

## Translation of the Original Operating Manual

### Mobile Energy Storage System

### BattPak Xpansion 2100

Additional battery to expand the battery capacity of your  
BattPak 3621



Read operating manual before starting any work!  
Keep the operating manual for future use!

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## 2 General

### 2.1 Operating manual

- ▶ This operating manual contains all important information for the safe and proper use of the BattPak Xpansion. It is an integral part of the BattPak Xpansion and must always be kept readily accessible to operating and maintenance personnel.
- ▶ Safe operation requires careful observance of all safety and operating instructions in this manual.
- ▶ Read all safety and warning notices, terms of use, and liability disclaimers carefully.
- ▶ Users assume full responsibility for the use and operation of the BattPak Xpansion.
- ▶ Familiarize yourself with the relevant regulations in your country.
- ▶ You are solely responsible for knowing all applicable regulations and using the BattPak Xpansion in accordance with them.
- ▶ In addition, all accident prevention regulations and general safety rules applicable at the place of use must be observed.
- ▶ Before starting operation, read the operating instructions of the connected device.

### 2.2 Symbols, acronyms, terminology

Symbols, acronyms and specialist terminology used in this document have the following meaning:

- See item
- ▶ Enumeration
- Enumeration
- 1 Position number
- 1. Action step
- Text in italics* Explanation of facts
-  Refers to the document contained in the enclosed documentation. The source of the document is specified in italics behind the symbol.

### 2.3 Explanation of symbols

#### Warnings and safety instructions

Warnings and safety instructions in the manual are identified with the pictograms and provided in blocks highlighted in grey.

Warnings and safety instructions, which draw attention to fundamental dangers, are additionally precluded by signal words, which specify the scope of damage. Their structure is as follows:

**SIGNAL WORD!**  
**Origin of the danger.**  
Consequences of ignoring the danger.  
- Actions to avoid danger

- ▶ All warnings and safety instructions must be implicitly complied with!
- ▶ During the works, always act with caution, to avoid accidents, personal and material damage!  
Pictograms combined with signal words mean:



**DANGER!**  
... Indicates an immediate hazard that will result in serious injury or death. Always follow safety instructions and precautions.



**WARNING:**

... Indicates a potentially hazardous situation that could result in serious injury or death.



**CAUTION!**

... Indicates a potentially hazardous situation that could result in minor or moderate injury.



**ATTENTION!**

... Indicates a potentially hazardous situation that could result in property damage.

**Tips and recommendations**



**NOTE!**

... highlights tips and recommendations as well as information on efficient and trouble-free operation.

**Special safety instructions**

To make aware of special dangers, the following pictograms are used in combination with the safety instructions:



... marks danger due to electric current.  
Failure to observe the safety instructions leads to danger of heavy or fatal injuries.  
Observe safety instructions regarding the electrical connection and related measures.



Protect the BattPak Xpansion from heat and fire.



Do not immerse the BattPak Xpansion in liquids.

**2.4 Liability limitation**

All data and instructions provided in this manual were compiled with consideration of applicable standards and regulations, state of the art in this field and our long-standing insights and experience.

The manufacturer accepts no liability for damages caused by:

- ▶ Non-observance of the Operating manual
- ▶ Unintended use
- ▶ Employment of unskilled and uninstructed personnel
- ▶ Unauthorised conversions
- ▶ Technical changes
- ▶ Use of non-approved spare parts

The responsibilities agreed in the delivery contract, the General Terms and Conditions as well as the delivery conditions of the manufacturer and the statutory regulations valid at the time of the conclusion of the contract shall apply.

### Warranty

The manufacturer guarantees the functional capability of the applied process technology and performance parameters identified.

The warranty period commences with the defect-free delivery.

If you have any questions regarding the warranty conditions, please contact your local partner.

### Wear parts

Wear parts are all parts having direct contact with the processed or machined material during normal operation.

These parts are excluded from warranty and defect claims, insofar as tear and wear resulting from normal operation.

### Warranty conditions

The warranty period begins on the date the original purchaser receives the products. The purchase receipt (invoice) serves as proof of warranty.

- ▶ All batteries in BattPak Xpansion products are covered by a 5-year warranty.
- ▶ All mechanical and electronic components are covered by a 2-year warranty.
- ▶ Cables/adapters/connectors cannot be registered for warranty. In case of quality issues with these products, please contact our service team directly at [service@goelz.de](mailto:service@goelz.de).

The full warranty terms are included with the purchase of a BattPak Xpansion or can be viewed online at: <https://battpak.de/pages/garantiebestimmungen>

## 2.5 Customer service

Our customer service department is available to provide technical information.

**Service hotline**  
**02482 – 12 200**

You can obtain tips via the regional competent contact person by phone or via fax, email or website at any time.

Moreover, our employees are interested in new information and experience arising from use and which can be valuable for the improvement of our products.

## 2.6 Copyright

This document is protected by copyright. An unauthorised transfer to third parties, duplication of any kind, including in parts, as well as use and/or disclosure of the content without written permission of the publisher is prohibited.

Non-compliance with this provision is subject to damages. The right for further claims remains reserved.

### 3 Safety

This section provides an overview of all safety aspects to protect the operator and users from potential hazards and to ensure a safe and trouble-free operation. Failure to comply with the listed instructions, warnings, and safety notices may result in significant risks.

#### 3.1 Intended use

The BattPak Xpansion 2100 is designed exclusively for the following purposes:

##### **The BattPak Xpansion 2100**

- is an NMC solid-state battery with a capacity of 2,168 Wh. It is designed to increase the battery capacity of your BattPak Xpansion 2100 mobile energy storage system and provide extended power supply.
- The BattPak Xpansion 2100 is manufactured to IP67 protection class and is suitable for use in rainy conditions.



##### **WARNING!**

##### **Risk due to improper use!**

Any use of the BattPak Xpansion other than its intended purpose can lead to hazardous situations.

- Always use the BattPak Xpansion strictly for its intended purpose as specified in this document, particularly in compliance with the operating limits stated in the Technical Data.
- Do not engage in any use beyond or different from the intended application of the BattPak Xpansion.
- Do not modify, retrofit, or alter the design or individual components with the aim of changing the operating range or usability of the BattPak Xpansion.

- ▶ Any claims for damages resulting from unintended use are excluded.
- ▶ The operator alone is responsible for all damages due to unintended use.

#### 3.2 Rationally foreseeable misuse



##### **WARNING:**

##### **Risk of injury caused by misuse!**

When misused, the BattPak Xpansion may create dangerous situations for persons and cause heavy material damage.

- Refrain from any misuse of the BattPak Xpansion.

Any use of the BattPak Xpansion beyond its intended purpose is considered improper and is prohibited.

Use the BattPak Xpansion only as described in this operating manual.

## 3.3 Responsibilities of the operator

### Operator

An operator is any natural or legal person who uses the BattPak Xpansion or makes it available to third parties and is responsible for the safety of the user, personnel, or third parties during its use.

### Operator Responsibilities

If the BattPak Xpansion is used in a commercial environment, the operator of the BattPak Xpansion is subject to the statutory obligations regarding occupational safety.

In addition to the warnings and safety instructions in this manual, all safety, accident prevention, and environmental protection regulations applicable to the operating environment of the BattPak Xpansion must be observed.

## 3.4 User Requirements



### CAUTION!

Read, understand, and keep the operating manual!

- ▶ **If the mobile energy storage system is handed over to another person: include the operating manual.**
- ▶ **Ensure that the user meets the following requirements:**
  - The user is physically, sensorially, and mentally capable of operating the mobile energy storage system. If the user is physically, sensorially, or mentally limited, they may only operate the system under supervision or according to the instructions of a responsible and qualified person.
  - The user can recognize and assess the hazards associated with the mobile energy storage system.
  - The user is of legal age or is being trained in a profession under supervision in accordance with national regulations.
  - The user has received instruction from a Gölz sales partner or a qualified person before using the mobile energy storage system for the first time.
  - The user is not impaired by alcohol, medication, or drugs.

### Qualification



### WARNING:

#### Risk of injury for unqualified personnel!

Improper operation can result in significant personal and material damage.

- Any operations must be only carried out by the persons having required training, knowledge and experience.
- As a matter of principle, all works on the electrical installations must be carried out by qualified electricians.
- Qualified electricians are the persons, who, due to their specialist training, knowledge and experience, as well as knowledge of the relevant provisions, are capable of duly carrying out the works on electrical systems, recognising potential dangers independently and avoiding personal and material damage caused by electric current.

### 3.5 Dangers

The identified hazards have been eliminated as far as possible, and recognized risks have been reduced. Nevertheless, residual risks remain with the energy storage system BattPak Xpansion, which are described in the following section.

- ▶ Always observe the warning and safety instructions listed here and in the operational chapters of this manual to avoid potential health hazards and dangerous situations.



#### GEFAHR!

Uninvolved persons, children, and animals may not recognize or properly assess the dangers of the mobile energy storage system.

- ▶ Uninvolved persons, children, and animals may suffer serious injuries.
- ▶ Keep uninvolved persons, children, and animals away.
- ▶ Ensure that children cannot play with the mobile energy storage system.
- ▶ The mobile energy storage system is not protected against all environmental influences.
- ▶ If the mobile energy storage system is exposed to certain environmental conditions, it may catch fire, explode, or become irreparably damaged. This can lead to serious injury and property damage.



- ▶ Protect the energy storage system from heat and fire.
- ▶ Do not throw the energy storage system into fire.
- ▶ Do not charge, use, or store the energy storage system outside the specified temperature range.



- ▶ Do not immerse the energy storage system in liquids.
- ▶ Do not expose the system BattPak Xpansion to high pressure.
- ▶ Do not expose BattPak Xpansion to microwaves.
- ▶ Protect BattPak Xpansion from chemicals and salts.
- ▶ Do not operate the BattPak Xpansion in easily flammable or explosive environments.
- ▶ Do not operate the BattPak Xpansion on flammable surfaces.
- ▶ If the BattPak Xpansion must be used on an aerial work platform or a secure scaffold: Secure the BattPak Xpansion with fall protection to prevent it from falling.
- ▶ If the BattPak Xpansion is used as a work surface, it may become damaged. This can lead to personal injury and property damage.
- ▶ Do not use the BattPak Xpansion as a work surface.

#### 3.5.1 Safe Operating Condition

The BattPak Xpansion is in a safe operating condition if the following requirements are met:

- ▶ The BattPak Xpansion is undamaged.
- ▶ The BattPak Xpansion is clean and dry.
- ▶ The BattPak Xpansion is functional and unmodified.
- ▶ The fall protection is undamaged and unmodified.
- ▶ Original Gölz accessories for this storage system are installed.
- ▶ The accessories are correctly installed.

**WARNING!**

If the BattPak Xpansion is not in a safe operating condition, it can no longer function safely. Severe injury to persons may occur.

- ▶ Work only with an undamaged and fully functional BattPak Xpansion.
- ▶ Do not charge a damaged or defective BattPak Xpansion.
- ▶ If the BattPak Xpansion is dirty or wet: clean the BattPak Xpansion and allow it to dry.
- ▶ Do not modify the BattPak Xpansion.
- ▶ Do not insert objects or foreign materials into the openings of the BattPak Xpansion.
- ▶ Do not connect or short-circuit the electrical contacts of the BattPak Xpansion with metallic objects.
- ▶ Do not open the BattPak Xpansion.
- ▶ Install accessories as described in this operating manual or in the accessory's operating manual.
- ▶ Replace worn or damaged warning labels.

**WARNING!**

Liquid may leak from a damaged BattPak Xpansion. If the liquid comes into contact with skin or eyes, it may cause irritation to the skin or eyes.

- ▶ Avoid contact with the liquid.
- ▶ If contact with skin occurs: wash affected areas thoroughly with plenty of water and soap.
- ▶ If contact with eyes occurs: rinse eyes with plenty of water for at least 15 minutes and seek medical attention.

**DANGER!**

A damaged or defective BattPak Xpansion may emit unusual odors, produce smoke, or catch fire.

- ▶ If the BattPak Xpansion emits unusual odors or smoke: do not use the energy storage system and keep it away from flammable materials.
- ▶ If the BattPak Xpansion is on fire: Attempt to extinguish the BattPak Xpansion using a fire extinguisher or water.
- ▶ In an acute emergency, call the fire department (112).

**WARNING!**

Hazards when charging the BattPak Xpansion

- ▶ During charging, a damaged or defective portable power supply or a damaged or defective charging cable may emit unusual odors or smoke.
- ▶ People may be injured and property damage may occur.
- ▶ Disconnect the charging cable's mains plug from the socket.

**WARNING!**

Hazards from an electrically connected BattPak Xpansion

Contact with live components can occur due to the following causes:

- ▶ The charging cable or extension cord is damaged.
- ▶ The mains plug of the charging cable or extension cord is damaged.
- ▶ The socket connected to the power supply is not properly installed.

### 3.6 Safety

#### 3.6.1 General safety instructions



#### **CAUTION!**

**Observe the following safety instructions for the safe handling and use of Li-ion batteries.**

Failure to comply may lead to

- Irritation
- severe corrosive injuries,
- chemical burns,
- Fire and/or lead to explosions.

- ▶ Use the BattPak Xpansion and accessories only in proper technical condition.
- ▶ Never tamper with or modify the BattPak Xpansion or accessories. The BattPak Xpansion must not be opened.
- ▶ Do not touch the electrical contacts with your fingers, tools, jewelry, or other electrically conductive objects.
- ▶ Do not short-circuit the outputs of the BattPak Xpansion.
- ▶ Close the protective caps on the connectors when not in use.
- ▶ The BattPak Xpansion must not be disassembled, crushed, heated above 60 °C, or burned.
- ▶ Never expose the BattPak Xpansion to direct sunlight, high temperatures, sparks, or open flames. This can lead to explosions.
- ▶ Keep the BattPak Xpansion away from moisture and liquids. Penetrating moisture can cause short circuits, electric shocks, burns, fire, and explosions.
- ▶ Do not use or store the BattPak Xpansion in explosive environments.
- ▶ Use the BattPak Xpansion only within the defined operating limits.
- ▶ Handle the BattPak Xpansion carefully to avoid damage and prevent leakage of highly harmful liquids!
- ▶ Ensure a stable position of the BattPak Xpansion during use. Place the BattPak Xpansion only on a non-slip surface. Avoid overhanging edges.
- ▶ Do not use or charge the BattPak Xpansion if it has been dropped or otherwise damaged. Regularly check the BattPak Xpansion for signs of damage.
- ▶ Do not use the BattPak Xpansion as a substitute for a ladder.
- ▶ Do not transport the BattPak Xpansion by crane or lifting equipment.
- ▶ Comply with local regulations for the safe operation of electrical devices.
- ▶ Do not connect defective devices to the BattPak Xpansion.
- ▶ Do not connect power generators to the outputs of the BattPak Xpansion.
- ▶ Charge the BattPak Xpansion only with the supplied charging cable.
- ▶ Connect the consumer device. Always switch off the consumer device after use.
- ▶ Do not use the BattPak Xpansion to operate life-supporting medical devices.

If the BattPak Xpansion is too hot to touch, it may be defective. Place the BattPak Xpansion in a visible, non-flammable location with sufficient distance from flammable materials. Allow it to cool down. If the BattPak Xpansion is still too hot to touch after one hour, it is defective. Contact GÖLZ® Service.

## 3.6.2 Safety devices



**WARNING:**  
**Danger to life due to defective or bypassed safety devices!**

Inoperable, bypassed or disabled safety devices do not protect from hazards and may lead to heavy or fatal injuries.

- Before commencement of works, always make sure that all safety devices are properly installed and functional.
- Never disable safety devices.
- Ensure that the safety devices are always freely accessible.



**NOTE!**  
 See safety devices in → "Design and function".

### Emergency switch off BattPak 3621

Under normal condition, the emergency stop switch is on (Pulled out), and the system is in normal working condition.

When emergency occurs, press down the emergency stop switch, the system control cuts off the input and output and prohibits charging and discharging.



**NOTE!**  
*After the emergency stop switch restarts, the BattPak 3621 would not start the work immediately, you need to press the power button to turn off the power and press the power button again to allow input and output functioning.*

## 3.7 Spare parts



**WARNING:**  
**Risk of injury due to wrong spare parts.**

Wrong spare parts can seriously compromise safety and cause damage and malfunction up to total failure.

- As a matter of principle, only original spare parts must be used.

Original spare parts can be obtained via an authorised dealer or directly from the manufacturer.

## 3.8 Actions in emergency and in case of accidents

### Necessary actions

- ▶ Always be prepared for accidents or fire.
- ▶ First aid facilities (first aid box, cloth, etc.) and fire extinguisher must be close at hand.

- ▶ Personnel must familiarise themselves with accident signalling equipment, first aid and rescue facilities.
- ▶ Access roads for rescue vehicles must be always kept free.

### If the need arises, act properly

- ▶ Activate emergency stop immediately
- ▶ Initiate first aid measures
- ▶ Remove persons affected from the danger area.
- ▶ Inform persons responsible at the operation site.
- ▶ Alert doctor and/or fire brigade in case of heavy injuries.
- ▶ Keep access roads for rescue vehicles free

## 3.9 Signage

### Danger from electric current!



**DANGER!**  
**Danger to life from electric current!**

Touching live parts leads to death. Damage to the insulation or individual components can be life-threatening.

- The battery must not be opened under any circumstances!
- If the insulation is damaged, switch off the battery immediately and arrange for repairs.
- Keep moisture and moisture away from the live parts.

### Illegible signs









**CAUTION!**  
**Risk of injury due to illegible symbols!**








Stickers and signs that got illegible, make danger zones insufficiently recognisable and may become incapable of indicating potential injury risks.


- Always maintain legibility of pictograms, safety, warning and operating instructions.
- Immediately replace the pictograms, labels, signs or stickers that became illegible.

### 3.9.1 Legend to symbols


#### 3.9.1.1 BattPak Xpansion 2100

	CE label		Transport label
	Restriction of Hazardous Substances Directive		Protection class
	WEEE-symbol	 Li-ion	Recycling-symbol


	<p>Power capacity 2168 Wh 40,15 V, 54 Ah</p>		<p>Battery type Semi solid state Lithium ternary 54 Ah</p>
	<p>Net weight 23,0 kg</p>		<p>Dimension 22,1 x 10,2 x 16,1 Zoll 562 x 260 x 410 mm</p>
	<p>Cycle life 80 % of battery capacity remaining after 4000 cycles</p>		<p>Garantie 5 Jahre</p>
	<p>AC INPUT 220-240VAC, 50/60Hz, Max power 1350W</p>		



Discharging Temperature  
6 to 124°F / -18 to 60°C



Charging Temperature  
32 to 104°F / 0 to 40°C



IP67

**4 Technical data**
**4.1 Dimensions**

Specification	Value	Unit
Length	562	mm
Width	260	mm
Height	410	mm
Weight	20	kg

**4.2 General Information**

Specification	Value	Unit
Output Voltage	40.15	V
Battery Cut-off Voltage	47.3	V
Service Life	Ca. 4000	Charge Cycles
Internal Impedance	≤50	mΩ
Communication	RS485/RS232	-

**4.3 Charging Operation**

Specification	Value	Unit
Battery Voltage	40.15	V
Maximum Charging Current	33	A
Max. AC Charging Current	8A/230V	A
Overcharge Cut-off Point	47.3	Vdc

**4.4 Information of battery cells and battery**

Specification	Value	Unit
Cell Type	Nickel-Manganese-Cobalt Battery (NMC)	-
Cell Voltage	3,65	V
Cell Capacity	54	Ah
Battery Voltage	40	V
Battery Capacity	2168	Wh

**4.5 Connections**

Connections	Output	Input
	1x DC Out Expansion Connector	1x 230V AC

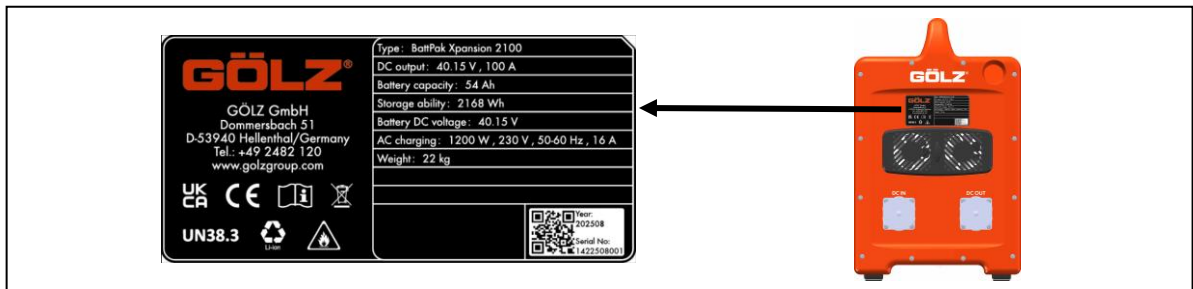
## 4.6 Operating conditions

### Working zone

Specification	Value	Unit
Ambient temperature when working	-18...60	°C
Storage temperature	-18...40	°C
Battery temperature at the start of charging	0...40	°C
Relative air humidity, maximum	15 – 75 (without condensing)	%
Conditions	Avoid direct impact of dampness, dust and frost. Do not operate in strong electric and magnetic fields! Do not operate the machine tool in explosive atmosphere!	

## 4.7 Type plate

The type plate is placed on the housing of the battery.



## 4.8 Installation site requirements

The floor surface must:

- ▶ have sufficient load bearing capacity,
- ▶ be slip proof,
- ▶ be level.

### Installation conditions

Choose the installation site as per space requirements according to the technical data.



#### NOTE!

The BattPak Xpansion is designed for daylight operation. In poorly lit or unlit work areas, ensure adequate workplace illumination.

## 4.9 Storage requirements

### Storage conditions

As a matter of principle, the BattPak Xpansion, its components, assemblies or parts must be only stored in the following conditions:

- ▶ do not store outdoors
- ▶ store in dry and dust-free place
- ▶ do not expose to aggressive media
- ▶ protect from solar radiation
- ▶ avoid mechanical vibrations
- ▶ storage temperature range -18 to 40°C
- ▶ relative air humidity: max. 75%.
- ▶ Store the BattPak Xpansion out of the reach of children and unauthorized persons.
- ▶ Do not store the BattPak Xpansion in the discharged state for long periods of time. This could lead to deep discharge. Charge the BattPak Xpansion at least once every three months.
- ▶ If stored for more than 2 months, regularly check the general condition of all parts and packaging. Also check the state of charge of the batteries. If necessary, refresh or renew the preservation and load the BattPak Xpansion (at least 80%).
- ▶ Store the BattPak Xpansion only when it is switched off.
- ▶ Store the BattPak Xpansion separately from the electrical device and the charging cable.
- ▶ The charging cable is not intended to carry or hang the BattPak Xpansion from it. The charging cable and the BattPak Xpansion may be damaged.
- ▶ Coil the charging cable into a loop and secure it

## 5 Design and function

The BattPak Xpansion 2100 is used to extend the battery capacity of the BattPak 3621 via the expansion port and the supplied expansion cable. The BattPak Xpansion consists of a housing, the lithium-ion battery with integrated electronics and connectors, as well as carrying handles.

### 5.1 Scope of delivery and responsibility

The BattPak Xpansion was developed and manufactured under sole responsibility of Gölz GmbH.

Upon transfer to the operator, the responsibility for safe handling and instruction of the personnel passes to the operator.

The manufacturer offers training on the BattPak Xpansion.

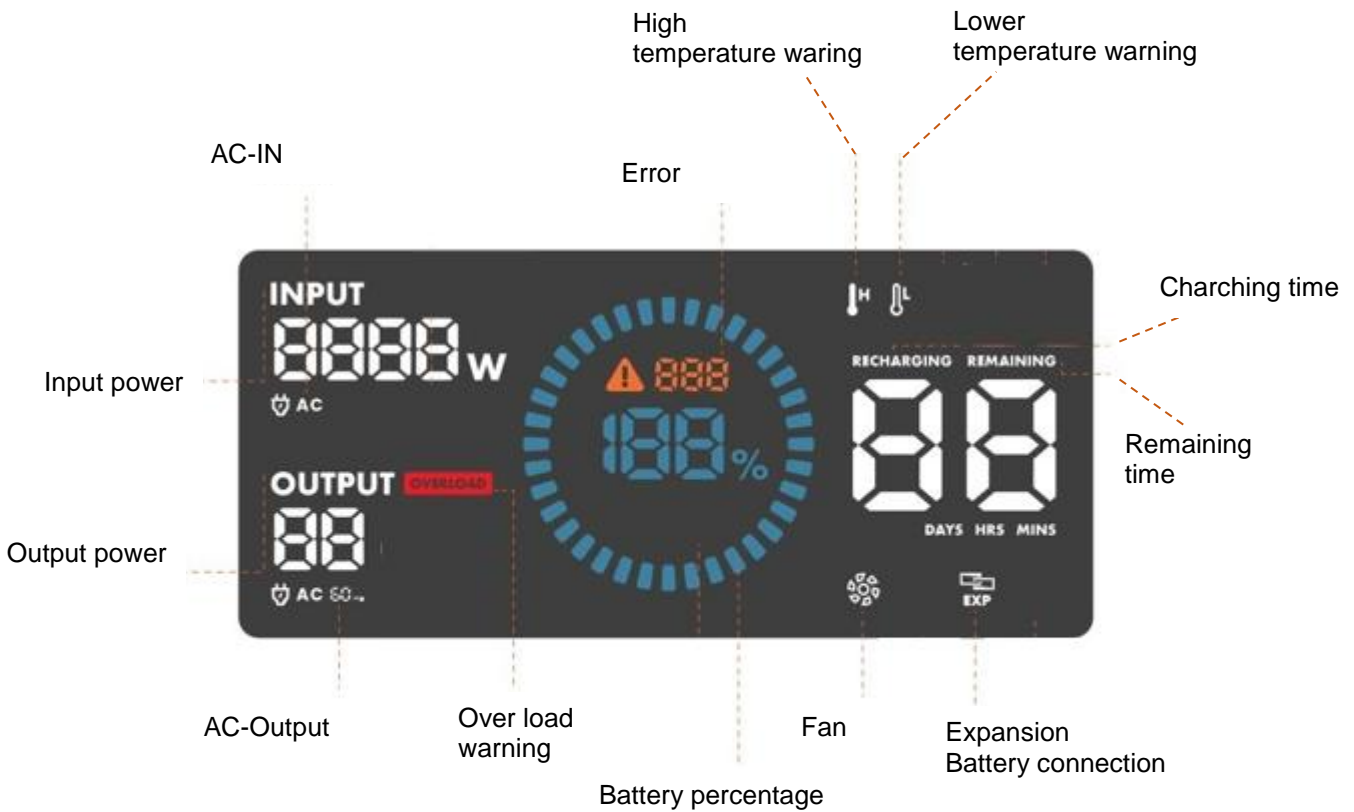
The scope of delivery includes the following components:

Components	Quantity
BattPak Xpansion 2100	1
Technical Documentation	1
Connection Cable	1
Charging Cable	1

### 5.2 BattPak Xpansion 2100



**LCD Layout**



**Housing**

The housing (1) protects the electronics and the battery from physical and environmental influences.

**Plugs**

The various connectors of the battery are used to connect devices to the battery for operation, to charge the battery and to connect the battery to a battery extension.

**Battery**

The battery cells are made of semi-solid lithium ternary battery and are enclosed in an impact-resistant housing. They are used to supply power to the connected devices.

**Display**

The battery display shows all relevant info about the battery via LCD display.

**ON/OFF Switch**

The ON/OFF switch is used to turn the BattPak Xpansion on or off.

**Fans**

The fans cool the BattPak Xpansion and protect it from overheating.

5.2.1 Functional description

By connecting the battery via the expansion port and then switching it on, power is supplied to the BattPak3621. The BattPak3621 can now be turned on and used to operate a device. All relevant information about the BattPak Xpansion 2100 is displayed on the LED screen at the front.

To increase the battery capacity of the BattPak3621, up to four BattPak Xpansion 2100 units can be connected in series.

## 6 Transport & packaging

### 6.1 Transport safety information



**ATTENTION!**  
**Damage through improper transportation!**

Improper transportation can result in considerable damage of the transported goods and objects in the vicinity.

- Always proceed with the utmost care and caution when loading and unloading and transporting goods within the company.
- Pay attention to the instructions and symbols on the packaging.
- Always remove transport locks only during installation.
- Transport the appliance only when it is switched off.

**Observe your local transport regulations for batteries!**

### 6.2 Transport inspection

Inspect the condition of the transported goods immediately upon delivery for completeness and damage.

In the event of externally recognisable damages:

- ▶ do not accept the delivery or accept it only conditionally,
- ▶ record the scope of the damage in the transport documents and indicate it in the carrier's consignment note,
- ▶ lodge complaint.



**NOTE!**

*Claim any defect immediately upon delivery of the transported goods!  
 Claims regarding transport damage can only be lodged within valid complaint periods.*

### 6.3 Transport symbols

On the outside of the transported goods, there are symbols corresponding to the content, which must be strictly observed during transportation and storage.

**Meaning of the transport symbols**

The following transport symbols can be placed on the transported goods:

	<p><b>This side up</b></p> <p>The arrowheads indicate the top end of the transported goods. These should point upwards otherwise the content can be damaged.</p>		<p><b>Keep dry</b></p> <p>Protect the transported goods from dampness and keep them dry.</p>
	<p><b>Anchor point</b></p> <p>Only attach lifting tackle to the indicated points.</p>		<p><b>Centre of gravity</b></p> <p>Indicates the centre of gravity of the transported goods. Pay attention to the centre of gravity position when handling the goods!</p>

### 6.4 Transport and storage

#### Handling packaging

The BattPak Xpansion 2100 is packaged safely and in an environmentally friendly manner for the expected transport conditions. The packaging protects the components from damage and corrosion until they are put into use.

- ▶ Remove the packaging and transport locks only before initial use.
- ▶ Keep the packaging carefully! In the event of a repair, the BattPak Xpansion 2100 must be shipped again in its original packaging!



#### **CAUTION!**

#### **Return for repair only in the original packaging!**

To send your BattPak Xpansion 2100 in for repair, it must be repacked in its original packaging. Therefore, keep the original packaging carefully!

#### Transport of the BattPak Xpansion



#### **CAUTION!**

#### **Damage due to improper transport!**

Improper transport can cause significant damage to the BattPak Xpansion and to nearby objects.

Before every transport:

- Repack the BattPak Xpansion in its original packaging
- Transport the BattPak Xpansion only when it is switched off

The BattPak Xpansion can be transported by one person using the transport handles.



#### **NOTE!**

*The BattPak Xpansion is not designed for crane transport. There are no appropriate load suspension points on the BattPak Xpansion.*

- ▶ Comply with your local transport regulations for batteries.
- ▶ Batteries must not be sent by mail. Contact a shipping company if you want to send undamaged batteries.
- ▶ Check the BattPak Xpansion for damage before each use and before and after long transport.
- ▶ The BattPak Xpansion must not be transported on an airplane. Contact the airline if necessary.
- ▶ Do not transport a damaged BattPak Xpansion.
- ▶ During transport, the BattPak Xpansion may tip over or move. This can cause injury to people and property damage.
- ▶ Secure the BattPak Xpansion with tension straps, a belt, or a net so that it cannot move.
- ▶ If the BattPak Xpansion is packaged:  
Pack the BattPak Xpansion in the packaging so that it cannot move.

#### Storage of the BattPak Xpansion

Store the BattPak Xpansion in the following conditions:

- ▶ indoors only,
- ▶ store in dry and dust-free place,
- ▶ do not expose to aggressive media,
- ▶ protect from solar radiation,
- ▶ avoid mechanical vibrations,

- ▶ storage temperature: -18 to 40 °C,
- ▶ relative air humidity: max. 75%.
- ▶ Store the BattPak Xpansion out of the reach of children and unauthorized persons.
- ▶ Do not store the BattPak Xpansion in the discharged state for long periods of time. This could lead to deep discharge. Charge the BattPak Xpansion at least once every three months.
- ▶ If stored for more than 2 months, regularly check the general condition of all parts and packaging. Also check the state of charge of the batteries. If necessary, refresh or renew the preservation and load the Battpak Xpansion (at least 80%).
- ▶ Store the BattPak Xpansion only when it is switched off.
- ▶ Store the BattPak Xpansion separately from the electrical device and the charging cable.
- ▶ The charging cable is not designed to carry or hang the BattPak Xpansion. The charging cable and the BattPak Xpansion may be damaged.
- ▶ Wind up the charging cable in a loop and secure it..

**7 Installation and first commissioning****7.1 Location**

Place the BattPak Xpansion 2100 in a suitable place. Check the safe stand before commissioning.

**7.2 First commissioning and acceptance, general****DANGER!****Risk of injury during initial commissioning. Therefore:**

- When connecting the BattPak Xpansion 2100 to the BattPak 3621, ensure that both units are switched off.
- Make sure the BattPak Xpansion is not positioned near slopes or excavation edges.
- Ensure the surface is level.
- Ensure adequate lighting.
- Keep the area clean and free of objects and cables.
- Ensure that no unauthorized persons are present in the work area.



The Battpak Xpansion is delivered immediately ready for use.

## 8 Operation

### 8.1 Operation safety information



**WARNING!**

**Risk of injury due to improper operation!**

Improper operation may lead to heavy injuries.

- The BattPak Xpansion may only be operated by trained personnel authorised by the operator.
- Before every work, make sure that the safety devices are correctly installed and function without flaws.
- Never disable safety devices.
- Always keep the working zone tidy and clean! Objects, parts, workpieces, tools and cleaning devices loosely lying around are accident sources.
- 



**DANGER!**

**Danger to life from electric current!**

Touching live parts leads to death. Damaged insulation or individual parts can be life-threatening.

- In case of defective electric components switch off immediately and arrange for repairs.
- Keep humidity away from live parts.

### 8.2 Start Preparations

To use the BattPak Xpansion safely and as intended, the following conditions must be met:

- ▶ The BattPak Xpansion is positioned securely
- ▶ The BattPak Xpansion has been checked for damage, loose screw connections, and completeness
- ▶ The BattPak Xpansion is fully charged
- ▶ The BattPak Xpansion is cleaned
- ▶ If these steps cannot be carried out:  
Do not use the BattPak Xpansion. Contact GÖLZ® Service.

To expand the capacity of the BattPak 3621, please follow these steps:

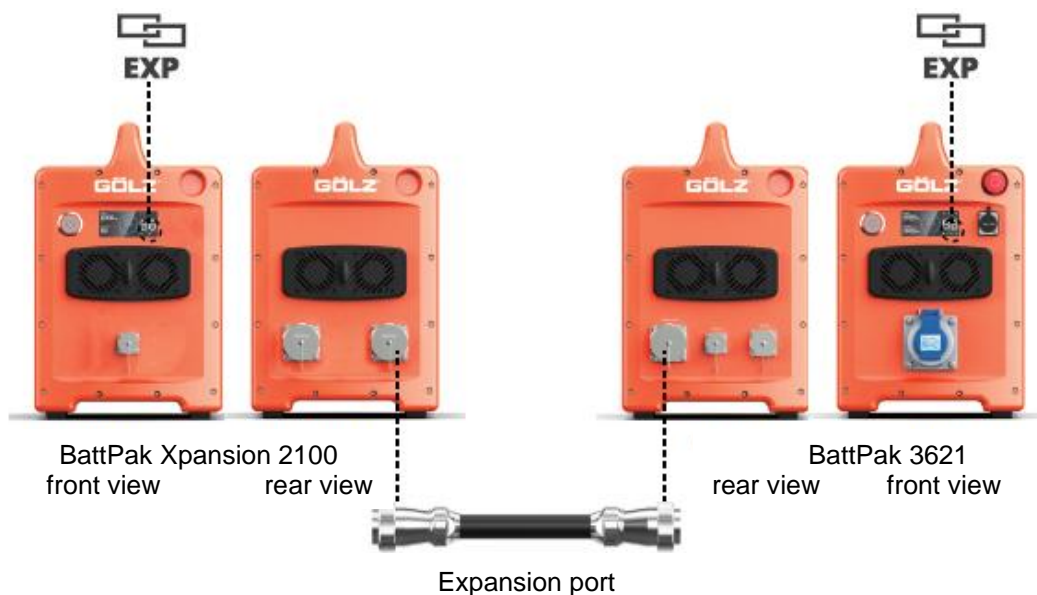
1. Ensure that both the BattPak 3621 and the BattPak Xpansion 2100 are switched off before starting the connection.



BattPak Xpansion 2100  
front view      rear view

BattPak 3621  
rear view      front view

2. After connecting the BattPak 3621 and BattPak Xpansion 2100, make sure that the connection symbol is displayed on both LCD screens.



3. Do not connect or disconnect the extended BattPak Xpansion during the charging or discharging process.
4. Do not touch the metal contacts of the BattPak or BattPak Xpansion connectors with your hands or other objects. If cleaning is necessary, use only a soft, dry cloth.

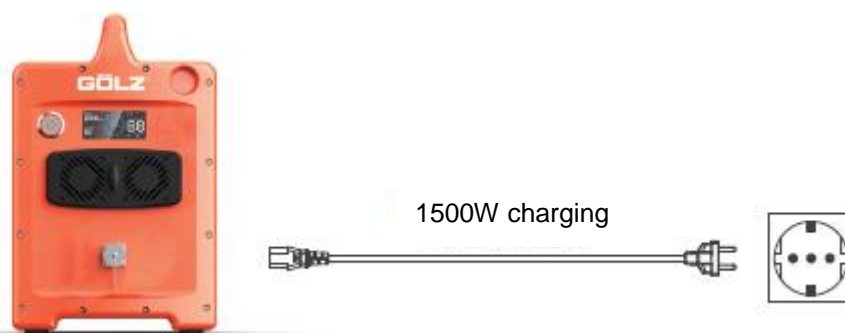
### 8.3 Charging BattPak Xpansion 2100



**NOTE!**

Fully charge your BattPak Xpansion 2100 before use or storage. If the LCD screen shows a charge level below 20%, please recharge it as soon as possible using an available power source.

#### AC Charging



Please use the supplied AC charging cable. Plug it directly into the socket and ensure that the output voltage is 230V.

GÖLZ assumes no liability for consequences resulting from failure to follow these instructions, especially for charging with other AC cables.

When AC charging the BattPak Xpansion 2100, the charging process starts automatically after connecting to the power supply, regardless of whether the power switch is on or off. The LCD display remains lit until fully charged and then turns off.

While the BattPak Xpansion 2100 is charging the BattPak 3621 host, it can also be charged from the mains at the same time. Depending on the sequence, the weaker BattPak Xpansion will start

charging first. Once the voltage difference to the other BattPak Xpansion is 0.5 V, it can be connected for simultaneous charging. Proceed in the same way until the BattPak is connected and fully charged at the same time.

## 8.4 ON/OFF Switch

Press the power switch. The power indicator will light up. After 5 seconds, the BattPak Xpansion 2100 will turn on, and the LCD display will illuminate. In this state, communication between the BattPak Xpansion 2100 and the host is established, and the host is powered. If there is no connection to the host, the device will automatically shut down after 10 minutes.

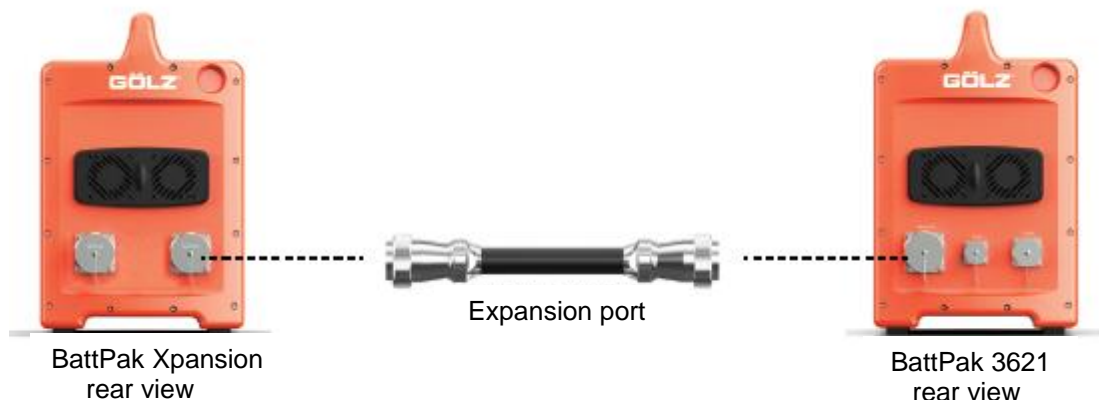
Press the power switch again to turn off the BattPak Xpansion 2100. The power indicator will go out. After 5 seconds, the system will shut down, the LCD display will turn off, the output interface will be disabled, communication will be interrupted, and the BattPak Xpansion 2100 will enter energy-saving mode.



During discharging, the BattPak Xpansions follow the sequence where the BattPak Xpansion with the higher voltage starts discharging first. When the voltage difference to the second higher-voltage BattPak Xpansion reaches 0.5 V, the second higher-voltage BattPak Xpansion begins discharging simultaneously. The same logic applies until the expansion battery pack is connected and discharging, and finally all are completely discharged at the same time.

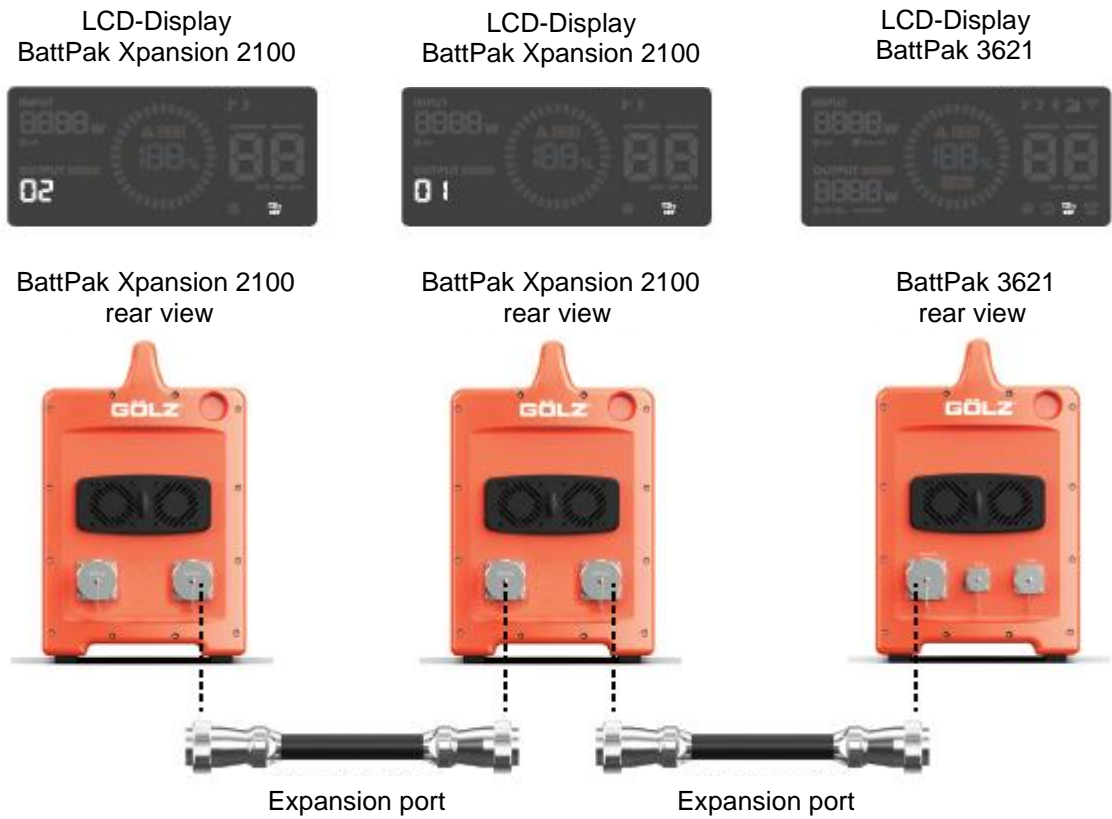
## 8.5 Connection Guideline for BattPak Xpansion 2100

### 8.5.1 BattPak 3621 and one BattPak Xpansion 2100





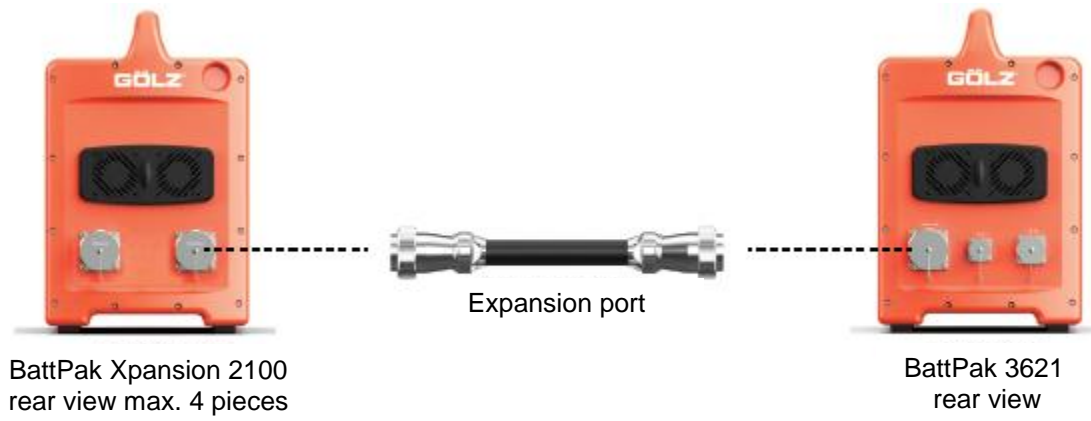
8.5.2 BattPak 3621 and two BattPak Xpansion 2100



## 8.5.3 BattPak 3621 with up to a maximum of 4 BattPak Xpansion 2100

Press the power button to turn on the device. The operation indicator lights up, and the AC output is ready.

Press the power button again to turn off the AC output.



## 9 Maintenance & cleaning

### 9.1 Maintenance safety information



**WARNING!**

**Risk of injury due to improper maintenance!**

Improper maintenance may lead to injuries.

- Any maintenance works must be only carried out by the service department of GÖLZ GmbH.
- Sufficient assembly freedom must be ensured before commencement of works.



**DANGER!**

**Danger to life from electric current!**

Touching live parts leads to death. Damage to the insulation or individual components can be life threatening.

- Before cleaning, switch off the battery and secure it against being switched on again, and also close the protective caps of the sockets.
- Keep moisture away from electrical components.

### 9.2 Maintenance plan

Maintenance works necessary for optimum and trouble-free operation are described in the following sections.

- ▶ If an increased wear of parts is revealed by regular inspections, reduce the maintenance intervals!
- ▶ Draw up a maintenance log after every maintenance! The log assists in error analysis, enables adjusting the intervals to actual usage conditions and validating guarantee claims.
- ▶ If you have any queries on maintenance works and intervals: contact manufacturer.

Interval	Maintenance work	Personnel
Before every commissioning	Visual inspection - the entire BattPak Xpansion	Operating personnel
	Visual inspection - the electrical connections	Specialist personnel
After completion of work	Clean - Entire BattPak Xpansion	Operating personnel
	Clean - Housing	Specialist personnel
yearly	Carry out a legal safety check in the case of - the entire BattPak Xpansion	Qualified electricians
in case of an error	Visual inspection - the entire BattPak Xpansion	Operating personnel
	Visual inspection - Connections	Specialist personnel

How should this BattPak Xpansion be stored?

If the semi-solid-state battery mobile power supply is not used for a long period of time, please turn off the device and disconnect the AC adapter from the socket. Store the BattPak Xpansion in a safe, dry place. Charge the BattPak Xpansion to 80% every 3-6 months to protect the battery life.

### 9.3 Description of the maintenance works to be carried out by the operator

**ATTENTION!**

Cleaning by a high-pressure cleaner will damage the BattPak Xpansion.

**ATTENTION!**

Foaming and cleaning with water will damage the BattPak Xpansion.

- Clean electrical contacts with a brush or a soft bristle brush.

### 9.4 Steps after completing maintenance

After completion of the maintenance works and before switching on, follow the following steps:

1. Check for tightness all threaded joints previously detached.
2. Check the proper installation of all previously removed protective devices and covers.
3. Make sure that all tools, materials and other equipment have been removed from the working zone.
4. Clean the working zone and remove any spilled substances such as liquids, processing materials or similar.
5. Make sure that all safety devices of the system function properly.

## 10 Errors

### 10.1 Troubleshooting safety information

**WARNING!****Risk of injury due to improper troubleshooting!**

Improper actions in the course of troubleshooting may lead to heavy injuries.

- Any repair works must be only carried out by the GÖLZ Service.
- Sufficient assembly freedom must be ensured before commencement of works.
- Always keep the working zone tidy and clean! Objects, parts, workpieces, tools and cleaning devices loosely lying around are accident sources.
- Check correct assembly of spare parts if these have been replaced. Fit properly all fastening elements. Observe screw tightening torques.
- Before recommissioning, make sure that all safety devices are properly installed and functional.

**WARNING!****Risk of injury resulting from unauthorised restarting!**

When working on individual components, people can be injured due to unexpected switching on of the power supply of the connected devices.

- Before working on any individual parts, switch off the BattPak Xpansion and secure it against being restarted.

**DANGER!****Danger to life from electric current!**

Touching live parts leads to death. Damaged insulation or individual parts can be life-threatening.






- Switch off the battery before maintenance and repair operations and secure it against being restarted.
- Keep humidity away from live parts.

### 10.2 Actions in case of errors

Basically, the following applies:

1. In the event of malfunctions that pose an immediate danger to persons or property, trigger emergency stops immediately.
2. Inform those responsible at the scene of the incident.
3. Depending on the type of malfunction, the cause should be determined and eliminated by responsible and authorized specialists.

## 10.3 Troubleshooting table

Error	Problems	Solutions
 	High temperature protection for AC IN /PV IN	After the BattPak Xpansion cools down, it will automatically resume normal operation
 	Overload protection for AC OUTPUT	Remove the overloaded device and press the power button again. Normal operation will automatically resume. Electrical devices should be used within their rated capacity.
	Machine fault warning	If a fault warning appears on the screen and does not disappear after restarting, please stop using it immediately and contact GÖLZ customer service.

## 10.4 Steps after troubleshooting

After completion of the troubleshooting and before switching on, follow the following steps:

1. Make sure that all tools, materials and other equipment have been removed from the working zone.
2. Clean the working zone and remove any spilled substances such as liquids, processing materials or similar.
3. Make sure that all safety devices of the machine function properly.

## 11 Disposal

After the design service life is over, the BattPak Xpansion must be disposed of in an environmentally friendly manner.

In many countries, GÖLZ takes back your old appliance for recycling.

Unless a take-back or disposal agreement has been made, dismantled components shall be recycled:

- ▶ Scrap residual metallic components.
- ▶ Giving plastic parts for recycling.
- ▶ Dispose of remaining components sorted according to material properties.



### EU countries only

Electric waste is recyclable and must not be disposed of in the household waste!!

According to the European directive 2012/19/EU on electrical and electronic waste and version transposed into national law, used power tools must be collected separately and sent for recycling in an environmental-friendly manner.



### ATTENTION!

#### Environmental damage resulting from improper disposal!

Wrong or negligent disposal may result in significant environmental pollution.

- Electrical scrap, electronic components, lubricants, operating and other auxiliary materials must be disposed of by specialised companies.
- In case of hazardous substances, treatment and disposal provisions of the material safety data sheets must be taken into consideration.
- In case of doubts, consult the manufacturer or local municipal authorities or specialised disposal companies on the environmentally safe ways of disposal.

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**EU conformity declaration****GÖLZ® GmbH**

Dommersbach 51  
D-53940 Hellenthal  
Germany

declares under sole responsibility that

<b>Model:</b>	<b>Energiesystem</b>
<b>Manufacturer:</b>	<b>GÖLZ</b>
<b>Type:</b>	<b>BattPak Xpansion 2100</b>

comply with the relevant provisions of the Directives

<b>2014/30/EU</b>	<b>UN38.3</b>
<b>2014/35/EU</b>	<b>2011/65/EU</b>
<b>2012/19/EU</b>	

and has been developed and fabricated in compliance with the following standards valid as at the production date:

**DIN EN 62133-2:2022-12; VDE 0510-82:2022-12**

**DIN EN IEC 62619:2023-08; VDE 0510-39:2023-08**

**DIN EN IEC 61000-6-4:2020-09; VDE 0839-6-4:2020-09**  
**DIN EN IEC 61000-6-2:2019-11; VDE 0839-6-2:2019-11**

Technical documentation kept by:

**GÖLZ® GmbH**

Development and design

Year of construction and machine number are indicated on the unit.

Hellenthal, 10/12/2025  
GÖLZ® GmbH

  
Managing Director