Micro Irrigation Solving the Water Problems

The dogs days are dragging on, and you're still out there dragging hoses. While you're desperately trying to stretch another snarled garden hose out to the rapidly wilting impatiens, you realize that there has to be a better way. Maybe, you think, it's time to look into one of those microsprinkler systems you've heard about. Now that you've seen the light, here's what you need to know to get started.

The Basics

Microsprinkler irrigation is a system that uses flexible polypipe, and various applicators to deliver water easily and efficiently to garden and landscape beds, and even to individual plants in the landscape. Polypipe is easily cut with shears or a utility knife, and fittings are simply pushed on; no threading or gluing required. Polypipe doesn't need to be buried, so you won't need to rent a trencher. Simple hand-twist fittings allow the system to hook directly to your hose spigots. Microsprinklers are available to water everything from hanging baskets on the front porch to row crops out in the vegetable garden. About the only thing microsprinklers can't do is lawns; however, a polypipe system can be an efficient addition to an existing or planned hard-pipe irrigation system. Because lawns and plantings have different water requirements, a hybrid system can save both water and installation dollars.

Getting Started

First, determine what needs to be irrigated. From window boxes to flowerbeds to garden plots, hedgerows to orchards to prized specimen trees, what needs water? Next, make a sketch. It needn't be architect grade; just show relative positions and approximate distances; usually, drawing on a copy of your site plan works fine. Be sure to mark the positions of spigots and any hardscape features such as buildings, driveways and sidewalks.

Design the system

Now, draw in a polypipe from a spigot to everywhere you want to get water. This is the creative part! Remember, the pipe is flexible; it tends to lay out in sinuous curves. Let it; try to get the pipe within about six feet of everything that needs water. It's ok to cross lawn areas; you can use an edger to make a small cut to get the polypipe out of harms way. A few rules of thumb: you can run about six hundred feet of three-quarter inch polypipe per spigot. Above that you'll have to split the system into zones. Often, the driveway naturally splits the yard into two zones. For larger or more intensively planted lots, there may be

six or more zones. Plan on no more than fifty or so applicators per zone. Use tees to add branch lines out to isolated plants or island beds. Now measure out how much polypipe you need, and count up the number of zone-heads, tees, and end caps…this is your main-line parts list. Now it's time to pick your emitters…

Emitters

Or everything you ever wanted to know about microsprinklers…

Figure 1 Maxijet in Action

Microsprinklers actually range from really micro to practically macro. The really micro end of the scale starts with drippers. These tiny emitters are inserted into the polypipe, and literally drip, emitting from ½ to 2 gallons per hour drop by drop. A few feet of spaghetti tube can be used to direct the drips into a pot or to the base of a small plant.

Drippers work best for containers, or in beds with really good soil. In sandy conditions, drippers tend to wet too small an area to be effective.

Next up the scale are vortex sprayers; these tiny sprinklers throw a flat circle of water, adjustable up to about a six foot diameter. Vortex are great for larger containers, hedges and shrubs, and individual specimen plants. They are especially good for keeping foliage dry, a benefit with plants that can be prone to leaf fungi.

At the macro end of microsprinklers are Maxijets. These larger, stake mounted sprinklers can water up to a 12 foot circle, and are adjustable both in distance and arc. Half-circle emitters are great for keeping water off of paths and sidewalks, and narrow strip patterns work well for row crops. Maxijets are best for watering larger areas, and thickly planted beds.

Specialty emitters for vineyards, hanging baskets, and other applications are available as well. So figure out how many of each type you will need, add that to your parts list, and head out to the Garden Center.

The true beauty of a microsprinkler system is its flexibility. We have had customers adapt their systems to provide cooling mists for horses and dogs, or to automatically keep bird baths filled. Once you are freed from the tyranny of dragging hoses, you can let your imagination run wild!

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