

Automated Foundation Watering Kit



Introduction

Thank you for purchasing the Automated Foundation Watering Kit for your home! This kit has been designed with simplicity in mind and is intended for use around the perimeter of your home to keep the soil around the foundation from drying out. In this manual you will find instructions for each part of the system, helpful tips, and an overview of the parts included in each kit.

Description

The Automated Foundation Watering Kit comes in four sizes: mini, small, medium, and large. These kits are designed specifically for foundation watering, which is the application of water to the soil around the foundation of a building. Each kit contains parts to allow you to water buildings of different sizes and shapes from a hose spigot either against the building or away from it. The main difference in the kits is the amount of dripline contained in them: 100', 200', 300' and 500' respectively.

Materials used in this kit include poly tube, poly tube fittings, dripline, and stakes. The kit also includes a head assembly designed to connect directly to a hose spigot or garden hose, comprised of a battery powered timer, backflow preventer, filter, pressure regulator, and poly tube adapter. Barbed ball valves are included to allow you isolate different parts of the system, allowing you to tailor the amount of water each side of your foundation receives. Medium and large sized kits include a y-splitter to put after the pressure regulator, allowing you to split your system in half and stay within the flow rate capacity of the included tubing.

Important Tips and Notes

Before setting up your irrigation system, please read through the tips and notes below as well as the rest of the manual, so you fully understand the system. If you have any questions not answered in the manual, please contact one of our customer service representatives at **877-597-1669** or by emailing **customerservice@dripirrigation.com**

- Each kit contains all the parts required to install a complete foundation watering system. If more parts are needed, the system you will build with the kit is easily expandable using the other parts found on our website.
- **If you have a medium or large kit** do not run the system as a closed loop. Run half the tubing one direction from your faucet and half in the other, and close each end separately instead of linking them together. Use the y-splitter included in the medium and large kits to do this by installing it on your head assembly after your pressure regulator, then using 1x LF003 on each side of the splitter to attach your dripline (in the case of your spigot being next to your building) or poly tubing (if your spigot is away from your building).
- We suggest that poly tube and dripline be installed above ground only. It is safe to mulch over it, but burying it beneath the ground tends to cause it to crimp, restricting flow and reducing effectiveness of the system. Contact us if you are interested in burying your poly tube.
- Drip irrigation systems should be used with clean water. Drip emitters, including those built into dripline, have many small passageways inside them that can clog if particulate matter is introduced to the system. To avoid this, flush the system prior to start up by opening the flush valve at the end of the line with the hose spigot turned on all the way and let the water run for a few seconds. Make sure to use the filter included in the kit, as it is designed to catch any debris coming out of the water source. Even good quality well or city water can have debris in it, so always use a filter.
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Automated Foundation Watering Kit

- The included pressure regulator should be installed between the filter and the poly tube adapter. This item will ensure that the pressure within your system remains within the operating pressure of the emitters and allows them to function properly. Check the “Head Assembly” section of this manual on how to install this item.

Important Tips and Notes (cont.)

- If installing your system in an area where freezes occur, make sure to winterize your system before the first freeze. If possible, disconnect the system and store inside until temperatures warm. If this is not feasible, disconnect your system from the water source, open all line ends, and allow to drain thoroughly for at least a week before the first freeze. Allowing the components to freeze with water inside can result in cracks, causing leaks when you start the system again.
- Poly tube and dripline softens and becomes more flexible when warm, making it easier to install fittings. Do not use direct flame or intense heat with any poly tube or plastic fitting as this will cause irreparable damage. Leaving the poly tube out in the sun for a while will usually suffice.
- Compression fittings are used to connect tubing or dripline to other tubing or dripline or to a threaded fitting. To use a compression fitting, push the poly tube or dripline into the end of the fitting firmly and at an angle, then walk it up and down while pushing in until the poly tube or dripline is inside the fitting by at least half an inch. Be aware that once you've gotten the tubing into the fitting it's very difficult to remove it!

Specifications

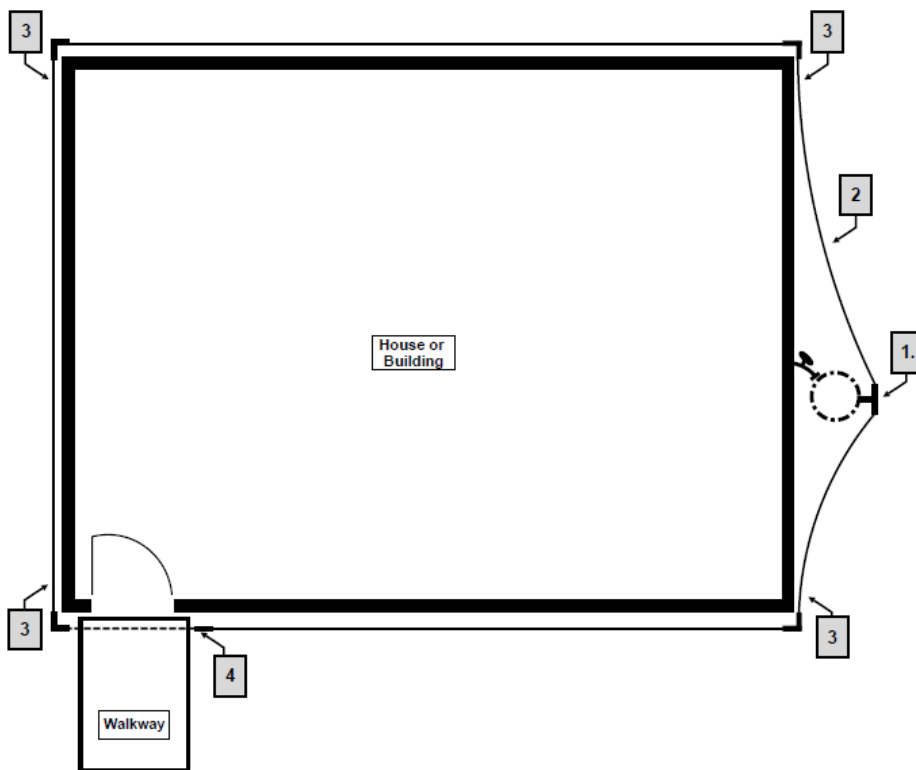
- Screen Filters
 - o Maximum recommended flow rate: 660 gph
 - o Maximum recommended pressure: 120 PSI
- Pressure Regulators
 - o Recommended flow rate range: 20 to 480 gph
 - o Maximum recommended pressure: 120 PSI
- 17mm Dripline, .95 gph, 12" spacing
 - o Flow rate per linear foot: .95 gph
 - o Bending radius: 1'
 - o Recommended pressure range: 12 to 50 PSI
- ½" (.600 ID x .700 OD) Poly Tube
 - o Maximum recommended flow rate: 220 gph
 - o Recommended pressure range: 25 to 30 PSI
 - o Maximum lateral run: 400'
 - o Pressure loss every 100': 4.4 PSI

Automated Foundation Watering Kit

Installation Instructions

Spigot Location

Installation of your system will be slightly different depending on the location of your spigot relative to your foundation. Installation is easiest when the spigot is against the foundation, reducing the number of parts needed:



Setup 1: Spigot Against Building

1. Head Assembly. This will connect your hose spigot to the tubing. Made up of C002 (Timer), A015 (Backflow Preventer), F300 (Filter), PR204 (Pressure Regulator), and LF009 (Threaded Tubing Tee). Components will be installed in the order specified above.

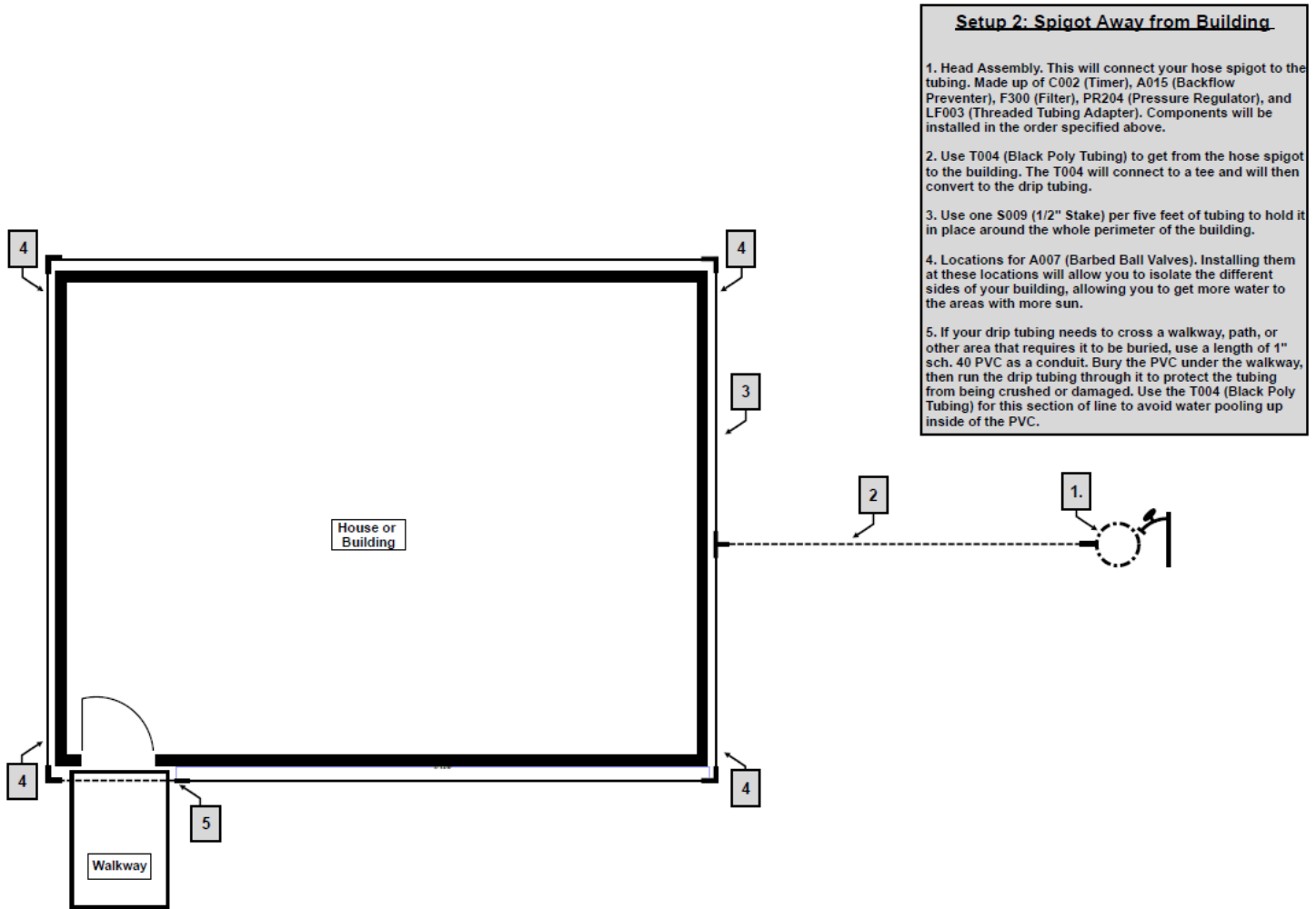
2. Use one S009 (1/2" Stake) per five feet of tubing to hold it in place around the whole perimeter of the building.

3. Locations for A007 (Barbed Ball Valves). Installing them at these locations will allow you to isolate the different sides of your building, allowing you to get more water to the areas with more sun.

4. If your drip tubing needs to cross a walkway, path, or other area that requires it to be buried, use a length of 1" sch. 40 PVC as a conduit. Bury the PVC under the walkway, then run the drip tubing through it to protect the tubing from being crushed or damaged. Use the T004 (Black Poly Tubing) for this section of line to avoid water pooling up inside of the PVC.

Automated Foundation Watering Kit

Installation of the system is slightly more complicated if your spigot is away from the foundation, as you will need to use $\frac{1}{2}$ " poly tubing to get water from the spigot to the foundation:



If you are planning to use a spigot away from your foundation for the medium or large size kit, use the LF009 at the end of the head assembly and run two separate lines of $\frac{1}{2}$ " poly tube to the foundation instead of just one as shown above. This will ensure even watering of all sides of your foundation.

Automated Foundation Watering Kit

Head Assembly: Connection to Hose Spigot

Your foundation watering system begins at the water source. The parts at the beginning of the system are called the “head assembly,” which is designed to attach to a hose spigot or garden hose. To build the head assembly for the mini and small kits, use the following components in order from the hose spigot or garden hose. All items provided in this kit are shown on the parts list included with your kit.

- C002 battery powered timer
- A015- Backflow Preventer
- F300- 155 Polyester Mesh Screen Filter
- PR204- 25 PSI Pressure Regulator
- LF003- Poly Tube Adapter OR LF009 (depending on location of spigot)

Each component’s inlet is $\frac{3}{4}$ ” FHT (female hose thread) and the outlets of each component are $\frac{3}{4}$ ” MHT (male hose thread). The poly tube adapters (LF003 and LF009) have a compression outlet, meaning it attaches directly to the poly tube or dripline.

1/2” Poly Tube and Dripline Fittings

The majority of your system will consist of dripline, which you will route around the edge of your foundation to distribute water. Some $\frac{1}{2}$ ” poly tubing is included in the kit in case you need it to cross walkways or get from your spigot to the foundation in cases where they are not close together. It is very important to make sure the lengths are correct before you cut. *Remember the adage: measure twice, cut once.* Make all cuts as straight as possible as any angled cuts can result in loose fittings and an increased chance of leaking once the system is operational. The tees and elbows are meant to help route tubing at right angles. Both types of tubing in your kit have a bend radius of about 1’, after which they will crimp and restrict water flow, decreasing the effectiveness of your system.

Stakes

Stakes are used to hold your tubing in place along the edge of your foundation. We include one stake per five linear feet or dripline in the kit, but you can purchase more if needed. When installing stakes, ensure to not press them down so far that they crimp the tubing they are holding.

System Startup

After you have installed all the components, it is time to begin the initial startup of the irrigation system. To do this, make sure all line ends are open. **If you plan to install your system in a closed loop, flush the system before completing the loop.** Turn the system on for about one minute. This will flush any debris (bits of soil, pieces of plastic, small rocks, etc.) out of the system. Turn the water off, close the line ends/make your final connections, then turn the water back on. This will let the system pressurize so you can check that your emitters are working and that there are no leaks. You should see water begin to drip out of each emitter. Remember that because the flow rate of each emitter is so low it will seem as though very little water is coming out. This is intentional! If you leave the system running for about 30 minutes and return you will see a large, wetted area on and below the surface of the soil. If you do not see a wetted area around an emitter after 30 minutes, double check that the emitter is connected properly. You may see some leaks forming where the tube or tape was connected to a fitting. The next section gives more information on how to handle leaks.

Repairing Leaks

It is normal for some of the connection points with $\frac{1}{2}$ ” poly tube or dripline to leak during the first few runs of the system. However, if there is a constant leak at the connection point, you will have to take out the fitting and replace it with a new fitting. Compression fittings have an internal barb on all ends that hold the tube. Once you pull poly tube out, the barb inside is no longer usable as it can become warped and cause leaking. Leaks can also be caused by small punctures. To fix both types of leaks, first cut the poly tube on one side of the hole or fitting as close as you can while getting a straight cut. Next, do the same thing on the other side of the hole or fitting. Once both cuts are done, a coupling or other fitting to connect the two ends of poly tube.

Automated Foundation Watering Kit

Next Steps

If you would like to add more items to your kit in the future, feel free to reach out to a customer service representative by emailing customerservice@dripirrigation.com or by calling us at 877-597-1669. We will guide you through any additions and offer our knowledge and expertise to make your system even better.

Thank you from The Drip Store Team!

Disclaimer: *The Drip Store makes no claims as to the effectiveness of this kit in preventing any kind of damage to any building or foundation used with this product. The only guarantees The Drip Store makes regarding this kit and the products contained within it are that the irrigation products will work as described (such as by emitting water at a certain rate, reducing pressure to a given PSI, filtering water to a certain micron level, etc) and that any defects or malfunctions of the parts in regards to their operation as an irrigation system will be addressed by our standard policies governing returns and defective product. Always consult with an architect or similar professional before deciding to engage in foundation watering to determine whether it is the right option for you and what effects it may or may not have on the building or foundation you intend to water.*

In Plain English: *This kit will make the ground around your house wet. We're not telling you if that is or isn't a good idea, you'll need to figure that out for yourself. If you've decided it's a good idea to get the ground around your house wet then this kit will do that, but that's all we guarantee that this kit will do. If it doesn't get the ground around your house wet then we'll try to make it right the same as we would for any other kit we sell.*