

# **Model 500C-NP-UV Installation and Owners Manual**

**Further Information:  
BERRIMAN ASSOCIATES  
1-800-480-3630  
[www.berriman.com](http://www.berriman.com)**

Thank you for purchasing the **Model 500C-NP-UV** medical grade air purification system (APS), one of the finest air cleaning devices in the world. In order to ensure optimizing the unit's effectiveness and safe use, please read this Owners Manual in its entirety before installing and operating the **Model 500C-NP-UV**.

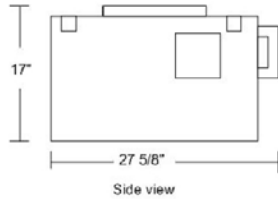
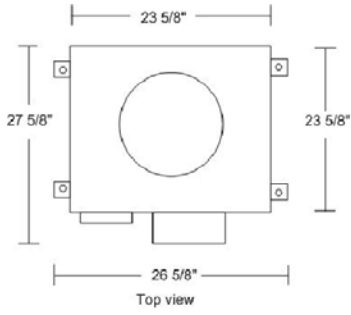
**SPECIFICATIONS:**

Length:	24"
Width:	24"
Depth:	17"
Weight:	75 lbs.
Construction:	20 gauge galvaneal
Electrical:	120 Volt/60 Hz / Single Phase, 1.7 A
Air Flow:	500 cfm max.; Variable Low
dBA:	60 dBA on High (Ducted)
Control:	Remote Off/On, Low, High

**REPLACEMENT PARTS:**

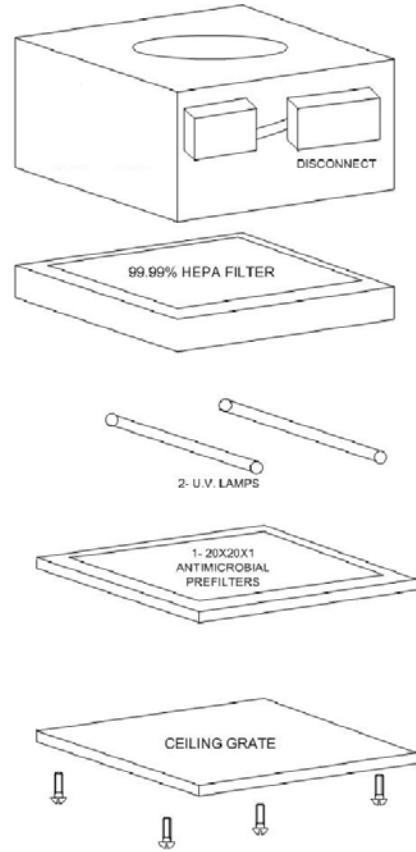
<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
20201F	20 x 20 x 1" Pleated Prefilter (30% ASHRAE)	1
20203-99GS	19 3/4 x 19 3/4 x 3 1/2" Gel Seal Certified HEPA Filter (DOP) With Anodized Aluminum Frame	1
TMUV22	22" UV Lamps for TM500-UV	

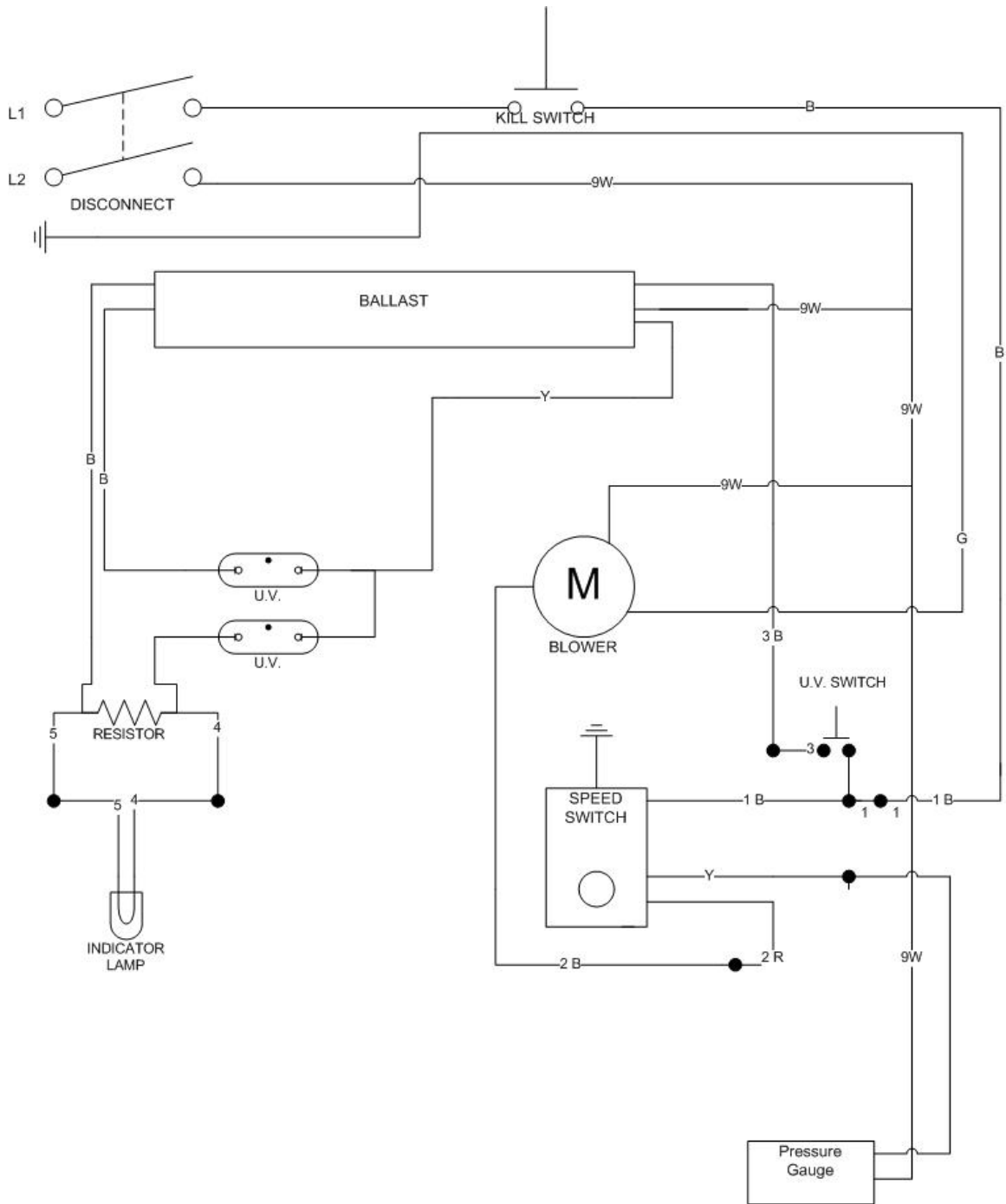
*All filters and UV lamps come factory installed and should not be removed until replacement is required.*



<b>MODEL 500</b>
DRAWING NO. 0421500UVV01

120 volts 60 Hz @ 1.9 amps  
500 cfm max  
Galvaneal Construction





## INSTALLATION:

1. Remove the protective intake grille with UV Shield from the unit via the four screws. **PLEASE NOTE THE CONFIGURATION OF THE GRILLE, AS THERE IS ONLY ONE WAY TO INSTALL THE GRILL THAT ALLOWS THE UNIT TO RECEIVE POWER. FAILURE TO INSTALL THE GRILLE PROPERLY COULD RESULT IN DAMAGE TO THE UNIT OR DIRECT EXPOSURE TO ULTRAVIOLET LIGHT.** Utilizing 3/8" threaded rod, mount the **TM500-C-NP** to upper structure supports via the hangers on the module, remove the "T Grid" (if applicable) and place the unit into the "T" grid ceiling.
2. Remove the inner panel from the control box by taking out the four Philips screws. Mount the control box (boxed separately from the unit) in a desirable location in the room, preferably as close to the TM500's location as possible. Knockouts are located on the top and back of the unit, and are to be used as necessary.
3. Wire the unit from the junction box on the unit to the wall-mounted control box and power as outlined below. Wiring is labeled with numbers for easy installation and should be followed strictly or damage to the unit could occur. For example, #3 on the wall box should go to #3 on the unit. Wiring must also be run from the small junction box on the unit to the monitor display in the wall box.
4. Re-install the inner panel into the control box.
5. Make duct connection to 12" round collar.
6. **Before re-installing the Protective Grille please be sure to securely tighten the #8 Nylon LockNut on the long screw on the Grille. This nut must be tightened so that the screw is rigid enough to activate the unit's kill switch. The nut was not tightened at the factory to prevent damage during shipment to the grille.**
7. Turn fan speed to "HIGH" position, and allow unit to purge for at least 10 minutes.

## CREATING NEGATIVE PRESSURE

To create negative pressure, the **CDC** recommends that exhaust flows be a minimum 100 CFM greater than the supply air entering the room. For example, a room with 150 cfm of supply air is required to have a minimum 250 cfm of exhaust air known as an "offset". Manufacturer

recommends a minimum of 150 CFM offset for all negative and positive pressure rooms.

The supply air should be measured to establish the incoming CFM. The return/exhaust air grille to the HVAC system or outdoors should be blocked off and sealed to prevent untreated air from returning into the general ventilation system or into area where the 25 foot rule is not in force.

A 12" round duct should be connected to the collar located at the top of the unit, and vented to the exterior of the building through a wall, window, or dedicated sanitary air duct.

Please be advised that the CDC strongly recommends the exhausted air not be returned to the general ventilation system if it is possible to vent the air outside. Returning the air to the HVAC return is permissible if physically unwise (long duct run/pressure drop) or prohibitively expensive.

## **MAINTENANCE**

### **MOTOR/BLOWER:**

The blowers are motorized backward curved AC impeller types and are selected for continuous operation. Maintenance is not required.

### **PREFILTER:**

The life of the Prefilters will depend on the ambient conditions within the room from which the air is being drawn. Average Prefilter life is 1-6 months, depending on the amount of use and the application.

### **PREFILTER REPLACEMENT:**

When changing filters, we recommend the use of gloves and a mask, but standard operating procedures for the facility should always be followed. Used filters should be placed in plastic bags, sealed, and treated according to your standard state, local or facility's disposal procedures.

The Prefilters are removed through the air intake grille from inside/within the room. To change the prefilter:

1. Unscrew the four screws located in the protective grille and remove it. **PLEASE NOTE THE CONFIGURATION OF THE GRILLE, AS THERE IS ONLY ONE WAY TO INSTALL THE GRILL THAT ALLOWS THE UNIT TO RECEIVE POWER. FAILURE TO INSTALL THE GRILLE PROPERLY COULD RESULT IN DAMAGE TO THE UNIT OR DIRECT EXPOSURE TO ULTRAVIOLET LIGHT.**

2. Next, slide the Prefilters out from the Protective Grille (being sure not to disrupt and trapped dust).
3. Dispose of the old Prefilter as per State, local or facility SOP.
4. To install a new Prefilter, simply slide it into the protective grille. Reinstall the protective grille in the correct configuration.

## **UV LAMPS**

The UV lamps are rated to run 9,000 hours, but can last longer. A UV indicator light is located on Wall Mounted Control Box, and it monitors the functioning of the UV lamps. Upon installation, the indicator should shine green. When the UV lamps need to be changed, the green indicator light will go out. UV shields are also attached to the intake grille to help ensure that direct exposure to UV radiation is avoided. **DO NOT REMOVE THE UV SHIELDS FROM THE GRILLE OR OPERATE THE UNIT WITHOUT THE GRILLE AND SHIELDS IN PLACE. FAILURE TO DO SO COULD RESULT IN DIRECT EXPOSURE TO UV LIGHT.**

## **UV LAMP REPLACEMENT:**

***UNPLUG UNIT BEFORE ANY SERVICE WORK IS***

**WARNING: ALL POWER MUST BE SHUT OFF BEFORE REMOVING THE HEPA FILTER. DIRECT EXPOSURE TO UV RADIATION WILL BURN EYES.** Once the intake grille is removed (as noted above), carefully remove the end of the UV lamps from their holders and pull the out from the socket. Installing the new lamps is done by reversing the removal process. Note: pins fit into socket in one direction. When installing UV lamps be careful not to touch the glass with bare hands, as skin oils will block UV output, making them less effective.

**WARNING: DO NOT RUN THE TM950 WITHOUT THE GRILLE/UV SHIELDS INSTALLED ON THE UNIT. FAILURE TO DO SO COULD CAUSE DIRECT EXPOSURE TO HARMFUL UV RADIATION.**

## **CERTIFIED HEPA FILTER:**

The life of the HEPA filter will depend on the ambient conditions within the room from which the air is being drawn. Average HEPA filter life is 1-3 years, depending on the application. The Digital Differential Pressure Monitor measures the differential pressure across the HEPA filter. It should be used to accurately determine when the HEPA Filter needs to be changed. Pressure readings should always be logged when new HEPA filters are installed.

When to change HEPA filter:

When the differential pressure reading is twice the original reading after installing a new prefilter.

### **HEPA FILTER REPLACEMENT:**

When changing filters, we recommend the use of gloves and a mask, but standard operating procedures for the facility should always be followed. Used filters should be placed in plastic bags, sealed, and treated according to your standard disposal procedures.

1. The HEPA filter is removed through the air intake grille from inside/within the room. Unscrew the four bolts located in the protective grille and remove it and the Prefilter.
2. Next, removed the UV lamps as outlined above.
3. The HEPA filter is held in place via two holding bars, so these need to be removed and the HEPA carefully uninstalled and disposed of as per facility SOP.
4. To install the HEPA, mount the HEPA filter into the module with the knife edge in the cabinet centered inside the gel seal track of the filter. **DO NOT TOUCH THE HEPA MEDIA AS IT IS VERY FRAGILE AND WILL TEAR VERY EASILY.** While carefully holding the HEPA into place (it may be easier to hold into place by actually pushing on the bars), install the HEPA holding bars and tighten until snug with the wing nuts. Be sure not to over-tighten as this could strip the bolts or damage the filter.
5. Replace the UV lamps, Prefilter, and perforated grille and hand-tighten the grille screws (**DO NOT OVER-TIGHTEN**)

# Limited Liability Warranty

All products are warranted by manufacturer to be free from defects in materials and workmanship for a period of five (5) years after shipment from its factory, provided the buyer demonstrates to the satisfaction of manufacturer that the product was properly installed and maintained in accordance with manufacturer's instructions and recommendations and that it was used under normal operating conditions.

This warranty is limited to the replacing and/or repairing by manufacturer of any part or parts which have been returned to manufacturer, with manufacturer's written authorization and in which manufacturer's opinion are defective. Parts not manufactured by manufacturer but installed by manufacturer in equipment sold to the buyer shall carry the original manufacturer's warranty only. The buyer shall pay for all transportation charges, any and all sales and use taxes, duties, imports, or excises for such part or parts. Manufacturer shall have the sole right to determine whether defective parts shall be repaired or replaced.

This warranty does not cover any customer labor charges for replacement of parts, adjustments or repairs, or any other work unless such charges shall be assumed or authorized in advance, in writing, by manufacturer.

This warranty does not cover any replaceable items such as filters or lamps, or any products which in the judgment of manufacturer, has been the subject to misuse or negligence, improper handling or which has been repaired or altered outside manufacturer's factory in any way, which may have impaired its safety, operation or efficiency, or any product, which has been subject to accident.

This warranty shall be null and void if any part not manufactured or supplied by manufacturer for use in any of its products shall have been substituted and used in place of a part manufactured or supplied by manufacturer for such use, without authorization in advance, in writing by manufacturer.

There are no warranties, other than those appearing on the acknowledgment form including no warranty of merchantability or fitness for a particular purpose, given in connection with the sale of the goods sold hereunder. The buyer agrees that his sole and exclusive remedy, and the limit of manufacturer's liability for loss from any cause whatsoever, shall be the purchase price of the goods sold hereunder for which a claim is made.

No warranty or affirmation of fact, expressed or implied, other than as stated in "LIMITED LIABILITY WARRANTY" above is made or authorized by manufacturer.