings as per IS 7834: 1987

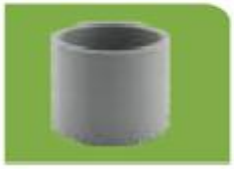
ELBOW HW

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33ELH200	100	1200
25	3/4"	33ELH250	100	800
32	1"	33ELH320	50	450
40	1 1/4"	33ELH400	-	300
50	1 1/2"	33ELH500	-	180
63	2"	33ELH630	-	100
75	2 1/2"	33ELH750	-	60
90	3"	33ELH900	-	35
110	4"	33ELH110	-	20

TEE HW

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33TH2000	100	800
25	3/4"	33TH2500	100	500
32	1"	33TH3200	50	300
40	1 1/4"	33TH4000	-	200
50	1 1/2"	33TH5000	-	120
63	2"	33TH6300	-	60
75	2 1/2"	33TH7500	-	40
90	3"	33TH9000	-	20
110	4"	33TH1100	-	12

COUPLER



Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33CUP200	100	1500
25	3/4"	33CUP250	100	1000
32	1"	33CUP320	100	700
40	1 1/4"	33CUP400	-	500
50	1 1/2"	33CUP500	-	300
63	2"	33CUP630	-	150
75	2 1/2"	33CUP750	-	100
90	3"	33CUP900	-	60
110	4"	33CUP110	-	60

END CAP Plain

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33ECP200	100	2500
25	3/4"	33ECP250	100	1500
32	1"	33ECP320	100	1000
40	1 1/4"	33ECP400	-	600
50	1 1/2"	33ECP500	-	400
63	2"	33ECP630	-	300
75	2 1/2"	33ECP750	-	150
90	3"	33ECP900	-	120
110	4"	33ECP110	-	60

ELBOW LW

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
40	1 1/4"	33ELLW400	-	-
50	1 1/2"	33ELLW500	-	-
63	2"	33ELLW630	-	160
75	2 1/2"	33ELLW750	-	110
90	3"	33ELLW900	-	65
110	4"	33ELLW110	-	35
140	5"	33ELLW140	-	-
160	6"	33ELLW160	-	-

ELBOW Flowline

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
63	2"	33ELFL630	-	200
75	2 1/2"	33ELFL750	-	130
90	3"	33ELFL900	-	75
110	4"	33ELFL110	-	40

TEE LW

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
40	1 1/4"	33TLW400	-	-
50	1 1/2"	33TLW500	-	-
63	2"	33TLW630	-	112
75	2 1/2"	33TLW750	-	81
90	3"	33TLW900	-	45
110	4"	33TLW110	-	26
140	5"	33TLW140	-	-
160	6"	33TLW160	-	-

TEE Flowline

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
63	2'	33TFL630	-	158
75	2 1/2"	33TFL750	-	96
90	3"	33TFL900	-	57
110	4"	33TFL110	-	30

FTA

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33FT2000	100	1600
25	3/4"	33FT2500	100	1400
32	1"	33FT3200	-	700
40	1 1/4"	33FT4000	-	500
50	1 1/2"	33FT5000	-	250
63	2"	33FT6300	-	175
75	2 1/2"	33FT7500	-	80
90	3"	33FT9000	-	50
110	4"	33FT1100	-	35

REDUCING FTA

25X20	3/4"X1/2"	33FT2520	100	1500
32X20	1"X1/2"	33FT3220	100	800
32X25	1"X3/4"	33FT3225	100	700
75X63	2 1/2"X2"	33FT7563	-	110

FOUR WAY TEE

32x20	1" x ½"	33CT3220	-	400
32x32	1" x 1"	33CT3232	-	300
40X20	1 ¼" X ½"	33CT4020	-	220
40X25	1 ¼" X ¾"	33CT4025	-	200
40X40	1 ¼" X 1 ¼"	33CT4040	-	150
50X20	1 ½" X ½"	33CT5020	-	150
50X25	1 ½" X ¾"	33CT5025	-	150
50X32	1 ½" X 1"	33CT5032	-	130
50X40	1 ½" X 1 ¼"	33CT5040	-	110
50X50	1 ½" X1 ½"	33CT5050	-	85
63X20	2" X ½"	33CT6320	-	70
63X25	2" X ¾"	33CT6325	-	70
63X32	2" X 1"	33CT6332	-	70
63X40	2" X 1 ¼"	33CT6340	-	70
63X50	2" X 1 ½"	33CT6350	-	60
75X20	2 ½" X ¾"	33CT7520	-	50
75X25	2 ½" X ¾"	33CT7525	-	50
75X32	2 ½" X 1"	33CT7532	-	50
75X40	2 ½" X 1 ¼"	33CT7540	-	50
75X63	2 ½" X 2"	33CT7563	-	35

END CAP TH

Size (mm)	Size (In.)	Part No.	Quantity Bag	Quantity Box
20	1/2"	33ECT200	100	2000
25	3/4"	33ECT250	100	1500
32	1"	33ECT320	100	1000
40	1 1/4"	33ECT400	100	600
50	1 1/2"	33ECT500	100	500
63	2"	33ECT630	-	250
75	2 1/2"	33ECT750	-	150
90	3"	33ECT900	-	100
110	4"	33ECT110	-	60

END CAP Flat Bottom

160	6"	33ECB160	-	20
180	7"	33ECB180	-	16
200	8"	33ECB200	-	16

TEE TH

25X20	3/4"X1/2"	33TH2520	100	600
63	2"	33TH6300	-	60

SERVICE SADDLE TH

63X20	2"X1/2"	33ST6320	-	56
63X25	2"X3/4"	33ST6325	-	56
63X32	2"X1"	33ST6332	-	56
63X40	2"X1 1/4"	33ST6340	-	56
75X20	2 1/2"X1/2"	33ST7520	-	48
75X25	2 1/2"X3/4"	33ST7525	-	48
75X32	2 1/2"X1 1/4"	33ST7532	-	48
75X40	2 1/2"X1 1/4"	33ST7540	-	48
90X20	3"X1/2"	33ST9020	-	48
90X25	3"X3/4"	33ST9025	-	48
90X32	3"X1"	33ST9032	-	48
90X40	3"X1 1/4"	33ST9040	-	42
110X20	4"X1/2"	33ST11020	-	42
110X25	4"X3/4"	33ST11025	-	42
110X32	4"X1"	33ST11032	-	42
110X40	4"X1 1/4"	33ST11040	-	35

REDUCER TEE

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
25X20	¾" X ½"	33T25200	100	600
32X20	1" X ½"	33T32200	-	400
32X25	1" X ¾"	33T32250	-	400
40X20	1 ¼" X ½"	33T40200	-	300
40X25	1 ¼" X ¾"	33T40250	-	250
40X32	1 ½" X 1"	33T40320	-	250
50X20	1 ½" X ½"	33T50200	-	150
50X25	1 ½" X ¾"	33T50250	-	150
50X32	1 ½" X 1"	33T50320	-	140
50X40	1 ½" X 1 ¼"	33T50400	-	130
63X20	2" X ½"	33T63200	-	85
63X25	2" X ¾"	33T63250	-	85
63X32	2" X 1"	33T63320	-	85
63X40	2" X 1 ¼"	33T63400	-	75
63X50	2" X 1 ½"	33T63500	-	75
75X20	2 ½" X ½"	33T75200	-	55
75X25	2 ½" X ¾"	33T75250	-	50
75X32	2 ½" X 1 ¼"	33T75320	-	50
75X40	2 ½" X 1 ¼"	33T75400	-	50
75X50	2 ½" X 1 ½"	33T75500	-	50
75X63	2 ½" X 2"	33T75630	-	45
110X63	4" X 2"	33T11063	-	32
110X75	4" X 2 ½"	33T11075	-	15
110X90	4" X 3"	33T11090	-	15
140X75	5" X 2 ½"	33T14075	-	-
140X90	5" X 3"	33T14090	-	-
140X110	5" X 4"	33T114110	-	-
160X75	6" X 2 ½"	33T16075	-	-
160X90	6" X 3"	33T16090	-	-
160X110	6" X 4"	33T160110	-	-
160X140	6" X 5"	33T160140	-	-

ELBOW TH

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
25	3/4"	33ELTH25	100	600
40	1 1/4"	33ELTH40	-	250
63	2"	33ELTH63	-	100
75	2 ½"	33ELTH75	-	60
25X20	3/4"X1/2"	33ELTH2520	100	600
75X63	2 1/2"X2"	33ELTH7563	-	60

SERVICE SADDLE PL

63X40	2"X1 1/4"	33SP6340	-	49
75X40	2 1/2"X1 1/4"	33SP7540	-	48
90X40	3"X1 1/4"	33SP9040	-	42
110X40	4"X1 1/4"	33SP11040	-	35

REDUCER COUPLER

25X20	3/4"X1/2"	33C25200	100	1200
32X20	1"X1/2"	33C32200	100	800
32X25	1"X3/4"	33C32250	100	800
40X32	1 1/4"X1"	33C40320	-	500
50X40	1 1/2"X1 1/4"	33C50400	-	350
63X32	2"X1"	33C63320	-	200
63X40	2"X1 1/4"	33C63400	-	200
63X50	2"X1 1/2"	33C63500	-	200
75X32	2 1/2"X1"	33C75320	-	-
75X40	2 1/2"X1 1/4"	33C75400	-	150
75X50	2 1/2"X1 1/4"	33C75500	-	140
75X63	2 1/2"X2"	33C75630	-	120
90X63	3"X2"	33C90630	-	80
90X75	3"X2 1/2"	33C90750	-	80
110X63	4"X2"	33C11063	-	49
110X75	4"X2 1/2"	33C11075	-	49
110X90	4"X3"	33C11090	-	49

ELBOW TH

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
25	3/4"	33ELTH25	100	600
40	1 1/4"	33ELTH40	-	250
63	2"	33ELTH63	-	100
75	2 ½"	33ELTH75	-	60
25X20	3/4"X1/2"	33ELTH2520	100	600
75X63	2 1/2"X2"	33ELTH7563	-	60

REDUCER BUSH

25 X 20	3/4" X 1/2"	33RB2520	100	2000
32 X 20	1" X 1/2"	33RB3220	100	1200
32 X 25	1" X 3/4"	33RB3225	100	1400
40 X 20	1 1/4" X 1/2"	33RB4020	100	800
40 X 25	1 1/4" X 3/4"	33RB4025	100	700
40 X 32	1 1/4" X 1"	33RB4032	100	700
50 X 20	1 1/2" 1/2"	33RB5020	-	400
50 X 25	1 1/2" X 3/4"	33RB5025	-	400
50 X 32	1 1/2" X 1"	33RB5032	-	400
50 X 40	1 1/2" X 1 1/4"	33RB5040	-	450
63 X 32	2" X 1"	33RB6332	-	250
63 X 40	2" X 1 1/4"	33RB6340	-	250
63 X 50	2" X 1 1/2"	33RB6350	-	250
75 X 40	2 1/2" X 1 1/4"	33RB7540	-	200
75 X 50	2 1/2" X 1 1/2"	33RB7550	-	150
75 X 63	2 1/2" X 2"	33RB7563	-	200
90 X 63	3" X 2"	33RB9063	-	110
90 X 75	3" X 2 1/2"	33RB9075	-	120
110 X 63	4" X 2"	33RB11063	-	75
110 X 75	4" X 2 1/2"	33RB11075	-	75
110 X 90	4" X 3"	33RB11090	-	75

MTA

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
20	½"	33MT2000	100	2000
25	¾"	33MT2500	100	1500
32	1"	33MT3200	100	700
40	1 ¼"	33MT4000	-	500
50	1 ½"	33MT5000	-	300
63	2"	33MT6300	-	200
75	2 ½"	33MT7500	-	120
90	3"	33MT9000	-	70
110	4"	33MT1100	-	40

RPVC BALL VALVE

20	1/2"	33BV2000	15	240
25	3/4"	33BV2500	10	130
32	1"	33BV3200	8	88
40	1 1/4"	33BV4000	5	50
50	1 1/2"	33BV5000	4	40
63	2"	33BV6300	2	30
75	2 1/2"	33BV7500	-	30
90	3"	33BV9000	-	27

BRASS ELBOW

25X20	3/4"X1/2"	33BE2520	-	600
32X20	1"X1/2"	33BE3220	-	500

BRASS TEE

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
25X20	3/4"X1/2"	33BT2520	-	500
32X20	1"X1/2"	33BT3220	-	300

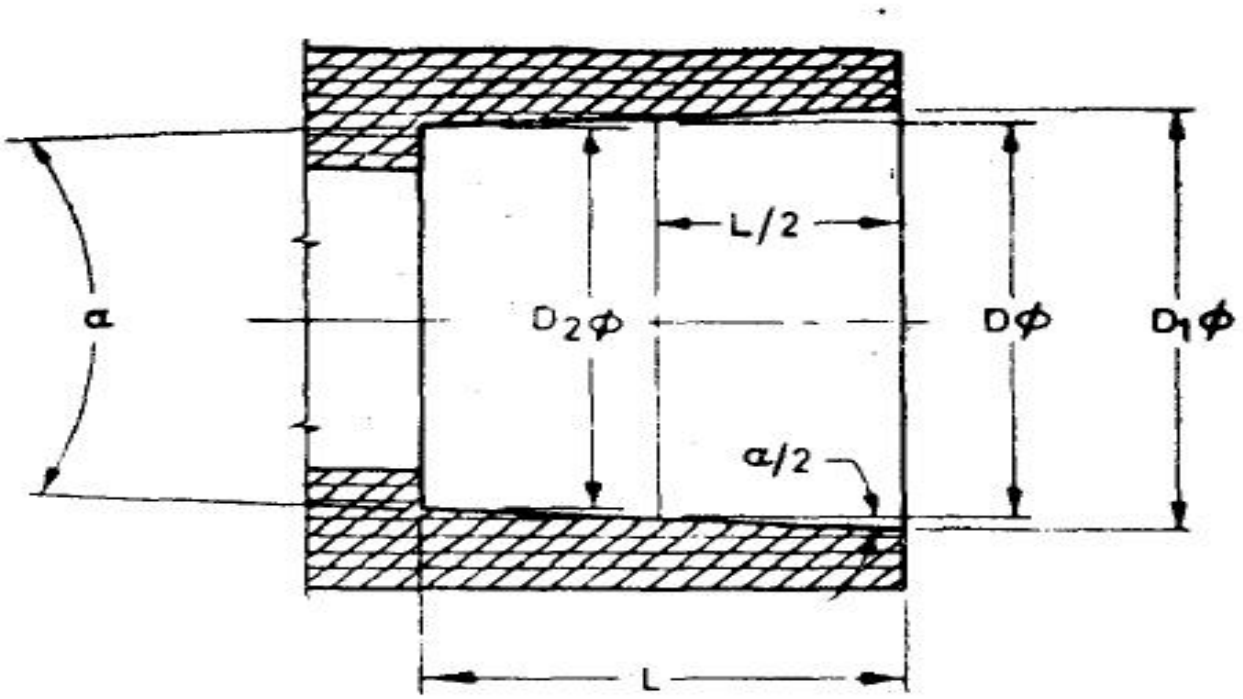
BRASS FTA

25X20	3/4"X1/2"	33BF2520	-	700
32X20	1"X1/2"	33BF3220	-	500

ELBOW 45°

Size (mm)	Size (In.)	Part No.	Quantity	
			Bag	Box
25	3/4''	33EL4525	-	-
32	1''	33EL4532	-	-

Technical specification of PVC Agricultural Fittings



Technical specification of PVC Agricultural Fittings

Nominal Size	Socket ID		Minimum Socket Length	Wall Thickness		Out-of-roundness tolerances of socket inside diameter (max. ID- Min. ID
	Minimum	Maximum		Min	Max	
20	20.1	20.3	16.0	Minimum 3.0 mm		0.14
25	25.1	25.3	19.0			0.18
32	32.1	32.3	22.0			0.22
40	40.1	40.3	26.0			0.28
50	50.1	50.3	31.0			0.35
63	63.1	63.3	38.0			0.44
75	75.1	75.3	44.0			0.53
90	90.1	90.3	51.0			0.63
110	110.1	110.4	61.0			0.77
125	126.1	125.4	69.0			0.88
140	140.1	140.5	76.0			0.98
160	160.2	160.5	86.0			1.12

FAQs

Question (1). What is the life expectancy of PVC pipe?

Ans : The design service life of most of the polymeric pipes is 50 years under standard pressure rating specified in the pipe, but is subject to temperature of 20 degree C. If the temperatures are higher (maximum being 40 degrees) derating factor for pressure rating of the pipe.

Question (2). How do PVC pipes behave at sub-zero temperatures?

Ans. Brittle

Question (3). Does chlorinated drinking water affect PVC pipes?

Ans. No!

FLOWKEM POLY PLAST PRIVATE LIMITED

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