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› [Varstrom](#) /

› Varstrom 48V 1500W E-Bike Conversion Kit with VD18MT Touch Display User Manual

Varstrom JYLT 1500W RDC 142mm VD18MT 275

Varstrom 48V 1500W E-Bike Conversion Kit with VD18MT Touch Display User Manual

Model: JYLT 1500W RDC 142mm VD18MT 275

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Varstrom 48V 1500W E-Bike Conversion Kit. This kit is designed to transform a standard bicycle into a powerful electric bicycle, featuring a brushless rear hub motor and a VD18MT Touch Display for intuitive control. Please read this manual thoroughly before installation and use to ensure proper function and safety.

VARSTROM JYLT 48V1500W Performance Version



Brushless Non-gear Hub Motor



1500W
Rated Power



70KM/h
Max Speed



78N.m
Max Torque



135-146mm
Rear Dropout Size



IPX5
Waterproof Grade

Image: The Varstrom 48V 1500W E-Bike Conversion Kit, showcasing the rear hub motor and its application on a mountain bike.

WHAT'S IN THE BOX

Your Varstrom E-Bike Conversion Kit includes the following components:

- 1500W Rear Hub Motor (pre-laced into rim)
- Controller and Controller Box
- LCD Display (VD18MT Touch Display)
- Brake Levers (or Brake Sensors, depending on selection)
- Thumb Throttle
- PAS Sensor (Pedal Assist Sensor)
- Headlight
- 1T4 Cable (main wiring harness)
- User Manual

Note: A 48V/52V battery is required and sold separately. The kit does not include a battery.



POWERFUL VERSION HUB MOTOR

PACKING LIST



REAR MOTOR 1500W PARCEL

	Display(Optional)		Motor Controller
	Controller Box		Left PAS sensor
	Thumb Throttle		1T4 Cable
	Brake Levers or Brake Sensors		Decorative Stickers
	Plastic Straps		

PLEASE NOTE: The Brake Lever and Brake Sensor can be selected in your order or specified in a message to us. We ship the left-side PAS sensor by default. If you require the right-side PAS sensor with a larger hole, please contact us for a replacement. If your order selects "No Display," your order will not include an Ebike display. If your order selects "No Battery," your order will not include an Ebike battery.

Image: A visual representation of all components included in the Varstrom E-Bike Conversion Kit package.

SPECIFICATIONS

Feature	Specification
Product Name	E-bike Rear Hub Motor Conversion Kit
Model	JYLT 1500W RDC
Rated Voltage	48V
Rated Power	1500W
Max Torque	78 N·m
Max Load Speed (26")	70 km/h (≈43 mph)

Feature	Specification
Noise Level	<55 dB
No-load Current	≤1A
Rated Current	≤32A
Controller Rated Voltage	48V
Controller Rated Current	18A
Controller Max Current	35A
Low Voltage Protection	39±1V
Overvoltage Protection	62.4V
Wheel Size Compatibility	26" / 27.5" / 28" / 29" / 700C
Spokes	36H*12G
Sprocket Type	Cassette (compatible with 10 speeds or less)
Motor Type	Brushless, Gearless Hub Motor
Rated Efficiency	>82%
Motor Protection Rating	IPX5
Motor Flange Width	142 mm
Frame Dropout Compatibility	138–146 mm
Display Type	VD18MT Touch Display (1.45" IPS Screen)
Brake Style Compatibility	Disc Brake Only
Material	Aluminum (wheel)
Assembly Required	Yes

SETUP AND INSTALLATION

Compatibility Requirements

Before beginning installation, ensure your bicycle meets the following requirements:

- **Brake System:** Your bicycle must have disc brakes. This kit is not compatible with V-brakes or rim brakes.
- **Rear Dropout:** The rear dropout width of your frame must be between 138mm and 146mm. The motor axle is 142mm.
- **Cassette:** Compatible with cassettes of 10 speeds or less. Not compatible with freewheels.
- **Frame Material:** Designed for aluminum or steel frames. Not compatible with carbon fiber frames.

Choosing the Correct Wheel Size

The kit is compatible with various wheel sizes. Ensure you have selected the correct wheel size for your bicycle. Refer to your tire sidewall for your current wheel and tire dimensions.

HOW TO CHOOSE SUITABLE WHEEL SIZE ?

How to choose suitable Wheel size ?



As shown in the figure: 26 represents Wheel Rim Size, 1.95 represents Tire Width Size

How to measure the frame drop out size ?

Rear Installation Widths



Fits For 132-139mm Rear Dropout Size



• 28" / 29" / 700C



• 27.5"



• 26"

• Rim Size	28"/29"/700C	27.5"	26"
• Drive Position	Rear wheel	Rear wheel	Rear wheel
• Rim Diameter	630mm (24.8 ")	600mm (23.6 ")	570mm (22.4 ")
• Compatible Tire	1.5"-2.4" Width or 32C-50C Width		
• Spokes	12G*36H		

Image: Guide on selecting the appropriate wheel size and measuring the rear dropout for installation.

Installation Flow

Follow these general steps for installing the hub motor:

1. **Check Fork Width:** Verify the width of your rear fork dropout.
2. **Select Spacer Setup:** Determine if spacers are needed based on your dropout width. For JYLT 1000W/1500W models, two spacers may be required inside the bicycle freewheel.
3. **Mount Motor & Torque Arm:** Securely install the hub motor into the rear dropout and attach the torque arm.
4. **Connect Wiring & Finalize:** Connect all electrical components according to the wiring diagram and secure all connections.

VARSTROM REAR HUB MOTOR KIT

Complete Installation & Spacer Guide

Installation Flow

-  1. Check Fork Width
-  2. Select Spacer Setup
-  3. Mount Motor & Torque Arm
-  4. Connect Wiring & Finalize



If your rear-wheel hub motor is a JYLT 1000W /1500W model, you will need to install these two spacers inside the bicycle freewheel as required.

Secure the Hub Motor to Your Bike Frame



Scenario A: FOR REAR FORK WIDTH > STANDARD (145mm/160mm)

Note: Install lock ring and gasket on the **INSIDE** of the rear fork dropouts to effectively reduce the opening gap.



Scenario B: FOR REAR FORK WIDTH ≤ STANDARD (132mm/145mm)

Note: Install lock ring and gasket on the **OUTSIDE** of the rear fork dropouts, primarily for final locking washer and serrated locknut.

Image: Detailed installation flow for securing the hub motor to your bike frame, including scenarios for different fork widths.

Component Overview and Wiring

Familiarize yourself with the kit components and their connections. The 1T4 cable simplifies wiring by integrating multiple connections into one main harness.

EASY INSTALLATION

HUB Motor Kits



- 1
- 2
- 3
- 4

1 Brake Lever or Brake Sensor (Optional)

2 Thumb Throttle

3 Display (Optional)

4 1T4 Cable

5 Headlight (Not include)

6 Controller & Box

7 PAS Sensor

8 Motor Extension Cable

9 Rear Hub Motor Wheel (Optional)

10 Battery (Optional)



- 5
- 6
- 7
- 8
- 9
- 10

Rear Hub Motor wheel

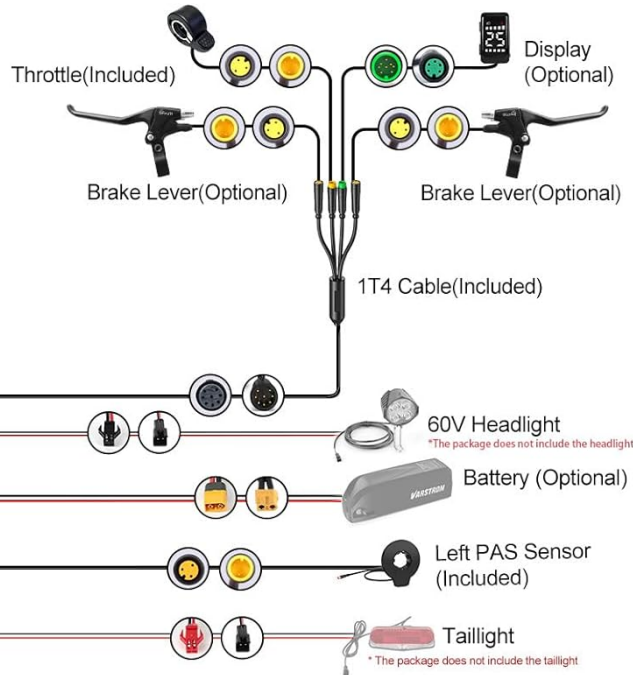


Image: An overview of the hub motor kit components and their wiring connections for a complete setup.

OPERATING INSTRUCTIONS

VD18MT Touch Display

The VD18MT Touch Display provides intelligent control and monitoring for your e-bike. It features a 1.45" IPS screen for clear visibility and easy navigation. Use the touch screen and lever-type button for adjusting settings and viewing ride data. Connect to the "I-Bike" app for further customization.

• VD18MT



Search for "I-Bike"
in the app store and download



1.45" TFT
Screen



3-5-9-U
PAS Level



φ22.2
Holder Size(mm)



Touch
Screen



Image: The VD18MT Touch Display, highlighting its features and smartphone app connectivity.

Riding Modes

Your e-bike conversion kit supports multiple riding modes to suit various preferences and conditions:

- **Pedal Assisted Mode (PAS):** Provides intelligent motor support as you pedal. Ideal for extending range and assisting on inclines.
- **Throttle Electric Mode:** Delivers full electric power on demand via the thumb throttle, allowing for riding without pedaling. Useful for quick acceleration or when tired.
- **Manual Mode:** Ride using only your own power, with the motor disengaged and battery off. Experience traditional cycling.
- **Walk Assisted Mode:** Hold the lower button to activate a steady 6 km/h (3.7 mph) walk assist. This feature helps when pushing the e-bike up slopes or through crowded areas.



VARSTROM

4 RIDING MODES

Pedal Assisted Mode

Smart Assist

Pedal to activate intelligent motor support. It seamlessly adapts to your riding style, offering a natural boost for hills, headwinds, or longer commutes.

Throttle Electric Mode

Full Power

Simply twist the throttle for 100% electric power on demand. Enjoy effortless riding without pedaling—perfect for quick acceleration or relaxing when you're tired.

Manual Mode

Pure Riding

Ride using only your own power. With the motor and battery disengaged, experience the classic, silent, and satisfying feel of a traditional bicycle.

Walk Assisted Mode

Walk Assist

Hold the lower button to activate a steady 6 km/h walking aid. This EU-compliant feature helps you push the e-bike safely up slopes or through crowded areas.

Image: Explanation of the four distinct riding modes offered by the Varstrom system.

MAINTENANCE

The Varstrom E-Bike Conversion Kit is designed for durability and minimal maintenance:

- **Brushless, Gearless Motor:** The direct-drive design of the brushless, gearless hub motor eliminates internal friction points, leading to smooth operation, extended lifespan, and reduced maintenance compared to geared motors.
- **Enhanced Protection:** The motor has an IPX5 rating and features waterproof cables, ensuring reliable performance in various weather conditions. The motor wiring is protected with a spring at the exit to prevent damage and wear.
- **Regular Checks:** Periodically inspect all electrical connections for tightness and signs of wear. Ensure brake levers and throttle operate smoothly. Keep the display clean.
- **Cleaning:** Clean the motor and other components with a damp cloth. Avoid high-pressure washing directly on electrical components.

Brushless, Gearless Hub Motor

Unmatched Durability & Silence

Our brushless, gearless hub motor eliminates internal friction points with its solid direct-drive design. This results in exceptionally smooth operation, an extended lifespan, and reliable performance under demanding conditions.



-70% Noise & Vibration



+18% Power Efficiency



100% Maintenance-Free



Laboratory data shown. Actual performance may vary slightly under different conditions.

Image: An illustration of the brushless, gearless hub motor's internal structure, emphasizing its durability and quiet operation.

TROUBLESHOOTING

If you encounter issues with your e-bike conversion kit, refer to the following common troubleshooting steps:

- **No Power to Display/Motor:**

- Check battery connection and ensure it is fully charged.
- Verify all cable connections, especially the 1T4 cable and motor cable, are secure.
- Ensure the display is properly seated and powered on.

- **Motor Not Assisting/Working:**

- Check PAS sensor installation and ensure the magnet disc is correctly positioned and not obstructed.
- Verify throttle connection and function.
- Ensure brake levers are not engaged, as they may cut motor power.
- Check for any error codes on the VD18MT display and consult the display's specific manual for code

interpretation.

- **Inconsistent Power/Jerking:**

- Inspect all wiring for damage or loose connections.
- Ensure the battery is providing stable voltage.

- **Display Not Responding:**

- Restart the system by turning the battery off and on.
- Check the display's cable connection to the 1T4 harness.

If problems persist after performing these checks, please contact customer support.

WARRANTY AND SUPPORT

Product Warranty

The Varstrom E-Bike Conversion Kit comes with an **18-month manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, warranty claims, or any questions regarding your Varstrom product, please refer to the contact information provided with your purchase or visit the official Varstrom website for support resources.