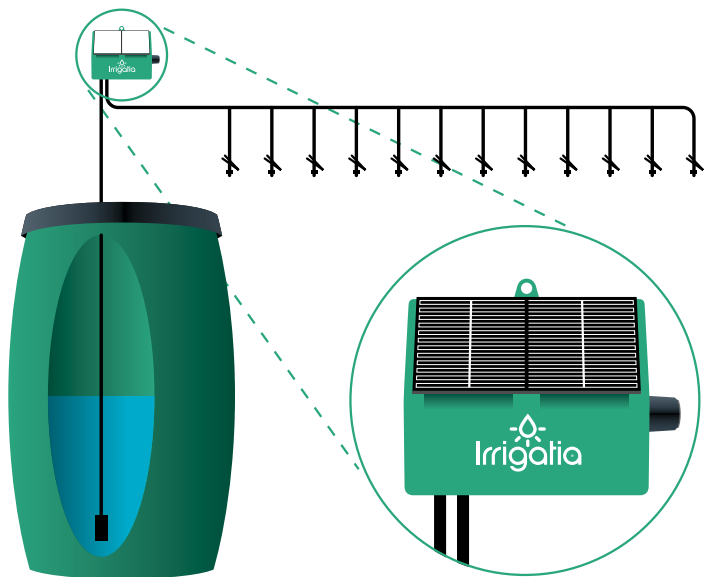


# Solar Automatic watering system



  
Irrigatia®

## Typical Irrigation Layout



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**Irrigatia**

# Irrigatia SOL-K12 installation and operation

Contents, a complete irrigation kit for use with a water butt or tank.

- R 1 Solar pump unit
- R 1 Anti siphon device
- R 1 Inlet filter
- R 15m tube
- R 12 each drips, stakes, tees

## Attaching the pump unit

The SOL-K12 should be fixed to a wall or post facing in the sunniest direction. If your water butt is in a shady position, the SOL-K12 may be sited some distance from the water butt. It should be no more than 3 metres higher than the bottom of the butt.

## Connecting to the water butt

Drill a 6mm hole in the lid, or near the top of the water butt, above the water line. Thread some tubing through the hole and attach the filter to it. Adjust the tubing so the filter hangs at least 5cm above the bottom of the butt. The other end of the tube should be taken to the SOL-K12, cut cleanly to length and attached to the pump inlet – the left hand connector marked I. The connections to the pump should be straight (to avoid leakage) and should not pull the pump out of vertical.

## Check the pumping

In a new pump the batteries may be charged or flat. If they have charge in them, before connecting to the irrigation system, using a piece of tube discharging back to the water butt, allow the pump to run until it stops. Connect to the irrigation system and set the knob to 3. If after 24h the pump has watered too much, turn in down, or if too little turn it up. Repeat until you are happy. If your pots/baskets drain a little after the afternoon watering on a sunny day, this is about right for most plants.

## Monitoring

The timer on the pump is zeroed by turning the unit off and on again. The pump will start automatically after a few seconds and thereafter at roughly 3 hour intervals. The duration of pumping is determined by how much light/sunshine has fallen on the solar panel and the position of the control knob. Put a dripper in a jug to see how much each dripper is delivering.

## Pump priming

The SOL-K12 pump is self priming, but if it has been disconnected ensure that the discharge pipe is not reconnected until all of the air has been pumped out of the inlet line, as a head of water above the

pump can prevent it priming properly.

### Maintenance

Keep the pump in a dry frost-free place in winter. Battery life is typically around 500 charge/discharge cycles, but will vary depending on conditions and usage. For peace of mind put in a new battery before going away on holiday then use the old one up when you come back.

### Laying the irrigation tubes

A typical Irrigation layout is shown in the diagram on the back page. In the diagram the pump inlet tube is on the left.

The length of tube between fittings is as required to reach your pots. Tube can be safely cut with good kitchen scissors.

Tees and dripper nozzles easily screw onto tube, but must be screwed tight to avoid leakage.

Extra drippers can be put in large pots/baskets.

Highest irrigation height 4.5m (15ft) above water source.

Stakes should be used to secure drippers in position.

Irrigation line can be run behind pots out of the way and dripper leads can be run up the back of pots out of view. To cross lawn cut a slit with a spade and push the tubing in out of the way.

### Installation of anti-siphon device

Where the level of the source water is higher than the irrigation drippers or seep hose, an air release device will be required to prevent siphoning.

1. Remove the outlet tube from the SOL-K12.
2. Cut tube 5 – 10cm from the end.
3. Screw the anti-siphon device onto the end of tube leading to the drippers.
4. Screw the remaining short piece of tube on, then reconnect to the SOL-K12.

When the pump has been running, the drippers will continue to drip for a short time while the delivery tube drains down, but should then stop.

Typically the pump will supply enough water for 5 large (35cm), well grown hanging baskets, 20 x 10 litre pots, or about 3m<sup>2</sup> of bed though this will vary depending on soil and plant types/sizes.