



# User Manual

with E-Bike pass and maintenance log

## SachsenRad E-Racing Bike R6



Productnummer: BB12062 / BB12083

# Inhalt

<b>VIDEO INSTRUCTIONS</b>	<b>4</b>
<b>E-BIKE ID / BIKE PASS</b>	<b>5</b>
<b>1. UNPACKING AND ASSEMBLY INSTRUCTIONS</b>	<b>6</b>
<b>2. ASSEMBLY</b>	<b>7</b>
2.1 Before assembly	7
2.2 Required tools	8
2.3 Installing the front wheel	8
2.3 Fitting the handle bar	9
2.4 Aligning the steering head bearing and stem	10
2.5 Installing the pedals	10
2.6 Fitting the saddle	11
2.7 Adjusting the saddle height	12
2.8. About the brake settings	12
2.9 Note on chain tension	12
2.10 Lighting and bell	12
2.11 Inserting the battery	13
<b>3. OPERATION AND FUNCTIONS</b>	<b>13</b>
3.2 Breaking with the E-Bike	14
3.3 The control display	14
<b>4. YOUR E-BIKE BATTERY</b>	<b>18</b>
4.2 Battery use, safe storage and handling	19
4.3 After use	19
4.4 Charging	19
4.5 Factors influencing range	20
4.6 Range optimisation	20
<b>5. BEFORE YOUR FIRST RIDE</b>	<b>21</b>
<b>6. MAINTENANCE</b>	<b>22</b>
6.1 Wheels	23
6.2 Chain	23
6.3 Tyres	23
6.4 E-Bike rear wheel hub motor	23
6.5 Brake system	24
<b>7. SAFETY INSTRUCTION</b>	<b>24</b>
<b>8. SERVICE BOOKLET</b>	<b>24</b>
<b>9. F.A.Q. - Frequently asked questions</b>	<b>26</b>
<b>10. DATA SHEET 28</b>	
<b>11. DECLARATION OF CONFORMITY</b>	<b>28</b>
<b>12. DISPOSAL 28</b>	
<b>13. IMPRINT 29</b>	
<b>14. WARRANTY 29</b>	
<b>15. RETURN RECEIPT 33</b>	



# SACHSEN RAD

**Thank you for purchasing our product!**

**Please read these instructions carefully.**

Cycling is a natural part of a modern, health-conscious lifestyle. People are travelling longer and longer and the roads for riding are more complicated. Due to the physical differences, riding habits and handling characteristics of each cyclist, especially when riding uphill or long distances, cycling can be very strenuous. Our e-bike was specially designed to solve these problems!

This e-bike is a combination of a high-quality lithium battery and a high-end bicycle. Go faster and further with more fun: It is the ideal companion for your fitness programme, for leisure time and for the ways that need to be done.

**Important notes**

This manual contains important safety, performance and service information.

Please ensure that you have read and understood the following warnings and precautions before using the product for the first time.

If you lend your e-bike to another person, ask them to read this manual to minimise the chance of accidents.

**WARNING:** Wear a suitable and qualified helmet while riding and wear fluorescent or reflective clothing at night.

**WARNING:** Your existing insurance policies may not cover everything that could occur when using an e-bike.

Please consult your insurance company or your insurance broker. Note: This manual does not cover all possible complications that may occur while riding. Please also read the F.A.Q. to solve any problems with the e-bike. For more information, please contact your dealer. Please also contact your dealer or find a professional service technician if repair or maintenance is required. Please observe all warnings in this manual, read and understand the contents before using your bike.

**WARNING:** Warnings indicate that significant property damage, serious injury or death to you or others may occur. Please be sure to follow the instructions.

## VIDEO INSTRUCTIONS

Under the following link you will find video instructions for assembly on YouTube  
<https://www.youtube.com/watch?v=Y1pG6k6E--Y>



In case of a return, please contact our customer service first. In the case of a return shipment, please ensure that it is dismantled properly. We also have a short video online for you:

<https://www.youtube.com/watch?v=zJ2FOVUJSYw>



Under the following link you will find a video tutorial on how to adjust the brake system  
<https://youtu.be/Tcc8Bml8occ>



### NOTE ON THE PICTURES

Pictures and graphics in the manual may differ from your actual product as the R6 is manufactured in several versions. The pictures are intended as supplements to the text and for better understanding.



## E-BIKE ID / BIKE PASS

PLEASE COMPLETE THE FOLLOWING E-BIKE PASSPORT, IN MINIMAL FORM, CAREFULLY IN YOUR OWN INTEREST!

FRAME NO.*				
MODEL				
TYPE	ELECTRIC BIKE	BATTERY SERIAL NO.		
ENGINE (REAR/CENTER)		MOTOR SERIAL NO. (IF AVAILABLE)		
SIZE (IN INCHES)				
COLOR	FRAME/FORK/RIM			
GEAR SHIFT	DERAILLEUR			
	TYPE/NUMBER OF GEARS			
SPECIAL EQUIPMENT	SUSPENSION FORK		BASKET	
			FRONT CARRIER	
	OTHERS			
OWNER				
SELLER				
PURCHASE DATE				

\* THE FRAME NO. IS LOCATED ON THE FORK SHAFT TUBE (BEHIND THE HEADLIGHT)

## 1. UNPACKING AND ASSEMBLY INSTRUCTIONS

Tip: Your e-bike is slightly heavier than a normal bike. It is best if two people lift it out of the box.

Required tools and aids (recommendation)

- Tool kit (supplied, see 2.2)
- Blanket or old carpet (to prevent the floor or the e-bike from being scratched during assembly).

Please read the following instructions carefully before unpacking and assembling your e-bike and follow the recommended sequence.

1. Carefully open the packaging box (to avoid injury, please wear gloves).
  2. Carefully remove the bike from the box, preferably in pairs.
  3. Place the bike on a blanket to avoid scratching the floor and the bike.
  4. Take all the parts out of the large box, including the accessories box.
  5. Carefully cut the various cable ties. By doing so, do not accidentally damage the bike, paint or tyres or lose accessories.
  6. Remove all protective material.
  7. Remove the e-bike battery from the packaging or from the e-bike battery sled and charge it for at least 10-12 hours first. Please read sections 5.2 and 5.3.
- (**Tip:** The battery must be charged for at least 12 hours before first use. Please read section 5.2 and section 5.3. )

**Remarks:** Upgrading with accessories, attachments or tampering with the control units.

**WARNING:** If you need to upgrade parts or add accessories, beware of the following: Before attaching parts or accessories, make sure that the specifications and dimensions match. Please check with your dealer if necessary. Parts with different specifications can be fitted but there is a major safety risk.

**WARNING:** Incorrect installation and use of parts not supplied with the e-bike and improper modifications to the original condition of the e-bike may result in significant property damage or the voiding of any warranty or guarantee claims. Even accidents, serious injuries or death can be the result. If you wish to upgrade or add further parts or accessories, please contact your dealer or a suitable expert. They can give you information about this.

**WARNING!** If you replace parts of the e-bike, upgrade parts or add accessories, please note that such changes may not have the same safety qualifications, so there is a certain safety risk.



## Designation of the e-bike parts

1. Saddle
2. Seat post
3. Quick release saddle
4. Rear brake
5. Front wheel / tyre
6. front brake
7. pedals and chainring
8. suspension fork
9. battery slides
10. drive chain
11. rear wheel / tyre
12. sprocket cassette
13. motor
14. battery charging connection
15. bicycle handle bar
16. left hand brake lever (rear brake control)
17. right brake lever (front brake control)



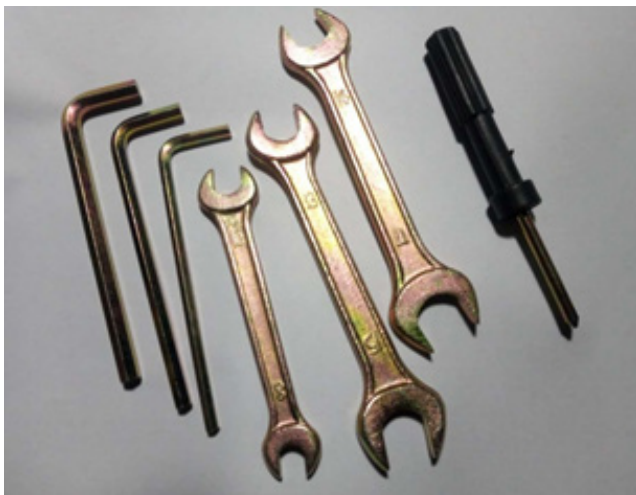
## 2. ASSEMBLY

### 2.1 Before assembly

**WARNING:** Incorrect assembly of your e-bike can cause significant damage to the bike and even personal injury. If you are not sure whether your assembly is correct, please contact your dealer.

**WARNING:** The motor, controls, sensors, battery and various cables on your bike must not be used for other purposes. Do not disassemble or modify [adjust] these parts as this may cause serious damage to them, voiding the warranty. It may also harm your personal safety. If you need assistance, please contact your dealer.

## 2.2 Required tools



Supplied in the tool kit:

Allen key 4s, 5s, 6s (3x)

Open-end spanners 8/10, 13/15, 14/17 (3x)

Screw driver

### NOT INCLUDED IN DELIVERY:

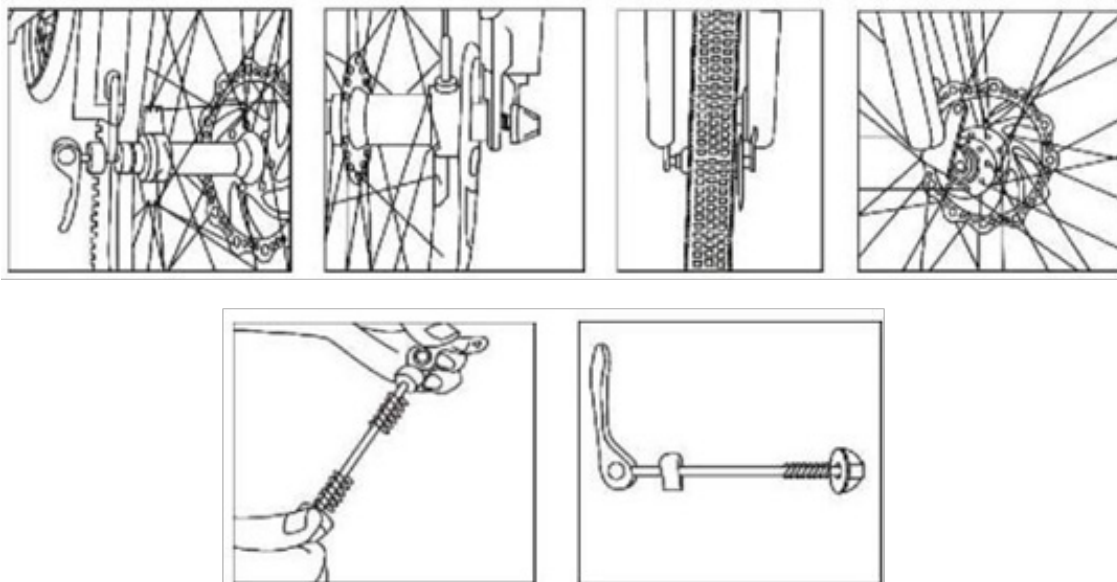
Air pump with car valve

Please bring the tyre pressure of the front and rear wheel to at least 2.8 bar with the help of an air pump

### BEFORE THE FIRST RIDE.

**Note:** For transport reasons, we can only deliver the e-bike with very low tyre pressure. Do not ride without first inflating the tyres!

## 2.3 Installing the front wheel



Remove the black plastic covers on the left and right of the front wheel that were used to secure it for transport. Carefully loosen the cable tie on the spoke with which your quick-release axle is attached.

Unscrew the nut of the quick release axle including a spring, put the quick release axle through the axle of the front wheel.

Now carefully insert the front wheel between the legs of the suspension fork. Pay attention to the direction of the wheel. The brake disc must be on the side of the brake caliper. Carefully insert the disc into the brake calliper parallel to the wheel in that manner that no damage to the brake or brake disc is inflicted.



When everything is set correctly, slide the spring back onto the axle and carefully screw the grip nut onto your front axle until the quick release can be flipped over hand-tight, thus holding the wheel firmly in the mount.

Now let the wheel turn by hand and check that it sits and runs correctly. Check and test the front brake. The instructions for adjusting the brakes can be found under section 2.5. If everything works, your front wheel should now be correctly mounted.

## 2.3 Fitting the handle bar



Fig. 1

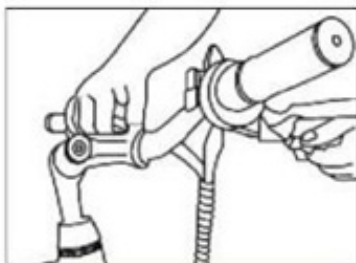


Fig. 2

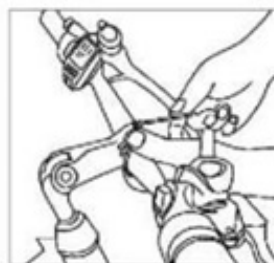


Fig. 3

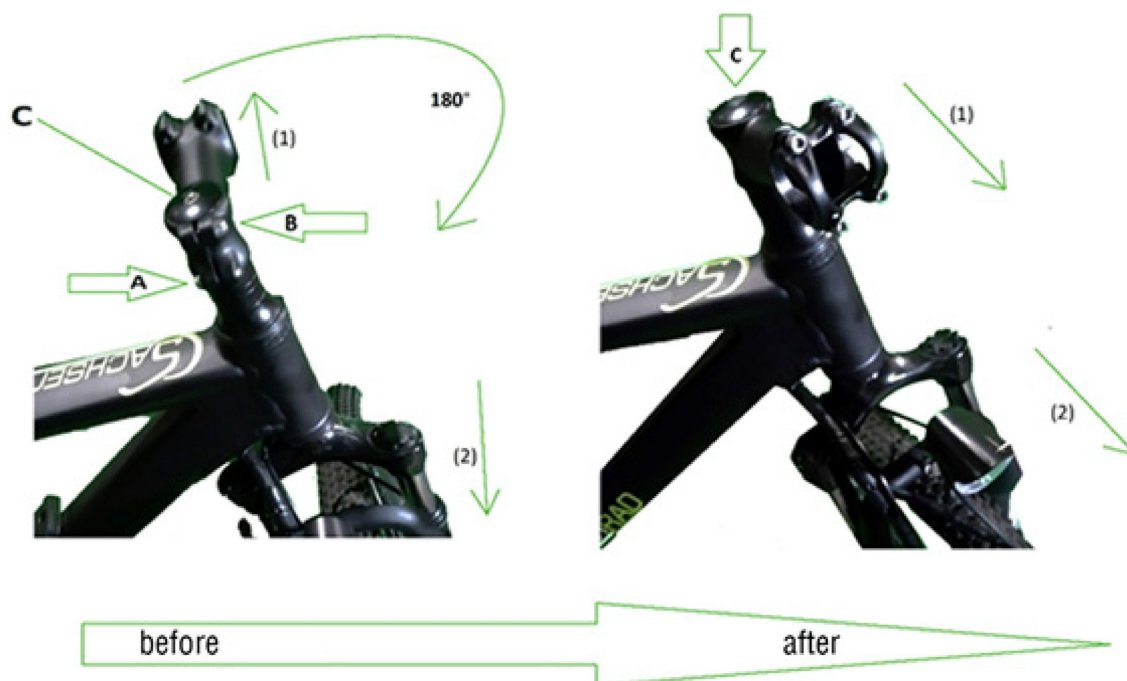
Now you have to mount the handlebar and then readjust the steering head bearing. First loosen the four bolts of the stem (Fig. 1).

**NOTE:** The stem is designed differently on some versions.

Now place the handlebars in the stem shell (please note the direction and run of the cables and Bowden cables) and screw the stem back on as shown in Fig. 2. Before doing so, align the handlebar centrally with the stem and tighten the four hexagonal bolts crosswise using the tool supplied. Tighten the bolts evenly and carefully.

**ADJUSTING THE TILT OF THE HANDLEBAR:** First loosen the clamping spindle screws of the handlebar sleeve (Fig. 1) with the appropriate hexagon socket spanner. Adjust the angle of inclination of the handlebar by turning the handlebar forwards or backwards around its own axis by hand. Tighten the clamping spindle screws again.

## 2.4 Aligning the steering head bearing and stem



**Note:** This step may differ for your model and may not be necessary because it has already been pre-assembled.

**Note:** In the photos above, the handlebars have not yet been fitted; this is for the sake of clarity. Please follow the described assembly sequence.

After the handlebars have been installed, turn the stem 180 degrees so that the suspension fork and handlebars are in the correct position. To do this, first loosen the rubber screw cover (C) and loosen the screw underneath (C) with the appropriate tool. Open the horizontal bolts of the stem, (A) and (B) in the illustration, so that the steering head bearing can move freely when turning and tightening. Align the handlebars with the stem at a 90 degree angle to the suspension fork by turning it 180° (look at the cables and Bowden cables to see if they are pointing to the left or right). The arrows (1) and (2) describe the directions of the stem and the suspension fork. On the left picture you see the delivery condition and on the right the final alignment of the assembly. When everything is correctly aligned, tighten the single head bolt (C) until the steering head bearing has no more slack but can still be moved easily. Then you can tighten the two horizontal bolts of the handlebar stem once from the left (A) and once from the right (B) until everything together forms one unit. Finally, put the rubber screw cover (C) back on the hexagon screw.

## 2.5 Installing the pedals

1. Please fasten your bicycle. It is best if two people hold it so that the chain and crank can turn smoothly.
2. Take the pedals out of the packaging and sort them. „R“ stands for the right foot, the „L“ is the left foot.
3. Align the foot thread with the mounting hole on the crank, tighten the right pedal clockwise and the left pedal anticlockwise.



4. Use a 15 mm open-ended spanner to lock the foot.

**WARNING:** Improper installation of the pedal can pose a serious safety hazard resulting in significant property damage, serious injury or death. Please check that the pedals are secure before each use.

## 2.6 Fitting the saddle

1. Make sure that the quick-release of the seat post is open (picture A).
2. Insert the seat post into the seat post bracket of the frame (picture B).
3. Press the quick-release lever onto the frame and close it.  
Please make sure that the lever is locked (picture C). Otherwise injuries may occur



Picture A



Picture B



Picture C

**Tip:** Please adjust the nut on the opposite side of the lever to adjust the tightening force of the lever.

**WARNING:** Do not pull out the seat post more than the marking of the minimum insertion depth. The marking must not be visible! Risk of breakage and accident! No warranty in case of disregard !

## 2.7 Adjusting the saddle height

1. The height of the saddle can be adjusted with the quick-release on the saddle rail. You only need to release the quick-release lever to freely select the height of the saddle. After you have adjusted the desired height, lock the quick-release lever again and the adjustment is complete.

2. After the adjustment, make sure that the quick-release lever of the seat post is well locked. The seat post must not slip.

**WARNING:** Incorrect installation of the seat post may result in serious injury or death. It is strictly forbidden to raise the height of the seat post above the safety line.

## 2.8. About the brake settings

If you are not satisfied with your brakes, please contact your dealer and ask for the intervention of a professional technician.

## 2.9 Note on chain tension



Not after the first few rides, but after a certain period of use, the chain may be worn out due to transmission strength and can be properly adjusted by using a tensioning screw to hold the chain in place. The chain should be set on the smallest tooth of the flywheel. Turn the rear transmission tensioning screw (see fig. A) clockwise with a screwdriver. The chain should not sag. Also make sure that the chain is sufficiently greased and clean.

## 2.10 Lighting and bell

**NOTE:** If front and rear lights and bell are included in the accessory pack, they must yet be fitted.

### Rear light

You will find the battery-powered rear light in the accessory box. Attach it to the seat post below the saddle using the screwdriver provided. If the clamp of the rear light mount is too loose, use the rubber strip provided. Before using the rear light for the first time, remove the battery protection strip.

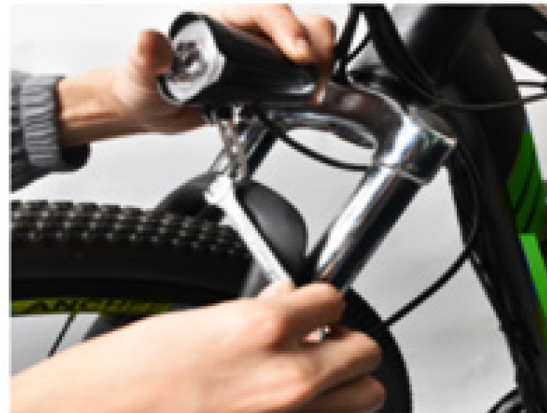
### Bell

You will find the bell, if not already installed on the handlebars, in your accessories box. Find a suit-able place on the handlebar and install the bell in the same way as for the rear light (described above).

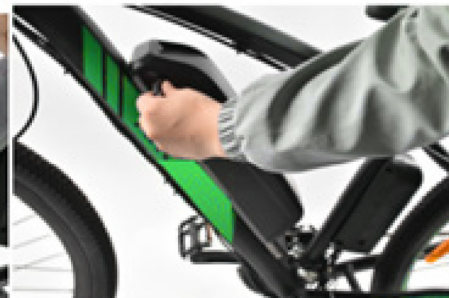


## Front light

If you do not find your front light already adjusted to the front of the bike, unpack the light from the accessory box and install it using the hexagonal bolt and nut supplied. You will find the necessary tools in the tool bag in the accessory box. Connect the plug of the lamp to the plug on the e-bike. Pay attention to the arrows on the side.



## 2.11 Inserting the battery



If your battery is not already inserted, please follow the next steps.

You will find your e-bike battery packaged separately in your complete e-bike package. Unpack the battery and remove any protective sticker from the battery contacts. Familiarise yourself with the locking mechanism of the battery using the key. Before inserting the battery, make sure that the red main switch on the right side of the battery is in the „O“ position. Place the battery on top of the battery slide and let the battery slide down as far as possible. If the battery is in the correct position, you can lock the battery with the key. Before each ride, check that the battery is in the correct position. Do not ride with an unlocked battery!

Before switching on the e-bike via the control display, you must of course set the battery main switch to „I“ again.

## 3. OPERATION AND FUNCTIONS

Please read this section carefully. Before using the device for the first time, please contact your dealer to learn more about the features of your electric bike.

1. Put on your helmet and choose a quiet place away from cars, other bicycles, obstacles or risky environmental conditions.
2. Make sure the power switch is in the „off“ position and then raise your bike stand.
3. Ride your electric bike for a test ride without motor assistance and adjust everything to suit you.
4. Press the switch in the centre of the display control unit for at least two seconds to set your motor to standby.

**NOTE:** Please keep the battery main switch in the 0 position until you are safely on the bike.

**WARNING:** Do not sit on your bike with the bike stand unfolded as this may cause damage to the vehicle and personal injury.

### Nothing working?

*Please refer to section 9 for troubleshooting:*

*F.A.Q. - Frequently asked questions about problems and their solutions*

## 3.2 Breaking with the E-Bike

**TIP:** When you apply the brakes, the motor is automatically switched off, which is a standard safety setting.

**TIP:** There is a sensor in the brake lever. When you apply the brake, the motor is automatically switched off. So do not press on the brake handle when you want the motor to work. Try the brakes at low speed. The brake handle of the left hand corresponds to the brake of the rear wheel. The brake handle of the right hand corresponds to the front wheel brake. Never brake hard. Squeeze both brakes together.

**WARNING:** If you suddenly and harshly engage the front brakes, you will roll over. Please do not set your brakes too hard to prevent wheel lock and accidents. Check the sensitivity and braking force of the brakes before each ride.

## 3.3 The control display

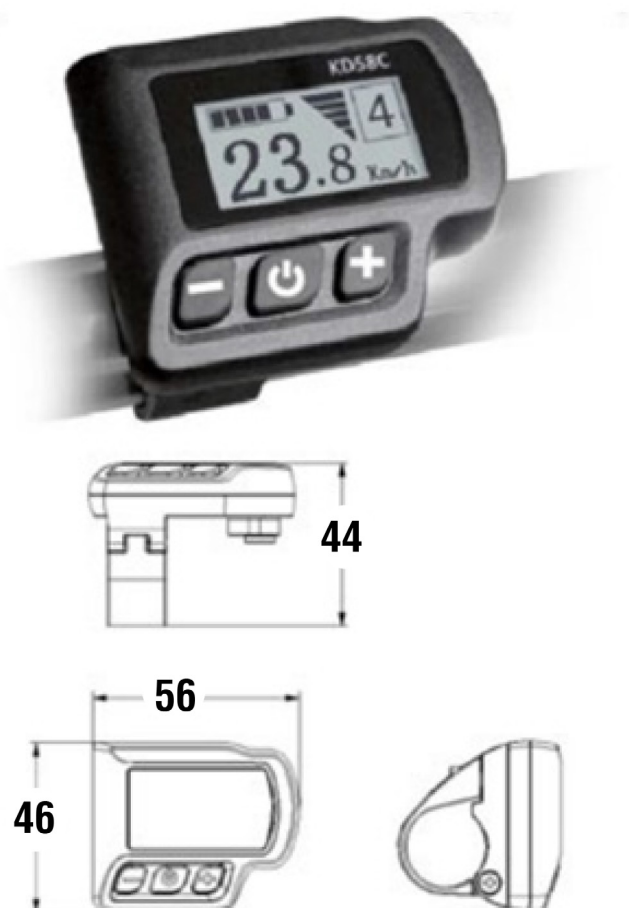
Intelligent control display for electric bikes:

Model: KD58C

### Specifications

- 24V / 36V / 48V power supply
- Rated current: 10mA /  
maximum working current: 30mA
- Quiescent current when switched off: <1  $\mu$ A
- Working temperature: -20 - 60 ° C.
- Storage temperature: -30 - 70 ° C.

Control display dimensions (in mm)

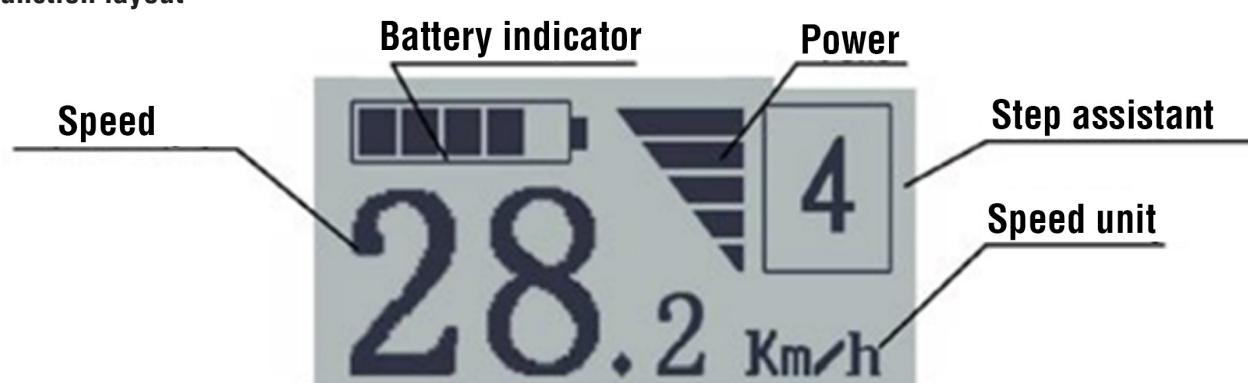




## Functions of the control display

- Battery indicator
- Support levels
- Speed display (incl. current speed, maximum speed and minimum speed)
- Motor output display
- Ride time
- Distance and total distance
- Assistant function
- Switch lighting on/off
- Error code display
- Various setting options (e.g. wheel circumference, speed limit, battery level, activate password, etc.)
- Restore default settings

## Function layout



## Button definition

There are three buttons on the KD58C display: ON/OFF, +, -

## Mounting instructions

The control display has been pre-mounted on the left side of the handlebar. Adjust the angle for a good screen view. Switch off the battery beforehand.

## General operation (control display)

### Switching the e-bike control display on and off

Press and hold the ON/OFF button for 2 seconds to switch the e-bike system on and off.

**NOTE:** Switch the red battery main switch to „1“ beforehand.



## Error code definition

If improper operation by the user occurs (e.g. excessive pressing of the on/off, + or - button), the user can switch off the display and restart it. If the e-bike is not moved for approx. 10 minutes, the control display switches off automatically.

## Display indication

After switching on, the display shows the battery status and the speed. Press the ON/OFF button to switch between indications:

Current speed (km/h), distance (km), QDO (km), time (hour), average speed (km/h), maximum speed (km/h).

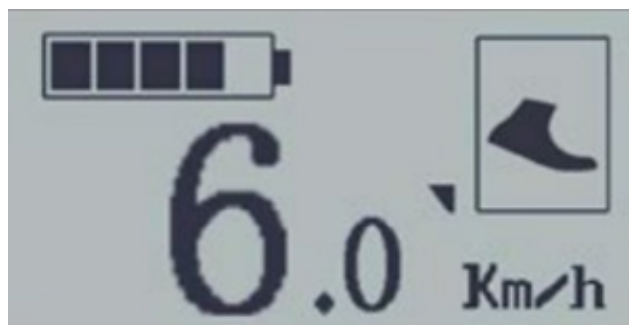
The status is displayed for 2 seconds and automatically returns to the current display.



## Operation and functions

### Assistant mode

To activate the function, press and hold the - button. After 2 seconds, the e-bike continues to travel at walking speed (6 km/h). The function is switched off as soon as the - button is no longer pressed.



This mode only works by keeping the - button pressed.

**Caution!** The e-bike accelerates in this mode.

### Switching the lighting on/off

Press and hold the + button for 2 seconds to switch on the front light.

The front light is switched off in the same way.

### Motor support levels

When the control display is switched on, the speed level is 0. There are 5 speed levels. At speed level 0, the e-bike runs without speed assistance. At minimum power level 1, the driving assistance starts. You get maximum power at level 5. You can change the speed level using the + and - button.



### Battery indicator

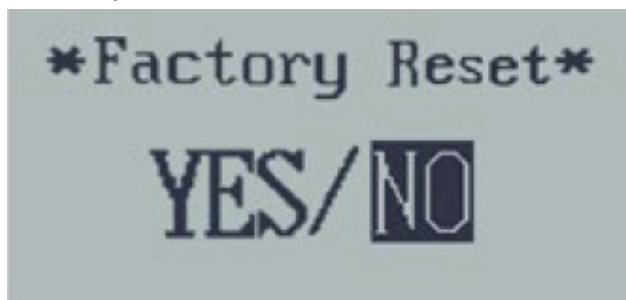
The battery consumption is shown on the display.





### Reset default settings

dEF Meaning: Default settings are restored. Press and hold the + key and the ON/OFF key for 2 seconds to enter the restore. Use the + and - keys to choose between YES and NO. If YES is selected, the restoration of the default settings will be activated. If NO is selected, the default settings will not be restored. Use the ON/OFF key to confirm your selection.



### Error code display

The components of the e-bike system are continuously and automatically monitored. As soon as an error is detected, the control display shows you an error code (see error code list).



If an error code is displayed, have the display checked and take repair measures if necessary. Please contact the manufacturer or a bicycle dealer in your vicinity.

### Quality assurance and warranty

The warranty is valid for 24 months from the date of purchase of the e-bike and only if used properly. The following cases are not covered by the warranty:

1. The display is torn off.
2. Damage to the display is caused by incorrect installation or use.
3. The housing of the control display is damaged after the purchase of the e-bike through the fault of a third party.
4. The cable of the display is broken.
5. The warranty period has been exceeded.

### Warning

1. Use the display with care. Please do not open the chassis when the control display is powered on.
2. Avoid hitting the display with objects.
3. Contact the manufacturer if the display does not work properly.
4. This manual is a universal version for display KDSBC. The specification may differ with respect to the software.

## Error code definition

- 21 Technical fault
- 22 Throttle malfunction (connecting cable)
- 23 Engine problem
- 24 Transmission problem
- 25 Brake malfunction
- 30 Electro-communication fault
- 31 MOSFET tube short circuit
- 32 On/off button problem
- 33 +/- button problem
- 34 Voltage failure

## 4. YOUR E-BIKE BATTERY



Main switch of your e-bike battery.

Set to „I“ before switching on the display control and to „O“ after riding.

**NOTE:** When removing and inserting the battery, always set the main switch to „O“ beforehand.

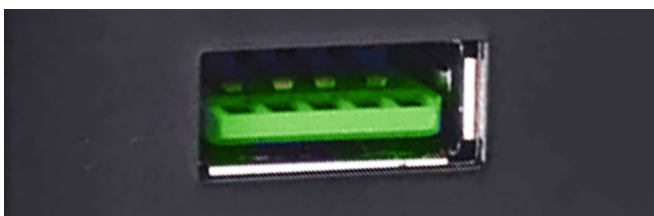
### Connections:



Battery contacts



Charging socket



USB - Charging socket (max. 1A 5V DC)

### 4.1 BATTERY - charge level indicator



Press and hold the button of the battery charge level indicator and the current charge level of your e-bike will be displayed.

#### Illumination of the LEDs:

- 1x red, 3x green >> 100%
- 1x red, 2x green >> 75%
- 1x red, 1x green >> 50%
- 1x red, 0x green >> 25%

Always check the remaining battery power. If your battery contains less than one cell (20%), please charge it as soon as possible.



The motor and battery control stops automatically to protect the battery and prevent a power failure as soon as the battery voltage is below a certain value.

**Warning:** Never use the battery until it is completely empty as this will seriously affect the capacity and charge level of the battery.

If the battery stops working, use an appropriate charger to charge the battery. The battery can be fully charged in approximately 5 - 6 hours under normal conditions.

**Note:** If you suddenly encounter a steep incline while riding and your speed drops below 10 km/h, you should dismount and climb the incline on foot to prevent the chain and motor from being damaged. Otherwise, the motor may overheat. The battery discharges too quickly at high power and the battery capacity and life are reduced.

## 4.2 Battery use, safe storage and handling

### Battery use

Reading and understanding the following points can help you to use, maintain and store your battery correctly, which is very important for improving the performance of your e-bike.

**WARNING:** Improper removal, repair, use or storage of the battery may void the warranty and may result in serious consequences. It is strictly forbidden to use the battery of your electric bike for other vehicles or devices. This will void the warranty and may result in serious consequences such as fire, serious injury or death. If you have any questions about using the battery, please contact your dealer.

**WARNING:** Never short-circuit a battery intentionally. Doing so may cause an explosion, fire and serious danger to your health.

**Tip:** Your battery must be charged for at least 12 hours before you use it for the first time. If your battery is not used for more than 30 days, continue reading in section 4.6.

## 4.3 After use

Switch off the control display or the battery main switch before dismounting in order to be able to safely lower the bicycle side stand. If there are any questions about the last time you used your e-bike, please contact your dealer or a specialist workshop before your next ride.

## 4.4 Charging

Please fully charge your battery, as the lithium-ion battery can be severely damaged if it is completely discharged. Keeping the battery charged helps to preserve it. For details, see sections 4.5 and 4.6.

**NOTE:** Please unplug the charger from the mains before connecting the charger's mains plug to the mains socket.

**NOTE:** If you wish to disconnect a charger from the mains, first switch off the charging switch.

**CAUTION:** To avoid damage to the charger, do not tear the charger or subject it to strong shocks.

**WARNING:** Improper use of the charger can result in serious consequences, including fire, significant property damage, serious injury or death.

**NOTE:** Do not place any objects on the battery and charger during charging as this may cause over-heating and serious consequences.

**NOTE:** Please use your charger indoors as damage caused by improper use is not covered by the warranty.  
Recharge plan (recommendations)

Charging	Hours
First three charges	12
Normal charging	4-6
Every ten charges	12

Charge the battery after each use to ensure the longest possible life.

**CAUTION:** Never charge for more than 12 hours to avoid overcharging.

**WARNING:** Please use the charger supplied with the battery to charge it. If you use a charger other than the original, the battery will lose its warranty and may be damaged, resulting in fire, injury or death.

**Tip:** You can charge your battery at any time. If you do not charge the battery in time when it is empty, it will gradually lose its performance and life. With proper use and maintenance, your battery can maintain more than 80% capacity after more than 500 charging cycles, but the decrease in total capacity is inevitable.

#### 4.5 Factors influencing range

Factors influencing the range of your e-mobility with the R6

- Age and state of charge of the battery
- Storage/storage location before the trip (depending on temperature)
- Outside temperatures
- Tyre pressure (recommendation: 2.9 - 3.4 bar)
- Weight of rider
- Riding style and choice of assistance level
- Road/ path conditions
- Weather conditions
- Frequent stops and restarts
- Cleanliness and inertness of bearings and all moving parts

#### 4.6 Range optimisation

- Fully charge the battery
- Check tyre pressure 2.9 - 3.4 bar  
(recommended depending on body weight, load and route profile)
- Reduce the load
- Do not ride too fast
- Maintain a constant speed



## 5. BEFORE YOUR FIRST RIDE

This section is to prepare you for your first ride. Please always wear a safety helmet of the correct size. If you wish to lend the e-bike to others, please ensure that they wear a safe and appropriate helmet.

### **Do not take anyone with you on the bike!**

Overloading, which can be caused by double occupancy, can have serious consequences resulting in significant property damage, serious injury or death.

### **Compliance with traffic laws and regulations**

Please drive on the right-hand side of the road. Observe local laws and regulations!

### **Reflectors**

Please keep the reflectors clean and bright and please do not remove the reflectors.

### **Check the brakes**

Please check the braking distance and braking force before each ride. Please note that the left brake corresponds to the rear brake and the right brake corresponds to the front brake. Your e-bike is equipped with normal specifications of brake pads. Please check the brake pads every time and ask your dealer about the brake pads. If the brake pads are worn, please replace them as soon as possible.

### **Tyre pressure**

Usually 2.9 - 3.4 bar (depending on the tyre pressure indicated on the side of the tyre). Your tyres contain inner tubes. You must inflate the inner tubes. Please check the pressure of the tyres before each ride. The tyres gradually lose pressure, this is normal. If you lose too much air pressure, please inflate again. If your tyre pressure is insufficient, this will result in additional power consumption and effort and reduce your range.

**WARNING:** If you brake hard and lock the tyre, this will cause a rollover, which can result in significant property damage, serious injury or death. If you are not sure whether your brake setting is appropriate, please consult your dealer or seek professional advice.

## 6. MAINTENANCE

Component	First Assembly	500km or after half a year*	1000km or 1 year*	each 1000km
Tubes and tyres	x	x	x	X
Wheel incl. rims and spokes	-	x	x	X
Brakes	x	x	x	X
Lights and reflectors		x	x	X
Stem and handlebars		x	x	X
Steering head bearing		x	x	x
Saddle (support)		x	x	X
Frame	-	x	x	X
Gear shift	x	x	x	X
Suspension fork	-	x	x	x
Battery and battery slide	x	x	x	x
Drive system	-	x	x	X
Chain	-	x	x	X
Bottom bracket, cranks and pedals	-	x	x	x
Accessories	-	x	x	x
Screw connections		<b>Vor jeder Fahrt</b>		
Quick release	x			

\*The earlier event is considered as orientation, i.e. whether KM or the time period has been reached first.

You can use this maintenance table and the service table voluntarily to have inspections and repairs properly carried out and entered by your mechanics. You are not obliged to do so. In the event of a later warranty claim on your ebike, this can help us with the assessment and possibly confirm or even increase the chances of goodwill.

**The specifications usually include, if necessary, cleaning, greasing and adjustment of the certain component and, if necessary, replacement of wear caused by fatigue or damage.**

**General information and brief instructions for the care of individual parts can be found on the following pages.**

### Regular inspection: small checklist

- A. Check the tyres for damage and whether the tyre pressure is sufficient.
- B. To check the function of the front brake, apply it half or two thirds. If the front wheel does not turn, everything is working properly. To check the rear brake, apply pressure to the foot pedal when lifting the bike. The brake is effective if the rear wheel does not turn.
- C. Check that the quick release parts are locked in place.
- D. The safety line on the tube of the handlebar attachment and the saddle must not be visible. Check that everything is firmly tightened.
- E. Check if the frame and front fork are cracked or deformed, if pedals, gears and tyres are intact.
- F. Check if the gearbox is deformed or damaged.
- G. Check whether the gearbox can be used normally.
- H. Check the bolts and nuts. Raise the front and rear wheels about 10 to 20 cm and then let them hit



the ground. If there are noises, there may be loose parts.

- I. Check that the lights can be used normally.
- J. If you have purchased a folding bike, please assemble it carefully before riding.

## Notes on inspection and maintenance of some components and systems

### 6.1 Wheels

The front and rear wheels of the vehicle should be in the center of the fork or frame. The tension of each spoke on the wheel rim should be similar and the rim should form a regular circle without dents. If spokes are missing or broken, the rim will lose stability. Please consult your dealer or professional technician for repair and troubleshooting.

The rim must be smooth. If it is not, it will increase the resistance of the ride or cause a hazard. If you think you need to make adjustments, please consult your dealer or see a professional technician.

### 6.2 Chain

Your e-bike is equipped with a high quality drive chain. Please keep the chain clean and add lubricant often.

**WARNING:** The brake pads and rims must be kept free of grease. Keep the rims and brake pads clean.

**WARNING:** Humid or moist air can also cause wear to the brakes. Please avoid riding in wet or rainy weather. If you cannot avoid it, remember that your braking distance is many times greater than normal in rain and snow. Please drive slowly and keep clear of other vehicles and brake early. Failure to do so may result in accidents, significant property damage, serious bodily injury or death. If you are unsure about the performance of your bike, contact your dealer or a professional service technician and ask them to test the performance of the brakes. Test again in a safe place before each use.

### 6.3 Tyres

Always check the tyre for scratches, cracks or excessive wear. The tyre should be properly combined with the rim. The tyre bead line should be fully exposed. If the tyre cannot be fully expanded, apply water to the rim and tyre to increase lubrication. The valve of the bicycle inner tube should be perpendicular to the rim. Damaged or excessively worn tyres must be replaced immediately. Please contact your dealer or a professional technician to replace your tyres. If your tyres have been punctured accidentally, contact your dealer or technician for repair or replacement.

**WARNING:** Do not drive if your tyres are leaking or underinflated. Failure to do so may result in severe damage to the vehicle, substantial property damage, accidents, and sometimes serious personal injury or death.

### 6.4 E-Bike rear wheel hub motor

Do not open the motor and do not overload or operate the motor over a long distance or on a very steep incline. It is strictly forbidden to attach other things to or on the motor housing, as this can have a negative effect on statics, riding safety and heat dissipation.

## 6.5 Brake system

Depending on the conditions, the braking effect may decrease after a short running-in period, or a squeal may be heard. The squeaking could be caused by contamination. You should clean your brake discs carefully with a suitable cleaner (brake cleaner).

If the braking effect decreases, you can retighten the Bowden cables using the adjusting screws on your respective brake lever of the e-bike handlebar. If the last step no longer leads to an improvement in the braking effect, we recommend that you visit a specialist workshop or a suitable technician. You can find advice in the form of a video on page 4, in the form of a QR code or link. Check your brakes before every ride!

*If you have any additional questions, please contact our support team!*

## 7. SAFETY INSTRUCTION

### **Please wear a helmet!**

When riding the e-bike, please wear a safe, approved helmet! It is strictly forbidden to carry people. Please observe the traffic rules and be careful with car doors that open suddenly.

Try to stay away from cars parked at the side of the road in case the door suddenly opens or the car blocks the line of sight so that you cannot see suddenly appearing people or things in time.

### **Please be especially careful in bad weather!**

In wet weather, your electric bike brakes many times slower than normal. Please reduce your riding speed, brake in advance and ride carefully through bends. Make sure that you are seen by other road users.

When riding on dark roads or at night, please wear clothing with reflective stripes or fluorescent paint as a warning. Switch on your own lights and check the reflectors and keep them clean. Drive slowly and with foresight.

### **Please concentrate!**

You should pay attention to the traffic!

### **Check your vehicle before every ride.**

Please check your entire e-bike before every ride: brakes, tyres, rims, quick-release levers and any screws or components.

The battery must be carefully maintained to ensure its safety and reliability. Please refer to the chapter on battery maintenance.

## 8. SERVICE BOOKLET

*You can use this template voluntarily to have inspections and repairs properly recorded by your mechanics. You are not obliged to do so. In the event of a later warranty claim on your ebike, this can help us with the assessment and possibly confirm or even increase the chances of goodwill.*



1. Inspection	2. Inspection	3. Inspection	4. Inspection
Carried out on:	Carried out on:	Carried out on:	Carried out on:
Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop

1. Inspection	2. Inspection	3. Inspection	4. Inspection
Carried out on:	Carried out on:	Carried out on:	Carried out on:
Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop

1. Inspection	2. Inspection	3. Inspection	4. Inspection
Carried out on:	Carried out on:	Carried out on:	Carried out on:
Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop	Signature/ Stamp Specialist workshop

## 9. F.A.Q. - Frequently asked questions about problems and their solutions

Below are some common problems and solutions. If the following methods do not solve your problem, please contact your dealer.

Problem	Possible cause	Possible solution
<b>Control display does not respond</b> <b>- Attempt to switch on without result</b>	<ol style="list-style-type: none"> <li>1. battery main switch inactive</li> <li>2. battery empty</li> <li>3. battery not correctly seated in battery slide</li> <li>4. connecting cable control display / control unit not connected or defective</li> <li>5. control display defective</li> <li>6. battery (circuit) defective</li> </ol>	<ol style="list-style-type: none"> <li>1. set battery main switch to I</li> <li>2. charge the battery completely</li> <li>3. put the battery slide back into its original position and tighten the two fastening screws.</li> <li>4. check the plug connection of the display control on the handlebars</li> <li>5. exchange the control display</li> <li>6. exchange of the ebike battery</li> </ol>
<b>EBike and control display fail after a short ride or not reaching the maximum motor support</b>	<ol style="list-style-type: none"> <li>1. ebike battery is almost empty</li> <li>2. plug contacts of the battery slide not connected</li> <li>3. battery protection and charge control defective</li> <li>4. defect in display control or motor control unit and motor damage</li> <li>5. manipulated or wrong settings in display control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. fully charge the battery</li> <li>2. check the position of the battery slide*.</li> <li>3. exchange the ebike battery*</li> <li>4. exchange the respective component*</li> <li>5. reset to factory settings</li> </ol> Reset see point 3.3 (page 17)
<b>Despite correct operation the motor does not run</b>	<ol style="list-style-type: none"> <li>1. circuit breaker in brake lever defective</li> <li>2. soldered motor cable connector</li> <li>3. battery cable soldered</li> <li>4. manipulated or wrong settings in display control</li> </ol>	<ol style="list-style-type: none"> <li>1. check cable contacts or replace brake lever including cable*.</li> <li>2. check plug connections*</li> <li>3. check battery cable*</li> <li>4. reset see item 3.3 (page 17)</li> </ol>
<b>Low range although battery is fully charged</b>	<ol style="list-style-type: none"> <li>1. increased demands due to changed load, gradient, headwind, etc.</li> <li>2. battery too old</li> <li>3. battery defective</li> <li>4. storage or use at too cold ambient temperatures (below 5(degree sign) C</li> <li>5. brake system grinding</li> <li>6. insufficient lubrication of one of the moving components</li> </ol>	<ol style="list-style-type: none"> <li>1. reinforce own pedal insert</li> <li>2. replace battery*</li> <li>3. replace battery*</li> <li>4. raise own pedal insert</li> </ol> Store battery at more than 7 degrees and less than 25 degrees before riding <ol style="list-style-type: none"> <li>5. readjust brake*</li> <li>6. check bearings, if necessary regrease*</li> </ol>
<b>Battery does not charge</b>	<ol style="list-style-type: none"> <li>1. plug connections loosened</li> <li>2. battery defective</li> <li>3. charger defective</li> </ol>	<ol style="list-style-type: none"> <li>1. check plug contacts*.</li> <li>2. replace battery*</li> <li>3. replace charger</li> </ol>



<b>Battery charge indicator does not react (on the battery)</b>	<ol style="list-style-type: none"> <li>1. main switch of the battery is not set to I</li> <li>2. battery empty</li> <li>3. battery defective</li> </ol>	<ol style="list-style-type: none"> <li>1. set battery main switch to I</li> <li>2. charge battery completely</li> <li>3. replace battery*</li> </ol>
<b>Front light does not work</b>	<ol style="list-style-type: none"> <li>1. error in operation</li> <li>2. cable connection defective</li> <li>3. connector solved</li> <li>4. LED defective</li> <li>5. battery empty</li> </ol>	<ol style="list-style-type: none"> <li>1. read point 3.3 on page 16</li> <li>2. replace cable*</li> <li>3. check plug connections</li> <li>4. replace front light*</li> <li>5. fully charge battery</li> </ol>
<b>Unusual noise development</b>	<ol style="list-style-type: none"> <li>1. chain must be regreased</li> <li>2. gear shift must be readjusted</li> <li>3. chain is too tight</li> <li>4. pedal crank is. Or has loosened</li> <li>5. steering head bearing has too much play</li> </ol>	<ol style="list-style-type: none"> <li>1. regrease chain</li> <li>2. readjust gear shift*</li> <li>3. retension chain*</li> <li>4. retighten crank arms*</li> <li>5. tighten steering head bearings see point 2.5 (page 10)</li> </ol>
<b>Braking effect decreases Brake shows no effect</b>	<ol style="list-style-type: none"> <li>1. wear of brake pads</li> <li>2. brake wrongly adjusted</li> <li>3. brake has become too hot under continuous load (e.g. due to long downhill rides)</li> </ol>	<ol style="list-style-type: none"> <li>1. renew brake pads*</li> <li>2. recalibrate the brake system*</li> <li>3. use brake alternately</li> </ol>
<b>Unsteady behavior of the chain in the first or last gear of the gear shifting system Gears do not shift cleanly</b>	<ol style="list-style-type: none"> <li>1. the gear shift is misadjusted</li> <li>2. parts of the gear shift are defective</li> <li>3. gear shift, chain, shift arm are heavily contaminated or not sufficiently lubricated</li> </ol>	<ol style="list-style-type: none"> <li>1. readjust the gear shift*</li> <li>2. replacing the defective components*</li> <li>3. cleaning and regreasing of the respective components</li> </ol>

*\* Please do not carry out these solutions yourself. Please contact a suitable technician or specialist workshop or our support.*

## 10. DATA SHEET

Main technical reference number:	(TDG01Z)
Dimensions:	1725/1785 × 640 × 1010 mmmm
Wheel diameter:	640/690 mm
Distance front and rear axle centre:	1010mm
Weight:	≤ 20kg
Maximum speed:	≤25Km/h
Average range:	≥25km
Maximum range:	>50km
Maximum permissible load:	125kg
Maximum permissible total weight:	150kg

### Main battery parameters

Battery type:	Lithium-ion
Nominal voltage:	36V

### Main parameters of the motor

Motor type:	Rear wheel hub motor brushless DC motor
Power:	≤250W
Voltage:	36V

### Controller parameters

Undervoltage protection value:	31.5±1V
Overvoltage protection value:	15±1A

### Battery charger

Input voltage:	AC 115/230V, 50/60Hz
Output voltage:	42V DC
Output current:	2A

## 11. DECLARATION OF CONFORMITY

The manufacturer declares that the above mentioned products are in conformity with all relevant declarations of the Machinery Directive -2006/42/EC, Low Voltage Directive 2014/35/EU Product Safety 2001/95/EC, RoHS 2011/65/EU and Dir. Electromagnetic Compatibility -2014/30/EU.

Please find the complete declaration here:  
[www.leicke.de](http://www.leicke.de) -> Fahrräder -> SachsenRAD R6  
 Angewandte technische Normen: DIN EN 15194  
 Fahrräder-Elektrisch unterstützte Fahrräder, DIN EN ISO 4210



## 12. DISPOSAL

### Our obligation to inform you according to the battery law.

*In connection with the sale of batteries or with the delivery of devices containing batteries / rechargeable batteries / lamps, we are obliged to inform you of the following:*

**Do not dispose of your old device in the household waste!**



You are legally obligated to return used batteries/rechargeable batteries/lamps as the end user. In the case of a removable battery/accumulator or illuminant, you must return them separately to the appropriate return system. You can return used devices/batteries/lamps to the collection points of the public waste disposal authorities (recycling centers) and to distributors as defined by the ElektroG (retail trade). In addition, you can return such old devices/batteries/lamps of which LEICKE has similar devices in its product range to our dispatch warehouse:

LEICKE GmbH

Ref.: Old appliances/batteries/lamps

Stöhrerstrasse 17

04347 Leipzig

In addition, you are responsible for completely deleting any personal data on old devices.

The symbols shown on the batteries have the following meaning:

The symbol of the crossed-out garbage can means that the battery must not be disposed of in the must not be disposed of with household waste.

Pb = Battery contains more than 0.004% lead by mass.

Cd = battery contains more than 0.002 mass percent of cadmium

Hg = Battery contains more than 0.0005 mass percent mercury.

Please observe the above instructions.



## 13. IMPRINT

Every effort has been made to ensure that the information in this manual is correct, however, product operating parameters are subject to change without notice.

LEICKE GmbH

Stöhrerstr. 17

04347 Leipzig

info@leicke.com



## 14. WARRANTY

### Manufacturer's warranty/warranty conditions and service for LEICKE e-bikes: (as of 12/2021)

#### 1. ensuring and warranty

You can make warranty claims within a maximum period of 24 months, calculated from the date of purchase. The warranty is limited to the repair or replacement of the damaged component / e-bike and is at our discretion. Our warranty is always free of charge for you. However, it does not apply if defects other than material and workmanship defects are found.

#### Warranty on frame:

The frame is guaranteed for five years against breakage. The warranty starts from the date of purchase. In the event of a broken frame, we will offer you an exchange of the e-bike or a credit note, less a flatrate usage fee, upon presentation of the proof of purchase. The amount of the flatrate usage fee depends on the period since you purchased the e-bike. The warranty does not apply if defects other than material and workmanship defects are found.

### **Warranty on battery:**

1. We provide a 12-month guarantee on the proper functioning of the battery. The warranty starts from the date of purchase. The warranty service is limited to the repair or replacement of the battery and is carried out at the discretion of LEICKE. The warranty service is always free of charge for you. The warranty does not apply if defects other than material and workmanship defects are found.

Changes due to wear and tear, such as capacity reductions, are expressly excluded from the warranty.

2. The claim to warranty must be proven by presentation of the purchaser's purchase receipt.

3. The investigation of the fault and its causes shall always be carried out by LEICKE. The components replaced within the scope of the warranty or guarantee shall become our property.

4. In the event of a justified warranty or guarantee claim, the costs of shipping and the costs of removal and installation shall be borne by LEICKE.

5. If the e-bike has been modified by third parties or through the installation of third-party parts, or if any defects that have occurred are originally related to the modification, the warranty claim shall expire. Furthermore, it expires if the instructions given in the user manual regarding the handling and use of the bike have not been followed. This applies in particular to the intended use as well as the care and maintenance instructions.

6. Not included in the warranty are:

a) Components subject to wear, consumption or deterioration (except for clear material or manufacturing defects), such as:

- tyres - lamps - saddle
- brake components
- Stand - Battery
- chain - sprockets - grips
- Fuse - Gearshift sprocket - Stickers/Decals
- Cables - Bowden cables - etc.

b) Damage that is attributable to:

- the non-use of original spare parts.
- manipulation of the engine control software (incl. throttling, tuning, etc.).
- the improper installation of components of the buyer or a third party.
- Damage caused by stone chips, hail, road salt, industrial exhaust fumes, lack of care, unsuitable care products, etc.

c) consumables not related to repair work on recognised faults.

d) all maintenance or other work resulting from wear and tear, accident or operating conditions as well as driving in non-compliance with the manufacturer's instructions.

e) all occurrences, such as noise, vibrations, colour changes, wear and tear, etc., which do not affect the basic and driving characteristics.

f) Costs for maintenance, inspection and cleaning work.

7. The claim to warranty entitles the customer to demand only the rectification of the defect. Claims for return or reduction of the purchase price shall only apply after rectification has failed. Compensation for indirect or direct damage shall not be granted.

8. The warranty period is neither renewed nor extended by an executed warranty. The assertion of claims after



the expiry of the period is excluded.

9. Warranty provisions other than those listed above are only valid if confirmed in writing by LEICKE GmbH / SachsenRad.

10. Should a technical problem occur with the e-bike you have purchased, please contact the support hotline of LEICKE GmbH / SachsenRad.

Contact:

LEICKE GmbH,  
Stöhrerstraße 17,  
04347 Leipzig

info@leicke.com  
+49 341/21825900



This image shows a single sheet of white paper with horizontal green ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



# 15. RETURN RECEIPT

If you have any questions regarding your e-bike, please contact our customer service:

info@leicke.com | +49 341 / 218 259 00

Your data				Return address			
Reference no.				Company	LEICKE GmbH		
Name				Street	Stöhrerstraße	Nr.	17
Street		No..		City	Leipzig	PLZ	04347
City		code		Country	Germany		
Country				Ref.	Return SachsenRad		
E-mail							

bought at	
bought on	

E-bike model / item number	
Frame size	
Color	

Please fill out this form carefully. All information is voluntary. Incomplete completion will not negatively affect your consumer rights, but will complicate and delay the processing of your return.

Reason for return	
Does not like, does not meet expectations	
Shipping carton damaged	
Wrong item was delivered	
No intention to buy	
Delivery time too long	
Delivery incomplete	
Item defective	
Item damaged	

In case of defect or damage, please indicate the reason for the defect. Enter missing parts under „Other“.  
(see p.2)

**Returning - Here's how it works if our customer service was unable to solve your problem.**

**1. Please contact our customer service before you return the product.**

**2. Pack well.**

Take your time and pack the item carefully.

Remove old labels and barcodes from the shipping box.

You can find video instructions here: <https://youtu.be/zJ2FOVUJSYw>

**2. fill out the return receipt and put it in the package.**

If you have already sent the receipt to us by mail,  
it is sufficient to indicate the reference number.

**3. stick the return label on the package.**

If you do not have a return label yet, then simply contact our customer service.

**4. take the package to the post office**

After successful processing of the return, we will send you an  
an e-mail and inform your dealer.

In the case of signs of use or damage, as well as improper shipping, we may be entitled to charge the resulting depreciation. Please refer to the instructions in your dealer's cancellation policy.

Defect	Description
Battery	
Charger	
Display (error code)	
Brakes	
Motor	
Handlebar	
Suspension fork	
Wheel	
Light	
Bottom bracket	
Other	

If you send this receipt by mail, please include pictures or videos of the defect as attachments.

**contact:**





## notes

This image shows a blank sheet of white paper with horizontal green ruling lines. The lines are evenly spaced and run across the width of the page, providing a guide for writing. There are no margins, text, or other markings on the paper.

**We wish you  
a good trip with your  
SachsenRad E-Racing Bike R6.**

