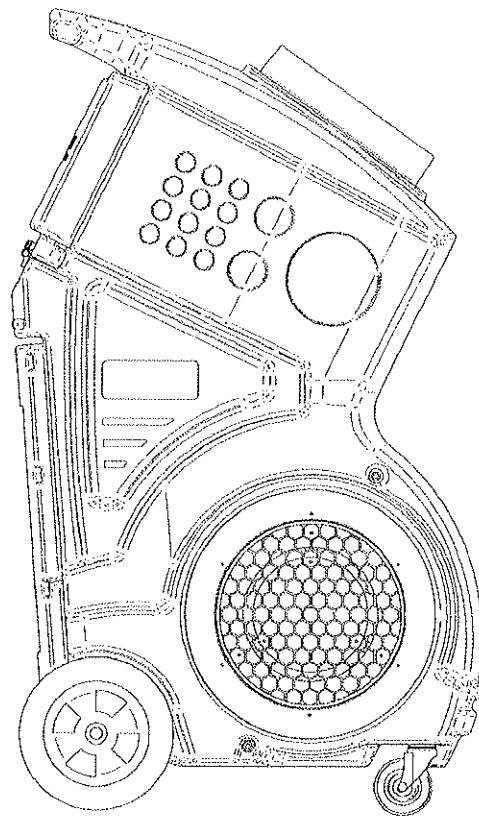




Predator™ 1200 Portable Air Scrubber
Model PRED1200
INSTRUCTION MANUAL



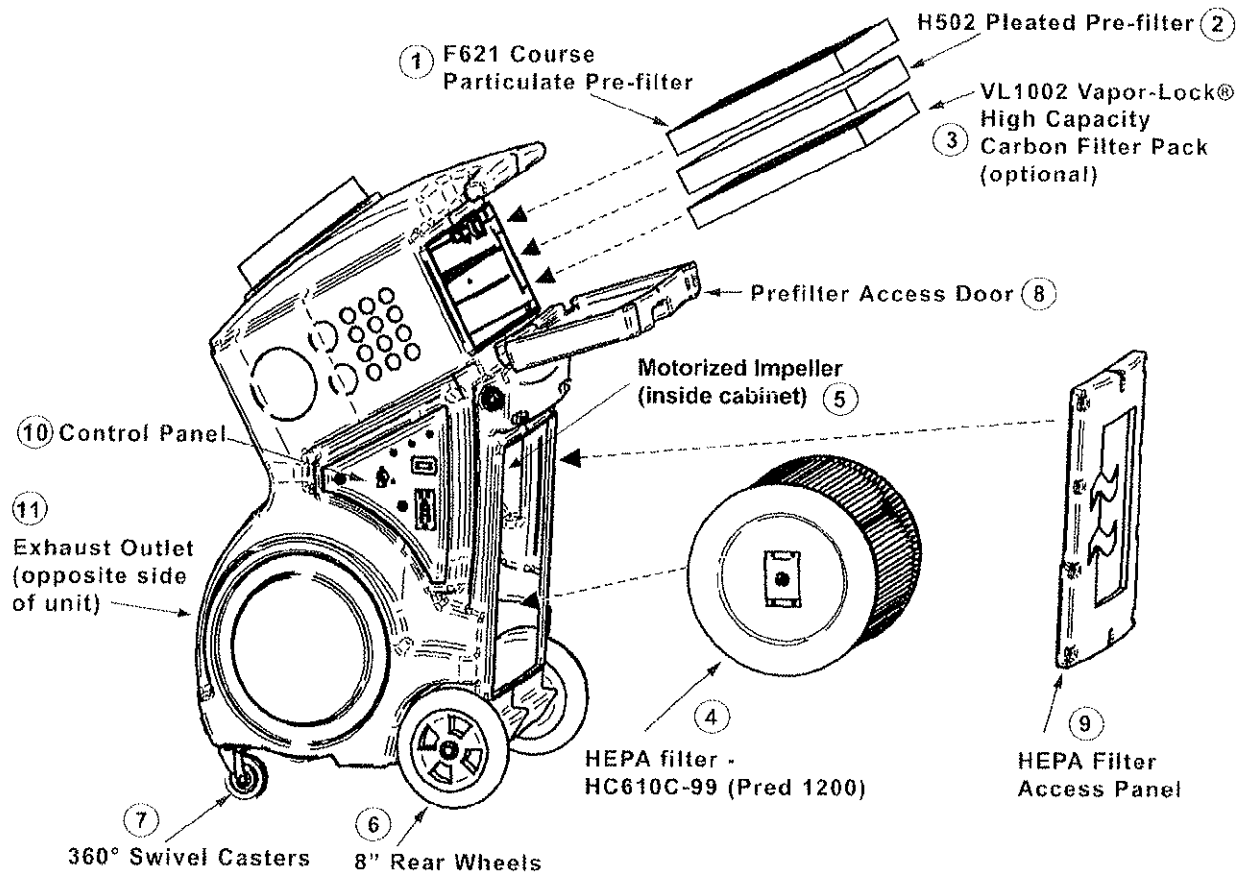
Abatement Technologies, Inc./Remediation Products Division

Abatement Technologies, Inc.
Georgia, USA
800-634-9091

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Predator Portable Air Scrubber Model: Pred1200



- | | |
|---|-----------------------------|
| 1. First Stage 1" Coarse/Particulate Pre-filter
P/N F621) | 5. Motorized Impeller |
| 2. Second Stage 2" Pleated Prefilter
(P/N H502) | 6. 8" Rear Wheels |
| 3. Optional Third Stage 2" High Capacity
Vapor-Lock® Carbon Filter Pack
(P/N VL1002). | 7. 360° Swivel Casters |
| 4. Final Stage 99.97% HEPA Filter
(P/N H610C-99) - PRED1200 | 8. Pre-filter Access Door |
| | 9. HEPA Filter Access Panel |
| | 10. Control Panel |
| | 11. Exhaust Outlet |

Predator Portable Air Scrubber Model: PRED 1200

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Note:

1. Read and understand all operating instructions before using the PRED1200 Portable Air Scrubber.
2. Save this manual for future reference.

This instruction manual provides important information on the use of the Predator Portable Air Scrubber - model PRED 1200. These instructions must be carefully followed in order to operate the unit safely and correctly. If there are any questions regarding the use of the unit, please contact Abatement Technologies, Inc. immediately at 800-634-9091 U.S. or 905-871-4720 Canada.

GENERAL INFORMATION

The PRED 1200 is a multi-use air filtration device capable of filtering most airborne particulates and odors, vapors, and gases (OVG).

Types of contaminants captured by particulate prefilters, HEPA filters, or carbon filters:

- Dirt
- Dust
- Drywall dust
- Saw dust
- Lung-damaging particles
- Metal fumes
- Smoke
- Mold and fungal spores
- Gases
- Volatile Organic Compounds (VOC)
- Unpleasant nuisance odors

The PRED 1200 provides particulate and odor, vapor, gas filtration with final stage filtration through a High Efficiency Particulate Air (HEPA) filter. The PRED 1200 incorporates a series of particulate filters which successively remove larger size to smaller size particles from the air.

An optional (not provided with unit) activated carbon filter can be used to adsorb odors, vapors and gases, and remove particulates. In the process of adsorption, the OVG molecules adhere to the pores of the carbon granules until the all the carbon surface area capacity is utilized.

Effective removal of various OVG relies on the removal of the emission source and the air-scrubbing of the ambient air containing the airborne OVG contaminants. By re-circulating the ambient air within the project area, the air is filtered and returned to mix with the rest of the room air.

The PRED 1200 has four operating speeds and filters between 300 - 1,000 cubic feet of air per minute (CFM). Refer to the chart in the manual entitled "AIRFLOW RATINGS".

As a guide, the following formula may be used when calculating the total air recycling time (one air change) in a closed environment (assuming no intake of additional air):

$$\frac{\text{Volume of enclosed area (cubic feet)}}{\text{CFM (airflow) of PRED 1200}} = \text{Number of minutes required to filter the air in the work area through the PRED 1200 one time.}$$

EXAMPLE:

- Room size of 25'L x 30'W x 10'H = 7,500 cubic feet
- 7,500 cubic feet (volume of work area) ÷ 800 CFM (airflow of PRED 1200 on speed #3) = one air change every 9 min. This equates to 6 air changes per hour.

Effective carbon filtration is dependent upon the amount of contact time that the OVG molecules have with the carbon filter media. As the PRED 1200 draws air through the media, the air is "scrubbed" as these molecules adhere to the surfaces of the carbon granules. Repeated recirculation of air through the unit reduces the OVG concentration. There is no "rule of thumb" for determining the length of time required for an area to be cleaned of ambient odors, vapors, and/or gases. Unknown variables

such as concentration, intake volume of fresh air, temperature, humidity, and other factors prevent the accurate estimation of carbon filter life. For odorous substances, the evidence of a clean, air-scrubbed environment is the absence or greatly reduced presence of the OVG. Air quality testing should be conducted if the OVG source is unknown, the vapors are toxic and/or otherwise hazardous to health, and to confirm that substances are not present at harmful levels.

The PRED 1200 has a built-in inlet and exhaust collar that accept 10" diameter flexible or rigid duct. This may be useful for filtration of particulates and OVG in remote areas or to direct the unit's exhaust to remote areas. For optimum air-scrubbing, operate the PRED 1200 in the center of the open area, allowing for more free-air movement.

The PRED 1200 is engineered for easy transport to the project site and within the project environment.

PRED 1200 TRANSPORT

Note: The PRED 1200 can be transported in the horizontal position. If extremely poor road conditions exist, or excessive shock and vibration are expected, take precautionary measures by padding the unit to provide impact absorption during transport.

Caution: Always use caution when moving the PRED 1200 inside a building or home. The unit weighs 70 pounds. Older structures with weakened floors or staircases may require special considerations for safe transport.

PRED 1200 OPERATION

Note: To maximize the unit's airflow performance, always use the shortest length of flexible duct necessary. This applies to flex duct connected to the inlet. Use of excess flex duct will drastically reduce machine airflow. The flexible duct should be as tight around inlet collar and straight as possible to avoid airflow loss from bends.

In the PRED 1200, each filter contributes to the total filtering efficiency of the system. The incoming air passes through a 1" thick first stage pre-filter. Large particles are retained by this filter and the air then passes through a 2" thick second stage pleated pre-filter which removes finer particulates. The third stage filter slot can be equipped with an optional Vapor-Lock® high capacity carbon filter pack (VL1002) for adsorption of odors, vapors, and gases and removal of particulates. To enhance the OVG removal capability of the unit, the high capacity carbon filter pack can be used in both the second and third stage filter slots. The air then passes through the final stage HEPA filter which captures 99.97% of all particles that are 0.3 microns and larger in size.

ELECTRICAL REQUIREMENTS

1. For maximum safety, the PRED 1200 should always be connected to a three-prong grounded 115 volt/15 amp electrical outlet equipped with a Ground Fault Circuit Interrupter (GFCI) device. A GFCI will trip the circuit and stop the flow of electricity if leakage of current is detected. To reduce risk of fire or electrical shock, do not use the PRED 1200 with any solid state speed control device. Do not use in a cooking area.

Caution: To avoid damage to the PRED 1200 electrical system and power cord, do not connect or disconnect the power cord to an electrical outlet unless the motorized impeller is "OFF".

2. Check to ensure that any circuit to which the unit is connected is protected by a 15 ampere circuit breaker.

3. All electrical equipment used on the job must be in good condition and properly grounded. Check all outlets, wiring, extension cords, and the ground pin on plugs.

4. Extension cords used for the PRED 1200 must be the heavy duty No. 14/3 AWG industrial grade 3-wire type, in good condition and in continuous lengths (no splicing). Power cords should not exceed a total of 50' in length.

Caution: The PRED 1200 requires a minimum of 110 volts to operate properly. Make certain that any extension cords used do not reduce power to the machine to less than 110 volts. Use of a voltmeter to confirm adequate voltage is recommended.

5. Due to momentary start-up current surge, the unit requires a 15 amp circuit that is free of other loads.

REQUIREMENTS FOR SAFE OPERATION

1. Never allow unauthorized individuals or children to operate the unit at any time.
2. Abatement Technologies urges anyone operating the PRED 1200 to wear the proper personal protective equipment in accordance with federal, state and employer regulations.
3. Check condition of power cord(s) before using them. Damaged cords can cause fatal electrical shock and/or motor failure.
4. As with any piece of electrical equipment, be sure that the unit's speed control switch is "OFF" prior to connecting the power cord to an electrical outlet. Failure to do so will cause "arcing" and damage unit. Never pull on an energized power cord to disconnect it from an outlet.
5. Do not touch the electrical outlet or power cord(s) with wet hands or while standing on a wet or damp surface.
6. Power cord(s) should never be exposed to water, heat, sharp, or abrasive objects; in addition, they should never be kinked or crushed.
7. Never pull the unit by the power cord.
8. Avoid running over power cords with utility equipment and vehicles.
9. Avoid tightly wrapping the cords to prevent kinking of the internal wires.
10. Always replace damaged cords immediately.

Note: The PRED 1200 is designed for indoor use only.

Warning: To reduce risk of electrical shock, do not expose this unit to water or rain.

Warning: Risk of electrical shock! Can cause injury or death! Turn unit "OFF" and disconnect power supply cord before replacing the HEPA filter or servicing unit.

CAUTION: For General Ventilating Use Only. Do not use to exhaust Hazardous or Explosive Materials and Vapors.

Warning: Any atmosphere that is combustible, flammable, explosive, oxygen deficient, and/or contains odors, vapors, gases or particulates that exceed permissible exposure levels should be evaluated by a certified industrial hygiene professional before being occupied. Such atmospheres may require the use of intrinsically safe equipment, specific engineering controls, and personal protective equipment in accordance with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Canadian Standards Association (CSA), and other federal, state, provincial and local regulations.

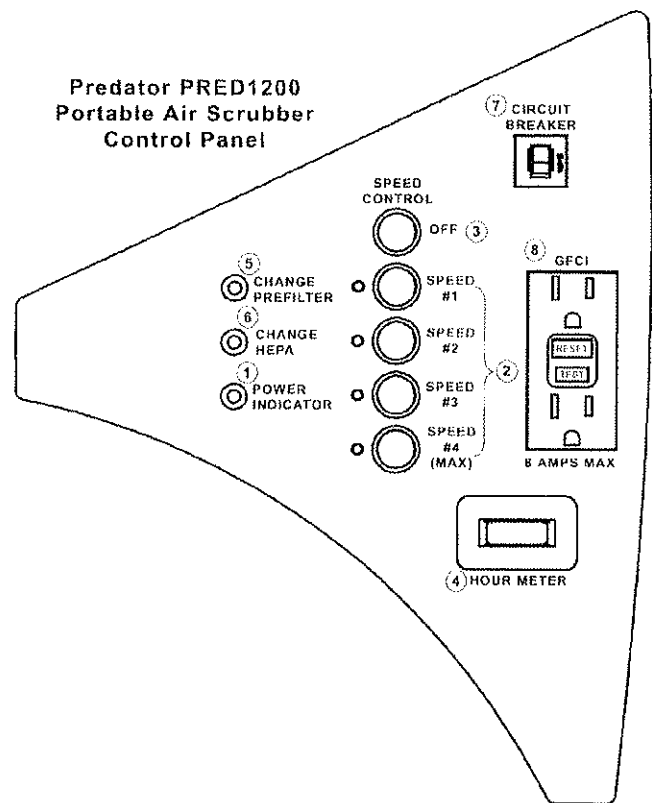
Warning: This equipment is not classified as "intrinsically safe" and should not be used in the following potentially hazardous locations as defined by the Underwriters Laboratories: Class I Division 1, Class I Division 2, Class I Zone 0, Class I Zone 1, Class I Zone 2, Class II Division 1, Class II Division 2, Class III Division 1, Class III Division 2. Refer to the UL web site: <http://www.ul.com/hazloc/define.htm>.

BEFORE OPERATING THE UNIT NOTE THE FOLLOWING:

Inspect and tighten any HEPA filter retaining bolts that may have loosened during transportation. Inspect each filter for any material or structural damage prior to each use. Replace any damaged filters before operating the PRED 1200. When removing any filters prior to operation, always put them back in place with air flow indicator on filter housing oriented in the proper direction (if applicable).

PRED 1200 CONTROL PANEL

1. **Power Indicator** - Green light that indicates unit is connected to power source.
2. **Speed Control Buttons** – There are 4 buttons, ranging from “Speed One” to “Max”, that control the speed of the motorized impeller. The unit can be started on any speed.
3. **OFF Button** - Turns power to the motorized impeller “OFF”.
4. **Hour Meter** - Provides a count of the total operating hours.
5. **Filter Change Indicator - Pre-filters** – Red light that indicates excessive restriction on intake or loading of the pre-filter(s) and that filter change procedures should be followed.
6. **Filter Change Indicator - HEPA** - Red light that indicates loading of the HEPA filter and that filter change procedures should be followed.
7. **Circuit Breaker** - 12 amp circuit breaker that provides protection for the unit's electrical components.
8. **GFCI Receptacle** - Electrical safety device that will trip and stop the flow of electricity if leakage of current is detected. The PRED 1200 can supply a total of 8 amps of electrical power for additional equipment that is connected to the GFCI receptacle. This feature allows the user to “daisy chain” up to 3 PRED1200 units on one 15A circuit.



Note: If the equipment connected to the GFCI receptacle draws more than a total of 8 amps, the circuit breaker on the control panel and/or the building breaker will trip. This condition can be remedied only by reducing the total amperage draw.

TO START UNIT

1. Plug power cord into a 115 volt supply circuit. The Power Indicator will illuminate, indicating that the unit is connected to a power supply.
2. Select the desired speed setting and press the corresponding Speed Control Button.
Note: Refer to the chart in this instruction manual entitled “AIRFLOW RATINGS” that lists the airflows corresponding to the various speeds for the PRED 1200.

FILTER CHANGE INDICATOR

“Change Pre-filter” light “ON” indicates one or more of the following:

1. Loaded pre-filter(s). Refer to filter change procedures.
2. Restrictions on air intake. Refer to Troubleshooting Guide.

“Change HEPA ” light “ON” indicates the following:

1. Loaded HEPA filter. Refer to filter change procedures.

FILTER REPLACEMENT

Note: Personnel responsible for changing filters, servicing units or relocating units within the facility are urged to wear the proper personal protective equipment and follow safe work practices in accordance with employer, state, provincial and federal regulations.

System air flow reduction is generally the result of filter loading, blockage of the unit's inlet or use of excessive lengths of flex duct connected to the inlet.

The size and concentration of airborne contaminants, temperature and humidity conditions, and duration of use determine how often filters need replacement. If the Filter Change Indicator(s) on the control panel illuminate, this indicates one or more of the following: (1) pre-filter(s) are loaded, (2) the inlet is obstructed, (3) the flex duct, if attached to inlet, is too long or has too many bends, and (4) the HEPA filter is loaded.

The method of determining when to replace the optional activated carbon filter is somewhat subjective. As the odor, vapor, and/or gas filtration capacity decreases, the user will begin to sense a slight odor or taste of the contaminant, indicating that the filter should be replaced.

Note: The filters are not reusable, therefore, do not attempt to clean and reuse them.

Caution: Abatement Technologies PRED1200 Portable Air Scrubber units are designed to meet or exceed standards for high efficiency air filtration equipment. Use only Abatement Technologies parts, including replacement filters. Use of non-Abatement Technologies parts and filters voids the product warranty and all performance claims.

Warning: Always turn the PRED1200 "OFF" and disconnect the power supply before replacing the filters, HEPA filter, or servicing the unit.

FILTER CHANGE PROCEDURE

To Change the First Stage Filter:

1. With the unit operating, turn the latch on the pre-filter access door counterclockwise (approx ½ turn), and open the door.
2. Remove the first stage filter and replace it with a new one.
3. Close the door and lock it in position by turning the latch clockwise. Make sure the door is completely closed before closing latch.
4. If the "Change Pre-filter" light remains "ON" after changing the first stage filter, the second stage filter should be replaced.

To Change the Second Stage Filter:

1. Open the pre-filter access door.
2. Remove the second stage filter and replace it with a new one.
3. Close the door and lock it in position.
4. If the "Change Pre-filter" light remains "ON" after changing the second stage filter, the optional third stage filter should be replaced. The light would remain "ON" only if the optional third filter is in use and has become loaded.

To Change the Optional Third Stage Filter:

1. Open the pre-filter access door.
2. Remove the third stage filter and replace it with a new one.
3. Close the door and lock it in position.

Note: If an optional activated carbon filter is being used, be sure to remove it from its poly bag before installing it in the unit. Most activated carbon filters are packaged in poly bags to preserve the integrity of the carbon granules.

To Change the HEPA Filter:

1. Turn the unit "OFF" and disconnect the power cord from the electrical outlet.
2. Remove the screws that hold the HEPA filter access panel in place and set the panel aside.
3. Remove the wing nuts that secure the HEPA filter retaining bracket in place, slide the bracket off the long filter retaining bolts and remove the HEPA filter. The HEPA filter for the PRED 1200 (part number H610C-99) should be disposed of in accordance with federal, state, provincial, local, and facility regulations.
4. Carefully place the HEPA filter into the cabinet, making sure that the foam seal on the new filter is facing the exhaust outlet. The filter should be positioned so that it rests on the curved section of the cabinet base, which is just behind the long, lower filter retaining bolt.
5. Place the HEPA filter retaining bracket over the retaining bolts and secure it in place with the wing nuts. Do not over-tighten the wing nuts.
6. Re-attach the HEPA filter access panel and secure it to the cabinet with its screws.

Warning: Use only Abatement Technologies prefilters, HEPA filters, and replacement parts. Substitute parts void the warranty, jeopardize worker and environmental safety, and adversely effect engineered performance levels.

PRED1200 SPECIFICATIONS

FEATURE	PRED1200
Net weight w/filters:	70 lbs.
Shipping weight:	95 lbs.
Dimensions (LxWxH):	22"L x 24"W x 42"H
Power supply requirements:	115 volts, 15 amps
Normal operating amps:	3.5 amps or less
Motorized Impeller:	400 watt motorized impeller with thermal overload protection, auto re-set, 60 Hz, single phase.
Circuit Breaker:	12 amp
Operational sound level:	62 - 67 dBA, reading taken at 5 feet
Cabinet material:	UL94HB flame retardant resin with EPA-Registered microbial inhibitor.
Transportability:	2 each 8" solid, non-marking rubber wheels in rear and 2 ea. 360° swivel casters in front.
Prefilter access:	Easy-operating hinged door is secured by rotating latch to protect against filter by-pass.
First stage prefilter:	1" coarse particulate pre-filter
Second stage prefilter:	2" pleated particulate pre-filter
Optional third stage filter:	2" high capacity carbon filter pack
HEPA filter:	DOP tested and certified to an efficiency of 99.97% or higher against 0.3 micron size particles.

Note: Specifications subject to change without notice.

AIRFLOW RATINGS

	Speed 1	Speed 2	Speed 3	Speed 4
Predator 1200	300 CFM	600 CFM	800 CFM	1,000 CFM

Note: Airflow ratings are based on peak airflow conditions in the recirculation mode, at 120 VAC input voltage, with clean filters and no external attachments unless otherwise specified. Filter loading and/or losses from inlet or outlet ducting, collars or lower input voltage can significantly reduce airflow. These ratings are provided for air changes per hour (ACH) estimates only. Actual airflow can vary plus or minus 5% due to manufacturing tolerances for the motorized impellers and HEPA filters.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
NO RESPONSE WHEN THE POWER IS TURNED "ON"	POWER CORD UNPLUGGED	PLUG POWER CORD FIRMLY INTO ELECTRICAL OUTLET IN WALL.
	DEFECTIVE POWER CORD.	CHECK ALL CONNECTIONS AND CONDITION OF ALL CORDS. DO NOT OPERATE WITH DAMAGED POWER CORD(S).
	TRIPPED CIRCUIT BREAKER.	RESET BREAKER FOR BUILDING. RESET 12 AMP BREAKER ON CONTROL PANEL.
	TRIPPED GROUND FAULT CIRCUIT INTERRUPTER.	RESET GFCI ON CONTROL PANEL AND/OR AT POWER SOURCE.
THERMAL OVERLOAD ON THE CONTROLLER HAS TRIPPED.	TURN UNIT "OFF", WAIT 30 MINUTES AND RESTART UNIT.	
CIRCUIT BREAKER ON CONTROL PANEL OR BUILDING "TRIPS".	OVERLOADED CIRCUIT	UNPLUG ANY ADDITIONAL EQUIPMENT CONNECTED TO THE GFCI RECEPTACLE. RESET CIRCUIT BREAKER FOR BUILDING.
UNIT RUMBLES WHEN ATTEMPTING TO START	LOW VOLTAGE OR LIMITED AMPERAGE IS SUPPLIED.	CHECK POWER SUPPLY - UNIT REQUIRES 115V 15 AMP CIRCUIT WHICH IS LOAD FREE.
	EXTENSION CORD IS TOO LONG OR OF TOO HIGH GAUGE.	EXTENSION CORD(S) SHOULD NOT EXCEED A TOTAL OF 50 FT IN LENGTH. USE GROUNDED 3-WIRE 14 GAUGE CORD(S).
	OTHER MACHINES OR LOADS ON SAME CORD OR CIRCUIT.	REMOVE OTHER LOADS FROM SAME CIRCUIT.
FILTER CHANGE INDICATORS	LOADED FILTERS.	CHANGE IN ACCORDANCE WITH OPERATING INSTRUCTIONS.
	EXCESSIVE RESTRICTIONS ON INTAKE OR EXHAUST	REDUCE BENDS, LENGTH OF FLEX DUCT OR ELIMINATE RESTRICTIONS.
	CARBON FILTER PACK HAS NOT BEEN REMOVED FROM POLYBAG.	REMOVE CARBON FILTER PACK FROM POLYBAG.

Note: If the unit does not start or malfunctions after carefully following the **Troubleshooting Guide**, call Abatement Technologies at 800-634-9091 for assistance.

COMPONENT REPLACEMENT

Caution: Always turn unit "OFF" and disconnect it from the power source before removing the control panel, replacing the HEPA filter, or servicing the unit. Keep clear of motorized impellers at all times.

Occasionally a defective component will cause the unit to operate improperly or not at all. Any electrical component can fail. Refer to the Wiring Diagrams and Wiring Schematics to diagnose the failure of any component. Diagnostics should only be performed by a technician qualified to service electrical equipment.

CARE OF THE UNIT

The units are plastic and should be cleaned with a damp cloth or a water-based cleaner/sanitizer. Do not use harsh chemicals, solvents or detergents to clean the units.

Warning: Keep electrical components dry as their exposure to liquids poses a safety hazard and can damage components.

CERTIFICATION OF ROOM AIR FILTRATION UNITS

The Abatement Technologies room air filtration units have been tested by Intertek Testing Services (ITS) and are ETL and ETL (Canada) listed.

ITS is accredited by the U.S. Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL).

LIMITED WARRANTY

Abatement Technologies, Inc (ATI) warrants that goods sold to the original user shall be free from defects in material and workmanship for a period of 1 year, except such as are commercially acceptable. This warranty does not include useful filter life. **ATI does not warrant that the goods sold are merchantable or fit for any particular purpose. ATI makes no warranties other than as stated in this paragraph. All other warranties, guaranties, or representations, express or implied, by operation of law or otherwise, are expressly disclaimed.** Goods found by ATI to be defective or not to conform to specification shall upon return be replaced or repaired by ATI without any additional charges, or, at ATI's option, ATI may refund the purchase price of such goods. ATI will pay return transportation charges on returned goods not exceeding the transportation charges applicable to shipment from original destination unless the returned goods are free from defect and conform to specifications. Returned goods which are found by ATI to be free from defect and to conform to specifications shall be held for Purchaser's shipping instructions, which instructions Purchaser shall furnish promptly upon request. **ATI's liability shall in no event extend beyond replacement, repair or refund of the purchase price and ATI shall not be liable under any circumstances for special, contingent or consequential damages, nor for loss, damages, or expenses directly or indirectly arising from the use of the goods, including without limitation, warehousing, labor, handling and service charges, die, equipment, or machine breakage, nor for costs, lost profits or loss of good will. The use of substitute, non-ATI parts and/or filters, in any ATI product, voids all warranties and performance claims. The remedies set forth herein are exclusive.**

For warranty information and assistance contact Abatement Technologies' Customer Service Department at 800-634-9091 (U.S.) or 905-871-4720 (Canada.)

Abatement Technologies' PRED1200 high-efficiency air filtration units are originally equipped with true HEPA (High Efficiency Particulate Air) filters designed to maximize the performance of the equipment, and to meet the following industry standards:

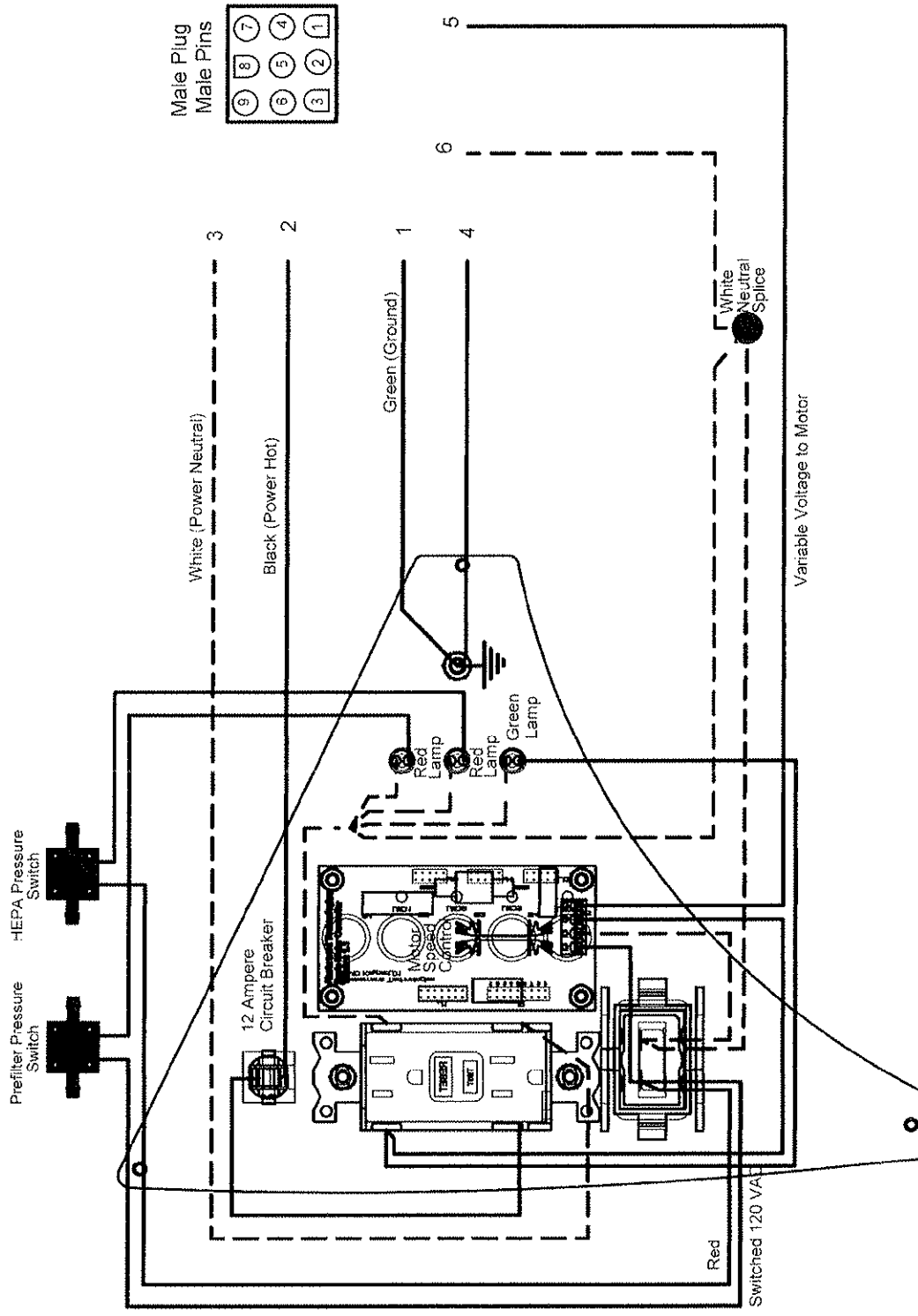
Institute of Environment Sciences and Technology
IEST-RP-CC001.3 (Type A HEPA and ULPA Filters)
IEST-RP-CC021.1 (Testing HEPA and ULPA Filter Media)

Underwriters Laboratories
UL900, Class II (Flammability Specifications)

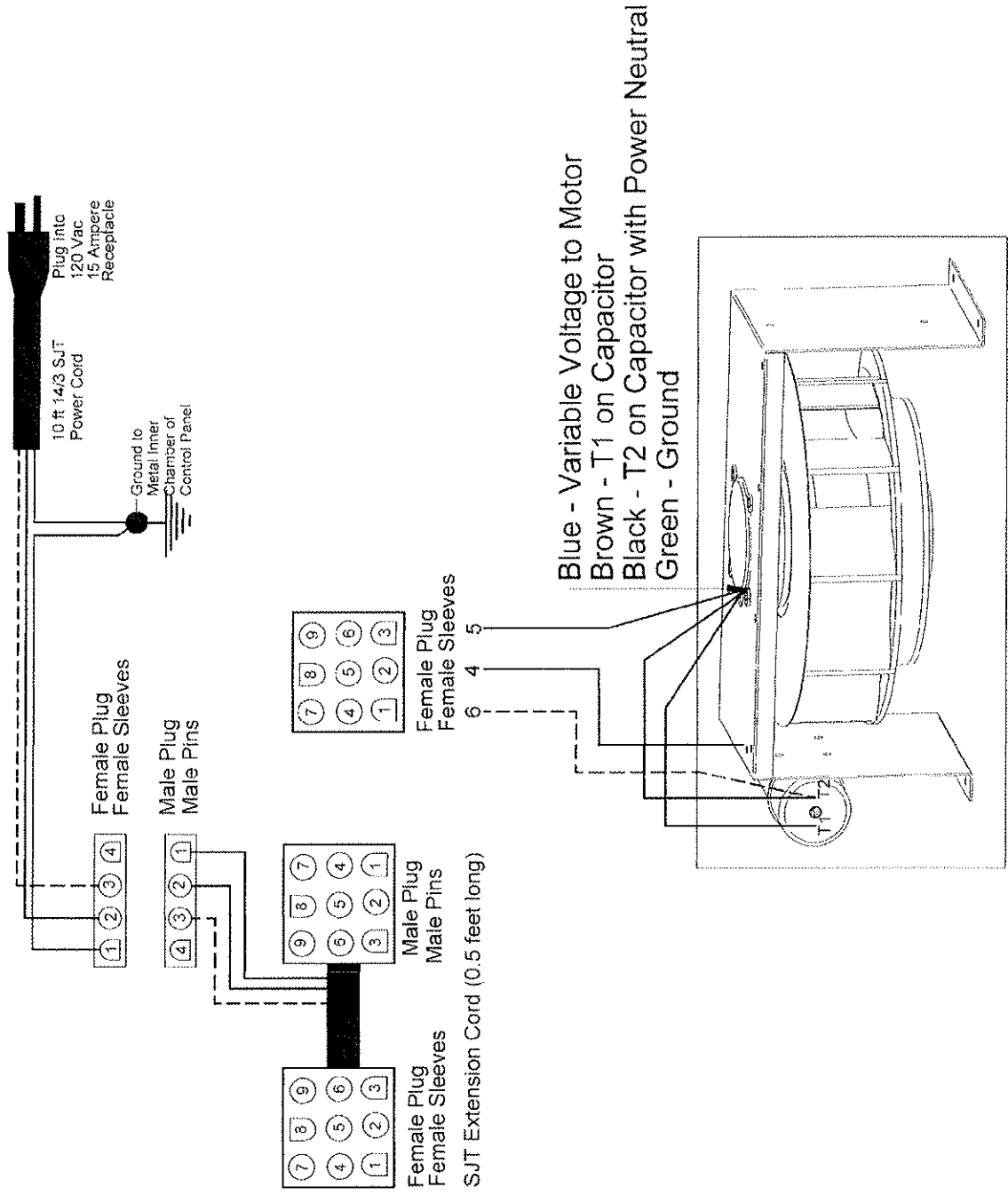
100% Efficiency Tested

Abatement Technologies HEPA filters are individually tested and certified to ensure that the completed filter provides an overall minimum efficiency of 99.97% when challenged by a thermally generated test aerosol, 0.3-microns in size, in accordance with IEST-RP-CC001.3.

Predator 1200 Control Panel Wiring Diagram



Predator 1200 Motorized Impeller Wiring Diagram



Predator 1200 Wiring Schematic

