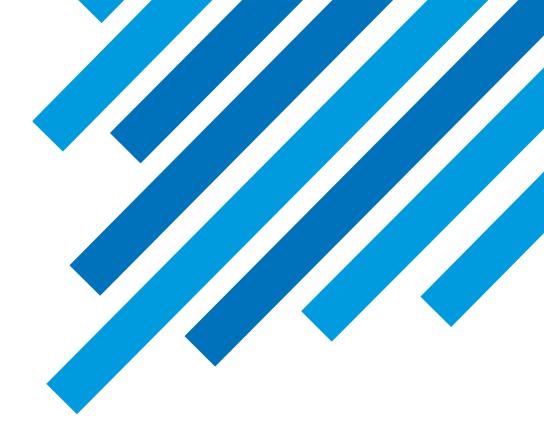


## THE TRUST OF TRUBORE



**Product Catalogue** 

**©** 1800 266 8222

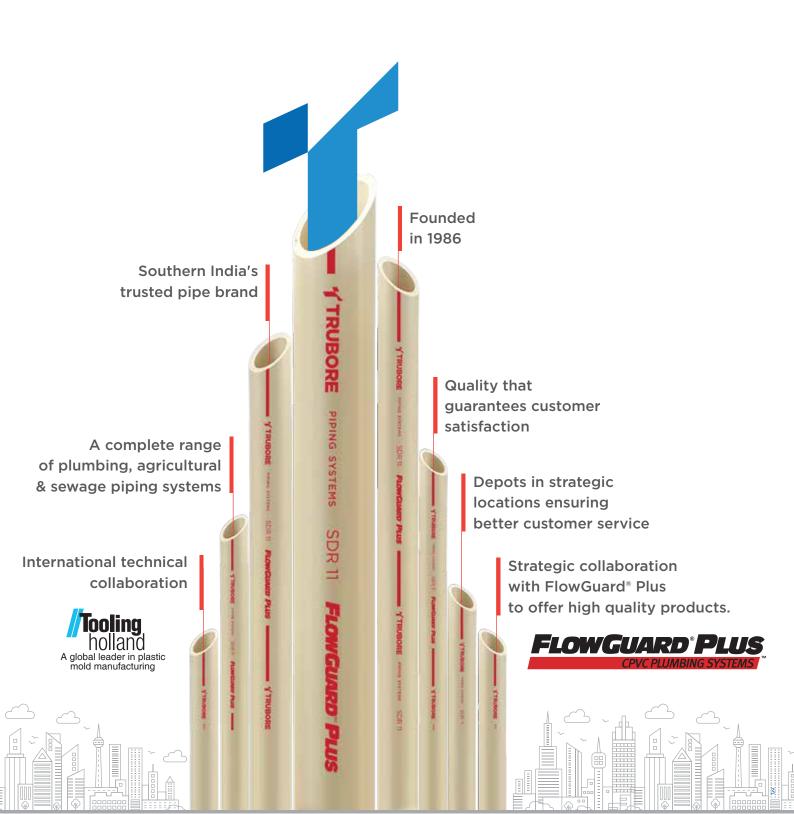


# The true choice of a nation.

The choices we make define us. They shape our present and ou r future. And when it comes to a nation, it cannot be a wrong one. We at Trubore have embraced this trust that an entire nation has placed on our name. From our nascent decades as South-India's most trusted piping company, we have cherished and practised this commitment to quality. From durable and reliable piping systems to uncompromising business ethics; we are proud to be the true choice of dealers, retailers, plumbers, farmers and households from across the nation.



## TRUBORE'S 30 YEAR LEGACY OF EXCELLENCE



# WORLD-CLASS MANUFACTURING FACILITIES















# TRUBORE **TENETS** OF TRUST.

Trubore's skilled workforce and state-of-the-art machinery ensure that our products are of the highest quality and adhere to these tenets of trust.



**Advanced machinery** for quality consistency



**Technical Collaboration** - Holland



**Pro-active R&D team** for continuous quality enhancements



**Technologically advanced**CPVC Compound



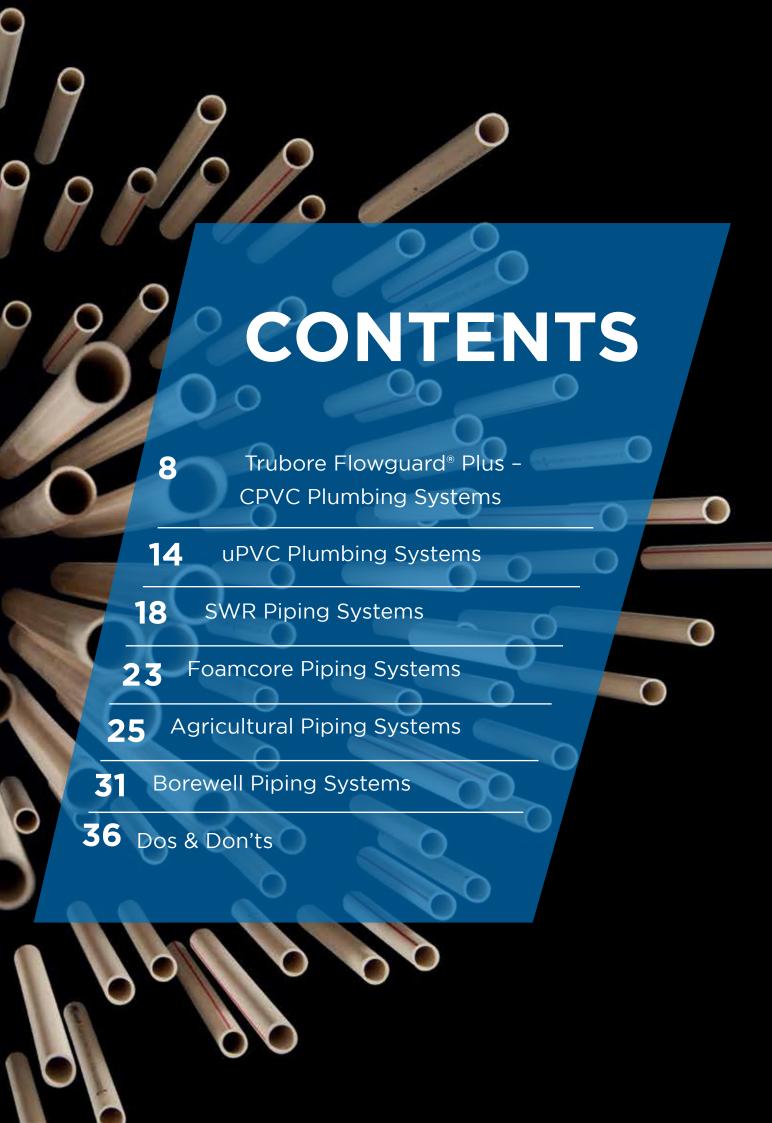
Superior packaging quality across all products



**State-of-the-art**Manufacturing Technology



Southern India's most trusted brand since 1986



# TRUBORE FLOWGUARD® PLUS CPVC PLUMBING SYSTEMS



# WORLD'S NO. 1\* CPVC PLUMBING SYSTEM



The best-in-class CPVC plumbing systems that can deflect heat even at 110°C



#### **PIPES**

15 to 50mm-SDR 11 & 13.5 as per IS:15778 65 to 250mm-Sch 40 & 80 as per ASTM F 441

#### **FITTINGS**

15 to 50mm- SDR 11 as per ASTM D 2846 65 to 100mm- Sch 80 as per ASTMF439 150mm- Sch 40 as per ASTM F438

#### FLANGE

As per ASTM-D4024 and ASME B 16.5

#### **PRODUCT RANGE**

**FEATURES** 

Pipes: 15mm to 250mm (1/2" to 10") Fittings: 15mm to 150mm (1/2" to 6")

\*FlowGuard® Plus is no. 1 based on the length of pipes installed globally

# OWEST OF THE REAL PROPERTY.

#### Lowest Bacterial Growth

Helps in boosting the durability to withstand higher Ensuring the water we const temperatures for the application areas which is safe for drinking.



#### **Consistent Product Quality**

Trubore FlowGuard\* Plus is manufactured from the World's No. 1 CPVC compound and stringent quality checks ensure that there is no variation in the products.

Heat Deflection at 110°C

#### **APPLICATION**



MALLS



HOSPITALS



RESIDENTIAL



HOTELS



COMMERCIAL



#### **MAJOR ADVANTAGES**

- Suitable for use up to 93°C
- 25% higher pressure bearing capacity
- · Low thermal expansion
- Fire retardant/resistant

- UV resistant
- High tensile andimpact strength
- Corrosion resistant
- Peace of mind assured

#### **JOINTING METHOD**

- Solvent Joint
- Threaded Joint: Plastic & metal threaded fittings to be used for transition joints.

#### **PIPE DIMENSIONS**

			Outside			301	C- 11		3DR - 13.3						
	Nomin	al Bore	Dian	neter	Wall Th	ickness	Working	Pressure	Wall Th	ickness	Working	Pressure			
			Min	Max	Min	Max	At 27°C	At 82°C	Min	Max	At 27°C	At 82°C			
	(mm)	Inch	(mm)	(mm)	(mm)	(mm)	(Kg/cm <sup>2</sup> )	(Kg/cm²)	(mm)	(mm)	(Kg/cm²)	(Kg/cm²)			
	15	1/2	15.80	16.00	1.70*	2.20*	28.14	6.93	1.40*	1.90*	22.22	5.60			
As per IS IS//8 —	20	3/4	22.10	22.30	2.00	2.50	28.14	6.93	1.70	2.20	22.22	5.60			
	25	1	28.50	28.70	2.60	3.10	28.14	6.93	2.10	2.60	22.22	5.60			
ber 15	32	1 1/4	34.80	35.00	3.20	3.70	28.14	4 6.93 2.60 3.10		3.10	22.22	5.60			
As b	40	1 1/2	41.20	41.40	3.80	4.30	28.14	6.93	3.10	3.10 3.60		5.60			
	50	2	53.90	54.10	4.90	5.50	28.14	6.93	4.00	4.60	22.22	5.60			
						Sched	ule 40			Sched	ule 80				
	(mm)	Inch	(mm)		Min	Max	At 23°C	At 82°C	Min	Max	At 23°C	At 82°C			
	65	2 1/2	73.00 (	+/-0.18)	5.16	5.77	21.10	5.30	7.01	7.85	29.57	7.34			
<u>.</u>	80	3	88.90 (	+/-0.20)	5.49	6.15	18.25	4.58	7.62	8.53	26.00	6.32			
г - -	100	4	114.30 (	+/-0.23)	6.02	6.73	15.49	3.87	8.56	9.58	22.53	5.60			
2	150	6	168.30 (	+/-0.28)	7.11	7.79	12.64	3.16	10.97	12.29	19.68	4.89			
	200	8	219.10 (	219.10 (+/-0.38)		9.17	11.21	2.85	12.70	14.22	17.54	4.18			
	250	10	273.10 (	+/-0.38)	9.27	10.39	9.89	2.44	15.06	16.86	16.21	3.87			

#### NOTE:

- 1. Dimensions with '\*' are not a function of SDR.
- 2. Fittings are suitable for corresponding pipe pressure rating.



#### TRUBORE FLOWGUARD® PLUS VS REGULAR CPVC

The many reasons to choose Trubore FlowGuard® Plus over regular CPVC products:

TRUBORE FLOWGUARD® PLUS CPVC	OTHER REGULAR CPVC
Capable of withstanding temperatures of 110°Celsius for application areas which demand very hot water flow	Cannot withstand temperature more than 100° Celsius
50+ years of proven technology	New and unproven technology
Inventors and innovators of CPVC	Technology still being researched & attempting to establish the right products
Highest number of projects in the world and India	Trying to duplicate FlowGuard® Plus to capture markets
Finished compound for manufacturing resulting in consistent quality	Basic resin provided resulting in inconsistent quality of end product
In flattening test, no cracks or damage observed ensuring best quality of end products	The product gets damaged easily
It withstands 4 hrs of pressure test to confirm higher life of more than 50 years	It does not even withstand 3 hrs raising questions about the longevity of the system
Higher pressure bearing capacity in CTS sizes by 25% HDB compound from Lubrizol	Lower by 25% in CTS sizes

#### PRESSURE BEARING CAPACITY

Trubore FlowGuard® Plus offers a proven high pressure bearing capacity even at 82°C which saves cost and energy in the long run.

#### Other CPVC Products **Trubore FLOWGUARD® Plus PRESSURE RATINGS** PRESSURE RATINGS **ASTM CELL CLASS ASTM CELL CLASS** 8.79 kg/cm2 @ 82°C 7.03 kg/cm2 @ 82°C SDR-11 23448 23447 28.1 kg/cm2 @ 23°C 28.1 kg/cm2 @ 23°C **PRESSURE RATINGS ASTM CELL CLASS ASTM CELL CLASS PRESSURE RATINGS** 7.03 kg/cm2 @ 82°C 5.62 kg/cm2 @ 82°C **SDR-13.5** 23448 23447 22.5 kg/cm2 @ 23°C 22.5 kg/cm2 @ 23°C

\*We have upgraded Trubore FlowGuard® piping from cell class of 23447 to 23448 which will enable it to withstand higher temperatures for the application areas which demand very hot flow



#### PIPE DERATING FACTOR

Trubore FlowGuard® Plus has a better derating factor to handle increased temperatures,

#### TEMPERATURE DERATING FACTORS AT WORKING PRESSURE

WORKING TEMPERATURE	PIPE DERATING	FACTOR
°C	Trubore FlowGuard® Plus	Other CPVC
23-27	1.00	1.00
32	0.91	0.91
38	0.83	0.82
49	0.70	0.65
60	0.57	0.50
71	0.44	0.40
82	0.31	0.25

#### LONGER SHELF-LIFE. STRONGER BOND.

Trubore in association with E-Z Weld, world leaders in solvent cements, bring to you the best-in-class adhesive. This solvent cement is fast-setting making the installation process quick and easy.



World's best resin from Lubrizol manufactured exclusively for FlowGuard® Plus



NSF certified solvent cement



3-year shelf life (unopened cans)



Adherence to the parameters of ASTM D2846 and F493



For copper tube size up to 2" diameter (50mm) interference fit



Sets faster resulting in quicker installation



Low VOC







#### TRUBORE FLOWGUARD® PLUS CPVC FITTING RANGE

## COUPLER



1/2" & 2"

#### **ELBOW**



1/2" & 2"

#### ELBOW 45°



1/2" & 2"

#### **EQUAL TEE**



1/2" to 2"

#### **FOUR WAY TEE**



1/2" & 3/4"

#### **REDUCING TEE**



20 X 15mm to 50 X 40mm (3/4" x 1/2" to 2" x 1 1/2")

#### REDUCING ELBOW



20 X 15mm to 25 X 20mm (3/4" x 1/2" & 1" x 3/4")

## REDUCING MALE THREADED ADAPTOR (MTA)



20 x 15mm & 25 x 20mm (3/4" x 1/2" & 1 X 3/4")

**END CAP** 



1/2" to 2"

## MALE THREADED ADAPTOR (MTA)



1/2" to 2"

#### **REDUCER**



20 X 15mm to 50 X 40mm (3/4" x 1/2" to 2" x 1 1/2")

#### REDUCING BUSH



20 x 15mm to 150 x 100mm (3/4" x 1/2" to 6" x 4")

## FEMALE THREADED ADAPTOR (FTA)



1/2" to 2"

#### **CROSS OVER**



1/2", 3/4" & 1"

## CROSS OVER (MOULDED)



1/2", 3/4" & 1"

#### UNION



15 to 50mm (1/2" to 2")

#### TANK CONNECTOR (PLAIN)



20 to 25mm (3/4" to 1")

## TANK CONNECTOR MOULDED (SHORT BODY)



15 to 50mm (1/2" to 2")

#### **FLANGE WITH SOCKET**



1" to 4"

#### **BLIND FLANGE**



2 1/2" & 4"



#### **FABRICATED BEND**



20 X 15mm (3/4" x 1/2")

#### TRANSITION BUSH SDR (11)



15 & 20mm (1/2" & 3/4")

#### **FEMALE THREADED** ADAPTOR (BRASS INSERT) **SDR (11)**



15 to 50mm (1/2" to 2")

#### **FEMALE THREADED ADAPTOR (HEAVY)\*** (BRASS INSERT)



15 to 50mm (1/2" to 2")

#### MALE THREADED ADAPTOR (BRASS INSERT)



15 to 50mm (1/2" to 2")

#### **MALE THREADED ADAPTOR (HEAVY)\*** (BRASS INSERT)



15 to 50mm (1/2" to 2")

#### FEMALE THREADED TEE (BRASS INSERT) SDR (11)



15 to 32mm (1/2" to 1 1/4")

#### **FEMALE THREADED ELBOW** (BRASS INSERT)



15 to 32mm (1/2" to 1 1/4")

#### **SOLVENT CEMENT**

#### **TUBE**



118ml to 946ml

#### TIN



29.5ml to 59ml

#### **CPVC FITTINGS**

#### **BALL VALVES**



1/2" & 2"

#### **POWDER COATED METAL CLAMP**



1/2" to 2"

#### CONCEALED VALVE



1/2" & 2"

#### **EXTENDED END PLUG**



1/2" to 2"

Images shown here are for representation purpose only, actual product may vary.

## **uPVC PLUMBING SYSTEMS**





## CHOOSE LEAD-FREE. LIVE CAREFREE.

Corrosion-resistant uPVC pipes and fittings for safe drinking water.



#### **PIPES**

Sch 40 & 80 As per ASTM D - 1785 (Plain Ended).

#### FITTINGS

1/2"to 6"-Sch 40 as per ASTM D - 2466. 1/2" to 4"-Sch 80 as per ASTM D - 2467.

#### PRODUCT RANGE

Pipes: 15mm to 250mm (1/2" to 10") Fittings: 15mm to 150mm (1/2" to 6")



#### **EXTENSIVELY USED IN**







SWIMMING POOLS RESIDENTIAL

**INDUSTRY** 



#### **APPLICATION**

- Indoor and outdoor installations of cold water plumbing lines.
- Residential complexes & commercial buildings.
- · Public utilities & swimming pools.

- RO & DM water plants.
- · For concealed, down take and terrace looping.

#### **MAJOR ADVANTAGES**

- Lead-free material ensures safe drinking water.
- Exceptional corrosion resistance ensures constant flow over its lifetime.
- Lightweight but strong.
- Self-extinguishing (Does not support combustion
- High impact resistance. Ensures high quality performance at lower temperatures.
- Fast and easy installation.
- · Long life.

#### JOINTING METHOD

- Solvent Joint
- · Threaded Joint: For transition joints-fittings with plastic threads and metal threaded inserts.

#### PIPE DIMENSIONS

		Pressure fo	or Pipes (Solvent We	eld) at 23°C				
			Sched	ule 40	Schedule 80			
Nomin	al Bore	Outside Diameter	Wall Thickness	Working Pressure	Wall Thickness	Working Pressure		
(Inch)	(mm)	Kg/cm <sup>2</sup>	(mm)	Kg/cm <sup>2</sup>	(mm)	Kg/cm <sup>2</sup>		
1/2	15	21.34 ± 0.10	2.77 + 0.51	42.20	3.73 + 0.51	59.75		
3/4	20	26.67 ± 0.10	2.87 + 0.51	33.75	3.91 + 0.51	48.50		
1	25	33.40 ± 0.13	3.38 + 0.51	31.60	4.55 + 0.53	44.25		
1 1/4	32	42.16 ± 0.13	3.56 + 0.51	26.00	4.85 + 0.58	36.60		
11/2	40	48.26 ± 0.15	3.68 + 0.51	23.25	5.08 + 0.61	33.00		
2	50	60.32 ± 0.15	3.91 + 0.51	19.65	5.54 + 0.66	28.10		
2 1/2	65	73.02 ± 0.18	5.16 + 0.61	21.10	7.01 + 0.84	29.55		
3	80	88.90 ± 0.20	5.49 + 0.66	18.25	7.62 + 0.91	26.00		
4	100	114.30 ± 0.23	6.02 + 0.71	15.50	8.56 + 1.02	22.50		
6	150	168.28 ± 0.28	7.11 + 0.86	12.60	10.97 + 1.32	19.65		
8	200	219.10 ± 0.38	8.18 + 0.99	11.20	12.70 + 1.52	17.50		
10	250	273 ± 0.38	9.27 + 1.12	9.90	15.06 + 1.80	16.20		

#### Note:

- For threaded pipes & fittings, the working pressure at 23°C shall be considered as 50% rating.
- Pressure rating at uPVC pipes & fittings is temperature related. Derating factor shall be applied for applications at higher temperatures.



Working	pressure for Fittir	ngs (Solvent Welc	l) at 23°C		
		Schedule 40	Schedule 80		
Nomin	al Bore	Working	Pressure		
(inch)	(mm)	Kg/cm²	Kg/cm <sup>2</sup>		
1/2	15	25.30	35.85		
3/4	20	20.25	29.10		
1	25	18.95	26.55		
11/4	32	15.60	21.95		
1 1/2	40	13.95	19.80		

Working	pressure for Fittir	ngs (Solvent Welc	l) at 23°C						
		Schedule 40 Schedule							
Nomin	al Bore	Working	Pressure						
(inch)	(mm)	Kg/cm²	Kg/cm²						
2	50	11.75	16.85						
2 1/2	65	-	17.70						
3	80	-	15.60						
4	100	-	13.50						
6	150	7.50	-						

 $\textbf{Note:} \ \text{Working pressure for metal insert fittings is 15 Kg/cm}^2$ 

#### **FITTINGS RANGE**

TITTINGS KANGE			
COUPLER	ELBOW	ELBOW 45°	EQUAL TEE
15mm to 150mm (1/2" to 6")	15mm to 150mm (1/2" to 6")	15 to 50mm (1/2" to 2")	15mm to 150mm (1/2" to 6")
REDUCING TEE	FOUR WAY TEE	END CAP	MALE THREADED ADAPTOR
20 X 15mm to 80 X 65mm (3/4"x 1/2" to 3" x 2 ½")	15mm (1/2")	150mm (6")	15 to 100mm (1/2" to 4")
FEMALE THREADED ADAPTOR	REDUCER	REDUCING BUSH	CROSS OVER
15 to 100mm (1/2" to 4")	25 X 15mm to 40 X 32mm (1"x 1/2" to 1 ½" x 1 ¼")	20 X 15mm to 50 X 40mm (3/4" x 1/2" to 2" x 1 1/2")	15 to 25mm (1/2" to 1")
UNION	TANK CONNECTOR	TANK CONNECTOR (SHORT)	FLANGE WITH SOCKET

15 to 50mm (1/2" to 2") 25 to 100mm (1/2" to 4")

20 & 25mm (3/4" & 1")

15 to 50mm (1/2" to 2")



#### **BLIND FLANGE**



65 & 100mm (2 1/2" & 4")

#### **FABRICATED BEND**



15 to 50mm (1/2" to 2")

## FEMALE THREADED ADAPTOR (BRASS INSERT)



15 to 50mm (1/2" to 2")

## MALE THREADED ADAPTOR (BRASS INSERT)



15 to 65mm (1/2" to 2 1/2")

## FEMALE THREADED ELBOW (BRASS INSERT)



15mm to 25 X 15mm (1/2" to 1"x 1/2")

#### FEMALE THREADED TEE (BRASS INSERT)



20 X 15mm to 25 X 15mm (3/4"x 1/2" to 1"x 1/2")

#### BALL VALVE



15 to 50mm (1/2" & 2")

Images shown here are for representation purpose only, actual product may vary.

#### **SOLVENT CEMENT**

#### TIN



50ml to 1000ml



# SAY GOODBYE TO LEAKAGES.

Leakproof SWR piping systems wi world-class triple lip rubber ring.



PIPES
As per IS:13592
FITTINGS

As per IS:14735.

#### **PRODUCT RANGE**

Pipes: 40mm to 160mm

Fittings: Solvent - 40mm to 160mm

Rubber Ring - 75mm, 90mm, 110mm & 160mm



#### TYPES OF PIPE AVAILABLE:

TYPE A



VENTILATION PIPE WORK

RAIN WATER DISCHARGE & HARVESTING

TYPE B

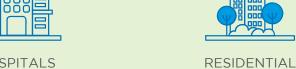


SOIL AND WASTE DISCHARGE SYSTEM



#### **EXTENSIVELY USED IN**







HOSPITALS

#### **APPLICATION**

• Inside & outside building drainage systems including ventilation.

- Rain water discharge & harvesting for residential and commercial buildings/complexes.
- Industrial buildings and public utilities.

#### **MAJOR ADVANTAGES**

- Lightweight but strong.
- Compatible with other drainage products.
- Easy to install.
- · Smooth bore.
- \*\*Trubore world-class seals

- · Cost-effective.
- World-Class Seals ensures long term sealing performances against leakages.\*\*
- · Long life.

#### **JOINTING METHOD**

- Elastomeric Sealing Ring
- Solvent Cement Joint.

#### PIPE DIMENSIONS

Dina Cina (wawa)	Mean (	Dutside	Wall Thickness (mm)									
Pipe Size (mm)	Diameto	er (mm)	Тур	e 'A'	Type 'B'							
	Min	Max	Min	Max	Min	Max						
40	40.00	40.30	1.80	2.20	3.20	3.80						
50	50.00	50.30	1.80	2.20	3.20	3.80						
63	63.00	63.30	1.80	2.20	3.20	3.80						
75	75.00	75.30	1.80	2.20	3.20	3.80						
90	90.00	90.30	1.90	2.30	3.20	3.80						
110	110 110.00		2.20	2.70	3.20	3.80						
160	160.00	160.50	3.20	3.80	4.00	4.60						



#### WORLD CLASS TRIPLE LIP RING

#### COUPLER



75mm to 160mm

#### BEND 87.5 °



75mm to 160mm

#### **BEND WITH DOOR**



75mm to 160mm

BEND 45°

75mm to 160mm

SINGLE TEE



75mm to 160mm

SINGLE TEE WITH DOOR



75mm to 160mm

**REDUCING TEE** 



110mm X 75mm & 160mm X 110mm

**REDUCING TEE WITH DOOR** 



110mm X 75mm & 160mm X 110mm

**REDUCER** 



110mmx75mm & 160mmx110mm

**CLEANSING PIPE** 



75mm to 160mm

#### SINGLE Y



75mm to 160mm

**SINGLE Y WITH DOOR** 



75mm to 160mm

**REDUCING Y** 



110mm X 75mm

REDUCING Y WITH DOOR



110 x 75mm

DOUBLE Y



75mm & 110mm

**DOUBLE Y WITH DOOR** 



75mm & 110mm

#### **SOLVENT JOINT**

COUPLER



75mm & 160mm

BEND 87.5°



75mm to 160mm

BEND WITH DOOR



75mm to 160mm

BEND WITH DOOR 90° (HY)



50mm to 63mm



#### BEND WITH DOOR (D/S)



75mm to 110mm

#### BEND 45°



75mm to 160mm

#### BEND 45° (D/S)



40mm to 160mm

#### SINGLE TEE



75mm to 160mm

#### SINGLE TEE WITH DOOR



75mm to 160mm

#### SINGLE T WITH DOOR (HY)



63mm

SINGLE T WITH DOOR (D/S)



75mm to 110mm

**DOUBLE TEE** 



75mm & 110mm

**DOUBLE TEE WITH DOOR** 



75mm & 110mm

**REDUCING TEE** 



110mm X 75mm & 160mm X 110mm

#### REDUCING TEE WITH DOOR



110mm X 75mm & 160mm X 110mm

REDUCER



110mm X 75mm & 160mm X 110mm

**CLEANSING PIPE** 



75mm to 160mm

SINGLE Y



50mm to 160mm

#### SINGLE Y WITH DOOR



50mm to 160mm

**DOUBLE Y** 



75mm & 110mm

#### **DOUBLE Y WITH DOOR**



75mm & 110mm

#### REDUCING Y



110mm X 75mm

#### **REDUCING Y WITH DOOR**



110mm X 75mm

**ACCESS / SOCKET PLUG\*** 



50mm to 160mm

#### **VENT COWL**



63mm & 160mm

PIPE CLIP<sup>4</sup>



75mm to 160mm

Images shown here are for representation purpose only, actual product may vary.

#### **ROYAL FITTING RANGE - SOLVENT JOINT**

#### BEND 45°



75mm & 110mm

#### **TRAPS**

MULTI FLOOR TRAP (WITH JALI) 4" HT



110mm X 75mm

MULTI FLOOR TRAP (WITHOUT JALI) 4" HT



110mm X 75mm

MULTI FLOOR TRAP (WITH JALI) 4" HT WITH 3 SOCKETPLUG



110mm X 75mm

MULTI FLOOR TRAP (WITHOUT JALI) 4" HT WITH 3 SOCKETPLUG



110mm X 75mm

NAHANI TRAP WITH JALI



110mm X 75mm

NAHANI TRAP WITHOUT JALI



110mm X 75mm

P TRAP



110mm X 110mm & 125mm X 75mm

P TRAP (SHORT)

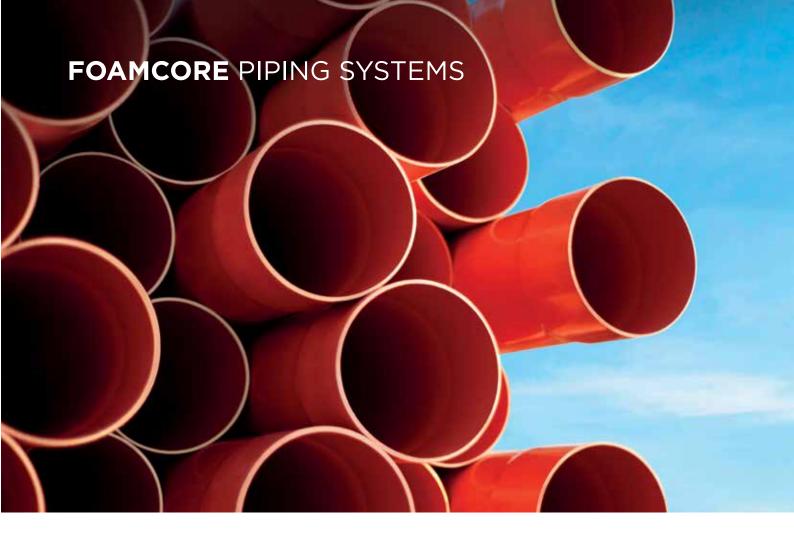


110mm X 110mm

#### **ROUND JALI**



110mm X 110mm



# CARRIES THE WEIGHT. PERFORMS GREAT!

High load-bearing Foamcore Piping Systems for durable and effective drainage.



**PRODUCT RANGE**Pipes: 110mm to 315mm



**EXTENSIVELY USED IN** 



WASTE DRAINAGE LINE

#### **APPLICATION**

•Underground drainage.

The outer and innermost layers give the pipe a great load bearing capacity, the middle layer provides firmness to the overall pipe structure.

#### **MAJOR ADVANTAGES**

- Lighter than solid wall PVC but stronger.
- Easy underground installation.
- Compatibility with other drainage and sewerage products.
- · Cost-effective.
- Long life due to improved strength.
- · Anti rodent

#### **JOINTING METHOD**

- Solvent Joint
- Elastomeric Sealing Ring



#### PIPE DIMENSIONS

Pipe Size	Mean (	Outside	Wall Thickness (mm)										
(mm)	Diamet	er (mm)	SN2 (S	SDR 51)	SN4 (S	SDR 41)	SN8 (SDR 34)						
	Minimum Maximum		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum					
110	110.00	110.40	-	-	2.80	3.30	3.20	3.70					
160	160.00	160.50	3.20	3.70	4.00	4.60	4.70	5.40					
200	200.00	200.60	3.90	4.50	4.90	5.60	5.90	6.70					
250	250.00 250.80		4.90	5.60	6.20	7.00	7.30	8.30					
315	315.00	316.00	6.20	7.00	7.70	8.70	9.20	10.40					



## STANDS STRONG. LASTS LONG.

Pressure-resistant pipes for Agricultural Piping Systems.



#### **PRODUCT RANGE**

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

Fabricated fittings: 20mm to 315mm



**EXTENSIVELY USED IN** 



**AGRICULTURE** 

#### **APPLICATION**

#### IN AGRICULTURE

- · Water supply and distribution schemes.
- · Irrigation.

#### **OTHERS**

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

#### **MAJOR ADVANTAGES**

- Lightweight, easy to transport, store, handle and install.
- Smooth bore ensures higher flow compared to G.I. pipes & fittings of the same size. No clogging. Saves operational cost.
- Quick to install, Solvent cement based jointing system.
- Corrosion resistance uPVC is rustproof material, therefore

bore diameter remains constant, ensuring constant flow over its lifetime.

- Long working life (if operated under normal/recommended conditions).
- Cost effective. Added value for your money.

#### **JOINTING METHOD**

- · Solvent Joint.
- · Threaded Joint.

#### NOTE:

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

#### **SPECIFICATIONS**

Specifications	Fittings	Pipes				
Material	Unplasticized Polyvinyl Chloride (uPVC)	Unplasticized Polyvinyl Chloride (uPVC)				
Colour	Dark Grey	Light Grey				
Reference Standards	IS 7834 : 1987	IS 4985 : 2000				
	Up to 60° C - Continuous	Up to 60°C - Continuous				
Working Temperature of Fluids	Up to 90° C - Short time	Up to 90°C - Short time				
	Up to 3 mins	Up to 3 mins				
Working Pressure (kg/cm²)	4, 6, 10 & 16	2.5, 4, 6, 8, 10 & 12.5				
End Connections	Solvent sockets, Threads (For transition fittings)	Solvent sockets				

NOTE: Note: ISI & Non-ISI pipes & fittings are available.



#### PROPERTIES OF UPVC PIPES

#### **MECHANICAL**

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

**THERMAL** 

Coefficient of Linear Expansion 0.08 mm/M°C

Vicat Softening Temperature >78°C
Max. Operating Temperature 60°C

**PHYSICAL** 

Water Absorption <4mg/cm<sup>3</sup>

Agricultural Pipes are manufactured in accordance with IS:4985 covering a complete range from 20mm to 400mm. They are available in pressure ratings of 2.5 kg/cm², 4 kg/cm², 6 kg/cm², 8 kg/cm², 10 kg/cm² & 12.5 kg/cm² as defined in IS:4985. These pipes are provided with plain socket and are suitable for solvent cement jointing.

#### STANDARDS, QUALITY CONTROL & TESTING

Manufacturing & testing is done in accordance with IS: 4985 - 2000.

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

## HAZEN - WILLIAM'S FLOW COEFFICIENT COMPARISON

Pipe Material PVC A.C. G.I. C.I.

130

110

100

Their main application is in agriculture -

Flow Coefficient

For water supply, drip-irrigation & sprinkler lines as well as for drinking water distribution.

150

However, these can also be used in cable ducting, ventilation pipelines, slurry lines etc.

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

#### PIPE DIMENSIONS

Nominal			0.1.1		Wall Thickness												Mean Socket	
Outside Diameter (Nominal Size) (in mm)	Out Dian	Mean Outside Diameter (1in mm)		Outside Diameter at any point (in mm)		Class 1 0.25 MPa 2.5 Kg/cm²		Class 2 0.40 MPa 4.0 Kg/cm²		Class 3 0.60 MPa 6.0 Kg/cm²		Class 4 0.80 MPa 8.0 Kg/cm²		ss 5 MPa g/cm²	Class 6 1.25 MPa 12.5 Kg/cm²		Internal Diameter of Mid Point of Socket Length	
20	20.0	20.3	19.5	20.5	-	-	-	-	-	-	-	-	1.1	1.5	1.4	1.8	20.1	20.3
25	25.0	25.0	24.5	25.5	-	-	-	-	-	-	1.2	1.6	1.4	1.8	1.7	2.1	25.1	25.3
32	32.0	32.3	31.5	32.5	-	-	-	-	-	-	1.5	1.9	1.8	2.2	2.2	2.7	32.1	32.3
40	40.0	40.3	39.5	40.5	-	-	-	-	1.4	1.8	1.8	2.2	2.2	2.7	2.8	3.3	40.1	40.3
50	50.0	50.3	49.4	50.6	-	-	-	-	1.7	2.1	2.3	2.8	2.8	3.3	3.4	4.0	50.1	50.3
63	63.0	63.3	62.2	63.8	-	-	1.5	1.9	2.2	2.7	2.8	3.3	3.5	4.1	4.3	5.0	63.1	63.3
75	75.0	75.3	74.1	75.9	-	-	1.8	2.2	2.6	3.1	3.4	4.0	4.2	4.9	5.1	5.9	75.1	75.3
90	90.0	90.3	88.9	91.1	1.3	1.7	2.1	2.6	3.1	3.7	4.0	4.6	5.0	5.7	6.1	7.1	90.1	90.3
110	110.0	110.4	108.6	111.4	1.6	2.0	2.5	3.0	3.7	4.3	4.9	5.6	6.1	7.1	7.5	8.7	110.1	110.4
125	125.0	125.4	123.5	126.5	1.8	2.2	2.9	3.4	4.3	5.0	5.6	6.4	6.9	8.0	8.5	9.8	125.1	125.4
140	140.0	140.5	138.3	141.7	2.0	2.4	3.2	3.8	4.8	5.5	6.3	7.3	7.7	8.9	9.5	11.0	140.2	140.5
160	160.0	160.5	158.0	162.0	2.3	2.8	3.7	4.3	5.4	6.2	7.2	8.3	8.8	10.2	10.9	12.6	160.2	160.5
180	180.0	180.6	177.8	182.2	2.6	3.1	4.2	4.9	6.1	7.1	8.0	9.2	9.9	11.4	12.2	14.1	180.2	180.5

Nominal								,	Wall Th	icknes	s					Mean Socket																						
Outside Diameter (Nominal Size) (in mm)	Mean Outside Diameter (1in mm)		Outside Diameter at any point (in mm)		Class 1 0.25 MPa 2.5 Kg/cm²		Class 2 0.40 MPa 4.0 Kg/cm²		0.60	Class 3 0.60 MPa 6.0 Kg/cm²		Class 4 0.80 MPa 8.0 Kg/cm²		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		0.80 MPa		ss 5 MPa ig/cm²	1.25	ss 6 MPa g/cm²	Internal Diameter of Mid Point of Socket Length	
200	200.0	200.6	197.6	202.4	2.9	3.4	4.6	5.3	6.8	7.9	8.9	10.3	11.0	12.7	13.6	15.7	200.3	200.6																				
225	225.0	225.7	222.3	227.7	3.3	3.9	5.2	6.0	7.6	8.8	10.0	11.5	12.4	14.3	15.3	17.6	225.3	225.7																				
250	250.0	250.8	247.0	253.0	3.6	4.2	5.7	6.5	8.5	9.8	11.2	12.9	13.8	15.9	17.0	19.6	250.4	250.8																				
280	280.0	280.9	276.6	283.4	4.1	4.8	6.4	7.4	9.5	11.0	12.5	14.4	15.4	17.8	19.0	21.9	280.4	280.9																				
315	315.0	316.0	311.2	318.8	4.6	5.3	7.2	8.3	10.7	12.4	14.0	16.1	17.3	19.9	21.4	24.7	315.4	316.0																				
355	355.0	356.1	350.7	359.3	5.1	5.9	8.1	9.4	12.0	13.8	15.8	18.2	19.6	22.6	24.1	27.8	355.4	356.0																				
400	400.0	401.2	395.2	404.8	5.8	6.7	9.1	10.5	13.5	15.6	17.8	20.5	22.0	25.3	27.2	31.3	400.4	401.0																				

#### WORKING PRESSURE V/S TEMPERATURE OF PIPE

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

Example: Rated pressure of the installed system is 10Kg.

Up to 25°C, the system can stand 10Kg pressure.

If the temperature is 40°C,

the derating factor is 0.71.

Therefore  $10 \times 0.71 = 7.1$ Kg.

So, the system can withstand 7.1Kg.

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

#### **FITTINGS RANGE**

Trubore offers the highest range of uPVC Pipes & Fittings with a wide range from 20mm to 60mm and working pressure of 10kg/cm², 6kg/cm² and 4kg/cm² as well as non-pressure fittings.

Trubore is crafted to perfection with the highest rating of ISI mark and is available through a wide-spread network.



COUPLER (6 KG)

63mm to 160mm



20mm to 50mm



63mm to 160mm



50mm to 110mm



ELBOW (10 KG)



20mm to 40mm

#### **ELBOW ESTEEM**



63mm to 180mm

**ELBOW LW** 

40mm to 200mm



63mm to 180mm

THREADED ELBOW



25mm x 20mm to 90mm x 75mm

ELBOW 45°(PN 16)



25mm & 32mm

END CAP (6 KG)



50mm x 110mm

END CAP (10 KG)



20mm to 40mm

**END CAP LW** 



63mm x 180mm

**END CAP THREADED** 



20mm x 110mm

TEE (6 KG)



50mm x 160mm

TEE (10 KG)

\_\_\_\_\_\_



20mm to 40mm

**TEE LW** 



40mm x 160mm

THREADED TEE



25mm x 20mm to 32mm x 20mm

TEE (PN 6)



63mm x 110mm

TEE ESTEEM



63mm x 110mm

**REDUCING TEE** 



32mm x 20mm to 160mm x 63mm

REDUCING TEE LW



160mm X 110mm & 160mm X 140mm

\_\_\_\_\_+

FAB. BEND 4KG



63mm to 200mm

FAB. BEND 6KG



40mm to 160mm

## FAB. BEND 10KG



20mm to 160mm

FAB. COUPLER 4KG



63mm to 315mm

FAB. COUPLER 6KG



63mm to 315mm

**FAB. COUPLER 10KG** 

. \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ . . . . . .



75mm to 100mm

## FOUR WAY TEE (W/O COLLAR)



63mm X 20mm,63mm X 25mm & 63mm X 32mm

## FEMALE THREADED ADAPTOR



20mm x 110mm

## MALE THREADED ADAPTOR



20mm x 110mm

## REDUCING FEMALE THREADED ADAPTOR



25mm x 20mm to 90mm x 63mm

#### **REDUCING ELBOW**



25mm X 20mm

#### REDUCER



25mm X 20mm to 160mm X 110mm

#### **REDUCING BUSH**



25mm X 20mm to 160mm X 140mm

#### SERVICE SADDLE



63mm x 20mm to 140mm x 25mm

#### **PVC BALL VALVE**



20mm to 63mm

## FEMALE THREADED ELBOW BRASS INSERT



25mm X 1/2" & 32mm X 1/2"

#### FEMALE THREADED TEE BRASS INSERT



25mm X 1/2" & 32mm X 1/2"

## FEMALE THREADED ADAPTOR BRASS INSERT



25mm X 1/2" & 32mm X 1/2"

#### **SOLVENT CEMENT**

#### BOTTLE



25ml to 500ml

#### CAN



1ltr. to 5ltr.

#### TIN



50ml to 1000ml

Images shown here are for representation purpose only, actual product may vary.



# FIT IT. FORGET IT!

High impact resistant Borewell Piping Systems to withstand extreme pressure at great depths.



#### **PRODUCT RANGE**

ScreenPipes: 1 1/2" to 16" (40mm to 400mm) Casing Pipes: 1 1/2" to 12" (40mm to 305mm) Column Pipes: 1" to 4" (25mm to 100mm)



**EXTENSIVELY USED IN** 



**AGRICULTURE** 

#### **APPLICATION**

- To extract ground water for farms and fields.
- To extract ground water for residential & commercial buildings, public places, etc.

#### **MAJOR ADVANTAGES**

- Easy to transport, store, handle and install.
- Saves labour & installation cost.
- Smooth bore ensures higher flow compared to G.I. pipeline of the same size. No clogging.
- Bore diameter remains constant, ensuring constant flow over lifetime.
- Superior resistance to most of the chemicals, no scaling, makes the system almost maintenance free.
- · Long life.

#### JOINTING METHOD

· Threaded Joint

#### **QUALITY TEST**

- · Tensile test.
- · Impact test.
- Vicat softening temperature test.
- Effect on water test.
- Hydraulic pressure test.

# C-CLAMP C. I. ADAPTOR (MALE) CASING PIPES SUBMERSIBLE DELIVERY PIPES SCREEN PIPES CENTERING GUIDE C. I. ADAPTOR (FEMALE) SUBMERSIBLE PUMP CASING PIPES PLUG

TYPICAL LAYOUT OF BOREWELL

#### **SPECIFICATIONS**

Specifications		Screen Pipes			Casing Pipes	Submersible Delivery Pipes/ Rising Main Pipes			
	Ribbed	Plain	Medium	СМ	CS	CD			
Colour	Blue	Blue	Blue	Blue	Blue	Blue	lvory		
Standard Length	3m	3m	3m	3m	3m	3m	3m		
Standards									
Type of Threads		99 & rings.	Square						
				Notes:					
A) Suitability: For wells		-		Above 80m 262ft. up to 250m 820ft.	up to 80m 262 ft.	Above 250m 820ft. up to 450m 1476ft.	-		
B) Threads	P	Pipes will have internal threads at one end external threads at other end with thread pro							
C) Specification required	Slot width 0.	.75, 1.00, 1.50, 2.0	0 & 3.00 mm						



## MEDIUM WELL SCREEN (RMS) & DEEP WELL SCREEN (RDS) PIPES WITH RIBS/RIBBED SCREEN PIPES





				Medium '	Well Screen (R	MS)	Deep Well Screen (RDS)			
	Diameter (N)		ameter of pipe mm)	Mean Outer Diameter over Connection, (d's')	Wall Thickness (e) (under ribs) (mm)		Mean Outer Diameter over Connection, (d's')		ickness, nm)	
mm	inches	Min	Max	Max	Min	Max	Max	Min	Max	
40.0	1 1/2	52.00	52.20	56.00	3.50	4.00				
50.0	2	64.00	64.20	69.00	4.00	4.60				
80.0	3	92.00	92.30	98.00	4.00	4.60				
100.0	4	117.00	117.30	124.00	5.00	5.70	129.00	7.00	7.90	
115.0	4 1/2	129.00	129.30				141.00	7.50	8.50	
125.0	5	144.00	144.40	154.00	6.50	7.30	156.00	8.00	9.00	
150.0	6	169.00	169.40	182.00	7.50	8.50	184.00	9.50	10.70	
175.0	7	204.00	204.50	219.00	8.80	9.80	221.00	11.80	13.60	
200.0	8	229.00	229.50	247.00	10.00	11.20	251.00	13.00	14.80	
250.0	10	284.00	284.50	302.00	12.50	14.00	309.00	16.00	17.60	
300.0	12	334.00	334.60	356.00	14.50	16.20	363.00	19.00	21.00	
350.0	14	404.00	404.70	432.00	17.50	19.50	437.00	21.50	23.90	
400.0	16	454.00	454.80	483.00	19.50	21.70	494.00	23.50	26.10	

## PLAIN MEDIUM WELL SCREEN (PMS) & PLAIN DEEP WELL SCREEN (PDS) PIPES

		Plain Medium Well Screen (PMS) Plain Deep Well Screen (PDS)									
	minal Mean Outer Diameter of pipe (d) (mm)		of pipe (d)	Mean Outer Diameter over Connection, (d's')	er (e) (mm)		Outer Diameter at any point d'e' (mm)		Diameter over		ckness, 'e' m)
mm	inches	Min	Max	Max	Min	Max	Min	Max	Max	Min	Max
200.0	8	225.00	225.50	243.00	10.00	11.20	224.50	225.80	247.00	13.00	14.80
250.0	10	280.00	280.50	298.00	12.50	14.00	279.40	280.80	304.00	16.00	17.60
300.0	12	330.00	330.60	352.00	14.50	16.20	329.30	331.00	359.00	19.00	21.00
350.0	14	400.00	400.70	428.00	17.50	19.50	399.20	401.20	433.00	21.50	23.90
400.0	16	450.00	450.80	479.00	19.50	21.70	449.10	451.30	490.00	23.50	26.10

#### MEDIUM WELL CASING (CM) & SHALLOW WELL CASING (CS) PIPES



				Medium W	ell Casing (CM)	Pipes	Shallow Well Casing (CS) Pipes			
	Diameter DN)		ameter of pipe mm)	Mean Outer Diameter over Connection, (d's')	Wall Thickr	ness e (mm)	Mean Outer Diameter over Connection, (d's')	Wall Thickn	ess, 'e' (mm)	
mm	inches	Min	Max	Max	Min	Max	Max	Min	Max	
40.0	1 1/2	48.00	48.20	52.00	3.50	4.00				
50.0	2	60.00	60.20	65.00	4.00	4.60				
80.0	3	88.00	88.30	94.00	4.00	4.60				
100.0	4	113.00	113.30	120.00	5.00	5.70				
125.0	5	140.00	140.40	150.00	6.50	7.30				
150.0	6	165.00	165.40	178.00	7.50	8.50	174.00	5.70	6.50	
175.0	7	200.00	200.50	215.00	8.80	9.80	211.00	7.00	7.80	
200.0	8	225.00	225.50	243.00	10.00	11.20	238.00	7.60	8.80	
250.0	10	280.00	280.50	298.00	12.50	14.00	292.00	9.60	11.00	
300.0	12	330.00	330.60	352.00	14.50	16.20				

#### DEEP WELL CASING (CD) PIPES



	Diameter N)	Mean Outer Diameter of pipe d'em' (mm)		Outer Diameter at any point d'e' (mm)		Mean outer Diameter over Connection, (d's')	Wall thickne	ess, 'e' (mm)
mm	inches	Min	Max	Min	Max	Max	Min	Max
100.0	4	113.00	113.30	112.80	113.40	125.00	7.00	7.90
115.0	4 1/2	125.00	125.30	124.90	125.40	137.00	7.50	8.50
125.0	5	140.00	140.40	139.70	140.50	152.00	8.00	9.00
150.0	6	165.00	165.40	164.60	165.60	180.00	9.50	10.70
175.0	7	200.00	200.50	199.60	200.60	217.00	11.80	13.60
200.0	8	225.00	225.50	224.50	225.80	247.00	13.00	14.80
250.0	10	280.00	280.50	279.40	280.80	304.00	16.00	17.60
300.0	12	330.00	330.60	329.30	331.00	359.00	19.00	21.00
350.0	14	400.00	400.70	399.20	401.20	433.00	21.50	23.90
400.0	16	450.00	450.80	449.10	451.30	490.00	23.50	26.10

#### SUBMERSIBLE DELIVERY PIPES/RISING MAIN PIPES/COLUMN PIPES



Product   OD - Outside Dia.   ND - Nominal Dia. in mm		in mm Pressure		Safe total pump delivery Head	Ultimate Breaking Load	Safe Pulling Load (Kg)	Screen Colour	STD Packing
Size	Туре	Category	<b>Kg/cm²</b> 12.5	(m)	(Kg)	Load (Kg)		
		V 4	12.5	125	850	500	Royal Claret	28
	Coupler	V 4	17	170	950	600	Green	
1 OD-33.30	Coupler	Medium	22	220	1250	750	Orange	28
ND-25.00		Std	38	380	1750	1100	Red	28
	Bell Form Cou-	V4	12.5	125	850	500	Royal Claret	28
	pler	V4	17	170	950	600	Green	28
		V 4	12.5	125	1350	800	Royal Claret	20
		V 4	7	170	1500	900	Green	20
1 1/4	Coupler	Medium	21	210	1725	1000	Orange	20
OD-42.10		Std	30	300	2350	1400	Red	20
ND-32.00		Heavy	39	390	2900	1750	Blue	20
	Bell Form Coupler	1/4	12.5	125	1350	800	Royal Claret	20
		V4	17	170	1500	900	Green	20
	Coupler	V 4	16	160	1850	1100	Green	16
11/2		Medium	22	220	2400	1450	Orange	16
OD-48.20 ND-40.00		Std	26	260	2750	1650	Red	16
		Heavy	39	390	3700	2250	Blue	16
2		Medium	14	140	2450	1450	Orange	12
OD-60.20	Coupler	Std	20	200	3500	2100	Red	12
ND-50.00		Heavy	27	270	4600	2800	Blue	12
2 1/2		Medium	11	110	3100	1800	Orange	8
OD-75.00	Coupler	Std	16	160	4500	2700	Red	8
ND-65.00		Heavy	26	260	6450	3900	Blue	8
7		Medium	11	110	4100	2450	Orange	6
3 OD-88.00	Coupler	Std	17	170	6400	3800	Red	6
ND-80.00		Heavy	26	260	8900	5300	Blue	6
4		Medium	10	100	6500	3900	Orange	4
OD-113.00	Coupler	Std	15	150	9250	5550	Red	4
ND-100.00		Heavy	26	260	14450	8700	Blue	4

Note:

Submersible pipes with 'Bellform' available on 1" & 11/4" - v4 catergory with 12.5 & 17kg pressure ratings



#### **GUIDELINES FOR INSTALLATION OF SCREEN & CASING PIPE:**

 Drill the bore of the required size & depth in the ground using the method of auger drilling/water jet boring/hydraulic rotary drilling/core drilling. During drilling, care should be taken that it is vertically straight down without any bends. Saves labour & installation cost.

#### Note:

- To construct the bore/tube well casing/screening & rising main pipes are required.
- 2. Casing pipes are highly recommended in the area where loose soil & silt/loose boulders stones are prevalent.
- Fit the rubber gasket properly on the space provided on the ribbed screen/casing pipes.

- Fit "C" clamp below the bell end on the pipe and lower the assembly done with help of chain pulley block (Provide sand trap with end plug as necessary).
- After lowering the pipe up to the clamp level, fix the rubber gasket on another pipe & tighten it gently with the lowered pipe. After tightening, use pipe/chain wrench for proper jointing, but do not overtighten.
- Fix the next clamp with the pipe above and bell end below and connect the chain pulley with the clamp.
- Remove the clamp of lowered pipe & start lowering further.
- Repeat the jointing method till the required depth of borewell.
- · Centering guide to be fitted wherever necessary.
- Fill the gravel between pipe & borehole.

#### **GUIDELINES FOR INSTALLATION OF RISING MAIN PIPE:**

Once screen & casing pipes are installed properly, follow the below guidelines for installation of PUMP & SUBMERSIBLE DELIVERY PIPE.

- Before starting the installation, pre-check if the submersible pump is in good working condition.
- Join the Trubore metal adaptor with the submersible pump with the help of chain wrench.
- Before starting the pipe assembly, clean the pipe threads with normal water to avoid forceful jointing.
- Before joining the pipe with pump; ensure pump guard is installed properly between pipe coupler & pump metal adaptor.

- Assemble SUBMERSIBLE DELIVERY PIPE with pump, always use strap wrench/rope for last jerk.
- Fix a nylon rope to the cast iron adaptor as a safety measure against falling of submersible pump due to mishap (run the nylon rope throughout the borewell length & tie it with top clamp).
- Fit the "C" clamp below coupler (at a defined location on the pipe) and lower the assembly inside the Casing pipe carefully with the help of a chain pulley.
- Once pipe will be lowered in the borewell up to the clamp level, fix the rubber ring on other pipe and tighten it gently with the help of rope/strap wrench, till half of the ring gets inside the coupler.

#### **IMPORTANT STEPS**



Join Metal connector to submersible pipe with the help of chain wrench.



Before starting pipe assembly clean the pipe threads with clean water.



Before joining the pipe with the pump, ensure pumpguard is installed properly



Before opening or joining the pipe, ensure the coupler is firmly held by



Tighten pipe with hand, til half rubber ring is seen. If required use rope wrench to give a final ierk.



Tighten pipe with hand, till half rubber ring is seen. If required use belt wrench for final jerk.



Lower SUBMERSIBLE DELIVERY PIPE with the help of a chain pully.



#### **DESIGN, HANDLING, TRANSPORTATION & STORAGE PROCESS**

uPVC Plumbing System, CPVC Plumbing System, Borewell Piping System, Agricultural Piping System, SWR Piping System & Foamcore Piping System

#### **DESIGN STAGE**

#### DO'S



#### **DON'TS**

Check the chemical suitability while deciding the pipe line for chemical application. Also check the thread sealants and fire stop materials for the contents before recommending for use. (For CPVC pipes only)

Do not use CPVC piping system for non-recommended chemicals such as polar organic solvents, anti-freezing solutions, dish washing liquids etc., as mentioned in chemical resistance chart.

Consider for provision for expansion and contraction of piping installation.

Consider pressure de-rating factor for use of pipe line at higher temperatures.

#### HANDLING, TRANSPORTATION & STORAGE



#### DO'S



#### **DON'TS**

Store the pipes on flat surface under covered area.

Do not drag or drop/throw the pipes while loading/unloading & shifting.

Use flat bodied vehicle for transportation of pipes.

Do not overhang the pipes out of vehicle body while transporting.

Pipes may be stored on timber support of at least 75mm width & breadth, placed at the interval of 1.2 meters.

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While stacking socketed pipes, stack the pipe with socket protruding at alternate ends.

Do not stack the pipes with all the socket ends together on one side.

The stacking height of pipe stack shall not be more than 1.5 meters.

Do not stack the pipes for more than 1.5 meters height.

#### **SOLVENT JOINT INSTALLATION PROCESS**

uPVC Plumbing System, CPVC Plumbing System, Agricultural Piping System & SWR Piping System

#### **CUTTING**



#### DO'S



#### **DON'TS**

It is imperative to mark the pipe from all sides so that pipe is cut with the help of a Hand Saw. It should be a right angle cut from all the sides. - The cut piece should not be with burr on edge.

Do not cut slant/ unevenly.

#### **CHAMFERING**

(This step is required when pipe cutting is done from 03 mtr pipe to any required length during installation)



#### DO'S





After cutting, the pipe needs to be chamfered from the outer sides. It is advisable to provide approximately 2 mm wide ,15° Chamfer on spigot end.

Do not proceed with installation of pipe without chamfering.

**DON'TS** 

## DEBURRING AND RIDGE REMOVAL



#### DO'S



#### **DON'TS**

Remove all the burrs and ridges accumulated on the inner as well as the outer edges of the pipe with the help of a deburring knife, file or abrasive paper.

Do not proceed with the installation of pipe without deburring.

#### **DRYFIT TEST**



#### DO'S



#### **DON'TS**

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.

Do not apply solvent cement without dryfit test.

#### **CLEANING**



#### DO'S



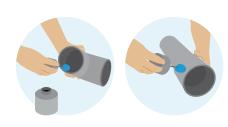
#### **DON'TS**



Thoroughly clean the pipe with dry cloth where the solvent cement is going to be applied to avoid dust, dirt, oil, moisture and other foreign material during the installation process.

Do not join the pipes without cleaning the pipe ends.

## APPLICATION OF SOLVENT CEMENT



#### DO'S



#### **DON'TS**

Mark the pipe length to be inserted for jointing. Apply a liberal coat of solvent cement with the help of the brush on the marked surface.

Do not apply excess solvent cement on the pipe and do not use solvent cement by hand.

#### **JOINTING**



#### DO'S



#### **DON'TS**

Push the pipe inside the fitting / pipe so that it goes inside equally from all the sides. Wipe off excess solvent cement that comes out from all the edges. Hold the joint for one to two minutes so that the jointing is perfect.

Do not use a hammer or half push the pipe.

## INSTALLATION AND COMMISSIONING



#### DO'S



#### **DON'TS**

- a) Pipe line should be installed in proper alignment & along with necessary clamps.
- b) Pressure testing to be done before conceal work.
- c) Pressure testing may be carried out after a curing period of 24 hrs.
- d) Keep at least 200mm distance from geyser for pipeline passing nearby.
- a) Avoid loose joints & mis-alignments.
- b) Pressure testing should not be done before 24 hrs of curing.

#### THREADED JOINT INSTALLATION PROCESS

uPVC Plumbing System, CPVC Plumbing System & Agricultural Piping System

#### **CLEANING**



#### **DO'S**



#### **DON'TS**

Clean the Male & Female threads of the pipe & fitting to be joined.

Do not proceed without cleaning the threads.

#### **TEFLON TAPE**



#### DO'S



#### **DON'TS**

For threaded pipes, a teflon tape needs to be applied on the threads in the direction of thread tightening to make the joint & should not be visible after the jointing is completed.

Do not install the threaded pipe without the teflon tape as it will create a weak joint.

#### **TIGHTENING**



#### DO'S



#### **DON'TS**

Hand-tighten the threads firmly or tighten the joint more by using pipe wrench. Use rubber packing to avoid scratches on pipe. Don't over tight with pipe wrench.

## INSTALLATION AND COMMISSIONING



#### DO'S



#### **DON'TS**

- a) Pipe line should be installed in proper alignment & along with necessary clamps.
- b) Pressure testing to be done before conceal work.
- c) Pressure testing may be carried out after a curing period of 24 hrs.
- d) Keep at least 200mm distance from geyser for pipeline passing nearby.
- a) Avoid loose joints & mis-alingments.
- b) Pressure testing should not be done before 24 hrs of curing.

#### **RUBBER RING JOINT INSTALLATION PROCESS**

SWR Piping System & Foamcore Piping System

#### **CUTTING**



#### DO'S



#### **DON'TS**

It is imperative to mark the pipe from all sides so that pipe is cut with the help of a Hand Saw. It should be a right angle cut from all the sides. The cut piece should not be with burr on edge.

Do not cut slant/ unevenly.

#### **CHAMFERING**

(This step is required when pipe cutting is done from 03 mtr pipe to any required length during installation)



#### DO'S



#### **DON'TS**

After cutting, the pipe needs to be chamfered from the outer sides. It is advisable to provide approximately 2 mm wide ,15° Chamfer on spigot end.

Do not proceed with installation of pipe without chamfering.

## DEBURRING AND RIDGE REMOVAL



#### **DO'S**



#### **DON'TS**

Remove all the burrs and ridges accumulated on the inner as well as the outer edges of the pipe with the help of a deburring knife, file or abrasive paper.

Do not proceed with the installation of pipe without deburring.

#### **DRYFIT TEST**



#### DO'S



#### **DON'TS**

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.

Do not apply solvent cement without dryfit test.

#### **CLEANING**



#### DO'S



#### **DON'TS**



Thoroughly clean the pipe with dry cloth where the solvent cement is going to be applied to avoid dust, dirt, oil, moisture and other foreign material during the installation process.

Do not join the pipes without cleaning the pipe ends.

## APPLICATION OF LUBRICANT



#### DO'S



#### **DON'TS**

Mark the pipe length to be inserted for jointing. Apply a liberal coat of lubricant for easy and smooth insertion.

Do not insert the pipe into fitting without lubrication.

#### **JOINTING**



#### DO'S



#### **DON'TS**

Push the pipe inside the fitting till marked length, and is completely inserted equally from all sides.

Do not use a hammer or half push the pipe.

## INSTALLATION AND COMMISSIONING



#### DO'S



#### **DON'TS**

- a) Pipe line should be installed in proper alignment & along with necessary
- b) Pressure test may be carried out at 0.5kg/cm² pressure for 15 minutes.
- c) Pressure testing may be carried out after a curing period of 24 hrs.

a) Avoid loose joints & misalingments.



Be Water-Wise. Be Earth-Wise.

Utilize water properly and be Earth-conscious.



### How can you conserve water effectively?



While washing vegetables and plants, use a pot underneath.



Collect the water used to clean vegetables, and use it to water plants.



Instead of glasses, use a bottle to drink water.



Use as little water while washing dishes.



Use Trubore leak-proof pipes.





All information contained in this manual is given in good faith and believed to be accurate and reliable. No responsibility can be accepted for any error omissions or incorrect assumptions. Any specification can change without prior notice. All the images are shown for representation purposes only.



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