

## Translation of original operating instructions

### GO SwissDrive drive system G2



**In the pursuance of technical progression, we reserve the right to amend these operating instructions in accordance with technology. Retain for future use!**

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## 1. Welcome

Dear Customer,

we are delighted that you have chosen our GO SwissDrive system. Our trusted drive system has won numerous awards and is synonymous with high Swiss quality and dynamic riding pleasure.

The operating instructions contain important information about safe and proper operation, repairs, storage, decommissioning and disposal. To use the product correctly and to avoid incorrect operation, carefully read the operating instructions before commissioning.

Retain the operating instructions for future reference in case you have any questions. If you have any questions to which the operating instructions are unable to provide an answer, please consult your dealer.

If, when you received the E-Bike from your dealer, it was not operationally ready, contact the salesperson from whom you purchased the complete E-Bike.



**This is a translation of the original operating instructions for the GO SwissDrive drive system. In your bicycle's general operating instructions, you can find further details about handling the E-Bike.**

If you sell the product to a third party, please ensure that these operating instructions are handed over as well.

We hope you have lots of fun with our drive system.  
Regards, the GO SwissDrive Team

## 1.1. Basic information about the operating instructions

The abbreviation OI is used hereafter when referring to these operating instructions. The OI belong to the product and contain important information about safe and proper operation, repairs, storage, decommissioning and disposal.

The following typographical conventions are used throughout the OI:



### **NOTICE!**

Pay particular attention to this text.



### **CAUTION!**

Danger when performing the described activity and during operation from hazardous sources: possible physical injuries or risks to health. This symbol also warns you about improper behaviour that could lead to material damage and negative impacts on the environment.



### **WARNING!**

Danger when performing the described activity and during operation from hazardous sources: possible severe physical injury.

In terms of the drive components, the instructions comply with DIN EN 15194 and, in relation to S-Pedelecs, meet EU regulation no. 168/2013.

Failure to observe the safety instructions will render any compensation claims invalid.

The OI issued at the time of product delivery was up-to-date.

## 1.2. Using these operating instructions

These OI contain all of the information necessary for correct use of the product.

To operate the product properly and to avoid incorrect operation, carefully read the OI before commissioning.

To prevent damage to the product or other items and to avoid any risk to the health of yourself and others, strict adherence to the details provided in the OI is required. If you sell the product to a third party, please ensure that these OI are handed over as well.

## 1.3. Other applicable documents

- Operating instructions of E-Bike
- Operating instructions of battery

## 2. Intended use

### 2.1. Use and legal foundation

The GO SwissDrive drive system meets the requirements of DIN 15194 for bicycles with electric motor power assistance as well as directive 2014/30/EU for electromagnetic compatibility.

The GO SwissDrive drive system is available in two versions:

The normal Pedelec version can be used without restriction like a bicycle because the power assistance is only activated up to a speed of 25 km/h while the rider is pedalling.



**Even though a Pedelec can be used without restriction, the recommendation from GO SwissDrive is to wear a helmet and goggles on account of the high speeds.**

The S-Pedelec version comes with a number of obligations as the power assistance works up to a speed of 45 km/h while the rider is pedalling. One of the obligations is to wear a helmet during use according to § 21a section 2 of the (German) road traffic act. Another obligation (in Germany) is to display insurance because, according to § 30a of the (German) road traffic, S-Pedelecs fall into the moped category.



**The regulations concerning pushing aids are country-specific. If you were born after 01.03.1965, you must check (in Germany) before riding the E-Bike whether you require a moped licence or a category AM licence.**

Observe the following points for riding correctly and safely:



**In the bicycle's general operating instructions you can find information about the intended use of the E-Bike, the maximum permissible weight and the routes that you are authorised to use.**



**The E-Bike sector is part of a dynamic market owing to the rising demand. There is a chance, therefore, of the current regulations for E-Bikes being adapted in future. Keep up-to-date with the daily news for adaptations and changes in legislation.**



**Before using the E-Bike, we recommend taking out third party insurance. If you are currently not insured, find out about suitable offers from your insurance agent.**

## 2.2. Equipment versions

The GO SwissDrive drive system is offered in three different versions: Standard, Speed and Power. The differences between the versions are as follows:

Motor	Standard	Speed	Power
Output (nominal)	250 W	400 W	400 W
Torque	40 Nm	40 Nm	45 Nm
Weight	5.3 kg	5.6 kg	5.6 kg
Typical use	Allround	S-Pedelec	S-Pedelec

## 2.3. Description of the components

The motor is the core of the GO SwissDrive drive system. It is a rear motor that transfers power directly to the rear wheel hub of the E-Bike.



**Rear wheel motors offer smooth acceleration, high elasticity, smooth running and plenty of reserve power.**



**At 18 to 25 decibels, the GO SwissDrive drive system is as quiet as a whisper.**



The **EVO operating element** acts as a communication interface for the GO SwissDrive drive system.

With one grip, you can use the EVO operating element to switch the system on and off, select the power assistance levels and read various information from the system. Furthermore, it offers a variety of displays and configuration possibilities.



**The operating element is IP65 protected against dust and spray water. However, the display should be removed during transit on bike carriers.**



To supply the GO SwissDrive drive system with power there is a battery and a battery charger. Different types of GO SwissDrive battery can be used. For more specific information about the batteries, read the operating instructions of the battery manufacturer.



The wiring harness joins the components together and supplies them with power. As such, the wiring is a communication interface for the components. The drive system can be enhanced with optional components, such as a lighting system, depending on the specifications of the bike manufacturer.

## 2.4. Description of the functions

The main function of the drive system is to provide motor power assistance while the bike is being ridden. The electric motor assists the rider of the E-Bike during pedalling. The motor power assistance can be applied in increments.

The GO SwissDrive drive system features 8 levels of power assistance: level -2 to 5. At level 0, power assistance is deactivated. In the positive power assistance levels 1 to 5, the rider is assisted with additional positive torque from the motor during pedalling. Here, the available motor output rises with the selected power assistance level: from level 1 = low power assistance to level 5 = maximum power assistance. In the negative power assistance levels -2 and -1, the motor is driven by a generator. This means that part of the energy generated when the bike is being ridden is fed back into the battery by means of a charge current.



This so-called recuperation causes motor braking, which is perceived by the rider as deceleration. Here, **recuperation** at level -2 is stronger than at level -1. To set the system to different riding situations, the GO SwissDrive drive system has **three riding modes**. **These can be selected on the display:**

- Eco mode: The focus here is on achieving the greatest range with consumption-optimised motor power assistance.
- Power mode: The maximum motor power assistance is made available to the rider.
- Tour mode: This operating mode is a balanced mix of range and performance.

The **pushing aid** feature enables acceleration of the E-Bike up to 6 km/h without any pedalling effort by the rider. This makes it easier to push the E-Bike particularly on uphill gradients or with heavy loads. On some models, a reverse pushing aid is also implemented. The pushing aid feature makes it possible for S-Pedelecs to accelerate to a set level according to the country-specific registration.



If the optional brake grip with auxiliary contact is used, **motor power assistance can take place during braking**. In this event, the motor is switched to recuperation mode and the braking energy is fed back into the battery.

The **hill-start assist** function makes it possible to configure a fixed speed from which recuperation engages automatically and the drive system brakes.

By measuring the rider's pedalling frequency, the GO SwissDrive drive system can also provide a **gear shift recommendation**. A higher or lower gear on the bicycle is recommended to the rider via the display of the EVO operating element in order to achieve the desired pedalling frequency.

Pressing and holding the (+) button activates the **boost function** and the highest level of power assistance is activated. If the boost function is activated for longer than 5 seconds, the power assistance level set by the boost function remains active.

In order to plan the route better, the rider is shown information about the **remaining distance**. The remaining distance that can be reached with the current battery charge level is calculated based on the current riding style, and is communicated to the rider via the EVO operating element.

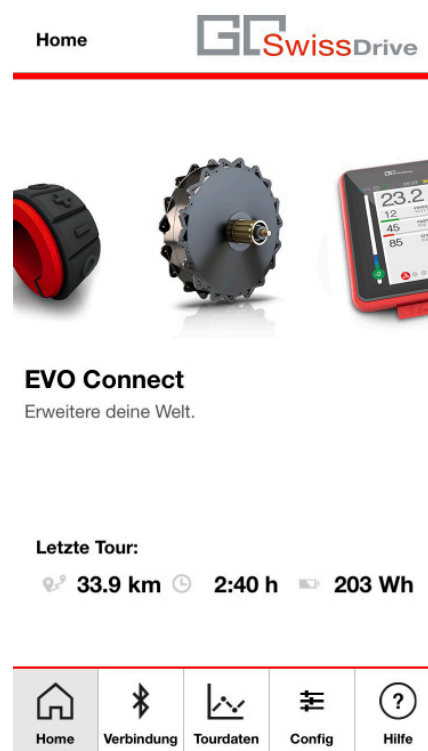


The remaining distance displayed here is an indication of the calculated remaining distance based on current and past consumption. Future changes, such as topography and consumption, are unable to be factored into this however. It is therefore important to also check the remaining battery capacity in the display.

The display of the EVO operating element features an integrated Bluetooth chip and can be connected via **Bluetooth 4.0** to various devices such as smartphones.



For connection of a compatible mobile telephone, the Bluetooth interface must be activated. The EVO operating element must be switched on via the "Bluetooth" sub-menu using the "Activate Bluetooth" button.



The EVO operating element will then attempt to make a connection. In order to connect to the EVO operating element, the "EVO Connect" app is required. The "EVO Connect" app can be downloaded from the Apple app store (iOS device) or Google Playstore (Android device).

Devices from the following Smartphone operating system versions are supported owing to Bluetooth specification 4.0:

- iOS 5+
- Android 4.3+



**Please note that due to different hardware versions there may still be incompatibility issues for which GO SwissDrive is unable to accept liability.**

### 3. Transport

There are different transportation regulations in terms of the individual components of the GO SwissDrive drive system.

#### 3.1. Transporting the battery

Before transporting the E-Bike, remove the battery and transport it using the original packaging supplied. This is special hazardous materials packaging on which the necessary warning notices are displayed.



**In connection with this, strictly observe the regulations applicable in your country for the dispatch of hazardous materials!**



#### 3.2. Transporting the EVO operating element

To prevent scratches and damage, the display of the EVO operating element should not be transported together with sharp objects, such as keys or pen-knives.

The display of the EVO operating element is protected to IP65 against dust and water splashes. Nevertheless, the display should still be removed from its holder and stored safely when the E-Bike is transported on a car or trailer.

## 4. Installation and assembly



The motor should only be mounted when disconnected from the power supply.



Ensure that all components are securely attached so that there are no loose parts.



After installing and activating the system, check whether a fault message is displayed on the EVO operating element.



### 4.1. Mounting the motor

Always use a torque wrench for mounting and adhere to the torque specifications.

#### 4.1.1. Installing the rear wheel

The procedure for installation of the rear wheel varies depending on the type of axle used.

##### 4.1.1.1. Threaded axle

1. Mount the torque arm and spacer sleeve on the dedicated anti-rotation device of the threaded axle of the GO SwissDrive motor. Ensure that the motor cable is not trapped by the torque arm.



2. Select the highest gear on the chain gears so that the shift mechanism points outwards.

The rear wheel can now be inserted in the frame ends of the E-Bike. Ensure that the cable outlet of the motor is in its mounted state and the torque arm is turned in such a way that it can be secured to the frame.

3. Now tighten the M10 axle nuts evenly. Ensure when doing this that the washers are placed between the frame and axle nuts. These must lie flat against the surface. It is important to ensure that the axle nuts are tightened with the torque wrench to a maximum of 45 Nm.

Observe also the bicycle frame specifications of the bicycle manufacturer.



**Use only self-locking M10x1 nuts. Genuine replacement nuts are available from your specialist dealer as a GO SwissDrive replacement part.**



4. Tighten the torque arm bolts to the specified torque of 8-9 Nm to the frame.



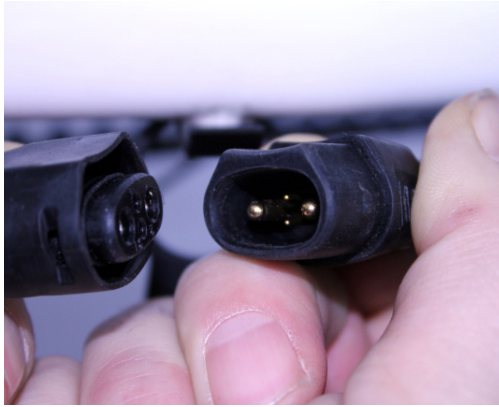
**Pay attention to any limitations imposed by the frame/bicycle manufacturer and also the bolt manufacturer.**

5. Re-attach the brake cable on rim brakes as soon as the wheel has been fitted. On hydraulic brakes, it is important to close the quick release in addition to immediately attaching the brake element. When the wheel is turning, make sure that the brake element touches neither the rim nor the tyre or the spokes. On disc brakes, pull the brake lever continually until firm pressure can be felt. It should not be possible to pull the brake lever as far as the handlebar. There is more information about this in the bicycle's general operating instructions.

6. Check on the display of the EVO operating element that the system is switched off and the battery is not connected. Then, and only then, connect the motor to the wiring harness. To do this, insert the motor connector in the receiver on the wiring harness. Note that the connector is mechanically (geometrically) coded against polarity reversal. Fit the connector slowly and carefully, do not to exert force under any circumstances.



**Always hold by the connector. Never pull the cable or the shrink-fit hose.**



7. Finally, attach the cable with a cable tie or secure in the dedicated position on the frame. The cable should not protrude outwardly to the side nor interfere with the spokes of the rear wheel or rub against the motor.



**Ensure that the cable is not under tension and, if cable ties are used, that these do not pinch the cable.**



**Always use a torque wrench for mounting and adhere to the torque specifications.**



**Handle the connector with care so that it does not suffer from damage or water ingress.**

#### 4.1.1.2. Hollow axle with quick release

1. Mount the torque arm and spacer sleeve on the dedicated anti-rotation device of the hollow axle of the GO SwissDrive motor. Ensure that the motor cable is not trapped by the torque arm.



2. Then, unless already done, guide the quick release axle through the hollow axle of the rear wheel. Screw the counternut by hand 2-3 turns onto the thread of the clamping axle to ensure that there is sufficient clearance when installing.

3. Select the highest gear on the chain gears so that the shift mechanism points outwards. The rear wheel along with the clamping axle can now be inserted in the frame ends of the E-Bike. Ensure that the cable outlet of the motor is in its mounted state behind the axle and the torque arm is turned in such a way that it can be secured to the frame. Pay attention also the position of the torque arm. This must be positioned so that it can then be screwed to the bicycle frame.

4. Tighten the nut of the quick release axle until it comes into contact with the frame. Then use the actuating lever of the quick release to apply an axial clamping force. This secures the rear wheel in the desired position.



**Strictly observe the operating instructions of the specific quick release.**



**Use only the supplied quick release. Genuine replacement parts are available from the specialist dealer.**



5. Now secure the torque arm to the frame and tighten the bolt, if present, to the prescribed torque of 8-9 Nm\*.



**Pay attention to any limitations imposed by the frame/bicycle manufacturer and also the bolt manufacturer.**



**Depending on the version used, the torque arm may not have to be secured to the frame with a bolt.**

6. Re-attach the brake cable on rim brakes as soon as the wheel has been fitted. On hydraulic brakes, it is important to close the quick release in addition to immediately attaching the brake element. When the wheel is turning, make sure that the brake element touches neither the rim nor the tyre or the spokes. On disc brakes, pull the brake lever continually until firm pressure can be felt. It should not be possible to pull the brake lever as far as the handlebar.

There is more information about this in the bicycle's general operating instructions.

7. Check on the display of the EVO operating element that the system is switched off and the battery is not connected. Then, and only then, connect the motor to the wiring harness. To do this, insert the motor connector in the receiver on the wiring harness. Note that the connector is mechanically (geometrically) coded against polarity reversal. Fit the connector slowly and carefully, do not to exert force under any circumstances.



**Always hold by the connector. Never pull the cable or the shrink-fit hose.**



8. Finally, attach the cable with a cable tie or secure in the dedicated position on the frame. The cable should not protrude outwardly to the side nor interfere with the spokes of the rear wheel or rub against the motor.



**Ensure that the cable is not under tension and, if cable ties are used, that these do not pinch the cable.**





**Always use a torque wrench for mounting and adhere to the torque specifications.**



**Handle the connector with care so that it does not suffer from damage or water ingress.**

#### **4.1.1.3. Through axle**

1. The torque arm has a hexagon recess. Mount the torque arm and spacer sleeve on the dedicated anti-rotation device of the hollow axle of the GO SwissDrive motor. Ensure that the motor cable is not trapped by the torque arm.
2. Select the highest gear on the chain gears so that the shift mechanism points outwards. Then position the hub of the rear wheel between the mountings of the bicycle frame. Ensure that the cable outlet of the motor is in its mounted state behind the axle. Then check that the torque arm is located in the dedicated recess in the frame.
3. Now guide the through axle through the mounting in the bicycle frame and through the hub of the rear wheel. Then tighten the axle to the prescribed torque of the axle manufacturer and/or bicycle manufacturer.
4. Depending on the version, the actuating lever of the quick release or a screw-type clamp can be used to apply an axial clamping force to secure the rear wheel in the respective position.
5. Re-attach the brake cable on rim brakes as soon as the wheel has been fitted. On hydraulic brakes, it is important to close the quick release in addition to immediately attaching the brake element. When the wheel is turning, make sure that the brake element touches neither the rim nor the tyre or the spokes. On disc brakes, pull the brake lever continually until firm pressure can be felt. It should not be possible to pull the brake lever as far as the handlebar.

There is more information about this in the bicycle's general operating instructions.

6. Check on the display of the EVO operating element that the system is switched off and the battery is not connected. Then, and only then, connect the motor to the wiring harness. To do this, insert the motor connector in the receiver on the wiring harness. Note that the connector is mechanically (geometrically) coded against polarity reversal. Fit the connector slowly and carefully, do not exert force under any circumstances.



**Always hold by the connector. Never pull the cable or the shrink-fit hose.**



7. Finally, attach the cable with a cable tie or secure in the dedicated position on the frame. The cable should not protrude outwardly to the side nor interfere with the spokes of the rear wheel or rub against the motor.



**Ensure that the cable is not under tension and, if cable ties are used, that these do not pinch the cable.**



**Always use a torque wrench for mounting and adhere to the torque specifications.**



**Handle the connector with care so that it does not suffer from damage or water ingress.**

#### 4.1.2. Removing the rear wheel

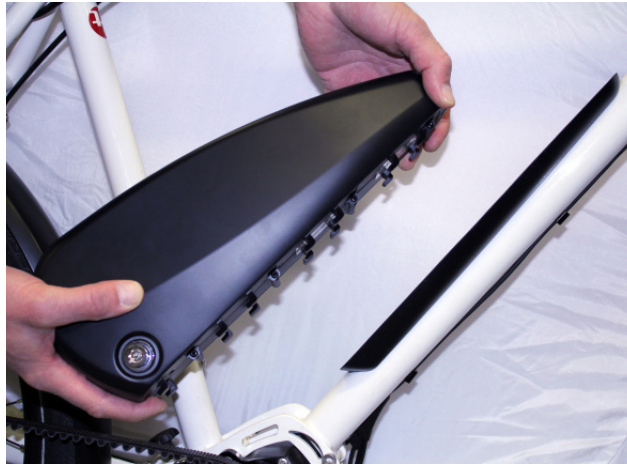
In the event of a tyre defect or to service the gear shift components, it may be necessary to remove the rear wheel.



**First read the basic information in the bicycle's general operating instructions. This can be found in the chapters "Removing and installing the wheel" and "Using quick releases and through axles". Do not remove the rear wheel until this has been done. Consult your specialist bicycle dealer if you still have questions.**

Since the rear wheel contains the drive unit of the GO SwissDrive system, observe the following procedure:

1. Switch off the system on the operating element and remove the battery.



2. After removing the battery, switch the EVO operating element on and off again in order to completely de-energise the system. The rear wheel must be stationary when doing this.

3. Park the E-Bike so that the rear wheel can be removed. Ideally, the E-Bike should be clamped on a dedicated assembly stand. Seek help to do this owing to the heavy weight of the E-Bike.

4. Shift the chain gears to the smallest gear on the rear wheel (highest gear) as this will facilitate removal and installation.



**Remove the brake if necessary. Observe the operating instructions of the brake manufacturer to do this.**

5. Disconnect the motor connector from the wiring harness. Pull apart the connection to do this. Make sure at all times that the connector itself is pulled and not the cable or the shrink-fit hose. If present, open the cable tie securing the motor cable.

6. Now remove the rear wheel in the reverse order of installation (see above).

### 4.1.3. Mounting a brake disc

It is possible to mount a standard 6-hole brake disc on the GO SwissDrive motor. Use only brake discs measuring  $\geq 180$  mm in diameter.



**The particular shape means that special T25 bolts must be used. On brake discs with a thickness of 2 mm, use only M5x7 bolts (with thread lock) in accordance with ISO standard 7380.**

1. Place the brake disc in the designated direction of rotation on the mounting of the GO SwissDrive motor.
2. Start all bolts by hand and screw in two or three turns.
3. Then tighten all bolts lightly and evenly.
4. Turn the brake disc in the opposite direction of rotation and hold it firmly in this position.
5. Then tighten the bolts in diagonal sequence using a torque wrench. The prescribed torque is 5 Nm.



**Use only original GO SwissDrive bolts available from an authorised specialist dealer.**



**Adjust the brake calliper on the E-Bike so that it does not rub against the housing of the motor.**



**Observe the instructions of the bicycle manufacturer and/or brake manufacturer when doing this.**



## 4.2. Mounting the EVO operating element

Choose a position for the EVO operating element on the handlebar in such a way that the grip controls can be accessed easily by the rider when riding. The EVO operating element should be mounted in the vicinity of the handlebar grip. At the same time, ensure that the EVO operating element is mounted so that it does not interfere with the brakes or gear shifters or blocks them.

The EVO operating element was designed for a handlebar diameter of 22.2 mm. If there is a deviation from this, the EVO operating element may become damaged during installation.

To mount, loosen the pinch bolt and position the EVO operating element and also the docking station on the handlebar in the desired position. Then tighten the pinch bolt of the operating element to a torque of 0.1 Nm and that of the docking station to 0.3 Nm.



**Ensure that all cables are routed in such a way that the system is not exposed to any mechanical tension. Ensure also when securing the cables that they are not broken (open circuit) from crushing or pinching.**

## 4.3. Cable connections



**The wiring harnesses supplied by GO SwissDrive are designed specifically for the communicating components of the GO SwissDrive drive system. Use only wiring harnesses, therefore, that comply with the requirements of the specific system.**



**Before connecting the individual components of the system, remove the battery.**



**Ensure that all cables are routed in such a way that the system is not exposed to any mechanical tension.**

When routing the motor cable on the bicycle frame, ensure that the cable can be secured to the frame by suitable means. The cable must not be exposed to any mechanical stress and not rub against the motor, the torque arm, the brake disc or other moving parts.

To avoid hazards during operation, the motor cable must run along the frame as closely as possible. Furthermore, the cable must be routed so that it cannot interfere with the spokes of the rear wheel.

In the area of the handlebar, it is recommended to secure the cable with a spiral hose as the cable is not supposed to be fixed to one point due to the movements of the handlebar.

All of the connectors on the wiring harness are designed to be safe against polarity reversal. The connections on the handlebar have a notch in them. This notch makes it possible to align the corresponding receiver. There is an outward curve on one side of the motor connector. Located on the opposite side is a depression, which predefines the direction of connection.



**Always hold the connector itself, never the cable or shrink-fit hose.**



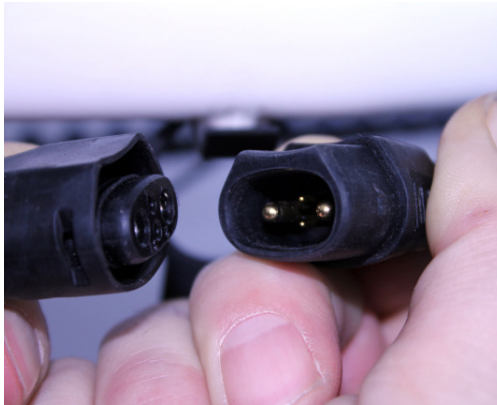
**Ensure that the components are wired together correctly and that the cables do not rub against anything when the bicycle is being ridden.**



**If the connector is fitted with force the wrong way around, all connected components could suffer repairable or irreparable damage.**



**When routing the motor cable, ensure that the cable does not come into contact with moving components, e.g. the brake discs.**



**Make sure that no components of the first generation are used together with those of the second generation as otherwise a defect may be caused.**

#### 4.4. Mounting optional components

See mounting instructions of optional components.

#### 4.5. Table of torque settings

Component	Notices	Torque setting
Brake disc bolts	T25, M5x7	5 Nm
Axle nuts	M10 x 1, self-locking	45 Nm
Torque arm	On frame	8-9 Nm*
Freewheel clamp nut		8 Nm
Docking station handlebar clamp		0.3 Nm
Grip controls		0.1 Nm

## 5. Commissioning

A few steps are necessary in advance before the E-Bike can be brought into operation with the GO SwissDrive drive system.

1. Fully charge the battery of the drive system as described in chapter 5.4.1 "Charging the battery".
2. Familiarise yourself with the functions of the GO SwissDrive drive system.

Before commencing a journey and with the system switched on, familiarise yourself with the corresponding functions of the operating element as explained in chapter 5.1 "EVO operating element".

Become accustomed with setting the power assistance levels without taking your hands off the handlebar or looking at the display.



3. Before riding in traffic for the first time, learn about the properties of the E-Bike. Choose a cordoned off area for a test ride to do this. Many traffic users underestimate the speed of E-Bikes so pay particular attention when riding on open roads.

### 5.1. EVO operating element

Once a comfortable seating position has been adopted, adjust the EVO operating element before starting out for the first time in such a way that it can be reached easily and all functions are legible. Familiarise yourself with the buttons and displays.

Change the basic settings in accordance with chapter 6.3.1.





## 5.2. Riding information

The GO SwissDrive system assists the pedalling power at various levels. These can be selected on the EVO operating element. If the pedals are not turned there is no assistance. On an E-Bike, power assistance switches off at 25 km/h. This is a legal prerequisite.



**The statutory requirements for an S-Pedelec require power assistance to be limited to 45 km/h. In addition, it is obligatory to display a number plate and to wear a helmet during operation.**

If, when travelling downhill, a reduction in speed is desired, the GO SwissDrive system has the benefit of a recuperation mode with two levels. This is a system that feeds the braking energy of the motor back into the battery. Be aware that this system is not a substitute for the two brakes. Therefore, always decelerate with both brakes as required by the traffic situation or the route. Read about "Safe braking" in the bicycle's general operating instructions.



**Recuperation may not be used in certain situations, e.g. if the battery is already fully charged. Moreover, the recuperation feature switches off at high speeds to protect the battery.**

Depending on the size of wheel, high charge currents occur in certain product series at speeds above approx. 35 to 50 km/h. This is inherent of the design owing to the energy-saving recuperation possibilities. The consequence may be temporary deactivation of the charging element of the battery. Significant braking is encountered due to the charge currents in a narrow speed range. As speed increases and charging deactivation takes effect, this stops again abruptly. Certain battery types switch back on again automatically after a few seconds and cause a short braking effect. These are protective measures for the electronics and not a defect or deficiency in the system.

Bear in mind when travelling downhill that braking pulses may be encountered and be prepared for this. Shift your weight to the back part of the saddle in this case and hold the handlebar firmly with both hands.



**If the battery is fully charged, note that there is no recuperation possibility when travelling downhill.**



**Read the hints about riding the E-Bike in the bicycle's general instructions and instructions of the E-Bike manufacturer.**



The motor will become warm if used for prolonged periods. Do not touch the motor either during use or within 30 minutes of use. If disc brakes are fitted, note that these can become hot as well. Allow the brakes to cool down before removing the wheels.



Never touch the E-Bike during use by the motor or rear wheel.

### 5.3. Before starting

Before starting, always check the function and safety of the entire E-Bike. The steps to do this can be found in the bicycle's general operating instructions. If there is any doubt, consult your specialist dealer before starting off. In terms of the drive system, the following checks are necessary before starting:

1. Activate the EVO operating element and check whether a fault is displayed. When the EVO operating element can be activated without a fault message it is operationally ready.



2. Check the pushing aid by pushing the E-Bike and activating the "pushing aid" function. This should switch on.

3. Check whether the cables are correctly and fully connected.

4. If the optional brake grip is used, check its function before starting a journey by pushing the bicycle with the pushing aid activated and pulling the brake lever. The pushing aid should be deactivated and the display should show power assistance level -2.

5. After a defined period, the battery will switch to deep sleep mode. For energy saving reasons, the battery switches off and no longer supplies voltage. The battery can be reactivated by pressing and holding the switch (approx. five seconds) next to the charge level indicator. Lighting up of the charge level indicator denotes that reactivation was successful. The bicycle can then be switched on via the display in the normal manner. The deactivation point of the battery may be several hours or up to several days depending on the configuration. Refer to the specific battery instructions for the point at which it deactivates.

### 5.3.1. Charge level indicator

The charge level is indicated via five LED lamps by pressing the button on the battery. How the light emitting diodes represent the actual charge level can be seen in the following table:

LED lit	LED flashing	Charge level
-	1	approx. 0-20%
1	-	approx. 21-40%
1,2	-	approx. 41-60%
1,2,3	-	approx. 61-80%
1,2,3,4	-	approx. 81-100%

The charge level indicator goes out automatically after about 10 seconds.



To ensure that the destination can always be reached with full power assistance and the battery service life is as long as possible, our recommendation is for the battery to be recharged after every long journey.

### 5.4. Battery safety instructions

Read and observe all notices and instructions on handling the battery safely. In addition to the safety instructions given here, observe the information in the operating instructions of the battery manufacturer.



**Improper use of the battery can cause damage. Paying attention to these notices prevents possible electric shock, injuries and overheating/fire.**

1. Use only the genuine charging device supplied with the battery. Failure to do so may result in the battery overheating and becoming damaged.



2. The battery may only be used with the motor designed for the battery and with the corresponding control units. A dangerous overload may occur if it is used in connection with other equipment.
3. Only handle the battery with the E-Bike motor/system switched off.
4. Before carrying out work on the E-Bike, e.g. assembly or maintenance measures, the battery must be removed from the E-Bike.
5. Remove the battery before transporting the E-Bike, e.g. transportation in a carrier system or on a car. Only transport the batteries in the original transit box provided.
6. Never perform any kind of repairs on the battery. Improper handling of the battery can result in a malfunction of the internal electrical safety features and cause a short circuit. If the battery is opened, any warranty entitlement will be rendered void.
7. Objects that can cause a short circuit, e.g. metallic objects such as paper clips, coins, keys, nails or screws, must be kept away from the contacts and connectors of the battery.
8. Always place the battery down so that the contacts and connectors cannot come into contact with metallic surfaces and objects.
9. Do not expose the battery for longer periods to heat, excessive sunlight, moisture and do not immerse in or pour over any liquid. There is a risk of damage that may cause a short circuit and/or the battery to overheat.

10. Do not bring the battery in contact with naked flames and do not place the battery on hot hobs, in the microwave or in the oven. There is otherwise a danger of explosion. Always charge the battery on a fire-resistant, non-flammable surface such as glass or ceramic.

11. The battery cells are protected against explosion by an engineered breaking point. However, improper handling, such as excessive heat or mechanical damage, can in extreme cases cause the engineered breaking point to open and electrolyte or vapour to escape.



**Never touch or swallow electrolyte under any circumstances! If vapour escapes, ventilate the area with plenty of fresh air. Escaped electrolyte or vapour can cause skin irritations. In the event of accidental contact, wash off the electrolyte with plenty of water. If skin irritation is severe, electrolyte is swallowed, the respiratory ducts are affected or electrolyte comes into contact with the eyes, seek medical assistance immediately.**

#### 5.4.1. Charging the battery

Use only the genuine charging device supplied with the battery. The best charging result is achieved in this way and a risk of explosion caused through incompatibility is avoided. Failure to do so may result in an explosion.



**Do not charge batteries if they exhibit signs of damage. Do not use a damaged battery. Contact an authorised specialist dealer without delay.**

The battery can also be charged while it is mounted on the E-Bike:

- First connect the battery to the charger.
- Then insert the mains connector of the charger in the socket.
- To end charging, carry out the procedure in reverse.
- The charging process can be interrupted at any time.



**The batteries of E-Bikes have no memory effect. It is best to charge the battery after each journey, e.g. when just three LEDs of the charge indicator on the battery are lit. Avoid exhaustive discharge of the battery.**



**Only charge the battery at an ambient temperature of 0°C up to 45°C. The battery's maximum service life can be achieved if it is charged at an ambient temperature between 0°C and 30°C.**



**If the battery is not used, it must not be left to charge over a long period.**

The battery heats up slightly as it is charged. This is a normal operating condition.



**Always charge the battery on a fire-resistant, non-flammable surface made e.g. of glass or ceramic.**

#### 5.4.2. Exhaustive discharge

If the battery is completely discharged and not charged again for a long period of time, the battery may adopt an inactive operating state. The charge level indicator is then no longer active. In this case, proceed as described in the chapter "Before starting".

If the battery cannot be activated, the battery must be checked by a specialist dealer.

Further information about exhaustive discharge can be found in the operating instructions of the battery manufacturer.

#### 5.4.3. Removing the battery



**Switch off the system on the operating element before removing the battery. Failure to do so may result in damage to the system electronics or the contacts of the battery-motor unit.**

To remove the battery, open the battery lock with the key. The lock cylinder is now out. The battery can be removed.



**Do not remove the battery while riding.**



#### 5.4.4. Inserting the battery

After inserting the battery, press the lock cylinder and check the seating of the battery. The battery must now be securely seated. The lock is engaged and closed. This prevents the battery from falling out.

Withdraw the key as an anti-theft measure and to avoid injuries before the E-Bike is used.



**Do not insert the battery while riding.**



#### 5.4.5. Preparing for winter and storage

Store the battery in a dry and temperate location. Charge the battery to about 75% (three LED lamps in the charge level indicator). After a few weeks, check the charge level at regular intervals. If the charge level drops below 25% (one LED lamp in the charge level indicator), recharge the battery to 75%. Exhaustive discharge and damage to the battery are prevented in this way.

## 6. Operating information

Operation of the GO SwissDrive drive system is by means of the grip controls of the EVO operating element, which can be mounted on the left or right near the handlebar grip. The grip controls have five buttons whose functions are described as follows.



### 6.1. Using the grip controls

**[ON/OFF] button:** With the [ON/OFF] button, though with any other button as well, the overall GO SwissDrive drive system can be activated. The system can be deactivated by pressing and holding the [ON/OFF] button. Shortly after pressing this button, the EVO operating element should be activated and the overall system ready for operation. Pressing the [ON/OFF] button again and holding it for slightly longer switches the system off.



**[Confirm] button:** With the [confirm] button, various functions in the menu of the EVO operating element can be activated and deactivated. It is also possible to select and confirm settings in the configuration menu. The function of the [confirm] button here depends on the currently displayed menu.

1. Function in main menu: If the E-Bike is equipped with a compatible lighting system, the lights can be switched on and off by pressing and holding the [confirm] button in the main menu. When the lights are switched on, it is also possible by pressing the [confirm] button briefly to toggle between manual mode, automatic mode and main beam. In automatic mode, the lighting is controlled by an integrated brightness sensor integrated in the display of EVO operating element.

2. Function in trip data menu: By pressing and holding the [confirm] button, trip data can be manually deleted and reset.



**Be aware that any trip data recorded up to that point will be permanently deleted.**



3. Function in stopwatch menu: The stopwatch can be started by pressing the [confirm] button while the stopwatch menu is displayed. Pressing the [confirm] button again stops the measurement. Pressing and holding the [confirm] button saves the measurement, whereupon the stopwatch is reset. If you wish to continue the measurement after a pause, simply press the [confirm] button again.

4. Function in stationary menu: In the stationary menu, the [confirm] button serves as a means of confirming selected options or parameter settings. After navigating with the [+]/[-] buttons to the desired field, use the [confirm] button to select the option or execute the function. Examples for this function are deleting the call list in the telephone menu or selecting a language in the system settings.



**[+]/[-] buttons:** The power assistance level of the GO SwissDrive drive system can be set with the [+]/[-] buttons. In the configuration menu, the [+]/[-] buttons are used to navigate between the individual menu items and change numeric values.

1. Selection of power assistance level: The [+]/[-] buttons are used to choose between five positive power assistance levels and two recuperation levels. If power assistance level 0 is selected, motor assistance is no longer provided. Pressing the [+] button increases the power assistance level, while pressing the [-] button reduces it. The higher the power assistance level, the greater the support from the motor up until the shutoff limit set by the manufacturer. The recuperation effect of the motor (feeding back of recuperated energy into the battery and motor brake) is strongest at the lowest level (-2).

2. Pushing aid: Pressing and holding the [+] button in riding mode activates the forward pushing aid. The pushing/starting aid brings the motor into operation without additional pedalling and is designed to help push the E-Bike up gradients or under heavy load. Lightly pushing the E-Bike by hand to start it off is necessary to engage the pushing aid. As soon as the button is released, power assistance stops.

3. Boost function: Pressing and holding the [+] button while riding activates the boost function. To do this, it is necessary to pedal the bicycle. The boost function sets the system to the highest power assistance level while the [+] button is pressed and enables strong acceleration. If the [+] button is pressed for longer than 5 seconds, the highest power assistance level is set permanently.



Should a reverse pushing aid be integrated, this is activated in riding mode by pressing and holding the [-] button. It has the same functionality as the forward pushing aid.



The function can only be activated up to a set speed of 0-6 km/h (Pedelecs) and 0-20 km/h (S-Pedelecs). Note that the adjustment range depends on country-specific legislation and legal requirements.

4. Function in configuration menu: The [+] / [-] buttons are used in the configuration menu to navigate between the individual fields. Navigate to the next line by pressing the [-] button. If several options are available within one line, navigate from left to right through the line by pressing the [-] button. In the same way, navigate to the previous line by pressing the [+] button. If several options are available within one line, navigate from right to left through the line by pressing the [+] button.

Setting numeric values: For certain parameters, such as the tyre circumference, numeric values must be entered. This can be done with the aid of the [+] / [-] buttons from a predefined starting point. Pressing the [+] button increases the value by 1, pressing the [-] button reduces the value by 1. Pressing and holding the buttons speeds up the selection.



**[Next] button:** The [next] button is used to change between the individual menus of the EVO operating element. The order of the menus is predetermined and cannot be changed. It is possible, however, to deactivate individual menus in the settings. Deactivated menus are left out when the next one is selected.

It is possible to return to the main menu from any other menu by pressing and holding the [next] button.



## 6.2. EVO operating element menu

The menu structure of the EVO operating element comprises various menus that are enabled depending on the riding situation.

### 6.2.1. Menu when riding



**Menu selection is restricted for reasons of traffic safety to the main menu, trip data and stopwatch. When stationary, other menus are enabled in which e.g. settings can be made or a mobile telephone can be paired via Bluetooth.**

In riding mode, the display of the EVO operating element is divided into five areas:

- Status line
- Display of power assistance level
- Speed indicator
- Menu item
- Variable area in which various riding menus are displayed



The status line provides a quick overview of the current system status by means of various symbols.

The currently selected power assistance level is visualised by a graphic on the left edge of the display. The [ + ]/[ - ] buttons are used to choose between five positive power assistance levels and two recuperation levels. If power assistance level 0 is selected, motor assistance is no longer provided. Pressing the [ + ] button increases the power assistance level while pressing [ - ] button reduces it.



The current speed of the E-Bike is displayed digitally with a comma as a decimal point.



**For the speed to be displayed accurately, the circumference of the E-Bike's tyre must be set correctly. The tyre circumference can be adjusted in the settings. There is more detailed information about this in chapter 6.3.1 "System settings".**

In the variable display area, it is possible to change between the main menu, an overview of the current trip data and also the stopwatch function. Choosing between these menus is carried out by pressing the [next] button. The menu position indicates the current menu with a symbol.



When the recommended gear change is activated, arrows on the right of the speed display indicate which speed should be selected. An up arrow is an indication by the system to shift to a higher speed using the bicycle's chain gears. If the arrow is pointing down, this is a recommendation by the system to select a lower speed.

### 6.2.2. Menu when stationary

When the E-Bike is stationary, further menus can be enabled:

- Overview of total data
- Configuration menu
- Telephone menu
- Service menu
- Menu for saving data to external devices
- Configuration pages

Choosing between these menus is carried out by pressing the [next] button.

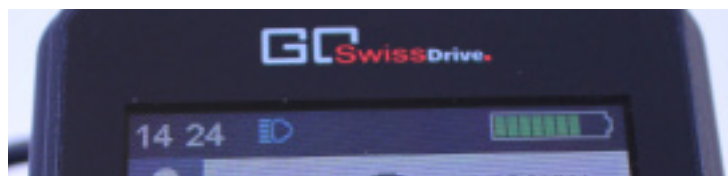


**For reasons of traffic safety, the EVO operating element deactivates in transit the menus that are only available when the bicycle is stationary. If a stationary menu is still active when starting off on the bicycle, the EVO operating element switches automatically to the main menu.**

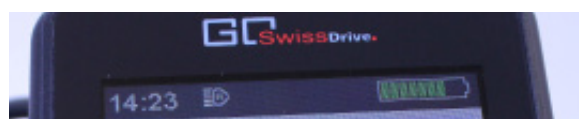
### 6.2.3. Status line

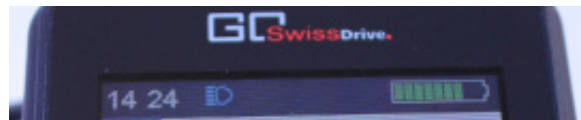
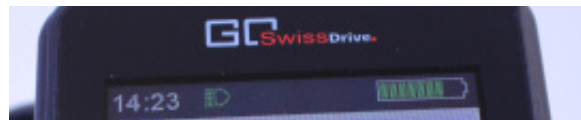
The status line is displayed in all menus at the upper edge of the display in each case and provides a quick overview of the current operating status of the E-Bike by means of various symbols. What these individual symbols mean is described as follows.

**Time:** The current time is shown on the left edge of the status line. It is possible to change between 12 hour and 24 hour mode in the settings. If 12 hour mode is selected, AM (Ante Meridiem) or PM (Post Meridiem) is shown after the time.



**Lights:** If the E-Bike is fitted with a compatible lighting system, its current status is displayed in the status line: on, off, automatic or main beam. Day-time running light status is indicated by a green lamp, main beam status is indicated by a blue lamp and automatic status is denoted by an A in the status line. The lights can be switched on and off by pressing and holding the [confirm] button. Changing between the operating modes is carried out in activated state by briefly pressing the [confirm] button in the main menu.





Bluetooth: The EVO operating element features an integrated Bluetooth chip and can be connected via Bluetooth 4.0 to compatible devices such as mobile telephones. See the operating instructions of the mobile telephone to find out whether your mobile telephone supports the Bluetooth 4.0 standard. The current status of the connection is visualised by means of the Bluetooth symbol. A blue symbol means that the Bluetooth interface of the EVO operating element is activated. When the Bluetooth symbol is no longer shown in the status bar, the Bluetooth interface is deactivated.



Telephone: If the EVO operating element is connected to a mobile telephone via Bluetooth, this is visualised by the telephone symbol in the status line. If a call or text message is received on the mobile telephone, this is shown in the display. This is indicated briefly by a pop-up. A telephone symbol is then displayed in the status line. This is displayed until the telephone menu of the EVO operating element is called up (see chapter 6.4 "Telephone menu").





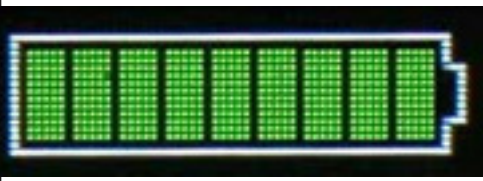

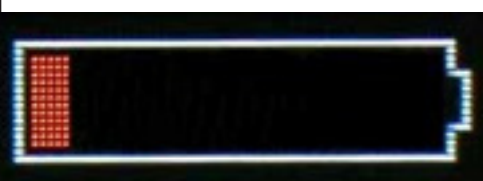
Fault: If a fault occurs in the GO SwissDrive drive system of the E-Bike, this is shown in the display. A pop-up appears (see chapter 7.2 "Warning notices") along with a fault symbol in the status line.

More detailed information about the fault and measures that may be necessary are described in the service menu (see chapter 7.1 "Service menu"). The fault symbol is removed from the display when the service menu is called up or the fault no longer exists.

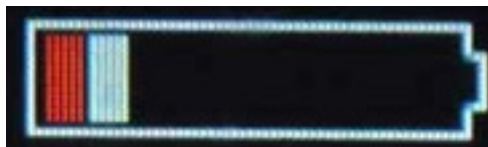


Battery charge level: The battery symbol on the right edge of the status line indicates the current charge level of the battery. The symbol has 9 bar segments with each bar representing 10% of the battery capacity. A detailed description of the display depending on the charge status can be found in the following table.



Display	Battery charge level
	100% - 90%
	39% - 30%
	19% - 10%

If the motor is operated in recuperation mode, this is denoted by a white bar.



The charge level indicator always relates to the current capacity of the battery. Note that the maximum chargeable capacity of a battery can become less as the number of charging cycles increases.

#### 6.2.4. Main menu

The main menu provides important information when the bicycle is being ridden. This menu is displayed as standard when the GO SwissDrive drive system is switched on.

Apart from the power assistance level and the current speed, which are obligatory for the riding menus, details are shown about the current performance of the GO SwissDrive drive system and the remaining distance. The current electric output is represented by a three digit digital value and in watts (W). If the motor is operated in recuperation mode, this is indicated by a negative output value. In addition, the current output is visualised by an analogue round instrument.





The remaining distance is displayed with a three digit digital value and is measured in kilometres or miles. In addition, the remaining distance is visualised by an analogue round instrument. The algorithm for calculation of the remaining distance takes account not only of the total distance covered by the E-Bike but also the miles recently covered. As the total distance increases, therefore, the algorithm adjusts to the riding style and thereby enables more accurate prognoses of the remaining distance.



**The remaining distance displayed here is an indication of the calculated remaining distance based on current and past consumption. Future changes, such as topography and consumption, are unable to be factored into this however. It is therefore important to also check the remaining battery capacity in the display.**

### 6.3. Operating element configuration

In the configuration menu, various basic settings can be changed and the EVO operating element can also be specially adapted to your needs and requirements.



**If you have any questions or encounter problems in connection with the EVO operating element configuration (described as follows), contact your specialist dealer.**

The configuration menu is divided into six different sub-menus that are selected by navigating to the desired field with the [+] / [-] buttons of the grip controls and then pressing the [confirm] button.

The field currently marked is highlighted green. Return to the upper menu from the sub-menu by pressing the next button on the grip controls.

Within the sub-menu, it is possible to change between the various fields using the [+] / [-] buttons of the grip controls, in which case the field currently selected is highlighted green. If several options are available for a setting, the one currently active is highlighted grey and features a checkmark. To activate a different option, navigate with the [+] / [-] buttons to the desired option and press the [confirm] button.

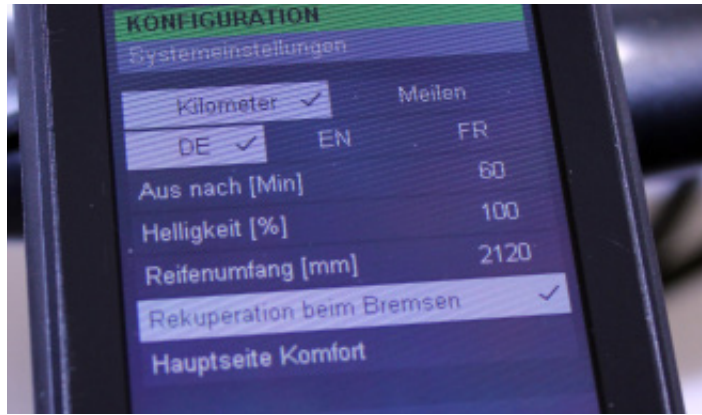
To change a numeric setting, e.g. the tyre circumference, navigate to the desired field with the [+] / [-] buttons of the grip controls and then press the [confirm] button. The value can then be increased or reduced by pressing the [+] / [-] buttons. The respective parameter increases by 1 each time the [+] button is pressed, and the respective parameter decreases by 1 each time the [-] button is pressed. Pressing and holding the [+] / [-] buttons activates rapid selection, which remains active as long as the corresponding button is pressed. Once the desired value is reached, press the [confirm] button to save.

The individual sub-menus are described in detail in the following chapters.

#### 6.3.1. System settings

Before starting off on the bicycle with the GO SwissDrive drive system, some basic settings should be adjusted, e.g. date, time and tyre circumference. If possible, have these settings changed by your specialist dealer before collecting the E-Bike.

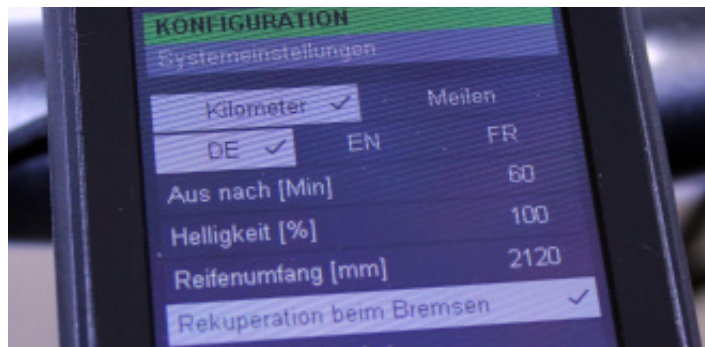
Further basic settings of the system can be selected in the "System settings" sub-menu.



It is possible to choose between the metric system and the imperial system for the display of distances and speeds. In the metric system, distances are displayed in kilometres (km) and speeds are displayed in kilometres per hour (km/h). In the imperial system, distances are displayed in miles (m) and speeds are displayed in miles per hour (mph).

The EVO operating element offers various menu languages. Choose between English, German and French as standard. The possible selection options depend on the configuration of the E-Bike manufacturer. Navigate to the desired language with the [+]/[-] buttons and press the [confirm] button.

With the "off after [min]" parameter, it is possible to choose the number of minutes after which the system should switch off to save energy if no input is made or the E-Bike is not moved.



**Do not set the time too short as the system could switch off unintentionally if a traffic light is red for a long period of time. Should the system nevertheless switch off unintentionally, simply switch it back on again using the [ON/OFF] button of the grip controls or any other button.**

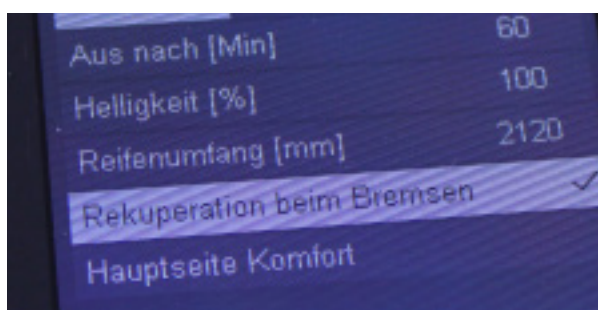
The EVO operating element features an integrated brightness sensor. This adapts the backlight of the display automatically to the ambient brightness.

The basic brightness can be increased or decreased using the brightness parameter. If the parameter is set to 100%, automatic regulation is deactivated and the backlight will always be at the maximum level irrespective of the ambient brightness.



**The automatic brightness sensor is not activated in all versions of the EVO operating element. The brightness sensor is activated by setting the brightness level to 0. The display then regulates the brightness automatically.**

With the tyre circumference parameter, it is possible to enter the circumference of the E-Bike tyres in the system. This is entered in millimetres (mm). The tyre circumference can be increased or reduced using the [+]/[-] buttons. Finally, press the [confirm] button.



Note that the tyre circumference is a fundamental requirement for many calculations, such as the displayed speed and also the distance travelled and the distance remaining. If possible, have these settings changed by your specialist dealer before collecting the E-Bike.



**The relevant tyre circumference value for the maximum speed is stored in the motor and cannot be changed via the display.**

By selecting the "recuperation during braking" option, the GO SwissDrive drive system feeds energy gained from braking back into the battery. This extends the range of the battery charge. The function is only available in connection with the compatible brake grip.

Activating the option "automatically delete trip after 4 hours" results in the trip data being permanently deleted after four hours if the bicycle is left stationary. The next time the EVO operating element is switched on, it starts at zero.

Furthermore, it is possible to reset the trip data in this menu at any time via the "reset trip" field.

In the "date and time" sub-menu, it is possible to adjust the date and current time. It is also possible to choose whether the time is displayed in 24 hour mode or 12 hour mode.

Hour, minute, day, month and year can be entered by navigating to the corresponding field with the [+] / [-] buttons and then pressing the [confirm] button. The respective value can be increased or decreased by means of the [+] / [-] buttons. Finally, press the [confirm] button.



The EVO operating element offers the means of configuring the lower area of the main menu according to personal preference by having up to two parameters from the current trip data displayed.

The following can be chosen from:

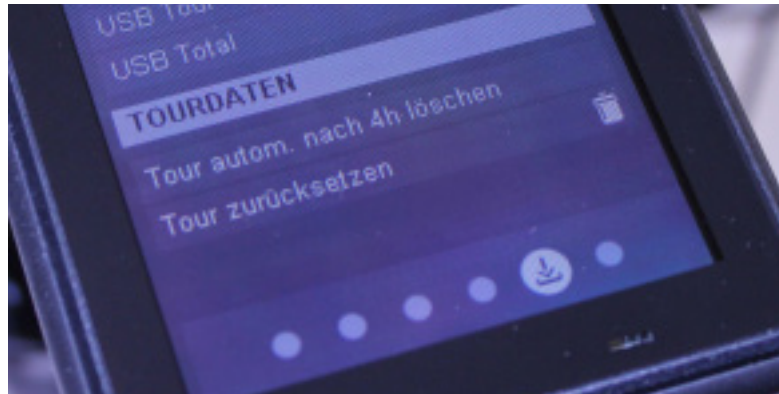
- Distance
- Duration
- Average consumption
- Average speed
- Maximum speed

Totals can also be chosen from the following:

- Total distance
- Total consumption
- Average speed
- Maximum speed
- Total duration

The currently active parameter is highlighted grey and features a checkmark.

To activate a different parameter, navigate with the [+] / [-] buttons of the grip controls to the desired option and press the [confirm] button. Should you wish to deactivate the currently active parameters without selecting a new parameter, navigate with the [+] / [-] buttons to the active parameter and press the [confirm] button. A parameter is now no longer displayed at the relevant position in the main menu.



### 6.3.2. Function settings

Various functionalities can be activated and deactivated in the "Functions" sub-menu.

The desired operating mode can be selected with the "Riding mode" parameter. Three operating modes are available here: Eco, Tour and Power. The differences of the operating modes are explained in chapter 2.4.



**Note that the individual setting of levels 1 to 5 on the EVO Connect app or by the specialist dealer is only taken account of in "Tour" mode.**

Activation of the downhill assist feature enables the automatic activation of recuperation when riding downhill. With the "downhill speed" parameter, it is possible to set the desired downhill speed at which recuperation starts. The energy generated here is fed back into the battery by means of recuperation.

Selecting "Boost function" activates the boost functionality. When activated, this enables powerful acceleration with a maximum output specification.

The sub-menu also contains gear shift recommendation functions. If the selection field "Gear shift recommendation" is activated, the recommended gear is shown in the display. Depending on the rider's pedalling frequency, this shows whether a shift into a higher or lower gear is required using the bicycle's chain gears.

### 6.4. Telephone menu

The EVO operating element offers the means of connecting a mobile telephone via Bluetooth 4.0. See the operating instructions of the mobile telephone to find out whether your mobile telephone supports the Bluetooth 4.0 standard.

Once the EVO operating element has been paired to the mobile telephone, incoming calls and text messages are shown on the display. This is indicated briefly by a pop-up.



Next to the telephone symbol in the status line a list symbol then appears, which indicates that a new call or a new text message has been entered in the telephone menu. The calls and text messages are arranged in the list according to the date and time, with the most recent call or most recent text message displayed uppermost. If the number of the incoming call or text message is entered in the contacts of your mobile telephone, the name saved in the mobile telephone is displayed instead of the telephone number.

It is possible to delete the list of received calls and text messages by navigating to the "Delete list" field with the [+] / [-] buttons of the grip controls and then pressing the [confirm] button.



**For reasons of traffic safety, always come to a halt before using the mobile telephone.**



**Note that deleting only affects the list stored in the EVO operating element. The information in the mobile telephone is not changed or deleted.**



**The telephone menu of the EVO operating element is purely for visualising data from the mobile telephone. It is not possible to take or make calls using the EVO operating element.**

## 6.5. Data storage

The EVO operating element offers the means of saving your current trip data and total data to an external device via the USB interface or Bluetooth interface.



**To ensure that the function works correctly, the external memory (e.g. USB stick) must be formatted to FAT32.**

Once an external device is connected to the EVO operating element via either of these two interfaces, one of the four storage variants can be selected in the "Data storage" menu by navigating to the desired field with the [+] / [-] buttons of the grip controls and the saving process can be started by pressing the [confirm] button. The field currently marked is highlighted green in each case. A pop-up appears to show that the storage of data on the external device was successful.



## 6.6. Charging a mobile telephone via USB

The docking station of the EVO operating element features a USB interface. The USB interface can be used for the transfer of data as well as for charging a mobile telephone. To charge a mobile telephone, connect the mobile telephone to the USB port of the docking station with a USB cable. Charging commences as soon as a connection is made.



**Note that the GO SwissDrive drive system must be switched on to charge a mobile telephone. The maximum charge current is 1.0 A. The rated charge voltage is 5 V.**



**The availability of the charge function depends on the E-Bike. For reasons of safety, fuses are installed in some wiring harnesses that can significantly restrict the available charge current.**



## 7. Information and fault messages

The GO SwissDrive drive system uses the display of the EVO operating element to inform you of malfunctions and provides warning notices where necessary.

### 7.1. Service menu

If a fault occurs in the E-Bike's GO SwissDrive drive system, the service menu offers compact details on how to rectify the fault.

The most recent faults are held in a list. Each detected fault is represented by a letter and a two digit number. The letter can be used to identify the component affected by the fault:

- M: Motor fault
- D: EVO operating element fault
- B: Battery fault
- C: Communication error

In the event of a communication error, communication between the individual system components will fail. Even if the components themselves appear to work properly, the system will still switch to fault mode for reasons of safety. Often, a check of the wiring and connections is all that is required to rectify the communication problem.



**In addition to fault detection, possible remedial measures are provided in compact form. If through these measures it is not possible to rectify the fault, have the E-Bike checked by a specialist dealer.**

It is possible to delete the list of detected faults by navigating to the "Delete list" field with the [+] / [-] buttons of the grip controls and then pressing the [confirm] button.



The service menu indicates beneath the fault list when (time or mileage) the next service is due at the specialist dealer.



**The service interval display depends on the E-Bike manufacturer. If the function is not activated, no information is displayed here.**

## 7.2. Warning notices

To prevent possible faults in the system in good time, warning notices are shown in the display of the EVO operating element.

If the battery charge level of the GO SwissDrive drive system drops below 20%, a pop-up appears as an indication. Another pop-up appears if the charge level of the battery drops below 10%.

## 7.3. Fault messages

If a fault occurs in the GO SwissDrive drive system, this is indicated in the EVO operating element by a pop-up with a clearly visible warning signal and a colour code. To find out what the fault code means and the recommended measure for rectifying the fault, refer to the following list.

Fault code	Meaning	Remedial measure BA
M26	Current too high	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M40	Current too low	Reboot the system and check that all connections are seated correctly. If the fault persists, contact a GO SwissDrive service centre.
M41	Voltage too high	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M84	Sensor error	Contact a GO SwissDrive service centre.
M85	Sensor error	Contact a GO SwissDrive service centre.
M1003	Software error	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M2000	Current regulation deactivated	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M2002	Calibration timeout	Contact a GO SwissDrive service centre.
M2003	Calibration aborted	Contact a GO SwissDrive service centre.

Fault code	Meaning	Remedial measure BA
M2004	Sensor error	Contact a GO SwissDrive service centre.
M2005	Sensor error	Contact a GO SwissDrive service centre.
M2006	Fault in current regulation	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M2007	Sensor error	Contact a GO SwissDrive service centre.
M6147	E-Bike regulation deactivated	Reboot the system. If the fault persists, contact a GO SwissDrive service centre.
M6148	Temperature sensor initialisation fault	Contact a GO SwissDrive service centre.
M9900	Communication error	Reboot the system and check that all connections are seated correctly. If the fault persists, contact a GO SwissDrive service centre.
M9904	Communication error	Reboot the system and check that all connections are seated correctly. If the fault persists, contact a GO SwissDrive service centre.
M9905	Communication error	Reboot the system and check that all connections are seated correctly. If the fault persists, contact a GO SwissDrive service centre.

## 8. Maintenance, care and repairs

### 8.1. Hazard information during maintenance



Never clean an E-Bike with GO SwissDrive drive system with a high-pressure cleaner, steam cleaner or water hose. To clean the system, use damp cloths or sponges but never liquids directly.



Try to avoid the use of cleaning agents. Never clean the E-Bike with cleaning agents that contain organic solvents.



Never press the buttons during cleaning and care of the operating element.



Opening the motor or parts of the motor will render the warranty and any warranty entitlement void.



Never remove the type plate from the motor. This is used to identify the motor and legal compliance with the relevant sections of DIN EN 15194. Wilful removal of the type plate/label will invalidate the warranty. The same applies for the battery.



Always have the E-Bike serviced by an authorised specialist dealer at the specified intervals as stated in the bicycle's general operating instructions.

### 8.2. Care and maintenance of the system

The motor is the core of the GO SwissDrive drive system and also practically maintenance-free.



**Please note the specified service intervals of the bike manufacturer. GO SwissDrive recommends annual servicing of the E-Bike.**

The other components of the GO SwissDrive system are also maintenance-free aside from the fact that the battery needs to be recharged at regular intervals. Pay attention to cleanliness.

Should maintenance work be required on the E-Bike, have this carried out exclusively by an authorised GO SwissDrive dealer.

For cleaning and care of the E-Bike, the necessary steps are described as follows.

For care of the system, always remove the battery first. Never clean the battery with damp or even wet implements. Make sure that the contacts never become wet.

To clean the remaining parts of the system, it is best to use a damp cloth. Keep water away from the contacts and connectors.

### 8.3. Care and maintenance of the battery

Factors that have a positive affect on the service life of the battery are good care, correct operation and storage at the correct temperature.

Operating temperatures between 5 and 35 degrees Celsius are recommended. Should the ambient temperature drop below this range, we recommend placing the E-Bike or at least the battery in a warmer area. Insert it again just before restarting the journey. In this way, the full performance and capacity of the battery is available.

Do not charge the battery if it is very cold. Wait until the battery is warmer than 10 degrees Celsius.

Do not leave the battery connected to the charger for long periods of time. Extended periods can damage the battery or the electronics.



**If the battery is fully discharged, it should be recharged again without delay. This prolongs the service life of the battery and prevents exhaustive discharge.**

### 8.4. Care and maintenance of the EVO operating element

The EVO operating element is generally maintenance-free. Exception: Replacement of the internal battery.



**Always go to an authorised dealer for replacement of the battery in the EVO operating element.**



**Never attempt to repair the EVO operating element yourself. Opening the display, the docking station or the grip controls will render the warranty and any warranty entitlement void. Have maintenance work carried out exclusively by an authorised dealer.**



**Any change or modification to the EVO operating element can influence the electromagnetic compatibility (EMV) and cause undesired effects.**

Clean the EVO operating element straightaway if it comes into contact with substances that can leave marks, e.g. thinners, petrol, ink, make-up and so on. To clean, use a soft, lint-free and dust binding cloth.



**Do not use cleaners containing alcohol.**



**Never use cleaning fluid and abrasive agents as these can damage the EVO operating element.**

To protect the EVO operating element against corrosion damage, always check the display and docking station after the bicycle has been ridden in the rain to ensure there is no water accumulation and remove with a dry cloth if necessary.

We recommend that the contact points of the docking station and display are then treated with an anti-corrosion agent. To do this, we recommend NyoGel® 760G.



**Avoid contact with clothing when using the gel.**

### **8.5. Repairs**

Have repairs to the GO SwissDrive drive system carried out exclusively by trained personnel from the specialist dealer.

Please use only genuine GO SwissDrive replacement parts. These can be obtained from the specialist dealer.



## 9. Storage

**If the battery is stored for a long period of time without charge, the battery may suffer irreparable damage. This is particularly the case if the battery is stored at high temperatures and in high relative humidity.**

Store the battery in a cool and dry place. The ideal temperature range is between +18 and +23 degrees Celsius for long-term storage.

If the battery is not used or placed in storage for an extended period of time, charge the battery before storage until three or four LED lamps on the charge level indicator are shown, which represents about 70% of the capacity.

After three months, check the charge level without fail. If the charge level has dropped (fewer than three to four LED lamps are lit), recharge to about 70% of the capacity (three to four LED lamps light up).

The optimum relative humidity for storage is 0% to 80%.



**A battery stored for extended periods without charge can become damaged despite there being a low level of self-discharge. Moreover, the storage capacity will be heavily reduced through exhaustive discharge.**



**Observe the information for storage of the complete E-Bike in the bicycle's general operating instructions.**

## 10. Disposal

Do not discard the drive system in the household waste system. With the exception of the battery, all components of the GO SwissDrive drive system must be taken to a relevant recycling plant for electric and electronic equipment.



**Disposal of the battery with household waste is not permitted. The disposal of batteries is clearly regulated in the respective national legislation.**

Improper disposal of the battery can cause environmental damage. Information about correct disposal can be gleaned from the operating instructions of the battery manufacturer, or contact the local authority, disposal company or specialist dealer from where the E-Bike was purchased.



**Alternatively, batteries can be returned to the dealer for disposal.**





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