



*The Real Pumping Experience*

**ARO-W**  
SOLUTIONS



AN ISO 9001 COMPANY



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## Our Infrastructure





# uPVC Column Pipes

## Salient Features

- Corrosion Free
- Easy Installation & Handling
- Very Low Friction Loss
- Termite Proof
- Non Toxic & Resistant to chemical reactions
- Unbreakable & longer life span upto 25 years.
- The best alternative for G.I Pipes and cost effective.



Up to 6" (150 mm)

## Specification

- Maximum ambient temperature 70°C
- Maximum installation depth 370m
- Installation: Vertical, Horizontal or Inclined

## Applications

- Water rising for submersible and jet pump for Irrigation & Domestic purposes
- Industrial mining and Chemical distribution
- The best replacement for MS, PPR, ERW, GI, HDPE and Stainless Steel column pipes
- uPVC is nearly inert towards corrosion, chemical reaction and erosion, so that, it is ideally used in salty, sandy and chemically aggressive water

## Special Features

- Surface finish of this pipe is extremely smooth which reduces the hydraulic friction losses & helps improve the flow
- Internal and external square threaded spigot ends and rubber gasket for easy and reliable jointing and pressure sealing
- Special square thread gives quick & easy installation facility and provides strength
- Provision of inside seal ring to prevent friction loss & over tightening
- Provision of step ring to stop leakage & over tightening

## Other Advantages

- Corrosion-proof even if pipes are fitted with MS and CI top & bottom pipe adaptors.
- Inkjet printing & Hallmark to prevent duplication in market
- Provision of outer seal ring to prevent leakage & over tightening
- Very smooth internal surface increases 10% to 20% water & reduces 10% to 20% power consumption
- Ultimate locking system ensures a trouble free and a longer life for the Bore Well and the Pump

## Wall Thickness of Column Pipes

### Technical Data

Product Range

All dimensions are in mm

| Nominal Diameter |       | Nominal O.D. | O.D. including coupler (Max) | Wall Thickness |      |        |          |       |             |
|------------------|-------|--------------|------------------------------|----------------|------|--------|----------|-------|-------------|
| mm               | inch  |              |                              | Primo ++       | Nano | Medium | Standard | Heavy | Super Heavy |
| 25               | 1.00" | 33.30        | 46.10                        | 3.30           | 3.50 | 3.50   | 4.80     | -     | -           |
| 32               | 1.25" | 42.16        | 55.10                        | 4.10           | 4.20 | 4.20   | 5.00     | 6.40  | -           |
| 40               | 1.50" | 48.26        | 62.50                        | -              | 4.30 | 4.30   | 5.20     | 6.00  | -           |
| 50               | 2.00" | 60.32        | 79.00                        | -              | 4.60 | 4.80   | 6.00     | 7.30  | 8.00        |
| 65               | 2.50" | 75.15        | 91.80                        | -              | 5.30 | 5.30   | 6.60     | 8.70  | 10.00       |
| 80               | 3.00" | 88.20        | 110.00                       | -              | -    | 6.00   | 7.40     | 9.90  | 10.50       |
| 100              | 4.00" | 113.30       | 136.50                       | -              | -    | 6.50   | 8.50     | 12.0  | 12.50       |
| 125              | 5.00" | 141.30       | 165.00                       | -              | -    | 7.70   | 10.20    | 15.20 | 16.50       |
| 150              | 6.00" | 165.00       | 205.00                       | -              | -    | -      | -        | 16.50 | -           |

## Packing Details

(Nos. of Pipes/Bundle)

| mm    | 3 Meter | 5.8/6 Meter |
|-------|---------|-------------|
| 1.00" | 25      | -           |
| 1.25" | 25      | -           |
| 1.50" | 20      | -           |
| 2.00" | 10      | -           |
| 2.50" | 10      | 5           |
| 3.00" | 5       | 3           |
| 4.00" | 5       | 3           |
| 5.00" | 3       | 2           |
| 6.00" | 3       | 2           |

## Color Coding of Pipes

| Types       | Identity Printing Color |
|-------------|-------------------------|
| Primo++     | <b>Orange</b>           |
| Nano        | <b>Peacock Blue</b>     |
| Medium      | <b>Blue</b>             |
| Standard    | <b>Red</b>              |
| Heavy       | <b>Green</b>            |
| Super Heavy | <b>Black</b>            |

## Pressure Ratings for Column Pipes (kg/cm<sup>2</sup>)

| Size |       | Primo ++ | Nano | Medium | Standard | Heavy | Super Heavy |
|------|-------|----------|------|--------|----------|-------|-------------|
| mm   | inch  |          |      |        |          |       |             |
| 25   | 1.00" | 12.50    | 15   | 21     | 27       | -     | -           |
| 32   | 1.25" | 12.50    | 15   | 21     | 27       | 35    | -           |
| 40   | 1.50" | -        | 15   | 21     | 27       | 35    | -           |
| 50   | 2.00" | -        | 13   | 18     | 21       | 27    | 35          |
| 65   | 2.50" | -        | 13   | 15     | 18       | 27    | 35          |
| 80   | 3.00" | -        | -    | 11     | 18       | 27    | 35          |
| 100  | 4.00" | -        | -    | 10     | 16       | 27    | 35          |
| 125  | 5.00" | -        | -    | 10     | 16       | 27    | 35          |
| 150  | 6.00" | -        | -    | -      | -        | 27    | -           |

## Weight, Load &amp; Pressure Carrying Capacity

| Type & Size<br>OD - Outer Dia.<br>NB - Nominal Bore | Net Weight<br><br>(kg.) | Ultimate Breaking Load<br><br>(kg.) | Max Pulling Load with Chain Pulley or Crane<br><br>(kg.) | Max Allowable Hydrostatic Pressure<br><br>(kg.) | Max Total Shut Off Head of The Pump<br><br>(mtr.) | Recommended Installation Depth of Pipes Max.<br><br>(mtr.) | Recommended Installation Depth of Pipes Max.<br><br>(ft.) | Weight of Pipes at Recommended Installation Depth<br>(kg.)<br>(A) | Weight of Water at Recommended Installation Depth<br>(kg.)<br>(B) | Weight of Pump & Motor at Recommended Installation Depth (kg.)<br>(C) | Total Weight at Recommended Installation Depth<br><br>(A+B+C) |
|---|-------------------------|-------------------------------------|--|---|---|--|---|---|---|---|---|
| <b>OD : 33mm (1") NB : 25 mm</b>                    |                         |                                     |  |   |   |  |   |   |   |   |   |
| Primo   | 0.97                    | 850                                 | 500  | 12.50   | 125   | 88   | 287   | 28  | 43  | 25  | 96  |
| Nano  | 1.08                    | 1000                                | 580  | 15.00   | 150   | 105  | 344   | 38  | 52  | 35  | 125   |
| Medium  | 1.31                    | 1500                                | 800  | 21.00   | 210   | 147  | 482   | 64  | 72  | 42  | 178   |
| Standard  | 1.63                    | 2200                                | 1250   | 27.00   | 270   | 189  | 620   | 103   | 93  | 45  | 241   |
| <b>OD : 42mm (1.25") NB : 32 mm</b>                 |                         |                                     |  |   |   |  |   |   |   |   |   |
| Primo   | 1.48                    | 1600                                | 800  | 12.50   | 125   | 88   | 287   | 43  | 71  | 27  | 141   |
| Nano  | 1.58                    | 1720                                | 900  | 15.00   | 150   | 105  | 344   | 55  | 84  | 38  | 177   |
| Medium  | 1.94                    | 1800                                | 1150   | 21.00   | 210   | 147  | 482   | 95  | 118   | 40  | 253   |
| Standard  | 2.14                    | 2650                                | 1400   | 27.00   | 270   | 189  | 620   | 135   | 152   | 60  | 347   |
| Heavy   | 2.80                    | 3100                                | 1800   | 35.00   | 350   | 245  | 804   | 230   | 197   | 84  | 511   |
| <b>OD : 48mm (1.5") NB : 40 mm</b>                  |                         |                                     |  |   |   |  |   |   |   |   |   |
| Nano  | 2.00                    | 2000                                | 1000   | 15.00   | 150   | 105  | 344   | 70  | 150   | 45  | 265   |
| Medium  | 2.30                    | 2300                                | 1200   | 21.00   | 210   | 147  | 482   | 113   | 185   | 60  | 358   |
| Standard  | 2.62                    | 3200                                | 1700   | 27.00   | 270   | 189  | 620   | 165   | 237   | 75  | 477   |
| Heavy   | 3.47                    | 4200                                | 2200   | 35.00   | 350   | 245  | 804   | 285   | 308   | 86  | 679   |
| <b>OD : 60mm (2") NB : 50 mm</b>                    |                         |                                     |  |   |   |  |   |   |   |   |   |
| Nano  | 2.35                    | 2730                                | 1750   | 13.00   | 130   | 91   | 298   | 71  | 179   | 58  | 308   |
| Medium  | 2.70                    | 3040                                | 2000   | 18.00   | 180   | 126  | 413   | 113   | 247   | 80  | 440   |
| Standard  | 3.90                    | 5098                                | 2700   | 21.00   | 210   | 147  | 482   | 191   | 288   | 110   | 589   |
| Heavy   | 4.60                    | 5682                                | 3200   | 27.00   | 270   | 189  | 620   | 290   | 371   | 128   | 789   |
| Super Heavy   | 5.48                    | 6200                                | 3600   | 35.00   | 350   | 245  | 804   | 449   | 481   | 145   | 1075  |

## Weight, Load & Pressure Carrying Capacity

| Type & Size<br>OD - Outer Dia.<br>NB - Nominal Bore | Net Weight<br><br>(kg.) | Ultimate Breaking Load<br><br>(kg.) | Max Pulling Load with Chain Pulley or Crane<br><br>(kg.) | Max Allowable Hydrostatic Pressure<br><br>(kg.) | Max Total Shut Off Head of The Pump<br><br>(mtr.) | Recommended Installation Depth of Pipes Max.<br><br>(mtr.) | Recommended Installation Depth of Pipes Max.<br><br>(ft.) | Weight of Pipes at Recommended Installation Depth (kg.) (A) | Weight of Water at Recommended Installation Depth (kg.) (B) | Weight of Pump & Motor at Recommended Installation Depth (kg.) (C) | Total Weight at Recommended Installation Depth<br><br>(A+B+C) |
|---|-------------------------|-------------------------------------|--|---|---|--|---|---|---|--|---|
| <b>OD : 75mm (2.5") NB : 65 mm</b>                  |                         |                                     |  |   |   |  |   |   |   |  |   |
| Medium  | 3.93                    | 4496                                | 2800   | 15.00   | 150   | 105  | 344   | 138   | 348   | 98   | 584   |
| Standard  | 4.75                    | 5934                                | 3600   | 18.00   | 180   | 126  | 413   | 200   | 418   | 125  | 743   |
| Heavy   | 6.12                    | 7432                                | 4200   | 27.00   | 270   | 189  | 620   | 386   | 627   | 180  | 1193  |
| Super Heavy   | 7.75                    | 9194                                | 5300   | 35.00   | 350   | 245  | 804   | 636   | 812   | 203  | 1651  |
| <b>OD : 88mm (3") NB : 80 mm</b>                    |                         |                                     |  |   |   |  |   |   |   |  |   |
| Medium  | 4.85                    | 5934                                | 4000   | 11.00   | 110   | 77   | 253   | 126   | 349   | 120  | 595   |
| Standard  | 6.60                    | 9112                                | 5010   | 18.00   | 180   | 126  | 413   | 277   | 572   | 220  | 1069  |
| Heavy   | 8.70                    | 10000                               | 6000   | 27.00   | 270   | 189  | 620   | 548   | 857   | 380  | 1785  |
| Super Heavy   | 10.61                   | 12000                               | 7250   | 35.00   | 350   | 245  | 804   | 870   | 1111  | 418  | 2399  |
| <b>OD : 113mm (4") NB : 100 mm</b>                  |                         |                                     |  |   |   |  |   |   |   |  |   |
| Medium  | 7.60                    | 11402                               | 4500   | 10.00   | 100   | 70   | 230   | 175   | 549   | 181  | 905   |
| Standard  | 9.80                    | 12150                               | 7250   | 16.00   | 160   | 112  | 367   | 363   | 879   | 326  | 1568  |
| Heavy   | 14.45                   | 15980                               | 5950   | 27.00   | 270   | 189  | 620   | 910   | 1484  | 441  | 2835  |
| Super Heavy   | 16.45                   | 19500                               | 12000  | 35.00   | 350   | 245  | 804   | 1349  | 1924  | 455  | 3728  |
| <b>OD : 140mm (5") NB : 125 mm</b>                  |                         |                                     |  |   |   |  |   |   |   |  |   |
| Medium  | 13.25                   | 12000                               | 7540   | 10.00   | 100   | 70   | 230   | 305   | 859   | 176  | 1340  |
| Standard  | 16.15                   | 16000                               | 10100  | 16.00   | 160   | 112  | 367   | 598   | 1374  | 377  | 2349  |
| Heavy   | 18.90                   | 23860                               | 15100  | 27.00   | 270   | 189  | 620   | 1191  | 2319  | 465  | 3975  |
| Super Heavy   | 24.50                   | 30000                               | 18000  | 35.00   | 350   | 245  | 804   | 2009  | 3006  | 478  | 5493  |
| <b>OD : 165mm (6") NB : 150 mm</b>                  |                         |                                     |  |   |   |  |   |   |   |  |   |
| Standard  | 30.00                   | 22500                               | 12550  | 16.00   | 160   | 112  | 367   | 1110  | 1979  | 650  | 3739  |
| Heavy   | 35.00                   | 40000                               | 23500  | 27.00   | 270   | 189  | 620   | 2520  | 3340  | 980  | 6840  |

## Cast Iron (CI) Top & Bottom Adaptor

Suitable for Medium, Standard & Heavy Column Pipes



Bottom Top

### Specification

|            |                              |
|------------|------------------------------|
| Metal      | CI                           |
| Diameter   | 1" to 6"                     |
| Finishing  | Colour Coated                |
| Thickness  | 7mm to 12mm                  |
| Connection | Square Thread / Pipe Thread* |

## Cast Iron (CI) S.H Bottom Adaptor

Suitable for Super Heavy Column Pipes



Bottom

### Specification

|            |                              |
|------------|------------------------------|
| Metal      | CI                           |
| Diameter   | 1.1/4" to 6"                 |
| Finishing  | Colour Coated                |
| Thickness  | 8mm to 12mm                  |
| Connection | Square Thread / Pipe Thread* |

## Mild Steel (MS) Top Adaptor

Suitable for Medium, Standard & Heavy Column Pipes



Top

### Specification

|            |                              |
|------------|------------------------------|
| Metal      | MS                           |
| Diameter   | 1" to 6"                     |
| Finishing  | Colour Coated                |
| Thickness  | 5mm to 9mm                   |
| Connection | Square Thread / Pipe Thread* |

## Mild Steel (MS) S.H Top Adaptor

Suitable for Super Heavy Column Pipes



Top

### Specification

|            |                              |
|------------|------------------------------|
| Metal      | MS                           |
| Diameter   | 1.1/4" to 6"                 |
| Finishing  | Colour Coated                |
| Thickness  | 6mm to 12mm                  |
| Connection | Square Thread / Pipe Thread* |

Note :

Top Adaptors - Double Clamp

\* Available with both BSP & NPT Connections

## Accessories for uPVC Column Pipes

### Stainless Steel Top & Bottom Adaptor

Suitable for Medium, Standard & Heavy Column Pipes



Top

Bottom

#### Specification

|            |                              |
|------------|------------------------------|
| Metal      | SS 304                       |
| Diameter   | 1" to 6"                     |
| Finishing  | Glossy / Matte Steel Finish  |
| Thickness  | 5mm to 9mm                   |
| Connection | Square Thread / Pipe Thread* |

Note : Top Adaptors - Double Clamp

### Stainless Steel 304 (SS) S.H Top Adaptor

Suitable for Super Heavy Column Pipes



Top

#### Specification

|            |                              |
|------------|------------------------------|
| Metal      | SS 304                       |
| Diameter   | 1.1/4" to 6"                 |
| Finishing  | Glossy / Matte Steel Finish  |
| Thickness  | 6mm to 10mm                  |
| Connection | Square Thread / Pipe Thread* |

Note : Top Adaptors - Double Clamp

### Cast Iron (CI) Reducer & Expander - Bottom



Reducer

Expander

#### Specification

|            |   |
|------------|---|
| Metal      | CI  |
| Diameter   | 1.1/4" x 1" to 5" x 4" (Reducer)<br>1" x 1.1/4" to 4" x 5" (Expander) |
| Finishing  | Colour Coated   |
| Thickness  | 7mm to 12mm   |
| Connection | Square Thread / Pipe Thread*  |

Note : \* Available with both BSP & NPT Connections

### Stainless Steel Reducer & Expander - Bottom



Reducer

Expander

#### Specification

|            |   |
|------------|---|
| Metal      | SS 304  |
| Diameter   | 1.1/4" x 1" to 5" x 4" (Reducer)<br>1" x 1.1/4" to 4" x 5" (Expander) |
| Finishing  | Glossy / Matte Steel Finish   |
| Thickness  | 6mm to 10mm   |
| Connection | Square Thread / Pipe Thread*  |

## Accessories for uPVC Column Pipes

### Pump Guard MS Flange



#### Specification

|            |                 |
|------------|-----------------|
| Metal      | MS              |
| Diameter   | 1" to 6"        |
| Finishing  | Colour Coated   |
| Thickness  | 8mm to 12mm     |
| Connection | Stud Clamp Type |

### Pump Guard SS 304 Flange



#### Specification

|            |                             |
|------------|-----------------------------|
| Metal      | SS 304                      |
| Diameter   | 1" to 6"                    |
| Finishing  | Glossy / Matte Steel Finish |
| Thickness  | 8mm to 12mm                 |
| Connection | Stud Clamp Type             |

### Pump Guard SS 202 ROD



#### Specification

|            |                               |
|------------|-------------------------------|
| Metal      | SS 202                        |
| Diameter   | 17", 20", 22", 24", 26" & 27" |
| Finishing  | Glossy / Matte Steel Finish   |
| Thickness  | 12mm                          |
| Connection | Stud Clamp Type               |

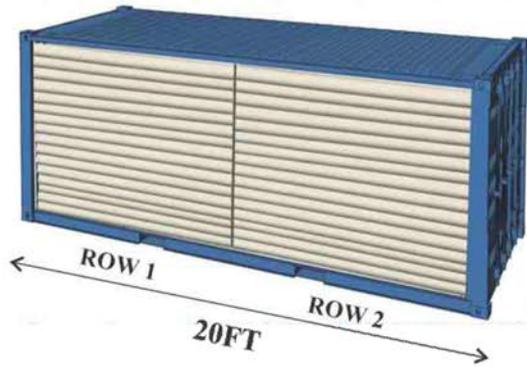
### Mild Steel Lowering Jig



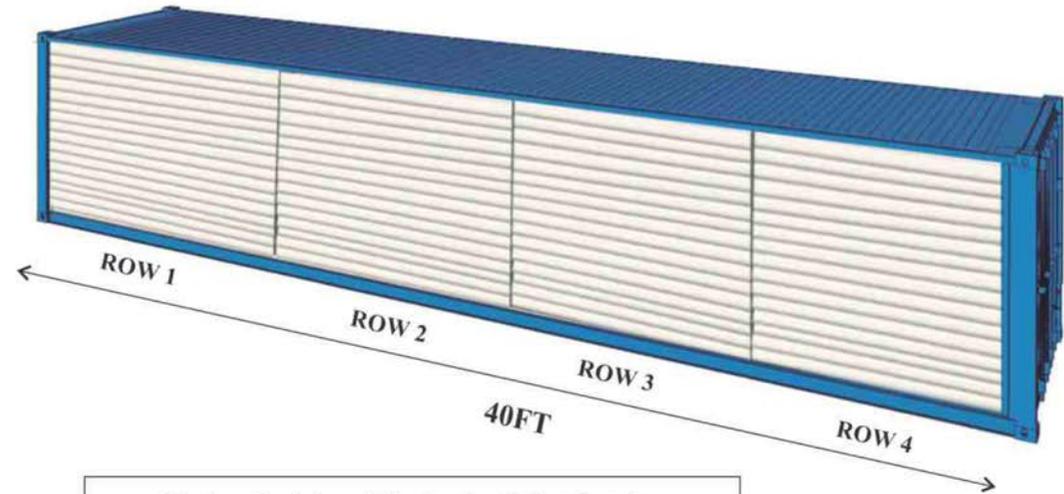
#### Specification

|            |                           |
|------------|---------------------------|
| Metal      | SS 202                    |
| Diameter   | 1" to 6"                  |
| Finishing  | Colour Coated             |
| Thickness  | 6mm to 12mm               |
| Connection | Square Thread / Hook Type |

# Container Stuffing Details



- The length of pipe will be 2.9m for 20 feet Container
- In case of 6m pipes for 20 ft, the pipe length will be 5.8m and no of Rows will be 1.



- The length of pipe will be 3m for 40 feet Container
- In case of 6m pipes for 40 ft, the pipe length will be 6m and no of Rows will be 2.

## CONTAINER STUFFING DETAILS

| Pipe Size | No of Pipes per bundle | No of Bundles per Row | Total No of Pipes per Row | No. of Rows without Capillary (20 ft) | No. of Rows with Capillary (20ft) | No. of Rows without Capillary (40ft) | No. of Rows with Capillary (40ft) |
|-----------|------------------------|-----------------------|---------------------------|---------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| 1"        | 25                     | 150                   | 3750                      | 2                                     | 1                                 | 4                                    | 3                                 |
| 1.25"     | 25                     | 90                    | 2250                      | 2                                     | 1                                 | 4                                    | 3                                 |
| 1.5"      | 20                     | 85                    | 1700                      | 2                                     | 1                                 | 4                                    | 3                                 |
| 2"        | 10                     | 100                   | 1000                      | 2                                     | 1                                 | 4                                    | 3                                 |
| 2.5"      | 10                     | 68                    | 680                       | 2                                     | 1                                 | 4                                    | 3                                 |
| 3"        | 5                      | 100                   | 500                       | 2                                     | 1                                 | 4                                    | 3                                 |
| 4"        | 5                      | 65                    | 325                       | 2                                     | 1                                 | 4                                    | 3                                 |
| 5"        | 3                      | 65                    | 195                       | 2                                     | 1                                 | 4                                    | 3                                 |
| 6"        | 2                      | 48                    | 96                        | 2                                     | 1                                 | 4                                    | 3                                 |

## Casing Pipes

REDUCER



LIFTING CAP



CENTER GUIDE



BOTTOM & TOP CAP



### Salient Features

- Easy to Handle
- Corrosion Free
- Ultimate Tensile Strength and Impact Strength
- Maximum Yield of Water
- Easy Joining & Installation
- Fire Proof
- Long Life



### Specification

- Maximum ambient temperature 70°C
- Maximum installation depth 250m for CM series, 450m for CD series and 80m for CS series
- Installation: Vertical, Horizontal or Inclined

### Applications

- Bore well casing, Irrigation, Domestic, Industrial mining, Chemical distribution
- A wise replacement for MS, ERW, GI, Asbestos and Cement and Stainless Steel Pipes
- uPVC is nearly inert towards corrosion, chemical reaction and so that, it is ideally used in salty, sandy and chemically aggressive water

### Special Features

- Specification followed IS 12818:1992 equivalent to DIN 4925
- Surface finish of this pipe is extremely smooth which reduces the hydraulic friction losses
- Internal and external threaded & bell spigot ends and reliable jointing
- Ribbed screen are used especially when outer surface area of bore well casing pipe is to be increased. These ribs provide around 25% of additional surface area by virtue of its design. Besides that, it keeps gravel balls away from the pipe at a distance of about 2mm, which facilitates to clean slits due to vertical flow passage and allows more water to seep in, resulting in higher yield than other plain screen pipes from the same bore

### Other Advantages

- Horizontal slots to get maximum water yield
- Special male female square threads to ensure better strength
- Very high impact strength to resist external pressure

### Screen Open Area in Percentage (w) - Based on the width of slot

| RMS/PMS/RDS/PDS  |      |                         |                    |                                     |      |      |      |     |     |      |      |
|------------------|------|-------------------------|--------------------|-------------------------------------|------|------|------|-----|-----|------|------|
| Nominal Diameter |      | Number of Slots N (Min) | $\Sigma a \pm 5\%$ | Slot width in mm                    |      |      |      |     |     |      |      |
|                  |      |                         |                    | 0.2                                 | 0.3  | 0.5  | 0.75 | 1.0 | 1.5 | 2.0  | 3.0  |
| mm               | inch |                         |                    | Free passage area in Percentage (%) |      |      |      |     |     |      |      |
| 50               | 2    | 3                       | 108                | 3.7                                 | 5.2  | 6.0  | 9.1  | 9.4 | 9.7 | 12.1 | ---- |
| 80               | 3    | 3                       | 168                | 3.7                                 | 5.2  | 6.0  | 9.1  | 9.4 | 9.7 | 12.1 | ---- |
| 100              | 4    | 5                       | 216                | 3.7                                 | 5.2  | 6.0  | 9.1  | 9.4 | 9.7 | 12.1 | 14.0 |
| 115              | 4.5  | 5                       | 240                | 3.7                                 | 5.2  | 6.0  | 9.1  | 9.4 | 9.7 | 12.1 | 14.0 |
| 125              | 5    | 5                       | 240                | ----                                | 4.7  | 5.6  | 8.2  | 8.5 | 8.8 | 11.0 | 13.5 |
| 150              | 6    | 5                       | 285                | ----                                | ---- | 5.6  | 8.2  | 8.5 | 8.8 | 11.0 | 13.5 |
| 175              | 7    | 6                       | 340                | ----                                | ---- | 5.6  | 8.3  | 8.5 | 8.8 | 11.0 | 13.5 |
| 200              | 8    | 6                       | 390                | ----                                | ---- | ---- | 8.3  | 8.5 | 8.8 | 11.0 | 13.5 |
| 250              | 10   | 6                       | 450                | ----                                | ---- | ---- | 7.6  | 7.9 | 8.1 | 10.2 | 12.5 |
| 300              | 12   | 6                       | 530                | ----                                | ---- | ---- | 7.6  | 7.9 | 8.1 | 10.2 | 12.5 |
| 350              | 14   | 8                       | 720                | ----                                | ---- | ---- | ---- | 7.9 | 8.1 | 10.2 | 12.5 |
| Slot pitch mm    |      |                         |                    | 4.0                                 | 4.0  | 5.5  | 5.5  | 6.8 | 9.5 | 9.5  | 11.0 |

### Tolerance on Width of slot (w)

| Slot width (w) mm | Tolerance (mm) |       |
|-------------------|----------------|-------|
| 0.2               | +0.06          | -0.00 |
| 0.3               | +0.06          | -0.00 |
| 0.5               | +0.10          | -0.00 |
| 0.75              | +0.20          | -0.00 |
| 1.0               | +0.20          | -0.00 |
| 1.5               | +0.20          | -0.00 |
| 2.0               | +0.20          | -0.00 |
| 3.0               | +0.30          | -0.00 |

### Screen Permeability

| RMS/PMS/RDS/PDS  |      |                                     |      |      |      |      |      |      |      |  |
|------------------|------|-------------------------------------|------|------|------|------|------|------|------|--|
| Nominal Diameter |      | Slot width in mm                    |      |      |      |      |      |      |      |  |
|                  |      | 0.2                                 | 0.3  | 0.5  | 0.75 | 1.0  | 1.5  | 2.0  | 3.0  |  |
| mm               | inch | Free passage area in Percentage (%) |      |      |      |      |      |      |      |  |
| 50               | 2.0  | 0.18                                | 0.25 | 0.29 | 0.44 | 0.45 | 0.46 | 0.58 | 0.67 |  |
| 80               | 3.0  | 0.27                                | 0.39 | 0.45 | 0.68 | 0.70 | 0.72 | 0.90 | 1.04 |  |
| 100              | 4.0  | 0.35                                | 0.50 | 0.57 | 0.87 | 0.90 | 0.93 | 1.16 | 1.34 |  |
| 115              | 4.5  | 0.40                                | 0.56 | 0.64 | 0.97 | 1.01 | 1.04 | 1.30 | 1.50 |  |
| 125              | 5.0  | ----                                | 0.56 | 0.66 | 0.97 | 1.00 | 1.04 | 1.30 | 1.59 |  |
| 150              | 6.0  | ----                                | ---- | 0.78 | 1.15 | 1.19 | 1.23 | 1.54 | 1.89 |  |
| 175              | 7.0  | ----                                | ---- | 0.93 | 1.38 | 1.41 | 1.46 | 1.82 | 2.24 |  |
| 200              | 8.0  | ----                                | ---- | ---- | 1.59 | 1.62 | 1.68 | 2.10 | 2.58 |  |
| 250              | 10.0 | ----                                | ---- | ---- | 1.81 | 1.88 | 1.93 | 2.42 | 2.97 |  |
| 300              | 12.0 | ----                                | ---- | ---- | 2.13 | 2.22 | 2.27 | 2.86 | 3.51 |  |

| CS Casing Pipe   |       |                             |       |                |      | Technical Data                           |                   |
|------------------|-------|-----------------------------|-------|----------------|------|--|-------------------|
| Nominal Diameter |       | Average Outer Diameter (mm) |       | Wall Thickness |      | Average Outer Dia. Over Connection (Max) | Length of Threads |
| mm               | inch  | min                         | max   | min            | max  |  |                   |
| 100*             | 4.0"  | 113.0                       | 113.3 | 4.60           | 5.20 | 116.0                                    | 48                |
| 125*             | 5.0"  | 140.0                       | 140.4 | 5.30           | 5.60 | 148.0                                    | 63                |
| 150              | 6.0"  | 165.0                       | 165.4 | 5.70           | 6.50 | 174.0                                    | 63                |
| 165*             | 6.5"  | 180.0                       | 180.3 | 6.10           | 7.10 | 188.0                                    | 63                |
| 175              | 7.0"  | 200.0                       | 200.5 | 7.00           | 7.80 | 211.0                                    | 63                |
| 200              | 8.0"  | 225.0                       | 225.5 | 7.60           | 8.80 | 238.0                                    | 74                |
| 225*             | 9.0"  | 250.0                       | 250.5 | 8.80           | 9.60 | 262.0                                    | 74                |
| 250              | 10.0" | 280.0                       | 280.5 | 9.60           | 11.0 | 292.0                                    | 90                |
| 300              | 12.0" | 330.0                       | 330.6 | 11.2           | 13.3 | 346.0                                    | 90                |
| 350              | 14.0" | 400.0                       | 400.7 | 14.0           | 15.5 | 420.0                                    | 90                |

| CM Casing Pipe |       |       |       |      |      | Technical Data                           |                   |
|----------------|-------|-------|-------|------|------|--|-------------------|
| mm             | inch  | min   | max   | min  | max  | Average Outer Dia. Over Connection (Max) | Length of Threads |
| 40             | 1.5"  | 48.0  | 48.2  | 3.5  | 4.0  | 52.0                                     | 25                |
| 50             | 2.0"  | 60.0  | 60.2  | 4.0  | 4.6  | 65.0                                     | 30                |
| 80             | 3.0"  | 88.0  | 88.3  | 4.0  | 4.6  | 94.0                                     | 40                |
| 100            | 4.0"  | 113.0 | 113.3 | 5.0  | 5.7  | 120.0                                    | 48                |
| 115            | 4.5"  | 125.0 | 125.3 | 5.0  | 5.7  | 132.0                                    | 48                |
| 125            | 5.0"  | 140.0 | 140.4 | 6.5  | 7.3  | 150.0                                    | 63                |
| 150            | 6.0"  | 165.0 | 165.4 | 7.5  | 8.5  | 178.0                                    | 63                |
| 165*           | 6.5"  | 180.0 | 180.4 | 8.0  | 8.5  | 196.7                                    | 63                |
| 175            | 7.0"  | 200.0 | 200.5 | 8.8  | 9.8  | 215.0                                    | 63                |
| 200            | 8.0"  | 225.0 | 225.5 | 10.0 | 11.2 | 243.0                                    | 74                |
| 225*           | 9.0"  | 250.0 | 250.5 | 12.0 | 12.5 | 270.0                                    | 74                |
| 250            | 10.0" | 280.0 | 280.5 | 12.5 | 14.0 | 298.0                                    | 90                |
| 300            | 12.0" | 330.0 | 330.6 | 14.5 | 16.2 | 352.0                                    | 90                |
| 350            | 14.0" | 400.7 | 400.7 | 17.5 | 19.5 | 428.0                                    | 90                |

| CD Casing Pipe |       |       |       |      |      | Technical Data                           |                   |
|----------------|-------|-------|-------|------|------|--|-------------------|
| mm             | inch  | min   | max   | min  | max  | Average Outer Dia. Over Connection (Max) | Length of Threads |
| 100            | 4.0"  | 113.0 | 113.5 | 7.0  | 7.9  | 125.0                                    | 48                |
| 115            | 4.5"  | 125.0 | 125.3 | 7.5  | 8.5  | 137.0                                    | 48                |
| 125*           | 5.0"  | 140.0 | 140.4 | 8.00 | 9.00 | 152.0                                    | 63                |
| 150            | 6.0"  | 165.0 | 165.4 | 9.50 | 10.7 | 180.0                                    | 63                |
| 165*           | 6.5"  | 180.0 | 180.3 | 10.0 | 11.0 | 194.0                                    | 63                |
| 175            | 7.0"  | 200.0 | 200.5 | 11.8 | 13.6 | 217.0                                    | 63                |
| 200            | 8.0"  | 225.0 | 225.5 | 13.0 | 14.8 | 247.0                                    | 74                |
| 225*           | 9.0"  | 250.0 | 250.5 | 15.0 | 16.6 | 270.0                                    | 74                |
| 250            | 10.0" | 280.0 | 280.5 | 16.0 | 17.6 | 304.0                                    | 90                |
| 300            | 12.0" | 330.0 | 330.6 | 19.0 | 21.0 | 359.0                                    | 90                |
| 350            | 14.0" | 400.0 | 400.7 | 21.5 | 23.9 | 433.0                                    | 90                |

\* Not Covered under ISI

All Dimensions in mm

| R - CS Casing Pipe |       |                             |       |                |       | Technical Data                           |                   |
|--------------------|-------|-----------------------------|-------|----------------|-------|--|-------------------|
| Nominal Diameter   |       | Average Outer Diameter (mm) |       | Wall Thickness |       | Average Outer Dia. Over Connection (Max) | Length of Threads |
| mm                 | inch  | min                         | max   | min            | max   |  |                   |
| 125*               | 5.0"  | 144.0                       | 144.4 | 5.30           | 5.60  | 152.0                                    | 63                |
| 150*               | 6.0"  | 169.0                       | 169.4 | 5.70           | 6.50  | 178.0                                    | 63                |
| 175*               | 7.0"  | 204.0                       | 204.5 | 7.00           | 7.80  | 215.0                                    | 63                |
| 200*               | 8.0"  | 229.0                       | 229.5 | 7.60           | 8.80  | 242.0                                    | 74                |
| 250*               | 10.0" | 284.0                       | 284.5 | 9.60           | 11.0  | 296.0                                    | 90                |
| 300*               | 12.0" | 334.0                       | 334.6 | 11.20          | 13.30 | 350.0                                    | 90                |

| R - CM Casing Pipe |       |                             |       |                |      | Technical Data                           |                   |
|--------------------|-------|-----------------------------|-------|----------------|------|--|-------------------|
| Nominal Diameter   |       | Average Outer Diameter (mm) |       | Wall Thickness |      | Average Outer Dia. Over Connection (Max) | Length of Threads |
| mm                 | inch  | min                         | max   | min            | max  |  |                   |
| 40*                | 1.5"  | 52.0                        | 52.2  | 3.5            | 4.0  | 56.0                                     | 25                |
| 50*                | 2.0"  | 64.0                        | 64.2  | 4.0            | 4.6  | 69.0                                     | 30                |
| 80*                | 3.0"  | 92.0                        | 92.3  | 4.0            | 4.6  | 98.0                                     | 40                |
| 100                | 4.0"  | 117.0                       | 117.3 | 5.0            | 5.7  | 124.0                                    | 48                |
| 125                | 5.0"  | 144.0                       | 144.4 | 6.5            | 7.3  | 154.0                                    | 63                |
| 150                | 6.0"  | 169.0                       | 169.4 | 7.5            | 8.5  | 182.0                                    | 63                |
| 175                | 7.0"  | 204.0                       | 204.5 | 8.8            | 9.8  | 219.0                                    | 63                |
| 200                | 8.0"  | 229.0                       | 229.5 | 10.0           | 11.2 | 247.0                                    | 74                |
| 250                | 10.0" | 284.0                       | 284.5 | 12.5           | 14.0 | 302.0                                    | 90                |
| 300                | 12.0" | 334.0                       | 334.6 | 14.5           | 16.2 | 356.0                                    | 90                |
| 350                | 14.0" | 404.0                       | 404.7 | 17.5           | 19.5 | 432.0                                    | 90                |

| R - CD Casing Pipe |       |                             |       |                |      | Technical Data                           |                   |
|--------------------|-------|-----------------------------|-------|----------------|------|--|-------------------|
| Nominal Diameter   |       | Average Outer Diameter (mm) |       | Wall Thickness |      | Average Outer Dia. Over Connection (Max) | Length of Threads |
| mm                 | inch  | min                         | max   | min            | max  |  |                   |
| 100                | 4.0"  | 117.0                       | 117.3 | 7.0            | 7.9  | 129.0                                    | 48                |
| 115                | 4.5"  | 129.0                       | 129.3 | 7.5            | 8.5  | 141.0                                    | 48                |
| 125                | 5.0"  | 144.0                       | 144.4 | 8.0            | 9.0  | 156.0                                    | 63                |
| 150                | 6.0"  | 169.0                       | 169.4 | 9.5            | 10.7 | 184.0                                    | 63                |
| 175                | 7.0"  | 204.0                       | 204.5 | 11.8           | 13.6 | 221.0                                    | 63                |
| 200                | 8.0"  | 229.0                       | 229.5 | 13.0           | 14.8 | 251.0                                    | 74                |
| 250                | 10.0" | 284.0                       | 284.5 | 16.0           | 17.6 | 309.0                                    | 90                |
| 300                | 12.0" | 334.0                       | 334.6 | 19.0           | 21.0 | 363.0                                    | 90                |
| 350                | 14.0" | 404.0                       | 404.7 | 21.5           | 23.9 | 437.0                                    | 90                |

\* Not Covered under ISI

All Dimensions in mm

## Threading

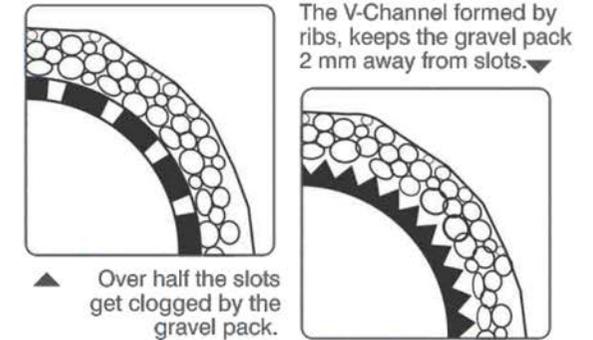
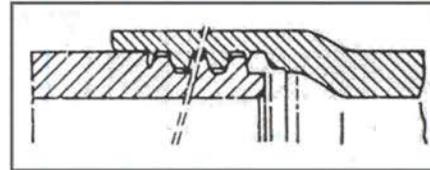


## Tensile Strength of thread joints

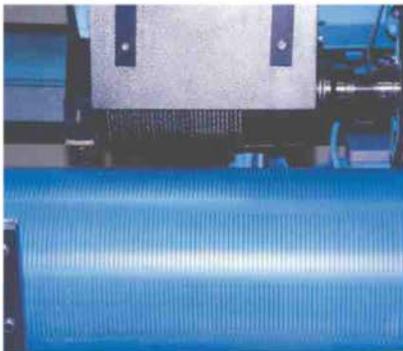
| ND     |        | Trapezoidal |
|--------|--------|-------------|
| ( mm ) | ( in ) | kN*         |
| 100    | 4      | 20          |
| 115    | 4.5    | 20          |
| 125    | 5      | 30          |
| 150    | 6      | 40          |
| 165    | 6.5    | 40          |
| 175    | 7      | 40          |
| 200    | 8      | 80          |
| 250    | 10     | 110         |
| 300    | 12     | 150         |

\*1kN = 100 Kp

## Thread Type: Metric Trapezoidal



## Slotting



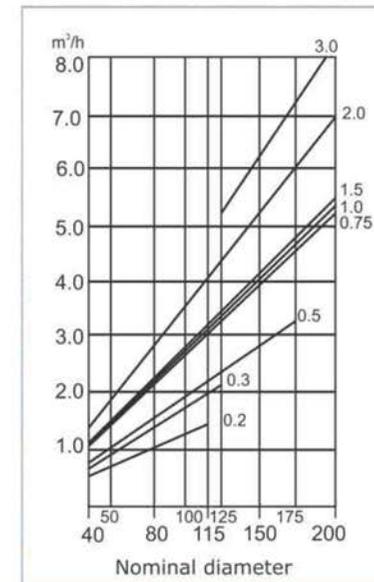
Standard Slot width range  
(Showing average % open area)

|     |        |
|-----|--------|
| 3%  | 0.20mm |
| 4%  | 0.30mm |
| 5%  | 0.40mm |
| 6%  | 0.50mm |
| 9%  | 0.75mm |
| 11% | 1.00mm |
| 13% | 1.25mm |
| 16% | 1.50mm |
| 20% | 2.00mm |
| 25% | 3.00mm |

Permeability of Screens

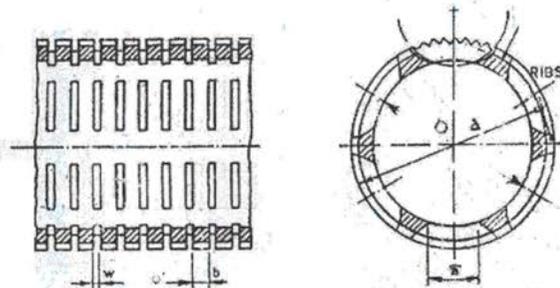
The permeability of the screen has to be higher than that of the sand or gravel layer directly next to the outer layer of the screen.

(for slot width of 0.2 mm - 3.0 mm)  
Permeability per m of screen  
 $k$  (m<sup>3</sup>/h) at  $V_r = 3$  cm/sec.



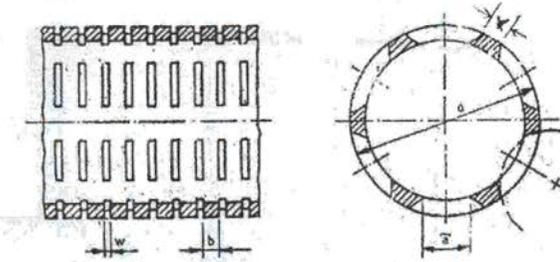
## Slot Arrangements

Ribbed Screen Pipe



— This portion may or may not have ribs

Plain Screen Pipe

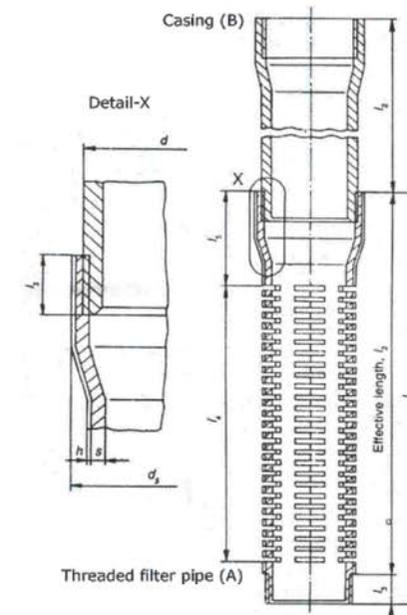


Example showing 6 slots around circumference of pipe

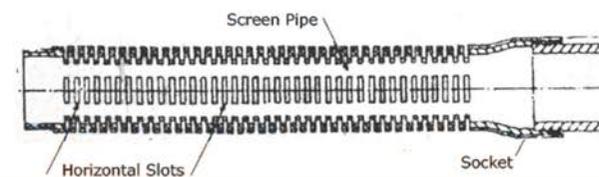
- A = Slot length
- W = Slot width
- b = Longitudinal pitch of slot
- V = Vertical pitch
- D = Inside diameter
- d = Out side diameter

Note: The number of rows of slots in the open area depends on the pipe diameter

## Screen & Casing Assembly

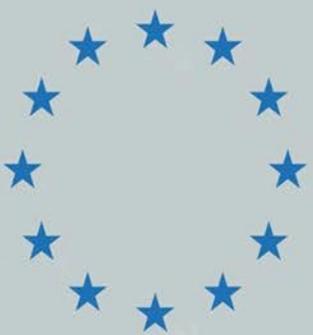


- L1 = Overall Length (L2+L3)
- L2 = Effective pipe length, after assembly
- L3 = Thread length
- D = Outside diameter
- DS = Outside socket diameter
- S = Wall thickness





**OUR DEALER NETWORK**  
**Marked in red**



**REGISTER OFFICE**

**AROW SOLUTIONS ESPAÑA SL**  
Avenida Aragon,40,46021. Valencia - SPAIN  
Tel:+ 34.627.058.766,admin@aro-w.com