

# Instruction manual

## *For safety cabinet*



## Model B22S

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## 1. DESCRIPTION / USE

The corrosive products (acids and bases) have to be stored in safety cabinets to avoid any risk of leak or breakage of a bottle. Please ensure to separate acids and bases storage considering their incompatibility.

These safety cabinets are compliant to the standard FM and to the NFPA – OSHA specifications with manual or automatic closing doors. They allow storing either acids or bases, with a protection at every storage level in polyethylene.

## 2. TECHNICAL FEATURES

### **Compliance :**

- Compliance with the specifications NFPA (National Fire Protection Association), OSHA (Occupational Safety and Health Administration) and FM (Factory Mutual International)

### **Technical features :**

- Construction in 18-gauge (1-mm) thick double-wall, welded steel with 1-1/2" (38-mm) of insulating air space
- Standardized pictogram for acids provided (trilingual)
- Swing door
- Self-latching door, that open to a full 180 degrees
- 3-point locking-system
- Shelves adjustable on 3" (76-mm) centers for versatile storage
- Leakproof 2" (51-mm) bottom sump
- Dual vents with flame arresters
- 4 self-leveling feet
- Grounding connector
- External dimensions : H 1650 x W 585 x D 460 mm
- Internal dimensions : H 1560 x W 500 x D 390 mm
- Storage capacity : 86 liters
- Retention capacity : 10 liters
- Loading capacity : 75 KG per shelf
- Weight : 90 KG

## 3. INSTALLATION AND COMMISSIONING

### **Installation**

The safety cabinet has to be installed on a flat surface that can bear its weight with the products inside.

Ensure that the safety cabinet is correctly wedged, as for the cabinet not to topple. The eventual blocking has to be done by the user.

The correct leveling of the cabinet must correct any distortion of the frame, allow the doors to be strictly parallel compared to the frame, and take away any rubbing of the doors on the cabinet's frame.

The installation location must guarantee :

- That it is not exposed to any heat source
- That it is protected against moisture and that the ambient temperature of the location is neither less than 5°C, nor more than

40°C

### **Transport and handling**

The safety cabinet that you received has been protected and transported in optimal conditions, as to be protected from any damage.

It has to be lifted only by suitable equipment (suction cup, strap...). It has to be carried in a vertical position, and it must not be lying. It is imperative not to tilt the cabinet when it is carried. Indeed it can cause damages that can alter the right functioning of the cabinet.

On the other hand, if it has to be moved, the cabinet has to be placed on a pallet and strapped, as to avoid any fall.

### **Commissioning**

After having unwrapped the cabinet, ensure that you also received a set of two keys.

Your safety cabinet has to be installed, used and maintained as to guarantee the users protection.

You need to remove the covers on the vents before storing any can in your cabinet. To do this, simply unscrew them counterclockwise.

The doors open by pulling the handle towards you.

#### *Swing doors*

The swinging doors can be open by pulling the handle. The automatic closing system allows the doors to be closed systematically after every use (if the blocking doors system is not activated).

#### *Door closing mechanism*

The door closing mechanism is adjusted in the warehouse, in usual conditions. In case of an important evolution of the temperature, its behavior can evolve.

If the cabinet has been delivered during summer or winter, an adaptation period to the ambient temperature might be required. This period can last up to 12 hours.

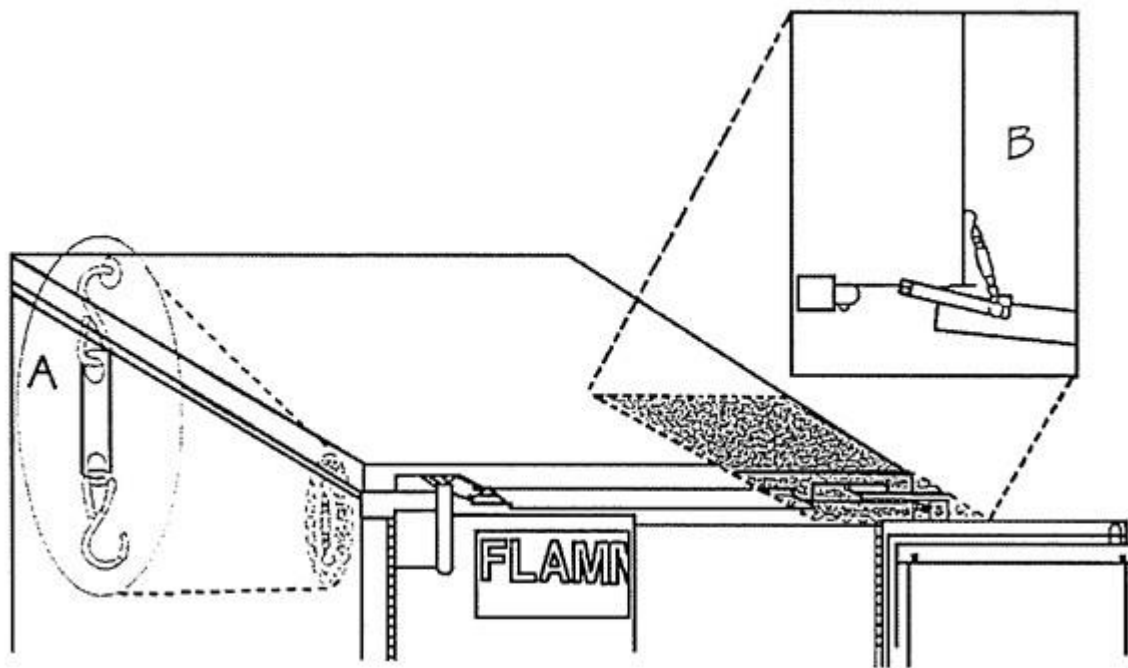
#### *Door blocking system*

The door blocking system allows maintaining the doors open, during an undetermined period. It allows safe manipulation of the chemicals.

If the ambient temperature rises over 74°C, the opened door gets unlocked and will automatically close.

It is mandatory for safety reasons, not to impede the proper closure of the doors with an object and to maintain the doors closed if the cabinet is not used.

*See the below schema for the fixation of the thermo-fuse :*



#### 4. INTERNAL EQUIPMENTS

The cabinet is provided with 3 shelves. This must be fixed at the chosen height thanks to the rack and pinion.

Take care not to exceed the loading capacity per shelf of 75 KG.

The cabinet also has an integrated retention tank, which has a retention capacity of 10 liters.

The cabinet is provided with polyethylene trays attached to the galvanized steel shelves and a separate polyethylene liner for the bottom sump.

#### 5. STORAGE

Your safety cabinet is exclusively destined to store chemicals in laboratories, industries, schools... in closed containers.

It must not store high concentrated corrosive products.

We remind you that the storage of corrosives can alter the quality of your safety equipment. On the other hand, we remind you that damages due to a bad use of the equipment won't be covered by our warranty.

#### 6. VENTILATION

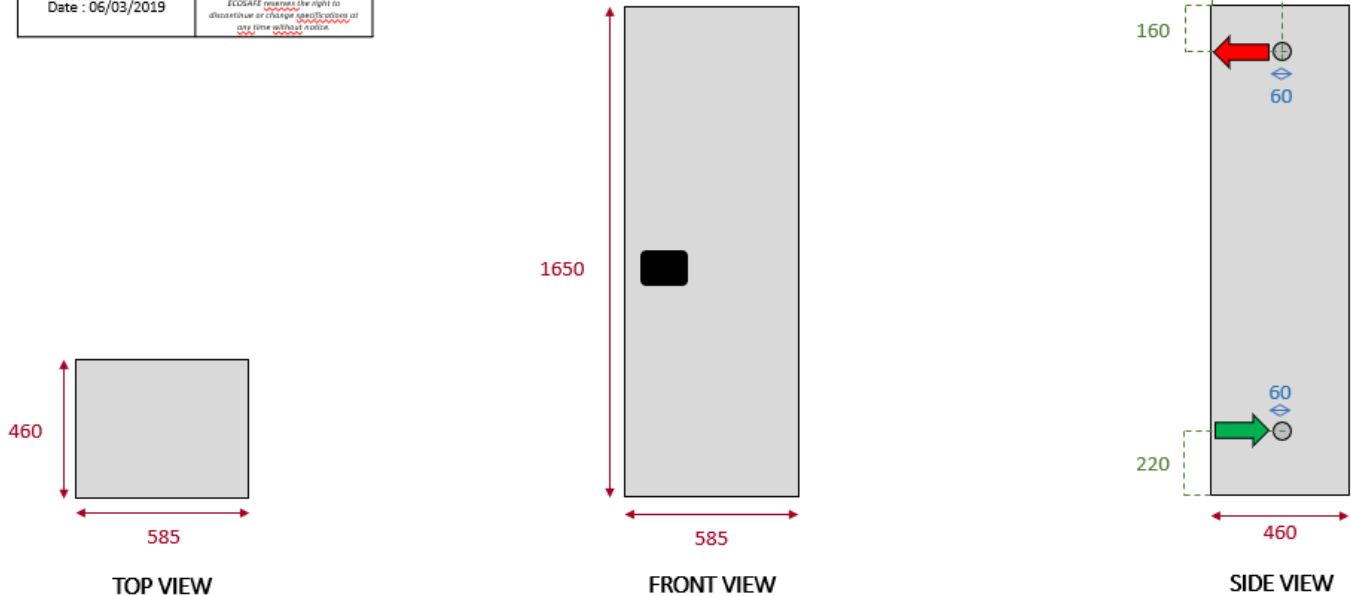
We highly recommend connecting your safety cabinet to a ventilation system, as to evacuate the eventual vapors contained in it.

The air renewal has to be at least 10 times the volume of the cabinet, per hour. Moreover, ensure that the ventilation runs 24h/7.

##### Connection to a ventilation system

The air inlet and outlet are situated on the side of the cabinet. See the schema below.

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Scale 1 : 15 Measure unit : mm Date : 06/03/2019	Chemin des Champs Courbes 15 – Zone Industrielle de Vallière Est CF-1024 Ecublens Tél : +41 (0)21 694 10 04 ECOSAFE reserves the right to discontinue or change specifications of our line without notice.



### How to choose a ventilation or a filtration box ?

**Ventilation boxes** are connected to the safety cabinet with a connecting kit (including a connecting sleeve, 2 hose clamps and 1 meter of flexible sheath) ; the fan included in the box extracts the toxic vapors contained in the cabinet, and reject it to the outside of the building thanks to the roof or wall extraction.

If you cannot reject the vapors to the outside, you need a filtration box.

**Filtration boxes** are equipped with an activated carbon filter, which purifies the toxic vapors in the box, and rejects it in the room in a healthy fashion. Filtration boxes are delivered with the activated carbon filter that you need to renew once a year.

### Running without any mechanic ventilation

It is possible for your safety cabinet to run without mechanical ventilation. However, your cabinet has to be placed in a location that provides its own ventilation system (at least 5 times the volume of the location, per hour).

The cabinet itself and a radius of 2,5 meters directly around is a dangerous area subject to explosions.

On the other hand, if the ventilation system of your cabinet is not running, you have to indicate it, by putting an etiquette on the cabinet, saying "Safety cabinet not connected to the mechanic ventilation" (etiquette is not provided).

## 7. SAFETY CONTROLS

Your safety cabinet is a safety equipment. As to guarantee its perfect efficiency, you have to check the equipment regularly.

## Daily safety controls :

- Check if the products (liquids, powders...) have flowed in the containment sumps. If it has, they have to be emptied and cleaned promptly, with suitable equipment (absorbent mat...).
- Check that the cabinet and its internal equipments are not corroded.
- Check that the cabinet does not have any mechanical damages.
- Check the proper closing of the doors.
- Check the proper working of the locking system.

## Monthly safety controls :

- Check the proper working of the doors (opening and closing)
- Check the working of your ventilation system thanks to, for example, a piece of paper  
(Only if your cabinet is connected to a mechanical ventilation system)

## 8. SPARE PARTS

### Elements :

- Handle with integrated locking system : *Contact us*
- Standardized pictogram : *Contact us*
- Shelf with polyethylene protection : P/N **ESP22**

## 9. RECYCLING

The safety cabinet can be entirely dismantled. Various elements such as the steel can be recycled. Ensure to respect the national and local waste disposal terms. Those elements should not be mixed with household waste.

## 10. WARRANTY

Your equipment holds a 12 months warranty against every manufacturing defect (limited to ordinary conditions of use, from the date indicated on the delivery note).

Our warranty can be applied only in case of manufacturing defects or hidden fault. The warranty covers only the replacement of the faulty goods or pieces indicated by our quality or technical department, as they are the only one able to determine the condition. Repair of the equipment must be performed in our warehouse.

The spare parts are under 3 months warranty upon their settlement.

The warranty cannot be applied in the following cases :

The equipment has not been stored, used or maintained in accordance with the standards by the user

In case of a damage of the equipment by the user or a third party

The equipment had a modification or a repair by the user or a third party, without any prior written authorization by ECOSAFE

In case of a bad use of the equipment

In case of a normal attrition of the equipment

In case of a bad installation of the equipment

In case of damage caused by the corrosion

The activation of the warranty won't extend the term. Our warranty stops if the customer has not notified us in a 7 days term after seeing the fault ; date that the customer has to prove.



## 11. CONTROL SHEET FOR THE USER

	YES	NO
The opening and the closing of the doors are working correctly		
The locking system of the doors works correctly		
The mechanic ventilation system is running correctly (if applicable)		
The ventilation system is not obstructed		
The air inlet and outlet are clean		
The standardized pictogram on the door is in good condition and visible		
The door hinges are lubricated		
The locking system is lubricated		
The containment sump is clean		
<b>Remarks :</b>		
<b>Date :</b>		
<b>By :</b>		
<b>Signature</b>		