



# Irrigation Depot™

## MICRO DRIP IRRIGATION INSTALLATION GUIDE



# What is Drip Irrigation ?

Drip irrigation is a type of watering system that applies a small amount of water to keep plants healthy and hydrated. Drip irrigation slowly delivers a precise amount of water directly to plant root zones, enabling them to thrive in a healthy environment with a consistent moisture level.

## Why Install A Drip Irrigation System ?

- ✓ Saves Water—Water is delivered directly to the roots
- ✓ Saves Money—Up to a 70% reduction in water waste, resulting in lower water bills
- ✓ Saves Time—Replaces hand watering
- ✓ Healthier Plants—Plants flourish when receiving the precise amount of water
- ✓ Less Yard Maintenance—Delivers water to the plants, not to weeds



**P-1** Water Source Connections

**P-2** Connecting to an Outside Hose Faucet

**P-3-4** Connecting to an Underground Sprinkler System — Retrofit

**P-5** Connecting to a Designated Irrigation Valve

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**P-12** Flower Beds with Flexible Tubing

**P-13** Flower Beds with Rigid Risers

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### IMPORTANT:

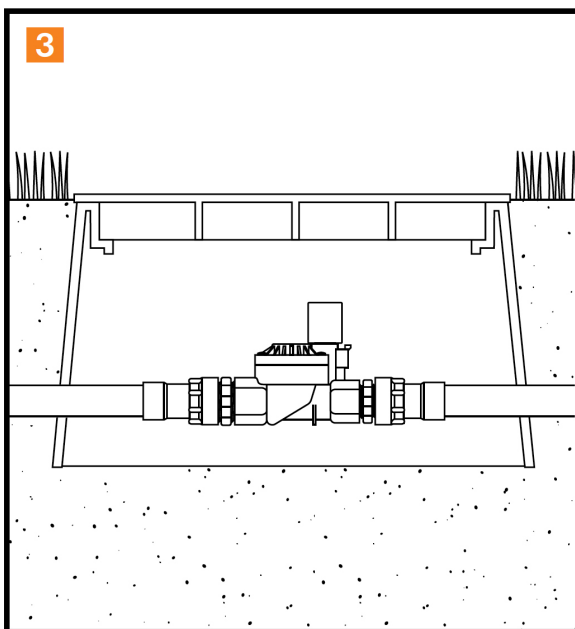
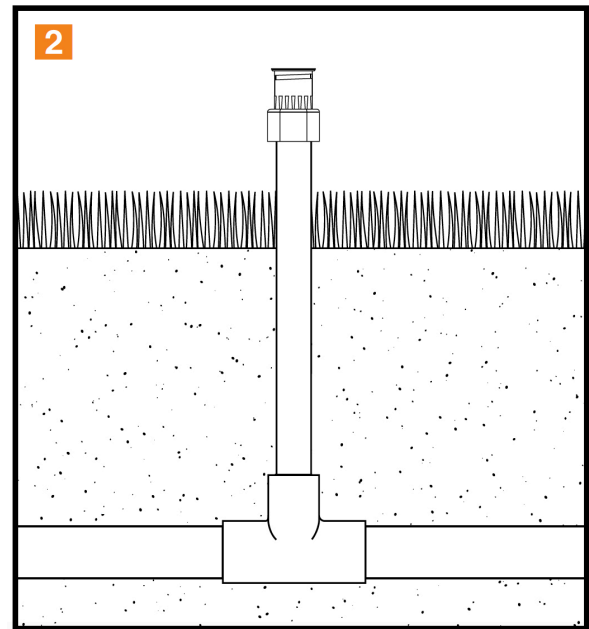
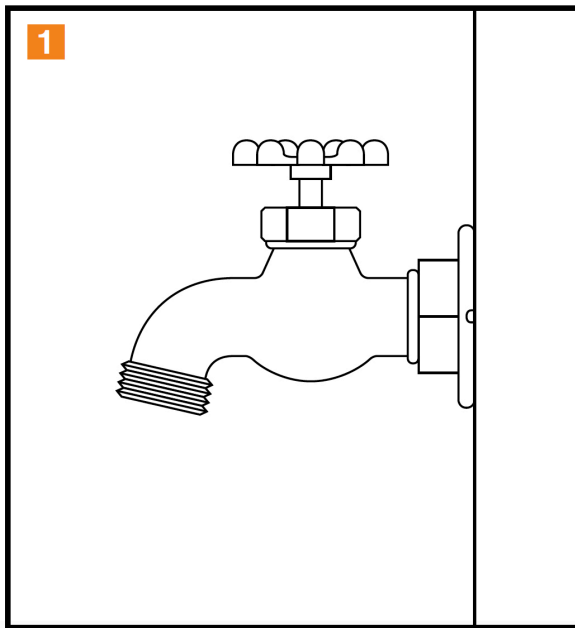
- Contact the local water district for code requirements.
- Before digging, contact utility companies to mark utility lines.

# WATER SOURCE CONNECTIONS

## WATER SOURCE CONNECTIONS AND PRESSURE

Water Source Connections—Drip Irrigation Systems can be connected to any of the following water sources. Select the best option for you.

- 1 Outside Hose Faucet
- 2 Existing Underground Sprinkler System
- 3 Direct Connection to an Irrigation Valve



**Water Pressure**—Obtain a water pressure gauge (available at [www.irrigationdepot.ca](http://www.irrigationdepot.ca)) and attach it to your source of water.

Drip Irrigation systems are designed to operate between 15–35 PSI (high water pressure may cause system failure).

# WATER SOURCE CONNECTIONS

## 1 CONNECTING TO AN OUTSIDE HOSE FAUCET

An outside hose faucet is one of the simplest ways to connect your Drip Irrigation system.



*TIP—For complete hands-free watering, install an Electronic Hose Timer to the hose faucet prior to connecting your Drip Irrigation system.*

### THE FOLLOWING ITEMS ARE RECOMMENDED FOR YOUR HOSE FAUCET DRIP IRRIGATION SYSTEM:

#### A- Electronic Hose Timer

Wide selection on Irrigation Depot Canada [www.irrigationdepot.ca](http://www.irrigationdepot.ca)

#### B- Anti-Siphon

Prevents contaminants from entering your drinking water supply. Required in most areas (part # OP-67750)

#### C- 1/2" Hydro-Lock Fittings FHT

(part # DR-10813) or Drip-Lock Fittings FHT (part # OP-67455-07495)

#### D- 1/2" Distribution Tubing

The main supply line that feeds water to the Drip Irrigation system. Distribution Tube may be installed either above or below ground. (part # DR-67346-69346)

#### E- 1/2" Ratchet High Pressure Clamp

Use to secure 1/2" tubing to 1/2" barbed fittings. (part # DR-DR-10292)

**F- 1/2" In-Line Filters: 80 mesh Screen** Filtration device designed to trap foreign particles in the water and reduce clogging of emitters. (part # DR-44365)

#### G- 1/2" Hydro-Lock Fittings MHT

(part # DR-10809) or Drip-Lock Fittings MHT (part # OP-67462-07498)

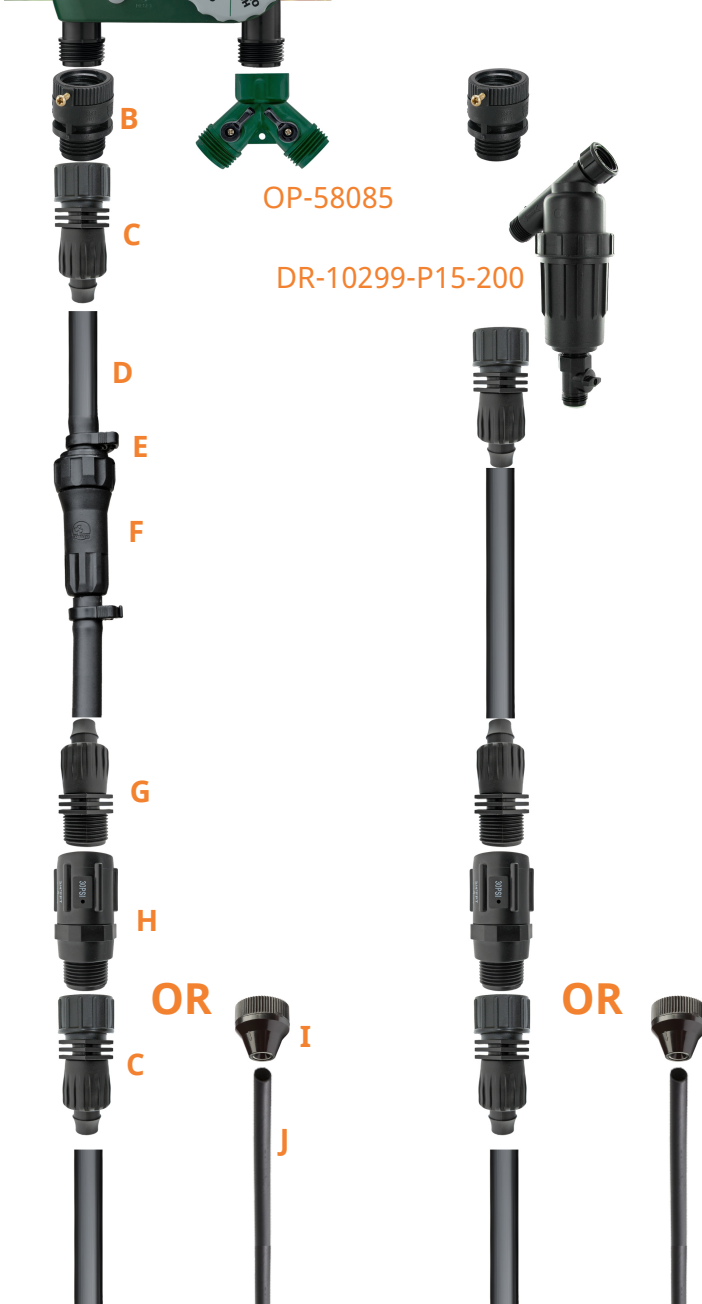
#### H- Pressure Regulator FHT x MHT

Reducing high pressure damage and drip system failure. (part # DR-10851 or DR-10852)

#### I- 1/4" Tap Adapter FHT

This Faucet Adapter connects to all major brands of 1/4" distribution tubing. (part # DR-67432 or DR-10506)

**J- 1/4" Distribution Tubing** To distribute water (above or below ground) from main pipe to drippers, misters and low volume sprinklers. (part # DR-10905-VINYL-50 or DR-10905-VINYL-100)





## 2 CONNECTING TO AN EXISTING UNDERGROUND SPRINKLER SYSTEM

Connecting to an existing underground sprinkler system (or Retrofit) is a simple way to supply water to your Drip Irrigation system. Retrofits are commonly used to conserve water by replacing inefficient shrub sprinklers and bubblers.

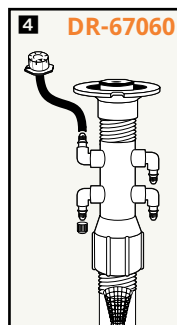
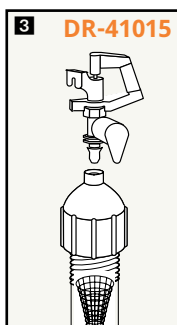
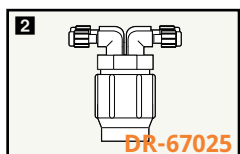
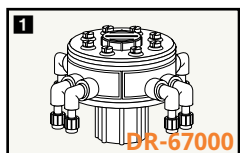
### Retrofit Drip Irrigation systems consist mainly of

- 1** Manifold—Attaches to a ½" riser and consists of 1 to 8 outlets.
- 2** ¼" Distribution Tubing
- 3** Low-Volume Sprinkler, Dripper, Soaker or Dripline Tube.



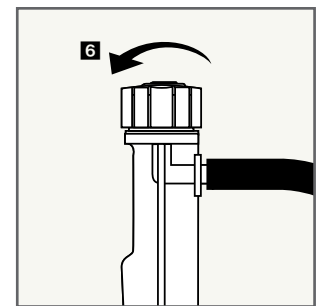
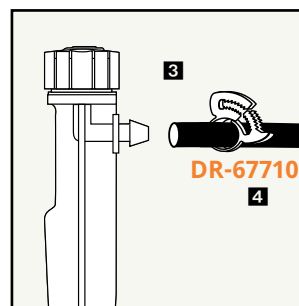
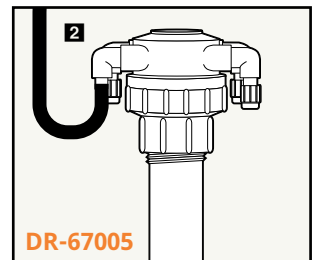
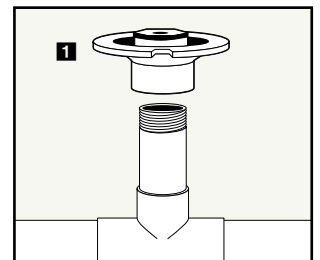
**Manifolds**—The main function of a Manifold is to distribute water through ¼" outlets. There are 4 types of Manifolds.

- 1 Adjustable Flow Manifolds**—Ideal when water system pressures exceeds 40 PSI and where flow control is desired (part # DR-67000).
- 2 Full Flow Manifolds**—Ideal for replacing inefficient shrub heads and bubblers (part # DR-67025).
- 3 Shrub Adapter**—Ideal for micro-sprinklers (part # DR-41015).
- 4 Riser Adapter Manifolds**—Permits Drip Irrigation without eliminating a sprinkler head (part #DR-67060).



### INSTALLATION FOR ADJUSTABLE- FLOW, FULL-FLOW, AND RISER ADAPTER MANIFOLDS

- 1** Remove sprinkler head from a ½" Riser and attach the manifold. (For Riser Adapter Manifold, reattach sprinkler head).
- 2** Remove Cap(s) from the ¼" Barb(s) and insert ¼" Distribution Tubing.
- 3** Attach a Low-Volume Sprinkler or Drip Irrigation Dripper to the end of the Distribution Tubing.
- 4** To avoid high water pressure failure, install a ¼" High Pressure Clamp on all tube connections (part # DR-67710).
- 5** Position Drip Irrigation Dripper next to plant.
- 6** If applicable, adjust flow-control knob for desired flow rate.



## 2 CONNECTING TO AN EXISTING UNDERGROUND SPRINKLER SYSTEM

Other Retrofit solution: Use Universal Pop-Up Conversion Kit.

The Universal Pop-Up Conversion Kit is Agrifims answer to converting spray head zones to drip irrigation.

This compact unit features a 30PSI regulator, 150 Mesh filter, 2 Universal Drip Tubing Connectors, Cap, and a flow of 6.5 gallons per minute. The unit has been engineered to be universal and will work with all types of spray head zones.

Its low profile design allows connection to the tubing at the desired grade and in tee or elbow configurations. The units 6.5 GPM flow rate is 150% higher than the competition allow installation to be completed with fewer units. Converting to drip from sprays results in a 30 - 70 % reduction in water use.

The Universal Pop-Up Conversion Kit is leading the way toward efficient irrigation with the simplest, most effective spray to drip conversion product available today.



Irrigation Depot™



Part # DR-67400



Irrigation Depot™



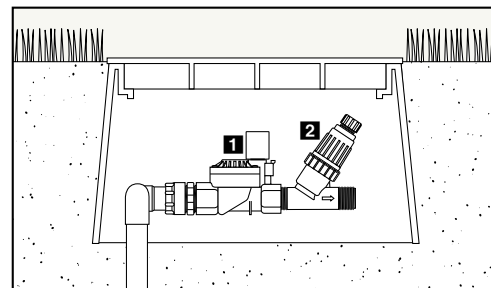
# WATER SOURCE CONNECTIONS

## 3 CONNECTING TO A DESIGNATED IRRIGATION VALVE

Direct connection to an underground irrigation valve is ideal for medium to large Drip Irrigation projects. This application is most commonly used for gardens, large flower beds, shrubs, trees, and desert landscaping.

### Connection to a designated valve consists of

- 1 3/4" or 1" Irrigation Valve (manual or automatic).
- 2 Y-Filter (model DR-69736 or DR-97160-PRF-25-075 or others).  
*Note: Using a filter not designed for Drip irrigation, may cause damage.*
- 3 1/2" Distribution Tubing (part # DR-67346-69346) or 3/4" Polyethylene or PVC Pipe.



Several models and brands available, see [www.irrigationdepot.ca](http://www.irrigationdepot.ca) for more informations.

4-in-1 Drip Irrigation valve stands in the market as the industry's first "one piece" low-flow irrigation zone 1 inch valve, 200 mesh filter with flush port, 30 psi pressure regulator and 1/2" Drip tube adapter. (part # OV-67790).



### Rain Bird Low Flow Control Zone Kits with PR Filter

Rain Bird Control Zone Kits provide all of the components necessary for on/off control, filtration, and pressure regulation in a single package, making them simple to order and easy to install. (part # RBV-XCZ-075-PRF)



### 410BT Series Bluetooth Battery Operated Controller

The 410BT controller's rugged design is ideal for use in residential and commercial applications or where AC power is unavailable. It features a waterproof design (IP 68) and can operate for up to one year on two AA alkaline batteries. The controller includes a single button for manual operation and 3/4" through 2" professional grade in-line valves with flow control. (part # DIG-410BT-100)



### Orbit Battery Operated Timer with Valve

No Power? No Wiring? No Problem! The new full-featured isolation timer/valve combo provides up to a year of automatic operation on one set of standard batteries. Installation is simple and the timer utilizes Orbit Easy-Set programming logic. (part # OV-57860).





# WHERE ARE YOU WATERING ?

## WATERING SOLUTIONS AT A GLANCE

See following pages for typical applications

### Vegetable gardens

#### 1/4" or 1/2" Emitter Tubing

Place in rows

#### Spot Watering Emitters

Add near larger plants

### Patio Plants

#### 1/4" Emitter Tubing

Use in containers and narrow plantings

#### Spot Watering Emitters

Place in each planter



### Flower Beds

#### Single Piece Sprays

Apply to flowers and shrubs

### Landscape Areas

#### 1/2" Emitter Tubing

Use in larger areas

#### Spot Watering Emitters

Apply to trees and large shrubs

### Widely Spaced Plants

#### Spot Watering Emitters

Place in each planter



# WHERE ARE YOU WATERING ?

## SMALL VEGETABLE GARDENS

To water closely spaced plants in a vegetable garden, use 1/4" Dripline Tubing connected as a grid spaced 18" apart. In this approach, your Landscape Dripline System soaks the entire area.

**A- 1/2" Distribution Tubing** This universal tubing works with new or existing drip systems. To distribute water above or below ground from main pipe to drippers, misters, and low volume sprinklers. (part # DR-67346-69346)

**B- 1/4" Dripline Tubing** This tubing is a pressure compensating drip line with in-line drip emitters that provide high uniformity and even distribution of water over longer lengths. Ideal for vegetable gardens, row crops, seed beds, planter boxes and fruit trees. (part # DR-12930-SHB106 or DR-12936-SH106)

**C- 1/4" Micro Adapter** 1/4" barb adapter is used to joint two ends of 1/4" micro tube together. Also, attach the 1/4" pipe by inserting the other end into a 1/2" or 3/4" pipe. (part # DR-40935 or DR-DR-97150)

**D- 1/2" Hydro-Lock End Cap** Easy-to-install Hydro-Lock fittings for drip irrigation are available in a wide range of configurations for 1/2" poly tubing and dripline applications. (part # DR-DR-10800)

**E- 1/4" Barbed Goof Plug**

**F- 1/4" or 1/2" Stakes Hold-Down**  
(part # DR-10400-10)

or  
**1/2" Loop Stake**  
(part # DR-12912-R61B)

or  
**1/4" Tubing Stake**  
(part # DR-DR-10402-65721)

**G- 1/4" In-line Flow Control Valve** (optional) Use to open and close any line of 1/4" microtube. Turn top 90 degrees to open or close. (part # DR-42155)





# WHERE ARE YOU WATERING ?

## VEGETABLE GARDENS

To water closely spaced plants in a vegetable garden, use 1/2" Dripline Tubing connected as a grid spaced 18" apart. In this approach, your Landscape Dripline System soaks the entire area.



**A**



**1/2" Distribution Tubing** This universal tubing works with new or existing drip systems. To distribute water above or below ground from main pipe to drippers, misters, and low volume sprinklers. (part #DR-67346-69346)

**B**



**1/2" Dripline Tubing** This tubing is a pressure compensating drip line with in-line drip emitters that provide high uniformity and even distribution of water over longer lengths. Ideal for vegetable gardens and others. (part # DR-12960-)

**C**



**1/2" Hydro-Lock Tee** Easy-to-install Hydro-Lock fittings for drip irrigation are available in a wide range of configurations for 1/2" poly tubing and dripline applications. (part # DR-98100)

**D**



**1/2" Hydro-Lock Elbow**  
(part # DR-10801)

**E**



**1/2" Hydro-Lock End Cap**  
(part # DR-DR-10800)

**F**



**1/4" or 1/2" Stakes Hold-Down**  
(part # DR-10400-10)

or

**F**



**1/2" Loop Stake**  
(part # DR-12912-R61B)



# WHERE ARE YOU WATERING ?

## POTTED PLANTS

Depending upon the size of your plants and containers, your patio watering system may consist of 1/4" Dripline Tubing or Spot Watering Emitters placed directly on top of the potting soil. Run 1/4" tubing from the main 1/2" tubing.

For larger plants, use 1/4" Dripline Tubing in a loop around the plant.

For smaller plants, you can use 1/4" Tubing and 1/4" Tubing Stakes to direct water at the base of each plant.

### A- 1/2" Distribution Tubing

This universal tubing works with new or existing drip systems. To distribute water above or below ground from main pipe to drippers, misters, and low volume sprinklers. (part # DR-67346-69346).

### B- 1/4" Dripline Tubing

This tubing is a pressure compensating drip line with in-line drip emitters that provide high uniformity and even distribution of water over longer lengths. Ideal for vegetable gardens, row crops, seed beds, planter boxes and fruit trees. (part # DR-12930-SHB106 or DR-12936-SH106).

### C- Pressure Compensating Emitter

A PC emitter with a turbulent flow path, sealed to maintain pre-set discharge rates and uniformity. Ideal for pots, patios and landscape applications. See Irrigation Depot.ca for many choices.

**D- Manifold** It may be used with 1/4" micro tubing, 1/4" dripline or with individual drippers.

### E- 1/4" Distribution Tubing

To distribute water (above or below ground) from main pipe to drippers, misters and low volume sprinklers. UV-resistant (part # DR-10903-VINYL-100).

### F- 1/4" Barbed Elbow

1/4" barb elbow is used to join two ends of 1/4" micro tube together in a 90 degree angle (part # DR-40295-10502).

**G- 1/4" Tubing Stake** Use the tubing stakes to hold drip heads and tubing at the desired height. These stakes are universal and will work with all drip systems (part # DR-10402-65721).





# WHERE ARE YOU WATERING ?

## HANGING BASKETS PLANTS

Saves water by delivering water right where it is needed most, at the plant root zone.

### A- 1/2" Distribution Tubing

This universal tubing works with new or existing drip systems. To distribute water above or below ground from main pipe to drippers, misters, and low volume sprinklers. (part # DR-67346-69346)

**B- 1/4" Dripline Tubing** This tubing is a pressure compensating drip line with in-line drip emitters that provide high uniformity and even distribution of water over longer lengths. Ideal for vegetable gardens, row crops, seed beds, planter boxes and fruit trees. (part # DR-12930-SHB106)

### C- Pressure Compensating Emitter

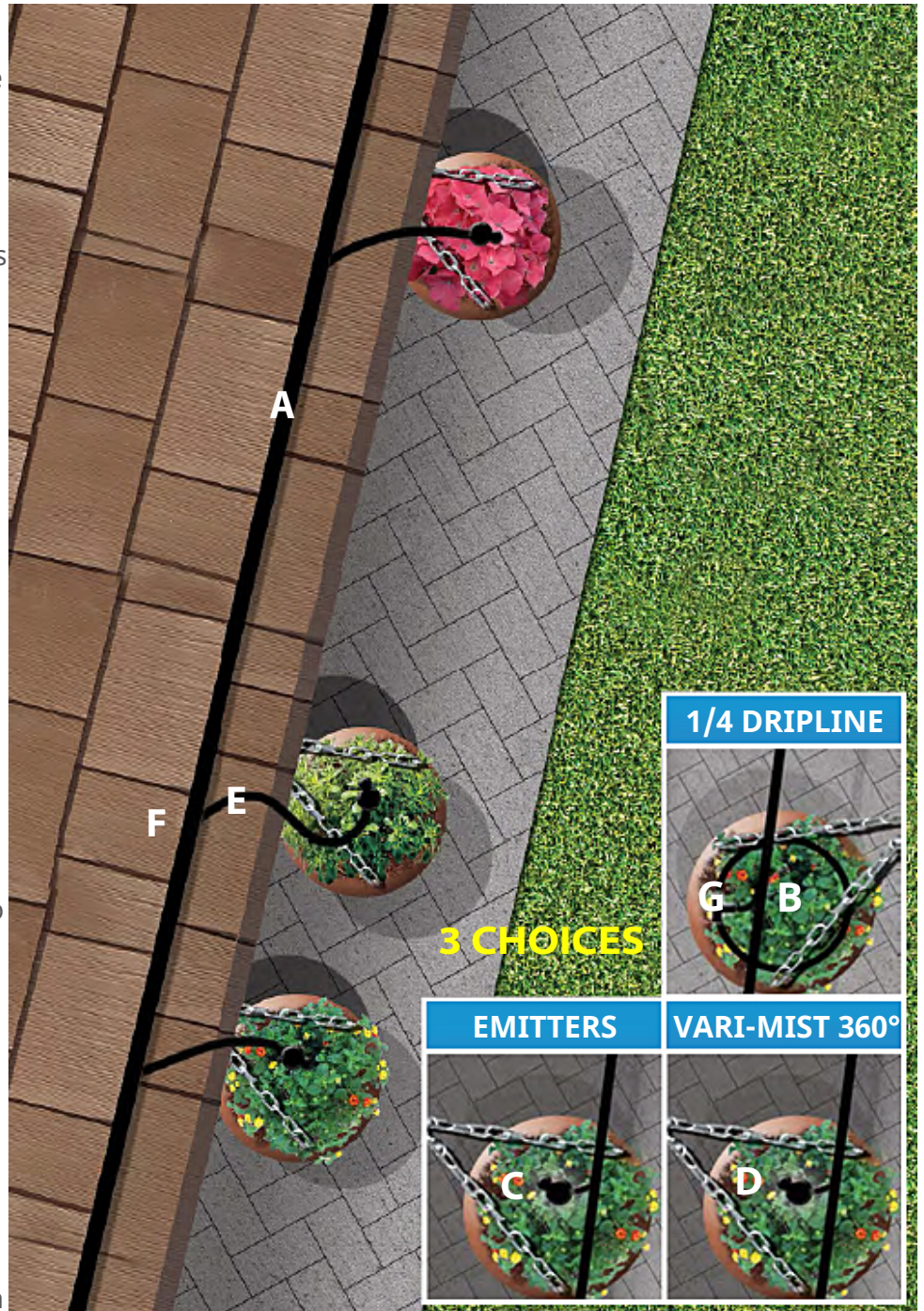
A PC emitter with a turbulent flow path, sealed to maintain pre-set discharge rates and uniformity. Ideal for pots, patios and landscape applications. See Irrigation Depot.ca for many choices.

**D- Vari-Mist 360°** The flexible Misting Sprinkler is ideal for hanging baskets and container plants. Wrap the flexible memory tube around the supports and position the sprinkler to the right spot. (part # DR-66190, DR-59035, DR-59045)

**E- 1/4" Distribution Tubing** To distribute water (above or below ground) from main pipe to drippers, misters and low volume sprinklers. UV-resistant. (part # DR-10903-VINYL-100 )

**F- 1/4" Micro Adapter** 1/4" barb adapter is used to joint two ends of 1/4" micro tube together. Also, attach the 1/4" pipe by inserting the other end into a 1/2" or 3/4" pipe. (part # DR-40935 or DR-DR-97150)

**G- 1/4" Barbed Elbow** 1/4" barb elbow is used to join two ends of 1/4" micro tube together in a 90 degree angle.(part # DR-40295-10502)



**H- 1/4" Tubing Stake** Use the tubing stakes to hold drip heads and tubing at the desired height. These stakes are universal and will work with all drip systems. (part # DR-10402-65721)



# WHERE ARE YOU WATERING

## POTTED PLANTS EXAMPLES

Saves water by delivering water right where it is needed most, at the plant root zone.





# WHERE ARE YOU WATERING ?

## FLOWER BEDS

Economical fan spray jet for effective watering. Suitable for flower beds and horticultural applications.

### Micro Single Piece Spray Installation with a 1/4" Flexible Tubing

**1** DR-10395 OR DR-10397

**2** 3 Choices DR-40935 DR-40295 DR-97150

**3** Single Piece Spray

**4** DR-41005

**5** Flush the Line

**6** DR-10404 DR-10406

1/2" or 3/4" Distribution Tubing

Ideal Spacing 3' - 4' for Blue Single Piece Spray

1/4" Flexible Distribution Tubing DR-10905-VINYL-100

**Irrigation Depot™**



# WHERE ARE YOU WATERING ?

## FLOWER BEDS

Economical fan spray jet for effective watering. Suitable for flower beds and horticultural applications.

### Micro Single Piece Spray Installation with a Rigid Riser



### Installation



3- Flush  
the Line

DR-50135

DR-40995



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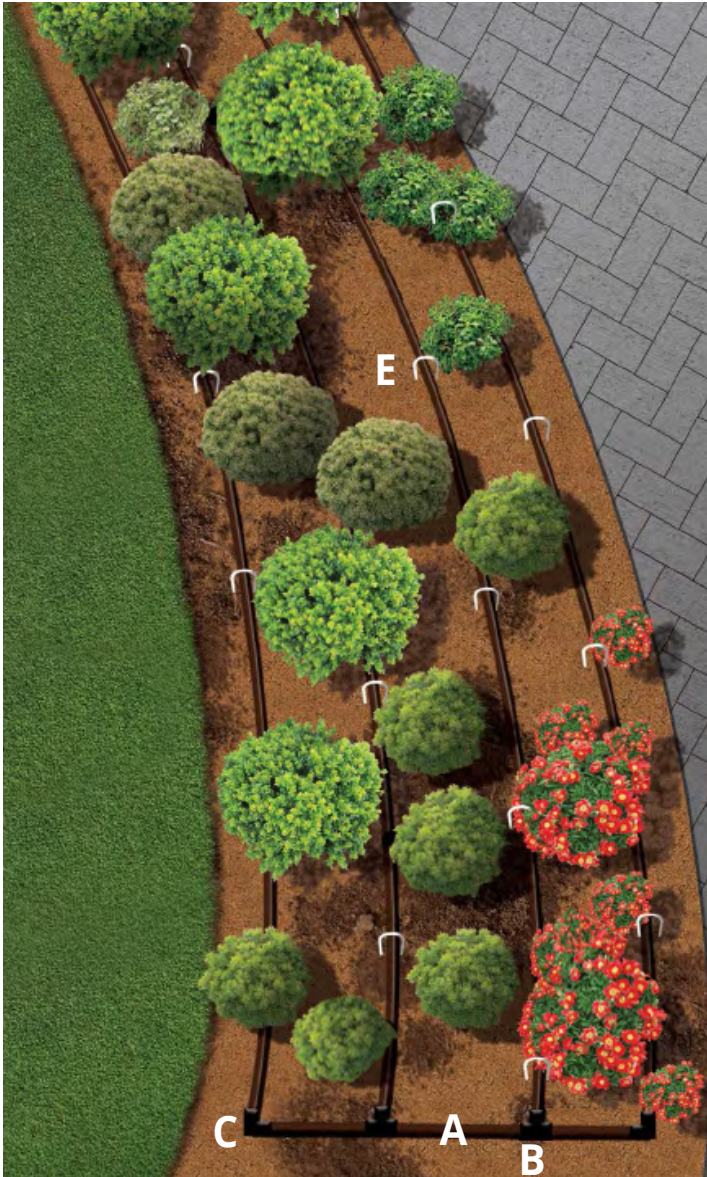
# WHERE ARE YOU WATERING ?

## LANDSCAPE AREAS

Use a combination of Dripline Tubing and spot watering emitters to reach all areas of your planting bed. For closely spaced plants such as ground covers, use 1/2" Dripline Tubing connected in a grid pattern.

The recommended spacing between 1/2" Dripline Tubing runs is 18" to 24". Extend irrigation to narrow planting areas using 1/4" Dripline Tubing.

To reach widely spaced bushes or trees, tap off of the main 1/2" tubing by using 1/4" tubing and spot watering emitters and 1/4" tubing stakes.



**A**



**1/2" Dripline Tubing** This tubing is a pressure compensating drip line with in-line drip emitters that provide high uniformity and even distribution of water over longer lengths. Ideal for vegetable gardens and others. (part # DR-12960-A1112P)

**B**



**1/2" Hydro-Lock Tee** Easy-to-install Hydro-Lock fittings for drip irrigation are available in a wide range of configurations for 1/2" poly tubing and dripline applications. (part # DR-98100)

**C**



**1/2" Hydro-Lock Elbow**  
(part # DR-10801)

**D**



**1/2" Hydro-Lock End Cap**  
(part # DR-DR-10800)

**E**



**1/2" Stakes Hold-Down**  
(part # DR-10400-10)

or



**1/2" Loop Stake**  
(part # DR-12912-R61B)



