



POPE DIY GUIDE



AUTOMATING YOUR WATERING

Automation

BASIC IRRIGATION SYSTEM

To help you better understand what your irrigation system is made of, and how it will operate, take a look at the following diagram. The following components will bring your system to life. This guide will focus on automating your watering.

CONTROLLER



The controller is the "brains" of the system. It determines which watering zone operates, when it turns on and how long it runs for. External controllers are fine to be mounted outside in the weather, but should be mounted close to a 240 volt power source.

DRIP EZE®



Drip Eze tubing is the most efficient way to water garden beds and other small areas. It is made up of inbuilt drippers at fixed flow rates, which are placed at fixed spacings to give even coverage throughout the garden bed.

DRIPPER / SPRAYS



Drippers and sprays are two different ways to water small parts of your garden. A dripper will slowly release water over time that sinks deep within the soil. This is better for established plants with deeper root bowls, in windy areas. Sprays involve spraying water over a small area in an uncontrolled manner. This is great for getting leaf and top soil coverage. Perfect for ferns or other plants that have leaves built for catching water droplets.

MANIFOLD / VALVE BOX



The manifold/valve box is a sealable box that is mounted in the ground on a bed of pebbles. The valve manifold sits inside this, with outlets to all of your watering zones. Manifolds consist of a PVC or poly manifold and multiple solenoid valves. These are the gateways of water to your zones and are controlled by irrigation cable that is run from the controller. The manifold/valve box can be mounted in the most convenient location for your installation, but should be located centrally to all your zones.

TAP TIMER



Tap timers offer basic operation to your irrigation system. They don't require any additional valves or wiring so are often considered an easy way to get into automated watering. They can be connected to a standard garden tap and often come with 25mm/20mm adaptors. You can remove the bottom 12mm hose connector and add tap nuts, directors or pressure reducers. They don't offer as much individual programming so may not suit complicated watering setups.

POP-UP SPRINKLER



Pop-up sprinklers are designed to distribute water evenly over lawn surfaces. The spray mimics a soaking rain. Pop-ups normally have 15mm inlet threads and come with variable arc nozzles or fixed spray nozzles. Both have various throw characteristics. Pop-ups should be placed evenly apart with the spray reaching from the head of one sprinkler, to the head of the next sprinkler. This ensures full coverage and no dry spots.





Ways To Automate Your Garden

FIND THE RIGHT CONTROL METHOD FOR YOU

Automating your watering is an ideal way to ensure your garden gets the amount of water it needs and avoids over watering. In many regions automating your garden watering can assist you in complying with water restrictions. You can automate your garden watering using manual tap timers, automatic tap timers or with a fully automated watering system.





BASIC MANUAL



-  User needs to be at home to operate
-  Mounts to a standard garden tap



BASIC AUTOMATIC



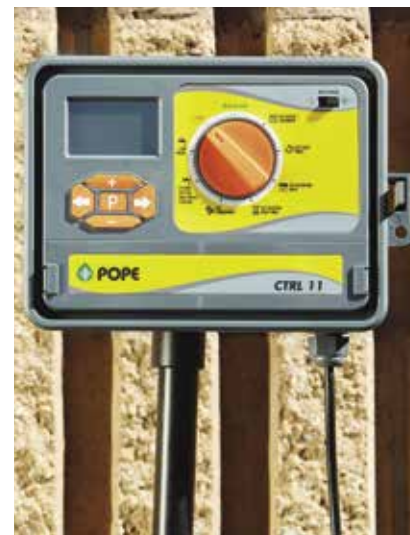
-  Can be used when not at home
-  Adjustable watering times
-  Mounts to a standard garden tap
-  Powered by either 9V or AA battery











ADVANCED AUTOMATIC



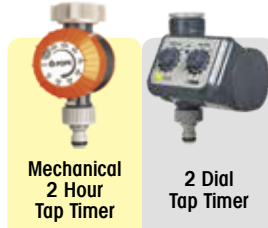
-  Can be used when not at home
-  Adjustable watering times
-  Multiple watering start times
-  Powered by either 9V or AA battery
-  Mounts to a standard Garden Tap
-  Meets Water Restriction guidelines by allowing watering on individual selected days

FULLY AUTOMATED



-  Can be used when not at home
-  Adjustable watering times
-  Multiple watering start times
-  Powered by either 9V or AA battery
-  Mounts to a standard garden tap
-  Meets water restriction guidelines by allowing watering on individual selected days
-  Pump start
-  Sensor input
-  Multiple zones
-  Master valve

COMPARE TAP TIMER MODELS AT A GLANCE



	Mechanical 2 Hour Tap Timer	2 Dial Tap Timer
Product Code	1010307	1010372
Battery Type AA - Low cost, common battery type 9V - More expensive, long life	n/a	9V x 1
Minimum Water Pressure The minimum water pressure required to open the timer's mechanism.	100 kPa	50 kPa
Maximum Water Pressure The maximum water pressure to be used before causing internal damage to the mechanism.	1000 kPa	1000 kPa
Ease of Use This is characterised by how quickly you can activate functions or how many steps it takes to start a program. <ul style="list-style-type: none"> • Easy - All information available on face of timer, easy selection. • Simple - Easy to follow on-screen instructions, simple to use menu. • Advanced - Multiple menus and options, may require planning before programming. 	Easy	Easy
Number of Zones How many zones of the garden which can be watered at one time?	1	1
Number of Programs How many variations on start time, run time and zone operation can be programmed into the timer per zone?	1	1
Minimum Run Time What is the minimum time between start times?	> 5 min	1 min
Maximum Run Time What is the maximum run time of the program?	120 min	120 min
Manual Mode Can the unit be turned on by the user when water is required immediately?	Yes	Yes (Turn Run Time to On)

	Low Pressure Single Outlet Tap Timer	Low Pressure Dual Outlet Tap Timer	Snap Shot Tap Timer	Ezy Run Tap Timer	AquaZone Duo Tap Timer	AquaZone Trio Tap Timer	Sun Boss Solar Timer
	1010305	1010394	1010379	1010376	1010377	1010378	1010375
	AAA x 2	AA x 2	AA x 2	AA x 2	AA x 2	AA x 2	Lithium Ion rechargeable x1 (supplied)
	0 kPa	0 kPa	20 kPa	50 kPa	50 kPa	50 kPa	100 kPa
	600 kPa	600 kPa	1000 kPa	800 kPa	800 kPa	800 kPa	1000 kPa
	Easy	Easy	Simple	Simple	Advanced	Advanced	Advanced
	1	2	1	2	2	3	1
	1	2	1	2	4	4	6
	1 min	1 min	1 min	15 min	1 min	1 min	1 min
	120 min	120 min	360 min	60 min	240 min	240 min	120 min
	Yes (Turn Run Time to On)	Yes (Turn Run Time to On)	Yes (1-360 min)	Yes	Yes (1-240 min) Manual mode can be programmed to each zone	Yes (1-240 min) Manual mode can be programmed to each zone	Yes

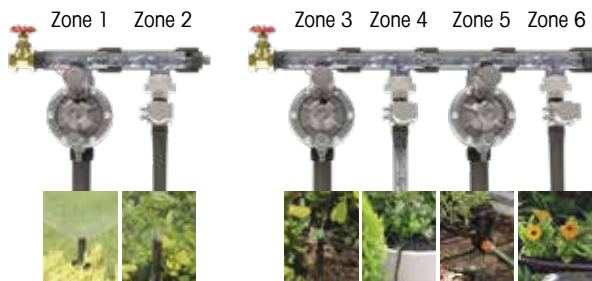
INSTALLING AN AUTOMATED SYSTEM FULLY AUTOMATED WATERING SYSTEMS

- Suit gardens with multiple areas.
- Allows you to water separate garden areas independently.
- Turn the water on and off automatically.
- Connect to the mains water and power.
- Have many components including auto controllers, solenoid valves and accessories.



WATERING ZONES

Automated systems are programmed to water one garden area (or zone) at a time. Solenoid valves open and close one solenoid at a time, according to the programs set in your auto controller.



SELECTING THE CORRECT VALVE ACCORDING TO WATERING NEEDS

25mm solenoid valves can be used for pop-up sprinklers, drippers and spray systems.



25mm solenoid valves should be used when considering a pop-up system.



Due to the lower water flow, mini barb valves should be avoided for pop-up systems.

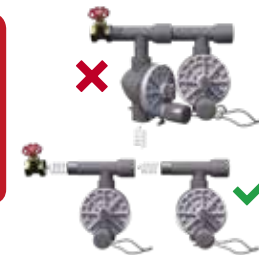
ASSEMBLING THE MANIFOLD AND SOLENOID VALVES

25mm Solenoid

Screw the 25mm solenoid valve directly into the manifold. Make sure the arrow points in the direction of the water flow.

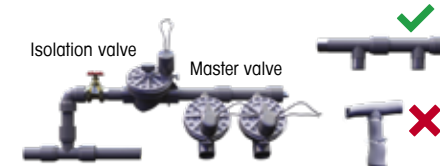


Note: Only screw the manifold together after solenoid valves are attached.



CONNECTING THE MANIFOLD TO THE WATER MAINS

Connect the manifold to the off-take with PVC pipe. The pipe pressure rating must meet local regulations. Do not connect the manifold to your garden tap. Manifolds are not designed to be mounted vertically from garden taps.



MASTER VALVES

Master valves are useful for isolating your irrigation system from your mains water system. It allows you turn off the system for maintenance (manual valve), or automate it as part of the system turn on procedure (solenoid valve).



PREVENTING BACK FLOW

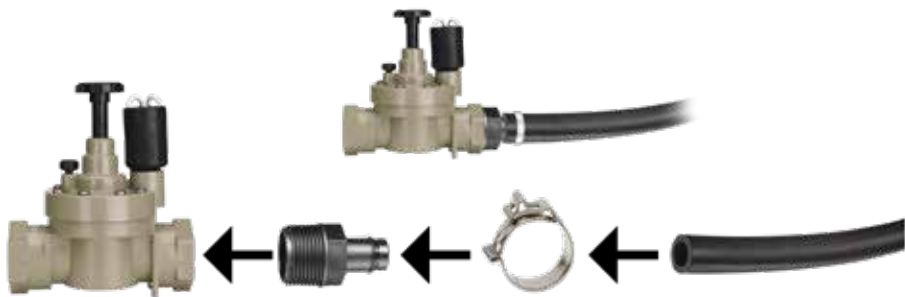
Back flow is when water from your yard flows back through the water supply lines and into the water supply. This can be caused during system deactivation or when a pipe in the system is damaged. A back flow valve should be installed to prevent any waste water flowing back into the water supply.

Please contact your local council for more information on whether this is required for your installation.

CONNECTING SPRINKLERS AND POLY PIPE

Lay poly pipe and connect sprinklers, sprays or drippers as per your plan. Use locking or Loc-Sure® clamps on all barbed fittings.

Once the solenoid valve is installed, connect the director to the solenoid valve, then connect the poly pipe.

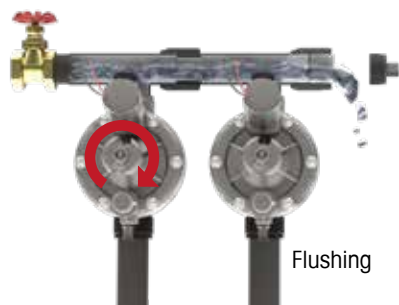


TESTING THE SYSTEM

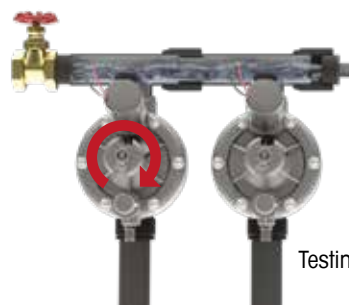
When the solenoid valves and manifolds are connected and the glue on the PVC pipe has set, test the system for leaks.

First, flush the manifold and PVC pipe of any debris by removing the screwed plug on the manifold.

Re-apply the pressure and check all fittings for leaks. This is best done before trenches are backfilled.



Flushing

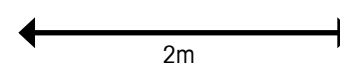


Testing

CONTROLLER LOCATION

When determining where to put your controller, there are a few things to keep in mind:

- It must be mounted in a weather proof area.
- It should be mounted close to a 240 volt power source.
- It should be installed at least 2 metres away from other electrical devices (this will reduce any chance of electrical interference).



2m



CONNECTING THE SOLENOID VALVES TO YOUR CONTROLLER

Each valve connects to the controller via two wires, known as the common and active wires. To connect the valves to your controller, follow these three steps:

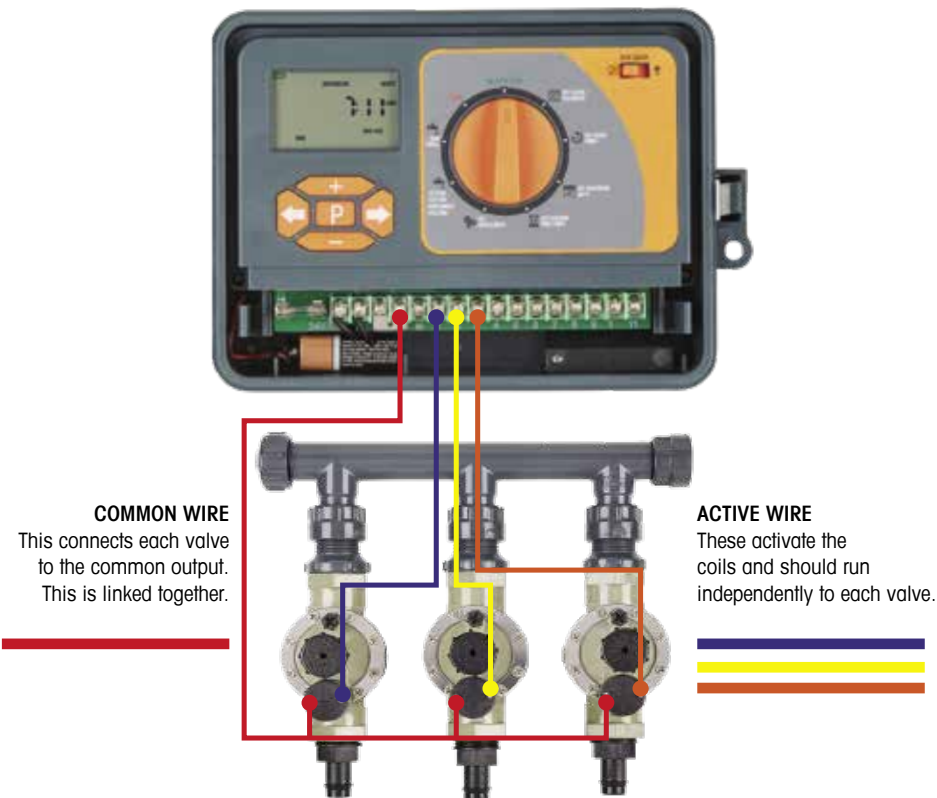
1. Working from the solenoid valve end, select either of the two leads coming out of the solenoid coil and connect the active wire to it. Repeat this for all valves.
2. Connect the remaining lead from each solenoid coil to the common wire.
3. Loop the common wire from one coil to the next.

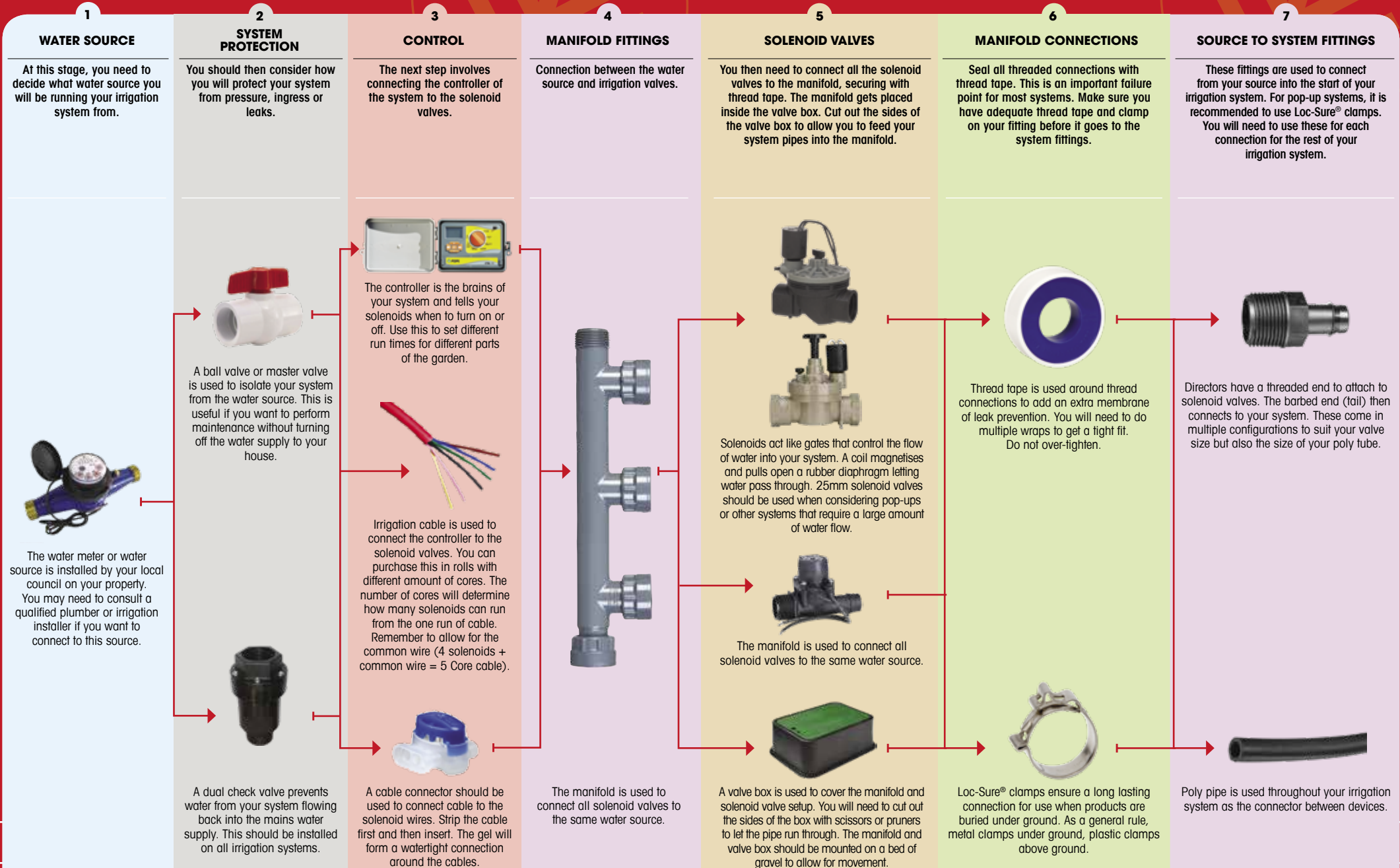
CHECKING THE FLOW CONTROL

Where fitted, the flow control handle on the solenoid valve is used to adjust the pressure available to the watering device. To adjust operating pressure, firstly turn the flow control handle clock-wise as far as it will go. At the controller, turn the valve on using the manual valve on feature. Turn the flow control handle counter clock-wise until the watering device is operating correctly.

Repeat this step for each valve fitted with flow control.

As an example, each of the below may require different flow settings.







***the better way
to water***



1300 134 880



info.au@toro.com



popeproducts.com.au



Follow us on Facebook
[popeproductsaustralia](https://www.facebook.com/popeproductsaustralia)



www.youtube.com/user/PopeAustralia

Pope®, Toro®, Loc-Sure®, Drip Eze®, The Better Way to Water®
are all registered trademarks of Toro Australia Pty Ltd

