

#### FILTERS

Filters are used to remove organic and inorganic debris from the water that could potentially clog the emission devices. In agriculture, sand media filters, screen filters or disk type filters are commonly used, and may be cleansed manually, semi-automatically or automatically. Even where potable water is used, which is typical of landscaping applications, disc or screen filters should be installed since scale and chemical precipitants may occur which present a potential clogging hazard. Depending on the emission device chosen, the degree of filtration should be 80-200 mesh.

#### CHEMICAL INJECTORS

Chemical Injectors are typically installed in drip irrigation system in order to facilitate system maintenance with chlorine or acid, and also to supply nutrients or other liquid or gaseous substances to the plants being irrigated. Whatever type of injector chosen, extreme care should be taken to ensure that the system includes proper safety and backflow prevention devices.

#### PIPE

PVC pipe is widely used to transport water from the water source to irrigation equipment of all types. In drip irrigation systems, it is typically used in the control zone and in the delivery network as both mainline and sub-mainline. In some cases, it may also be used as the lateral serving the emission devices. White PVC pipe is not UV resistant.

#### TUBING

PE tubing is widely used as the lateral pipe servicing the emission devices. It is available in numerous diameters, wall thicknesses and reel lengths with varying pressure ratings and hydraulic characteristics. PE tubing, regardless of the color, is UV resistant.

#### FITTINGS

PVC pipe connections are typically made using solvent welded fittings, while PE tubing is usually connected via compression, insert, or ring-lock type fittings.

#### FLUSH VALVES

Flush Valves are used to periodically cleanse the conveyance and emission device components of organic and inorganic debris that could clog the emission devices if left unchecked. They may be simple manual valves fitted at the ends of mainlines, sub-mainlines and/or laterals, semi-automatic valves that flush only at start-up or shut-down, or fully automated solenoid valves.

#### AIR / VACUUM RELIEF VALVES

To avoid general equipment failure, pipe rupture or pipe blockage, air/vacuum relief valves are used to expel air that builds up in the pipeline network during start-up and operation. Air/Vacuum relief valves are also used to allow air to enter the pipeline network as water exits at shutdown. This avoids undesirable vacuum suction in both the pipelines and the emission devices. Air/Vacuum relief valves are typically installed at high elevation points, at control points, and at periodic pipeline intervals.

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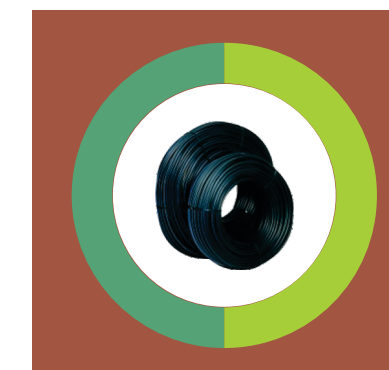
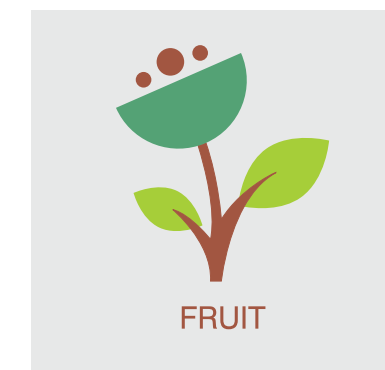
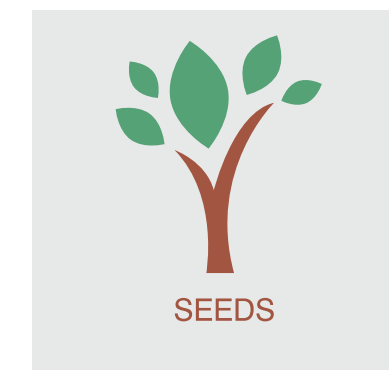
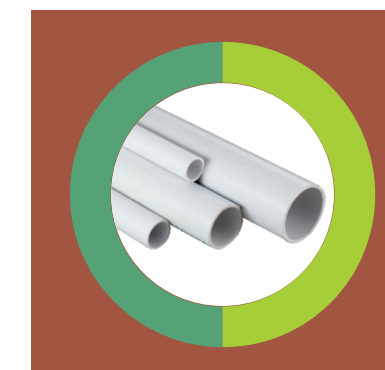
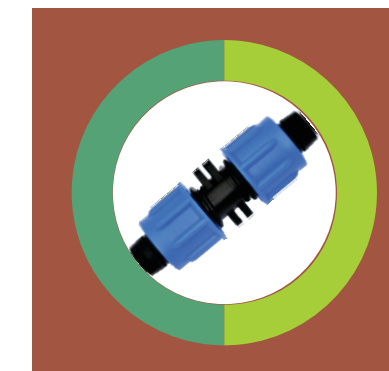
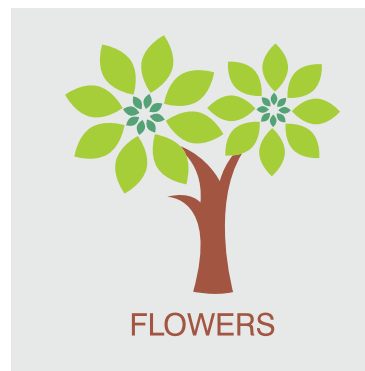
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All you need to know about **DRIP IRRIGATION**

# Ori-Plast®

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## DRIP IRRIGATION SYSTEMS BY ORIPLAST

Drip irrigation is today's need because Water – nature's gift to mankind is not unlimited and free forever. World water resources are fast diminishing. With this scarcity in mind " Oriplast" presents its In Line Drip Irrigation System.

This system consists of thin tubes of LLDPE running parallel to crop line with drippers at regular intervals. These drippers provide a round the clock drop by drop nourishment to the crops ensuring that every water drop is utilized to the maximum.

A totally customizable, efficient and long-life system which ensures saving in water and a bountiful harvest, season after season, year after year. Apart from all this, savings in labour and fertilizer costs are added advantage. After detailed study of inter-relationship among soil, water, crop, land terrain and related agro climatic conditions, Design a suitable and economically viable system to deliver a measured quantity of water at the root zone of each plant at regular intervals. This is to ensure that the plants do not suffer from stress or strain of less and over watering. The system installed at the farmer's field is commissioned and training imparted to the farmer, followed by regular after sales services.

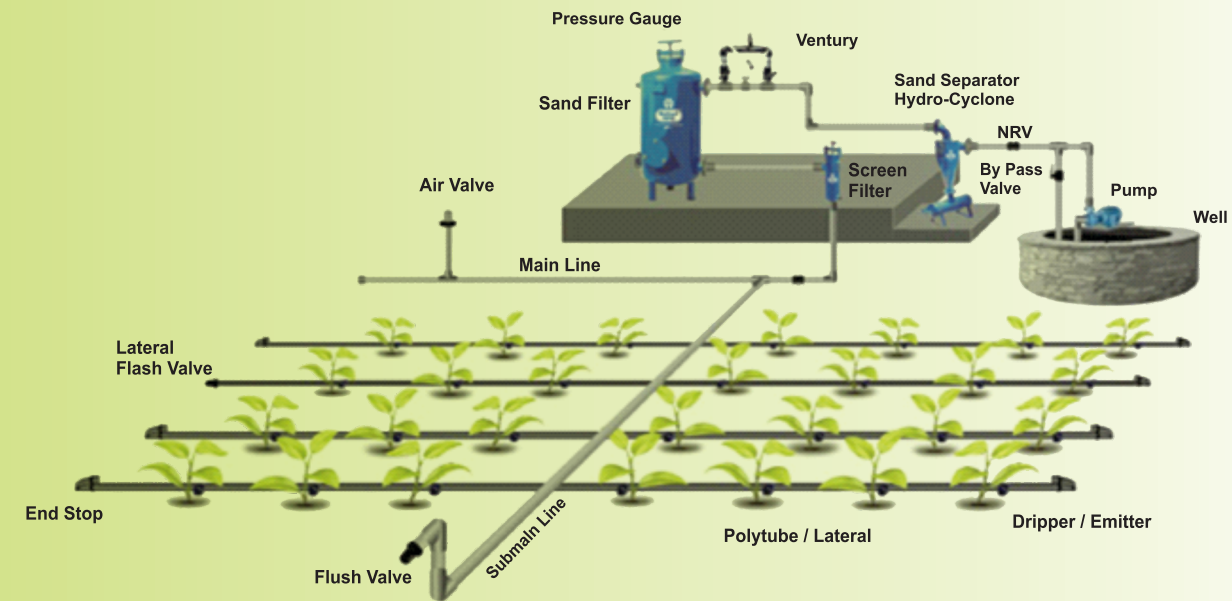
## WHY ORIPLAST DRIP IRRIGATION SYSTEM ?

- ★ Based on careful study of all the relevant factors like land topography, soil, water, crop and agro-climatic conditions, we select the most suitable and scientific micro irrigation system. We offer you a complete system for your crop so that you reap all the benefits.
- ★ We at Ori-plast Irrigation do not merely sell the micro irrigation system, we provide Agronomic and Extension support, after sales services and all technical supports for getting better crop returns. And for this, we have a team of technocrats, engineers, agronomists, horticulturists and regional offices, as well as trained dealers, distributors all over India.
- ★ Micro Irrigation System is made from high quality virgin raw materials, using advanced machinery. It is durable, reliable and meets International quality standards.
- ★ Apple, grapes, banana, sugarcane, tea, coffee, cotton, mango, teak-wood, vegetables, flowers... whatever may be your crop, we have a suitable micro irrigation system for each of them. All the system components are manufactured by us in our plant at Balasore, under strict quality control norms at every stage of production.
- ★ Drip Irrigation System means a technology developed for farmers by a company who knows and understands the farmer and his needs for five decades.



## BENEFITS OF ORIPLAST DRIP IRRIGATION SYSTEMS

- ★ Has recorded increase in yield up to 230%.
- ★ Saves water up to 70% compare to flood irrigation. More land can be irrigated with the water thus saved.
- ★ Crop grows consistently, healthier and matures fast.
- ★ Early maturity results in higher and faster returns on investment.
- ★ Fertilizer use efficiency increases by 30%.
- ★ Cost of fertilizers, inter-culturing and labour use gets reduced.
- ★ Fertilizer and Chemical Treatment can be given through Micro Irrigation System itself.



## TYPICAL DRIP SYSTEM LAYOUT

### MODEL DESIGN

Drip irrigation system delivers water to the crop using a network of mainlines, sub-mains and lateral lines with emission points spaced along their lengths. Each dripper/emitter, orifice supplies a measured, precisely controlled uniform application of water, nutrients, and other required growth substances directly into the root zone of the plant.

Water and nutrients enter the soil from the emitters, moving into the root zone of the plants through the combined forces of gravity and capillary. In this way, the plant's withdrawal of moisture and nutrients are replenished almost immediately, ensuring that the plant never suffers from water stress, thus enhancing quality, its ability to achieve optimum growth and high yield.

## RANGE OF DRIP IRRIGATION SYSTEMS

### EMITTING PIPE

Emitting Pipe play a key role in irrigation systems. Ori - plast Emitting pipe are manufactured from virgin special grade polyethylene. Resistant to ultra violet (UV) radiation and other environmental effects.



### POLYETHYLENE HOSE & TUBES

Polyethylene Hose and PE tubes are used as a submain/lateral pipe in micro irrigation system. These hose and tubes are UV stabilized and are able to withstand environmental effects.



### CONTROL & SAFETY VALVES

We provide complete solution for Control and Safety Valves. Our high performance Valves are with manual and or automatic control. Our Plastic Valves are cost effective, easy to install & maintain, value driven and customized for specific requirement.



### FILTRATION EQUIPMENTS

Water does not found in its purest form in nature. It always contaminated with physical, chemical & biological impurities. Proper filtration is of much importance to prevent low pressure diffuser like emitters from clogging.



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## FERTIGATION & CHEMIGATION EQUIPMENTS

Fertigation System & Chemigation equipment is a need for today's irrigation system. Optimum and efficient use of fertilizers is one of the major advantages of drip irrigation systems. We are well aware that success of micro irrigation system lies in precise application of fertilizers.



## POLY FITTINGS & ACCESSORIES

Poly fitting manufactured from reinforced PPCP. Excellent chemical and weather resistance. Ori - plast Poly Fittings and Accessories help you to obtain a most reliable irrigation system. Leak proof, snap proof fittings.



## QUALITY ASSURANCE

Ori-Plast has a committed Research & Development team dedicated to achieve the highest level of efficiency and excellence. The R&D department is equipped with the latest facilities, know-how and technology.

The R&D wing boasts of a steady and progressive product development system and back it up is an extensive range of the latest testing equipment that ensures the most optimal standardized quality in every batch.

Rigid quality control at every stage from raw material inspection to finished goods inspection and testing and an ongoing commitment to innovation and development ensures that Ori-Plast's products maintain a uniformly high standard of excellence. Export Promotion Award ten times in succession from the Govt. of Orissa and five times from the Plastics and Linoleum Export Promotion Council along with numerous other awards and recognition from various other organizations speak of Ori-Plast's primary objective-Quality. Ori-Plast is ISO 9001:2000 company.

All Ori-Plast products are tested in the company laboratory before release. Sometimes, the purchaser appoints an independent inspecting authority, generally called third party inspecting authority, to inspect the lot before the approval and issue of signed Test Certificates. Occasionally the inspecting authorities draw and send it to a Government Laboratory for testing.

## COMPONENTS/STAGES of DRIP IRRIGATION SYSTEM

Once the emission device is chosen, a system of filters, chemical injectors, pipes, valves and fittings must be constructed to deliver water reliably, safely and efficiently to each outlet, and to facilitate system maintenance. The following are the major distribution system component categories:

