

## RiToEasysports RiToEasysports50ftdgivpz

# RiToEasysports 24V 350W Electric Wheelchair Motor Instruction Manual

Model: RiToEasysports50ftdgivpz

## 1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of your RiToEasysports 24V 350W Electric Wheelchair Motor. Please read this manual thoroughly before using the product and retain it for future reference. This motor is designed for integration into compatible electric wheelchair systems, providing reliable power and controlled movement.

## 2. SAFETY INFORMATION

**WARNING: Failure to follow these safety instructions may result in injury, electric shock, fire, or damage to the product.**

- Always disconnect power before performing any installation, maintenance, or troubleshooting procedures.
- Ensure all electrical connections are secure and properly insulated to prevent short circuits.
- Do not operate the motor if it is damaged or if any components are missing.
- Keep hands, hair, and loose clothing away from moving parts during operation.
- This motor is designed for specific applications. Do not use it for purposes other than its intended use.
- Installation and repairs should only be performed by qualified personnel.
- Protect the motor from excessive moisture and extreme temperatures beyond its IP44 rating.

## 3. PRODUCT OVERVIEW

The RiToEasysports 24V 350W Electric Wheelchair Motor is a permanent magnet electric motor featuring an aluminum body, all copper coils, and natural air cooling for heat resistance and extended lifespan. It is designed for mobility applications requiring controlled and reliable power output.



Figure 3.1: Front view of the 24V 350W Electric Wheelchair Motor, showcasing its robust aluminum alloy housing and output shaft.



Figure 3.2: The 24V DC 350W permanent magnet electric motor, highlighting its aluminum body, copper coils, heat resistance, and natural air cooling for a longer lifespan.



Figure 3.3: The 24V 350W 120rpm electric wheelchair motor, characterized by its small size, low speed, high torque output, low noise, high reliability, and convenient maintenance.

## 4. SPECIFICATIONS

The following table details the technical specifications of the RiToEasysports 24V 350W Electric Wheelchair Motor:



Figure 4.1: Detailed product parameters as shown on the motor's label.

Parameter	Value
Rated Voltage	24V
Rated Power	350W
Rated Speed	120 RPM
Rated Current	18.7A

Parameter	Value
Protection Level	IP44
Material	Aluminum Alloy
Weight	Approx. 3745g (8.3lb)
Model Name	RiToEasysports50ftdgivpz

## 5. INSTALLATION

The motor unit is designed for integration into compatible electric wheelchair systems. Proper installation is crucial for safety and optimal performance. It is recommended that installation be performed by a qualified technician.

### 5.1 Pre-Installation Checks

- Verify that the motor specifications match the requirements of your wheelchair system.
- Inspect the motor for any visible damage from shipping.
- Ensure all necessary mounting hardware (not included) is available and compatible.

### 5.2 Mounting the Motor

1. Position the motor securely within the designated mounting area of the wheelchair frame.
2. Align the motor's output shaft with the wheelchair's drive mechanism.
3. Fasten the motor using appropriate bolts, washers, and nuts. Ensure all fasteners are tightened to the manufacturer's recommended torque specifications for the wheelchair frame.
4. Verify that the motor is firmly mounted and there is no excessive play or vibration.

### 5.3 Electrical Connections

The motor comes with a pre-attached electrical connector. Ensure proper polarity when connecting to the wheelchair's power supply and controller.



Figure 5.1: Close-up of the motor's electrical connector, which should be securely connected to the wheelchair's control system.

1. Connect the motor's electrical connector to the corresponding port on the wheelchair's motor controller.
2. Ensure the connection is secure and free from any strain or pinching.
3. Double-check all wiring for correct polarity and insulation.

## 6. OPERATION

Once properly installed, the motor's operation is controlled by the electric wheelchair's main control system. Refer to your wheelchair's specific user manual for detailed operating instructions.

### 6.1 Initial Power-Up

- After installation, power on the wheelchair system.
- Listen for any unusual noises or vibrations from the motor.
- Perform a low-speed test in a safe, open area to ensure smooth operation.

### 6.2 Normal Operation

- The motor will respond to commands from the wheelchair's joystick or control panel.
- Avoid sudden starts or stops at high speeds to prolong motor life.
- Monitor for any signs of overheating or decreased performance.

## **7. MAINTENANCE**

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Regular maintenance helps ensure the longevity and reliable performance of your motor.

### **7.1 Cleaning**

- Periodically clean the exterior of the motor to remove dust and debris. Use a dry cloth or a slightly damp cloth if necessary.
- Do not use harsh chemicals or abrasive cleaners.
- Ensure no liquids enter the motor housing, especially around the electrical connections.

### **7.2 Inspection**

- Regularly inspect the motor for any signs of wear, damage, or loose connections.
- Check the electrical wiring for fraying or damage.
- Ensure mounting bolts remain tight.



Figure 7.1: Rear cap of the motor. Ensure this area is free from damage and connections are secure.

### 7.3 Storage

If the motor is to be stored for an extended period, ensure it is kept in a dry, cool environment, away from direct sunlight and corrosive materials.

## 8. TROUBLESHOOTING

This section addresses common issues you might encounter with the motor. For problems not listed here, or if solutions do not resolve the issue, contact customer support or a qualified technician.

Problem	Possible Cause	Solution
Motor does not operate	No power supply; Loose electrical connection; Faulty controller; Motor damage	Check power source and battery; Secure all connections; Test controller; Inspect motor for damage (seek professional help if damaged)

Problem	Possible Cause	Solution
Motor operates intermittently	Loose wiring; Overheating; Controller issue	Check and secure all wiring; Allow motor to cool down; Consult wheelchair manual for controller diagnostics
Unusual noise or vibration	Loose mounting; Internal damage; Obstruction	Tighten mounting bolts; Disconnect power and check for obstructions; If noise persists, motor may require professional inspection
Reduced power or speed	Low battery voltage; Overload; Motor wear	Charge wheelchair battery; Reduce load on wheelchair; Motor may be nearing end of life (professional replacement recommended)

## 9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation provided with your purchase or contact RiToEasysports customer service directly. Ensure you have your product model number (RiToEasysports50ftdgivpz) and purchase details available when seeking support. Contact information can typically be found on the manufacturer's official website or through your retailer.