BUMAX

USER MANUAL

FIRE-RESISTANT LITHIUM CABINETS BASIC STORE / CHARGE





The specialist in fire-resistant storage systems

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Dear Customer,

You have chosen a high-quality LaCont Umwelttechnik product.
Thank you very much.

To ensure that the entire system functions perfectly, please read the following operating instructions carefully.

We cannot accept any liability if these instructions are not followed.

We expressly reserve the right to make technical changes that serve to improve our product or that are necessitated by changes in legislation, even without prior notice.

These operating/installation instructions may only be reprinted or reproduced, in whole or in part, with the written permission of LaCont Umwelttechnik GmbH.

Important



The product must be installed vertically and horizontally!



When storing individual parts, e.g. a door that has been removed, do not place them on their corners and line the storage area with soft material beforehand, e.g. a packing blanket!



Before commissioning, connect the battery in the smoke detector and check that the smoke detector is working properly!

Caution / Warning / Attention
Danger to persons due to electric current.



Info
Warning 230V AC
Dangerous voltage. May cause death, serious injury or significant property damage.
Disconnect the device from the supply voltage at all poles before dismantling/assembling or modify the structure. Observe VDE 0100 for 230 V mains connection.



Caution: There may be defective batteries in the cabinet! These pose a hazard. Protect yourself from leaking electrolytes or other hazardous substances by taking adequate protective measures.

General safety information

- The operating/installation instructions must always be kept at the place of use of the fire protection enclosures.
- Legally required safety instructions must be displayed in a visible location for users.
- All safety and hazard warnings as well as the type plate must be kept in a legible condition.
- Observe the relevant VDE regulations.
- Observe general building regulations and building requirements.
- Observe the requirements of the fire authority.
- Observe the regulations necessary for handling lithium-ion batteries.
- Observe the accident prevention guidelines and the workplace guidelines.
- The instructions of the technical supervisory service must be followed.
- The relevant standards must be observed when assessing fire protection and structural engineering aspects.
- Only use the products when they are in proper working order.
- Ensure that the required safety checks are carried out by personnel authorised by us.
- Damage and malfunctions that may occur as a result of improper transport and installation due to the heavy weight can only be reliably avoided by specialist personnel trained and authorised by us.
- The stability of the enclosure may be impaired when the doors are open if the enclosure has not yet been bolted to the building structure.
- The door's swivel range must always be kept clear.
- Please observe the technical specifications in our catalogue or data sheet for the respective product.
- Unauthorised persons must be denied access to the enclosures.
- The doors of the enclosures must be kept closed.
- Observe all instructions in this operating and maintenance manual.
- The enclosure must only be screwed to the building structure using approved and suitable screws/dowels.
- The suitability of the screws/dowels must be checked depending on the structure.
- The enclosures must not be covered with adhesive tape, painted or coated in any other way.
- The enclosures must not be damaged on the body (drill holes, screws).
- The enclosure does not have an emergency release! People inside the enclosure cannot free themselves!
- The locking systems must not be modified or replaced.
- The enclosures may only be connected to a socket that is protected by a 16 A circuit breaker and an RCD. The necessary safety measures must be provided on site!



Caution / Warning / Attention
Danger to persons due to electric current.

Warning 230 V AC

- May cause death, serious injury or significant damage to property. Before dismantling the ventilation unit, disconnect the device from the power supply at all poles. It is essential to the safety instructions of VDE 0100 for 230 V AC mains connection.

Intended use

- The products described in these operating/installation instructions are manufactured in accordance with the latest technology and recognised safety regulations.
  They may only be used:
  - used for their intended purpose and
  - in a condition that is safe to use.
- The housings may only be used for storing and charging "commercially available lithium-ion batteries".
- Only chargers and lithium-ion batteries in perfect technical condition may be used.
- Only lithium-ion batteries in perfect condition may be stored and charged.
- The housings consist of coated, non-metallic plate-shaped components. The edges are colour-coded.
- Please follow these operating instructions carefully when handling the products and using the cable entry correctly.
- The enclosures must not be used to store hazardous substances.
- No fan heaters or similar devices may be placed in the cabinet and operated there.
- Any other use is considered improper. LaCont is not liable for any damage or consequential damage resulting from this.

Transport

- The enclosures are shipped standing upright on a pallet.
- If the packaging is damaged, the damage must be reported in writing to the carrier on the delivery note – a "clean receipt" to the delivering carrier excludes recognition of transport damage.
  The same applies to missing packages according to the delivery note.
- The pallet must be picked up from the narrow side with forks inserted completely through to the end of the pallet.
- Only open the pallet at the installation site to prevent damage during transport to the installation site.
- When opening the pallet, the housings may be damaged if sharp objects such as knives are used. Please take care!
- Dispose of packaging material in an environmentally friendly manner or reuse it.
- If the fire protection enclosure is not used or installed immediately, it must be stored in a suitable location. -> Do not store outdoors.
- Transport must be carried out in accordance with safety regulations!
- Transport the enclosure upright on the transport pallet.
- Only loosen the strapping at the installation site.
  If the enclosure needs to be turned over, this must only be done smoothly and on its entire surface, either on its back or side.
- Fire protection enclosure with integrated, wheel-accessible base. The front panel must be unscrewed for use.
- Do not place the enclosure on the door(s)!!
- The enclosure must be locked.
- Please note the heavy weight of the fire protection enclosure.
- Transport work must generally be carried out by at least 2 people.



- Tilting to the side or rear wall is only permitted for the purpose of installation!
- In general, tilting the enclosure onto its side or back up to 45° is safe.
- If tilting by 90°, the door must be secured all around with appropriate spacer blocks – alternatively, the door leaf can be removed.
- In the case of double-door enclosures, the doors should generally be removed if the enclosure has to be laid on its side or back.
- The outer edges must be protected accordingly.
- The weight must be taken into account -> follow the accident prevention regulations here!
- The enclosure must be secured accordingly.

The most important points in brief

- Be aware of the risk of tipping during transport!
- Only remove the protective film, corner protectors or other packaging material immediately at the installation site!
- Check for any mounting materials attached to the protective film or the enclosure!
- Never transport the enclosure with the doors open!
- Always transport the enclosure with at least 2 people!
- When transporting with a forklift, use long forks appropriate for the dimensions.
- Pay attention to protruding or protruding parts.
- When transporting with a crane, do not stand under suspended loads.
- Damage must be reported to us immediately.
- The products must not be stored outdoors and must be protected from moisture (water).

Basic information

- Please note: As a general rule, defective batteries should not be stored inside buildings.
- Do not install damaged parts – this will immediately void the warranty and proof of usability.
- Without complete and professional installation, the housing does not meet the necessary building regulations for proof of usability.
- Building regulations and guidelines, as well as instructions from the relevant building authority and the responsible fire safety expert, must be followed.
- As the installer, only issue an unrestricted manufacturer's declaration of conformity with the building authority approval if the installation has been carried out in accordance with the specifications.
- Please observe the relevant VDE regulations.
- Observe the accident prevention guidelines and the workplace guidelines.
- The swivel range of the doors must always be kept clear.
- Unauthorised persons must be denied access to the enclosures.
- The doors of the fire protection enclosures must be kept closed during operation.
- Secure the enclosure against tipping.

Information in these instructions

- These instructions do not constitute a manufacturer's declaration or a building authority certificate of usability.
- The information in these instructions applies to a wide range of products. For binding technical and approval-related information, please refer exclusively to the building authority usability certificates, the manufacturer's declarations issued by the installing company and our order confirmation, which has become part of the purchase contract through the signature of our contractual partner.

Installation conditions for fire protection enclosures

- The surface must be level
- Only suitable for indoor installation
- The installation site must be frost-free and dry, ambient temperature +5°C to +30°C
- Not suitable for outdoor installation
- The floor/wall must be suitable (load-bearing capacity, classification)

Check the suitability of the enclosed dowels in relation to the wall properties.

The housing must be aligned at the final installation location. To do this, lift the housing at the corners and adjust the height using shims. The housing must then be level.

The enclosure must be secured against tipping.
Check that the fire protection seals are undamaged.
Check that the door locks properly when closing the enclosure.

Special features

- Free-standing enclosure
- Doors can be removed, thus reducing weight during transport
- Door locking via swivel lever with double-bit operation
- Cable entry at top and bottom
- Cable gland for single entry
- External mounting brackets
- Door folds into body, opening angle 180°
- Ventilation in rear panel
- Bottom support rail for mounting grating floors

Scope of delivery

- Our delivery includes everything that is useful and necessary for installation.
- The SiS Li-Ion is delivered as described in the brochure. Please refer to the brochure for optional ordering options.
- 230 V fan switches off automatically in case of fire.
- Smoke detector with switch base – connection to fan
- Fan unit with integrated smoke detector.
- Grating floors with floor supports

Design variants

- Control unit with fire detection for Basic Charge EI 90
- Extinguishing generator (optional)
- Or up to 4 x 10-way power strip

- Basic Charge: - Operating voltage 230 V, fuse protection 1-phase 16 A
  - Maximum electrical power per charging cabinet 3.5 kW (max. 2 kW per power strip)

Warranty, transfer declaration

To ensure that our products function optimally, the installation instructions must be followed strictly.

LaCont's warranty covers the delivered products.

Modifications or alterations to the design may only be carried out after consultation with LaCont, otherwise the warranty will be void.

The warranty for installation services is to be provided by the installer/assembler.

Warranty and liability claims for personal injury and property damage are excluded if they are attributable to one or more of the following causes:

- improper installation, commissioning, operation and maintenance,
- failure to observe the instructions regarding transport, storage, operation and installation,
- improper repairs, or
- disasters caused by external influences of third parties and force majeure.

1. **Installation –** can be secured using the materials supplied (not mandatory)

Check the supplied mounting accessories for completeness:

1. 2 x suspension brackets
2. 10 x countersunk screws 4.5 x 20
3. 1 x double-bit wrench
4. 2 x countersunk screws 6.0 x 120

Opening and closing the door(s)

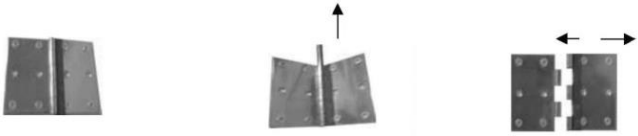
Opening:

- Insert the key into the lock.
- Turn the key a quarter turn clockwise and pull out the swivel lever.
- Turn the swivel lever upwards 180° anticlockwise.
- Open the door.

Closing:

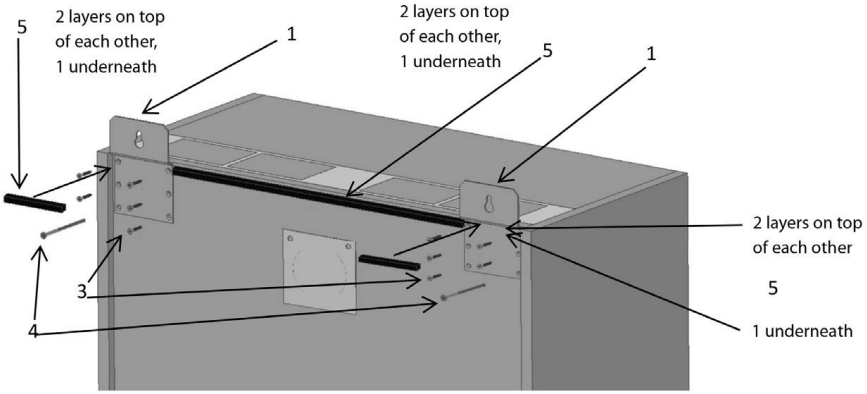
- Close the door, ensuring that the swivel lever is in the open position.
- Press the door lightly and turn the swivel lever 180° clockwise downwards.
- Allow the swivel lever to click audibly back into the swivel lever holder.
- Remove the key.

Note on removing the doors



To unhinge the doors, press the pin out of the hinges!
For safety reasons, at least two people should always be present when unhinging the door leaves.

Attaching the suspension brackets to the rear of the housing



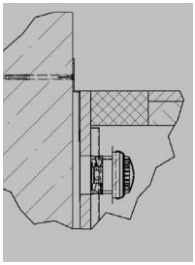
Tighten screw 4 to a maximum of 2 Nm and screw 3 to a maximum of 2.5 Nm!

① 2 suspension brackets
③ 10 countersunk screws 4.5 x 20
④ 2 countersunk screws 6.0 x 120
⑤ Insulation layer former (on the suspension brackets)), see information above

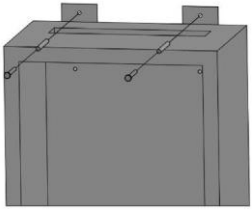
Selection of dowels

For fastening, generally building authority-approved or European technically approved or European technically assessed dowels with steel screws that are suitable for the intended use must be used in accordance with the static requirements.
The special provisions of the respective general building authority or European technical approval or European assessment must be observed.
The selection of suitable dowels for masonry must be made depending on the type of brick (solid or perforated) and the different materials such as brick, sand-lime brick or normal, lightweight and aerated concrete.
The dowels supplied by us are suitable for DIN masonry and bricks. If the type of masonry is unknown, pull-out tests must be carried out on the dowels!

Wall mounting

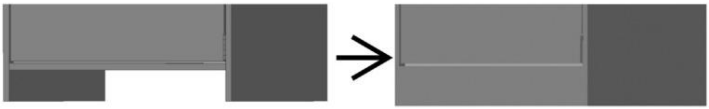


- The wall for mounting must be straight and free of unevenness!
- Align the fire protection housing horizontally on the wall.



- Mark the pre-drilled holes using the mounting brackets at the top.
- Drill holes for the dowels.
- Insert the dowels.
- Secure the enclosure.
- If necessary, rehang the doors.
- Seal the connection between the side wall and the building wall with silicone.
- Keep the ventilation openings at the top and bottom clear!

2. Installation instructions for plinth panel



Recommendation:
To remove the cabinet from the transport pallet, we recommend using a forklift

1. Transport and Positioning



2. Hold the base panel and remove it from the rear wall by loosening the countersunk screws A.



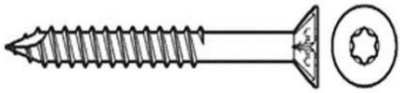
3. Secure the plinth panel with the countersunk screws A from point 2 and the accessory pack from the front double layer.



1x

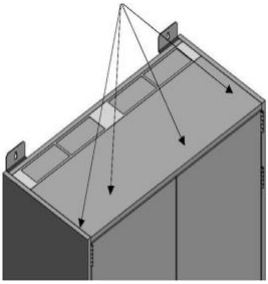


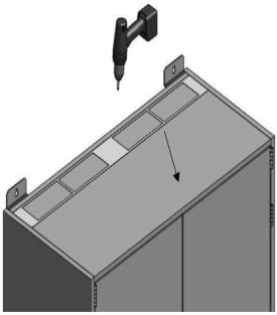
A 2x 4,5 x 35mm



- Pre-drill the location where the cable is to be inserted according to the cable diameter. Take note of the interior insulation, mounting plates and fan!
- Insert existing cables through the cable gland of the housing.

Drill the necessary holes for the cable entries here.





After inserting the cables, fill the existing gaps with mineral wool.

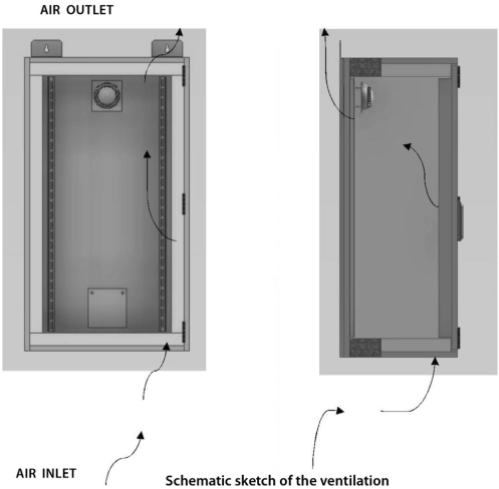
4. Initial commissioning

For versions with a control unit, the housing can be put into operation using the mains plug.
The LEDs indicate the operating mode

Green LED: Device is in operation
Red LED: Fault – permissible temperature exceeded or smoke development in the housing; disconnect the device from the power supply; take safety measures

housing; disconnect device from power supply; take safety measures

5. Ventilation diagram



Schematic sketch of the ventilation

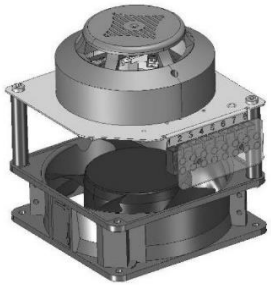
Please note: To ensure adequate ventilation, no more than 60-70% of the area of the grating floors should be covered. grating floors be covered. Covering the entire surface of the grating floors is prohibited.

6.1 EBEL-VENT-L230R fan

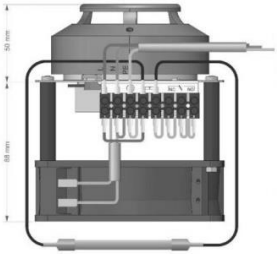
The fan must be connected to 230V/AC. If the optional control unit with fire detection is installed, the fan is already connected.



6.2 Ventilation unit: technical data

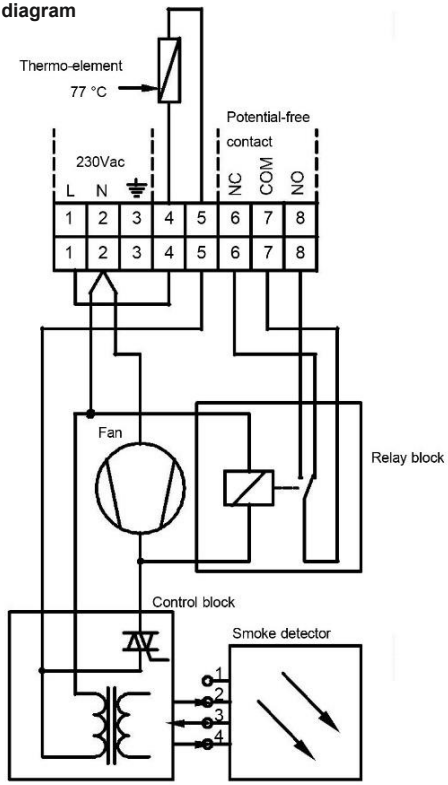


Power	
Operating voltage	185…230…245V/AC 50Hz
Power consumption	0.14A
Power	22W
Fan	
Speed	2850 rpm
Air flow	0.0274 m³/s (98.64 m³/h)
Static pressure	8.64 mmH_2O
Noise level	45 dB(A)
Operating temperature	-10…70°C
Thermal fuse	
Protection level	77
Output relay	
Contact load	Max. 230Vac/1A 24 Vdc/3 A



Smoke detector	
Type	SPD-3.1M
Manufacturer	Arton UA
Light signalling	Red LED
Connection method	2-wire cable
Power supply	10…30 Vdc
Monitoring current	95uA
Current for alarm	6…30mA
Average service life	10 years
Protection rating	IP32
Operating temperature	-30…+55 °C
Compliance with standards	EN 54-7

6.3 Connection diagram



Caution/Warning/Attention

Danger to persons due to electric current.

Info
Warning 230V AC

Dangerous voltage. May cause death, serious injury or significant damage to property. Disconnect all poles of the device from the supply voltage before dismantling/assembling or modify the structure. Observe VDE 0100 for 230 V mains connection.

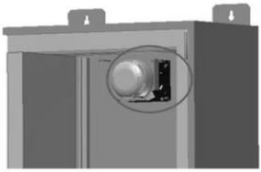
Before commissioning, connect the battery in the smoke detector and check that the smoke detector is working properly!

Environmental protection

Electrical waste products should not be disposed of with household waste. Please recycle electrical components at a designated location. You can obtain advice on proper recycling from your local authority.

7. Dismantling the fan unit

on the fire protection housing



Caution:
The following work may only be carried out by a qualified electrician!

1. Disconnect all poles of the fan unit from the supply voltage and disconnect VDE 0100 for 230 V mains connection before starting disassembly. Check that there is no voltage.

Warning 230 V AC
Dangerous voltage. May cause death, serious injury or considerable material damage.



2. Disconnect and remove the temperature sensor. Loosen the two contacts on the terminal strip with a flat-blade screwdriver. Pull the heat sensor and cable out of the housing from the outside. Seal the remaining holes with mineral wool.

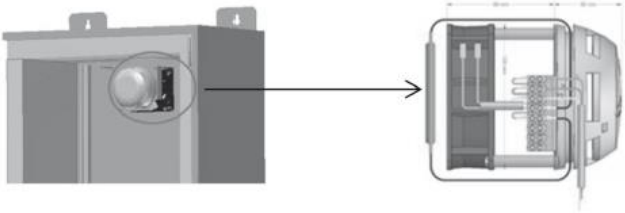


3. Dismantle the ventilation unit:

   Hold the ventilation unit firmly with one hand and open the 2 fixing screws (4.5 x 55 mm) on the fan.



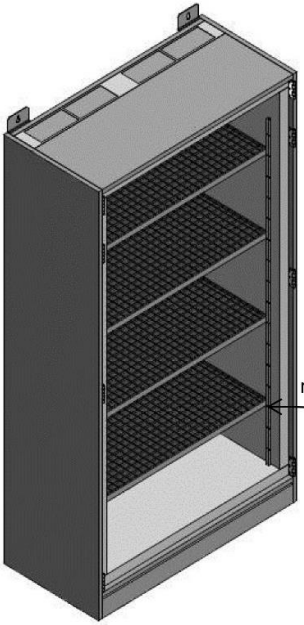
4. Ventilation unit EBEL-VENT-L230R and remove the supply cable from the housing.

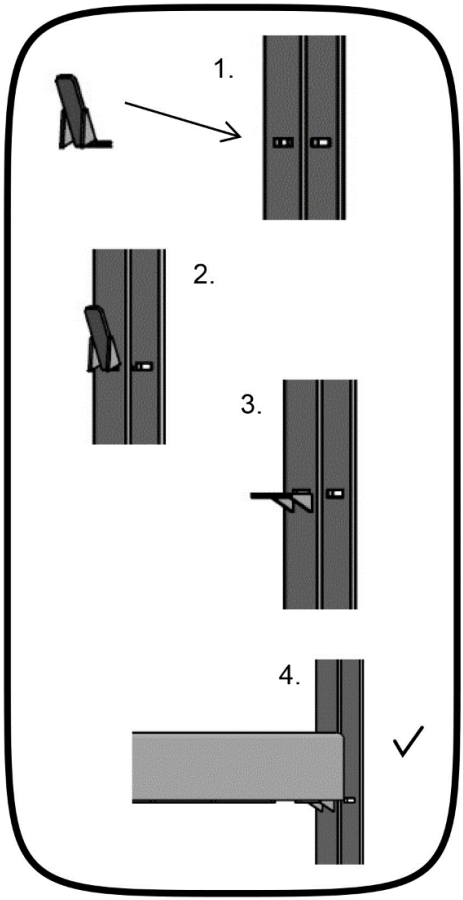


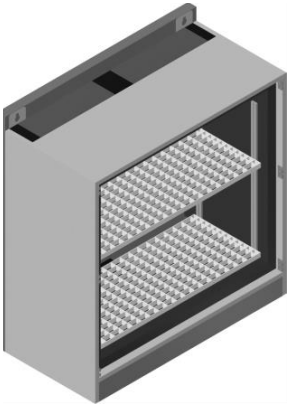
Support system

8 / 16x 

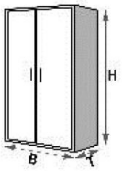
2 /4x 



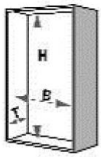




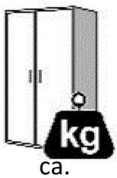
9. Technical data Housing



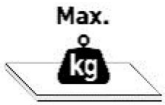
H x B x T



H x B x T



ca.



ca.

2048	1148	591	1804	1004	440	605	75
1222	1148	591	904	1004	440	370	75

10. Technical data for power strip

	10-way power strip
Max. voltage	250 volts
Max. power	3600 watts
Protection class	IP20
Overvoltage protection	Yes

11. Technical data for extinguishing generator

Extinguishing agent	Aerosol
Type of release	Self-contained – no power supply required
Activation	From 180°C or contact with open flame
Service life	10 years – maintenance-free

12. Function test, safety inspection, care and maintenance

- The fire protection enclosures should be serviced at least once a year and checked to ensure they are functioning properly. In your own interest, we recommend that you carry out a functional test (visual inspection) every month. The safety inspection can only be carried out with the necessary care by a qualified employee, as sufficient experience and comprehensive knowledge are essential for this.
- Common, mild household cleaners can be used to clean the exterior of the fire protection enclosures.
- The door locking mechanism must be oiled twice a year.
- The fire protection enclosures must be protected against water, moisture ingress and splashing water.
- If damage relevant to safety is detected, the fire protection enclosures must be repaired with original parts before further use.
- The ventilation unit, smoke detector and battery must be checked twice a year.

BUMAX

BUMAX is a manufacturer and supplier of storage systems for hazardous substances and a specialist in fire-resistant storage systems. BUMAX is the first manufacturer to supply fully tested and approved fire-resistant containers, in accordance with PGS 15 and the latest standards and regulations.


Production in our own factory


Integrally assessed



Over 30 years of experience in the field of PGS 15


Customization possible


Delivery, installation, and service


Specialist in fire-resistant storage systems

Houtkopersstraat 28 | 3334 KD Zwijndrecht | Tel. 078-625 52 10 | info@bumax.com
www.bumax.com