

Varstrom 52V 20Ah Ebike Battery

Varstrom 52V 20Ah Ebike Battery User Manual

Model: 52V 20Ah Ebike Battery

1. INTRODUCTION

Thank you for choosing the Varstrom 52V 20Ah Ebike Battery. This manual provides essential information for the safe and efficient use, installation, and maintenance of your new battery. Please read this manual thoroughly before using the product and retain it for future reference.

This battery is designed to power electric bikes with motors ranging from 50W to 1500W, offering reliable and long-lasting performance.

2. IMPORTANT SAFETY INSTRUCTIONS

- **Charging Safety:** Always use the provided Varstrom charger. Do not use chargers from other brands or with different voltage/current specifications. Recharge the battery before it is completely depleted for optimal life. Disconnect the charger once its indicator turns green to prevent overcharging.
- **Avoid Short-Circuiting:** Never short-circuit the battery terminals, as this can cause permanent damage, fire, or explosion.
- **Temperature:** Do not expose the battery to extreme temperatures (above 60°C / 140°F or below -10°C / 14°F). Avoid direct sunlight and heat sources.
- **Water Exposure:** Keep the battery dry. Do not immerse it in water or expose it to heavy rain.
- **Physical Damage:** Do not drop, puncture, or disassemble the battery. Any physical damage can compromise its safety and performance.
- **Storage:** Store the battery in a cool, dry place, partially charged (around 50-60%) if not used for extended periods.
- **Children:** Keep the battery out of reach of children.
- **Disposal:** Dispose of the battery according to local regulations for lithium-ion batteries. Do not dispose of it with household waste.

3. PACKAGE CONTENTS

Please verify that all items are present in the package:

- 1x Varstrom 52V 20Ah Ebike Battery
- 1x Battery Fix Plate (Mounting Bracket)
- 1x Battery Charger
- 2x Keys
- 4x Mounting Screws
- 1x User Manual (this document)



Figure 3.1: A step-by-step visual guide demonstrating how to mount the battery to an ebike frame, along with a packing list detailing the included battery, battery fix plate, keys, screws, charger, and user manual.

4. PRODUCT OVERVIEW

The Varstrom 52V 20Ah Ebike Battery is a high-performance lithium-ion power source designed for electric bicycles. It features a robust construction and advanced safety mechanisms.

4.1 Key Features

- **High Capacity:** 52V 20Ah (1040Wh) for extended range.
- **Wide Compatibility:** Suitable for 0-1500W electric bike kits, including BAFANG, Voilamart, AW, Ebikeling,

Pexmor, and L-Fater.

- **Durable Construction:** Engineered with a proprietary CNC cell holder and shockproof shell structure.
- **Advanced Safety:** Dual-layer protection with a Battery Management System (BMS) and individual cell fuses.
- **Integrated Lock System:** Provides security against theft.
- **Power Switch & LED Indicator:** For power management and charge level monitoring.
- **Easy Installation:** Mounting bracket compatible with most water bottle screw holes on bike frames.



Figure 4.1: The Varstrom 52V 20Ah Ebike Battery, shown with its mounting base and dedicated charger.

SAFE LOCK

Secure your battery to ensure smooth motor operation and enhance theft prevention.



CHARGING PORT

DC2.1 charging port: Ensure the charging current does not exceed 3A.

DISCHARGE PORT

Please be aware that the discharge port utilizes a 5-Pin header, essential to consider when sourcing a replacement battery for your bike



BATTERY CONNECTOR

The XT60 connector facilitates a simpler connection with your motor controller and ensures efficient charging performance

Figure 4.2: Detailed views of the battery's integrated safe lock for theft prevention, the DC2.1 charging port (ensure current does not exceed 3A), the 5-pin discharge port, and the XT60 female battery connector for efficient power transfer.

SHOCKPROOF SHELL STRUCTURE

Safe, reliable, and boasting a long cycle life.



Figure 4.3: An exploded view showing the robust shockproof shell, individual battery cells, the Battery Management System (BMS), and the cell holder, designed for safety and durability.

YINGWU BATTERY

52V 20AH



Overcurrent
Protection



Overvoltage
Protection



Overload
Protection



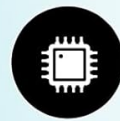
Overcharge
Protection



Overdischarge
Protection



Temperature
Protection



Short
Circuit Protection



Cell Voltage
Balancing

Figure 4.4: This graphic highlights the comprehensive safety features including overcurrent, overvoltage, overload, overcharge, overdischarge, temperature, short circuit protection, and cell voltage balancing.

5. SETUP AND INSTALLATION

Follow these steps to install your Varstrom Ebike Battery:

1. **Mount the Fix Plate:** Locate the water bottle screw holes on your bike frame. Align the battery fix plate with these holes and secure it using the provided mounting screws. Ensure the plate is firmly attached.
2. **Insert the Battery:** Carefully slide the battery onto the mounted fix plate. Ensure it clicks securely into place.
3. **Lock the Battery:** Use the provided key to lock the battery to the fix plate. This prevents theft and ensures the battery remains secure during rides.
4. **Connect to Motor:** Connect the XT60 discharge connector from the battery to your ebike motor controller. Ensure a firm connection.

VARSTROM

EBIKE BATTERY

YINGWU BATTERY



Empower Your Ride with Varstrom
Ebike Battery: Safe, Reliable,
Long-Lasting Energy for Your Journeys!



Figure 5.1: Visual representation of the battery installation process on an ebike frame.

6. OPERATING INSTRUCTIONS

6.1 Charging the Battery

To charge your Varstrom Ebike Battery:

1. Ensure the battery's power switch is in the 'OFF' position before connecting the charger.
2. Connect the charger to a standard wall outlet. The charger's indicator light will typically show red.
3. Connect the charger's output plug to the battery's charging port (DC2.1).
4. The charger indicator light will turn green when the battery is fully charged. Disconnect the charger from the battery and then from the wall outlet.
5. It is recommended to charge the battery in a well-ventilated area and to avoid leaving it unattended for prolonged periods during charging.

6.2 Powering On/Off

Use the integrated power switch on the battery to turn it on or off. The LED power indicator lights will illuminate to show the current charge level when the battery is on.

6.3 LED Power Indicator

The LED indicator lights provide an approximate indication of the remaining battery charge. Refer to the battery casing for the specific interpretation of the LED pattern (e.g., 4 lights for 76-100%, 3 lights for 51-75%, etc.).

6.4 Video Guide: Unboxing and Handling

Your browser does not support the video tag.

Video 6.1: This video provides a visual guide on how to unbox and handle an ebike lithium battery, showcasing the components and initial inspection.

7. MAINTENANCE AND STORAGE

- **Cleaning:** Wipe the battery exterior with a soft, dry cloth. Do not use water or cleaning agents directly on the battery.
- **Charging Habits:** For optimal battery longevity, avoid completely draining the battery before recharging. Regular, partial charges are generally better than infrequent, deep discharges.
- **Long-Term Storage:** If storing the battery for an extended period (more than one month), charge it to approximately 50-60% capacity. Store it in a cool, dry place away from direct sunlight and extreme temperatures. Check the charge level every 2-3 months and recharge if necessary to maintain the 50-60% range.
- **Connector Care:** Keep the battery and charger connectors clean and free of debris to ensure good electrical contact.

8. TROUBLESHOOTING

If you encounter issues with your Varstrom Ebike Battery, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Battery not charging	Charger not connected properly; charger malfunction; battery power switch off; battery fault.	Ensure charger is securely plugged into wall and battery. Check if charger indicator light changes. Turn battery power switch ON. Try another outlet. If issue persists, contact support.
Battery not powering ebike	Battery power switch off; battery not securely mounted; discharge connector loose; battery depleted.	Turn battery power switch ON. Ensure battery is fully seated and locked. Check XT60 connector for secure fit. Charge the battery.
LED power indicator not working	Internal wiring issue; indicator fault.	Ensure battery is powered on. If the battery functions otherwise, this may be a minor fault. If the battery does not function, contact support.

Problem	Possible Cause	Solution
Reduced range or power	Battery degradation; improper charging; extreme temperatures.	Ensure proper charging habits. Avoid riding in very cold conditions. If battery is old, degradation is normal. Consider battery replacement if performance is significantly impacted.

If you cannot resolve the issue using the troubleshooting guide, please contact Varstrom customer support for assistance.

9. SPECIFICATIONS

Technical specifications for the Varstrom 52V 20Ah Ebike Battery:

Feature	Specification
Brand	Varstrom
Model	52V 20Ah Ebike Battery
Nominal Voltage	52V
Nominal Capacity	20Ah
Energy	1040Wh
Max Continuous Discharge Current	30A
Dimensions (L x W x H)	368mm x 95mm x 125mm (14.4" x 3.7" x 4.9")
Weight	Approximately 5KG
Discharge Connector	XT60 Female
Battery Base	5-pin Header
Cycle Life	≥80% capacity retention after 800 cycles; estimated lifespan up to 5 years.
Matchable Motor Power	50W to 1500W (including 1500W, 1200W, 1000W, 750W, 500W)
Charger Connector	6PIN Gold-Plated
Maximum Charge Current	3A
Color	Black



Figure 9.1: This image illustrates the physical dimensions of the battery and highlights key specifications.

10. WARRANTY AND SUPPORT

10.1 Warranty Information

The Varstrom 52V 20Ah Ebike Battery comes with the following warranty:

- **30-Day Return Policy:** For initial product defects or dissatisfaction.
- **365-Day Repair or Replace:** Covers manufacturing defects and functional issues under normal use conditions.

Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by misuse, accidents, unauthorized modifications, or failure to follow the instructions in this manual.

10.2 Customer Support

For technical assistance, warranty claims, or any questions regarding your Varstrom Ebike Battery, please contact Varstrom customer support through the platform where you purchased the product. Provide your order number and a detailed description of the issue to expedite service.

