

CONVERTING A STANDARD IRRIGATION SYSTEM TO DRIP/MICRO

Today's irrigation systems are designed so that they are much more efficient and uniform than the older hand-move or brass sprinkler systems of the 1940's and 50's, but many older homes and yards still have the old brass pop-up sprinklers and metal pipes installed when the houses were built. The older systems are durable and can take abuse, but they are not efficient and use much more water than people realize. Once brass pop-up can use over 3 gallons a minute and apply that to a small 50 square foot area. That translates to over 1" per hour of water, sometimes more if the system is not efficient. To help reduce water waste and runoff, many areas of your yard can be converted to drip or micro spray irrigation easily. Existing turf and shrub irrigation systems can be converted to drip without tearing up pipe or pulling out sprinklers. With today's online media, many of the principals discussed in this article can be found on websites and online videos.

If you have an automatic irrigation system and want to convert a station or landscape area to drip, do the following:

1. Locate the anti-siphon valve or in-line valve that runs the heads in the area you want to convert.
2. Run the system to find all the heads that operate from that valve.
3. Depending on where you run the dripline, remove all the sprinklers and cap them with ½" PVC caps. You may need to purchase ½" thread by thread couplings so that you can install 6" risers and put the cap on the ends. Cap all the heads except one. Remove the last head and install a 6 or 12" threaded riser so that you can place a 90 degree swing joint on the top to allow installing of an inline filter and pressure regulator.
4. The filter should attached directly to the swing joint, then to the regulator, then the poly tubing attaches to the pressure regulator (see photo). You can also run the drip line with filter and regulator directly from the valve if you don't want to cap all the heads, but you will need to disconnect the line by cutting it and then attaching the filter and pressure regulator to the existing valve and then run the tubing from there.
5. You can then run the poly tubing (drip line) to any plant or "snake" it to the areas where you will be installing plants.
6. Be sure to install drippers that apply enough water for the size and type of plants you will be using. A large shrub will need at least 4 gallons per hour and a tree will need a micro sprinkler that applies at least 10-15 gallons per hour.
7. Drip tubing can either be buried, or left on the surface and covered with mulch. You can also stake down the tubing with tubing stakes or use piles of soil to keep it in place. The tubing will last longer if covered with some type of material.
8. Be sure your existing timer can run the drip station for at least an hour. Most stations can run for 30 minutes 2-3 times per week depending on your dripper and micro sprinkler flow rates. A good source of more detailed irrigation help can be found at IrrigationTutorials.com.

Typical anti-siphon valve and wire

