INSTRUCTION MANUAL

MALAGUTI BICYCLES
(EPAC RESP. PEDELECS)

Malaguti

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1 Welcome to the world of Malaguti

Dear Biker

We are delighted that you have chosen a Malaguti e-bike. You are following in the footsteps of one of Italy‘s most historic bicycle and motorbike brands. As early as the 1930s, Antonino Malaguti developed motorised bicycles in his bicycle shop in Bologna. Today, 90 years later, the motors are powered by electricity instead of petrol, but with the same unbroken enthusiasm with which the founder of the traditional brand was at work.

You have made a good choice when you buy your new bike: Equipped with high-quality components, it is state of the art and is also particularly safe to operate: our frames comply with the tests according to DIN EN 4210 and DIN EN 82079-1 and are closely scrutinised and tested by our development team as well as our test riders.

This manual is intended to inform you about all important features and components and to provide you with basic knowledge about the individual components as well as instructions for the most important maintenance and care work. You will also find hints and tips to make work easier and on the subject of safety.

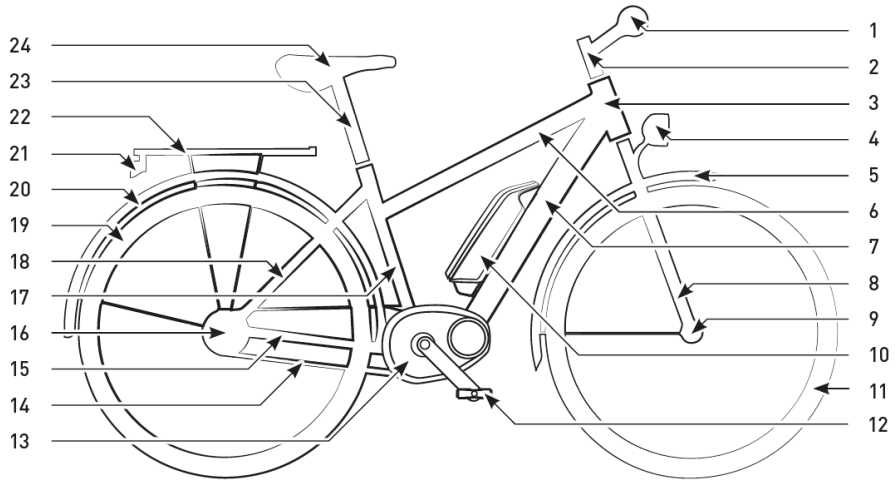
Please note, however, that maintenance work requiring specialist knowledge and tools should be carried out by your specialist dealer. In this way, signs of wear or minor technical discrepancies can also be localised at an early stage.

A small tip beforehand: Often, small adjustments to the bike to suit your individual needs can bring about big improvements. See the relevant passage in this manual. Add to this a small safety check before every ride and nothing stands in the way of your adventures with your new Mal- aguti e-bike!

Your Malaguti team wishes you a safe ride and lots of fun.

2 Pedelec parts

The illustration may differ depending on the pedelec model or the selected equipment. differ.



1 Handlebar
2 Handlebar stem
3 Head tube
4 Headlight
5 Front mudguard
6 Top tube
7 Down tube
8 Fork
9 Front hub
10 Battery
11 Front wheel
12 Pedal
13 Engine
14 Chain
15 Rear down tube
16 Rear hub
17 Seat tube
18 Rear stay
19 Rear wheel
20 Rear mudguard
21 Rear light
22 Luggage carrier
23 Seat post
24 Saddle

3 Basics

3.1 Read and keep the instructions for use

These original operating instructions - hereinafter referred to as the user manual - belong to this pedelec. The user manual provides important information on the settings and use of the pedelec. Read all warnings and notes in this user manual - especially the „Safety“ section - carefully before using the pedelec. Failure to observe the warnings and instructions in this user manual may result in serious injury and damage to the pedelec. Keep the user manual handy so that it is available at all times. If you pass your pedelec on to a third party, hand over the user manual with it.

3.2 Labelling of the warnings

The purpose of warnings is to draw your attention to possible dangers. The warnings require your full attention and understanding of what they say. Failure to follow a warning may result in injury to yourself or others. The warnings alone do not prevent hazards. Follow all warnings to avoid risk when using the pedelec.

The warnings in this instruction manual have the following meanings:

WARNING

The signal word indicates a hazard with a medium degree of risk, which may result in death or serious injury if not avoided.

CAUTION

The signal word denotes a hazard with a low degree of risk, which may result in a minor or moderate injury if not avoided.

NOTE

The signal word warns of possible damage to property.

3.3 Symbols and signs

	Be sure to read the instructions for use.
	Supplementary notes on the instructions for action or use.
1.	Instructions for action with a specific sequence begin with a number.
→	Instructions for action without a fixed sequence begin with an arrow.
•	Enumerations begin with a full stop.
	Electrical appliances with this marking must not be disposed of in household or residual waste. Consumers are legally obliged to dispose of electrical appliances with this marking at suitable collection points for environmentally sound recycling.
	Rechargeable batteries and batteries with this marking must not be disposed of with household or residual waste. Consumers are legally obliged to dispose of rechargeable batteries and batteries with this marking at suitable collection points for environmentally sound recycling.
	Labelling for recyclable materials intended for recycling. Dispose of the packaging according to type. Put cardboard and carton in the waste paper collection and foil in the recyclables collection.
	Products marked with this symbol comply with all applicable Community regulations of the European Economic Area.
	Labelling for products that may only be used indoors.
	The mains connection 230V~/50 Hz has protection class II.
	Symbol for direct current (DC).
	Symbol for alternating current (AC).

3.4 Units and their meaning

In these instructions for use or on components of your pedelec, you will find the following units:

Unit	Meaning	Unit for
°	Degree	Angle measure
°C	Degree Celsius	Temperature
°F	degrees Fahrenheit	Temperature (USA)
1/s	per second	Revolutions
“	Inch	Unit of length (USA) 1 inch = 2.54 cm
bar	Bar	Pressure
g	Gram	Mass (weight)
h	Hour	Time
Hz	Hertz	Frequency
kg	Kilogram	Mass (weight)
km/h	Kilometre per hour	Speed
kPa	Kilopascal	Pressure
mph	Miles per hour	Speed
Nm	Newton metre	Torque
psi	Pound per square inch	Pressure (USA)

3.5 Intended use

The manufacturer or bicycle dealer accepts no liability for damage caused by improper use. Only use the pedelec as described in these instructions for use. Any other use is considered improper and can lead to accidents, serious injuries and damage to the pedelec.

The warranty expires if the pedelec is not used as intended.

The pedelec is intended to be used by a person to whose height the seating position has been adjusted.

The pedelec is only intended for use on roads and paths with a smooth surface.
Any use on unpaved roads that are not asphalted, concreted or paved may cause the pedelec to fail.

The pedelec is not intended for use with above-average loads, e.g. use at racing and competition events is not considered to be in accordance with the intended use.

For the intended use of the pedelec in road traffic, you must know, understand and observe the country-specific and regional regulations.

The pedelec is only intended for use with a child seat, trailer or hitch system if this is noted in the bicycle passport.

3.6 Maximum permissible total weight

The pedelec has a maximum permissible total weight which you must observe when using the pedelec. You can find the information on the maximum permissible total weight:

- the CE sticker on your pedelec or
- the bike passport (see section „Bike passport“ on page 90).

→ Determine the unladen weight of your pedelec by weighing it with a hanging scale, if necessary with all optional equipment.

The maximum permissible total weight is calculated by adding the following weights:
Pedelec + rider + luggage/child seat etc. = maximum permissible total weight.

→ You reduce your risk of accident and injury and the risk of damaging the pedelec if you always observe the maximum permissible total weight of the pedelec. Non-observance can lead to the exclusion of warranty and guarantee.

3.7 Notes on torques

WARNING

Improper tightening of screw connections can lead to material fatigue and breakage of screw connections.
Risk of accident and injury!

- Do not use the pedelec if the bolted connections are loose.
- Tighten the screw connections with the correct torques.

For professional tightening of the screw connections, the torques must be observed. A torque spanner with an appropriate setting range is required for this.

→ If you are not experienced in using torque spanners or do not have a suitable torque spanner, have the bolted connections checked by your two-wheeler dealer.

The correct torque of a bolted joint depends on the material and diameter of the bolt as well as the material and construction of the component.

→ If you tighten screw connections yourself, check whether your pedelec is equipped with aluminium or carbon components (see section „Bicycle passport“ on page 90).

→ Note the special torques for components made of aluminium or carbon.

→ Individual components of the pedelec are marked with information on torques or markings for the insertion depth. Be sure to observe these specifications and markings.

Not all components are listed in this table. The torque specifications are basic values.

→ If necessary, ask for the corresponding torque for other components or read the enclosed user manual for the components.

Screw connection	Torque in Nm
Pedal crank (steel/aluminium)	30/40
Pedal	30
Axle nut front/rear (spanner size 15mm)	5/35
Saddle (adjustment screw) M6/M8	14/20
Seat post clamp M5/M6	5/10
Brake and shift lever on handlebar	3
Handlebar stem with internal clamping (clamping spindle stem)	8
Handlebar stem with outer clamping (stem clamping/handlebar clamping)	4/5

3.8 Direction of rotation of screws

→ Tighten nuts, bolts and thru axles clockwise.

→ Loosen nuts, bolts and quick-release axles by turning them anticlockwise.

If there is a deviation from this rule, a changed direction of rotation is indicated in the respective section. Observe the corresponding notes.

3.9 Seat position

CAUTION

An incorrectly adjusted sitting position can lead to muscle tension and joint pain.
Risk of injury!

- Have the seat position correctly adjusted by a bicycle dealer.

CAUTION

An incorrect seating position restricts the accessibility of controls on the handlebars.
Risk of accident and injury!

- Have the seat position correctly adjusted by a bicycle dealer.

In order to control the pedelec safely, the seating position must be adapted to your individual needs (see section „Seating position“ on page 14).

The optimal seating position depends on the frame size and geometry of the pedelec, the height of the rider and the settings of the handlebars and saddle. Expertise is required to adjust the optimal seating position. The optimal seating position may also depend on the use of the pedelec, e.g. if it is mainly used for sporting purposes.
The essential characteristics of an optimal sitting position are:

- When one pedal is up, the knee angle of the upper leg and the arm angle are 90°. The lower leg is slightly bent (see Fig. „Characteristics of an optimal sitting position“, left).
- When one pedal is in front, the knee is above the axis of the front pedal (see fig. „Characteristics of an optimal sitting position“, right).
- The arms are relaxed and slightly bent outwards (not shown in the illustration).
- The back is not perpendicular to the seat post.

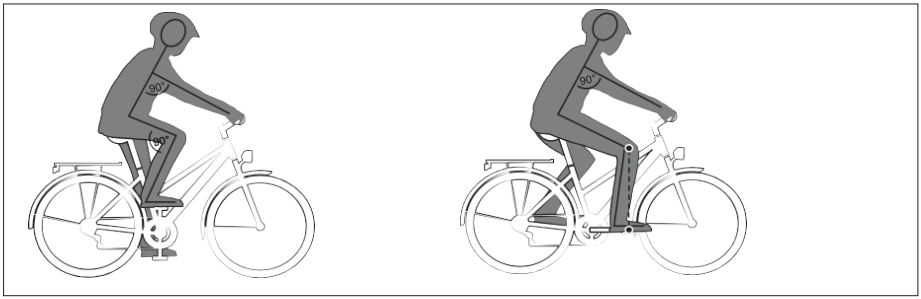


Fig.: Characteristics of an optimal sitting position

3.10 Transport

NOTE

Incorrect use of bicycle racks can cause damage to property.
Risk of damage!

- Only use approved bicycle carriers with which the pedelec can be transported upright.
- Ask your bicycle dealer about the use of bicycle racks.
- Secure the pedelec against slipping and falling off.

Depending on the model, a transport lock for the disc brake is included in the scope of delivery.

→ Have a bicycle dealer explain the use of the transport lock to you.

→ Use the transport lock to transport the pedelec.

→ Transport the pedelec standing upright.

3.11 After a fall

WARNING

Falls or accidents can cause damage such as hairline cracks on the pedelec. Components may be damaged without this being apparent.
Risk of accident and injury!

- After a fall or accident, have the pedelec checked for damage by the bicycle dealer.
- Do not straighten damaged components.
- Have damaged components replaced immediately by a bicycle dealer.
- Do not use the pedelec if damage to the pedelec is visible or suspected.

Components can be damaged by a fall or an accident. Damage to carbon components is not always visible. Fibres or paints can peel off or be destroyed and the strength of the components can decrease.

→ Have carbon components replaced by a bicycle dealer after a fall or accident.

→ Check all pedelec components after minor falls, e.g. if the pedelec has fallen over.

→ In case of doubt and for repairs, contact a bicycle dealer.

3.12 Wear

WARNING

Excessive wear, material fatigue or loose screw connections can lead to malfunctions that cause accidents or falls.
Risk of accident and injury!

- Regularly check the pedelec for wear.
- Do not use the pedelec if there are cracks, deformations or changes in colour.
- Do not use the pedelec if there is excessive wear or loose screw connections.
- Have the pedelec checked immediately by the bicycle dealer if there is excessive wear, loose screw connections, cracks, deformations or changes in colour.

The pedelec, like all mechanical components, is subject to wear and high stress. Different materials can react differently to wear or tear due to stress. Any kind of cracks, grooves or colour changes indicate the expiry of the component‘s period of use. Worn components must be replaced. Wear on components made of aluminium, carbon or composite materials can only be assessed by a two-wheeler dealer.
For frames, forks and wheels made of carbon and composite materials, hard impacts, shocks and distortions are harmful. The inner structure of the material is adversely changed without this being visible.

- → Seek advice on the wear components of your pedelec from a bicycle dealer.
- → Check the condition of all wear parts regularly.
- → Maintain the wear parts regularly.

4 Safety

This section contains information on how to use your pedelec safely.

4.1 Notes on safe use

You reduce your risk of accident and injury if you observe the following instructions for the safe use of your pedelec:

- Only use the pedelec if you are familiar with its operation and all functions.
- Only use the pedelec as described in the intended use.
- Do not allow the pedelec to be used by persons with reduced physical, sensory or mental abilities or lack of experience and knowledge.
- Do not allow children to play with the pedelec.
- Do not allow cleaning, care and maintenance to be carried out by children.
- If you do not have the necessary knowledge and tools for assembly, adjustments and repairs, have these activities carried out by your bicycle dealer.

4.2 General safety instructions

In the interest of your safety, please also observe the following safety instructions:

WARNING

Wet, slippery or dirty road surfaces can increase braking distance or reduce grip.
Risk of accident and injury!

- Adapt driving style and speed to the weather and road conditions.

CAUTION

With slippery shoes you can slip off the pedals.
Risk of injury!

- Wear shoes with a non-slip sole.

CAUTION

By using recumbent or aero handlebars, the range of the controls is limited and the stopping distance is longer.
Risk of injury!

- Drive carefully and adapt your driving style.

CAUTION

Moving parts of the pedelec can become catching points for clothing and body parts.

Risk of injury!

- Do not let loose laces hang down, e.g. no laces or ribbons on jackets.
- Wear tight-fitting legwear or use trouser clips.
- Check all moving parts of the pedelec before cleaning or servicing.

NOTE

Incorrect or improper use of the pedelec can cause components of the pedelec to wear out more quickly, become damaged or break.

Risk of damage!

- Do not ride the pedelec over stairs or other steps.
- Do not jump over ramps or mounds with the pedelec.
- Do not ride the pedelec downhill at high speed.
- Do not ride the pedelec through deep water.
- Observe the maximum permissible total weight of the pedelec.
- Observe the temperature limits of the pedelec.
- Observe the tyre inflation pressure.

4.3 Safety instructions for the charger

WARNING

Incorrect handling of electric current and live components can result in electric shock and serious injury.

Risk of electric shock and injury!

- Check the charger, mains cable and mains plug for damage before each use.
- Do not use the charger if damage is evident or suspected.
- Only use the charger indoors under supervision.
- Only connect the charger to a properly installed socket.
- Do not allow the charger to come into contact with water or other liquids.

NOTE

Incorrect use can damage the charger.
Risk of damage!

- Do not charge the battery if the battery may be damaged.
- Place the battery on fireproof materials when charging.
- Only charge the battery with the original charger.
- Keep the battery away from fire and other sources of heat.
- Do not allow the battery to come into contact with water or other liquids.

4.5 Road safety

You increase your safety when using the pedelec in road traffic if you observe the following general safety instructions:

→ Only use the pedelec in road traffic if the equipment complies with the country-specific road traffic regulations.

→ Observe and follow the country-specific and regional road traffic regulations.

→ When riding, wear a suitable bicycle helmet that has been tested according to the DIN EN 1078 standard and bears the CE test mark.

→ Wear light-coloured clothing with reflective elements when riding.

→ Do not ride the pedelec if you have consumed alcohol, intoxicants or impairing medication.

→ Do not use any mobile devices, e.g. smartphones or MP3 players, while riding.

→ Do not distract yourself with other activities while riding, e.g. by switching on the lights.

→ Never ride the pedelec hands-free.

ⓘ Note that road traffic also includes private areas, forest and field paths if they are publicly accessible.

You will increase your safety when participating in road traffic if you also observe the following instructions:

→ Find out about the applicable road traffic regulations of the country or region, e.g. from the Ministry of Transport.

→ Always keep yourself informed about changes to the applicable regulations.

→ Drive carefully and show consideration for other road users.

→ Drive in such a way that no one is harmed, endangered, obstructed or inconvenienced.

→ Use the prescribed lanes for bicycles.

4.5.1 Other regulations

For participation in road traffic, pedelecs must be equipped with two independent brakes and a bell.

4.5.2 Bringing children

Find out (see section „Bicycle passport“ on page 90) whether children are allowed on your pedelec. Observe the following instructions when taking children with you:

WARNING

The additional weight changes the driving characteristics of the pedelec.
Risk of accident and injury!

- Observe the maximum trailer load and the maximum permissible total weight.
- After fitting a child seat or a child trailer, familiarise yourself with the changed driving characteristics of the pedelec away from road traffic.

WARNING

Incorrect installation of a child seat or trailer hitch can cause components to break.
Risk of accident and injury!

- Have child seats, trailers and trailer couplings fitted by a two-wheeler dealer.

→ Your bicycle dealer will be happy to help you choose suitable child seats, child trailers and towing systems for your pedelec.

→ Read the user manual for the child seat, child trailer or hitch system.

→ Observe the maximum permissible weight for the child seat, child trailer or hitching system in the corresponding user manual.

→ Only take a child in a child seat or in a child trailer if the child is younger than 8 years and weighs less than 22 kg.

→ You must be at least 16 years old to take a child in the child seat or child trailer.

→ Only take a child in a child seat or in a child trailer if he or she is wearing an adapted bicycle helmet that has been tested in accordance with the DIN EN 1078 standard and bears the CE test mark.

→ For the use of child seats, child trailers and trailer systems, you must observe and comply with the country-specific and regional regulations.

→ Brake earlier and plan for a longer braking distance and slower steering.

→ Practice getting on and off the bike away from traffic.

→ Practise correct behaviour while driving with your child.

→ Drive with foresight and defensively.

4.5.2.1 Taking children in a child seat

→ Restriction Carbon frames of any type (trekking, MTB, gravel, road bike) as well as all full-suspension models.

→ Only allow child seats to be mounted on the frame. The attachment of add-on parts (child seat) to the luggage carrier by means of crimping can lead to breakage and is strictly prohibited.

→ When mounting a child seat, have the saddle springs and the suspension seat post completely wrapped.

→ When mounting a child seat, have all moving components wrapped.

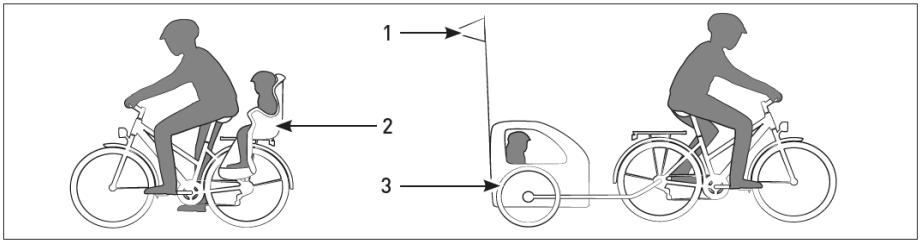


Fig.: Taking children with you

1 Pennant
2 Child seat
3 Child trailer

4.5.2.2 Taking children in the child trailer

WARNING

A pedelec with a child trailer is considerably longer and more difficult to stop due to the thrust of the child trailer.

Risk of accident and injury!

- Ride a pedelec with a child trailer at a moderate speed.
- Allow for a longer stopping distance.

Observe the following points when using child trailers:

→ Only have child trailers fitted if your pedelec is suitable for them (see section "Bicycle passport" on page 90 .

→ Only a child trailer tested according to DIN EN 15918 offers you the best possible safety.

→ Observe the maximum trailer load:
- The maximum towing capacity for unbraked trailers is 40 kg.
- The maximum towing capacity for braked trailers is 80 kg.

→ Practice off the road the changed handling of your pedelec due to the higher weight and additional length.

→ Carry a maximum of two children in the child trailer.

→ Only use child trailers with lighting that complies with country-specific and regional regulations.

→ Choose a child trailer with a restraint system for a secure seat for the child.

→ Have the child trailer fitted with a bendable flagpole at least 1.5 m high with a brightly coloured pennant and covers for the spokes and wheel arches.

→ To ensure the highest possible safety, choose a child trailer with a stable passenger compartment and with seat belts.

4.6 Component exchange

WARNING

According to the CE marking, no components other than those installed in the original condition of the vehicle may be used. Replacing components or incorrectly selected spare parts can cause malfunctions of the pedelec.
Risk of accident and injury!
- Only have components replaced by the bicycle dealer.
- Only use original spare parts.

4.7 Misapplications

To use your pedelec safely, exclude the following misuse:
- using the pedelec for competitions, jumps, stunts or tricks
- improper repairs and maintenance
- Use only original batteries.
- structural changes to the delivery condition of the pedelec, in particular tuning, and any other manipulation of the pedelec;
- opening and modifying any of the pedelec‘s components;
- charging outside the temperature range of +5 to +45 °C;
- Deep discharge of the battery due to charging breaks of more than 3 months or improper storage of the battery outside the optimal storage temperature of +10 to +25 °C..

Misuse of the pedelec can lead to the exclusion of the warranty.

4.8 Residual risks

Even if you observe all safety and warning instructions, you are still exposed to the following unforeseeable residual dangers when using the pedelec, for example:

- Incorrect behaviour of other road users
- Unpredictable road surface characteristics, e.g. slippery conditions due to black ice.
- Unpredictable material defects or material fatigue can lead to breakage or functional failure of components

→ Ride with foresight and defensively.

→ Before each ride, check the pedelec for cracks, grooves, changes in colour or damage to the components.

→ Before each ride, check the function of the safety-relevant components such as the brakes.

→ After a fall or accident, have the pedelec checked for damage by your bicycle dealer.

5 Notes on the pedelec

This section contains information on the basic features and components of pedelecs.

→ Observe the enclosed manufacturer‘s operating instructions for the components of your pedelec.

Depending on the model, your pedelec may be equipped differently.

5.1 Differences between pedelec and bicycle

In contrast to a pedal-powered bicycle, a pedelec includes the following additional components:
- Electric drive (motor),
- battery,
- control unit,
- display,
- charger.

The additional components of the pedelec lead to significant differences between a pedelec and a pedal-powered bicycle.
- The pedelec has a significantly higher weight and a different weight distribution than a bicycle. This changes the riding behaviour.

  → Familiarise yourself with the pedelec‘s handling characteristics away from traffic.

- The electric drive has a significant influence on the braking behaviour.

  → Familiarise yourself with the pedelec‘s handling characteristics away from traffic.

- Pedelecs require higher braking forces. As a result, wear and tear can be higher than with bicycles.
- Your average speed will increase due to the electric drive.

  → Ride with appropriate caution. Be aware that other road users must adjust to the higher speed of the pedelec.

→ Handling the battery and charger in particular requires appropriate expertise.

→ Do not make any changes to the additional components of your pedelec.

5.2 Electric drive

The electric drive is intended solely for powering your pedelec and must not be used for any other purpose.

Depending on the model, the electric drive supports the use of your pedelec in two ways.

5.2.1 Driving assistance

The electric drive only supports you when you pedal. The strength of the assistance is automatically adjusted depending on:

- the selected assistance level,
- the pedal force,
- the load and
- the speed.

The electric drive supports you when pedalling up to a speed of 25 km/h. The electric drive automatically switches off when you reach a speed higher than 25 km/h. If you reach a speed higher than 25 km/h, the electric drive switches off automatically. If the speed drops below 25 km/h, the electric drive switches on again automatically.

5.2.2 Pushing support

Depending on the model, your pedelec may be equipped with a pushing aid.

The pushing aid supports you when pushing the pedelec. The speed of this function can be up to 6 km/h and depends on the gear selected. The lower the selected gear, the lower the speed.

CAUTION

Turning the pedal cranks and pedals independently when switching on the push aid can cause injuries.
Risk of injury!

- Keep your distance from the pedal cranks and pedals when switching on the push aid.

5.3 Range

The electric drive is a support motor. The range is decisively influenced by your pedalling power.

→ Set the lowest possible support level.

The lower the cadence of the pedal drive, the higher the energy requirement for the drive.

→ Operate the gear shift as if you were riding unassisted.

→ Use the smaller gears of your gear shift when going uphill, into a headwind or with a heavy load.

The drive requires a lot of energy when starting up

→ Always start in a low gear and with as much pedal power as possible.

→ Shift to a lower gear in good time before going uphill.

→ Ride with foresight so that unnecessary stops can be avoided.

Energy consumption increases with high loads.

→ Do not transport unnecessary loads.

Lack of care and maintenance can lead to reduced range.

→ Handle the pedelec with care and observe all notes on the battery in the manufacturer's operating instructions.

→ Check the tyre pressure regularly.

→ Observe the maintenance intervals.

Temperatures below +10 °C can reduce battery performance during operation. When you are not using your pedelec:

→ Remove the battery from the holder when the outside temperature is low and store it (see section "Storing the battery" on page 85).

→ Only place the battery in the holder directly before driving.

5.4 Driving with an empty battery

If the battery charge is fully used up during the ride, you can use your pedelec like a pedal-powered bicycle.

When the battery charge is used up, the electric drive switches off. The lighting is supplied with energy for another 2 hours.

5.5 Drive overheating protection

CAUTION

The electric drive and battery can become very hot during operation.
You can injure yourself if they come into contact with your skin.
Risk of injury!

- Do not touch the electric drive and the battery.

The electric drive is automatically protected from damage due to overheating. If the temperature of the drive is too high, the electric drive switches off automatically.

→ To prevent the electric drive from overheating, set a low assistance level when the outside temperature is high or when riding on steep inclines.

→ If the electric drive is switched off when the battery is charged and the speed is below 25 km/h, do not use the pedelec temporarily to allow the electric drive to cool down.

→ If the malfunction is not remedied by cooling down the electric drive, have the pedelec checked by your two-wheeler dealer.

5.6 Notes on the battery

Your pedelec is equipped with a lithium-ion battery (Li-ion battery). Li-ion batteries have a relatively high energy density. Therefore, handling these batteries requires a high level of attention.

→ Observe the safety instructions for the battery (see section „Safety instructions for the battery“ on page 18).

→ For reliable operation and a long service life, also observe the following instructions:
A partial charge does not damage the battery, it has no memory effect. Partial charges are rated proportionally according to their capacity. For example, a charge of 50 % corresponds to half a charging cycle.

NOTE

Irreparable damage can be caused by a technically induced self-discharge of the battery.
Risk of damage!
- Charge an empty battery immediately.

→ Observe the temperature limits for the battery (see enclosed manufacturer's operating instructions).

→ Note that outside temperatures below +10 °C can reduce battery performance.

→ Note that the battery may lose power after approx. 500 complete charging processes (charging cycles).

→ Note that after initial use you will become accustomed to the electric assistance. This can lead to a perceived loss of power from the battery.

→ If there is a loss of power or significantly reduced operating time, contact your two-wheeler dealer.

→ Never make any changes to the battery yourself.

5.6.1 Charging times

When the battery is empty, a complete charging process can take between approx. 4 and 8 hours depending on the charger used. The duration of the charging process also depends on the following factors:

- Capacity of the battery,
- State of charge of the battery,
- temperature of the battery and
- temperature of the environment.

→ Observe the enclosed manufacturer‘s operating instructions when using the battery of your pedelec.

5.6.2 Use battery

Depending on the model, your pedelec may be equipped with:
- Luggage carrier battery
- Seat tube battery
- Down tube battery
- integrated down tube battery.

→ Always switch off your pedelec before removing the battery.

→ Remove the battery before carrying out any work (e.g. repair, transport, maintenance) on the pedelec.

→ Observe the enclosed manufacturer's operating instructions when using the battery of your pedelec.

5.6.3 Transporting or shipping the battery

Lithium-ion batteries are subject to the requirements of dangerous goods legislation. Undamaged batteries may be transported by private users on the road without further requirements.

→ For commercial transport, observe the special requirements for packaging and labelling, e.g. for air transport or forwarding orders.

→ Find out about transporting the battery and suitable transport packaging, e.g. directly from the transport company or from your bicycle dealer.

→ When transporting the pedelec, remove the battery and transport it separately and secured against shocks and impacts.

If you transport your pedelec by car see section „Transport“ (on page 15)

5.7 Protective devices

Depending on the model, the battery of your pedelec may be equipped with protective devices:
- Protection against overheating
- Protection against deep discharge

→ Observe the enclosed manufacturer‘s operating instructions when using the battery of your pedelec.

5.8 Notes on the additional components of the pedelec

→ Observe the safety instructions for the charger see section "Safety instructions for the charger" on page 19 when using the charger.

→ Observe the enclosed manufacturer's operating instructions when using additional components of your pedelec.

5.9 Notes on use

5.9.1 Information on road traffic

The assistance of pedelecs is effective up to a speed of 25 km/h. The technical design of your pedelec complies with the European standard EN 15194 for electric motor-assisted bicycles and the bicycle standard DIN EN ISO 4210.

→ Find out about the current road traffic regulations of the country or region, e.g. from the Ministry of Transport.

→ Keep yourself informed about changes to the valid regulations.

5.9.2 Putting into operation

To put your pedelec into operation, the following requirements must be met:
- a charged battery is inserted,
- the control unit/display is functionally mounted on the pedelec.

→ Observe the enclosed manufacturer‘s operating instructions when you want to put your pedelec into operation.

5.10 Residual risks

The use of the pedelec is associated with the following unforeseeable residual dangers despite compliance with all safety instructions:

5.10.1 Risk of injury
- Gases, vapours and liquids may escape from the battery due to internal, non-visible damage and in the event of fire. Injuries to the external and internal organs are possible, e.g. through skin contact or inhalation of the gases.

5.10.2 Fire hazard
- Internal, invisible damage can cause the battery to catch fire and ignite objects in the vicinity.

5.10.3 Risk of damage
- When the battery burns, smoke gas and corrosive liquids escape.

6 Basic settings

See the following section for more information,

- how to check your pedelec before you start riding,
- how to adjust your seating position and
- how to make other basic adjustments.

If you do not have the necessary knowledge and tools for the basic settings, have the basic settings made by your two-wheeler dealer.

6.1 Before the first ride

Your bicycle dealer has fully assembled and adjusted the pedelec. The pedelec is now ready to ride.
Get to know important functions of the pedelec before your first ride.

→ Familiarise yourself with the handling characteristics of your pedelec away from road traffic.

→ If you are not used to the assignment of the brake levers for the front or rear brake, have the assignment of the brake levers changed by your bicycle dealer.

→ Familiarise yourself with the braking characteristics of your brakes away from traffic and at low speed.

→ With hydraulic brakes, operate both brake levers several times so that the brake pads are centred in the brake calliper.

→ Practice using the gears away from traffic so that you can operate the gears in a way that does not impair your attention to traffic.

→ Check that you have a comfortable riding position for longer rides and that you can safely operate all components on the handlebars while riding.

6.2 To be checked before each journey

→ Check the pedelec for damage and excessive wear before every ride.

→ Do not use the pedelec if you notice any damage or excessive wear.

→ Have damaged or worn components replaced by a bicycle dealer.

Check before each journey:

- **the brakes**
  - → Schieben Sie das Pedelec und bedienen Sie jeweils eine Bremse, das gebremste Vorder- bzw. Hinterrad muss blockieren.
- **the gear shift**
  - → Check that the gears shift easily and silently.
- **the frame, fork and seatpost**
  - → Visual inspection: There must be no cracks, deformations or colour changes on the frame, fork or seat post.
- **the rapid clamping devices**
  - → Check that all quick release devices are tightly closed and correctly fastened.
  - → Check the pretension of all quick release devices.
- **the screw and plug connections**
  - → Visual inspection: The screw and plug connections must be correctly closed.
- **the pedal drive**
  - → Check that the pedal drive works and is correctly fastened.
- **the lighting**
  - → Check that the headlight and tail light are working.
- **the bell**
  - → Check that the bell gives a clear sound.
- **the handlebars and the handlebar stem**
  - → Check the handlebars and handlebar stem for tight fit.
  - → Visual inspection: There must be no cracks, deformations or changes in colour on the handlebars or handlebar stem.
- **the tyres**
  - → Check the tyre inflation pressure.
  - → Check the tyres for cracks and foreign objects.
- **the rims and spokes**
  - → Visual inspection: There should be no cracks, deformation or excessive wear on the rims.
  - → Check the spokes for even tension.

6.3 Adjust seat position

Finding the right seating position depends on

- the height of the rider,
- the frame size of the pedelec
- and the settings of the handlebars and saddle.

WARNING

By improperly adjusting the saddle height or the handlebar height, you endanger the function and safety of the bicycle component.
Risk of accident and injury!

- Observe the minimum insertion depth of the seat post.

CAUTION

An incorrectly adjusted sitting position can lead to muscle tension and joint pain.
Risk of injury!

- Have the seat position correctly adjusted by a bicycle dealer.

CAUTION

An incorrectly adjusted seating position can lead to limited access to controls on the handlebars.
Risk of accident and injury!

- Have the seat position correctly adjusted by a bicycle dealer.

You can read about the essential characteristics of a suitable seating position in the section „Seating position“ on page 14.

The suitable seating position may also depend on the use of the pedelec, e.g. if it is mainly used for sporting purposes.

To adjust the saddle height, read the section „Adjusting the saddle“ on page 69).
Only adjust the handlebar height if you have the necessary knowledge and the required tools (see section „Handlebar“ on page 70).

If your pedelec has an Ahead handlebar stem, have the handlebar height adjusted by a two-wheeler dealer.

If you cannot achieve a suitable seating position by adjusting the saddle and handlebars, you can achieve a suitable seating position by replacing components. Components that can be exchanged for this are

- the seat post,
- the saddle,
- the handlebar stem,
- the handlebars,
- the pedal cranks.

→ If the seating position cannot be adjusted to fit, have components with other dimensions fitted by a two-wheeler dealer.

If you sell or pass on the pedelec to another person, replacing components can be one way of achieving a suitable seating position for another person.

6.4 Observe the direction of rotation of screws

→ Tighten nuts, bolts and removable axles clockwise.

→ Loosen nuts, bolts and removable axles by turning them anticlockwise.

If there are deviations from these rules, the applicable direction of rotation is indicated in the respective section.

6.5 Observe torques

The torque indicates the force of the turning action, e.g. on screw connections on the pedelec. To tighten bolted connections properly, the respective torques must be observed (see section „Notes on torques“ on page 13).

WARNING

Improper tightening of screw connections can lead to material fatigue and breakage of screw connections.
Risk of accident and injury!
- Do not use the pedelec if the bolted connections are loose.
- Tighten the screw connections with the correct torques.

7 Brakes

WARNING

In wet conditions, braking performance may be reduced and braking distance increased.

Risk of accident and injury!

- Adapt driving style and speed to weather and road conditions.

WARNING

Applying the front brake can cause a rollover.

Risk of accident and injury!

- Use the brake lever for the front wheel carefully at high speeds.
- Adapt the braking force of the brakes to the riding situation.
- Always brake with both brakes simultaneously.

WARNING

A locking rear wheel can cause falls.

Risk of accident and injury!

- Use the rear brake carefully when cornering.

WARNING

Incorrect brake pads can lead to reduced or excessive braking performance or brake failure.

Risk of accident and injury!

- Replace brake components only with original spare parts.

A brake is a technical device for decelerating an object. The term brake system refers to the entirety of the individual parts.
A pedelec is equipped with at least two brakes that act independently on the front wheel and the rear wheel.

The following brakes may be installed:

- Coaster brake
- Rim brake
- Disc brake

→ Check which brakes the pedelec is equipped with using the "Bicycle passport" section on page 90.

→ For a short braking distance, brake evenly with both brakes.

7.1 Check brakes

Carry out the following instructions for the front wheel brake and for the rear wheel brake.

1. Check all screws of the brake system for tightness.
2. Check that the brake lever is firmly attached to the handlebar.
   → If you notice loose bolted connections, have the bolts tightened by your two-wheeler dealer.
3. Check that there is at least 1 cm of clearance between the brake lever and the handle when the brake lever is fully tightened.
   → If the gap is less than 1 cm, have the brake system adjusted by your two-wheeler dealer.
4. Check the wear of the brake pads.
   → Have your bicycle dealer explain to you how to check the wear.
5. Check whether the brake disc is seated on the front or rear wheel without play by moving the brake disc slightly back and forth.
6. Check whether the front or rear wheel locks when the brake is applied.
   → If you notice a low braking effect, have the brake system adjusted by your two-wheeler dealer.

7.2 Brake lever assignment

The brake levers are assigned as follows in the basic configuration:
If the pedelec has only one brake lever, it is mounted on the right-hand side of the handlebar and operates the front wheel brake.
If the pedelec has two brake levers, the right brake lever operates the rear wheel brake and the left brake lever operates the front wheel brake.

→ Familiarise yourself with the brake lever assignment before riding. Contact your bicycle dealer if you want to change the brake lever assignment.

7.3 Rim brake

WARNING

Wear can lead to rim breakage.
Risk of accident and injury!

- Have the rims checked by the bicycle dealer at least once a year or after 1000 km.

When the brake lever is actuated on a mechanical rim brake, the brake cable pulls the brake arms together and the brake pads are pressed against the rim.
When the brake lever is actuated on a hydraulic rim brake, brake pistons located in the brake unit are pressed outwards by oil pressure. The brake pads are pressed onto the rim.

If you do not have the necessary knowledge and tools for adjusting the rim brake, have the rim brake adjusted by a two-wheeler dealer.

7.3.1 Rim brake with quick release

WARNING

An open quick release can cause the rim brake to fail.
Risk of accident and injury!

- Make sure that the quick release is closed.

The quick release lever on a rim brake allows the wheels to be removed and installed quickly.

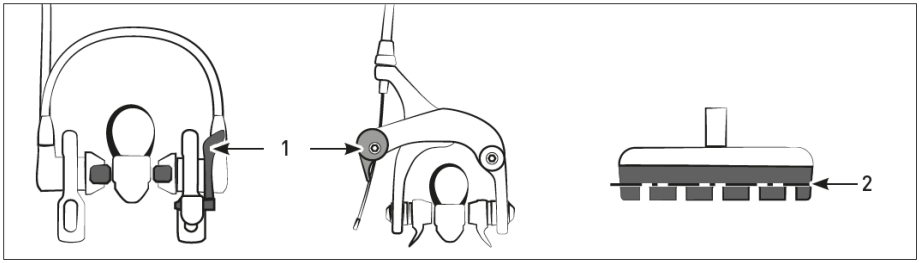


Fig.: Rim brake

1 Quick release lever
2 Wear limit

7.3.2 Basics

Use of the rim brake causes wear to the brake pads and the rim. With a cable-operated rim brake, the brake cable also wears out. With a hydraulic rim brake, the brake fluid also wears out.
To be able to use the rim brake safely at all times, carry out the following maintenance instructions.

- → Remove dirt from the components of the rim brake and the rim immediately with a slightly damp cloth.
- → Check all screws of the brake system for tightness.
- → Check that the brake lever is firmly attached to the handlebar.
- → If you notice loose bolted connections, have the bolts tightened by a two-wheeler dealer, observing the torques.
- → Pull the brake lever several times and check whether the brake cable is stuck or whether scratching noises occur or whether brake fluid leaks from the lines, connections or at the brake pads.
- → Check whether the brake cable sheath is damaged or wire strands are broken (visual inspection).
    - → If you notice defective brake cables or if brake fluid leaks, do not use the pedelec.
    - → Check that there is still at least 1 cm of clearance between the brake lever and the handle when the brake lever is fully applied.
- → If the gap is less than 1 cm, have the rim brake adjusted by a bicycle dealer.
- → Check whether the wheels of the pedelec lock when the rim brake is applied.
    - → If you notice a low braking effect, have the brake system adjusted by your two-wheeler dealer.
- → When operating the rim brake, listen for unusual noises.
    - → If you hear unusual noises, have the brake system checked by a two-wheeler dealer.

7.3.3 Check brake pads

- → Check whether the wear limit of the brake pads has been reached.
    - → If in doubt, have your bicycle dealer check the wear limit of the brake pads.

The brake pads must be changed before the wear limit on the brake pad is reached.
Have brake pads replaced by a two-wheeler dealer and then have the brake system readjusted.

ⓘ Have a bicycle dealer explain the wear limit of the rim brake to you.

→ Check that there is at least 1 cm of clearance between the brake lever and the handle when the brake lever is fully tightened.

  → If the gap is less than 1 cm, have the brake system adjusted by a two-wheeler dealer.

→ Check that the brake pads wear evenly on both sides of the rim (visual inspection).

  → If the brake pads wear unevenly or at an angle, have the brake system checked by a two-wheeler dealer.

→ Check the brake pads for damage and heavy soiling (visual inspection).

  → If the brake pads are very dirty, clean them.

  → If the brake pads are damaged, have them replaced by a two-wheeler dealer.

→ Check whether the brake pads rub centrally on the rim flank.

  → The brake pads should be adjusted so that they follow the bend of the rim as closely as possible.

→ Grasp the brake pads and check whether they can be twisted.

  → If you can twist the brake pads, have the brake pads adjusted by a two-wheel dealer.

→ Check whether the brake pads move evenly and symmetrically back and forth towards the rim when pulling and releasing the brake lever (visual inspection).

  → If the brake pads move unevenly, have the brake system checked by a two-wheeler dealer.

7.4 Operate rim brake

The rear wheel locks earlier than the front wheel with the same braking force.
Depending on the model, your pedelec is equipped with different brake types on the front and rear wheel.

→ To brake, pull the brake lever towards the handlebar with your fingers.

→ Regulate the braking effect by the force with which you pull the brake lever.

→ To release the brake, let go of the brake lever.

For a short braking distance, brake evenly with both rim brakes or with the hand and coaster brakes.

7.5 Adjusting the rim brake

WARNING

An improperly adjusted brake system can lead to loss of braking power.
Risk of accident and injury!

- Have the brake system adjusted by the bicycle dealer only.

7.5.1 Adjust grip width

Adjusting the grip width puts the brake lever closer to the grip.

→ Adjust the brake lever so that you can operate it safely while riding without taking your hand off the handlebar.

Adjusting the handle width adjusts the tension of the brake cable.

1. Turn the adjustment screw in so far that you can safely operate the brake lever (see fig. „Adjustments on the brake lever“).

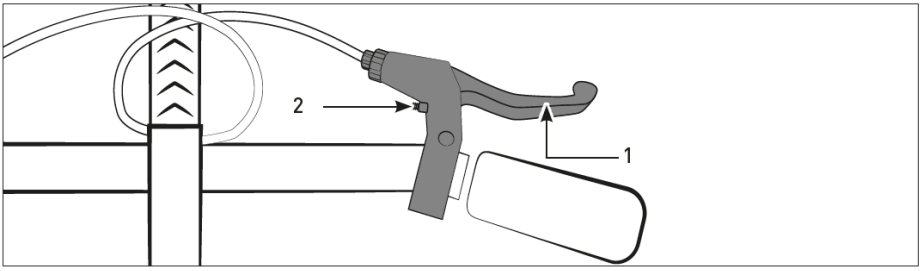


Fig.: Settings on the brake lever

1 Brake lever
2 Adjusting screw

Depending on the model, the adjustment screw is a Phillips or hexagon socket screw.

2. Adjust the tension of the brake cable.

7.5.2 Adjust brake cable

If the distance of the brake pads on the left and right to the rim differs by more than 1 mm, a basic adjustment of the brake system must be carried out by your bicycle dealer before adjusting the brake cable.

1. Loosen the lock nut counterclockwise one to two turns (see fig. „Adjustments on the brake cable“).
2. Turn the knurled nut in or out until the distance between the brake pads on both sides is 1 to 2 mm (see fig. „Mechanical rim brake“).

   → Grasp the brake cable in front of the knurled nut and pull gently to make it easier to turn the knurled nut.
3. Turn the knurled nut out a maximum of five turns.

   → If you cannot adjust the brake pads in this way, have the brake system checked by a two-wheeler dealer.

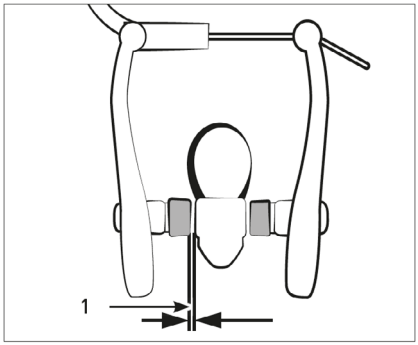


Fig.: Mechanical rim brake
1 Distance

4. Check that you can only pull the brake lever close enough to the handle so that the distance between the brake lever and the handle is at least 1 cm.
5. Turn the lock nut clockwise and tighten it with measured force.

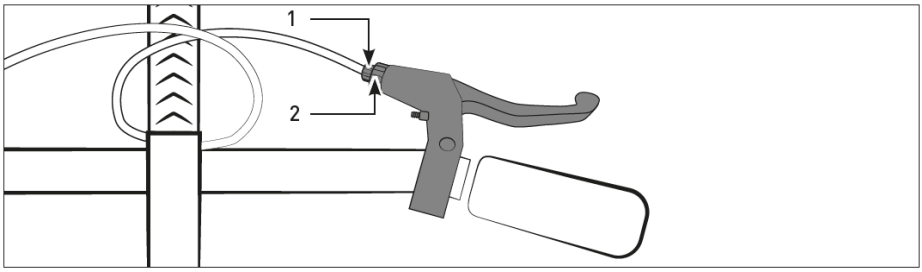


Fig.: Adjustments on the brake cable
1 Knurled nut
2 Lock nut

7.6 Disc brake

WARNING

Wear can lead to failure of the disc brake.
Risk of accident and injury!
- Have the disc brake checked by the bicycle dealer at least once a year or after 1000 km.

CAUTION

Contact with hot brake discs can cause burns.
Risk of injury!
- Let the brake discs cool down before touching them.

NOTE

Brake pads can vitrify due to prolonged stress.
Risk of damage!
- If it is safe to do so, brake intermittently and with greater force on long downhill slopes.

NOTE

Removing the front or rear wheel can damage the brake.
Risk of damage!
- Only have the front or rear wheel removed and fitted by your bicycle dealer.

NOTE

Full braking with new brake pads leads to glazing of the brake pads.
Risk of damage!
- Brake in new disc brakes off the road.

7.6.1 Basics

When the brake lever is pulled, the brake pistons located in the brake caliper of the disc brake are pressed outwards. The brake pistons press the brake pads against the brake disc.

→ Check the disc brake regularly for wear and function.

→ Remove dirt from the disc brake components and the brake disc immediately with a slightly damp cloth.

→ For disc brakes, clean the brake discs regularly with brake cleaner or warm water.

Use of the disc brake causes wear to the brake pads and the brake disc.
In the case of a disc brake with a cable, the brake cable also wears out.
In the case of a hydraulic disc brake, the brake fluid also wears out.

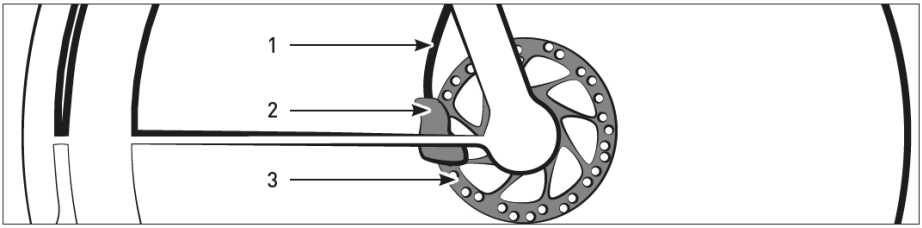


Fig.: Hydraulic disc brake

1 Hydraulic line
2 Brake caliper
3 Brake disc

Ask a two-wheeler dealer for an inspection aid to check the wear of the brake pads. Depending on your brake type, this could be the transport lock, for example.

→ Carry out the following instructions for the front and rear brakes.

1. Check that the brake pads move evenly and symmetrically towards the brake disc and back when pulling and releasing the brake lever.
   → If you can move the brake disc or the brake pads move unevenly, have the brake checked by a two-wheeler dealer.
2. Pull the brake lever and check for brake fluid leaking from the lines, connections or at the brake pads.
   → If brake fluid leaks, do not use the pedelec.
   → Have the disc brake repaired by a bicycle dealer.

If the disc brakes are new or if the brake pads or the brake disc have been renewed, the disc brakes must be braked in.

→ Please refer to the manufacturer‘s instructions or ask a bicycle dealer.

→ If the effect of the disc brakes is insufficient after braking in or you hear unusual noises when braking, have the disc brakes checked by your two-wheeler dealer.

7.6.2 Operate disc brake

The rear wheel locks earlier than the front wheel with the same braking force.
Depending on the model, your pedelec is equipped with different brake types on the front and rear wheel.

→ To brake, pull the brake lever towards the handlebar with your fingers.

→ Regulate the braking effect by the force with which you pull the brake lever.

To release the disc brake, release the brake lever.
For a short braking distance, brake evenly with both brakes.

7.6.3 Disc brake adjustment

WARNING

Improperly adjusted brakes can reduce braking performance or cause the brakes to fail.
Risk of accident and injury!
- Only have the brakes adjusted by a bicycle dealer.
- If necessary, have a bicycle dealer explain how to adjust the brakes.

If you do not have the necessary knowledge and tools for adjusting the disc brake, have the disc brake adjusted by your two-wheeler dealer.

7.6.4 Replace brake pads

WARNING

Incorrect or improperly installed brake pads can lead to malfunctions, e.g. disc brake failure.
Risk of accident and injury!
- Only use original brake pads for disc brakes.
- Seek professional advice when buying brake pads.
- Have brake pads replaced by a bicycle dealer.

→ Check whether the brake pads are worn.

→ Have the brake pads replaced by a two-wheeler dealer.

8 Drives

Pedelecs are powered manually and by motor assistance. The muscle power applied when pedalling is transferred to the chain (chain drive) or belt (belt drive) with the help of the pedal drive, which in turn sets the rear wheel in motion, thus driving the pedelec as a whole, i.e. setting it in motion.

→ Use the following sections „Chain drive“ or „Belt drive“ to find out about the model-dependent drive type of your pedelec and observe the information on safety and maintenance listed there.

8.1 Pedal drive

8.1.1 Basics

Components of the pedal drive are
- Pedal,
- Pedal crank,
- Bottom bracket,
- Sprocket.

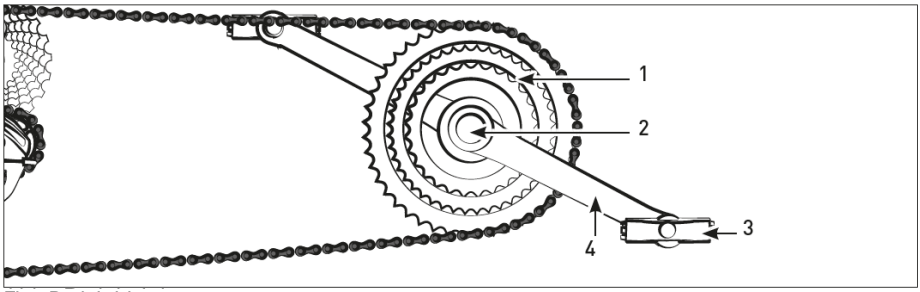


Fig.: Pedal drive

1 Sprocket
2 Bottom bracket
3 Pedal
4 Pedal crank

8.1.2 Operate pedal drive

→ Start the pedal drive by pedalling so that the chain or belt rotates to set the pedelec in motion.

8.1.3 Check pedal drive

→ Make sure that the crank arm, bottom bracket and pedals are fixed by trying to move the pedals both sideways back and forth and vertically up and down with a little pressure.

→ If the crank arm, bottom bracket or pedal can be moved sideways or vertically, contact a two-wheeler dealer for an inspection and repair if necessary.

8.2 Chain drive

8.2.1 Basics

A pedelec with chain drive can be equipped with the following components/functions depending on the model:

- Hub gears
- Derailleur gears
- Coaster brake

→ Clean the chain with a clean, lightly oiled cloth.

→ Clean the sprocket and chain wheels with a soft brush if necessary.

→ Oil the chain regularly with universal oil:
  - after cleaning,
  - after driving in the rain,
  - after 15 hours of operation.

→ Make sure that all components of the chain drive are free from damage.

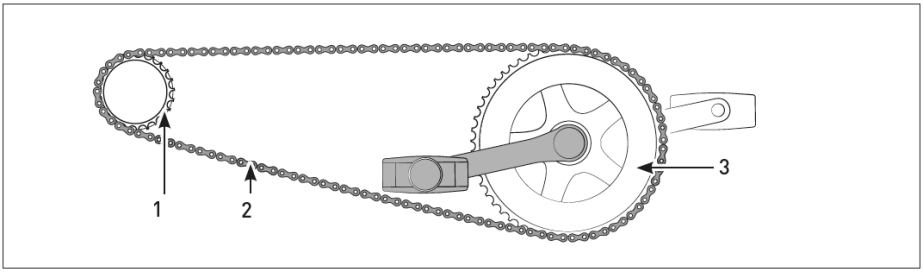


Fig.: Chain drive

1 Sprocket
2 Chain
3 Chainring

→ Contact a bicycle dealer for more stubborn dirt that cannot be removed with the above-mentioned agents or if you notice damage to components of the chain drive.

8.2.2 Operate chain drive

→ Pedal the bicycle:
The muscle power used for pedalling is transferred to the chain with the help of the pedal drive and sets the chain drive in motion. The rotation of the chain acts on the rear wheel and drives the pedelec.

8.2.3 Adjust chain drive

→ Have the sprocket or chain wheel replaced by a bicycle dealer if you notice that individual teeth are dangerously sharp (so-called shark teeth).

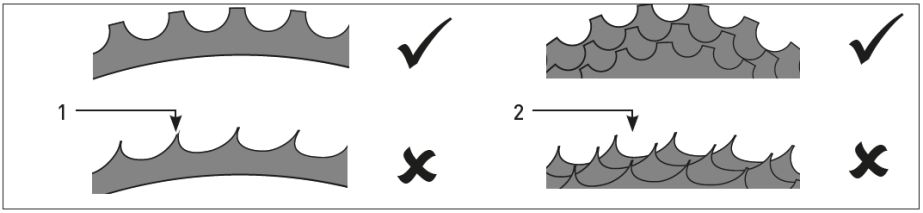


Fig.: Wear

1 Chain sprocket wear
2 Sprocket wear

8.3 Belt drive

8.3.1 Basics

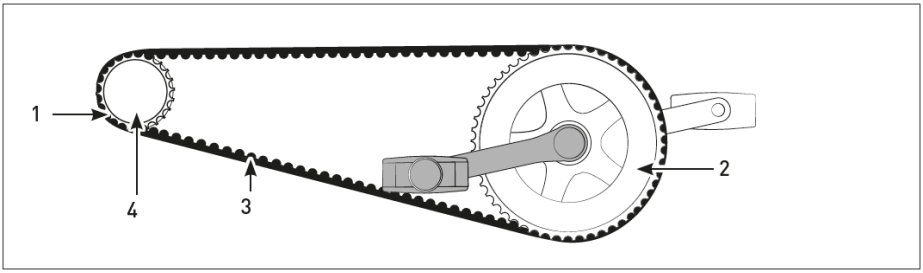


Fig.: Belt drive

1 Rear disc
2 Front pulley
3 Belt
4 Rear flanged pulley

A pedelec with belt drive can be equipped with the following components/functions depending on the model:

- Hub gears
- Coaster brake

NOTE

Improper handling can damage the belt.
Risk of damage!

- Do not kink, bend, twist, lace, turn the belt upside down or use it as a key.
- Do not roll up the belt on the sprocket when fitting it.
- Do not use a lever (e.g. a screwdriver) to put the belt on.

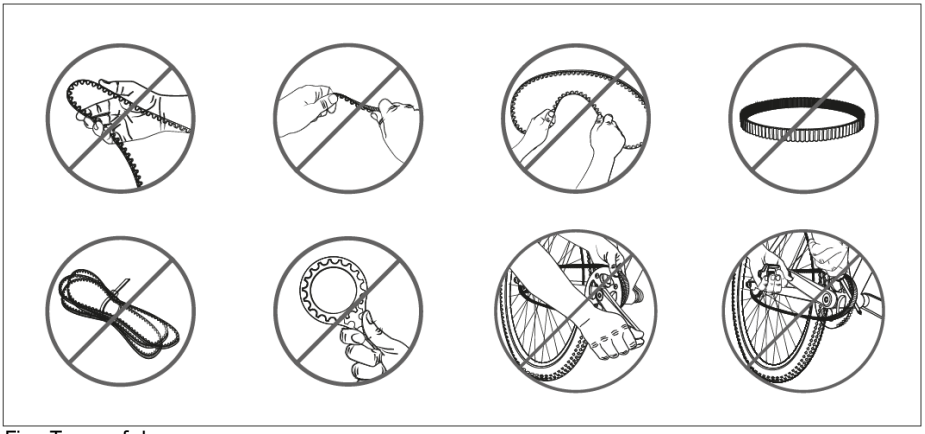


Fig.: Types of damage

8.3.2 Operate belt drive

→ Pedal the bicycle:
The muscle power used for pedalling is transferred to the belt with the help of the pedal drive and sets the belt drive in motion. The rotation of the belt acts on the rear wheel and drives the pedelec.

8.3.3 Adjust belt drive

8.3.3.1 Check the tension of the belt

The belt tension must be 14-20 kg for trouble-free functioning of the belt drive.

→ Consult a two-wheeler dealer at regular intervals to have the belt tension checked and adjusted if necessary.

8.3.3.2 Check wear on the belt drive

→ Check all components of the belt drive for wear at regular intervals.

→ Contact a bicycle dealer to have the belt replaced if you notice signs of wear such as sharp teeth, cracks or missing teeth on the belt.

→ Have the sprocket replaced by a two-wheeler dealer if you notice that individual teeth are dangerously pointed (so-called shark teeth).

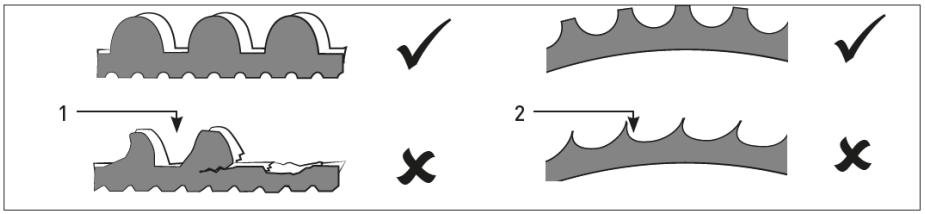


Fig.: Wear
1 Belt wear
2 Sprocket wear

9 Gear shift

The gearstick allows the driver to adjust the power required for propulsion according to the track conditions and speed.
The gearstick consists of a shiftable gearbox and the corresponding controls.

A distinction is made between the following gear types:
- Derailleur gears
- Hub gears
- Hybrid gears
- Automatic gear shift

→ Familiarise yourself with the gears on your pedelec by reading and understanding the relevant sections in the user manual.

A regularly maintained and cared for gear shift shows only minor signs of wear. The gear shift cables are stretched through use.
Observe the following information to prevent premature wear:

→ Do not pedal too hard when changing gears.

→ Shift to the desired gear early before going uphill.

→ Regularly check all components of the gear shift system as described in the relevant section on your gear shift system.

→ Contact a bicycle dealer if any components are damaged, if you hear unusual noises during the shifting process or if you cannot shift properly into all gears.

9.1 Operating elements

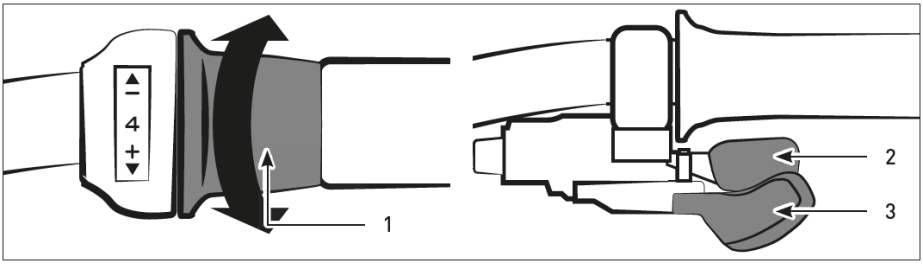


Fig.: Operating elements of the gear shift (exemplary)

1 Twist shifter
2 Rear gear lever
3 Front gear lever

9.2 Derailleur gears

9.2.1 Basics

Models with derailleur gears have 1-3 sprockets on the pedal crank and 7-11 sprockets on the rear wheel, which are selected separately via model-dependent controls on the handlebars. The theoretical total number of gears can be determined from the possible combinations (number of sprockets × number of sprocket wheels).
The sprockets are selected according to the course of the route (uphill/uphill/downhill) and the individual gears are set using the sprockets.

Choose:
- A smaller sprocket for uphill sections (higher cadence; drive smoother).
- a larger sprocket for flat stretches/descents (lower cadence; drive more sluggish)

The smaller the sprocket you combine with it, the higher/heavier the gear engaged and the lower the cadence.

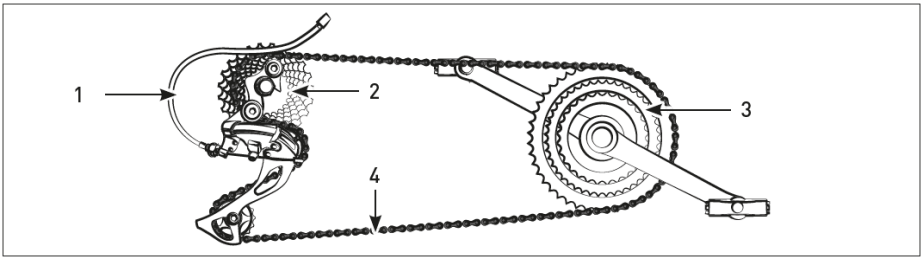


Fig.: Derailleur gears

1 shift cable
2 sprockets on rear wheel
3 sprockets on the pedal drive
4 Chain

9.2.1.1 Maintaining derailleur gears

→ Clean the operating elements with a damp cloth.

→ Remove coarse dirt from accessible components of the shiftable transmission using a damp cloth or a soft brush.

→ After cleaning, grease the components of the shiftable gearbox with a suitable lubricant, e.g. universal oil.

→ Remove excess lubricant immediately to avoid contamination and environmental pollution.

9.2.1.2 Check derailleur and chain tension

→ Check all components of the derailleur for damage.

→ Check whether the rear derailleur is vertical or bent sideways.

→ Check whether there is sufficient clearance between the rear derailleur/chain and the spokes.

→ Contact a bicycle dealer if any components are damaged, the rear derailleur is bent the rear derailleur is bent sideways or there is no/barely any space between the rear derailleur/chain and the spokes.

The chain is kept under tension with the aid of the pulleys in the shifting cage according to the selected sprockets and sprocket wheels.

→ Make sure that the chain is properly tensioned and does not sag.

→ Carefully push the shifting cage forward towards the pedal crank and make sure that the shifting cage moves back to its original position on its own.

→ Contact a two-wheeler dealer if the chain sags or the shifting cage does not move back on its own or hooks.

9.2.1.3 Gear combinations

NOTE

If you combine the gears incorrectly, this can damage the gear shift.
Risk of damage!

- Do not use small sprocket with smallest sprockets and large sprocket with largest sprockets.

Some of the theoretically possible combinations of sprockets and sprocket wheels are not suitable for the intended use, as they may have a low riding comfort and increase wear.
When combining e.g. the smallest sprocket with the smallest sprocket, the sprockets, sprockets and chain wear out faster than when using more balanced combinations due to the extremely skewed chain.
 Choose combinations in which the chain runs as parallel as possible (see fig. „Intended combinations“).
 Contact a bicycle dealer for instruction in the handling and use of derailleur gears if you have problems or you are unsure of how to handle the derailleur gears.

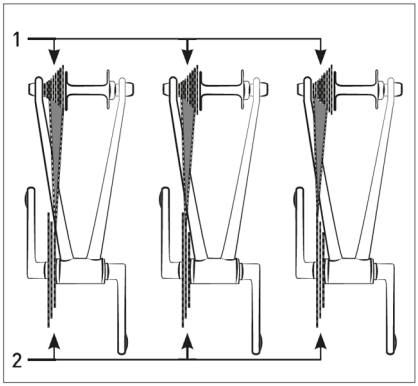


Fig.: Intended combinations

1 sprockets on the rear wheel
2 sprockets on the pedal drive

9.2.2 Operate derailleur

WARNING

If you are unsure of how to use the gear shift or have problems with it, this may distract you from the road.
Risk of accident and injury!
- Familiarise yourself with the functions of the gear shift before participating in road traffic.
- Stop if problems arise in the operation of the gear shift, e.g. due to malfunctions.

NOTE

If you operate the gear shift incorrectly, it can be damaged.
Risk of damage!
- Do not pedal forcefully when changing gear.
- Do not pedal backwards when changing gear.
- Shift to the desired gear early before going uphill.

9.2.2.1 Control unit with levers

On models with gear levers, the control for the sprockets is on the right-hand side of the handlebars and the control for the chain wheels is on the left-hand side of the handlebars.

→ After each shift, release the gear lever so that it returns to its original position to complete the shift.

→ Push or pull on the right-hand side of the handlebar (see fig. „Gear shift controls“):
- the front gear lever so that it engages once to shift down one gear.
- the front gearstick lever to the maximum so that it engages 2 times to shift down two gears.

→ On the right-hand side of the handlebars, press the rear gear lever to shift up one gear.

→ On the left-hand side of the handlebars, press or pull the front shift lever to shift to a larger sprocket (lower cadence; drive more sluggish).

→ On the left-hand side of the handlebars, press or pull the rear gear lever to shift to a smaller sprocket (higher cadence; drive smoother).

9.2.2.2 Control unit on the racing bike handlebar

On models with road bike handlebars, the control unit for the sprockets is on the right-hand side of the handlebars and the control unit for the chain wheels is on the left-hand side of the handlebars.

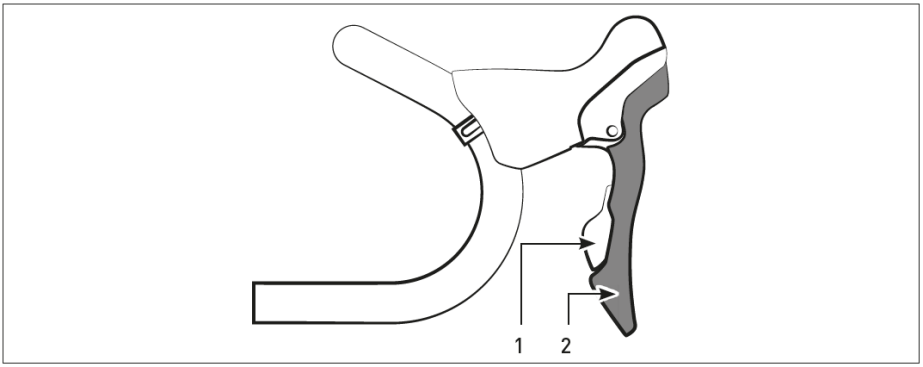


Fig.: Control unit on the road bike handlebars
1 Small gear lever
2 Large gear lever

→ After each shift, release the gear lever so that it returns to its original position to complete the shift.

→ Press on the right-hand side of the handlebar (see fig. „Control unit on road bike handlebar“).
- the large gear lever so that it engages once to shift down one gear.
- the large gearstick lever to the maximum so that it engages 2 times to shift down two gears.

→ On the right-hand side of the handlebars, press the small gear lever to shift up one gear.

→ On the left-hand side of the handlebars, press the large gear lever to shift to a larger sprocket (lower cadence; drive more sluggish).

→ Press the small gear lever on the left-hand side of the handlebars to shift to a smaller sprocket (higher cadence; drive smoother).

9.2.2.3 Shifting with twist grip shifter

→ Turn the twist grip shifter so that the desired gear is selected or shown on the display (see fig. „Gear shift controls“).

9.2.3 Adjusting the derailleur

NOTE

If the gear shift is incorrectly adjusted, it may be damaged during use.
Risk of damage!
- Visit a bicycle dealer if you have the impression that the gears need to be adjusted.

Only adjust the derailleur yourself if you have the necessary knowledge. Otherwise, contact a bicycle dealer.

Adjust the rear derailleur or front derailleur using the corresponding tension screw if unusual noises occur during or after shifting or if the gears cannot be adjusted smoothly or „jump“.

To do this, proceed as follows:

1. Turn the corresponding tension screw half a turn clockwise or anticlockwise (see fig. „Tension screw“).
   - The tension screw on the control regulates the front derailleur.
   - The tension screw on the rear derailleur regulates the rear derailleur.
2. Check whether the noises have decreased or increased during the shifting process.
3. Turn the corresponding tension screw in the smallest increments.
   - further in the original direction if the noises have decreased.
   - in the opposite direction if the noise has increased.
4. Carry out steps 1-3 until the rear derailleur or front derailleur are correctly adjusted. Consult a bicycle dealer if the noises persist or if you are unsure.

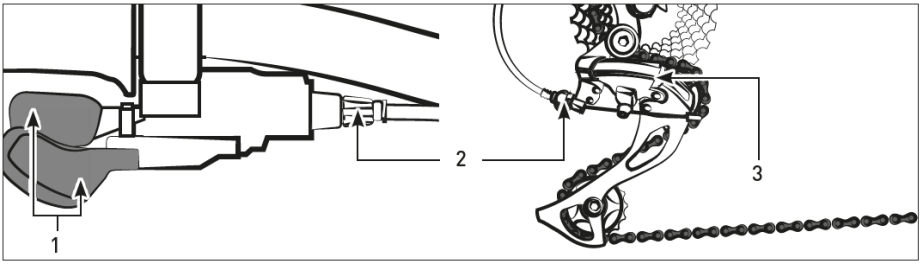


Fig.: Tension screw

1 Shift lever
2 Tension screw
3 Rear derailleur

9.3 Hub gears

9.3.1 Basics

The hub gears are located in the rear wheel hub. Depending on the model, either a twist grip shifter or a shift lever on the right side of the handlebars act as controls. The 2-speed automatic hub gear changes automatically between 1st and 2nd gear depending on the speed and therefore has no control element.

There are models with and without coaster brakes.

In a salty environment, the components of the hub gears are subjected to greater stress, so that inspection and maintenance should be carried out at shorter intervals.

→ Have a bicycle dealer change the oil in the gear hub once a year.

→ Check all components of the gear hub for damage.

→ Inspect the shift cables and check the sheaths of the shift cables and the wire cores for damage or cracks.

→ Check the function of the hub gears as follows:
1. Lift the pedelec by the frame so that the rear wheel can move freely.
2. Set the rear wheel in motion using the pedals.
3. Shift through all the gears.
4. Check whether you can shift properly into all gears. Also listen for any unusual noises during the shifting process.

→ Contact a bicycle dealer if any components are damaged, if you hear unusual noises during the shifting process or if you cannot shift properly into all gears.

→ Maintain the components of the hub gears with suitable care products to reduce increased wear due to weather conditions and environmental influences. Contact a bicycle dealer for information on suitable care products.

9.3.2 Operating the hub gears

WARNING

If you are unsure of how to use the hub gears or have problems with them, this may distract you from the road.
Risk of accident and injury!

- Familiarise yourself with the functions of the gear hub before riding on the road.
- Only operate the hub gears if you are not distracted from the road traffic.
- Stop if you encounter problems when operating the hub gears, e.g. due to malfunctions.

NOTE

If you operate the hub gears incorrectly, this can damage them.
Risk of damage!

- Do not pedal forcefully when changing gear.
- Do not pedal backwards when changing gear.
- Shift to the desired gear early before going uphill.

9.3.2.1 Shifting with gear lever

→ After each shift, release the gear lever so that it returns to its original position to complete the shift.

→ Press the front gear lever to shift down one gear.

→ Press or pull the rear gear lever to shift up one gear.

9.3.2.2 Shifting with twist grip shifter

→ Turn the twist grip shifter so that the desired gear is selected or shown on the display (see fig. „Gear shift controls“).

9.3.3 Adjusting the hub gears

NOTE

If the gear shift is incorrectly adjusted, it may be damaged during use.
Beschädigungsgefahr!

- Visit a bicycle dealer if you have the impression that the gears need to be adjusted.

Only adjust the hub gears yourself if you are experienced and have the necessary knowledge. Otherwise, contact a bicycle dealer.
Adjust the shift cable tension if the hub gears no longer function properly. To do this, proceed as described in the corresponding section for your hub gears.

9.3.3.1 3-speed hub gears

1. Shift to 2nd gear.
2. Loosen the lock nut on the hub gear housing counterclockwise (see fig. „Setting „Nexus““).
3. Align the marking in the viewing window exactly in the centre of the two lines/arrows by turning the knurled nut clockwise or anticlockwise.
4. Carefully hand-tighten the lock nut clockwise.

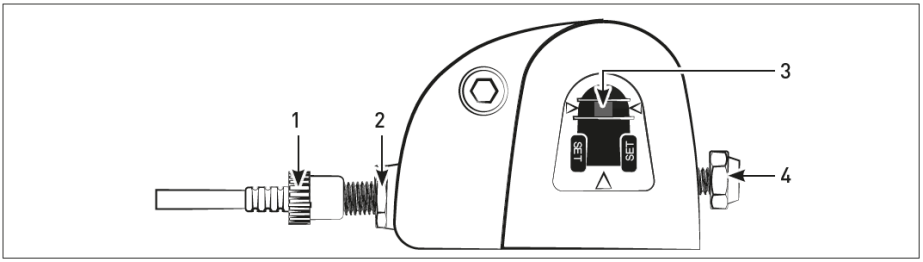


Fig.: Setting „Nexus
1 Knurled nut
2 Lock nut
3 Marking
4 Fixing screw
To remove the rear wheel, loosen the fastening screw and pull the clickbox off the axle (see fig. „Nexus adjustment“).

9.3.3.2 5-speed, 7- or 8-speed and 11-speed hub gears

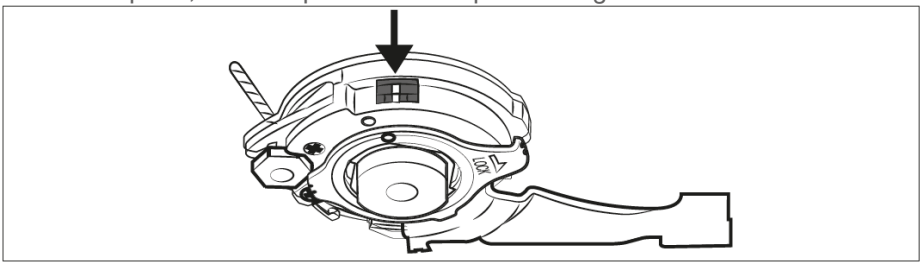


Fig.: Marking on the rear wheel hub
Switch to the:

- 2nd gear (5-speed hub gears)
- 4th gear (7- or 8-speed hub gears)
- 6th gear (11-speed hub gears)

Set the pedal crank slightly in motion.
Align the two markings on the rear wheel hub so that they are exactly at the same height by turning the adjustment screw on the twist grip (below the handlebars) clockwise or anticlockwise.

10 Lighting

10.1 Basics

Pedelecs intended for participation in road traffic must be equipped with the following lighting components:

- Headlights,
- tail light,
- Reflectors on the pedals,
- side reflectors for front and rear wheel or light strips,
- white reflector at the front,
- red reflector at the rear (see fig. „Lighting equipment“).

→ Ensure that all lighting components comply with national and regional requirements.

In many countries, the aforementioned lighting components must be present and operational on the pedelec even if the pedelec is only used in road traffic during the day (when it is bright).

The LEDs in the headlamp and tail lamp cannot be replaced. When the LEDs have reached their end of life, the corresponding lighting component must be replaced.

→ Have a defective light replaced by a bicycle dealer.

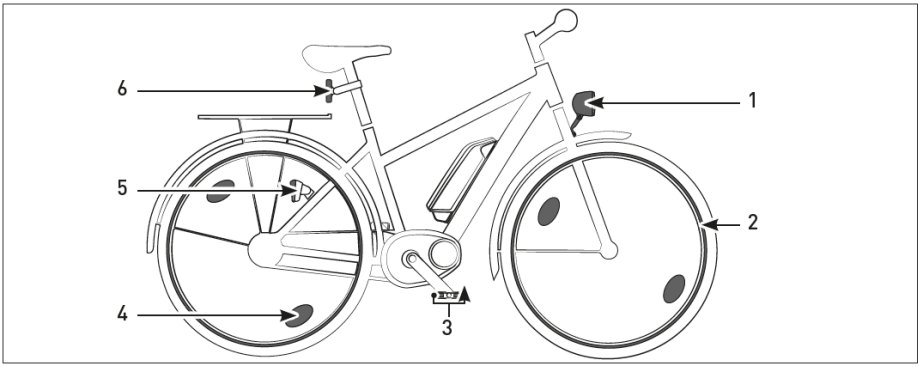


Fig.: Lighting equipment

1 headlight with reflector (white)	4 Side reflector (yellow)
2 Light strip (white)	5 Taillight with reflector (red)
3 Reflector on pedal (yellow)	6 Reflector (red)

Depending on the model, the headlight and tail light are located in one of the following mounting locations (see fig. „Mounting locations of the lighting equipment“).

Headlight:

- on the head tube,
- above the mudguard or
- on the fork.

Tail light:
- under the luggage carrier,
- on the mudguard or
- on the seat stay.

When you switch on the headlight, the tail light is also activated automatically.

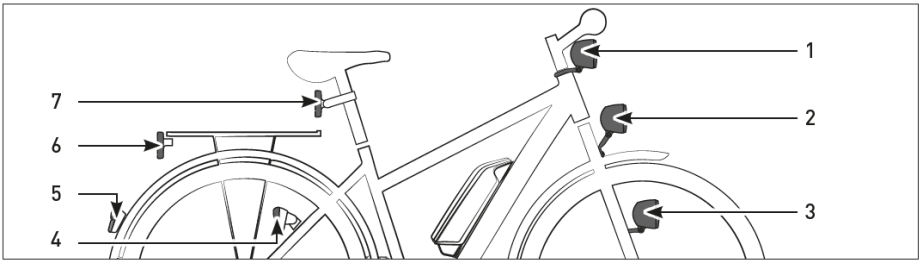


Fig.: Mounting locations of the lighting equipment

1 On the head tube
3 On the fork
3 Reflector on pedal (yellow)
4 On the seat stay
5 On the mudguard
6 Under the luggage rack
7 On the seat post

10.2 Operate lighting

WARNING

If there is no or insufficient lighting, other road users may have difficulty seeing you and you may miss bumps or obstacles.
Risk of accident and injury!
- Always switch on the lights in poor visibility conditions (e.g. dusk) and darkness.

WARNING

If you switch on the lights while driving, this may distract you from the road traffic.
Risk of accident and injury!
- Only switch on the lighting when the vehicle is stationary.

Depending on the model, the lighting can be switched on at the display or at the control unit.

10.3 Adjust lighting

WARNING

If the headlight range is not set correctly, you may dazzle oncoming road users.
Danger of accident!
- Ensure correct adjustment of the headlight range on a regular basis.

10.3.1 Align holder

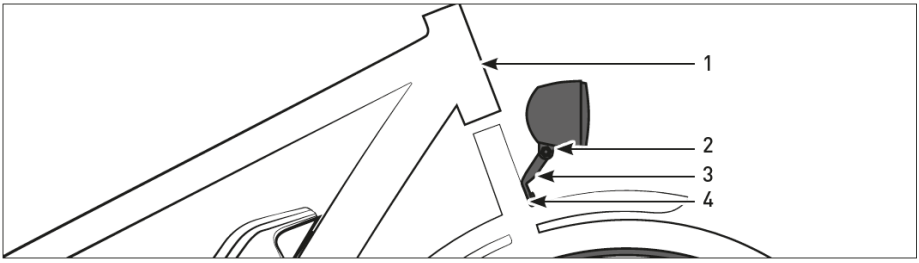


Fig.: Adjustment screws

1 Head tube	3 Holder
2 Screw 2	4 Screw 1

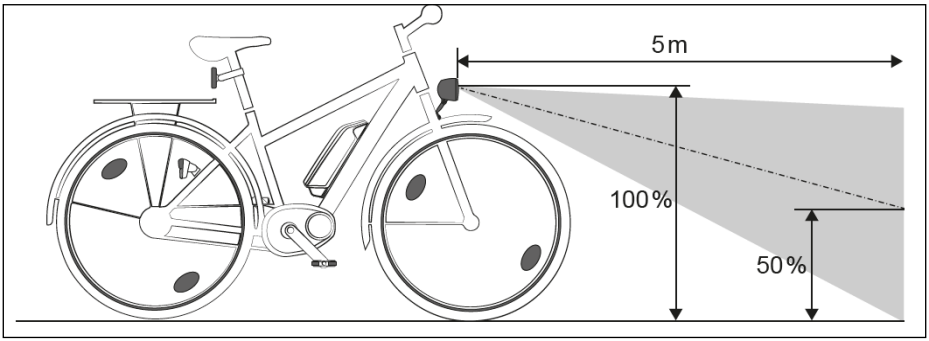
The holder must be aligned with the head tube.

1. Loosen screw 1 by a few turns counterclockwise (see fig. „Adjusting screws“).
2. Align the holder so that it is in line with the steering head tube.
3. Fix the holder by tightening screw 1 clockwise.

10.3.2 Align headlamp

The headlamp must be aligned so that the emerging cone of light is halfway up the headlamp at a distance of 5 m (see fig. „Headlamp range“).

1. Switch on the headlamp to check the alignment of the emerging light cone.
2. Loosen screw 2 by a few turns counterclockwise (see fig. „Adjusting screws“).
3. Align the headlight correctly as described above by tilting it forwards or backwards.
4. Fix the headlamp by tightening screw 2 clockwise.



11 Wheels and tyres

11.1 Basics

Front and rear wheels consist of hub, spokes, rim and the tyre running on the rim with or without an inner tube inserted.
On models with an inner tube, there is an additional rim tape on the rim to protect the tube from the rim base and spoke nipples.
During use, the front and rear wheels are subjected to heavy loads due to the rider‘s weight and bumps in the road.

→ After running-in (at the latest after 300 km of riding, 15 hours of use or 3 months; depending on which event occurs first), contact a two-wheel dealer to have the front and rear wheel checked and, if necessary, re-centred.

→ After running-in, check the front and rear wheel regularly for damage and correct alignment.

11.1.1 Rims and spokes

WARNING

If the front or rear wheels do not run centred or if they are loose, this impairs driving safety and rim brakes can lock.
Risk of accident and injury!

- Have the front and rear wheel aligned by the bicycle dealer if they do not run centred or if they wobble.

If spokes are not correctly and evenly tensioned, this may affect the concentricity of the front or rear wheel. Driving over obstacles quickly, such as a kerb, or if a spoke nipple comes loose, this can affect the tension of individual spokes.
If individual spokes are not correctly tensioned or are damaged, the affected wheel will no longer run true, it will wobble and the rim stability is endangered, so that the rim may break.

11.1.2 Wear limit

Some models have indentations on the rims to determine wear.

→ Run your fingernail or a toothpick over the indentation.

→ If you hardly notice the indentation or do not notice it at all, do not use the pedelec. The rim must be replaced by a bicycle dealer.

11.2 Settings

11.2.1 Check and adjust spokes

→ Ensure that the spokes are evenly tensioned by gently squeezing two spokes at a time.

→ Have the spokes tensioned by a two-wheel dealer if you notice that individual spokes have loosened.

11.2.2 Check wear limit or replace rim

→ Check the rims for cracks and damage.

→ For rims made of composite materials, have the wear determined by a bicycle dealer.

→ Have a damaged rim replaced immediately. Contact a bicycle dealer for this.

12 Tyres and valves

12.1 Basics

CAUTION

If reflectors are dirty or missing, other road users will have difficulty seeing you.
Risk of accident and injury!
- Keep reflectors clean and replace missing or worn reflectors immediately.

CAUTION

Damaged tyres can burst while driving.
Risk of accident and injury!
- Regularly check whether tyres are damaged or badly worn.

NOTE

If the mounted tyres do not correspond to the original size, components may be damaged.
Risk of damage!
- Contact a bicycle dealer if you have questions about tyre size or are unsure.

There are different types of tyres that are used depending on the intended use of a pedelec.
The tyre size is indicated on the tyre sidewall in millimetres or inches.
- Notation for millimetre specification: width-inner diameter, e.g. 52-559.
  The inflated tyre is 52 mm wide, the inner diameter is 559 mm.
- Notation for inches: inside diameter × width, e.g. 26“ × 2.35“.
  The inflated tyre is 2.35“ wide, the inner diameter is 26“.

The tyre and rim are not airtight, but the air is held inside the tyre with the help of a tube, which is filled with air through the valve.
The only exceptions are tubular tyres and UST tyres.

→ Make sure that the tyres are not cracked or damaged by foreign objects.

→ Check the degree of wear of the tyre tread and ensure that the tyres are not excessively worn.

→ Consult a two-wheeler dealer if the tyres are cracked or damaged or if the tread is badly worn.

12.1.1 Valve types

→ Contact a bicycle dealer to purchase an air pump with a suitable valve plug or adapter for your valve.

The following valve types (incl. operating instructions) are used as standard for bicycle inner tubes:

- Presta valve (Sclaverand): secured with a plunger in the valve.

1. Turn the knurled screw counterclockwise to the maximum to open the valve.
2. Place the appropriate valve plug or adapter on the valve to inflate the tyre.
3. Press down the knurled screw (without a valve plug or adapter on the valve) to deflate.
4. Turn the knurled screw clockwise to the maximum to close the valve.

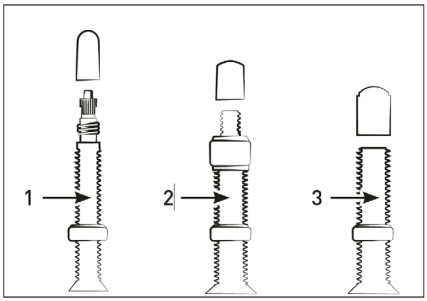


Fig.: Valve types (exemplary)
1 Presta valve (Sclaverand)
2 Flash valve (Dunlop)
3 Schrader valve

- Flash valve (Dunlop): secured with union nut.

1. Turn the upper knurled nut anticlockwise upwards to release air from the tyre.
2. Unscrew the upper knurled nut completely to be able to change the valve core.
3. Turn the upper knurled nut clockwise to the maximum to close the valve.

- Car valve (Schrader): secured with a plunger in the valve.

1. Press the valve plunger down (into the valve) to release air from the tyre.

12.1.2 Tyre inflation pressure

WARNING

If the tyre pressure is too high, the inner tube may burst or the rim may break while driving; if the tyre pressure is too low, the inner tube may be damaged.
Risk of accident and injury!
- Observe the information on maximum and minimum tyre pressure.
- Use an air pump with pressure indicator.

Note the maximum tyre inflation pressure, determined by the lower of the two values indicated on the rim or tyre sidewall.

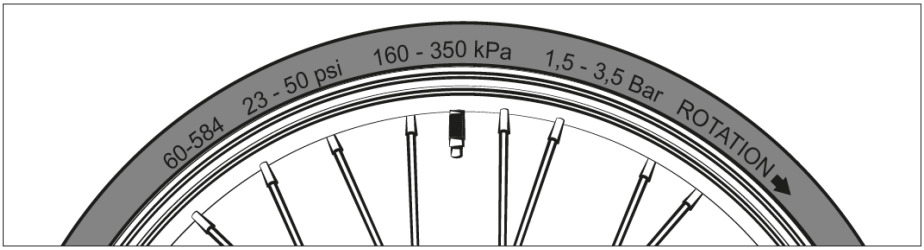


Fig.: Imprint on the tyre sidewall (exemplary)

A tyre inflation pressure corresponding to the specified lower limit is suitable for:
- light drivers,
- Riding on uneven surfaces,
- Driving with higher suspension comfort with higher rolling resistance.

→ Regularly check that the tyre inflation pressure is within the specified range and correctly matched to the driver and driving intentions.

→ Observe the information on maximum and minimum tyre inflation pressure.

→ Fill the tyre with air
- at least according to the specified lower limit and
- at most according to the upper limit indicated.

→ Use an air pump with a pressure indicator to check the tyre pressure during inflation.

12.2 Settings

The tyre pressure influences the rolling resistance and the suspension of the pedelec.
1. Make sure that your air pump has the appropriate valve plug or adapter for your valve.
2. Remove the protective cap from the valve.
3. Check the tyre pressure using a pressure gauge or an air pump with a pressure indicator.
4. Increase or decrease the tyre pressure as desired by inflating or deflating the tyre.
5. Close the valve with the protective cap previously removed.
6. After adjusting the tyre pressure, make sure that the lower knurled nut of the valve is correctly and firmly seated. If necessary, fix the knurled nut by turning it clockwise towards the rim.

13 More components

13.1 Handlebar

13.1.1 Basics

The handlebars of the pedelec are the most important element for directional control and control elements such as the brake lever are located on them.
Depending on the model, a handlebar stem with external clamping or a handlebar stem with internal clamping is installed on your pedelec.

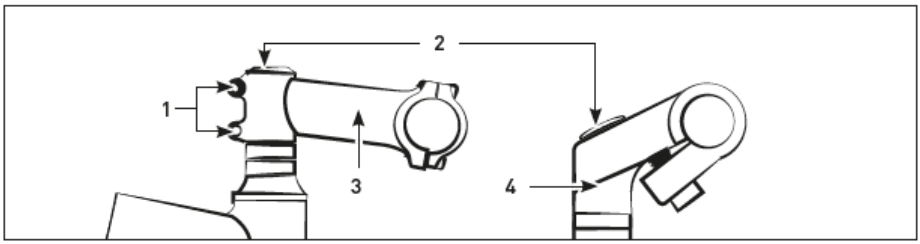


Fig.: Handlebar stems

1 screws	3 Handlebar stem with outer clamp
2 Cap	4 Handlebar stem with inner clamp

With some models, the inclination setting on the handlebar stem can also be varied.

→ Contact a two-wheeler dealer if you have any questions about how to handle it, if the tilt setting can be changed on your model.

13.1.2 Operate handlebars

→ When riding, hold both handlebar grips with your hands. The wrists should not bend and you should adopt a comfortable sitting position when riding.

13.1.3 Settings: Handlebar height

WARNING

Improperly carried out settings endanger the function and safety of the components.
Risk of accident and injury!

- Observe torques.
- Observe the minimum insertion depth of the handlebar stem.

13.1.3.1 Handlebar stem with outer clamp

Adjusting the handlebar height of a handlebar stem with outer clamp requires expertise.

→ Contact a bicycle dealer to have the handlebar height adjusted for the handlebar stem with outer clamp.

13.1.3.2 Handlebar stem with inner clamp

1. Pull off the cap on the top of the handlebar stem with inner clamp (see fig. „Handlebar stems“, right).
2. Loosen the inner screw by one to two turns anticlockwise.
3. Adjust the desired handlebar height by moving the handlebar stem with inner clamp up or down. Please note that the handlebar clamp may only be moved upwards so far that the corresponding marking on the handlebar stem with inner clamp is not visible (see illustration „Handlebar stem with inner clamp“).
4. Fix the setting by tightening the inner screw clockwise. When doing so, take the corresponding torques into account.

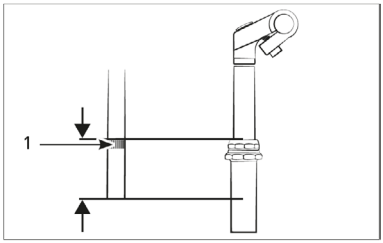


Fig.: Handlebar stem with inner clamp
1 Marking

5. Put the previously removed cap back on the handlebar stem with inner clamp.

13.1.4 Settings: Handlebar direction

13.1.4.1 Handlebar stem with outer clamp

NOTE

If you adjust the handlebar stem with outer clamp improperly, the headset bearing may be damaged.
Risk of damage!

- Tighten the upper bolt on the handlebar stem with the outer clamp at most so that the headset bearing has no play, but the bearing and handlebars can move freely at the same time.

1. Pull off the cap on the top of the handlebar stem with outer clamp (see fig. „Handlebar stems“, left).
2. Loosen the screw on the top by half a turn counterclockwise.
3. Loosen both screws on the stem clamping counterclockwise so far that you can turn the handlebars against the front wheel (see fig. „Head tube“).

The following describes the adjustment of the steering head bearing.

4. Turn the screw on the top side clockwise in the smallest increments (by no more than an eighth of a turn each time).
5. Tighten the screw clockwise so that the headset bearing is fixed and has no play.
6. Hold down the handbrake for the front wheel and try to push the pedelec back and forth to see if the headset bearing is fixed and has no play.
7. Lift the pedelec by the frame and tilt the frame to one side:
8. The front wheel must be movable in this position and move to the left or right by itself. The headset bearing is correctly adjusted if it is fixed and has no play and the front wheel is movable and moves to the left or right by itself.

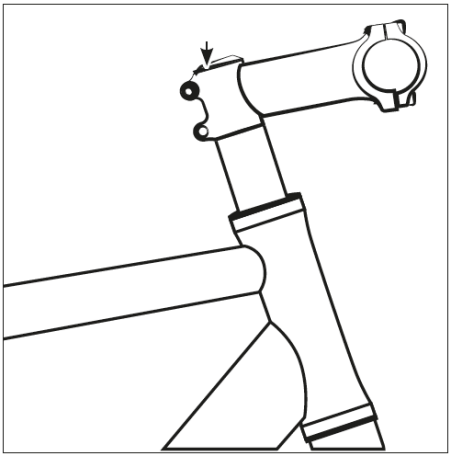


Fig.: Steering head tube

1 screws	3 Handlebar stem
2 Cap	4 Steering head bearing

9. Align the handlebar direction so that the handlebar is at a 90° angle to the front wheel (see fig. „Handlebar direction“).
10. Fix the setting by tightening both screws on the handlebar stem clockwise. Take the corresponding torques into account.
11. Put the cap back on the handlebar stem with external clamping.

13.1.4.2 Handlebar stem with inner clamp

1. Pull off the cap on the top of the handlebar stem with inner clamp (see fig. „Handlebar stems“, right).
2. Loosen the screw on the top by half a turn anticlockwise.
3. Align the handlebar direction so that the handlebar is at a 90° angle to the front wheel (see fig. „Handlebar direction“).

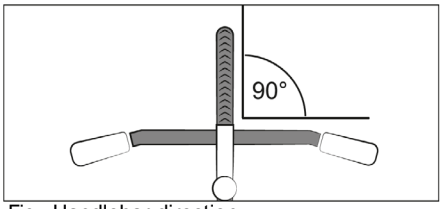


Fig.: Handlebar direction

4. Fix the setting by tightening the inner screw clockwise. When doing so, take the appropriate torques into account.
5. Put the previously removed cap back on the handlebar stem with inner clamp.

13.1.5 Adjusting the headset bearing

You need the following tools to adjust the steering head bearing:

- 2× open-end wrench/control set spanner (spanner size depends on model)

Proceed as follows to adjust the steering head bearing:

1. Turn the lock nut anticlockwise to loosen it.

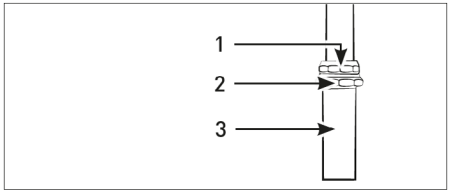


Fig.: Steering head bearing

1 Lock nut
2 Bearing shell
3 Steering head tube

2. Tighten the bearing shell clockwise. The headset bearing must not have any play.
3. Hold down the handbrake for the front wheel and try to push the pedelec back and forth to see if the headset bearing is fixed and has no play.
4. Lift the pedelec by the frame and tilt the frame to one side:
   - The front wheel must be movable in this position and move to the left or right by itself. The headset bearing is correctly adjusted when it is fixed and has no play and the front wheel is movable and moves to the left or right by itself.
5. Fix the setting by holding the bearing shell with one hand and tightening the lock nut clockwise. When doing so, take the corresponding torques into account.
6. Check the handlebar position: If necessary, adjust the handlebar direction so that the handlebar is at a 90° angle to the front wheel (see fig. „Handlebar direction“).

13.2 Saddle

13.2.1 Basics

The saddle acts as a seat for the rider.
The saddle shape should be chosen according to the intended use and the rider's personal preferences and physical characteristics.

13.2.2 Adjust saddle

With the saddle optimally adjusted, the rider is able to adopt a comfortable sitting position, reach all the controls on the handlebars easily and rest his feet on the ground.

13.2.2.1 Saddle height

WARNING

Improper adjustment of the saddle height endangers the function and safety of the seat post.
Risk of accident and injury!

- Observe the minimum insertion depth of the seat post.

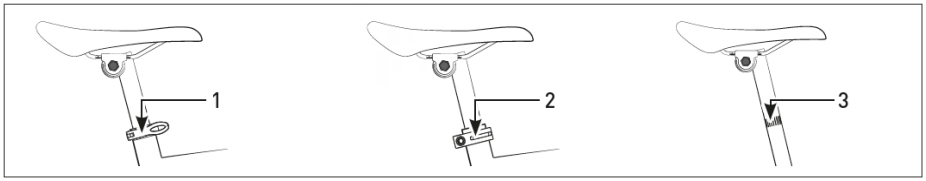


Fig.: Seat post clamp

1 Quick release 2 Clamping screw 3 Marking

1. Fix the saddle with one hand.
2. With the other hand, release the seat post clamp by:
   - open the quick-release (1) (see section „Quick-release“ on page 83).
   - turn the clamping screw (2) on the seat post clamp counterclockwise (see fig. „Seat post clamp“).
3. Move the saddle up or down. Make sure that the marking (3) on the seat post is not visible (see fig. „Seat post clamping“).
4. Align the saddle in line with the frame.
5. Fix the setting by pressing:
   - lock the quick-release. When doing so, make sure that the quick-release lever is fully in contact with the seat tube.
   - tighten the bolt on the seat post clamp clockwise. When doing so, take the appropriate torques into account.
6. Make sure the seat post is fixed by sitting on the saddle and bobbing up and down.
7. Make sure that the saddle is fixed by trying to twist it with a little pressure.

→ If necessary, adjust the quick-release setting if the saddle is not fixed (see section „Quick-release“ on page 83).

Some models have a height-adjustable seat post that can be varied within a range of 100 mm.

1. Press and hold the button of the corresponding control on the handlebar.
2. Pull the saddle up or apply pressure to the saddle to make it lower.
3. Fix the setting by releasing the held button.
4. If necessary, adjust the saddle height using the seat post clamp.

13.2.2.2 Saddle position

On some models, the saddle angle and distance to the handlebars can be adjusted.

1. Depending on the model, loosen the bolt or bolts on the seat post by one to two turns counterclockwise (see fig. „Saddle clamping“).
2. Align the saddle by sliding it into the correct position. On models with several bolts you have to turn the loosened bolts against each other to adjust the saddle angle.
3. Fix the adjustment by tightening the bolt(s) on the seat post clockwise. Take the appropriate torques into account.
4. Make sure that the saddle is fixed by trying to move it with a little pressure.

→ Contact a bicycle dealer if the saddle cannot be fixed firmly or if you are unsure.

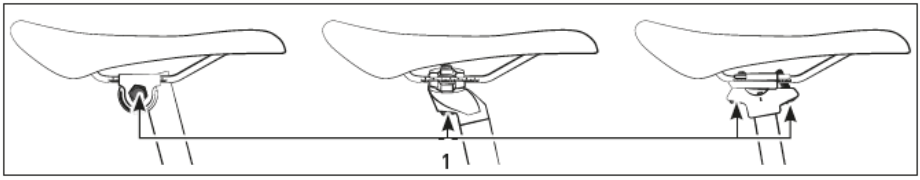


Fig.: Saddle clamp
1 Bolt

13.3 Pedals

13.3.1 Basics

The pedals are attached to the pedal cranks. The pedelec is propelled with the feet via the pedals.

Depending on the pedelec model, the pedelec is equipped with folding pedals, block pedals or clipless pedals.

13.3.2 Operate pedals

→ Pedal so that the chain or belt rotates to set the pedelec in motion.

13.3.3 Fit pedals

→ When mounting pedals, note that the right pedal has a right-hand thread and the left pedal has a left-hand thread. The tightening of the pedal threads in the crank is done by screwing in both pedals in the direction of travel and the loosening of both pedals by screwing out in the opposite direction of travel.

13.4 Luggage carrier

13.4.1 Basics

NOTE

Improper installation of a luggage rack can damage components.
Risk of damage!
- Have the luggage rack mounted by the bicycle dealer.

The luggage rack is designed to carry lighter luggage on it while riding. Depending on the model, it is a luggage carrier with clamp bracket, a luggage carrier with tension straps or a system luggage carrier.

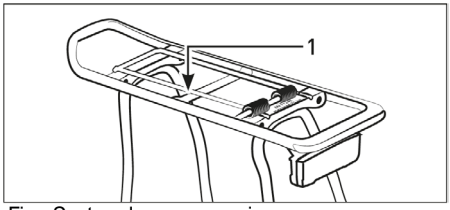


Fig.: System luggage carrier
1 Clamp bracket

→ Do not modify the luggage carrier, otherwise the stability or functioning may be impaired.

→ Contact a bicycle dealer if you intend to retrofit or convert your pedelec or luggage carrier.

→ When retrofitting or converting your pedelec, only use luggage carriers that meet the specifications according to DIN EN ISO 11243.

→ Contact a bicycle dealer for the installation of the luggage carrier.

→ Ask a bicycle dealer about the special features of system racks.

→ Load the luggage carrier according to the specifications for the intended maximum load.

13.4.1.1 Maximum load

NOTE

Overloading the luggage carrier can damage components.
Risk of damage!
- Observe the maximum load of the luggage carrier and the maximum total weight of the pedelec when loading.

Maximum load of the luggage carriers
- Rear carrier: 25 kg
- Front carrier: 12 kg

Depending on the model, the maximum load of some front carriers can be 7 kg.

→ Note the embossed indication of the maximum load of the luggage carriers (see fig. „Maximum load of some front luggage carriers“).

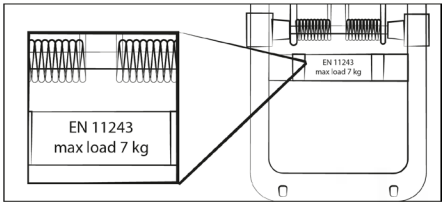


Fig.: Maximum load of some front carriers

13.4.2 Operate luggage carrier

WARNING

Improper loading of the pedelec endangers the functions and safety of the pedelec.
Risk of accident and injury!
- Do not attach luggage (bags or similar) to the handlebars.
- Secure luggage on the carrier to prevent it from falling or slipping.
- Only use undamaged tension belts or similar.
- Use proper bicycle bags from a specialist dealer.
- Take into account changes in handling due to additional load.
- Position the luggage so that the centre of gravity is in the middle.

CAUTION

When abruptly releasing tensioning straps or clamping brackets, you can pinch your fingers or be hit by straps snapping back.
Risk of injury!
- Operate the tensioning straps and clamping brackets carefully and hold them securely when opening and closing.

13.5 Luggage

- → When loading the pedelec, make sure that reflectors or lights are still clearly visible.
- → When riding, take into account the additional weight and the possibly unfamiliar riding behaviour. You may have to reckon with a longer braking distance and changed steering behaviour.
- → Secure the luggage on the luggage carrier with tension straps or similar to prevent it from falling or slipping.
- → Place heavy luggage so that the centre of gravity is as low as possible, e.g. in panniers.
- → Always make sure that tension straps or ropes for fastening cannot get caught in moving parts, e.g. the rotating rear wheel or the pedal crank.

13.6 Bell

13.6.1 Basics

A bicycle bell is usually a bright sounding metal bell that you use to signal other road users to get your attention.

- → Contact a bicycle dealer to have the bell replaced if you cannot produce a clearly audible signal with your bell.
- → Position the bell on the handlebars so that you can reach it comfortably without taking your hand off the handlebar grip.

13.6.2 Operate bell

- → Press and then release the bell button to generate a signal.

13.6.3 Set bell

- → Position the bell on the handlebar so that you can reach it comfortably without taking your hand off the handlebar grip.

13.7 Stand

13.7.1 Basics

The stand allows you to park the pedelec upright when not in use.

13.7.2 Operate stand

→ Hold the pedelec and guide the stand upwards, e.g. with your foot, if you want to use the pedelec.

→ Hold the pedelec and guide the stand downwards to park the pedelec.

→ Shift the weight of the pedelec so that it is held by the stand.

→ Release the pedelec when it is secure without tipping over.

→ Use a suitable lock when parking the pedelec to protect it from theft and use by unauthorised persons.

13.7.3 Adjust stand

→ Some stand models can be adjusted.

→ Adjust the stand if the function of the stand is affected.

→ Consult a two-wheeler dealer if you have problems adjusting the stand or are unsure.

13.8 Frame lock

Depending on the model, your pedelec has a frame lock. The frame lock does not provide sufficient protection against theft. Connect the pedelec to a fixed object, e.g. a bicycle stand.

13.8.1 Close frame lock

1. SInsert the key into the lock and turn it to open the lock.
2. Guide the handle downwards to the maximum. The lock will engage. Note that the lock bolt must pass between the spokes.
3. Pull the key out of the lock.

13.8.2 Open frame lock

1. Insert the key into the lock and turn it. The lock unlocks.
2. Push the handle upwards as far as it will go to open the lock.
3. Pull the key out of the lock.

13.9 Suspension

A suspension adjusted to the rider‘s body weight increases riding comfort and safety on uneven tracks. The individual adjustment of the suspension requires expertise; it may be necessary to replace the suspension components.
Consult a bicycle dealer if you are not familiar with the adjustment of the suspension or are unsure.

WARNING

If the suspension is improperly adjusted, this can affect the grip of the pedelec depending on the road surface.
Risk of accident and injury!

- Have the basic adjustment of the suspension carried out by the bicycle dealer.

WARNING

The suspension components are under tension. If you handle the suspension seat post, the suspension fork or the rear frame damper improperly, they can come loose in an uncontrolled manner.
Risk of accident and injury!

- Have the suspension seat post, suspension fork and rear frame damper removed and repaired exclusively by the bicycle dealer.

NOTE

If the suspension is improperly adjusted, it will affect ride comfort and the components may be damaged.
Risk of damage!

- Have the suspension checked by a bicycle dealer if you notice any unusual noises or hard jolts during suspension.

13.9.1 Suspension fork

13.9.1.1 Basics

The suspension fork absorbs shocks and road irregularities at the front wheel.

→ Keep the sliding surfaces of the suspension components and the seals free of dirt.

→ Remove contamination immediately using a clean cloth, lightly oiled if necessary.

→ After cleaning, apply some lubricant to the sliding surfaces, e.g. universal oil. If necessary, ask a bicycle dealer for advice on suitable lubricants and care products.

→ After lubricating, apply pressure to the suspension five times so that the suspension fork dips into the mount and then remove excess lubricant using a clean cloth.

→ Consult a bicycle dealer if you hear unusual noises during suspension or if you do not notice any resistance when compressing the suspension.

13.9.1.2 Sag

The term „sag“ refers to the compression, i.e. the yielding of the suspension due to the rider‘s body weight.
Depending on the model, the sag should be 15-30 % of the total spring travel.
The sag influences the spring tension, but not the hardness of the suspension.
The suspension should only compress by a few mm when the rider sits on the saddle and the sag is optimally adjusted.
The individual adjustment of the sag requires expertise, especially if there are several suspension elements.

It may be advisable to have the installed spring replaced by a harder or softer spring from the bicycle dealer for optimum adjustment of the suspension.

13.9.1.3 Lock-Out

The „Lock-Out“ function locks the suspension fork, reducing suspension bounce or dip, e.g. when the suspension dips when riding with strong force.

13.9.1.4 Rebound and compression damping

By adjusting the rebound and compression damping, the damping or the response behaviour of the suspension is influenced. The ratio of rebound and compression damping is decisive, which is why only the rebound damping can be manually adjusted on some models. The ratio of rebound and compression damping is determined by the road surface and, when optimally adjusted, ensures that the wheels remain in contact with the ground.

13.9.1.5 Operation

The suspension fork type specifies how the suspension fork is to be operated.
If the suspension fork installed on your model is equipped with different or additional operating options, please refer to the relevant manufacturer‘s documentation or contact a bicycle dealer.

13.9.1.6 Lock-Out

NOTE

Using the lock-out function increases the wear and tear on the components.
Risk of damage!

- Only use the lock-out function if this has a positive effect on the driving behaviour.

Some suspension fork models can not only be operated, but also adjusted.

Depending on the model, a rotary knob on the top of the suspension fork or a remote control on the handlebars act as the operating element for the lock-out (see fig. „Lock-out operation“).

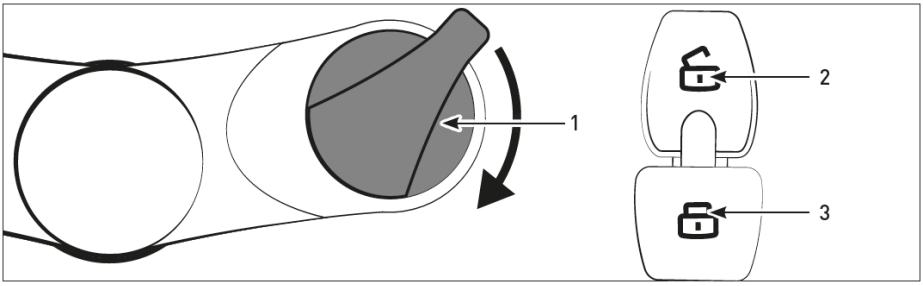


Fig.: Lock-out operation (exemplary)

1 Rotary knob

2 Unlock button

3 Lock button

→ Turn the rotary knob clockwise by a quarter turn or press the lock button to lock the suspension fork.

→ Turn the knob a quarter turn anticlockwise or press the unlock button to unlock the suspension fork.

Despite the lock, the suspension compresses up to 15 mm on uneven road surfaces.

13.9.1.7 Adjusting the mechanical suspension

1. Pull the dust protection caps off all immersion tubes vertically upwards.
2. Turn the knob on the immersion tube in (direction "+") using a coin to increase the spring preload (see fig. "Spring preload").
3. Turn the knob on the immersion tube in (direction „-“) using a coin to reduce the spring preload (see fig. „Spring preload“).
4. Make sure that the spring preload is set the same on both sides.
5. Consult a two-wheeler dealer if you have problems adjusting the suspension or are unsure.

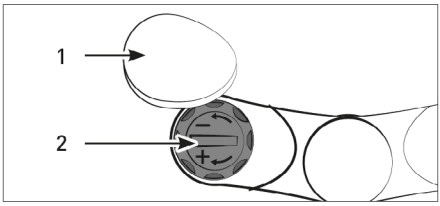


Fig.: Spring preload
1 Dust cap
2 Rotary knob

13.9.1.8 Adjusting the pneumatic suspension

NOTE

If dampers are improperly adjusted, the suspension components may be damaged.
Risk of damage!
- Have the pneumatic dampers adjusted by the bicycle dealer.

Adjusting the pneumatic suspension requires expertise.

→ Consult a two-wheeler dealer if you are unfamiliar or unsure about adjusting a suspension.

→ Use a suitable air pump to adjust the pneumatic suspension.

→ Read the manufacturer's documentation to find out about the permissible air pressures.

13.9.1.9 Suspension fork travel

Proceed as follows to shorten the spring travel:

1. Press and hold the „Push“ button (see fig. „Spring travel“).
2. Apply pressure to the handlebar from above so that the suspension fork sinks into the receiver. The further you push the suspension fork into the seat, the shorter the suspension travel.
3. Release the „Push“ button to fix the setting.

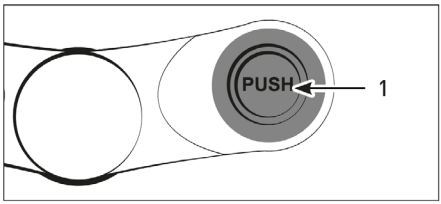


Fig.: Spring travel
1 „Push“ button

Proceed as follows to extend the spring travel:

1. Press and hold the „Push“ button (see fig. „Suspension travel“).
2. Fix the front wheel and hold the handlebars pulled upwards so that the suspension fork moves out of the mount. The further you pull the suspension fork out of the mount, the longer the suspension travel.
3. Release the „Push“ button to fix the setting.

13.9.2 Rear frame damper

A rear frame damper adjusted to the rider‘s body weight and the intended use increases riding comfort and safety on uneven trails.
The individual adjustment of the rear frame damper requires expert knowledge; it may be necessary to replace the suspension components.

→ Consult a bicycle dealer if you are not familiar with the adjustment of the rear frame damper or are unsure.

→ If necessary, refer to the additional manufacturer documentation for the rear frame damper to find out how to adjust the rear frame damper.

13.9.2.1 Basics

The rear frame damper is used to absorb shocks and road irregularities at the rear wheel. The rear frame damper is located in the middle of the bicycle frame.

→ Keep the sliding surfaces of the suspension components and the joints free of dirt.
- Remove contamination immediately using a clean, lightly oiled cloth if necessary.

→ After cleaning, apply some lubricant to the sliding surfaces, e.g. universal oil. If necessary, ask a bicycle dealer for advice on suitable lubricants and care products.
- After lubricating, apply pressure to the saddle five times so that the rear frame damper dips into the receptacle and then remove excess lubricant using a clean cloth.

→ Contact a two-wheeler dealer if you notice unusual noises during suspension or if you do not notice any resistance when compressing the suspension.

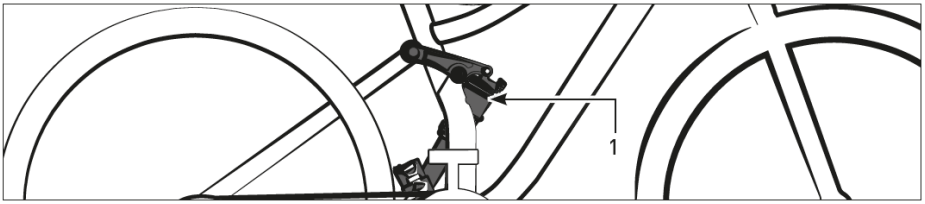


Fig.: Rear frame damper
1 Damper

13.9.2.2 Settings

Adjusting the rear frame damper requires expertise.

→ Consult a two-wheeler dealer if you are unfamiliar or unsure about adjusting a rear frame damper.

13.9.3 Suspension seat post

A suspension seat post adjusted to the rider‘s body weight increases riding comfort and safety on uneven trails.
The individual adjustment of the suspension seat post requires expertise.

→ Consult a bicycle dealer if you are not familiar with the adjustment of the suspension seat post or are unsure.

13.9.3.1 Basics

With the help of the suspension seat post, shocks and road irregularities are absorbed at the saddle.

→ Keep the sliding surfaces of the suspension components and the joints free of dirt.

→ Remove dirt immediately using a clean cloth, lightly oiled if necessary.

→ After cleaning, apply some lubricant to the sliding surfaces, e.g. universal oil.

→ If necessary, ask a bicycle dealer for advice on suitable lubricants and care products.

→ After lubrication, apply pressure to the saddle five times so that the seat post is immersed in the receptacle and then remove excess lubricant with a clean cloth.

→ Consult a bicycle dealer if you hear unusual noises during suspension or if you do not notice any resistance when compressing the suspension.

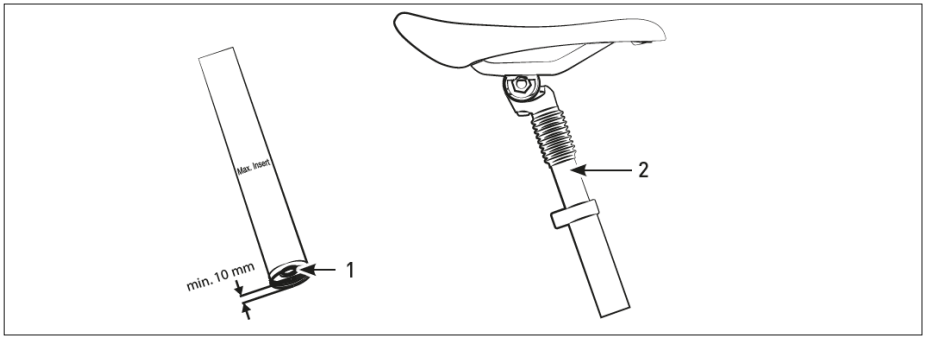


Fig.: Adjusting the suspension seat post
1 Adjustment screw
2 Suspension seat post

13.9.3.2 Settings

Adjusting the suspension seat post requires expertise.

→ Consult a bicycle dealer if you are not familiar with the adjustment of a suspension seat post or are unsure.

Proceed as follows to adjust the suspension seat post yourself:

1. Remove the suspension seat post from the seat tube (see section „Adjusting the saddle“ on page 69).
2. Turn the adjustment bolt at the bottom of the seat post
   - clockwise to increase the spring rate.
   - counterclockwise to reduce the spring stiffness.
3. When adjusting, make sure that the adjustment screw remains at least 10 mm inside the suspension seat post.
4. Contact a bicycle dealer if you have problems adjusting the suspension seat post or are unsure.

13.10 Quick release

13.10.1 Basics

Quick-releases allow you to remove, install or adjust components quickly and without the use of tools.
The following components can have quick-releases:

- Axles (quick-release axles): Fastening of front or rear wheel
- Seatpost clamp: attachment of the seatpost

→ Check if there are any unusual noises when opening or locking the quick release.

→ Remove dirt from the quick release with a clean cloth.

The removal or installation of the front and rear wheel requires expertise.

→ Only remove or fit the front and rear wheels yourself using the quick-release axles if you have sufficient expertise in doing so.

13.10.2 Operate quick release

WARNING

If the quick-release axles or the quick-release on the seat post are not properly locked, the wheels may come loose while riding or the saddle may come loose while riding.
Risk of accident and injury!

- In case of lack of expertise or tools, have the quick-release axles installed and removed by the bicycle dealer.
- Before riding off, make sure that the quick-release lever is locked with sufficient pretension and is in contact with the component/frame.

CAUTION

If you handle the quick release skewers improperly, you can crush your fingers or other parts of your body.
Risk of accident and injury!

- Handle the quick release carefully.

13.10.2.1 Open quick release

→ Pull the quick-release lever outwards from the corresponding frame element to open it.

13.10.2.2 Lock quick release

→ Push the quick-release lever in the direction of the corresponding frame element so that it rests against the seat tube (seat post clamp) or the fork (axle) to lock the quick-release.

→ Adjust the quick-release correctly if you notice that the seat post or quick-release axle are not fixed when the quick-release is closed.

13.10.3 Adjust quick release

1. Pull the quick-release lever outwards from the corresponding frame element to open it.
2. Turn the adjustment screw or the axle nut clockwise by a quarter turn.
3. Lock the quick-release by pressing the quick-release lever to the maximum against the corresponding frame element.
4. Check whether the seat post or front or rear wheel are fixed with the quick-release.
5. If necessary, repeat steps 1-3 until the seat post or front or rear wheel are fixed with the quick-release locked.

→ Adjust the preload on the quick-release if the quick-release is too easy to put on (with little/no effort).

→ Consult a bicycle dealer if you have problems adjusting a quick-release or are unsure.

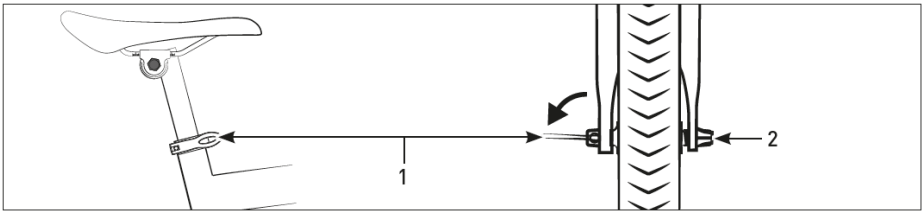


Fig.: Adjusting the quick-release
1 Quick release lever
2 Axle nut

14 Storage and disposal

This section contains information on how to safely store and dispose of your battery and pedelec.

14.1 Store battery

WARNING

A damaged or improperly used battery can irritate and injure the respiratory tract, eyes or skin.

Risk of injury!

- Seek medical attention immediately in case of complaints.
- If the battery is defective, provide fresh air.
- Avoid contact with the battery fluid.
- If battery fluid gets into eyes, rinse eyes with plenty of water. Seek medical attention immediately.

If you are not going to use the battery for a long time, proceed as follows when storing it:

→ Charge the battery to approx. 60 % of its capacity.

→ After each charge, disconnect the battery from the charger and pull the mains plug out of the socket.

→ Remove the battery from the battery holder.

→ Store the battery frost-free and protected from large temperature differences in a dry room, ideally at +10 to +15 °C, e.g. in a cellar room.

→ Store the battery so that it is
- is protected from falling down,
- is protected from moisture and
- is out of reach of children and animals.

→ If you store the battery for more than 3 months, charge the battery to about 60 % of its capacity every 3 to 6 months.

14.2 Store pedelec

If you are not going to use the pedelec for a longer period of time, proceed as follows when storing it:

→ Store the pedelec frost-free and protected from large temperature differences in a dry room.

→ Store the pedelec hanging from the frame to prevent deformation of the tyres.

→ Clean the pedelec before storing it.

→ On a pedelec with derailleur gears, shift to the small chain wheel at the front and the smallest sprocket at the rear in order to relieve the cables as much as possible.

14.3 Pedelec cleaning

In the interest of your safety, please also observe the following safety instructions:

CAUTION

Moving parts of the pedelec can pinch or crush body parts.
Risk of injury!
- Immobilise moving parts if possible.
- Wear protective gloves.

NOTE

Using the wrong cleaning agents can cause damage to property.
Risk of damage!
- Do not use aggressive cleaning agents.
- Do not use sharp, edged or metallic cleaning objects.
- Do not use a hard water jet or high-pressure cleaner.

→ For cleaning you will need:
- clean cleaning cloths
- mild, lukewarm soapy water
- sponge or soft brush
- Detergent and preservative

→ If necessary, ask your bicycle dealer for advice on suitable cleaning and preserving agents.

→ Clean the pedelec regularly even if it is only slightly dirty.

→ Wipe all surfaces and components with a sponge moistened with a mild soap solution.

→ After cleaning, wipe all surfaces and components dry.

→ Preserve painted surfaces and metallic surfaces on the frame at least every six months.

→ Colours can fade under UV radiation and other environmental conditions.

→ Do not preserve the rims of rim brakes or the brake discs of disc brakes.

→ Observe and follow the instructions in the manufacturer's information for cleaning individual components.

→ The pedelec must always be maintained with suitable corrosion protection to prevent corrosion.

14.4 Disposal

Familiarise yourself with the disposal symbols visible on the packaging, the battery and the charger (see section „Symbols and signs“ on page 11).

14.4.1 Dispose of packaging

→ Dispose of the packaging according to type. Put cardboard and carton in the waste paper collection and foil in the recyclables collection.

14.4.2 Dispose of pedelec

For pedelecs, all rechargeable batteries and batteries as well as all operating parts containing rechargeable batteries or batteries must be removed before disposal. After removing all rechargeable batteries and batteries, the pedelec is considered an old electrical appliance and must be recycled.

→ Dispose of the pedelec at a recycling centre or a collection point in your town or municipality.

14.4.3 Disposing of rechargeable batteries and batteries

Rechargeable batteries that supply power to the motor and permanently installed display batteries are usually lithium-ion batteries that must be disposed of as hazardous waste.

→ Dispose of rechargeable batteries and batteries at a recycling centre or a collection point in your town or municipality.

14.4.4 Dispose of lubricants, cleaning and care products

Lubricants, cleaning and care products do not belong in household waste, in the sewage system or in nature.

→ Read the instructions on the packaging.

→ Dispose of lubricants, cleaning and care products at a recycling centre or collection point in your city or municipality.

14.4.5 Dispose of tyres and inner tubes

Tyres and inner tubes are not residual or household waste.

→ Dispose of inner tubes and tyres at a recycling centre or collection point in your town or municipality.

15 Warranty and guarantee provisions

15.1 General

The legal warranty regulations of the country in which the pedelec was purchased apply. Warranty claims must be made to the bicycle dealer from whom the pedelec was purchased.
To make warranty and guarantee claims, the proof of purchase for the pedelec in question must be presented. In addition, the completed handover protocol and the completed bicycle passport must be presented.
Furthermore, registration of the end customer in the „Warranty extension“ area on our website www.malaguti-bicycles.com is required. Should the registration or the inspections not be carried out, the statutory warranty of 2 years applies.

15.2 Warranty conditions

KSR Group GmbH provides a warranty on the frame in addition to the statutory warranty. The warranty is limited to the original purchaser, is non-transferable and applies exclusively to products that have been put into circulation by a dealer authorised by KSR Group GmbH.
The guarantee is: 6 years from the date of purchase on the frame

During the warranty period, product defects will be remedied by replacement or repair free of charge. All warranty services are only provided by a two-wheeler dealer designated by the company KSR Group GmbH.
The warranty only applies to pedelecs that have been final assembled and made ready to ride by a two-wheeler dealer authorised by the company KSR Group GmbH.

Warranty and guarantee claims do not exist:
- Damage caused by the pedelec being used contrary to the instructions in the user manual.
- in the event of damage caused by the use of unauthorised spare parts when replacing parts.
- in the event of damage caused by force majeure, accident, improper use, repairs not carried out professionally, lack of maintenance, lack of care or wear and tear.
- in the event of damage caused by the use of the pedelec in racing or competition.

If a frame is replaced in a warranty case, the warranty expires and no new warranty claim arises on the new frame.

16 Declaration of conformity

With the declaration of conformity and the CE mark affixed to the pedelec, the manufacturer of your pedelec declares that the product meets all requirements and other relevant provisions of Directive 2006/42/EC and the standards DIN EN 15194, DIN EN ISO 4210 and any other applicable directives and standards.
You will find the declaration of conformity enclosed with the packaging or at www.malaguti-bicycles.com

17 Bicycle passport

Manufacturer/Model _____

Frame size _____

Frame shape _____

Frame number _____

Suspension fork manufacturer _____

Model _____

Serial number _____

Gear system (manufacturer, type) _____

Brake (manufacturer, type) _____

Brake (manufacturer, type) _____

Wheel/tire size _____

Permissible total weight _____

Drive (manufacturer, type) _____

Battery (manufacturer, type) _____

Display (manufacturer, type) _____

Brake lever assignment

Right brake lever ☐ Front brake ☐ Rear wheel brake

Left brake lever ☐ Front brake ☐ Rear wheel brake

Other

Handover protocol

We wish you a good ride with your new pedelec!

Confirmation

☐ I have received verbal instruction on care, maintenance and the product. The original operating instructions were handed over to me in printed form.

☐ I am aware that the seller's warranty obligation only applies to product defects. There is no warranty for wear damage resulting from the normal use of the product.

☐ I have thoroughly inspected the entire product. The delivery was complete and without any apparent damage.

☐ I hereby confirm that the pedelec has been completely checked for safety by the specialist dealer and that all necessary adjustments have been made before handover.

Comments: _____

Stamp/Signature bicycle dealer | Place, date | Client‘s signature

18 Inspection protocol

1. Inspection

After approx. 200 km or 2 months

Date

Stamp / signature of the dealer

2. Inspection

After approx. 1000 km or 1 year

Date

Stamp / signature of the dealer

3. Inspection

After approx. 2000 km or 2 years

Date

Stamp / signature of the dealer

4. Inspection

After approx. 3000 km or 3 years

Date

Stamp / signature of the dealer

5. Inspection

After approx. 4000 km or 4 years

Date

Stamp / signature of the dealer

6. Inspection

After approx. 5000 km or 5 years

Date

Stamp / signature of the dealer

18.1 Space for notes

19 Publisher

KSR Group GmbH
Im Wirtschaftspark 15
3494 Gedersdorf
www.ksr-group.com

The stated bicycle weights are approximate
and may vary slightly due to production tolerances.

Images are for colour illustration only. For more detailed information, please refer to the specification list. Slight colour variations are possible due to production.

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