

SINCE 1935

VARUNA[®]
ELECTRIC



uPVC COLUMN PIPE
for Borewell Submersible Pumps

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BOREWELL uPVC COLUMN PIPE

- VARUNA Column Pipes are mainly used to bring water from Domestic and Agriculture borewell.
- VARUNA Column Pipes are available in the range of 1" (33 mm OD) to 4" (113 mm OD) with different class like V4 Bell End, V4 Light Duty, Medium, Crystal, Standard, Heavy, and Super Heavy. We offer all standard accessories like Top-Bottom Adaptor Sets, Pump Guards, etc.



ADVANTAGES

- Cost effective
- Energy efficient
- Non-toxic and non-conductive
- Corrosion resistant
- Safe & hygienic for drinking water
- Higher flow rate
- Light in weight
- Longer Life
- Easy & Fast Installation

SALIENT FEATURES

THICK & THIN PROCESS

The pipe ends are strengthened by providing more wall thickness on the precise length by using inimitable Thin & Thick technique, which compensate the loss of the load bearing strength of pipes due to threading. The Thick & Thin portion is given to pipes considering the size, working conditions & load factor.

SQUARE THREADS

The internal-external square threading on Pipes & Couplers are made on the ultra-modern CNC machines, which provide sufficient grip to the joint and it become fairly strong to take care of load of the entire assembly along with the Pump-Set. The square threading pattern shall also make the installation process - very easy, quick & proper.

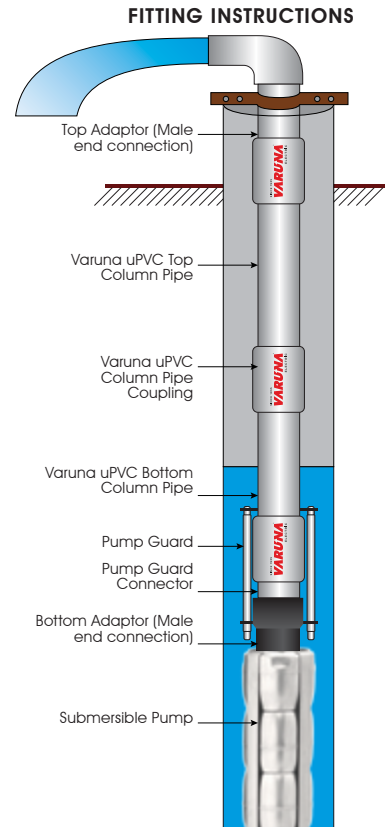
SEALING RINGS

VARUNA has introduced especially designed "JVO Guard" along with the combination of "O" rings, "C" rings and "L" rings of EPDM rubber for providing better protection against Jerks, Vibrations and Oscillations between the pipe and coupler as well as giving an additional Locking and Leak-proof joint to the assembly.



INSTALLATION PROCEDURE

- First, firmly connect the male end of the lower adapter (C.I. / SS) to the pump discharge casing with a pipe wrench, and the first pipe can be connected to the female end.
- Before connecting, flush both ends of the pipes with clean water and check the rubber ring for damage.
- The pipe itself can be hand-tightened, but while tightening the pipe threads must be filled with water for lubrication. In any case, a strap wrench can be used to tighten / hold the pipes for a better grip.
- Tighten the pipes by hand until the rubber ring at the end of the pipe is fully seated in the coupling.
- The submersible pump cable must be tied at regular intervals along with the string pipes to prevent damage to the cable.
- Then all other pipes can be connected in the same way. The pipe wrench should not be used as a support on the pipe.
- Once the top pipe of the column reaches ground level, connect the top adaptor using a male end connection.
- Finally, from ground level, ordinary plumbing accessories can be used to supply water to the desired delivery point.



SAFETY PRECAUTION

- We strongly advise our customers not to apply lubricant to square thread pipe joints when joining two strings together. Grease / vegetable oil incompatible with VARUNA uPVC column tube. Grease is a semi-solid lubricant.
- Use clean water or soapy water to fasten the column pipe.
- Typically a grease consists of soap emulsified with mineral or vegetable oil. The degree of chemical attack on any material depends on a number of variables, including chemical concentration, temperature, aeration, duration of exposure, fluid stability, and possible chemical reactions with other compounds in the area.

PRECAUTIONS

- Do not apply grease, oil or any other oily substance on the threads.
- In bore wells, without full casing pipes, it is advised that at the time of removal of pumps from bore-wells, if the pump gets stuck up due to silt/sticky mud or entrapped stone, proper flushing of the bore-well should be done and then only pulling load should be applied to the pipes for pump removal.
- Do not over tighten the pipes as it will result in crushing of rubber sealing there by leading to leakage/pipe failure.
- A safety cable or rope should be used to prevent dropping of pump in the well either during operation or withdrawal. The rope can be of steel or nylon or polypropylene.
- Use of good quality reflux valves on the delivery side is recommended for preventing water hammer, up thrust and back spin in the pumping system.
- It is advisable to use safety device such as pump protection relay to prevent dry running of pump or pump shut-off head condition.

STORAGE

- The pipes should be handled with reasonable care. Because Column Pipes are much lighter in weight than metal pipe.
- Plunking of column pipes should be avoided.
- The pipes should never be dragged or pushed from a truck bed. Pallets for pipe should be removed with a fork lift. Loose pipe can be rolled down on timbers, as long as the pieces do not fall on each other or on any hard or uneven surface. In all cases, abrupt contact with any sharp object (rocks, iron angles, forks on forklifts, etc.) should be avoided.

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TECHNICAL CHART

| Nom. SiZe (Inch) | Nom ID (MM) | Nom OD (MM) | Product Description | Colour | Type | STD PACKING | Safe Allowable Hydrostatic Pressure (Kg/cm2) | Ultimate Breaking Load (kgf) | Safe Pulling Load with Chain Pulley (Kg) | Safe Total Pump Delivery Head (m) |
|------------------|-------------|-------------|------------------------------------|--------|----------|-------------|--|------------------------------|--|-----------------------------------|
| 1" | 25 | 33 | VCP 1.0" V4-12.5 Light Duty Green | Green | Coupler | 25 | 12.5 | 850 | 480 | 125 |
| 1" | 25 | 33 | VCP 1" V4 12.5 Bell End Black | Black | Bell End | 40 | 12.5 | 850 | 500 | 125 |
| 1.25" | 32 | 42 | VCP 1.25" V4-12.5 Light Duty Green | Green | Coupler | 25 | 12.5 | 1300 | 800 | 150 |
| 1.25" | 32 | 42 | VCP 1.25" V4 Bell End Black | Black | Bell End | 25 | 12.5 | 1300 | 800 | 150 |
| 1.25" | 32 | 42 | VCP 1.25" V4-15 Light Plus Violet | Violet | Coupler | 25 | 15 | 1550 | 900 | 150 |
| 1.25" | 32 | 42 | VCP 1.25" V4 15 Bell End Black | Black | Bell End | 25 | 15 | 1550 | 900 | 150 |
| 1.25" | 32 | 42 | VCP 1.25" Medium Duty Orange | Orange | Coupler | 25 | 21 | 1800 | 1050 | 210 |
| 1.25" | 32 | 42 | VCP 1.25" Standard Duty Red | Red | Coupler | 25 | 25 | 2600 | 1500 | 250 |
| 1.25" | 32 | 42 | VCP 1.25" Heavy Duty Blue | Blue | Coupler | 25 | 35 | 3100 | 1800 | 350 |
| 1.5" | 40 | 48 | VCP 1.5" V4-15 Light Plus Violet | Violet | Coupler | 20 | 15 | 2000 | 1200 | 150 |
| 1.5" | 40 | 48 | VCP 1.5" V4 Medium Duty Orange | Orange | Coupler | 20 | 21 | 2500 | 1500 | 210 |
| 1.5" | 40 | 48 | VCP 1.5" V4 Standard Duty Red | Red | Coupler | 20 | 26 | 3050 | 1700 | 260 |
| 1.5" | 40 | 48 | VCP 1.5" V4 Heavy Duty Blue | Blue | Coupler | 20 | 35 | 4050 | 2000 | 350 |
| 2" | 50 | 60 | VCP 2.0" Eco Medium Green | Green | Coupler | 15 | 8 | 1700 | 1000 | 80 |
| 2" | 50 | 60 | VCP 2.0" Medium Duty Orange | Orange | Coupler | 15 | 17 | 2450 | 1450 | 130 |
| 2" | 50 | 60 | VCP 2.0" Standard Duty Red | Red | Coupler | 15 | 20 | 3600 | 2100 | 200 |
| 2" | 50 | 60 | VCP 2.0" Standard Plus Violet | Violet | Coupler | 15 | 23 | 4250 | 2400 | 230 |
| 2" | 50 | 60 | VCP 2.0" Heavy Duty Blue | Blue | Coupler | 10 | 27 | 4700 | 2800 | 270 |
| 2" | 50 | 60 | VCP 2.0" Super Heavy Duty Black | Black | Coupler | 10 | 35 | 5650 | 3350 | 350 |
| 2.25" | 50 | 63 | VCP 2.25" Super Heavy Duty Black | Black | Coupler | 7 | 35 | 5750 | 3420 | 350 |
| 2.5" | 65 | 75 | VCP 2.5" Medium Duty Orange | Orange | Coupler | 10 | 10 | 3100 | 1800 | 100 |
| 2.5" | 65 | 75 | VCP 2.5" Standard Duty Red | Red | Coupler | 10 | 16 | 4650 | 2700 | 160 |
| 2.5" | 65 | 75 | VCP 2.5" Heavy Duty Blue | Blue | Coupler | 10 | 26 | 7000 | 4200 | 260 |
| 2.5" | 65 | 75 | VCP 2.5" Super Heavy Duty Black | Black | Coupler | 5 | 35 | 9000 | 5300 | 350 |
| 3" | 80 | 88 | VCP 3.0" Medium Duty Orange | Orange | Coupler | 5 | 11 | 4450 | 2600 | 110 |
| 3" | 80 | 88 | VCP 3.0" Standard Duty Red | Red | Coupler | 5 | 17 | 6800 | 4000 | 170 |
| 3" | 80 | 88 | VCP 3.0" Heavy Duty Blue | Blue | Coupler | 5 | 26 | 9600 | 5650 | 260 |
| 4" | 100 | 113 | VCP 4.0" Medium Duty Orange | Orange | Coupler | 5 | 10 | 6800 | 4000 | 100 |
| 4" | 100 | 113 | VCP 4.0" Standard Duty Red | Red | Coupler | 5 | 15 | 10000 | 5900 | 150 |
| 4" | 100 | 113 | VCP 4.0" Heavy Duty Blue | Blue | Coupler | 5 | 26 | 15900 | 9350 | 260 |

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