



POPE

DIY GUIDE



INSTALLATION OF LAWN POP-UPS





Watering

How to use these guides

FACT:

Most people tend to over water rather than under water and that means big water bills

FACT:

Getting the amount of water right is just a combination of knowing what type of soil you have, how long you need to water, and how often you need to water.

The type of watering device you use will also affect how long you water. Different sprinklers have different water output rates. For example:

PROFESSIONAL POP-UP



Up to
11 PRP's™
Pope Rating Points

LOW PRESSURE POP UP



Up to
4 PRP's™
Pope Rating Points

IMPACT IN CANISTER



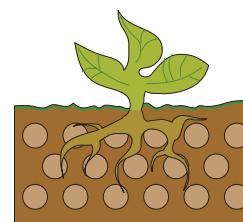
Up to
8 PRP's™
Pope Rating Points

MULTI STREAM GEAR DRIVE

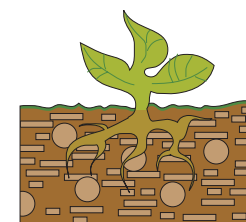


Up to
23 PRP's™
Pope Rating Points

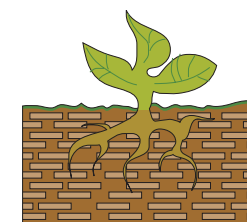
And different soils hold different levels of water.



SAND



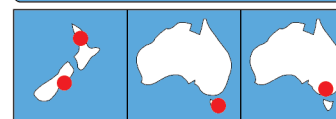
LOAM



CLAY

This guide has been put together using average weather conditions. Use the Locality Guide below to adjust your watering for your area.

Less often than guide



Same as guide



More often than guide



During periods of Water Restrictions, consult your local Water Authority for compliance to local restrictions.

PLEASE NOTE: Water distribution rates vary from sprinkler to sprinkler and from manufacturer to manufacturer. This guide has been precisely calculated for Pope sprinklers, jets and drippers. Using these guidelines for product not listed may result on under or over watering.

Lawns

How long should I water?

Water your plants for the time period below, each time your water. Use the "When should I water" chart to determine how often you should water.

	POP-UPS				HOSE AND SPRINKLERS			
	Professional Pop-Up	Low Pressure Pop-Up	Impact In Canister	Multistream Gear Drive	Capitol Sprinkler	Canberra Sprinkler	Oscillator Sprinkler	Impact Sprinkler
SAND	5-10 minutes	10-20 minutes	10-20 minutes	10-15 minutes	1-5 minutes	5-10 minutes	15-25 minutes	5-15 minutes
CLAY	10-20 minutes	30-40 minutes	30-40 minutes	30-40 minutes	5-10 minutes	20-25 minutes	40-60 minutes	20-30 minutes
LOAM	20-30 minutes	35-50 minutes	20-30 minutes	20-30 minutes	5-10 minutes	10-15 minutes	30-50 minutes	15-25 minutes

PLEASE NOTE:

This Publication is presented as a **Guide Only** and while every care has been taken in recommending **When to Water** and for **How Long**, the Guide can not account for every situation, weather condition, soil type and plant type. There is no substitute for careful observation and local experience. Please ensure you follow any local water restrictions in place. Water conservation principles including deep and infrequent watering have been used to formulate the guide.

For further information about Water Conservation please contact your Local Water Authority.

When should I water?

	Very Hot > 35	Hot 30-35	Very Warm 25-30	Warm 20-25	Mild 15-20	Rain - Cold
						
SAND	Every Day	Every Day	Every 2nd Day	Every 3rd Day	Every 4th Day	X
CLAY	Every 3rd Day	Every 3rd Day	Every 4th Day	Every 5th Day	Every 6th Day	X
LOAM	Every 3rd Day	Every 4th Day	Every 5th Day	Every 6th Day	Every 7th Day	X

Lawn Pop-ups

Testing for water flow and pope rating points (PRP's™)

1 BUCKET TEST

Note the time to fill a standard 9 litre household bucket, from the tap to be used for your watering with the tap turned on full.

PLEASE NOTE:

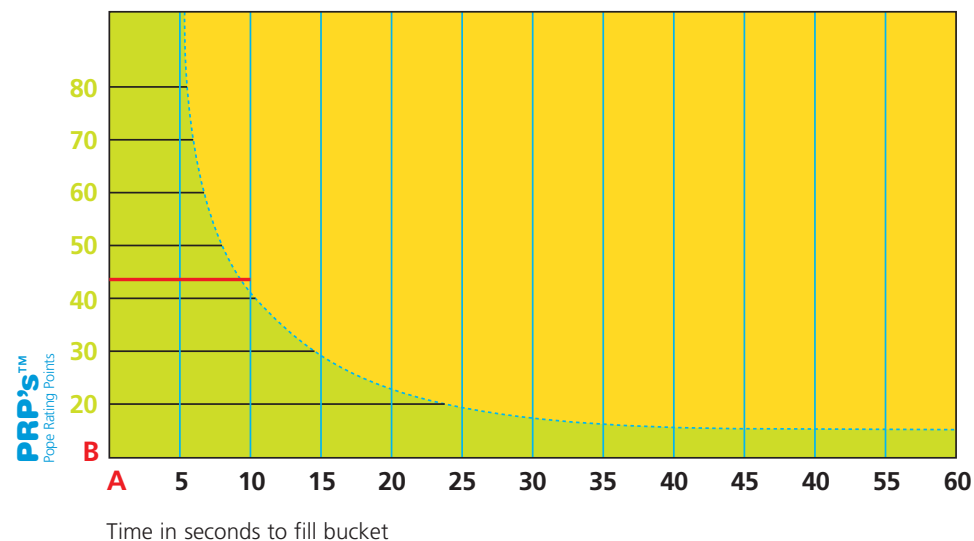
1. Ensure water flow is measured at times of peak water usage, and
2. If using a tap timer or pressure reducer, ensure water flow is measured with the device fitted.



2

The total number of Pop-Ups you can use at one time is limited by the water flow from your tap. Read off the number of Pope Rating Points PRP's™ you have available from your tap.

For example if it takes 10 seconds to fill your 9-litre bucket, move along the bottom line of the chart **A** to the 10 second point. Move up the blue vertical line from the 10 second point to the dotted line and across the horizontal red line to the PRP's™ **B**. This shows that this tap has 43 Pope Rating Points PRP's™ available for use.



3

Each Pop-Up details its Pope Rating Points PRP's™, refer to "Performance Specifications" chart on page 13. The Pop-Up PRP's™ must be added together to ensure they do not exceed the total PRP's™ available from your tap. In our example, 43 PRP's™ were available.







 = 40 








 = 46 



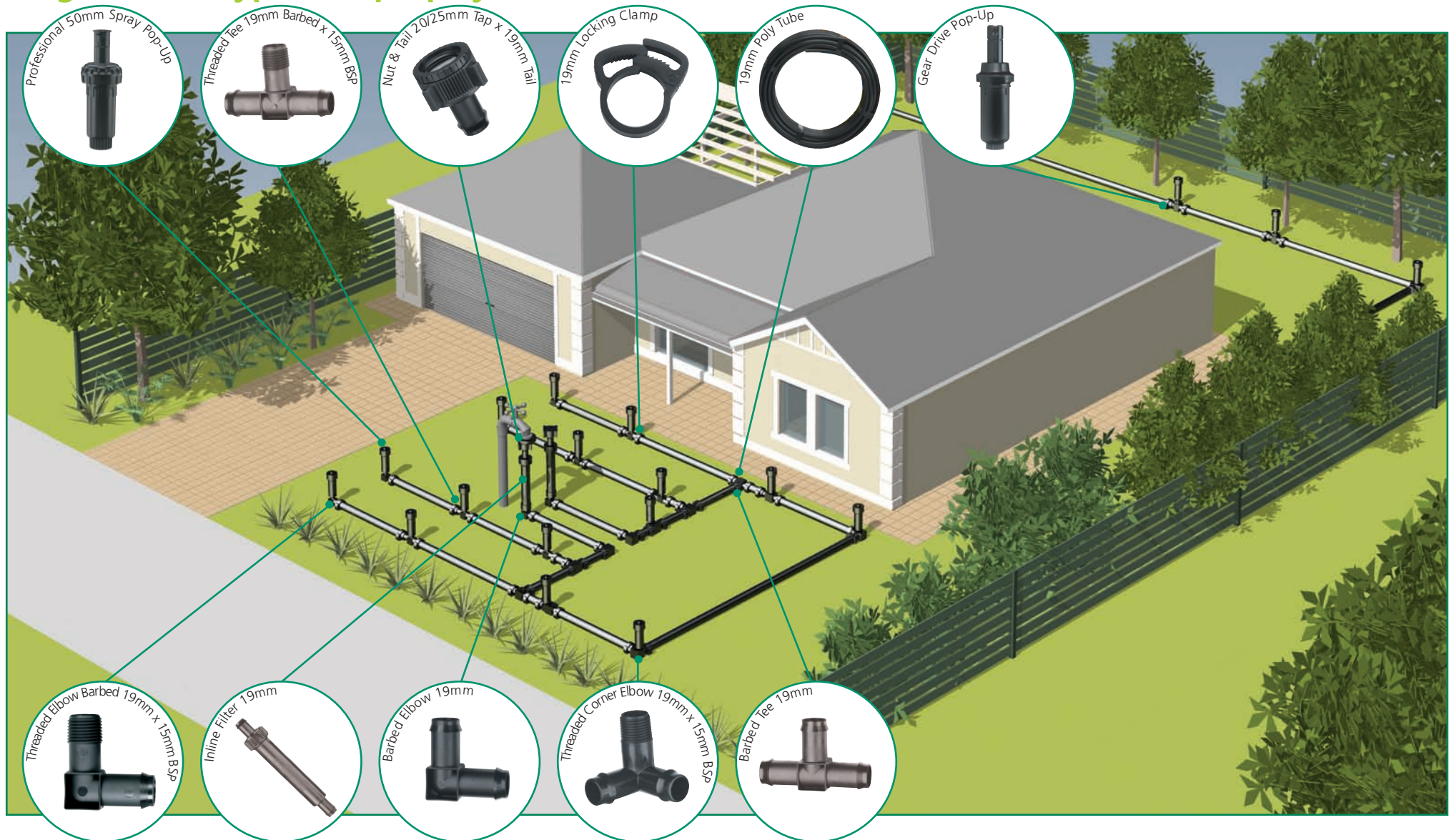
PRP's™
Pope Rating Points

PLEASE NOTE: This chart is a guide only. If your bucket takes longer to fill than 20 seconds, we recommend you assemble your system above ground, before digging trenches, to confirm that it works correctly.

Lawn Pop-ups

Diagram of a typical Pop-up system

Pop-up systems run on 19mm polytube and fittings



Selecting the most suitable Pop-up sprinkler

Lawn Pop-ups - Sprays

Professional - Suitable for smaller lawns



DISTANCE BETWEEN POP-UPS

3 metres minimum → 4 metres maximum.

CALCULATING WATER FLOW

1/4 Circle Nozzle



PRP's™

1/2 Circle Nozzle



PRP's™

3/4 Circle Nozzle



PRP's™

Full Circle Nozzle

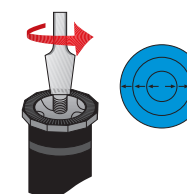


PRP's™

The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.

FEATURES

- Fixed spray pattern
- Uniform coverage
- Low maintenance
- Available in 1/4, 1/2, 3/4 or full circle patterns
- Suitable for small or large lawn areas
- For large areas, more pop-ups are required which may mean two or more separate watering lines are needed
- Best for small lawns
- 50mm pop-up height
- To reduce the throw (between 3 and 4 metres) turn screw to the right. To increase, turn screw to the left.



Precision - Suitable for smaller lawns



DISTANCE BETWEEN POP-UPS

2 metres minimum → 4 metres maximum.

CALCULATING WATER FLOW

1/4 Circle



PRP's™

1/2 Circle



PRP's™

Full Circle

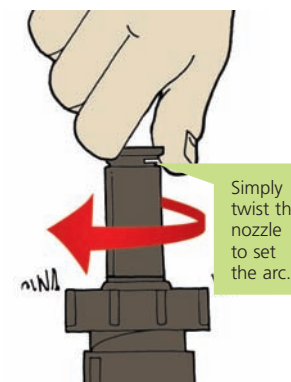


PRP's™

The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.

FEATURES

- Fixed spray pattern
- Adjustable pattern nozzle for greater watering flexibility
- Pattern adjustable from 0° to 360°
- Uniform coverage
- 50mm and 75mm pop-up height
- Suitable for small or large lawn areas
- For large areas, more pop-ups are required which may mean 2 or more separate watering lines are needed
- To reduce the throw (between 2 and 4m) turn screw to the right. To increase, turn screw to the left.



Selecting the most suitable sprinkler

Lawn pop-ups - Gear Drives

Single Stream Gear Drive - Suitable for larger areas		
	DISTANCE BETWEEN POP-UPS ← 10 metres minimum  13 metres maximum. →	FEATURES • Driven by a series of gears within the sprinkler • Best for large areas • Produces a single, rotating stream of water • Quiet operation makes it perfect for early morning watering • Comes with three inter-changeable nozzles with low, medium and high flow rates • Adjustable pattern - 45° to 325° • Comes with pre-installed low flow rate nozzle • Adjust pattern by rotating nozzle once installed • To reduce the throw turn the screw to the right. To increase the throw turn screw to the left. 
	CALCULATING WATER FLOW Orange Nozzle  6 PRP's™ Pope Rating Points Black Nozzle  13 PRP's™ Pope Rating Points Green Nozzle  23 PRP's™ Pope Rating Points The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.	
Multi Stream Gear Drive - Suitable for small to medium sized areas		
	DISTANCE BETWEEN POP-UPS ← 4.5 metres minimum  8.5 metres maximum. →	FEATURES • Driven by a series of gears within the sprinkler • Quiet operation makes it perfect for early morning watering • Nine different watering patterns to choose, by installing an arc disc • Economical with water - uses 1/3 less water than fixed spray pop-ups • Unique “fingers of water” ensure even water distribution • Less water run-off or pooling • Easy radius adjustment • Premium construction quality • 100mm pop-up height 
	CALCULATING WATER FLOW 4.5m Radius  12 PRP's™ Pope Rating Points 6m Radius  16 PRP's™ Pope Rating Points 8.5m Radius  23 PRP's™ Pope Rating Points The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.	

DO NOT mix different Pop-Ups on the same line.

Selecting the most suitable sprinkler

Lawn Pop-ups - Spray and Gear Drive

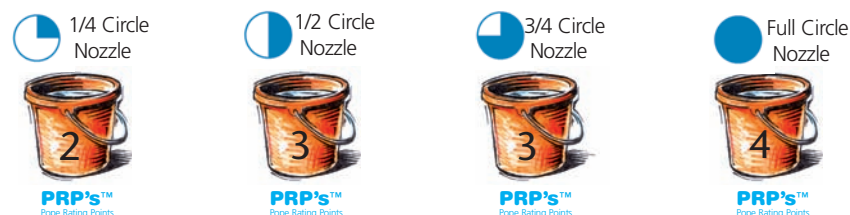
Waterbird Low Pressure Spray - Suitable for smaller lawns



DISTANCE BETWEEN POP-UPS



CALCULATING WATER FLOW



The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.

FEATURES

- Fixed spray patterns available 1/4, 1/2, 3/4 and full circle
- Perfect for areas with low water pressure
- Means more pop-ups can be used on one line
- Best for small lawns
- 50 mm pop-up height

NB: Waterbird Low Pressure Pop-Ups may draw more water as they pop-up. Check the performance of your system by assembling it above ground, before digging trenches.

Impact in Canister Gear Drive - Suitable for large open areas



DISTANCE BETWEEN POP-UPS



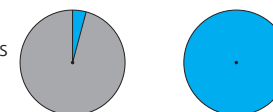
CALCULATING WATER FLOW



The PRP's™ represent minimum water flow required to operate a Spray Pop-Up.

FEATURES

- Water stream is automatically rotated by the impact arm
- Best for large open areas of lawn
- Large droplet size makes them good performers in windy conditions
- Don't use an impact to spray over garden borders as plants may be damaged
- Weighted spray arms for even coverage
- Side or bottom inlet for poly pipe
- Fully adjustable pattern - 15° to 360°
- Adjust pattern by moving rotation pins around the collar



Adjustable spray pattern ranging from 15° to 360°

DO NOT mix different Pop-Ups on the same line.

How to plan your system

Drawing your plan

1 BUCKET TEST

Use the Bucket Test (previously explained on page 2) to see how many available PRP's you have to use for your system.

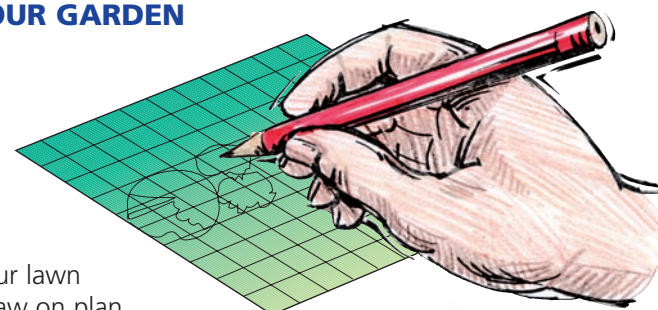
For our example we have 43 available PRP's™.



2

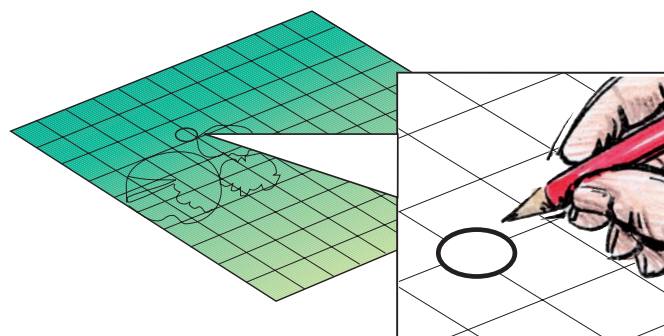
DRAW YOUR GARDEN

Measure your lawn area and draw on plan.

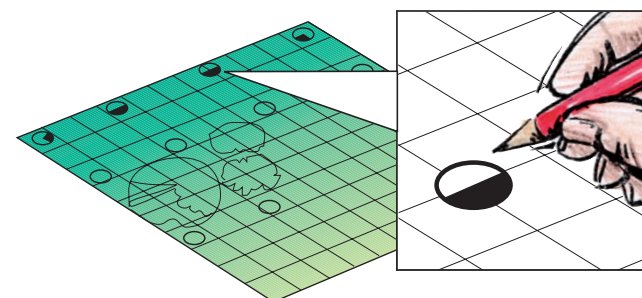


3 PLAN YOUR SYSTEM

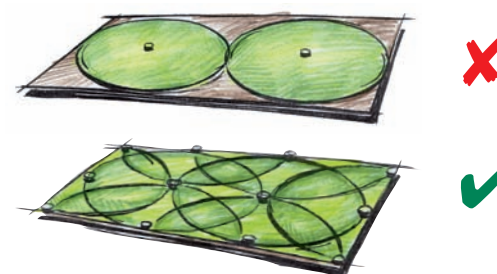
- A** Select your preferred sprinkler type, choosing the pop-up that best suits your garden size. Draw a circle for each Pop-Up, based on the number of metres between Pop-Ups.



- B** Mark each circle with required spray pattern.



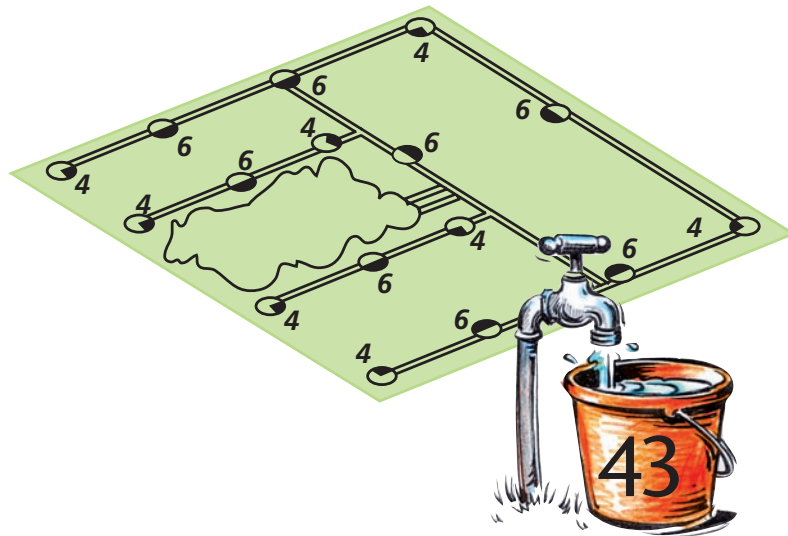
- C** It is **extremely important** that you set your sprinklers up correctly. Sprinkler patterns must overlap to water effectively and efficiently. This overlapping is called "head to head" watering. (See notes on page 12)



How to plan your system

Calculating how many Pop-ups can fit on one line

D Write the PRP™ rating for each Pop-Up.



Total the number of **PRP's™** on Pop-Ups to be used for your lawn area.
In our example the total is 80 **PRP's™**.

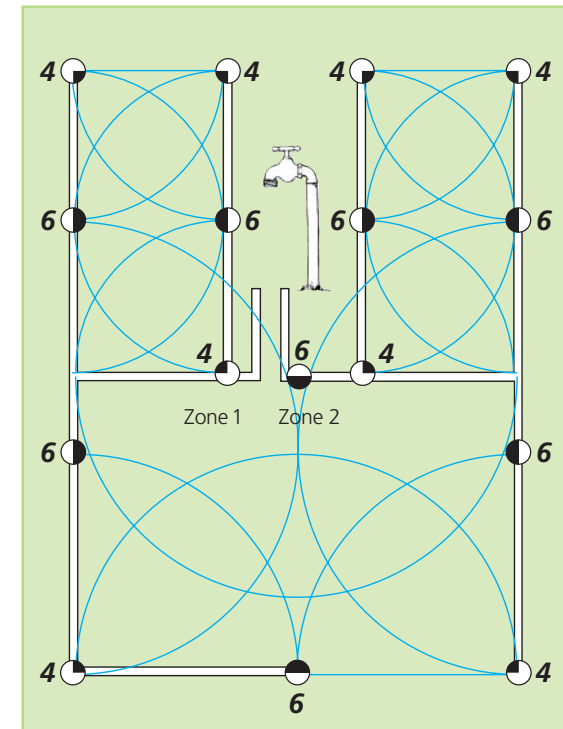
$$4 + 6 + 6 + 4 + 6 + 4 + 6 + 6 + 4 + 4 + 6 + 4 + 4 + 6 + 4 + 6 = 80 \text{ PRP's™}$$

In our example, 43 **PRP's™** were available from the tap.

This plan with 80 **PRP's™** requires 2 separate lines to work all of these Pop-Ups.

4

IDENTIFY YOUR WATERING ZONES.



If your available PRP's are less than you need to operate your watering system you may need to split your system into two or more zones. This design is based on our example of 43 **PRP's™** available from the tap.

$$\begin{aligned} \text{Zone 1 } & 4 + 6 + 4 + 4 + 6 + 6 + 6 + 4 = 40 \text{ PRP's™} \\ \text{Zone 2 } & 4 + 6 + 4 + 4 + 6 + 6 + 6 + 4 = 40 \text{ PRP's™} \end{aligned}$$

How to plan your system

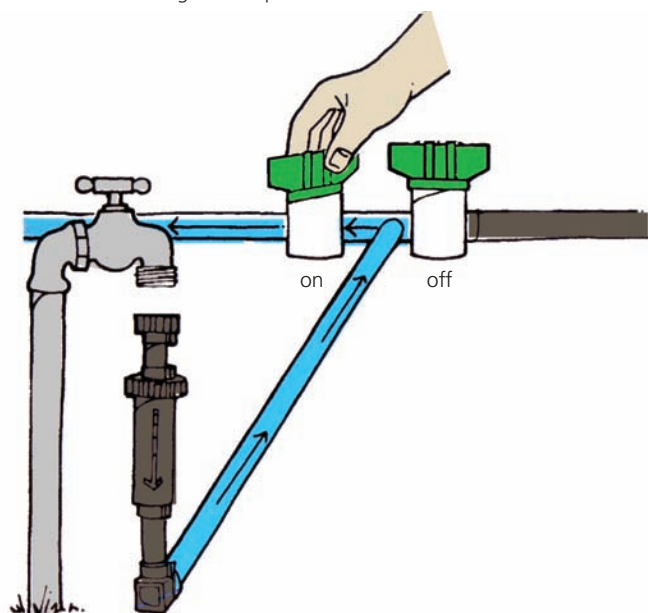
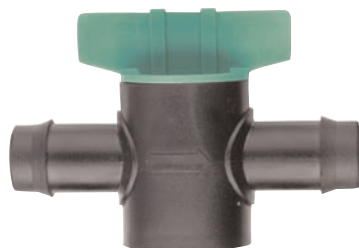
For gardens with multiple watering zones

5 INLINE TAPS

Inline Tap fittings can be used to water separate areas of your garden. They must be manually turned on or off to isolate each watering zone.

Inline Taps can also aid in distributing your PRP's, especially when your total available PRP's are not sufficient to water your whole area at once.

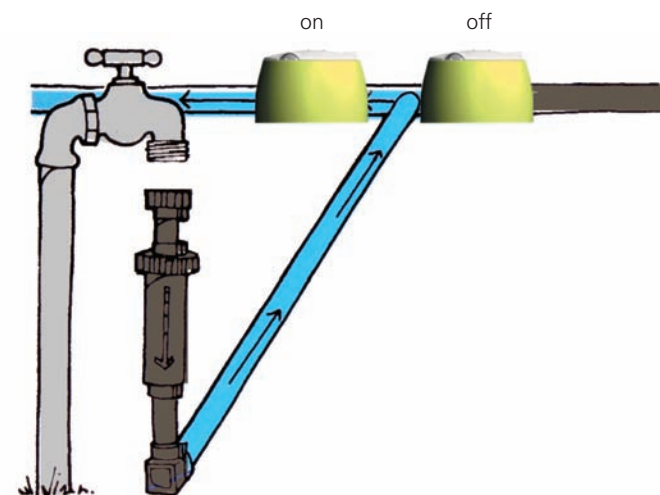
Note: Inline Taps are not designed to withstand constant high pressure in the "off" position. Always ensure one Inline Tap is turned to the "on" position when operating the system. When system is not in use ensure the main garden tap is turned off.



6 INLINE TIMERS

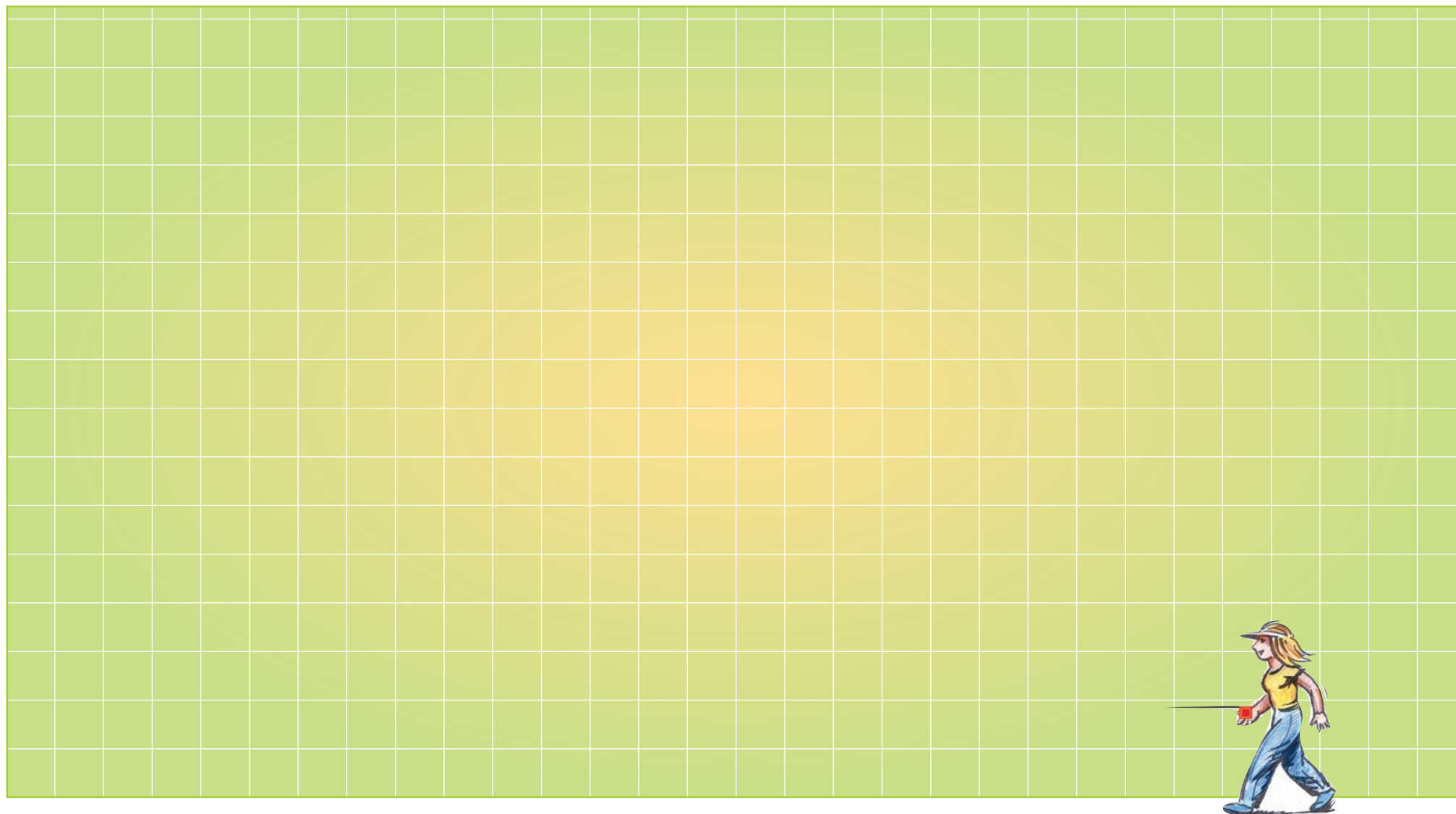
Inline Timers can be simply installed to water separate areas of your garden. By setting the timer mechanism, the water will turn on and off according to the program you set. So it works just like a fully automated watering system, whether you're at home or not.

See the booklet "Automating Your Watering" for more information.



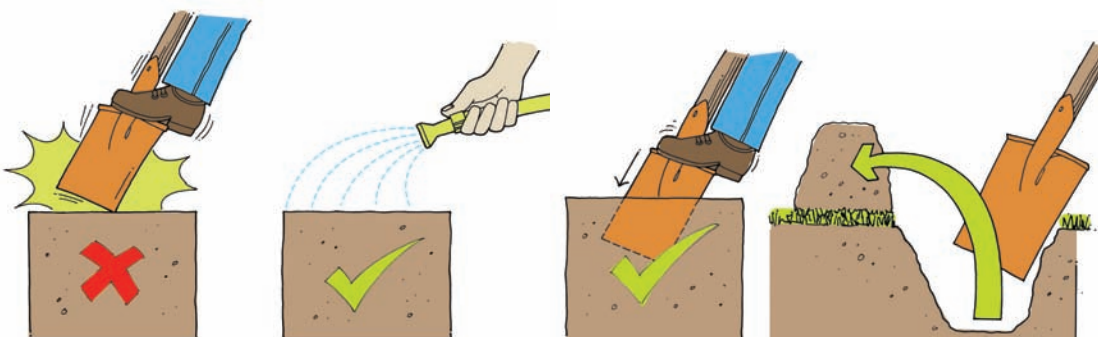
How to plan your system

Drawing to scale Use a tape measure to measure your borders. One square equals one metre.

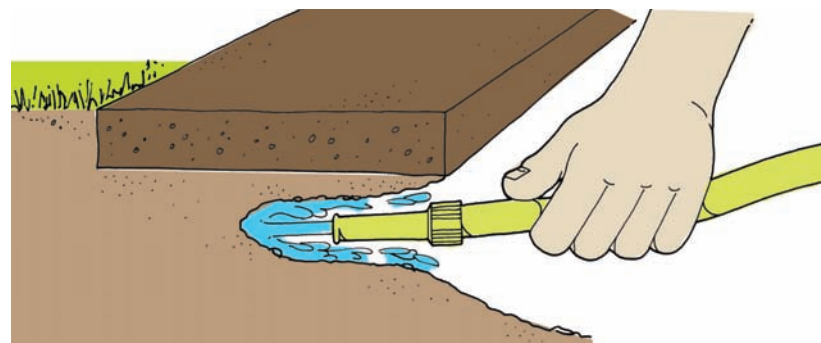


Installation tips for Pop-up systems

- 1** Pre-soak ground to soften digging.



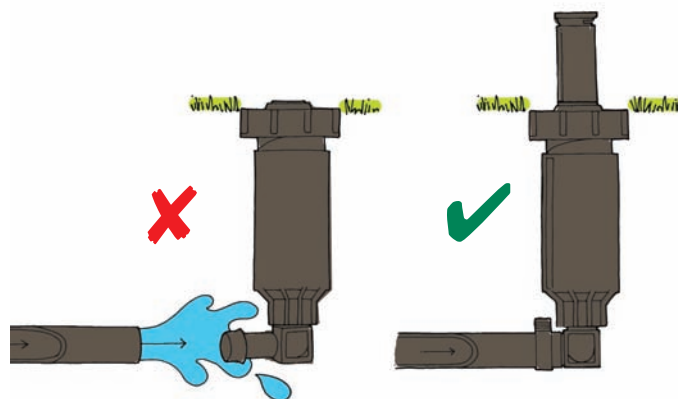
- 2** Use a hose to make a trench underneath driveways.



- 3** Avoid utility and communication lines when digging.



- 4** Use 19mm Locking Clamps on all Barbed Fittings and place Pop-Up head level with base of grass.

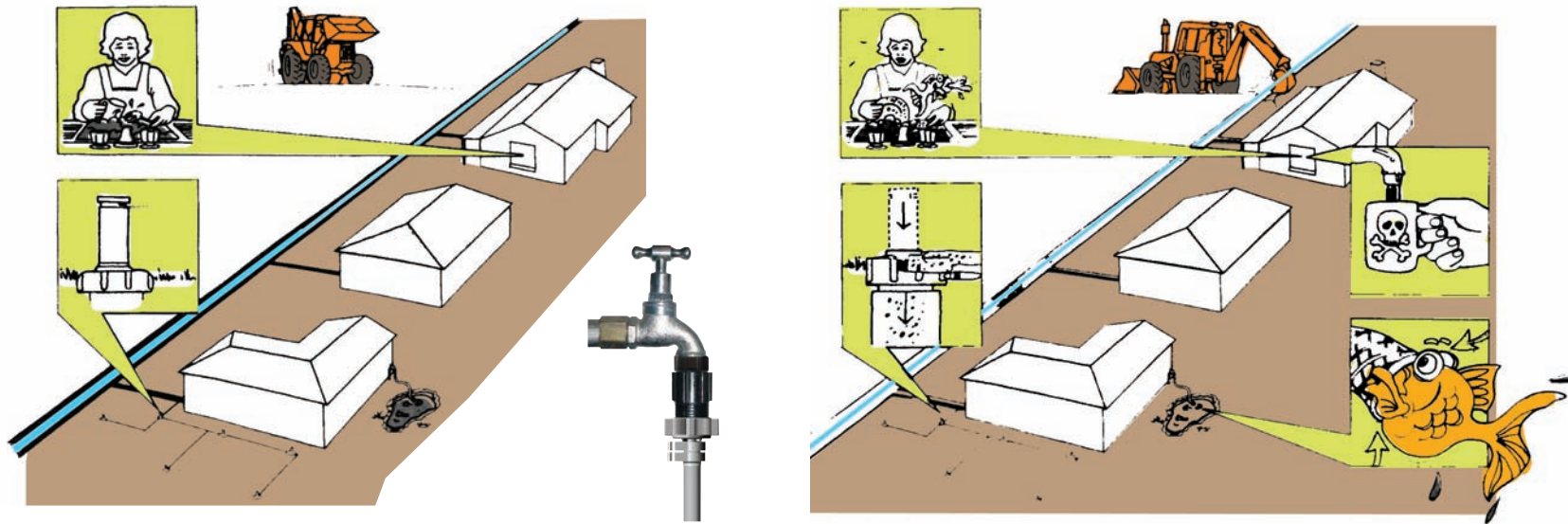


- 5** Low density poly pipe can only withstand pressure of 300kPa. If water pressure is in excess of 300kPa you should use a Pressure Reducer. Pope's Inline Timer Pressure Reducer is suitable for all applications and will reduce your available pressure to 300kPa. This will relieve longer term problems (such as leaking) that may arise with your irrigation system downstream.



Installation tips for Pop-up systems

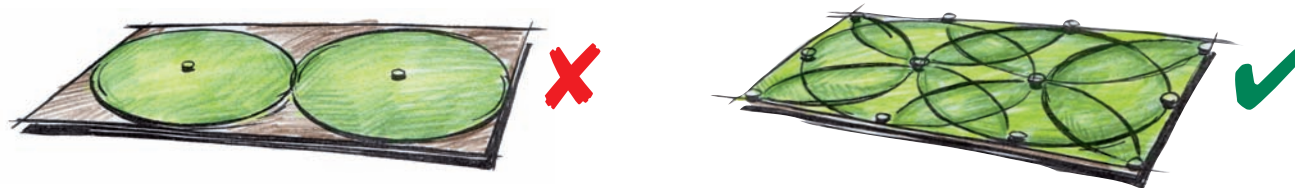
6 BACK FLOW PREVENTION is recommended for all underground installations.



WARNING:
When pipes are damaged, back flow occurs polluting household water. Please contact your local Water Authority for advice on installing an approved back flow prevention device.

7 HEAD TO HEAD WATERING

Head to head watering is spacing the sprinklers so that the watered patterns overlap. Sprinklers must always be spaced at distances equivalent to their radius of throw. So, for example, if your sprinkler has a radius of two metres (and a diameter of four metres) you should place your sprinklers two metres apart, so that the edge of the "throw" touches the head of the next sprinkler.





Lawn Pop-ups

All the technical stuff

PERFORMANCE SPECIFICATIONS

Pop-Up Sprinkler Type	PRP's	Radius (m)
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Professional

Based on Operating Pressure of 175kPa

1/4 Circle	3	3.0 – 4.0
1/2 Circle	6	3.0 – 4.0
3/4 Circle	10	3.0 – 4.0
Full Circle	11	3.0 – 4.0

Pope Precision

Based on Operating Pressure of 150kPa

1/4 Circle	5	2.0-4.0
1/2 Circle	8	2.0-4.0
Full Circle	12	2.0-4.0

Multi Stream Gear Drive (New)

Based on Operating Pressure of 350kPa

1/4 Circle	3	4.5
1/2 Circle	6	4.5
Full Circle	12	4.5
1/4 Circle	4	6.0
1/2 Circle	8	6.0
Full Circle	16	6.0
1/4 Circle	6	8.5
1/2 Circle	12	8.5
Full Circle	23	8.5

Pop-Up Sprinkler Type	PRP's	Radius (m)
-----------------------	-------	------------

Single Stream

Based on Operating Pressure of 300kPa

Orange Nozzle	6	10.0-13.0
Black Nozzle	13	10.0-13.0
Green Nozzle	23	10.0-13.0

Waterbird™ 1200 Low Pressure Pop-Up

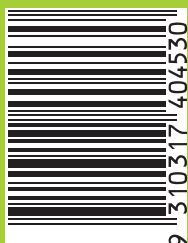
Based on Operating Pressure of 100kPa

1/4 Circle	2	3.5
1/2 Circle	3	3.5
3/4 Circle	3	3.5
Full Circle	4	3.5

Impact in Canister

Full Circle	8	10.0-13.0
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Note: PRP's are calculated using the optimum operating pressure.



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For further information on any Pope product see contact details below.

Toro Australia Pty Ltd,
53 Howards Road, Beverley
South Australia 5009
www.toro.com.au/pope
A.C.N.001310443

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