**Attention!** Before first use, please read the operation and safety instructions carefully!

# sIMPLEk



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## 1.0 General remarks and safety instructions

sIMPLEk is compatible with Bosh drive motors Classic Line since 2011, all Active Line, Performance Line and Performance Line CX, optionally with HMI, Intuvia, Nyon or Purion operator control module and all Yamaha mid-engines since 2014.

The completed assembly set, obstructed in a compatible E-Bike, causes the suspension of the factory-integrated speed regarding the support of the motor.

Thus, the establishment of the completed assembly set, within the scope of the StVO, is forbidden and not accepted.

The use of the assembly set is only provided for closed-off public traffics as well as for private grounds and race courses.

Please put on a suitable helmet at all times!

The usage of the assembly set leads to the loss of warranty concerning the vehicle.

Regarding the installation of the E-Bike, please make sure not to damage any cables while installing the protection cover of the motor. Thus, you can prevent electrical shorts which could lead to major cable bruises or fires.

Liabilities for any damages will not be assumed (directly or indirectly) that may arise by activating the completed assembly set.

Use at your own risk!

## 2.0 Installation

Before you start with the installation, remove the battery of your E-bikes!

The sIMPLEk is upstreamed in front of the original sensor. For this purpose the motor cover has to be removed.

Depending on the engine version you need additional tools.

**Installation based on an engine version active line /performance line:**

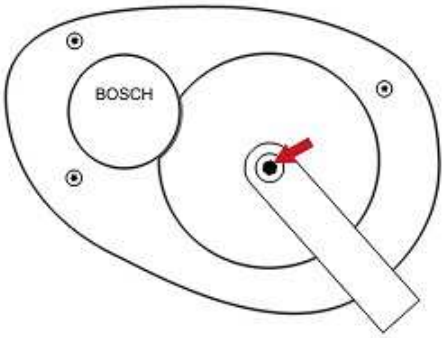
Required tools:

- Torx 20 wrench
- 8 mm allen key
- optional: ISIS crank puller (if you can`t remove the crank per hand)
- optional: flat not pliers

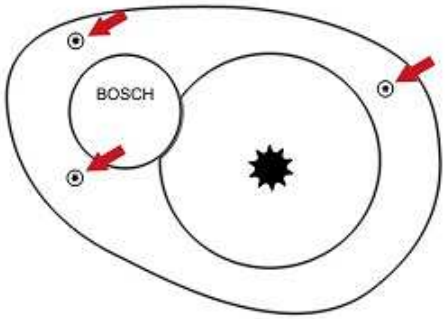
Unscrew the 8 mm allen key (picture 15). Remove the crank. If you can`t remove the crank by hand, take a crank puller. Remove the 3 Torx screws with a socket (picture 16). Now the engine cover can be removed. If necessary, pull the plug speed sensor with a flat nose pliers (picture 17).

Now close the industrial plug of the sIMPLEk at the position of the previously unplugged speed sensor. The supplied rubber tube has to be put off the plug of the speed sensor until the sealing blades (picture 18). Afterwards the speed sensor and the male connector have to be connected (picture 19). The polarity does not need to be considered.

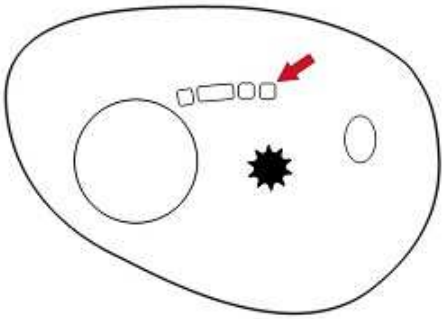
Picture 15




picture 16




picture 17



picture 18 – moisture protection

picture 19 – moisture protection

**Installation based on an engine version classic line:**

Required tools:

- Torx 20 wrench
- 8 mm allen key
- optional: ISIS crank puller (if you can`t remove the crank per hand)
- optional: flat not pliers
- Tool for removing the sprocket nut ("spider-tool")

Unscrew the 8 mm allen key (picture 20). Remove the crank. If you can`t remove the crank by hand, take a crank puller. Remove the sprocket nut with the aid of the spider-tool (picture 21). Remove the 3 Torx screws with a socket (picture 22).

Now the engine cover can be removed. If necessary, pull the plug speed sensor with a flat nose pliers (picture 23). Close the male plug of the sIMPLEk at the position of the previously unplugged speed sensor. Afterwards the speed sensor and the female connector of the sIMPLEk have to be connected.

Bild 20

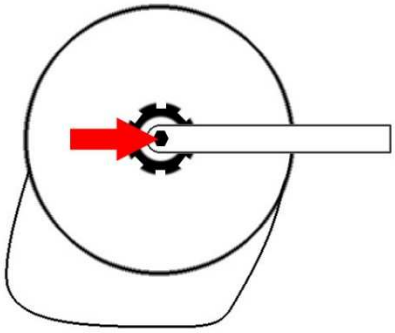


Bild 21

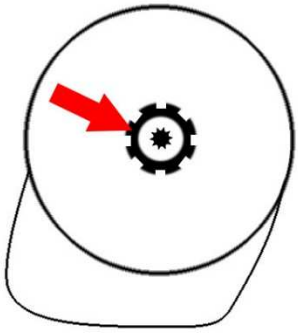


Bild 22

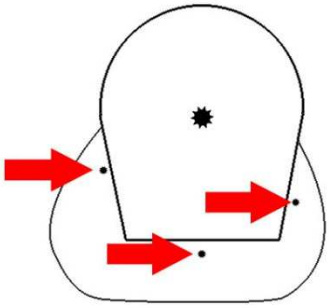
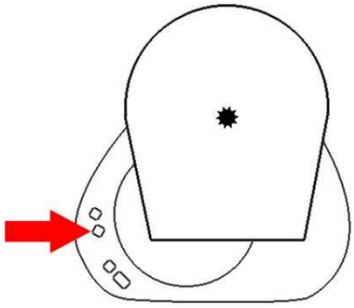


Bild 23



## 3.0 Operation

Der sIMPLEk includes 3 operation modes:

[1] 1:1-mode

[2] tuning-mode

[3] calibration-mode

There is a change from one to another operation mode, if after the start, the E-Bike will be switched off and restarted in an appropriate mode of 10 seconds. The period of 10 seconds starts as soon as the E-Bike is started. The Nyon operating unit takes longer till it run up completely. With Nyon, restarting is necessary before the Nyon runs up completely.

**BOSCH Classic Motors:** When changing the operating modes, it is necessary to wait at least 5 seconds after switch-off before switching on again.

A calibration is only necessary once so that for every wheel circumference the real speed in tuning modus can be read.

In the 1:1 mode the sIMPLEk passes signals of the speed sensor one-to-one. Therefore the E-Bike acts like in an original condition.

The tuning-mode makes an unlimited support possible (theoretically up to 100 km/h (mph) ).

Table – change between the operation modes

| | | | | | | |
|---|---|---|---|---|---|---|
| [1] | → E-Bike will be restarted within 10 seconds after start | [2] | → E-Bike will be restarted within 10 seconds after start | [3] | → Performance or cancellation of the calibration | [1] |
| | | [2] | → E-Bike stay~~s~~ on longer than 10 seconds and will be restarted | [1] | | |
| [1] | → E-Bike stays on longer than 10 seconds and will be restarted | [1] | | | | |

## 3.1 Calibration

The calibration has to be carried out once and has to be shifted **during standstill** and with an inserted rechargeable battery pack.
On first start, the calibration will be automatically called up. It consists of two sections. At first it will be grossly calibrated, then more precise. In order to start the calibration mode manually, the E-Bike has to be restarted in the 1:1-mode and after it in the tuning-mode of approx. 10 seconds.
In the first section of the calibration, an increased speed will be displayed on the speedometer. Switch off the E-Bike as closely as possible at 10.0 $\frac{km}{h}$ (mph). If you switch on again, precised calibration will be completed. You can see the speed on the speedometer which comes closer in small steps to 10.0 $\frac{km}{h}$(mph).

As soon as the 10.0 $\frac{km}{h}$ will be displayed for the first time, again switch off the E-Bike. Thus, the calibration is completed.

After a successful calibration the sIMPLEk should exactly display 10.0 $\frac{km}{h}$(mph) in the tuning-mode.
If you move the E-Bike during the calibration mode, the calibration will interrupt and the sIMPLEk will go~~es~~ back into the 1:1-mode. In this case a calibration does not take place.

## 3.2 Tuning-Mode

The tuning-mode will be activated during the 1:1-mode, the E-Bike will be restarted within 10 seconds.
During standstill the speedometer displays 10.0 $\frac{km}{h}$ (mph) in the tuning-mode. If you don`t move the E-Bike for approx. one minute, the display returns to 0.0 $\frac{km}{h}$(mph). The actually travelled speed remains readable during the tuning-mode. The speed will be displayed over the second number and decimal place. Examples:

10.0 $\frac{km}{h}$(mph) → 0 $\frac{km}{h}$(mph)
10.5 $\frac{km}{h}$(mph) → 5 $\frac{km}{h}$(mph)
13.5 $\frac{km}{h}$(mph) → 35 $\frac{km}{h}$(mph)

In order to balance the difference between the actual forward speed and the route displayed on the speedometer, the maximally driven speed will be displayed on the speedometer after one minute whilst standstill until the route will be caught up. As soon as the difference will be balanced, the speedometer displays 0.0 $\frac{km}{h}$(mph) and the E-Bike switches off itself independently. If the E-Bike will be switched off in advance, sIMPLEk stores the difference with an accuracy of 200m and catches up the route later on.

Thus the maximal speed as well as the actually travelled route/total distance will be reproduced correctly.

### 3.2.1 Resetting oft he maximal speed

The maximal speed will be resetted while restarting the calibration and will be stopped because of starting. After the stopping the sIMPLEk returns to the 1:1-mode. Now the maximal speed is resetted.

## 3.3 1:1-Mode

After the E-Bike will be running and switched off in the tuning-mode or 1:1-mode longer than 10 second, the 1:1-mode will always be restarted. During this mode the E-Bike behaves as if it was not modified.