



Irrigation Design Information



Spray Heads

The most commonly used item in a landscape irrigation system is the spray head. Being the most commonly used it is also the most abused or misused item. In today's market there are little differences between the different brands of spray heads. They are produced in 2", 3", 4", 6' and 12" pop-up sizes with the 4" being the most popular size. The 2", 3" and 4" sizes are used mainly in the turf areas and the 6" and 12" in the flower and ornamental beds.

The spray head should not be operated at pressures over 30 psi, beyond this pressure excessive misting occurs costing you or your client more money in operating costs. Even with a 50 psi static pressure there could possibly be more than 30 psi at the head, so you should always calculate the actual head pressure on each zone.

Most manufacturers offer several nozzle patterns and radius for their heads, they are nowadays designed as matched precipitation rate nozzles so each pattern will be emitting the right fraction of water that the next pattern does:

IE: full circle = 4.0gpm, ½ Circle = 2.0 gpm and ¼ circle = 1.0 gpm.

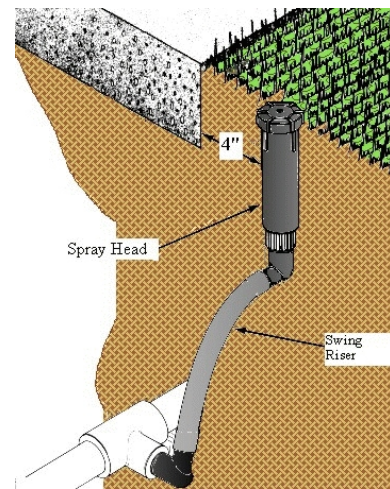
This way all the different patterns can be installed on the same zone.

INSTALLATION

The trench should be of sufficient depth so the sprinkler head can be adjusted up and down for changes in the turf (a minimum of 12"). Installing the head on a swing riser assembly is one of the better ways to install rather than on a solid riser nipple. Always use a swing riser assembly around traffic areas.

The heads should not be placed against sidewalks, driveways and buildings. Keep a 3" to 4" space between the head and walkways, driveways, etc...

On initial startup slowly flush the lines before inserting the nozzle in the head. Always use the filter screen that comes with the head, it will keep the nozzle from clogging.



Typical Spray Head Installation

TROUBLESHOOTING

Little goes wrong with the spray head other than mowers eating them up or the nozzles getting knocked off.

The main problem is the wearing of the chevron seal that is around the pop-up piston, with dirty water the seal can wear and not seal properly.

The nozzle orifices have a tendency to erode with time, so the nozzles should be replaced at least every two years or sooner if your water supply is from a lake, river, well or pond.

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