

READ AND SAVE THESE INSTRUCTIONS

# ALTAPURE®

## AP-4 Series Disinfection System User Guide





**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN COVERS

**ATTENTION**  
RISQUE DE CHOC ÉLECTRIQUE  
NE COUVRE PAS OUVRIR

**Contact an authorized service technician for repair or maintenance of this unit. NEVER attempt to open the covers or perform repairs on any internal components. CALL YOUR SERVICE REPRESENTATIVE FOR HELP! 303-838-7320**

**FOR YOUR RECORDS**

Fill in the important items below for future reference:

<b>Important Information</b>	
<b>Model #</b>	
<b>Serial #</b>	
<b>Service Representative Name</b>	
<b>Service Representative Phone Number</b>	
<b>Emergency Response Number</b>	
<b>Date of Release</b>	

**PLEASE READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE OPERATING THE EQUIPMENT**

This guide will provide you proper procedures to use and maintain your AP-4 system. The Altapure AP-4 is safe when used as directed. Care should be taken to follow all operating instructions.

If you have any questions after reading this manual, please contact your Unity-Healthcare Solutions sales representative 303-838-7320.


# Table of Contents

Warnings .....	4
Specifications.....	5
Operating Instructions.....	6
Cleaning .....	15
Maintenance .....	15
Troubleshooting.....	16
Accessories .....	16
Warranty .....	16

## WARNINGS

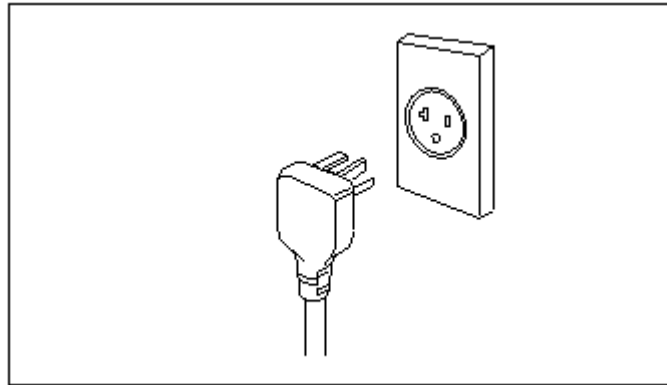
Read all instructions before using equipment.

- To prevent injury to the user or other people and property damage, the following instructions must be followed.
- Incorrect operation due to ignoring instructions may cause harm or damage.

	<b>CAUTION</b> <b>RISK OF ELECTRIC SHOCK</b> <b>DO NOT REMOVE COVERS</b>	
<b>CAUTION:</b> RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVERS. <b>ATTENTION:</b> RISQUE DE CHOC ÉLECTRIQUE. NE COUVRE PAS OUVRIR.		

**⚠ WARNING:** This system must be properly grounded.

The power cord of this system is equipped with a three-prong grounding plug. To minimize the risk of electric shock, use the plug only with a standard 20A three-slot grounding wall power outlet. If the power outlet does not match the plug completely, have a qualified electrician replace the outlet before you use the equipment. **DO NOT USE AN ADAPTER.**



**⚠ WARNING:** Do not cut or remove the grounding prong from the power plug.

**⚠ WARNING:** If you have any doubt whether the system is properly grounded, have the wall receptacle and circuit checked by a qualified electrician.

**⚠ WARNING:** Do not disassemble or modify any part of this machine.

**⚠ WARNING:** This system must be operated on a level surface. Avoid bumping or moving the machine while in operation.

**⚠ WARNING:** Do not block the air inlet or outlet.

**⚠ WARNING:** Close and seal all doors, windows and other outside openings to the room including ventilation ducts.

**⚠ WARNING:** Do not operate if room temperature is below **60°F (15.5°C)** or above **100°F (37.8 °C)**.

**⚠ WARNING:** Do not operate with wet hands or in a damp environment.

**⚠ WARNING:** Make sure the system is set correctly for the area you want to disinfect.

**⚠ WARNING:** Use a soft cloth to clean. Do not use wax, thinner, or a strong detergent.

## SPECIFICATIONS

AC Supply: 120V 16A 60Hz



Use only the power cord supplied with the equipment. Connect only to a dedicated 20A branch circuit outlet. Failure to do this will result in nuisance tripping of the circuit breaker and may result in a risk of fire or other damage to the electrical system.

## PRIOR TO OPERATION

### PRIOR TO OPERATION

1. Plug in the power cord properly.
2. Use a dedicated circuit.
3. Do not use an extension cord.
4. Do not start/stop operation by plugging/unplugging the power cord.

### USAGE

1. Do not expose occupants, pets, or plants to direct contact with the disinfecting solution in either liquid or aerosol form.
2. Do not ventilate room when the system is being used.
3. Do not use this system for any purposes other than those specified by Altapure or the sales representative. Such usage could damage the system or other items.

### CLEANING AND MAINTENANCE

1. When cleaning the unit, make sure that the power switch is turned off and **UNPLUG THE POWER CORD FROM THE WALL OUTLET.**
2. Wipe down the outside of the machine with a soft damp cloth.
3. Any further maintenance or service must be performed by an authorized service technician only.

## SERVICE

**Note:** The AP-4 contains expensive, proprietary, and delicate electronics.

**Do not attempt any repairs under any circumstances. Call 574-485-2145 option 1**

In case of any problem, contact your authorized service agent. Failure to do so may result in bodily injury and economic loss beyond the value of the machine.

## OPERATING INSTRUCTIONS

### ROOM PREPARATION

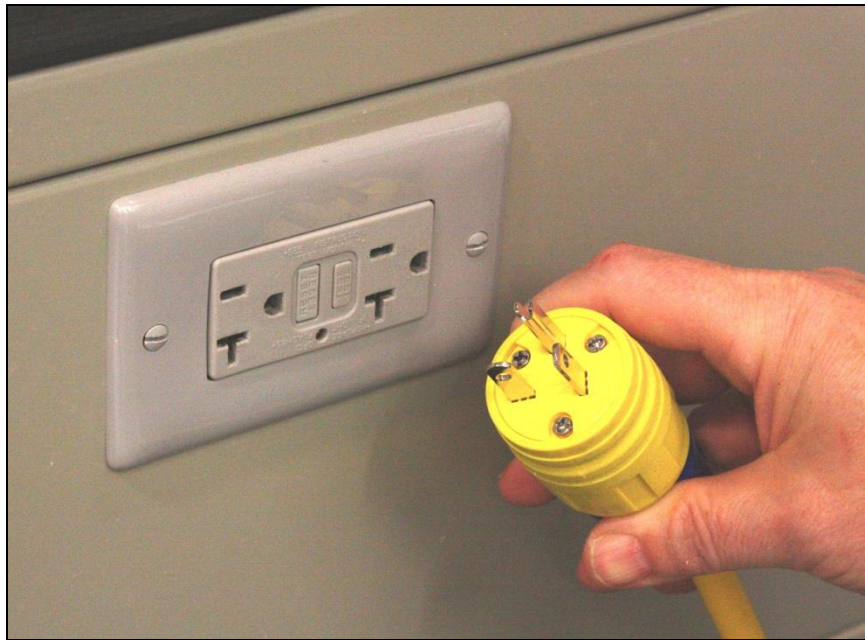
#### Prior to disinfection

1. Perform normal janitorial room cleaning.
2. Remove bedding from room.
3. Ensure all sterile packaged items are in air tight containers or have been removed from room.
4. Seal all vents using correct room sealing apparatus.
5. Place system in center of room. Allow at least 18 inches of space on all sides of the unit for good air circulation. Locate your system as close to the center of the room as possible. Ensure the air-intake of the machine is clear of obstructions and the machine exhaust port is not blocked.
6. Place air reprocessor in room. Allow 18 inches of space in front of air reprocessor vents.
7. Place warning sign outside room.

**Room is now ready to be disinfected.**

## SYSTEM OPERATION

1. Plug the AP-4 into a **20A** 120VAC/60Hz outlet. NOTE: The 20A plug on the AP-4 has one horizontal “blade” and one vertical “blade” to match up with only a 20A service outlet.



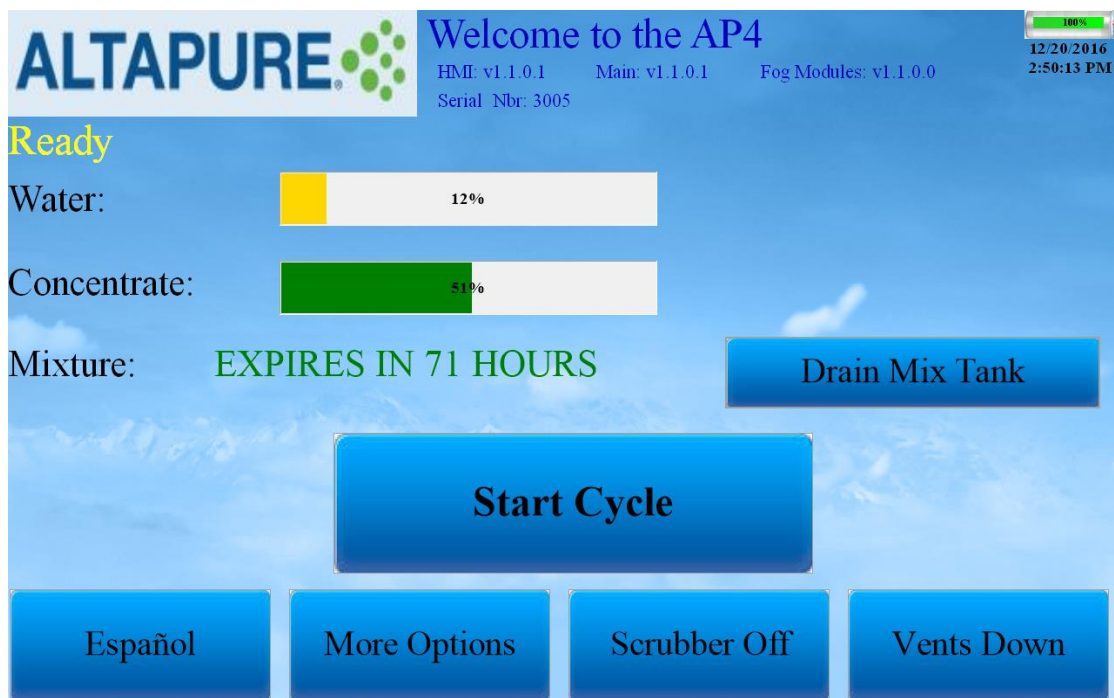
2. Power up the AP-4 by switching the breaker switch to “ON” (the orange indicator should glow), and pulling out on the Emergency Stop/Power Switch (the red center of the button should glow). Note that only the Red Power Switch need be pressed in to power down the machine, the other switch can be left in the “ON” state.



3. Turn the Control Tablet on by holding down the power switch on back side of the top left corner of the screen.



4. Once the Control Tablet is booted up it will show the screen below. It may take a few seconds to connect with the AP-4 unit so please wait until the “Ready” appears in the upper left corner. This indicates that it is communicating properly with the main unit. Verify the battery charge is above 20%. If needed, connect to the charger outside the room.



5. If the Water or Concentrate show low (yellow bar) you will need to fill it prior to starting a cycle. To add water, remove the black cap labeled “WATER ONLY”. Fill with reverse osmosis (RO) and/or deionized (DI) water until the display shows close to 100%. **Add 1 mL of Altacare concentrate per gallon of water to assure freshness.** Make sure to add some water after the concentrate is added to rinse it down the filler tube. **Do not use tap water or filtered drinking water.** Replace the cap.



6. To add Altacare Concentrate, remove the black cap labeled “ALTACARE ONLY”.

**IMPORTANT: Wear appropriate latex gloves and eye protection any time you are handling the concentrated Altacare solution.**

Carefully remove the cap from the Altacare bottle and pour into the fill spout. It is preferred to wait until the Concentrate level is below 10% so that the entire contents of the bottle (1L) can be added to avoid partial bottles needing to be stored. When the bottle is empty, rinse and discard or recycle

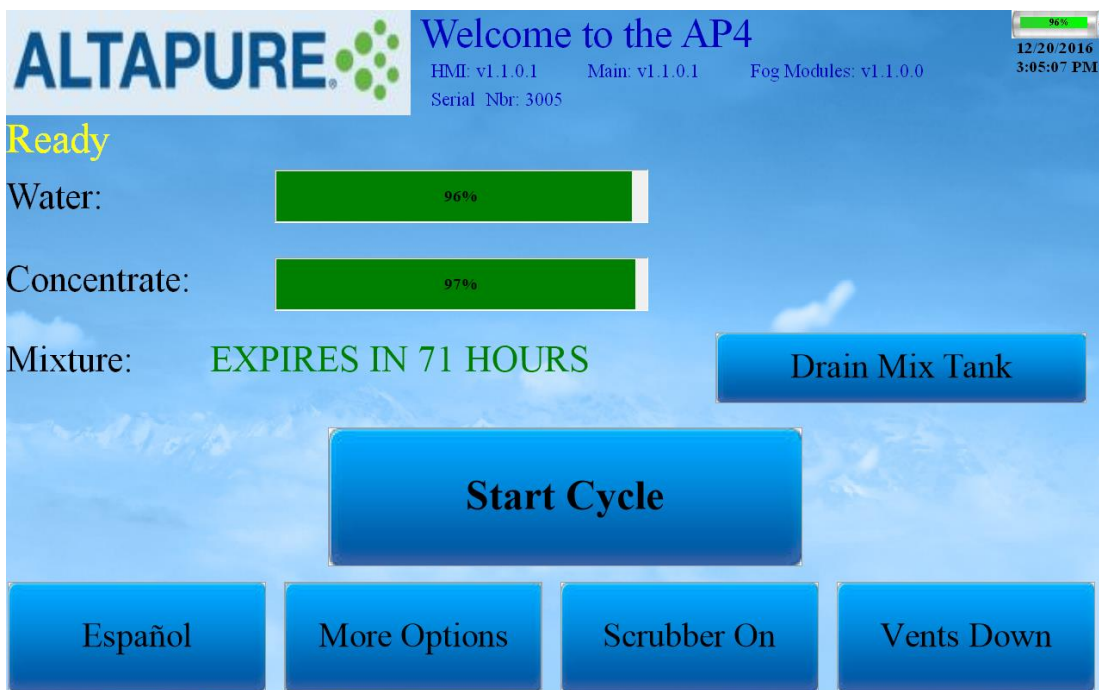
7. If the Mixture shows EXPIRED, it will need to be drained before you can start a cycle. Press the “Drain Mix Tank” button and allow it to drain into the drain bottle. Once it is fully drained, it will reset the Mixture time to 72 hours.



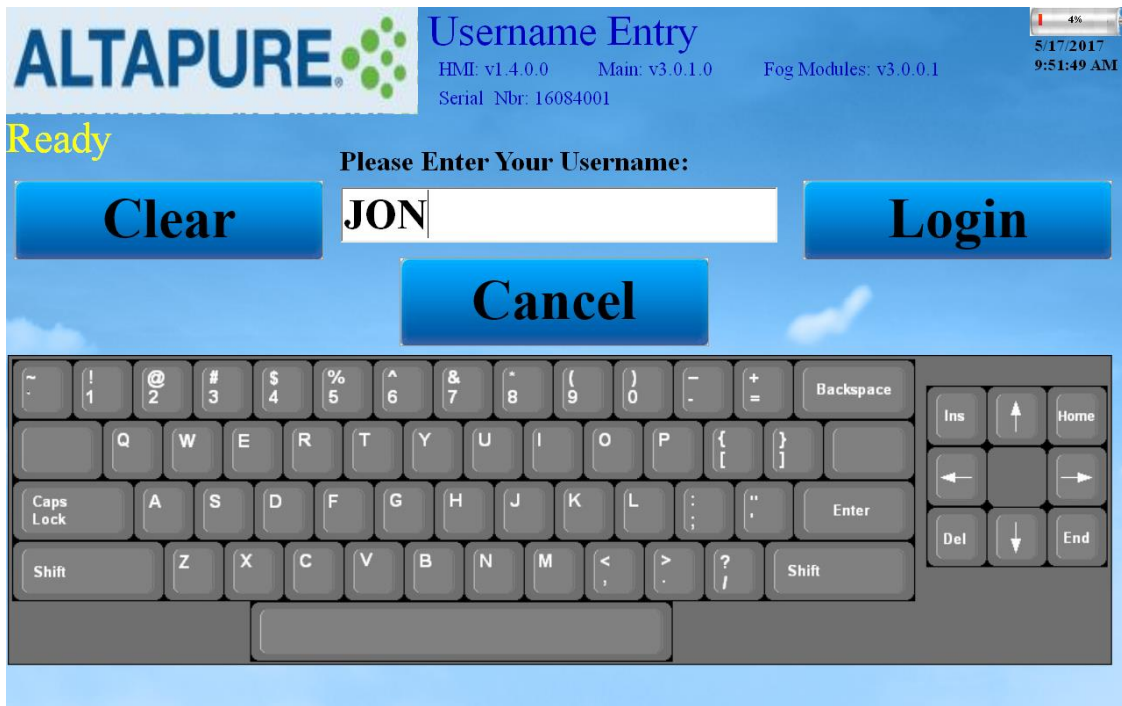
8. Remove the drain bottle by pressing the gray button on the valve and lifting up on the hose to disengage the connector. Lift the hose to clear the cap and slide the drain bottle out of the pocket. Dispose of the fluid by pouring into any sink or commode and flushing with water. Place the drain bottle back into the pocket and connect the tube by pressing the fitting back into the valve until you hear the retainer snap into place.



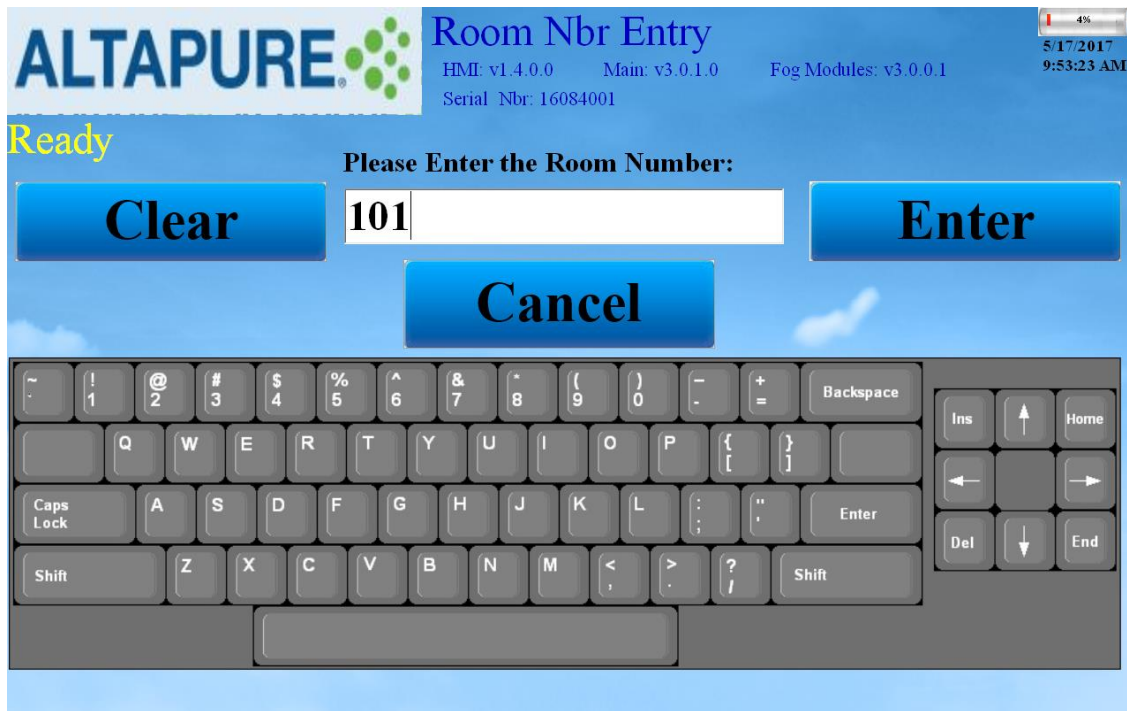
9. Once the fluids and mixture are OK, press the “Start Cycle” button.



10. Log in with your username. (Must match as set up by the administrator.)



11. Enter the room number to be treated. (Must match as set up by administrator.)



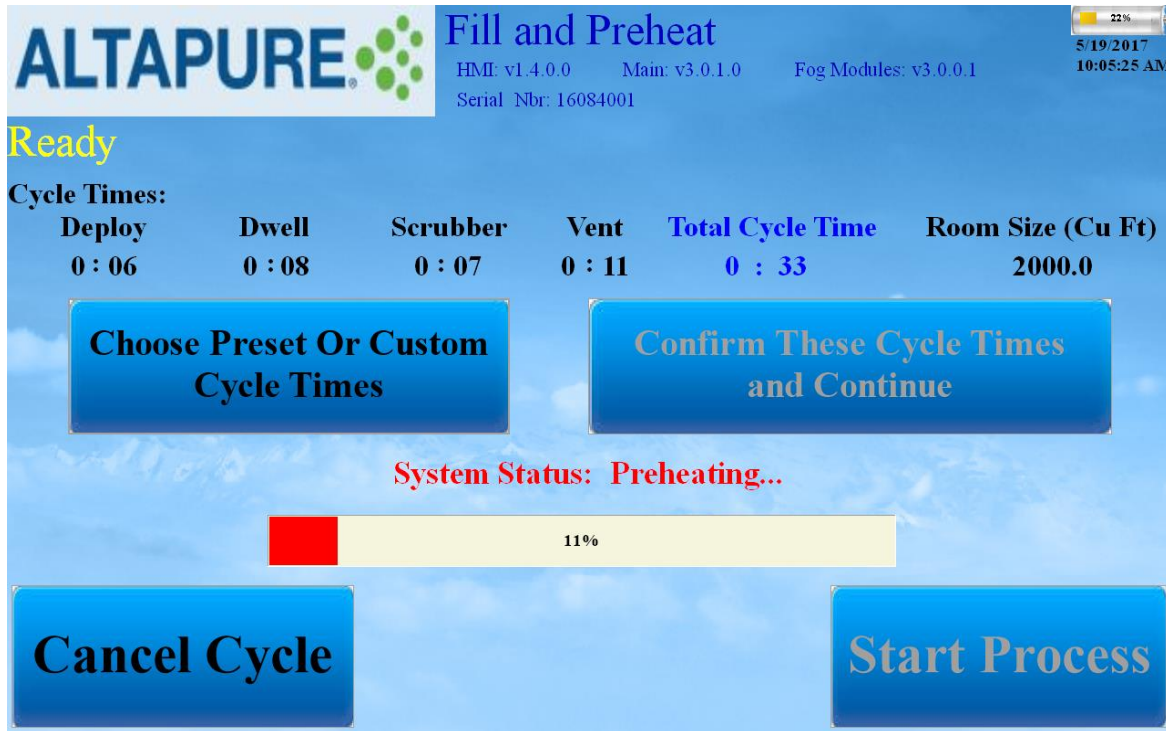
12. Select the appropriate reason for treating the room and then press "Enter."



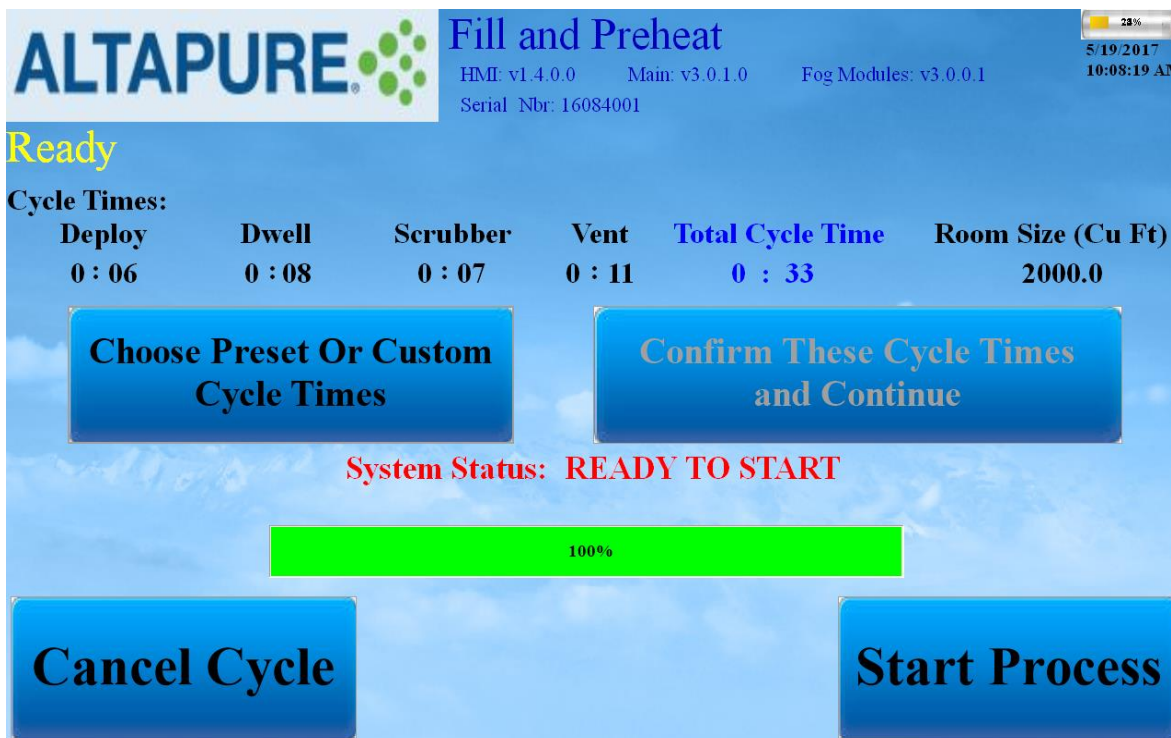
13. Verify that the cycle times and room size are appropriate for the room you are disinfecting or set custom times if needed to properly treat the space. (See room size entry section below.) Then press the "Confirm and Continue" button.



14. The filling and preheating process will take a few minutes to complete at this point. During this time you can set up the automatic vent covers and make sure all vents and smoke alarms are covered and sealed. Also, close the door and seal it with tape as the next step will begin filling the room with the aerosol treatment.



15. Once preheating is complete, the bar will turn green and the "Start Process" button will become active. Double check to make sure everything is sealed and ready, then press the "Start Process" button.



16. This will start the countdown on the next screen showing the time in each phase of the cycle and the total time remaining. It is recommended that the operator stay close by through the deploy portion of the cycle to make sure there are no issues with the aerosol leaking into the hallway or anywhere else. Then the operator can leave and come back at the end of the cycle as indicated by the Total Remaining Time countdown.

**ALTAPURE** **System Operation**  
 HMI: v1.4.0.0 Main: v3.0.1.0 Fog Modules: v3.0.0.1  
 Serial Nbr: 16084001  
 5/19/2017 10:08:50 AM

**Ready**

	Setting H : MM	Remaining H : MM : SS	<b>Total Remaining</b> H : MM : SS
<b>Deploy:</b>	<b>0 : 06</b>	<b>0 : 06 : 35</b>	
<b>Dwell:</b>	<b>0 : 08</b>	<b>0 : 08 : 00</b>	
<b>Scrubber:</b>	<b>0 : 07</b>	<b>0 : 07 : 00</b>	
<b>Vent:</b>	<b>0 : 11</b>	<b>0 : 11 : 00</b>	

**System Status: Deploy (Fogging) In Progress...**

**Cancel Cycle**

17. Once the cycle is complete, each phase will show "DONE" and the status at the bottom will display "Cycle Complete". At this point, press the "exit button to return to the main screen and proceed to open the door, tear down the system setup, and ready the room for the next patient.

**ALTAPURE** **System Operation**  
 HMI: v1.1.0.2 Main: v1.1.0.1 Fog Modules: v1.1.0.1  
 Serial Nbr: 4006  
 2/20/2017 10:36:01 AM

**Ready**

	Setting H : MM	Remaining H : MM : SS	<b>Total Remaining</b> H : MM : SS
<b>Deploy:</b>	<b>0 : 10</b>	<b>DONE</b>	
<b>Dwell:</b>	<b>0 : 10</b>	<b>DONE</b>	
<b>Scrubber:</b>	<b>0 : 15</b>	<b>DONE</b>	
<b>Vent:</b>	<b>0 : 20</b>	<b>DONE</b>	

**System Status: CYCLE COMPLETE!!!**

**Exit....**

18. When the cycle is complete, check the fluid level in the drain bottle. If it is over ½ full, remove and empty the bottle as detailed in step 8 above.

### Room size entry:

If the room size has not already been set up in the control tablet, you will be presented with the screen below. You can enter in the information for the room by selecting each field and then typing in the value for that field. If you know the cubic feet of the room you can just enter that directly. Otherwise fill in the Width, Length and Height and then press "Continue". The size will be calculated and stored for that room. Press "Continue" again to proceed to the Fill and Preheat step.

**ALTAPURE** HMI: v1.4.0.0 Main: v3.0.1.0 Serial Nbr: 16084001 Fog Modules: v3.0.0.1 5/17/2017 9:54:20 AM

Enter Room Dimensions and whether the room has vents.

7	8	9
4	5	6
1	2	3
.	0	Del

**Width**

**Length**

**Height**

**Size In Cu. Ft.**

Room Has Air Vents

**Choose Preset Or Custom Cycle Times**

**Cancel Cycle** **Continue**

If you wish to use presets or enter custom cycle times, press the "Choose Preset" button. On this screen you can select one of the preset cycles or set custom times for each portion of the cycle. Once selected, press the "Enter" button to proceed to the Fill and Preheat process.

**ALTAPURE** **Cycle Time Presets** 4%  
5/17/2017  
9:54:51 AM

HMI: v1.4.0.0    Main: v3.0.1.0    Fog Modules: v3.0.0.1  
Serial Nbr: 16084001

		Deploy	Dwell	Scrubber	Vent
• <b>Tiny</b>	( < 1000 Cu Ft )	5	10	6	5
• <b>Small</b>	( 1800 Cu Ft )	9	10	8	14
• <b>Medium</b>	( 2600 Cu Ft )	13	10	9	22
• <b>Large</b>	( 3400 Cu Ft )	17	10	11	31
• <b>Extra Large</b>	( 4000 Cu Ft )	20	10	12	37
• <b>Set Custom Cycle Times</b>		9	8	8	14

**Cancel Cycle**
**Enter**

## CLEANING

- Remove the **POWER CORD FROM THE WALL OUTLET** before cleaning the system.
- You may use a damp cloth to wipe outside of the machine.

## MAINTENANCE

The AP-4 requires no customer maintenance other than just periodic cleaning of the outside and making sure to **add 1mL of Altacare per gallon of water when filling the water tank.**

## TROUBLESHOOTING

THE USER **SHALL NOT ATTEMPT** TO MAKE ANY REPAIRS TO THE MACHINE UNDER ANY CIRCUMSTANCES. ALL REPAIRS MUST BE MADE BY TRAINED SERVICE TECHNICIANS.

If the unit does not turn on:

- a. Check the GFCI power indicator on the control panel to determine if power is getting to the machine.
- b. If not on, make sure unit is properly plugged into wall outlet.
- c. Contact facilities personnel to ensure that outlet is functioning properly.
- d. Push reset button on the GFCI.
- e. Check the power switch indicator. (It will illuminate dimly so surround it with your hand to see properly.)
- f. Make sure the battery in the Control Tablet is fully charged.
- g. Call your service representative with any further questions. (303-838-7320)

## ACCESSORIES

<u>Part Number</u>	<u>Description</u>
100-1644	Standard Vent Cover (24" x 24")
100-1645	Small Vent Cover (12" x 12")
100-1652	Custom Vent Covers (up to 4 sq ft.)
100-1658	Vent Bypass Kit
110-0100	Auto Vent Cover Tripod
110-1489	Manual Vent Cover Pole
110-1490	Vent Cover Tripod Extension
100-6220	Smoke Detector Cover
100-1629	Control Tablet
100-1641	Battery Charger for Control Tablet

### Consumables

900-0390 Chemical, Altacare (Case of 4 Liters)

### Order Placement

Email (preferred): [Office@unity-healthcare.com](mailto:Office@unity-healthcare.com)

Phone: 303-838-7320

## LIMITED WARRANTY

All equipment is covered by a Twelve (12 ) month parts and labor warranty, excluding damage or failure caused by misuse of the product. Altapure warrants to the customer that the equipment will perform in accordance with Altapure's specifications when used for the purpose for which it was intended: **high level disinfection only**. Altapure's sole and exclusive obligation under this warranty and the customer's sole and exclusive remedy, shall be, in Altapure's sole discretion, repair or replacement of the defective or damaged component provided that it is notified within 24 hours of such failure.



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End of Manual

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