

# POWERBASE

32cm 20V Cordless  
Lawn Mower 644534

## Instruction Manual

**IMPORTANT!**  
Please read these  
instructions fully before  
starting assembly.



These instructions contain important information that will help you get the best from your product, ensuring it is assembled correctly and safely. If you need help or have damaged or missing parts, call the Customer Helpline on 01904 727 509.

# Contents

General safety warnings	3
Warning symbols	12
In the box	15
Assembling the lawn mower	16
Operation	19
Maintenance and storage	26
Troubleshooting	28
Technical data	29
Havs	30
Disposal	30
Getting help	31
Warranty	31

# General Safety Warnings

## Safety warnings



**WARNING! Read all safety warnings and instructions.**

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.



**WARNING! Read all safety warnings and instructions designated by the  symbol.**

Save all warnings and instructions for future reference.

- This machine can be used by children aged from 8 years and above, and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning the use of the mower in a safe way and understand the hazards involved.
- Children should be supervised to ensure that they do not play with the product.

**IMPORTANT!** Before assembling the lawn mower, check all the parts indicated in the manual are in the box. Inspect all the parts for signs of damage. Do not assemble the lawn mower if you observe any damaged components.

# General safety

## Training

1. Read the instructions carefully and make sure you fully understand them. Make sure you are familiar with the controls and the correct use of the product.
2. Never allow small children or people unfamiliar with these instructions to use the product. Local regulations can restrict the age of the operator.
3. Never operate the product while people, especially children or pets, are nearby.
4. Keep in mind that the operator or user is responsible for any accidents or hazards occurring to other people or their property.

## Preparation

1. While operating the product always wear substantial footwear and long trousers. Do not operate this product when barefoot or wearing open-toed sandals. Avoid wearing clothing that is loose fitting or has hanging cords or ties.
2. Thoroughly inspect the area where the product is to be used and remove all objects which could be thrown by the product.
3. Before use, always visually inspect to check that the blade, blade bolt and the blade assembly are not worn or damaged. Replace worn or damaged

components in sets to preserve balance. Replace any damaged or unreadable labels.

4. Ensure the switch is in the off position before inserting the battery pack. Inserting the battery pack into a machine that is switched on can result in injury.

## **Product safety warnings**

### **General Operation**

1. Use the tool only with specifically designated battery packs. Use of any other battery packs will increase the risk of injury and fire.
2. Only operate the product in daylight or in good artificial light.
3. Do not expose the machine and charger to rain or wet conditions. If a machine or charger is exposed to moisture it will increase the risk of electric shock.
4. Avoid operating the product on wet grass.
5. Always be sure of your footing on slopes.
6. Walk, never run.
7. Mow across the face of slopes, never up and down.
8. Exercise extreme caution when changing direction on slopes.
9. Do not mow excessively steep slopes.
10. Use extreme caution when reversing or

pulling the product towards you.

11. Stop the blades if the product has to be tilted for transportation, when crossing surfaces other than grass, and when transporting the product to and from the area to be mowed.
12. Never operate the product with defective guards or shields, or without safety devices in place, such as deflectors or the grass collector.
13. When switching on the motor, keep feet well away from the blades.
14. Do not tilt the product when switching on the motor, except if the product has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part furthest away from the operator.
15. Do not start the product when standing in front of the discharge opening.
16. Keep clear of the discharge opening at all times.
17. Do not put hands or feet near or under rotating parts.
18. Do not transport the product while the cutting blade is running.
19. Stop the product and remove the key/ battery pack from the machine and make sure that all moving parts have come to a complete stop:
  - Whenever you leave the product unattended.
  - Before clearing blockages or

unclogging the chute.

- Before checking, cleaning or working on the product.
- After striking a foreign object. Make sure to inspect the product for damage and make repairs before restarting and operating the product.

20. If the product starts to vibrate abnormally:

- Inspect for any damages.
- Replace or repair any damaged parts.
- Check for and tighten any loose parts.

## **Charger**

1. Recharge only with the charger specified by the manufacturer. Do not use the original charger on other li-ion batteries or on any other type of battery, as this can increase the risk of fire or explosion.
2. Check the battery charger, cable and plug before each use. Do not use the battery charger if damaged. Do not open the battery charger yourself; the charger must be repaired by qualified personnel using original spare parts.
3. The charger is designed to use a standard household 220-240 V~ 50Hz power source. Ensure that the plug matches the outlet.
4. Never modify the plug in any way, this will reduce the risk of electric shock.

5. Do not abuse the cord of the charger. Never use the cord for carrying, pulling or unplugging the charger. Keep the cord away from heat, oil, sharp edges and moving parts. Damaged or entangled cords increase the risk of electric shock.
6. Make sure the charger cord is situated so that it will not be stepped on, tripped over or get damaged.
7. Keep the battery charger clean. Contamination can increase the risk of electric shock.
8. Protect the battery charger from rain and moisture. If water accesses the battery charger there is an increased risk of electric shock.
9. Battery will heat up whilst charging. To reduce the risk of fire, do not operate the battery charger on flammable surfaces, such as paper or textiles.
10. The temperature range over which the battery pack can be charged is typically between 5°C-45°C. Attempts to charge outside of the prescribed temperature range may automatically be blocked by the protection circuitry of the battery pack. Longest life and best performance can be obtained if the battery pack is charged at room temperature.
11. Disconnect the charger from the power supply when not in use. This will reduce the risk of electric shock or damage to the charger.



## Battery pack

1. Fully charge the battery pack before first use.
2. Recharge the battery pack immediately when the power output starts to slow. **DO NOT CONTINUE TO USE THE PRODUCT WHEN BATTERY LEVEL IS LOW.**
3. To prevent serious damage to the battery, charge in temperatures above 5°C or below 45°C. Longest life and best performance can be achieved when the battery is charged at room temperature.
4. If the battery temperature is above 45°C, it must be allowed to cool for at least 30 minutes before putting it into the charging station.
5. To reduce the risk of explosion, ensure the battery pack is not left in the sun for extended periods of time and that it is kept away from fire.
6. Do not carry individual battery packs in your pockets or bag as they could short-circuit against other metal items.
7. Should a li-ion battery catch fire, be sure to use the correct fire extinguisher to combat the fire. **DO NOT THROW WATER ON A BURNING LI-ION BATTERY.**
8. If the battery pack becomes too hot during charging, disconnect and switch off immediately. Contact the service centre directly.
9. Do not attempt to open the battery yourself.

10. When the battery pack is not in use, keep it away from other metal objects, such as paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another.

## **Maintenance and Storage**

1. Keep all nuts, bolts and screws tight to be sure the product is in a safe working condition.
2. Check the grass collector frequently for wear or deterioration.
3. Be careful when adjusting the product to prevent trapping fingers between moving blades, or other fixed parts of the product.
4. Always allow the product to cool down before storing.
5. When servicing the blades, be aware that even though the power source is switched off, the blades can still move.
6. Replace worn or damaged parts for safety. Use only genuine replacement parts and accessories.
7. DO NOT attempt to open the charger and battery pack. There are no customer serviceable parts inside. Return to any authorised service centre.
8. Store the machine with the battery pack fully charged at room temperature (around 20°C).

9. Every deep discharge cycle decreases the capacity of the battery pack. To prolong battery life, it is recommended that you charge the battery every six months when the product is not in use.

## **Servicing**

1. Have your machine repaired by an authorised service agent. This product is manufactured in accordance with the relevant safety regulations. To avoid danger, equipment must only be repaired by qualified technicians.
2. Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.

## **Intended Use**

This lawn mower is designed for domestic lawn mowing only. Use in any other way is considered contrary to the intended use. Compliance with the operation, service and repair, as specified in this manual, also constitutes essential elements of the intended use. Failure to comply can void the warranty.

# Warning Symbols

The purpose of safety symbols is to attract your attention to any possible dangers. The safety symbols and their explanations deserve your careful attention and full understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitute for proper accident prevention measures.



**WARNING:** Be sure to read and understand all safety instructions within this operator's manual, including all safety alert symbols, such as '**DANGER**', '**WARNING**', and '**CAUTION**' before using this tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

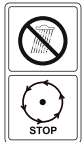
**SAFETY ALERT SYMBOLS:** Indicate **DANGER**, **WARNING**, or **CAUTION**. May be used in conjunction with other symbols or pictographs.

## Symbol meanings

This page depicts and describes safety symbols that may appear on this product. Read, fully understand and follow all instructions on the machine before attempting to assemble and operate.



To reduce the risk of injury, the user must read the instruction manual carefully.



Avoid using the machine in the rain.

Wait until all machine components have completely stopped before touching them.



Keep bystanders away. Objects thrown by the product could hit the user or other bystanders. Always ensure that other people and pets remain at a safe distance from the product when it is in operation.



Beware of sharp blades. Blades continue to rotate after the motor is switched off. Remove disabling device before performing any maintenance tasks.



Guaranteed sound power level value is 93 dB.



Wear ear protection, eye protection and protective gloves (PPE) when using the product.



WEEE symbol. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or local store for recycling guidelines.



The product complies with the applicable European directives and an evaluation method of conformity for these directives was done.



The product complies with the applicable UK directives and an evaluation method of conformity for these directives was done.

### Warning symbols on the battery pack



To reduce the risk of injury, the user must read the instruction manual carefully.



Do not throw into water.



Do not throw on fire.



Do not subject the battery to strong sunlight over long periods of time. Do not leave on a heater (max. 45°C).



Li-Ion

Batteries contain Li-ion. Do not dispose of waste batteries in domestic waste. Contact your local authority to find out how to dispose of batteries.

## Warning symbols on the charger



To reduce the risk of injury, the user must read the instruction manual carefully.



The charger is for indoor use only.



Class II equipment.

T3.15A



Protective 5A limited.



WEEE symbol. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or local store for recycling advice.

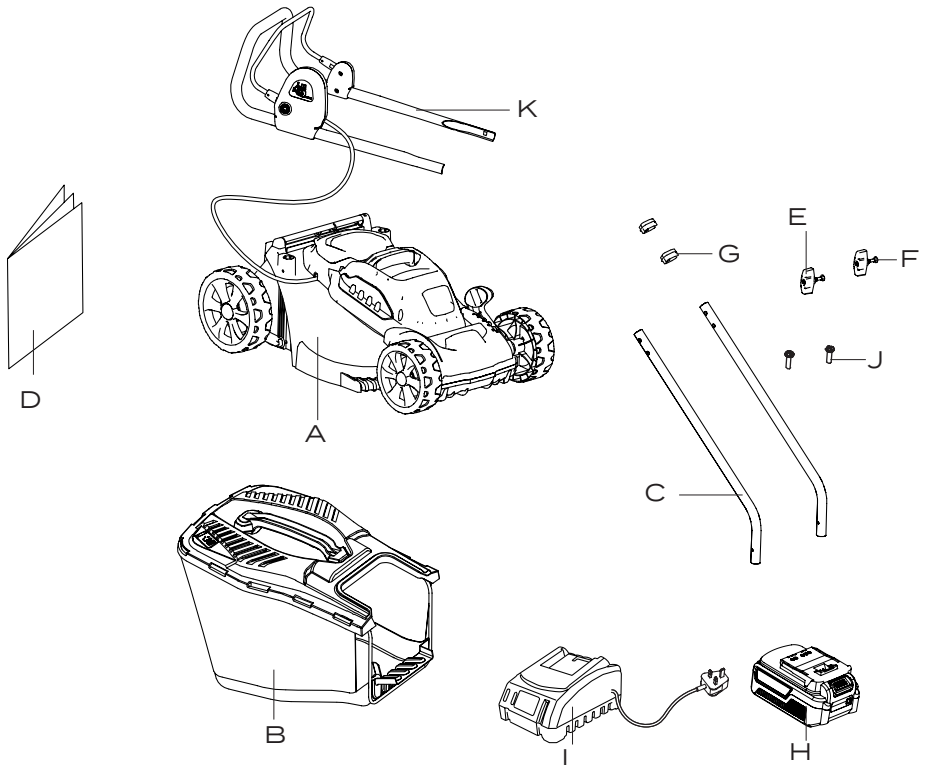


The product complies with the applicable European directives and an evaluation method of conformity for these directives was done.

# In the Box

## Parts

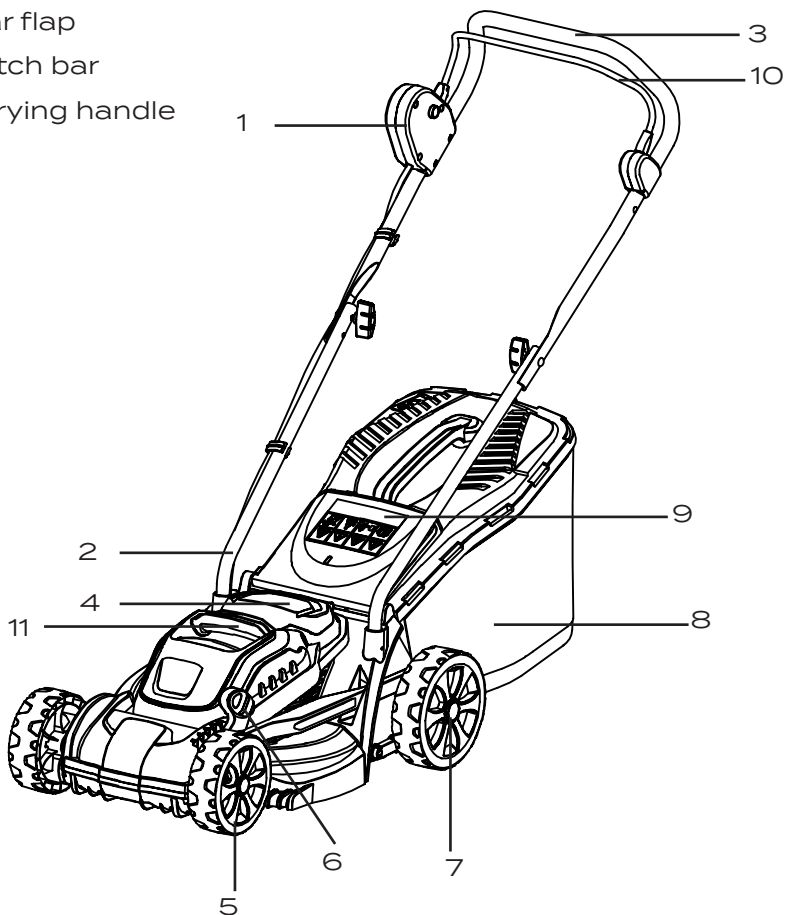
- A. Lawn mower with upper handle
- B. Grass collection bag
- C. Lower handle
- D. Manual
- E. Wing nuts x 2
- F. Fastening screws x 2
- G. Cable clips x 2
- H. Battery pack
- I. Charger
- J. Fix screw for lower handles x 2
- K. Upper handle



# Assembling the Lawn Mower

## Parts

1. Switch box
2. Lower handle
3. Top handle
4. Battery pack tank cover
5. Front wheel
6. Cutting height adjustment lever
7. Rear wheel
8. Grass bag
9. Rear flap
10. Switch bar
11. Carrying handle



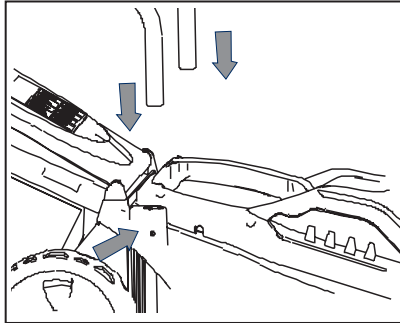




**WARNING:** Ensure the battery pack is disconnected from the mower before starting the assembly.

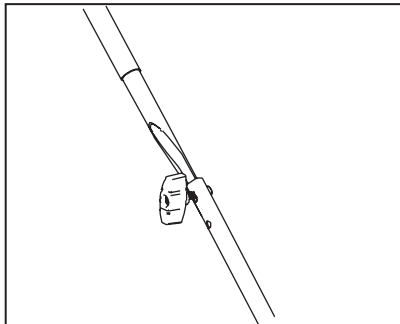
## Attach the lower handle

Locate the lower handle into the deck slot, and fix it with the screw.



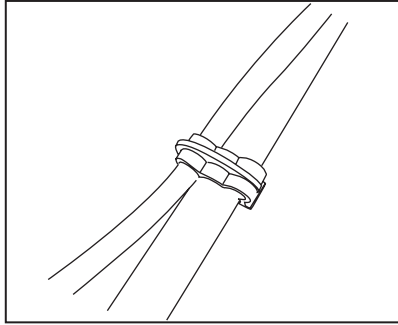
## Attach the upper handle

Fit the upper handle and lower handle together using the wing nuts, then fasten the screws.



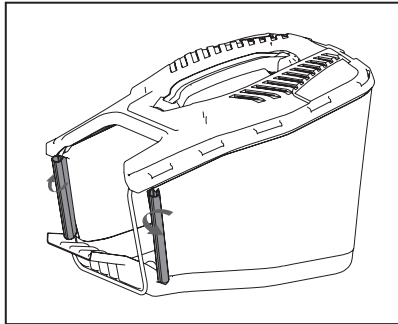
## Fixing the cable

Ensure that the cable clips supplied are used to fix the cable to the handle.

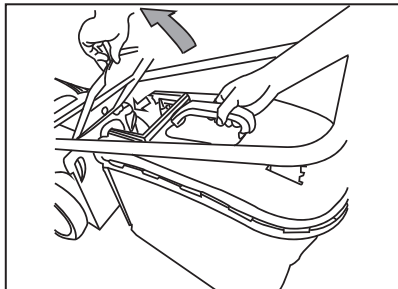


## Assemble the grass bag

Place the metal frame inside the grass collection bag. Make sure that these clips are fully secured to the metal frame.



Lift up the rear flap with one hand and hook in the grass bag. Release the rear flap to secure the grass bag in position.



# Operation



**WARNING:** Ensure the battery pack is disconnected from the lawn mower before starting the assembly.

## Charging the battery pack



**WARNING!** The charger and battery pack are specifically designed to work together, so do not attempt to use any other devices. Never insert or allow metallic objects into your charger or battery pack connections; an electrical failure and hazard will occur.

The battery needs to be charged before first use and whenever it fails to produce sufficient power on jobs that were easily done before.

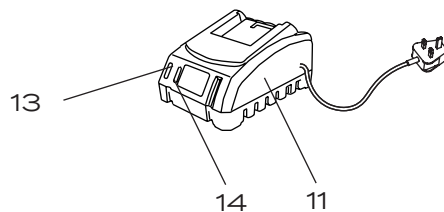
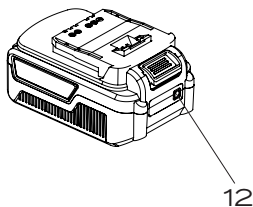


**WARNING!** NEVER LEAVE THE BATTERY AND CHARGER UNATTENDED WHEN CHARGING THE BATTERY.

This product comes with a lithium-ion battery pack. Lithium-ion batteries don't lose charge when not in use, and don't lose charging capacity overtime. Nevertheless, it is best practice to charge the battery when empty or insufficient to do the job.

## Charging procedure

1. Connect the charger (11) to a power supply. The left red light (13) will illuminate.
2. Slide the battery pack into the charger, make sure the battery pack (12) is fully seated in position. The left red light is on and the right green light (14) is flashing, to indicate the battery is charging.
3. When charging is complete, the left light is off and the right green light is on.
4. Once the battery is fully charged, disconnect the charger from the mains and remove the battery pack from the charger.



Press the battery display button to check the capacity of the battery pack. The battery pack capacity will be shown on the battery's digital display. If 100% is shown, the battery is fully charged and if 50% is shown, the battery is half charged.

Charge the battery pack before operating, when it is less than half-charged.

## Important charging notes

1. Never allow the battery to completely discharge before recharging. The battery pack should be placed on the charger whenever the battery pack is noticeably running down, or the tool no longer performs a task it previously performed.
2. Avoid conducting short charges. Make sure that the battery is fully charged each time by allowing the charger to complete its full charging cycle.
3. Avoid allowing loose items like screws or nails, etc., to be stored with battery packs, as these or similar items can short battery packs and cause a fire or explosion.
4. Always unplug the charger when not in use and store in a dry and secure place.
5. Avoid charging or storing your battery in temperatures below 5°C and above 45°C.
6. After use, allow the battery pack to cool down for approximately 30 minutes before attempting to recharge.



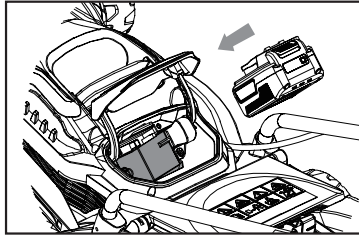
**WARNING!** Don't allow any liquid to get inside the charger; electric shock may result. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment, such as in a metal shed or an uninsulated trailer.



**WARNING!** Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return it to a service centre for recycling; do not put it into further use.

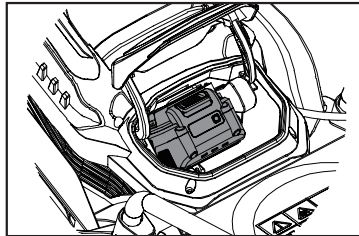
## Inserting the battery pack

Align the battery pack with its compartment on the machine. Push the battery pack into the tank until you hear a click. This means the battery pack has been locked in position, then close the battery pack tank cover.



## Removing the battery pack

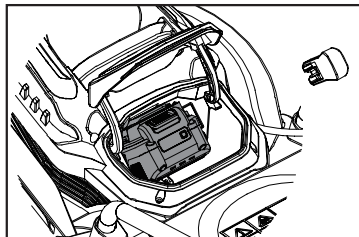
Open the battery pack tank cover. Press the battery pack release button on the battery pack, then pull the battery pack out.



## Operating the safety key

This lawn mower is fitted with a safety key; this prevents the accidental start-up of your cordless lawn mower.

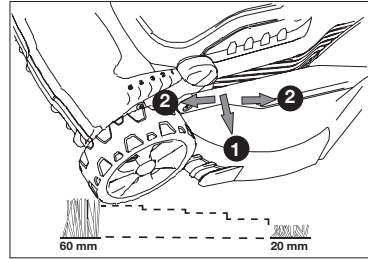
The safety key has been designed to totally disable the lawn mower when it is removed.



## Setting the cutting height

If you wish to change the cutting height, push the adjusting lever to the side to make it out of the positioning gap. Then push it forward or backward to the desired position. Then place it to the recelant positioning gap.

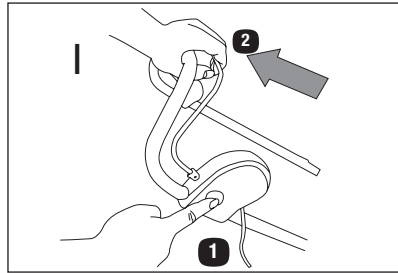
Cutting position	Cutting height
1	20mm
2	30mm
3	40mm
4	50mm
5	60mm



## Switching on and off

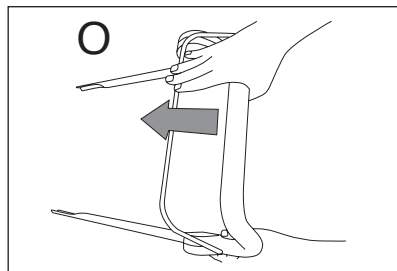
### Switch on:

1. Press and hold the safety button on the side of the switch box with one hand.
2. Pull the switch bar towards the handle and hold it with the other hand.
3. Release the safety button.



### Switch off:

Release the switch bar.



## Operating the lawn mower



**WARNING:** Ensure the battery pack is disconnected from the mower before making any adjustment, cleaning and maintenance.

### Operating on a slope:

Slopes increase the risk of slip-and-fall accidents, which can result in severe injury. Always be sure of your footing on slopes. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it.

#### Do:

- Mow across the face of slopes, never mow up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, rocks, hidden objects or bumps which could cause you to slip or trip. Tall grass can hide obstacles.

#### Do not:

- Mow near drop-offs, ditches or embankments; you could lose your footing or balance.
- For safety reasons, do not use the mower on gradients exceeding 15°.
- Do not mow on wet grass. Unstable footing could cause you to slip.



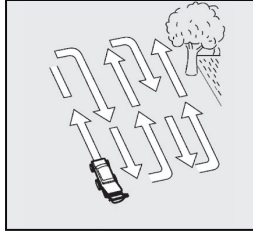
**WARNING:** To prevent overload conditions, do not try to cut too much grass at one time. Slow down your cutting pace or raise the cut height. Your mower has built-in overload circuit protection. When the mower is overloaded, the mower will stop. Switch the mower off and check to see if grass has collected beneath the deck and clear it, if necessary, then restart the mower.



**WARNING:** The battery pack will generate heat during operation. The heat dissipates slower in hot weather. If the battery temperature exceeds more than 70°C during operation, the protection circuit will immediately turn off the mower to protect the battery pack from damage. Release the switch bar, wait until the battery pack cools down, then restart the mower.

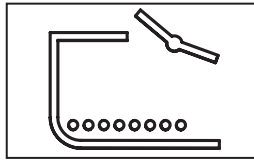
## Moving tips

When you begin to mow follow the arrow. Mow in slight overlapping rows. The most effective pattern for mowing lawns is straight lines along one of the sides. This will keep the rows even and ensures that all the lawn is cut without missing any spots.

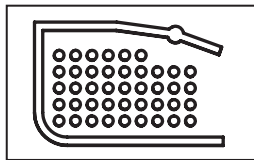


## Function of full indicator

If the collection bag is empty or it is not filled with grass, the grass full indicator will open.



If the collection bag is filled with grass the grass full indicator will close.



## Emptying the grass bag

As soon as the grass bag indicator closes while you are mowing, it is time to empty the grass bag.

**NOTE:** Before removing the grass bag, switch off the mower, disconnect the battery pack and wait until the blade has come to a complete stop.



To take off the grass bag, use one hand to lift up the safety flap and the other to grab on to the carry handle of the grass bag. The safety flap automatically falls down after removing the grass bag and closes off the rear chute opening. Empty out the grass bag then refit to the mower.

**NOTE:** If any grass residue is caught in the discharge chute, clean it using a brush. Do not remove grass debris in the mower casing or on the blade by hand or with your feet. Instead, use suitable tools, such as a brush or broom. To ensure that the cut grass can be collected into the grass bag, the discharge opening and inside the mower casing must be cleared of any blockages.

# Maintenance and Storage



**WARNING:** Before performing any maintenance or cleaning work, always ensure that the battery pack/safety key has been removed. Wait until the blade has stopped completely and the machine has cooled down.

## Cleaning

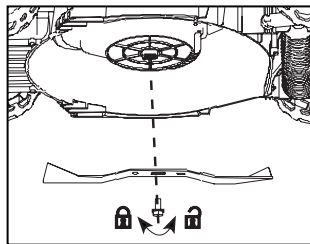
### Cleaning the product

- Use a soft brush to remove accumulated dust and debris. Wear safety glasses to protect your eyes whilst cleaning.
- Wipe down the product enclosure with a slightly damp cloth. Do not spray the unit with water. Water may destroy the switch unit and the electric motor.

## Replacing the cutting blade

Keep the cutting blade sharp to ensure a good cutting performance. Replace a worn or damaged cutting blade with a new one of the same type or have it sharpened by a qualified specialist.

1. Loosen the bolt anti-clockwise using a suitable wrench and remove it together with the blade.
2. Replace the blade with a new one of the same type.
3. Re-attach the blade onto the spindle, pay attention to correct alignment. Tighten the bolt clockwise with 18 Nm min. and 22 Nm max, to ensure safe operation of your product.



**NOTE:** Replace this cutting device after 50 hours mowing or 2 years whichever comes first, regardless of condition. If the cutting device is cracked or damaged, immediately replace it with a new one. Unbalanced blades will cause the lawn mower to vibrate violently, which can increase the risk of accidents occurring.

## Battery pack maintenance:

Use the following procedures to achieve the best battery life:

1. Protect the battery against moisture and water.
2. Store the battery only within temperature range of 5°C to 45°C. Do not leave the battery in direct sunlight for extended periods of time.
3. Clean the battery regularly with a soft, clean and dry brush.
4. If you do not use the product for a long time, remember to charge and discharge the battery pack once every 6 months.

## Storage and transport

### Storage

After cleaning the unit thoroughly, store the lawn mower in a dry room and allow the motor to cool down.

1. Loosen the quick-release lock system on the handles.
2. Fold the handles.

**NOTE:** Remove the safety key and battery packs. Ensure cables are not trapped when folding/unfolding the handle. If stored vertically, make sure the mower is positioned in a corner so that the blade is facing inwards against a wall, and the machine is secure to prevent it falling over.

### Transport

Use the original packaging to ship whenever possible.

### Consumable parts

Part No. of 644534 Powerbase CORDLESS MOWER 20V 32cm	Part Name
BYBEO11O45	Grass bag
BYBEO11O83	Blade

# Troubleshooting



**WARNING!** Before performing any repair work, always ensure that the battery pack has been removed.

**WARNING!** Always wear heavy duty gloves when adjusting or cleaning, especially when handling sharp objects.

<b>Fault</b>	<b>Possible cause</b>	<b>Solution</b>
Mower fails to start	Safety key is not inserted	Insert safety key
	Battery is not correctly inserted	Remove battery and re-insert
	Mower standing in high grass	Start motor on shorter grass or an already mowed area, change cutting height if necessary
	The mower housing is clogged	Clean housing so blade can move freely
	Battery has no power	Check and recharge battery
Mower stops working/loses power	Cutting height is incorrect	Adjust cutting height
	Cutting blade is worn or damaged	Replace with new blade from dealer service centre
	Battery performance decreasing	Check battery performance and charge if necessary
Grass bag is not filled sufficiently	Cutting height is too low	Adjust and increase cutting height
	The lawn/grass is wet	Allow lawn to dry
	Underside of mower deck is clogged	Clean underside of mower deck
	Cutting blade is worn or damaged	Replace by contacting customer service centre
Mower vibrating at higher speed	Cutting blade is unbalanced	Balance blade by grinding each cutting edge until equal
	Blade is loose/incorrectly fitted	Tighten blade bolt
Mower cuts unevenly	The blade is damaged	Sharpen blade or replace
	Blade is assembled incorrectly	Re-assemble blade correctly

# Technical Data

Property	Value
Model no.	LM C32S
Nominal voltage of product with battery	20V $\equiv$ / 5.0Ah
No-load cutting speed	3500min <sup>-1</sup>
Cutting width	32cm
Cutting height	20-60mm, 5 positions
Capacity of grass bag	30l
Weight	11kg
Measured sound pressure level( $L_{pA}$ )	80.7dB(A), K=3dB(A)
Measured sound power level( $L_{WA}$ )	89.4dB(A), K=3dB(A)
Guaranteed sound power level	93dB(A)
Vibrations	1.21m/s <sup>2</sup> K=1.5m/s <sup>2</sup>
<b>Battery pack model</b>	BOP-SPO6-2OZJ
Battery capacity	20v d.c. 5.0Ah
Charging time	2.0 hours
<b>Battery charger model</b>	BOQ-SPO6-2OZB
Input	220-240V~ 50/60Hz 65W
Output	20V d.c. 2.4A
Protection class	□ / II

The sound values have been determined according to noise test code given in EN 60335-2-77, using the basic standards EN ISO 11201 and EN ISO 3744.

The sound intensity level for the operator may exceed 80 dB(A) and ear protection measures are necessary.

The declared vibration value has been measured in accordance with a standard test method (according to EN 60335-2-77) and may be used for comparing one product with another. The declared vibration value may also be used in a preliminary assessment of exposure.



**WARNING:** Depending on the actual use of the product, the vibration values can differ from the declared total! Adopt proper measures to protect yourself against vibration exposure! Take into consideration the whole work process, including times the product is running under no load or is switched off.

## HAWS



**WARNING!** This equipment may cause Hand-Arm Vibration Syndrome (HAWS) if its use is not adequately monitored and managed.

Preventative measures include, among others, regular maintenance and care of the product and cutting attachments, keeping hands warm and periodical breaks, as well as proper planning of work processes.

## Disposal

The lawn mower and its accessories are made of various recyclable materials. Dispose of the lawn mower in accordance with your local recycling regulations.

# Getting Help

Our dedicated UK-based customer helpline is open 7 days a week to assist you with assembly, parts queries and technical support. We are open during office hours but you can always send an email via **support@coreservice.co.uk**. Our experts are here to get you back enjoying your garden in no time.

For useful assembly, starting and maintenance videos, and for ordering spares, please visit **www.coreservice.co.uk**.

Calling our helpline does not affect your statutory rights.

# Warranty

This product is covered by a 3 year warranty.

The warranty covers any manufacturing defect in materials, workmanship and finish.

Any claim under this warranty must be made by going to your nearest Homebase store, taking your proof of purchase with you, and claims must be made within 3 years of the date of purchase.

We will offer you a free repair of the item where this is possible, or a replacement or a refund. Your statutory rights remain unaffected, in particular, any rights you may have under the Consumer Rights Act 2015.

This warranty is given by HHGL Limited, MK9 1BA; HHGL (ROI) Limited, DO2 X576.

Please note: This warranty does not apply to products misused or neglected and only covers domestic use. It does not apply to commercial use of the product. The warranty period for battery pack and charger is 1 year.