LAB EQUIPMENT

Euro-Clone®
serving science through innovation

BIOAIR®

safehood series

Plug & Work Recirculatory Filtration Fume Cupboards

Last generation of fume cupboard for personal and environmental protection from chemical toxics.

Main Applications:

- ***Rigid or flexible endoscopes decontamination***
- ***Sample preparation for anatomo-pathology***
- ***Handling chemical substances in the laboratory***
- ***Handling of airborne powders and chemical aerosols***
- ***Handling of adhesives and solvents***

Working with volatile toxic substances is not a problem when using a Safehood ductless workstation.

No cumbersome installation needed and minimum space requirements makes Safehood the easiest way to solve your safety problems when handling toxic chemicals.

The quality and extensive range of BioAir activated carbon filters will help you to find the right solution for all your safety requirements.

Safehood is the new Bioair fume cupboard with activated carbon filters for the removal of toxic fumes, gases or vapours from the exhausted air.

This ready to use ductless fume cupboard provides the maximum level of operator and environmental protection from chemical contaminants.

Because no exhaust ducting is required, Safehood provides:

- Maximum energy saving on laboratory air conditioning (no heated or cooled air will be exhausted from you lab).
- No influence on the balancing and control of the air pressure levels of your laboratory.
- Expensive ductwork is not required.

The high quality activated carbon filters provide both maximum adsorption and maximum efficiency to the specific contaminants, with the longest life span.

L.E.D. Display with continous indication of:

- *Face air velocity with containment alarm.*
- *Filter condition with saturation alarm.*
- *Sliding sash position alarm.*

Simple and fast carbon filter removal procedure (1 step)

- *Remove filter clamping mechanism.*
- *Slide out filter along the dedicated side bars.*
- *Extract filter from cabinet.*

Simple and fast carbon filter removal procedure (2 step)

- *The filter is then held vertically by the retention bars, in a safe position for the operator.*
- *The filter can be then inserted in the waste bag, provided with any new filter, without any contact with the operator.*

COMFORTABLE

- The smoothly operated sliding sash front window allows class leading access to the work area.
- The glass side walls offer excellent visibility and ease of cleaning.
- Choice of polypropylene, ceramic or Stainless Steel AISI 304 (with liquid containment) work surface.
- Integral fluorescent lighting and extremely low noise level induction fan.

SAFE

- Manufactured in accordance with the most important European Standards, BS7258 and BS 7989, Afnor NFX15211, Etraf type 1 and 2, COSHH requirements and guidelines.
- Highest containment factor provided by the most sofisticated microprocessor controlled airspeed regulation that maintains a constant front barrier average velocity of 0.5 m/sec, which is indipendent from the opening height of the sliding sash.
- Visual and acoustic alarm for low barrier speed or high window position and for chemical filter saturation.
- All electrical components are isolated from the air flow.
- Optional dual exaust carbon safety filter.
- Safety slot(s) on the front panel for visual filter(s) identification (in accordance with the new european safety regulation).

EFFICIENT

- Smart energy saving sliding sash with automatic air speed control, to guarantee the safest condition for the operator as well as the lowest energy consumption in stand-by position.
- Extra large activated carbon filters with optimised granularity for the highest chemical specificity and efficiency Maximum weight (12 kg), maximum residence time (110 mm height).
- Large choice of specific application filters.
- Front window aerodynamically designed to ensure minimum turbulence whilist providing maximum containment.

USER FRIENDLY

- Ready to use: just place the cabinet on a bench or on the optional support stand and plug into a standard mains socket. No need of calibration or expensive ductwork.
- Prefilter provided as standard, easily removable from inside the cabinet providing the highest operator safety.
- The high quality of the components and the accurate design ensures years of trouble free operation.

BIOAIR® TECHNICAL NOTES

BioAir Activated carbon filters

Chemical decontamination of the air is based on the properties of charcoal obtained from coconut shells and activated by steam at high temperature process. The finely porous active carbon has a structure criss-crossed by millions of minute channels and an enormous exchange surface, about 1300 square meters per gram. Air passing through the carbon invades these channels and the chemical substances it contains are captured very efficiently, owing to their size, by the physical-chemical process defined as **Adsorption**.
This process is enhanced by **Chemisorption**, that is impregnating the carbon with chemical substances to improve the retention of simple, light and linear molecules. Active carbon filters can adsorb any chemical compound possessing a molecular weight over 30 and a boiling point higher than 60°C. Some compounds that fall outside these limits are still satisfactorily retained owing to their molecular structure and size.

State of the art construction

In order to obtain the highest degree of efficiency and filtration the design criteria and operation of the cabinet, fitted with active carbon filters are of vital importance. It is essential that the air passing through the active carbon filter stays there for about 0.1 seconds (residence time) at a linear speed not exceeding 0.5 meters per second in order to obtain a high filtration efficiency, while a mass of carbon of about 13.5 kg per 1000 cubic meters per hour of airflow is required to achieve adequate filtration capacity.
All BioAir fume cupboards are designed to ensure a time of permanence longer than 0.3 seconds and an air speed through the filter never higher than 0.5 meters per second.
All BioAir fume cupboards, moreover, are equipped with carbon filters weighing over three times the required minimum.

Environmental friendly

Chemical filtration based on active carbon makes it possible to install fume hoods in any environment with no need for expensive ducting of exhausted air.
Since fume cupboards fitted with active carbon filters recirculate the air within the room, energy is also saved since there is no need to cool or warm fresh air that replaces the air exhausted from the room as with the use of traditional ducted fume cupboards.

Types of filters

Different types of active carbon filters are available, some impregnated with chemical substances to enhance their filtration capacity when organic molecules with low molecular weight or inorganic gases and vapours are present.

1. **GENERAL USE (GP)** this is the filter more commonly used to capture a broad range of substances, especially vapours of organic solvents.
2. **FORMALDEHYDE (FOR)** This type of filter is impregnated with an oxidising agent to oxidise the formaldehyde.
3. **AMMONIA (AMM)** The filter is impregnated with copper compounds for effective removal of vapours generated by diluted ammonia solutions and of low molecular weight ammines.
4. **INORGANIC ACIDS (ACI)** This impregnated filter neutralises volatile inorganic acid vapours such as chloridric acid, fluoridric acid and gaseous acids such as sulphur biocide and nitrogen biocide.
5. **MERCAPTANS (SUL)** This filter is impregnated with potassium iodate for removing low molecular weight hydrosulfuric acid and mercaptans.
6. **MERCURY VAPOURS (ACM)** This filter is impregnated with iodate

*The **Technical Notes** shown here will provide the user with all necessary information concerning the choice and the characteristics of the filter more suitable for each specific application. Please ask your Dealer for this valuable piece of literature.*

TECHNICAL SPECIFICATIONS	Safehood 75	Safehood 120	Safehood 165
Work chamber dimensions (W x D x H) mm	670 x 550 x 600	1120 x 550 x 600	1570 x 550 x 600
External dimensions (W x D x H) mm	750 x 720 x 1200	1200 x 720 x 1200	1650 x 720 x 1200
Main body	Epoxy painted cold rolled steel		
Lateral windows	Safety glass		
Front window	Safety glass sliding sash, manually operated		
Control panel	Soft touch with on-off switch; allarm mute separate mains switch		
Power W	420	800	1170
Power supply	220/240 V - 50 Hz and 220 V - 60 Hz		
Noise level dB(A)	< 60		
Lightning	> 800		
Work surface (optional)	AISI 304 Stainless steel, ceramic or polypropilene		
Main Carbon filter Kg 12 qty.	1	2	3
Exaust safety filter Kg 4 qty. (optional)	1	2	3
Prefilter qty.	1	2	3
Weight Kg (filters excluded)	95	130	180
Treated air volume m3/h	300	550	800
Average front front barrier speed m/s	> 0.4 (set point 0.50 m/s)		

HOW TO ORDER

FS20000	Safehood 75
FS10000	Safehood 120
FS30000	Safehood 165

Optional utilities	
AZZA000	Retrofit Additional Vacuum tap not installed
AZZ0001	Retrofit Additional Gas tap without solenoid valve, not installed

MANY OPTIONAL FEATURES also avaible;
For further information please contact you local dealer

Accessories	
AS44000	Stand for Safehood 75
AS43000	Stand for Safehood 120
AS45000	Stand for Safehood 165
AZ90001	Polypropilene worksurface for Safehood 75
AZ90101	Polypropilene worksurface for Safehood 120
AZ90201	Polypropilene worksurface for Safehood 165
AZ90000	Stainless steel worksurface for Safehood 75
AZ90100	Stainless steel worksurface for Safehood 120
AZ90200	Stainless steel worksurface for Safehood 165
AZ90003	Ceramic worksurface for Safehood 75
AZ90103	Ceramic steel worksurface for Safehood 120
AZ90203	Ceramic steel worksurface for Safehood 165

EuroClone S.p.A. reserves the right to change product specifications without prior notice

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EuroClone S.p.A. has a Quality System certified in compliance with UNI EN ISO 9001:2008 and NF EN ISO 13485:2004

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