



POWER EQUIPMENT

COMMERCIAL AIR SCRUBBER

MODEL: CAS750



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 aircleaners. The Air Scrubber features a 56 x 60cm footprint and stands only 35cm tall. Weighing less than 15.5kgs 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 40cm inlet flex duct and 25cm lay flat outlet duct for a variety of operating set-up options.

The Air Scrubber delivers a maximum 850 m³/h of HEPA filtered air, while drawing less than two 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 212 cubic meter room (more than a 10 x 10 x 2.5m).

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

- **Less than 2 amps**
- **Compact design**
- **Variable speed flow**
- **Multiple ducting options**
- **Tough, plastic cabinet**
- **Optional carbon filter**

Specifications

Part No. CAS750

Power 220-240 Vac, 1.9 amps

Blower 850 m3/h

Filters: 1st stage 2.5cm Pleated Media, 45 x 45 (optional) 2.5cm Carbon and Potassium Permanganate

2nd stage 6.3cm Pleated HEPA 45 x 45cm

Warranty One Year, 100% Parts and Labor

Dimensions Width 56cm

Height 35cm

Depth 60cm

Weight 15.5KGS.

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 GFCI 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 10 Amp circuit. It draws about 2 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 GFCI 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 40cm 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 over it over the lip gradually. It may be removed after use for easier transport and storage. Flexible 40cm duct is available from.

B Outlet Ducting

A detachable trapazoid shaped exhaust ring is supplied that will allow 25cm round lay-flat plastic duct to be attached to the Air Scrubber outlet. Lay-flat plastic ducting is available from

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.

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 850 m³/h performance.

Airflow on high speed with all filters clean and no ducting is slightly over 850 m³/h. 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 425 m³/h vs. 850 m³/h, 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

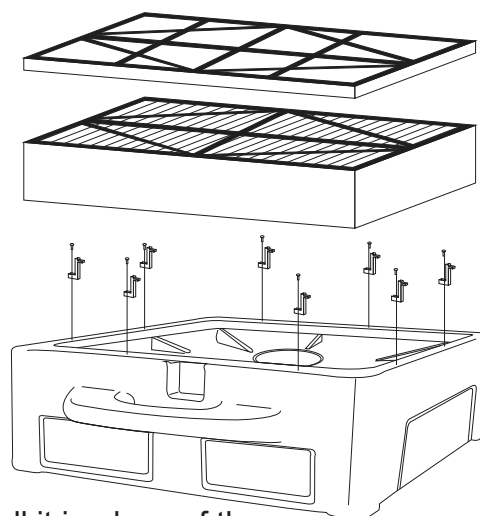
Filters

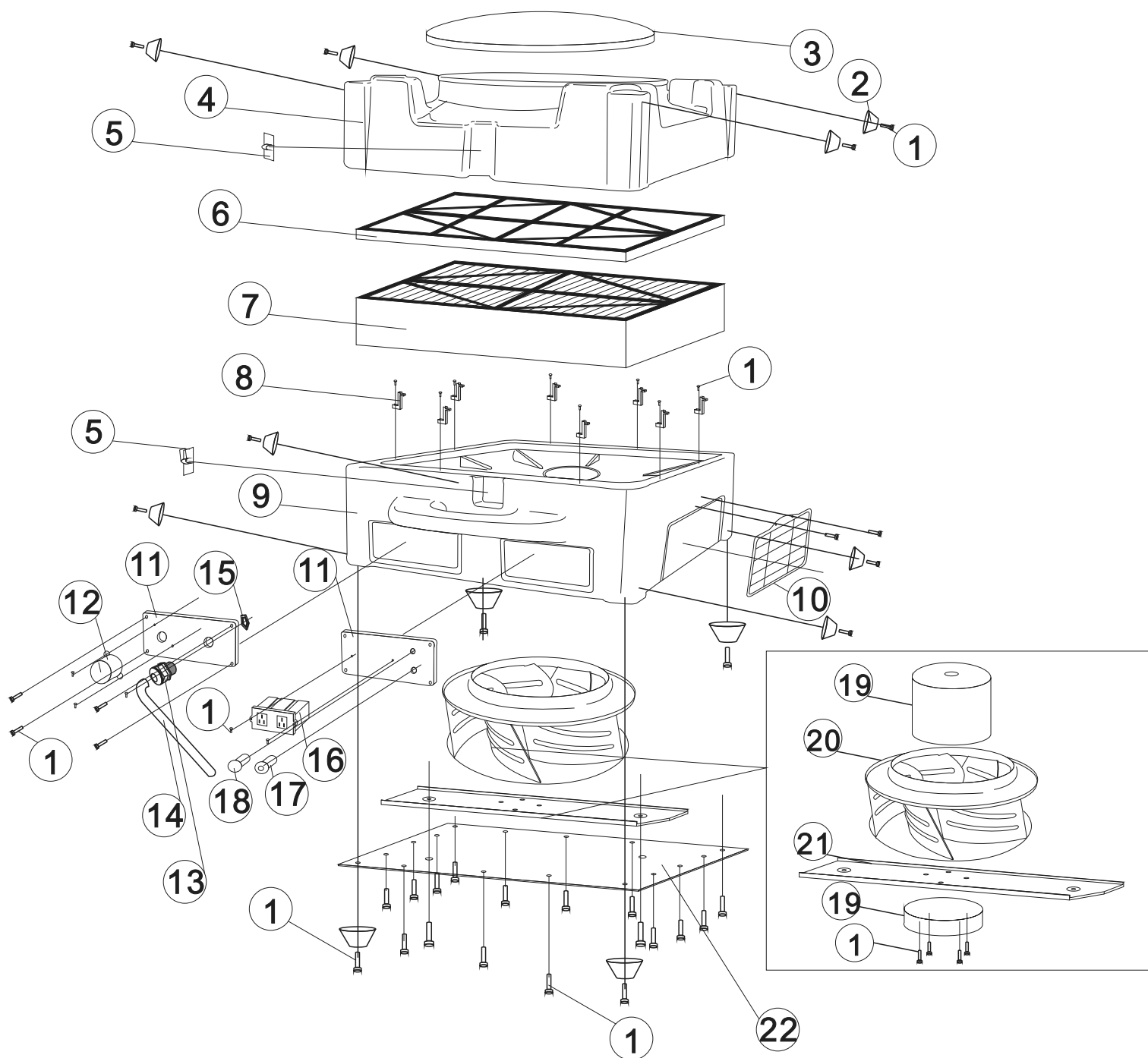
They use a blend of activated carbon and potassium permanganate. This blend removes the vast majority of gaseous contaminants encountered in most filtering applications.

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.





ref#	doscription	qty
1	Screw	46
2	Rubber foot	12
3	Removable Foam Cap	1
4	Upper half shell	1
5	Buckle	2
6	Primary efficiency filter	1
7	High efficiency filter	1
8	Fixed buckle	8
9	Lower half shell	1
10	Larger & Wider air outlet	1
11	Switch panel/GFCI panel	1
12	On/off rocker switch, blk	1

ref#	doscription	qty
13	Strain relief-lq tight	1
14	Power cord	1
15	Nut, hex	1
16	Gfci outlet, female plug	1
17	Circuit breaker	1
18	Filter net plug alarm lamp	1
19	AC motor	1
20	Fan blade	1
21	Fixed plate	1
22	Bottom cover plate	1
23		1