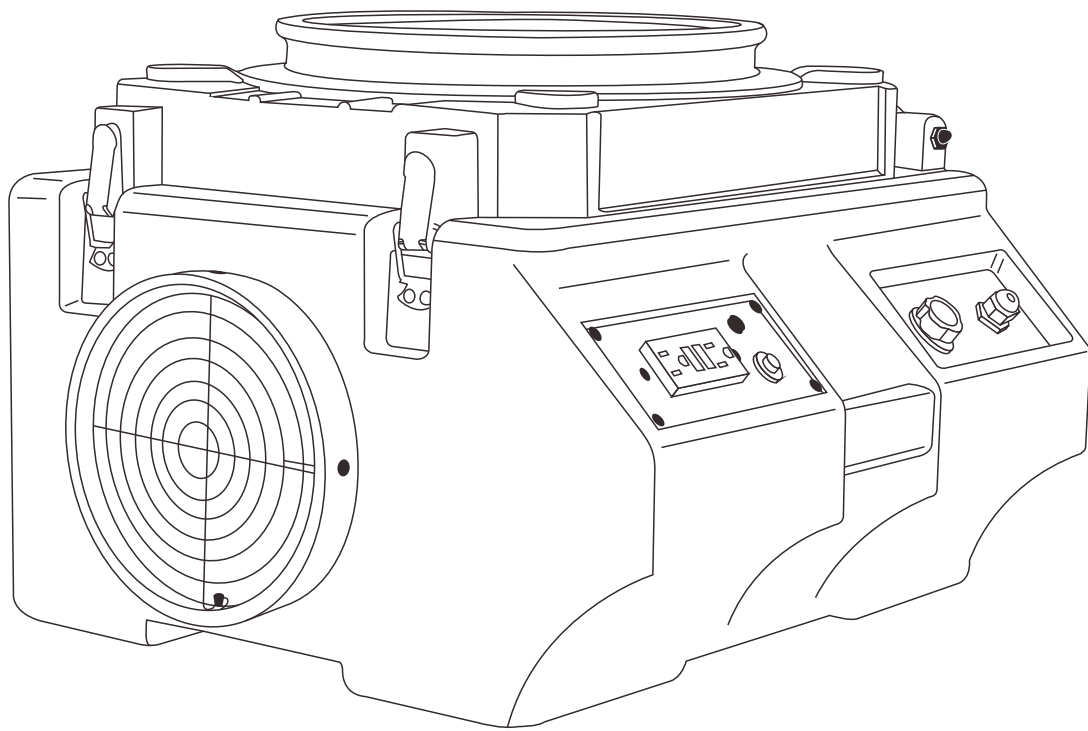


# Owner's Manual-AIR SCRUBBER



## INSTRUCTION MANUAL

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

# Read and Save These Instructions

The Air Scrubber is the most compact, portable unit in our popular line of high performance airscrubbers. The Air Scrubber features a 21.7" x 20.1" footprint and stands only 15.4" tall. Weighing less than 25.4 lbs and featuring a molded handle and stackable design, the Air Scrubber is easy to carry, transport, and store.

For maximum flexibility, the Air Scrubber features variable airflow and can be operated vertically or horizontally. The Air Scrubber is designed to accept 12" inlet flex duct and 10" lay flat outlet duct for a variety of operating set-up options.

The Air Scrubber delivers a maximum 355 CFM of HEPA filtered air, while drawing less than 0.29 amps of power. This makes the Air Scrubber perfect for a variety of remediation projects where space and power are at a premium. A single Air Scrubber is capable of providing 4 air changes per hour (the recommended minimum) on a 7500 cubic foot room (more than a 30' x 30'x 8').

The Air Scrubber's 2-stage filter design - with documented true HEPA filtration performance - will remove hazardous particles from the air and, with the addition of an optional carbon/potassium permanganate filter, will adsorb a wide range of odors and gases.

## **The Air Scrubber**

- **Low amps:0.29amps**
- **Compact design**
- **Variable speed flow**
- **Multiple ducting options**
- **Tough, plastic cabinet**
- **Optional carbon filter**
- **Quiet, 50db**

# Specifications

Part No. AS110003

Power 240 Vac, 0.29 amps

Blower 355 CFM

Filters: 1st stage 1"Pleated Media, 11.2" x 11.2" (optional) 1" Carbon and Potassium Permanganate

2nd stage 2.5" Pleated HEPA 11.8" x 11.8"

Warranty One Year, 100% Parts and Labor

Dimensions Width 21.7"

Height 15.4"

Depth 20.1"

Weight 25.4 lbs.

## Important Safety Instructions

### CAUTION

***CAUTION: Risk of electric shock. Can cause injury or death. To reduce the risk of electric shock:***

Do not expose to standing water or rain

Connect to AU outlet

Do not use an extension cord

Unplug fan before servicing or changing filters.

Do not block air intake or outlet. One foot minimum distance to obstructions.

Indoor use only

Do not use as stool or bench

Do not operate with damaged cord or plug.

Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

# Operation

## Transporting the Air Scrubber

The Air Scrubber should be transported vertically or horizontally on the appropriate feet located on the bottom of the unit or opposite the handle

## Electrical Requirements

The Air Scrubber can be plugged into a grounded 9 Amp circuit. It draws about 0.29 Amps with clean filters and no ducting. The amp draw will decrease slightly with added ducting and as the filters load with particulate. Due to the presence of AU Outlet receptacle, the Pro model must be plugged directly into a wall outlet. No extension cords should be used.

## *Air Ducting*

### A Inlet Ducting

Occasionally the area to be filtered is difficult to access and/ or the unit cannot be located in the area. In such cases, the air can be ducted to the unit's inlet. A round 12" diameter flexible duct can be attached to the unit inlet. It connects by placing the wire in the duct over the duct collar lip at one location and working it over the lip gradually. It may be removed after use for easier transport and storage. Flexible 12" duct is available from us.

### B Outlet Ducting

A detachable trapezoid shaped exhaust ring is supplied that will allow 10" round lay-flat plastic duct to be attached to the Air Scrubber outlet. Lay-flat plastic ducting is available from us.

To attach ducting to the collar, remove the ring from the unit by pressing release tab at the top of the grill. Put the plastic duct end through the inside of the ring. Roll the duct end outward so that it over-laps the outside of the ring. Clip the ring back onto the exhaust grill.

### C Negative Air Ducting

The Air Scrubber can be used to filter and exhaust air from a space.

When exhausting to outside the space, the space will be under a slight negative pressure.

This will help prevent airborne particles from leaving the space, because the negative pressure will draw air in through openings in the space's exterior surfaces.

# Operation

## CAUTION

**CAUTION:** *Exhausting too much air from a space with open combustion devices (e.g. furnace, fireplace or water heater) can cause those devices to backdraft. This can contaminate the space with potentially fatal gases.*

In such cases, the Air Scrubber must be used in one of the following three ways:

- A. As a filtering unit only. Exhausting no air from the space and thus causing no negative pressure or backdrafting.
- B. Exhausting a very limited amount of air which does not cause backdrafting. In case B, the open combustion devices must be thoroughly checked to guarantee that they do not backdraft while the Air Scrubber is running.
- C. Direct the outlet duct from the Air Scrubber to the room with the open combustion device(s). This will positively pressurize the room with HEPA filtered air, thus preventing backdrafting. As in case B, those combustion devices must be checked after the Air Scrubber is running to guarantee that they are not backdrafting.

## Power/Speed Control

The power/speed switch is located on the control panel. When turned on to any speed, it powers the impeller fan.

Occasionally the impeller fan may not start on low speed. If this occurs, rotate the speed control to high speed until the impeller fan starts, then adjust it to a lower speed.

## CAUTION

**CAUTION:** *Do not remove HEPA filter with the unit on. Removing the top and filters while running will expose the dangerous rotating impeller fan. Disconnect the appliance before changing filters.*

## Resettable Circuit Breaker

The 9 AMP thermal response resettable circuit breaker protects the unit and devices connected to its duplex AU outlet.

The circuit breaker is designed to sense the total current draw through the circuit. The circuit breaker "trips" when more than 9 amps of electrical current are drawn through the device's power cord. Should an over-current condition occur, the Air Scrubber on-board circuit breaker prevents nuisance visits to a remote power junction box.

## IMPORTANT

**IMPORTANT:** *Total amperage of the GuardianR plus all devices plugged into the receptacle must not exceed 9 amps. The circuit breaker will not allow for loads in excess of 9 amps, although there is a time delay before the overloaded circuit is broken.*

## IMPORTANT

**IMPORTANT:** *When the GuardianR is plugged into a standard "powered" wall outlet the GuardianR's duplex outlet is electrically "HOT" and AC voltage is present.*

# Maintenance

## **WARNING**

*Use extreme caution when changing the HEPA filter as hazardous material could be trapped in the media. Always make sure to dispose of filters in the appropriate way. If you are unsure of how to safely dispose of any filter-consult an industrial hygienist to ensure that all hazardous materials are contained and disposed of properly.*

## Air Filters

The standard Air Scrubber HEPA System is equipped with two filters that progressively filter out smaller particles. An optional activated carbon/potassium permanganate filter can be also added. These filters must be checked regularly. Operating the unit with dirty filters will reduce the airflow, but will do no harm to the unit. The unit can be run indefinitely with dirty filters.

The two standard filters used are listed below (as installed in the unit from top to bottom):

- A. 25 to 30% efficient (per ASHRAE 52.1-1992), MERV-7, pleated fabric pre-filter.
- B. 99.97% DOP efficient HEPA filter.

## ***Filter replacement***

### A

When the amber "filter change light" illuminates. It may be time to replace one or both filters. To check airflow accurately, an airflow meter or anemometer must be used:

- When the filter change light illuminates; remove all ducting and run on high speed. If the filter light remains lit; replace the pre-filter and run on high again. If the light remains; it is time to replace the HEPA filter for full 355 CFM performance.

Airflow on high speed with all filters clean and no ducting is slightly over 355 CFM. The unit can be run with very dirty filters and virtually no flow without harming the unit. The operator's decision to change filters should be based on filter cost vs. the unit's filtering effectiveness. If airflow is 250 CFM vs. 355 CFM, the unit will filter particles from a space at half the rate. The operator must judge if that is acceptable.

If the operator determines the filters should be changed due to low airflow, it is most economical to change them in the following order:

Change the pre-filter (top) first. This is the least expensive filter. Recheck the airflow. If the airflow is acceptable, no other filters need to be changed.

If the airflow is still too low, the HEPA filter must be changed. To remove the HEPA filter, follow these steps:

1. Loosen the eight screws one revolution
2. Rotate all eight clips out of the way.
3. Remove old filter.
4. Installing the new filter is the reverse of these instructions

# Maintenance

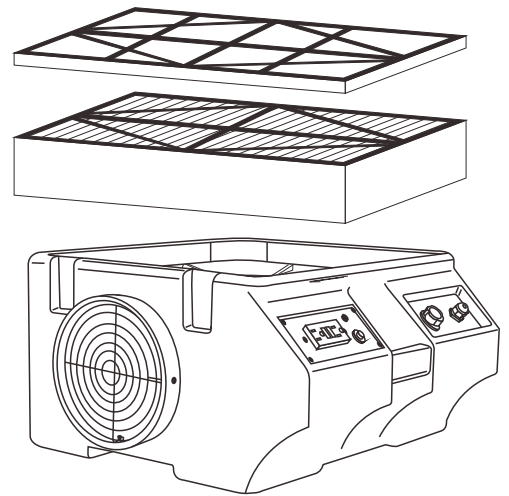
## B Optional Activated Carbon/Potassium Permanganate

### Filters

Optional gas phase filters are available from Therma- Stor. They use a blend of activated carbon and potassium permanganate. This blend removes the vast majority of gaseous contaminants encountered in most filtering applications. The activated carbon removes the heavier volatile organics while the potassium permanganate removes lower molecular weight contaminants. This is well suited to the smoke odors present after fire damage.

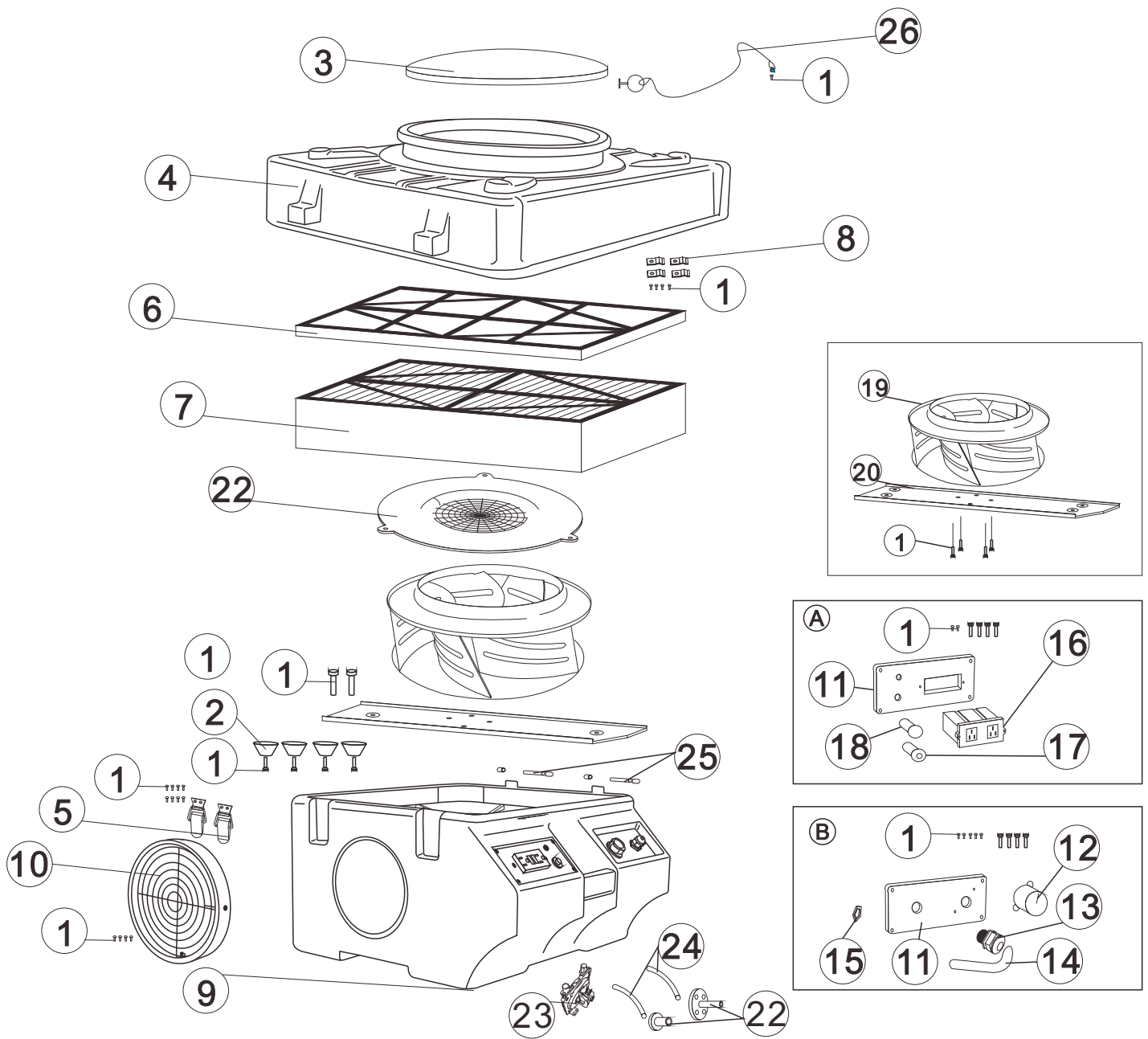
The life of the media blend depends upon both the hours used and the contamination level. Another advantage of the blended media versus activated carbon only is that part of the blend changes color as it loads up with contaminants. It starts out black, then turns pink, then brown, and finally white. It is best changed when it passes the brown stage and begins to turn white. It has lost most of its effectiveness at that point.

The filter is the same size as the pleated fabric filter. Install it in place of the pleated fabric filter.



# Warranty

A warranty certificate has been enclosed with this unit. Read it before any repair is initiated. If a warranty repair is required, email us first for warranty claim authorization and technical assistance.



ref#	description	qty	ref#	description	qty
1	Screw	42	14	Power cord	1
2	Rubber foot	4	15	Nut,hex	1
3	Removable Foam Cap	1	16	AU outlet,female plug	1
4	Upper half shell	1	17	Circuit breaker	1
5	Buckle	2	18	Filter net plug alarm lamp	1
6	Primary efficiency filter	1	19	AC motor AND Fan blade	1
7	High efficiency filter	1	20	Fixed plate	1
8	Fixed buckle	4	21	Larger & Wider air outlet	1
9	Lower half shell	1	22	Pipe joint	2
10	Larger & Wider air outlet	1	23	On/off rocker switch,blk	1
11	Switch panel/AU outlet panel	1	24	Pressure probe	2
12	On/off rocker switch,blk	1	25	Loose leaf hinge	2
13	Strain relief-lq tight	1	26	Cover rope	1