
en Translation of the original instructions
MOTOR B1 BATTERY
MOTOR B2 BATTERY
MOTOR B3 BATTERY



Please read this manual before starting up!

To be retained for future reference.

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1. Concerning this manual

This manual

- is part of this product
- is valid for all mentioned series
- describes the safe and proper use in all operating stages

1.1 Terms

User: Single person or organisation who is using the products e.g. customer, user, assistant

Children: Young persons up to and including the age of 14 years.

1.2 Target groups

Target group	Task
User	<ul style="list-style-type: none"> ▶ Retain these operating instructions at the product's place of use for future reference. ▶ Demand the staff to read and observe these instructions and the additional valid documents, in particular the safety information and warnings. ▶ Observe additional regulations and instructions concerning the plant.
Qualified personnel, installer	<ul style="list-style-type: none"> ▶ Read, observe and follow these instructions and the additional valid documents, in particular the safety information and warnings.

Tab. 1: Target groups and their tasks

1.3 Associated applicable documents






Document	Purpose
B1 Battery, B2 Battery: <ul style="list-style-type: none"> • Operating instructions pump tubes B1/B2 B3 Battery: <ul style="list-style-type: none"> • Operating instructions for drum and container pumps • Operating instructions for horizontal pump tube for container(IBC) • Operating instructions for eccentric screw pumps HD-E 	Safe and proper use of the pump tube
Operating instructions Battery 10.8 V and Battery 21.6 V	Safe and proper use of the battery
Operating instructions battery charger	Safe and proper use of the battery charger

Tab. 2: Associated applicable documents and purpose

1.4 Warnings and symbols

Warning	Level of risk	Consequences in case of non-compliance
DANGER	direct danger	death or serious injury
WARNING	possible direct danger	death or serious injury
CAUTION	possible dangerous situation	Light physical injury
NOTICE	possible dangerous situation	damage of property

Tab. 3: Warnings and consequences in case of non-compliance

Symbol	Meaning
	Safety information ▶ Comply with all measures that are marked with a safety sign to prevent injuries or death.
	Information / Recommendation
	What to do
	Cross reference
	Requirement

Tab. 4: Symbols and meaning

1.5 Latest state

Please find the latest state of this operating instruction under www.lutz-pumpen.de.

1.6 Copyright

The content of this operating instruction and the images contained in them are subject to the copyright protection of Lutz Pumpen GmbH.

2. Safety

The manufacturer will not be held responsible for any damages resulting from non-compliance of the overall documentation, in particular for damages in case of non-compliance of the operating instructions.

2.1 General safety information

Observe following regulations before accomplishing all activities.

Product safety

The motor is constructed in conformity with the state of the art and approved safety-related standards. Danger however can occur during use for life and health of the user or third parties or damage of the motor and other material assets. Therefore:

- Operate the motor only in a technically sound state, for its proper use, and conscious of safety and hazards taking into account these instructions.
- Ensure that these instructions and all associated applicable documents are complete, legible, and stored in a place that personnel can access at all times.
- Refrain from any manner of working that endangers personnel or uninvolved third parties.
- In case of a safety-relevant malfunction, stop the motor immediately and enlist a responsible person to rectify the malfunction.
- In addition to the overall documentation, observe the statutory or other safety and accident prevention regulations, as well as the valid standards and guidelines of the respective operating country.

Modifications

Unless the manufacturer has provided its consent in writing, the manufacturer is not liable for interventions performed by the user (modifications) on the product, such as conversion, alteration, new design, etc. Modifications not agreed with the manufacturer may have the following effects, among others:

- Functional impairments on the appliance or plant
- Damage to the appliance and other property damage
- Environmental damage
- Personal injuries right through to death

Duties of the operator

Safety-conscious working

- Operate the motor only in a technically sound state, for its proper use, and conscious of safety and hazards taking into account these instructions.
- Ensure observance and monitoring of:
 - Proper use
 - Statutory or other safety and accident prevention regulations
 - Safety provisions in handling hazardous substances
 - Valid standards and guidelines in the respective country of operation
- Provide protective equipment.

Personnel qualification

- This device must not be used by children. It may be used by persons of reduced physical, sensory or mental capacity or by persons lacking in experience or knowledge provided that they are supervised or have been instructed in the safe use of the device and understand the associated hazards. Cleaning or user maintenance must not be performed by children.
- Ensure that personnel tasked with work on the motor have read and understood these instructions and all associated applicable documents, particularly safety, maintenance and servicing information, before they start work.
- Clarify responsibilities, competencies and monitoring of the personnel.
- Personnel to be trained must only work on the motor under the supervision of technical personnel.
- Personnel holding the motor in their hands during operation will be subjected to vibrations. The upper limbs are exposed to an acceleration of less than 2.5 m/s^2 .

Statutory warranty

- During the guarantee period, obtain the manufacturer's permission for modifications, maintenance work or alterations.
- Use only original parts.

Duties of the personnel

- Observe the notices on the motor and maintain them in a legible state.
- Use protective equipment where necessary.
- Only perform work on the motor during downtime. Always remove the battery from the motor.

2.2 Proper use

A battery powered drum and container pump consists of drive motor B1 Battery, B2 Battery or B3 Battery and pump tube to suit the particular application. The pump is only used to transfer pure, turbid, water-like, aggressive and non aggressive liquids.

- Motor is not allowed to be operated in explosion hazard areas.
- Do not use for pumping flammable liquids.
- Only use the motor with the pump tubes provided and observe to the maximum density and viscosity limits (→ Operating instructions pump tube).
- Motor must be held in hand during proper use.
- Pull off battery after use and connect it to the battery charger.
- The motor may only be operated in an upright position.
- Check the engine for operational safety before each use.
- Motor may only be operated with correctly mounted pump tube.
- Motor must not be exposed to weather or dusty environment.
- Do not store motor over aggressive vapours.
- When working on the motor or pump tube, always remove the battery from the motor.
- Avoiding damages on the motor, only use batteries and battery chargers provided by Lutz.
- Make sure that no moisture gets into the motor or battery.
- Danger of injury due to free running drive shaft.
- Observe following technical data:

Motor	B1 Battery Order No. 0001-115	B2 Battery Order No. 0002-515	B3 Battery Order No. 0030-500
Rated voltage (V)	10.8	21.6	21.6
Speed (1/min)	5000-12000	5000-12000	6000-10000
Motor technology	BLDC	BLDC	BLDC
Nominal power (watt)	70	260	320
Weight without battery (g)	400	428	1277
Ambient temperature (°C)	0-40	0-40	0-40
Sound pressure level dB(A)	< 70*	< 70**	< 70***

* determined with pump tube PP 25-L SL

** determined with pump tube PP 32-R SL

*** determined with pump tube PP41-L SL

Battery	B1 Battery Order No. 0332-027	B2 Battery / B3 Battery Order No. 0332-031	Order No. 0332-032
Rated voltage (V)	10.8	21.6	21.6
Rating (Ah)	2	4	2
Battery engineering	Li-Ion	Li-Ion	Li-Ion
Recommended storage temperature (°C)	0-40	0-40	0-40
Ambient temperature (°C)	0-40	0-40	0-40
Weight (g)	160	921	532

If the product and supplied accessories are used for other purposes than the intended purpose, it is the responsibility of the user to check the suitability and admissibility. Product use not confirmed in writing by the manufacturer absolves the manufacturer of any liability.

The manufacturer is not liable for consequences of incorrect treatment, use, maintenance, servicing and operation of the appliance, as well as normal wear and tear. The same applies if faults arise from intervention or configurations on the part of the user not confirmed by the manufacturer.

Prevention of obvious misapplication (examples)

- Do not operate the motor unattended.
- Do not immerse the motor in the liquid being pumped.
- Do not pump flammable liquids.
- Do not operate the motor in explosion hazard area.
- Only remove battery when motor is switched off.
- Do not expose motor and battery to mechanical shocks.
- Do not expose motor and battery to fire or heat.
- Do not expose motor to aggressive environment.

2.3 Specific danger

WARNING

If the battery is damaged, liquid can escape - risk of chemical burns!

- ▶ Avoid contact with the fluid.
- ▶ In case of accidental contact with the liquid, rinse with water.
- ▶ If the fluid comes into contact with the eyes, medical treatment is required.

DANGER

If the battery is overheated, there is a danger of explosion!

- ▶ Do not expose battery to fire or heat.

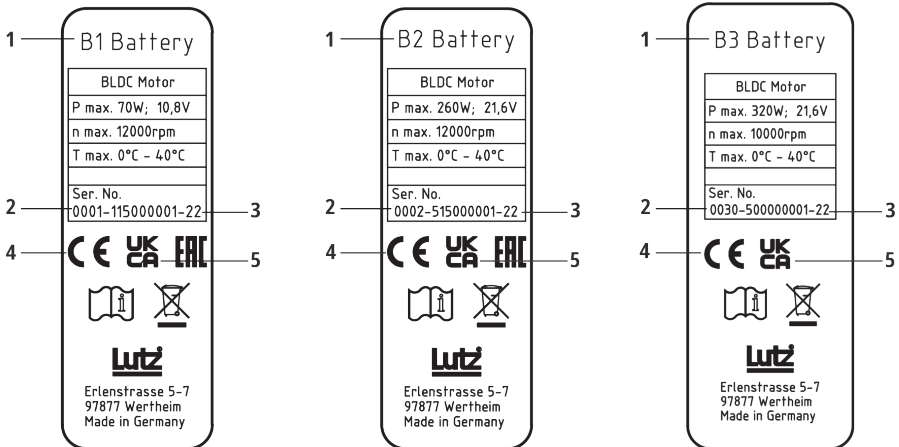
DANGER

Motor can run or burn uncontrolled when a malfunction occurs!

- ▶ Motor must be held in hand during use.
- ▶ Immediately disconnect the battery from the motor if there is any indication of malfunction (smoke, overheating, fire).

2.4 Marking

Fig. 1: Rating plate motor



- 1 Type
- 2 Serial number of the motor
- 3 Year of construction of the motor (last two digits of the serial number e.g. -22 for 2022)
- 4 CE marking
- 5 UKCA marking

3. Transport and storage

3.1 Transport

Unpacking and checking condition of delivery

- ▶ Unpack the motor on receipt and check for transport damages.
 - ▶ Report transport damages to the manufacturer immediately.
 - ▶ Check that the consignment is complete as ordered.
- ▶ When transporting or carrying the motor, always remove the battery from the motor to prevent unintentional switching on.

3.2 Storage

- ▶ Store motor dry, dust-free, protected against weather effects and UV-rays.

CAUTION

Battery heats up in case of a short circuit of contacts. Can burn skin!

Store the battery, so that no metal objects can short-circuit the battery contacts (coins, keys, tools). Further notices → Operating instructions Battery.

4. Starting up

WARNING

Danger of injury on the fingers due to free running drive shaft!

Never operate the motor without pump tube.

- ▶ Switch off the motor and remove the battery before disconnecting it from the pump tube.
 - ▶ Wait until the motor stops turning and then remove it from the pump tube.
 - ▶ Always check that the motor is properly mounted on the pump tube before switching on the motor.
-
- ▶ Do not immerse the pump tube in the liquid deeper than the outrun piece.
 - ▶ Fasten motor and pump tube in a way that the container cannot fall over.

4.1 Commissioning B1 Battery and B2 Battery

⚠ CAUTION

When locking the quick fastener, the fingers can be squeezed!

For locking, press on the slider with the flat hand.

- ▶ Open quick fastener before connecting the motor to the pump tube (→ Fig 2).

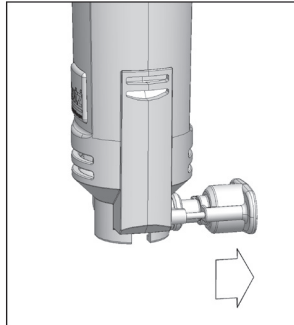
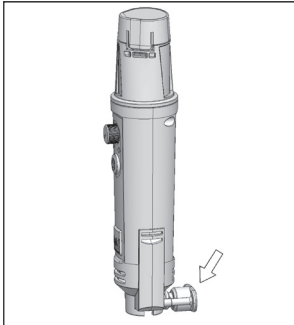


Fig. 2: Unlock the quick fastener

- ▶ Mount the motor on the pump tube and lock it with quick fastener (→ Fig 3).

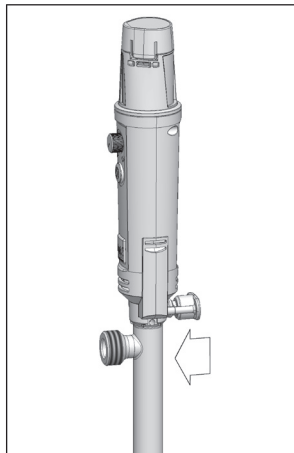
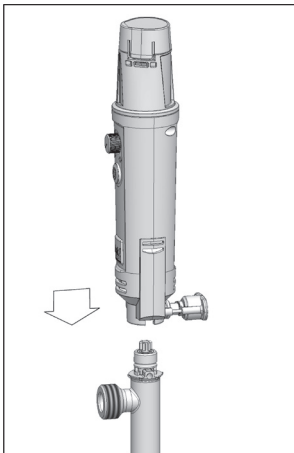


Fig. 3: Locking motor and pump tube

- ▶ Connect hose and filling fittings securely to the pump tube.

The B2 Battery motor is mounted in the same way.

- ▶ Insert the battery into the motor B1 Battery (→ Fig. 4, item 1).
- ▶ When removing the battery, release the lock by pressing it (→ Fig. 4, item 2).
- ▶ Pull out the battery (→ Fig 4, item 3).

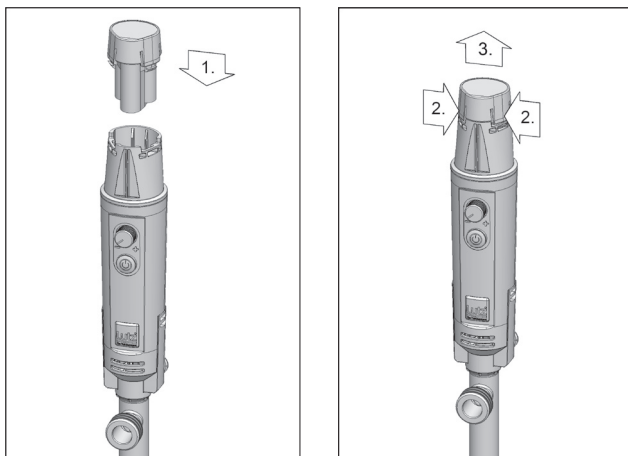


Fig. 4: Motor B1 Battery - installation/removal of the battery

- ▶ Insert the battery into the motor B2 Battery (→ Fig. 5, item 1).
- ▶ When removing the battery, release the lock by pressing it (→ Fig. 5, item 2).
- ▶ Push out the battery (→ Fig 5, item 3).

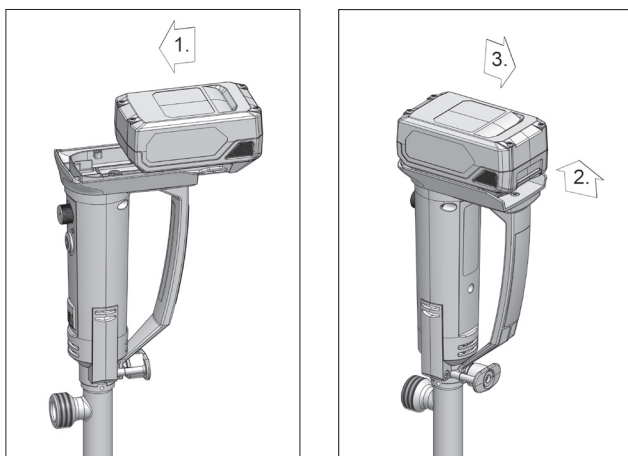


Fig. 5: Motor B2 Battery - installation/removal of the battery

4.2 Commissioning B3 Battery

- ▶ Connect the motor with the pump tube.
- ▶ Turn the motor slightly to ensure that the upper coupling engages in the coupling.
- ▶ Firmly connect the motor and pump tube by means of the handwheel (right-hand thread) (→ Fig. 6).

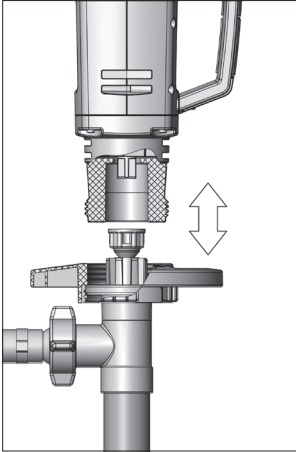


Fig. 6: Mount the motor on the pump tube

- ▶ Insert the battery into the motor B3 Battery (→ Fig. 7, item 1).
- ▶ When removing the battery, release the lock by pressing it (→ Fig. 7, item 2).
- ▶ Push out the battery (→ Fig 7, item 3).

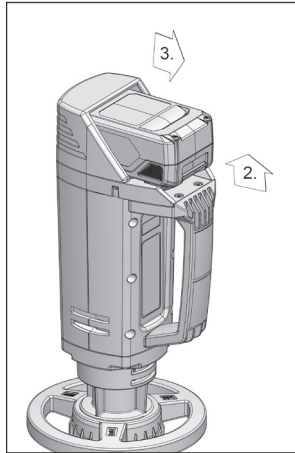
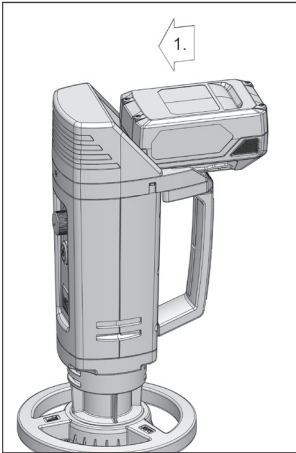


Fig. 7: Motor B3 Battery - installation/removal of the battery

5. Operation

✓ For safe operation of the pump, sufficient space and a safe stand must be available.

NOTICE

Do not force the speed controller, otherwise it may be damaged. Then the motor will no longer work properly.

⚠ WARNING

Danger of injury on the fingers due to free running drive shaft!

Never operate the motor without pump tube.

- ▶ Switch off the motor and remove the battery before disconnecting it from the pump tube.
- ▶ Wait until the motor stops turning and then remove it from the pump tube.
- ▶ Always check that the motor is properly mounted on the pump tube before switching on the motor.

5.1 Operation B1 Battery and B2 Battery

- ▶ To start the motor, press the on/off switch (→ Fig. 8, item ①). After a long break, press the On/Off switch twice to exit sleep mode. During failure-free operation, the on/off switch lights up continuously.
- ▶ The flow rate can be increased (clockwise) or decreased (counterclockwise) by turning the speed controller (→ Fig. 8, item ②).
- ▶ To turn off the motor, press the on/off switch again. The speed controller does not have to be turned back. The motor starts at the last set speed.
- ▶ Remove the battery after each use of the motor and place it on the battery charger.



Fig. 8: On/off switch and speed controller

Sleep mode

- ▶ After 2 minutes downtime, the motor switches to sleep mode. Then the first actuation of the on/off switch causes the change back to the operating mode. Press the on/off switch again to start the motor.

Battery discharged

- ▶ The on/off switch starts to flash when the battery is discharged. This condition cannot be stopped. The battery must then be charged with the battery charger (→ Operating instructions battery charger).

Overload

- ▶ The motor automatically switches-off when overloaded. The on/off switch starts to flash. The error must be acknowledged by pressing the on/off switch again. If necessary, reduce motor speed. If the overload persists, check the cause → Troubleshooting.

5.2 Operation B3 Battery

- ▶ To start the motor, press the on/off switch (→ Fig. 9, item ①).
- ▶ The flow rate can be increased (clockwise) or decreased (counterclockwise) by turning the speed controller (→ Fig. 9, item ②).
- ▶ To turn off the motor, press the on/off switch again. The speed controller does not have to be turned back. The motor starts at the last set speed.
- ▶ Remove the battery after each use of the motor and place it on the battery charger.

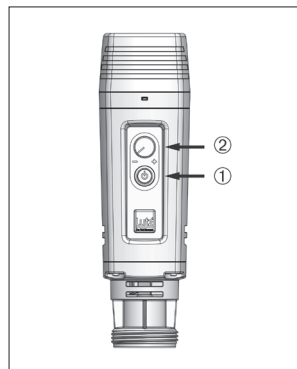


Fig. 9: On/off switch and speed controller

Battery discharged

- ▶ When the battery is discharged, the motor switches off and the red LED of the battery indicator remains lit. Press the motor on/off switch and remove the battery. The battery must then be charged with the battery charger (→ Operating instructions battery charger).

Overload

- ▶ In the event of an overload, the motor automatically sets an operating state that is no longer within the overload range of the motor. If the load is too great or the motor is blocked, the motor switches off and the 3 LED battery indicators flash.

6. Taking out of operation

Disconnect pump tube from motor:

- ▶ Switch off the motor and wait until the engine stops turning.
- ▶ Remove battery.
- ▶ B1 Battery, B2 Battery: Open quick fastener (→ Fig. 2).
- ▶ B3 Battery: Turn the handwheel up (→ Fig. 6).
- ▶ Disconnect pump tube from motor.

7. Cleaning

- ▶ Use only dry cloths to clean the motor and battery.
- ▶ Exclude contact between motor or battery and cleaning fluid.

8. Transport/dispatch

Due to strict national and international regulations for the transport of lithium batteries, these products may only be transported or shipped under certain conditions.

Please inform yourself about the regulations to be observed by you.

Damaged and/or defective lithium batteries should never be shipped.

Defective or damaged lithium batteries which are subject to the possibility of dangerous heat, fire or short-circuiting, are prohibited from being transported/shipped.

For safety reasons, damaged or defective batteries are considered to be lithium batteries that can not be diagnosed prior to transportation; those that have leaked or are deeply discharged or those that are defective / mechanically damaged.

9. Checking/Repair

Repairs should only be made by the manufacturer or authorized Lutz dealers. Only use Lutz spare parts.

- ▶ For returns, use a designated (approved) packaging. The battery must be packed in such a way that a short circuit is prevented.

10. Disposal

- ▶ Dispose of battery according to the regulations of your country.
- ▶ Always dispose battery and motor separately.
- ▶ If the old electrical or electronic device contains personal data, you are responsible for their deletion before it giving back.
- ▶ Dispose the batteries only in discharged condition. The battery must be packed in such a way that a short circuit is prevented.



Do not dispose batteries and battery packs into the domestic waste, into fire or into water.

Batteries and rechargeable batteries must be collected and recycled.

Within the EC countries you are legally bound to return batteries and rechargeable batteries after use to the sale shop or a public collecting point. Taking back of batteries and rechargeable batteries is free of charge.

Annex

Troubleshooting B1 Battery, B2 Battery

Error	Cause	Measure
The motor does not start when switched on.	Motor is in sleep mode (downtime longer than 2 minutes).	Press on/off switch twice
When switched on, the motor does not start and the on/off switch starts to flash.	Battery voltage too low.	Charge battery
	Density or viscosity of the pumped liquid is too high.	Check operating limits (→ Operating instructions pump tube) If necessary, reduce motor speed.
	Pump tube blocks or stiffens, therefore an excessively high torque occurs and the motor automatically switches off.	Disconnect pump tube from motor and turn on the coupling. Result: Stiff → repair pump Smooth-running → repair motor
When the speed increases, the motor stops and the on/off switch starts to flash.	Load too high Observe operating limits with regard to pump tube combination and viscosity/density (→ Operating instructions pump tube).	Reduce the speed and acknowledge the error. Then work with a reduced flow rate.

Troubleshooting B3 Battery

Error	Cause	Measure
Motor switches off and all 3 LED battery indicators flash	Pump tube blocks or stiffens, therefore an excessively high torque occurs and the motor automatically switches off.	Disconnect pump tube from motor and turn on the coupling. Result: Stiff → repair pump
	Density or viscosity of the pumped liquid is too high.	Check operating limits (→ Operating instructions pump tube) If necessary, reduce motor speed.
Motor switches off and the red LED remains illuminated	Battery voltage too low.	Charge battery

Translation of the original declaration of conformity

We herewith declare under the sole responsibility that the following product complies with the EU Directives listed.

Manufacturer: Lutz Pumpen GmbH
Erlenstraße 5-7
D-97877 Wertheim

Product: **Motor**

Types: **B1 Battery**
B2 Battery
B3 Battery

Relevant European Directives:

Machinery Directive	2006/42/EC
EMC	2014/30/EU
RoHS	2011/65/EU, 2015/863/EU

Relevant harmonised standards:

EN ISO 12100
EN 55014-1
EN 55014-2
EN IEC 61000-6-2
EN 61000-6-3

Wertheim, 19.08.2022



Heinz Lutz, CEO

UK Declaration of conformity

We herewith declare under the sole responsibility that the following product(s) complies with the requirements of the following UK legislation.

Manufacturer: Lutz Pumpen GmbH
Erlenstraße 5-7
D-97877 Wertheim

Product: **Motor**

Models: **B1 Battery**
B2 Battery
B3 Battery


UK Statutory Instruments (and their ammendments):

The Supply of Machinery (Safety) Regulations 2008 (SI 2008 No.1597)
The Electromagnetic Compatibility Regulations 2016 (SI 2016 No. 1091)
The Restriction of the Use of Certain Hazardous Substances in Electrical and
Electronic Equipment Regulations 2012
(SI 2012 No. 3032 and SI 2019 No. 188)

Relevant standards:

EN ISO 12100
EN 55014-1
EN 55014-2
EN IEC 61000-6-2
EN 61000-6-3

Wertheim, 19.08.2022



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