

KARJOLA

**ORIGINAL
OPERATING
MANUAL**



Congratulations on your purchase of Karjola, the electric wheelbarrow with a smart control. Karjola is a new generation of technically sophisticated electric wheelbarrows that ensure comfortable and easy use.

Please read these instructions carefully before use and store them safely.

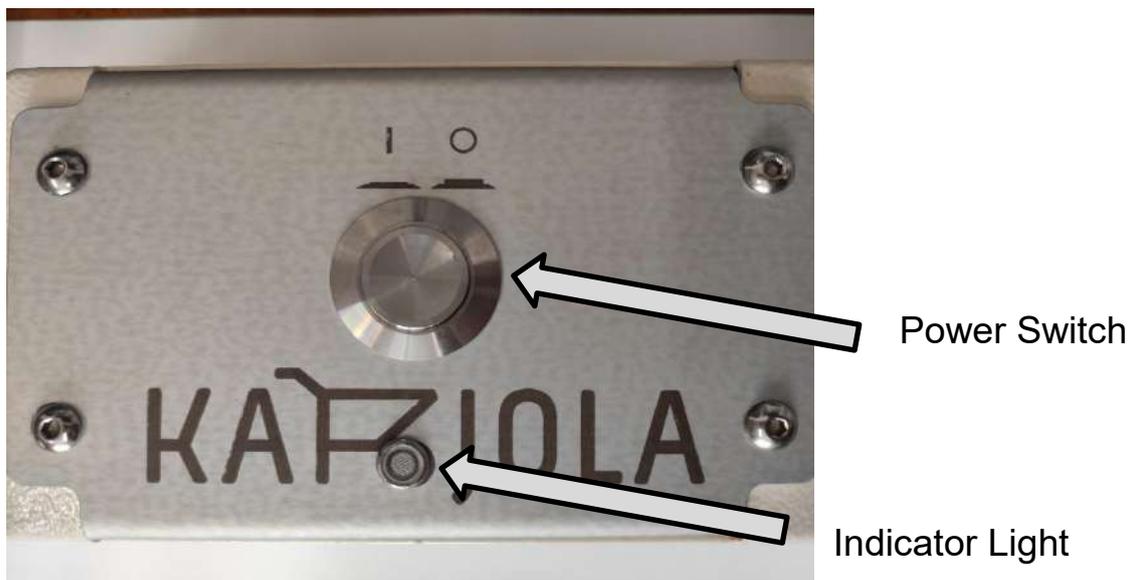
I. GETTING STARTED

Fully charge the batteries before the first use. Charge the batteries on the wheelbarrow at a specially designated charger port as described in **section 8 Charging the electric wheelbarrow.**

II. INSTRUCTIONS FOR USE

1. **To start:** turn on the power switch of the electric wheelbarrow located under the electric wheelbarrow's container. The indicator light will flash orange to indicate that the electric wheelbarrow is switched on.

Figure1: The power switch for turning the electric wheelbarrow on and off and the indicator light



2. **Check the battery charge level.** In 2 seconds after powering on the electric wheelbarrow, the indicator light will change from flashing orange to the following states:

- Battery charge level 100-50%, green colour, no flashing,
- Battery charge level 50-25%, yellow colour, flashing,
- Battery charge level 25-0%, red colour, flashing.

Warning!

Always check the charge level of the batteries before use. In the case the batteries are empty, the electric drive, the downward braking and the handbrake will not work, so it is necessary to adjust the way of using the electric wheelbarrow. It should also be noted that these functionalities are not available when the electric wheelbarrow is switched off. Then the electric wheelbarrow works like a manual wheelbarrow.

- 3. To drive:** the electric wheelbarrow is ready for the drive when the indicator light shows the battery status (unless you have turned the light off with the advanced control mode).

To drive, hold the electric wheelbarrow by the handles, the position of the fingers is on the handles in front of the sensor, lift the wheelbarrow and take a step forward. To active the drive, the electric wheelbarrow must be in the raised position (handles raised from the ground), fingers must be on the handle in front of the sensor, which is located in the quiver on the underside of the handle.

There are four driving modes available, that can be selected by the position of the fingers on the handle of the wheelbarrow, as shown in the illustration below, or by using the button:

A. The Intuitive Mode (switched off by the default mode)

With the intuitive driving mode, the speed adapts to the walking pace.

To drive with the intuitive mode, the fingers are positioned to the edge of the handle, as shown on Figure 2.

Figure 2: The Hand Position to Drive in the Intuitive Driving Mode



B. The Cruise Control Mode

With the cruise control mode, the speed is locked to the current speed of the electric wheelbarrow.

To use the cruise control mode, the fingers are positioned in the middle of the distance between the handle and the sensor under the handle (as shown on Figure 3).

Figure 3: The Hand Position to Drive with the Cruise Control Mode



C. The Constant Speed – the Tractor Mode

With the tractor mode the electric wheelbarrow drives at a constant pre-set speed (the default pre-set speed is 4 km/h).

The fingers are located immediately in front of the sensor on the underside of the handle (as shown on Figure 4).

Figure 4: The Position of the Hands to Drive with the Tractor Driving Mode



D. Driving Forward with the Button Mode

When driving with button mode the electric wheelbarrow works when you press (and hold) a button on the handle. The electric wheelbarrow runs at a constant pre-set speed. In this mode, the parking brake/emergency stop, and the assisted reverse drive do not work (as described in points 5 and 6).

At the time of purchase, the electric wheelbarrow operates according to the default operating settings.

The default (pre-set) operating settings are as follows:

- the cruise control and the tractor mode are on, the intuitive mode is off
- the set speed of the tractor mode is 4 km/h forward and 2.4 km/h backward
- the selected responsiveness is “normal”
- the display of battery status during operation is on
- the automatic wheel braking when emptying forward is switched off

To change the default operating settings, see the instructions in the **ADVANCED OPERATING SETTINGS** section.

4. **Stopping.** To stop when using the tractor mode or driving with the cruise control, slightly move the hand on the handle with the sensor backwards (out from the sensor detection) and stop the step.

After moving the hand from the detection of the sensor, the electric wheelbarrow continues to operate for three tenths of a second. When the

wheel stops, place the electric wheelbarrow on the ground and release the handles.

With the intuitive way of use, just stop the step. If you need to stop immediately, make a short click on the button on the handle to engage the parking brake (as described in point 5).

- 5. Parking Brake/Emergency Stop.** To activate the parking brake, make a short click on the button on the handle of the electric wheelbarrow. When the parking brake is engaged, the indicator light is red, non-flashing. To turn off the parking brake click on the button again or switch off the main power switch under the electric wheelbarrow container.

Figure 5: Button on the Handle



The Button:

- to turn on/off the parking brake
- to drive in reverse with the assistance
- to change the operating settings

Warning!

The handbrake does not work when the electric wheelbarrow is switched off or when the batteries are discharged.

- 6. The Assisted Reverse Drive.** To drive in reverse with the assistance of the motor, make a longer click (approx. 2 seconds) on the button on the handle of the electric wheelbarrow (Figure 5). The reverse drive is on as long as the button is pressed. The set reverse speed with the drive is 60% of the set tractor speed (the default reverse speed is 2.6 km/h).

To drive in reverse without the assistance of the motor, move your hands on the handles backwards to switch off the drive forward and then drive the electric wheelbarrow backwards with the engine off.

7. Automatic Braking when Tipping Forward

When the automatic braking mode when tipping forward is on, the electric wheelbarrow will automatically brake when you empty the electric wheelbarrow forward (**off by default settings**).

When the automatic braking mode is turned off, you can lock the wheel when tipping forward by using the handbrake (see section **5. Stopping with the handbrake**), which works in all driving modes, except with the button mode.

8. Charging the Electric Wheelbarrow.

- The electric wheelbarrow is charged with the included charger. The charger port is located under the electric wheelbarrow's container, as shown in the figure 7 below.
- Before charging, first connect the AC connector to the mains, then connect the DC connector to the electric wheelbarrow.
- After charging, first unplug the DC connector, then unplug the AC connector. Close the charging plug cap on the electric wheelbarrow to protect it from water and dirt.
- Check the battery charge on the battery charge indicator of the charger.
- In the case of low temperatures (below 0°C), do not charge the electric wheelbarrow outdoors or in a low-temperature area, as it may malfunction.

Figure 6: The Charger with Connectors



Figure 7: The Charger Connection



9. Handling of batteries

The batteries are located in the legs of the electric wheelbarrow and are protected by a steel housing.

Do not open the battery housing or the battery cover.

In case of non-operation or to replace the batteries, contact an authorized service centre.

Follow the instructions in the **Maintenance, cleaning, and care section** and in the **Troubleshooting section**.

ATTENTION: When handling with the batteries improperly, it can lead to risks such as explosion, overheating and fire. Failure to follow the instructions for the use leads to premature wear and other errors.

III. ADVANCED OPERATING SETTINGS

Advanced operating settings are changed with the button on the handle. First, it is necessary to place the electric wheelbarrow upright on a flat surface (on the front wheel, **as shown in Figure 8**). Next, keep your hand on the right handle (your hand should cover at least $\frac{3}{4}$ of the handle above the sensor, as shown in Figure 9) then press and hold the button for 10 seconds.

Figure 8: The Position of the Electric Wheelbarrow to Change the Settings



Figure 9: Hand Position on the Handle to Control Settings



During the time of 10 seconds, the indicator light will flash purple. When the indicator light is fully purple, it means that you are in the setting environment **(your hand must be on the handle all the time when changing settings and the electric wheelbarrow must be in an upright position)**.

If you hold down the button for more than 20 seconds, the setting environment of the electric wheelbarrow is turned off.

When you are in the setting environment, you select the operating modes by clicking on the button. When you click the setting button, the indicator light flashes white. A click means a short (max. 0.5 second) press on the button.

To change each operating setting, use the number of the button clicks as shown in the table below. Each time a certain number of clicks is used for the settings, the mode of operation changes for one step forward.

At the last mode, the set mode jumps back to the first mode.

After the selected operating mode, the indicator light flashes as many times as the button was pressed, then the colour of the light is displayed. The colour depends on the selected mode:

Mode 1 - Red, Mode 2 - Orange, Mode 3 - Yellow, Mode 4 - Green, Mode 5 - Blue.

- **To change the driving modes – use 3 clicks:**
 1. All driving modes are on.
 2. The intuitive mode is off (default).
 3. The cruise control and intuitive mode are switched off.
 4. Driving with the button is on, all other driving modes are off.

- **To change the speed of the tractor (constant speed) - use 5 clicks:**
 1. Tractor speed at 2 km/h
 2. Tractor speed at 3 km/h
 3. Tractor speed at 4 km/h (default)
 4. Tractor speed at 5 km/h
 5. Tractor speed at 6 km/h

- **To change the responsiveness of the electric wheelbarrow – use 7 clicks:**
 1. Responsiveness eco
 2. Responsiveness “normal” (default)
 3. Responsiveness sports

- **To change the display of the battery status during operation - use 11 clicks:**
 1. The indicator light is always on (default).
 2. The indicator light starts to glow after changing to yellow.
 3. The indicator light starts to glow after switching to red.

- **To turn off/on automatic braking when tipping forward – use 13 clicks (the default is off).**
- **To reset all states to default settings – use 17 clicks.**

EXAMPLE to change the driving mode:

- you need to be in the setting environment (the indicator light is purple, non-flashing),
- then you click on the button three times in a row shortly. Depending on the current setting, the driving mode will move one step forward. In case that the electric wheelbarrow is in the driving mode 2, it will switch to the driving mode 3 after three clicks and the indicator light will flash three times, then turn yellow.
- to switch to the driving mode 4, click the button again three times in a row (**you must be in the setting environment all the time**) and the driving mode will be shifted forward by one step again (after the three flashes, the display light will turn green).

The operating modes are summarized in the table below.

Number of clicks	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
	1 x flash then red light	2 x flashes then orange light	3 x flashes then yellow light	4 x flashes then green light	5 x flashes then blue light
3 clicks – to choose the driving mode	All driving modes are on	The Intuitive mode is off (default)	Cruise control and intuitive mode are switched off	Driving with the button is on, all other driving modes are off	
5 clicks - tractor speed	2 km/h	3 km/h	4 km/h (default)	5 km/h	6 km/h
7 clicks - responsiveness	Eco	Normal (default)	Sport		
11 clicks - display of the battery status during operation	Indicator light is always on (default)	The indicator light starts to glow after changing to yellow	The indicator light starts to glow after changing to red		
13 clicks - to turn off/on automatic braking when tipping forward	On/off (default)				
17 clicks - To reset all states to default settings	Reset to default				

IV. TECHNICAL SPECIFICATIONS

Model	K1
Capacity	80 litres
Loading	130 kg
Weight (including batteries)	34 kg
Batteries	Lithium-ion, 48 V, 8 Ah
Motor power	500 W, (Short time 1500 W)
Operating temperature	-20 to 60° C (-4° F to 140° F)
Charging temperature	0 to 45° C (32° F to 113° F)
Charger	200/260 V AC, 54V/2 A
Protection level	IP54
Max. speed forward, backward	12 km/h, 4 km/h
Dimensions (L x W x H)	1350 x 650 x 600 mm

V. SAFETY

- The electric wheelbarrow is intended for the use as described in the user manual, and in accordance with the technical specifications. Always follow this user manual.
- Do not expose the electric wheelbarrow to temperatures higher than the temperature range for the use of the electric wheelbarrow. The application which is outside the temperature range of the specified use may cause malfunctions of the electric wheelbarrow.
- Check the charger cables before charging. Ensure that there are no damages on the cables or in the bending protection. The charger with a damaged cable must be returned to the seller.
- Do not cover the charger while charging.
- Always ensure the adequate ventilation during charging. Do not charge the electric wheelbarrow in damp areas or high temperature areas.
- Do not leave the electric wheelbarrow unattended for a long time while charging.

- It is forbidden to charge the electric wheelbarrow in the presence of flammable and explosive gases or other such substances.
- Do not open the battery case.
- Do not open the controller housing.
- The device is not designed to be used by young children or people who cannot read or understand the user manual, unless they are under the supervision of a responsible person who ensures the safe use of the electric wheelbarrow. Keep the electric wheelbarrow and the charger out of the reach of children and ensure that children cannot play with the wheelbarrow and the charger.
- Do not submerge the electric wheelbarrow in the water.
- The connection to the power source must comply with national electrical installation regulations.

Danger to health and the environment!

If the battery is damaged, lithium leakage may occur. The contact with the substance can cause a serious injury. Do not open the battery case but contact an authorized service. If the battery fluid encounters a skin or eyes, flush with plenty of water for at least 10 minutes and seek medical assistance.

Danger of the electric shock!

Incorrect wiring or excessive mains voltage can cause the electric shock. In case of malfunctions, switch off the power supply quickly.

Danger of the short circuit!

If water or other liquid enters the battery, it may cause a short circuit. Therefore, never immerse the electric wheelbarrow in water or other liquids.

Battery overheating warning!

In case

- the temperature is $> 50^{\circ}\text{C}$, the electric wheelbarrow twitches 3 times and the indicator light lights up yellow
- the temperature is $> 55^{\circ}\text{C}$, the electric wheelbarrow twitches 5 times and the indicator light lights up red.

If the batteries overheat, stop using the electric wheelbarrow, turn it off and wait for the batteries to cool down. Use the electric wheelbarrow again when the power indicator light is green.

VI. MAINTENANCE, CLEANING AND CARE

You can clean the electric wheelbarrow with water, but the jet of water must not be directed directly at the controller housing of the electric wheelbarrow, which is located under the container of the electric wheelbarrow, or at the battery housing, which is located in the legs of the electric wheelbarrow. Clean the controller housing and the battery housing with a dry cloth.

When the electric wheelbarrow is not in use, do not expose it to direct sunlight unnecessarily.

If the electric wheelbarrow is not going to be in use for a longer period (i.e., during the winter rest), store it in a dry place at the temperature between 5 and 20°C, avoiding direct sunlight.

To achieve a longer service life, the batteries should not be fully charged during the storage. The recommended charge is between 25% and 50% (yellow flashes on the battery charge indicator). Check the charge at least once a month, if the indicator shows less than 25% (the indicate light flashes red), partially charge it. Do not store the electric wheelbarrow charger in damp or high-temperature areas. Clean the dust from the charger regularly.

TROUBLESHOOTING

The Trouble	The Probable Cause	How to solve
When the power is turned on, the indicator light does not illuminate or suddenly turns off during the normal operation.	Empty battery	Check if the battery is empty by connecting the charger and if the indicator on the charger is red, wait for the battery to charge. If the indicator is green, contact the service.
After connecting to the mains (AC), the charger does not work, no LED light is on.	The plug is loose, the charger won't connect to AC mains. The charger is damaged.	Reconnect the AC cord. Send the charger for service.
The electric wheelbarrow twitched 3 times, the indicator light is yellow.	Battery overheating above 50 °C.	Switch off the electric wheelbarrow and wait for the battery to cool down. Do not expose the electric wheelbarrow to the direct sunlight.
The electric wheelbarrow twitched 5 times, the indicator light is red, and the electric wheelbarrow stops working.	Battery overheating above 55 °C.	Switch off the electric wheelbarrow and wait for the battery to cool down. Do not expose the electric wheelbarrow to direct sunlight.
The indicator light flashes red.	The engine controller is off.	Keep your hand on the handle and click the button on the handle or turn the electric wheelbarrow off and on.

VII. DECLARATION OF CONFORMITY

	<p>You can request a declaration of conformity at the address listed in the support section of the manufacturer's website https://karjola.com/.</p> <p>Products marked with the CE symbol comply with all relevant EC directives.</p>
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VIII. BATTERY REMOVAL

Do not open the battery case.

If the batteries are used up or they do not function properly, arrange to have the batteries replaced at an authorized service.

IX. SUSTAINABILITY

The electric wheelbarrow is made robustly with the aim of using it for as long as possible. The construction of the product is modular, easy to repair, so before you stop using the electric wheelbarrow and put it in the waste, check whether it is possible to ensure further use by repairing or replacing some parts.

X. END OF USE AND DISPOSAL

	<p>Dispose of the packaging in the waste separately, according to the types of materials. Place the paper and the cardboard among the wastepaper for recycling, plastic and film among packaging for recycling.</p> <p>At the end of the product's life, dispose of it at collection centres, with checking how you sort and dispose of it.</p>
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The used battery must not be disposed of with household waste. Separate collection is mandatory. The useful materials from used batteries will be reused, which is environmentally friendly. More information can be obtained from competent waste collection companies.

XI. WARRANTY AND SERVICE

Limited warranty: Blockhapp guarantees the original buyer the faultless operation of the electric wheelbarrow Karjola for a period of 24 months from the date of purchase. Warranty for the batteries is 12 months from the date of purchase. This limited warranty is not transferable.

The Warranty Claim

For information or in case of problems, refer to the **Customer Support** section on our website <https://karjola.com>, where you can find a list of authorized service centres and contacts, or contact your local Karjola electric wheelbarrow dealer. The original buyer claims the warranty by presenting the product and the original invoice.

The Invalid Warranty Claim

The warranty claims are invalid in cases:

- of malfunctions and damages that can be attributed to force majeure or an accident,
- of unauthorized interventions in the product, such as opening the battery case or the controller case by a person who is not an authorized service technician,
- if the user did not follow the instructions for using the product,
- in case the product is mechanically damaged,
- if the damage was caused by spilled batteries,
- if the malfunction was caused by an extreme fluctuation in the mains voltage of electricity grid or a force majeure
- in case of modifications and changes to the product by the customer,
- if the product has been handled negligently and/or contrary to the instructions for use and maintenance,

- for fading and peeling of the top layer of paint,
- for rust caused by abrasions and/or scratches.
- in other cases, as stated in the description of the warranty in the instructions for use of the product.

The company Blockhapp d.o.o. makes no other warranty and is not responsible for any costs other than those mentioned above.

XII. KARJOLA IS PROTECTED WITH

Patents	Trademarks
Patent in the Slovenian patent register number 25808	Karjola , registered at EIUPO no. 018427550
EP 3 878 712 A1 – in progress	
US2021/0284222 A1 – in progress	

XIII. CUSTOMER SUPPORT

For the user support, please refer to <https://karjola.com>, customer support section.

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Instructions for using the electric wheelbarrow Karjola.

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