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Ahopegarden Z243-2

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1. INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your Ahopegarden Hydroponics Growing System Indoor Garden, Model Z243-2. This system is designed to facilitate year-round indoor cultivation of various plants, including vegetables, herbs, and fruits, using a soilless method.



Image 3.1: All components included in the Ahopegarden Hydroponics Growing System package.

- Hydroponics Growing System Frame (collapsible)
- LED Grow Lights (2 units)
- Water Tanks (2 units, 10L each)
- Water Pumps (2 units)
- Grow Sponges (44 pieces)
- Grow Domes (22 pieces)
- Blackout Paper (44 pieces)
- Nutrient Bottles (4 bottles)
- Power Adapter (1 piece)
- Measuring Cup (1 piece)
- Water Pipe (1 piece)
- Power Connecting Line (1 piece)
- Brush (1 piece)
- Spanner (1 piece)
- Tags (44 pieces)
- Tweezers (1 piece)
- Blank Labels (44 pieces)
- Grow Baskets (44 pieces)
- Grow Covers (44 pieces)

4. ASSEMBLY INSTRUCTIONS

The system is designed for quick and easy assembly. Follow these steps:

1. **Unpack Components:** Carefully remove all parts from the packaging.
2. **Assemble Frame:** Connect the frame components as shown in the diagram. The collapsible design allows for straightforward setup.
3. **Install Water Tanks:** Place the two 10L water tanks onto the designated shelves of the frame.
4. **Connect Water Pumps:** Insert the independent water pumps into each tank and connect the water pipes.
5. **Attach Grow Lights:** Secure the LED grow lights to the adjustable posts. Ensure they are positioned

correctly above each tank.

6. **Insert Grow Baskets and Sponges:** Place the grow sponges into the grow baskets, then insert them into the holes on the tank covers.
7. **Adjust Light Height:** The light posts are adjustable up to 14.68 inches to accommodate different plant growth stages. Adjust as needed.



Image 4.1: Visual guide for quick installation of the hydroponics system.



Image 4.2: Adjusting the height of the LED grow light post.

5. OPERATING GUIDE

5.1. Water and Nutrient Management

Each of the two tanks has a 10L capacity. Fill the tanks with water up to the 'Max' indicator. Add the appropriate hydroponic nutrients according to the plant type and growth stage. The independent water pumps ensure proper circulation and oxygenation for healthy root development.



Image 5.1: Smart water recycling system with independent tanks.



Image 5.2: Water level indicator showing 'Max' fill line.

5.2. LED Grow Light Modes

The system features 53W LED grow lights with dual operating modes:

- **16-Hour Mode:** Standard duration for general plant growth.
- **22-Hour Mode:** Extended duration to accelerate growth and increase yields, particularly beneficial for fruiting plants like tomatoes.

Dual Light Mode and Plant Grow Mode

Mode	Power	Trun on	Trun off
16 Hour	53W	6:30	22:30
22 Hour	53W	0:30	22:30

- 30% Faster Grow Speed
- 50% Higher Harvest

Enough Oxygen (1-2 days, 6-7 days, 14-15 days) vs **Low Oxygen**

Image 5.3: Dual light mode settings and their impact on growth speed and harvest.

5.3. Smart Control Panel

The integrated smart control panel allows for easy management of the system's functions:

- **Power Button:** One-touch start/stop for the entire system.
- **Pump Switch:** Controls the water circulation pumps.
- **Vegetable Growth Mode:** Optimized light spectrum and duration for leafy greens and vegetables.
- **Flowers & Fruits Growth Mode:** Optimized light spectrum and duration for flowering plants and fruits.

Smart Control Panel

Freedom Options of Growth Modes, Easy to Operate



Image 5.4: Smart control panel for operating the system.

5.4. Pod Placement and Capacity

The system accommodates 44 pods across two layers (22 pods per layer), offering ample space for a variety of plants. The retractable porous design ensures efficient use of space and light.

Retractable Porous Design 20L Large Capacity



Image 5.5: Retractable porous design and large capacity.

6. MAINTENANCE

6.1. Water Changes

Regular water changes are crucial for plant health. It is recommended to change the water and replenish nutrients every two weeks. The bonus conduits simplify the cleaning process.



Image 6.1: Drainage hole for convenient water changes.

6.2. Cleaning

Periodically clean the water tanks and other components to prevent algae buildup and ensure optimal system performance. Use the provided brush for thorough cleaning.

7. TROUBLESHOOTING

If you encounter issues with your hydroponics system, consider the following:

- **Poor Germination/Growth:** Ensure adequate oxygenation by checking pump function. Verify correct light mode and duration for your plant type. Confirm nutrient levels are appropriate.
- **Algae Growth:** This can be caused by excessive light exposure to the water or nutrient solution. Ensure blackout papers are used and clean the tanks regularly.
- **Pump Malfunction:** Check for blockages in the water pipe or pump. Ensure the power connection is secure.

8. SPECIFICATIONS

Feature	Detail
Model Number	Z243-2
Material	Acrylonitrile Butadiene Styrene (ABS)
Color	White
Product Dimensions	21.65"D x 14.98"W x 17.72"H
Water Tank Capacity	20 Liters (2 x 10L tanks)
Number of Pods	44
LED Grow Light Power	53W
Adjustable Light Height	Up to 14.68 inches
Voltage/Frequency	100-120 Volts, 60 Hertz
Item Weight	14.33 Pounds
Special Features	Drainage Hole, Energy Saving, Faster Root Growth, Higher Water Retention, Portable, 360° Mobility

9. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding your Ahopegarden Hydroponics Growing System, please refer to the contact information provided with your purchase or visit the official Ahopegarden website. Keep your purchase receipt for warranty claims.

