

Operating instructions

Filtering Ventilation Safety Cabinets – Range 12.X

Models A1X – AF2X – AF2-2X – AF4-2X – AF4-3X – AF4-4X

1. Technical specifications

Filtering safety cabinet dedicated for the storage of

- flammable products following your local regulation ,
- noxious products,
- toxic products
- corrosives products

in closed cans.

We remind you that our filtering ventilation safety cabinets are equipped with our ventilation/filtration system in accordance to the standard NF X 15-211 – May 2009.

1.2. Technical characteristics

	AF2X	AF2-2X	AF4-2X	AF4-3X	AF4-4X	AF1
<i>External Dimensions (approx.)</i>						
<i>Height (mm)</i>	1900	1900	1950	1950	1950	1900
<i>Width (mm)</i>	800	800	1600	1600	1600	800
<i>Depth (mm)</i>	545	545	545	545	545	545
<i>Empty weight (kg)</i>	140	150	280	290	300	115
<i>Usable volume inside (m³)</i>	0,6	0,6	1,2	1,2	1,2	1,1
<i>Retention capacity (l)</i>	31	30	62	46	60	31
<i>Maximum shelf load uniformly distributed (kg)</i>	60	40	60	40/60	40	60

1.2.1. Conformity

- Adsorption capacity in compliance with the NF X 15-211 norm.
- Large warning labels in compliance with ISO 3864 and NF X08.003 norms, 92/58/CEE European directive.
- In compliance with the health regulation articles (R.5132-66 and R.5132-68).
- Electric fan in compliance with CE specifications.

1.2.2. Advantages

- Cabinet delivered ready to use.

- Independent cabinet ensuring perfect security.
- Elimination of dangerous vapours.
- No need of connection to an exhausting system. No modification of building structure required.
- Easy sight of the stored products.
- Perforated shelves allowing liquids flow in case of discharge.
- Ventilation system with lighting control.
- Window control for presence of the filter adapted to your needs .
- Control of the saturation level with reactive coded tubes.
- Specialised high efficiency active charcoal filter, in compliance with the NF X 15-211 norm, treated following chemical products stored.
- Dust pre-filter, 92% efficiency with less than 3 µm particles.
- Easy replacement of the active coal filter.

1.2.3. Technical characteristics

Storage compartment:

- Built in 15/10th steel with white epoxy paint (RAL 9010).
- Large glazed door with framing.
- perforated shelves adjustable in height.
- Double air inlet at the bottom.
- Key-locking system.
- Drawer/retention tank at the bottom with absorbing mat.

Ventilation/filtration compartment:

- Built in 15/10th steel with white epoxy paint (RAL 9010).
- Noiseless fan : 220-240 volts - 50 Hz; flow: 202 m³/h; 0,2 A; 47 watts; sound level 49 dB(A); delivered with cable and plug.

1.2.4. Options

- Additional shelf.
- Active charcoal filters:
 - The cabinets are delivered without active charcoal filter. You must select one depending on your chemicals stored.
- Control of filter saturation level by FILTRALARM:
 - Control lead.
 - Monitoring system to control the air velocity across the filter.
 - Adjustment allowing the detection of filter saturation level and faulty air flow.
 - Sound alarm indicating a malfunction in the device.
 - Visual alarm system.
- Control of filter saturation level by REACTIVE TUBES:
 - Control port on the side of the cabinet.
 - Use of a manual pump.
 - Control of efficiency of active coal filter's saturation level by observing the tubes.

2. Installation

The cabinet must be settled on a levelling floor able to support the fully loaded weight of the safety cabinet (see technical characteristics on point 1.2.).

Please note that the safety cabinet can be set up horizontally in order to avoid any falling down and also to guarantee for a perfect use of the self closing system (this system is verified during the construction and certified by the item number written on the door sticker). The possible adjustment must be done by the user himself. The correct levelling

off should avoid any scraping between the door(s) and the body of the cabinet.

The position chosen for the location of your cabinet must ensure that:

- The cabinet is not directly exposed to direct or indirect sources of heat.
- The cabinet is not exposed to operating temperatures below -5°C or above +40°C.
- The cabinet is protected against moisture.

3. Transport and handling

This safety cabinet has been transported in optimal conditions in order to be protected against all possible damages due to transport.

Your safety cabinet must only be moved when placing a suitable transport device under its base. It must be transported in a vertical position. It is strictly forbidden to tilt the cabinet when it is lifted or transported. This could cause serious damages that could also affect the good working of the safety cabinet's equipments.

Hence, if this cabinet has to be moved, it is highly recommended to load and strap it on a pallet in order to avoid any weighing.

4. Settlement

Please, verify that you have received 2 keys with your cabinet and check that they fit in the lock of the cabinet. The keys can be placed either:

- on the lock,
- or on the handle
- or inside the cabinet
- or fixed on the cabinet
- or fixed on a shelf
- or in the retention tank

Wing doors

Doors: Note: It is necessary to maintain the doors closed

The cabinet must be located, operated and maintained in order that the users are protected against fire and explosion risks in particular.

The double wing doors can be opened by pulling the handle.

Clock type meter

During the first use of your fume hood and after every prolonged power cut, it is necessary to put right the clock type meter, placed up left on the front of your fume hood. To do it, please follow the procedure indicated hereafter:

- Press PROG, the number on the left is blinking,
- Press + or – to display 60,
- Press PROG, the number in the middle is blinking,
- Press + or – to display 00,
- Press PROG, the number on the right is blinking,
- Press + or – to display 00.

The clock type meter counts automatically since the on/off switch with the light signal and the ventilation/filtration system are in service.

Once the on/off switch and the pilot lamp turned off in order to stop the fume hood, you need to press the **STOP** button to stop the counting. Your clock type meter turns off only manually. According to the French regulation (NF X 15-211) you have to check the saturation of your active coal-based filter every 60 hours. The clock type meter will warn you every 60 hours, by a sound signal that you have to check the saturation of your filter.

Warning:

- We recommend to not wait for 60 hours (indicated by the regulation) to check the saturation of your active coal-based filter. Check in a regular way the saturation of your filter by use of the manual pump and of the tubes for reagents adapted. To find tubes for reagents adapted to the products which you wish to measure, please contact us.

Filter alarm (optional)

Your fume hood can be equipped with an optional Filter alarm if you want. The Filter alarm is placed up left on the front of the fume hood. The Filter alarm turns on automatically by pulling the on/off switch.

The Filter alarm allows measuring the frontal velocity of the air during the passage in the filter. It informs you about the containment of fumes in your fume hood. Any abnormality of airflow is indicated by a sound signal. The Filter alarm also allows revealing a possible filtration clogging. The Filter alarm is pre-set in factory with a frontal velocity of the air included between $> 0,4$ and $> 0,6$ m/s.

In case of normal working, the green diode is lit. In case of dysfunction, the red diode is lit and a sound signal ring to indicate you that a dysfunction was detected. To cut the sound signal, you need to press the button with sound symbol and resolve the problem.

Warning:

- It is mandatory to leave a space of at least 15 centimeters between the wall and the sensor of the Filter Alarm, placed up left on the back wall.
- It may happen that, during the transport or installation, the Filter Alarm, adjusted in factory before packing, doesn't comply with the location where it is (for example too close from a window or a door, and installed too close from the wall). Then, a re-adjustment is necessary in order that this one corresponds to its location. In this way, please proceed as follow :
 - Take off the sensor located on the back of the cabinet,
 - Put the sensor in a airtight plastic bag,
 - Push on the alarm button (crossed) located in front top of the cabinet, during 10 seconds waiting that the red and green led switch on,
 - Take on the sensor back at its place on the back of the cabinet,
 - Push once again during 10 seconds on the alarm button (crossed) located in front top of the cabinet waiting that the red and green led switch on.

The Filter Alarm is then re-adjusted.

5. Ventilation

Your cabinet is equipped with a silent fan, 220 V – 50Hz. If there is an active coal filter, you just have to plug your cabinet to a 220-240 V source, then push the « ON / OFF » button to switch on the fan. You just have to look through the control window to check if there is a filter (different colours following

type of coal).

If you have not ordered a active coal filter, your cabinet has to be connected to the outside or a ventilation connection. The ventilation grid is at the bottom of the cabinet. To discharge the fumes, you have to connect your cabinet to the outside of the building with a linking kit (ref. KRC).

Warning ! Do not switch the fan on if you have not linked your cabinet to an extracting kit.

Operation without a ventilation system:

It is also possible to use this safety cabinet without an exhausting system. Nevertheless, in this case it should be located in a special room equipped with its own ventilation system (minimum 5-fold change of air per hour).

The cabinet itself and 2,5 metres in the perimeter (Zone 2), is considered as a possible explosion area. Moreover, if your cabinet is not connected to an exhausting system, it is required to indicate it on a door by a special sticker.

6. Inner fittings

Perforated shelves and perforated half shelves:

	AF2X	AF2-2X	AF4-2X	AF4-3X	AF4-4X	AF1X
<i>SHELF</i>	4	-	8	4	-	4
<i>HALF SHELF</i>	-	8	-	8	16	-

The shelf(ves) must be fixed at the appropriate height with the shelf supports in the side panels.

Each shelf must be laid on 4 shelf supports.

Warning: Do not overload the shelf (refer to technical characteristics chapter).

Drawer / tank and half drawer / retention tank:

	AF2X	AF2-2X	AF4-2X	AF4-3X	AF4-4X	AF1X
<i>DRAWER/ RETENTION TANK</i>	1	-	2	1	-	1
<i>HALF DRAWER / RETENTION TANK</i>	-	2	-	2	4	-
<i>ABSORBING MAT</i>	1	2	2	3	4	1

Your cabinet is delivered with a drawer/retention tank with an absorbing mat(s).

These mats must be located on the bottom of the cabinet and these drawers should not be used as an additional storage space for containers and cans.

Concerning the volume of retention tank, please refer to the chapter "technical characteristics".

7. Storage in the cabinet

This cabinet is exclusively dedicated to the storage of dangerous products: little flammable (depending on your local regulations), not too corrosive products, noxious or toxic products in safe and closed cans in working place. It is strictly forbidden to store corrosive products such as nitric, chloride sulphuric, Fluor hydric acids.

We remind you that storage of corrosive products may cause damage and alter the good functioning of the safety equipment. Further more, we also remind you that any damage due to corrosion is not covered by the manufacturer warranty.

8. Safety maintenance

The safety cabinet is a technical safety device. We recommend a check at least once a year.

Daily controls:

- Check if there are any leaks on the shelf(ves). Should this be the case, remove the retention shelf or base trough, clean with an adequate absorbent material, then dispose properly.
- Check for mechanical damages.
- Check for possible damages due to contamination or corrosion.
- Check the lock functioning
- Check that the doors close normally

Monthly controls:

- Check the proper opening of the door(s).
- Check the efficiency of the ventilation with a sheet of paper.. (Only if your cabinet is connected to an exhausting system).
- Check the filter's saturation level with the manual pump (if you have ordered it). Concerning the operating instructions of the manual pump, please refer to the manual delivered with it.

Annual controls:

You have to change the active coal filter at least once a year. Just open the ventilation compartments, remove the old filter, place the new one and close the compartment with the keys.

Check must be done by your maintenance department. If you need any information on this matter, please feel free to contact your supplier. In order to help you, please refer to the checklist for users in appendix. We remind you that you must wear in case of an intervention, protective clothes including gloves, shoes and safety glasses and that the cabinet can be cleaned up only with soapy water.

9. Spare parts

Elements :

- Lock and keys
- Handle
- Normalised labels
- Retention tank
- Perforated shelves
- Perforated half shelves

- Absorbing mat
- Active charcoal filter :
- For organic vapours (flammables / solvents): Ref. ORG300
- For organic, non organic corrosives, flammable fumes: Ref. CORG301
- Manual pump, ref. PMAF
- Box of 10 coded reactive tubes: "organic test", ref. TROR
- Box of 10 coded reactive tubes: "corrosive test", ref. TARC
- Box of 10 coded reactive tubes: 5 "organic test" + 5 "corrosive test", ref. TROA

10. Disposal and recycling

The safety cabinet can be completely dismantled. Individual components, e.g. sheet of metal, insulation, self closing system, etc... can be recycled. National and local waste disposal regulations must be observed. To preserve resources, the safety cabinet components or the whole cabinet must not be disposed off as domestic waste.

12. Guarantee

Your safety cabinet is under guarantee for a period of 12 months, against any construction defect and in normal use conditions, from the date indicated on our delivery note.

The guarantee can be applied only in case of manufacture defects. It covers exclusively replacement of material and pieces recognised as faulty by our technical and quality departments, only qualified to decide. It is strictly limited to the reparation of the materiel in our manufacture. Spare parts are under guarantee for a period of 3 months after there installation.

The guarantee will be excluded in following cases:

- the material is not placed, used or kept in good conditions in accordance with the operating instructions,
- deterioration of the material by the user or a third person,
- modification or repairing by the user or a third person without our written agreement,
- normal usury or in case of non payment at the due date of the total or partial material price.

The implementation of the guarantee will not extend its duration. The guarantee stops if the customer has not notified the supplier of the defect within 7 days as from the date of the detection of the problem, date that the customer has to prove.

All damages which can be related to improper operation and set-up as well as occurring from corrosion are excluded from the guarantee.

Appendix

Checking list for the user

	Yes	No
Check the closing mechanism		
- The door(s) open correctly		
- The door locking device		
Check the exhausting system: Does it work properly?		

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Check that all labelling are complete?		
If the hinges have been oiled or greased: Do they work properly?		
Has the lock been oiled: Does it work properly?		
Have the shelf(ves), base trough and perforated plate been cleaned?		
Check whether the inlet and outlet valve have been cleaned?		
Remarks		
Done on		
by		
Signature		