

LOXXER



Manuel

LOXK2000 VDMA

Manual

LOXK2000

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**PLEASE READ THE USER MANUAL CAREFULLY BEFORE USING THE DEVICE.
KEEP THIS INFORMATION FOR FUTURE REFERENCE!**

Dear customer,

Thank you very much for choosing a quality product from LOXXER®.

You invest in the safety of both your employees and your infrastructure, so that you can carry out your operational activities with peace of mind.

Our LOXXER® cabinets are manufactured with advanced and durable materials and are assembled in a high-quality way according to modern production methods. Every LOXXER® product is subject to strict quality controls throughout the entire production process.

We are committed to ensuring that you are satisfied with our product.

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

With kind regards,

The LOXXER® team

1 INTRODUCTION

1.1 Intended Use

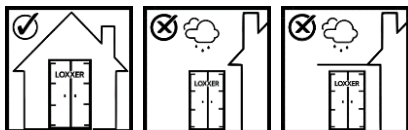
The LOXXER® cabinet is a safety cabinet that has been approved for the safe storage and charging of Lithium-ion batteries of limited size, including bicycles, scooters, hand and garden tools, drones and walkie-talkies.

The LOXXER® cabinet is designed for use in a fixed location **INSIDE** a building and connected to the mains power supply. The cabinet should be inspected annually by qualified personnel authorized by the manufacturer to ensure proper operation.

The following components should be routinely checked to ensure proper functioning:

- The smoke and temperature detector
- The aerosol unit (option)
- The fan and siren with flashing light
- The mechanical door contacts
- The multi-point locking system
- The doorseals

Request a maintenance contract for this.



1.2 Prohibited Uses



The LOXXER® cabinet is not intended for any use other than the storage and charging of Lithium-Ion batteries.

For safety reasons, it is not permitted to make any modifications to the LOXXER® cabinet. The intended use is based on compliance with all the information in this instruction manual.

The LOXX2000 must not be placed in an environment with a lot of smoke or dust development. This could disrupt or activate the smoke detector.

In the event of non-compliance with these regulations, no liability can be placed on the manufacturer.

In addition, ensure that:

- National or regional legal provisions are complied with.
- Only qualified persons may operate the electrical installation.
- Do not exceed the maximum power per power strip.
Each shelf has a distribution socket with 8 sockets (7 for UK version) on the back wall for charging the Lithium-ion battery with a maximum current of 3680W (16A)/ 3250W (13A,UK).

1.3 Warranty

The manufacturer's warranty on this product is 12 months from delivery. In case of modifications to the cabinet that have not been requested and approved by the manufacturer, the warranty will be void.

In the event of activation of the aerosol due to smoke detection, the replacement of this aerosol unit is not covered by warranty.

Possible (transport) damage must be determined and reported upon receipt.

1.4 Technical data

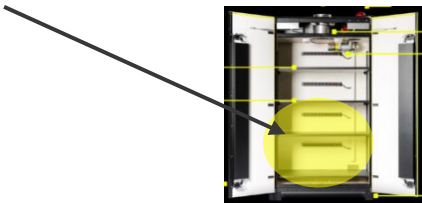
Type		LOXK2000	
Weight		kg	450
Height (total height incl. alarm)	Exterior dimensions	mm	2.040
	Interior dimension	mm	1.600
Cabinet width	Exterior dimensions	mm	1.142
	Interior dimension	mm	1.070
Depth of case	Exterior dimensions	mm	765
	Interior dimension	mm	680
Height (excl. audiovisual alarm)		mm	2000
Airflow		m³/minute	1.21
Ambient temperature		°C	5-35
Relative humidity		%	30-70
Siren sound level		dB(A)	94-106

*Dimensions may slightly vary due to product development. The manufacturer cannot be held responsible for this

POWER SUPPLY / power distribution unit (8 sockets, 7 for UK version)				
1-phase, 230V, 16A	REGION	EU	FR	UK
	Ampere	16A	16A	13A
	Max. total power cabinet	3.68 kW	3.68 kW	2.99 kW
	Max. power per PDU	3.68 kW	3.68 kW	2.99 kW
3-phase, 400V, 16A	REGION	EU	FR	UK
	Ampere	3 x 16A	3 x 16A	3 x 13A
	Max. total power cabinet	11.04 kW	11.04 kW	8.97 kW
	Max. power per PDU	3.68 kW	3.68 kW	2.99 kW

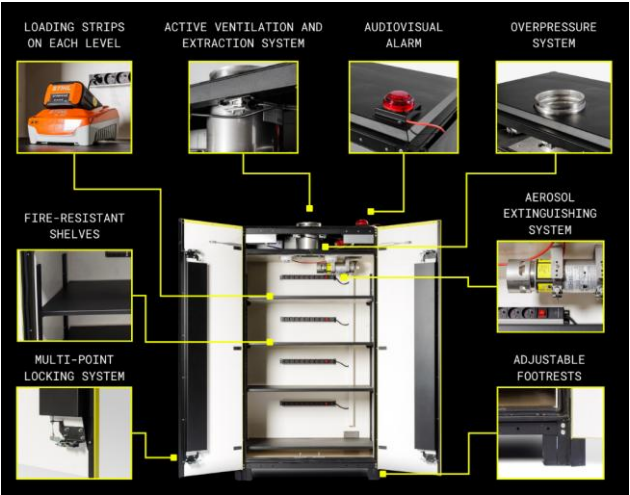
Make sure that the maximum allowed power is not exceeded. Never exceed the power draw on each PDU of 16A/13A.

The **bottom two PDU's** max capacity in the three-phase configuration is 16A combined.



The LOXX2000 has **achieved VDMA 24994 class I for 17 kWh of battery cells** for the entire cabinet and a maximum energy load of 3.4kWh **per compartment** (3.4 kWh)

2 OVERVIEW LOXX2000



3 COMMISSIONING OF THE CABINET

3.1 General

The LOXXER® cabinet is divided into 5 compartments, 4 of which are equipped with sockets to charge your batteries. Please note that the batteries must always be charged with their specific corresponding battery

charger according to the manufacturer's instructions. Never mix battery chargers with batteries of any other type or brand, as this can cause serious damage to the batteries while charging.

3.1.1 Shelves

The LOXK2000 versions are equipped with 4 height-adjustable shelves. These shelves are made of fire-resistant material and prevent fire spread between the different levels.

3.1.2 Pallet truck recesses

The cabinet is equipped with recesses on the 4 sides to easily and quickly move the cabinet during an intervention with a pallet truck. The dimensions of the cabinet allow the cabinet to be moved through a door with standard dimensions.

3.2 Ensuring safe operation

3.2.1 Active ventilation

The LOXK2000 is equipped with **active ventilation** that prevents heat build-up during the charging process. This permanently pulls out the warmer air in the cabinet. The air exhaust is done at the top of the cabinet. At the bottom of the cabinet, fresh air is sucked in.

3.2.2 Unused cable grommet

If the LOXK2000 has openings that are not used, they must be provided with appropriate seals. The appropriate parts can be ordered for this via Loxxer. The cabinet is always equipped with all necessary seals as standard.

3.2.3 Storing and charging

CAUTIONOUS
Never store obviously damaged lithium-ion batteries in a LOXXER cabinet.
Dispose of them immediately in waste containers that are outside the building and approved for transport.

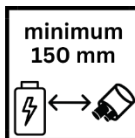


- It is recommended that new and used lithium-ion batteries are stored separately (each at a different storage level) in the cabinet.
- The cabinet must not be placed near flammable materials



ATTENTION

If the cabinet is equipped with an aerosol, **a distance of at least 150 mm must** be maintained from the edge of the fire extinguishing system.



3.2.4 Self-closing doors



Fireproof operation of the cabinet can only be guaranteed if the doors are closed. The door closers on both doors ensure that the doors always close by themselves.

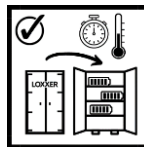
At the LOXK2000, this is registered via two door contacts, if one of the doors is not closed, this is indicated by a blue LED. After 60 seconds, the batteries will stop charging if the door is not closed.

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



ATTENTION TO ERROR OR ALARM MESSAGES

Only authorised personnel with appropriate personal protective equipment (e.g. fire brigade) should be allowed to open the cabinet. A battery fire can release flammable gases. Before opening the cabinet, remove all ignition sources within a radius of 12 meters around the cabinet. Open the cabinet in a safe environment.



3.2.5 System monitoring

The LOXK2000 has a system monitoring system by default. If a cable has come loose or if one of the peripherals is not working correctly, the controller will report an error.

3.2.6 Exhaust air system

Lithium-ion batteries can produce toxic gases. It is therefore advisable to connect the cabinet to a ventilation system through the designated air outlet. The ventilation system must have a minimum flow rate of 30m³ and must not discharge the air to other work sites.

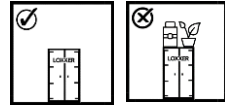
If the cabinet is not connected, a risk analysis must be made to ensure that no gases can be released in active workshops.

3.2.7 General risk analysis

It is advisable to do a general risk analysis when installing the cabinet. This is to determine whether additional safety measures need to be taken to minimize the risk of developing harmful gases or explosions.



It is strictly prohibited to place any objects on top of the cabinet.



3.3 Smoke and temperature detection



The LOXK2000 has an optical smoke detector and a temperature detector to detect critical events. These are activated when smoke develops and when the temperature in the cabinet exceeds 60 °C. Both comply with the EN 54 standard.

3.4 Extinguishing agent Aerosol (option)



The aerosol fire extinguishers have been specifically developed to control and/or extinguish a fire by means of a dry aerosol that completely stops the chemical combustion process at the molecular level in a few seconds **WITHOUT** taking away the oxygen present.

The aerosol extinguishing agent is harmless and non-corrosive.

Once activated, the solid material in the aerosol generator is converted into a rapidly expanding dry aerosol that fills the cabinet through the fire extinguisher's outflow opening. The fire is extinguished within seconds. For this reason, both doors must always be closed during extinguishing.

Always notify the manufacturer or your distributor if an aerosol unit has been activated.

3.5 Errors and alarm

The LOXK2000 has an RGB status LED and a siren with flashing light as standard to notify the customer in the event of a malfunction or alarm. Both are positioned in a highly visible place at the top of the cabinet.

3.5.1 Open door notification

If the cabinet is in normal operation, but 1 of the doors is not closed properly, the status **LED will** light up **blue**. **After 60 seconds, the cabinet will stop charging and ventilating** if the doors are not closed correctly.

3.5.2 Error message

If there is a bad contact with the peripherals, the status **LED will** light up **yellow**. This way you can always be sure that the connected detectors, siren, door contacts and any options are working properly. If the cabinet is in error state, the batteries are not charged and the ventilation stops.

3.5.3 Pre alarm

If smoke is detected **or** the temperature threshold (60°C) is reached inside the cabinet, the status **LED will** light up **purple**. In addition, the siren will repeatedly turn on and off for 3 seconds. This notification can be forwarded by cable or via wireless notification as a pre-alarm.

In the event of a **pre-alarm**, the cabinet immediately **stops charging and ventilating**. To reset the cabinet a power cycle is required.

Before resetting the controller make sure the cabinet is safe to use again.

To reset, disconnect the cabinet from the power supply and after 10 seconds reconnect the power supply.

3.5.4 Alarm

If smoke is detected in the cabinet and the temperature rises above 60°C, the status **LED will** light up red. In addition, the siren will go off continuously. This message can be forwarded as an alarm by cable or via wireless transmission.

The cabinet **immediately stops** charging and ventilating **in the event of an alarm**. If the option was taken to install an aerosol extinguishing agent, it will also be activated immediately in the event of an alarm.

Take the necessary precautions and alert your fire safety department when the alarm is triggered.

4 INSTALLING THE CABINET

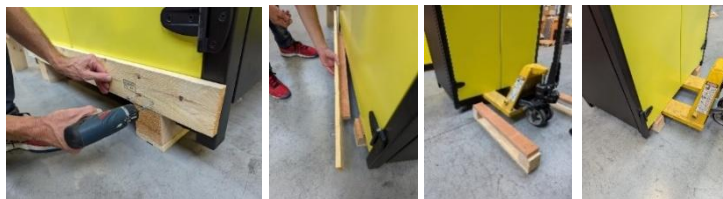
4.1 Transport

Move the LOXXER® cabinet, including the transport packaging, to the right place using a pallet truck. Make sure that both doors are properly locked.

Please note 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 at the top and bottom (see illustrations). If the surface is uneven, you can level the LOXXER® cabinet using the swivel legs that are provided in each corner at the bottom.

Attention: the doors must close quickly & well and must not cause friction anywhere so that both doors easily fall into the lock.



The cabinet is transported as standard on a Euro pallet or in wooden transport packaging.

Removal of transport packaging

1. Remove the screws from the front and rear transport beams and remove these beams
2. Use the pallet truck to raise the cabinet
3. Now you can remove the beams at the bottom left and right of the cabinet
4. The transport beams at the top of the cabinet can be removed by sliding them up



4.2 Included in the cabinet

- Door lock keys LOXXER® cabinet
- User manual
- Maintenance sticker

4.3 Connecting the cabinet

Connect the cabinet to the power supply and to an existing fire control panel if desired.

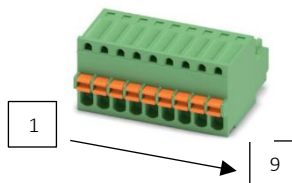
4.3.1 Connection to mains voltage

Connect the LOXXER® cabinet to the mains power of the building. After a few seconds, the LOXXER® cabinet is ready for use:

- Status LED is lit "green", the cabinet is in normal operation
- The fan and siren are active
- Smoke and temperature detection is operational
- Wireless Forwarding (option) is operational
- Aerosol extinguishing system (option) is operational
- Batteries can be charged

4.3.2 Connection to an existing fire alarm panel

The controller of the cabinet is provided with a pluggable terminal block (FK-MC 0,5/ 9-ST-2,5) to connect the cabinet to an existing alarm center using potential-free contacts. This connection must be done by qualified personnel.



Pin nr	Description	Wire
Pin 1	RLS 1 : NC	Fault
Pin 2	RLS 1 : NO	Fault
Pin 3	RLS 1 : COM	Fault
Pin 4	RLS 2 : NC	Pre-alarm
Pin 5	RLS 2 : NO	Pre-alarm
Pin 6	RLS 2 : COM	Pre-alarm
Pin 7	RLS 3 : NC	Alarm
Pin 8	RLS 3 : NO	Alarm
Pin 9	RLS 3 : COM	Alarm

4.3.3 Wireless Forwarding (Optional)

To set up the communication module follow the instructions provided with the M2M communicator to gain access to your account and set up the RControl app in order to receive notifications.

4.4 Contact

If you have any questions or comments, please contact your dealer.

5 EMERGENCY

In case of fire:

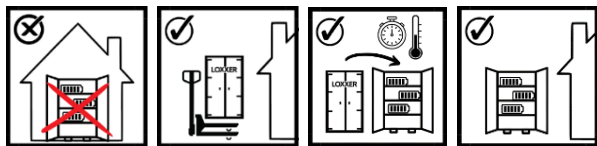
Stay calm, evacuate the building and notify the fire brigade immediately. The fire may have formed a flammable gas-air mixture inside. The cabinet may only be opened after a minimum of 24 hours by qualified personnel (the fire brigade).



Important:

Do not open the cabinet if the surface of the cabinet is still warm. The cabinet may only be opened outside. Opening the doors of the cabinet too early within a building can spread the fire and put lives at risk. In the event of a fire, ensure that personal protective equipment is worn.

Removing the cupboard from the building:



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

- Toxic fumes.
- Leaks of liquids.
- Physical injuries.

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

ATTACHMENTS

1. Warranty conditions

We guarantee that the battery cabinet will be produced without defects under our terms and conditions included in the sales agreement.

The warranty is only valid on the condition that the above operating and maintenance instructions and all applicable regulations are followed exactly. Any modification to the battery box by the customer without consultation with the manufacturer LOXXER® BV will void any claim to the statutory warranty.

Disclaimer:

- The company LOXXER® BV is not liable for damage caused by improper use.
- LOXXER® does not affect the lithium batteries used by the user. The user must 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.