

July 2013

AD-ORACLE



AD-ACCESS



AD-PVC



Videojet Fume Extractor Preventive Maintenance Guide

Models Include: AD-ORACLE, AD-PVC, and AD-ACCESS



Videojet Contact Information

To order filters, spare parts and supplies:

- **Call** – 1-800-843-3610 and speak to one of our Customer Service Representatives. Telephone hours are 7:00 a.m. – 6:00 p.m., M-F.
- **Fax** – VIDEOJET at 1-800-582-1343(USA) or 630-616-3629(Int'l).
- **Online** – Contact VIDEOJET at www.videojet.com

To request service or to inquire about equipment needs:

- **Call** – 1-800-843-3610 and speak to one of our Customer Service Representatives.

Videojet Technologies Inc.
1500 Mittel Boulevard
Wood Dale, IL 60191-1073, U.S.A.

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Filter Status Indicator Light Chart



The four LEDs on the front panel indicate the following conditions



FUME EXTRACTOR FILTER STATUS INDICATOR	
LEDs SHOWING	INDICATE(S)
<ul style="list-style-type: none"> ○ ○ ● -- Green On ○ 	Filters OK & Unit Running
<ul style="list-style-type: none"> ○ ● -- Amber On ● -- Green On ○ 	Warning: Filters 75% Blocked → Purchase 1 Pre filter → Purchase 1 Combined filter
<ul style="list-style-type: none"> ● -- Red On ● -- Amber On ● -- Green On ○ 	Alert: Filters 100% Blocked → Replace Pre filter → If lights stay on, then replace Combined filter
<ul style="list-style-type: none"> ○ ○ ○ ● -- Red Alert On 	VOC Alert (Volatile Organic Compound) → Replace Combined filter immediately → Feature not available on all models
<ul style="list-style-type: none"> ★ -- Red Flashing ★ -- Amber Flashing ★ -- Green Flashing ○ 	Extractor Fault → If lights stay on longer than a few seconds, please call Videojet
→ Filter P/N located on filter & starts with AL- → To order replacement filters, call Videojet 1-800-843-3610	
Important notice: Combined filter must be changed once every 12 months regardless of alerts & fume extractor usage. Keep track of filter install date.	
Videojet Technologies Inc 1500 Mittel Blvd. Wood Dale, IL 60191 USA	www.videojet.com/filters 1-800-843-3610

Filter Maintenance Protocol

Filters to be changed in accordance with filter frequency table located in PM guide.

Log the date of filters changed and estimate the date of replacement on this table:



Fume Extractor Filter Log			
Fume Extractor Unit Serial Number: _____			
Pre-Filter		Combined Filter*	
Your Frequency** = _____ months		Your Frequency** = _____ months	
Date of Last install	Estimated Date of Next Replacement	Date of Last Install	Estimated Date of Next Replacement

Important Notice:
 *Combined filter must be changed once every 12 months regardless of usage.
 **To calculate your frequencies refer to filter frequency table located in PM guide.

Why Regular Filter Maintenance is Important

Technical Reasons:

- Operational – If filter maintenance is ignored, smoke and debris can settle on the laser optics causing permanent damage to the lens and impairing the quality of the marking. As fume extraction efficiency decreases laser downtime increases.
- Health and Safety – The particulate generated from most materials is sub micron size which is a health hazard if inhaled and some materials give off harmful gases which again operators need protecting from.

Symptoms:

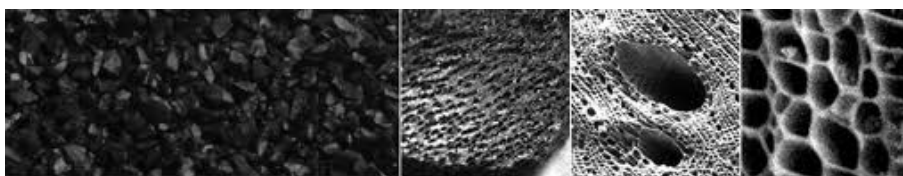
- Lens gets dirty quickly, uneven print contrast, bad smell coming from marking process. Power of lens is low. No more suction.

Benefits:

- High quality print on all your products, maintaining a safe and odor-free environment, and keeping your production area clean.

Combined Filter Contains Carbon

Carbon granules are used because of the inherently high absorption characteristics which makes it the ideal medium for filtration. Absorption levels can be further improved through chemical impregnation (activation). Depending upon the type of impregnation the surface area can range between 300-2,000 square metres per gram

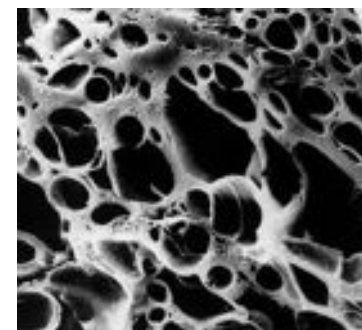


Differing types of activation have been developed to cover a range of applications e.g. Copper Impregnation to remove Hydrochloric acid (HCL) generated when laser marking PVC.

Please note: that the carbon media within the combined filter is hygroscopic and will absorb moisture from the atmosphere. This is why these filters need to be changed every 12 months regardless of usage.

Within the surface of the impregnated carbon granule there are multiple bonding sites which absorb water vapor as well as any VOC's that are present in the air stream. Over time these bonding sites become saturated and so effectively the filter life comes to an end.

Activated Carbon Pore Structure
Showing multiple bonding sites
Magnified Image



Overview

AL-72990 Exhaust unit VIDEOJET AD-ORACLE 115/230V 50/60Hz

The complete, global solution for high performance laser fume extraction.

Introducing the most technically advanced laser fume extractor. The Advantage Oracle packs a powerful range of unique features into one compact unit. The revolutionary Auto-Voltage Sensing Pump automatically

self adjusts to run on any voltage worldwide, while the Reverse Flow filter technology enhances filter performance and ensures longer filter life.

Closed loop, automatic flow control allows the user to preset correct flow rates, for lower noise levels. This also provides further protection of the combined filter and pre filter.

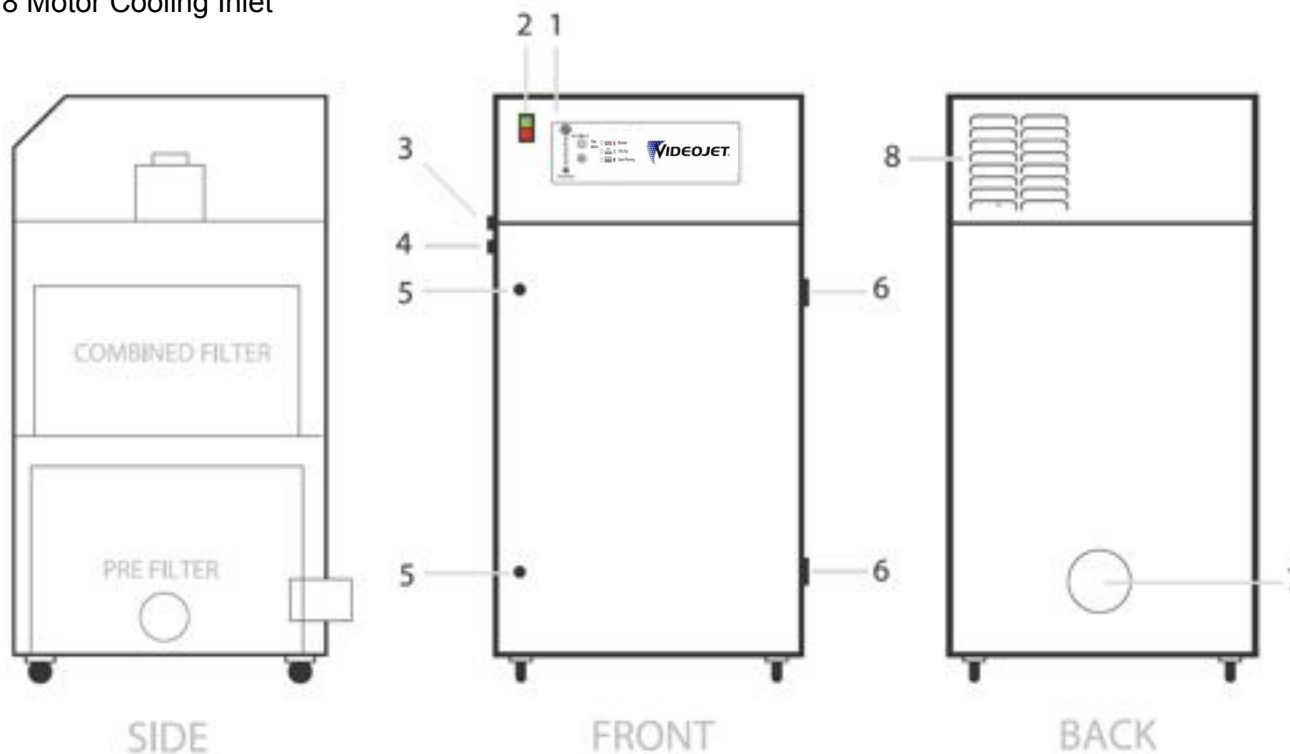
The below features all come as standard

- Closed loop automatic flow control
- 2 stage F8 pre filter with large surface area
- Reverse Flow
- Small footprint and low noise levels



Diagram

- 1 Unit/Filter Condition Display - Automatic Closed Loop Flow Control
- 2 On/Off Switch
- 3 Power Cable
- 4 Signal / Interface Cable to Laser
- 5 Filter Housing Cam Latch
- 6 Door Hinge
- 7 Hose Inlet Connection
- 8 Motor Cooling Inlet



Filter Part Numbers

It is recommended that a spare set of filters are kept on site to avoid prolonged unit unavailability.

Consumables		
AL-72981	AD-Oracle Pre Filter	
AL-72982	AD-Oracle Combined Filter	

Filter Disposal

Pre and combined filters are manufactured from non-toxic materials. Filters are not re-usable, cleaning used filters is not recommended. Disposal of the used filters depends on the material deposited on them.

Recommended PM Schedule

Normal Use: Pre Filters should be replaced every 4 - 8 months

- 1 shift of 12 hours or less per day
- Ablation or engraving of substrate producing only smoke and very little debris
- Plastics as substrate
- Clean environment

Extreme Use: Pre Filters should be replaced every 2 - 3 months or less

- Multiple shifts or more than 12 hours per day
- 300+ prints per minute
- Noticeable dust/debris accumulating on or around printer.
- Ablation of painted surfaces
- Dirty environment

Combined Filter:

- Normal Use – Once every 8 - 12 months
- Extreme Use – Once every 3 - 6 months

Filter Frequency Table

Pre Filter/Combined Filter PM Schedule							
AD-Oracle							
Marking Speed		0 - 150 prod/min	151 - 500 prod/min	500 prod/min			
Shifts Per Day		1	3	1	3	1	3
Target Substrate		Pre filter / Combined filter duration in Months using a 2 line code					
Card White		8/12	4/12	4/12	3/6	3/6	2/3
Card Painted		18/12	12/12	12/12	3/6	3/6	2/3
Glass (none treated)		18/12	12/12	16/12	10/12	12/12	9/12
Painted Metals		18/12	12/12	10/12	10/12	12/12	9/12
Plastics		12/12	6/9	6/9	3/6	3/6	2/3
PET		12/12	8/12	8/12	3/6	3/6	2/3

Example:

Laser is printing 250 products per minute, 3 shifts a day, on plastic.

Filter Change Frequency = Pre filter every 3 months, Combined filter every 6 months.

Filter Replacement Instructions

Pre- Filter instructions

1. Isolate the electrical supply to the extractor.
2. Undo the two catches on the front of the unit and open the door.
3. The pre filter is the lower of the two filters. Using the handle, on the front of the filter, pull it out of the unit being careful to support it as it comes free, as it is heavy.
4. Slide a clean filter back into position making sure it is pushed all the way in to locate on the spigot at the back of the unit.
5. Close the door and fasten the two latches.
6. Reconnect the power supply.

Combined Filter instructions

1. Isolate the electrical supply to the extractor.
2. Undo the two catches on the front of the unit and open the door.
3. The combined filter is the higher of the two filters.
4. Rotate the handle below the combined filter through 180°, which releases the filter.
5. The filter can now be lifted away from the extractor.
6. Place a new combined filter into the runners and back into position.
7. Rotate the handle back through 180° to lock the filter in position.
8. Close the door and fasten the two latches.
9. Reconnect the power supply.

Caution: When changing filters always wear mask, safety glasses and gloves.

Combined Filter – 1 Year Life

What happens if the Combined filters are not changed after 12 months?

After 12 months the bonding sites in the Combined filter become saturated to the point where further VOC's (Volatile Organic Compounds) can not be captured and remain within the airstream.

In such instances there is the risk that harmful gases will pass through the extraction unit into the workplace.

Where an identified Health & Safety risk has determined that fume extraction is required it is also necessary to ensure that such equipment is suitably maintained.



Overview

AL-72353 Exhaust unit VIDEOJET ADPVC 115V 50/60Hz

AL-72351 Exhaust unit VIDEOJET ADPVC 230V 50/60Hz

For the laser marking, coding and engraving of PVC.

The Advantage PVC extraction system has been purposely designed to effectively deal with the extremely corrosive fumes that are generated when lasing PVC. Each unit is fitted with a specific HCL sensor as well as a general purpose VOC sensor to continually monitor the exhaust air of the unit. Automatic closed loop flow control comes as standard so consistent processing conditions are maintained. The patent pending Easi-Glide filter location mechanism makes filter change simple, quick and safe.

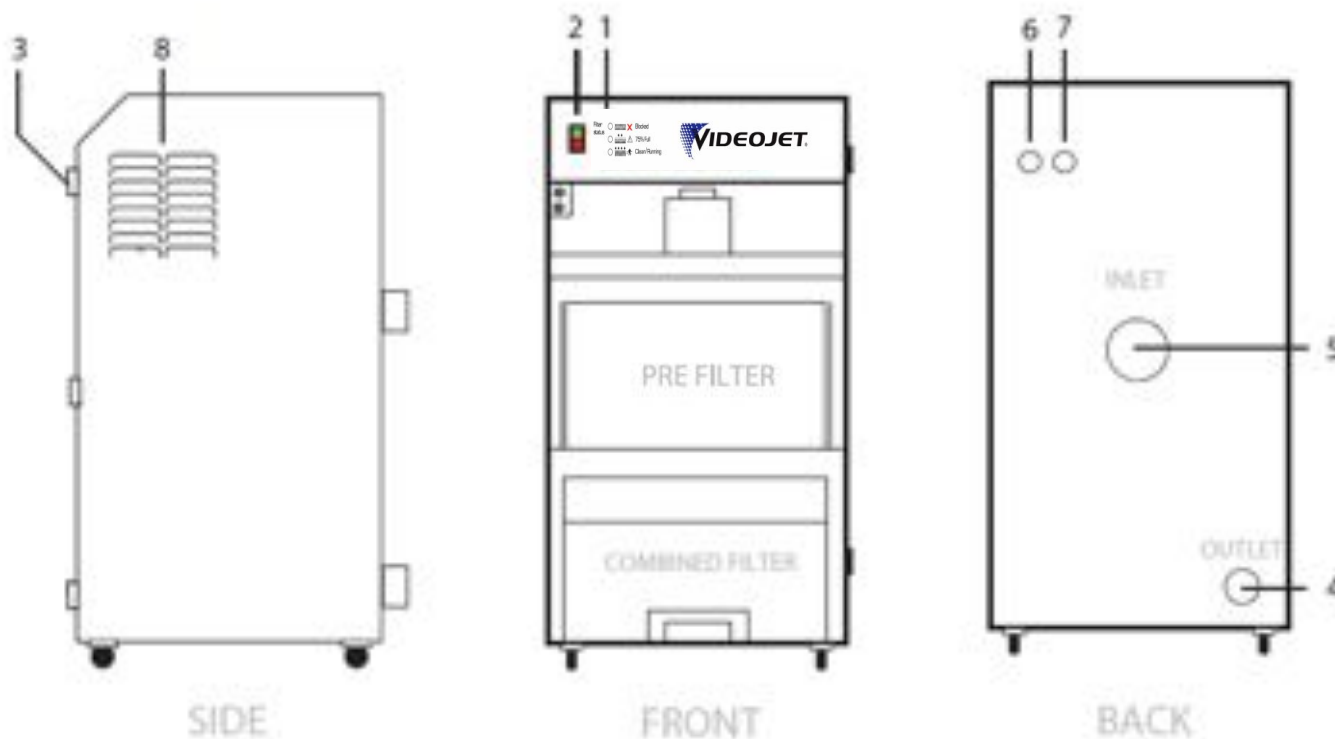
The below features all come as standard

- Blower with high airflow and pressure
- HCL and VOC gas sensors
- Automatic closed loop flow control
- Technically advanced stop/start interfaces to laser



Diagram

- 1 Unit/Filter Condition Display - Automatic Closed Loop Flow Control
- 2 On/Off Switch
- 3 Filter Housing Cam Latch
- 4 Extracted Air Outlet
- 5 Hose Inlet Connection 75mm
- 6 Signal/ Interface Cable to Laser
- 7 Power Cable
- 8 Motor Cooling In/Out



Recommended PM Schedule

Normal Use: Pre Filters should be replaced every 3- 4 months.

- 1 shift of 12 hours or less per day
- Ablation or engraving of substrate producing only smoke and very little debris
- Plastics as substrate
- Clean environment

Extreme Use: Pre Filters should be replaced every 1 - 2 months or less.

- Multiple shifts or more than 12 hours per day
- 300+ prints per minute
- Noticeable dust/debris accumulating on or around printer.
- Ablation of painted surfaces
- Dirty environment

Combined Filter:

- Normal Use – Once every 6 - 9 months
- Extreme Use – Once every 2 - 4 months



Filter Frequency Table

Pre Filter/Combined Filter PM Schedule							
AD-PVC							
Marking Speed		0 - 150 prod/min	151 - 500 prod/min	500 prod/min			
Shifts/Day		1	3	1	3	1	3
Target Substrate		Pre Filter / Combined Filter duration in Months using a 2 line code					
PVC		4/9	3/6	3/6	2/4	2/4	1/2

Example:

Laser is printing 250 products per minute, 3 shifts a day, on PVC.

Filter Change Frequency = Pre filter every 2 months, Combined filter every 4 months.

Filter Replacement Instructions

Pre- Filter instructions

1. Isolate the electrical supply to the extractor.
2. Undo the three catches on the front of the unit and open the door.
3. The pre filter is the higher of the two filters. Slide the bag filter cage out of the unit.
4. Remove the bag from the retaining cage by undoing the Velcro strap.
5. Replace the chemical pad with a new one.
6. Fit a new bag ensuring the Velcro strap is fitted.
7. Slide the filter cage back into position.
8. Close the door and fasten the three latches.
9. Reconnect the electrical supply.

Combined Filter instructions

1. Isolate the electrical supply to the extractor.
2. Undo the three catches on the front of the unit and open door.
3. The combined filter is the lower of the two filters.
4. Slide the filter out of the unit on the Easi-Glide runners holding tightly to the handle on the filter.
5. The filter can now be lifted away from the extractor.
6. Place a new combined filter into the runners and back into position on the filter glide system.
7. Close the door and fasten the three latches.
8. Reconnect the power supply.

Caution: When changing used filters always wear mask, safety glasses and gloves.

Combined Filter – 1 Year Life

What happens if the Combined filters are not changed after 12 months?

After 12 months the bonding sites in the Combined filter become saturated to the point where further VOC's (Volatile Organic Compounds) can not be captured and remain within the airstream.





In such instances there is the risk that harmful gases will pass through the extraction unit into the workplace.

Where an identified Health & Safety risk has determined that fume extraction is required it is also necessary to ensure that such equipment is suitably maintained.



Spare Parts

It is recommended that a spare set of filters are kept on site to avoid prolonged unit unavailability.

Consumables		
AL-72354	ADPVC Pre Filter F8	
AL-72355	ADPVC Combined Filter	
AL-72356	ADPVC Chemical Pad filter	
AL-72357	ADPVC Replacment HCL sensor	

Filter Disposal

Pre and combined filters are manufactured from non-toxic materials. Filters are not re-usable, cleaning used filters is not recommended. Disposal of the used filters depends on the material deposited on them.

Overview

AL-72311 Exhaust unit VIDEOJET AD-ACCESS 115V 50/60Hz

AL-72310 Exhaust unit VIDEOJET AD-ACCESS 230V 50/60Hz

For the light duty, laser marking, coding and engraving industries.

The Advantage Access is an entry level fume extraction solution in order to maintain safe operator working conditions and product quality. The Advantage Access combines economic ownership with performance to match the small laser user. A three stage filter condition indicator is included as a standard feature, together with three stage filtration: pre filter, HEPA and chemical section.

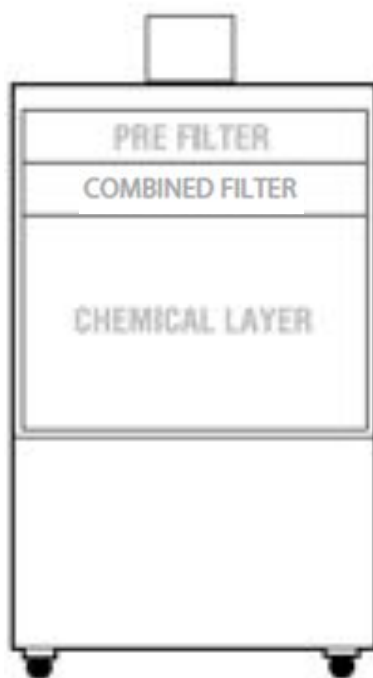
The below features all come as standard

- Entry level, low cost unit
- Three stage filtration
- Comes complete with filter condition indicator

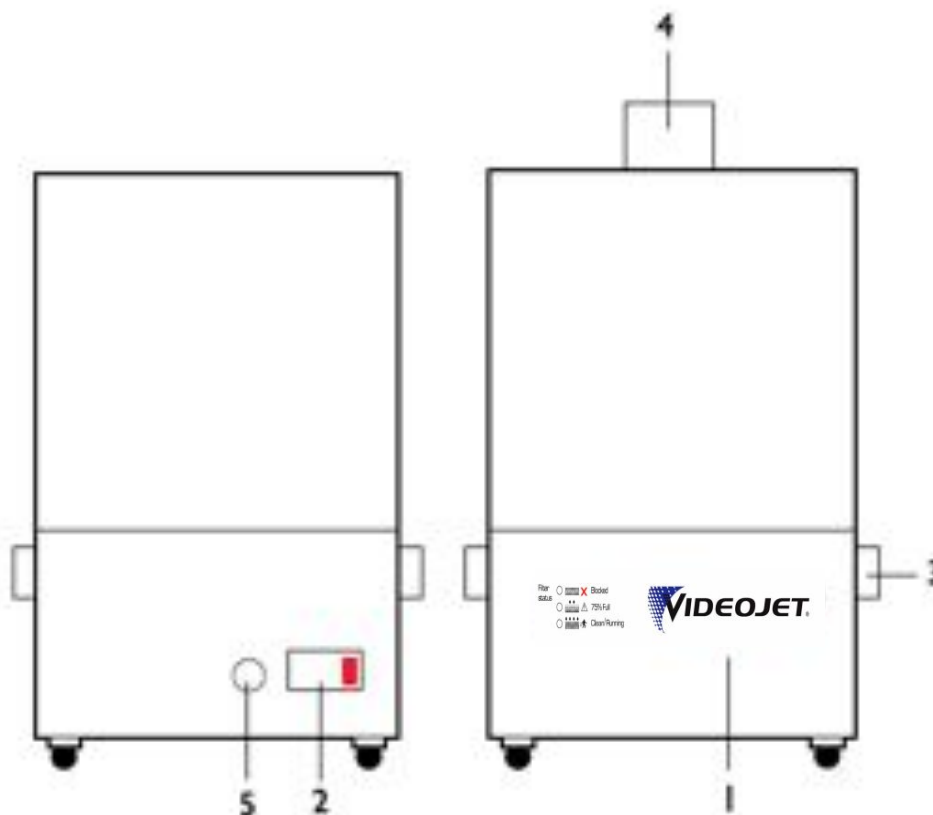


Diagram

- 1 Unit/Filter Condition Display
- 2 On/Off Switch
- 3 Filter Compartment Latch
- 4 Hose Inlet Connection 50mm
- 5 Signal/Interface Cable to Laser



SIDE



BACK

FRONT

Recommended PM Schedule

Normal Use: Pre Filters should be replaced every 1 - 2months.

- 1 shift of 12 hours or less per day
- Ablation or engraving of substrate producing only smoke and very little debris
- Plastics as substrate
- Clean environment

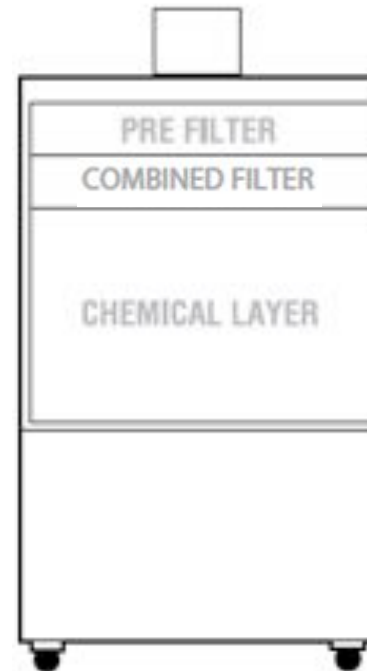
Extreme Use: NOT RECOMMENDED

Customers should use an AD-ORACLE

- Multiple shifts or more than 12 hours per day
- 300+ prints per minute
- Noticeable dust/debris accumulating on or around printer.
- Ablation of painted surfaces
- Dirty environment

Combined Filter:

- Normal Use – Once every 2 - 6 months
- Extreme Use – **NOT RECOMMENDED**



Filter Frequency Table

Pre Filter/Combined Filter PM Schedule							
AD-ACCESS							
Marking Speed		0 - 150 prod/min		151 - 500 prod/min		500 prod/min	
Shifts/Day		1	3	1	3	1	3
Target Substrate		Pre Filter / Combined Filter duration in Months using a 2 line code					
Card White		2/4	1/2	1/2	N/R	N/R	N/R
Card Painted		2/4	1/2	2/4	N/R	N/R	N/R
Glass (none treated)		5/6	3/5	5/6	4/6	4/6	N/R
Painted Metals		5/6	3/5	4/6	N/R	N/R	N/R
Plastics		2/4	1/2	1/3	N/R	N/R	N/R
PET		2/4	1/2	2/4	N/R	N/R	N/R

Example:

Laser is printing 250 products per minute, 1 shifts a day, on glass.

Filter Change Frequency = Pre filter every 3 months, Combined filter every 5 months.

NOT RECOMMENDED FOR HEAVY DUTY USE
Customers should use an AD-ORACLE Fume Extractor instead

Filter Replacement Instructions

Pre- Filter instructions

- Isolate the electrical supply to the unit
- Undo the protex clips on either side of the unit and lift the lid off
- Remove the pre filter from inside the combined filter and replace with a new pre filter
- Replace the lid and fasten the protex clips
- Reconnect the power supply

Combined Filter instructions

- Isolate the electrical supply to the unit
- Undo the protex clips on either side of the unit and lift the lid off
- Remove the pre filter from inside the combined filter and if still serviceable fit into a new combined filter
- Locate the new filters onto the base
- Replace the lid and fasten the protex clips
- Reconnect the power supply

Caution: When changing used filters always wear mask, safety glasses and gloves.



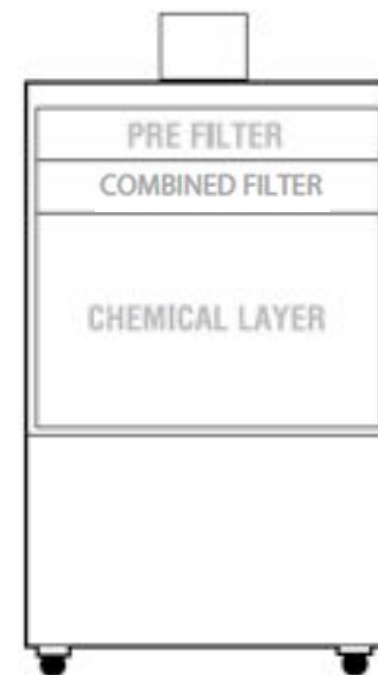
Combined Filter – 1 Year Life

What happens if the Combined filters are not changed after 12 months?

After 12 months the bonding sites in the Combined filter become saturated to the point where further VOC's (Volatile Organic Compounds) can not be captured and remain within the airstream.

In such instances there is the risk that harmful gases will pass through the extraction unit into the workplace.


Where an identified Health & Safety risk has determined that fume extraction is required it is also necessary to ensure that such equipment is suitably maintained



Spare Parts

It is recommended that a spare set of filters are kept on site to avoid prolonged unit unavailability.

Consumables	
AL-72312	Pre Filter F8 Mini Pleat For AD-ACCESS
AL-72313	Combined Filter FOR AD-ACCESS



Filter Disposal

Pre and combined filters are manufactured from non-toxic materials. Filters are not re-usable, cleaning used filters is not recommended. Disposal of the used filters depends on the material deposited on them.

More Information

To order filters, spare parts and supplies:

- **Call** – 1-800-843-3610 and speak to one of our Customer Service Representatives. Telephone hours are 7:00 a.m. – 6:00 p.m., M-F.
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