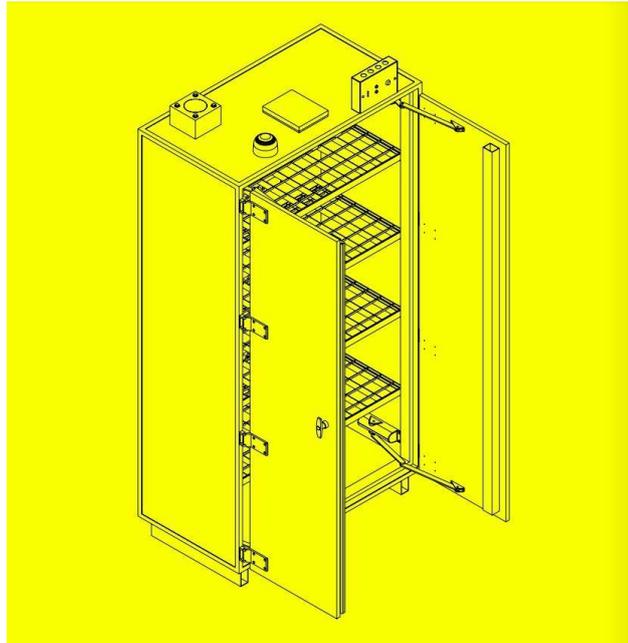


# LOXXER



## User manual

### Loxk1850

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**READ THE USER MANUAL CAREFULLY BEFORE USING THE  
DEVICE.**

**SAVE THIS INFORMATION FOR FUTURE REFERENCE!**

Dear customer,

Thank you for choosing a quality product from Loxxer.

You are thus investing in the security of both your employees and your infrastructure, allowing you to run your operational activities with peace of mind.

Our Loxxer cabinets are manufactured using progressive and durable materials and assembled in a quality manner using modern production methods. Every Loxxer product is subject to strict quality controls throughout the production process.

We make every effort to ensure that you are satisfied with our product.

If you have any questions or comments about your product, please get in touch.

Kind regards,

The Loxxer team

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# 1 INTRODUCTION

## 1.1 Intended use

The Loxxer cabinet is a safety cabinet approved for the safe storage and charging of lithium-ion batteries, of limited size, of bikes, scooters, scooters, hand tools, among others.

The Loxxer cabinet is designed for use in a fixed location **INSIDE** a building and connected to the mains. The cabinet should be inspected annually to ensure proper operation. Request a maintenance contract for this purpose.



## 1.2 Prohibited uses



The Loxxer cabinet is not intended for use other than storing and charging Lithium-Ion batteries. For safety reasons, no modifications may be made to the Loxxer cabinet. The intended use is based on compliance with all information in these operating instructions.

In the event of failure to comply with these regulations, no liability can be placed on the manufacturer.

Furthermore, ensure that:

- National or regional legal provisions are complied with
- Only qualified persons should operate the electrical installation
- Do not exceed the maximum power per socket. Per shelf grid, a distribution socket with 8 sockets is provided on the back wall for charging the lithium-ion battery with a maximum current of 16A.

### 1.3 Type designation



### 1.4 Warranty

The manufacturer's warranty on this product is 12 months from delivery.

### 1.5 Technical data

| Type   |                 | LOXK1850           |
|--|-----------------|--------------------|
| Weight   |                 | 180 kg             |
| Height (excl. plinth and superstructure)         | outer dimension | 1,850 mm           |
|  | inner dimension | 1,818 mm           |
| Cabinet width                                    | outer dimension | 1,000 mm           |
|  | inner dimension | 964 mm             |
| Cabinet depth                                    | outer dimension | 550 mm             |
|  | inner dimension | 458 mm             |
| Overall height (incl. plinth and superstructure) |                 | 2,100 mm           |
| Nutrition  |                 | 230V or 380V       |
| Maximum load on shelf                            |                 | 70 Kg              |
| Airflow  |                 | 1.23 litres/minute |
| Ambient temperature                              |                 | 5°C - 35°C         |
| Relative humidity                                |                 | 30 - 70%           |
| Siren sound level                                |                 | 94 - 106 dB(A)     |

## 2 DESCRIPTION

### 2.1 Front view



| No | Section                                       |
|----|---|
| 1  | Forced ventilation                            |
| 2  | Fireproof boards                              |
| 3  | Intelligent software with alarm               |
| 4  | Self-closing doors and lockable               |
| 5  | Sockets                                       |
| 6  | Double smoke detection                        |
| 7  | FirePro® Condensed Aerosol extinguishing unit |

## 3 OPERATION

### 3.1 General

The Loxxer cabinet is divided into 5 compartments, 4 of which are equipped with sockets. These sockets are for charging the batteries with each their specific battery charger according to the manufacturer's instructions. Never swap battery chargers with batteries of another type or brand as this can cause serious damage to the batteries during charging.

The Loxxer cabinet is equipped with intelligent control and includes functionalities developed for this specific application for stocking and charging lithium-ion batteries.

The functionalities can be divided into different areas. Each of these areas is permanently monitored, supervised and reported via the controllers at the top of the cabinet.

If smoke is detected, extinguishing is triggered via the FirePro® generator and an alarm is raised.

### 3.2 Ensure safe operation

#### 3.2.1 Active ventilation

When charging batteries, heat is released. To keep this heat build-up within acceptable limits, the cabinet is equipped with an **active fan** that permanently draws out the warmer air inside the cabinet. The air extraction takes place at the top of the cabinet. Diagonally opposite, at the bottom of the cabinet, fresh air is drawn in via a flap.

The fan is switched off by the LOXXER controller if the FirePro® generator will be activated. If the fan should stop working, a notification will be issued.

### 3.2.2 Storage and charging

**! CAREFUL**  
Never store obviously damaged lithium-ion batteries inside buildings. Dispose of them immediately in waste containers located outside the building and approved for transport.

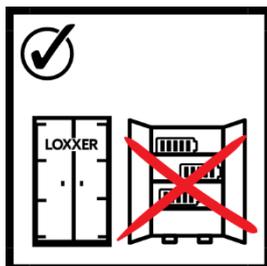


- It is recommended to store new and used lithium-ion batteries separately (each at a different storage level) in the cabinet.
- To ensure trouble-free operation of the fire-fighting system and sufficient air circulation, only 60% of the grate shelves should be covered by battery chargers and batteries.

**! ATTENTION**  
A distance of at least 150 mm must be maintained from the edge of the fire extinguishing system.



### 3.2.3 Door contacts



Safe operation of the cabinet can only be guaranteed if the doors are closed during extinguishment.

This is measured via two door contacts. If one of the doors is not closed as it should be, the Loxxer controller will report this.

The owner/user is responsible for ensuring that the doors remain closed when the cabinet is not in use.

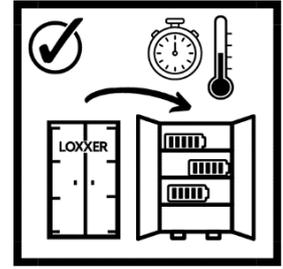
### 3.2.4 Temperature monitoring after activation of extinguishing unit

There is continuous temperature monitoring in the cabinet as soon as the extinguishing unit is activated. This data can be accessed via the Myloxxer portal.



### ATTENTION

Only open the cabinet after it has cooled down.  
Only authorised personnel (e.g. fire brigade) may open the cabinet.



### 3.2.5 System over-watch

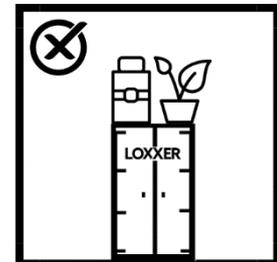
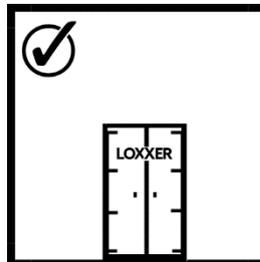
A continuous system overvoltage is integrated as standard in the protection concept of the Loxxer cabinet. If a cable is disconnected or if a component no longer responds to the over-wake current, the controller will go into alarm.

### 3.2.6 Pressure relief valve

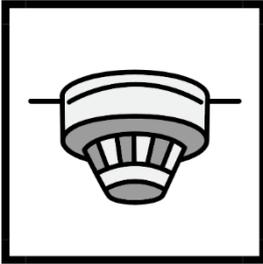
If a sudden rise in temperature were to cause excessive pressure in the cabinet, or in the case of a battery explosion resulting in enormous pressure, the pressure relief valve will automatically open and allow the built-up pressure to drop until normal atmospheric value is reached again.



**It is strictly forbidden to place any object on the pressure relief valve.**



### 3.3 Smoke detection



A smoke detector can catch the very first indications of fire danger.

The LOXXER concept is based on optical smoke detection with a redundant smoke detector. Thus, 2 smoke detectors are always active.

These detectors activate the controller after which the following steps are performed sequentially:

- alarm via siren and red flashing light
- possible reporting to the main fire brigade
- stop charging the batteries
- switching off active ventilation
- activating the FirePro® extinguishing unit

### 3.4 Extinguishing agent FirePro®



FirePro® aerosol fire extinguishers are specifically designed to control and/or extinguish a fire using a dry aerosol that completely stops the chemical combustion process at the molecular level in a few seconds **WITHOUT** removing the oxygen present.

The FirePro® extinguishing agent is harmless and non-corrosive.

Once activated, the solid material in the FirePro® generator is converted into a rapidly expanding dry aerosol that exits through the fire extinguisher outlet and extinguishes the fire in the protected area within seconds. For this reason, both doors must be closed at all times during extinguishment.

For more information, please visit the international website [www.firepro.com](http://www.firepro.com) or the Dutch-language website <https://firepro.nl>.

Always notify the manufacturer or your distributor if a FirePro® extinguishment has occurred.

## 3.5 Error messages

Several situations will occur on the shop floor that could compromise safe operation of the cabinet and/or even prevent it from doing what it is supposed to do in the event of an acute fire of the Lithium-Ion batteries.

Pro-activity is essential in reducing and/or eliminating hazards when storing and charging Lithium-Ion batteries. To this end, numerous preventive measures have been developed and integrated into the Loxxer cabinet.

These alerts are reported both on the Loxxer cabinet itself and on the portal (<https://my.loxxer.com/>) to the authorised and affected persons.

The notifications to ensure proper operation can be divided into 2 areas:

- General operation of the Loxxer cabinet
- FirePro® extinguishing system

### 3.5.1 Audio signal

The audio signal will be active if:

- a door is open for more than 5 minutes
- there is no mains power (if UPS batteries were provided)
- the fan is not working



### 3.5.2 Orange LED & buzzer on the FirePro® controller

The orange LED (Fault) on the FirePro® controller's front panel will illuminate if:

- Smoke detector cabling is disconnected or damaged
- The cabling to the FirePro® extinguisher unit is disconnected or damaged

## 3.6 Fire alarm

As soon as the smoke detectors detect the slightest form of smoke, the fire extinguishing system will be activated:

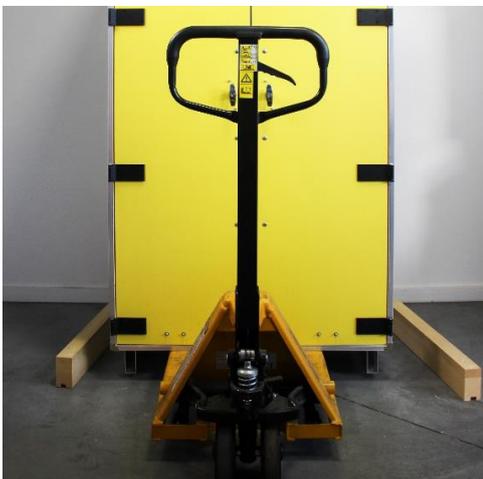
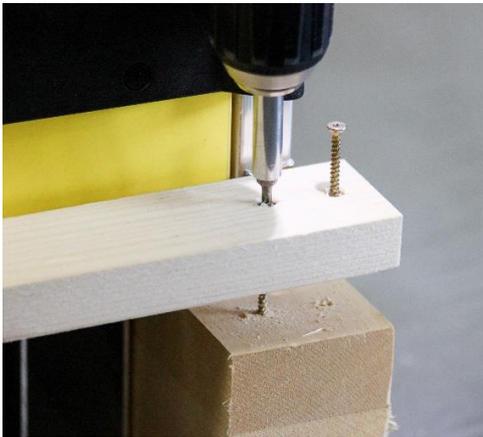
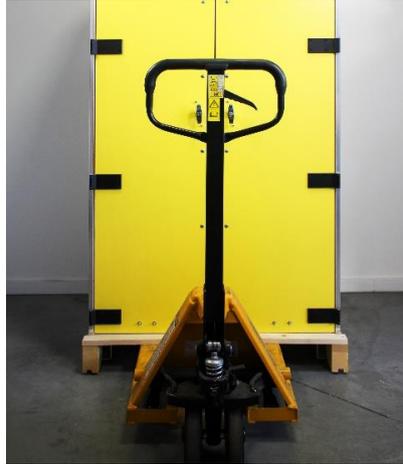
- The FIRE LED on the front panel will light up red
- The siren/flash light will alarm
- The FirePro® extinguishing unit will disperse the aerosol inside the cabinet

## 4 COMMISSIONING

### 4.1 Transport

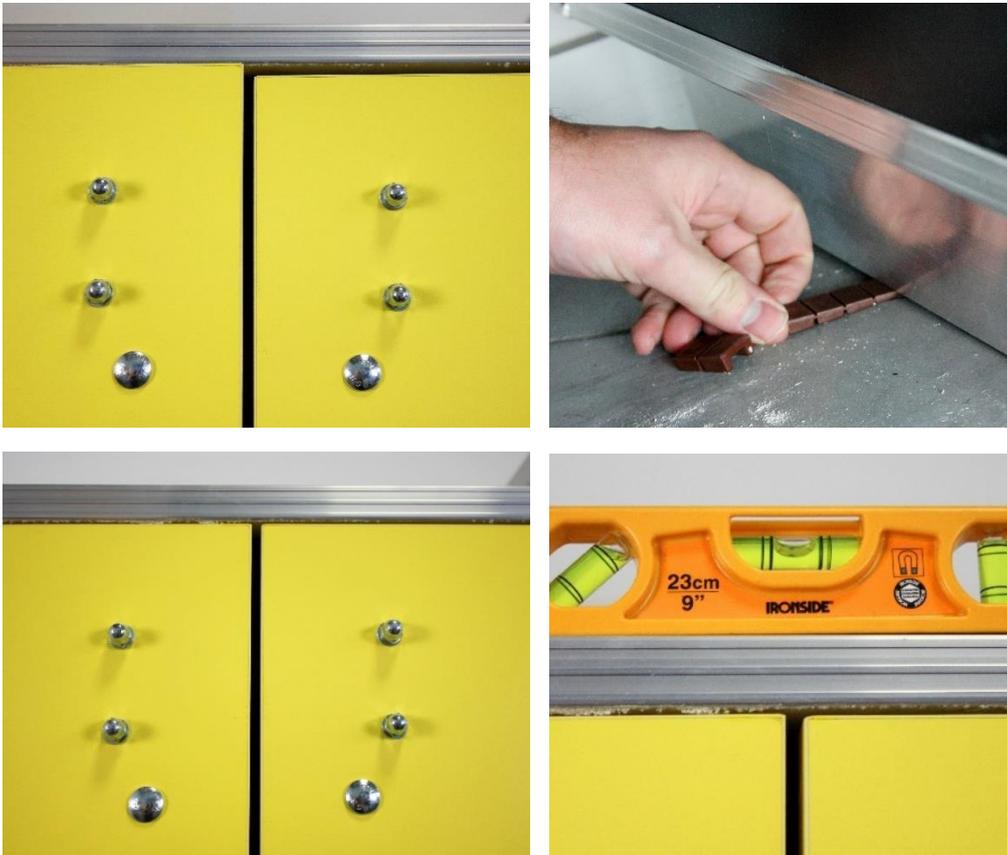
Using a pallet truck, move the Loxxer cabinet, including the transport packaging, to the right place. Make sure both doors are securely locked.

Make sure that the Loxxer cabinet always remains in the vertical position during transport. Do this safely and avoid slipping of the Loxxer cabinet.



Remove the transport packaging and level the Loxxer cabinet in all directions using the adjusting plates.

Attention: the doors should close smoothly & properly and should not cause friction anywhere so that both doors lock easily.



#### 4.2 Included in the cabinet

- Keys door lock Loxxer cabinet
- Keys controller FPC - 2V2
- User manual
- Maintenance sticker
- Wedges (x2) to level the cupboard

#### 4.3 Connecting to mains voltage

Connect the Loxxer cabinet to the mains voltage of the building. After a few seconds, the Loxxer cabinet is ready for use:

- An initial audio signal is followed by three short signals; this is confirmation that the cabinet has been activated and the SIM card has connected.
- Power On indicator is lit "green"

- Fan works
- Isolate key switch is set to "Live"
- Smoke detectors and FirePro® extinguishing system are operational
- Batteries can be recharged

As standard, we supply the cabinet in the 380V version.

#### 4.4 My.Loxxer registration

Contact Loxxer customer service at [info@loxxer.com](mailto:info@loxxer.com) and provide the contact details of the person responsible for receiving notifications from the cabinet.

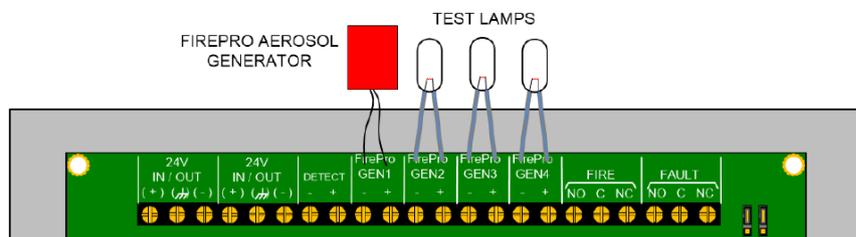
This person receives notifications if the cabinet generates an alarm signal.

#### 4.5 Contact

If you have any questions or comments, contact your distributor.

#### 4.6 Forwarding to alarm centre

- The free alarm contacts serve to transmit a signal to an alarm centre. This should only be connected in consultation with the person in charge of the existing system.
- The connection of the contact must always be done by the customer (This service is not included when purchasing the cabinet)
- Connection must be done by sufficiently trained person (product training supplier / product knowledge)
- These contacts are located in the control system of the firepro FPC - 2V2.
- The connection must be done by a qualified electrician.



NO = Normally Open

C = Contact

NC = Normally Closed

#### 4.6.1 FIRE = alarm

As soon as the system goes into alarm, the volt-free contacts "FIRE" can report this to a central alarm system. This possible relay is connected in parallel with the wiring to the siren.

These contacts are rated for a maximum of 30V DC & 1A. These values must not be exceeded.

#### 4.6.2 FAULT = error message

As soon as the system goes into fault, the volt-free contacts "FAULT" can report this to a central alarm system.

These contacts are rated for a maximum of 30V DC & 1A. These values must not be exceeded.

ADDRESSABLE MODULES (Jumpers J1 & J2 from A to B position)

## 5 EMERGENCY

In case of fire:

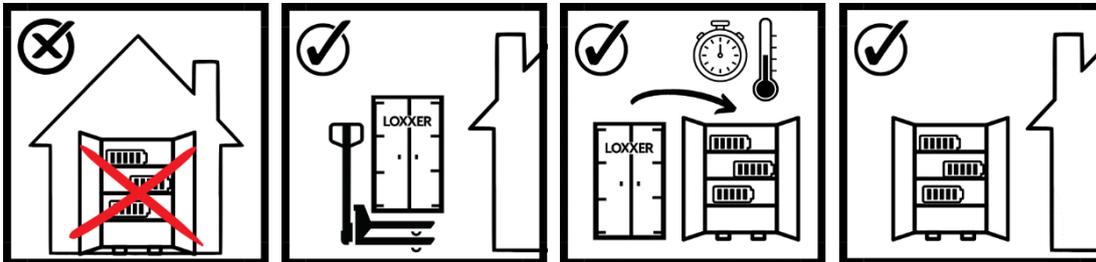
Stay calm, evacuate the building and notify the fire brigade immediately. A flammable gas-air mixture may have formed inside due to the fire. The cabinet should only be opened by qualified personnel (the fire brigade) after at least 24 hours.



Important:

Do not open the cabinet when its surface is still warm. The cabinet should only be opened outside. Opening the cabinet doors too early inside a building can spread fire and endanger lives. Ensure that personal protective equipment is worn in case of fire.

Removing the cabinet from the building:



To prevent further damage and minimise the risk, move the cabinet out of the building. Burning lithium batteries poses a number of risks:

- Toxic fumes.
- Leaking liquids.
- Bodily injuries.

Do not reuse the cabinet if it has been damaged by fire or the use of extinguishing agents.

## 1. Warranty conditions

We guarantee that the battery box is produced without defects under our terms and conditions included in the sales agreement.

The warranty only applies on condition that the above operating and maintenance instructions and all applicable regulations are carefully followed. Any modification to the battery box by the customer without consulting the manufacturer Loxxer BV will invalidate any claim under the legal warranty.

Disclaimer:

- Loxxer BV is not liable for damage caused by improper use.
- Loxxer has no influence on the lithium batteries used by the user. The user should check that the cabinet is suitable for the intended application.
- Loxxer is not liable for technical defects or damage of any kind caused by lithium batteries.

## 2. Electrical diagram

The electrical diagram 'LOXK1850 3n400v 4cd' can be downloaded from the link below:  
[www.loxxer.com/nl/elektrisch-schema](http://www.loxxer.com/nl/elektrisch-schema)

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