

Operation and Maintenance Manual

RAP 48 CCH

Odor and Particulate Controller

Important:

Your unit has been shipped in four boxes.

- 1 RAP wheeled base, lower grill, upper grill and blower assembly
- 2 / 3 HEPA Filters and carbon cartridges filled with Carbon #120-Orbotech (2 Carbon Filters and one HEPA in each box)
- 4 Exhaust flange and Duct Kit

Model No. _____

Serial No. _____



UNPACKING

WARNING!

AN AIRFLOW MEASURING TUBE EXTENDS OUT THE BOTTOM OF THE BLOWER ASSEMBLY. THIS TUBE MUST NOT BE BENT OUT OF ITS VERTICAL POSITION WHEN HANDLING THE BLOWER. TO PROTECT THE AIRFLOW TUBE, THE UNIT IS SHIPPED ASSEMBLED, BUT EMPTY. PRIOR TO REMOVING THE BLOWER FROM THE UNIT, ARRANGE FOR SOME OF THE BOXES USED IN SHIPPING (WHEN EMPTY), TO BE POSITIONED SO THAT WHEN THE BLOWER IS DETACHED FROM THE UPPER GRILL, IT CAN BE TEMPORARILY PLACED ON THE BOXES WHILE ALLOWING ITS AIRFLOW TUBE TO EXTEND DOWN WITHOUT BEING BENT OUT OF POSITION.

Remove the items from their boxes. Refer to the photo annex attached to these instructions for the following steps:

- 1 Wrap a pre-filter around the inner side of the lower grill.
- 2 Centrally position one of the carbon cartridges on the base.
- 3 Place a second carbon cartridge on top of the first carbon cartridge.
- 4 Place one of the HEPA filters down the center of the two carbon cartridges.
- 5 Place the lower grill with its attached black powder coated circular pans over the two carbon cartridges. Align the seam of the grill over the 'rear' label on the base.
- 6 Secure the six grill latches to the base.
- 7 Centrally position one of the remaining carbon cartridges on the lower grill.
- 8 Repeat STEPS 1-3 with the remaining carbon cartridge, pre-filters and HEPA filter.
- 9 Place the upper grill in position around the upper carbon cartridges, aligning the seam of the upper grill directly above the lower grill's seam.
- 10 Secure the upper grill's lower six latches to the lower grill.
- 11 **TWO PEOPLE REQUIRED:** Using the lift knobs, carefully raise the blower assembly so the airflow tube clears the top of the upper grill, and then lower the blower so the airflow tube is positioned in the center of the HEPA filter. Align the blower assembly seam (rear), so that it is positioned above the seams on the grills.
- 12 Install the exhaust flange cone on top of blower
- 13 Attach the ducting from the duct kit to the RAP exhaust cone and secure it with its accompanying 12" diameter duct clamp. Attach the other end of the ducting (cut to preferred length), to the air intake on the LDI. Secure in place with the gasketed duct clamp.

PHOTO ANNEX



STEP 1



STEP 2



STEP 3



STEP 4



STEP 5



STEP 6

IMPORTANT!

WHEN YOU INITIALLY PLACE YOUR RAP48-CCH IN SERVICE, TURN THE AIR SCRUBBER ON VIA ITS VARIABLE SPEED CONTROLLER, AND SET IT ON MAXIMUM SPEED. WHEN THE READING ON THE MAGNEHELIC GAUGE IS 1.5, THE HEPA FILTER OR ITS .3 MICRON FILTER WRAP WILL NEED TO BE REPLACED.

NOTE: OVER TIME, DUE TO THE GRADUAL BUILDUP OF CAPTURED CONTAMINANTS IN THE HEPA FILTER, THE AIR FLOW THROUGH THE FILTER WILL DIMINISH. THE AIR FLOW OF THE FILTER DROPS WHEN ITS STATIC PRESSURE INCREASE DUE TO CONTAMINANT BUILDUP. THE TOTAL POWER AVAILABLE THAT HAS BEEN BUILT INTO THE RAP BLOWER ASSEMBLY ALLOWS YOU TO COMPENSATE FOR THIS EXPECTED DROP IN AIR FLOW AND MAINTAIN YOUR PREFERRED AIR FLOW EVEN AS THE FILTER'S STATIC PRESSURE INCREASES OVER THE LIFE OF THE HEPA FILTER.

PRE-FILTER REPLACEMENT

It is important to have a supply of pre-filters on hand.

Obtain from Electrocorp or your local distributor, 6 pre-filters to a case.

Refer to the RAP48-CCH Assembly Instructions that came with the unit to replace the spent pre-filters.

WARNING!

BE CAREFUL THAT THE PREVIOUSLY MENTIONED AIR SENSING TUBE IS NOT BENT OUT OF ALIGNMENT DURING YOUR HANDLING OF THE BLOWER ASSEMBLY.

Pre-filter is wrapped around the inner side of the grill and capture dust type particulate up to 10 microns in size. The pre-filters should be replaced whenever there is a noticeable dust build up, or on a regular schedule. More frequent replacement may be required if there is a high level of airborne particulate being removed from the air. Be sure to turn the RAP off and disconnect it from its power source when you replace the pre-filter.

REPLACEMENT

- 1 Remove the carbon cartridges and the HEPA filters from inside the body of the RAP48-CCH.

WARNING!

BE CAREFUL THAT THE AIR SENSING TUBE ATTACHED TO THE BLOWER ASSEMBLY IS NOT BENT OUT OF ALIGNMENT DURING YOUR HANDLING OF THE BLOWER.

- 2 Remove the spent pre-filter and wrap a new pre-filter around the inner side of the grill.
- 3 Replace the carbon and HEPA cartridges.

CARBON LIFE

The RAP48-CCH contains four carbon cartridges, each containing Carbon Mixture #120-Orbotech. This carbon mixture is intended to protect an Orbotech LDI machine from a broad range of VOCs, including PGMEA. The life of this carbon mixture depends upon the volume and range of gasses adsorbed. For simplicity, we recommend replacing the carbon cartridges on a regularly scheduled basis (approximately every 6 months).

INSTALL NEW CARBON CARTRIDGES

- 1 Order from Electrocorp four replacement carbon cartridges for the RAP48-CCH filled with Carbon #120-Orbotech or bulk carbon to replace the spent carbon.
- 2 Follow the RAP48-CCH Assembly Instructions that came with the unit to remove the spent carbon cartridges and insert new carbon cartridges.

WARNING:

BE CAREFUL THAT THE PREVIOUSLY MENTIONED AIR SENSING TUBE IS NOT BENT OUT OF ALIGNMENT DURING YOUR HANDLING OF THE BLOWER ASSEMBLY.

.3-MICRON FILTER REPLACEMENT

IMPORTANT!

ALWAYS HAVE A SUPPLY OF THE .3-MICRON FILTERS ON HAND. OBTAIN THESE FROM ELECTROCORP OR YOUR LOCAL DISTRIBUTOR; THREE .3 MICRON FILTERS TO A CASE.

- The .3 micron filter wraps around and is attached by tape to the cylindrical HEPA filter.
- The .3 micron filter is efficient at removing 99.5% of all airborne dust type particulate at .3 micron or larger per air pass and extends the life of the HEPA filter.
- The .3 micron filter wrap must be replaced when a significant buildup of contaminant causes a noticeable discoloration.

Check the outer and inner surface of the HEPA filter. If the outer 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 inner surface (discoloration), the HEPA filter must be replaced. (Proceed to: steps for HEPA Filter Replacement)

REPLACEMENT

- 1 Turn the RAP off and disconnect it from its power source. Remove the blower assembly and set it aside.
- 2 Lift the HEPA filter out. Separate the spent .3 micron filter wrap at its seam and remove from the HEPA filter.
- 2 Unwrap a new .3 micron filter wrap from its packaging and peel away the protective tape at both ends of the .3 micron filter wrap.

- 4 Lay the .3 micron filter wrap out flat on a clean surface.
- 5 Place the HEPA filter onto the .3 micron filter wrap so that you will be able to roll the HEPA filter across the .3 micron filter wrap.
- 6 Lift one end of the .3 micron filter wrap, remove protective cover from the taped edge, pull firmly and press the now exposed surface of the taped edge against the side of the HEPA filter.
- 7 Roll the HEPA filter so that the free end of the .3 micron filter wrap overlaps the end that is taped to the side of the HEPA filter.
- 8 Remove the protective cover from the other taped edge, press the overlapped .3 micron filter wrap edge firmly against the side of the HEPA filter.
- 9 You have now completed the replacement of the .3 micron filter wrap.
- 10 Reinstall the HEPA filter.
- 11 Reinstall the Blower Assembly.

INSTALLING NEW HEPA FILTERS

NOTE: The .3 micron filter wrap has been wrapped around the HEPA filter at the factory.

IMPORTANT:

WHEN THE READING ON THE MAGNEHELIC GAUGE IS 1.5, THE HEPA FILTER, OR THE .3 MICRON FILTER WHICH IS WRAPPED AROUND THE HEPA FILTER, OR BOTH, WILL NEED TO BE REPLACED.

The RAP48CCH is designed to run 24 hours a day.

NOTE: Over time, due to the gradual buildup of captured contaminants in the HEPA filter, the air flow through the filter will diminish. The air flow of the filter drops when its static pressure increases due to contaminant buildup. The total power available that has been built into the RAP blower assembly allows you to compensate for this expected drop in airflow and maintain your preferred air flow even as the filter's static pressure increases over the life of the HEPA filter.

REPLACEMENT

- 1 Pre-order from Electrocorp two replacement HEPA filters for the RAP48-CCH.
- 2 Follow the RAP48-CCH Assembly Instructions that came with the unit to remove the spent HEPA filters and insert new HEPA filters. **WARNING:** Be careful that the previously mentioned air sensing tube is not bent out of alignment during your handling of the blower assembly

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.



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