Irrigatia

SOLAR POWERED

WATERS EVERY 3 HRS

MORE SUN = MORE WATER

USE WITH A RAIN BARREL

Solar Automatic Watering System

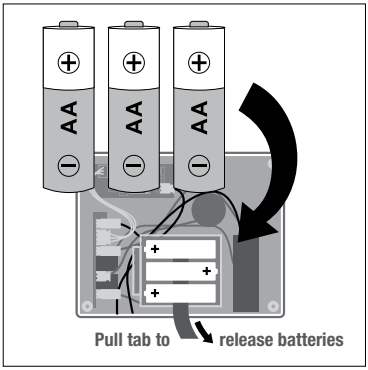
Instructions: Irrigatia Solar Automatic C12 & C24 Watering Kits / L Series

EN FR DE NL ES SE

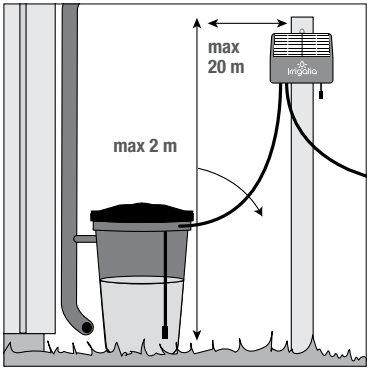
irrigatia.com/L-series

Designed in Britain

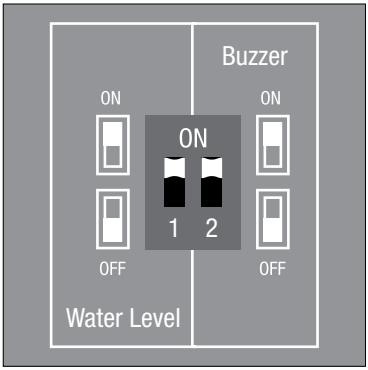
1 Insert/replace batteries



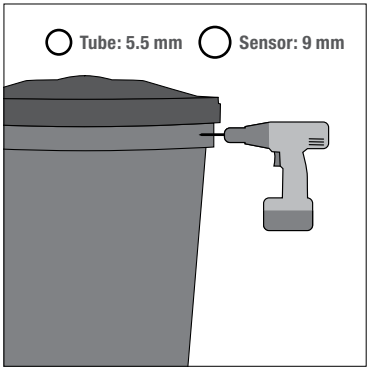
2A Controller set-up



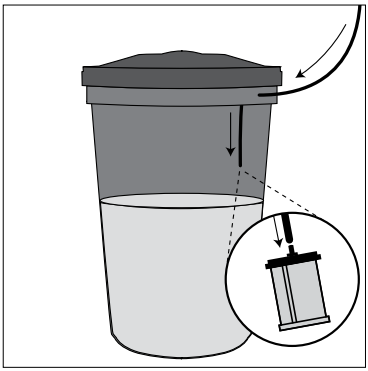
2B



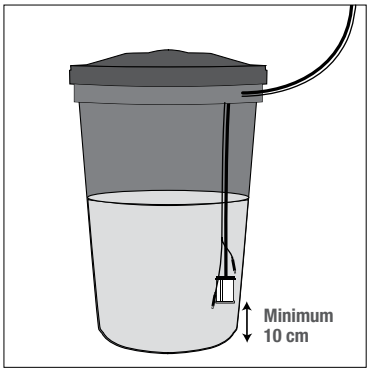
3A Connecting to the Water Barrel



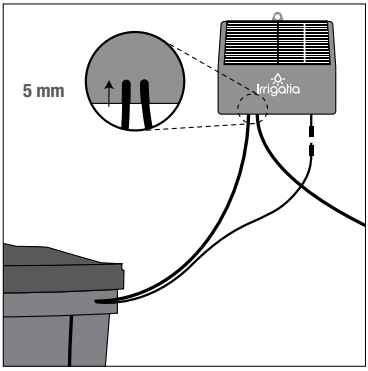
3B



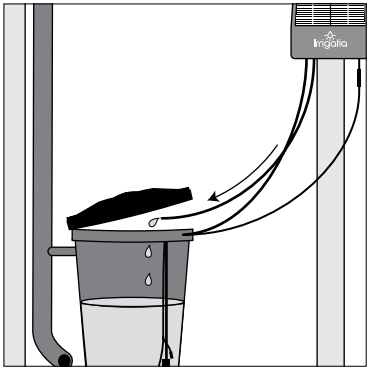
3C



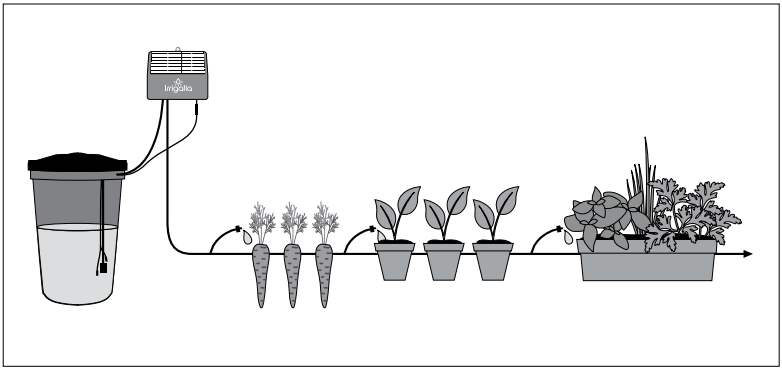
3D



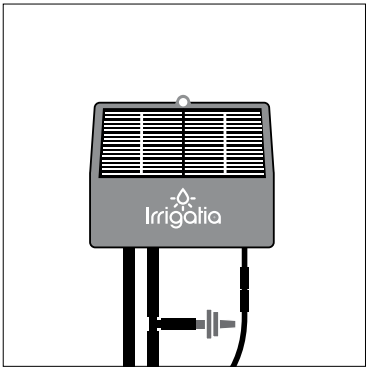
4 Check the controller



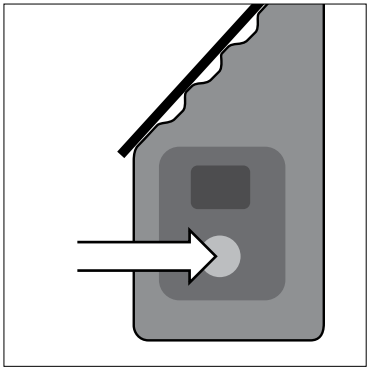
5 Install the drippers



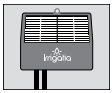
6 Installation of the Anti-Siphon device



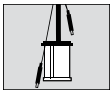
7 Operating the controller



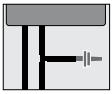
Instructions: Irrigatia Solar Automatic C12 and C24 Watering Kits



Smart Controller
The batteries installed in the controller are charged by sunshine captured by the solar panel and are used to power the pump. The pump pumps water from the water barrel and to your plants. The pump starts every 3 hours during daylight and stops when the batteries fall to 3v. NB the batteries are 3 x AA rechargeable, 1.2v NiMH batteries between 600 and 1800mAh.

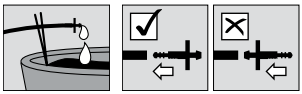


Filter and Water Level Sensor
The filter prevents debris from blocking the pump or drippers. It is fitted onto the end of the inlet tube and is at least 10cm from the barrel bottom. The water sensor is fitted, using cable ties provided, to the inlet tube so that one probe is 2cm above the filter, the other hanging below it. There is a screw connector on the wire close to the controller in case it needs removing. The water level sensor can be turned off – see diagram 2B. Also you can leave the sensor on but turn the buzzer off.

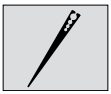


Anti-siphon device
The anti-siphon device is needed if the first dripper is lower than the water source. It should be fitted to the delivery tube between the pump and first dripper and must be higher than the water source. Its purpose is to prevent further dripping once the pump has stopped. It is a one-way valve which works by opening to allow air into the tube to break the siphon when the pump stops.

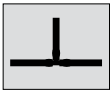
Tube
The tube is used to draw water from the barrel and deliver it to your plants. 30m extension kits are available if extra tube is needed.



Drippers
Plants are supplied with a controlled amount of water by the drippers. These should be positioned in pots or close to the plants to be watered. Drippers push into tube ends. The watering system will not work unless there is a dripper in **every** tube end.



Stakes
These are used to hold drippers and tubes in place, clip the tubes into them to secure.



Tees
Cut and join the tube using tees to configure the irrigation layout to suit your needs. The tube needs to be pushed completely on to avoid leakage.

Syringe
With a short piece of tube attached this can be used for reverse flushing drippers and flushing the pump (inlet to outlet) if it gets blocked or jammed.

Before using the pump for the 1st time the pump needs to be primed by squirting water into the inlet (marked I).

Assembling the watering system (page 2-3)

1

Batteries
The kit is normally supplied with batteries fitted. Be aware that the first time the controller is turned on, it will run until the batteries are depleted to 3v, **this may take 2 – 3 hours. To avoid overwatering at this time the water can be diverted back to the water barrel (Diagram 4)**. Use 3 x AA rechargeable, NiMH batteries between 600 and 1800mAh. Note that externally charged and replacement batteries will also need depleting.

2

Controller
(A) The controller should be installed on a wall or post in a sunny position and at least 30 cm higher than the barrel. It should not be laid down. In order to get it into the sun it can be a distance from the barrel (there are 5m wires on the water sensor) and it can be up to 2m higher than the barrel – up to 5m if it is primed (pumping water) then lifted into position. (B) It can be situated up to 20m from the barrel if the water sensor is unscrewed from the connector outside the controller and the red switch on the circuit board is moved to the OFF position. It can also be a distance from the barrel if an optional reservoir kit is used, in which case the water sensor can still be used.

3

Connecting to the Water Barrel
(A) Drill a 5.5mm hole near the top of the water barrel – above the water line but low enough to use the lid normally. (B) Thread the tube through the hole and attach the filter to the end. If using the water sensor a hole of at least 8mm is required to thread those through, they can be attached to the tube above the filter using the cable ties provided so that one is 2cm above the filter, the other hanging below the filter. (C) The tube should now be adjusted so that the filter hangs about 10cm above the barrel bottom. (D) Now the tube can be cut to length (leave a little spare) so the other end can be connected to the pump inlet (marked I) on the left hand side of the controller. Connect the Water Level Sensor to the controller.

4

Check the controller
Connect a piece of delivery tube long enough to reach your first plant to the pump outlet (marked O), but direct it back to the barrel. Turn the pump on, if there is charge in the battery it will start

to pump the air out of the tube and shortly after that (depending on inlet tube length) it will start to pump water. Allow it to run until it stops (this may take 2 – 3 hours). Once it has stopped, normal weather dependant control will commence.

Before using the pump for the 1st time the pump needs to be primed by squirting water into the inlet (marked I) using the syringe supplied with a short piece of tube attached.

5

Install the drippers
Remove the delivery tube from the barrel and construct your system to your requirements by cutting the tube and joining it using the tees. A controller can supply 5 – 24 drippers but the more there are the less water will be emitted by each. The system can be branched or grouped in any way required and there should be a dripper in every tube end. The highest dripper should be no more than 5m high and with 12 drippers on the system, the lowest should be no more than 2m lower than the highest. With the maximum of 24 drippers fitted they should all be at the same height. For more information on good irrigation layouts refer to irrigatia.com/docs/default-source/instructions/irrigatia_good_irrigation_layout

6

Installation of the Anti-Siphon device
This is required if the first dripper is lower than the water source. It is fitted in the delivery tube between the pump and first dripper and must be higher than the barrel.

7

Operating the controller
The controller can be turned on or off by depressing the red spot for at least 3 seconds. The LCD will indicate as shown in the table. If there is an alert this will be displayed for 2 seconds, after that the display will revert to the current setpoint.

Once the current setpoint is being displayed it can be reset by using brief presses of the red spot to scroll to a new setting. This controls the charging of the batteries. Setting 1 the solar panel is switched on for 30 seconds in a 5 minute cycle' which is increased by 80% for each setting up to 5 when the solar panel charges the batteries continuously.

Once your irrigation system is set up, set the controller to number 3. Allow it to run for 24 hours, then, if it is overwatering turn it down, under watering turn it up. Repeat this process until you are happy it is applying the correct amount of water. Check occasionally as it will need turning up as your plants grow.

Once your system is set up, the controller will start the pump every 3 hours during the day. The pump will run until the batteries drop to 3v. In this way the duration of watering is determined by a combination of light intensity and the 1 – 5 setting.

Indicator	Definition	Pump
1 – 5 flashing	Charge mode	Off
1 – 5 on constantly	Run mode	On
10	Night mode	Off
20	Low water	Off
80	Low current	On
81	High current	On
1H	watering within next 1 hour	-
2H	watering within next 2 hours	-
3H	watering within next 3 hours	-

NB: LCD goes blank at night

Maintenance
In most climates the system should be left in place and switched on all year round. In extremely cold climates the controller should be taken in, the pump turned on to empty it of water and the batteries charged. The controller should be switched on for a few minutes every few weeks. Note that it will not start if there is insufficient light on the solar panel and that most domestic light is too dim to start it.

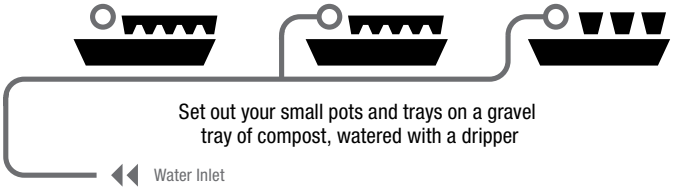
Extension kits/spares/information
For information sheets, spares and optional extension kits please visit www.irrigatia.com

Sample Designs

We have set out some sample designs to help you plan your irrigation system depending on what you need to water. Just remember to check the contents of each kit in case you need to purchase any extras.

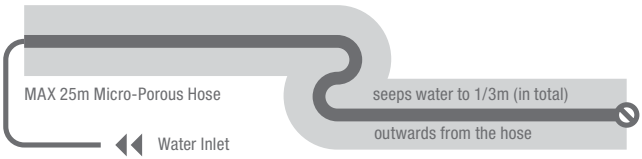
SMALL POTS AND TRAYS

KIT REQUIRED:
SOL-C12L



LARGE BED WATERING

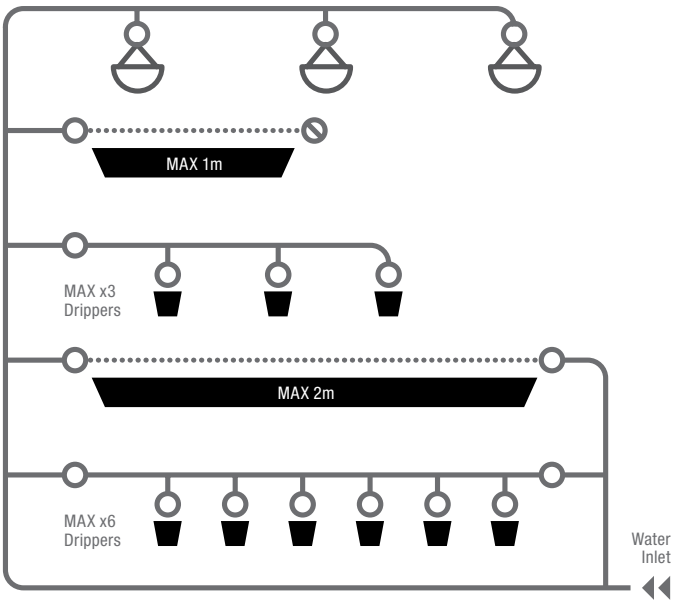
KIT REQUIRED:
SOL-C24L
IRR-MPH25



WATERING AT DIFFERENT HEIGHTS

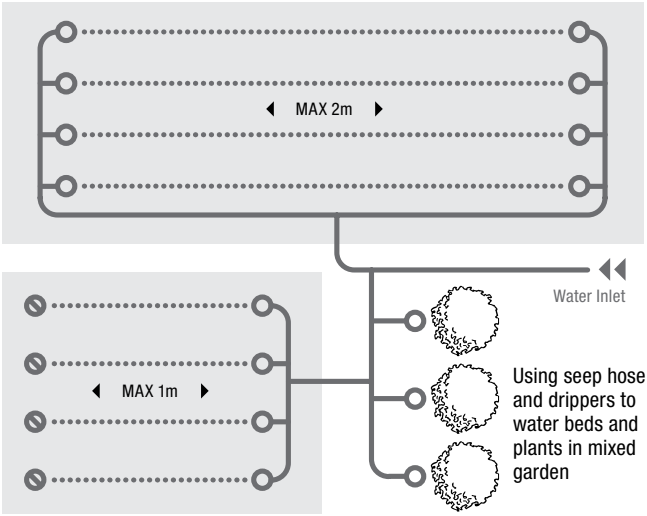
KIT REQUIRED:
SOL-C24L,
12 Dripper Ext kit,
12m Seep Hose
Spare capacity:
6 Drippers

NB: install a non return valve at each change in height – to prevent drainback



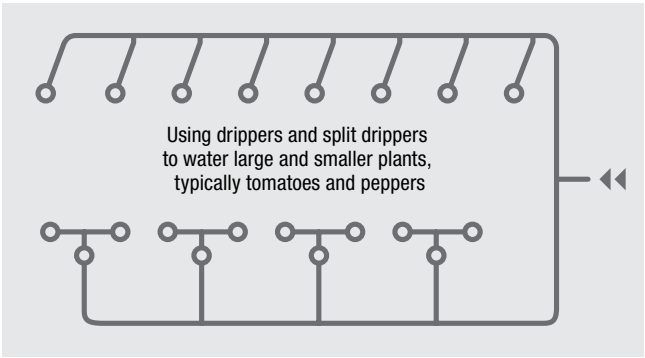
FLOWER & VEGETABLE BED WATERING

KIT REQUIRED:
SOL-C24L,
12 Dripper Ext Kit,
12m Seephose
Spare Capacity:
9 drippers



GREENHOUSE WATERING

KIT REQUIRED:
SOL-C12L,
8 Drippers,
4 Tees



KEY

- Tube
- Dripper
- Stopper
- Micro-Porous Hose
- Seep Hose
- Plant Tray
- Trough
- Plant Pots
- Large Plant
- Hanging Basket

More information can be found at: **irrigatia.com/how-it-works**

SOL-C12L

20L				
12x	12x	24x	5x	12m

Max capacity for one of each example shown

SOL-C24L

20L				
24x	24x	48x	10x	24m

Max capacity for one of each example shown

For further information on this or any of the other products in our range, please visit:

irrigatia.com

Irrigatia