



YAKrescue

YAKwheel-P1 TSL

USER MANUAL v1

Content

1. Safety instructions and warnings	3
2. List of components and accessories.....	5
3. User profile.....	6
4. Product description, functionality, features, performance	6
4.1 Intended purpose.	6
4.2 Assembly	7
4.2.1 YAKwheel - parts.....	7
4.2.2 YAKwheel - assembly	7
4.2.3 Motor cable connection.....	8
4.2.4 Bateria 40V	8
4.2.5 YAKremote - remote control.....	9
4.2.6 YAKremote - assembly	9
4.3 How to use.....	10
4.4 Charging.....	11
4.4.1 YAKremote - Charging	11
4.4.2 YAKwheel - Charging battery 40V	12
5. Product technical specifications	13
6. Maintenance and troubleshooting information	14
7. Notes on the EC Declaration of Conformity.....	16
8. Recycling information.....	16
9. How to properly remove batteries for recycling.....	17
10. Warranty conditions and contact for claims.....	17

1. Safety instructions and warnings



WARNING

To ensure proper and safe operation of the product, and to prevent serious personal injury or property damage, please read the entire user manual and pay particular attention to this section before using the product.

Do not modify, disassemble, or replace the original electrical components in the kit. Doing so will void your warranty and could put you at risk. Properly caring for your kit can reduce the risk of sudden component failure, but it cannot prevent it. These sudden failures could cause serious damage, injury, or death to the user. If you notice abnormalities in any component of your kit, contact the supplier immediately. YakSolutions ApS assumes no responsibility for damage, injury or death to users.

When using the product, you must read the safety precautions listed below to avoid danger.

The YAKwheel kit can withstand most water splashes without damage. However, the kit and its mechanical and electrical components are not waterproof. We do not recommend storing or using the bicycle in wet conditions. YakSolutions ApS warranty does not cover water damage.



WARNING

- Maximum weight capacity: 130Kg
- Disconnect the battery for maintenance, assembly and disassembly of any component.
- It is required to operate in good lighting conditions.
- Do not manipulate or adjust components while the battery is connected
- Objects placed inside the wheel during operation could damage the product.
- It is highly recommended to wear protective equipment while using the product.
- Consult the stretcher manufacturer for more information and safety features.

- At all times the stretcher must be held by two people.
- Keep fingers, hair, and clothing away from motors, wheels and moving parts.
- Do not open or alter the casing of electronic components. Electrical shock is possible, and this also voids the warranty.

**WARNINGS - FIRE / EXPLOSION HAZARD**

Radio equipment that includes lithium ion (Li-Ion) batteries.

- Do not expose the product to extreme temperatures.
- Optimum range during normal use: -20°C to +65°C
- Do not handle the battery under any circumstances.
- The battery can only be replaced by the manufacturer, its authorized service agent or similarly qualified personnel (if applicable).
- Do not expose the product to moisture or liquids.
- Do not use with wet or clammy hands.
- Only use peripherals and accessories provided and/or recommended by the manufacturer.
- Do not expose to direct sunlight for prolonged periods of time.
- Do not expose the product to extreme dust or external electrical charges.
- Keep the product away from heat sources.
- Keep the product away from electrical sources and electromagnetic fields."
- The YAK remote control battery cannot be removed.

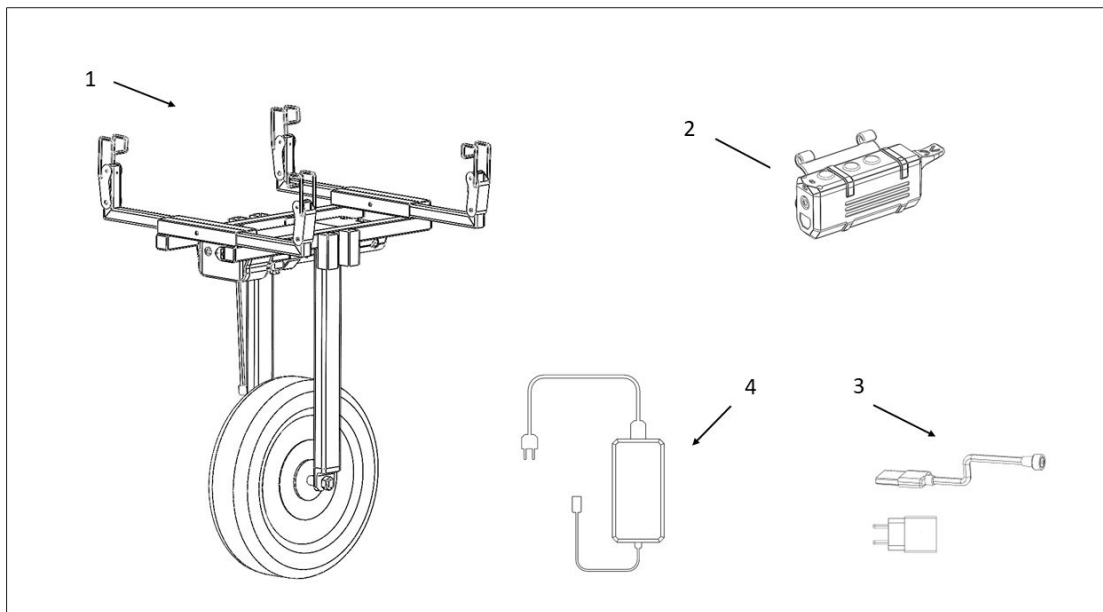
2. List of components and accessories.

Starting

Congratulations on your purchase of a new YAKwheel! Your kit comes in the box fully assembled. The instructions that follow are intended to serve as a guide for unpacking and getting familiar with your new YAKwheel. The kit may require adjustments once received and unpacked, as shipping can sometimes present obstacles. When performing the first adjustment and inspecting the kit before use, we recommend seeking professional help from a reputable and certified bicycle mechanic.

What is in the box:

1. Electric wheel with battery
2. Remote control
3. Remote control charger
4. Electric Wheel Battery Charger
5. Manufacturer's manuals



Before removing the packaging material from the YAKwheel, remove all items from the box and ensure that everything mentioned above is present. If anything is missing or damaged, contact the company immediately for assistance.

3. User profile

This instruction manual is designed for people who have purchased the YAKwheel product. It is intended for users who are familiar with basic bicycle maintenance and have some knowledge of electrical systems. Users must have general knowledge of bicycle components and be able to perform basic mechanical tasks.

Previous experience with e-bike components or systems is beneficial, but not required. The manual provides step-by-step instructions, making it accessible to both experienced users and those who are new to e-bike technology.

Please note that the YAKwheel is not recommended for children or people with certain disabilities or mobility limitations. It is essential to comply with local traffic laws and regulations when using the product on public roads or highways.

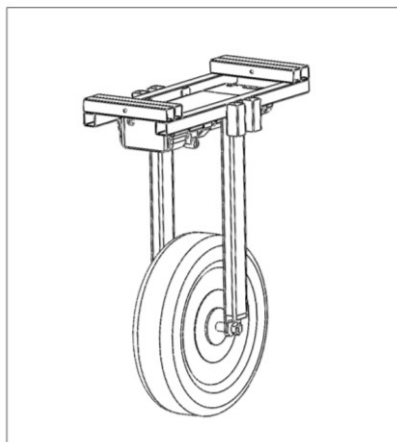
4. Product description, functionality, features, performance

4.1 Intended purpose.

The drive unit is intended exclusively to replace the normal bicycle wheel used on TSL Franco Garda stretchers and cannot be used for other purposes.

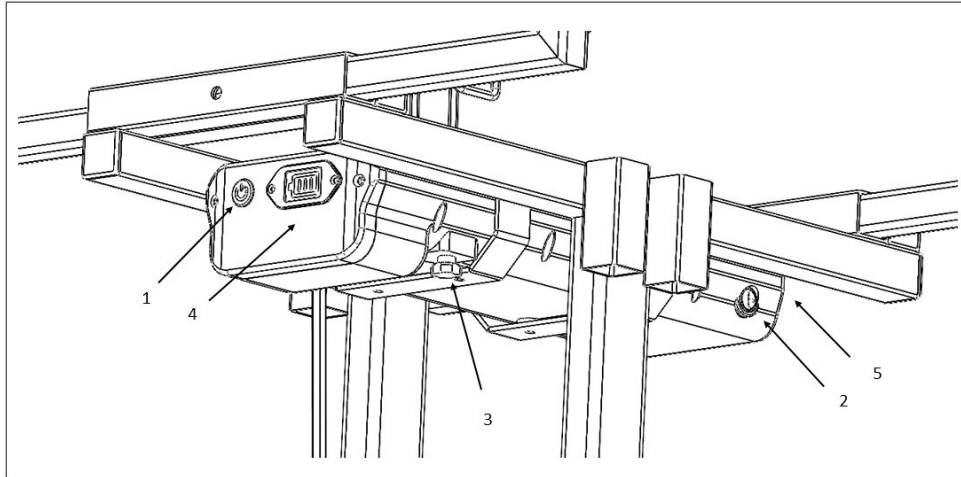
Be sure to contact the manufacturer to ensure it can connect to your current frame.

The remote control can be used by the operator holding the stretcher when the remote control is connected to the stretcher and by an operator who is not holding the stretcher.



4.2 Assembly

4.2.1 YAKwheel - parts

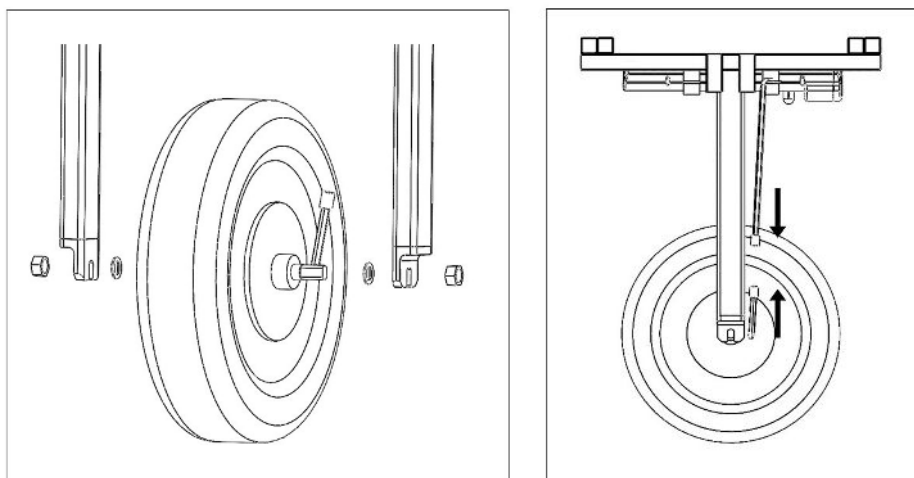


The arrow indicates the forward direction.

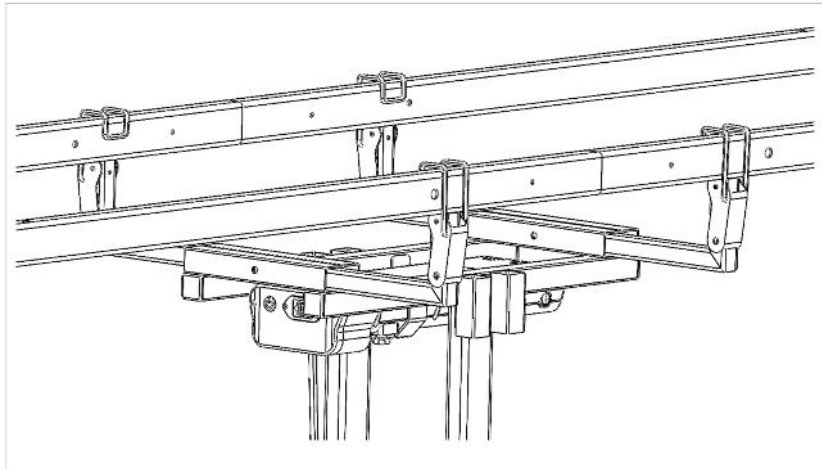
1	ON/OFF Switch
2	ON/OFF Battery
3	Screw - Battery removal
4	Battery level
5	Charging port

4.2.2 YAKwheel - assembly

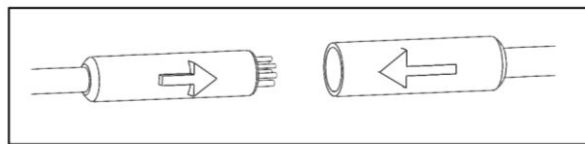
Install the wheel bolts and spacers as shown in the pictures. Make sure the motor cable is placed on the same side as the cable coming out of the battery.



Position the stretcher bars as shown in the image below to attach the YAKwheel to the stretcher.

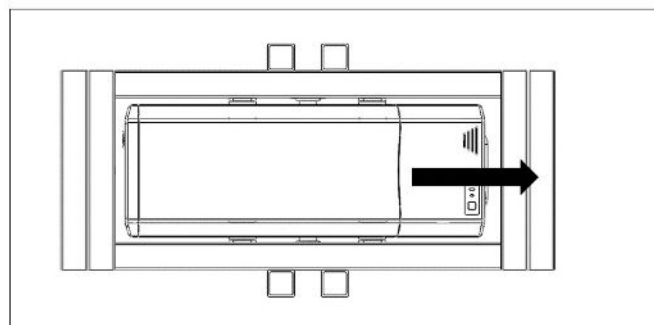


4.2.3 Motor cable connection



Align the arrows, making sure one arrowhead is placed directly in front of the other arrowhead, as illustrated in the image.

4.2.4 Bateria 40V

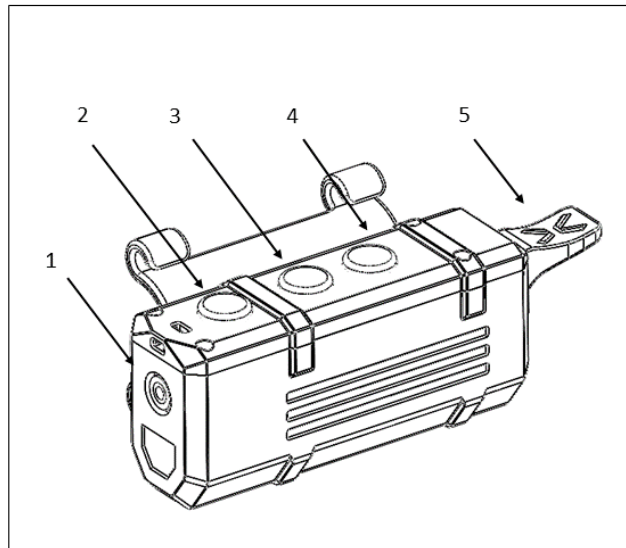


Loosen the screw (3) and remove the battery as indicated by the arrow. Once the battery is inserted again, tighten the screw again.

Battery level

Number of LEDs ON	Load percentage
1	25 %
2	50 %
3	75 %
4	100 %

4.2.5 YAKremote - remote control



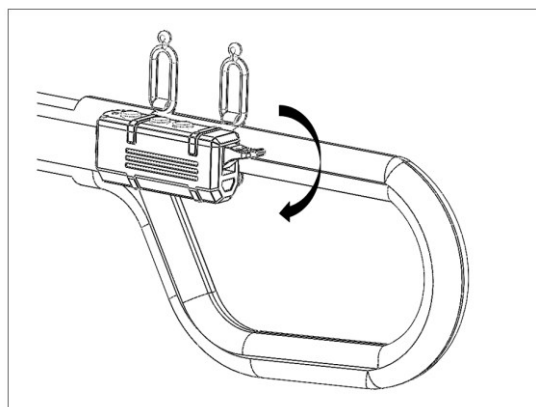
1	Charging port
2	ON/OFF Swithc - Battery/Charging status
3	2 Speed
4	Forward/Reverse
5	Throttle

LED STATUS:

LED flashing	Battery level
Green	>60%
Green + Red	60 - 30%
Red	< 30 %

4.2.6 YAKremote - assembly

Secure the remote control holder to the stretcher with the rubber straps.



4.3 How to use

To enable a secure connection between the remote control and the YAKwheel:

- 1st Turn on the YAKwheel.
- 2nd Turn on the remote control.

To turn the remote control on or off, simply press the switch *2. When you press the switch, the LED indicator will illuminate, providing an automatic visual representation of the battery level.

To turn the motor controller on or off, insert the battery and press the battery switch and main switch on the back of the motor controller.

When both the remote control and the controller are turned on, use the throttle *5 to gently increase the wheel speed. Gradually apply pressure to the accelerator to reach the desired speed. To change the direction of the engine, release the accelerator and press the switch marked *4. When the accelerator is pressed again, the wheel will turn in the opposite direction.

The first speed allows the YAKwheel to move at 2Km/h, when activating the second speed *3, the maximum speed will be 6Km/h.

General use

- If the engine controller is on, the electronic engine brakes will activate automatically.
- If the accelerator is not pressed, the electronic wheel brakes are activated. Once the accelerator is pressed, the brakes are automatically released.

Do not turn on the remote control while pressing the accelerator

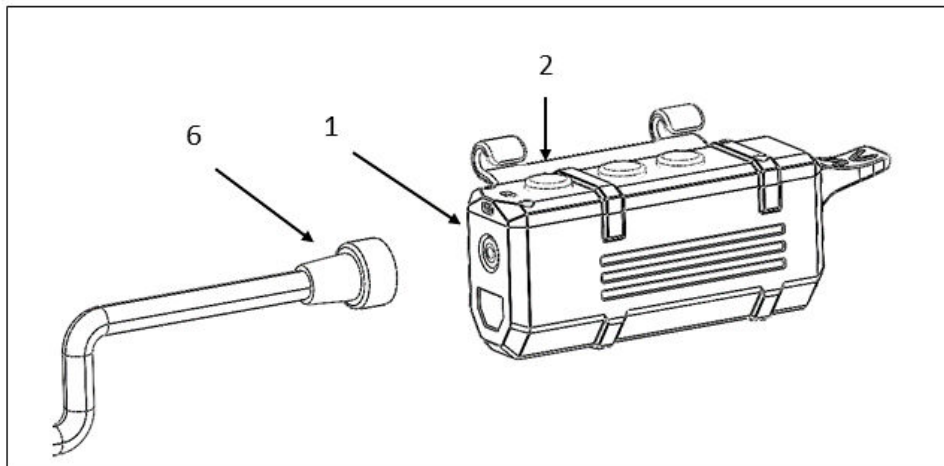
4.4 Charging

4.4.1 YAKremote - Charging



WARNING:

- Optimal range during 5V battery charging: 5°C to +40°C
- Charging requires a dry environment and all parts dry.
- Do not leave the charger unattended during charging.



To recharge the remote control, follow these steps:

- Make sure the remote control is turned off.
- Connect the supplied charger cable to the charging port marked *1 on the remote control.
- Connect the other end of the charger cable to a 5V USB power source.
- *2 charging status LEDs

LED colour	Charging status
Red	Charging
Green	Full charged

4.4.2 YAKwheel - Charging battery 40V



WARNING:

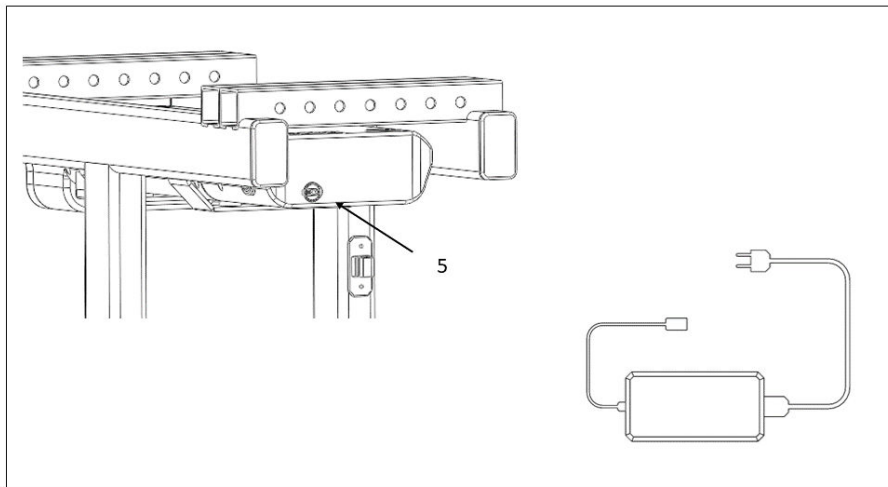
- Optimal range during 40 V battery charging: 5°C to +40°C
- Charging requires a dry environment and all parts dry.
- Do not leave the charger unattended during charging.
- Remove the battery from the vehicle while charging.

Start loading:

- Connect the battery to the charging slot.
- Connect the charger to an AC outlet.
- The charging process starts.

Stop loading:

- Disconnect the charger from the AC outlet.
- Disconnect the charger from the Battery.



To provide users with a visual representation of the battery's charging status, there is an LED indicator conveniently located on the charger.

5. Product technical specifications

Technical data

Battery

Nominal voltage	V	40
Power output	W	360
Maximum discharge current	A	10
Storage temperature	°C	+5...+40
Operating temperature	°C	-20...+65

Charger

Output voltage	V	42
Output current	A	3
Input voltage	V	100-240
Input frequency	Hz	50/60
Input power	W	120
Operating temperature	°C	+5...+40
Charging time	h	3-4

Wheel

Nominal voltage	V	40
Power	W	250
Maximum speed	Km/h	6
Maximum torque	Nm	90
Wheel dimensions	Inch	9

Remote control

Nominal voltage	V	3,7
Power	W	11
Charging port USB	V	5
Approximate battery duration	h	20
Operating temperature	°C	-20...+65
Charging temperature	°C	+5...+40

General information

Total weight	Kg	13
Dimensions YAKwheel	cm	55x75x28
Dimensions YAKremote	cm	12x6x6

6. Maintenance and troubleshooting information

Better practices

- Keep components torqued to the torque specifications listed in this manual.
- Make sure tires are always inflated to a pressure within the recommended range printed on the sidewalls of the tires.
- Before each use, make sure all electrical cords are connected.
- The YAKwheel is not waterproof. Components are not likely to be damaged in most rain events.
- Keep the battery clean.
- The machine must be completely stationary before and during maintenance or repair.

Quarterly

- Check all items on the monthly service list above.
- Check tire tread for excessive wear. Replace if necessary.
- Confirm that the tires rotate properly and have no obvious wobble.
- Confirm that all wheel spokes are not broken or loose.
- Confirm that the motor is turning smoothly and that the bearings are in good working order.
- Confirm that all power cables to the motor are secure and undamaged.

Notes for optimal battery management

Battery life can be extended if properly maintained and especially if used and stored at appropriate temperatures.

However, over time, the battery's capacity will decrease, even if it is properly maintained.

A significantly reduced period of operation after charging indicates that the battery is worn out and needs to be replaced. You can replace the battery yourself.

Recharging the battery before and during storage

When not using the battery for a long period, charge it up to approx. 60% (3 to 4 LEDs on the charge control indicator).

Check the charging status after 6 months. When only one LED of the charge control indicator lights up, it recharges the battery again approx. 60%.

Note: When the battery is stored discharged (empty) for long periods, it may be damaged despite low self-discharge and the battery capacity may be greatly reduced.

It is not recommended to have the battery permanently connected to the charger.

Storage conditions

Store the battery in a dry, well-ventilated place. Protect the battery against moisture and water. In unfavourable weather conditions, it is recommended to remove the battery from the YAKwheel and store it in a dry place until it is used again.

The battery can be stored at temperatures between 5°C and +40°C. However, for longer battery life, it is advisable to store it at a room temperature of approx. 20°C is an advantage.

Be careful not to exceed the maximum storage temperature. For example, do not leave the battery in a vehicle in summer and store it out of direct sunlight.

Transport

Battery packs are subject to the requirements of dangerous goods legislation. Private users can transport batteries in good condition by road without further requirements.

In case of transport by commercial users or third parties (e.g. air transport or transport agency), special requirements regarding packaging and labelling (e.g. ADR regulations) must be met. If necessary, contact a hazardous materials expert.

Cleaning



Do not spray the device with water or immerse it in water. Danger of electric shock!

7. Notes on the EC Declaration of Conformity



" YakSolutions ApS hereby declares that YAKwheel radio equipment is in compliance with Directive 2014/53/EU, Directive 2011/65/EU and Directive 2006/42/EC.

The A-weighted emission sound pressure level at the driver's ears is less than 70 dB(A).



Please read the instructions carefully before using the product.

8. Recycling information

The following information must be accessible to users in accordance with WEEE Directive 2002/96/EC on Waste Electrical and Electronic Equipment.

Recycling information



This symbol indicates that this product should not be treated as household waste and should be taken to an appropriate collection point for the recycling of electrical equipment. By correctly recycling electrical appliances you help avoid risks to health and environmental safety..



This symbol indicates that the product contains batteries that should not be disposed of with household waste. The product, at the end of its useful life, must be taken to a relevant collection point for the correct recycling of the batteries it contains.



Li-ion

The product includes lithium-ion/polymer (Li-ion/po) batteries that must be recycled.



"This product is suitable for recycling and should be recycled."

9. How to properly remove batteries for recycling

"Note on product disposal: If this product is damaged beyond repair or, for any reason, its useful life is considered to have ended, please consult local, state and European regulations and disposal points for products containing lead, batteries, plastics, among others, materials present in electrical and electronic equipment and batteries."



Your local community or municipal authorities can provide you with information on how to dispose of your used product.

10. Warranty conditions and contact for claims

Dear customer,

This appliance has a 2-year warranty valid from the date of purchase. If this product is defective, you, the buyer, have certain legal rights. Your legal rights are in no way restricted by the warranty described below.

Warranty conditions

The warranty period begins on the date of purchase. Keep your receipt in a safe place. This will be required as proof of purchase.

If any defect in material or workmanship occurs within two years from the date of purchase of the product, we will repair or replace the product or refund the purchase price (at our discretion). This warranty service requires that you present the defective appliance and proof of purchase (receipt) within the two-year warranty period, along with a brief written description of the failure and when it occurred.

If the defect is covered under warranty, your product will be repaired or replaced by us. The repair or replacement of a product does not constitute the start of a new warranty period.

Warranty period and legal claims for defects

The warranty period is not extended for repairs carried out under the warranty.

This also applies to replaced and repaired components. Any damage and defects present at the time of purchase must be reported immediately after unpacking. Repairs made after the expiration of the warranty period will be subject to a fee.

Scope of warranty

This appliance has been manufactured in accordance with strict quality guidelines and meticulously inspected before delivery.

The warranty covers material defects or production defects. The warranty does not extend to parts of the product subject to normal wear or fragile parts that could be considered consumables, such as switches or glass parts.

The warranty does not apply if the product has been damaged, misused or improperly maintained. The instructions in the product operating instructions regarding proper use of the product must be strictly followed. Uses and actions advised against in the operating instructions or warned should be avoided.

The warranty will be void in cases of misuse or improper handling, use of force and modifications/repairs that have not been carried out by one of our authorized Service centres.

The warranty period does not apply to

- Normal reduction in battery capacity over time.
- Damage or alteration of the product by the customer.
- Failure to comply with safety and maintenance instructions, operating errors.
- Damage caused by natural disasters.

Warranty Claims Procedure

- To ensure prompt processing of your case, please observe the following instructions:
- Please have the cash receipt and item number (e.g. IAN 12345) available as proof of purchase.
- You will find the article number on the type plate of the product, in an engraving on the product, on the first page of the operating instructions (bottom left) or on the sticker on the back or bottom of the product.
- If functional or other defects occur, please contact the indicated service department by email.
- You may return a defective product to the service address provided. Be sure to attach proof of purchase (up to receipt) and information about what the defect is and when it occurred.

Repair service

Repairs not covered by the warranty can be carried out upon payment to our technical service, who will be happy to provide you with a quote. We can only handle equipment that has been shipped with proper packaging and shipping.

Attention: Send your equipment to our service branch in clean condition and with indication of the defect. Equipment shipped in advance or by freight will

not be accepted. We will remove your defective devices free of charge when you send them to us.

If you have any questions, please contact us:

- YAKsolutions ApS DK-43452037
- Send us an email: hello@yakrescue.com
- Call us: +45 50 31 95 20
- Address: Centrifugevej 374, Lyngby 2800, Denmark