

Garden Circles Irrigation Kit



Our Irrigation Kit is simply a kit we bought from Irrigation Direct and added a few sprayers to it. We offer this kit for your convenience so you can get everything you need to get your Garden Circle garden beds going right now. You can save a few bucks by going to IrrigationDirect.com and figuring out what you need for your particular application.

Product Description

This raised bed drip and spray irrigation kit contains everything you will need to go from hose bibb (faucet) into your raised garden beds. **Waters up to 10 Garden Circle beds using sprayers..** Each raised bed drip irrigation kit uses a combination of adjustable sprayers, drip emitters, and drip emitter tubing. If you want to automate your raised bed drip irrigation system, a [Drip Pro Water timer \(DD-DWT673\)](#) can be purchased separately.





Maximum Flow Rate Required when kit is fully installed (all sprayers, drippers and soaker hose): 355 gph (6 gallons per minute)

Included in the Kit:

	Qty	Item	Part #
	1	Y Ball Valve (2 outlets) 3/4" Female Hose x 3/4" Male Hose	DD-YBV75
	1	3/4" Hose Thread Vacuum Breaker - Anti-Siphon Backflow Preventer - Plastic	DD-HVB
	1	Y Filter 3/4" Female Hose Swivel x Male Hose 150 Mesh Stainless Steel Screen	DD-YS75HFM
	1	Pressure Regulator 20 PSI - Hose Threaded 3/4" FHT x 3/4" MHT - Economy Model	DD-HPR20

	1	Direct-Loc Swivel Adapter .600 ID DL x 3/4" FHT Swivel - 700 or 710 Tubing	DL-FHS600
	4	Direct-Loc Elbow .600 ID DL x DL - 700 or 710 Tubing	DL-L600
	1	Direct-Loc Tee .600 ID - 700 or 710 Tubing	DL-T600
	1	Direct-Loc Coupling .600" ID - 700 or 710 Tubing	DL-C600
	4	Direct-Loc End Cap .600 ID DL x 3/4" MHT w/ Cap - 700 or 710 Tubing	DL-EC600
	1	1/2" x 50' .700 OD Poly Tubing - 50' Roll	DD-DH700-50
	10	1/2" Tubing Mounting Clamp with Nail - Black	DD-MC700B
	1	Deluxe Hole Punch for 1/4" Barbed Fittings & Drippers - Drip Irrigation	DD-HP250

	20	1/4" Barbed Connector - Drip Irrigation	DD-C250
	20	1/4" Barbed Elbow - Drip Irrigation	DD-L250
	10	1/4" Barbed Tee - Drip Irrigation	DD-T250
	1	1/4" x 50' Poly Micro Tubing (PE) - 50' Roll	DD-DH250-50
	1	1/4" x 100' Soaker Hose Dripline 12" Spacing 1/2 GPH Dripline Irrigation Emitters - Black Tubing	DD-DET250-12-100
	20	Goof Plug - Dual End 1/4" & 1/8" - Drip Irrigation	DD-GP
	10	1/2 GPH Pressure Compensating Drip Irrigation Emitter - Turbo Style Dripper	DD-TC5
	10	Micro Tubing Holder Stake 6" - Multiple sizes .167" to .350" OD - Drip Irrigation	DD-S2

	3	Drip Irrigation Tubing Hold Down 8" Wire Stake "J Style" fits 1/8" to 3/4" tubing - 10 Pack	DD-S8-10
	10	Full Circle Adjustable Stream Sprayer 10-32 Threaded Inlet	
	5	12 inch stake	
	5	18 inch stake	

Recommended to go along with this kit:



<http://www.irrigationreplacement>

direct.com/rain-drip-r673-

Drip Irrigation Kit Installation Manual

Description

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Maximum Flow Rate Required when kit is fully installed (all sprayers, drippers and soaker hose): 355 gph (6 gallons per minute)

Installation: Overview

You will attach a Y Ball Valve, Hose Vacuum Breaker, Filter, and Pressure Regulator to the faucet or garden hose. The supply line is 1/2" Solid Drip Tubing and is run into each raised bed. Drip emitter tubing is installed in rows about 10 inches apart in the planter boxes. Keep in mind that **the maximum run length for the 1/4" drip emitter tubing with 6" emitter spacing is 19 linear feet. The max run for the 12" emitter spacing is 33 feet.**

When watering individual plants in your raised bed garden with drip irrigation emitters, small plants will get one 1/2 gph drip emitter. Larger plants (or vegetables requiring more water) should get two 1/2 gph emitters. Entire garden beds can be covered with the adjustable sprayers. We've included stakes for the 1/4" and 1/2" tubing. 1/2" Flow Control Valves allow you to adjust (or shut off) the water flow to sections of 1/2" main line tubing.

Installation: Step-by-Step

Roll the tubing out in the sun to soften. Weigh it down and let the sun heat the tubing. This will make it easier to work with.

Step one: Connecting to the Hose Bibb

1. Screw the **Y Ball Valve** (DD-YBV75) onto the hose bibb (faucet).
2. Screw the **Hose Vacuum Breaker** (DD-HVB) onto the Y Ball Valve. *Note: If you have purchased an optional [Drip Pro Water timer](#) (DD-DWT673) screw it onto the Y Ball Valve first. Then attach the Hose Vacuum Breaker to the Water Timer.*
3. Screw the **Filter** (DD-YS75HFM) onto the Hose Vacuum Breaker.
4. Screw the **Regulator** (DD-HPR20) onto the Filter.
5. Screw the **Direct-Loc Swivel Adapter** (DL-FHS600) onto the regulator.

Step Two: From the Hose Bibb to the Raised Bed

1. Attach **1/2" Drip Tubing** (DD-DH700) to the 1/2" swivel adapter and run it to each raised bed.

2. Use **1/2" Direct-Loc Elbows** (DL-L600) to make 90 degree turns and **1/2" Direct-Loc Tees** (DL-T600) to create lateral lines as needed.
3. Add **Direct-Loc Threaded End Caps** (DL-EC600) to the ends of 1/2" drip tubing. Leave the caps off for flushing.
4. Secure the 1/2" drip tubing to the walls of the planter box with **Drip Tubing Mounting Clips** (DD-MC700B).
5. You will add the drip emitter tubing after the lines have been flushed (end of Step Three).
1. **Direct-Loc Couplings** (DL-C600) are used to connect 1/2" solid drip tubing or for repairs in 1/2" tubing that goof plugs can't handle.
2. The larger kits include one or more **1/2" Flow Control Valves** (DD-FCV700). Use these to shut off sections of your drip system or individual raised beds. For more flexibility, buy an extra Flow Control Valve for each raised bed.
3. Run **1/2" solid tubing** inside one end of the raised bed. This will be the "manifold" which supplies water to individual lines of **1/4" Drip Emitter Tubing** (DD-DET250-6-100, DD-DET250-12-100).

Step Three: Installing Drip Emitters

1. Use a **1/2" Direct-Loc Tee** (DL-T600) to create lateral line the runs to the plants.
2. Run the 1/2" drip tubing as close to the plants as possible.
3. Secure the drip emitter tubing in place with **8" Wire Stakes** (DD-S8).
4. At each plant use the **Deluxe Hole punch** (DD-HP250) or the **Super Hole punch** (DD-SP250) to poke a hole in the 1/2" tubing and insert a **1/4" barbed elbow** (DD-L250) or **1/4" barbed connector** (DD-C250).
5. Cut a length of tubing that will run from the 1/4" barbed fitting to the plant and push it over the end of the barbed fitting.
6. Stake the 1/4" tubing in place with a **Micro Tubing Holder Stake** (DD-S2). Complete this step for each plant before moving on to the next step. **Turn on the water and FLUSH THE LINE until all lines are clear of debris. Replace the 1/2" threaded end caps at the ends of the 1/2" drip tubing. Don't forget to replace end caps in the raised beds.**
7. After flushing the lines, insert a **Pressure Compensating Emitter** (DD-TC5) into each micro tube.
8. 1/4" Connectors can also be used to connect lengths of 1/4" tubing. Damaged tubing can be repaired by making clean cuts and then connecting with a 1/4" connector.
9. **Goof Plugs** (DD-GP) are used to plug holes in 1/2" drip poly tubing or cap off 1/4" micro tubing.
10. Turn on your system and check each emitter for water output. Keep in mind that you want to balance the amount of water delivered to individual plants with that delivered to each raised bed (next step)

Step Four: Installing Drip Emitter Tubing in Raised Beds

Drip Emitter tubing has emitters inside the tubing at set intervals. In raised beds, we recommend spacing the 1/4" drip emitter tubing in rows about 10" apart. You are not limited to 4' x 8' boxes but keep in mind that **the maximum run length for the 1/4" drip emitter tubing with 6" emitter spacing is 19 linear feet. The max run for the 12" emitter spacing is 33 feet.** Use 6" spaced tubing with plants that are closer together.

1. Poke holes about every 10" along the solid tubing you installed earlier and insert a 1/4" connector or 1/4" elbow.
2. Connect the 1/4" drip emitter tubing to the barbed fitting. **Tip: Cut every other length of drip emitter tubing so that the emitters are staggered, forming a triangle pattern. This provides better coverage.**
3. Insert a **Goof Plug** (DD-GP) into the end of the 1/4" drip emitter tubing. You have extra goof plugs to cap off additional sections of 1/4" tubing and plug holes in 1/2" drip tubing (if needed).
4. Secure the drip emitter tubing in place with **8" Wire Stakes** (DD-S8).

5. Turn on the system and record how long it takes to saturate the soil in the bed. The idea is for each plant and raised bed to receive enough water during the same time period.
6. *If you have purchased an optional Hose End Timer (DD-HEDT) set the watering time accordingly. The number of watering days will depend on your plants' watering requirements.*

Step Five: Installing Sprayers in Raised Beds

A good way to cover round garden beds is to put a micro sprayer right in the middle of it. The sprayers are adjustable and can be tuned to cover just the garden bed and not overspray much.

1. Check irrigation recommendations for the types of plants you hope to grow in the beds you plan to spray irrigate. Some plants, like tomatoes do not like being sprayed frequently.
2. Screw an adjustable sprayer to a stake and place at the center of a round bed.
3. Poke a hole in the ½ inch tubing, insert ¼ inch connector.
4. Plug the ¼ inch tube from the sprayer onto the ¼ connector. If it does not reach, splice in another length of ¼ inch tubing with another connector.
5. Repeat for all the sprayers you want.
6. Test the system by turning it on and adjust the spray flow by turning the little knob on the sprayer till the desired spray pattern is achieved.

Maintenance Tips

WINTERIZING

If you live where it freezes, it is a good idea to drain the water from your drip lines and the components connected to the water source. Here's how:

1. Turn off the hose bibb.
2. If you have a hose-end timer installed, let the system run through a watering cycle. This will open the timer and let any remaining water drain out of the timer and other components & into the drip tubing.
3. If you do not have a timer installed, unscrew the drip system from the hose bibb for a few minutes to let air into the line. Reattach the line after a minute or two.
4. **Note:** *We do not recommend blowing compressed air through a drip system.*

FLUSH THE LINE ANNUALLY

Since drip systems operate at low pressures, sediment can settle in the line over time.

1. Flush the line annually by unscrewing the end cap at the end of the line.
2. Check filter screen for debris and clean if necessary.
3. Turn on the hose bibb until the water runs clear from the end of the line.
4. Replace the cap.
5. Turn on the hose bibb and check the entire system for leaks.

REPAIR BREAKS & LEAKS

1. Small holes in the line can be plugged with a goof plug.

2. For larger breaks or holes in the 1/4" drip tubing, make a clean cut around the damaged area and reconnect the lines with a **1/4" barbed connector** (DD-C250).
3. For larger breaks or holes in the 1/2" drip tubing, make a clean cut around the damaged area and reconnect the lines with a **1/2" Direct-Loc coupling** (DL-C600).

DRIP IRRIGATION TUTORIALS

Visit our website for more tips, tricks, and expert advice: <http://www.irrigationdirect.com/expert-advice>