SEATEC

Electric Bike

with 4-level support and pushing aid
20”

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USER MANUAL

Rev. 2018

Electric Bike

with intuitive 4-level support

Your Seatec Blizzard Pro Electric Bike is equipped with four support modes that will make pedaling easier depending on cyclist type und intended use.

By using the display attached to the handlebar, you can quickly switch between the different modes.

Modus	Display	Description
ZERO	0	No electric support, all display functions are available
ECO	1	Efficient electric support at a high performance for a high reach
TOUR	2	Balanced support for long tours
SPORT	3	Powerful support for city and mountain rides
RACE	4	Maximum support for ambitious and athletic cycling

Preface

Dear customer,

thank you for choosing this Seatec Electric Folding Bike.
The electric drive was developed specifically for people who want to combine simple operation, compact design and high performance. Even with health impairments you don‘t have to miss out on the mobility and fun of cycling.

We hope your new Pedelec brings you great joy and we wish you a safe and accident-free trip !

Your SVB Team

Guarantee / Warranty

According to European law, you are rightfully entitled to a warranty of 24 months. The guarantee span for batteries is 6 months since they are wearing parts. Regard the additional information concerning the battery in Chapter 4.

Should you not be satisfied and decide to return the bike, you have to regard the following:

Sie sollten die Lackschutzhüllen noch nicht entfernt haben und nicht auf Wegen gefahren sein, die Verschmutzungen an der Bereifung zur Folge hatten.
Bicycles with obvious signs of use cannot be returned. To return it, the bike has to be in its original packaging.

Choose the bike according to your body size and weight. According to DIN EN 14764 the maximal load for bicycles for adults is limited to 100 kg. Damages that suggest overload, like broken off pedals, bent seat posts, crooked handlebars, etc., are not acknowledged as warranty damage.

Important notes

To avoid misuse, please thoroughly read this user manual before the electric bike's first use.

We suggest that you familiarise yourself with your new bicycle without making use of the motor support and to get used to functions like the brakes and gear change.

This SEATEC Electric Bike is a bicycle with pedaling and pushing aid, according to the european standard design prEN 15195 a so-called „EPAC" (Electrically Power Assisted Cycle) or Pedelec (Pedal Electric Cycle).
It is equipped with an electromotive support drive with a nominal capacity of 250 watts. The maximal speed is limited to 25 km/h and cannot be achieved through use of the drive support alone but is directly related to the cyclist's legwork. For this reason, Pedelecs do not require registration, insurance, driver's licence or helmet and are not limited to a certain age. By using the gear change, you can choose the pedaling speed in relation to the bicycle speed. The entirety of the electric drive unit is very light and is completely separated from the impeller when the motor is turned off due to a free wheel. Even without the use of the electric drive, this bicycle is conveniently easy to use. The slight resistance when pushing the bicycle backwards as well as the motor's slight humming are results of the bicycle's construction and are no deficiency.

Keep this user manual for future reference.

Your receive the electric bike in a pre-assembled state which is not in running condition.
Before the first use, you need to examine/adjust all screws etc. and tighten them if required! Brakes and hang-on parts are to be checked for flawless condition and correct fitting. Also assure a tight and ergonomically correct placement of the control panel on the handlebar.
ATTENTION: an inappropriate final assembly causes loss of warranty.

Complete the bike before first usage.
Check all screws and familiarise yourself with the folding mechanism. Careless, hasty or inexperienced handling can lead to injuries.

Before stowing the bicycle in the valise and taking it on board, you should have already checked all the bike's functions and familiarised yourself with the bike's riding characteristics on a thorough test ride.
Before stowing the bike in the valise, the pedals need to be folded up.

Should the tyres be out of round laterally/radially, reduce the air pressure and correctly position the mantle in the wheel rim. Afterwards, assure optimal tyre pressure between 2,8 and 4,6 bar.

According to road traffic regulations, every bicycle is to be equipped with lights.

This user manual does not share the properties of repair / installation and setting instructions. If you want to tune your bike yourself, you should have a certain basic knowledge or leave the bike at a specialised company for service or repair. Damages caused by an improper final assembly are not subject to guarantee/ warranty. Many of the bike's parts are standarised and available in specialised trade. Should you not be able to acquire certain parts, we will of course do our best to help you.

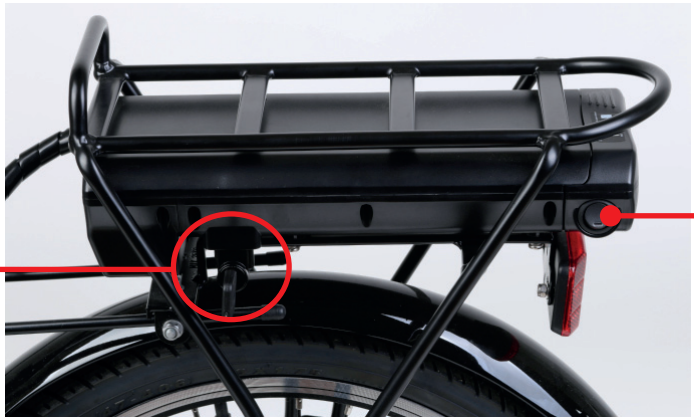
Please keep in mind that you bought an onboard fold-up bike and riding behaviour as well as stability cannot be compared to those of a tour or mountain bike. Limitations in resilience due to the folding mechanism and small size are to be expected. Overstraining, e.g. emergency stops when riding down a slope, heavy pedaling while standing or the transportation of heavy luaggage can lead to damages or breakage with injury risk.

Before every ride, check the correct fit of all quick release fastener clamping levers, the locking of the battery, the seat's height, the handlebar's height, the handlebar's position and the folding joints.

If you have additional questions about our products, feel free to call us. We will assist you immediately.

1. Lock Positions

On the left side of the bicycle rack there is a lock which locks the battery and secures it from loss and theft. After unlocking, the battery can be removed from the battery chamber, e.g. for charging.



ill. 1

***key position*:**
Clockwise rotation – Battery is locked
Counterclockwise rotation – Battery is unlocked

Before every ride, make sure that the battery is locked.

2. During operation

Before every ride, check the correct fit of all quick release fastener clamping levers.

***Activation*:**
First, check if the battery is locked (see Chapter 1). Activate the main switch on the battery (see ill. 1). This will simultaneously activate the control panel and the lights.

If you want to start the ride, get on your bike, pedal lightly and choose a support level by using the arrow buttons on the control panel.

The electric drive is only activated while pedaling and is immediately deactived when the brake is applied.

Regularly check the tyre's air pressure. It should be between 2,8 and 4,6 bar. You can only achieve maximal reach with a high enough air pressure.

When riding with an electric drive, the optimal support range is around 50-60 pedal rotations per minute.

The bike is equipped with 3-gear hub gears (with backpedal brake).

Further instructions for an optimized use of the electric drive can be found in Chapter 3.

The battery's current state of charge is displayed on the display on the handlebar and can also be seen on the battery itself. You can find more information on this topic in the following chapters.

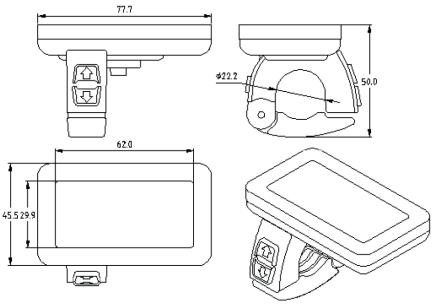
It is recommended to recharge the battery no later than when the battery's state of charge that is shown on the display starts to flash. Please note the information on lithium batteries in Chapter 5.

You can also see the battery's state of charge on an LED display on the battery itself. To activate it, push the "TEST" button.

3. Display Operation

The display that is attached to the handlebar is one of the most important operation elements of your eBikes. It offers the following options:

- Display of the battery‘s state of charge
- Switching between the electric support levels (0-4 levels)
- Speedometer (current, average and maximum speed)
- Trip display (trip distance and total distance)
- Duration of the current trip
- Battery drain (approximate) of a single trip
- Error display
- Display and setting parameters (only to be used by the manufacturer or the service workshop)



measurements in mm

3.1 User information

Before using the bike, you should check the display for stable fitting and adjust the viewing angle according to your personal needs.

Be careful! When using the control panel and always pay attention to traffic.

Do not separate any of the control panel's plug connections while the battery is turned on.

Avoid jolts or collision. Always secure your bike from falling over.

Do not remove the protection film from the display. The film protects the display from intruding fluids.

The display's default settings are set by the manufacturer to match your bike optimally and require no further adjustments. Making alterations by yourself can influence the handling and in the worst case lead to the loss of the guarantee.

Should a malfunction occur, contact your trader immediately.

3.2 Display and operation

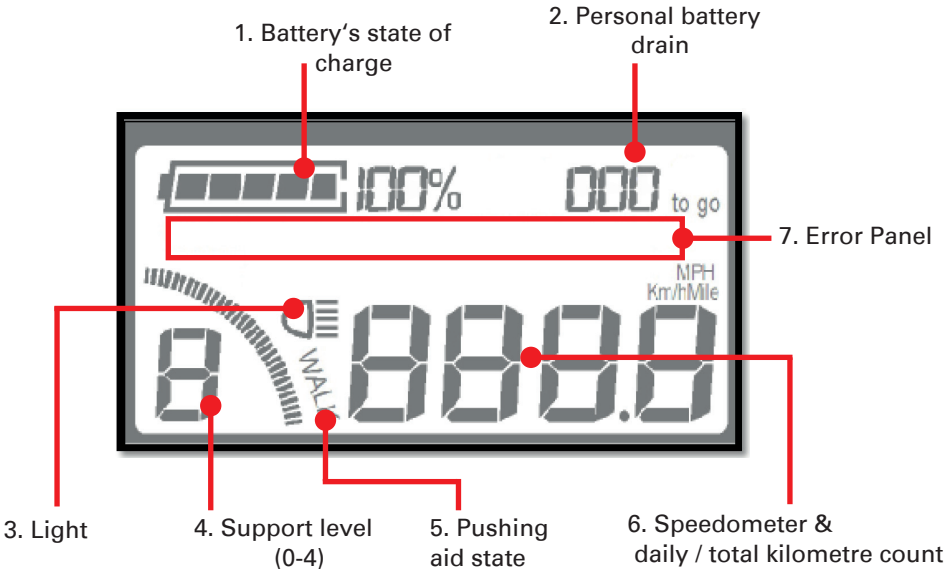
After turning on the battery, the control panel starts automatically.

Activating the display:

Push and hold the “MODE“ button for approx. 3 seconds.

>3 seconds pushing and holding - the display is activated

The LCD display’s layout:



1. **Battery’s state of charge**

The battery’s state of charge is presented in bars and in percent. If the battery is completely drained, the battery symbol flashes and you need to recharge the battery immediately.

Flashing - the battery is empty.
Please recharge immediately.

2. **Personal battery drain**
Displays the average battery drain. The display is reset automatically if the bike is out of use for over 10 minutes.

3. **Light**

Shows whether the light is turned on or off.

Please note:
As you turn on the battery, the light is turned on automatically.

You can turn the light on and off manually by pushing and holding the "up" arrow button for more than 3 seconds.

>3 seconds pushing and holding - the light is turned on / off.

4. **Support mode**

Shows the currently set support mode.

By using the arrow buttons you can choose between 4 support modes.

Please note:
support mode 0 = no electric engine support

5. Pushing aid state

Shows if pushing aid is active.

You can activate the pushing aid by pushing and holding the “down“ arrow button.

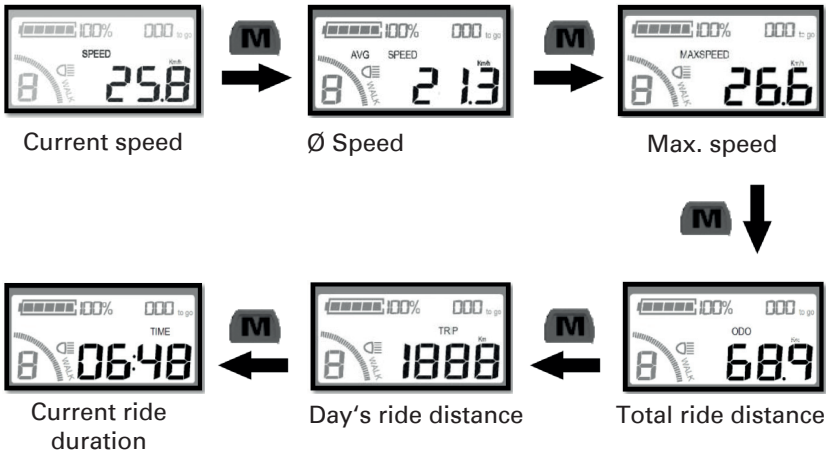
Pushing and holding - pushing aid is activated
Letting go - pushing aid is deactivated (applying the handbrake will also deactivate pushing aid.)

Please note:
The pushing aid accelerates the bicycle to approx. 6 km/h and thus enables easy pushing, e.g. on hills.

Please note that this is a pushing aid, not a starting aid. Do not use the pushing aid while riding the bike, as this can damage the motor.

6. Speed and trip display

By pushing the “Mode“ button, you can choose from the following options.

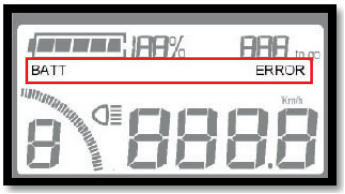


7. Error panel

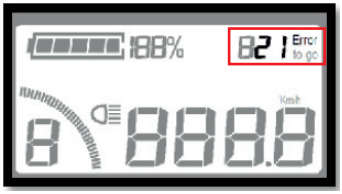
Should there be a malfunction concerning the bike‘s electronics, an error code representing the possible cause is displayed.

Should a malfunction occur, please examine the cause and contact your trader if necessary.

The error code can be displayed numerically or alphanumerically.



alphanumeric error code



numeric error code

Error code key:

Error Code	Error Description
21	electricity/voltage supply
22	motor control
23	missing engine control voltage
24	motor Hall sensor
25	brake sensor
30	connection to the controller
BATT	battery
CONTROLLER	controller
DISPLAY	display
SENSOR	sensor
MOTOR	motor

4. Folding mechanism

1. You receive your bike in a folded up state. To unfold it, carry out the following steps. To fold it up again after use, repeat the steps in reverse order.

1.

2. Fold out the handlebar and lock it using the quick release fastener (ill. similar).

2.

3. Fold out the kickstand and unfold the bike. Afterwards, lock the frame using the quick release skewer and the locking lever, which locks down automatically. Make sure that there is a slight resistance when locking the quick release skewer, if not, you need to adjust it. Should the quick release require a lot of strength to close or should it not close at all, readjustment is required.

3.

4. Release the saddle tube's quick release and adjust the seat's height. Afterwards, fixate the quick release once more. Keep in mind that the tube is made of black anodised aluminium, and thus is sensitive to scratches*.

4.

5. Fold out the pedals.

   To fold them up again at a later time, push them towards the bottom bracket.

5.

*Surface damages caused by use are not considered defects and are excluded from warranty/guarantee.

5. Battery

You can see the battery's state of charge by looking either at the display on the battery or that on the handlebar (see Chapter 2).

battery's state of charge display

charging socket

Make sure that no splash or rain water enters the switch, the charging socket or the battery case over the battery holder. When the bike is placed in the rain, make sure to place the bike so that water can only flow out of the battery holder and not inside. Should this not be an option, remove the battery and keep it in a dry environment.

5.1 Charging the battery

To charge the battery you may remove it from the bike.

1. Unlock the battery (see Chapter 1).
2. Remove the battery from the bracket.
3. Charge the battery.
4. After charging, place the battery back in the bracket and lock the battery bracket.

Charge the battery after every use!

- Only use the provided charger when charging the battery.
- Ideally, charge the battery in room temparature, between 10°C and 45°C in a dry and well ventilated surrounding. First, connect the charger to the battery charging socket. Only after should you proceed to connect the charger to the alternating mains voltage (230V AC). The state of charge is displayed on the charger. When the battery is charged, separate the connections in reverse order.
  Trickle charging after a long time of non-usage, like it is commonly used with lead acid batteries, should not be applied in this case (see also 5.2)
- Do not use the bike (for testing purposes) while the battery is charging.
- Do not use the charger during thunderstorms.

5.2 Important information concerning the bike‘s battery

As the owner of an Electric Bike you should know some things about the properties of lithium batteries.

We have collected information and technical background knowledge for you.

Modern battery systems for electric bikes consist of lithium-ion round cells or lithium-polymer flat cells.
To achieve the needed output voltage and capacity, the battery is equipped with multiple cells that are arranged in parallel and series circuits. The lithium batteries are equipped with control electronics which cause the cells‘ consistent charging process.

Lithium batteries with small measurements and light weight have a very high energy density. This causes the batteries to be sensitive. The construction of the bicycle‘s batteries already follows important safety measures. Despite this, you should handle the batteries with great care. Inappropriate use damages the batteries and poses risks. We are not accountable for any damages caused by wrong handling.

The battery‘s guarantee spans 6 months.

Note the following instructions. Disregard can lead to a shortened lifespan, in an extreme case to uselessness after just a few uses and thus the loss of entitlement to guarantee/warranty!

- **Do not ride until the battery is completely empty but charge it every now and then.** Many small charging processes extend the lifespan. To see the state of charge, check the display on the handlebar or on the battery.

- Avoid unnecessary strain on the battery. If you are using a bike **without electric drive**, you will change to a low gear when starting, ascending a slope or in strong headwind. If you choose a high gear, you will strain yourself and have a hard time.

  When starting, ascending or in strong headwind **with electric drive**,the motor can do the required work even in higher gears, however, this strains your battery.

  Conclusion: use the gear change when starting, ascending and in strong headwind.

- The electric drive is most efficient at 50 to 60 pedal rotations per minute. Only change to a higher gear when when you have exceeded this pedaling frequency.

- Regularly examine the tyre pressure.
  A somehwat “flat” tyre has a high rolling resistance and diminishes the battery reach.

- The use within temparatures spanning between 0°C to approx. 40°C is easiest on the battery.

- Charging is easy on the battery within temperatures of 20°C (room temperature), **never under 0°C**.

- During longer breaks between uses (1 to 2 weeks) only stow the batteries halfway charged and in approx. 20°C (+/-5°C) and at normal humidity. After 2 months, it should be recharged for approx. 2-3 hours using the corresponding charger.
  Attention: just recharge, do not fully charge.

Maintenance, storage and transport

Storage:

Over extended periods of time, lithium batteries should be stored not fully but halfway charged.

Procedure:
Charge the empty lithium battery approx. 2 - 3 hours using the corresponding charger.
After charging, separate battery and charger from each other and store them in a dry and well ventilated place.
Despite minor self-drain, this procedure should be repeated every 2 months.

Storage conditions for the lithium battery and charger:
Surrounding temperatures of - 5°C to 55°C and humidity from 5 % to 75%.
If the battery is out of use for more than a month (winter break), the ideal storage temperature is approx. 20°C (+/-5°C).
If you want to store the battery in a garage or a basement, please consider the humidity.
There should be no aggressive/corrosive liquids or objects within the surroundings of the place of storage.
The place of storage needs to have sufficient distance from strong heat sources or open fire.

Maintenance:

Clean the lithium battery with a damp cloth. Please regard the general safety notes. Pay special attention to dusty/sticky stainings in the area of the electric connectors. Here, current leaks can occur and lead to draining of the battery. Make sure that no water can enter the switch and keep the battery chamber dry.

Transport:
Due to the low flashpoint* of the lithium part, lithium batteries are classified as part of the category hazardous materials (flashpoint lithium = 170° C).

The transport of lithium batteries by land (car, bus, etc.) should be executed in a stable container. The battery connectors are to be secured from possible short circuits. During transport the container should protect the battery from vibrations, heavy collisions or deformation. The container should be stored in a cool place in the vehicle and be exposed to neither sun nore rain.

The transport of big lithium batteries* by air partly demands strict safety precautions. You can get more information from your airline.

*Batteries with more than 8 gramme of lithium count as "big". Depending on the battery's performance (watt-hours) it is possible to conclude the amount of lithium. 100 Wh equate to approx. 8 gramme of lithium. You can calculate the value of your lithium battery by multiplying the ampere-hour value with the nominal voltage. (e.g. 8,7Ah x 36 V = 313 Wh; equates approx. 25 g lithium).

General safety notes

- **Never short-circuit the PLUS and MINUS contacts on the charger or the main contacts on the backside of the battery.**
- Never discharge the battery over the charger's contacts.
- Do not charge the battery over the main contacts on the backside of the battery.
- Keep sufficient distance from strong heat sources or open fire.
- Do not expose the batteries to strong vibrations, collisions or high pressure.
- **Use the battery under mostly dry circumstances.**
- Make sure that no rain or splash water can enter the switch or the connector area.
- The main contacts on the backside of the battery should never be exposed to rain or water of any kind.
- Intruding water, saltwater or similar liquids can lead to a wrong charging current / a wrong charging voltage.
  In the worst case the battery could overheat, catch fire or explode.

- Use (drain) the battery in surrounding temperatures from - 20°C to 55°C and humidity up to 75%.
- Always keep batteries and chargers out of the reach of children.
- **During longer breaks from usage, remove the battery from the bike's bracket and stow it separately as explained previously.**
- Never open, deconstruct or modify the battery - there is a fire / explosion risk.
- A defective fuse may only be replaced with one of the same value.
- Should outages occur continuously, please inform your specialized trader or a qualified work shop.
- Do not use the battery if you notice corrosion, smells or excessive heat.
- Never use water or other liquids to cool an overly heated battery or to put it out during a fire.
- Do not use damaged or deformed batteries (e.g. after an accident/fall). An internal short-circuit may cause the battery to overheat after a few hours. Remove the damaged battery from the bike and store it outside on fireproof ground or in a fireproof container.
- Damaged / deformed batteries should not be used anymore but disposed of.

Please note that defective batteries do not count as domestic waste and should instead be properly disposed of (redemption by vendors, communal disposal of hazardous waste,etc.). Before transport or dispoal, cover the battery connections with tape to prevent accidental short-circuits.

6. Tyres

20“ x 2,125, tyre pressure: 2,8 - 4,6 bar

7. How to achieve the highest reach

- Fully charge the battery after every trip.
- Avoid permanent use of high support levels when riding.
- Avoid starting when the 3rd gear is engaged and a high support level is selected.
  The battery drain is highest that way.
- Use the gear change and adjust the support level according to your needs.
- Regularly check the tyre pressure.
- Oil the chain every 400 km.

8. Care instructions

To guarantee a long lifespan for your electric bike, please keep some important instructions in mind.

Make sure to dry your bike and wipe off dirt after use. If the bike has had contact with salt water, immediately clean the electric bike with fresh water. Regularly use proper care products to protect it from possible corrosion. If you plan on stowing the bike in a valise, provide sufficient ventilation to prevent corrosion damage.

Chain, motor and electric parts should be examined and maintained regularly. For the protection of cables, electric plugs and electric contacts we recommend „Wet.Protect“ Art. Nr. 68127.

For the mechanic parts „Marine-Spray“ Art. Nr. 16616. Douse the entire bike without the spray trickling down. Be especially attentive when dousing the cracks and joints. Prior to use, the bike should be cleaned once. Delicate parts like the chain, the spokes‘ nuts and sire ropes can be protected with marine grease once. The same preventive care is to be executed before the winter.

Stainless steel demands precautionary care as well. Without proper care, even stainless steel can display flash rust or crevice corrosion within just a few weeks. Insufficient care can lead to corrosion.

Complaints about corrosion are not acknowledged as a warranty case.

Reports on cycling accidents caused by material fatigue, etc. keep showing up in the media. Regularly check the frame, handlebar and rims for possible deformations or crackings.

Technical changes reserved.

Notes

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