## THE TRUST OF TRUBORE



Product Catalogue
C1800 2668222

## 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

A complete range of plumbing, agricultural \& sewage piping systems

International technical collaboration

A global leader in plastic mold manufacturing

Southern India's trusted pipe brand



Strategic collaboration with FlowGuard ${ }^{\circledR}$ Plus to offer high quality products.

FLOWGUARD'PLUS



## 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


Technologically advanced CPVC Compound


Technical
Collaboration - Holland


Superior packaging quality across all products


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


State-of-the-art
Manufacturing Technology


Southern India's most trusted brand since 1986

## TRUBORE FLOWGUARD ${ }^{\circledR}$ PLUS <br> CPVC PLUMBING SYSTEMS



WORLD'S NO. 1*

## FLOwGUARD'PLUS <br> CPVC PLUMBING SYSTEMS

## CPVC PLUMBING SYSTEM

The best-in-class CPVC plumbing systems that can deflect heat even at $110^{\circ} \mathrm{C}$


## PIPES

15 to $50 \mathrm{~mm}-$ SDR $11 \& 13.5$ as per IS:15778
65 to 250 mm -Sch 40 \& 80 as per ASTM F 441

## FITTINGS

15 to 50 mm - SDR 11 as per ASTM D 2846
65 to 100mm- Sch 80 as per ASTMF439
150 mm - Sch 40 as per ASTM F438
FLANGE
As per ASTM-D4O24 and ASME B 16.5

## PRODUCT RANGE

Pipes: 15 mm to 250 mm ( $1 / 2^{\prime \prime}$ to 10 ")


Fittings: 15 mm to 150 mm ( $1 / 2^{\prime \prime}$ to 6 ")
*FlowGuard ${ }^{\oplus}$ Plus is no. 1 based on the length of pipes installed globally

## FEATURES



Heat Deflection at $110^{\circ} \mathrm{C}$ Helps in boosting the durability to withstand higher temperatures for the application areas which demand very hot water flow.


Lowest Bacterial Growth Ensuring the water we consume is safe for drinking.


Consistent Product Quality Trubore FlowGuard ${ }^{\text {® }}$ Plus is manufactured from the World's No. 1 CPVC compound and stringent quality checks ensure that there is no variation in the products.

APPLICATION


MALLS


HOSPITALS


RESIDENTIAL


HOTELS


COMMERCIAL


SOLAR PANELS

## MAJOR ADVANTAGES

- Suitable for use up to $93^{\circ} \mathrm{C}$
- UV resistant
- $25 \%$ higher pressure bearing capacity
- High tensile andimpact strength
- Low thermal expansion
- Corrosion resistant
- Fire retardant/resistant
- Peace of mind assured


## JOINTING METHOD

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


## PIPE DIMENSIONS

| Nominal Bore |  | Outside <br> Diameter |  | SDR - 11 |  |  |  | SDR - 13.5 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Wall Thickness | Working Pressure |  | Wall Thickness |  | Working Pressure |  |
|  |  | Min | Max | Min | Max | At $27^{\circ} \mathrm{C}$ | At $82^{\circ} \mathrm{C}$ | Min | Max | At $27^{\circ} \mathrm{C}$ | At $82^{\circ} \mathrm{C}$ |
| (mm) | Inch |  |  | (mm) | (mm) | (mm) | (mm) | $\left(\mathrm{Kg} / \mathrm{cm}^{2}\right)$ | $\left(\mathrm{Kg} / \mathrm{cm}^{2}\right)$ | (mm) | (mm) | $\left(\mathrm{Kg} / \mathrm{cm}^{2}\right)$ | $\left(\mathrm{Kg} / \mathrm{cm}^{2}\right)$ |
| 15 | 1/2 | 15.80 | 16.00 | 1.70* | 2.20* | 28.14 | 6.93 | 1.40* | 1.90* | 22.22 | 5.60 |
| 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 |
| 32 | $11 / 4$ | 34.80 | 35.00 | 3.20 | 3.70 | 28.14 | 6.93 | 2.60 | 3.10 | 22.22 | 5.60 |
| 40 | $11 / 2$ | 41.20 | 41.40 | 3.80 | 4.30 | 28.14 | 6.93 | 3.10 | 3.60 | 22.22 | 5.60 |
| 50 | 2 | 53.90 | 54.10 | 4.90 | 5.50 | 28.14 | 6.93 | 4.00 | 4.60 | 22.22 | 5.60 |
| Schedule 40 |  |  |  |  |  |  |  | Schedule 80 |  |  |  |
| (mm) | Inch | (mm) |  | Min | Max | At $23^{\circ} \mathrm{C}$ | At $82{ }^{\circ} \mathrm{C}$ | Min | Max | At $23^{\circ} \mathrm{C}$ | At $82^{\circ} \mathrm{C}$ |
| 65 | $21 / 2$ | 73.00 (+/-0.18) |  | 5.16 | 5.77 | 21.10 | 5.30 | 7.01 | 7.85 | 29.57 | 7.34 |
| 80 | 3 | 88.90 (+/-0.20) |  | 5.49 | 6.15 | 18.25 | 4.58 | 7.62 | 8.53 | 26.00 | 6.32 |
| 100 | 4 | 114.30 (+/-0.23) |  | 6.02 | 6.73 | 15.49 | 3.87 | 8.56 | 9.58 | 22.53 | 5.60 |
| 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 (+/-0.38) |  | 8.18 | 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 ${ }^{\circledR}$ Plus over regular CPVC products:

| TRUBORE FLOWGUARD ${ }^{\text {® }}$ PLUS CPVC | OTHER REGULAR CPVC |
| :---: | :---: |
| Capable of withstanding temperatures of $110^{\circ}$ Celsius for application areas which demand very hot water flow | Cannot withstand temperature more than $100^{\circ}$ 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 ${ }^{\text {® }}$ 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 ${ }^{\circledR}$ Plus offers a proven high pressure bearing capacity even at $82^{\circ} \mathrm{C}$ which saves cost and energy in the long run.

## Trubore FLOWGUARD ${ }^{\circledR}$ Plus Other CPVC Products



[^0]Trubore FlowGuard ${ }^{\circledR}$ Plus has a better derating factor to handle increased temperatures,

TEMPERATURE DERATING FACTORS AT WORKING PRESSURE

| WORKING TEMPERATURE | PIPE DERATING FACTOR |  |
| :---: | :---: | :---: |
| ${ }^{\circ} \mathrm{C}$ | Trubore FlowGuard ${ }^{\circ}$ 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 |  |

## 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 ${ }^{\circledR}$ Plus


3-year shelf life (unopened cans)

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


Sets faster resulting in quicker installation



## SOLVENT CEMENT



## CPVC FITTINGS



[^1]

## 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: 15 mm to 250 mm ( $1 / 2^{\prime \prime}$ to 10 ") Fittings: 15 mm to 150 mm ( $1 / 2^{\prime \prime}$ to $6^{\prime \prime}$ )


EXTENSIVELY USED IN


COMMERCIAL


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

## Note:

- For threaded pipes \& fittings, the working pressure at $23^{\circ} \mathrm{C}$ 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 Fittings (Solvent Weld) at $23^{\circ} \mathrm{C}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Nominal Bore |  | Schedule 40 <br> Working Pressure |  |
| (inch) | (mm) | $\mathrm{Kg} / \mathrm{cm}^{2}$ | $\mathrm{Kg} / \mathrm{cm}^{2}$ |
| $1 / 2$ | 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 |
| $11 / 2$ | 40 | 13.95 | 19.80 |


| Working pressure for Fittings (Solvent Weld) at $23^{\circ} \mathrm{C}$ |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | Schedule 40 <br> Workin | Schedule 80 <br> ressure |
| (inch) | (mm) | $\mathrm{Kg} / \mathrm{cm}^{2}$ | $\mathrm{Kg} / \mathrm{cm}^{2}$ |
| 2 | 50 | 11.75 | 16.85 |
| $2_{1 / 2}$ | 65 | - | 17.70 |
| 3 | 80 | - | 15.60 |
| 4 | 100 | - | 13.50 |
| 6 | 150 | 7.50 | - |

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

## FITTINGS RANGE



PIPING SYSTEMS


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


50 ml to 1000 ml

## SWR PIPING SYSTEMS

EXTENSIVELY USED IN


HOSPITALS


RESIDENTIAL


HOTELS

## APPLICATION

- Inside \& outside building drainage systems including ventilation.


## MAJOR ADVANTAGES

- Lightweight but strong.
- Compatible with other drainage products.
- Easy to install.
- Smooth bore.
**Trubore world-class seals
- Rain water discharge \& harvesting for residential and commercial buildings/complexes.
- Industrial buildings and public utilities.
- Cost-effective.
- World-Class Seals ensures long term sealing performances against leakages.**
- Long life.

JOINTING METHOD

- Elastomeric Sealing Ring
- Solvent Cement Joint.


## PIPE DIMENSIONS

| Pipe Size (mm) | Mean Outside Diameter (mm) |  | Wall Thickness (mm) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Type '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 | 110.00 | 110.40 | 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



SOLVENT JOINT

| COUPLER | BEND $87.5^{\circ}$ |  | BEND WITH DOOR | BEND WITH DOOR 90 |
| :---: | :---: | :---: | :---: | :---: | :---: |



[^2]BEND $45^{\circ}$


TRAPS


ROUND JALI

$110 \mathrm{~mm} \times 110 \mathrm{~mm}$

## APPLICATION

- Underground drainage.


## 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

| $\begin{aligned} & \text { Pipe Size } \\ & \text { (mm) } \end{aligned}$ | Mean Outside Diameter (mm) |  | Wall Thickness (mm) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | SN2 (SDR 51) |  | SN4 (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 |

## AGRICULTURAL PIPING SYSTEMS

## STANDS STRONG. LASTS LONG.

Pressure-resistant pipes for Agricultural Piping Systems.


## PIPES

As per IS:4985
FITTINGS
As per IS:7834

PRODUCT RANGE
Pipes: 20 mm to 400 mm
Fittings: 20 mm to 250 mm
Fabricated fittings: 20 mm to 315 mm


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 |
| Working Temperature of Fluids | Up to $60^{\circ} \mathrm{C}$ - Continuous | Up to $60^{\circ} \mathrm{C}$ - Continuous |
|  | Up to $90^{\circ} \mathrm{C}$ - Short time | Up to $90^{\circ} \mathrm{C}$ - Short time |
|  | Up to 3 mins | Up to 3 mins |
| Working Pressure ( $\mathrm{kg} / \mathrm{cm}^{2}$ ) | $4,6,10$ \& 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.

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<br>PVC<br>A.C.<br>G.I.<br>C.I.

Flow Coefficient
150
130
110
100

Agricultural Pipes are manufactured in accordance with IS:4985 covering a complete range from 20 mm to 400 mm . They are available in pressure ratings of $2.5 \mathrm{~kg} / \mathrm{cm}^{2}, 4 \mathrm{~kg} /$ $\mathrm{cm}^{2}, 6 \mathrm{~kg} / \mathrm{cm}^{2}, 8 \mathrm{~kg} / \mathrm{cm}^{2}, 10 \mathrm{~kg} / \mathrm{cm}^{2} \& 12.5 \mathrm{~kg} / \mathrm{cm}^{2}$ as defined in IS:4985. These pipes are provided with plain socket and are suitable for solvent cement jointing.

Their main application is in agriculture -
For water supply, drip-irrigation \& sprinkler lines as well as for drinking water distribution.

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 Outside Diameter (Nominal Size) (in mm) | Mean <br> Outside <br> Diameter <br> (1in mm) |  | Outside Diameter at any point (in mm) |  | Wall Thickness |  |  |  |  |  |  |  |  |  |  |  | Mean Socket Internal Diameter of Mid Point of Socket Length |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { Class } 1 \\ 0.25 \mathrm{MPa} \\ 2.5 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ | $\begin{gathered} \text { Class } 2 \\ 0.40 \mathrm{MPa} \\ 4.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 3 \\ 0.60 \mathrm{MPa} \\ 6.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 4 \\ 0.80 \mathrm{MPa} \\ 8.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 5 \\ 1.00 \mathrm{MPa} \\ 10.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 6 \\ 1.25 \mathrm{MPa} \\ 12.5 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  |  |  |
| 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 Outside Diameter (Nominal Size) (in mm) | Mean <br> Outside <br> Diameter <br> (1in mm) |  | Outside <br> Diameter at any point (in mm) |  | Wall Thickness |  |  |  |  |  |  |  |  |  |  |  | Mean Socket Internal Diameter of Mid Point of Socket Length |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { Class } 1 \\ 0.25 \mathrm{MPa} \\ 2.5 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ | $\begin{gathered} \text { Class } 2 \\ 0.40 \mathrm{MPa} \\ 4.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 3 \\ 0.60 \mathrm{MPa} \\ 6.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 4 \\ 0.80 \mathrm{MPa} \\ 8.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 5 \\ 1.00 \mathrm{MPa} \\ 10.0 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  | $\begin{gathered} \text { Class } 6 \\ 1.25 \mathrm{MPa} \\ 12.5 \mathrm{Kg} / \mathrm{cm}^{2} \end{gathered}$ |  |  |  |
| 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 10 Kg . Up to $25^{\circ} \mathrm{C}$, the system can stand 10 Kg pressure.
If the temperature is $40^{\circ} \mathrm{C}$,
the derating factor is 0.71 .
Therefore $10 \times 0.71=7.1 \mathrm{Kg}$.
So, the system can withstand 7.1 Kg .

| Temp Deg ( ${ }^{\circ} \mathrm{C}$ ) | 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 20 mm to 60 mm and working pressure of $10 \mathrm{~kg} /$ $\mathrm{cm}^{2}, 6 \mathrm{~kg} / \mathrm{cm}^{2}$ and $4 \mathrm{~kg} / \mathrm{cm}^{2}$ 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)


63 mm to 160 mm

COUPLER (10 KG)


COUPLER LW


63 mm to 160 mm

ELBOW (6 KG)


50 mm to 110 mm



[^3]
## BOREWELL PIPING SYSTEMS



## FIT IT.

## FORGET IT!

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


PRODUCT RANGE
ScreenPipes: $11 / 2^{\prime \prime}$ to $16^{\prime \prime}$ ( 40 mm to 400 mm ) Casing Pipes: $11 / 2^{\prime \prime}$ to $12^{\prime \prime}$ ( 40 mm to 305 mm ) Column Pipes: 1 " to 4 " ( 25 mm to 100 mm )


EXTENSIVELY USED IN


AGRICULTURE

## APPLICATION

- To extract ground water for farms and fields.


## 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.
- To extract ground water for residential \& commercial buildings, public places, etc.


## JOINTING METHOD

- Threaded Joint
- 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.


## QUALITY TEST

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


## SPECIFICATIONS

| Specifications | Screen Pipes |  |  | Casing Pipes |  |  | Submersible Delivery Pipes/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ribbed | Plain | Medium | CM | CS | CD |  |
| Colour | Blue | Blue | Blue | Blue | Blue | Blue | Ivory |
| Standard Length | 3 m | 3 m | 3 m | 3m | 3 m | 3 m | 3 m |
| Standards | IS - 12818-2010 / Marked items will bear ISI marks |  |  |  |  |  |  |
| Type of Threads | 11 TPI V threads up to $80 \mathrm{~mm}, 100 \mathrm{~mm}$ (CS) Casing pipes as per IS-554-1999 \& Trapezoidal threads form 100 mm as per IS-12818-2010 with rubber sealing rings. |  |  |  |  |  | Square |
| Notes: |  |  |  |  |  |  |  |
| A) Suitability: For wells |  | - |  | Above 80m 262 ft . up to 250m 82Oft. | up to 80 m 262 ft . | Above 250m 820ft. up to 450m 1476ft. | - |
| B) Threads | Pipes will have internal threads at one end external threads at other end with thread protection cover. |  |  |  |  |  |  |
| C) Specification required | Slot width 0.75, 1.00, 1.50, 2.00 \& 3.00 mm |  |  |  |  |  |  |

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

|  |  |  |  | Medium Well Screen (RMS) |  |  | Deep Well Screen (RDS) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nomina | iameter | Mean Outer Diameter of pipe <br> (d) (mm) |  | Mean Outer Diameter over Connection, (d's') | Wall Thickness (e) (under ribs) (mm) |  | Mean Outer Diameter over Connection, (d's') | Wall Thickness, ' e ' (mm) |  |
| mm | inches | Min | Max | Max | Min | Max | Max | Min | Max |
| 40.0 | 11/2 | 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 | $41 / 2$ | 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

| Nominal Diameter (DN) |  |  |  | Plain Medium Well Screen (PMS) |  |  | Plain Deep Well Screen (PDS) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mean Outer Diameter of pipe (d) (mm) |  | Mean Outer Diameter over Connection, (d's') | Wall Thickness <br> (e) (mm) |  | Outer Diameter at any point d'e' (mm) |  | Mean Outer Diameter over Connection, d's' | Wall Thickness, 'e' (mm) |  |
| 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 Well Casing (CM) Pipes |  |  | Shallow Well Casing (CS) Pipes |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nomina | iameter <br> ) | Mean Outer Diameter of pipe <br> (d) (mm) |  | Mean Outer <br> Diameter over Connection, (d's') | Wall Th | (mm) | Mean Outer <br> Diameter over Connection, (d's') | Wall T | (mm) |
| mm | inches | Min | Max | Max | Min | Max | Max | Min | Max |
| 40.0 | 11/2 | 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 | -- | -- | -- |


| Nominal Diameter (DN) |  | Mean Outer Diameter of pipe d'em' (mm) |  | Outer Diameter at any point d'e' (mm) |  | Mean outer Diameter over Connection, (d's') <br> Max | Wall thickness, 'e' (mm) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| mm | inches | Min | Max | Min | Max |  | Min | Max |
| 100.0 | 4 | 113.00 | 113.30 | 112.80 | 113.40 | 125.00 | 7.00 | 7.90 |
| 115.0 | $41 / 2$ | 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 |  |  | Pressure $\mathrm{Kg} / \mathrm{cm}^{2}$ | Safe total pump delivery Head (m) | Ultimate Breaking Load (Kg) | Safe Pulling <br> Load (Kg) | Screen Colour | STD Packing |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size | Type | Category |  |  |  |  |  |  |
| $\begin{gathered} 1 \\ \text { OD-33.30 } \\ \text { ND-25.00 } \end{gathered}$ | Coupler | V 4 | 12.5 | 125 | 850 | 500 | Royal Claret | 28 |
|  |  |  | 17 | 170 | 950 | 600 | Green |  |
|  |  | Medium | 22 | 220 | 1250 | 750 | Orange | 28 |
|  |  | Std | 38 | 380 | 1750 | 1100 | Red | 28 |
|  | Bell Form Coupler | V4 | 12.5 | 125 | 850 | 500 | Royal Claret | 28 |
|  |  |  | 17 | 170 | 950 | 600 | Green |  |
| $\begin{gathered} 11 / 4 \\ \text { OD-42.10 } \\ \text { ND- } 32.00 \end{gathered}$ | Coupler | V 4 | 12.5 | 125 | 1350 | 800 | Royal Claret | 20 |
|  |  |  | 7 | 170 | 1500 | 900 | Green |  |
|  |  | Medium | 21 | 210 | 1725 | 1000 | Orange | 20 |
|  |  | Std | 30 | 300 | 2350 | 1400 | Red | 20 |
|  |  | Heavy | 39 | 390 | 2900 | 1750 | Blue | 20 |
|  | Bell Form Coupler | V4 | 12.5 | 125 | 1350 | 800 | Royal Claret | 20 |
|  |  |  | 17 | 170 | 1500 | 900 | Green |  |
| $\begin{gathered} 11 / 2 \\ \text { OD-48.20 } \\ \text { ND-40.00 } \end{gathered}$ | Coupler | $\checkmark 4$ | 16 | 160 | 1850 | 1100 | Green | 16 |
|  |  | Medium | 22 | 220 | 2400 | 1450 | Orange | 16 |
|  |  | Std | 26 | 260 | 2750 | 1650 | Red | 16 |
|  |  | Heavy | 39 | 390 | 3700 | 2250 | Blue | 16 |
| $\begin{gathered} 2 \\ \text { OD-60.20 } \\ \text { ND-50.00 } \end{gathered}$ | Coupler | Medium | 14 | 140 | 2450 | 1450 | Orange | 12 |
|  |  | Std | 20 | 200 | 3500 | 2100 | Red | 12 |
|  |  | Heavy | 27 | 270 | 4600 | 2800 | Blue | 12 |
| $\begin{gathered} 21 / 2 \\ \text { OD-75.00 } \\ \text { ND-65.00 } \end{gathered}$ | Coupler | Medium | 11 | 110 | 3100 | 1800 | Orange | 8 |
|  |  | Std | 16 | 160 | 4500 | 2700 | Red | 8 |
|  |  | Heavy | 26 | 260 | 6450 | 3900 | Blue | 8 |
| $\begin{gathered} 3 \\ \text { OD-88.00 } \\ \text { ND-80.00 } \end{gathered}$ | Coupler | Medium | 11 | 110 | 4100 | 2450 | Orange | 6 |
|  |  | Std | 17 | 170 | 6400 | 3800 | Red | 6 |
|  |  | Heavy | 26 | 260 | 8900 | 5300 | Blue | 6 |
| $\begin{gathered} 4 \\ \text { OD-113.00 } \\ \text { ND-100.00 } \end{gathered}$ | Coupler | Medium | 10 | 100 | 6500 | 3900 | Orange | 4 |
|  |  | Std | 15 | 150 | 9250 | 5550 | Red | 4 |
|  |  | Heavy | 26 | 260 | 14450 | 8700 | Blue | 4 |

Note:
Submersible pipes with 'Bellform' available on 1 " \& $11 / 4$ " - v4 catergory with $12.5 \& 17 \mathrm{~kg}$ pressure ratings

- 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:

1. 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 with the pump, ensure
pumpguard is installed properly.


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



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 STAGE


HANDLING, TRANSPORTATION \& STORAGE


DO'S

## DON'TS

$\qquad$
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)

Consider for provision for expansion and contraction of piping installation.

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

## DON'TS

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

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

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.

## DO'S



Store the pipes on flat surface under covered area.

Use flat bodied vehicle for transportation of pipes.
-

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

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.

## 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.

## 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

Do not proceed with installation of pipe without chamfering. mm wide, $15^{\circ}$ Chamfer on spigot end.

DEBURRING AND RIDGE REMOVAL


## 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




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.

## 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.

## APPLICATION OF SOLVENT CEMENT



## 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 join the pipes without cleaning the pipe ends.

## JOINTING



## DO'S

## DON'TS

Do not use a hammer or half push the pipe.

INSTALLATION AND COMMISSIONING


DO'S

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 200 mm distance from geyser for pipeline passing nearby.

DON'TS
a) Avoid loose joints \& mis-alignments.
b) Pressure testing should not be done before 24 hrs of curing.

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

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.

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.

## TIGHTENING



Hand-tighten the threads firmly or tighten the joint more by using pipe wrench. Use rubber packing to avoid scratches on pipe.

INSTALLATION AND COMMISSIONING


## DO'S

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 200 mm 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.

## 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.

## 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, $15^{\circ}$ Chamfer on spigot end.

Do not cut slant/ unevenly.


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


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.

## DON'TS

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.

## 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 join the pipes without cleaning the pipe ends.

## $\xi 10$

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 clamps.
b) Pressure test may be carried out at $0.5 \mathrm{~kg} / \mathrm{cm}^{2}$ pressure for 15 minutes.
c) Pressure testing may be carried out after a curing period of 24 hrs .

## PIPING SYSTEMS

## Be Water-Wise. Be Earth-Wise.

## Utilize water properly and be Earth-conscious.



## TRRUBORE*


an the QR code to down


[^0]:    *We have upgraded Trubore FlowGuard ${ }^{\oplus}$ 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

[^1]:    Images shown here are for representation purpose only, actual product may vary.

[^2]:    Images shown here are for representation purpose only, actual product may vary.

[^3]:    Images shown here are for representation purpose only, actual product may vary.

