# POPE

# DIY GUIDE

## DRIP IRRIGATION MADE SIMPLE

Available at BUNNINGS warehouse

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# Irrigation System

## 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 drip irrigation.

### 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.





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DRIP IRRIGATION FOR YOUR GARDEN

# Why Drip Irrigation?

## WATERING USING A DRIP SYSTEM MAKES SENSE!

There are a wide range of drip watering products available to help you water your plants efficiently. These include:

**Individual Drippers**

**Tricklers**

**Inline Drippers** (such as Drip Eze or Dripper Hose)

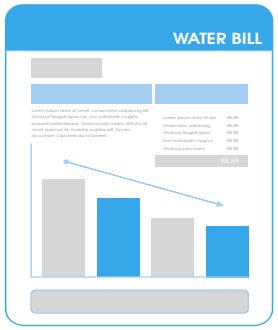
**Weeping Hose**

- Each has their own unique features and uses.
- No matter what you use, all drip watering systems work by releasing water slowly at targeted areas of the garden.

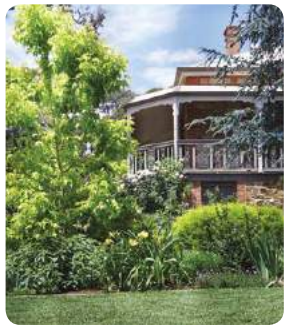
**Drip watering helps avoid water wastage that can happen through:**




## ADVANTAGES OF DRIP IRRIGATION




**Up to 70% savings in water usage** due to more efficient delivery and less runoff.



**Healthier, more bountiful plants** as a result of less over-watering or under-watering.

**Easy automated watering** by adding a timer or connecting to an underground irrigation system. Eliminates the chores of hand watering.

**Reduced weed growth** by limiting moisture to desirable plants only.

**Versatility** on flat terrain or sloping landscapes without wasteful run-off or erosion.

**Easy system expansion** to accommodate new planting areas or to retrofit an existing sprinkler system.

**DID YOU KNOW?** Drip Irrigation is a method of applying moisture directly to the desired plants and their root system. Water is distributed slowly and accurately, reducing water loss from wind or evaporation and minimising moisture wasted on weeds, unplanted areas or runoff.

# Selecting the Right Drip Solution

## EASY CLEAN DRIPPERS / PRECISION DRIPPERS

**2** 2 LITRES PER HOUR PER DRIPPER

- Ideal flow rate for most applications.
- Suits sandy soils.

**4** 4 LITRES PER HOUR PER DRIPPER

- Ideal flow rate for trees, shrubs, bushes and mid to large sized established plants.
- Suits loamy or clay soil.

**8** 8 LITRES PER HOUR PER DRIPPER

- Ideal flow rate for trees, shrubs, native gardens and any plants requiring infrequent but thorough soaking.
- Suits loamy or clay soil.

### EASY CLEAN DRIPPERS

Easy Clean Drippers connect straight into 13mm poly tube or can be used with 4mm poly tube.


### PRECISION DRIPPERS

Precision Drippers connect straight into 13mm poly tube or Drip Eze and can be used with 4mm poly tube. They are suitable for sloping garden areas or to be covered in mulch. They also inhibit insects from entering and blocking the dripper.


### SUITABLE FOR:

- Plants spaced randomly apart.
- Targeted and efficient watering at each plant's root zone.
- Pots or hanging baskets.
- Areas with low water pressure.
- Easy to take apart and clean.

### NOT SUITABLE FOR:

- Non mains water tank connections.
- Non-Potable water.

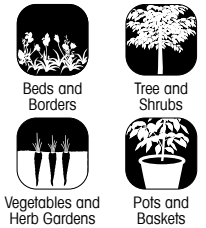




## VARIABLE FLOW DRIPPERS AND TRICKLERS

### VARIABLE FLOW DRIPPERS

**Connect straight into 4mm or 13mm poly tube.**




**Veri-Flow Dripper adjusts from 0-60 litres per hour.**

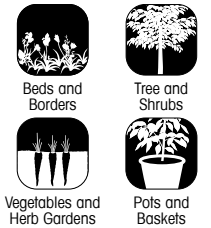
**LOW FLOW RATE:**
- Sandy soils.
- Potting mix.
- Plants that require less water.

**MID FLOW RATE:**
- Loamy or clay soils.
- Established bushes, shrubs and hedges.
- Vegetables and fruiting plants.

**HIGH FLOW RATE:**
- Heavy clay soils.
- Trees & large plants.
- Vegetables and fruiting plants.

### VARIABLE FLOW TRICKLERS

**Connect straight into 4mm or 13mm poly tube.**




**VERI-FLOW TRICKLER**
- Adjustable flow rate 0-30 lph.
- Threaded inlet.
- Use with 4mm rigid poly tube.
- Ideal for pots and hanging baskets.
- Trickler action gives larger area coverage.

**ADJUSTABLE FLOW TRICKLER**
- Adjustable flow rate 0-50 lph.
- Barbed inlet.
- Use with 13mm & 4mm poly tube.
- Ideal for shrubs.
- Trickler action gives larger area coverage.

**INLINE TRICKLER ON SPIKE**
- Adjustable flow rate 0-100 lph.
- 100mm spike.
- Connect to 13mm poly using 4mm tube.
- Trickler action gives larger area coverage.

### SUITABLE FOR:

- Connecting poly pipe.
- Plants with different watering needs.
- Pots or hanging basket.
- Garden beds and borders.
- Hedges, shrubs, bushes & trees.
- Low water pressure.

### NOT SUITABLE FOR:

- Sloping garden areas.
- Covering with mulch.
- Non mains water tank connections.
- Non-potable water.

# Selecting the Right Drip Solution

## DRIP EZE® - 4MM AND 13MM

Water Emission Rate

2 LITRES PER HOUR PER DRIPPER

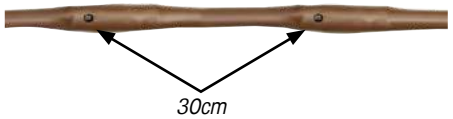
Beds and Borders

Can be Covered with Mulch

Vegetable and Herb Gardens

### 4MM DRIP EZE

*Distance between emitters*

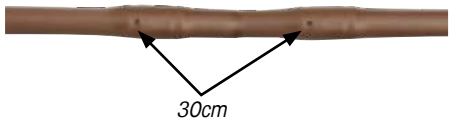


*30cm*

Drip Eze - 4mm works with poly pipe or 13mm Drip Eze and is most suitable for being looped around trees and shrubs to run from existing poly tube, or if replacing spray jets.

### 13MM DRIP EZE

*Distance between emitters*



*30cm*

Drip Eze - 13mm can be connected to a tap or used with poly tube and is most suitable for garden beds, hedges, nature strips and vegetable gardens.

### SUITABLE FOR:

- All soil types including sandy, loamy and clay soils.
- Areas up to 50m long.
- Can be covered with mulch.
- Low water pressure.
- Vegetable or herb gardens.

### NOT SUITABLE FOR:

- Non mains water tank connections / non-potable water.
- Pots or hanging baskets.
- Slopes.



## WATER WEEPER®


Water Emission Rate

VARIABLE FLOW

### 4MM WATER WEEPER

Water Weeper - 4mm connects to 13mm poly pipe. Emits water through tiny pores in the hose. Application rate varies depending on water pressure. Ideal for looping around trees and shrubs.

Beds and Borders

Trees and Shrubs

Can be covered with mulch

### 12MM WATER WEEPER

Water Weeper - 12mm connects directly into a garden hose or poly pipe. Emits water through tiny pores in the hose. Application rate varies depending on water pressure. Can be gently soaked through garden beds and borders.

Beds and Borders

Trees and Shrubs

Can be covered with mulch

### SUITABLE FOR:

- Connecting to a garden hose.
- All soil types including sandy, loamy and clay soils.
- Garden beds, hedges and nature strips.
- Can be covered with mulch.
- Low water pressure.

### NOT SUITABLE FOR:

- Non mains water tank connections / non-potable water.
- Pots or hanging baskets.
- Vegetable or herb gardens.
- Slopes.

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# Watering your Garden

## FINDING THE SUITABLE IRRIGATION PRODUCT FOR WHAT IS BEING WATERED

| | | WATERING TREES, BUSHES, SHRUBS AND HEDGES |
|---|---|---|
| **Drip Eze®** - Has built-in drippers already situated in the tube for an easy to use roll out system. Each dripper emits 2 litres of water per hour and each dripper is spaced 30cm apart. Connects just like regular poly pipe. Use 13mm Drip Eze or 4mm Drip Eze - both can be used with existing 13mm poly pipe and can snake through the garden. Drip Eze can be covered with mulch. |  | ✓ |
| **Easy Clean Drippers** - Can be placed directly into 13mm poly pipe or used with 4mm poly pipe to get right to the base of the plant. Ideal where plants are spaced randomly. Available in 2, 4 and 8 litre per hour drippers. Can be easily taken apart for cleaning. Use when plants have similar watering needs. |  | ✓ |
| **Precision Drippers** - Can be placed directly in to 13mm poly pipe, 13mm Drip Eze or used with 4mm poly pipe to get right to the base of the plant. Ideal where plants are spaced randomly. Available in 2, 4 and 8 litre per hour drippers. Can be easily taken apart for cleaning. Suits slopes and can be covered with mulch. Use when plants have similar watering needs. |  | ✓ |
| **Water Weeper®** - Connects directly into a garden hose or poly pipe. Emits water through tiny pores in the hose. Application rate varies depending on water pressure. Can be covered with mulch. Available in 4mm or 12mm diameter. |  | ✓ |
| **Tricklers -** Offer variable water flow and wider area coverage than drippers. Can be placed directly into 13mm poly pipe or used with 4mm poly pipe. Ideal for use with plants that have different watering needs. |  | |
| **Variable Flow Drippers** - Offer variable water flow and a smaller coverage area than tricklers. Can be placed directly into 13mm poly pipe, or used with 4mm poly pipe. Ideal for use with plants that have different watering needs. |  | |
| **Tricklers On Spike** - Offer variable water flow and wider coverage area. Use with 4mm poly pipe when the flow of water needs to be elevated. |  | |



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| WATERING GARDEN BEDS AND BORDERS | WATERING POTS AND BASKETS | WATERING VEGETABLE AND HERB GARDENS | WATERING UNDER MULCH | WATERING ON SLOPES |
|---|---|---|---|---|
| ✓ | | ✓ | ✓ | ✓ |
| ✓ | ✓ | ✓ | ✓ | |
| ✓ | ✓ | ✓ | ✓ | ✓ |
| ✓ | | | ✓ | |
| ✓ | ✓ | ✓ | | |
| ✓ | ✓ | ✓ | | |
| ✓ | ✓ | ✓ | | |

# How Long Should I Water?

## USING DRIP SYSTEMS IN YOUR GARDEN

Drip systems use low pressure from your tap. Always remember to use a filter with drip systems and a pressure reducer to ensure low operating pressure.

| USE THIS TABLE AS A GUIDE FOR WATERING YOUR GARDEN | DRIPPERS | DRIPPERS | DRIPPERS | VERI-FLOW DRIPPER |
|---|---|---|---|---|
| |  |  |  |  |
| **FLOW RATE PER EMITTER** | 2 lph | 4 lph | 8 lph | 0 - 60 lph |
| **SEEDLINGS** | 10 minutes | 5 minutes | 3 minutes | up to 5 minutes |
| **SMALL ESTABLISHED SHRUBS** | 30 minutes | 15 minutes | 10 minutes | up to 15 minutes |
| **LARGER SHRUBS** | 45 minutes | 25 minutes | 15 minutes | up to 25 minutes |
| **FLOWER BEDS** | 30 minutes | 15 minutes | 10 minutes | up to 15 minutes |
| **VEGETABLES** | 30 minutes | 15 minutes | 10 minutes | up to 15 minutes |
| **TREES** | 1 hour | 30 minutes | 15 minutes | up to 30 minutes |

**HINT!** Watering times will vary based on your soil type and weather conditions. Water sandy soil more frequently and water clay soil less frequently. (Refer to page 17 to check what type of soil you have).

| VERI-FLOW TRICKLER | 4MM DRIP EZE | 13MM DRIP EZE | 4MM WATER WEEPER® | 12MM WATER WEEPER® |
|---|---|---|---|---|
|  |  |  |  |  |
| 0 - 30 lph | 2 lph | 2 lph | 12 lph per 10m | 240 lph per 15m |
| up to 5 minutes | 10 minutes | 10 minutes | 10 minutes | 5 minutes |
| up to 15 minutes | 30 minutes | 30 minutes | 30 minutes | 15 minutes |
| up to 25 minutes | 45 minutes | 45 minutes | 45 minutes | 25 minutes |
| up to 15 minutes | 30 minutes | 30 minutes | 30 minutes | 15 minutes |
| up to 15 minutes | 30 minutes | 30 minutes | 30 minutes | 15 minutes |
| up to 30 minutes | 1 hour | 1 hour | 1 hour | 30 minutes |

Note: Watering times stated in this table are based on operating pressure of 150kPa. Use as a guide only.

## THE DIFFERENCE BETWEEN DRIPPERS AND TRICKLERS

### DRIPPERS

- Drippers water a concentrated area.
- Place at root zone.
- Low water use.

### TRICKLERS

- Tricklers water a wider area.
- Place between plants.
- Visible watering.



DRIP IRRIGATION FOR YOUR GARDEN

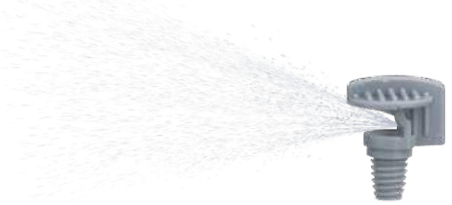
# Selecting the Right Spray

## JET / SPRAYS

Spray type emitters are ideal where full water coverage of an area is required, or for localised watering of trees, shrubs and ground cover. They can be connected straight into poly pipe or mounted on a rigid riser.

Quarter, half and full circle spray patterns are available. The key difference between types of sprays, is that some will emit a fan of water (such as the jet spray), where as others will emit thin streams of water (such as the MicroJet®).

### JET SPRAY



Fan spray water pattern

### MICROJET®

Thin water stream

### FIXED SPRAY

- Suits watering where plants are the same or require the same amounts of water.
- Can be quarter, half or full circle sprays.
- Mist and strip sprays also available.
- Spinners are full circle only.

### ADJUSTABLE SPRAY

- These adjust the amount of water emitted from the spray.
- Suits watering where plants require different amounts of water.
- Quarter, half or full circle.



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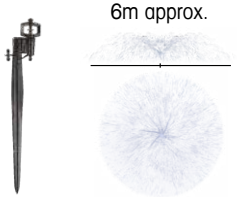
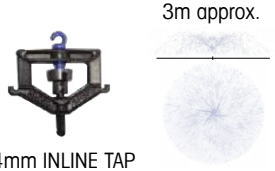
## SELECT A SPRAY TYPE TO SUIT YOUR GARDEN

Sprays, mini sprinklers and mini spinners offer different spray patterns and diameters of throw. They apply water over different areas. It is important to select a spray type with a diameter of throw that suits your garden's needs. Where you have plants that require different amounts of water, select a variable flow spray or use an in-line tap to adjust the flow.

### MINI SPRINKLERS

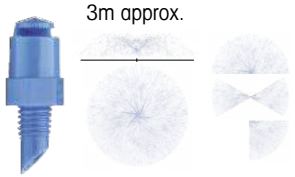



### MINI SPINNER



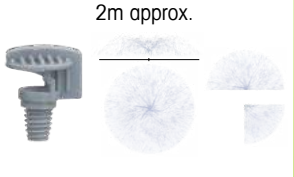

Use with 4mm INLINE TAP

### MICROJET



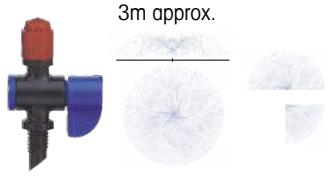

Use with 4mm INLINE TAP

### JET SPRAY

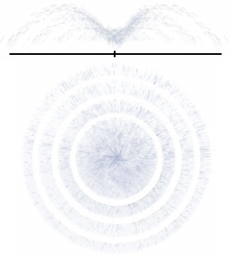



Use with 4mm INLINE TAP

### VERI-FLOW




Inline Tap



Adjustable Throw

**NOTE** Diameter of throw can be adjusted by using a 4mm Inline Tap to vary the flow of water.

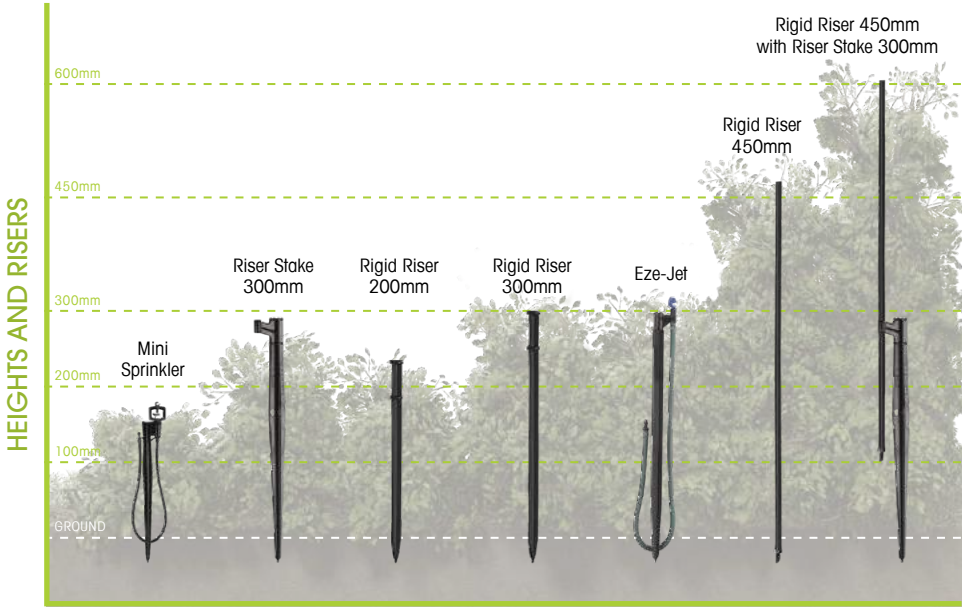
# Selecting the Right Spray

## FIXED SPRINKLER HEADS AND RISERS

Combined sprinkler heads and risers are designed to make it easy. Available in a range of heights and spray patterns, there is a riser combination to suit your watering needs.


**RISERS**

- Rigid Risers connect into 13mm poly pipe and are used to elevate jets and sprays.
- Rigid Stakes hold 4mm poly pipe to raise jets and sprays to the required height.
- Rigid Risers and Stakes can be combined to provide extra 'holding' power.
- They are used to add height and cover foliage as required.








# How Long Should I Water?

## WATERING USING SPRAYS, MINI SPINNERS AND MINI SPRINKLERS

| USE THIS TABLE AS A GUIDE FOR WATERING YOUR GARDEN | SPRAY JET | MICROJET® | VERI-FLOW SPRAYJET | EZE-JET | MINI SPINNER | MINI SPRINKLER | WATERBIRD® VI SPRINKLER ON STAKE |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| SPRAY PATTERN | 1/4, 1/2 & Full Circle | 1/4, 1/2 & Full Circle | 1/4, 1/2 & Full Circle | 1/4, 1/2 & Full Circle | Full Circle | Full Circle | Full Circle |
| RADIUS OF THROW | 1.0m | 1.5m | 1.5 - 2m | 1.5m | 1.5m | 3.0m | 3.45m |
| FLOW RATE | 60 - 110 lph | 40 lph | 0 - 115 lph | 40 lph | 115 lph | 35 lph | 55 lph |
| DROPLET SIZE | medium | medium | medium | medium | medium | large | large |
| SEEDLINGS | 2 - 5 minutes | 5 - 10 minutes | 1 - 10 minutes | 5 minutes | 2 - 5 minutes | 5 - 10 minutes | 5 minutes |
| SMALL ESTABLISHED SHRUBS | 5 minutes | 10 minutes | 5 - 10 minutes | 10 minutes | 5 minutes | 10 minutes | 10 minutes |
| LARGER SHRUBS | 10 minutes | 15 minutes | 10 -15 minutes | 15 minutes | 10 minutes | 15 minutes | 15 minutes |
| FLOWER BEDS | 5 minutes | 10 minutes | 5 - 10 minutes | 10 minutes | 5 minutes | 10 minutes | 10 minutes |
| VEGETABLES | 5 minutes | 10 minutes | 5 - 10 minutes | 10 minutes | 5 minutes | 10 minutes | 10 minutes |
| TREES | 10 - 15 minutes | 15 - 20 minutes | 10 - 20 minutes | 15 - 20 minutes | 10 minutes | 15 - 20 minutes | 10 - 15 minutes |

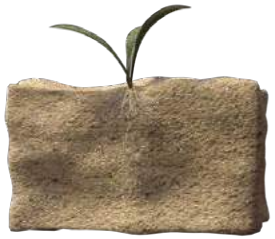
Note: Watering times highlighted above are based on operating pressure of 150kPa. Flow rates are stated in Litres per hour. Use as a guide only.

# Useful Hints and Tips

## HOW MUCH WATER DOES YOUR SOIL HOLD?

Check your soil type to calculate how much water your soil will hold. This will help you understand how often you should water.

Grab a hand full of soil and squeeze it gently with your fingers (don't do this when the soil is very wet or very dry). Open your fist and gently poke at the soil.



### Sandy Soil

If the soil falls apart completely you have sandy soil which allows water to run straight through and therefore plants don't get enough water and dry out quickly.

### Loam Soil

If the soil gently breaks into small clumps, you have loam which is the ideal soil. It contains a mix of particles, allowing water to move more slowly through the soil.

### Clay Soil

If the soil stays tightly in a clump, you have clay soil which doesn't allow water to flow through it. Therefore, roots don't grow well and plants get waterlogged.

As a general rule sandy soil will need to be watered more frequently than loamy or clay soil which will hold more water.



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## WATERSMART CHECKLIST: SAVE WATER IN YOUR GARDEN!

### CHECK THE LIGHT

How many hours of direct sun does each area of your yard get? This will influence how often you need to water.


- 1 to 4 hours of sun or 3 to 6 hours of dappled sunlight means you have a shade garden.


- 4 to 6 hours of sun or 6 to 8 hours of dappled sunlight means you have partial shade.


- More than 6 hours of sun a day means you have a sun garden.

### CHECK YOUR COMPOST LEVEL

No matter what type of soil you have, adding organic matter allows for the ideal flow of water through the soil. You can easily make your own at home. By using compost or mulch in your garden you can stop water loss through evaporation and also prevent soil erosion. Mulching can prevent up to 73% of soil evaporation loss whilst it also restricts weed growth.

### CHECK YOUR PLANTS AND PLACEMENT

Select plants and grass suited to your climate, the amount of light and soil type. Native plants are the best choices. Incorporate "hydrozones" within your landscape. Hydrozones are areas where you can group plants with similar water requirements.

### CHECK YOUR GARDEN IS WEED FREE

Be on top of your weeding in the garden. Weeds compete with the plants in your garden for water. Be water wise and don't water the weeds!

# Useful Hints and Tips

## SANDY SOIL AND POTTING MIX

Sandy soil and potting mix have very fast drainage. This means you should use drippers with lower emission rates so the water seeps more slowly into the soil and water can be absorbed by the root zone, rather than bypassing the roots.

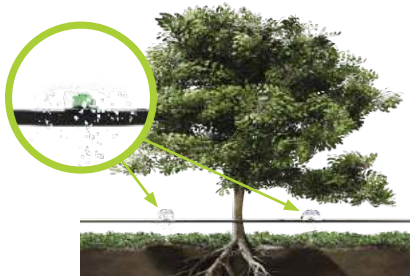
FAST WATER EMISSION RATE

SLOW WATER EMISSION RATE

## LARGER PLANTS SUCH AS TREES, SHRUBS AND BUSHES

Established plants generally require more water than smaller or younger plants and they require it less frequently. Often, a good long soak is recommended. Consider using higher flow rate products such as 4 or 8 litre per hour drippers and ensure coverage is around the root areas of the trunk.


WHERE TO PLACE DRIPPERS



Drippers should be placed almost in line with the width of the tree.

LOOP AROUND TREES

Drippers should be placed evenly around the tree.





## MORE HANDY HINTS

Use a punch to pierce holes in 13mm poly pipe.

For hanging baskets, use 4mm poly pipe and a 4mm adaptor to apply water direct to basket.

Using a pressure reducer lowers the available pressure from your garden tap to suitable level for drip irrigation.

For potted plants use drippers, poly and a 4mm adaptor to water the base of the plant.

Use a repair plug if fittings need to be removed.

Always use a filter, to prevent particles from blocking drippers and clean out your filter regularly.

# POPE Overall Drip System

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## 1 WATER SOURCE

**At this stage, you need to decide what water source you will be running your irrigation system from.**

Taps have different outlet sizes from 15mm to 25mm.

The water meter or water source is installed by your local council on your property. You may need to consult a qualified plumber or irrigation installer if you want to connect to this source. Please see the 'Automating Your Watering' guide for more information.

## 2 SOURCE CONNECTION

**Next, you need to choose how or if you will automate your irrigation system. You can use either a tap timer, or a solenoid valve connected to a controller. Please see the 'Automating Your System' guide for more information.**

Hose connects taps to useful watering devices.

A tap timer is an alternative to a full automatic system. It will allow you to run separate programs and start times but may give less precise options. Tap timers have limited flow compared to a 25mm solenoid valve which means you may need to run more watering zones.

Solenoids act like gates that control the flow of water into your system. A coil magnetises and pulls open a rubber diaphragm letting water pass through. 25mm solenoid valves should be used when considering pop-ups or other systems that require a large amount of water flow.

## 3 SYSTEM CONNECTION

**Depending on your source connection, you will then choose how to connect to the rest of the system.**

Barb to snap on fittings make it easy to connect a standard garden hose to your irrigation setup. This is a great place to start for beginners.

Tap nuts have a thread to meet the input device and then the tail has a barbed adaptor to run into your system. Secure the barb connection with a locking clamp.

Directors have a threaded end to attach to solenoid valves. The barbed end (tail) then connects to your system. These come in multiple configurations to suit your valve size but also the size of your poly tube.

## 4 SOURCE TO SYSTEM FITTINGS

**These fittings are used to connect from your source into the start of your irrigation system. For drip systems we recommend ratchet clamps or Loc-Sure clamps for a lasting connection.**

Locking clamps are used to hold poly pipe to barbed fittings. Remember to put on before connecting the pipe so it slides over the barb. Squeeze the top together with pliers to make sure the clamp is secure. If you need to remove the clamp, twist the top to the side, separating the teeth.

Poly pipe is used throughout your irrigation system as the connector between devices.

Tap nuts have a thread to meet the input device and then the tail has a barbed adaptor to run into your system. Secure the barb connection with a locking clamp. These can also be used in the middle of a system to connect to filters or pressure reducers.

## 5 SYSTEM PROTECTION

**You should then consider how you will protect your system from pressure, ingress or leaks. You should consider using a combination of all 3 protection devices for your irrigation system.**

A pressure reducer is used to limit the amount of pressure that the system receives. This helps with fittings blowing out, poly tube breaking or emission devices from misting or not performing as specified. Every irrigation should try to add a pressure reducer to ensure long life and correct performance.

Filters are used to stop dirt and particles from clogging the emission devices in your system. If you are having problems with pop-ups not rising or drippers not dripping, it could be clogged with debris.

## 6 LAYOUT FITTINGS

**You will then need a collection of fittings and pipes to layout and connect your system. Choose from a variety of fittings to direct water where it is required.**

Barbed fittings are used to direct flow around your watering area. They come as elbows, joiners, and tees. Secure all poly tube to the fittings with locking clamps. End plugs seal the system.

## 7 OFFTAKE FITTINGS

**You will then need a collection of fittings and pipes to layout and connect your system. Choose from a variety of fittings to direct water where it is required.**

4mm fittings function in the same way as larger fittings. They can be used to direct water to the final point. A barbed to threaded fitting should be used if trying to attach 4mm tubing to 13mm tubing.

4mm tubing comes as either PVC or LDPE. PVC will be more flexible and can be used for running lengths through the garden. LDPE is great for adding to risers and screwing drippers into as it is a harder material.

## 8 EMISSION DEVICES

**Your final step is to choose an emission device. Your choice will depend on the drip or spray that you require.**

CHOOSE FROM THE FOLLOWING

Tricklers operate like drippers but they are raised on spikes to increase the water coverage area. Break off the 4mm adaptor and insert it into 4mm tubing, you can then place these between plants to water multiple plants at once.

Attach Drip Eze directly to the barbed poly fittings and secure with a ratchet clamp.

Threaded drippers/tricklers should attach to the system using 4mm tubing. Threaded fittings may not secure direct into poly tube and will pop out more often than a barbed fitting.

Barbed fittings can attach directly to 13mm poly tube if required. These will let out a steady drip of 2 - 8 l/h and can be located directly at the base of a plant for direct watering. The barbed fitting pierces the tube but ensures that it won't pop out like a threaded fitting.

Jets are larger versions of tricklers on spikes but consume less water meaning you can add more sprays to a line. The added height means the sprays reach the foliage of the plant and encourage their natural drainage method.



DRIP IRRIGATION FOR YOUR GARDEN

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