



INSTALLATION MANUAL



Mid-Drive Electric Bicycle Kit

EVBike-SET-CMS

EVBike-SET-CMS-48

EVBike-SET-CMS-68

EVBike-SET-CMS-100

Thank you for purchasing EVBIKE product and we hope that you will become a happy user.

Carefully read the entire manual prior to installation and first use!

If you find any fact in the manual that would prevent you from using our product, please contact your reseller for further discussion and keep the original packaging. The reseller will advise you how to proceed properly.



CAUTION

EVBIKE SET IS SOLD AS THE CONVERSION KIT. SAFETY AND COMPLIANCE WITH LEGISLATIVE REQUIREMENTS OF THE FINAL PRODUCT IS FULLY GUARANTEED BY THE OPERATOR OF A BIKE OR WHOEVER BUILT AND THEN SOLD THE CONVERTED BIKE. WE RECOMMEND THAT YOU ENTRUST CONVERSION OF THE BIKE TO AN AUTHORIZED SERVICE CENTER.

PLEASE READ CAREFULLY THIS INSTALLATION MANUAL BEFORE YOU WILL START EVBIKE CONVERSION.

Note: This user manual was translated from the Czech original.

TABLE OF CONTENTS

1. Central motor installation
2. Installation of LCD display, left brake, accelerator and wheel speed sensor
3. Battery installation
4. Diagnostic of malfunctions and service
5. Usage
6. Maintenance

SPECIFICATIONS

	EVBIKE-SET-CMS-48	EVBIKE-SET-CMS
Motor power:	750 W	250 W
Motor torque:	nominal 70, peak 100 Nm	nominal 50, peak 80 Nm
Designed for battery voltage:	48 V	36 V
Motor weight:	3,8 kg	3,7 kg
Water-Dust protection:	IP65	IP65
Operating temperature range:	-25°C ~ 55°C	-25°C ~ 55°C
Maximum speed:	25 km/h (limiter turned ON)	25 km/h (limiter turned ON)

	EVBIKE-SET-CMS-68	EVBIKE-SET-CMS-100
Motor power:	1000 W	1000 W
Motor torque:	nominal 130, peak 160 Nm	nominal 130, peak 160 Nm
Designed for battery voltage:	48 V	48 V
Motor weight:	4,8 kg	4,8 kg
Water-Dust protection:	IP65	IP65
Operating temperature range:	-25°C ~ 55°C	-25°C ~ 55°C
Maximum speed:	25 km/h (limiter turned ON)	25 km/h (limiter turned ON)



PACKAGE CONTENT



Motor unit



Chainwheel

M5



M8 nut

Cranks

M33

M6

Fixing plate



Main wiring harness

for successful assembly of eVBIKE, you will also need following:

- ribbons for cables fastening
- screws, nuts, washers
- special bottom bracket tools (see pictures a, b, c)
- basic technical skills

Picture 1



1 a - Compact Crank Puller



1 b - Cassette Lockring Remover Tool



1 c - Tool for easy assembly of bottom bracket lock rings

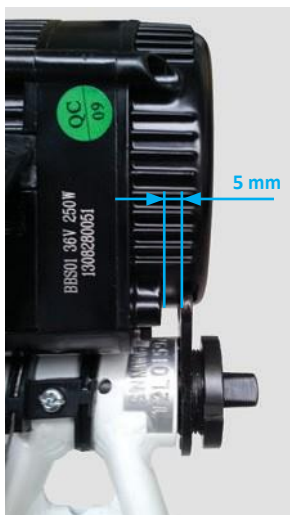
1 CENTRAL DRIVE UNIT INSTALLATION

1) Fasten chainwheel onto the main drive. Chainwheel is fastened on the motor, so that the teeth facing toward the engine (see picture).



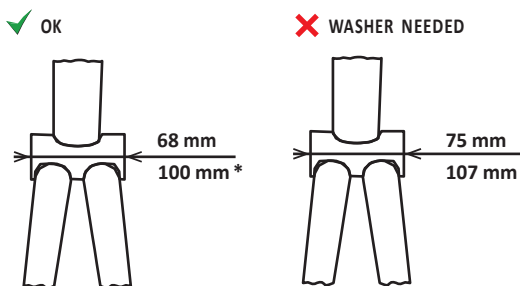
2) Remove the original bottom bracket including cartridge and cups. Use special bottom bracket tools (see pictures 1 a, b). Remove the derailleur, if the bike is fitted with it. The interior thoroughly clean and make sure that nothing prevents insertion of the motor. Axle of the motor must go slip freely.





In the case of using a frame for the bottom bracket of width 68-72 mm, you must fill space between the engine and fixing washer using a ring or nuts (not included in package).

For installation on bike with central axle 100 mm is necessary to use special motor with 100 axle for correct installation.

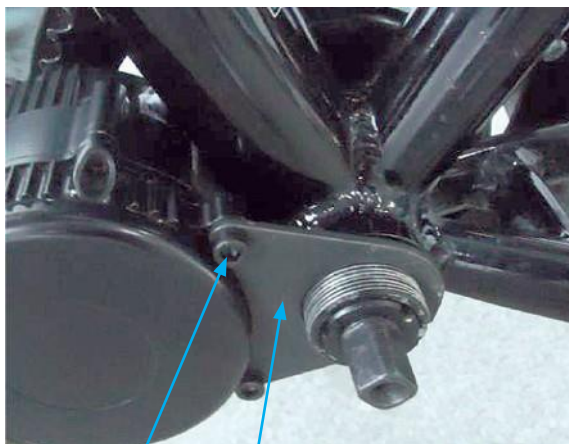


* Motor CMS-100 is central axle 100 mm.

The surface with teeth of fixing plate towards inside, then fix the plate on drive unit with 2pcs M6 Nuts.



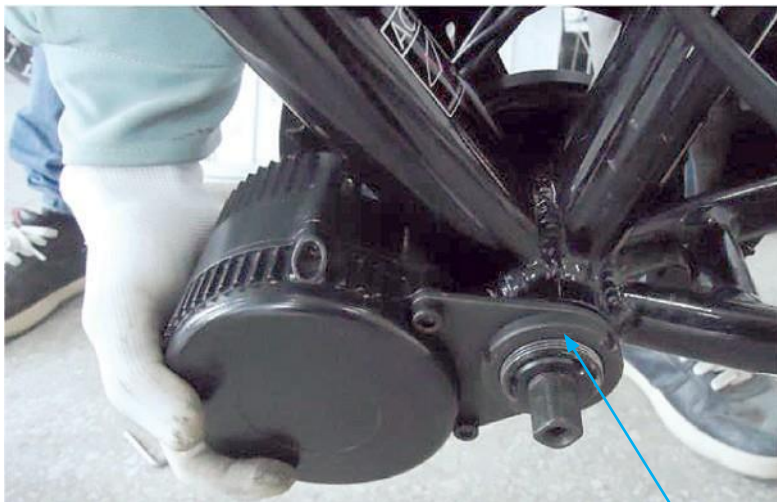
Fixing plate with teeth.



2x M6 Nut.

Teeth of the fixing plate must face towards the bicycle frame!

Now gently pull the motor towards the bicycle frame and tighten the first M33 nut onto axle tube with maximal force. You can also use glue for nuts. Then tighten the second nut onto axle tube. The movement and tighten second M33 nut with force against first (so called „contra nut“). Use special tool (see picture 1c).



M33 Nut.

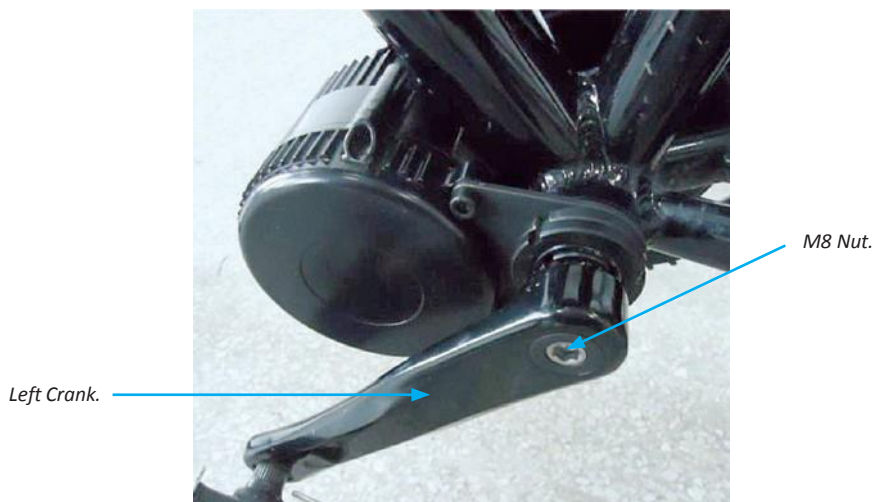


Contra M33 Nut.

In the case of using a frame for the bottom bracket of width 73 mm (105 mm), is possible to install only one M33 nut.

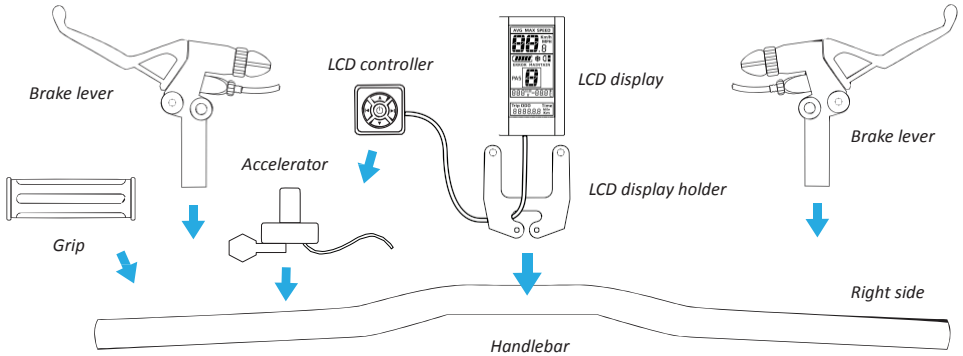
Is recommended to secure nut with a special glue for screws (not included in package).

Now place the left and right crank (watch the label L and R) and tighten M8 nuts with reasonable force after 50-100 km check the nuts. After tightening, install pedals (watch out for right and left-hand thread).



2 INSTALLATION OF CONTROLS AND SPEED SENSOR

First remove the original equipment from left side of the handlebar. Grip, the brake lever and shifter. In reverse order mount LCD display, LCD controller, accelerator, brake lever and grip. LCD controller and accelerator can be optionally installed on the right side of the handlebar.



After installing all controls, connect their connectors to the main harness.



Connect controllers to the main harness and then connect the connector from motor unit.



Fasten Speed Sensor to the frame of the rear fork in an appropriate place so between the sensor and the magnet is not a distance greater than 5 mm. Now install the magnet on the spoke and set it, his magnetic side, to the sensor. Check, that the distance is 5 mm. If the sensor and magnet are installed correctly, when rotating the LED on the sensor is activated and flashes when passing through the magnet.



NOTICE

The manufacturer reserves the right to change shape and appearance of the sensor. Its functionality will not be affected. Therefore, the appearance may differ from those illustrated in this manual this is not a defect of the product.

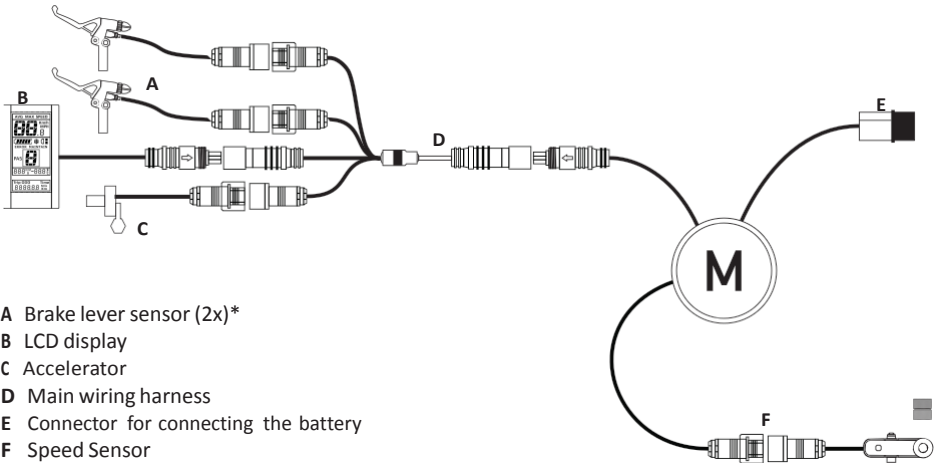


Fasten or underlay and make sure, that distance between the magnet and the sensor is not greater than 5 mm.



Connect sensor connector with output from the motor unit.

Schematic diagram of the coNtrols aNd speed seNsor:

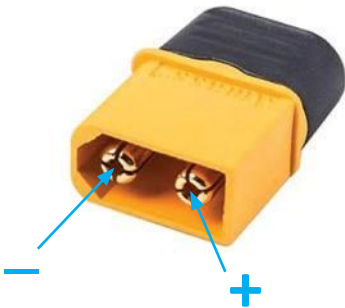


- A Brake lever sensor (2x)*
- B LCD display
- C Accelerator
- D Main wiring harness
- E Connector for connecting the battery
- F Speed Sensor

* The possibility of installing gearsensor.
(Installation is done instead of the brake lever via distributor.)

3 BATTERY INSTALLATION

EVBIKE kit can be powered by your own battery of voltage 36 V or 48 V. For proper functionality and seamless installation we recommend using certified EVBIKE batteries. When you install your own batteries always make sure that the correct polarity of the connected battery and provide battery output with the connector that is compatible with the connector of the motor unit. You can purchase that connector accessories. The polarity of the battery connector is shown below.



NOTICE

Battery is not included.
Compatible voltage is 36/48 V.



CAUTION

Ensure correct polarity!
In case of polarity reversal, engine control unit will be damaged, as well as other electronic components!

4 ERROR DIAGNOSTICS - TROUBLE SHOOTING

Error Code	Error description	Handle
1	Communication Error	Check cable connection
2	Controller protection	Check three-phase power line. If the problem persists, consult your dealer, it is a defect in the motor.
3	Three-phase power error	Check three-phase power line connection. If the problem persists, consult your dealer, it is a defect in the motor.
4	Battery low	Charge the battery. If the problem persists you must check the battery.
5	Brake error	Release the brake lever or perform check of the switch functionality.
6	Turn error	Then turn on and off the system again.
7	Speed Hall error	Speed Hall error. If the problem persists, consult your dealer, it is a defect in the motor.
other	Reserved	Check cable connection - turn off and turn on the system. If the fault persists contact servis. It is an engine defect.

5 USAGE

The product cannot be used in the rain, should not be exposed to continuous contact with water. If you drive in the rain never disconnect connectors and do not use LCD controller. Do not leave the main unit exposed to direct sunlight when you do not ride the bike. Store the product in a dry place with a temperature of 15-25 °C. Keep product clean. Do not use thinner, alcohol or benzene. Wash with clean water using a damp cloth. Do not concentrate on meter while riding. Safety first!



CAUTION

NEVER MANIPULATE THE CHAIN AND CHAINSET IF BATTERY IS CONNECTED. RISK OF SERIOUSLY INJURY!
BEFORE HANDLING TURN OFF LCD DISPLAY, DISCONNECT BATTERY AND REMOVE IT OUT OF THE HOLDER.



6 MAINTENANCE

Before every ride is recommended to check the motor and wiring.

Keep the engine clean and dry.

We recommend common check bolts and wiring, check if all connectors are firmly connected, then check the connector pins (whether bent or not corroded).

We recommend checking every 500 km and at the start/end of the season.

Approximately every 1 000 km is recommended to clean the engine and replace the engine lubricant.

Regular maintenance significantly extends the life of the engine.



WARNING

BEFORE THE FIRST RIDE CHECK THE TIGHTNESS OF ALL BOLTS AND FUNCTIONALITY OF ALL SYSTEMS INCLUDING WHEEL BRAKES.

Declarations of conformity:

GWL Power a.s., EU-VAT ID: CZ25948253, as an entity authorized by the producer for EU, thus proclaims that the device conforms to basic requirements and any other relevant provisions of Decree-Law No 117/2016 and 118/2016 Coll., as well as the device conforms to basic requirements and any other relevant provisions of Decree-Law No 176/2008 Coll., establishing technical requirements for machinery (MACHINERY DIRECTIVE 2006/42/EC, 2009/127/EC). This statement is issued on the basis of documents presented by the producer.



