

Operating manual

Lithium-ion transport container type LIP-F 2800

(Version 2)

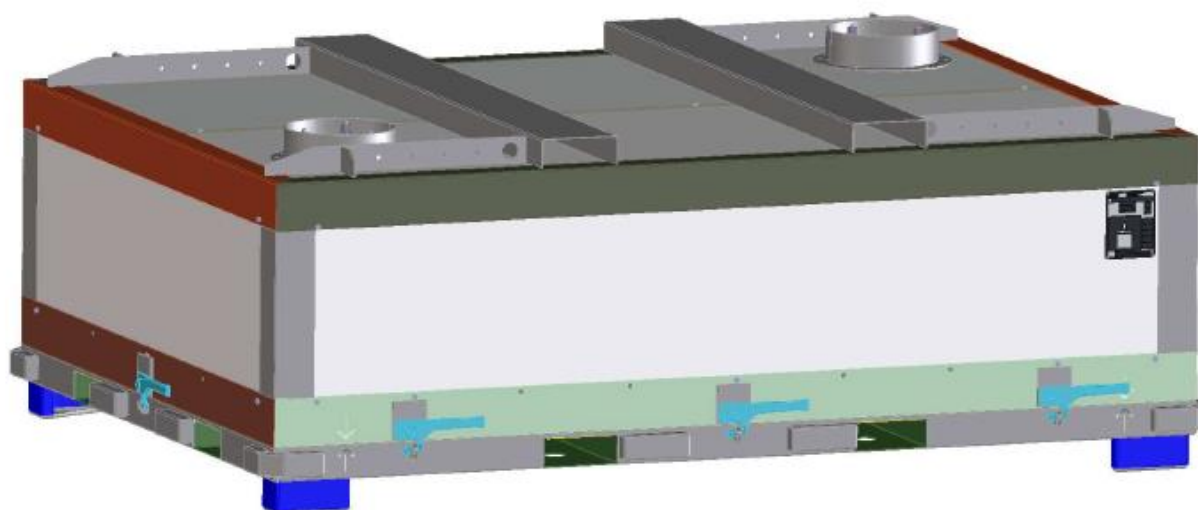




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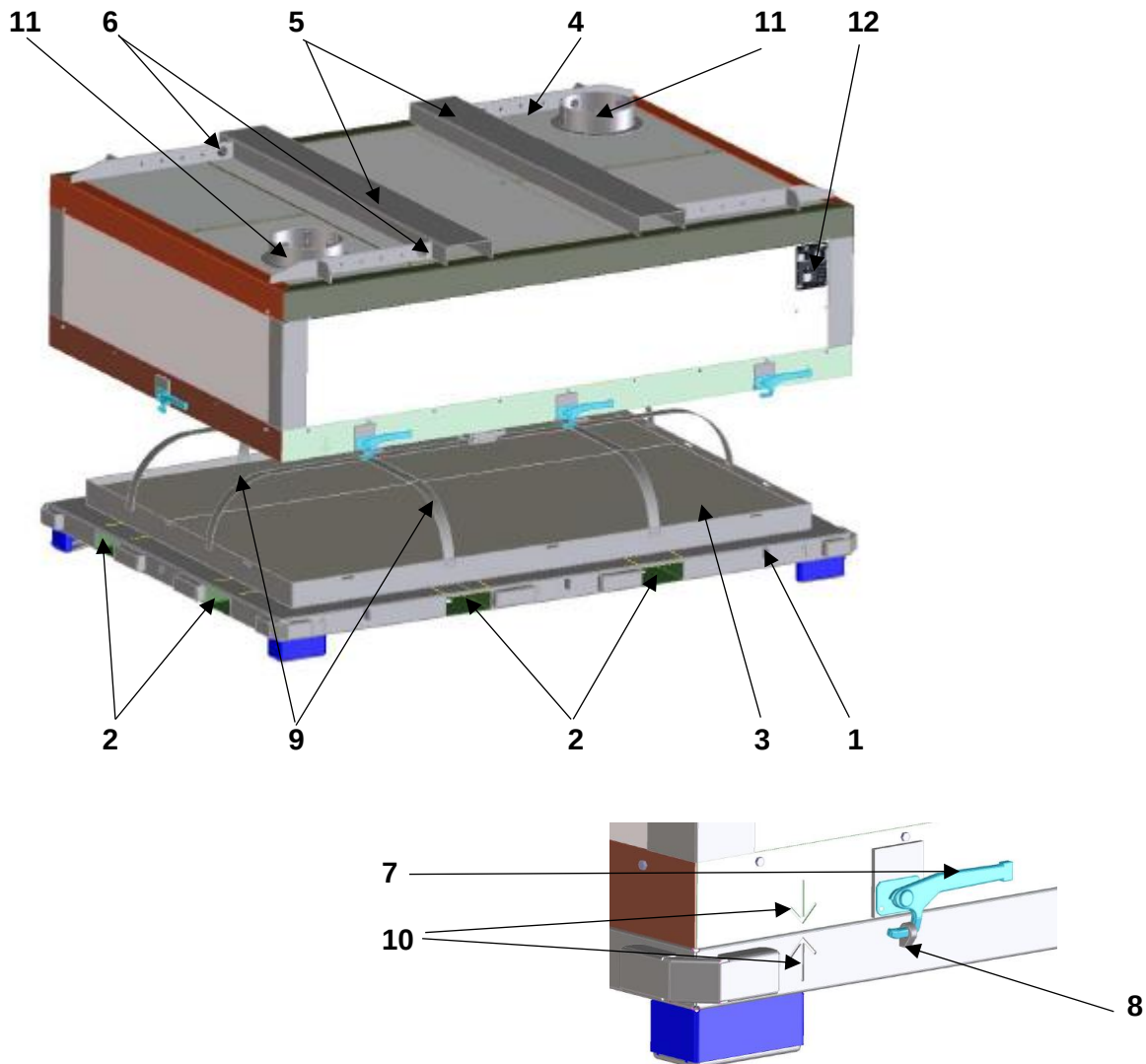
1 Product description

1.1 Technical data

Type	LIP-F 2800
External dimensions in mm	
Length	2080
Width	2880
Height	1040
Internal dimensions in mm	
Length	1754
Width	2544
Height	547
Ground clearance in mm	100
Collection volume of tray to upper edge in litres	100
Bulk packaging code	UN 50A/X/..../GB/BAUER-7276/0/1947
Permissible total weight in kg	1947
Tare weight in kg	980
Base frame galvanised, hood painted	
Material container	Steel
Filling material	Fire protection material
Load	One or up to 72 battery units with two or more cells, which are generally referred to as “battery packs”, “modules” or “batteries”, with a max. total mass of 967 kg and a max. total energy of 144.5 kWh.
Packaging instructions	The batteries are to be positioned on the pallet next to each other to secure against short circuiting and shifting under normal transport conditions.

1.2 Layout

Item	Name
1	Base frame
2	Base frame forklift pockets
3	Collecting tray including fire protection material
4	Hood including fire protection material
5	Hood forklift pockets
6	Hood crane eyes
7	Hood lever lock
8	Base frame eyes
9	Strap including ratchet
10	Marking arrows
11	Pressure relief valve
12	Type plate



2 Safety instructions

2.1 Intended use

The transport container is used to store and transport lithium-ion and lithium-metal modules, batteries and battery packs. The transport container may only be used in an undamaged and unmodified state. The integrity of the transport container must be checked before each use.

3 Use

Attention

Before each use, check the integrity of the transport container and the other components such as fire protection materials, lashing straps including ratchets and the lever locks and eyelets.

3.1 General use

Only battery units with two or more cells, which are generally referred to as “battery packs”, “modules” or “batteries”, may be transported in the LIP-F 2800.

3.2 Storage

3.2.1 Safety instructions



Warning

Risk of injury due to falling parts.

Serious to fatal injuries.

Only move transport containers with suitable forklifts / pallet trucks at the designated pick-up points, as well as with suitable lifting tackle at the intended crane eyes.

No person standing in the working area of the forklift / pallet truck or the lifting gear.



Danger

Risk of poisoning due to toxic, sometimes odourless gases.

Serious to fatal injuries.

Leave the danger area as soon as possible in the event of a thermal runaway of the “battery packs”, “modules” or “batteries”.



Danger

Risk of explosion due to explosive gases.

Serious to fatal injuries.

Avoid sources of ignition in the event of a thermal runaway of the “battery packs”, “modules” or “batteries”. Provide adequate ventilation if possible.

3.2.2 Storage instructions

- Only personnel who have received training and instruction may be commissioned to set up and store the containers.
- **The storage of “battery packs”, “modules” or “batteries” in defective transport containers is prohibited.**
- **The storage space must be well ventilated.**
- The transport container must be set up on a level surface **beneath roofing**.
- The transport container must be protected from the weather, direct sunlight and radiant heat.
- The transport container must not be endangered by the vehicle traffic, work equipment or loads.

3.3 Transport

3.3.1 Safety instructions



Danger

Risk of poisoning due to toxic, sometimes odourless gases.

Serious to fatal injuries.

Leave the danger area as soon as possible in the event of a thermal runaway of the “battery packs”, “modules” or “batteries”.



Danger

Risk of explosion due to explosive gases.

Serious to fatal injuries.

Avoid sources of ignition in the event of a thermal runaway of the “battery packs”, “modules” or “batteries”. Provide adequate ventilation if possible.



Warning

Risk of injury due to falling parts

Serious to fatal injuries

Only move transport containers with suitable forklifts / pallet trucks at the designated pick-up points, as well as with suitable lifting tackle at the intended crane eyes.

No person standing in the working area of the forklift / pallet truck or the lifting gear.

3.3.2 Transport instructions

- The relevant legal regulations must be observed during transport. This also applies to any additional markings and labels.
- Only personnel who have received training and instruction may be commissioned to transport and carry out the moving procedures of the transport container. Moving procedures and transportation of the containers may only be carried out using suitable, operationally reliable means.
- The hood must be sealed tightly to the base frame before transport.
- The filled transport container may only be transported with the forklift truck/pallet truck at the forklift pockets provided on the base frame.
- The empty transport container may also only be transported with suitable lifting gear at the lifting eyes provided on the hood.
- The entry pockets of the hood are only for lifting the hood, **not** for transporting the container.
- Anti-slip mats must be placed beneath the feet of the transport container to increase the adhesion resistance. The load is secured by lashing down with lashing straps that are placed over the hood.

3.4 Opening the transport container

3.4.1 Work flow

1. In the delivery state, the transport container is firmly closed by the lever locks (7) on the hoods with the eyes (8) of the base frame.

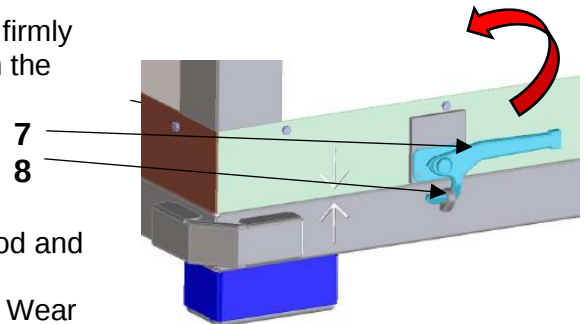


Caution

Danger of trapping between the hood and the base frame.

Minor injuries to fingers and hands. Wear work gloves.

Do not place fingers or hands between the hood and the base frame.



2. Move the eight lever locks (7) upwards in the direction of the arrow until the eye (8) is exposed.



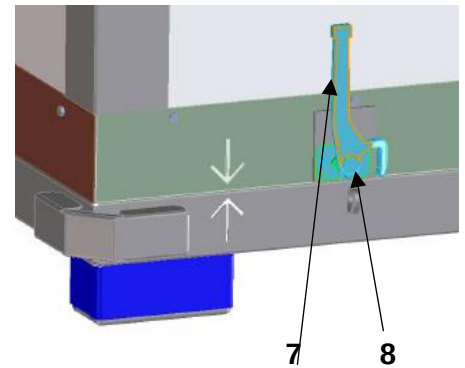
Warning

Risk of injury due to falling parts.

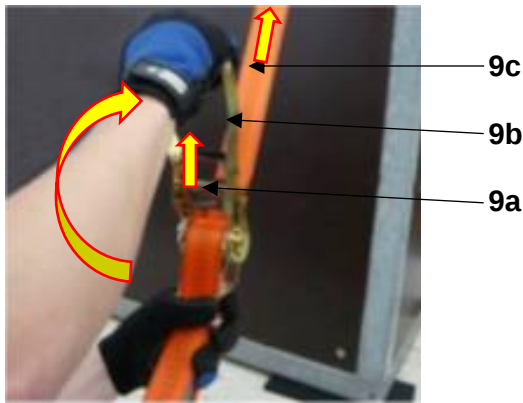
Serious to fatal injuries

Only move cover of the transport containers with suitable forklifts / pallet trucks at the designated pick-up points, as well as with suitable lifting tackle at the intended crane eyes.

No person standing in the working area of the forklift / pallet truck or the lifting gear.



3. a) Drive the forklift into the pockets (5) of the hood (4), lift the hood (4) and place it next to the base frame (1).
- b) Attach the lifting gear with the safety catches to the crane eyes (6) of the hood (4). Lift the hood (4) with the crane and place it next to the base frame (1).



4. Pull the gate valve (9a) while turning the ratchet handle (9b) to the 180° position. Pull out the strap (9c).

3.5 Packing the hazardous substance

3.5.1 Safety instructions



Warning

Risk of poisoning due to toxic substances escaping from the “battery packs”, “modules” or “batteries”.

Serious to fatal injuries.

Wear protective equipment suitable for the hazardous substance.



Warning

Danger due to high electrical voltage.

Serious to fatal injuries.

Cover the battery contacts with electrically insulating materials. Wear sufficient electrically insulating protective equipment.

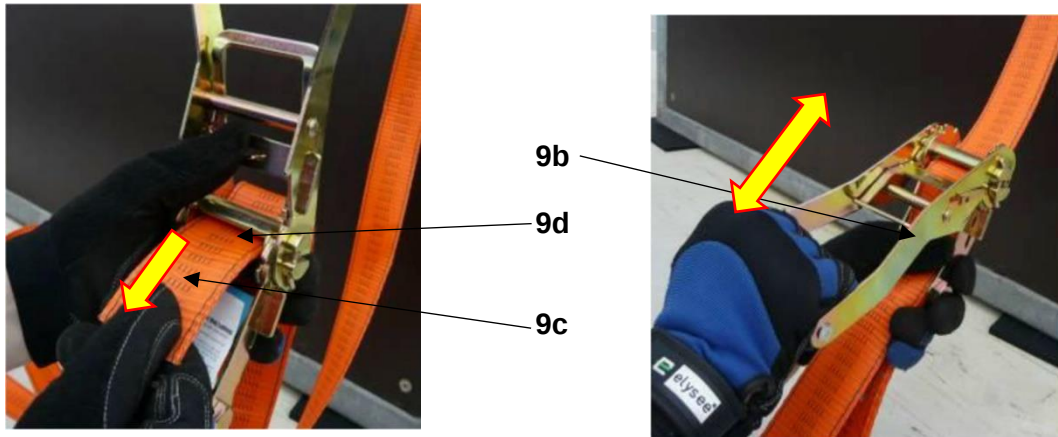
3.5.2 Packaging instructions

One or up to 72 battery units with two or more cells which are generally referred to as “battery packs”, “modules” or “batteries”, with a max. total mass of 967 kg and a max. total energy of 144.5 kWh.

The battery unit(s) are to be positioned on the pallet next to each other to secure against short circuiting and shifting under normal transport conditions.

3.5.3 Work flow

1. Open the transport container (see section 3.4.1).
2. Insert the dangerous goods according to the packaging instructions (see section 3.5.2).



3. Place the strap around the dangerous goods, thread the strap (9c) through the gap (9d) and pull it through as far as possible by hand. Move the ratchet handle (9b) up and down several times until the required preload force is achieved, then close the ratchet.
4. Close the transport container (see section 3.6.1).

3.6 Closing the transport container

3.6.1 Work flow



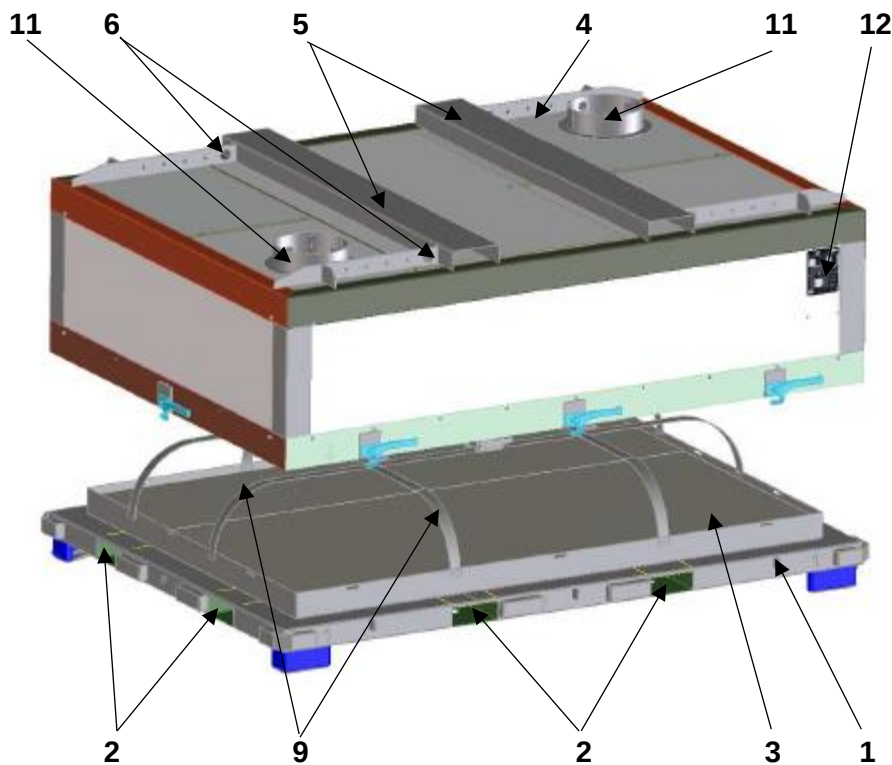
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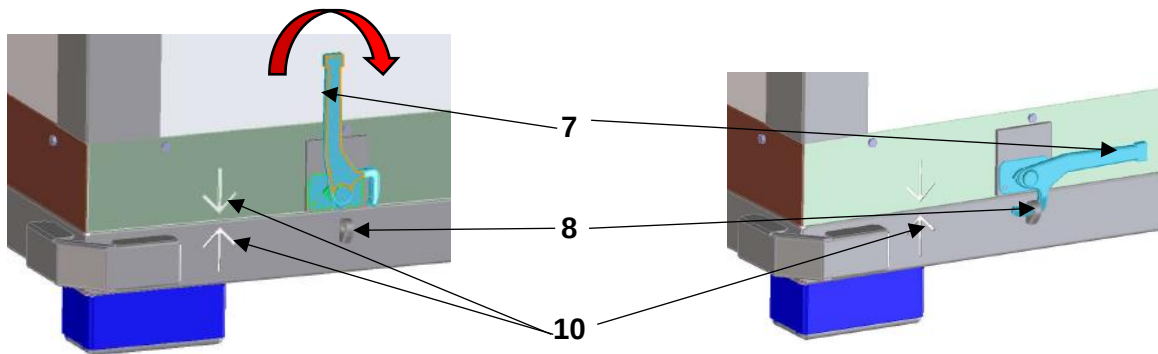
Risk of injury due to falling parts.

Serious to fatal injuries.

Only move cover of the transport containers with suitable forklifts / pallet trucks at the designated pick-up points, as well as with suitable lifting tackle at the intended crane eyes.

No person standing in the working area of the forklift / pallet truck or the lifting gear.





1. a) Drive the forklift into the forklift pockets (5) of the hood (4), lift the hood (4) and place it on the base frame (1) so that the marking arrows (10) on the hood (4) and the base frame (1) match.
- b) Attach the lifting gear with the safety catches to the crane eyes (6) of the hood (4). Place the hood (4) on the base frame (1) with the crane so that the marking arrows (10) on the four corners of the hood (4) and the base frame (1) match.



Caution

Danger of trapping between the hood and the base frame.

Minor injuries to fingers and hands.

Wear work gloves. Do not place fingers or hands between the hood and the base frame.

2. Move the eight lever locks (7) downwards in the direction of the arrow and grip them through the eye (8). The hood (4) is therefore firmly sealed to the base frame (1).

Now move the transport container to the operation site under the safety instructions (see section 3.2.1) and the transport instructions (see section 3.2.2).

3.7 Removal of dangerous goods

3.7.1 Safety instructions

If deposits, discolouration or a pungent odour are detected on the transport container, you must assume that electrolytes are leaking or there is thermal runaway of the “battery packs”, “modules” or “batteries”.

In this case, the pressure relief valves (11) automatically compensate for the excess pressure.



Danger

Risk of poisoning due to the inhalation of contaminated fumes.

Serious to fatal injuries.

After a thermal runaway of the “battery packs”, “modules” or “batteries” or the leaking of electrolytes, only open transport containers with protective equipment suited to the hazardous substance.



Warning

Risk of explosion due to explosive gases.

Serious to fatal injuries.

Avoid sources of ignition after a thermal runaway of the “battery packs”, “modules” or “batteries”. Provide adequate ventilation if possible.



Warning

Danger due to high electrical voltage.

Serious to fatal injuries.

Cover the contacts of the “battery packs”, “modules” or “batteries” with electrically insulating materials. Wear sufficient electrically insulating protective equipment.

3.7.2 Work flow

1. Open the transport container (see section 3.4.1).
2. Remove the battery.

Attention

The mechanical strain on the battery can lead to a thermal breakdown of the battery (see section 3.7.1).

4 Maintenance and repair

4.1 Maintenance

4.1.1. Safety instructions



Warning

Risk of poisoning due to toxic substances escaping from the “battery packs”, “modules” or “batteries”

Serious to fatal injuries

Wear protective equipment suitable for the hazardous substance



4.1.2 Maintenance instructions

Any soiling caused by substances escaping from “battery packs”, “modules” or “batteries” on the transport containers must be removed. Only cleaning agents that do not attack the material of the transport container (steel) or that of the fire protection materials may be used for this.

4.2 Repairs

Damaged transport containers must not be re-used. Repairs may only be carried out by specialists authorised by the manufacturer or by the manufacturer themselves.

5 Disposal/environmental protection

The reusable materials in the transport container can be recycled and taken to an appropriate waste collection centre.



Danger

Risk of poisoning due to the inhalation of contaminated gases

Serious to fatal injuries

Wear protective equipment suitable for the contamination.

Contaminated components must be disposed of properly according to their contamination.



6 Spare parts

All details you need to obtain spare parts can be found in the spare parts list. We need the following details to be able to process your order rapidly:

- our item number for each spare part
- our item designation for each spare part
- the order quantity
- designation of the container, manufacturer's number and year of manufacture

Store the spare parts in a dry, dust-free environment and protect them from frost and heat. We also recommend creating a small storage area for these parts.

We would like to explicitly state that spare parts and accessories not supplied by us have not been checked and approved by us. The installation, attachment and use of such parts may influence the structural properties of the container, under certain circumstances.

We give no guarantee and assume no liability for damage caused by the use of non-original parts and accessories.

7 Contact data

Bauer GmbH
Eichendorffstraße 62
46354 Südlohn, Germany
Tel. +49 2862 / 709-0
Fax + 49 2862 709-155 /-156
E-Mail: info@bauer-suedlohn.com

8 Customer service

Customer service is provided within the scope of the warranty. The warranty period is 1 year after the initial commissioning of all parts except wear parts. Customer service beyond this period requires a separate agreement or it can be arranged with us if necessary and carried out for a fee.

For any technical problems, please contact the address specified above.

Please note the current legal provisions for the above mentioned points