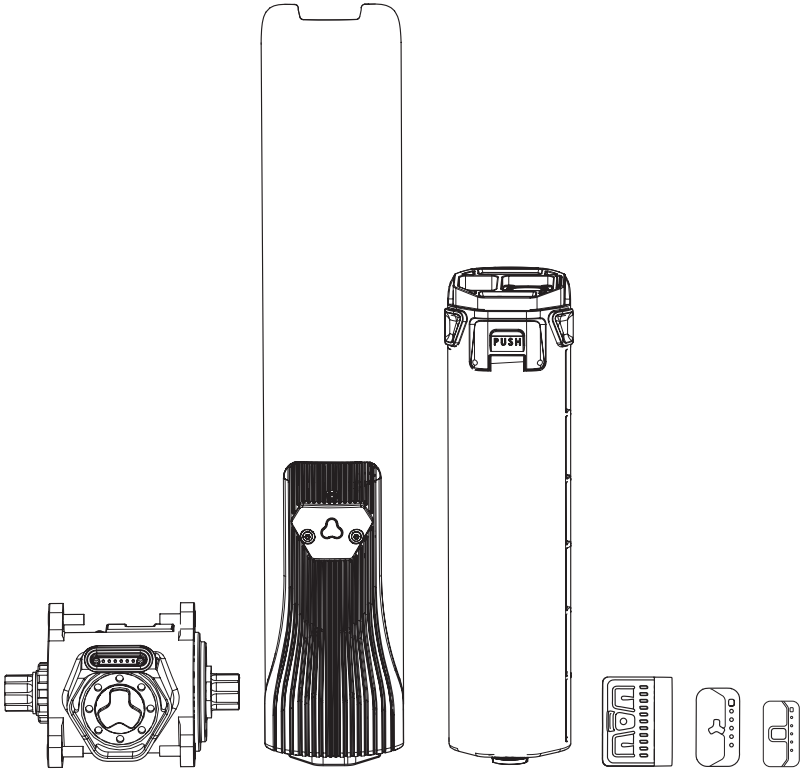
evation

pedelec drive system



FAZUA

Original instructions

U.S. Edition 2020 | EN

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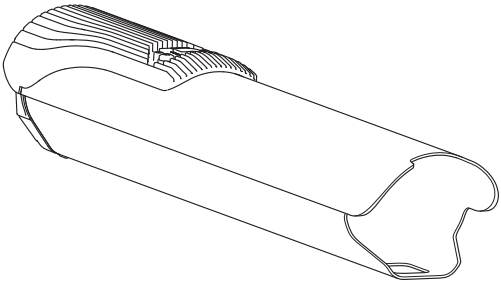
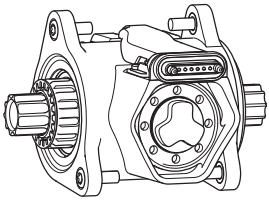
1 OVERVIEW: DRIVE SYSTEM

A Drivepack
(Details from page 44)



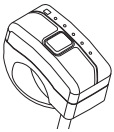
B Bottom Bracket
(Details from page 50)



C Remote
(Details from page 54)

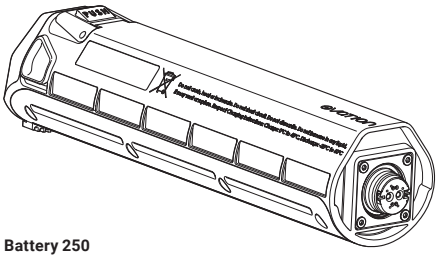
Remote b

Remote fX

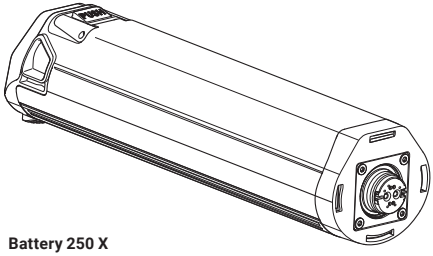


Remote bX

D Battery
(Details from page 70)



Battery 250



Battery 250 X

E Charger
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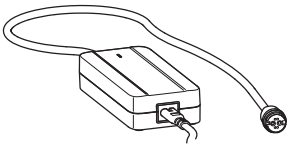
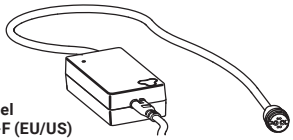
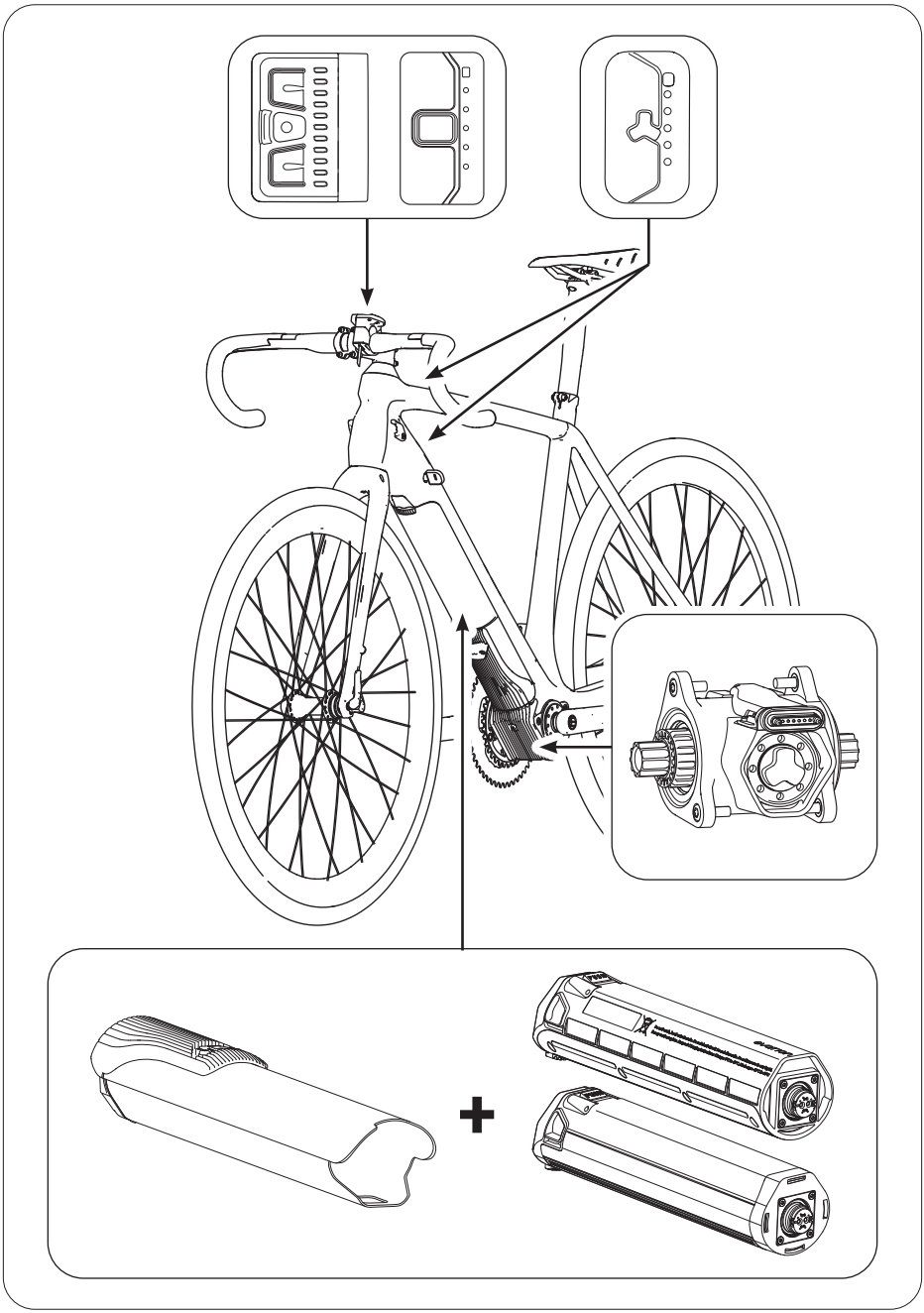


Charger A



Charger, Model
STC-8133LC-F (EU/US)



2 ABOUT THIS MANUAL

2.1 Terminology and structure

These original instructions are part of the Fazua evation drive system. In order to improve readability, the term "manual" will be used instead of the term "original instructions".

To facilitate orientation within the manual, it is divided into sections:

The first section "Fundamentals" deals with the drive system as a whole. In chapter 3 "Safety" you will find the basic information on intended use and important safety instructions. Chapters 4-8 ("Usage", "Storage and transport", "Optional accessories", "Cleaning and maintenance", "Troubleshooting") describe the procedures and steps to be taken. In chapters 9–12 you will find information on disposal instructions, consumer warranty, manufacturer and dealer service as well as conformity.

The remaining sections are dedicated to the individual components of the drive system: Here you will find detailed illustrations and additional information on the respective components. In addition, the steps listed in chapter 4 "Usage" are described in detail and supplemented with handling-specific warnings.

2.2 Read and keep manual

This manual contains all important information on the safety and use of the drive system as well as the individual components. It is based on the laws and regulations applicable in the United States, as well as national regulations such as UL® and ANSI testing standards.

Before using the drive system for the first time, be sure to read the complete manual - especially the "Safety" chapter - carefully. Failure to follow the instructions could result in serious injury to you or others and/or damage to the drive system or individual components.

Always keep this manual handy for further use and pass it on if you pass on the drive system or the equipped e-bike to third parties. In addition to this manual for the drive system, always observe the manufacturer's instructions for the e-bike in which the drive system is installed.

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2.3 Explanation of characters and symbols used

Certain types of notes and information in this manual are identified by signs or symbols, which are listed below together with their meaning.

⚠ DANGER

High risk level! Risks that result in death or serious injury are indicated by the signal word "Danger".

⚠ WARNING

Moderate risk level! Risks that can result in death or serious injury are indicated by the signal word "Warning".

⚠ CAUTION

Lower risk level! Risks that may result in moderate injuries are indicated by the signal word "Caution".

NOTICE

Risks relating to damage to the product itself or to property damage to other objects are indicated by the signal word "Notice".

Useful additional information is marked with this information symbol.

3 SAFETY

3.1 Functionality & intended use

evation is designed as an electric drive system for e-bikes that are used as a means of transport by one person. From a speed of 20 mph (32 km/h), the electric pedal support switches off, so that at speeds above 20 mph (32 km/h) without motor support, you pedal exclusively with your own muscle power.

The drive system as a whole is made up of different, coordinated components.

These are:

A → Drivepack (incl. locker for locking to the frame),

B → Bottom Bracket (incl. Speed Sensor + spoke magnet),

C → Remote (Remote b, Remote fX, Remote bX),

D → Battery (Battery 250, Battery 250 X),

E → Charger (Charger A, Charger, Model STC-8133LC-F (EU/US)).

The version of the drive system installed in your e-bike, i.e. the specific combination of component variants, is specially adapted to your e-bike and must therefore not be changed.

Categorically, the installation of the drive system and certain work on it may only be carried out in the ways planned by the manufacturer or by an authorized specialist. Authorized specialists for repair and maintenance work can be found with the official Fazua Servicepartners (see chapter 11 "Service").

For information on which work you can carry out yourself and which work must be carried out by an authorized specialist, refer to the separate sections on the individual components.

3.2 Limitation of liability

Fazua accepts no liability for damage caused by incorrect or improper installation or use other than that intended. Only use the drive system as described in this manual. Any other use is considered improper and may result in accidents, serious injury and damage to the drive system.

3.3 Symbols & pictograms of the drive system

On individual components of the drive system you will find certain symbols and pictograms, which are listed below including their meaning.

This symbol indicates that the user of the drive system or the individual components must have read and understood these original instructions before using it.

A device marked with this symbol (here: the charger) may only be used in dry indoor areas.

⚠ DANGER

When used in a humid environment and in contact with liquids, there is a risk of electric shock!

An electrical appliance marked with this symbol corresponds to protection class II: The device has double or reinforced insulation to protect against electric shock.

This symbol warns of hot surfaces.

⚠ DANGER

There is a burning risk if touched, contact with combustible materials may cause a fire.

These symbols indicate that the lithium-ion battery must be disposed of separately at the end of its life and must not be disposed of with household waste.

The symbols must be affixed in the European Union in accordance with the laws and directives in force there.

This symbol indicates that the marked component must be disposed of separately as electrical or electronic equipment at the end of its service life and must not be disposed of with household waste.

The symbol must be affixed in the European Union in accordance with the laws and directives in force there.

This symbol indicates products that meet all the requirements for obtaining the European CE marking.

The test seal "Geprüfte Sicherheit" (GS mark) is awarded by independent certification bodies.

A device marked with the GS test seal complies with the safety-relevant requirements of the German Product Safety Act (ProdSG).

The "UL®-Listed" seal of approval is awarded by the US UL® Certification Body.

A device marked with the "UL®-Listed" test seal shown corresponds to the safety-relevant requirements for Canada and the USA.

The accompanying test seal is awarded by the SGS certification body.

A device marked with this test seal complies with the safety-relevant requirements for Canada and the USA in accordance with UL Standards.

The drive system and the battery were tested according to UL Standards. The following UL Standards were applied: UL 2271 - Standard for Batteries for Use In Light Electric Vehicle (LEV) Applications, UL 2849 - Standard for Electrical Systems for eBikes.

The FCC seal is awarded by the Federal Communications Commission, an independent U.S. government agency responsible for implementing and enforcing U.S. communications laws and regulations.

An electrical device marked with the FCC seal complies with American standards for electromagnetic compatibility.

3.4 Important safety instructions

READ AND KEEP ALL IMPORTANT SAFETY INSTRUCTIONS!

The following important safety instructions must always be observed when using and handling the drive system.

- ▶ Read all the instructions before using the product.
- ▶ To reduce the risk of injury, close supervision is necessary when the product is used near children.
- ▶ Do not put fingers or hands into the product.
- ▶ Do not use this product if the flexible power cord or output cable is frayed, has broken insulation,or any other signs of damage.
- ▶ This equipment is not intended to be used at ambient temperatures less than -5 °C (23 °F) or above ambient temperatures of +40 °C;
- ▶ The battery is intended to be charged when the ambient temperature is between 0 °C (32 °F) and +45 °C (113 °F). Never charge the battery when ambient temperatures are outside this range.

⚠ DANGER

Dangers for users of e-bikes!

Basically there are specific dangers for the users of e-bikes, e. g. danger of accidents when riding in road traffic. Dangers arising from handling the corresponding e-bike model in which the drive system is installed are dealt with in the separate instructions of the e-bike manufacturer. Depending on your country or location, there may also be additional legal requirements that you must observe when using your e-bike. If you do not fully inform yourself about existing dangers before using your e-bike equipped with the drive system, there is an

increased risk of accident and injury.

- ► Read and follow the manufacturer's instructions for your e-bike.
- ► Find out about and observe any applicable national regulations regarding e-bikes.

⚠ DANGER
Danger of battery explosion!

If you use inappropriate batteries or do not handle the battery properly, the battery may explode.

- ► Only use original Fazua evation batteries approved by the e-bike manufacturer.
- ► Never use a damaged battery and never try to charge a damaged battery!
- ► Never open the battery! If you try to open the battery, there is an increased risk of explosion!
- ► Keep the battery away from heat (e.g. strong sunlight), open fire or water or other liquids.

⚠ DANGER
Dangers during unattended use!

Basically there are specific dangers dangers for children (younger than 14) and persons with reduced physical, sensory and mental abilities (e.g. partially handicapped persons, older persons with limited physical and mental abilities) or a lack of experience and knowledge (e.g. older children)!
If, for example, children or people with physical or mental impairments handle the battery or charger, there is an increased risk potential as these user groups may not be able to correctly assess certain risks, for example.

- ► This appliance is not intended for use by children (younger

than 14) and persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- ▶ Children shall not play with the appliance.
- ▶ Only for rechargeable li-ion battery.
- ▶ Don't attempt to disassemble the charger by yourself.
- ▶ Don't use the charger in high temperature, moist, inflammable or explosive outdoor environments.
- ▶ Disconnect the power supply before marking or breaking the connections to the battery.

⚠ DANGER
Danger of impairment of medical devices!

The magnetic connections in the battery and charger can interfere with the function of pacemakers.

- ▶ Keep the battery and charger away from pacemakers or persons wearing a pacemaker and draw the attention of persons with pacemakers to the danger.

⚠ DANGER
Risk of electric shock!

Improper handling of the charger or incorrect mains connection may expose you and others to the risk of electric shock.

- ▶ Only connect the charger to an easily accessible and properly installed power outlet.
- ▶ Make sure that the mains voltage at the mains connection corresponds to the information on the charger.
- ▶ Only use the charger in dry indoor areas.

- Keep the charger away from any liquid or moisture.
- Do not pull on the mains or charging cable to pull the respective cable out of a socket or outlet, but always hold the corresponding plug.
- Do not handle the plugs of the power cord and charging cable with wet or damp hands.
- Take care not to bend the power cord and charging cable or lay them over sharp edges.
- Do not open the charger without authorization. The charger may only be opened by an authorized specialist and repaired using original spare parts.
- Before each use of the charger, check all individual parts (mains adapter, mains cable, charging cable and all plugs) for damage. If the charger's power cord is damaged, it must be replaced by an authorized specialist to avoid hazards.
- Never use a damaged charger. Otherwise there is a high risk of electric shock!
- Keep the charger in a clean condition. There is an increased risk of electric shock if the charger is dirty or contaminated.
- Only use the battery in e-bikes equipped with an original Fazua evation drive system. Never use the battery for other purposes or in other drive systems.

⚠ DANGER

Dangers due to unauthorized changes!

If you make unauthorized changes to the drive system or components, you may cause an explosion, electric shock, or serious injury to yourself or others.

- Under no circumstances should you modify or alter individual components of the drive system autonomously.
- Never replace any components of the drive system without

authorization.

- Never open the drive system components without authorization. The drive system components do not require any maintenance. Only allow repairs to the drive system to be carried out by an authorized specialist.
- Only allow components of the drive system to be replaced by an authorized specialist with permissible original spare parts.

⚠ DANGER

Fire hazard due to incorrect handling!

If you handle the battery and/or charger improperly or use incompatible batteries and chargers together, they may cause a fire.

- Follow all charging instructions and do not charge the battery outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- Do not modify or attempt to repair the charger or the battery.
- To charge the battery, use only original and compatible evation chargers from Fazua.
- Take care not to handle metal objects such as coins, paper clips, screws, etc. in the immediate vicinity of the battery and to store the battery separately from metal objects. Metal objects can close a circuit between the terminals of the battery (i.e. "short-circuit" the battery) and so cause a fire.
- Do not short-circuit the battery.
- Battery and charger may heat up during charging or operation. It is therefore essential to keep the battery and

charger away from flammable materials. Pay particular attention during the charging process and always move the battery and charger to a dry and fireproof place before charging.

- ▶ Do not leave the battery and charger unattended during charging.

⚠ WARNING

Risk of caustic burns due to battery acid!

The battery contains battery acid. If you come into contact with this fluid, the affected skin area and/or mucous membrane may be burnt. Eye contact can cause loss of vision.

- ▶ Do not touch any liquid leaking from the battery.
- ▶ Should you ever come into contact with battery acid, immediately rinse the affected body part thoroughly under plenty of running water.
- ▶ Consult a doctor immediately after rinsing, especially in case of eye contact and/or if mucous membranes (e.g. nasal mucosa) are affected.

⚠ WARNING

Health hazard due to irritation of the respiratory tract!

If the battery is damaged, gases may escape which may irritate the respiratory tract.

- ▶ Protect the battery from mechanical influences and any other load.
- ▶ If you notice or suspect that gas is leaking from the battery, immediately ensure a supply of fresh air and seek medical attention as soon as possible.

⚠ WARNING

Danger from accidental starting!

Starting the drive system in unsuitable situations can result in accidents and serious injury.

- ▶ Remove the drivepack from the e-bike while the e-bike is being transported or stored and during all work on the e-bike to prevent the drive system from being started accidentally.
- ▶ Use the "Pushing support" function only when pushing the e-bike. While the pushing support is activated, you must hold the e-bike securely with both hands and the wheels must be in contact with the ground, otherwise there is a risk of injury.

⚠ WARNING

Risk of burns!

The radiator in the drivepack can become very hot during operation so that you can burn yourself on it.

- ▶ Be careful when handling the drivepack.
- ▶ Allow the drivepack to cool down completely before touching the drivepack.

NOTICE

Risk of damage!

Improper handling can damage the drive system or individual components.

- ▶ Have individual components of the drive system and the e-bike replaced exclusively by identical components or other components expressly approved by the e-bike manufacturer. This will protect the other components or your e-bike from possible damage.
- ▶ Never use your e-bike without a drivepack or without a

downtube cover if you use it as a conventional bicycle without a drivepack.

- ► Remove the battery before cleaning the drivepack and allow all components to dry completely before inserting. If the battery comes into contact with damp or wet contacts on the drivepack during insertion, the battery may be damaged.
- ► When charging the battery, make sure that the mains cable and charging cable of the charger are not trip hazards in order to prevent components from being damaged, e.g. by a fall.

3.5 Notes on safe riding in road traffic

By following the road safety precautions listed below, you can reduce the risk of accidents and injuries when riding a bicycle or e-bike in road traffic.

The term "road traffic" also refers to private areas open to the public and to field or forest paths open to the public.

- ► Only ride your e-bike on the road if the equipment complies with national road traffic regulations. Please contact your e-bike manufacturer for more information.
- ► Find out about the regulations applicable to road traffic in your country or region, e.g. from the Ministry of Transport. You should also keep yourself informed about any changes to the contents of the valid regulations.
- ► Observe and follow national and regional road traffic regulations.
- ► When riding, use a suitable bicycle helmet that complies with national and regional regulations (CPSC (Consumer Product Safety Commission, 16 CFR Part 1203 or ASTM F1447-06).
- ► When riding, wear light-colored clothing with reflective elements to attract the attention of other road users.
- ► Do not ride your e-bike if you are under the influence of alcohol, narcotics or medications.
- ► Do not use mobile devices such as smartphones, MP3 players, etc. while riding.
- ► Do not distract yourself while riding by other activities such as switching

on the light. Stop to carry out such activities.

- ▶ Never ride without your hands, under any circumstances. Always keep both hands on the handlebars.
- ▶ Ride carefully and be considerate of other road users.
- ▶ Rive in such a way that nobody is harmed, endangered, obstructed or annoyed.
- ▶ Ride on prescribed lanes for bicycles.