

Colli Easy DIY Projects

Install a Sprinkler System

- Easy to follow step-by-step guide
- Important and handy tips
- Materials check list
- Project cost estimator



Before you begin your exciting new project, please read through this entire pamphlet carefully and estimate and assemble all the materials you will need for the project and gather your tools and equipment together. Refer to the checklist and estimating form on the back panel of the pamphlet to assist in this preparation. If you require any help, please don't hesitate to speak with one of Colli's experienced trade team.

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TIMBER AND HARDWARE 1969-2009



You can install a garden irrigation system

Save money & enjoy a healthier garden

A lot of time and effort is put into creating the perfect garden. We all spend hours preparing the soil, selecting the right plants and protecting them from pests and disease. Unfortunately, many people also spend a lot of time and energy keeping their precious garden watered, unnecessarily wasting both water and time.

With a little help from the experienced team at your local Colli store, you can easily design and install your own garden irrigation system, and take the worry out of maintaining your garden all year round. This easy to follow DIY brochure deals with the most common garden irrigation systems, including drip feed, microspray and pop-up watering systems.

Watering systems

All the commonly used watering systems are based on either 13mm or 19mm polyethylene tubing. Both drip and microspray systems use 13mm tubing, whilst pop-up systems use 19mm tube. Colli stock a wide range of fittings all of which are designed to help you match your system with your garden layout.

- **Drip systems** – Deliver a precise amount of water to individual pot plants, trees or shrubs using the very efficient drip irrigation systems available at Colli. Some of these systems provide individual drip head adjustment, while others are pre-set. When planning a drip system, it is recommended that you allow one dripper for every 50cm of foliage. If you are operating in sandy soil, space the drippers approximately 35cm apart, while for trees, it is best to form a ring around the base which enables the drippers to feed the area under the foliage.
- **Microspray systems** – With spray heads conveniently available in full, quarter and half circle patterns, microspray systems are the most common home garden watering solution. Selecting the correct spray pattern for each location in your garden is easy and you will find that once installed, will reduce water wastage dramatically.
- **Pop-up sprinklers** – The ideal watering system for lawns, pop-up sprinklers deliver water where it's needed and also save you heaps of time – no more shifting sprinklers or over-watering one section of the lawn. Pop-up systems are best installed in a loop pattern using a variety of sprinkler heads to provide optimum coverage over the lawn.

Planning your system

- Before starting your plan, it is always best to check the water pressure available at your garden tap, which can be done by timing how long it takes to fill a 9 litre bucket. With all the household taps turned off, fill your bucket with the garden tap turned on full and time how long it takes in seconds to fill the bucket.
- Now divide the bucket size (9 litre) by the time in seconds that it took to fill, then multiply this result by 60. This formula, shown below, will give you the flow rate in litres per minute: eg. a 9 litre bucket / 25 seconds x 60 = 21.6 litres per minute.
- Use your flow rate to guide you in the selection of spray heads and the number you can use effectively. Please remember that spray heads from different manufacturers will produce different results, so always check the packaging or chat to one of our experienced staff when you purchase your system.

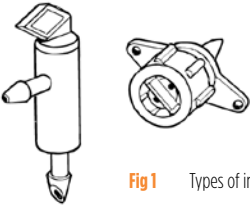


Fig1 Types of irrigation system

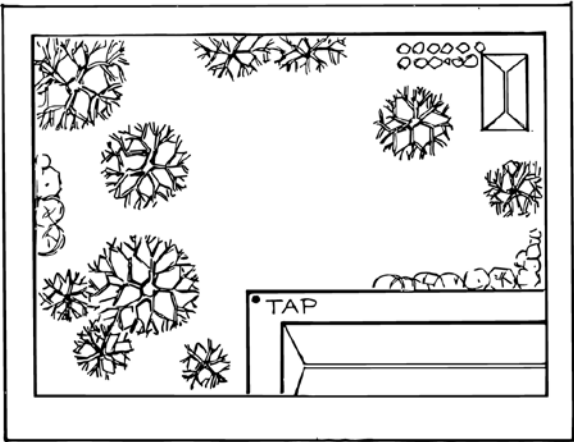


Fig 2 Sketch plan of garden

Laying out the system

- Take a sheet of graph paper and draw a sketch plan of your garden marking in any buildings and fences, shrubs, trees, garden beds, paths and any obstacles that do not need watering. Don't forget to mark the location of your tap (Fig 2).
- Now, draw where the main poly tube line will go from your tap all the way around the garden or lawn area. Mark distribution lines off the main line to ensure all required areas of the garden are covered sufficiently. You will find that the system will work more efficiently if you create a loop with the distribution lines and position sprinklers or microsprays so that their spray coverage overlaps slightly (Fig 3).
- Remember, you cannot mix drippers and microsprays on the same system so make your selection that best meets your overall requirements.
- Now, make a list of all the sprayheads, drippers, tubing and fittings that you will need for your system. Alternatively, you may wish to take your garden plan down to your local Colli store where our team will be able to advise you in selecting the right components.

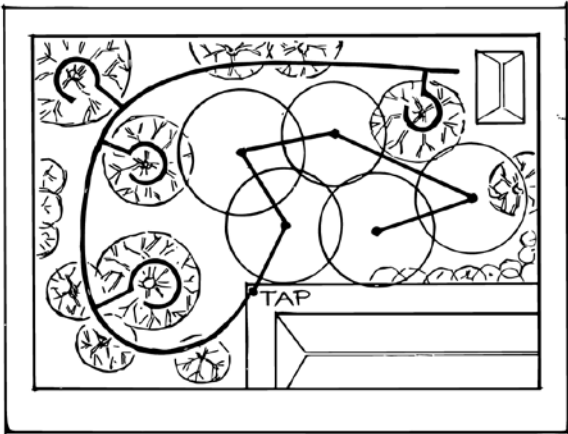


Fig 3 Mark out the distribution system

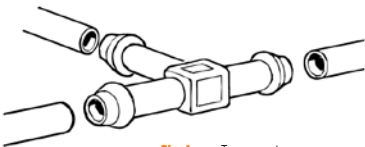


Fig 4 T-connectors for sharp bends



Fig 5 Attach system to tap

Installing a drip or microspray system

- From your garden plan, start by laying out the main poly tubing line, working from the tap outwards. It is a good idea to hold the tubing in position with bricks as you lay it out. A great tip is to lay the tubing out in the sun for a while to make it more pliable.
- Cut the poly tube to length with a sharp utility knife or secateurs and join all distribution lines to the main line using either T-connectors or elbow joiners for right angles or sharp bends (see Fig 4). To avoid any blow outs when the water is switched on, ensure that you always secure the connections with locking clamps which are available from your Colli store.
- Fit a connector to the end of the main line to allow the system to attach to your tap (see Fig 5). Similarly, you can also fit a convenient in-line filter to reduce spray head or dripper blockages (Fig 6).
- To fit drippers or microspray heads, simply pierce the tubing with the manufacturer's supplied hole punch then insert the dripper or spray into the punched hole. Microspray heads may be fitted direct to the main tube or onto a riser tube (Fig 7). Special stakes are also available to provide sturdy support to riser tubes.
- If you find that you have made a hole in the main tubing in the wrong place, this is easily fixed with a repair plugs (see Fig 8). It is always good to have these plugs close at hand in case you make changes to your system over time.
- When all your spray heads or drippers are fitted to your system it's time to connect the main line to the tap and turn on the water supply to flush the tubing clear of any dirt or debris.
- Once the water is running clean, fit end stops to the open ends of the main tube and any distribution tubing in your system, then cover the tubing with soil and you are ready to water the garden.



Fig 6 In-line filter to prevent blockages



Fig 7 Push dripper or spray heads into punched hole in the tubing or onto riser tubes

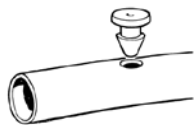


Fig 8 Use repair plugs to plug up wrongly punched holes in tubing

DIY Sprinkler Systems made easy

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Installing a pop-up sprinkler system

- From your sketch plan of the lawn area, determine the position of the main poly tubing line (use 19mm tubing for pop-ups) and dig a 150mm to 200mm trench to house the tubing (Fig 9).
- Use your water flow rate calculation as a guide in selecting the correct pop-up sprinkler heads for your system. Remember that these sprinklers will need sufficient water pressure to make them pop up and provide sufficient spray coverage for your lawn.
- Lay the tubing in the trench and cut it at the position of each sprinkler and install a threaded 'T' junction (see Fig 10). For the last sprinkler on the line install a threaded elbow connector (see Fig 11).
- Secure all connectors with locking clamps.
- Fit a suitable connector to the end of the main line, to allow the new system to attach to your tap (see Fig 12).
- Screw on the pop-up sprinklers, making sure they are level with the lawn surface (see Fig 13), then backfill the trench with soil.

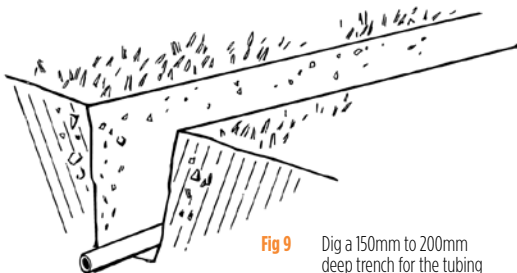


Fig 9 Dig a 150mm to 200mm deep trench for the tubing

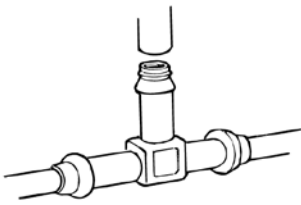


Fig 10 Threaded T-junction.

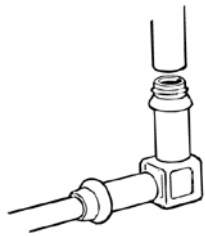


Fig 11 Threaded elbow junction

Be a wise water user

A forgotten sprinkler or watering system can waste thousands of litres of water an hour. Not only that, many plants will die from receiving too much water, rather than too little. In the interests of saving you time, money and your garden, it is advisable to think about the range of water system controllers that are available from Colli.

Meeting any requirement and budget, Colli stock both manual and electronic controls. A simple tap timer may be all that you need, whilst for larger systems, you may require a sophisticated station of controllers and distributors. Whatever your needs and budget, pop in and talk to your local Colli store for advice on the timer best suited to your garden.

Watering tips

Here are a few tips on wise water use:

- Never water your garden in the heat of the day as water droplets will evaporate and provide no real benefit.
- Early morning or late evening are the ideal times to water your garden and lawn. Not only is evaporation reduced, but the watering will assist your plants to recover from the heat.
- Deep watering once a week encourages deep root growth and healthy plants. More frequent shallow waterings can lead to stress in hot weather, as the plants will have only short-term defence against the heat.

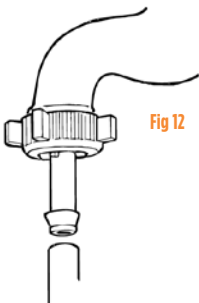
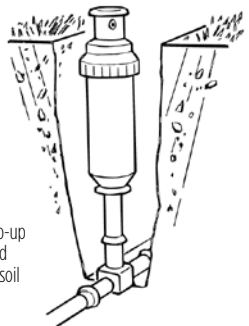


Fig 12 Attach system to tap

Fig 13 Screw on pop-up sprinklers and backfill with soil



Project Cost Estimator

Materials Description	Quantity	Cost
13mm or 19mm polyethylene tubing		
Tap connectors		
Elbow connectors		
Tee junctions		
End Stops		
Locking clamps		
Hole punch		
Repair Plugs		
In-line Filter		
Drippers		
Microsprays		
Riser Tubes		
Pop-up Sprinklers		
Threaded Tee connectors		
Threaded Elbow connectors		
Equipment		
9 litre bucket		
Secateurs or Utility knife		
Spade		
Total		

All the materials you need for this job are available at Colli, your DIY specialist.

Disclaimer: Please note that this brochure is designed as a guide only - if you have any queries, please consult one of our Colli Team Members for further assistance. The information provided in this brochure is done so on the understanding that Colli Timber and Hardware is not liable for any loss or damage which is suffered or incurred, for any personal injury or property damage as a result of using the information contained in the Colli DIY Projects brochure. Colli Timber and Hardware advises you to call in a qualified tradesperson, such as an electrician or plumber, where expert advice and services are required.

Note: Please ensure you comply with local council laws or regulations before undertaking any DIY project.

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