



42V LITHIUM-ION POWERHEAD

Owner's Manual



IMPORTANT

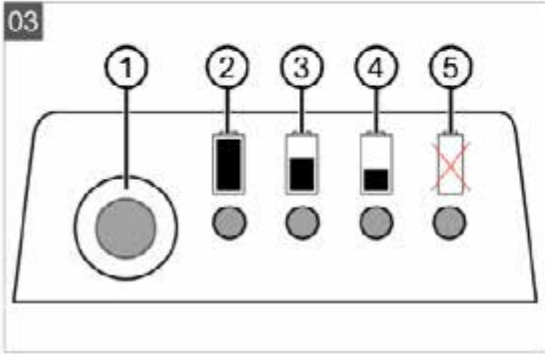
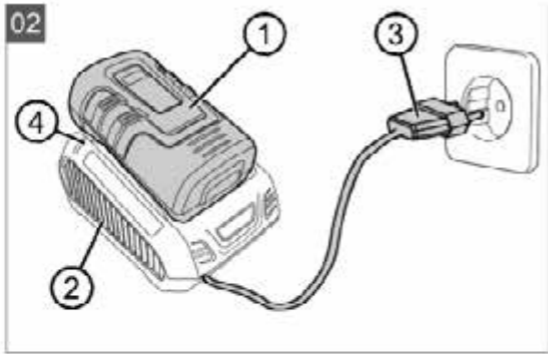
To reduce the risk of fire, burn hazard or other injury, please read these instructions carefully before use.

Keep these instructions in a safe place for future use.

This manual covers the Masport 42V Battery PowerHead

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PRODUCT SPECIFICATION

1. PRODUCT DESCRIPTION

The B150 Li and B200 Li batteries are lithium ion batteries with a rated output voltage of max. 42 V and a charge storage capacity of 4 Ah and 5 Ah, respectively. As soon as the rechargeable battery is inserted into the charger, the charger automatically detects the charge status of the rechargeable battery. The charging process then begins. It ends automatically when the rechargeable battery is fully charged. The rechargeable battery can be charged in any charge status. Interrupting the charging process does not damage the rechargeable battery.

1.1 Product overview (01 - page 4)

No.	Component
1	Control panel for determining the charge status
2	Rails and rechargeable battery contacts

2. DESIGNATED USE

The rechargeable battery is intended for Masport appliances that are operated by a rechargeable battery. It cannot be used in environments where there is a potential risk of explosion and/or fire. It is intended for use only in the garden and hobby area, not for professional use. The rechargeable battery must only be charged with the Masport Energy Flex battery charger.
C130 Li Battery Charger
Charger Product No. 11328145

SAFETY INSTRUCTIONS

GENERAL SAFETY RULES

READ ALL INSTRUCTIONS CAREFULLY



WARNING!

- For safe operation, read and understand the instruction manual.
- To reduce the risk of electric shock, do not expose to water or operate on wet ground.
- Replace any damaged parts immediately. Remove the safety key prior to servicing.
- For use only with Masport batteries and Masport Charger.

BATTERY & CHARGER



DANGER! Danger of explosions and fires!

- Persons can be fatally or severely injured if the rechargeable battery explodes because it was used in an environment where there is a potential risk of explosion and/or fire.
- Do not use the rechargeable battery in a potentially explosive environment.
- Do not throw the rechargeable battery into an open fire.



WARNING!

Danger of fires and electric shocks!

- Persons can be fatally or severely injured if the rechargeable battery causes a fire due to a short-circuit because it was exposed to moisture and humidity.
- Do not expose the rechargeable battery to moisture and humidity.



IMPORTANT!

Danger from water

- Water in the appliance causes short-circuits and destroys electrical components.
- Do not spray the appliance with water.
 - Only use a broom or a brush for cleaning.

BASIC SAFETY INSTRUCTIONS

- This section mentions all basic safety and warning information to be heeded when using the charger. Read these instructions.
- Always remove the safety key (twist to lock/unlock) from your PowerHead when you are assembling parts, making adjustments, cleaning, or when not in use. Removing the safety key will prevent accidental starting that could cause serious personal injury.
 - Always remove the safety key and fit the rubber socket cover before storing the device.
 - Only use the rechargeable battery as designated, i.e. for Masport rechargeable battery-driven devices. Charge the rechargeable battery only with the charger (see chapter 2 "Designated use").
 - Only unpack the new rechargeable battery from the original packaging when it is to be used.
 - Fully charge the rechargeable battery before using it for the first time and always use the specified charger. Always comply with the details given in these instructions for use for charging the rechargeable battery.
 - Only use original rechargeable batteries and chargers from Masport.
 - Do not use the rechargeable battery in environments where there is a potential risk of explosion and/or fire.
 - Do not expose the rechargeable battery to moisture and humidity when in use on the appliance.
 - Protect the rechargeable battery from heat, oil and fire to prevent it being damaged so no vapours and electrolyte liquids can escape.
 - Do not subject the rechargeable battery to impacts or throw it.
 - Do not use the rechargeable battery when soiled or wet. Before use, clean and dry the rechargeable battery with a dry, clean cloth.
 - When battery pack is not in use, keep it away from other metal objects, like paperclips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Burns or fire can result from a short-circuit.
 - Do not open, dismantle or crush the rechargeable battery. There is a danger of electric shock and short-circuit.
 - An improperly used and damaged rechargeable battery can cause vapours and electrolyte fluid to escape. Vent the room adequately and in the case of any disorders, consult a doctor. In the event of contact with electrolyte fluid, flush with water and immediately rinse the eyes thoroughly. Then consult a doctor.
 - The rechargeable battery must not be used by unauthorised persons unless they are supervised by a person responsible for their safety or have been instructed on how to use the rechargeable battery.
 - by persons (including children) with limited physical, sensory or mental aptitude.
 - by persons who have no experience and/or knowledge of the appliance.
 - Children must be supervised and instructed so they do not play with the rechargeable battery.
 - Do not leave the rechargeable battery permanently in the charger. For prolonged storage, remove the rechargeable battery from the charger.
 - When not in use, remove the rechargeable batteries from the operated appliances.
 - Dry the unused rechargeable battery and store in a closed place.
 - Protect from heat and direct sunlight. Unauthorised persons and children must not have access to the rechargeable battery.

UNPACKING THE RECHARGEABLE BATTERY

Only unpack a new rechargeable battery from the original packaging when you want to use it.

SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

	Warning	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	Caution	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	Important	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	Read User Manual	To reduce the risk of injury, the user must read and understand the operator's manual before using this product. (Keep User Manual).
	Eye Protection	Always wear eye protection with side shields marked to comply with ANSI Z87.1 when operating this equipment.
	Environmental Protection	<p>Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.</p> <p>The battery contains material which is hazardous to you and the environment. It must be removed and disposed of separately at a facility that accepts lithium-ion batteries.</p>



WARNING!

- To avoid serious personal injury, do not attempt to use this product until you have read this Owner's Manual thoroughly and understand it completely. If you do not understand the warnings and instructions in this Owner's Manual, do not use this product. Call a Masport authorised dealer for assistance.

1) Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the appliance.
- Never allow children or people unfamiliar with these instructions to use the appliance. Local regulations may restrict the age of the operator.

2) Preparation

- While mowing, always wear substantial footwear and long trousers.
- Do not operate the appliance when barefoot or wearing open sandals.
- Thoroughly inspect the area where the appliance is to be used and remove all stones, sticks, wires, bones, and other foreign objects.
- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- On multi-bladed appliances, take care as rotating one blade can cause other blades to rotate.

3) Operation

- Mow only in daylight or in good artificial light.
- Avoid operating the appliance in wet grass, where feasible.
- Always be sure of your footing on slopes.
- Walk, never run.
- Mow across the face of slopes, never up and down.
- Exercise extreme caution when changing direction on slopes.
- Do not mow excessively steep slopes.
- Use extreme caution when reversing or pulling the appliance towards you.
- Stop the blade(s) if the appliance has to be tilted for transportation when crossing surfaces other than grass, and when transporting the appliance to and from the area to be mowed.
- Never operate the appliance with defective guards or shields, or without safety devices, for example deflectors and/or grass catchers, in place.

- Switch on the motor according to instructions and with feet well away from the blade(s).
- Do not tilt the appliance when switching on the motor, except if the appliance has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator. Always ensure that both hands are in the operating position before returning the appliance to the ground.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times. Never pick up or carry an appliance while the motor is running.
- Remove the safety key from your Power-head:
 - whenever you leave the machine;
 - before clearing a blockage;
 - before checking, cleaning or working on the appliance;
 - after striking a foreign object, inspect the appliance for damage and make repairs as necessary;
 - if the appliance starts to vibrate abnormally (check immediately).

4) Maintenance and storage

- Keep all nuts, bolts, and screws tight to be sure the appliance is in safe working condition.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- Ensure that only replacement cutting means of the right type are used.
 - Caution – Do not touch rotating blade
 - The battery charger should be supplied via a residual current device (RCD) with a tripping current of not more than 30 mA during charging.
 - WARNING: For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance .

ASSEMBLY

INSTALLING/REMOVING THE BATTERY

- Lift the front flap and insert the battery as shown. (see figure 1)
- Make sure the battery is in all the way as shown. (see figure 2) and close the front flap.
- To remove the battery, press the latch on the top of the battery and pull it from the powerhead.



Figure 1.



Figure 2.

TO PREPARE POWERHEAD FOR USE

- Lift and hold up the rear flap.
- Uncover safety key by lifting rubber cover and store as shown. (See Figure 3).
- Insert the safety key. (See Figure 4) Twist to lock.



Figure 3.



Figure 4.

OPERATION

STARTING/STOPPING THE POWERHEAD

(See Figure 5).

TO START THE POWERHEAD

- Open the rear flap.
- Insert the safety key. (See Figure 4) Twist to lock. The Safety key can only go in one direction.
- Close the rear flap.
- Press and hold the safety lock-out button (See Figure 5) - (1).
- Pull the bail lever (See Figure 5) - (2) upward to the handle to start the motor and release the button.

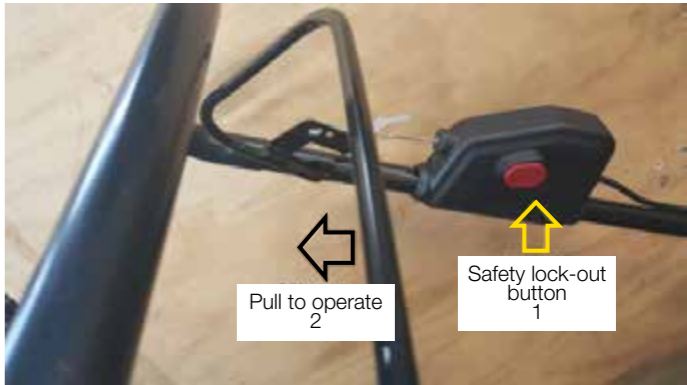


Figure 5.

TO STOP THE POWERHEAD

- Release the bail lever.

SOFT-START

Your PowerHead is equipped with a "soft-start" feature. When initially starting up, the PowerHead will take approximately 7-8 seconds to get up to full speed. If the PowerHead does not initially start: Remove the safety key and check under the machine deck to ensure there is nothing obstructing the blade and that the blade can spin freely by hand. Even a small amount of grass blocking the PowerHead blade may prevent the mower blade from accelerating and engaging.

Do not start in grass but on a hard surface.



CAUTION!

- Do not attempt to override the operation of the safety lock-out button or bail lever.

DETERMINING THE CHARGE STATUS OF THE RECHARGEABLE BATTERY (03 - PAGE 4)

There is a control panel with a pushbutton (03/1) and LED charge status displays (03/2 to 03/5) on the front of the rechargeable battery.

- Press the pushbutton (03/1).

- The charge status displays light according to the charge status of the rechargeable battery.
- 2. To identify the charge status, see section “Charge status displays on the rechargeable battery”.

Lighting LEDs	Charge status of the rechargeable battery
Green (03/2)	Rechargeable battery is fully charged, i.e. to 100 %.
Green (03/3) and (03/4)	Rechargeable battery is charged to over 50 %.
Green (03/4)	Rechargeable battery is charged to less than 50 %.
Red (03/5)	The rechargeable battery is fully discharged or the rechargeable battery has been overheated/undercooled.

BATTERY AND CHARGER MAINTENANCE

CHARGING PROCEDURE


 NOTE:

The battery is not shipped fully charged. It is recommended to fully charge before first use to ensure that maximum run time can be achieved. This lithium-ion battery will not develop a memory and may be charged at any time.


LOW VOLTAGE CHARGING

If the battery has been stored with little to no charge for a long period of time, the charger will go into recovery mode and will take 20 hrs to fully charge the battery. This will enhance the life of the battery. Once it is fully charged, the next charge will return to standard charging.


CHARGING THE RECHARGEABLE BATTERY (02 - PAGE 4)

**DANGER!**
DANGER OF FIRE DURING CHARGING
The charger heats up when charging. There is a danger of fire if the charger is placed on a flammable surface not adequately ventilated.

- Always use the charger on a non-flammable surface and in a non-combustible environment.


**NOTE**
Fully charge the rechargeable battery before using it for the first time.
The rechargeable battery can be charged in any charge status. Interrupting charging does not damage the rechargeable battery.


1. Insert the rechargeable battery (02/1) in the charger (02/2) and plug the power plug (02/3) into the power outlet.
 - The charging process begins and the LED for indicating the operating status (02/4) flashes green.
2. Observe the LED (02/4). Complete charging takes approx. 1.5 to 2 hours, depending on the battery capacity.
 - The charging process ends automatically when the rechargeable battery is fully charged. The LED (02/4) then lights permanently green.
3. Disconnect the power plug (02/3) when the LED (02/4) lights permanently green.
4. Press and hold the lock knob on the underside of the rechargeable battery. Then pull the rechargeable battery (02/1) out of the charger (02/2).

**WARNING!**


- Do not use any charger other than the MASPORT supplied charger.

HELP IN CASE OF MALFUNCTION


**NOTE**
How to determine the charge status is described in the operating instructions for the rechargeable battery.

**NOTE**
If you encounter any malfunctions that are not listed in this table or that you cannot rectify yourself, please contact your local service dealer.

STORING THE RECHARGEABLE BATTERY

**DANGER!**
DANGER OF EXPLOSIONS AND FIRES!
Persons will be fatally or severely injured if the rechargeable battery explodes because it was stored in front of naked flames or heat sources.

- Store the rechargeable battery in cool and dry conditions, but not in front of naked flames or heat sources.

**NOTE**
When charging in the charger, the rechargeable battery is protected from overcharging due to automatic detection of the charge status and thus can remain in the charger for some time, but not permanently.


- Store the rechargeable battery in a dry, frost-free place at an ambient temperature between 0°C and +25°C and with a charge state of approx. 40 - 60%.
- Recharge the rechargeable battery after approx. 3 months.

Remove the safety key and store in a secure location out of the reach of children.

SERVICE

Servicing requires extreme care and knowledge and should be performed only by a Masport qualified service technician. For service we suggest you return the product to your nearest authorised service dealer for repair. When servicing, use only identical replacement parts.

TRANSPORT

**NOTE**
The total stored energy of the rechargeable battery is more than 100 Wh.
Heed the following transport instructions.

The li-ion rechargeable battery is subject to the requirements of the hazardous goods law. The rechargeable battery can be transported on public roads by the private user without further conditions. Only transport the rechargeable battery if it is undamaged. The rechargeable battery must be protected against contact with other objects, short-circuit and accidental shifting. For shipment by third parties (e.g. by shipping agent or air freight), heed the special requirements on packaging and marking.

A hazardous goods specialist must be involved in the preparation of the shipment. Only ship rechargeable batteries if the housing is undamaged. Tape off exposed contacts and pack the rechargeable battery so it can no longer move in the packaging.

Please follow any other national regulations.

ENVIROMENTALLY SAFE BATTERY DISPOSAL

The batteries used in this PowerHead’s battery pack contain the following toxic and corrosive material: LITHIUM-ION.




In the first instance return any faulty PowerHeads to a MASPORT authorised repair centre for repair.

Items that contain toxic materials must be disposed of in a specified manner in order to prevent contamination of the environment. Before disposing of damaged or worn out Battery PowerHeads, contact your local waste disposal agency for information and specific instructions. Take the Powerhead to a local recycling and/or disposal centre that is certified for disposal. Dispose of it. DO NOT ATTEMPT TO REPAIR IT!

Follow these instructions in order to avoid injury and the risk of fire, explosion, or electric shock and to avoid damage to the environment:

- DO NOT attempt to repair the battery PowerHead.
- DO NOT attempt to remove or destroy any of the components of the battery PowerHead.
- DO NOT attempt to open the battery PowerHead.
- If a leak develops, the electrolytes that are released are corrosive and toxic.
- DO NOT get the solution in the eyes or on the skin and do not swallow it.
- DO NOT place battery PowerHeads or any part in regular household trash.
- DO NOT incinerate battery PowerHeads or any part thereof.
- DO NOT place batteries where they will become part of any waste landfill or municipal solid waste stream.
- Dispose of batteries at a certified recycling or disposal centre.



- Electrical and electronic appliances do not belong in household waste, but should be collected and disposed of separately.


Used batteries or rechargeable batteries that are not installed permanently in the old appliance must be removed before disposal. Their disposal is regulated by the battery law.

- Owners or users of electrical and electronic appliances are obliged by law to return them after use.
- The end user bears personal responsibility for deleting his personal data from the old appliance to be disposed of.

The symbol of the crossed-through rubbish bin means that electrical and electronic appliances may not be disposed of in the household rubbish. Electrical and electronic appliances can be handed in at the following places at no charge:

- Public service disposal or collection points (e.g. municipal building yards)
- Points of sale of electrical appliances (stationary and online) provided traders are obliged to take them back or offer this voluntarily.

These statements apply to appliances that are installed and sold in the countries of the European Union and are subject to European Directive 2012/19/EU. Different provisions may apply to the disposal of electrical and electronic appliances in countries outside the European Union.



- Used batteries and rechargeable batteries do not belong in household waste, but should be collected and disposed of separately.

- For safe removal of batteries or rechargeable batteries from the electrical appliance and for information on their type or chemical system, follow the further information within the operating or installation instructions.
- Owners or users of batteries and rechargeable batteries are obliged by law to return them after use. Return is limited to the handover of customary household quantities.

Used batteries can contain harmful substances or heavy metals that can cause damage to the environment and human health. Reuse of the used batteries and use of the resources contained therein contributes to the protection of these two essential commodities. The symbol of the crossed-through rubbish bin means that batteries and rechargeable batteries may not be disposed of in household rubbish. In addition, if the symbol Hg, Cd or Pb appears under the rubbish bin, this stands for the following:

- Hg: Battery contains more than 0.0005 % mercury
- Cd: Battery contains more than 0.002 % cadmium
- Pb: Battery contains more than 0.004 % lead

Rechargeable batteries and batteries can be handed in at the following places at no charge:

- Public service disposal or collection points (e.g. municipal building yards)
- Points of sale of batteries and rechargeable batteries
- Disposal points of the common take-back system for the used batteries of appliances
- Disposal point of the manufacturer (if not a member of the common take-back system)

These statements apply to rechargeable batteries and batteries that are sold in the countries of the European Union and that are subject to European Directive 2006/66/EU. Different provisions can apply to the disposal of rechargeable batteries and batteries in countries outside the European Union.

TECHNICAL DATA

Item no.	11328045
Rated voltage	42 V max.*
Rated capacity (charge quantity)	4 Ah
Total stored energy	144 Wh
Operating temperature range	+5 °C to +40 °C
Storage temperature range	0 °C to +25 °C
Dimensions (Length x Width x Height)	L = 180 mm, W = 105 mm, H = 80 mm
Weight	1.4 kg

Disclaimer: *Maximum initial battery voltage (measured off load) is 42 V. Nominal voltage as per industry rule (3.65V/cell) is 36 Volts.

TROUBLESHOOTING

Electric machines prefer to run at a constant speed. If you encounter some heavy / thick grass that slows the motor down, slow down the forward motion to allow the motor to run back up to its normal operating speed.

The electronic speed controller within the Masport smart lawn mower has been design to protect itself from damage by only operating within a safe operating zone. If you cut some particularly long / dense grass (first cut of the season etc.) the controller may get warm to the point that it will protect itself by switching off the motor. No worries, it will allow the motor to operate again after it has cooled down. This is not a fault; it is by design to provide you with a long term reliable product.

The same is true of a separate electronic controller built into the Lithium Ion Battery pack and coupled with another one built into the smart charger. They have been designed to work in unison to protect the high performance Lithium Ion Battery, resulting in a long trouble free operating life and providing the optimum charge every time. In achieving this, the controller may sometimes prevent the battery from being charged if the previous run resulted in an overly warm battery pack. Waiting a brief period after cutting the grass before putting the machine on charge will allow the battery pack to cool down to enable it to receive a full fresh charge. These smarts have been incorporated to protect the various items from damage and provide the user with a reliable long term product.

To allow the free running of the motor, do not cut with an excessively low cut height. Two light cuts are better than one heavy cut especially when not using the catcher.

Problem	Displays	Possible Cause	Solution
The PowerHead does not start.		Battery not charged.	Charge the battery.
		Safety key is not inserted correctly.	Insert safety key and twist to lock.
		Battery may require service.	Contact Masport approved dealership.
		Fuse is blown.	Replace fuse.
		Warm controller after cutting particularly long /dense grass.	Wait for controller to cool down.
		Not enough travel on the OPC cable	Make sure ‘z’ bend is in 3rd hole.
Excessive noise and/or vibration.		Bent motor shaft	Remove safety key & inspect PowerHead for damage
		Blade assembly is unbalanced.	Remove safety key & replace / repair blades and tighten bolt
The rechargeable battery is not charging.	LED on the charging unit lights permanently red.	The service life of the rechargeable battery has expired.	Replace the rechargeable battery. Only use original accessories from Masport.
		The rechargeable battery is not fully inserted in the charger.	Fully insert the rechargeable battery in the charger.
		The plug contacts of the recharge-able battery or charger are soiled.	Disconnect the power plug and clean the plug contacts with a dry cloth. If the fault reoccurs, contact a Masport service centre.
	The LED on the charger flashes red	The rechargeable battery or charger is faulty.	Replace the rechargeable battery. Only use original accessories from Masport.
	The LED on the charger is not active.	No mains voltage.	Insert the power plug or check that mains voltage is present.
The rechargeable battery has been removed from the charger and is not charged.	On the rechargeable battery the red LED lights after pressing the pushbutton.	There is a fault on the rechargeable battery or on the charger (see above causes).	See above measures.
Beeps from the controller x 2		Low battery.	Charge the battery.
Beeps from the controller x 3		High temperature.	Wait for controller to cool down.

Beeps from the controller x 4		Excess current.	Remove safety key and inspect if the blade is jammed up with grass. Clear grass away. If that does not solve the problem, contact Masport approved dealership.
Beeps from the controller x 5		Motor Jam.	Remove safety key and inspect if the blade is jammed up with grass. Clear grass away.

WARRANTY

Check warranty card for terms.



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