



Pedelec Groove Next

EPAC Electrically power assisted cycle

Original User Guide | EN

Version 1

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GROOVE NEXT

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I. Introduction

This user guide contains information on how to use, maintain and look after your Pedelec Groove Next.

DANGER



Before using your Pedelec for the first time, carefully read this user guide. Please also read other manuals in the information pack ⇒ II. Information pack Page EN-5. Familiarise yourself with the appearance and meaning of the safety information symbols. Ensure to contact your cycle dealer ⇒ III. Cycle dealers Page EN-7 in case a clarification is required. Failure to comply with safety symbols and instructions can result in death, very serious injuries and/or damage to the bicycle. The manufacturer's liability and any warranty are deemed null and void for any damage or injury caused by a failure to adhere to safety symbols and instructions.

Ensure that your cycle dealer has provided you with all the documents included with the bike upon delivery. Keep this user manual and the other documents in the information pack for future reference. Please pass on the user manual and information pack to other people who will use, maintain or repair this Pedelec. Failure to do so can lead to uncertainty which may cause death, severe injuries and/or damage to equipment.




You can download this guide, the “Original User Guide | General” and parts of the information pack as PDFs from our website (www.derby-cycle.com/en/downloads/kalkhoff/). There you will also find links to the websites of the various component manufacturers.



I.I Explanation of the safety information symbols


DANGER



This symbol  combined with the signal word "DANGER" indicates a potentially dangerous situation. Failure to comply with this safety instruction can result in death or very serious injuries.


WARNING



This symbol  in conjunction with the signal word "WARNING" indicates a potentially dangerous situation. Failure to comply with this safety warning can result in serious injury.


CAUTION



This symbol  combined with the signal word "CAUTION" indicates a potentially dangerous situation. Failure to comply with this safety instruction can result in minor injuries.

PLEASE NOTE



This symbol  combined with the signal word "IMPORTANT" indicates a potentially dangerous situation. Failure to comply with this safety instruction can result in damage to the Pedelec and its components.



This symbol indicates helpful tips, useful or important information about the product or its additional uses. It does not indicate a dangerous or harmful situation.

I.II The Pedelec Groove Next

Your Pedelec Groove Next is an electrically power assisted cycle (EPAC). When the assistance mode is switched on, the electric drive provides assistance as long as you are pedalling. You can control the degree of assistance which is adjusted using various assistance modes ➡ [5.3.4 Display of the assistance mode Page EN-26](#). The drive assistance is dependent on the force and speed of your pedalling and the speed you are travelling. Drive assistance stops as soon as you stop pedalling and when the battery is discharged or if you reach a speed of 25 km/h. Thus pedalling harder is required if you want to travel faster than 25 km/h.

II. Information pack

In addition to this guide, you will receive a booklet and CD, a service book, two declarations of conformity and component guides with your Pedelec Groove Next. The following points describe the contents of the information pack in more detail.

II.I Booklet and CD

The booklet contains a “Quick-start guide” describing how to check the torque settings, attach the pedals and adjust the height of the saddle. At the back of the booklet is a CD. The CD includes the "Original User Manual | General" in several languages which provides general information on the different types of bikes and their components. If you go online you can follow a link to our website. The CD can be played on any standard PC or laptop. Proceed as follows:

Method A

1. Insert the CD.
2. Left-click on the shelexec.exe file twice.
3. Select the required language.
4. Select "Open User Guide from CD" or "Check Online for New Version of User Guide".

Method B

1. Insert the CD.
2. Right-click once on "Open Folder to Show Files".
3. Left-click on "Start" twice.
4. Select the required language.
5. Select "Open User Guide from CD" or "Check Online for New Version of User Guide".



You will need the Adobe Acrobat Reader software to read the manuals. It is included on the CD; you can also download it for free from <https://acrobat.adobe.com/uk/en/acrobat/pdf-reader.html>.

The paper version of 'Original User Guide | General' can be ordered free of charge from:

Derby Cycle Werke GmbH
Siemensstraße 1-3
49661 Cloppenburg, Germany
info@derby-cycle.com

II.II Component guides

In the component guides you will find important information on using and maintaining the components of your Pedelec. Often they also provide information on any warranties. If there is no specific user guide included for the particular component you are interested in, look in our "Original User Guide | General" (CD) ⇒ [II.I Booklet and CD Page EN-5](#) or on the component manufacturer's website.

You can also find a list of our component manufacturers at [www.http://www.derby-cycle.com/en/downloads/downloads.html](http://www.derby-cycle.com/en/downloads/downloads.html).



II.III Service book

In the accompanying service book, you will find the warranty terms, a list of wearing parts, a cycle passport, and forms to use for initial sale, maintenance and owner changes.



DANGER

Keep the service book appropriately up-to-date and adhere to the maintenance intervals. Components can fail if wear and damage are not identified in good time. If this happens whilst you are cycling, you could injure yourself very seriously or even die. Replace any worn, damaged or bent components before using the Pedelec again.

II.IV EU declarations of conformity

EU declarations of conformity confirm that we have complied with all the safety requirements of the regulations applicable to the Pedelec and the battery charger.

III. Cycle dealers

Ask our cycle dealers for advice. On Page 02 you will find a link to the brand website with all cycle dealers in your region.

IV. Legal regulations for Pedelecs

IV.I International

DANGER



Never ride "hands free". You could fall off and seriously injure or even kill yourself – and also be liable for prosecution. You must always have at least one hand on the handlebars.

Always observe the relevant national traffic regulations. Otherwise you run the risk of a serious accident. Before using your Pedelec abroad, find out about the regulations applicable in that country.

DANGER



Like all bicycles, the Pedelec must comply with the respective national road traffic regulations and applicable standards. If you carry out any technical modifications, bear in mind the relevant national traffic regulations and applicable standards. If the cut-off speed exceeds 25 km/h, the Pedelec will become liable to mandatory registration and insurance. Technical modifications can impair the function of your Pedelec resulting in damage to components. If this happens while you are riding the bike you could be severely injured or killed. Furthermore, it will invalidate the manufacturer's liability, warranty and guarantee (where applicable).



Observe the respective national regulations regarding the disposal of the drive system, control elements, Pedelec battery and charger. Otherwise you will be committing an offence and run the risk of a fine.

IV.II Germany

The following regulations (not exhaustive) were applicable in Germany when this guide was compiled (10/2017):

- » The drive may only be used as an aid to pedalling, i.e. it may only "help" when the rider is actively pedalling.
- » The average drive output must not exceed 250 W.
- » The drive output must continue to fall as the speed of the bike continues to increase.
- » The drive must cut out automatically at 25 km/h.

For you this means:

- » There is no obligation to wear a helmet.

DANGER

In the interests of your own safety, a suitable helmet should always be worn. A cycle helmet can protect you from severe injuries. Make sure that the helmet fits properly.

- » You do not require a driving licence.
- » There is no requirement for compulsory insurance.
- » The use of cycle paths is regulated as for normal bicycles.
- » The use of children trailers and cycle trailers is generally permitted for Pedelects.

DANGER

Before you use a trailer bike or trailer, make sure you read Section 5.4.2 Trailer bikes and trailers Page EN-27. Otherwise there is a risk of serious injury or death.

IV.II.I Lights

In Germany, the requirements for lights on bicycles is regulated in Section 67 of the Road Traffic Licensing Regulation (StVZO) and in the Technical Requirements for vehicle parts. Lights include both battery and dynamo-powered lights and include reflectors that work without a power supply and simply reflect external light.

Front light	1	Front	White light The illuminance must be at least 10 lux at the centre of the beam at a distance of 10 metres.
Reflector	At least 1	Front	White The reflector can be integrated into the front light.
Rear light	1	Rear	Red light The lowest point of the illuminating surface must not be lower than 250 mm above the road surface. A parking light function is also permitted.

Light type	Number	Position	Characteristics
Reflector	At least 1	Rear	Red The highest point of the illuminating surface must not be higher than 600 mm above the road surface.
Large reflector	1	Rear	Red The large reflector is marked with a Z. It can be integrated in the rear light.
Reflector	2	Per pedal	Yellow They reflect light in both directions (forwards and backwards).
Reflector (or reflective wheel stripe)	At least 2	Per wheel	Yellow Attached to the spokes at an angle of 180°. They reflect light to the sides.
Reflective stripe (or wheel reflector)	1	Per wheel	Ring-shaped reflecting white stripe.

IV.II.I.I Replacement bulbs

LED lamps are not replaceable.

IV.II.II Disposal

Do not dispose of the drive, control element, battery or charger in the household waste.

Hand them in at the designated places (such as a recycling centre, battery collection point or cycle dealer).



Electrical devices marked with this symbol must not be disposed in the household waste.

V. Intended use

V.I Pedelec

This bicycle is designed and equipped for use on public roads and paved paths. It can also be used on a non-challenging terrain.

The manufacturer and dealer accept no liability for damage resulting from any use beyond this definition and/or failure to comply with the safety information and instructions in the user guide.

This applies particularly to off-road use, overloading and failure to properly rectify faults.

Also included in the definition of intended use are the conformance to the operating, maintenance and repair conditions in the user guide and service book ⇒ [II.III Service book Page EN-6](#) - stipulated by the manufacturer. Fluctuations in consumption and battery power as well as a reduction of capacity ⇒ [7.3.1.2 Capacity Page EN-38](#) due to the bicycle's age are commonplace and technically unavoidable and as such do not constitute material defects.

VI. Pedelec weight*



Pedelecs are heavier than normal bicycles. The exact weight depends on the equipment fitted. If you want to know the precise weight of your Pedelec, we recommend having it weighed by a specialist dealer. Most dealers have a professional and accurate cycle weigher.

VI.I Overall weight



DANGER

Do not exceed the permitted overall weight of the Pedelec as this can result in fracturing or failing of important safety parts (such as the brakes). If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences.

Overall weight = Weight of the bike + weight of the rider + weight of the trailer bike or trailer + weight of luggage and/or child

Bike type	Overall weight permitted	Weight of rider**
Pedelec Groove Next	130 kilograms	Max. 110 kilograms

** for a Pedelec weighing 20 kilograms.

VII. Pedelec Groove Next*



- 1 Seatpost
- 2 Saddle
- 7 Display element
- 5 Handlebar stem
- 3 Right brake lever
- 4 Shifter
- 6 Handle bars
- 8 Fork
- 9 Disc brake, front wheel
- 10 Front wheel hub
- 11 Front wheel
- 12 Wheel rim
- 13 Clamping bolt for removing the battery
- 14 Pedal crank
- 15 Chain
- 16 Rear wheel incl. reflector strips
- 17 Derailleur
- 18 Drive
- 19 Seat stay
- 20 Seat tube
- 21 Crossbar
- 22 Down tube with integrated battery
- 23 Battery charger

*dependent on model

1. General safety information

Comply with the safety and user instructions at the start of the following sections.

DANGER



We discourage allowing children under the age of 14 years to ride Pedelects. They may not be able to cope with the speed. Serious accidents and falls might result.

Wear a cycle helmet. While there is no legal obligation to wear one, you should always wear a suitable cycle helmet for your own safety. A cycle helmet can protect you from severe injuries. Make sure that the helmet fits properly.

Keep your hands and other body parts and clothing away from moving parts, otherwise you can become ensnared, have a serious fall and injure yourself.

Adapt your riding style to the prevailing traffic conditions, otherwise you could fall off and involve yourself and others in a serious accident. Take into consideration that longer braking distances needed on wet or icy roads. Think ahead anticipating the actions of other road users and reduce your speed. Avoid sudden jerky movements of the handlebars and braking actions. Dismount if you ever feel unsafe.

Only use the bicycle for its intended purpose

⇒ [V. Intended use Page EN-10](#). Otherwise component failure may result. If this happens whilst you are cycling, you could injure yourself very seriously or even die.

DANGER



Check that the brakes work and that the handlebars can move freely before every ride. Do not use the bike if it is not in perfect technical condition. If you are unsure, ask your cycle dealer to check it over.

Inspect your Pedelec before every trip and after each time it has been transported anywhere or left unattended ⇒ [4. Before every trip Page EN-22](#). Components might fail if wear and damage are not detected early enough. If this happens whilst you are cycling, you could injure yourself very seriously or even die. The additional power means higher loads are applied to wearing parts on a Pedelec than on a normal cycle. Replace any worn, damaged or bent components before using the bike again.

Do not exceed the overall weight permitted for the Pedelec because parts important for safety might fracture or fail ⇒ [VI.I Overall weight Page EN-10](#). If this happens while you are riding the bike, severe falls might result – with fatal consequences.

Contact your cycle dealer when wearing parts and other components need to be replaced. We recommend asking your cycle dealer to assemble and adjust the bike.

Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something, you will find a complete list of the required torque settings in Section ⇒ [10. Torque settings Page EN-49](#) which must be strictly followed.

DANGER



Only use original replacement parts. Replacement parts from other manufacturers can impair the function of your Pedelec. Serious accidents can result.

Ask your cycle dealer to explain and show you how to use the special features of the components. Please also follow the component guides. We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something yourself, a full list of torque settings is in Section ⇒ [10. Torque settings Page EN-49](#) (strict adherence to which is a requirement).

WARNING



Do not ride in unfavourable lighting conditions (fog, rain, dusk, darkness) without adequate lights ⇒ [IV.II.I Lights Page EN-8](#). Failure to do so can result in accidents and serious injuries.

Always remove the battery before starting to work on the Pedelec. The Pedelec could switch on unexpectedly and you could be seriously injured.

CAUTION



Do not open up the drive, battery, control element or charger as you could injure yourself. Parts might also be damaged beyond repair invalidating the warranty. Contact your cycle dealer when problems arise.

PLEASE NOTE



Always park your Pedelec so that it cannot tip over. Components can be damaged if the bike tips over.

Do not clean the Pedelec with a water hose or high pressure washer. Although the components are sealed, damage to the cycle may still result. Clean the Pedelec with a soft, damp cloth.

2. Protection from theft, manipulation and loss

DANGER



Protect your Pedelec from unauthorised access. Serious injury may result if third parties modify components (e.g. the brakes) without your knowledge. Inspect your Pedelec before every trip, and after each time it has been transported anywhere or left unattended ⇒ [4. Before every trip Page EN-22](#). If your bike is damaged, only ride it again once the damage has been rectified. Your bike will not be replaced under warranty if lost or stolen.

The following measures can help you to protect your Pedelec from theft and manipulation and to recover it if it has been stolen:



Always lock the bike and battery even if you leave it for a short while. Ideally, the lock(s) should block the wheel powered by the drive. Do not leave the key in. To be on the safe side, you can also remove the battery. A Pedelec must also be secured with a lock when parked outside residential areas (e.g. in a shed or basement).

Do not park your Pedelec in deserted locations – especially for long periods. If possible, park your Pedelec in private or communal garages or individual bike lockers which have surveillance.



Attach your Pedelec to a fixed object (such as a tree, street lamp or fence), so that it cannot be carried away.

Use a high-quality bike lock. Invest about 10 % of the purchase price of the bike in locks. Your cycle dealer will be able to fit a suitable frame lock if your bike does not already have one. You can also use other types of bike lock. Ask your cycle dealer for advice.

Make a note of the important details of your Pedelec (e.g. in the service book ⇒ [II.III Service book Page EN-6](#), bike passport) and get it registered with the police. This makes it easier to describe and identify if stolen.

Have the police code for your Pedelec; the address and initials of the owner are engraved on the frame in an encrypted form. Coding makes the illegal resale of a bike more difficult and deters thieves. A coded bike also makes it easier to identify the owner.

Bicycle theft is often covered by household contents insurance. Check the terms of your insurance policy as soon as possible.

3. Before your first ride

Make sure that your Pedelec is adjusted to your height and ready to use. Familiarise yourself with the basic functions of your Pedelec.

DANGER



Ask your cycle dealer to explain and show you how to use the special features of the Pedelec and its components. Please also follow the component guides. We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something yourself, a full list of torque settings is in Section ⇒ [10. Torque settings Page EN-49](#) (strict adherence to which is a requirement). Always use a torque wrench.

Adjusting the Pedelec to your height. If the bike is not correctly adjusted to your height, you can lose control of the bike and fall badly.

Practise braking and riding with the assist function in a safe place before venturing into traffic. If you do not familiarise yourself with the operation and higher speed of your Pedelec, you could cause a serious accident. Ride in ECO mode until you feel confident enough to try the higher modes ⇒ [5.3.4 Display of the assistance mode Page EN-26](#). Dismount if you ever feel unsafe.

3.1 Attaching the pedals

1. Screw the right-hand pedal (marked 'R') into the right-hand pedal crank in a clockwise direction.
2. Screw the left-hand pedal (marked 'L') anticlockwise into the left-hand pedal crank.

DANGER



Screw the pedals in straight, otherwise you could damage the thread on the pedal crank – if this happens when you are cycling, a severe fall could result.

3. Tighten both pedals towards the front wheel to a torque of 40 Nm using a torque wrench.



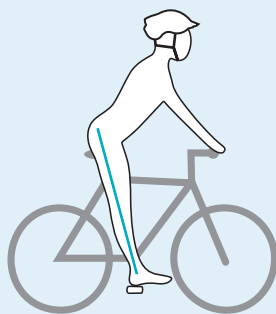
If no value is shown on the component, use the torque settings from Chapter ⇒ [10. Torque settings Page EN-49](#)

3.2 Adjusting the saddle height



Determining the correct saddle height

1. Sit on the Pedelec and at the same time lean against a wall.
2. Turn the foot pedal on the opposite side to the wall to its lowest point.
3. Place your heel on the pedal. Your leg should be fully extended.
4. If your leg is not fully extended when your heel is on the pedal, raise the saddle. Lower the saddle if you cannot reach the pedal.



For 3. Extend leg

WARNING



Seatpost marking

The seatpost is marked to indicate how far you may pull it out from the frame. Never pull the seatpost further out than the marking. This could cause it to bend or break, and cause you to fall.

1. Undo the seatpost bolt by turning it anticlockwise with a 4 mm Allen key.
2. Move the seatpost into the right position.



For 1. Loosen seat clamp(s)

PLEASE NOTE



When lifting the seatpost completely out of the seat tube, be careful not to damage the light cable. The light cable for the rear light passes through the seat post into the seat tube.

3. Tighten the seat post bolt again by turning it clockwise with a torque of 12 - 15 Nm using a torque wrench.
4. Test the tightness of the saddle by trying to move it.



For 3. Tighten seat clamp(s)

DANGER



Observe the prescribed tightening torque. Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged.

If no value is shown on the component, use the torque settings from Chapter → 10. Torque settings Page EN-49

3.3 Moving the saddle

DANGER



Screw the clamping screws fully in a straight position in the nuts. Failure to do so can result in the screws tearing out of the nuts.

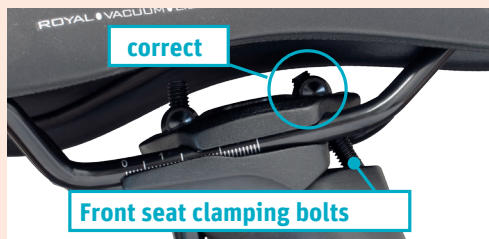


Fig. 1



Fig. 2

1. To move the saddle, loosen the front and rear saddle clamping bolts (M6) by turning them anticlockwise with a 5 mm Allen key. Turn the saddle clamping bolts completely two to three times at most, otherwise the whole mechanism could fall apart.

2. Move the saddle backwards or forwards as required.

DANGER



Never clamp the saddle in the curve of the saddle rail; always do it in the straight section. Only shift the saddle within the straight section (Fig. 1). Saddles that stay clamped outside this area can fail (Fig. 2).

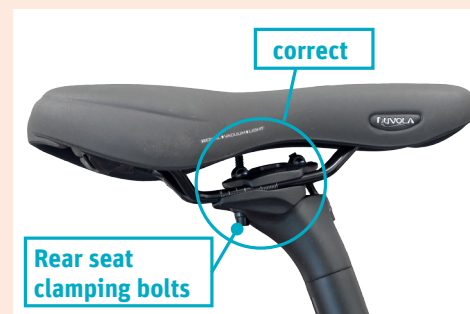


Fig. 1



Fig. 2

3. Tighten the two saddle clamping bolts by turning them clockwise with a torque of 12 Nm using a torque wrench.



For 3. Tightening the bolts

DANGER



Observe the prescribed tightening torque. Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged.

If no value is shown on the component, use the torque settings from Section → [10. Torque settings Page EN-49](#)

3.4 Tilting the saddle

1. To alter the tilt of the saddle, loosen the front saddle clamping bolt (M6) by turning it anticlockwise using a 5 mm Allen key. Turn the saddle clamping bolt completely two to three times at most, otherwise the whole mechanism could fall apart.
2. Tilt the bicycle saddle to the desired angle.
3. Tighten the front saddle clamping bolt again by the same number of turns.
4. Ensure that the newly-tightened saddle does not tip; test it by pressing down on the front and back alternately.

3.5 Braking

Make sure that you can always reach the brakes comfortably and that you are familiar with their operation and position. Note which brake lever operates the front and rear brakes.

DANGER

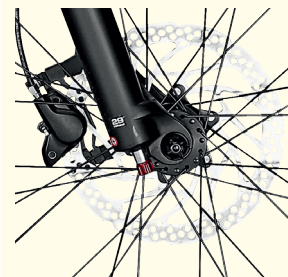


Practise braking in a safe place before venturing into road traffic.

In some instances, the braking effect can be different or stronger than what you are used to. If you do not take the time to familiarise yourself with the braking effect, you could cause a serious accident. Practise until you feel safe. Dismount if you ever feel unsafe.

Replace the brake pads when they reach the safe wear limit. Using worn brake pads can result in serious injuries with fatal consequences.

CAUTION



Disc brake

Disc brakes: Avoid touching the brake discs after intensive use of the brakes □ they can become very hot. You could burn yourself if you touch them.

3.6 Chain



Bicycle chain

WARNING



Always remove the battery before starting to work on the Pedelec. The cycle could switch on without warning and you could be seriously injured.

CAUTION



Check the chain for signs of wear before every trip. A worn or damaged chain can break. If this happens while you are riding the bike, you can easily injure yourself.

3.6.1 Checking for chain wear

1. Remove the Pedelec battery.
2. Check chain wear with a chain wear indicator or vernier calliper.
3. Replace the chain if it is worn.

3.6.2 Chain cleaning and maintenance



Lubricate the chain after riding in the rain. Clean and lubricate it when you clean the wheel. Use lubricating oil applied with a dry rag. Be careful not to get lubricant on the brake discs and pads. Please also observe the operating instructions provided by the brake manufacturer.

1. Remove the Pedelec battery.
2. Brush the chain coarsely with a hand brush.
3. Then remove the old chain oil with a dry cloth.
4. Now you can oil the chain. Follow the application instructions from the chain oil supplier.
5. When you have finished, turn the crank to distribute the chain oil.

3.7 Gears

PLEASE NOTE

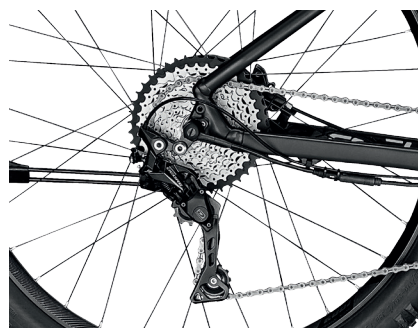


If the bike is overturned or the rear derailleur has received a shock, there is a risk that the rear derailleur or its attachment, the so-called derailleur hanger, is bent and protrudes into the spokes. After such incidents or if another rear wheel is installed, you should check the alignment of the shift eye and the swivel range and readjust the limit stop screws if necessary.

The gears are operated by the gear lever on the handlebars. The gear shift allows you to adjust the gears of your bicycle, and so the transmission, to current riding conditions. On a straight level stretch, a higher gear is sensible to achieve and maintain a higher speed without having to pedal too much. As soon as you start going uphill, a lower gear is beneficial because it is important to be able to climb the hill with a little effort. Select the gears so that your legs are always moving at a steady pace.

Derailleur

This system lifts the chain on to a sprocket when the gear is changed. The chain must continue moving so that the teeth of the sprocket can engage with the chain links easily and smoothly. For a successful gear change, therefore, you must keep pedalling forwards, **never backwards** – but at the same time pedal lightly without force.



Derailleur

3.8 Wheel

3.8.1 Replacing the rear wheel

Removing the rear wheel

1. Remove the Pedelec battery.
2. Switch the chain to the smallest sprocket.
3. Then disconnect the cable between the drive and battery.



Refer to the "General Original Operating Instructions"
⇒ *II. Information pack Page EN-5* on handling disc brakes.

4. Undo the axle nuts (M12) using an 18 mm spanner turning anticlockwise.
5. Take off the chain.
6. Then remove the rear wheel from the frame. Turn the gears slightly to the rear, so that it is easier to guide the sprocket.

Inserting the rear wheel

1. Attach the chain.
2. Insert the rear wheel centrally in the drop-outs as far as it will go.

PLEASE NOTE



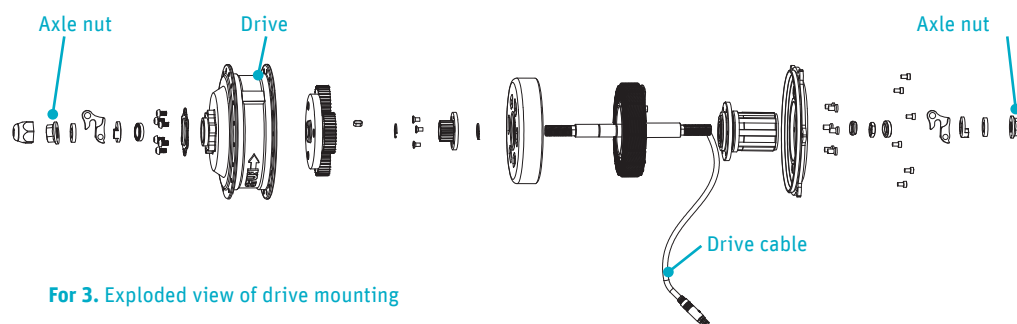
The opening for the cable guide must face downwards, and/or upwards for overhead mounting.



Make sure that the brake disc is placed exactly in the middle between the brake shoes.

Do not forget to install all the washers.

3. Tighten the axle nuts (M12) using an 18 mm spanner turning clockwise and tighten via torque of 30 to 40 Nm. Ensure that the rear wheel is correctly centred.



For 3. Exploded view of drive mounting

4. Reinsert the Pedelec battery.

DANGER



Observe the prescribed tightening torque. Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged.

If no value is shown on the component, use the torque settings from Section ⇒ 10. Torque settings Page EN-49

3.8.2 Replacing the front wheel

Removing the front wheel

1. Remove the Pedelec battery.

PLEASE NOTE



Detach all cables from the front wheel (e.g. light cables), otherwise you could tear them.

2. Insert a 6 mm Allen key into the threaded axle and turn anticlockwise until it releases.
3. Remove the threaded axle.
4. Remove the front wheel.

Inserting the front wheel

1. Push the front wheel into the front forks and align with the axle holes.
2. Lift the frame slightly and screw in the threaded axle.
3. Tighten the threaded axle with a 12 - 14 Nm torque clockwise using a 6 mm Allen key.

DANGER



Observe the prescribed tightening torque. Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged.

If no value is shown on the component, use the torque settings from Section [⇒ 10. Torque settings Page EN-49](#)

WARNING



Reattach any cables disconnected before (such as light cables), otherwise you could tear them.

3.8.3 Rims

Cleaning

1. Remove the Pedelec battery.
2. Brush the rims with a hand brush. Heavier soiling can be removed with a soft, damp cloth.

PLEASE NOTE



When you are cleaning the rims, make sure that no water gets into the drive. Water ingress can damage the drive.

3. Leave to dry.

3.8.4 Tyres

DANGER



Do not either overinflate or underinflate the tyres. If the air pressure is too high, this could lead to a worst-case scenario of the tyres bursting and you could fall. On the other hand, if the air pressure is constantly too low, the tyre can wear prematurely. The maximum permissible pressure is marked on the side of the tyre in bar and psi (pounds per square inch). You can measure the tyre pressure yourself by using a tyre gauge. Alternatively, you can contact your cycle dealer.

4. Before every trip

DANGER




Replace any damaged (e.g. cracks, grooves) or bent components before using the Pedelec again. Not doing so can lead to essential parts failing and cause a serious fall.

Do not ride the Pedelec if it is not in a technically satisfactory condition. If you are unsure, ask a cycle dealer to check it over.

We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die.

Inspect your Pedelec before every trip, and after each time it has been transported anywhere or left unattended. Use the following checklist to help you.

Checklist

Type	Characteristics
Frame / forks	Check the frame and forks for visible warping, cracks and damage.
Handlebars / front stem	Check they are seated securely. Check that the bell is working and attached correctly and securely.
Wheels	Check the condition (damage, foreign bodies), concentricity and pressures of the tyres. <div>  <p>The maximum permissible pressure is marked on the side of a tyre in bar and psi (pounds per square inch). Tyres should not be inflated above or below this pressure.</p> </div> Check the valves are seated securely. Visually inspect the rims for damage and wear. Check that the through-axle is attached correctly and securely.
Chain	Check the chain, pinions and sprockets for wear and damage.
Brakes	Check that the brake system (including brake levers) is working and attached correctly and securely. Visual inspection of the brake pads/disks.
Lights	Check that the light system is adjusted and in working condition. Check that reflectors are affixed in accordance with applicable national traffic regulations.
Threaded joints	Check that all threaded joints are tightened as specified.
Luggage	Check it is attached securely.
Battery	Check it is attached securely.

5. Drive and display element

5.1 Safety information

DANGER



Do not allow yourself to be distracted by the display on the display element and/or your Smartphone. If you do not fully concentrate on the traffic, you risk being involved in a serious accident or fall with fatal consequences.

WARNING



Do not attempt any modifications to the drive. For example, it is not permitted to raise the cut-off speed above 25 km/h. Pedelects with modified drive power may no longer comply with the legal requirements of the relevant country. You may be liable to prosecution if you ride on public roads with a “tuned” Pedelec. There is also a risk of a technical failure. Modified bikes of this type are excluded from the warranty and guarantee.

Always remove the battery before starting to work on the Pedelec. Accidental activation of the ⏻ button may lead to severe injuries.

CAUTION



Do not open up the drive. There is a risk of electric shock. It will also invalidate any warranty claim. Only have repairs to the drive carried out by trained cycle dealers.

Do not touch the drive after a long downhill ride - it can become very hot. You could burn yourself if you touch it.

PLEASE NOTE

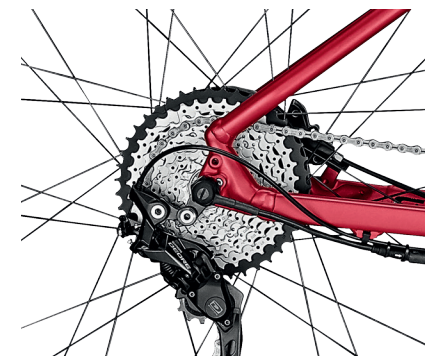


All components mounted on the drive and all other drive components may only be replaced with identical components or those approved specially for your Pedelec by the manufacturer. Otherwise it may result in overloading and damage.

Do not open up the display element. You may damage it beyond repair.

5.2 Technical details

Drive



Type	Rear wheel drive
	Free-wheel
Tyre size	28 inch
Nominal power	250 W
Nominal torque	20 Nm
Max. torque	32 Nm
Nominal voltage	36 V
Cut-off speed	25 km/h
Permissible ambient temperature in operation	-10 to +40 °C
Storage temperature	-10 to +50 °C
Recommended storage temperature	18 to 23 °C
Protection class	IP 54
Weight	3400 g

5.3 Overview and basic functions

Display element



No.	Symbol	Function
1		a) Switch on the Pedelec b) Switch off the Pedelec
2		LEDs light in blue: Battery charge level LEDs light in green: Assistance mode
3		a) Configure/confirm b) Change assistance mode c) Show assistance mode

5.3.1 Switching on the Pedelec



The Pedelec can only be switched on if a sufficiently charged battery has been inserted.

DANGER




Only ride the Pedelec when you can safely reach the brakes

⇒ [3.12 Braking Page EN-18](#). You must activate the brakes to stop the cycle quickly in a dangerous situation. The maximum brake force is greater than the propulsion force possible. This means stopping is guaranteed at all times by pressing the brakes. Note that the Pedelec Groove Next does not switch off automatically after braking. Switch the drive system to idle after braking.

1. Press the button on the display element briefly. The Pedelec Groove Next will start. The LEDs on the display element will light in blue and display the battery charge level ⇒ [5.3.3 Display of the battery charge level Page EN-26](#).
2. Press the button briefly to see which support mode was last used ⇒ [5.3.4 Display of the assistance mode Page EN-26](#). To change modes, press the button within three seconds. Otherwise, the LEDs lit in blue will return to the battery charge level.
3. You will receive support for the selected support mode once you step on the pedals.

5.3.2 Switching off the Pedelec

1. Press the  button on the display element for one second.
The Pedelec Groove Next will switch off.





If the Pedelec remains stationary for about 10 minutes, it switches off itself.

5.3.3 Display of the battery charge level

Display	Description	Battery charge level
● ● ● ●	Four LEDs light up	76 – 100 %
● ● ● ○	Three LEDs light up	51 – 75 %
● ● ○ ○	Two LEDs light up	26 – 50 %
● ○ ○ ○	One LED lights up	11 – 25 %
⚡ ○ ○ ○ ○	One LED flashes	0 – 10 %

5.3.4 Display of the assistance mode

1. To change the support mode, press the  button briefly.
2. Keep pressing the  button until the desired support mode is displayed.

Display	Assistance	Power consumption
● ● ● ●	POWER: Assistance function is working with a high power.	High
● ● ● ○	SPORT: Assistance is working with a medium power.	Centre
● ● ○ ○	ECO: Assistance is working with a low power.	Low
● ○ ○ ○	OFF: No assistance	Very low

3. Assistance for the selected mode starts working as soon as you start pedalling. Assistance cuts out as soon as you stop pedalling or when you have reached a speed of 25 km/h.



There is no drive support during charging.

5.4 Tips

5.4.1 Transporting your Pedelec

WARNING



Remove panniers and other attachments during transport. Also remove the battery from the down tube. They can come off and cause serious accidents. The battery could also fall from the down tube and be damaged. Use a special battery bag that protects the battery from heat, shocks and impacts.

By car: The bike rack must be designed for the higher weight of the Pedelec ⇒ [VI.I Overall weight Page EN-10](#), otherwise it can break and cause a serious accident. It is important to follow the guidance of the bike rack manufacturer.

PLEASE NOTE



Pedelec carried on a rear-mounted bike rack must have a suitable weather protection. Water ingress can damage the drive and its components.



Bus, train and plane: Find out from your travel company well in advance if their regulations allow you to take your Pedelec with you.

5.4.2 Trailer bikes and trailers

The use of trailer bikes and trailers is generally permitted for the Pedelec Groove Next, but please observe the following safety instructions:

DANGER



Do not exceed the overall weight of the Pedelec because parts important for safety might fracture or fail. If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences ⇒ [VI.I Overall weight Page EN-10](#).

Trailer bikes and trailers alter the riding characteristics. Adapt your riding style accordingly. If you do not adapt your riding style, you could seriously injure or kill yourself or the child in the trailer. The braking distance becomes longer, thus you should start braking earlier, and the steering response becomes more sluggish. Practise starting, braking, going around corners and up and down hills, start with an empty trailer bike or trailer.

Only use trailer bikes and trailers that conform to the relevant national regulations. In addition, they should be designed and tested in accordance with DIN EN 15918. Otherwise components could break while you are riding the bike; resulting in serious or even fatal injuries for you and/or your child. Please consult your cycle dealer if you want to purchase a trailer bike or trailer.



We recommend Weber (www.weber-products.de), Croozer (www.croozer.com) and Thule Chariot (www.thule.com) bike trailers and couplings. Ask your cycle dealer for advice.

5.4.3 Luggage rack

Position	Over the rear wheel
Maximum carrying capacity	25 kg*
Tested	in accordance with DIN EN 14872.

DANGER



***Check for different specifications on the luggage rack itself or in the luggage rack manufacturer's installation instructions.** Otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself. The maximum carrying capacity is specified on the luggage rack carrier or on the mounting of the rear light.

5.4.3.1 Safety information

DANGER



Attach any luggage securely and regularly check it. If it is not secure, straps, etc. can get caught up in the spokes and/or rotating wheels. Serious falls can result.

Do not exceed the overall weight of the Pedelec because parts important for safety might fracture or fail. If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences. ⇒ [VI.I Overall weight Page EN-10](#).

Modifying the luggage rack in any way is not permitted, otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself.

The maximum carrying capacity of the luggage rack must not be exceeded, otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself.

Luggage alters the handling characteristics of the bike. Adapt your riding style accordingly. If you do not adapt your riding style, you could seriously injure or kill yourself. The braking distance becomes longer, thus you have to start braking earlier, and the steering response becomes more sluggish.

WARNING

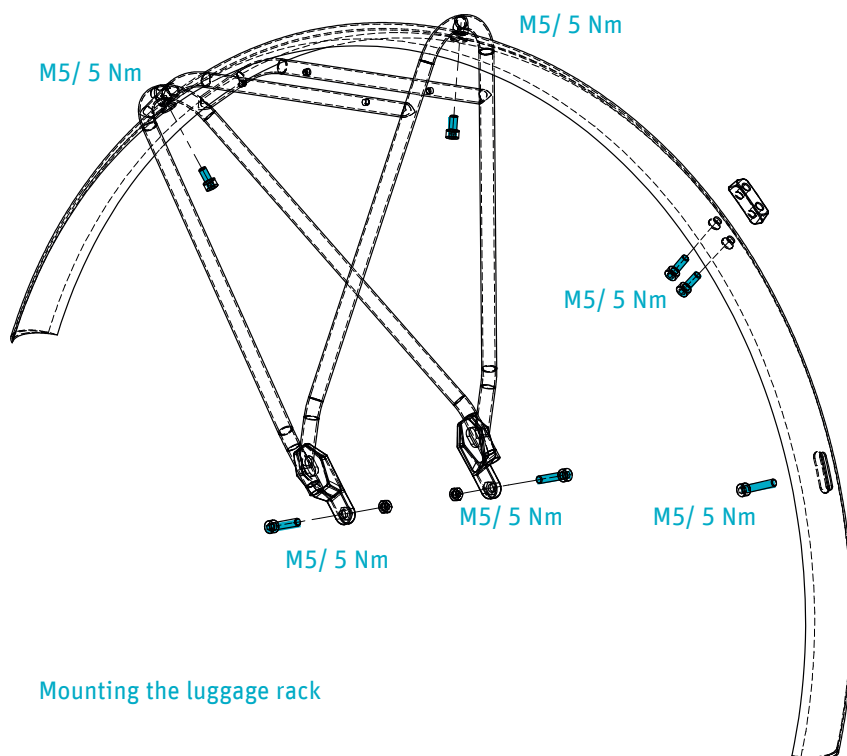


Make sure that the luggage does not obscure the view of the reflectors and rear lights, and that they are easily visible to other road users. Otherwise there is a risk of not being seen in unfavourable light conditions (fog, rain, dusk, darkness) which could result in you being seriously injured.



Carry your luggage in side-mounted panniers. Distribute the weight evenly to ensure safer riding characteristics.

5.4.3.2 Assembly




5.4.4 Storage

1. Remove the battery from the Pedelec.
2. Store the battery in a dry, not excessively warm room. The battery should not be exposed to direct sun. The recommended storage temperature range is from 18 to 23°C.

5.4.5 Cleaning

WARNING



Remove the battery before cleaning the Pedelec. Accidental activation of the  button can result in severe injuries.

PLEASE NOTE



Do not clean the Pedelec and its components with a water hose or high pressure washer. Damage may still result even though the components are sealed. Clean the bike with a soft, damp cloth.

Do not immerse the drive or components into water. Damage may still result even though the components are sealed.

Do not use any alcohol-, solvent-based or abrasive cleaners for cleaning. No coarse sponges or brushes may be used either. They leave scratches and cause the surface to become dull. Clean the bike with a soft, damp cloth.



Do not allow dirt to dry out. It is best to clean the cycle immediately after your ride.

Drive

CAUTION



Do not clean the drive when it is warm

(e.g. straight after a ride). You may burn yourself otherwise. Wait until the drive unit has cooled down.

1. Remove the battery from the Pedelec.
2. Clean the outside of the drive with a soft, damp cloth.

Display element

1. Clean the outside of the display element with a slightly moist, soft cloth.

6. Kalkhoff Display App



You can turn your Smartphone into a Pedelec display with the free Kalkhoff Display App. You can use this to display information on your cycling behaviour, set cycling profiles and maintenance intervals or navigate to your destination.

6.1 Technical requirements





In order to be able to use the Kalkhoff Display App on your Smartphone, the following conditions must be fulfilled:

Operating system	iOS	> 9.0
	Android	> 6.0
Wireless technology	> BTLE 4.0	

6.2 Connecting the Smartphone with the Pedelec

1. Switch the Pedelec on.
2. Enable Bluetooth on your Smartphone.
3. Open the Kalkhoff Display App. All the active Groove Next Pedelecs within a range of 10 m will be displayed on the Smartphone display under “Connect My Bike”.
4. Hold the  button on the Pedelec display element down for three seconds. The Pedelec ID number will light for three seconds.
5. Connect the Smartphone to your Pedelec by pressing “Connect”. The  button for the selected Pedelec will flash for three seconds. The first and fourth LEDs will also flash in blue three times before returning to display the battery charge level.



Even when no support (   ) is selected, the display element remains Bluetooth-enabled.

6.3 Disconnecting Smartphone from Pedelec

1. To disconnect the Smartphone and Pedelec press “Connect” on the “Connect My Bike” display. Alternatively you can press the “Connect” button on another Pedelec that you want to connect.

6.4 Menu



The display lighting activates automatically after a certain time. This is so that you can navigate home safely, even in the dark.

6.4.1 Overview



Ride data display



Navigation



Ride profiles



Settings



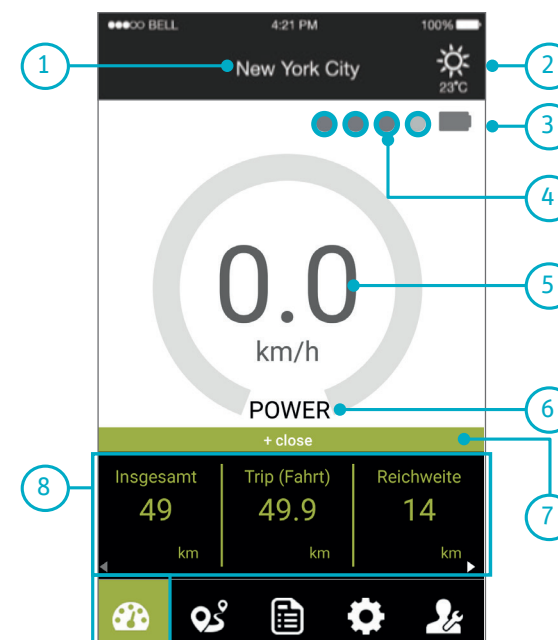
Service

Kalkhoff Display App menu items



If the Smartphone is not connected to the bike, only **Ride data display** ⇒ [7.4.1 Range Page EN-41](#) and **Navigation** ⇒ [6.4.3 Navigation Page EN-32](#) can be used.


6.4.2 Ride data display

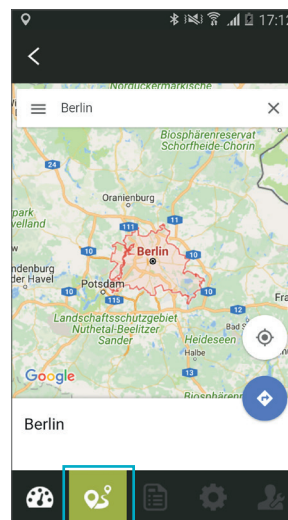



No.	Meaning
1	Location
2	Weather conditions
3	Battery charge level ⇒ 7.3.1.1 Battery charge level Page EN-38
4	System support
5	Speed
6	Assistance mode ⇒ 5.3.4 Display of the assistance mode Page EN-26
7	Maximise or minimise display field
8	Display panel

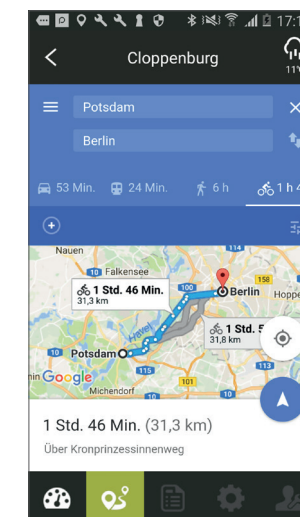
No.	Display panel	Meaning
8	TOTAL (in km)	Total number of kilometres ridden
	TRIP (in km)	Trip (e.g. day trip, short trip) in kilometres
	RANGE (in km)	Remaining kilometres for which the system will still provide support
	RPM	Revolutions per minute
	HEIGHT (in Meter)	Height above the sea level in metres
	Ø SPEED (in km/h)	Average speed in kilometres per hour
	MAX. SPEED (in km/h)	Maximum speed in kilometres per hour
	TRIP TIME (in 00:00:00)	Duration of trip (e.g. day trip, short trip) in hours, minutes and seconds.

6.4.3 Navigation

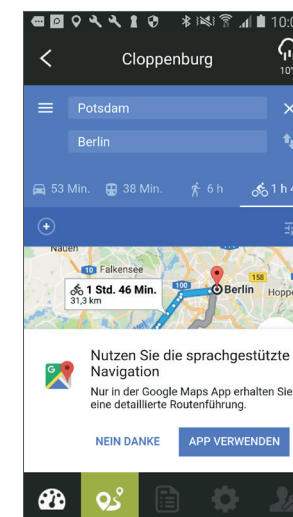
1. Open **Navigation** menu item.
2. Enter a location or tap on the map.
3. Tap on .



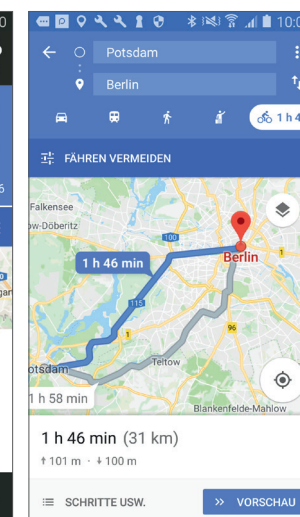
4. Click on “Your location” or enter the desired starting position.
5. Select your desired means of transportation.
6. Tap on . You will be asked whether you want to use voice-supported navigation.
7. Tap on “Use app”. The desired route will be displayed.



For 5. Select the desired means of transport



For 7. Use the app



For 7. The route is displayed

6.4.4 Ride profiles

System

The software and hardware status of the display elements, drive and battery can be found here.

Cycling

If you want to know how long and how many kilometres you have travelled in individual support modes, go to “Cycling”.

Offline Record

Allows you to see how long and how many kilometres you have travelled with the Kalkhoff Display App without connecting your Smartphone to the Pedelec.

Power

Here you will find information on the number of charging processes and full charging processes.

6.4.5 Settings

Performance

You can select from the following: **Dynamic**, **Regular** and **Relax**. Each profile has an effect on the power at start-up, power delivery, maximum power and power consumption.

Ride profile	Characteristics			
	Power on start-up	Power delivery	Maximum power	Power consumption
Dynamic	High	High	High	High
Regular	Medium	Medium	Medium	Medium
Relax	Low	Low	Low	Low



Select the ride profile in line with the routes you ride. For a leisurely tour with friends at the weekend, the “Relax” assistance level is the right choice. If you often speed from one appointment to the next, the “Dynamic” setting can inject the necessary pace.

Ride data display panel

This is where you select which ride data you want to display in the maximised display panel of the ride data display.

Language

The **Language** option allows you to select the language in which the display text appears

Name your bike

Give your Pedelec a name.

Service reminder

To help you remember to maintain your bike, you can set the total kilometres or a date after which you will be reminded.

6.4.6 Service

System diagnostics

Tap on **Go** to perform a system diagnostics.

List of dealers

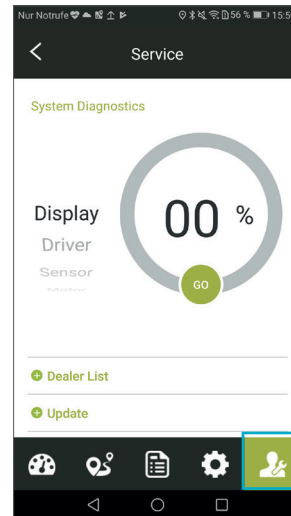
This displays all the dealers in your vicinity.

Update

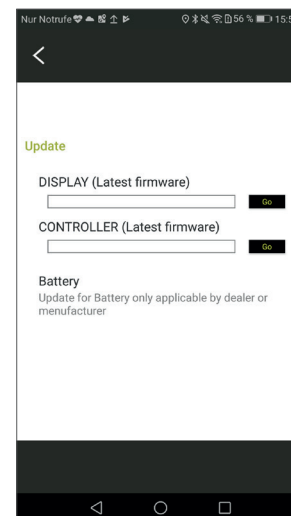
Update the display and drive controller by tapping on **Go**. During the update process, the LEDs on the display element will flash from right to left and back again until the update process is completed.



To update your battery please contact your dealer.



Perform system diagnostics



Perform an update

7. Battery

7.1 Safety information

DANGER




People (including children) who are unable to use batteries because of their physical, sensory or intellectual capabilities, or because of their lack of experience or knowledge, are prohibited from using them unless supervised or under the instruction of a responsible person. Otherwise there is a risk of mishandling with consequential very serious injuries.

WARNING



Only operate your Pedelec with a suitable original battery. The use of other batteries can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life.

Only use the correct original battery charger to charge your battery. The use of other battery chargers can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life.

Always remove the battery before starting to work on the Pedelec. Accidental activation of the  button can result in serious injuries.

WARNING



Keep batteries away from sparks and fires. Prevent batteries from heating up too much. They can explode and cause serious burns and fires. Further consequences can include malfunctions and a limited battery life. Keep batteries away from sources of heat (e.g. direct sunlight and radiators). When charging the battery, ensure that there is an adequate ventilation and observe the permitted ambient temperature range: 0 - 40°C. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are the most suitable. If it is possible to take the battery safely outside, smother the fire with sand.

Batteries must not be short-circuited. They can explode and cause serious burns and fires. Further consequences can include malfunctions and a limited battery life. Do not store batteries in a box or drawer where they can be short-circuited by contact with each other or with conductive materials (screws, paper clips, keys, coins, nails or other small metal objects).

Batteries must not be destroyed, shredded, taken apart, opened or repaired. They can explode and cause serious burns and fires. Contact your cycle dealer for help if you have problems with the battery.

WARNING



Damaged batteries must not be charged, used or transported.

- » They can explode and cause serious burns and fires.
- » Gases can be released and irritate the respiratory tract. Ensure that there is a supply of fresh air and consult a doctor in case of feeling discomfort.
- » Liquid can escape and cause skin irritation. Prevent contact with it. In case of accidental contact, wash off the liquid with water. If the liquid gets into eyes, rinse the eyes with a plenty of water and
- » seek for a medical help.

Do not send batteries by post. Batteries are dangerous goods that under certain conditions may explode, causing severe burns and fires. Only trained personnel may prepare and transport batteries. If you have a complaint about a battery, please always go through your cycle dealer. Dealers are able to have batteries collected free of charge under hazardous goods regulations.

CAUTION



Batteries must not be immersed in water. This presents a risk of explosion. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are the most suitable. If it is possible to take the battery safely outside, smother the fire with sand. But you need not to be afraid of the battery exploding under you when you ride the cycle under the rain. The battery is sealed to prevent moisture and spray water from entering.

PLEASE NOTE



Batteries must not be subjected to mechanical impact. This poses a risk of damage. A battery can still be damaged after dropping or knocking it even if there are no visible signs of damage. A battery which looks fine on the outside should, therefore, also be subjected to an inspection. Please contact your cycle dealer.

PLEASE NOTE



Perform a 'learning cycle': You should completely run down a new, **fully** charged battery once until the drive assistance stops and without recharging it in between. In that way the battery 'learns' its capacity, and the actual capacity will agree with the level indicated on the battery status display. As soon as the battery enters Sleep mode, press the battery button for one second. Then the learning cycle can be continued. Please perform a learning cycle every six months or 5,000 kilometres. When the battery becomes older and you do not repeat the cycling from time to time, the difference between the actual battery capacity and charge level display will become greater and greater.

Only use the battery to operate this Pedelec, otherwise there is a risk of damage to the device.



Batteries are subject to the dangerous goods regulations. Private users are permitted to transport them on the road without further conditions. When transported by commercial third parties (such as by air, freight forwarders and logistics firms), special requirements of packaging and labelling must be observed. Please contact your cycle dealer if you have any questions about transportation.

7.2 Technical details



* With a 2 A charger until battery is fully charged (95 % battery capacity).

** Measured in the lowest assistance mode under optimal conditions and with a fully charged battery of the highest capacity.

Type	7 Ah
Position	Down tube
Nominal capacity	6.3 Ah
Nominal voltage	36 V
Power	252 Wh
Weight	1900 g
Charge cycles	1,100 full cycles
Charge time*	Approx. 3.5 hours
Cell	Li-ion (20 cells)
Range**	Up to 60 km
Permissible ambient temperature for charging	0 to +40°C
Storage temperature	-10 to +50 °C
Permissible ambient temperature in operation	-10 to +40 °C
Recommended storage temperature	18 to 23 °C

7.3 Overview and basic functions



Winter cover: You can purchase a neoprene winter cover (KD170618502) from your cycle dealer to protect the clip lock of the battery from moisture and dust in any weather.

7.3.1 Display panel



Battery button

On the outside of the battery there are the button and the display panel with four LEDs. The LEDs light up in blue when you press the battery button. The number and type of lighting provide information on the battery.

7.3.1.1 Battery charge level

1. Briefly press the battery button. The battery charge level is displayed for 10 seconds.

Display	Description	Battery charge level
●●●●	Four LEDs light up	76 – 100 %
●●●○	Three LEDs light up	51 – 75 %
●●○○	Two LEDs light up	26 – 50 %
●○○○	One LED lights up	11 – 25 %
⚡○○○	One LED flashes	0 – 10 %

7.3.1.2 Capacity



Capacity indicates the quantity of electric charge that the battery can deliver or store. It is specified in ampere hours (Ah). Even when used properly, the capacity diminishes over time due to chemical reactions (ageing). Thus it reduces with every charging cycle. The battery also ages slightly when it is not used.

A charging cycle is the complete charging of a battery from 0 to 100% capacity. It follows that not every charging process equates to a charging cycle. For example, a charge from 50 to 100% capacity is only half a charging cycle.

1. Press and hold the battery button for 10 seconds. The maximum available capacity (state of health) of the battery will be displayed.

Display	Description	Capacity
●●○○	The third and fourth LEDs light for two seconds	Capacity exceeds 60 %
○○●●	The first and second LEDs light for two seconds	Capacity is less than 60 %




The battery may need to be replaced when the capacity is below 60 %. Discuss how to proceed with your cycle dealer.

7.3.1.3 Sleep mode




If you do not use your Pedelec for an extended period, the battery management system (BMS) will switch to sleep mode and thus prevent any deep discharge. Your battery reverts to Sleep mode after a maximum of 24 hours (depending on charge level).

To wake from Sleep mode

1. There are three ways to wake the battery:
 - a) Press the battery button briefly or
 - b) Press the  button briefly on the display element or
 - c) Connect the battery to the charging unit plugged into the mains supply.
2. Once the battery has been woken, all the LEDs will light up consecutively in blue and then switch off again consecutively.

Initiating Sleep mode

1. Press the battery or  button twice quickly in succession. The first and fourth LEDs flash twice.

Display	Description
	The first and fourth LEDs flash twice.



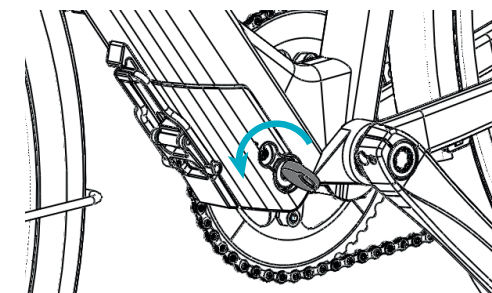
2. The battery is now in Sleep mode.

7.3.2 Removing the battery



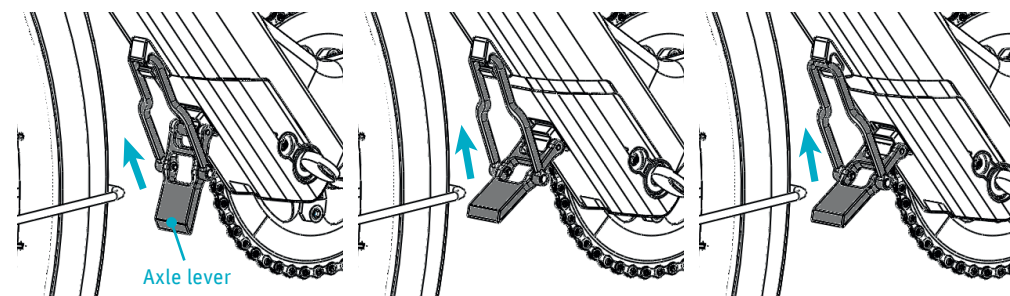
When removing the battery, make sure that the pedals and pedal cranks do not cover the battery lock.

1. Lift the protective cap, put the key into the lock and turn anticlockwise. The battery is unlocked.



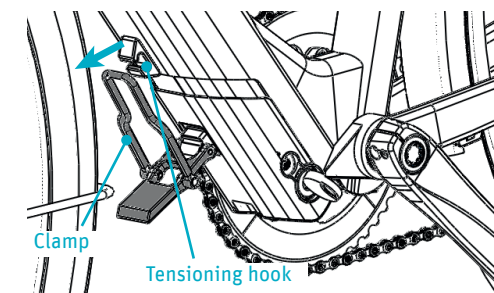
For 1. Unlocking the battery

2. Move the axle lever upwards until the battery is released.



For 2. Push the axle lever upwards

3. Push the clamp out of the tensioning hook.



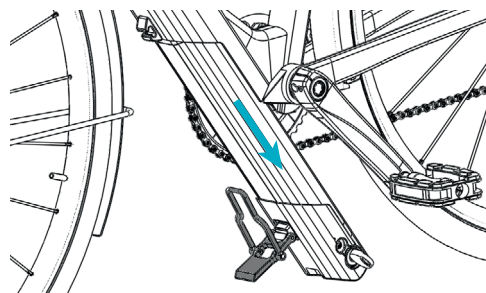
For 3. Loosen the tensioning clamp

PLEASE NOTE



Hold the battery tight so it does not fall. It can be damaged if it drops.

4. Remove the battery from the down tube.



For 4. Removing the battery

7.3.3 Inserting the battery



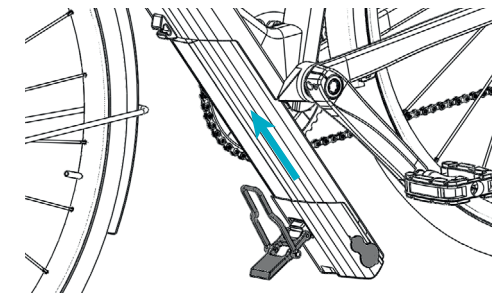
When inserting the battery, make sure that the pedals and pedal cranks do not cover the battery lock.

PLEASE NOTE



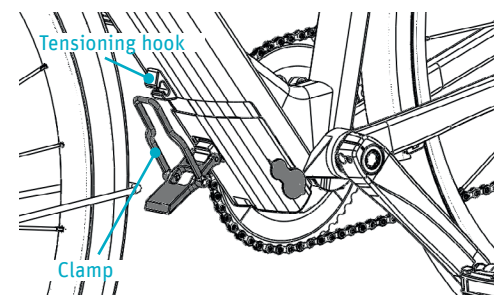
Hold the battery tight so it does not fall. It can be damaged if it drops.

1. Push the battery from below into the down tube.



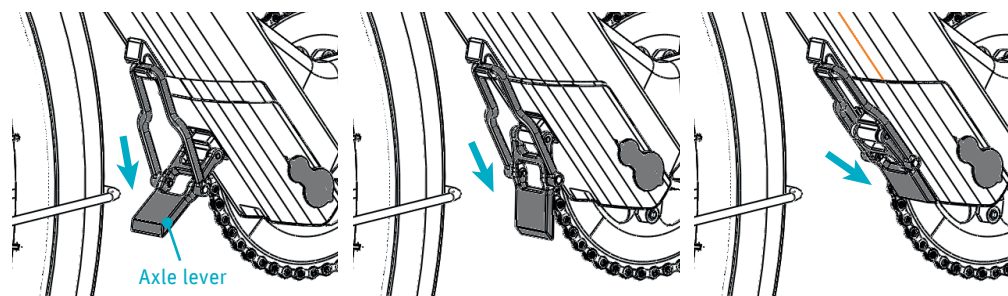
For 1. Slide the battery into the down tube

2. Position the clamp in the tensioning hook.



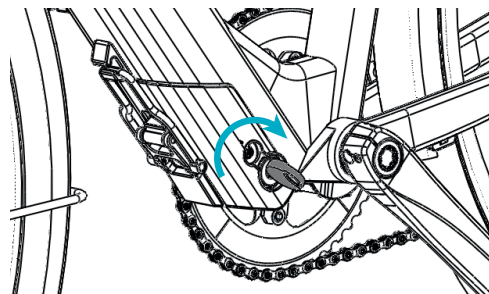
For 2. Position the clamp in the tensioning hook

3. Push the axle lever downwards and allow it to lock in place.



For 3. Push the axle lever downwards

4. Lift the protective cap, put the key into the lock and turn clockwise. The battery is now locked in place.



For 4. Locking the battery

PLEASE NOTE



Remove the key now and keep it in a safe place so it does not break off and is not lost.

7.4 Tips

7.4.1 Range

Various factors determine how far you can go with your battery:



When you go on a long trip it is worth taking a spare battery or battery charger with you.

Ride profile: You need the most power in the highest ride profile (POWER). The range becomes shorter.



Select the ride profile in line with the routes you ride. For a leisurely tour with friends at the weekend, the “ECO” assistance level is the right choice. If you often cycle at greater speed (such as to work), the “Power” setting can inject the necessary pace.

Assistance mode: You consume the most battery power in the highest assistance mode. The range decreases, the higher the selected assistance mode is.



Vary the assistance modes you use. If there is a tailwind when going downhill or on flat surfaces, you can still go fast with a lower assistance mode.

Tyre pressure: If the tyre pressure is too low it is harder for the tyres to rotate. The drive unit needs to provide more assistance and the range decreases.

Riding style: A low pedalling speed combined with high gears results in a high-power consumption.



Switch on a low gear in good time to maintain constant cadence, especially when starting.

Your fitness level: The fitter you are, the less assistance you will need.

Total weight: The lower the total weight supported by the bike, the easier it will be to ride ⇒ [VI.I Overall weight Page EN-10](#).

Outside temperatures: The lower the outside temperatures (e.g. cold in winter), the shorter the range.



Insert the battery just before starting off with your Pedelec. This way you prevent low temperatures shortening the range.

Battery capacity: A much shorter service life after the charging process indicates that the battery has lost considerable capacity.

⇒ [7.3.1.2 Capacity Page EN-38](#).



The battery may have to be replaced. Discuss how to proceed with your cycle dealer.

Route selected: You need to pedal harder when cycling uphill or against strong head wind. This is registered by the power sensor which in turn requires the drive to work harder.

7.4.2 Storage

1. Remove the battery from the Pedelec.
2. Store the battery in a dry, not excessively warm room. The battery should not be exposed to a direct sun. The recommended storage temperature range is from 18 to 23°C.

PLEASE NOTE



The battery should not be stored in a fully charged state. A charge level between 51 and 75 % (●●●) is ideal. Since the battery loses charge very slowly, you should recharge it when only one or two LEDs illuminate, but after six months at the latest.

7.4.3 Cleaning

DANGER



If you wipe the battery avoid touching the contacts, otherwise there is a risk of the electric shock.

WARNING



Remove the battery from the Pedelec before cleaning. Unintentionally pressing the ⏻ button represents a risk of injury.

CAUTION



Batteries must not be immersed in water. This presents a risk of explosion. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are the most suitable. If it is possible to take the battery safely outside, smooth the fire with sand. But you need to not be afraid of the battery exploding under you when you ride the cycle through rain. The battery is sealed to prevent moisture and spray water from entering.

PLEASE NOTE



Do not spray the battery with a water hose or wash it with a high-pressure cleaner. Damage to the battery may still result even though the components are sealed. Clean the battery with a soft, damp cloth.

Do not use any alcohol- or solvent-based, or abrasive cleaners while cleaning. No coarse sponges or brushes may be used either. They leave scratches and cause the surface to become dull. Clean the battery with a soft, damp cloth.



Do not allow dirt to dry out. It is best to clean the battery immediately after your ride.

1. Remove the battery from the Pedelec.
2. Clean the housing with a slightly damp, soft cloth.
3. If the battery terminals are dirty, clean them with a dry, soft cloth.



You can use terminal grease to protect the contacts from oxidation.

Apply a protective spray every once in a while to the battery lock. Follow the instructions of the protective spray manufacturer.

4. Clean the battery holder on the inner side of the down tube with a slightly damp, soft cloth. Use a bottlebrush if necessary.

8. Battery charger

8.1 Safety information



DANGER

Battery chargers are not a toy and must not be used by children under the age of 8 years. Older children must be sufficiently trained on how to use the battery charger. People who are unable to use battery chargers because of their physical, sensory or intellectual capabilities, or because of their lack of experience or knowledge, are prohibited from using them unless supervised or under the instruction of a responsible person. Otherwise there is a risk of mishandling with consequential very serious injuries.



WARNING

Only use the correct, original charger to charge the battery. The use of other battery chargers can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life.

Only charge the correct, original battery with the charger. The use of other batteries can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life.

Check the charger, cable and plug before every use. Do not use the charger if you detect signs of damage. Do not open the charger yourself and only have it repaired by qualified experts using original spare parts. This poses a risk of fire and explosion. Damaged chargers, cables and plugs also increase the risk of electric shock.

WARNING



The charger is only intended to be used indoors. Keep the charger away from rain and moisture. If water gets into the charger, there is a risk of electric shock. If water has penetrated the casing, unplug the device immediately and have it checked out by your dealer. Condensation might form on the charger when the temperature suddenly changes from cold to warm. When this happens wait about an hour. This is the time a charger needs to reach the temperature of the warm surroundings. Prevent this happening by storing the charger where it is used.

The charger and battery may not be covered during the charging process. Do not use the charger and battery on materials which can catch fire easily (such as paper and textiles) or within a combustible environment. This also applies when the battery is charged when fitted to the Pedelec. In this case, the Pedelec must be positioned so that a potential fire cannot spread quickly (exercise caution with carpeted floors). Do not expose the battery and Pedelec to a direct sun above 40°C. The charger heat generated during the charge process represents a risk of fire. When there is smoke or an unusual smell, immediately unplug the mains connector of the charger from the socket and disconnect the battery from the charger. An overheated battery is damaged and may not be used again. Always stay with the charger when it is in use.

Keep battery chargers away from sparks and fires. It can explode causing severe burns and fires. Further consequences can include malfunctions and a reduced service life. Ensure there is an adequate ventilation while charging.

PLEASE NOTE



The mains voltage must match the supply voltage of the battery charger, otherwise there is a risk of damage to the device. The supply voltage for the charger is specified on the label on the back of the device.

Do not charge batteries for a long period if they are already fully charged or are not being used. Electrical storms, voltage fluctuations and short circuits can damage the battery.

Keep the battery charger clean. If the contacts are dirty, the dirt can burn during charging, leaving burn marks. The charger may need to be replaced in such cases ⇒ [8.5.1 Cleaning Page EN-46](#).

8.2 Technical details

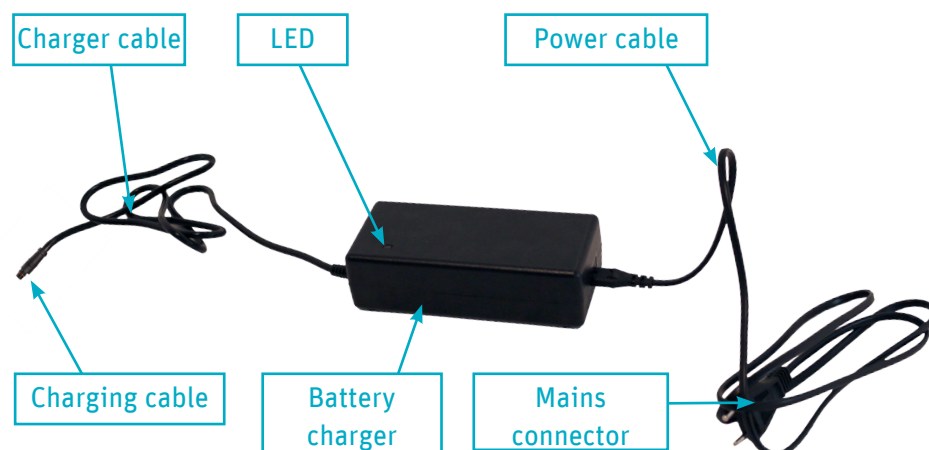
Battery voltage	36 V
AC input voltage	100 – 240 V
Frequency	50 – 60 Hz
Max. DC output voltage	42 V
Max. charge current	2 A
Dimensions (L W H)	160 mm 70 mm 46 mm (charger)
Permissible ambient temperature when charging	0 °C to +40 °C
Storage temperature	-10 to +50 °C
Recommended storage temperature	18 to 23 °C
Weight	706 g (charger)

Protection class



The charger and the charging station is only intended for interior use. Keep the charger away from rain and moisture. If water gets into the charger there is a risk of electric shock.

8.3 Overview



8.3.1 LED

Display	Description	Meaning
	LED flashes green	Standby
	LED lights up red	Battery is charging
	LED flashes red	Charging fault
	LED lights up green	Battery is fully charged

8.4 Functions

8.4.1 Charging a battery



DANGER






Read and follow the information on the charger specification plate, otherwise there is a risk of misuse resulting in serious injuries.

Damaged batteries must not be charged.



The battery can remain on the Pedelec during the charging process. It can also be removed and charged elsewhere.

1. Fold the protective cap to the side.
2. Connect the charger plug to the battery (it clicks into place).
3. Insert the mains plug into a power socket.
4. All four LEDs light continually on the battery when it is fully charged. No LED flashes.
5. Remove the power cable from the socket after completing the charging process.
6. Remove the charging cable from the battery charging socket.

Display	Description	Battery charge level
	The first LED flashes.	0 – 25 %
	One LED lights continuously. The second LED flashes.	26 – 50 %
	Two LEDs light up continuously. The third LED flashes.	51 – 75 %
	Three LEDs light up continuously. The fourth LED flashes.	76 – 99 %
	Four LEDs light up continuously.	100 %



If you charge the battery in the Pedelec, the charging progress will be displayed on the display element in the top tube.

8.5 Tips

8.5.1 Cleaning

DANGER



Always unplug the charger from the mains before cleaning and especially before wiping it, otherwise you could get an electric shock if you touch the contacts.

PLEASE NOTE



Do not immerse the charger in water. Damage may still result even though the components are sealed.

Do not use any alcohol- or solvent-based, or abrasive cleaners while cleaning. No coarse sponges or brushes may be used either. They leave scratches and cause the surface to become dull. Clean the charger with a soft, damp cloth.


1. Remove the charging cable from the battery charging socket.
2. Unplug the charger from the mains socket.
3. Clean the casing with a slightly damp, soft cloth.
4. If the contacts are dirty, clean them with a soft, dry cloth.

8.5.2 Storage

1. Store the battery charger in a dry, not excessively warm room. The charger should not be exposed to a direct sun. The recommended storage temperature range is from 18 to 23 °C.

9. Faults

9.1 Drive and display element





Description	Cause	Remedy
No drive support	a) Battery is in Sleep mode.	a) Wake battery from Sleep mode. If the battery does not respond, briefly connect it to the battery charger → 8.4.1 Charging a battery Page EN-45 .
		 If the battery still does not respond or the LEDs flash in an unusual way, the battery is damaged and must be removed from the charger.
	b) Battery is defective.	b) Insert a new battery.
	c) The Pedelec is OFF. The Groove Next switches itself off after 10 minutes if there is no call for power from the drive (e.g. because the Pedelec is stationary).	c) Switch on the Pedelec → 5.3.1 Switching on the Pedelec Page EN-25 .

9.2 App



If error codes appear in the Kalkhoff Smartphone App on your Smartphone display, please contact your cycle dealer.

9.3 Battery

Display	Description	Cause	Remedy
○○●○	Only the 3rd LED flashes.	The ambient temperature is too high or too low.	The permissible ambient temperature when charging is 0 to +40°C.
○○○●	Only the 4th LED flashes.		Please contact your cycle dealer.

Display	Description	Cause	Remedy
	The range appears too short.	a) The range depends on: <ul style="list-style-type: none"> » Assist mode » Tyre pressure » Riding style » Physical condition » Overall weight » Outside temperatures » Battery capacity » The route selected 	a) There are many reasons why the range may seem low ⇒ 7.4.1 Range Page EN-41 .
	Battery key lost.	Order another key. We recommend making a note of the key number on the sales receipt/document. This number can be used to order a replacement key. <ol style="list-style-type: none"> 1. Go to website www.trelock.de 2. Select your language. 3. Select “Your service”, then “Trelock key service”. 4. Follow the instructions. If you no longer have the key number, replacing the lock is the only option. Contact your cycle dealer for this.	
	The battery does not charge.	a) Ambient temperature too high or low.	a) You can charge the battery at ambient temperatures of between 0 °C and 40 °C.
		b) Damaged battery.	 b) Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced.
		c) Battery charger faulty.	c) Have your charger checked out by your cycle dealer; it may have to be replaced.
	Battery is damaged.	Accident or fall involving the Pedelec or the battery has been dropped.	 Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced.
	Battery does not "wake up" from Sleep mode	a) Battery is flat.	a) Briefly charge the battery.
			 a) If the battery still does not respond or the LEDs flash in an unusual way, the battery is damaged and must be removed from the charger.
		b) Damaged battery.	 b) Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced.

9.4 Battery charger

Display	Description	Cause	Remedy
	The red LED flashes continuously.	There is a charging fault.	 Unplug the charger from the mains immediately. If the problem reoccurs, a new battery charger is required.

10. Torque settings

DANGER



Only use appropriate tools to tighten screws and bolts. Observe the specified torque setting. The component manufacturer's torque settings take precedence (where available). Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged. Tighten all screws and bolts that are relevant for safety with a torque wrench. This indicates the corresponding torque in newton metres (Nm).

If no values are shown on the component or component manuals, use the torque settings from the following table.

Screw fixing	Thread	Tightening torque [Nm]
Front light	M5	3
Rear light	M4	Hand-tightened
Handle bars	M4 / M5	M4: 3 / M5: 5
Drive controller bolt	M5	7
Foot pedal	M8	35 – 40
Pedal	9/16	40
Seatpost bolt	M8	12 - 15
Seat clamping bolt	M6	12
Gear lever clamp	M5	5
Brake lever	M5	Ref. manufacturer's spec.
Shimano disc brake caliper	M6	6 – 8
Rear wheel axle nut	M12	30 - 40
Front wheel threaded axle	M12	12 - 14
Bolts on the display element	M3	0.9
Luggage rack	M5	5
Smartphone holder	M4	3

11. Spare parts

Your cycle dealer will be able to replace a wide range of parts in case of loss, wear, etc.

11.1 Battery parts

1.	Battery	KD170418006
2.	Battery lock with bolts	KD170418503
3.	Protective cover	KD170418504
4.	Rubber cover (self-adhesive)	KD170418505
5.	Battery cover	KD170418506
6.	Bolts for battery cover (4 x)	KD170418507
7.	Axle lever	KD170418508
8.	Clamp	KD170418509
9.	Bolts (3 x) for no. 7 and 8	KD170418510
10.	Lock washers (3 x) for no. 9	KD170418511
11.	Protective film	KD170418501
12.	Winter cover	KD170618502

Sets

BG 1	Spare parts set (2 + 3 + 4)	KD170418601
BG 2	Spare parts set (7 + 8 + 9 + 10)	KD170418602
BG 3	Spare parts set (3 + 4 + 6 + 11)	KD170418603

Notes