



electrocorp®
Air Filtration Systems

Operation and Maintenance Manual

RSU 20 CC / CCR / CCHR

Series Space Saver™ Air Scrubber



Model No. _____

Serial No. _____

UNPACKING

- 1 Carefully unpack the RSU20 from its shipping container. Be sure to save the shipping container and packaging material in case the unit has to be re-shipped for any reason.
- 2 Carefully inspect the unit for any shipping damage. If damage has occurred, contact the freight company immediately for a claim number. Do not return the equipment to the factory without a Material Return Authorization.

OPERATING YOUR RSU20

- 1 Plug the RSU power cord into a 115VAC/ 60 Hz wall outlet.
- 2 Turn the RSU on by rotating the control knob on the speed control box. By rotating the knob, you can select the appropriate operating speed for the conditions where the RSU is placed.
Note: The RSU20 is designed to run 24 hours a day (if required).

PRE-OPERATION

The RSU20CC, CCR, CCHR must be turned on for a 30 minute “blowout”, which will result in a small amount of carbon dust being blown out. Carbon dust has been created in the carbon cartridge during shipping. It is best if the “blowout” period is done in an area that is well ventilated and can accept the carbon blowout without problem.

SETUP TO REPLACE RSU20

- 1 Release the 2 draw clamps that hold the blower assembly to the top retainer ring and set the blower assembly to the side.
- 2 Remove the 4 wing nuts and washers located on the top retainer ring.
- 3 Lift the top retainer ring up until it clears the 4 hold down threaded rods.
- 4 If CCH or CCHR, open the box marked “HEPA Filter”, remove the plastic bag, and place the entire filter assembly down the inside of the carbon cartridge. This HEPA filter assembly consists of the HEPA filter and a micro HEPA electrostatic filter wrapped on the HEPA. Be sure the HEPA filter assembly is completely seated around the center disk on the bottom retainer ring.

Micro HEPA Electrostatic wrap:

- A If CCH – Remove the micro HEPA from around the outer surface of the HEPA filter when extremely dirty or an air restriction has occurred.
- B If CC – Remove the micro HEPA from around the outer surface of the carbon filter when extremely dirty or an air restriction has occurred.

- 5 Replace the top retainer ring
 - A Insert the threaded rods into the 4 alignment holes on the top retainer ring. Place 1 washer and 1 wing nut on each rod.
 - B Before tightening each wing nut, visually inspect each threaded rod so that they are vertically straight.
 - C Tighten the 4 wing nuts to a firm "finger tightness". Be sure the top is very firmly tightened down to ensure a good seal between top and the gaskets on the carbon cartridge and the HEPA filter. (Do not use a wrench to tighten the wing nuts.)
- 6 Replace Blower Assembly
 - A Place the blower into the top of the retainer ring so that the airflow direction arrow on the blower points up (RSU20CC, H) or down (RSU20CCR, CCHR)
 - B Align the 2 draw clamp brackets on the blower assembly with the T-handle draw clamps located on the top retainer ring.
 - C Pull up on the draw latch handle and set the ball below the T-handle so that it rests on the draw clamp bracket.
- 7 Install the Post-filter (Post-filter Replacement)

A blue post-filter, which wraps around the RSU, captures dust type particulates to 10 microns. The post-filter should be replaced whenever there is a noticeable dust buildup. You have the option of turning the RSU20 off, or keeping it running when you replace the post-filter.

- A Remove a new post-filter from its packaging and peel away the protective tape exposing the Velcro. Wrap the post-filter around the bottom half of the RSU. Pull tightly and press the edge of the post-filter against the surface of the exposed Velcro strip for a secure attachment.
- B Tuck the top edge of the post-filter under the top retainer ring. Tuck the bottom edge of the post-filter down inside the space between the base ring and the outer carbon screen.

CONNECT DUCTWORK TO RSU

(If ordered with your RSU, open the Duct Kit that came with your order).

The blower assembly on the RSU20-CCHR will accept an 8" diameter duct. If the exhaust port on your laser engraver or other machinery is smaller than 8" in diameter, place a duct enlarger over the exhaust port and extend an 8" diameter duct from the exhaust port to the top of the RSU blower assembly. Use hose clamps to ensure a tight seal of the ducting to the blower and to the duct enlarger.

CARBON LIFE

The RSU20CC, CCR and CCHR contain approximately 30 pounds of carbon if Carbon #100 is used. The carbon can gain between 30% and 40% maximum of its own weight in contaminant, depending upon the adsorption capacity of the carbon for the contaminant that is being removed from your process air stream. The carbon in the RSU20-Carbon/HEPA-R must be changed when the unit has gained a maximum of 9-12 pounds in adsorbed fumes and odors, or sooner. You will also be able to rely on your sense of smell to determine when odor 'breakthrough' has occurred in the unit's carbon, thus signaling the need for a carbon exchange. When this happens you will notice the odors to be stronger in the room at the point when the carbon can no longer adsorb any more fumes from the ducted exhaust.

REPLACING THE CARBON CARTRIDGE WITH A NEW FILLED CARTRIDGE

Pre-order replacement filled cartridges from your Electrocorp dealer.

- 1 Remove the blower and the top retainer ring.
- 2 Remove the blue post-filter that is wrapped around the RSU by pulling one edge away from the vertical strip of Velcro at the post-filer seam.
- 3 Remove HEPA filter assembly. (Ref: HEPA Replacement) If so equipped.
- 4 Lift the carbon cartridge up and away from the RSU's base.
- 5 Place a new carbon cartridge back on the RSU base.
- 6 Replace the HEPA filter assembly. Be sure the HEPA filter assembly is completely seated around the center disk on the bottom retainer ring.
- 7 Replace the Top Retainer ring. (Follow the instructions previously listed in Setup under Item #5: "Replace the Top Retainer Ring").
- 8 Replace Blower Assembly: (Follow the instructions previously listed in Setup under Item #6: "Replace Blower Assembly").
- 9 Replace blue post-filter around the body of the RSU. Tuck the post-filter under the top retainer ring and down into the RSU base.

REFILLING THE CARTRIDGE WITH NEW CARBON

Pre-order from your Electrocorp dealer, bulk replacement carbon that matches the mixture that came with your RSU.

CAUTION!

THE FOLLOWING PROCEDURE SHOULD BE DONE IN A WELL-VENTILATED AREA. THE OPERATOR SHOULD WEAR A DUST MASK AND EYE PROTECTION DUE TO CARBON DUST BEING CREATED DURING THE FILLING PROCESS.

- 1 Remove the blower and the top retainer ring.
- 2 Remove the blue post-filter that is wrapped around the RSU by pulling one edge away from the vertical strip of Velcro at the post-filter seam.
- 3 Remove HEPA filter assembly. If so equipped.
- 4 Lift the carbon cartridge up and away from the RSU's base.
- 5 Place the cartridge in a box or plastic bag that can accept the spent carbon. Remove the cartridge top by pulling up on its four Velcro straps.

IMPORTANT!

VACUUM THE CARBON OUT OF THE CARTRIDGE OR POUR THE CARBON OUT.

- 6 After the carbon has been removed, place the 4 alignment brackets that were shipped with your RSU between the inner and outer screens of the carbon cartridge.
- 7 Use a scoop, or pour replacement carbon into the open area between the inner screen and the outer screen. Do this until the area is completely filled to the top of the screens. Occasionally tap the sides of the outer ring to help settle the carbon.
- 8 Remove the 4 alignment brackets, replace the cartridge top and secure the Velcro strips or the four #8 sheet metal screws.
- 9 Return the cartridge to the RSU base.
- 10 Replace the HEPA filter assembly. Be sure the HEPA filter assembly is completely seated around the center disk on the bottom retainer ring.
- 11 Replace the Top Retainer ring. (Follow the instructions previously listed in Setup under Item #5: "Replace the Top Retainer Ring").
- 12 Replace Blower Assembly: (Follow the instructions previously listed in Setup under Item #6: "Replace Blower Assembly").
- 13 Replace the blue post-filter around the body of the RSU. Tuck the post-filter under the top retainer ring and down into the RSU base.

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- 14 Dispose of the spent carbon in a manner approved by your state or local waste disposal regulations.

.3 MICRON FILTER INSERT AND 30PPI FOAM FILTER REPLACEMENT (RSU20CCR, CCHR)

The .3 Micron filter insert and the 30 ppi foam filter are located on to the insert assembly filter down the center of the HEPA). It is important to have a replacement .3 Micron filter insert and a 30 ppi foam filter on hand. Order from your Electrocorp dealer as required.

The .3 Micron filter insert is located on the outer of the support screen (white color) and is efficient at removing 90% of all airborne dust type particulates at .3 micron or larger per air pass and extends the life of the HEPA filter. The .3 Micron filter insert must be replaced periodically.

Check the outer and inner surface of the .3 Micron filter. If the inner surface of the .3 Micron filter is discolored due to heavy dusting, and if there is some evidence of dust break through on the .3 Micron filter's outer surface (discoloration), the .3 Micron filter must be replaced.

- 1 Follow the instructions previously listed in "Setup To Replace RSU20" to remove the blower and the top retainer ring.
- 2 Remove the insert assembly filter.
- 3 Remove the used .3-micron insert filter media from its inner supporting screen by separating the filter at its seam.
- 4 Place a new .3-micron insert filter on a clean flat surface. Remove the taped backing from both seam edges.
- 5 Press one exposed taped edge to the screen. Roll the screen over the filter and press the other exposed edge to the .3-micron filter so it overlaps.
- 6 Replace the insert assembly filter in the unit.
- 7 Follow the instructions previously listed in "Setup To Replace RSU20" to replace the blower and the top retainer ring.

The 30ppi foam filter insert is located on the inner of the support screen (gray color) and must be replaced periodically.

For replacing, follow the same procedure as per .3 Micron replacements.

HEPA FILTER REPLACEMENT (for RSU12CCHR)

Check the outer and inner surface of the HEPA filter. If the inner surface of the HEPA filter is discolored due to heavy dusting, and if there is some evidence of dust break through on the HEPA filter's outer surface (discoloration), the HEPA filter must be replaced.

- 1 Follow the instructions previously listed in "Setup To Replace RSU20" to remove the blower and the top retainer ring.
- 2 Remove HEPA filter.
- 3 Place a new HEPA cartridge back on the RSU base.
- 4 Follow the instructions previously listed in "Setup To Replace RSU20" to replace the blower and the top retainer ring.

PRODUCT WARRANTY

Electrocorp does not warrant, expressed or implied, our products to be medical devices. We do not claim or warrant, expressed or implied, that they are intended to prevent or reverse any medical condition that a user of this equipment may have. We do not guarantee or warrant, expressed or implied, our equipment to protect an individual from contracting any particular disease or illness.

Electrocorp warrants its products to be free of defects in material and workmanship for twelve months after shipment from the factory. Electrocorp will provide factory service when the warranted equipment is returned to the factory freight prepaid. Electrocorp's liability under this warranty is limited to the repair or replacement of defective material, and in no event shall it be liable for consequential or indirect damages.

This warranty shall not apply to equipment subjected to accidental damage, misuse, alteration, or deterioration due to extended storage or exposure. Nor shall it apply to items requiring normal replacement such as filters or fuses.

This warranty constitutes Electrocorp's exclusive limited warranty, there being no other warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose.

WARNING!

THE RSU IS NOT MEANT TO BE USED IN AN EXPLOSIVE ENVIRONMENT.



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