A major advance in drip irrigation using a clay pot

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Subsurface clay pot

Unpowered Drip Irrigation Clay Pot Controller

Contents

1. Installation of the Unpowered Drip Irrigation Clay Pot Controller

1 Select a drip irrigation zone where all the plants in the zone have the same irrigation requirement.

2 Select a typical dripper and replace it with a subsurface clay pot.

3 Connect the clay pot to the controller.

4 Connect a dripper inside the controller.

5 Connect the water supply for the zone to the inlet of the controller (between 10 kPa and 800 kPa).

6 Connect the irrigation zone to the outlet of the controller.

7 Fill the controller with water until the float is partially covered.

8 Turn on the water supply and all the plants will be watered automatically without power.

2. How to use the Unpowered Drip Irrigation Clay Pot Controller

The Unpowered Drip Irrigation Clay Pot Controller allows you to automatically irrigate your garden using gravity feed from an elevated rainwater tank without using a pump and without power.

The controller can be used for surface and subsurface irrigation using either non pressure compensating (NPC) drippers or pressure compensating (PC) drippers.

Using PC drippers on sloping land or NPC drippers on flat land, the interval between irrigation events adjusts automatically to ensure that the discharge from each dripper during an irrigation event is the same as the on-demand discharge from the subsurface clay pot since the previous irrigation event.

If more than one dripper is dedicated to each plant, then you may wish to replace the dedicated drippers by the corresponding subsurface clay pots. The number of drippers inside the controller should be the same as the number of subsurface clay pots. In this case the discharge from each dripper during an irrigation event is the same as the average on-demand discharge from the subsurface clay pots since the previous irrigation event.

If you decide that your plants are not receiving sufficient water, you can increase the water usage slightly by opening the lid of the controller

3. Key features

1. All plants in the zone should have the same irrigation requirements
2. Unpowered (no batteries, no solar panels, no electronics, no computers, and no WiFi)
3. Use for gravity feed or pressurised irrigation
4. Use for PC (pressure compensating) drippers or NPC (non pressure compensating) drippers
5. Use for subsurface or surface drip irrigation
6. The water supply pressure should be between 10 kPa and 800 kPa
7. Can deliver water to at least 400 2 L/H drippers
8. The water usage is controlled by the demand from the plants
9. The discharge from each dripper during an irrigation event is the same as the on-demand discharge from the subsurface clay pot since the previous irrigation event
10. As the water needed by your plants changes as the plants grow, the discharge from each dripper during the irrigation event adjusts accordingly
11. The water usage increases significantly during a heat wave
12. Water in the controller is protected from debris, algae, mosquitoes and thirsty animals
13. With a continuous water supply, you can leave your irrigation application unattended for months on end
14. A tap timer may be used so that irrigation is only available between sunset and sunrise