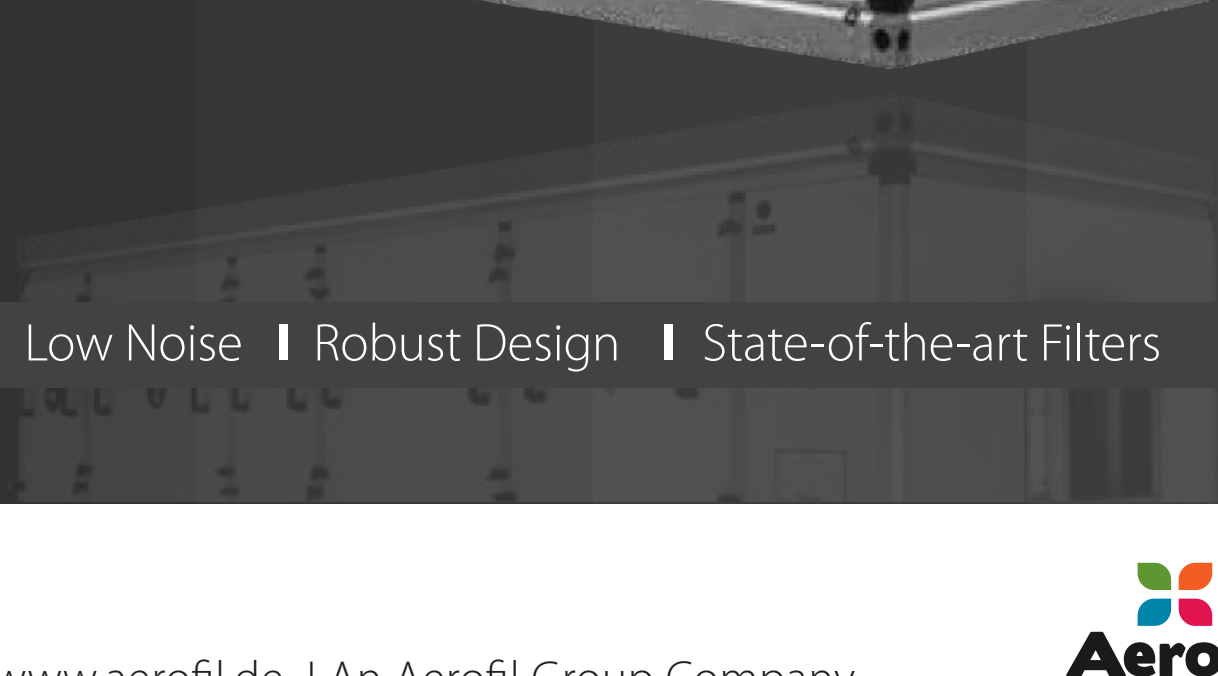


# ECOLOGY UNITS

## AERO ECO - OR Series

### Featuring Oil Repellent Filters



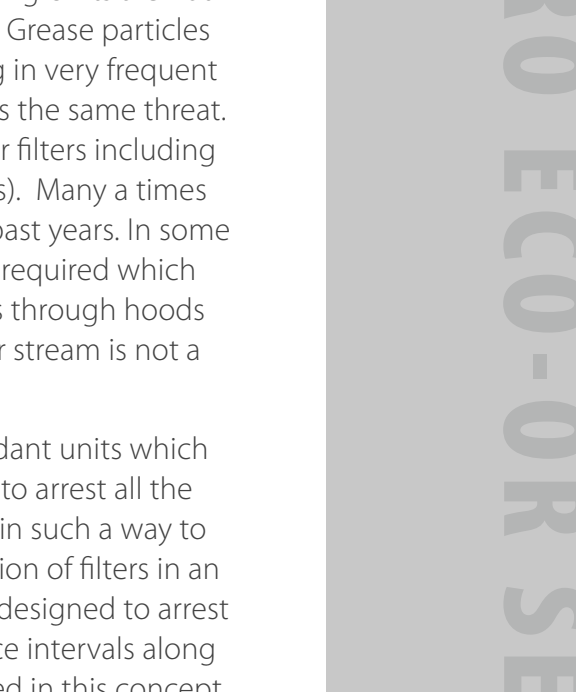
Low Noise | Robust Design | State-of-the-art Filters

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#### Ecology Units - Introduction

- Eliminate cooking odors
- Special Filters for grease and oil removal
- Low initial pressure drop across unit
- Higher service life
- Energy efficient design



Ecology units are used in removal of grease and oil particle systems from air stream. Many buildings face a problem with cooking odor getting mixed up with return air and then entering the main air stream through re-circulation. This will badly affect the quality of ambient air. On other hand direct exhaust of these pollutants to environment also make serious problems. General purpose Air Handling Units are not equipped with system that meets problems of oil, grease or smell. Grease particles when mixed with air chocks general purpose filters easily resulting in very frequent replacement of filters. Oil particles carried in air stream also poses the same threat. Another major problem to address is cooking odor. Mechanical air filters including HEPA are not designed to stop Volatile Organic Compounds (VOCs). Many a times this problem is not foreseen when building design were done in past years. In some cases adding a restaurant or cooking area into existing building is required which trigger this problem. Cooking odor is sucked through return ducts through hoods and are exhausted to open air. Installation of filters alone in the air stream is not a fair solution because of higher pressure drops offered by filters.

Here comes the importance of Ecology Units. They are self dependant units which includes a fan, control panel and proper range of filters that helps to arrest all the targeted pollutants like grease, oil and even odor. Fan is designed in such a way to overcome the pressure drop of filters across the units. Right selection of filters in an ecology unit is important because the Ecology unit in principle is designed to arrest particles. At the same time it should work with longer maintenance intervals along with energy efficiency solution. **Aero ECO - OR** series are built based in this concept.

"Choosing right filters in an Ecology Unit is very important..."

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#### Specifications

##### Fans

A centrifugal, double inlet, double width fan with backward curved blade is used in these units. Fan wheels are manufactured with co-rolled steel sheet with polyester coated finish. Shafts are manufactured using C-45 carbon steel and further coated for anti corrosion filter assembly. Fan and motor assemblies are mounted on an extruded aluminium base located inside the casing. This in turn is mounted on anti-vibration pads.

##### Motors

All ecology units have motors inside the unit casing in standard models. Motor can be fixed outside in case of customer requirement. Electric motors used are squirrel cage type, totally enclosed fan cooled construction and class F insulation. Motors are suitable for VFD operations.

##### Filters

Ecology units will have 5 stages of filtration namely Grease Filters, Pre Filters, Fine Filters, HEPA Filters and Carbon Filters.

##### Grease Filters

Aero Metallic CLST filters are permanent filters with layers of aluminium mesh of used in kitchen exhaust for grease trapping. They are available in G2 filtration class. The filter media used is pleated layers of 14 screen aluminium mesh arranged in multi layers and encased in a galvanized steel frame. Additional expanded metal grid on up stream and down stream sides provides media support and strength to the filter. These filters offer low resistance to the airflow. Complete stainless steel construction model ALSTS is also available as an option. They are good to use even in very high temperatures since the construction is fully metallic. All filters are cleanable using detergent solutions and luke warm water. Rinse the filters properly, dry and re-use.



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##### Pre Filters - Aero Hydropleat | Oil repellent filter

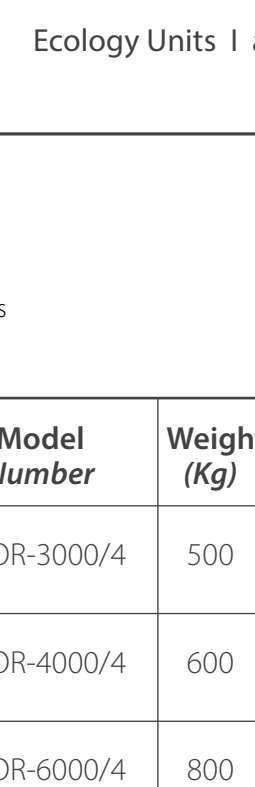
Aero Hydropleat is a unique filter that separate oil particle from air stream. This filter stands out Aero Eco-OR series in competition. The filters are washable with mild detergent and are re-usable. This filter have gained wide appreciation from UK and USA markets as a perfect replacement for existing pre filters. Hydro pleat filters are offered in G4 and M5 efficiency grades. A new generation hydrophobic Synthetic Media with a special coating offers 100% removal of water mist and oil from the air combined with a G4/M5 filtration efficiency. Aero Hydro pleat is a 100% coalescer filter which can challenge any competitive brands.



We also offer economical washable G4 pre filters class for those who look at cost cutting techniques. They are made up of washable lofted synthetic filter media mat encased in GI frame and supported by PVC mesh on both sides. We also offer this in plastic frame upon customer's request. A flexibility is given in all range of filters where a customer is offered oil repellent filters in all stages. So a choice of this pre filter can also go with oil repellent filter in a more fine stage. Model - Aero Poly Pleat.

##### Fine Filters - Aero Cell V

Aero Cell V is a fine filter with F7 efficiency. This is made up of micro fine glass fiber media pleat packs encased in fully plastic frame. Media packs are bonded to the frame using a two part poly urethane. This design offers a very low IPD and higher service life on filters. In Aero Eco - OR series you have the freedom to select filters with oil repellent type in this stage as well. Aero Cell V-OR will be the model. These filters are also available in 400mm or 430mm depth. Base model will be of 292mm depth.

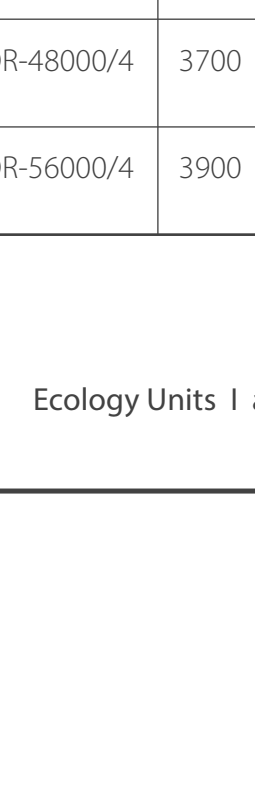


Customers can also choose economical soft bag filter for their units. This keeps down the filter costs but will attract frequent replacements, higher energy costs and services. Another option is Aero Poly Pac - a fully rigid pocket filter that serves 6 times high dust holding compared to soft bag filters. These models too offer energy savings, lower pressure drops and high service life during filter life.

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##### EPA Filters- Aero HEPA HV

Aero HEPA HV filters in H10 grade is offered as a fine filter in our units. These filters are available in 4V or 6V styles as required by the customer. 6V filters offers more service life due to its increased surface area. Filters are also optional to have an "Oil Repellent" option in this stage. Media used is microfine glass fiber media packs encased in a nABS frame and potted fully with two part poly urethane. These filters are light weight and fully incinerable after use. Each filter is factory tested individually for leak proof and a certificate will accompany the filter along with test data.



##### Carbon Filters - Aero Carb VH

Aero Carb VHC is an activated carbon filter in V Bank form. This is offered in plastic frame and is fully filled with coconut based activated carbon granules and potted with two part poly urethane. Filters are offered in 292mm depth but 400mm or 430mm filters are also available upon customer request.



Cylindrical carbon filters are also suitable for this stage. We have this also in our selection range. Please refer catalogue for more details and selections.

##### Accessories

Aero Eco - OR series comes with a range of accessories like control panel, VFD, Vibration isolators, VCDs, Flexible Duct connector, weather proof canopy, fire rated fan, Fire Duplex as and when opted. Units will have differential pressure test device, fixed.

##### Airflow Range

Units are available in different airflows - 2000 CFM, 3000 CFM, 4000 CFM, 5000 CFM, 6000 CFM, 8000 CFM, 10000 CFM, 12000 CFM, 14000 CFM, 16000 CFM, 18000 CFM, 20000 CFM, 24000 CFM, 28000 CFM and 32000 CFM

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#### Selection Chart - 4 stage filtration

Pre + Fine + Carbon + HEPA. Contact factory for other dimensions and stages

Airflow (CMH)	ESP* (Pa)	TSP* (Pa)	L x W x H (mm)	Model Number	Weight (Kg)
3000	650	1250	3550 x 863 x 886	AEOR-3000/4	500
4000	650	1250	3550 x 924 x 943	AEOR-4000/4	600
6000	650	1250	3550 x 1447 x 886	AEOR-6000/4	800
8000	650	1250	3550 x 1568 x 943	AEOR-8000/4	900
10000	650	1250	3550 x 2030 x 886	AEOR-10000/4	1050
12000	650	1250	3350 x 1447 x 1631	AEOR-12000/4	1250
16000	650	1250	3350 x 1568 x 1745	AEOR-16000/4	1550
20000	650	1250	3350 x 2030 x 1631	AEOR-20000/4	1750
24000	650	1250	3350 x 2213 x 1745	AEOR-24000/4	2000
28000	650	1250	3350 x 2030 x 2376	AEOR-28000/4	2350
32000	650	1250	3350 x 1568 x 1745	AEOR-32000/4	2450
34000	650	1250	3350 x 2315 x 2546	AEOR-34000/4	2800
36000	650	1250	3350 x 2295 x 1837	AEOR-36000/4	3200
48000	650	1250	7100 x 2213 x 1745	AEOR-48000/4	3700
56000	650	1250	7100 x 2030 x 2376	AEOR-56000/4	3900

ESP\* - External Static Pressure TSP\* - Total Static Pressure

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