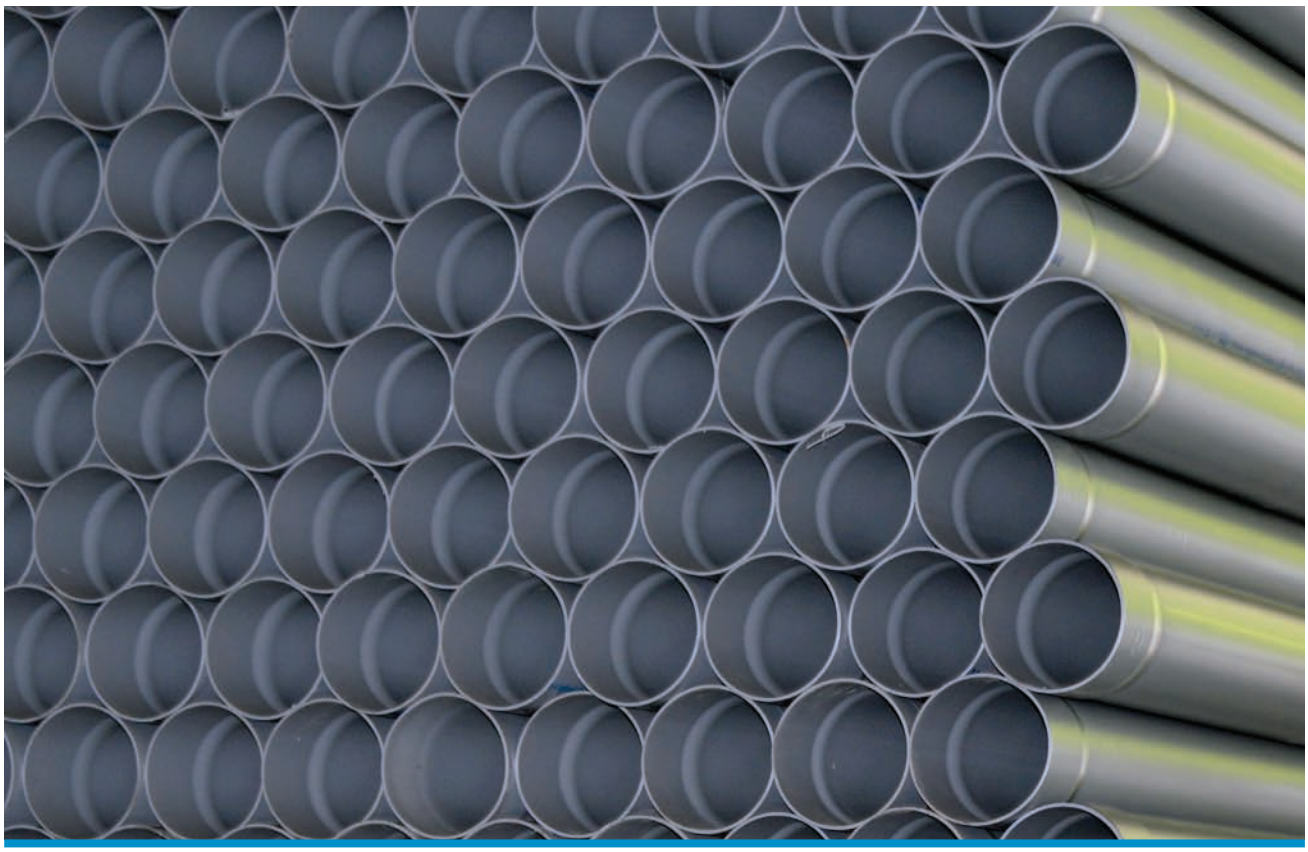
Jain PVC Pipes

More Crop per Drop®

Jain Irrigation Systems Ltd.

Small Ideas. Big Revolutions.®

The best bottomline is a farmer's smile.



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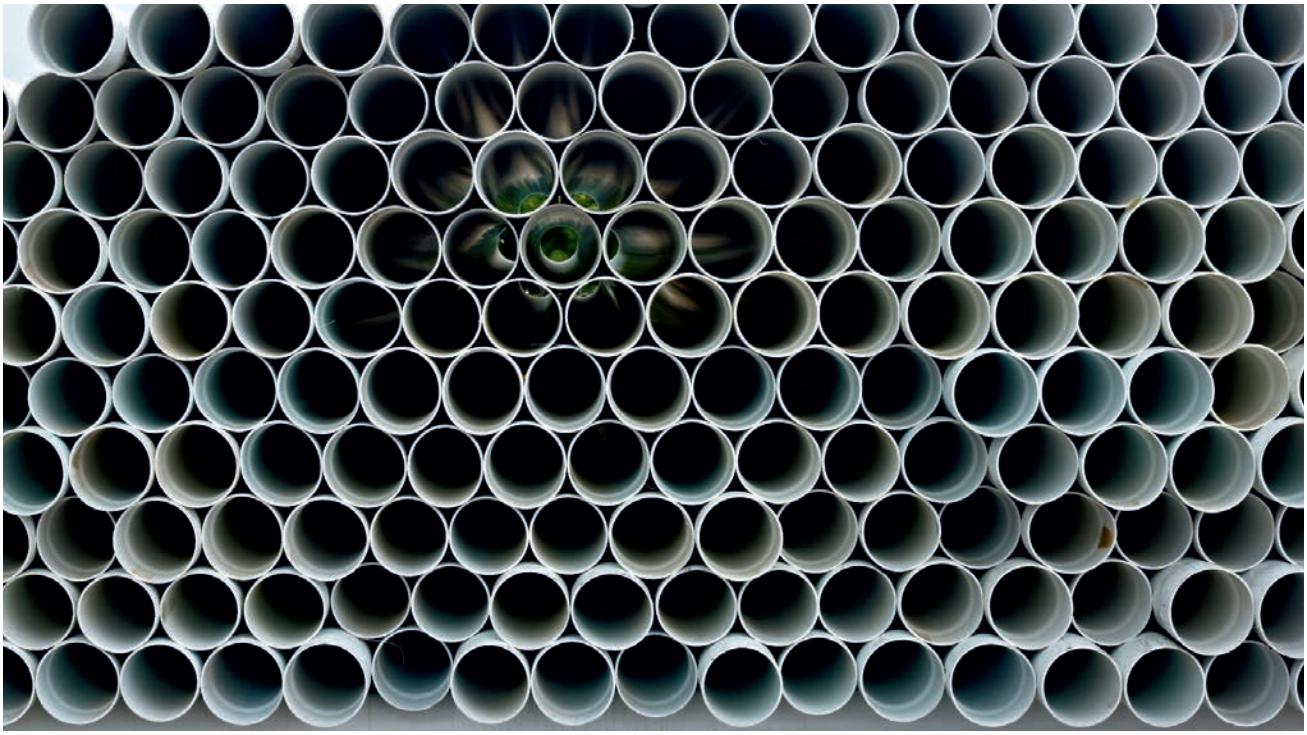


Jain PVC Pipes & Fittings

Introduction

Presently, JISL is the largest producer in Asia of plastic piping systems for all conceivable applications with pipes ranging from as small as 3 mm to 1600 mm in diameter and in pressure ratings ranging from 1.00 kgf/cm^2 to 25 kgf/cm^2. JISL has a production capacity of over 5,00,000 tonne per annum or 8000 km/day. The Piping Division includes PE, PVC Pipes and Fittings catering to the urban and rural infrastructure needs of the country apart from irrigation needs of the farmers. JISL is the only manufacturer to own DSIR approved R&D setup with state-of-the-art facilities. The pipes are manufactured conforming to IS, DIN, ISO, ASTM, TEC and other customised specifications.

Process

PVC Resin is mixed with other required chemical additives to form a ready-mix for Extrusion into Pipes. The compound gets plasticized inside the extruder barrel and pushed forward by the screw. The die and mandrel shape the molten mass and the calibrator fixes the size. The extruded pipe, cooled and hardened through cooling tanks and is pulled by the haul-off continuously. The cutter cuts off pipes in required lengths.

Fittings Process

PVC resin mixed with required chemical additives is fed into the hopper of injection moulding machine and gets plasticized as it passes through the barrel. The molten plastic is then injected into the mould cavity in measure quantity. After cooling, the component is ejected and the next cycle starts.

ISO 9001, ISO 14001 & OHSAS 18001 Certified Company by TUV NORD, Germany.

We undertake Turn-key Projects - Concept to Commissioning.

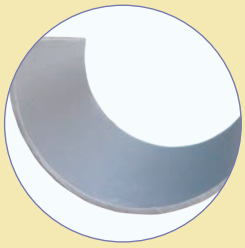
PVC Pipes Range

Type & Joints	Diameter	Standard
Pressure Pipes-SW/TH/ RR	20 to 630 mm	IS:4985, SI:532, ISO:1452, DIN:8062/8061 ASTMD:1785, 2241
Conduit- SW	16 to 63 mm	IS:9537
Fabricated PVC Fittings	up to 630 mm	IS:10124 ISO:1452
Moulded PVC Fitting	20 to 200 mm	IS:7834, IS:14735
Cable Duct- SW	50 to 110 mm	IS:14787

PVC Pipes

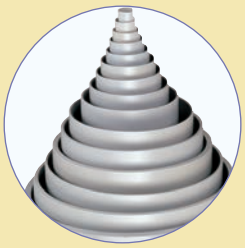
Smooth Wall Closed Conduit

Features & Benefits



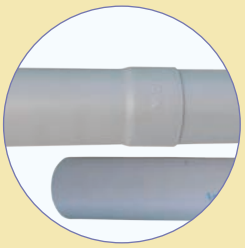
Smooth Inner Wall

Smooth inner wall minimizes frictional losses and due to precipitation



Various Sizes Available

Available in sizes from 20 mm (½") to 630 mm (24") as per the standards



Plain or Socket Option Available

Commonly supplied with plain ends or socketed at one end for solvent cement weld joint

Close Dimensional Tolerances

Excellent characteristics of PVC provided durable pipe with close dimensional tolerances

Available in Various Pressure Rating and Standards

Pressure - 2.5 to 16 kg/cm^2, Sandards - ISO 1452, IS 4985, DIN 8061/62, IS 12231, IS 9537, IS 14787, AS/NZS 1477, SI 532, ISO 1452-2, PNS 65

Advance Manufacturing Technology

Advance manufacturing technology and our experience bring the quality products in the market

PVC Pipes

Additional Features

- Manufactured from high quality uPVC compound.
- Excellent corrosion and chemical resistance to most acidic and alkaline solutions.
- Light weight.
- Easy to handle and transport.
- Excellent flow characteristics.

Applications

- Potable water supply system
- Lift & Gravity irrigation system
- Drip/Sprinkler Irrigation System
- Rain water harvesting
- Industrial process Lines
- Chemical conveyance system
- Cooling Tower & Hydro Power Station
- Tube -Well Construction
- Soil, Waste & Rain water system
- Agruculture irrigation distribution system
- Effluent treatment & conveyance pipeline system
- Centrifugal pump suction & delivery pipes.

Physical and Mechanical Charastics of UPVC Pipe as per IS 4985 :2000

Parameter	Units	Guaranteed Value
Dimensions	mm	As per Table 1, 2, 3, 4 & 5 of IS 4985 : 2000
Pipe colour		Light Gray or as per customer requirement
Opacity	%	Max. 0.2
Reversion Test	%	Max. ± 5
Vicat Softening Temperature	°C	Min 80
Density	g/cc	1.40 to 1.46
Sulphated Ash Content	%	Max 11
Resistance to External Blows	TIR	Max. 10%
Hydrostatic Characteristics	Kgf/cm^2	As per Clause No. 11 of IS 4985 : 2000
Effect on Water	ppm	As per Clause No. 10.3 of IS 4985 : 2000

Dimension as per ISO:1452.2

Nominal Outside Dia	Minimum Wall Thickness in mm						
	Pressure Rating in kg/cm^2						
mm	PN 6	PN 8	PN 10	PN12.5	PN 16	PN 20	PN 25
20	-	-	-	-	1.5	1.9	
25	-	-	-	1.5	1.9	2.3	
32	-	1.5	1.6	1.9	2.4	2.9	
40	1.5	1.6	1.9	2.4	3	3.7	
50	1.6	2	2.4	3	3.7	4.6	
63		2.5	3	3.8	4.7	5.8	
75	2.3	2.9	3.6	4.5	5.6	6.8	
90	2.8	3.5	4.3	5.4	6.7	8.2	
110	2.7	3.4	4.2	5.3	6.6	8.1	10
125	3.1	3.9	4.8	6	7.4	9.2	11.4
140	3.5	4.3	5.4	6.7	8.3	10.3	12.7
160	4	4.9	6.2	7.7	9.5	11.8	14.6
180	4.4	5.5	6.9	8.6	10.7	13.3	16.4
200	4.9	6.2	7.7	9.6	11.9	14.7	18.2
225	5.5	6.9	8.6	10.8	13.4	16.6	-
250	6.2	7.7	9.6	11.9	14.8	18.4	-
280	6.9	8.6	10.7	13.4	16.6	20.6	-
315	7.7	9.7	12.1	15	18.7	23.2	-
355	8.7	10.9	13.6	16.9	21.1	26.1	-
400	9.8	12.3	15.3	19.1	23.7	29.4	-
450	11	13.8	17.2	21.5	26.7	33.1	-
500	12.3	15.3	19.1	23.9	29.7	36.8	-
560	13.7	17.2	21.4	26.7	-	-	-
630	15.4	19.3	24.1	30	-	-	-

[a] Design coefficient C is 2.5 for 20 mm to 90 mm nominal diameter pipes and 2.0 for 110 mm to 630 mm diameter pipes

Dimension as per IS:4985

Nominal Outside Dia	Minimum Wall Thickness in mm					
	Pressure Rating in kg/cm^2					
mm	2.5	4.0	6.0	8.0	10.0	12.5
20	-	-	-	-	1.1	1.4
25	-	-	-	1.2	1.4	1.7
32	-	-	-	1.5	1.8	2.2
40	-	-	1.4	1.8	2.2	2.8
50	-	-	1.7	2.3	2.8	3.4
63	-	1.5	2.2	2.8	3.5	4.3
75	-	1.8	2.6	3.4	4.2	5.1
90	1.3	2.1	3.1	4.0	5.0	6.1
110	1.6	2.5	3.7	4.9	6.1	7.5
125	1.8	2.9	4.3	5.6	6.9	8.5
140	2.0	3.2	4.8	6.3	7.7	9.5
160	2.3	3.7	5.4	7.2	8.8	10.9
180	2.6	4.2	6.1	8.0	9.9	12.2
200	2.9	4.6	6.8	8.9	11.0	13.6
225	3.3	5.2	7.6	10.0	12.4	15.3
250	3.6	5.7	8.5	11.2	13.8	17.0
280	4.1	6.4	9.5	12.5	15.4	19.0
315	4.6	7.2	10.7	14.0	17.3	21.4
355	5.1	8.1	12.0	15.8	19.6	24.1
400	5.8	9.1	13.5	17.8	22.0	27.2
450	6.5	10.3	15.2	20.0	24.8	30.5
500	7.2	11.4	16.9	22.3	27.5	33.9
560	8.1	12.8	18.9	24.9	30.8	38.0
630	9.1	14.4	21.3	28.0	34.7	42.7

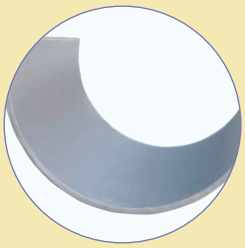
Quick Fix® Pipes

Precise Rubber Ring Joint Pipe

Features & Benefits

Convenient Push-Fit Joints

Faster installation, immediate pressure testing and commissioning possible and jointing can be done during any time of the day under any weather conditions

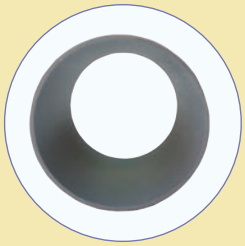


Smooth Inner Wall

Smooth inner wall minimizes frictional losses and scaling due to precipitation

Various Sizes Available

Available in sizes from 20 mm (½") to 630 mm (24") as per above standards



Close Dimensional Tolerances

Excellent Characteristics of PVC provided durable pipe with close dimensional tolerances

Available in Various Pressure Rating and Standards

Pressure - 2.5 to 12.5 kg/cm^2 as per IS & 6-25 kg/cm^2 as per ISO Sandards - IS:4985, DIN:8062, ISO1452-2

Advance Manufacturing Technology

Advance manufacturing technology and our experience bring the quality products in the market

Quick Fix® Pipes

Additional Features

- Manufactured from high quality uPVC compound
- Joints accommodate expansion and contraction.
- Joints are resistant to soil movement due to earthquake effects.
- The elastomeric rings have properties matching to Pipe with long life.
- Excellent corrosion and chemical resistance to most acidic and alkaline solutions
- Light weight.
- Easy to handle and transport.

Applications

- Used as Mainline OR Sub main in drip irrigation systems
- Water distribution lines, Sewerage transmission lines, Reclaimed water distribution lines, Lift irrigation etc.

Dimension as per ISO:1452.2

Nominal Outside Dia	Minimum Wall Thickness in mm						
	Pressure Rating in kg/cm²						
mm	PN 6	PN 8	PN 10	PN12.5	PN 16	PN 20	PN 25
20	-	-	-	-	1.5	1.9	
25	-	-	-	1.5	1.9	2.3	
32	-	1.5	1.6	1.9	2.4	2.9	
40	1.5	1.6	1.9	2.4	3	3.7	
50	1.6	2	2.4	3	3.7	4.6	
63	2	2.5	3	3.8	4.7	5.8	
75	2.3	2.9	3.6	4.5	5.6	6.8	
90	2.8	3.5	4.3	5.4	6.7	8.2	
110	2.7	3.4	4.2	5.3	6.6	8.1	10
125	3.1	3.9	4.8	6	7.4	9.2	11.4
140	3.5	4.3	5.4	6.7	8.3	10.3	12.7
160	4	4.9	6.2	7.7	9.5	11.8	14.6
180	4.4	5.5	6.9	8.6	10.7	13.3	16.4
200	4.9	6.2	7.7	9.6	11.9	14.7	18.2
225	5.5	6.9	8.6	10.8	13.4	16.6	-
250	6.2	7.7	9.6	11.9	14.8	18.4	-
280	6.9	8.6	10.7	13.4	16.6	20.6	-
315	7.7	9.7	12.1	15	18.7	23.2	-
355	8.7	10.9	13.6	16.9	21.1	26.1	-
400	9.8	12.3	15.3	19.1	23.7	29.4	-
450	11	13.8	17.2	21.5	26.7	33.1	-
500	12.3	15.3	19.1	23.9	29.7	36.8	-
560	13.7	17.2	21.4	26.7	-	-	-
630	15.4	19.3	24.1	30	-	-	-

[a] Design coefficient C is 2.5 for 20 mm to 90 mm nominal diameter pipes and 2.0 for 110 mm to 630 mm diameter pipes

Dimension as per IS:4985

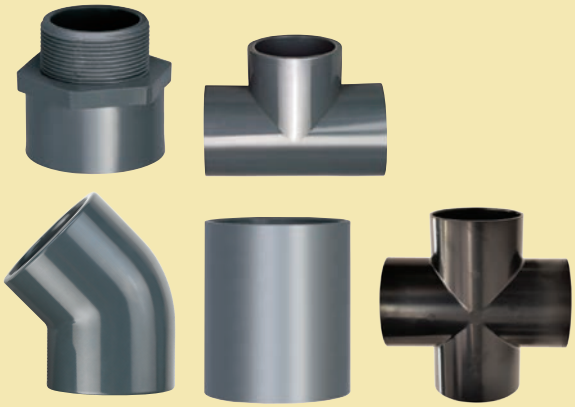
Nominal Outside Dia	Minimum Wall Thickness in mm					
	Pressure Rating in kg/cm²					
mm	2.5	4.0	6.0	8.0	10.0	12.5
20	-	-	-	-	1.1	1.4
25	-	-	-	1.2	1.4	1.7
32	-	-	-	1.5	1.8	2.2
40	-	-	1.4	1.8	2.2	2.8
50	-	-	1.7	2.3	2.8	3.4
63	-	1.5	2.2	2.8	3.5	4.3
75	-	1.8	2.6	3.4	4.2	5.1
90	1.3	2.1	3.1	4.0	5.0	6.1
110	1.6	2.5	3.7	4.9	6.1	7.5
125	1.8	2.9	4.3	5.6	6.9	8.5
140	2.0	3.2	4.8	6.3	7.7	9.5
160	2.3	3.7	5.4	7.2	8.8	10.9
180	2.6	4.2	6.1	8.0	9.9	12.2
200	2.9	4.6	6.8	8.9	11.0	13.6
225	3.3	5.2	7.6	10.0	12.4	15.3
250	3.6	5.7	8.5	11.2	13.8	17.0
280	4.1	6.4	9.5	12.5	15.4	19.0
315	4.6	7.2	10.7	14.0	17.3	21.4
355	5.1	8.1	12.0	15.8	19.6	24.1
400	5.8	9.1	13.5	17.8	22.0	27.2
450	6.5	10.3	15.2	20.0	24.8	30.5
500	7.2	11.4	16.9	22.3	27.5	33.9
560	8.1	12.8	18.9	24.9	30.8	38.0
630	9.1	14.4	21.3	28.0	34.7	42.7

Note: Blue colour represents wall thickness of available sizes in Quick Fix™ PVC pipes.

PVC Fittings

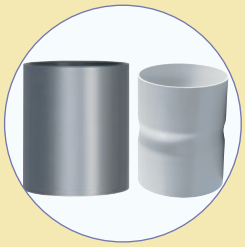
Smooth Wall Closed Conduit

Injection Moulded Fittings LP/HP



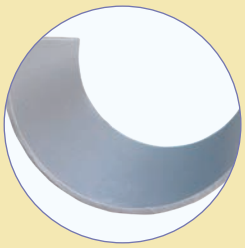
Fabricated Fittings

Features & Benefits



high quality uPVC Compound.

Manufactured from high quality uPVC compound.



Smooth Inner Wall

Smooth inner wall minimizes frictional losses and due to precipitation

Corrosion and Chemical Resistance

Excellent corrosion and chemical resistance to most acidic and alkaline solutions.

Various Range

Injection Moulded Fittings
Ø 20 mm to Ø 200 mm

Frabricated Fittings -
Ø 20 mm to Ø 630 mm

Available in Various Pressure Rating and Standards

Injection Moulded Fittings
IS7834, DIN 8063

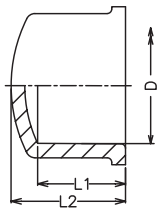
Fabricated Fittings
IS 10124

Advance Manufacturing Technology

Advance manufacturing technology and our experience bring the quality products in the market

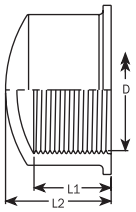
Injection Moulded Fittings - HP

End Cap (Plain)



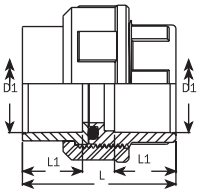
Code	Size mm	D1 (mm)		L1 mm	L2 mm
		Min.	Max.		
ECP020	20	20.1	20.3	16.0	21.5
ECP025	25	25.1	25.3	19.0	25.4
ECP032	32	32.1	32.3	22.0	30.0
ECP040	40	40.1	40.3	26.0	34.5
ECP050	50	50.1	50.3	31.0	38.0
ECP063	63	63.1	63.3	38.0	52.0
ECP075	75	75.1	75.3	44.0	57.6
ECP090	90	90.1	90.3	51.0	65.0
ECP110	110	110.1	110.4	65.0	83.0
ECP125	125	125.1	125.4	69.0	97.0
ECP140	140	140.1	140.4	76.5	108.4
ECP160	160	160.1	160.4	86.5	122.0
ECP180	180	180.1	180.4	96.5	135.6
ECP200	200	200.1	200.4	106.6	150.0

End Cap (Threaded)



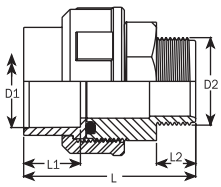
Code	Size mm	D inch (BSP)	L1 mm	L2 mm
ECT034	25	¾"	19.0	25.4
ECT112	50	1½"	26.5	35.0
ECT200	63	2"	28.0	39.0
ECT212	75	2½"	33.5	43.0
ECT300	90	3"	41.0	52.0
ECT400	110	4"	43.0	56.0

Union



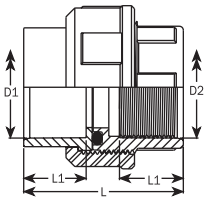
Code	Size mm	D1 (mm)		L1 mm	L mm
		Min.	Max.		
U20	20	20.1	20.3	16.0	45.5
U25	25	25.1	25.3	19.0	51.5
U32	32	32.1	32.3	22.0	57.5
U40	40	40.1	40.3	26.0	68.5
U50	50	50.1	50.3	31.0	79.3
U63	63	63.1	63.3	38.0	98.0
U75	75	75.1	75.3	44.0	109.4

Union (Plain x Male Threaded)



Code	Size mm x inch	D1 (mm)		D2 (inch) (BSP)	L1 mm	L2 mm	L mm
		Min.	Max.				
UMTP32100	32 x 1"	32.1	32.3	1"	22.0	19.1	74.5
UMTP40114	40 x 1¼"	40.1	40.3	1¼"	26.0	21.4	84.4
UMTP50112	50 x 1½"	50.1	50.3	1½"	31.0	21.4	94.0
UMTP50200	50 x 2"	50.1	50.3	2"	31.0	25.7	98.3
UMTP63200	63 x 2"	63.1	63.3	2"	38.0	25.7	112.0

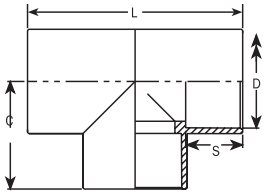
Union (Plain x Female Threaded)



Code	Size mmxinch	D1 (mm)		D2 inch (BSP)	L1 mm	L2 mm	L mm
		Min	Max				
UFTP20012	20 x ½"	20.1	20.3	½"	16.0	15.0	45.5
UFTP25034	25 x ¾"	25.1	25.3	¾"	19.0	16.3	51.5
UFTP32100	32 x 1"	32.1	32.3	1"	22.0	19.1	57.5
UFTP40114	40 x 1¼"	40.1	40.3	1¼"	26.0	21.4	68.5
UFTP50112	50 x 1½"	50.1	50.3	1½"	31.0	21.4	79.3
UFTP63200	63 x 2"	63.1	63.3	2"	38.0	25.7	98.0
UFTP75212	75 x 2½"	75.1	75.3	2½	44.0	30.0	109.5

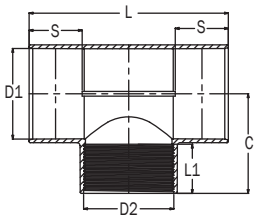
Injection Moulded Fittings - HP

Equal Tee



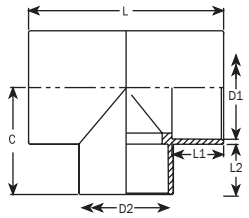
Code	Size mm	D (mm)		C mm	S mm	L mm
		Min.	Max.			
MT020	20	20.1	20.3	27.5	16.0	55.0
MT025	25	25.1	25.3	33.0	19.0	66.0
MT032	32	32.1	32.3	39.0	22.0	78.0
MT040	40	40.1	40.3	47.0	26.0	94.0
MT050	50	50.1	50.3	56.8	30.0	113.5
MT063	63	63.1	63.3	71.8	38.3	143.5
MT075	75	75.1	75.3	84.0	44.5	168.0
MT090	90	90.1	90.3	100.0	52.2	200.0
MT110	110	110.1	110.4	118.0	61.5	236.0
MT140	140	140.1	140.5	145.0	70.0	298.0
MT160	160	160.1	160.5	165.0	85.0	335.0
MT200	200	200.1	200.5	208.5	106.5	417.0

Threaded Equal Tee



Code	Size mm	D (mm)		C mm	S mm	L1 mm	C mm	L mm
		Min.	Max.					
MTT063200	63x2" BSP	63.1	63.3	38.2	38.2	2"	71.6	143.4
MTT075212	75X2 ½" BSP	75.1	75.3	44.2	44.2	2½"	83.0	166.0
MTT090300	90x3" BSP	90.1	90.3	51.2	51.2	3"	97.5	195.0
MTT110400	110 X 4" BSP	110.1	110.3	61.2	61.2	4"	117.0	234.0

Reducing Tee

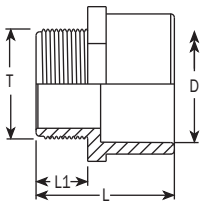


Code	Size, mm	D1, mm		D2, mm		L1 mm	L2 mm	C mm	L mm
		Min	Max	Min	Max				
MRT06332	63x32x63	63.1	63.3	32.1	32.3	38	22	55	142
MRT06340	63x40x63	63.1	63.3	40.1	40.3	38	26	59	142
MRT06350	63x50x63	63.1	63.3	50.1	50.3	38	31	64	142
MRT07540	75x40x75	75.1	75.3	40.1	40.3	44	26	65	166
MRT07550	75x50x75	75.1	75.3	50.1	50.3	44	31	70	166
MRT07563	75x63x75	75.1	75.3	63.1	63.3	44	38	77	166
MRT09050	90x50x90	90.1	90.3	50.1	50.3	51	31	78	196
MRT09063	90x63x90	90.1	90.3	63.1	63.3	51	38	85	196
MRT09075	90x75x90	90.1	90.3	75.1	75.3	51	44	91	196
MRT11050	110x50x110	110.1	110.4	50.1	50.3	61	31	87	236
MRT11063	110x63x110	110.1	110.4	63.1	63.3	61	38	95	236
MRT11075	110x75x110	110.1	110.4	75.1	75.3	61	44	101	236
MRT11090	110x90x110	110.1	110.4	90.1	90.3	61	51	108	236
MRT14032	140x32x140	140.1	140.5	76.5	32.1	32.3	22.5	94.9	297.0
MRT14040	140x40x140	140.1	140.5	76.5	40.1	40.3	26.5	98.9	297.0
MRT14050	140x50x140	140.1	140.5	76.5	50.1	50.3	31.5	103.9	297.0
MRT14063	140x63x140	140.1	140.5	76.5	63.1	63.3	38.5	111.4	297.0
MRT14075	140x75x140	140.1	140.5	76.5	75.1	75.3	44.5	115.4	297.0
MRT14090	140x90x140	140.1	140.5	76.5	90.1	90.3	51.3	123.3	297.0
MRT140110	140x110x140	140.1	140.5	76.5	110.1	110.4	61.3	133.3	297.0
MRT16032	160x32x160	160.1	160.5	86.5	32.1	32.3	22.5	104.9	297.0
MRT16040	160x40x160	160.1	160.5	86.5	40.1	40.3	26.5	108.9	297.0
MRT16060	160x50x160	160.1	160.5	86.5	50.1	50.3	31.5	113.9	335.0
MRT16063	160x63x160	160.1	160.5	86.5	63.1	63.3	38.5	121.4	335.0

Code	Size, mm	D1, mm		D2, mm		L1 mm	L2 mm	C mm	L mm
		Min	Max	Min	Max				
MRT16075	160x75x160	160.1	160.5	86.5	75.1	75.3	44.5	125.4	335.0
MRT16090	160x90x160	160.1	160.5	86.5	90.1	90.3	51.3	132.3	335.0
MRT160110	160x110x160	160.1	160.5	86.5	110.1	110.4	61.3	143.3	335.0
MRT160140	160x140x160	160.1	160.5	86.5	140.1	140.5	76.5	158.5	335.0
MRT18032	180x32x180	180.1	180.5	96.5	32.1	32.3	22.5	114.9	376.0
MRT18040	180x40x180	180.1	180.5	96.5	40.1	40.3	26.5	118.8	376.0
MRT18050	180x50x180	180.1	180.5	96.5	50.1	50.3	31.5	123.9	376.0
MRT18063	180x63x180	180.1	180.5	96.5	63.1	63.3	38.5	131.3	376.0
MRT18075	180x75x180	180.1	180.5	96.5	75.1	75.3	44.5	135.3	376.0
MRT18090	180x90x180	180.1	180.5	96.5	90.1	90.3	51.3	143.3	376.0
MRT180110	180x110x180	180.1	180.5	96.5	110.1	110.4	61.3	153.3	376.0
MRT180140	180x140x180	180.1	180.5	96.5	140.1	140.4	76.5	168.5	376.0
MRT180160	180x160x180	180.1	180.5	96.5	160.1	160.4	86.5	178.5	376.0
MRT20032	200x32x200	200.1	200.5	106.5	32.1	32.3	22.5	124.8	417.0
MRT20040	200x40x200	200.1	200.5	106.5	40.1	40.3	26.5	128.8	417.0
MRT20050	200x50x200	200.1	200.5	106.5	50.1	50.3	31.5	133.8	417.0
MRT20063	200x63x200	200.1	200.5	106.5	63.1	63.3	38.5	141.3	417.0
MRT20075	200x75x200	200.1	200.5	106.5	75.1	75.3	44.5	145.3	417.0
MRT20090	200x90x200	200.1	200.5	106.5	90.1	90.3	51.3	153.3	417.0
MRT200110	200x110x200	200.1	200.5	106.5	110.1	110.4	61.3	163.3	417.0
MRT200140	200x140x200	200.1	200.5	106.5	140.1	140.4	76.5	178.5	417.0
MRT200160	200x160x200	200.1	200.5	106.5	160.1	160.4	86.5	188.5	417.0
MRT200180	200x180x200	200.1	200.5	106.5	180.1	180.4	96.5	198	417.0

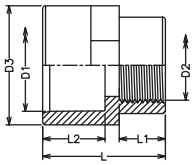
Injection Moulded Fittings - HP

Male Threaded Adaptor



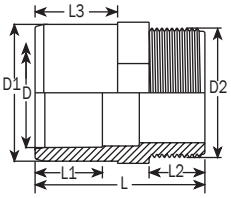
Code	Size mm	D (mm)		T (inch) (BSP)	L1 mm	L mm
		Min.	Max.			
MTA020	20	20.1	20.3	½"	15.0	36.0
MTA025	25	25.1	25.3	¾"	16.0	40.0
MTA032	32	32.1	32.3	1"	19.0	45.5
MTA040	40	40.1	40.3	1¼"	22.5	54.0
MTA050	50	50.1	50.3	1½"	24.5	59.0
MTA063	63	63.1	63.3	2"	28.0	74.5
MTA075	75	75.1	75.3	2½"	32.0	84.5
MTA090	90	90.1	90.3	3"	40.0	99.5
MTA110	110	110.1	110.4	4"	40.5	108.5

Female Threaded Adaptor



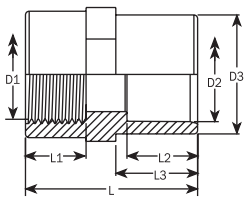
Code	Size mm	D1 (mm)		D2 (inch) (BSP)	L1 mm	L2 mm	L mm
		Min.	Max.				
FTA020	20	20.1	20.3	½"	17.3	14.3	35.5
FTA025	25	25.1	25.3	¾"	20.0	16.0	40.0
FTA032	32	32.1	32.3	1"	22.0	19.0	45.5
FTA040	40	40.1	40.3	1¼"	23.7	26.0	54.0
FTA050	50	50.1	50.3	1½"	31.0	30.0	64.0
FTA063	63	63.1	63.3	2"	38.0	33.5	78.0
FTA075	75	75.1	75.3	2½"	45.0	41.0	91.5
FTA090	90	90.1	90.3	3"	52.0	49.0	107.5
FTA110	110	110.1	110.4	4"	62.0	59.5	127.5

Combination Male Threaded Adaptor



Code	Size	D (mm)		D1	D2	L1	L2	L3	L
	mmxmmxinch	Min.	Max.	mm	inch (BSP)	mm	mm	mm	mm
CMTA2025012	20 x 25 x ½"	20.1	20.3	25.0	½"	16.0	15.0	19.0	46.0
CMTA2025034	20 x 25 x ¾"	20.1	20.3	25.0	¾"	16.0	16.3	19.0	47.3
CMTA2532012	25 x 32 x ½"	25.1	25.3	32.0	½"	19.0	15.0	22.0	49.0
CMTA2532034	25 x 32 x ¾"	25.1	25.3	32.0	¾"	19.0	16.3	22.0	50.3
CMTA4050114	40 x 50 x 1¼"	40.1	40.3	50.0	1¼"	26.0	21.4	31.0	66.9
CMTA4050112	40 x 50 x 1½"	40.1	40.3	50.0	1½"	26.0	21.4	31.0	66.9
CMTA5063114	50 x 63 x 1¼"	50.1	50.3	63.0	1¼"	31.0	21.4	38.0	73.9
CMTA5063112	50 x 63 x 1½"	50.1	50.3	63.0	1½"	31.0	21.4	38.0	73.9
CMTA5063200	50 x 63 x 2"	50.1	50.3	63.0	2"	31.0	25.7	38.0	78.2
CMTA6375200	63 x 75 x 2"	63.1	63.3	75.0	2"	38.0	25.7	44.0	84.2

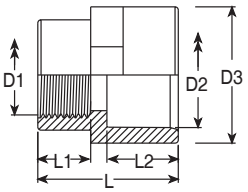
Combination Female Threaded Adaptor



Code	Size	D1	L1	D2, mm		L2	D3	L3	L
	mm x mm xinch	inch (BSP)	mm	Min.	Max.	mm	mm	mm	mm
CFTA25032034	25 x 32 x ¾"	¾"	16.3	25.1	25.3	19.0	32.0	22.0	46.3
CFTA63075200	63 x 75 x 2"	2"	25.7	63.1	63.3	38.0	75.0	44.0	78.7
CFTA63075212	63 x 75 x 2½"	2½"	30.2	63.1	63.3	38.0	75.0	44.0	88.2
CFTA75090212	75 x 90 x 2½"	½"	30.2	75.1	75.3	44.0	90.0	51.0	95.2
CFTA90110400	90 x 110 x 4"	4"	39.3	90.1	90.3	51.0	110.0	61.0	115.3

Note: For sales order outside India add E instead of D in the above mentioned ordering code. e.g. for ordering Elbow 45°-32mm change the code as EE45032 instead of DE45032.

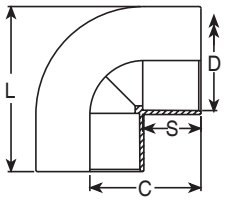
Reducing Female Threaded Adaptor



Code	Size	D1	L1	D2, mm		L2	D3	L
	mm x inch	inch (BSP)	mm	Min.	Max.	mm	mm	mm
RFTA025012	25 x ½"	½"	15.0	25.1	25.3	19.0	34.0	38.0
RFTA063112	63 x 1½"	½"	21.4	63.1	63.3	38.0	75.0	64.4
RFTA075112	75 x 1½"	½"	21.4	75.1	75.3	44.0	89.0	70.4
RFTA075200	75 x 2"	2"	25.7	75.1	75.3	44.0	89.0	74.7
RFTA090212	90 x 2½"	½"	30.2	90.1	90.3	51.0	106.0	88.7

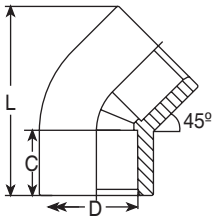
Injection Moulded Fittings - HP

Elbow 90°



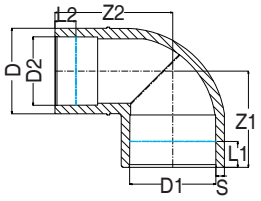
Code	Size mm	D mm		C mm	S mm	L mm
		Min.	Max.			
E020	20	20.1	20.3	27.5	16.0	40.1
E025	25	25.1	25.3	33.5	19.0	49.2
E032	32	32.1	32.3	39.4	22.4	58.6
E040	40	40.1	40.3	47.6	26.3	71.8
E050	50	50.1	50.3	60.0	31.5	90.0
E063	63	63.1	63.3	72.5	39.0	109.0
E075	75	75.1	75.3	85.5	46.0	129.3
E090	90	90.1	90.3	98.5	52.0	151.3
E110	110	110.1	110.4	119.0	61.5	183.5
E125	125	125.1	125.4	135..0	69.0	207.5
E140	140	140.1	140.5	148.5	76.5	225.3
E160	160	160.1	160.5	167.5	86.5	252.3
E180	180	180.1	180.5	188.0	96.5	283.5
E200	200	200.1	200.5	208.5	106.5	325.3

Elbow 45°



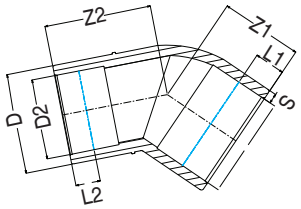
Code	Size mm	D (mm)		C mm	L mm
		Min.	Max.		
E45032	32	32.1	32.3	22.0	65.6
E45040	40	40.1	40.3	26.0	78.9
E45050	50	50.1	50.3	31.0	94.1
E45063	63	63.1	63.3	38.0	116.1
E45075	75	75.1	75.3	44.0	136.5
E45090	90	90.1	90.3	51.0	159.3
E45110	110	110.1	110.4	61.0	191.0

Reducing Elbow 90°



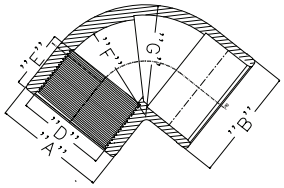
Code	Size	D	D1	D2	Z1	Z2	L1	L2	S
	(mm)								
RE05040	50x50/40	50	50	40	57	73	15.5	13	5.7
RE06350	63x63/50	63	63	50	71	87	19	15.5	6.3

Reducing Elbow 45°



Code	Size	D	D1	D2	Z1	Z2	L1	L2	S
	(mm)								
RE4505040	50x50/40	50	50	40	57	73	15.5	13	5.7
RE4506350	63x63/50	63	63	50	71	87	19	15.5	6.3

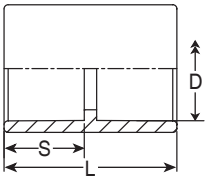
Female Elbow 90° - One End Threaded



Code	A	B	C	D	E	F	G
				(mm)			
Elbow 110x4" BSP (HWT)	Ø129	Ø 128.54	183.5	Maj. Ø 113.0 (4" BSP)	40	R118.6	R129.0
Elbow 90x4" BSP (HWT)	Ø106	Ø 106.0	152.0	Maj. Ø 87.9 (3" BSP)	36	R106.0	R.95.4
Elbow 75x2" ½ BSP (HWT)	Ø 89	Ø 89.0	129.5	Maj. Ø 75.4 (2½" BSP)	44	R 80.2	R 81.1
Elbow 63x2" ½ BSP (HWT)	Ø 73	Ø 73.1	108.5	Maj. Ø 59.6 (2" BSP)	32	R 65.9	R 73.0

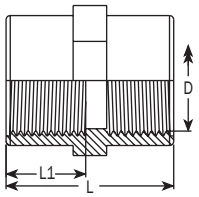
Injection Moulded Fittings - HP

Coupler



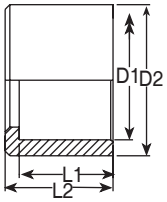
Code	Size mm	D (mm)		S mm	L mm
		Min.	Max.		
C020	20	20.1	20.3	16.0	42.0
C025	25	25.1	25.3	31.0	41.5
C032	32	32.1	32.3	22.0	47.5
C040	40	40.1	40.3	26.0	55.5
C050	50	50.1	50.3	31.0	65.5
C063	63	63.1	63.3	38.0	82.0
C075	75	75.1	75.3	44.0	92.5
C090	90	90.1	90.3	51.0	107.5
C110	110	110.1	110.4	61.0	129.5

Female Threaded Coupler



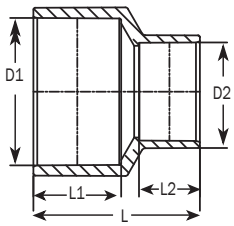
Code	Size mm	D inch (BSP)	L mm	L1 mm
FTC012	20	½"	35.5	17.3
FTC034	25	¾"	40.0	20.0
FTC100	32	1"	45.5	22.0
FTC114	40	1¼"	54.5	27.0
FTC112	50	1½"	64.0	31.0
FTC200	63	2"	78.0	38.0
FTC250	75	2½"	91.5	45.0
FTC300	90	3"	107.5	52.0
FTC400	110	4"	127.5	62.0

Reducer Bush



Code	Size mmxmm	D1 mm		D2 mm	L1 mm min	L2 mm min
		Min.	Max.			
RB02520	25 x 20	20.1	20.3	25.0	16.0	19.0
RB03220	32 x 20	20.1	20.3	32.0	16.0	22.0
RB03225	32 x 25	25.1	25.3	32.0	19.0	22.0
RB04020	40 x 20	20.1	20.3	40.0	16.0	26.0
RB04025	40 x 25	25.1	25.3	40.0	19.0	26.0
RB04032	40 x 32	32.1	32.3	40.0	22.0	26.0
RB05020	50 x 20	20.1	20.3	50.0	16.0	31.0
RB05032	50 x 32	32.1	32.3	50.0	22.0	31.0
RB05040	50 x 40	40.1	40.3	50.0	26.0	31.0
RB06332	63 x 32	32.1	32.3	63.0	22.0	38.0
RB06340	63 x 40	40.0	40.3	63.0	26.0	38.0
RB06350	63 x 50	50.1	50.3	63.0	31.0	38.0
RB07540	75 x 40	40.1	40.3	75.0	26.0	44.0
RB07550	75 x 50	50.1	50.3	75.0	31.0	44.0
RB07563	75 x 63	63.1	63.3	75.0	38.0	44.0
RB09063	90 x 63	63.1	63.3	90.0	38.0	51.0
RB09075	90 x 75	75.1	75.3	90.0	44.0	51.0
RB11063	110 x 63	63.1	63.3	110.0	38.0	61.0
RB11075	110 x 75	75.1	75.3	110.0	44.0	61.0
RB11090	110 x 90	90.1	90.3	110.0	51.0	61.0
RB125110	125x110	110.1	110.4	125.0	61.5	69.0
RB140110	140x110	110.1	110.4	140.0	61.5	76.0
RB14012510	140x125	125.1	125.4	140.0	61.5	76.0
RB20012510	160x110	110.1	110.4	160.0	61.5	86.0
RB20014010	200x125	125.1	125.4	200.0	69.5	106.0
RB20016010	200x140	140.4	140.4	200.0	76.5	106.0
RB20018006	200x160	160.1	160.4	200.0	86.5	106.0
RB20018010	200x180	180.1	180.4	200.0	96.5	106.0

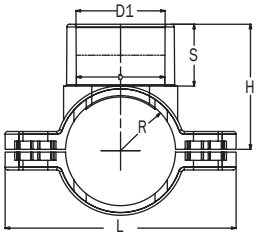
Reducer Socket



Code	Size mmxmm	D1 mm		D2 mm		L mm	L1 mm Min	L2 mm Min
		Min.	Max.	Min.	Max.			
RS02520	25 x 20	25.1	25.3	20.1	20.3	39.0	19.0	16.0
RS03220	32 x 20	32.1	32.3	20.1	20.3	42.0	22.0	16.0
RS03225	32 x 25	32.1	32.3	25.1	25.3	45.0	22.0	19.0
RS04020	40 x 20	40.1	40.3	20.1	20.3	48.0	26.0	16.0
RS04025	40 x 25	40.1	40.3	25.1	25.3	50.0	26.0	19.0
RS04032	40 x 32	40.1	40.3	32.1	32.3	52.0	26.0	22.0
RS05025	50 x 25	50.1	50.3	25.1	25.3	58.0	31.0	19.0
RS05032	50 x 32	50.1	50.3	32.1	32.3	58.0	31.0	22.0
RS05040	50 x 40	50.1	50.3	40.1	40.3	65.5	31.0	26.0
RS06332	63 x 32	63.1	63.3	32.1	32.3	70.5	38.0	22.0
RS06340	63 x 40	63.1	63.3	40.1	40.3	76.0	38.0	26.0
RS06350	63 x 50	63.1	63.3	50.1	50.3	75.5	38.0	31.0
RS07540	75 x 40	75.1	75.3	40.1	40.3	81.5	44.0	26.0
RS07550	75 x 50	75.1	75.3	50.1	50.3	94.0	44.0	31.0
RS07563	75 x 63	75.1	75.3	63.1	63.3	86.5	44.0	38.0
RS09050	90 x 50	90.1	90.3	50.1	50.3	95.0	51.0	31.0
RS09063	90 x 63	90.1	90.3	63.1	63.3	100.7	51.0	38.0
RS09075	90 x 75	90.1	90.3	75.1	75.3	102.5	51.0	44.0
RS11063	110 x 63	110.1	110.4	63.1	63.3	113.5	61.0	38.0
RS11075	110 x 75	110.1	110.4	75.1	75.3	117.5	61.0	44.0
RS11090	110 x 90	110.1	110.4	90.1	90.3	118.0	61.0	51.0
RS14090	140 x 90	140.1	140.4	90.1	90.3		76.5	51.5
RS140110	140 x 110	140.1	140.4	110.1	110.4		76.5	61.5
RS160110	160 x 110	160.1	160.4	110.1	110.4		86.5	61.5
RS160140	160x140	160.1	160.4	140.1	140.5		86.5	76.5

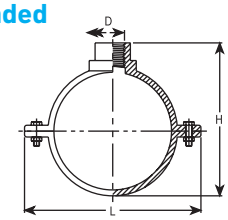
Injection Moulded Fittings - HP

Service Saddle Plain



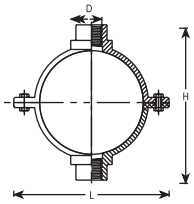
Code	Size	D1	H	H	H
	mm	mm	mm	mm	mm
SS075025	75x25	25.0	25.30	65.0	118.0
SS075032	75x32	32.0	32.30	65.0	118.0
SS090025	90x25	25.0	32.30	74.0	135.8
SS090032	90x32	32.0	32.30	74.0	135.8

Service Saddle Threaded



Code	Size	L	H	D
	mm x inch	mm	mm	inch (BSP)
SS032012	32 x ½"	64.0	55.8	½"
SS032034	32 x ¾"	64.0	55.8	¾"
SS040012	40 x ½"	85.0	65.2	½"
SS040034	40 x ¾"	85.0	65.2	¾"
SS050012	50 x ½"	89.5	81.5	½"
SS050034	50 x ¾"	89.5	81.5	¾"
SS050100	50 x 1"	89.5	81.5	1"
SS063012	63 x ½"	112.5	92.5	½"
SS063034	63 x ¾"	112.5	92.5	¾"
SS063100	63 x 1"	112.5	92.5	1"
SS075012	75 x ½"	124.0	104.5	½"
SS075034	75 x ¾"	124.0	104.5	¾"
SS075100	75 x 1"	124.0	104.5	1"
SS090012	90 x ½"	142.0	121.0	½"
SS090034	90 x ¾"	142.0	121.0	¾"
SS090100	90 x 1"	142.0	121.0	1"
SS110012	110 x ½"	160.5	140.0	½"
SS110034	110 x ¾"	160.5	140.0	¾"
SS110100	110 x 1"	160.5	140.0	1"

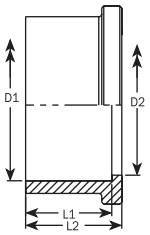
Two Way Service Saddle



Code	Size	L	H	D
	mm x inch	mm	mm	inch (BSP)
TSS032012	32 x ½"	64.0	72.6	½"
TSS032034	32 x ¾"	64.0	72.6	¾"
TSS040012	40 x ½"	85.0	83.0	½"
TSS040034	40 x ¾"	85.0	83.0	¾"
TSS050012	50 x ½"	89.5	105.0	½"
TSS050034	50 x ¾"	89.5	105.0	¾"
TSS050100	50 x 1"	89.5	105.0	1"
TSS063012	63 x ½"	112.5	114.5	½"
TSS063034	63 x ¾"	112.5	114.5	¾"
TSS063100	63 x 1"	112.5	114.5	1"
TSS075012	75 x ½"	124.0	125.0	½"
TSS075034	75 x ¾"	124.0	125.0	¾"
TSS075100	75 x 1"	124.0	125.0	1"
TSS090012	90 x ½"	142.0	142.0	½"
TSS090034	90 x ¾"	142.0	142.0	¾"
TSS090100	90 x 1"	142.0	142.0	1"
TSS110012	110 x ½"	160.5	160.0	½"
TSS110034	110 x ¾"	160.5	160.0	¾"
TSS110100	110 x 1"	160.5	160.0	1"

Injection Moulded Fittings - HP

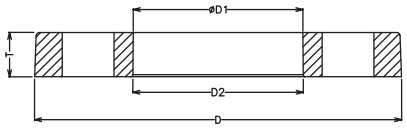
Flange Adaptor



Code	Size mm	D1 (mm)		D2 mm	L1 mm	L2 mm
		Min.	Max.			
FA050	50	50.1	50.3	46.0	31.0	34.0
FA063	63	63.1	63.3	58.0	38.0	40.5
FA075	75	75.1	75.3	70.0	44.0	48.5
FA090	90	90.1	90.3	79.0	51.0	57.0
FA110	110	110.1	110.4	103.0	63.0	68.0

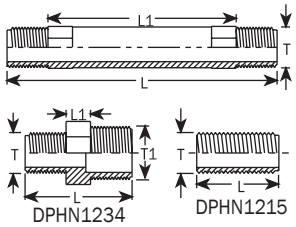
Note: For sales order outside India add E instead of D in the above mentioned ordering code. e.g. for ordering Flange Adaptor 50mm change the code as EFA050 instead of DFA050.

PVC Flange



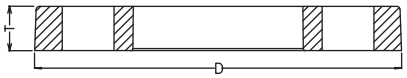
Code	Size mm	D1 mm	D2 mm	D mm	T mm
PFM63	63	78.0	78.3	168.75	20.5
PFM75	75	88.0	88.7	185.0	20.0
PFM90	90	103.0	103.7	200.0	20.0
PFM110	110	123.0	123.7	220.0	20.0
PFM125	125	138.0	138.7	254.0	20.0
PFM160	160	174.0	174.7	286.0	20.0

Nipple Joints



Code	T (inch) (BSPT/NPT)	T1 (inch) (BSPT/NPT)	L inch	L1 mm
PHN1215	½"	-	1½"	-
PHN1220	½"	-	2"	12.0
PHN1230	½"	-	3"	36.4
PHN1240	½"	-	4"	61.6
PHN1250	½"	-	5"	87.0
PHN1260	½"	-	6"	112.4
PHN1270	½"	-	7"	137.6
PHN1234	½"	¾"	2"	11.6

Blind Flange



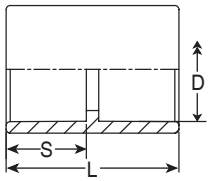
Code	Size mm	D mm	T mm
PFM63	63	168.75	20.5
PFM75	75	185.0	20.0
PFM90	90	200.0	20.0
PFM110	110	220.0	20.0
PFM125	125	254.0	20.0
PFM160	160	286.0	20.0

Pipe Holding Clamp

Code	Nominal Dia	L (mm)	T (mm)
SWRPC075	75	69	94
SWRPC090	90	78	110
SWRPC110	110	90	132
SWRPC160	160	110	185

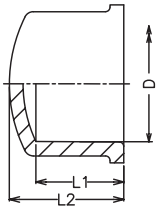
Injection Moulded Fittings - LP

Coupler



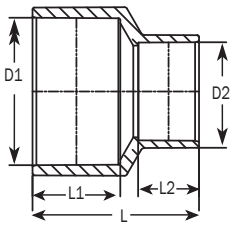
Code	Size mm	D (mm)		S mm	L mm
		Min.	Max.		
LC020	20	20.1	20.3	16.0	42.0
LC025	25	25.1	25.3	31.0	42.0
LC032	32	32.1	32.3	22.0	48.5
LC040	40	40.1	40.3	26.0	55.0
LC050	50	50.1	50.3	31.0	65.5
LC063	63	63.1	63.3	39.0	82.0
LC075	75	75.1	75.3	44.0	92.5
LC090	90	90.1	90.3	51.0	107.5
LC110	110	110.1	110.4	61.0	129.5

End Cap (Plain)



Code	Size mm	D1 (mm)		L1 mm	L2 mm
		Min.	Max.		
LCP040	40	40.1	40.3	26.0	34.6
LCP050	50	50.1	50.3	31.0	38.0
LCP063	63	63.1	63.3	38.0	52.0
LCP075	75	75.1	75.3	44.0	57.6
LCP090	90	90.1	90.3	51.0	65.0
LCP110	110	110.1	110.4	65.0	83.0
LCP140	140	140.1	140.4	76.5	103.5
LCP160	160	160.1	160.4	86.5	117.5
LCP180	180	180.1	180.4	96.5	131.0
LCP200	200	200.1	200.4	106.5	144.0

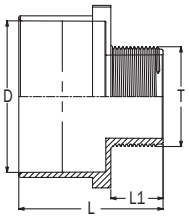
Reducer Socket



Code	Size mmxmm	D1 mm		D2 mm		L mm	L1 mm Min	L2 mm Min
		Min.	Max.	Min.	Max.			
LRS063040	63X40	63.1	63.3	40.1	40.3	76.0	39.0	27.0
LRS063050	63X50	63.1	63.3	50.1	50.3	75.5	38.5	31.5
LRS075040	75X40	75.1	75.3	40.1	40.3	81.5	44.0	27.0
LRS075050	75X50	75.1	75.3	50.1	50.3	94.0	45.0	33.0
LRS075063	75X63	75.1	75.3	63.1	63.3	86.5	45.0	37.5
LRM09050	90X50	90.1	90.3	50.1	50.3	95.0	51.0	33.0
LRS090063	90X63	90.1	90.3	63.1	63.3	100.7	52.0	41.7
LRM090075	90X75	90.1	90.3	75.1	75.3	102.5	51.5	47.5
LRM110063	110X63	110.1	110.4	63.1	63.3	113.5	61.0	41.7
LRM110075	110X75	110.1	110.4	75.1	75.3	117.5	62.0	43.5
LRS111090	110X90	110.1	110.4	90.1	90.3	118.0	61.5	52.5

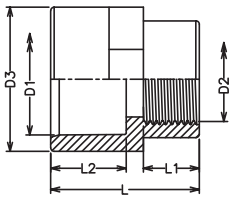
Injection Moulded Fittings - LP

Male Threaded Adaptor



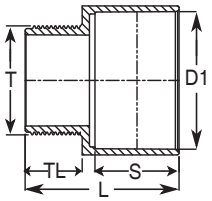
Code	Size mm	D (mm)		T (inch) (BSP)	L1 mm	L mm
		Min.	Max.			
LMT040	40	40.1	40.3	1¼"	22.5	54.0
LMT050	50	50.1	50.3	1½"	24.5	59.0
LMT063	63	63.1	63.3	2"	28.0	74.5
LMT075	75	75.1	75.3	2½"	32.0	84.5
LMT090	90	90.1	90.3	3"	40.0	99.5
LMT110	110	110.1	110.4	4"	40.5	108.5

Female Threaded Adaptor



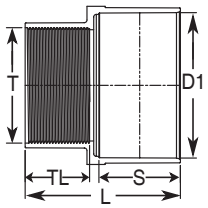
Code	Size mm	D1 (mm)		D2 (inch) (BSP)	L1 mm	L2 mm	L mm
		Min.	Max.				
LFTA040	40	40.1	40.3	1¼"	23.7	26.0	54.0
LFTA050	50	50.1	50.3	1½"	31.0	30.0	64.0
LFTA063	63	63.1	63.3	2"	38.0	33.5	78.0
LFTA075	75	75.1	75.3	2½"	45.0	41.0	91.5
LFTA090	90	90.1	90.3	3"	52.0	49.0	107.5
LFTA110	110	110.1	110.4	4"	62.0	59.5	127.5

Reducing Male Threaded Adaptor



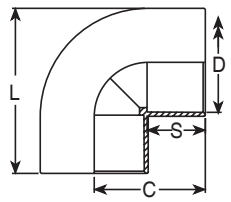
Code	Size	D1 (mm)		S	T	TL	L
	mm x inch	Min	Max	mm	Min.	mm	mm
LRMTA075200	75 x 2"	75.1	75.3	46.0	2"	31	84
LRMTA090200	90 x 2"	90.1	90.3	52.0	2"	33	86
LRMTA090212	90 x 2½"	90.1	90.3	52.0	2½"	41	86
LRMTA110200	110 x 2"	110.1	110.3	62.0	2"	33	97
LRMTA110212	110 x 2½"	110.1	110.3	62.0	2½"	41	97
LRMTA110300	110 x 3"	110.1	110.3	62.0	3"	49	106

Reducing Female Threaded Adaptor



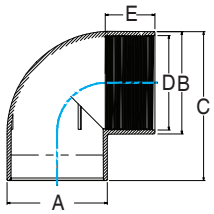
Code	Size	D1 (mm)		S	T	TL	L
	mm x inch	Min	Max	mm	Min.	mm	mm
LRFTA075200	75 x 2"	75.1	75.3	44.5	2"	31	82
LRFTA090200	90 x 2"	90.1	90.3	52.0	2"	33	92
LRFTA090212	90 x 2½"	90.1	90.3	52.0	2½"	41	100
LRFTA110200	110 x 2"	110.1	110.3	62.0	2"	33	102
LRFTA110212	110 x 2½"	110.1	110.3	62.0	2½"	41	110
LRFTA110300	110 x 3"	110.1	110.3	62.0	3"	49	118

Elbow 90°



Code	Size mm	D		C mm	S mm	L mm
		Min.	Max.			
LE040	40	40.1	40.3	47.30	26.0	70.6
LE050	50	50.1	50.3	60.0	31.5	90.0
LE063	63	63.1	63.3	72.5	39.0	109.0
LE075	75	75.1	75.3	85.5	46.0	129.3
LE090	90	90.1	90.3	98.5	52.0	151.3
LE110	110	110.1	110.4	119.0	61.5	183.5
LE140	140	140.1	140.4	148.0	78.0	220.0
LE160	160	160.1	160.4	165.0	85.0	245.0
LE200	200	200.1	200.4	208.5	106.5	318.0

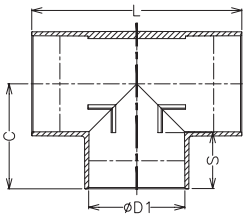
Female Elbow 90° - One End Threaded



Code	A	B	C	D	E	F	G
	(mm)						
Elbow 110x4" BSP (LWT)	Ø120.0	Ø 122.5	178.3	Maj. Ø 113.0 (4" BSP)	59.5	R115.0	R124.0
Elbow 90x4" BSP (LWT)	Ø98.3	Ø 98.0	146.0	Maj. Ø 87.9 (3" BSP)	44	R94.3	R.98.2
Elbow 75x2" ½ BSP (LWT)	Ø 81.75	Ø 81.75	123.4	Maj. Ø 75.4 (2½" BSP)	42	R 78.4	R 82.0
Elbow 63x2" ½ BSP (LWT)	Ø 69.5	Ø 69.5	106.75	Maj. Ø 59.6 (2" BSP)	37	R 66.3	R 69.5

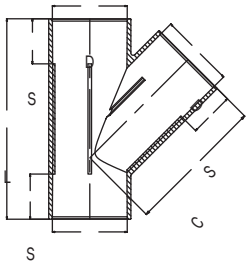
Injection Moulded Fittings - LP

Equal Tee



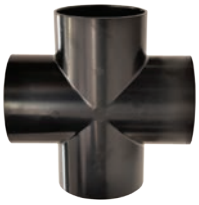
Code	Size mm	D (mm)		C mm	S mm	L mm
		Min.	Max.			
LT040	40	40.1	40.3	47.0	26.0	94.0
LT050	50	50.1	50.3	56.8	30.0	113.5
LT063	63	63.1	63.3	71.8	38.3	143.5
LT075	75	75.1	75.3	84.0	44.5	168.0
LT090	90	90.1	90.3	100.0	52.2	200.0
LT110	110	110.1	110.4	118.0	61.5	236.0
LT140	140	140.1	140.5	145.0	70.0	298.0
LT160	160	160.1	160.5	165.0	85.0	335.0
LT200	200	200.1	200.5	208.5	106.5	417.0

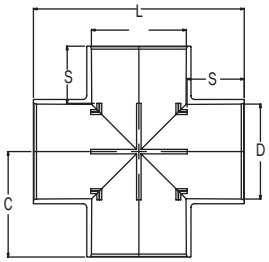
Y Tee



Code	Size mm	D (mm)		S mm	C mm	L mm
		Min.	Max.			
PWYE063	60x63	63.1	63.3	38.2	118.0	170.0
PWYE075	75x75	75.1	75.3	44.2	137.0	198.0
PWYE090	90x90	90.1	90.4	51.2	162.0	233.0
PWYE110	110x110	110.1	110.4	61.2	197.0	282.0

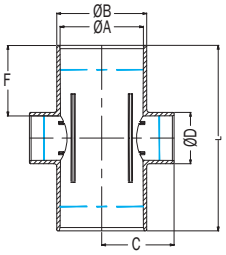
Cross Tee





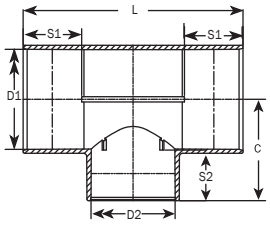
Code	Size mm	D (mm)		S mm	C mm	L mm
		Min.	Max.			
LCRT063	60x63	63.1	63.3	38.2	70.5	141.0
LCRT075	75x75	75.1	75.3	44.2	82.5	165.0
LCRT090	90x90	90.1	90.4	51.2	97.0	194.0
LCRT110	110x110	110.1	110.4	61.2	117.0	234.0

Reducing Cross Tee



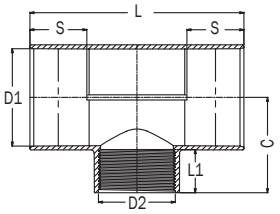
Code	Size	A mm	B mm	C mm	D mm	F mm	L mm
LPRCC6340	63x40	63.5	69.5	65.5	46.4	51.6	143.4
LPRCC7540	75x40	75.5	81.5	65.5	46.5	63.9	168.0
LPRCC9040	90x40	90.3	96.5	73.0	46.4	77.4	195.0

Reducing Tee



Code	Size, mm	D1, mm		D2, mm		L1 mm	L2 mm	C mm	L mm
		Min	Max	Min	Max				
LMRT04025	40X25X40	40.1	40.3	26	25.1	25.3	31	40.0	93.8
LMRT07563	75X63X75	75.1	75.3	44	63.1	63.3	38	76.5	165.0
LMRT09063	90X63X90	90.1	90.3	52	63.1	63.3	38	84.0	194.0
LMRT09075	90X75X90	90.1	90.3	52	75.1	75.3	44	90.0	194.0
LMRT11063	110X63X110	110.1	110.3	62	63.1	63.3	38	94.0	234.0
LMRT11075	110X75X110	110.1	110.3	62	75.1	75.3	44	100.0	234.0
LMRT11090	110X90X110	110.1	110.3	62	90.1	90.3	52	110.0	234.0
LMRT14032	140X32X140	140.1	140.3	76	32.1	32.3	22.5	94.85	297.0
LMRT14090	140X90X140	140.1	140.3	76	90.1	90.3	52	118.0	297.0
LMRT140110	140X110X140	140.1	140.3	76	110.1	110.3	62	132.0	297.0
LMRT16090	160X90X160	160.1	160.3	86.5	90.1	90.3	52	127.0	345.0
LMRT160110	160X110X160	160.1	160.3	86.5	110.1	110.3	62	139.0	345.0
LMRT20090	200X90X200	200.1	200.3	106	90.1	90.3	52	146.0	426.0
LMRT200110	200X110X200	200.1	200.3	106	110.1	110.3	62	158.0	426.0

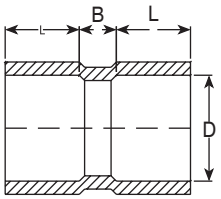
Reducing Threaded Tee



Code	Size mm	D1 (mm)		S mm	D2; Inch (BSP)	C mm	L mm
		Min.	Max.				
LMRTT075200	75x2" BSP	75.1	75.3	44.2	2"	74.0	166.0
LMRTT090200	90X2" BSP	90.1	90.3	51.2	2"	85.0	195.0
LMRTT090212	90x2 ½" BSP	90.1	90.3	51.2	2 ½"	91.0	195.0
LMRTT110200	110 X 2" BSP	110.1	110.4	61.2	2"	92.0	234.0
LMRTT110212	110 x 2½" BSP	110.1	110.4	61.2	2 ½"	100.0	234.0
LMRTT110300	110x3" BSP	110.1	110.4	61.2	3"	110.0	234.0

PVC Pipe & Fittings - Fabricated

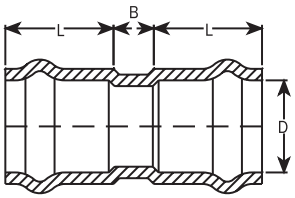
Coupler



Code	ND	B	L
PVFCS02010	20	20	16.0
PVFCS02510	25	20	19.0
PVFCS03210	32	20	22.0
PVFCS04010	40	20	26.0
PVFCS05010	50	20	31.0
PVFCS06310	63	20	37.5
PVFCS07510	75	20	43.5
PVFCS09010	90	35	51.0
PVFCS11010	110	35	61.0
PVFCS12510	125	35	68.5
PVFCS14010	140	45	76.0
PVFCS16010	160	45	86.0
PVFCS18010	180	45	96.0
PVFCS20010	200	45	106.0
PVFCS22510	225	55	118.5
PVFCS25010	250	55	131.0
PVFCS28010	280	55	146.0
PVFCS31510	315	55	163.5
PVFCS35510	355	65	183.5
PVFCS40010	400	65	206.0
PVFCS45010	450	65	231.0
PVFCS50010	500	65	256.0

Note: All dimensions are in mm
Note: All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

Quick-Fix Coupler

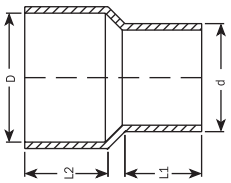


Code	ND	B	L
PVFCQ06310	63	250	107.0
PVFCQ07510	75	250	112.0
PVFCQ09010	90	250	118.0
PVFCQ11010	110	250	127.0
PVFCQ12510	125	250	133.0
PVFCQ14010	140	270	139.0
PVFCQ16010	160	270	146.0
PVFCQ18010	180	290	156.0
PVFCQ20010	200	320	164.0
PVFCQ22510	225	320	175.0
PVFCQ25010	250	350	185.0
PVFCQ28010	280	350	198.0
PVFCQ31510	315	430	215.0
PVFCQ35510	355	430	230.0
PVFCQ40010	400	450	242.0
PVFCQ50010	500	550	279.0

Note: All dimensions are in mm
Note: All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

PVC Pipe & Fittings - Fabricated

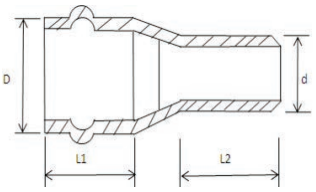
Reducer-Single Stage-Concentric



Code	Size	ND	d	L1	L2
PVFRS063x050X10	63x50	63	50.0	35	37.5
PVFRS075x063X10	75x63	75	63.0	42	43.5
PVFRS090x075X10	90x75	90	75.0	48	51.0
PVFRS110x090X10	110x90	110	90.0	55	61.0
PVFRS125x110X10	125x110	125	110.0	65	68.5
PVFRS140x125X10	140x125	140	125.0	73	76.0
PVFRS160x140X10	160x140	160	140.0	80	86.0
PVFRS180x160X10	180x160	180	160.0	90	96.0
PVFRS200x180X10	200x180	200	180.0	100	106.0
PVFRS225x200X10	225x200	225	200.0	110	118.5
PVFRS250x225X10	250x225	250	225.0	123	131.0
PVFRS280x250X10	280x250	280	250.0	135	146.0
PVFRS315x280X10	315x280	315	280.0	150	163.5
PVFRS355x315X10	355x315	355	315.0	168	183.5
PVFRS400x355X10	400x355	400	355.0	188	206.0
PVFRS450x400X10	450x400	450	400.0	210	231.0
PVFRS500x450X10	500x450	500	450.0	235	256.0

*Note : *All dimensions are in mm**
Note: All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

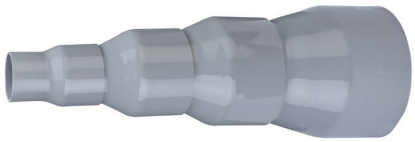
Quick Fix Reducer

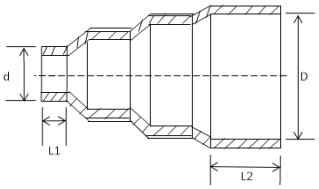


Code	Size	L1(Min)	L2 (Min.)
	mm	mm	mm
PVFRSQ075X063X08	75 X 63	113	157
PVFRSQ090X075X08	90 X 75	120	163
PVFRSQ110X090X08	110 X 90	128	170
PVFRSQ125X110X08	125 X 110	134	178
PVFRSQ140X125X08	140 X 125	140	184
PVFRSQ160X140X08	160 X 140	150	190
PVFRSQ180X160X08	180 X 160	157	200
PVFRSQ200X180X08	200 X 180	165	217
PVFRSQ225X200X08	225 X 200	176	225
PVFRSQ250X225X08	250 X 225	185	236
PVFRSQ280X250X08	280 X 250	201	245
PVFRSQ315X280X08	315 X 280	213	261

*Note : *All dimensions are in mm**
Note: All fabricated fittings are available in 8 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 10, 12.5 kg/cm².

Reducer-Multi Stage-Concentric





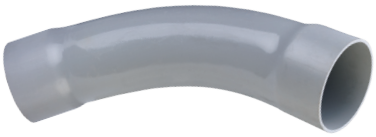
Code	Size	D	d	L1	L2
PVFRS110X063X06	110X063	110	063	42	61
PVFRS125X090X06	125X090	125	090	55	68.5
PVFRS140X090X06	140X090	140	090	55	76
PVFRS160X063X06	160X063	160	063	42	86
PVFRS160X075X06	160X075	160	075	48	86
PVFRS180X063X06	180X063	180	063	42	96
PVFRS180X090X06	180X090	180	090	55	96
PVFRS200X063X06	200X063	200	063	42	106
PVFRS200X090X06	200X090	200	090	55	106
PVFRS200X110X06	200X110	200	110	65	106
PVFRS225X063X06	225X063	225	063	42	118.5
PVFRS225X075X06	225X075	225	075	48	118.5
PVFRS225X090X06	225X090	225	090	55	118.5
PVFRS250X075X06	250X075	250	075	48	131
PVFRS250X090X06	250X090	250	090	55	131
PVFRS250X110X06	250X110	250	110	65	131

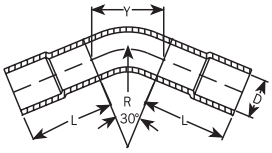
Code	Size	D	d	L1	L2
PVFRS280X075X06	280X075	280	075	48	146
PVFRS280X090X06	280X090	280	090	55	146
PVFRS315X090X06	315X090	315	090	55	163.5
PVFRS315X110X06	315X110	315	110	65	163.5
PVFRS315X125X06	315X125	315	125	73	163.5
PVFRS355X160X06	355X160	355	160	90	183.5
PVFRS355X200X06	355X200	355	200	110	183.5
PVFRS355X225X06	355X225	355	225	123	183.5
PVFRS400X110X06	400X110	400	110	65	206
PVFRS400X125X06	400X125	400	125	73	206
PVFRS400X140X06	400X140	400	140	80	206
PVFRS450X200X06	450X200	450	200	110	231
PVFRS450X225X06	450X225	450	225	123	231
PVFRS500X200X06	500X200	500	200	110	256
PVFRS500X225X06	500X225	500	225	123	256

Note : *All dimensions are in mm*
Note: All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 08, 10, 12.5 kg/cm².

PVC Pipe & Fittings - Fabricated

Solvent Cement Bend 30°



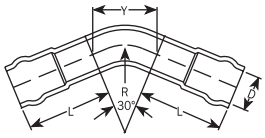


Code	ND	Y	L	R
PVFBS30020X10	20	32	20	60
PVFBS30025X10	25	40	25	75
PVFBS30032X10	32	51	32	96
PVFBS30040X10	40	63	40	120
PVFBS30050X10	50	79	50	150
PVFBS30063X10	63	99	63	189
PVFBS30075X10	75	118	75	225
PVFBS30090X10	90	142	90	270
PVFBS30110X10	110	173	110	330
PVFBS30125X10	125	197	125	375
PVFBS30140X10	140	220	140	420
PVFBS30160X10	160	252	160	480

Code	ND	Y	L	R
PVFBS30180X10	180	283	180	540
PVFBS30200X10	200	314	200	600
PVFBS30225X10	225	354	225	675
PVFBS30250X10	250	393	250	750
PVFBS30280X10	280	440	280	840
PVFBS30315X10	315	495	315	945
PVFBS30355X10	355	558	355	1065
PVFBS30400X10	400	628	400	1200
PVFBS30450X10	450	707	450	1350
PVFBS30500X10	500	785	500	1500
PVFBS30560X10	560	880	560	1680

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

Quick-fix Bend 30°

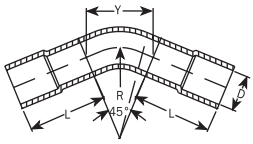


Code	ND	Y	L	R
PVFBQ30063X10	63	99	133.0	189
PVFBQ30075X10	75	118	143.5	225
PVFBQ30090X10	90	142	157.0	270
PVFBQ30110X10	110	173	176.0	330
PVFBQ30125X10	125	197	189.5	375
PVFBQ30140X10	140	220	203.0	420
PVFBQ30160X10	160	252	220.0	480
PVFBQ30180X10	180	283	240.0	540
PVFBQ30200X10	200	314	258.0	600
PVFBQ30225X10	225	354	281.5	675
PVFBQ30250X10	250	393	304.0	750
PVFBQ30280X10	280	440	332.0	840
PVFBQ30315X10	315	495	366.5	945
PVFBQ30355X10	355	558	400.5	1065
PVFBQ30400X10	400	628	436.0	1200
PVFBQ30500X10	500	785	523	1500

*Note: *All dimensions are in mm**
Also we can provide one side socket 6,8,12.5 kg

PVC Pipe & Fittings - Fabricated

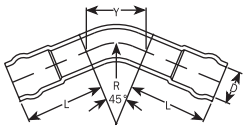
Solvent Cement Bend 45°



Code	ND	Y	L	R
PVFBS45020X10	20	48	20	60
PVFBS45025X10	25	59	25	75
PVFBS45032X10	32	75	32	96
PVFBS45040X10	40	95	40	120
PVFBS45050X10	50	118	50	150
PVFBS45063X10	63	149	63	189
PVFBS45075X10	75	177	75	225
PVFBS45090x10	90	212	90	270
PVFBS45110X10	110	259	110	330
PVFBS45125X10	125	295	125	375
PVFBS45140X10	140	330	140	420
PVFBS45160X10	160	377	160	480
PVFBS45180X10	180	424	180	540
PVFBS45200X10	200	471	200	600
PVFBS45225X10	225	530	225	675
PVFBS45250X10	250	589	250	750
PVFBS45280X10	280	660	280	840
PVFBS45315X10	315	742	315	945
PVFBS45355X10	355	837	355	1065
PVFBS45400X10	400	842	400	1200
PVFBS45450X10	450	1070	450	1350
PVFBS45500X10	500	1178	500	1500
PVFBS45560X10	560	1319	560	1680

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

Quick-fix Bend 45°

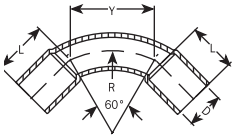


Code	ND	Y	L	R
PVFBQ45063X10	63	149	133.0	189
PVFBQ45075X10	75	177	142.5	225
PVFBQ45090X10	90	212	157.0	270
PVFBQ45110X10	110	259	176.0	330
PVFBQ45125X10	125	295	189.5	375
PVFBQ45140X10	140	330	203.0	420
PVFBQ45160X10	160	377	220.0	480
PVFBQ45180X10	180	424	240.0	540
PVFBQ45200X10	200	471	258.0	600
PVFBQ45225X10	225	530	281.5	675
PVFBQ45250X10	250	589	304.0	750
PVFBQ45280X10	280	660	332.0	840
PVFBQ45315X10	315	742	366.5	945
PVFBQ45355X10	355	837	400.5	1065
PVFBQ45400X10	400	842	436.0	1200
PVFBQ45500X10	500	1178	523.0	1520

*Note: *All dimensions are in mm**
Also we can provide one side socket 6,8,12.5 kg

PVC Pipe & Fittings - Fabricated

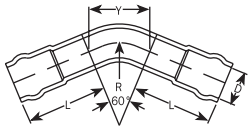
Solvent Cement Bend 60°



Code	ND	Y	L	R
PVFBS60020X10	20	63	20	60
PVFBS60025X10	25	79	25	75
PVFBS60032X10	32	101	32	96
PVFBS60040X10	40	126	40	120
PVFBS60050X10	50	158	50	150
PVFBS60063X10	63	198	63	189
PVFBS60075X10	75	236	75	225
PVFBS60090X10	90	283	90	270
PVFBS60110X10	110	346	110	330
PVFBS60125X10	125	393	125	375
PVFBS60140X10	140	440	140	420
PVFBS60160X10	160	503	160	480
PVFBS60180X10	180	566	180	540
PVFBS60200X10	200	629	200	600
PVFBS60225X10	225	707	225	675
PVFBS60250X10	250	786	250	750
PVFBS60280X10	280	880	280	840
PVFBS60315X10	315	990	315	945
PVFBS60355X10	355	1115	355	1065
PVFBS60400X10	400	1256	400	1200
PVFBS60450X10	450	1413	450	1350
PVFBS60500X10	500	1570	500	1500

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

Quick-fix Bend 60°

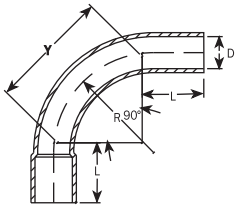


Code	ND	Y	L	R
PVFBQ60063X10	63	198	133.0	189
PVFBQ60075X10	75	236	142.5	225
PVFBQ60090X10	90	283	157.0	270
PVFBQ60110X10	110	346	176.0	330
PVFBQ60125X10	125	393	189.5	375
PVFBQ60140X10	140	440	203.0	420
PVFBQ60160X10	160	503	220.0	480
PVFBQ60180X10	180	566	240.0	540
PVFBQ60200X10	200	629	258.0	600
PVFBQ60225X10	225	707	281.5	675
PVFBQ60250X10	250	786	304.0	750
PVFBQ60280X10	280	880	332.0	840
PVFBQ60315X10	315	990	366.5	945
PVFBQ60355X10	355	1115	400.5	1065
PVFBQ60400X10	400	1256	436.0	1200
PVFBQ60500X10	500	1570	523.0	1500

*Note: *All dimensions are in mm**
Also we can provide one side socket 6,8,12.5 kg

PVC Pipe & Fittings - Fabricated

Solvent Cement Bend 90°

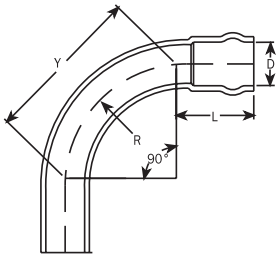


Code	ND	Y	L	R
PVFBS90020X10	20	95	20	60
PVFBS90025X10	25	118	25	75
PVFBS90032X10	32	151	32	96
PVFBS90040X10	40	189	40	120
PVFBS90050X10	50	236	50	150
PVFBS90063X10	63	297	63	189
PVFBS90075X10	75	354	75	225
PVFBS90090X10	90	424	90	270
PVFBS90110X10	110	519	110	330
PVFBS90125X10	125	589	125	375
PVFBS90140X10	140	660	140	420
PVFBS90160X10	160	754	160	480

Code	ND	Y	L	R
PVFBS90180X10	180	848	180	540
PVFBS90200X10	200	942	200	600
PVFBS90225X10	225	1060	225	675
PVFBS90250X10	250	1178	250	750
PVFBS90280X10	280	1319	280	840
PVFBS90315X10	315	1484	315	945
PVFBS90355X10	355	1673	355	1065
PVFBS90400X10	400	1884	400	1200
PVFBS90450X10	450	2120	450	1350
PVFBS90500X10	500	2355	500	1500

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/ cm².

Quick-fix Bend 90°

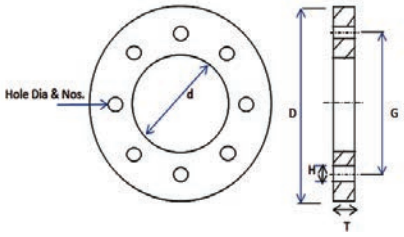


Code	ND	Y	L	R
PVFBQ90063X10	63	297	133.0	189
PVFBQ90075X10	75	354	142.5	225
PVFBQ90090X10	90	424	157.0	270
PVFBQ90110X10	110	519	176.0	330
PVFBQ90125X10	125	589	189.5	375
PVFBQ90140X10	140	660	203.0	420
PVFBQ90160X10	160	754	220.0	480
PVFBQ90180X10	180	848	240.0	540
PVFBQ90200X10	200	942	258.0	600
PVFBQ90225X10	225	1060	281.5	675
PVFBQ90250X10	250	1178	304.0	750
PVFBQ90280X10	280	1319	332.0	840
PVFBQ90315X10	315	1484	366.5	945
PVFBQ90355X10	355	1673	400.5	1065
PVFBQ90400X10	400	1884	436.0	1200
PVFBQ90500X10	500	2355	523.0	1500

*Note: *All dimensions are in mm**
Also we can provide one side socket 6,8,12.5 kg

PVC Pipe & Fittings - Fabricated

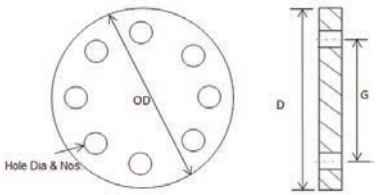
Slip on Flange



CODE	SIZE	DIA G (PCD)	DIA D (O.D)	DIA d (I.D)	T (THICK.)	DIA H (HOLE DIA)	NO OF HOLE
CIF63	63	125	165	64+1.0	7	19	4
CIF75	75	145	185	76+1.0	7	19	4
CIF90	90	160	200	91+1.0	9.5	19	4
CIF110	110	180	220	112+1.0	9.5	19	8
CIF125	125	210	250	127+1.0	11	19	8
CIF140	140	210	250	142+1.0	12.5	19	8
CIF160	160	240	285	162+1.0	12.5	23	8
CIF180	180	240	285	183+1.0	12.5	23	8
CIF200	200	295	340	203+1.0	16	23	8
CIF225	225	295	340	228+1.0	20	23	8
CIF250	250	350	395	253+1.0	20	23	12
CIF280	280	350	395	284+1.0	20	23	12
CIF315	315	400	445	319+1.0	24.5	23	12
CIF355	355	460	505	359+1.0	24.5	23	16
CIF400	400	515	565	405+2.0	24.5	28	16
CIF450	450	565	615	455+2.0	28	28	16
CIF500	500	620	670	506+2.0	28	28	20
CIF560	560	685	740	566+2.0	32	33	20
CIF630	630	755	810	637+2.0	32	33	20

IS 10124 - All Sizes Flanges are Available in BS Table 10D

Blind Flange

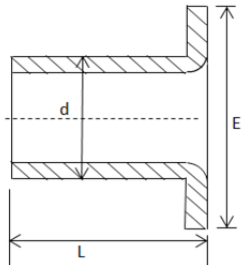


CODE	SIZE	DIA G (PCD)	DIA D (O.D)	T (THICK.)	DIA H (HOLE DIA)	NO OF HOLE
CIF63	63	125	165	7	19	4
CIF75	75	145	185	7	19	4
CIF90	90	160	200	9.5	19	4
CIF110	110	180	220	9.5	19	8
CIF125	125	210	250	11	19	8
CIF140	140	210	250	12.5	19	8
CIF160	160	240	285	12.5	23	8
CIF180	180	240	285	12.5	23	8
CIF200	200	295	340	16	23	8
CIF225	225	295	340	20	23	8
CIF250	250	350	395	20	23	12
CIF280	280	350	395	20	23	12
CIF315	315	400	445	24.5	23	12
CIF355	355	460	505	24.5	23	16
CIF400	400	515	565	24.5	28	16
CIF450	450	565	615	28	28	16
CIF500	500	620	670	28	28	20
CIF560	560	685	740	32	33	20
CIF630	630	755	810	32	33	20

IS 10124 - All Sizes Flanges are Available in BS Table 10D

PVC Pipe & Fittings - Fabricated

Flange Adaptor

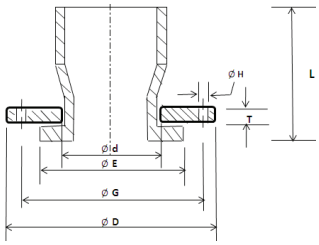


Code	Size	L	E
		Min	Max
PVFA063X10	63	68	101
PVFA075X10	75	80	121
PVFA090X10	90	95	136
PVFA110X10	110	115	156
PVFA125X10	125	130	186
PVFA140X10	140	145	186
PVFA160X10	160	165	212
PVFA180X10	180	185	212
PVFA200X10	200	205	267
PVFA225X10	225	230	267
PVFA250X10	250	255	322
PVFA280X10	280	285	322
PVFA315X10	315	320	372
PVFA355X10	355	360	432
PVFA400X10	400	405	483
PVFA450X10	450	455	533
PVFA500X10	500	505	588

Flange available on demand. Please specify flange sizes.

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08, 12.5 kg/cm².

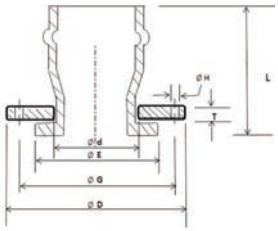
Metal Flange Adaptor



Code	Size	G	D	d	T	H	No. of Hole	L	E	Bolt Size
PVFAWF063X06	63	125	165	64	7	19	4	68	101	M16
PVFAWF075X06	75	145	185	76	7	19	4	80	121	M16
PVFAWF090X06	90	160	200	91	9.5	19	4	95	136	M16
PVFAWF110X06	110	180	220	112	9.5	19	8	115	156	M16
PVFAWF125X06	125	210	250	127	11.0	19	8	130	186	M16
PVFAWF140X06	140	210	250	142	12.5	19	8	145	186	M16
PVFAWF160X06	160	240	285	162	12.5	23	8	165	212	M20
PVFAWF180X06	180	240	285	183	12.5	23	8	185	212	M20
PVFAWF200X06	200	295	340	203	16.0	23	8	205	267	M20
PVFAWF225X06	225	295	340	228	20.0	23	8	230	267	M20
PVFAWF250X06	250	350	395	253	20.0	23	12	255	322	M20
PVFAWF280X06	280	350	395	284	20.0	23	12	285	322	M20
PVFAWF315X06	315	400	445	319	24.5	23	12	320	372	M20
PVFAWF355X06	355	460	505	359	24.5	23	16	360	432	M20
PVFAWF400X06	400	515	565	405	24.5	28	16	405	483	M24
PVFAWF450X06	450	565	615	455	28.0	28	16	455	533	M24
PVFAWF500X06	500	620	670	506	28.0	28	20	505	588	M24

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 08, 10, 12.5 kg/cm².

Quick Fix Metal Flange Adaptor

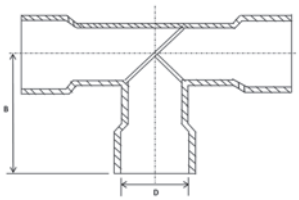


CODE	SIZE	ID(d)	O.Length (L)	Dia(D)	T	H	No. of Hole	L	E	Bolt Size
PVFAWFQ063x06	63	63.6	132	101	7	19	4	68	101	M16
PVFAWFQ075x06	75	75.6	147	121	7	19	4	80	121	M16
PVFAWFQ090x06	90	90.7	165	136	9.5	19	4	95	136	M16
PVFAWFQ110x06	110	110.8	190	156	9.5	19	8	115	156	M16
PVFAWFQ125x06	125	125.9	208	186	11.0	19	8	130	186	M16
PVFAWFQ140x06	140	140.9	226	186	12.5	19	8	145	186	M16
PVFAWFQ160x06	160	161	251	212	12.5	23	8	165	212	M20
PVFAWFQ180x06	180	181.1	275	212	12.5	23	8	185	212	M20
PVFAWFQ200x06	200	201.2	299	267	16.0	23	8	205	267	M20
PVFAWFQ225x06	225	226.4	330	267	20.0	23	8	230	267	M20
PVFAWFQ250x06	250	251.5	360	322	20.0	23	12	255	322	M20
PVFAWFQ280x06	280	281.6	397	322	20.0	23	12	285	322	M20
PVFAWFQ315x06	315	316.8	438	372	24.5	23	12	320	372	M20
PVFAWFQ355x06	355	357	484	432	24.5	23	16	360	432	M20
PVFAWFQ400x06	400	402.2	535	483	24.5	28	16	405	483	M24

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 08, 10, 12.5 kg/cm².

PVC Pipe & Fittings - Fabricated

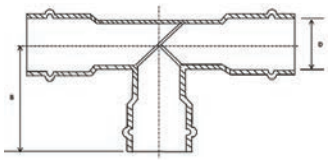
Equal Tee



CODE	SIZE	D		B
		Min	Max	
PVFT22506	225	225.3	225.7	338
PVFT25006	250	250.4	250.8	375
PVFT28006	280	280.4	280.9	420
PVFT31506	315	315.4	316	473
PVFT35506	355	355.4	356	521
PVFT40006	400	400.4	401	586
PVFT45006	450	450.4	451	659
PVFT50006	500	500.4	501	731

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 08, 10 kg/cm².

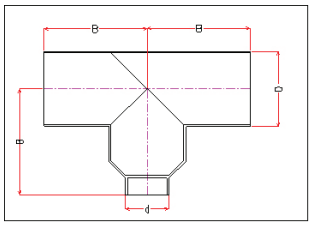
Quick-Fix Equal Tee



CODE	SIZE	B	D
PVFQT11008	110	300	1108
PVFQT12508	125	330	125.9
PVFQT14008	140	350	140.9
PVFQT16008	160	390	161
PVFQT18008	180	430	181.1
PVFQT20008	200	475	201.2
PVFQT22508	225	520	226.4
PVFQT25008	250	565	251.5
PVFQT28008	280	620	281.6
PVFQT31508	315	690	316.8
PVFQT35508	355	775	357
PVFQT40008	400	850	402.2

Note: • All dimensions are in mm. • All fabricated fittings are available in 08 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 10 kg/cm².

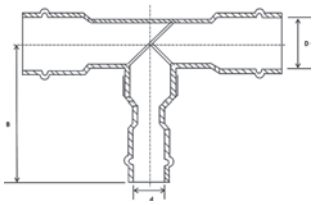
Reducing Tee



CODE	SIZE	D		d		B
		Min	Max	Min	Max	
PVFRT22520006	225 x 200	225.3	225.7	200.3	200.6	338
PVFRT25022506	250 X 225	250.4	250.8	225.3	225.7	375
PVFRT28025006	280 X 250	280.4	280.9	250.4	250.8	420
PVFRT31528006	315 X 280	315.4	316	280.4	280.9	473
PVFRT35531506	355 X 315	355.4	356	315.4	316	521
PVFRT40035506	400 X 355	400.4	401	355.4	356	586
PVFRT45040006	450 X 400	450.4	451	400.4	401	659
PVFRT50045006	500 X 450	500.4	501	450.4	451	731

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 08, 10 kg/cm².

Quick-Fix Reducing Tee

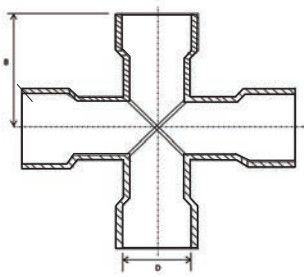


CODE	SIZE	D	
		Dm	d m
PVFRQT11009008	110 X 90	111.7	91.5
PVFRQT12511008	125 X 110	126.9	111.7
PVFRQT14011008	140 X 110	141.9	111.7
PVFRQT14012508	140 X 125	141.9	126.9
PVFRQT16014008	160 X 140	162.1	141.9
PVFRQT20016008	200 X 160	202.3	162.1
PVFRQT20018008	200 X 180	202.3	182.2
PVFRQT22520008	225 X 200	227.5	202.3
PVFRQT25022508	250 X 225	252.6	227.5
PVFRQT28025008	280 X 250	283.0	252.6
PVFRQT31528008	315 X 280	318.3	283.0

Note: • All dimensions are in mm. • All fabricated fittings are available in
08 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 10 kg/cm².

PVC Pipe & Fittings - Fabricated

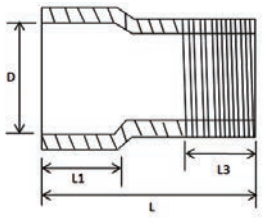
Cross Tee



CODE	SIZE	D		B
		Min	Max	
PVFFWT11006	110	110.0	110.4	165
PVFFWT12506	125	125.0	125.4	182
PVFFWT14006	140	140.0	140.5	210
PVFFWT16006	160	160.0	160.5	240
PVFFWT18006	180	180.0	180.6	270
PVFFWT20006	200	200.0	200.6	300
PVFFWT22506	225	225.0	225.7	338

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 08, 10 kg/cm².

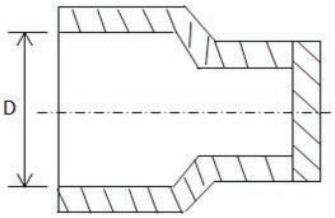
Threaded Adaptor



Code	Size	L	L1	L3	D
PVF125MTA	125	181	68.5	35	125.1
PVF140MTA	140	194	76.0	35	140.2
PVF160MTA	160	238	86.0	50	160.2
PVF180MTA	180	256	96.0	50	180.2
PVF200MTA	200	291	106.0	60	200.3
PVF225MTA	225	330	118.5	70	225.3
PVF250MTA	250	352	131.0	70	250.4
PVF280MTA	280	413	146.0	90	280.4
PVF315MTA	315	444	163.5	90	315.4

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 08, 10 kg/cm².

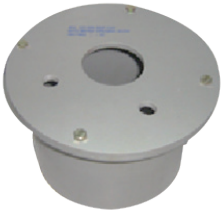
End Cap

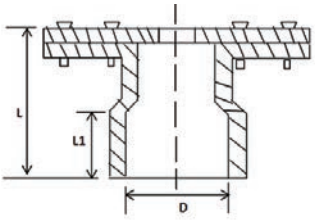


Code	D (mm)
PVFEC14004	140
PVFEC16004	160
PVFEC18004	180
PVFEC20004	200
PVFEC22504	225
PVFEC25004	250
PVFEC28004	280
PVFEC31504	315
PVFEC35504	355
PVFEC40004	400

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 08, 10 kg/cm².

225 MM TOP CAP WITH 80 MM BORE



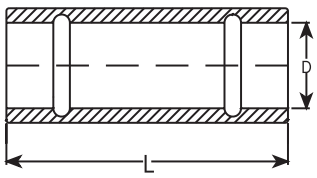


Code	Size	L	L1	D
PVFTC22504ID80MM	225	160	80	225.3

Note: • All dimensions are in mm. • All fabricated fittings are available in 06 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 08, 10 kg/cm².

PVC Pipe & Fittings - Fabricated

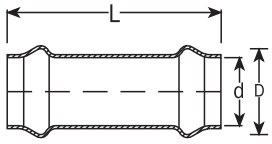
Repair Coupler



Code	D	L
PVFRC050X10	50	90
PVFRC063X10	63	100
PVFRC075X10	75	110
PVFRC090X10	90	140
PVFRC110X10	110	160
PVFRC125X10	125	200
PVFRC140X10	140	200
PVFRC160X10	160	220
PVFRC180X10	180	240
PVFRC200X10	200	260
PVFRC225X10	225	300
PVFRC250X10	250	320
PVFRC280X10	280	350
PVFRC315X10	315	455
PVFRC355X10	355	455
PVFRC400X10	400	480
PVFRC450X10	450	530
PVFRC500X10	500	590

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06 kg/cm².

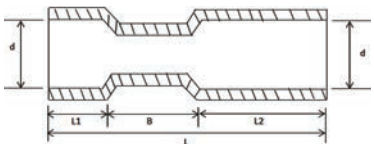
Quick-fix Repair Coupler



Code	ND	L
PVFRQC063X10	63	540.0
PVFRQC075X10	75	560.0
PVFRQC090X10	90	580.0
PVFRQC110X10	110	605.0
PVFRQC125X10	125	620.0
PVFRQC140X10	140	640.0
PVFRQC160X10	160	670.0
PVFRQC180X10	180	691.0
PVFRQC200X10	200	715.0
PVFRQC225X10	225	748.0
PVFRQC250X10	250	775.0
PVFRQC280X10	280	825.0
PVFRQC315X10	315	859.0
PVFRQC355X10	355	904.0
PVFRQC400X10	400	943.0
PVFRQC500X10	500	1057.0

Note: • All dimensions are in mm. • All fabricated fittings are available in 10 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 04, 06, 08 & 12.5 kg/cm².

One End Long Repair Coupler

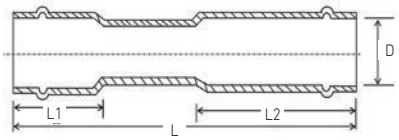


Code	Size	d	L 1	L2	B	L
	mm	mm	mm	mm	mm	mm
PVFSLC06304OL213	63	63.1	37.5	150	25	212.5
PVFSLC07504OL219	75	75.1	43.5	150	25	218.5
PVFSLC09004OL226	90	90.1	51.0	150	25	226.0
PVFSLC11004OL236	110	110.1	61.0	150	25	236.0
PVFSLC06306OL213	63	63.1	37.5	150	25	212.5
PVFSLC07506OL219	75	75.1	43.5	150	25	218.5
PVFSLC09006OL226	90	90.1	51.0	150	25	226.0
PVFSLC11006OL236	110	110.1	61.0	150	25	236.0

Note: • All dimensions are in mm. • All fabricated fittings are available in 04 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 08 & 10 kg/cm².

Note : Refer IS 4985 for socket details.

Quick Fix One End Long Repair Coupler



Code	L1 (Min.)	L2 (Min)	L (Min)
	mm	mm	mm
PVFRLC06304OL540	107	214	541
PVFRLC07504OL560	113	226	559
PVFRLC09004OL580	120	240	580
PVFRLC11004OL610	128	256	604
PVFRLC12504OL620	134	268	622
PVFRLC14004OL640	140	280	640
PVFRLC16004OL670	150	300	670
PVFRLC18004OL690	157	314	691
PVFRLC20004OL715	165	330	715
PVFRLC22504OL750	176	352	748
PVFRLC25004OL775	185	370	775
PVFRLC28004OL825	201	402	823
PVFRLC31504OL860	213	426	859
PVFRLC35504OL900	228	456	904
PVFRLC40004OL940	241	482	943

Note: • All dimensions are in mm. • All fabricated fittings are available in 04 kg/cm² pressure rating. Please specify other pressure ratings as per the requirement viz. 06, 08 & 10 kg/cm².

Note : Refer IS 4985 for socket details.

Jain PVC Ball Valve – DU

Easy Double Union Control Device

Features & Benefits

Compact Double Union (DU) Design

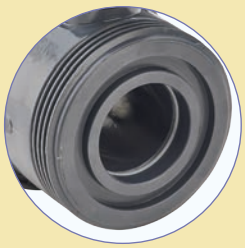
Compact Double Union (DU) design, manufactured from high performance rigid uPVC compound

Chemical Resistant Nitrile Rubber-O-Rings

Chemical resistant nitrile rubber-O-rings ensures leak proof operation for longer period.

Easy to Install and Dismantle.

Two union nuts provided for both ends provides easiness to install and dismantle valve



Added with Safety

Added with safety for accidental loosening of the ball is prevented

Innovative Two Types of Seat Rings

Available in two seat ring options - economical HDPE seat ring or leak resistance Teflon (PTFE) seat ring for high pressure applications.

Equipped with Leak Proof Handle

Valve Stem with Stem 'O' ring prevents leakage from handle.

Jain PVC Ball Valve – DU

Additional Features

- Manufactured from high performance rigid uPVC compound
- Excellent chemical & corrosion resistance
- Low frictional losses.
- Available in 20 to 90 mm (½" to 3") sizes
- Maximum operating pressure 16 kg/cm² (227 psi)
- Can be supplied with various option

Application

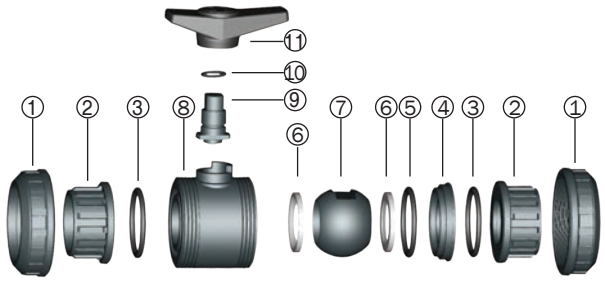
- Used for flow control in irrigation & water supply lines

Technical Specification

Nominal Diameter		Bore Diameter	Flow at 1 kg/cm² (14 psi) ▲P		Max. Operating Pressure	
mm	inch	mm	lpm	gpm	kg/cm²	psi
20	½"	15	200	52.9	16	227
25	¾"	20	385	101.9	16	227
32	1"	25	770	203.7	16	227
40	1¼"	32	1100	291.0	10	142
50	1½"	40	1750	463.0	10	142
63	2"	50	3400	899.5	10	142
75	2½"	63	5250	1388.9	6	85
90	3"	80	7100	1878.3	6	85

** For detailed code please refer the ordering specification.*

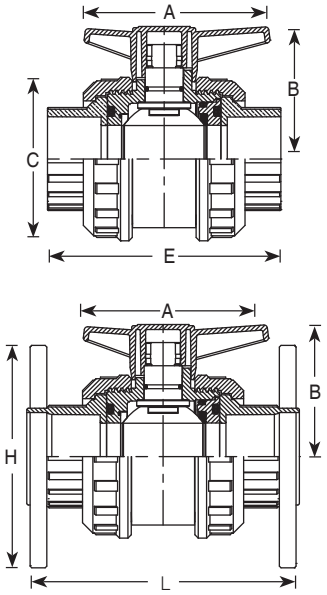
List of Spares



Sr.	Description	Material
1	Union Nut	PVC
2	Socket	PVC / HDPE
3	Socket 'O' Ring	Nitrile
4	Seat Support	PVC
5	Body 'O' Ring	Nitrile
6	Seat Ring	HDPE/ PTFE
7	Ball	PVC
8	Body	PVC
9	Stem	PVC
10	Stem 'O' Ring	Nitrile
11	Handle	ABS

** Female X Female, Solvent X HDPE Ends at both sides, compression end at both side*

Dimensional Specification



Nominal Diameter		A	B	C	D	E	L	H
mm	inch	mm						
20	½"	56.50	46.50	49.50	16.50	79.50	93.20	98.10
25	¾"	67.60	55.50	63.00	20.00	92.00	103.56	107.25
32	1"	75.20	62.50	68.00	23.00	103.00	117.28	118.30
40	1¼"	91.10	71.50	83.00	26.35	122.35	146.21	136.30
50	1½"	111.00	80.00	97.00	32.00	140.15	159.61	158.00
63	2"	135.60	95.50	118.00	36.00	171.35	191.39	180.70
75	2½"	148.00	114.30	138.00	44.20	207.90	228.52	219.15
90	3"	194.00	153.00	181.00	52.00	273.00	315.00	185.00

Ordering Specifications

BV	XX	X	XX
	Size, mm	Seat Ring Material	Type of Connection
	20	H - HDPE T - Teflon (PTFE)	SW - Solvent Welded FF - BSP Female x Female Threaded MM - BSP Male x Male Threaded MF - BSP Male x Female Threaded BF - BS Flanged AF - ANSI Flanged HBF - HDPE Pipe End
	25		
	32		
	40		
	50		
	63		
	75		
	90		

Example: BV50HFF - This code represents Jain PVC Ball Valves® - DU of Size 50 mm BSP female threaded connection with HDPE seat ring.

Jain PVC Ball Valve - SU

Strong & Durable Single Union Valve

Features & Benefits

Compact Single Union (SU) Design

Innovative design manufactured from high performance rigid uPVC compound

Chemical Resistant Nitrile Rubber-O-Rings

Chemical resistant nitrile rubber-O-rings ensures leak proof operation for longer period

Easy to Install and Dismantle.

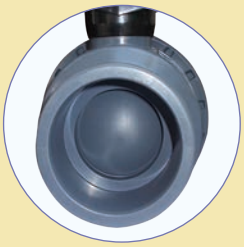
Single union nut provided for one end provides easiness to install and dismantle valve

Various Options for Connections

Available in solvent weld, threaded, PE pipe end and compression connectivity options

Innovative Two Types of Seat Rings

Available in two seat ring options - economical HDPE seat ring for applications or leak resistance Teflon (PTFE)



Specially Designed Ball for Sealing

Valve assembled with specially designed ball for sealing (after closing the valve)

Jain PVC Ball Valve - SU

Additional Features

- Manufactured from high performance rigid uPVC compound
- Excellent chemical & corrosion resistance
- Low frictional losses
- Available in 20, 25, 32, 40, 50, 63 & 75 mm sizes
- Maximum operating pressure 16 kg/cm^2 (227 psi)
- Can be supplied in female x female threaded, female x male threaded, female x solvent weld and female threaded by compression joint connection.

Application

For flow control in irrigation & domestic water supply lines

Technical Specifications

Nominal Diameter		Bore Diameter	Flow at 1 kg/cm^2 (14 psi) ▲ P	
mm	inch	mm	lpm	gpm
20	½"	15	200	52.9
25	¾"	20	385	101.9
32	1"	25	770	203.7
40	1 ¼"	32	1100	291.0
50	1 ½"	40	1750	463.0
63	2"	50	3400	899.5
75	2 ½"	63	5250	1388.9

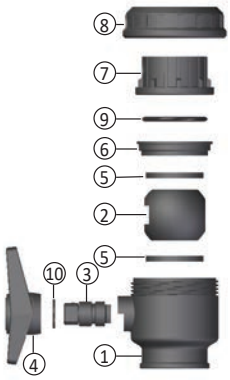
List of Spares

For 20, 25 & 32 mm Valves

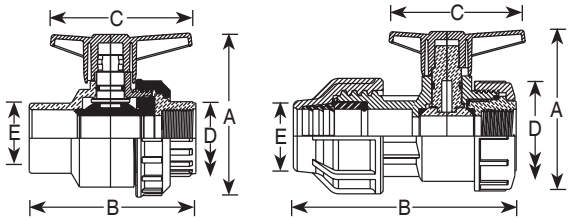
Sr.	Description	Material
1	Union Nut	PVC
2	Socket	PVC
3	Body 'O' Ring	Nitrile
4	Seat Ring	HDPE/PTFE
5	Ball	PVC
6	Body	PVC
7	Stem	PVC
8	Stem 'O' Ring	Nitrile
9	Handle	ABS

For 40, 50, 63 & 75 mm Valves

1	Body	PVC
2	Ball	PVC
3	Stem	PVC
4	Handle	ABS
5	Seat Ring	PVC
6	Seat Support	PVC
7	Plain Socket	PVC
8	Union Nut	PVC
9	'O' Ring for Seat Support	Nitrile
10	'O' Ring for Stem	Nitrile

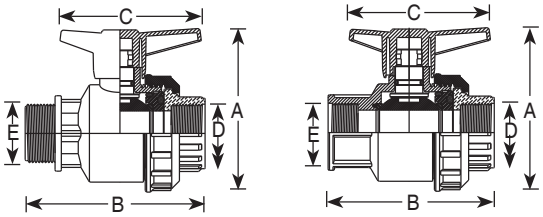


Dimensional Specification



Female Thread X Solvent Weld

Female Thread X Compression Joint



Female X Male Thread

Female X Female Thread

Connection Type	Nominal Diameter		A	B	C	D inch (BSP)	E
	mm	inch	mm	mm	mm		
Female X Female Thread	20	½"	66.5	55.5	57.0	½"	½"
	25	¾"	84.5	78.0	66.0	¾"	¾"
	32	1"	96.8	85.0	75.0	1"	1"
	40	1 ¼"	110.8	110.8	91.2	1 ¼"	1 ¼"
	50	1 ½"	126.4	121.3	111.0	1 ½"	1 ½"
	63	2"	151.5	150.4	135.6	2"	2"
	75	2 ½"	178.9	200.2	148.1	2 ½"	2 ½"
Female X Male Thread	20	½"	66.5	69.0	57.0	½"	½"
	25	¾"	84.5	90.0	66.0	¾"	¾"
	32	1"	96.8	101.5	75.0	1"	1"
	40	1 ¼"	110.8	137.0	91.2	1 ¼"	1 ¼"
	50	1 ½"	126.4	141.5	111.0	1 ½"	1 ½"
	63	2"	151.5	144.9	135.6	2"	2"
	75	2 ½"	178.9	199.8	148.8	2 ½"	2 ½"
Female Thread X Solvent Weld	20	½"	66.5	69.0	57.0	½"	½"
	25	¾"	84.5	90.0	66.0	¾"	¾"
	32	1"	96.8	101.5	75.0	1"	1"
	40	1 ¼"	110.8	110.8	91.2	1 ¼"	1 ¼"
	50	1 ½"	126.4	121.3	111.0	1 ½"	1 ½"
	63	2"	151.5	150.4	135.6	2"	2"
	75	2 ½"	178.9	200.2	148.1	2 ½"	2 ½"
Female Thread X Compression Joint	20	½"	66.5	83.0	57.0	½"	21 mm
	25	¾"	84.5	108.0	66.0	¾"	26 mm
	32	1"	96.8	127.0	75.0	1"	34 mm

Ordering Specifications

	XX	X	XX
	Size, mm	Seat Ring Material	Type of Connection
SUV	20 25 32	H - HDPE T - Teflon (PTFE)	FF - BSP Female x Female Threaded FM - BSP Female x Male Threaded FP - BSP Female x Solvent Welded FC - BSP Female Threaded x Compression Joint

Example: SUV20HFM - This code represents Jain PVC Ball Valves® - SU of size 20mm, with one end BSP female threaded and other end BSP male threaded connection with HDPE seat ring.

Gate Valve PL

Leak Proof Gate Control

Features & Benefits

Unique Gate Design

Unique sliding gate design provides leak proof control

Specially Designed Handle

Specially designed handle for slow opening & closure of valve to avoid water hammer

Equipped with Buttress Threaded Bonnet & Gland Nut

Equipped with buttress threaded Bonnet and Gland Nut for snap proof and better performance

Multi Start Brass Spindle

Square threaded multi start brass spindle for quick and trouble free preformance

Various Options Available

Threaded, solvent weld available for connectivity with system

Innovative Compact Design

Innovative compact design with straight through flow with minimal pressure drop.

Gate Valve PL

Additional Features

- light weight for easier & economical installation
- Manufactured from high performance rigid uPVC / Nylon of compound
- Precise flow control possible
- Low frictional losses
- Excellent chemical & corrosion resistance
- Maximum operating pressure 10 kg/cm^2 (142 psi)
- Available in 50, 63, 75 & 90 mm (1½", 2", 2½" & 3") connection sizes.

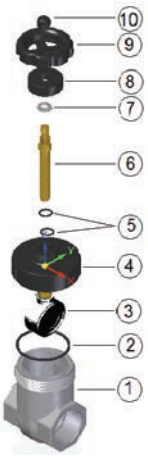
Applications

- Suitable for flow control in irrigation & water supply lines.

Technical Specifications

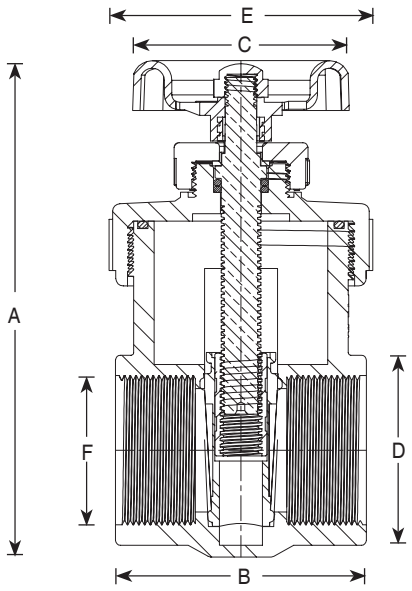
Nominal Diameter	Flow at 10 m (32.8ft) s		Max. Operating Pressure	
(mm)	lpm	gpm	kg/cm^2	psi
50	2055.7	543.8	10	142
63	4757.1	1258.4	10	142
75	-	-	10	142
90	-	-	10	142

List of Spares



Sr.No.	Description	Material
1	Body	PVC
2	Body O Ring	Nitrile
3	Wedge	PP
4	Bonnet	Nylon GF
5	Spindle O Ring	Nitrile
6	Spindle	Brass
7	Gland Nut Washer	PP
8	Gland Nut	Nylon GF
9	Handle	Nylon GF
10	Handle Nut	Nylon GF

Dimensional Specification



Nominal Diameter (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (inch)
50	200	103	87	63	106	1 1/2"
63	200	101	87	76.5	106	2"
75	247	116	110	89	136	2 1/2"
90	272	129	110	101.5	136	3"

Ordering Specifications

Code	Discription
GV112BSF	PVC Gate Valve 50mm (1.5")
GV200BSF	PVC Gate Valve 63mm (2")
GV250BSF	PVC Gate Valve 75mm (2.5")
GV300BSF	PVC Gate Valve 90mm (3")

Jain ARV – C

Continuous Acting Air Release Valve

Features & Benefits

Compact Design

Innovative compact design manufactured from high performance plastic

Pressure Balanced Float

Perfect pressure balanced float dynamically removes even small air pockets

Unique Orifice Design

Unique orifice design facilitates easy and quick expulsion of air

Innovative Double Action Function

Continuous acting air release valve that releases air entrapped in the pipeline during start up and while in operation continuously

Optional Multiple Air Release Valve Assembly

Multiple Air Release Valve assembly option can also be available for bigger size pipe lines

Threaded Inlet Connection

Threaded inlet connection available for connection with system

Jain ARV – C

Additional Features

- Manufactured from high performance plastic material
- Excellent chemical & corrosion resistance
- Low frictional losses
- Available in 1" and 2" sizes
- Maximum operating pressure 10 kg/cm² (142 psi)
- On demand multiple Air Release Valve assembly can also be supplied.

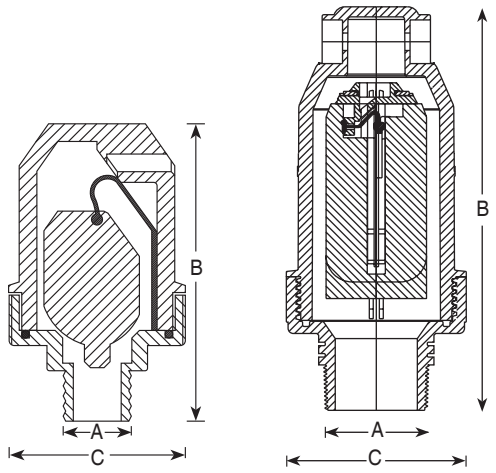
Application

- Recommended in water supply distribution and long pipeline networks.
- Protects irrigation system and components.

Technical Specifications

Max. Operating Pressure		Min. sealing pressure	
kg/cm²	psi	kg/cm²	psi
10	142	0.3	4
10	142	0.3	4

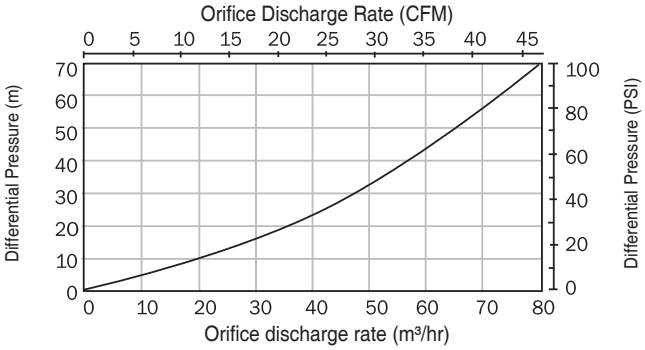
Dimensional Specification



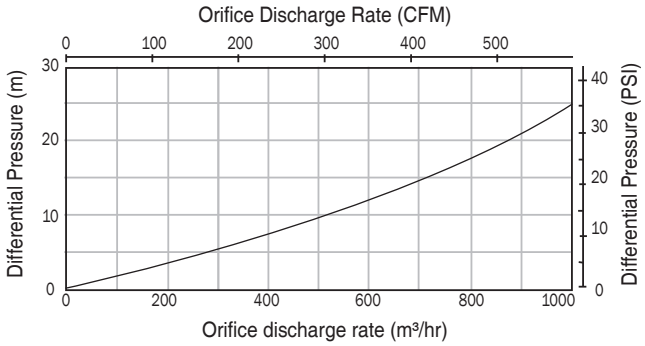
A	B	C
inch	mm	mm
1"	132	81
2"	231	103

Avaliable with BSPT & NPT thread connection.

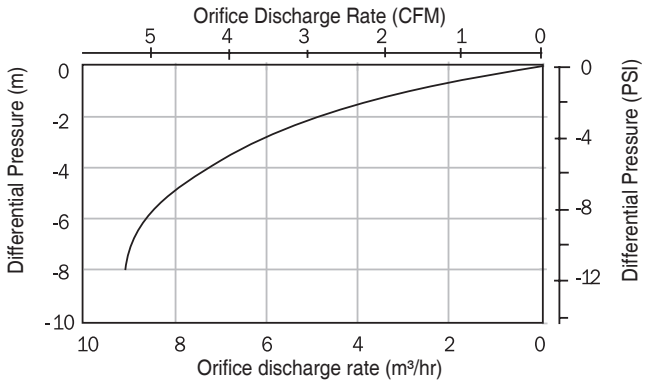
Performance Graph of Air Expulsion for Jain ARV-C® - 1"



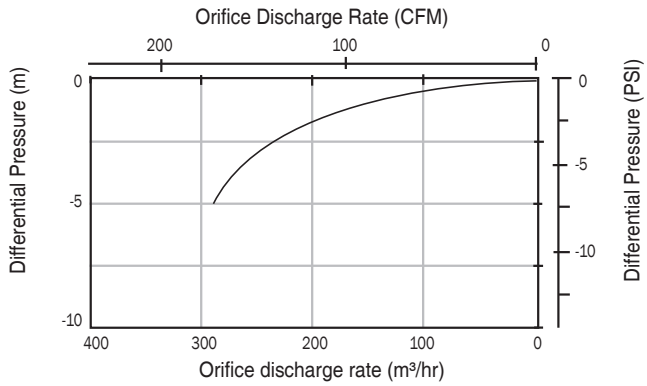
Performance Graph of Air Expulsion for Jain ARV-C® - 2"



Performance Graph of Vacuum for Jain ARV-C® - 1"



Performance Graph of Vacuum for Jain ARV-C® - 2"



Ordering Specifications - Regular Arv Valve

	XXX
	Size, inch
ARVC	100 - 1" ; 200 - 2"

Example: ARVC100 - This code represents Jain ARV - C® of size 1" BSP male threaded connection.

Ordering Specifications - ARV Assembly

	No of ARV	Height in mtr
ARVC200	3 4	1.5mtr - 15 2 mtr - 20 2.5 mtr - 25 3 mtr - 30

Example: ARVC200315 - This code represents Double Action ARV® 2"x 3 in nos with 1.5 mtr height.

Jain Air Release Valve

Effective Vacuum Breaker

Features & Benefits

Compact Design

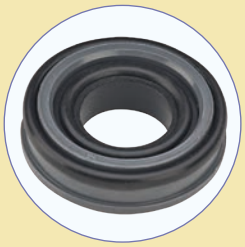
Innovative design manufactured from high performance rigid uPVC compound

Large Orifice Opening

Large orifice opening facilitates easy expulsion of air and breaking the vacuum.

Innovative Float Design

Innovative float designed to release the air at start and at end of system



Equipped With Rubber Seal

Equipped with special rubber seal to prevent leakage

Jain Air Release Valve

Additional Features

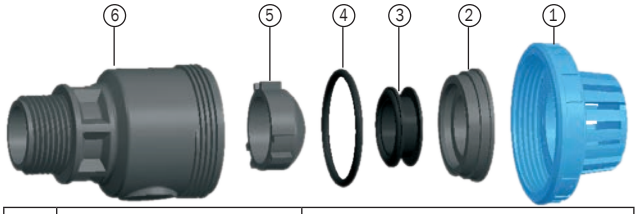
- Manufactured from high performance rigid uPVC compound.
- Excellent chemical and corrosion resistance.
- Light weight.
- Maximum working pressure 6 kg/cm^2 (85 psi).
- Available in ½" to 2½" male threaded, Female threaded, Solvent weld & compression type connection options.
- Available ½" to 1" in Single Union type & 1¼" to 3" in double union type.

Application

Recommended in micro/drip irrigation systems as a safety valve to remove entrapped air and to break the vacuum in the system.

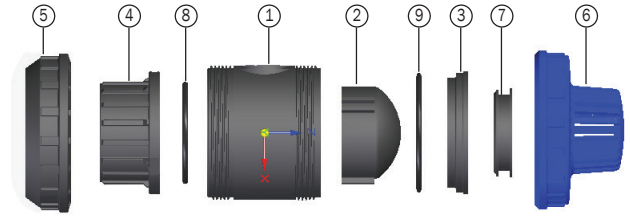
List of Spares

For 20 to 63 mm (Single Union Type)



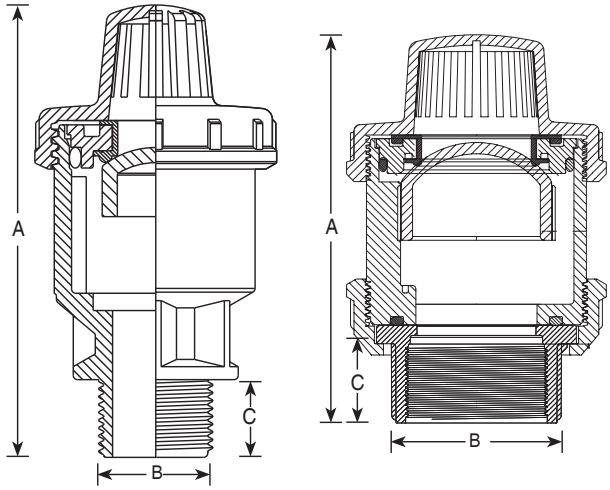
Sr	Description	Material
1	Strainer Union Nut	PVC
2	Seat Support	PVC
3	Rubber Seal	Nitrile
4	Body 'O' Ring	Nitrile
5	Float/ Ball	PVC
6	Body	PVC

For 40, 50, 63, 75 & 90 mm (Double Union Type)



Sr	Description	Material
1	Body	PVC
2	Float/ Ball	PVC
3	Seat Support	PVC
4	Socket	PVC
5	Union Nut	PVC
6	Vent Cap	PP
7	Rubber Seal	Nitrile
8	'O' Ring for Socket	Nitrile
9	'O' Ring for Seat Support	Nitrile

Dimensional Specification



Type	Size	A	B	C
	mm	mm		mm
Male Threaded	20	82.7	½"	15.0
	25	104.8	¾"	16.3
	32	109.0	1"	19.0
	40	130.3	1 ¼"	10.7
	50	137.3	1 ½"	9.8
	63	169.9	2"	11.2
Female Threaded / Plain	20	69.7	½"	15.0
	25	93.4	¾"	16.3
	32	94.0	1"	19.0
	40	109.8	1 ¼"	26.5
	50	127.3	1 ½"	32.8
	63	149.9	2"	59.9
	75	206.0	2 ½"	46.6
	90	216	3"	48.1
Compression Type	20	96.7	20.2mm	-
	25	120.8	25.2mm	-
	32	135.0	32.2mm	-

Ordering Specifications - Single Union

	XX	XX
	Size, mm	Type of Connection
ARV	20 to 63	BM - BSP male threaded BF - BSP female threaded CO - Compression Type

Example: ARV32BM - This code represents Jain Air Release Valve of the size 32 mm with BSP male threaded connection.

Ordering Specifications - Double Union

	XXX	
	Connection Size, inch	
ARVT	1.25" - 125 1.5" - 15 2.0" - 2 2.5" - 25 3" - 3	P

Example: ARVT125P - This code represents Jain Air Release Valve of the size 1.25" mm

ARV Assemblies

Effective Vacuum Breaker

All water contains dissolved air. Normally this is about 2% in fresh water but it can varies largely depending on temperature, pressure and water quality. Air trapped in the line in pockets is continually moving in and out of water. Air in the line not only reduces the flow by causing a restriction but amplifies the effects of pressure surges. Air valves should be placed in the line at sufficient intervals so that air can be evacuated, or, if the line is drained, air can enter the line. Air valves should be placed along the pipeline at all high points or significant changes in grade. On long rising grades or flat runs where there are no significant high points or grade changes, air valves should be placed at least every 500 – 1,000 metres at the engineer's discretion.

Code	Size	Outlet
MSARVA15102"001EBC	2"	1
MSARVA27325"002EBC	2.5"	2
MSARVA27304"003EBC	3"	3
MSARVA27304"004EBC	4"	4

Note: Air expelled out, connection type and size can be provided as per requirement.

Jain Check Valve

Reverse Flow Breaker

Check Valve - Single Union Type

Low Friction Non Return Valve

Features & Benefits

Compact Design

Innovative design manufactured from high performance rigid PVC compound

Guided Float Slides Smoothly

Float is provided with special guides to seal properly

Easy to Install and Dismantle

Two union nuts provided for both ends provides easiness to install and dismantle valve

Non Return Valve with Low Friction Option

Can also be supplied with low friction option

Jain Check Valve

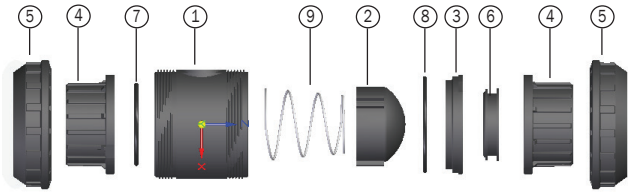
Additional Features

- Manufactured from high performance rigid PVC compound.
- Excellent chemical and corrosion resistance.
- Positive shut off prevents leakages.
- Energy saving, low frictional losses.
- Light weight.
- Maximum working pressure 6 kg/cm^2 (85 psi).

Application

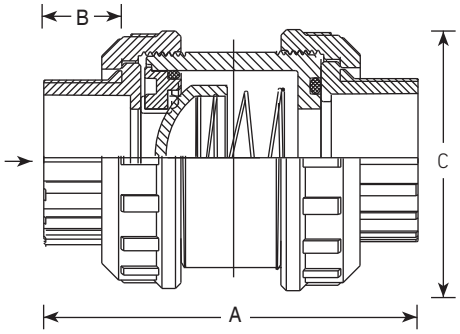
Recommended in micro/drip irrigation systems as a safety valve to prevent the water hammer and to maintain water column in delivery pipe.

List of Spaires



Sr	Description	Material
1	Body	PVC
2	Floot / Ball	PVC
3	Seat Support	PVC
4	Socket	PVC
5	Union Nut	PVC
6	Rubber Seal	Nitrile
7	'O' Ring for Socket	Nitrile
8	'O' Ring for Seat Support	Nitrile
9	Spring	SS 304

Dimensional Specification



Nominal Diameter		A	B	C
mm	inch	mm	mm	mm
20	½"	80.7	9.6	50.0
25	¾"	89.2	11.2	63.0
32	1"	101.9	16.1	68.0
40	1¼"	119.1	18.3	84.0
50	1½"	138.1	21.4	97.6
63	2"	163.7	30.6	118.2
75	2½"	204.6	36.7	138.2
90	3"	214.0	38.8	142.0

Ordering Specifications - Single Union

PNRV	XX	XX
	Size, inch	Type of Connection
	0.5" - 05 0.75" - 075 1" - 1	F - Female Threaded Blank - Male X Female

Example: CV32FF - This code represents Jain Check Valve of size 32mm with BSP female threaded connection.

Ordering Specifications - Low Friction Non Return Valve

JNRB	XX	XX
	Size, inch	Type of Connection
	2.5" - 212 3" - 300 4" - 400	F - Female Threaded Blank - Male X Female

Example: JNRB212F - This code represents Jain Check Valve of size 2.5".

Ordering Specifications - Double Union

CV	XX	XX
	Size, mm	Type of Connection
	20 25 32 40 50 63 75 90	SW - Solvent Welded FF - BSP Female x Female Threaded MM - BSP Male x Male Threaded MF - BSP Male x Female Threaded

Example: CV32FF - This code represents Jain Check Valve of size 32mm with BSP female threaded connection.

Jain PVC Foot Valve®

A Real Pump Guard

Features & Benefits

Compact Design

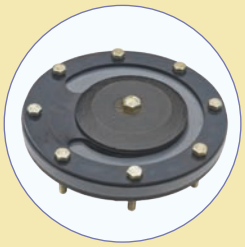
Innovative design manufactured from high performance rigid PVC compound

Unique Design of Strainer

Unique design of strainer effectively screens trash and ensures minimum obstruction to flow.

Excellent and Long Life Seal

Positive shut off prevents leakage & avoids repeated priming of the pump.



Precise Weight for Rubber Cap

For Rubber seal precise weight given for quick seal

Jain PVC Foot Valve®

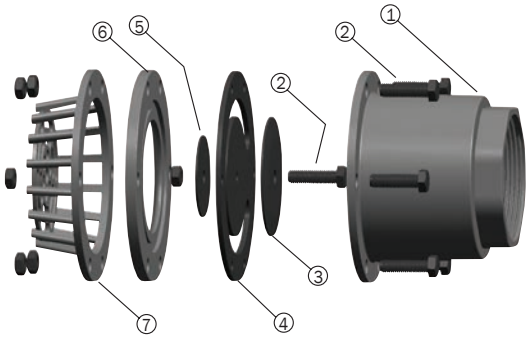
Additional Features:

- Excellent chemical and corrosion resistance
- Light weight, no extra weight on suction pipe.
- 'K' value (friction coefficient of the valve) less than 0.8 ensures low frictional loss.
- Energy savings up to 30%
- Available in sizes of 2½", 3.0" and 4.0" BSPT/NPT female threaded connections (65, 80 & 100 mm)

Application

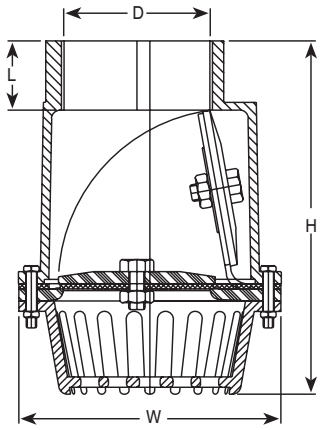
Maintains water column in suction pipe of the pump

List of Spares



Sl.	Description	Material
1	Body	PVC
2	Nut & Bolt	Mild Steel
3	Weight	Cast Iron
4	Rubber Flap	Nitrile
5	Washer	Mild Steel
6	Flange	PVC
7	Strainer	Nylon

Dimensional Specification



Size	D	W	H	L
inch	mm	mm	mm	mm
2½"	65.00	130.00	148.00	23.00
3"	80.00	153.00	185.00	23.00
4"	100.00	200.00	206.00	30.00

Ordering Specifications

JFV	XX	XXX
	Size, inch	Type of Connection
	212 - 2½" 300 - 3" 400 - 4"	BTF - BSPT female threaded NPF - NPT female threaded

Example: JFV212BTF - This code represents Jain PVC Foot Valves® of size 2½" with BSPT female threaded connection.

Flush Valve

Quick Vacuum Expulsion Device

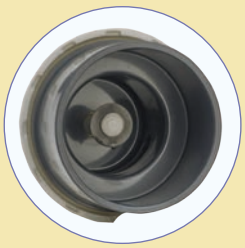
Features & Benefits

Easy to ON / OFF

Threaded facility to open to easiness for flushing dirt from sub main

Special 'O' Ring

Special 'O' ring provided for leak proof performance



Equipped with Stopper for Cap

To prevent snapout of cap while flushing, special provision made for cap

Large Opening for Dirt Removal

Large opening provided to provided to take out dirt from pipeline

Flush Valve

Additional Features

- Manufactured from high performance rigid uPVC & PP compound.
- Excellent chemical and corrosion resistance.
- Precise flow control possible.
- Maximum operating pressure 8 kg/cm^2.
- Available in 40, 50, 63, 75 and 90 mm sizes.
- Light weight

Application

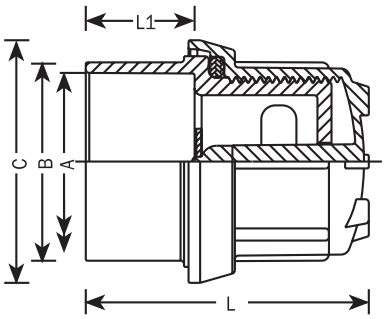
- Suitable for flushing the entire drip irrigation system & water supply line.
- Recommended in micro/ drip irrigation as a flush valve to remove the entrappled dirt from pipe line during flushing.

Ordering Specifications

	XXX
	Size, mm
SVF	40 50 63 75 90

Example: SVF40 - This code represents Flush Valve of size 40mm .
Can also supplied with Buttress Threads for 63 mm as a SVF63B

Dimensional Specification

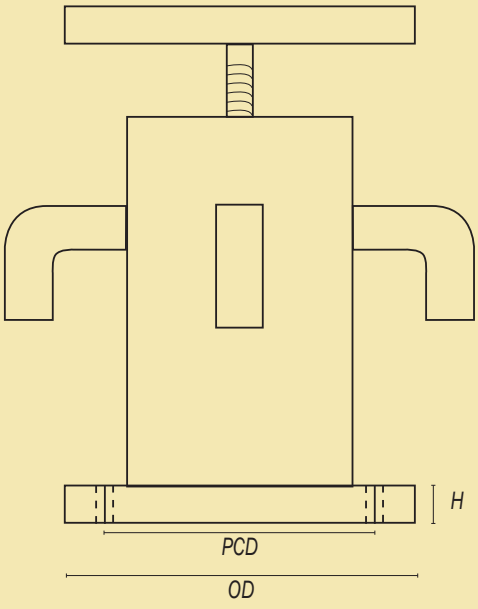


Size mm	A mm		B mm	C mm	L1 mm	L mm
	Min.	Max.				
40	40.1	40.3	46.5	69.0	26.0	75.5
50	50.1	50.3	56.5	69.0	31.0	80.5
63	63.1	63.3	69.5	80.5	38.0	96.5
75	75.1	75.3	82.0	96.3	44.0	105.0
90	90.1	90.3	96.5	109.2	51.0	113.0

Flow Control Valve - Four Way

Quick Vacuum Expulsion Device

The water from the dam or open canal is lifted and conveyed to desired field through the closed conduit pipes. The network of pipelines is laid in the entire section of the area to be cultivated and at the required points outlets are provided. The discharge through such outlets is controlled by the use of these discharge valves. The use of closed conduit pipe network and discharge valves results in reduction in water loss, prevention of soil run off and efficient use of water.



Code	Size	PCD	OD	L
PEDVALVE4WAY110	110mm	180	220	165
PEDVALVE4WAY125	125mm	210	250	188
PEDVALVE4WAY140	140mm	210	250	210
PEDVALVE4WAY160	160mm	240	285	240
PEDVALVE4WAY180	180mm	240	285	270
PEDVALVE4WAY200	200mm	295	340	300
PEDVALVE4WAY225	225mm	295	340	338
PEDVALVE4WAY250	250mm	350	395	375
PEDVALVE4WAY280	280mm	350	395	420
PEDVALVE4WAY315	315mm	400	445	473
PEDVALVE4WAY355	355mm	460	505	533
PEDVALVE4WAY400	400mm	515	565	600

Note: Also available in three and two ways.

Flow Control Valve

Butt Welding Joint

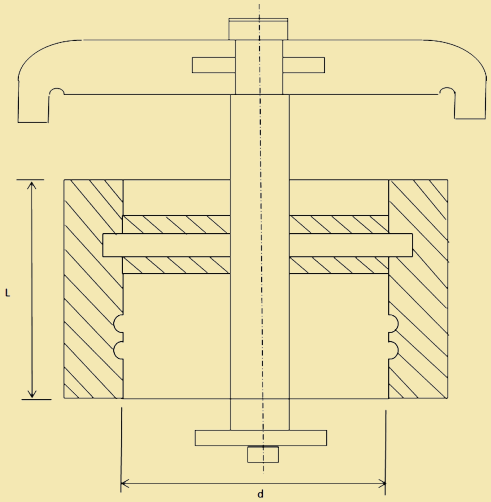
RR Joint

Flange Joint

Discharge Valve without Flange

Code	Size(d)	L
PEDVALVERR110	110	150
PEDVALVERR125	125	150
PEDVALVERR140	140	150
PEDVALVERR160	160	150
PEDVALVERR180	180	150
PEDVALVERR200	200	210
PEDVALVERR225	225	210
PEDVALVERR250	250	210
PEDVALVERR280	280	210
PEDVALVERR315	315	240
PEDVALVERR355	355	270
PEDVALVERR400	400	300

All Dimension are in mm



Discharge Valve with Flange

Code	Size (d)	PCD	OD	L
PEDVALVEFJ110	110mm	180	220	150
PEDVALVEFJ125	125mm	210	250	150
PEDVALVEFJ140	140mm	210	250	150
PEDVALVEFJ160	160mm	240	285	150
PEDVALVEFJ180	180mm	240	285	150
PEDVALVEFJ200	200mm	295	340	210
PEDVALVEFJ225	225mm	295	340	210
PEDVALVEFJ250	250mm	350	395	210
PEDVALVEFJ280	280mm	350	395	210
PEDVALVEFJ315	315mm	400	445	240
PEDVALVEFJ355	355mm	460	505	270
PEDVALVEFJ400	400mm	515	565	300

All Dimension are in mm

Discharge Valve

Design Registered

We are pleased to launch quality product "HDPE discharge valve – in continuation to our commitment for conservation of water". There are still some areas where farming is still done in a traditional way and water to plant is supplied through open furrows. Supply of water through open furrows not only results into water losses but it also results into the soil erosion. Apart from the water loss and soil erosion, the quantum of water in particular furrow is also uncontrollable in traditional way of field watering.

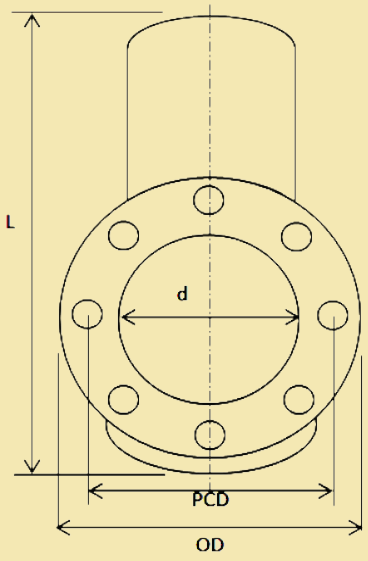
Jain HDPE discharge valve meets the requirement of traditional farming through open furrows by eliminating the other disadvantages such as water loss, soil erosion and flow control. The water is transported through the closed loop piping network. The points of water discharge are located at appropriate places with one Jain Discharge valve at each outlet location. The valve open / close position controls the water discharge. The water conveyed through pipe network apart from eliminating water loss and soil erosion, it also helps in effective utilization of land to its maximum extent.

The water from the dam or open canal is lifted and conveyed to desired field through the closed conduit pipes. The network of pipelines is laid in the entire section of the area to be cultivated and at the required points outlets are provided. The discharge through such outlets is controlled by the use of these discharge valves. The use of closed conduit pipe network and discharge valves results in reduction in water loss, prevention of soil run off and efficient use of water.

Jain HDPE discharge valve is available in different diameters and with different end connections to meet the different site requirements. (sizes 110mm to 400mm)

Code	Size (d)	PCD	OD	L
PEDVALVEDFJ110	110mm	180	220	330
PEDVALVEDFJ125	125mm	210	250	375
PEDVALVEDFJ140	140mm	210	250	420
PEDVALVEDFJ160	160mm	240	285	480
PEDVALVEDFJ180	180mm	240	285	540
PEDVALVEDFJ200	200mm	295	340	600
PEDVALVEDFJ225	225mm	295	340	675
PEDVALVEDFJ250	250mm	350	395	750
PEDVALVEDFJ280	280mm	350	395	840
PEDVALVEDFJ315	315mm	400	445	945
PEDVALVEDFJ355	355mm	460	505	1065
PEDVALVEDFJ400	400mm	515	565	1200

All Dimension are in mm



Metal Valves

Gate Valve

Gate valve is a full way valve which is inserted in a pipeline for controlling or stopping the flow of water. It offers lesser resistance to the flow of water. Hand wheel closes the valve by turning it in clockwise direction. The gate valve may be manually operated or mechanised depending on the requirement.

Ball Valve

Ball valve is also one of the type of flow control device. In this valve, a ball is used to control the flow through pipe. The ball had a through hole through its body and a stem at its top. The stem is connected to handle. The rotation of handle gives rotation to the ball and ultimately results into the flow control. This is very bulky as compare to gate valve.

Foot Valve

This valve is placed at the bottom of the suction pipe of the pump. It allows the water to enter the suction pipe when it is opened. It prevents water from flowing back when it is closed and thus maintains the suction water column at pump inlet. Use of this valve results in the trouble free start of pump without the need of priming.

Pressure relief Valve

It is used to protect pipe from sudden increase in the pressure due to water hammer because of sudden closing of the valves or some other malfunctioning. In the normal condition when the line pressure is normal, this valve remains closed. When suddenly the pressure in the line increases, this valve operates and bypasses some portion of water maintaining the line pressure to pre-set value and preventing the line from bursting.

Metal Valves

Pressure Reducing Valve

This valve is used to reduce the line pressure down the line. Suppose a pump is used to fill up the water supply tank constructed up the hill and same pump is used to supply the water directly in local area where the head required is less. If no valve is used, the pipeline network used in local area would be of much higher pressure rating than the actual requirement to suit the pressure of the pump. In this case if a pressure reducing valve is used at the entry of the pipeline network to the local area, low pressure rating pipe network suitable for the local area requirement will work.

Scour Valve or Washout Valve

Scour valves are located at low points or between valves sections of the pipeline. Their function is to allow periodic flushing of the lines to remove sediment and to allow the line to be drained for maintenance and repair work. The scour valve should be sized to allow a minimum scour velocity of 0.6 m/s to be achieved in the main pipe. A gate valve or sluice valve is used in combination of scour Tee for this application

Pressure Reducing Valve Globe Valve

The globe valve is used for throttling flow control. Shut off is accomplished by moving the disc against the flow stream rather than across it as in the case with a gate valve. The flow pattern through a globe valve involves changes in direction, resulting in greater resistance to flow, causing high pressure drop. The globe valve is an excellent valve to use for on-off service, but is highly suited for frequent cycling and control of fluids anywhere in amount or volume between the open and closed positions. The globe valve must be installed in the proper relation to the media flow as indicated by the flow direction arrow marked on the valve body. This valve is considered uni-directional and must be installed with the pressure side or inlet under the seat.

Butterfly Valve

A butterfly valve is a type of flow control device used to regulate the fluid flowing through a section of pipe. The valve is similar in operation to a Ball Valve except that instead of a ball, round disc is used to control the flow. A flat circular plate is positioned in the centre of the pipe through which a stem passes. Rotation of the stem controls the movement of the disc.

Metal Valves

Float Valve or Ball Cock

These valves are used in water tanks and in the cisterns to maintain constant water level and prevent overflow. It is activated by means of a lever and float (ball). The rise and fall of the ball controls the flow of the water. They are generally made for high pressure, medium pressure and for low pressure.

Reflux / Check Valve

Reflux / Check / Non return valve is used in the pipe line to stop the reverse flow of the water. In a pipeline the reverse flow may occur because of pump shut down, pump failure or down the line pipe failure. Use of NRV helps in reducing the losses which may arise because of sudden reversal of water flow and controls on water hammer.

Valve Box

Safe Valve Guard

Valve Green Box

Features & Benefits

Robust Top Cover

Robust top cover with non-slippery grips

Heavy Duty Extended Bottom

Heavy duty extended bottom keeps the valve box stable and firmly set in the soil

Easy Access

Passage provides easy access to valves installed below ground level

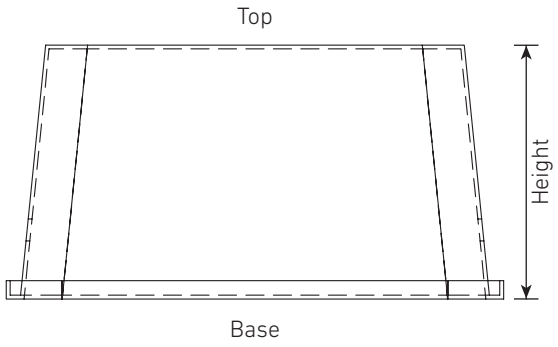
Three Optional Models

Available in circular and rectangular models

Valve Box

Additional Features

- Rugged reinforced plastic construction.
- Protects valves from damage due to lawn mowers, other garden equipment and vandalism.
- Leaf green colour of the cover matches to surrounding lawn/ turf.
- Special heavy duty models available.
- Valve box can also be supplied on demand



Application

Valve guard in Turf / Landscaping and in micro irrigation systems

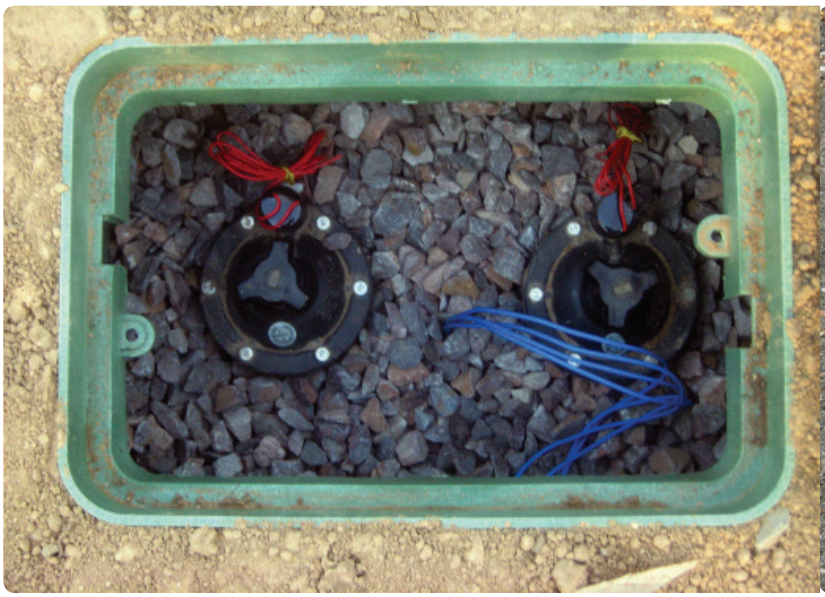
Technical Specifications

Type	Lock	Pipe Access Hole		Dimensions							
				Top		Lid		Base		Height	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Regular	Snap Fit	65	2½"	153	6"	140	5½"	200	8"	240	9½"
	Snap Fit	65	2½"	250	10"	274	10¾"	347	13½"	250	10"
Heavy Duty	Lockable	50	2"	230	9"	230	9"	325	13"	250	10"
	Snap Fit & Lockable	65	2½"	405x 275	16x 10.8"	405x 275	16x 10.8"	525x 393	20.7x 15.5"	325	12"
	Snap Fit			365x535	144x211	365x535	144x211	491x646	193x254	330	130
	Snap Fit			263x434	104x171	263x434	104x171	393x518	155x204	330	130

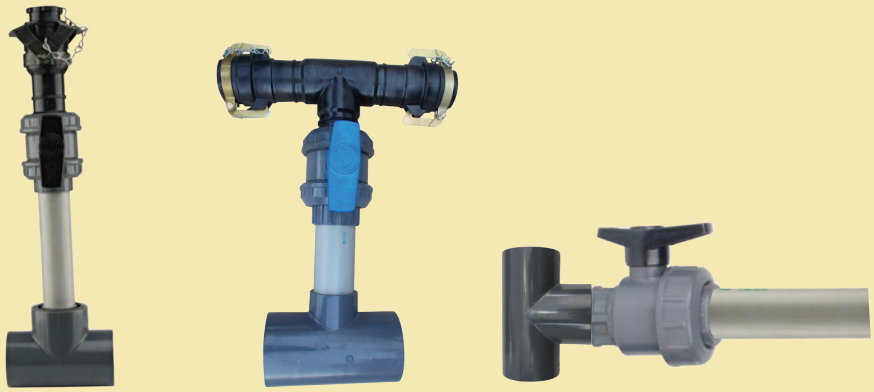
Ordering Specifications - Valve Box

	XX	X
	Top Opening (inch)	Model Options
VB	06	RG - Regular
	09	
	10	
	09	H - Heavy Duty
	12	

Example: VB06RG - This code represents valve box with 6" top openings.



Outlet / Bypass Assemblies



Outlet / Bypass Assemblies

The outlet / bypass assemblies are simple arrangements left out at different locations in the farms for future utilization/expansion of the piping network. These outlets can be used to take connection for sprinkler, drip, direct application of water, phase-wise irrigation scheme etc. At the end of outlet assembly a valve is used to temporarily close the outlet. Different types of outlet assemblies are shown below.

Water Meter

A device is used to measure how much water is used by particular is called as water meter. It works on same fundamental similar to electricity or gas or petrol. The water meter reading can be collected by different methods, that is physical reading, Wi-Fi network, Walk By reading, GSM/Cellular metering. Based on method of measurement of flow different types of water meters are available: displacement, velocity, multi-jet, turbine, compound, electromagnetic and ultrasonic water meters. With use of automated these smart water metering system user can pay for the water as per actual use. With availability of actual use data online the user can control water bills.

Water meters are available from sizes ½" (15mm) to 12" (305mm).

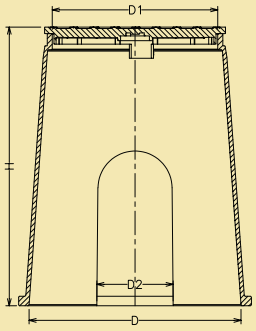
The benefits from metering

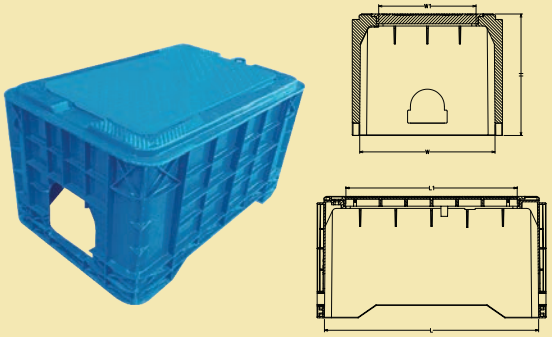
Full metering in a district metering area (DMA) may facilitate a mass balance across the DMA which will accurately determine leakage. Demand reductions, or influence on demand patterns will depend on the tariff structures used. However, benefits from full metering could include the following:

- Reduced demand which results in:
  - lower production and pumping costs,
- Reductions in supply pipe leakage which results in
  - lower production and pumping costs,
- Better information for leakage management;
- Increased efficiency in targeting of leakage crews etc;
- Improved accuracy of leakage data;
- Savings in infrastructure through:
  - deferment of investment in resource development,
  - reductions in peak demand (through appropriate tariffs);
- Better engagement with customers and increasing their awareness of how much water they use;
- An equitable system of charging (pay for what you use);
- Potential income from services such as customer side leak detection;
- Environmental and social benefits;
- Development of tariffs and mechanisms to tackle water affordability.

Meter Box

Safe Meter Guard





Features & Benefits

Robust Top Cover and Heavy Duty Extended Bottom

Robust top cover with non-slippery grips and Heavy duty extended bottom keeps the meter box stable and firmly set in the soil

Easy Access

Passage provides easy access to meter installed below ground level

Code	Size (d)	H	D	D1	D2
	6"	237	180	141	65
	8"	260	272	202	87
	9"	254	299	238	87
	10"	257	331	254	86

Code	Size (d)	L	L1	W	W1	H
	12"	504	403	319	229	286

Additional Features

- Rugged reinforced plastic construction.
- Protects meter from damage.
- Leaf green colour of the cover matches to surrounding lawn/ turf.
- Special heavy duty models available.
- Meter Protection box can also be supplied on demand

Application

Meter guard in Turf / Landscaping and in micro irrigation systems

Rotoclean

Smart Cleadn Suction Filter

Features & Benefits

Hydraulically Powered Spray

Hydraulically powered spray rotor continuously spray trash / debris away from the screen

Standard Pure Polyester / Epoxy coating for Protecting from Corrosion

Coated with more than 70 micron thick deep blue colored pure Polyester powder on outer surface & Epoxy coating from inner side for protection against corrosion and weather effects

Special Stainless Steel

Special stainless steel screen provided for corriosion free performance

Foot Valve Option

Can also be sypplied with Foot Valve to prevent back flow of water

Rotoclean

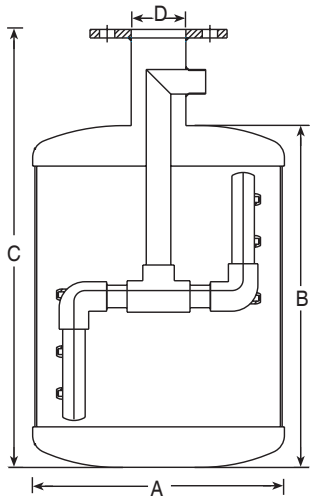
Additional Features

- Self cleaning suction filter.
- Flushing of screen using filtered water. Special provision of ¾" screen filter to avoid plugging of nozzles.
- Constructed from mild steel body and stainless steel screen. Stainless steel body can be supplied on demand.
- Low frictional loss across the filter.
- Strong metal ribbed supported screen to avoid collapse due to suction pressure.
- Available in standard screen size of 400 micron. Other screen size can be supplied on demand.
- Maintains constant flow rate.
- Helps to improve system efficiency by reducing load on the micro irrigation filters.
- Low maintenance. Does not require frequent removal of suction pipe or cleaning of foot valve.
- Minimum operating pressure for spray rotors is 1 kg/cm^2 (14 psi).
- Protects pump and piping system damage and clogging due to physical impurities.
- Available in 2½", 3" and 4" sizes without foot valve. Please specify for Jain foot valve (plastic) or metal foot valve option while ordering.
- Standard end connections are BSP flanged. Please specify for other end connections.

Applications

- Recommended to use for water source having heavy load of algae, trash, sand and other debris.
- Best suitable for irrigation pumping lines running on open wells, reservoirs, ponds, tanks etc.

Dimensional Specifications



Nominal flow		A	B	C	D
m³/hr	gpm	mm	mm	mm	inch
25	95	250	300	450	2.5"
40	176	280	380	485	2.5"
50	220	316	500	620	3"
80	352	316	500	630	4"

Note: JFV – Jain Foot Valve, MFV – Metal Foot Valve

Technical Specifications

Type	Nominal flow		Inlet connection, BSP flanged	Return inlet size	Flange PCD	No. of Holes	Hole Dia.
	m³/hr	gpm	inch	inch	mm	Nos	mm
Rotoclean	25	95	2"	3/4"	114.0	6	7.0
	40	176	2½"	3/4"	114.0	6	7.0
	50	220	3"	3/4"	137.0	8	7.0
	80	352	4"	3/4"	178.0	8	9.0
Rotoclean with Foot Valve	40	176	2½"	3/4"	127.0	4	17.0
	50	220	3"	3/4"	146.05	4	17.0
	80	352	4"	3/4"	177.8	8	17.0

Note: JFV – Jain Foot Valve, MFV – Metal Foot Valve

Ordering Specifications

	XX
	Inlet Connection, inch
RC	25 – 2½" BSP flange 30 – 3" BSP flange 40 – 4" BSP flange

Example: RC30 - This code represents Rotoclean Filter with 3" BSP Flanged inlet connection without foot valve option.

Note: For ordering Rotoclean filter with metal foot valve option add suffix 'MFV' and 'JFV' for Jain foot valve option to the above ordering specification.

Jain Sand Separator

Cyclone Innovation for Clean Water

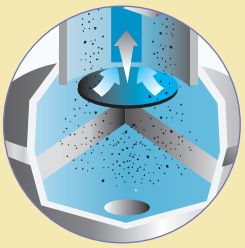
Features & Benefits

Patented Hydrodynamic Design

Innovative hydrodynamic design to create maximum centrifugal action to separate particles heavier than water

Innovative Water Inlet

Innovative water inlet provided to create centrifugal action



Equipped with Diffuser Plate

Special diffuser plate is provided to settle dirt particle and push them in to chamber

Standard Pure Polyester / Epoxy coating for Protecting from Corrosion

Coated up to 150 micron thick deep blue colored pure Polyester powder on outer surface & Epoxy coating from inner side for protection against corrosion and weather effects

Various Connection Options Available

Threaded connection, Flanged (universal) connection or Easy Fix™ connection available

Effective Draining Facility Provided

20mm '8' shape end stop with tube provided to drain silt/ sand particles from collection chamber

Jain Sand Separator

Additional Features

- **No moving parts to wear out -** This eliminates mechanical failures and troublesome replacement parts.
- **Highest trapping efficiency -** 90% trapping efficiency for particle size above 75 micron & specific gravity more than 2.5.
- **No downtime requirements -** All units are designed to operate continuously with no routine shutdowns for cleaning or maintenance.
- **Low pressure loss -** Require no more than 0.3 - 0.8 Kg/cm^2 loss for effective solids removal without troublesome pressure fluctuations.
- **Reduces load on secondary Media / Screen filter -** Reduces the frequency of cleaning for Media / Screen filter when installed before them.
- **Fully Automatic Option -** On demand Jain Sand Separator can also be supplied with fully automatic option.

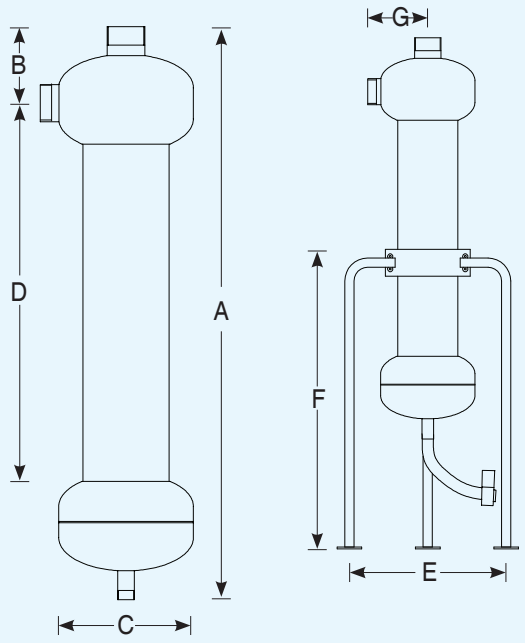
Applications

Used in micro irrigation systems to remove sand and silt particles from irrigation water.

Technical Specifications

Flow	Max. Pressure	Inlet/ Outlet	Weight	Drain Size	Drain Capacity
m³/hr	kg/cm²	Inch	Kg	Inch	Lit
10 - 15	10	1½"	12.2	¾"	2.50
12-30	10	2"	23.6	¾"	3.03
20-40	10	2½"	27.2	¾"	4.73
40-60	10	3"	45.8	¾"	8.33

Dimensional Specifications



Flow	Inlet/ Outlet	A	B	C	D	E	F	G
(m³/hr)	(Inch)	(mm)						
10-15	1½"	762	111	152	472	350	515	121
12-30	2"	854	127	219	613	350	515	140
20-40	2½"	940	140	219	539	350	515	159
40-60	3"	1067	178	273	591	380	610	209

Clean Pressure Drop Chart

Size	K	m	Pressure Drop(kg/cm²) w.r.t. Flow (m³/hr)										
Inch			5	10	15	20	25	30	40	50	60	80	100
1½"	0.052	0.151	-	0.24	0.50	-	-	-	-	-	-	-	-
2"	0.042	0.084	-	0.10	0.15	0.23	0.35	0.53	-	-	-	-	-
2½"	0.090	0.051	-	-	-	0.25	0.32	0.42	0.70	-	-	-	-
3"	0.073	0.038	-	-	-	-	-	-	0.33	0.48	0.70	-	-

Governing equation, $h = k\, e^{m\chi}$; h = Pressure drop (kg/cm²); χ = Flow rate (m³/hr); K = Pressure drop constant; m = Flow constant (for k & m values refer table)

Note: Filters are tested under standard laboratory test conditions.

Ordering Specifications

	XX	X
	Flow (m³/hr)	No. of Units
JSS	10 to 15 - 16	Single - Blank
	12 to 30 - 30	
	20 to 40 - 40	
	40 to 60 - 60	
	80 - 80	Duplex - D
	120 - 120	
	180 - 180	Triplex - T

Example: JSS30 - This code represents Jain Sand Separator Filter - Gold with mild steel construction having 12 to 30 m³/hr nominal flow capacity

Jain Filtrain – RWH Filter

Rainwater harvesting is the collection of rainwater for reuse or ground water recharge, rather than allowing it to run off. There are number of ways and methods to collect the rain water from different sources and one of that is Rainwater collection from roofs in residential or commercial area. The rain water so collected is redirected to a deep pit (well, shaft, or borehole), a reservoir with percolation, for ground water recharge or collected in a tank for immediate reuse. Its uses include water for gardens, irrigation and domestic use with proper treatment etc. The harvested water can also be used as drinking water (depending on source and method), longer-term storage and for other purposes such as groundwater recharge.

Rain water harvesting from roof top involves pipes, filter system and water storage mechanism (tank, well, sock pit etc.)

Jain irrigation, known for its water and energy conserving products is happy to introduce yet another innovative product "Jain Filtrain – RWH filter" as a forward integration to its roof water piping system. The Jain Filtrain is simple in construction, easy to use, operate and maintain.

Size & Range

Jain Filtrain is available in three sizes, inline with the size of roof water down stack pipe in the diameter of 75, 110 and 160mm.

Size	Code	Description
75	Filtrain075	Jain Filtrain – RWH Filter 75 mm
110	Filtrain110	Jain Filtrain – RWH Filter 110 mm
160	Filtrain160	Jain Filtrain – RWH Filter 160 mm

Note: Jain Filtrain is also available with Drain Valve.

Features & Advantages

- Simple in construction
- Easy to use and operate
- Trouble free installation and maintenance
- Compact in size
- No electric power required to operate
- Operates on low gravity head

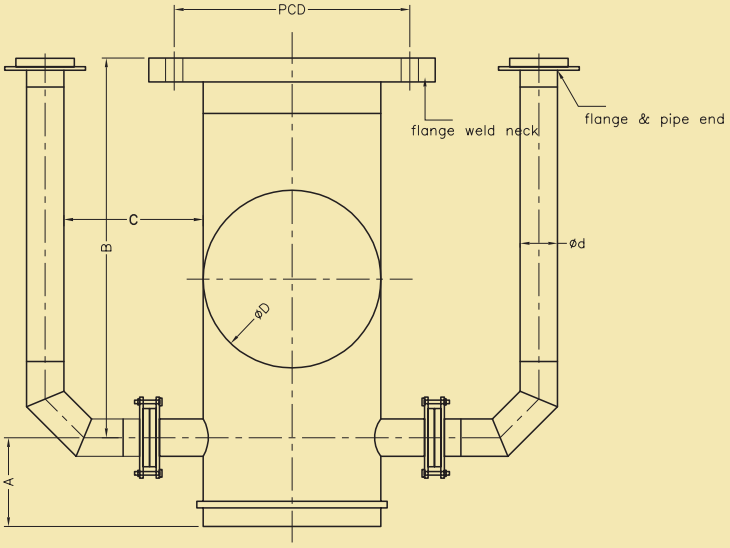
Jain Filtrain – RWH Filter

Installation

The water coming down through stack pipe from the roof is passed through the Filtrain. The inlet end is connected with down stack pipe from the top and outlet is connected with storage tank / recharge point from the side. The filtered water is either stored in the storage water tank (for further use) or directed to the recharge well. To remove the initial floating debris and flush the pipe, an open able cap is provided at the bottom of the filter. By opening the bottom cap, the initial water can be bypassed from the system. The internal screen element can be removed for the cleaning purpose by opening the complete bottom assembly. The filter is installed vertically on the wall maintaining the minimum ground clearance as per table for easy removal of filter element for cleaning.

Size	75	110	160
Minimum GroundClearance (MM)	300	400	550

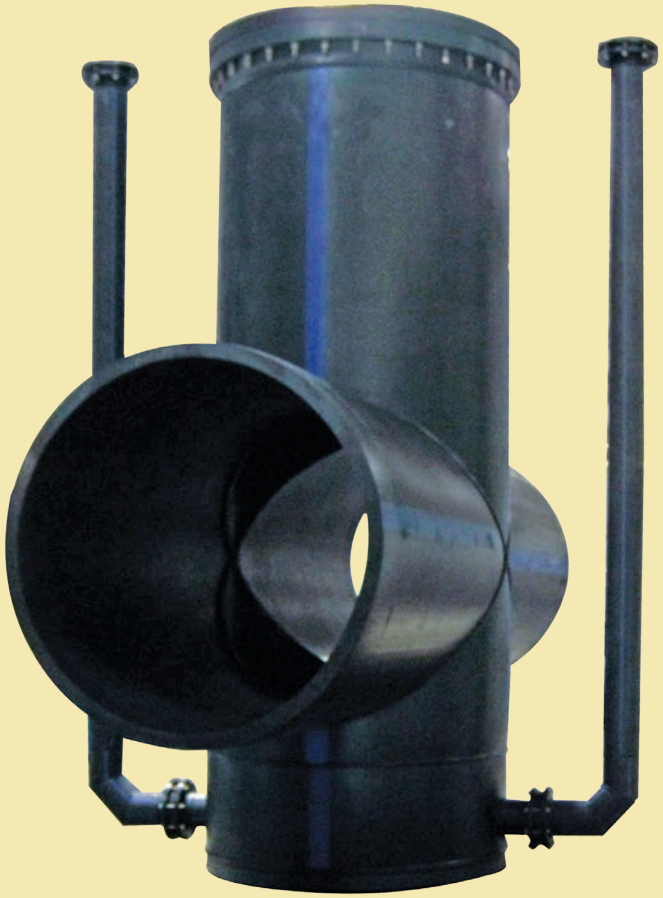
De Silting Chamber



When the water from the river or pond is conveyed through the closed conduit piping systems, practically it carries the silt along with it even though the system is designed at a zero silt velocity because of the reasons beyond our control. This silt, if not removed from the conduits time to time may result in reduced flow through it. We do manufacture and supply the products suitable for that application.

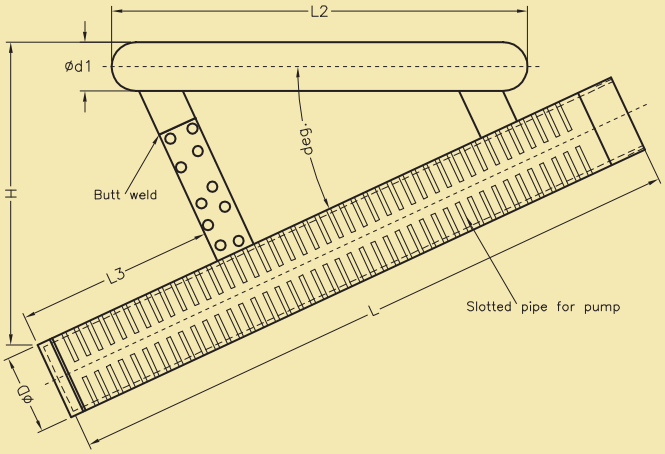
Code	Size
H1DC16K16K20010FJ	1600 X 200

Note: We manufacture and supply the products as per the site application.



De Silting Chamber

Product Code	Pump Diameter	Pump Length	Pump Weight
FP074X1247X008H1	74	1247	8
FP096X0780X013H1	96	780	13
FP096X0881X016H1	96	881	16
FP096X1118X021H1	96	1118	21
FP098X0942X016H1	98	942	16
FP098X1223X021H1	98	1223	21
FP098X1082X020H1	98	1082	20
FP098X1502X024H1	98	1502	24
FP101X0905X103H1	101	905	103
FP131X0775X020H1	131	775	20
FP131X0904X022H1	131	904	22
FP131X0956X024H1	131	956	24
FP138X1583X073H1	138	1583	73
FP138X2145X087H1	138	2145	87
FP138X2597X100H1	138	2597	100
FP143X1443X045H1	143	1443	45
FP145X1498X056H1	145	1498	56
FP145X1851X061H1	145	1851	61
FP145X1983X050H1	145	1983	50
FP145X1459X049H1	145	1459	49
FP145X1983X057H1	145	1983	57
FP145X1135X051H1	145	1135	51
FP145X1332X049H1	145	1332	49
FP145X1217X060H1	145	1217	60
FP150X1172X150H1	150	1172	150
FP188X2262X167H1	188	2262	167
FP195X2887X189H1	195	2887	189



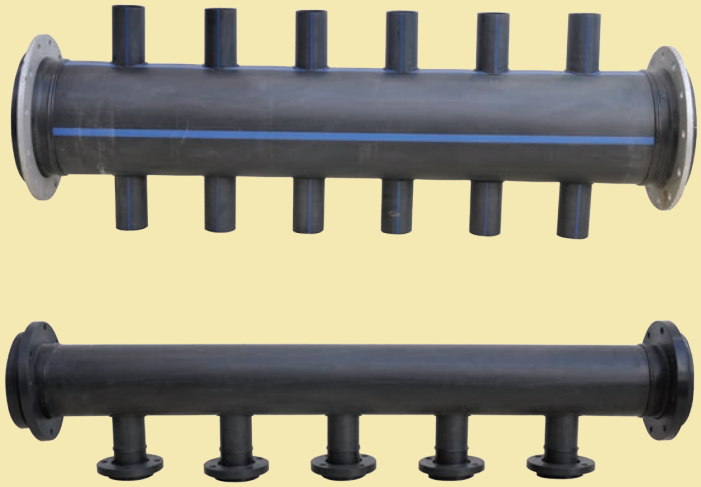
We manufacture and supply the floating platforms used in the water ponds to float the;

- Submersible pump
- Solar PV modules
- Temporary work stations etc.

Apart from the below specified standard floating platforms used for the submersible pump application, we do manufacture and supply the complete system to suit the specific requirements. We have developed and supplied the floating platforms suitable to float 50HP submersible pump and 25KW solar PV modules.

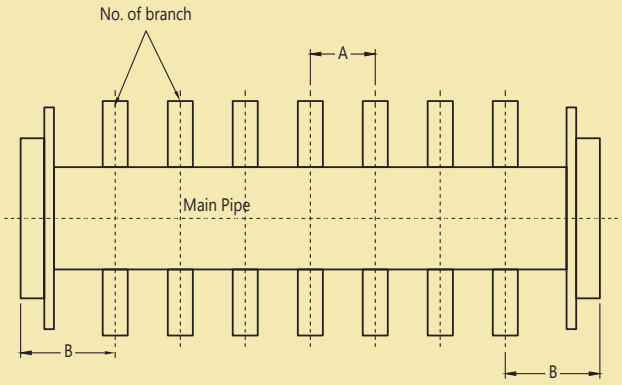
Note: Floating Platforms are available in different pump models.

Header / Manifold



Main Pipe (Size, mm)	Branch Pipe (Size, mm)
90	63
110	63, 75
125	63, 75, 90
140	63, 75, 90, 110
160	63, 75, 90, 110, 125
180	63, 75, 90, 110, 125, 140
200	63, 75, 90, 110, 125, 140, 160
225	63, 75, 90, 110, 125, 140, 160, 180
250	63, 75, 90, 110, 125, 140, 160, 180, 200
280	63, 75, 90, 110, 125, 140, 160, 180, 200, 225
315	63, 75, 90, 110, 125, 140, 160, 180, 200, 225, 250
355	63, 75, 90, 110, 125, 140, 160
400	63, 75, 90, 110, 125, 140, 160, 180, 200
450	63, 75, 90, 110, 125, 140, 160, 180, 200, 225
500	160, 180, 200, 225
560	160, 180, 200, 225, 250
630	200, 225, 250, 315

Note: Headers / Manifolds are available in different diameter and different branch connection to meet the different site requirment. (Manifolds available upto 2000mm diameter)



Note: All specification as per requirement/ customise

Jain Electrical Pump Panels

A rugged pump panel manufactured by Jain Irrigation Systems Ltd. especially designed considering the Indian power conditions.

Jain Irrigation Systems Ltd. has developed various types' products for the rural areas especially for irrigation purpose. By using Jain Electrical Pump panel, one can assure hassle-free operation of their pumps either submersible or surface.

Proving of technology in hazardous areas, varying weather & poor power supply conditions, and make it available at reasonable cost is a specialty of Jain Irrigation Systems Ltd.

A long list of clients includes thousands of farmers all over India and overseas industries & government sector.

Salient Features

- Seven tank treated MS powder coated enclosure to provide better corrosion resistance.
- Rugged Contactor with wide voltage band (380V to 440V).
- Fitted with reliable overload protection relay.
- Fitted with ammeter to inspect the motor current.
- Option to switch off the incoming power supply completely.
- Indication lamps for electricity availability
- Indication lamp for motor running.
- Fitted with Single Phasing Preventer and Auto start Unit which is used to switch on three phase motor/pump automatically & to protect them against under/high voltage, wrong phase sequence and single phasing.

Protects the pump from

- Over current
- Low Voltage below 180V
- High Voltage more than 440V
- Phase Sequence Reversal
- Single Phasing Condition

Advantages

- Incoming Control & Total Protection with ACB / MCCB / MPCB / MCB / SFU / HRC Fuses
- Electrical panels are designed for DOL / Star Delta Motors from 0.25 HP upto 400 HP
- Jain Mobile Pump Starter can be easily connected to the panel.
- Being made with very heavy duty components.
- Complete Motor Protection from various Electrical faults.
- Surface or submersible pumps can be controlled.
- Electrical safety from all electrical faults.
- Built in Single Phase Preventer, High Voltage Protector, Dry Run Preventer
- Fully Enclosed Floor / Wall Mounting as per Requirements
- Separate Chambers for Power Bus / Cable Alleys & Total Isolation from Control / Starter Feeders

Applications

- Solar Water Pumps
- Irrigation System Agriculture pump set
- Lift irrigation system
- Drip system
- Sprinkler system
- Water pipelines
- Fluid pipelines

Header / Manifold

A revolutionary electronic device manufactured by Jain Irrigation Systems Ltd.

Jain Irrigation Systems Ltd. has developed various types wireless automation systems for the rural areas especially for irrigation purpose. By using mobile based Pump control system, one can save enormous amount of electricity, water, fuel, time and labor. This helps world to conserve the valuable stocks of energy.

Proving of technology in hazardous areas, varying weather & poor power supply conditions, illiterate class of user and make it available at reasonable cost is a specialty of Jain Irrigation Systems Ltd.

A long list of clients includes thousands of farmers all over India and overseas industries & government sector.

Advantages

- By using mobile based Pump control system, one can save enormous amount of electricity, water, fuel, time and labor.
- Being made very simple to install and operate.
- Designed to work for pump of any HP and either single or three phase.
- Surface or submersible pumps can be controlled.
- Electrical safety from all electrical faults.
- Built in Single Phase Preventer, High Voltage Protector, Dry Run Preventer
- Acknowledgement of on/off status of the water pump.
- Only registered mobile can control the unit.
- Check an availability of power supply at the pump end and send SMS to registered user
- Can be controlled with low cost mobile phones or through Android App developed for smartphones
- Pumps can be controlled through SMS(SMS Mode) or by giving Missed Call(Free Mode)
- Multilanguage SMS support
- Pump will Automatically start/stop during Electricity cut-off.

Applications

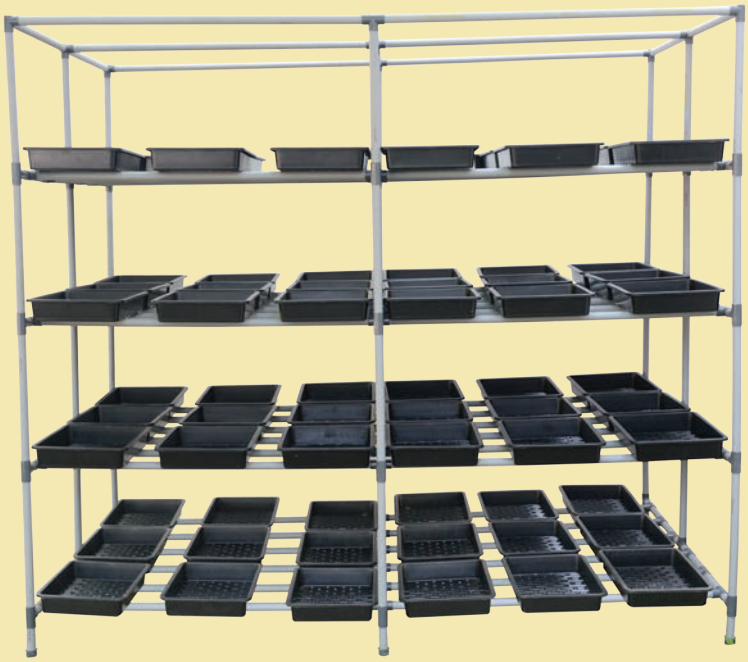
- Farms And Garden
- Residential and Commercial Buildings
- Solar Water Pumps
- Irrigation System And Agriculture
- Industries And Water Treatment plants
- Government Units And Publics Premises

Specifications

Applicable with Single Phase and Three Phase Supply

- Suitable with all kind of button starter
- Accurate reading of PUMP Current
- Protections
  - Over Current (range: 2A - 60A)
  - Dry Run
  - Voltage Unbalance (range: 200V - 415V)
- Single Phase Preventer
- Inbuilt Battery Backup - Up to 24 Hours of battery backup
- Extended 3db sticker antenna for high signal strength
- Easy Operation with Android Application

Green Fodder Unit



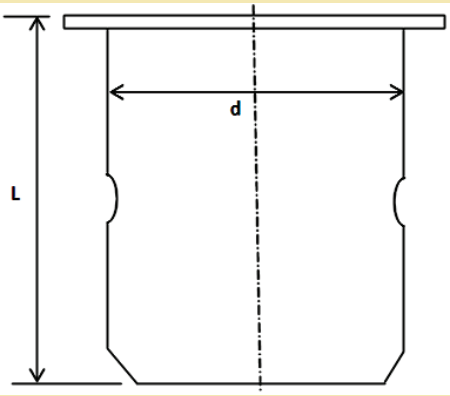
Agriculture in India cannot be separated from Animal Husbandry and Dairy. They are complimentary to each other. In fact Animal husbandry comes first. Considering the growing requirement of the green fodder for this sector JAIN irrigation has developed Hydroponic Green Fodder. This soilless technology for growing green fodder is used in the developed world very extensively. In this technology we can grow maize, wheat, oat, bajra etc., in the controlled structure.

This low cost structure is made up of PVC pipe, Bamboo or GI pipes. This can grow more fodder in lesser area and lesser time. The soilless growth of the seeds in 8-9 days can produce 9-10 kg of fodder from 1 Kg of Seeds. The seeds need to be kept in water for 24-48 hrs and then wrapped in a gunny bag for germination, and these germinated seeds then should be spread in a tray and water should be sprayed through foggers at continuous interval for 6-7 days and the fodder is ready with the root systems for feeding the animals.

Code	Description
PHYDFOD137X260X130	PVC GREEN FODDER UNIT 137X260X130

Tree Pot

PVC Tree POT			
Code	**Size**	**L (Min.)**	**ID (Min.)**
PVFPP160X2.5	160mm	217	160.2
PVFPP180X2.5	180mm	237	180.2
PVFPP200X2.5	200mm	257	200.3
PVFPP225X2.5	225mm	292	225.3
PVFPP250X2.5	250mm	317	250.4
PVFPP280X2.5	280mm	347	280.4
PVFPP3152.5	315mm	382	315.4
PVFPP160X04	160mm	217	160.2
PVFPP180X04	180mm	237	180.2
PVFPP200X04	200mm	257	200.3
PVFPP225X04	225mm	292	225.3
PVFPP250X04	250mm	317	250.4
PVFPP280X04	280mm	347	280.4
PVFPP31504	315mm	382	315.4
			All Dimensions are in mm



Design of Pipeline System

Pipe line Scheme

Components of Pipeline Scheme:

1) **Pump set:** This can be a monobloc, submersible or coupled electrical pumpset or a diesel engine. The important parameters while selecting the pump sets are head and discharge. While selecting a pumpset we should see that the pumpset is operating at its Best Efficiency Point.

2) **Foot Valve:** This is installed at the end of the suction and is used in preventing the line from getting emptied. PVC foot valves are already in the market in sizes up to 4". These foot valves are cheap, have low friction and save energy.

3) **Control Panel:** The function of the control panel is to switch on or off the pump. It is an electrical panel which consists of starter, main switch, cable, contactors, relays and on-off switch etc. It should be protected from rain water.

4) **Sluice Valve:** This is the flow control valve which controls the flow of water by throttling the valve. This valve is generally of C.I. in higher sizes and in small sizes upto 4" it can be of PVC .

5) **Non Return Valve:** In higher sizes above 2.5", this is necessarily of C.I. and in 2.5" some companies have developed this in PVC. The function of this valve is to prevent the backflow of the water while switching off the pumpset. This also prevents the water hammer.

6) **Thrust Blocks:** These are the cement concrete blocks provided at the sharp turns, ups and downs and such strategic points in order to absorb the thrust on the line and to prevent the possible damages in the lines because of the thrust.

7) **Intake well:** The objective of the intake well or the sump is to provide the storages and good flow conditions to the pump. If the design of the intake well is not proper undesirable hydraulic conditions may occur in the sump which will have impact on the pump and its efficiency.

8) **Jackwell:** Whenever any pump house is proposed on the bank of the reservoir, a circular Jackwell is ideal. There is no need for the provision of an intake well as always minimum water level is maintained. However when the pump house is to be located other than in the reservoir, to make flow from intake canal uniform and steady, an intake well is necessary.

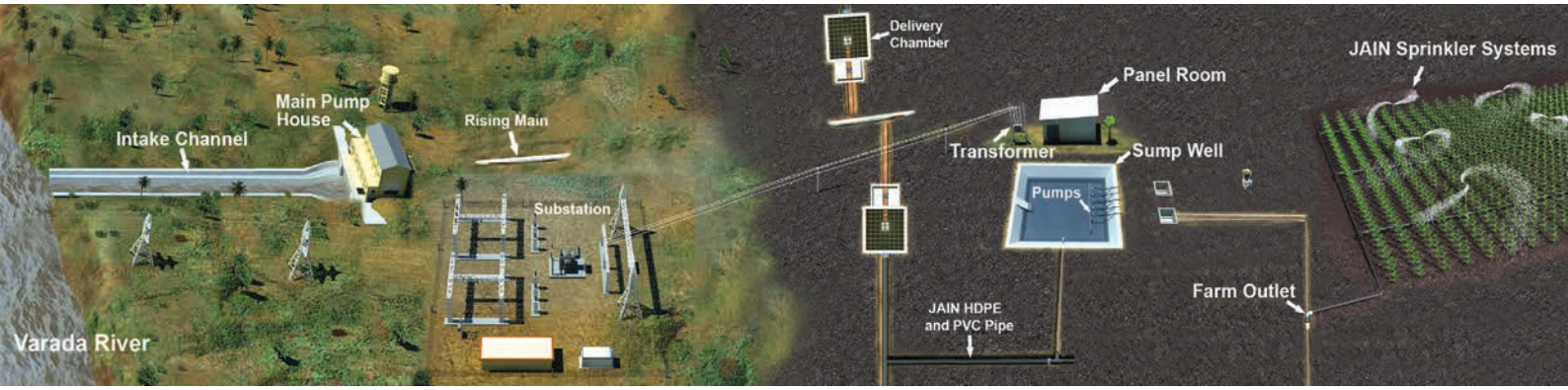
9) **Pump House:** Normally the pump house comes exactly on the jack well. In order to have accommodation for carrying out repairs and maintenance, an additional bay with sufficient area should be provided in the pump house.

10) **Delivery Chamber:** To dissipate the energy with which the water is falling from the pressure mains on to the bed of the canals, delivery chamber is required. It is constructed at the end of the rising main to allow the safe exit of the water from the rising main.

11) **Air Release valves:** To release the entrapped air in the pipeline while starting of the pump sets and during the operation of the pipeline and also to release the vacuum in the lines, double action air release valves are used. These valves are located at the mounds in the pipeline. Generally the size of the ARV provided is ¼ th of the pipe dia.

12) **Pressure Relief Valves:** Used for releasing the excess transient pressure when the flow is interrupted by control valve at the downstream.

13) **Rising Main and distribution Network:** This is mainly of the pipes like PVC depending on the size of the pipe and the choice of the customer. Generally up to 500 mm size PVC pipes are used in various pressure ratings as per requirements.



Design of Pipeline System

Parameter to be consider while preparation of pipeline scheme

1) Survey

Preliminary survey: In these survey following points should be taken into consideration

a)Water source: 1)Well, 2)Bore well, 3)River, 4)Dam backwater 5) Canal. These are the water source for the lift irrigation scheme.

b)Area: Area of the scheme is dived into two parts as follows.

i) Culturable command area (C.C.A): This is the area which can be cultivated under the scheme.

ii) Irrigable command area (I.C.A) : This is the area which can be taken into under the scheme.

c) Pipe line alignment: pipeline alignment is the lay out of the pipe line from lifting point to the delivery point. This should be selected as per the site condition. Preferably it should be in straight line so that length of the pipe line will be minimum.

d) Engineering survey: In this survey in addition to the above mentioned survey following surveys should be carried out.

i) Contour survey: In this survey detailed contour survey of the commend area should be carried out with the help of levelling equipment. This survey should include total area, field boundaries, contour levels, existing structures, and other relevant details. Then the map should be done with the proportionate scale.

ii) L section survey: In this survey detailed contour survey along the pipe line alignment should be carried out. In this survey details about the pipe line such as ground levels at the intervals of 30 meter, river/ nalla proportion details, soil strata, pipe alignment plan,water source details, existing structures and other relevant details should be carried out.

2) Design of the pipe

Selection of the pipe diameter: It is mainly based on the two following parameters.

Velocity: the velocity of the liquid should not exceed 1.25 m/sec through the pipe. B) Design discharge: This is calculated as per from the duties or ET of the crop.

From the flow chart based on Hazen William we can select the required pipe diameter.

3) Selection of the pipe Class

a) After selection of the pipe diameter from the flow chart find out the frictional losses per kilometer length in each class of pipe for the design discharge.

b) Pipe line design should be started from the delivery to the pump end.

c) For selection of the pipe class length design should be made on the trial and error basis until we gets required pressure check.

d) At the length check pressure finds within limits of the ranges given as follows the class length will be finalized at that point.

e) Steps in calculation of the friction losses and the class length.

H.F = (Length in kilometer × rate of the frictional losses) + 10% other losses in the pipe line.

H.G.L. (Hydraulic gradient level) at the class end point : Hydraulic grade level at class end point + friction loss(hf) in the considered length of the pipe line.

Check pressure: H.G.L at class start point – ground level at the class start point+ 1 mtr + pipe dia in mtr.

3) Design of the pump:

Total head = HGL at the pumping side of the pump line – lowest water level in the water source. Required power hp = (Discharge × Head × 1.10) / (75 × efficiency)

Efficiency should be taken as follows:

Centrifugal pump: 60%

Vertical turbine pump: 75%

4) Sample Calculation

Assuming discharge of 10 lps (lit/sec)

5) Selection of Pipe Dia

- Refer friction chart for PVC pipe and select pipe dia for discharge 10 lps such that velocity is around 1.25 m/sec. Also velocity should not be less than 0.60 m/sec (Silting Velocity)
- For economical Design always select Dia for velocity 0.70 to 1.0 m/sec. For 10 LPS Discharge Dia would be 140 mm.
- Do not opt for 125 mm as it is not commercial Dia.

6) Friction losses Calculation:

- After decision of Pipe dia. We will have to classify pipeline.
- For 10 lps we will have to calculate friction losses for different classes of 140 mm pipe like 2.50 kg/cm^2, 4 kg/cm^2 , 6 kg/cm^2, 8 kg/cm^2, 10 kg/cm^2
- For Rate of friction loss/ 1000 mt (hf/1000m), refer main line chart
- As PVC pipe is OD base, its ID will vary according to pipe class and rate of friction loss will differ for respective pipe class

Rate of He for 140 mm Dia for 10 LPS Discharge

Class	hf/1000mt
4 kg/cm^2	4.1
6 kg/cm^2	4.5
10 kg/cm^2	5.6

Design of Pipeline System

Start classification from the delivery end of pipeline

HGL: Hydraulic Gradient Line: Line Joining Pressure Head at different point.

Take a trail section from Ch. 3000 mt to 990 mt for 140x 4 kg class

Length	2000 m
HGL at Ch. 3000 mt	Full Supply Level at that point
HGL at Ch. 3000 mt	131.00 mt
Hf	Length in Km x Rate of hf + 10% fittings losses = 2.01x 4.1 x 1.10 = 9.06 mt.
HGL at 1000 m	HGL at 3000m + Hf = 131+ 9.06 = 140.06 mt.
Check Pressure at 1000 m	= HGL at 1000 m - GL at 1000 + (pipe cover+ pipe dia) = 140.06-112+1.14 = 29.18< 30 Mt, Hence Safe

Table: Desire Pressure for different pipe class

Pipe Class	Working Pressure	Design Pressure 75%, balance 25 % for surge allowance
2.5	25 mtr	18 mtr
4	40 mtr	30 mtr
6	60 mtr	48 mtr
10	100 mtr	75mtr

Take a trail section from Ch. 1000 mt to 300 mt for 140x6 kg class

Length	700 m
HGL at Ch. 1000 mt	We have already calculated = 140.02 mt.
Hf	Length in Km x Rate of hf + 10% fittings losses = 0.70x 4.5 x 1.10 = 3.465 mt.
HGL at 300 m	HGL at 1000m +Hf = 140.02 + 3.465 = 143.485 mt.
Check Pressure at 300 m	HGL at 300 m – GL at 300 + (pipe cover+ pipe dia) = 143.85 - 100 + 1.14 = 44.62 < 45 Mt, Hence Safe

Take a trail section from Ch. 300 mt to 00 mt for 140x10 kg class

Length	300 m
HGL at Ch. 300 mt	We have already calculated = 143.48 mt.
Hf	Length in Km x Rate of hf + 10% fittings losses. = 0.30x 5.60 x 1.10= 1.848 mt.
HGL at 00 m	HGL at 300m +Hf = 143.48+1.848= 145.328 mt.
Check Pressure at 0 m	= HGL at 00 m – GL at 00 + (pipe cover+ pipe dia) = 145.32-85+1.14 = 61.46< 75 Mt, Hence Safe

Pump Calculation

HP	(Q x H/75 x Eff.) x 1.10
Q	Discharge in LPS H= Total Head in mtr
Eff	Pump Efficiency, 0.75 for submersible and 0.60 for C.F Pump
Total Head	Suction Head +Static Head+ Total Frictional Losses
Static Head	= FSL- GL at Pumping Point = 131- 85 = 46 Mtr Suction Head
	= GL at Pump-LWL = 85-81=4 Mtr.
Total Frictional Losses	= Sum of Frictional losses in 4 kg +6 kg + 10 kg pipe
	= 9.02 +3.46+ 1.84 = 14.32 Mtr. Total Head
	= 65.32 Mtr.
Hp	= 10x 65.32/(75×0.60)x 1.10 = 15.97
Say	= 15 HP

Design of Pipeline System

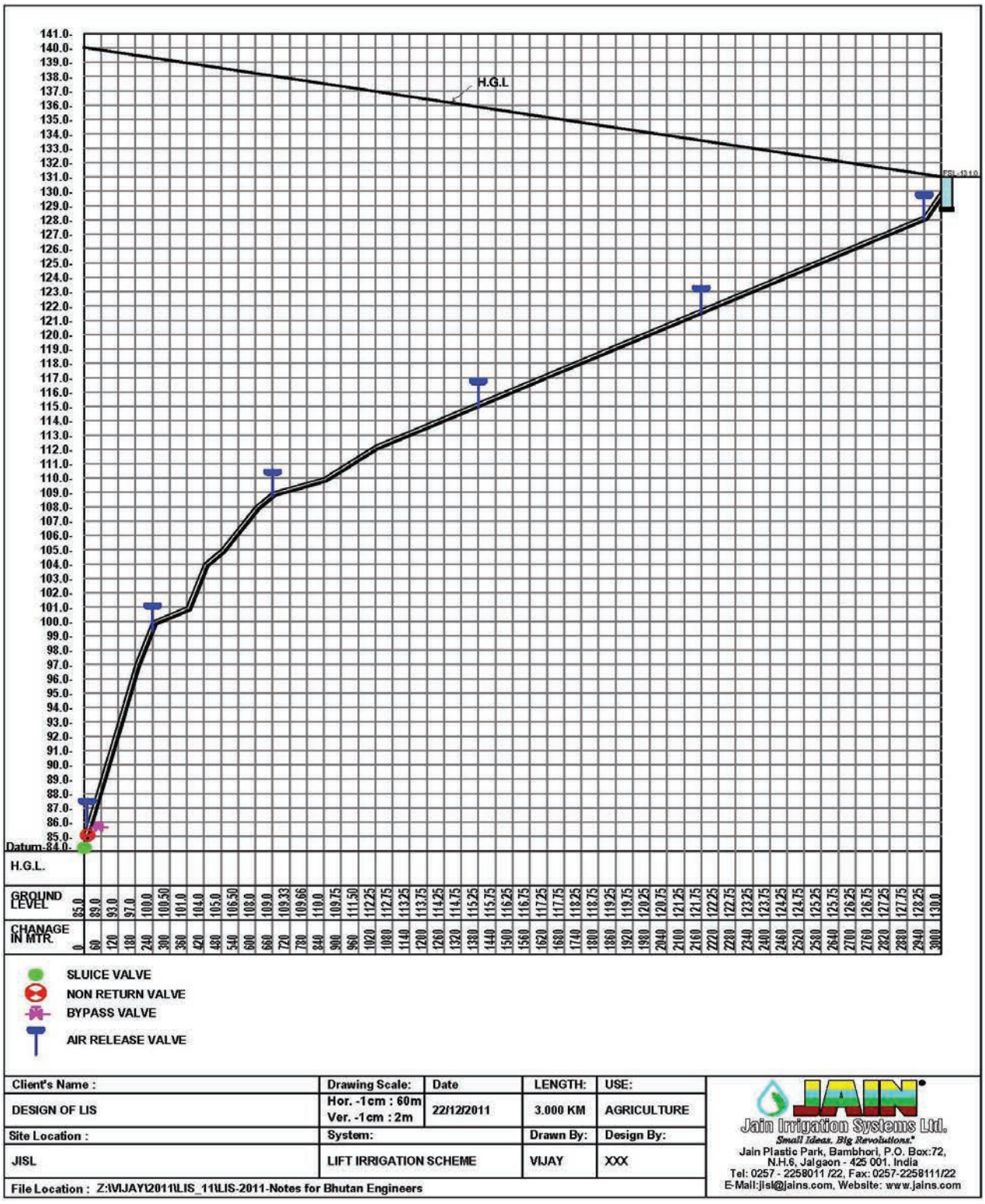


Fig 1.1: Showing the L-section of the sample calculation

Installation of PVC Pipes

Transportation of Pipes

- Vehicles with a flat bed should be used for the transport of pipes.The bed should be free from nails or other projections. The pipes should be supported uniformly along its length.
- When loading socket and spigot pipes, these should be stalked in alternate layers so that the sockets do not carry any load and damage to the sockets is avoided.
- Overhang should not be more than 1 meter.

Storage of Pipes

- Pipes storage must be done on the flat land. Before storing the pipes, thin layer of sand should be applied on land.
- Storage space should be free from pointed /sharp edged stones or similar matter.
- Pipes should be stored as shown in the picture on each other so that the damages are avoided. The staking height should not be more than 1 m so that the pipes in the lower layers are not damaged.
- Side supports should be maximum 2 m high.
- While storing the pipes, it should be ensured that the sockets are kept free and they do not become oval due to weight.

Handling of Pipes

- Care should be taken in handling PVC pipes to avoid damage to the wall surface.
- Pipes should not be dragged along rough ground.
- The loading and unloading of pipes should be carried out by hand.Hooks and chains should not come in direct contact with pipes
- It is suggested that minimum 3 persons be used to unload the truck load of pipes.
- Pipes should not be dropped on hard surface.
- When the pipes have to be transported one inside the other, the inner pipes should always be removed first and stored separately.

Trench Excavation

- Trench width and depth should be such that the pipes can be laid and jointed easily. Width = OD + 300 mm(min)

  Depth = OD + 1150 mm (min)
- Trench bottom should be continuously smooth and free from any hard objects, rock projections or free roots.
- It is advisable to pad the trench bottom using tamped earth or sand as cushion to protect the pipe from damage.

Laying and Jointing of Pipes

- Do not cement in weather below 20o C and above 370C. In hot weather minimize the solvent cement application time.
- Do not empty cement cans near plastic pipes.

a) Pipe Cutting: Cut pipes square with the axis using a fine tooth hack saw. Remove all burrs with a knife, file or abrasive paper.

b) Chamfering : Provide 2 mm wide , 150Chamfer on pipe end. it prevents the cement film from being wiped off into interior of the socket during assembly.

c) Dry Fit Test: Before applying solvent cement, insert the pipe end into the socket of the next pipe or fitting to check that interference occurs at about 1/3 to 2/3 of the socket depth.

d) Cleaning: Surfaces to be jointed must be cleaned and they should be free from dirt moisture and other foreign material.

e) Application of Solvent Cement

- Discard the cement when considerable change in viscosity takes place.
- Apply the cement with nylon brush.
- PVC solvent cement should be applied as early as possible.
- Two workers should be provided for larger size of pipes.
- Do not apply excess solvent cement in the bell socket.
- Immediately after applying the last coat of cement, forcefully insert the male end of pipe into the socket. Turn the Pipe (1/4th turn) to distribute the cement evenly.

Installation of PVC Pipes

3) Pipe Joint Drying Time:

(Temperature 10°C to 37°C)

Pipe Size,mm	min
20-40	20
50-75	45
90-110	60
125 and above	90

4) Number of Joints per Litre of Solvent Cement :

Pipe Size	Class	No of Joints
63	2	65
75	2	55
90	2	45
110	2	35
140	2	20
160	2	15
180	2	12
200	2	10
225	2	6
250	2	5

5) Rubber Ring Jointing :

- Check the pipe spigot end and remove burrs.
- Check the entire spigot end of pipe marking and ensure that it is correctly chamfered to 15 deg to the pipe axis.
- Check that the rubber ring is seated properly in the socket grove and the ring is free of dirt or mud deposits.
- Clean the spigot end of the pipe and ensure that the surface of the spigot end is smooth and free from deep scratches.
- Mark the depth of entry into the socket(depth) on the spigot end of the pipe.
- Apply lubricant evenly around the spigot end to approximately half the distance between the pipe end and the mark which indicates the depth of entry.
- Position the spigot end of the pipe.
- Check the horizontal and vertical alignment of the pipe and socket.
- Push the pipe in to the socket and position it so that the depth of entry mark is just visible. This procedure should be done in one fluid movement.A twisting action will help the entry. The joint is now complete.

Pre Test Precautions

- Solvent jointed pressure pipelines should not be pressure tested until at least 24 hours after the last joint has been made.
- The pipe must be backfilled sufficiently to prevent movement while under test pressure.
- Testing shall not be commenced before concrete anchorages are adequately cured.
- Test ends should be capped and braced to withstand the thrusts that are developed under test pressure.
- All the control valves should be positioned "open" for the test duration.

Testing Procedure

- Pressure should be applied either by hand pump or power driven pump.
- The pressure gauge should measure the accurate reading of pressure changes of 1% of test pressure
- The pressure in the test section should be read from a gauge placed as closely as practicable to the lowest portion of that section.
- Whenever the system is to be started up or restarted, the pump start up procedure should include the following:
  - Close the Pump Control Valve
  - Open air release valve or vents at the end of the pipeline
  - Start the pump
  - Start to open discharge slowly
  - Provide adequate air release.
  - As soon as the line is filled with water continue to flush the water. The pressure will continue to rise
  - When the increasing pressure begins to level off, continue flushing for approx 15 min until or no air release occurs
  - Pressure is then slowly increased to the required level.
  - The test section should be allowed to stand without make up pressure. If there is no evidence of leakage after at least 60 minute under pressure or after the time necessary to inspect all the joints in the complete section (24 hours max) the section is deemed to have passed the test.

Installation of PVC Pipes

Problems in PVC Pipelines- Nature, Causes and Remedies

1) Nature of Problem : Leakages in Collars

Causes : Thermal Expansion and Contraction

Possible Remedies

- Jointing of Pipes should be done preferably during morning and evening hours.
- Before jointing of pipes, fittings and solvent cement should be kept at the same temperature at least for one hour.
- Pipe insertion depth should be marked before jointing,
- Commissioning of the pipelines should be done immediately after the jointing. In case for any other reason, the commissioning is delayed, the pipelines should be kept filled with water.
- Ensure that the trench depth is not less than (pipe dia + 3ft)
- If the trench passes through the black soils, ensure that the concrete blocks have been provided in the pipeline at proper interval, so that the pipeline does not move. Also provide concrete blocks at the bends and junctions in pipelines
- Ensure that the expansion joints are provided in the pipelines at proper distance.

2) Nature of Problem : Leakages in Collars

Causes: Substandard solvent cement and improper application of Solvent Cement

Possible Remedies :

- Check the quality of Solvent Cement at the time of taking delivery. Order for only good quality solvent cement. Apply solvent cement uniformly in the required quantity. Do not apply excess or less solvent cement.
- While applying solvent cement ensure that the socket and pipe surfaces are free from dirt, moisture or oil. Clean the surface of the pipe and socket with clean dry cloth. Make use of primer.

3) Nature of Problem : Leakages in Collars

Causes : Collars Oversize (Manufacturing Defect)

Possible Remedies : Observe the couplers and spigot end of the pipes visually and also by a dry fit test. Replace oversized couplers.

4) Nature of Problem: Pipe Flattening and then breaking

Causes : Negative pressure(Installation Problem)

Possible Remedies :

- Air Release valves position and size should be correct. It is recommended to use double action air release valves at least ¼ th size of pipes.
- Please provide Double action ARVs at high elevation points at every 300 m distance.
- Check the working of existing ARVs,
- Repair,if there is any leakage in the foot valves

5) Nature of Problem : Pipe Bursting at the bottom of pipeline. Notches observed on pipes.

Causes : No proper bedding(Installation Problem)

Possible Remedies :

- Notches are generally due to sharp edged stones/rocks in the trench. While preparing the trench, care should be taken to remove these sharp edges/stones etc.
- Proper murum bedding of at least 15 cm depth must be done through out such lengths. The trench should be leveled properly. The surround material should be of less than 12 mm size

6) Nature of Problem : Pipe Bursting during Operation due to excessive pressure

Causes : Design and installation Problem

Possible Remedies:

- Check the design. Ensure that the proper class of pies and pumps are installed as per recommendations.
- Check the pressure with the help of pressure gauges. Install the pressure relief valve of the recommended size and ensure that it works.
- Check the sizes, quantity and locations of Air Release Valves. Ensure that all ARVs work.

7) Nature of Problem : Pipe Bursting due to excessive pressure after pump shuts down or at the start of pump

Causes : Design and installation Problem

Possible Remedies:

Ensure that the design takes acre of Water hammer head and ensure that Non Return Valve is installed after the pump set and it works

8) Nature of Problem : Erosion in Pipes or Collars

Causes : Design and installation Problem

Possible Remedies

Ensure that there is no sand content in the water. If the sand content is high, use HDPE pipes instead of PVC pipes and ensure that the velocity of water flowing in the pipes is within the limits(ie less than 1.37 M/sec)

Chemical Resistance Chart

Chemical	Concentration	PVC	
		20°	60°
Acetic Acid	10%(W/V)	S	S
	60%(W/V)	S	D
	glacial	U	U
Acetone	5%	U	U
Acetonitrile		U	U
Acetyl chloride		U	U
Acetylene	gas 100%	U	U
Adipic Acid		S	D
Ammonia	Dry gas	S	S
	Liquid	U	U*
Ammonium Zinc Chloride		S*	S*
Ammonium Dichromate		S	U
Ammonium Metaphosphate	Saturated	S	U
Amyl Acetate		U	U
Amyl alcohol		U	U
Beer		S	S
Beet Sugar Liquors		S	S
Benzaldehyde	Trace	U	U
	100%	U	U
Benzene		U	U
Benzene Sulphonic Acid	10%	S	S
	10% +	U	U
Benzoic Acid		D	U
Benzoyl chloride		U*	U*
Benzyl Acetate		U	U*
Benzyl alcohol phenylcarbonate		U*	U*
Bleach	5% active Cl2	S	S
	12% active Cl2	S	S
Butadiene	50%	S	S
Butylene		S	S
Chloramine	Dilute	S	D
Chloric Acid	10%	S	S
	20%	S	S
Chlorine	liquid	U	U
Chlorinated water	Saturated	S	S
Chloroacetyl chloride		S	U
Chlorobenzene		U	U
Chlorobenzyl Chloride		U	U
Chromium Potassium Sulfate	>10%	S	U
Coconut Oil		S	S
Cotton seed oil		S	S
Cresols		U	U
Cresylic acid		S	S
Crude oil		S	S
Cyclohexane		U	U
Cyclohexanone		U	U
Decahydronaphthalene (Decalin)		-	-
Detergents (Synthetic)		S	S*
Diacetone Alcohol		U	U
Diamyl ether		U*	U*
Dibromoethane (Ethylene dibromide)		U*	U*
Dibutyl phthalate		U*	U*
Dichlorobenzene		U*	U*
Dichloroethane (Ethylene di chloride)		U	U

Chemical	Concentration	PVC	
		20°	60°
Diethyl ether		U	U
Dimethyl formamide		U	U
Dimethyl sulphate (Methyl sulphate)		S	U
Dioctyl phthalate		U*	U*
Dioxane		U*	U*
Diphenyl ether		U	U
Emulsifier	All	S*	S*
Etahnediol(Ethylene glycol)		S	S
Ethers		U	U
Ethyl acetate		U	U
Ethyl acrylate		U	U
Ethyl Benzene		U	U
Ethyl Chloride		U	U
Ethyl Ether		U	U
Ethyl formate		U*	U*E
Ethyl Lactate		U*	U*
Ethyl methyl ketone		U	U
Ethylene chlorohydrine		U	U
Ethylene diamine		U	U
Ethylene di chloride		U	U
Formic Acid	25%aq soln	S	D
	50%aq soln	S	U
	98-100%aq soln	U	U
Glycerol mono benzyl ether		U*	U*
Heptane		S	U
n-Hexane		S	U
Hydrazine		U	U
Hydrofluoric acid	40%aq soln	S	U
	60%aq soln	D	U*
	Conc.	U*	U*
Hydrogen peroxide	3%aq soln	S	U
	12%aq soln	S	U
	30%aq soln	S	U
	90 %Conc.	U	U
Hydraulic Oil (Petroleum)		S	U
Iodine	Soln in potassium iodide	U	U
Kerosene		S	S
Lactic acid	100%	U	U
Linseed oil		S	S
Lime Sulphur		S	U
Lubricating oil (ASTM#1)		S	S
Lubricating oil (ASTM#2)		S	S
Lubricating oil (ASTM#3)		S	S
Methanol (Methyl alcohol)	100%	S	D
Methyl acetate		U	U
Methyl methacrylate		U	U
Methyl Amine		U	U
Methyl Bromide		U	U
Methyl Chloride		U	U
Methyl ethyl ketone (MEK)		U	U
Methyl isobutyl carbinol		U	U
Methyl isobutyl Ketone		U	U
Methyl isopropyl ketone		U	U
Methylene chloride		U	U

Chemical Resistance Chart

Chemical	Concentration	PVC	
		20°	60°
Methylene chlorobromide		U	U
Methylene Iodide		U	U
Methysulphonic acid		S	D
Mineral oils		S	S
Monochlorobenzene		U*	U*
Mono ethanolamine		U	U
Motor oil		S	S
Naphtha		S	S
Naphthalene		U	U
Nitric acid	5% (w/v) aq soln	S	D
	25% (w/v) aq soln	S	D
	50% (w/v) aq soln	S	U
	70% (w/v) aq soln	D	U
	100% (w/v) aq soln	U	U
Nitrobenzene		U	U
Nitroglycol		U	U
Oil and fats		S	S
Oleic acid		S	S
Orthophosphoric acid	30% (w/v) aq soln	S	S
	50% (w/v) aq soln	S	S
	95% (w/v) aq soln	S	S
Paraffin		S	S
Pentane		D	U
Perchloric acid	10%	S	D
Perchloroethylene		D	U
Perphosphate		S	U
Petrol		S	U
Petrol/benzene mixture	80-20 ratio	U	U
Petroleum spirit(Petroleum ether)		U	U
Phenol		S	U
Phenylhydrazine		U	U
Phenylhydrazine hydrochloride		U	U
Potassium Hydroxide	25%	S	S
Potassium iodide		S	U
Potassium Permanganate	25%	S	U

Chemical	Concentration	PVC	
		20°	60°
Propionic acid	50 % aq soln	S	S
	100 % aq soln	S	U
Propyl Alcohol(Type I)		S	S
Silicone oil		S	U
Silver Nitrate		S	S
Soap solution aquious		S	S
Sodium benzoate		S	D
Sodium Chlorate		S	U
Sodium Chlorite		U	U
Sodium Hydroxide	30%	S	S
Sodium Hypochlorite		S	U
Sodium Perborate		S	S
Sulphuric acid	90%(w/v)aq soln	D	D
	95%(w/v)aq soln	U	U
	98%(w/v)aq soln	U	U
	fuming	U	U
Terpineol		D	U
Tetrachloroethane		D	U
Tetraethyl Lead		S	U
Tetrahydrofuron		U	U
Titanium tetrachloride		U	U
Toluene		U	U
Transformer oil		S*	S*
Tributyl phosphate		U	U
Tributyl Citrate		S	U
Trichlorobenzene		U*	U*
Trichlorethane		U*	U*
Trichloroethylene		U	U
Triethanolamine		S	U
Trimethylamine		S	U*
Turpentine		S	S
Vaseline (Petroleum Jelly)		U	U
Vegetable Oil		S	S
vinyl acetate		U	U
Xylene		U	U
Xylenol		U*	U*E

S SATISFACTORY

U UNSATISFACTORY

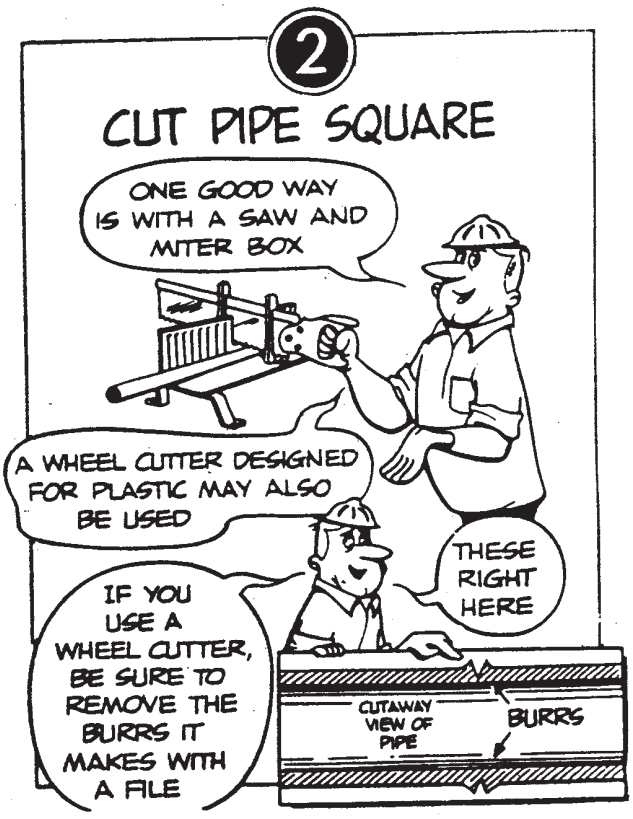
D SOME ATTACK OR ABSORPTION.THE MATERIAL MAY BE CONSIDERED FOR USE WHEN ALERNATIVE MATERIALS ARE UNSATISFACTORY AND WHERE LIMITED LIFE IS ACCEPTABLE. WHEN PLASTICS ARE TO BE USED WITH SUCH CHEMICALS , FULL SCALE TRIALS UNDER REALISTIC CONDITIONS ARE PARTICULARLY NECESSARY.

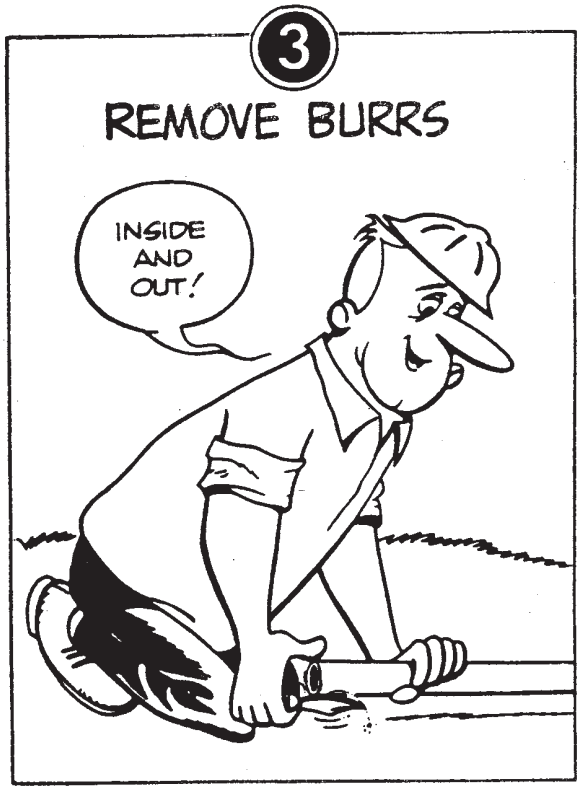
E ENVIRONMENTAL STRESS CRACKING HAZARD.POLYETHYLENE ARE SUBJECT TO THIS PHENOMENON IF USED WITH CERTAIN CHEMICALS,WHICH ALTHOUGH CHEMICALLY INACTIVE PRODUCE STRESS CRACKS.

* PREDICTED RESULTS .IN ORDER TO COVER AS WIDE RANGE OF NAMED CHEMICALS AS POSSIBLE. THE RESISTANCE OF PLASTICS TO SOME CHEMICALS HAS BEEN PREDICTED FOR ITS RESISTANCE TO OTHER CHEMICALS WHICH HAVE SIMILAR COMPOSITION.

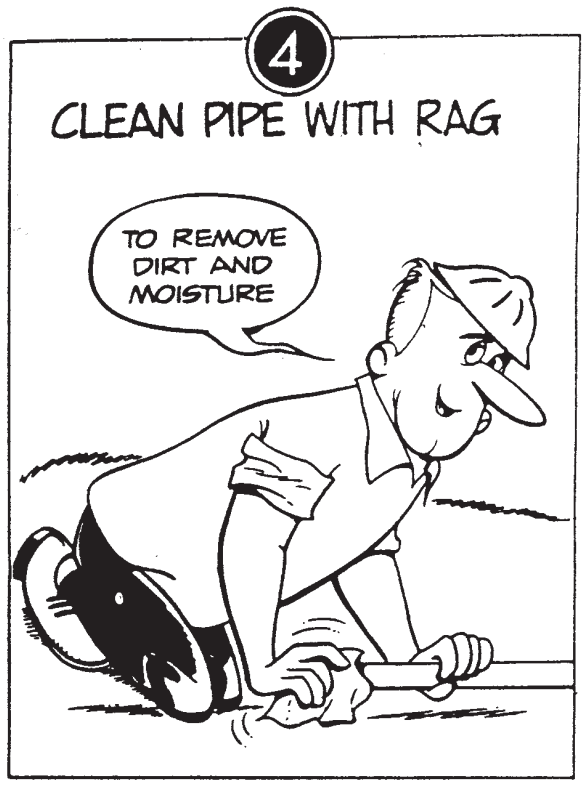
DATA NOT AVAILABLE

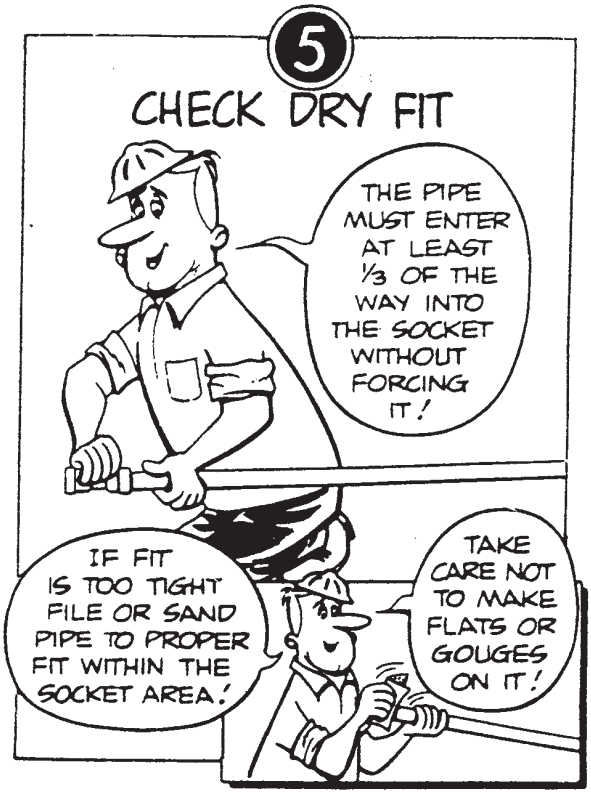
Installation Sequence - Do's & Dont's



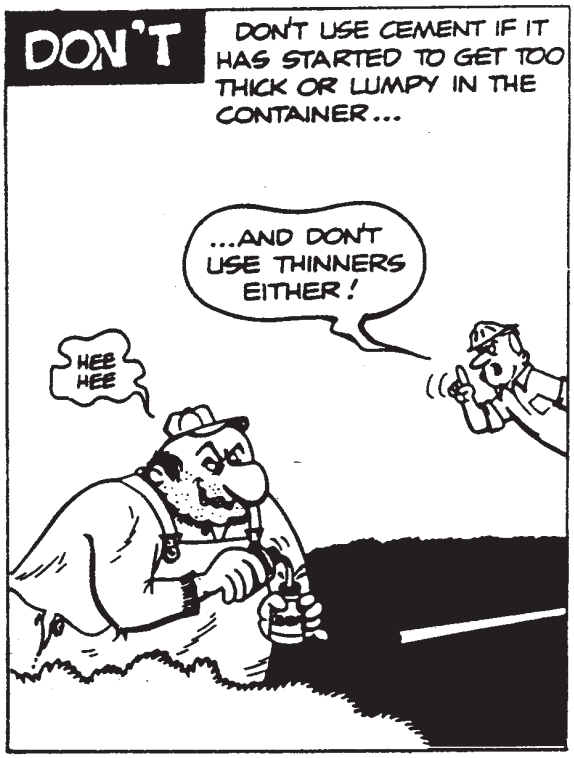


Do's & Dont's

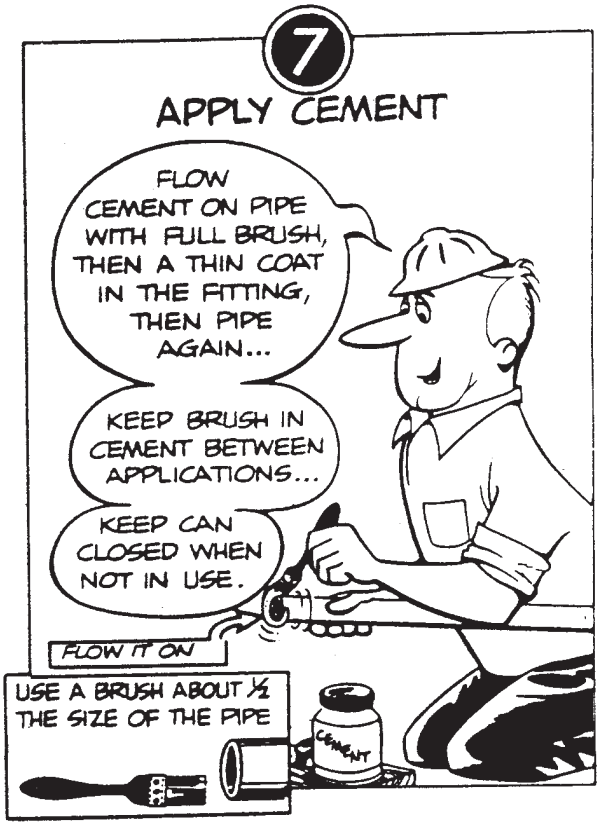

4
CLEAN PIPE WITH RAG
TO REMOVE DIRT AND MOISTURE

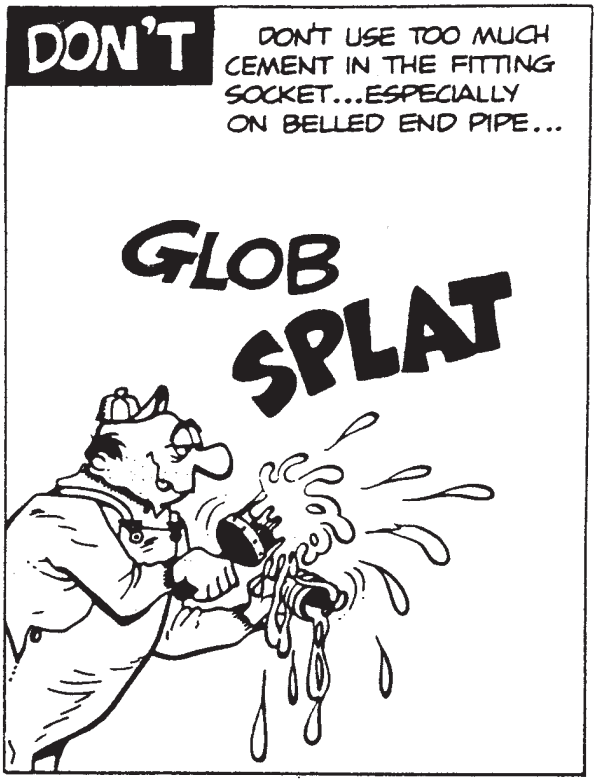

5
CHECK DRY FIT
THE PIPE MUST ENTER AT LEAST ⅓ OF THE WAY INTO THE SOCKET WITHOUT FORCING IT!
IF FIT IS TOO TIGHT FILE OR SAND PIPE TO PROPER FIT WITHIN THE SOCKET AREA!
TAKE CARE NOT TO MAKE FLATS OR GOUGES ON IT!


6
REMOVE GLOSS BY WIPING PIPE AND FITTINGS WITH A CLEANER, A PRIMER, OR SAND THEM
CLEANERS AND PRIMERS MAY BE OBTAINED FROM YOUR CEMENT SUPPLIER!


DON'T
DON'T USE CEMENT IF IT HAS STARTED TO GET TOO THICK OR LUMPY IN THE CONTAINER...
...AND DON'T USE THINNERS EITHER!
HEE HEE

Do's & Dont's


7
APPLY CEMENT
FLOW CEMENT ON PIPE WITH FULL BRUSH, THEN A THIN COAT IN THE FITTING, THEN PIPE AGAIN...
KEEP BRUSH IN CEMENT BETWEEN APPLICATIONS...
KEEP CAN CLOSED WHEN NOT IN USE.
FLOW IT ON
USE A BRUSH ABOUT ½ THE SIZE OF THE PIPE
CEMENT

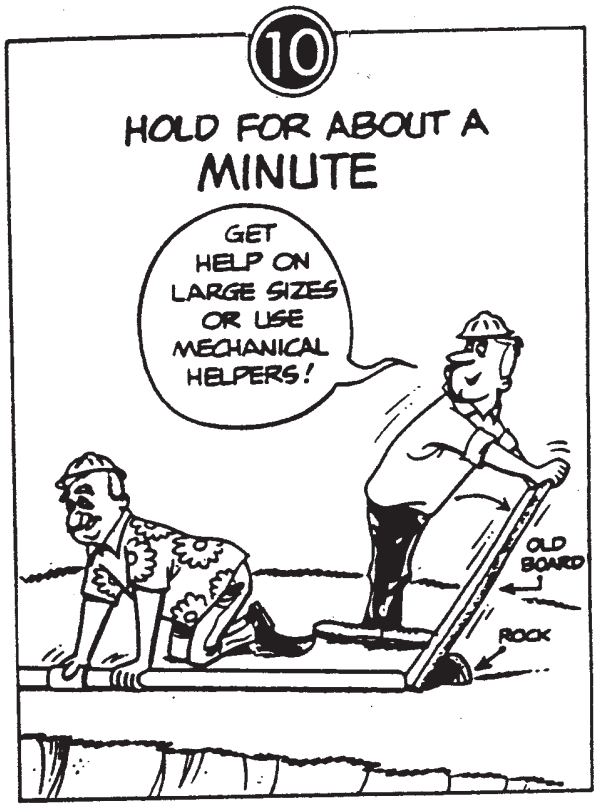

DON'T
DON'T USE TOO MUCH CEMENT IN THE FITTING SOCKET...ESPECIALLY ON BELLED END PIPE...
GLOB
SPLAT

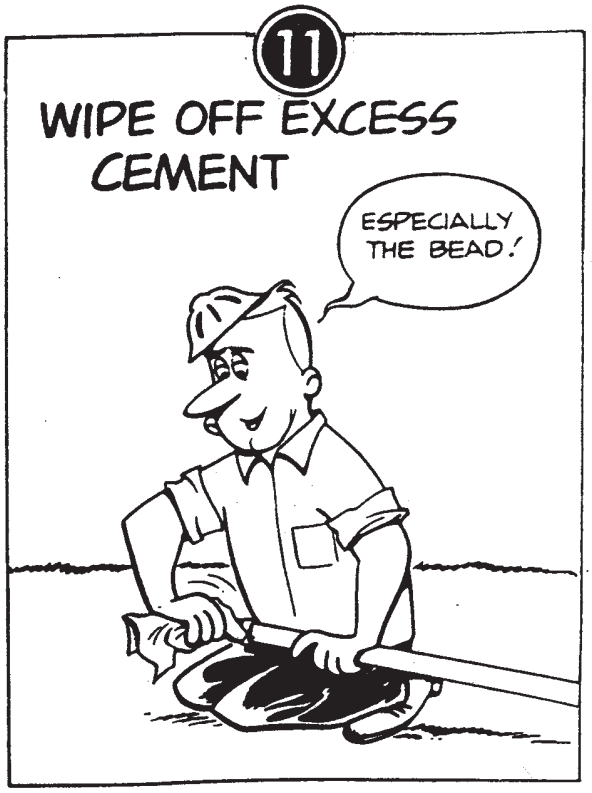

8
WORK QUICKLY
WHILE APPLYING CEMENT

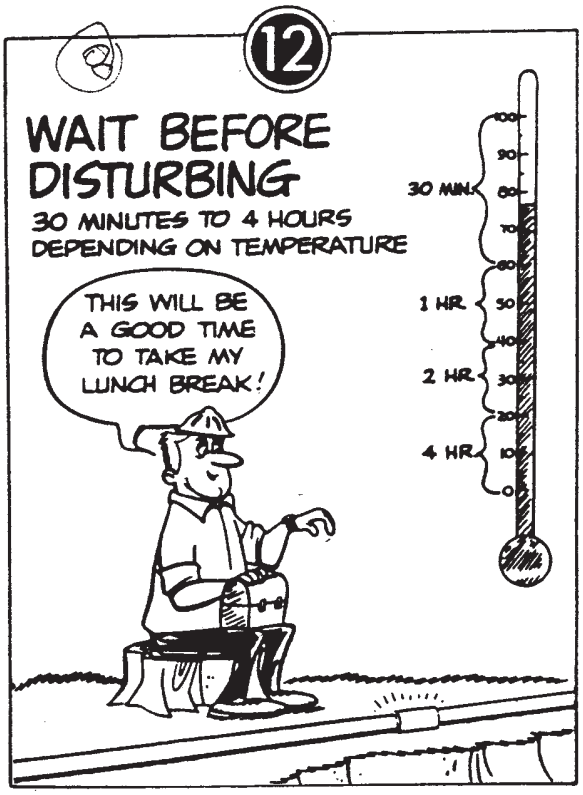

DON'T
DON'T STALL
I'LL JUST FINISH THIS AFTER LUNCH!
TOOT!

Do's & Dont's


9
ASSEMBLE IMMEDIATELY
WHILE BOTH SURFACES ARE STILL WET!


10
HOLD FOR ABOUT A MINUTE
GET HELP ON LARGE SIZES OR USE MECHANICAL HELPERS!
OLD BOARD
ROCK

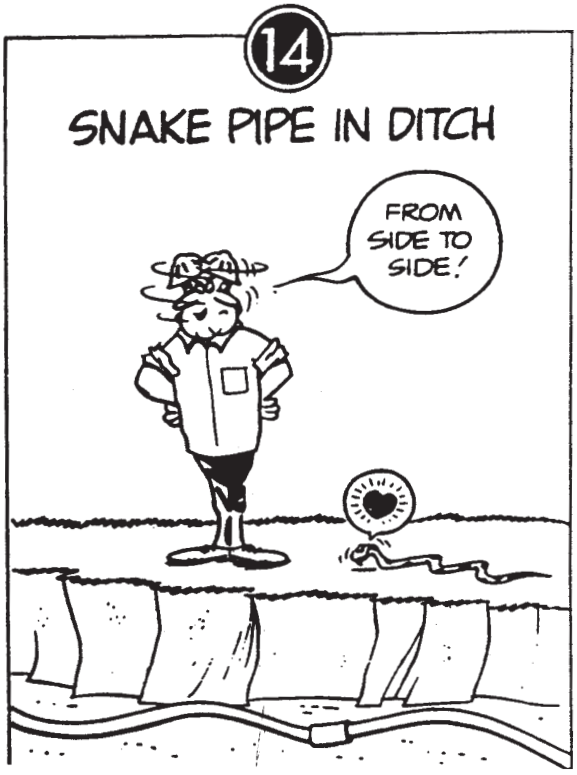

11
WIPE OFF EXCESS CEMENT
ESPECIALLY THE BEAD!

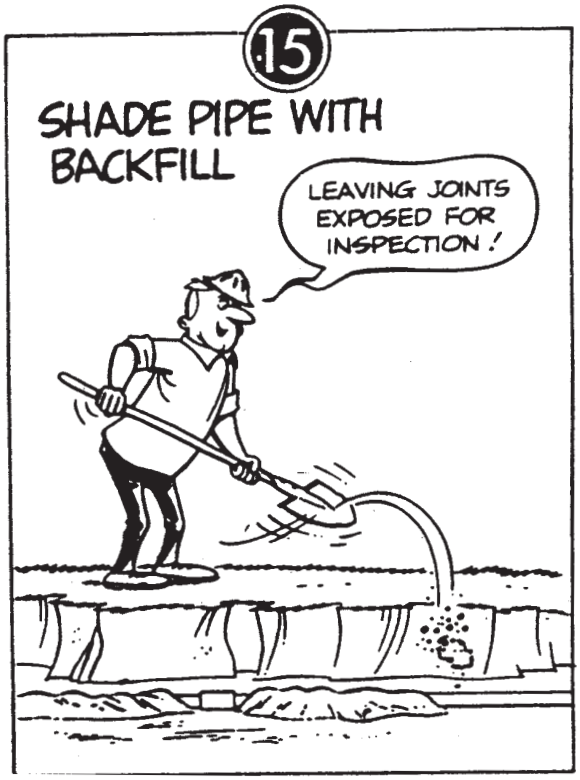

12
WAIT BEFORE DISTURBING
30 MINUTES TO 4 HOURS DEPENDING ON TEMPERATURE
THIS WILL BE A GOOD TIME TO TAKE MY LUNCH BREAK!
30 MIN.
1 HR.
2 HR.
4 HR.

Do's & Dont's

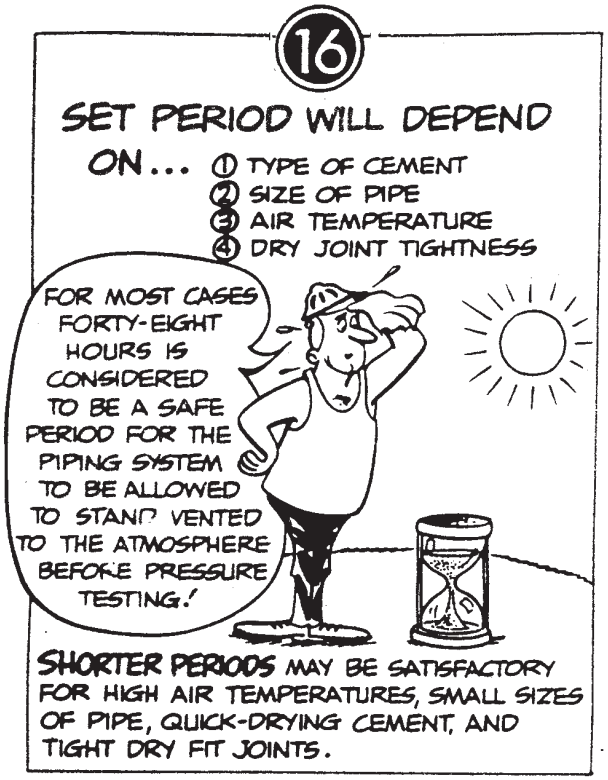

DON'T
DON'T DISTURB FRESH JOINTS !
OUCH !

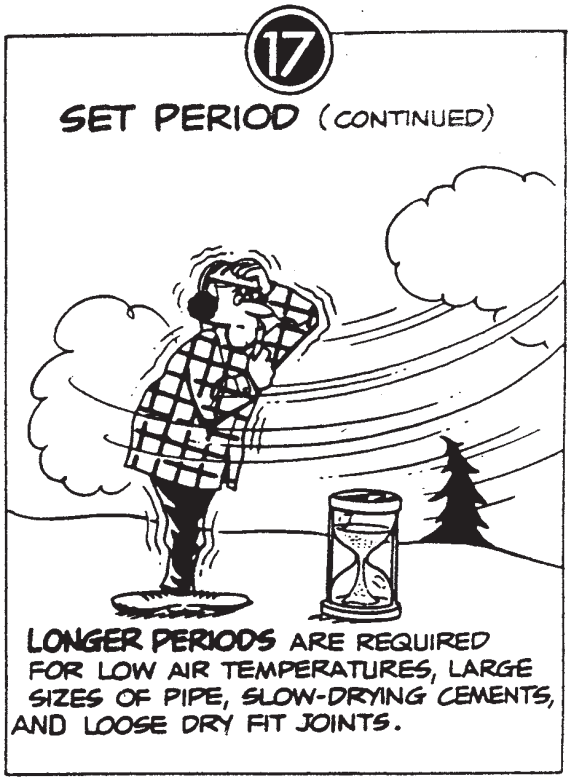

13
PUT IN DITCH CAREFULLY
..AND CAREFULLY MEANS DON'T KICK IT IN !

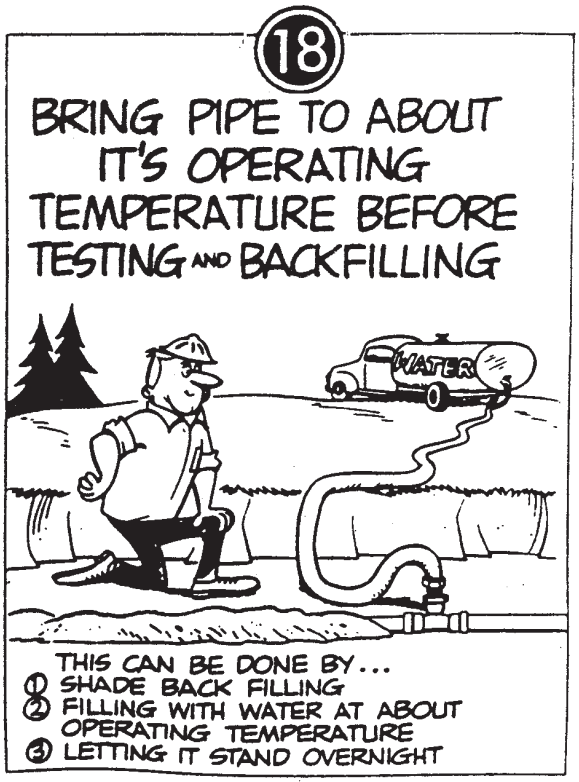

14
SNAKE PIPE IN DITCH
FROM SIDE TO SIDE!

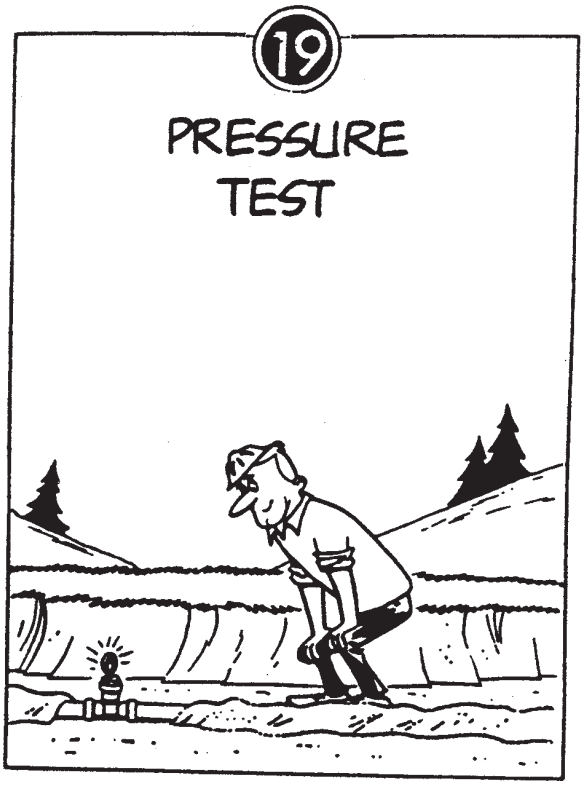

15
SHADE PIPE WITH BACKFILL
LEAVING JOINTS EXPOSED FOR INSPECTION !

Do's & Dont's


16
SET PERIOD WILL DEPEND ON...
① TYPE OF CEMENT
② SIZE OF PIPE
③ AIR TEMPERATURE
④ DRY JOINT TIGHTNESS
FOR MOST CASES FORTY-EIGHT HOURS IS CONSIDERED TO BE A SAFE PERIOD FOR THE PIPING SYSTEM TO BE ALLOWED TO STAND VENTED TO THE ATMOSPHERE BEFORE PRESSURE TESTING!
SHORTER PERIODS MAY BE SATISFACTORY FOR HIGH AIR TEMPERATURES, SMALL SIZES OF PIPE, QUICK-DRYING CEMENT, AND TIGHT DRY FIT JOINTS.


17
SET PERIOD (CONTINUED)
LONGER PERIODS ARE REQUIRED FOR LOW AIR TEMPERATURES, LARGE SIZES OF PIPE, SLOW-DRYING CEMENTS, AND LOOSE DRY FIT JOINTS.


18
BRING PIPE TO ABOUT IT'S OPERATING TEMPERATURE BEFORE TESTING AND BACKFILLING
WATER
THIS CAN BE DONE BY...
① SHADE BACK FILLING
② FILLING WITH WATER AT ABOUT OPERATING TEMPERATURE
③ LETTING IT STAND OVERNIGHT


19
PRESSURE TEST

NOTES :

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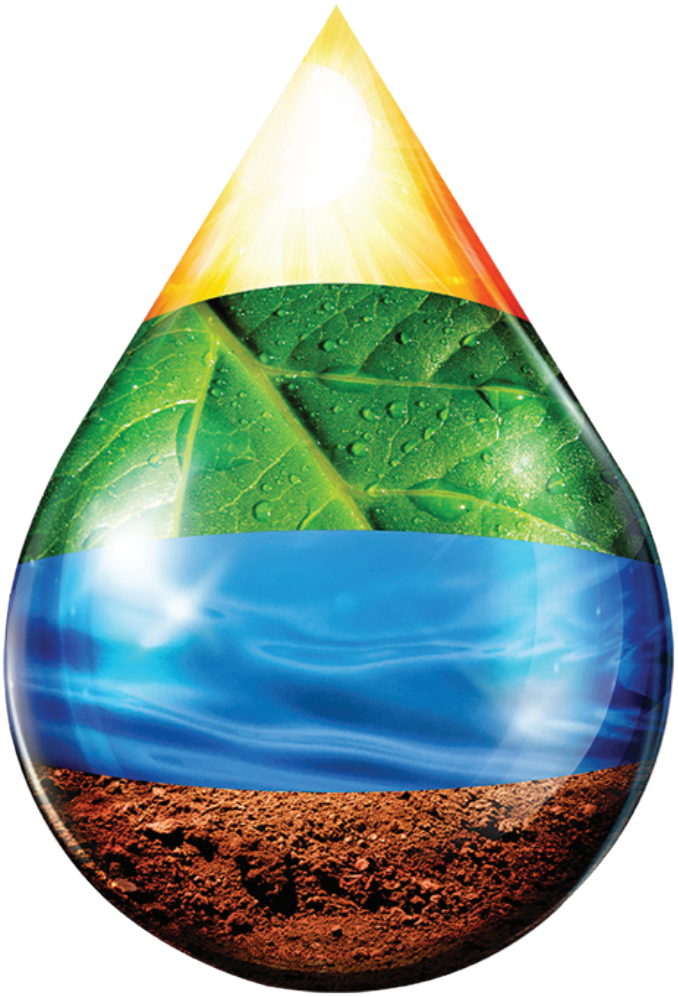

We revere these elements of our universe.
They reflect our ethos.

Yellow, Green, Blue and Brown are colours of Nature and have been embodied in our logo. They encapsulate the conviction of the Founder and the lasting commitment of the Corporation to agriculture. Jain Irrigation is striving to add value to the entire agri-chain. At the same time, they produce and process a complete range of agri-products for the exacting world markets and growing domestic clientele.

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