Activated Carbon Filters

- Effective against a wide range of odours
- High adsorption capacity
- Provide cleaner air
- Easy tray access and removal

Better Air Quality Through Better Odour Control
The benefits of activated carbon filters are widely acknowledged by the building services and medical professions. The improved environmental conditions which result from control of odours and noxious vapours range from reduced fatigue, improved efficiency and fewer IAQ complaints to higher employee productivity.

Lower Energy Costs
The use of activated carbon filters in HVAC systems enables fresh air make-up to be kept to a minimum hence reducing heating and cooling costs and saving energy.

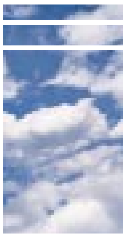
Construction
The filters are housed in a rigid sheet metal epoxy coated casing which may be used on their own or assembled into a multi-bank arrangement in the factory or on-site. The honeycombe structured filter cells are loaded with high quality activated carbon obtained from cocunut shells used in pure granular form. Their inherent strength prevents void and gap formation while the high weight of carbon in each cell maximizes filter life. Other benefits include:

- Prolonged contact time ensures high efficiency contaminant removal
- Diffused air flow ensures maximum use of total surface area
- Low pressure drop despite a high carbon weight content
- High adsorption capacity (CTC value of 60%) with

Installation of the cells in the standard range of units is from the front. If the unit forms part of ventilation ductwork the unit can be customized to facilitate installation from the side or bottom. Custom made units can be built on request.

Prefilter
To maximize the efficiency and service life of activated carbon it is necessary to protect it from unnecessary dust and particulate loading. The use of a prefilter such as an AAF AmerGlas panel filter is recommmeded as this will prevent a rise in pressure drop and will maintain filtration efficiency.

General Applications
The range of applications are numerous and include airports, hotels, restaurants, office blocks, kitchens, toilets and washrooms, refrigeratated warehouses, hospitals, laboratories, public buildings and industrial plants such as tanneries, breweries, food processing and chemical processing and other industries in which odours and vapours are a problem.



Activated Carbon Filters

Specific Applications
Different application requirements require different types, grades and weights of carbon. For example, the removal of hydrogen sulphate, sulphur dioxide and ozone requires a specially treated grade of carbon in a custom designed casing as they can cause untold damage to objets d'art in museums and galleries and to sensitive machinery.

Safety
Contaminated active carbon filters can pose a risk to health. It is important to exercise due care and attention when handling them as thay can contain hazardous substances.

Service
Activated carbon cells have to be exchanged at the end of their service life. The life expectancy of a cell can be predicted using laboratory techniques. The Carbon Life Prediction Service provides this service free of charge for non-toxic applications. Used cells returned will be analyzed and their life expectancy predicted. By following the prediction guideline, cell replacement will take place on time and filtration efficiency will be optimized throughout the service life of the filter.

Specification and Dimensions

Minimum carbon weight loading:	40 kg/1.0m³/sairflow
Resistance at maximum airflow:	100 Pa (excluding prefilter)
Prefilter resistance:	80 Pa initial, 125 Pa final
Maximum operating conditions:	50 °C and 85% RH

Model	NV1/*	NV2/*	NV3/*	NV4/*
Airflow (m^3/s)	0.25	0.50	0.75	1.00
No of cells per unit	4	4	4	4
Height (mm)	305	305	457	610
Width (mm)			610	
Depth (mm)	550	960		

*/P = Prefilter */F Front installation
*/K = Kitchen grade */B Bottom installation
*/S = Side installtion

Notes:
1) Cells should not be subjected to operating temperatures above 70°C.
2) Airflows greater than $1.0m^3/s$ are achieved by multi-bank arrangements

Adsorption Index

Acetic acid
Acetic anhydride
Acrylic acid
Acrylonitrite
Adhesive solvents
Alcohols
Amyl acetate
Amyl ether
Aniline
Antiseptic odours
Benzene
Body odours
Bromine
Burned food odour
Butyl acetate
Butyl alcohol
Butyl chloride
Butyl ether
Butyric acid
Camphor
Carbon tetrachloride
Cheese odour
Chlorobenzene
Chlorobutadiene
Chloroform
Cigarette odour
Citrous and other fruit odours
Cyclohexanol
Decane
Decomposition odours
Deodorants
Detergent odour
Dioxane
Dipropyl ketone
Disinfectants
Ethyl benzene
Ethyl silicate
Ethylene dichloride
Eucalyptole
Fertilizer odours
Floral scents
Heptane
Hospital odours
Incense
Iodine
Isophorone
Isopropyl acetate
Isopropyl alcohol
Isopropyl ether
Kerosene
Lactic acid
Liquid fuels
Masking agents
Medicinal odours
Menthol
Mesityloxide
Methyl acrylate
Methyl butane ketone
Naphtha
Naphthalene
Nicotine
Nitrobenzenes
Nitroethane
Nitropropane
Nonane
Octalene
Octane
Ozone
Paint odours
Palmitic acid
Paper deteriorations
Pentanone
Perchloroethylene
Perfumes, cosmetics
Perspiration odour
Pet odours
Phenol
Rancid oils
Ripening fruit odour
Rubber odour
Sour milk odour
Stale odours
Styrene monomers
Tar odours
Tetrachloroethane
Toilet odours
Toluene
Toluidene
Trichloroethylene
Turpentine
Urea
Uric acid
Valeric acid
Varnish fumes
Vinegar odour

This index provides examples of odour and vapours which, dependent on the concentration, are controlled by activated carbon.

AAF-International B.V.
P.O. Box 7928
1008 AC Amsterdam
The Netherlands
Tel.: + 31 20 549 44 11
Fax: + 31 20 644 43 98

International AAF Offices:
Vienna (A), Montreal (CDN), Dortmund (D), Vitoria (E), Paris (F), Cramlington (GB), Athens (GR), Milan (I), Riyadh (KSA), Mexico (Mex), Amsterdam (NL), Singapore, Istanbul (TR), Louisville, Ky (USA)

AAF Agents:
Copenhagen (DK), Bangalore (IND)
Oslo (N), Lisbon (P), Johannesburg (RSA), Dalsjöfors (S), Malmö (S), Helsinki (SF)

AAF INTERNATIONAL

AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice