



Installation & Service Manual

for

Ambient AIR 2000

Media Filtration Systems

February 19th, 2003

Ambient Air Filtration Collectors

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Ambinet Air Filtration Collectors

Disclaimer

Although instructions and recommendations are included for installation of your **Ambient Air Media Collector** equipment, the manufacturer does not assume responsibility for the installation of this equipment nor shall he be held liable for direct or consequential damages resulting from improper installation, application, maintenance or use.

The immense variety of contaminants make it impossible to list all of the potential hazards that may be encountered with air pollution control systems. It is therefore important that the application of the equipment be discussed with an AER Control Systems representative or application engineer prior to use. Additionally, users should consult and comply with all National and Local Fire, Electrical and /or other appropriate codes when determining the application, location and operation of any air pollution control equipment.

Collection of combustible or explosive materials and collection on flame or spark-generating operations may require specific system configurations (contact AER Control Systems LLC. Applications Engineering Department for questions and/or design assistance). The combined collection of combustible or explosive materials and contaminants from spark or flame generating operations, with a common collector or duct system, is not recommended, unless special design provisions have been made to the system (sparks or flames resulting from such operations may ignite the combustible or explosive material). Under no circumstances should anyone be allowed to discard a lighted cigarette, other burning materials, or refuse into an inlet hood or the duct of the collection system. It is the responsibility of the end user to comply with all applicable national, state, and local fire and safety codes.

This manual should be read completely before attempting Operation or Maintenance of this equipment. All work should be performed by qualified personnel according to local requirements.

WARNING

Failure to comply fully with the following instructions and local code requirements may increase your risk of physical injury due to fire, explosion or electrical shock.

All data and dimensions in this manual have been thoroughly checked however, we cannot assume responsibility for possible errors or omissions. We reserve the right to change designs and/or specifications without notice.

Ambient Air Filtration Collectors

SECTION 1

Uncrating

1. Remove banding and cardboard shipping carton and packing.
2. The Ambient Air 2000 unit is shipped in the horizontal position.
3. Inspect the exterior of the unit and accessories for shipping damage or shortage that may not have been noticed or recorded when the shipment was initially received, you have 30 days to notify AER Control Systems LLC of any discrepancies. Contact the shipping company if any damage or shortages have occurred.

Description & Operation

The standard Ambient Air 2000 collector can either be mounted from the ceiling or wall. The Ambient Air is an unducted collector designed to circulate the air inside a shop, warehouse, or schools. Ambient Air has 2 stages of filtration, a 4 inch disposable multi-vee filter and a disposable 10 pocket, 21 inch long 95% ASHRAE fiberglass Vee-bag. The standard blower is a forward curved centrifugal fan with a direct drive single phase electric motor. The standard horsepower for the motor is 3/4 HP.

Optional Equipment

Wrap around prefilter

Inlet Flange

Side Exhaust Deflector

SECTION 2

Applications - General

1. Dust - The Ambient Air 2000 collector is primarily designed for the capture and removal of dust contaminants from a wide variety of manufacturing processes.
2. Mounting options and accessories - The Ambient Air 2000 is standard with mounting eyebolts on top of the unit for ceiling mount. The inlet flange option improves the efficiency of an ambient system as the air is circulated inside of a shop as it provides a larger capture zone for the inlet air and dust to be drawn into the unit. The Wrap Around prefilter option is a good prefilter mounted to the inlet of the unit for larger fibrous dust contaminants. The side exhaust deflector turns the exhaust air from the Ambient Air 2000 unit to either side of the unit to rotate the circulated ambient air in a shop.

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SECTION 3

Installation

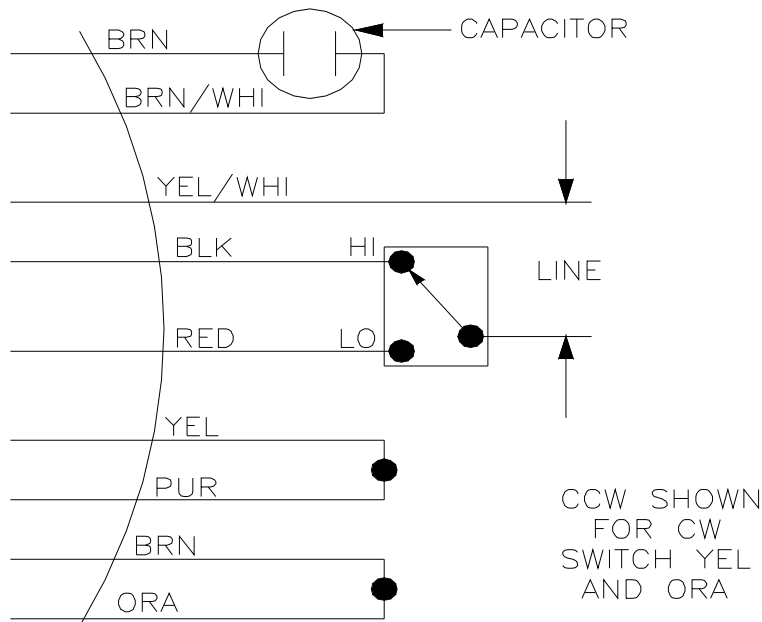
Assembly & Installation Ambient Air 2000 Collector

Standard collectors are shipped horizontally and are ready for hanging to the ceiling using the supplied eye bolts. It is important to set up a good air pattern to circulate the air and the contaminants in the shop. Contact our local rep or AER Control Systems LLC Applications Department for assistance in the proper unit spacing and placement.

Electrical

Single phase 115 V, 60 HZ units are standard and prewired from the factory, included is a two speed switch and a power cord with plug. Plug cord into a 115 volt outlet and turn on the rocker switch for the desired blower speed . The motor is a permanent split capacitor 2 speed electric motor.

See the following electrical schematic for the unit wiring.



WARNING

Permanent damage to the motor will be sustained if connected to voltages other than the normal operating voltage for which the unit is pre-wired.

Ambient Air Filtration Collectors

SECTION 4

Ordering Replacement Parts

Information required for prompt delivery of replacement parts will be:

1. Model and Serial Number
2. Part Number and Description

Contact your local AER Control Systems LLC. Distributor for replacement parts. Use either our toll free telephone number or our website www.aercontrolsystem.com to obtain the nearest AER Control Systems LLC. Distributor's name and telephone number.

1-866-265-2372

<u>DESCRIPTION</u>	<u>PART NUMBER</u>
Minihelic Gauge	1217-01
<u>Filters</u>	
4 x 24 x 24 Multi-Vee PreFilter	1035-05
21 x 24 x 24 Vee-Bag	1039-07
<u>Motor/Blower</u>	
Motor	1020-01
Blower Assembly	1021-01
Capacitator	1248-01
<u>Electrical</u>	
Power Cord	1201-01
Switch	1249-01
<u>Miscellaneous</u>	
Outlet Louvre	1084-01
Door Latches	1063-01

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SECTION 5

Maintenance

Operation & Maintenance

Lubrication or other routine periodic maintenance is not required. All that is needed is an occasional check of fasteners and a general visual check of the unit to make sure that nothing has gone wrong. Periodic replacement of the filters is required when necessary. Dispose of filters in accordance with local standards and procedures for the material collected.

Filter Replacement for Ambient Air 2000 Collector

Disconnect power to the unit by pulling out plug before servicing. Access to Vee-bag filter support loops is accomplished by opening the side access door and removing the bag hanger support bar from two hooks inside the top of the filter cabinet. The support bar will slide out of the loops on the 10 pocket Vee-bag. The multi-vee filter is removed from the inlet of the unit by pulling out the top of the filter and lifting up slightly over a lip on the bottom of the filter cabinet. The eye bolts help to hold the multi-vee inside the filter cabinet. The frame from the Vee-bag will slide out the same way as the multi-vee. Insert the new Vee-bag with loops on the bag going in first. Slide the support bar through all 10 pockets on the Vee-bag and hang the bar on the hooks. Insert the multi-vee with the airflow direction arrow pointing into the cabinet and drop the bottom of the multi-vee in over the lip first. Gently push down on the top corners of the cardboard of the filter to push the filter in past the eyebolts as these help hold the filter in place.

Motor Blower Assembly Replacement

Disconnect power to the unit by pulling out plug before servicing. The motor blower assembly can be replaced and accessed by removing the exhaust outlet panel with louver. The blower is bolted down to mounting rails inside the blower cabinet. Remove these bolts and remove the motor blower assembly. The motor has three mounting legs that bolts the motor to the inlet side of the blower housing. Remove these bolts and loosen the bolt on the hub of the blower wheel to remove the motor from the blower housing and to slide the shaft out of the blower wheel hub. A band or clamp holds the three motor mounting legs onto the motor, loosen the clamp and slide the motor or clamp out to separate them.

SECTION 5

Maintenance continued

A new motor will slide back into the band clamp, tighten clamp and position the three motor mounts. Slide the motor shaft into the blower wheel hub and bolt down motor to the blower housing. Position the blower wheel away from the inlet ring of the blower housing. It is important that the blower wheel does not rub the inlet ring of the blower housing. Manually spin the blower wheel to insure no interference to the blower housing.

Troubleshooting

Motor fails to start	No Power to Unit	Check for proper power at outlet Check for loose wire connections
Low airflow and/or suction	Blower is running backwards	Check blower rotation. Switch the yellow wire if necessary.
	Low airflow and/or suction	Check for blockage, replace or clean filters
Contaminant blowing out of collector exhaust	Damage or hole in filters	Replace filters
Motor/blower noise or vibration	Wheel is rubbing inlet ring	Check for wheel to ring interference

Specifications

The specifications below will give the important information for the Ambient Air 2000.

<u>Nominal CFM</u>	<u>Main Filter Area</u>	<u>Motor HP</u>	<u>Weight</u>
2000	74 sq. ft.	3/4	150 lb.
<u>Filter Sizes (in.)</u>			
Multi-Vee PreFilter		4 x 24 x 24	
FiberGlass Vee-Bag		21 x 24 x 24	
<u>Unit Dimensions (in.)</u>			
Depth		Height	Width
47.00 Long		24.00	24.00



Limited Warranty

AER Control Systems LLC warrants all products sold only to purchasers for use in business or for resale, against defects in workmanship or materials under normal use, for one (1) year after the date of purchase from AER Control Systems LLC. Misapplication of the product, decomposition by reaction or chemical action and wear caused by abrasion will not constitute, or be considered as a defect. Warranty is void if the product has been subject to damage, unreasonable use, neglect, improper service, improper installation, or other causes not arising from defects in original materials or workmanship. Any part that is determined to be defective in material or workmanship and returned to an AER Control Systems LLC distributor or authorized service facility, as AER Control Systems LLC designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at AER Control Systems LLC's option. AER Control Systems LLC shall not be liable for any incidental or consequential cost, expenses, or damages resulting from any failure, defect, or malfunction of this product, liability is expressly disclaimed. AER Control Systems LLC's liability in all events is limited to and will not exceed, the purchase price of the product. Title and risk of loss pass to the buyer on delivery to the common carrier. If a product is damaged in transit, the recipient MUST make note of the damage upon receipt of the product and file a claim with the carrier. AER Control Systems LLC will make a good faith effort for prompt correction or other adjustment, with respect to any product that proves to be defective within the warranty period.

Collection of combustible or explosive materials and collection on flame or spark-generating operation any require specific system configurations (contact AER Control Systems LLC's Applications Engineering Department for questions and/or design assistance). The combined collection of combustible or explosive materials and contaminants from spark or flame generating operations, with a common collector or duct system, is not recommended, unless special design provisions have been made to the system (sparks or flames resulting from such operations may ignite the combustible or explosive material). Under no circumstances should anyone be allowed to discard a lighted cigarette, other burning materials, or refuse into an inlet hood or the duct of the collection system. It is the responsibility of the end user to comply with all applicable national, state, and local fire and safety codes. AER Control Systems LLC's liability for consequential and incidental damage resulting from a fire or explosion is expressly disclaimed.

Installation of suitable overload protection such as a motor starter, according to NEC guidelines, is required. Failure to provide proper overload protection will void warranty coverage on electrical components in the system. (Combination motor starters with fusible disconnect packages are available through your local AER Control Systems LLC representative). To ensure optimum collector performance, always use AER Control Systems LLC replacement filters.