

ÆssenseGrows

Ætrium System Maintenance

Ætrium-4 Cleaning and Disinfection

Cleaning & Disinfection

After the harvest, once the all plants and roots have been removed from grow trays and tubs, cleaning and disinfection is an essential part of preparing for the next growing cycle.

1. Pause or stop the growth plan for the specific device in the Guardian Grow Manager (see Guardian Grow Manger manual for instructions).
2. Drain reservoir:
    a. Engage drain pump (see Guardian Grow Manager)
    b. Manually drain with submersible pump
3. Remove pH sensor **(fig. 1)** and place it into the pH sensor storage cap.

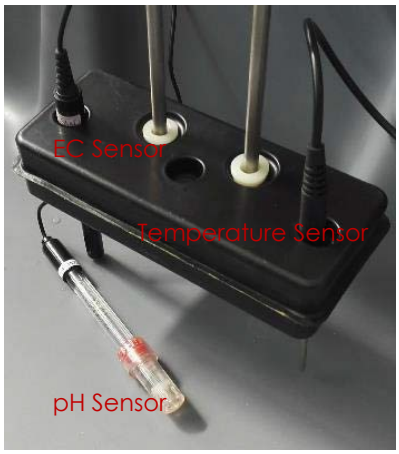


Fig. 1: Sensor float, with pH sensor inserted in storage cap

Important: Exposing the pH sensor to cleaning/disinfectants may damage the sensor. For temporary storage, tap water can be used in cap. For long term storage, use KCl storage solution. DO NOT store in deionized or distilled water.

4. Remove and clean primary filter and filter socks from return and suction pipes. (see SOP1, Filter Cleaning for instructions)
5. Remove pins **(fig. 2),** and the pump suction pipe, and slide dosing basin away from matriarch for better access to clean.

Important: If fully removing the dosing base from under the Matriarch, you will need to unplug some of the wires from the PDU. Be sure to power down the PDU before disconnecting any cables.



Fig. 2: Pins securing dosing basin to matriarch frame (l, c), and dosing basin pulled from under the matriarch (r).

5. Using a wet/dry vac remove remaining liquid and clean any debris from the dosing basin reservoir **(fig. 3)**.
6. Wipe down, clean, and disinfect all grow trays
7. Remove the grow tray and take it to the washing area **(fig. 4).**
8. Rinse and scrub all surfaces using soap and warm water.
9. Return the grow tray.
10. Remove any debris and organic matter from all matriarch and Daughter Tubs **(fig. 5)**. It is recommended to use a wet/dry vacuum to clean plant debris from tubs
11. Install cleaned filters. (See Filter Cleaning SOP.)
12. Slide the dosing basin reservoir back into Matriarch and lock it in place with pins.
13. Fill the dosing basin reservoir with clean water to 6"/15cm (about 30 gal, using one of these methods:
    a. Engage autofill (see Guardian Grow Manger Manual)
    b. Manually fill the reservoir.
14. Add cleaner/sanitizer into reservoir using manufacturer's recommended rates.



Fig. 3: Ætrium dosing basin



Fig 4: Ætrium 4 grow tray in wash area



Fig. 5: Inside of Ætrium 4 tub

Important: Avoid using bleach as it can cause phytotoxicity to adjacent plants, and may cause oxidation to accessory equipment.

15. Circulate in irrigation system for a minimum of 10 min. Irrigation can be manually engaged with **Red Pump Override** button on PDU.
16. Repeat steps **2**, **13,** and **15** at least two additional times to flush cleaning agent from system. Any remaining foam in the reservoir should be removed with wet/dry vac between each flushing cycle.
17. All plastic components can be cleaned with a domestic or commercial dishwasher and are rated to at least 140°F.

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