

ONE STOP SHOP

for Your All Piping Needs



HDPE Coils

- Pioneer and leader in manufacturing high quality HDPE piping systems.
- Complete piping system and solution provider.
- HDPE coils & pipes have smooth inner wall & have a higher coefficient of friction.
- Coils installed above ground don't get affected due to extreme weather conditions or UV-rays.
- HDPE pipes are available in coils and single straight length.
- HDPE coils & pipes are safe for potable water conveyance.
- On demand HDPE coils are available with factory fitted pump connector & quick connect joints.

Polyethylene (PE) Pipes

Range

- Available in coils upto 160mm dia (Coil Length-Table1.4) Straight length - 6/12 meters up to 2500mm diameter
- Pressure rating 2.5 to 25 kgf/cm²

Standards

- IS 4984, ISO 4427

Material Grades

- PE-63 | PE-80 | PE-100

Applications

- Suitable to use with submersible pump, jet pump, mono block / centrifugal pump.
- Pump suction & delivery pipes.
- Pumping main & distribution lines. Lift & gravity irrigation.
- Drip & sprinkler irrigation systems.



HDPE Coils v/s Conventional Metal Pipe Comparison

| HDPE Coils | Metal Pipe |
|---|--|
| Pipe life is 100+ years. | Pipe life is about 30 years. |
| Available in coil. Long lengths help reduce fittings cost. | Available in straight length. Due to its rigidity, more fittings have to be used. |
| Light in weight, Easy to handle, transport and install. | Requires special hoisting tools, tackles and labour to handle the pipes. |
| Efficient pumping due to low friction loss - resulting in energy saving of up to 20%. | High frictional losses result in higher power consumption. |
| Very tough and inert material, no effect of aggressive soil conditions or UV Rays. | Gets damaged easily in aggressive soil conditions, also corrosion takes place. |
| The pipe inner surface is very smooth resulting in an increased flow. Flow remains constant even after long term use. | Metal pipe inner surface is rough, resulting in reduced flow. Further with time flow deteriorate. |
| No erosion, no corrosion leads to uniform performance during its life time. | Corrosion, erosion & encrustation happens naturally leading to performance deterioration. |
| Lowering and removal of pump is easy & fast. | Lowering & removal of pump needs special tools, it is time consuming because of corrosion & leaching. |
| Life Cycle Analysis (LCA) shows HDPE is totally eco-friendly due to its low energy consumption both in process of production and usage. | LCA shows that metal pipes consume more energy in the process of production and usage. Life is limited & it is not eco-friendly. |



HDPE Pipe IS 4984 : 2016

Table 1.1 : Pipe Diameter Selection Chart Based on Discharge

| PN (kg/cm ²) | Discharge LPS | | | | | | |
|-----------------------------|---------------|------|------|------|------|------|-------|
| | 32 | 40 | 50 | 63 | 75 | 90 | 110 |
| 6 | 1.01 | 1.54 | 2.41 | 3.83 | 5.42 | 7.81 | 11.37 |
| 8 | 0.94 | 1.46 | 2.28 | 3.64 | 5.13 | 7.43 | 11.09 |
| 10 | 0.87 | 1.36 | 2.14 | 3.39 | 4.80 | 6.92 | 10.37 |
| 12.5 | 0.81 | 1.25 | 1.96 | 3.11 | 4.41 | 6.38 | 9.55 |
| 16 | 0.72 | 1.13 | 1.77 | 2.83 | 3.99 | 5.78 | 8.60 |
| 20 | 0.63 | 1.00 | 1.56 | 2.47 | 3.51 | 5.07 | 7.58 |

Table 1.2 : Pipe Pressure Rating Selection Chart Based on Installation Depth

| Standards | Recommended depth of installation(Feet) | | | | | |
|-----------------------------|---|-----|-----|------|-----|-----|
| | 6 | 8 | 10 | 12.5 | 16 | 20 |
| IS 4984 | 175 | 235 | 300 | 375 | 480 | 600 |
| Deep Well Coil [#] | 300 | 380 | 490 | 610 | 750 | 900 |

Company Standard

Table 1.3 : Pump Head Selection Chart

| Standards | Maximum Permissible Pump head (Feet) | | | | | |
|-----------------------------|--------------------------------------|-----|-----|------|-----|------|
| | 6 | 8 | 10 | 12.5 | 16 | 20 |
| IS 4984 / IS 14151 | 203 | 271 | 339 | 423 | 542 | 677 |
| Deep Well Coil [#] | 325 | 434 | 542 | 677 | 867 | 1084 |

Company Standard

Table 1.4 : Available Maximum Coil Lengths

| Pipe OD (mm) | 32 | 40 | 50 | 63 | 75 | 90 | 110 | 140 | 160 |
|----------------------|------|------|------|-----|-----|-----|-----|-----|-----|
| Coil Length* (meter) | 2000 | 2000 | 1000 | 500 | 500 | 300 | 150 | 50 | 50 |

* Note: Coil length shorter than above lengths are also available

Considerations

- 1) Above information is given for guidance. It is subject to pump performance and allied conditions including pipe selected.
- 2) It is a free discharge at well head at residual head of 3m (0.3 kg/cm²). However, if users want to take it further, then additional parameters- static head, friction losses need to be accounted for while selecting piping system.
- 3) Table 1.3 Max permissible pump head indicated is inclusive of static head, frictional head losses in pipe line & fittings.
- 4) Depth of coil installation has been worked out by accounting pump / cable / pipe weight, water column & water hammer.
- 5) Discharge calculated above is based on assumed water velocity of 1.6 +/- 0.1 m/sec through the pipe.
- 6) Once depth of installation of submersible pump is known, you can fix the required pipe pressure rating by referring Table 1.2.
- 7) Once discharge of well is known, You can fix pipe diameter by referring Table 1.1 for the selected pipe pressure class.
- 8) Once pipe is selected, you can fix the required pump specifications by referring Table 1.3 for pump head, pump outlet as per pipe diameter and discharge.



Now GreenAgri HDPE Coild are available with Quick Connect Joint

Traditionally PVC pipes are used for agricultural application because of its ease of installation and joining method. Looking at the present scenario, we are happy to introduce the PE Coils with Quick Connect Joint. A Farmer can himself lay and connect the PE Coils and start watering the field. Quick Connect Joint involves a to insert the plain portion of the coil into the coupler and bring the clamp to its home, the joint is complete. The Product available in pipe diameter ranging from 50 mm to 110 mm and in required length of 50, 100 or 200 meter based on pipe diameter.



Quick Connect Joint



Female Coupler



Male Coupler

