

SMUDUKKIT 450W Servo Motor

SMUDUKKIT 450W Brushless Servo Motor for Industrial Sewing Machine Instruction Manual

Model: 450W Servo Motor

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your SMUDUKKIT 450W Brushless Servo Motor for industrial sewing machines. This energy-efficient motor offers precise speed control, reduced noise, and a long operational lifespan, making it an ideal upgrade or replacement for various industrial sewing equipment.

PRODUCT OVERVIEW AND COMPONENTS

The SMUDUKKIT 450W Brushless Servo Motor integrates the motor and control box into a compact unit, simplifying installation. It delivers 450 Watts (3/5 HP) of power and operates on AC110V, 50/60Hz. The package includes the motor unit, a separate power switch, belt guard, mounting hardware, and a treadle rod.



Figure 1: SMUDUKKIT 450W Brushless Servo Motor with integrated control panel and separate power switch.



Figure 2: Complete package contents including the motor, control unit, power switch, belt guard, mounting hardware, and treadle rod.

Key Features:

- Brushless design for quiet operation and extended lifespan.

- Energy-efficient, reducing electricity consumption by up to 70%.
- Variable speed control from 200 RPM to 4500 RPM.
- Integrated control panel for easy adjustments.
- Separate power switch for convenient access.

SETUP

1. Mounting the Motor

The motor unit is designed to mount directly to your industrial sewing machine table. Ensure the mounting holes on the motor's base align with the existing holes on your table. Use the provided mounting bolts and rubber vibration dampeners.



Figure 3: The motor's mounting plate. Ensure rubber vibration dampeners are placed between the motor and the table, with the small tab on the dampener pointing downwards.

2. Installing the Belt Guard

Attach the belt guard to the motor unit using the provided screws. This guard protects against accidental contact with the rotating belt and pulley.



Figure 4: The belt guard installed over the motor pulley for safety.

3. Connecting the Foot Switch and Power

Connect the foot switch cable to the designated port on the motor's control unit. Plug the separate power switch into a standard AC110V outlet, then connect the motor's power cable to the power switch.



Figure 5: The separate power switch for convenient control of the motor's power supply.

4. Adjusting Belt Tension

Ensure the drive belt connecting the motor pulley to the sewing machine's handwheel is properly tensioned. Adjust the two nuts on the motor's mounting bolt to move the motor slightly, achieving optimal belt tension. The belt should have a small amount of play, but not be loose enough to slip.

OPERATING INSTRUCTIONS

1. Power On/Off

Use the separate power switch to turn the motor ON or OFF. The digital display on the control panel will illuminate when powered on.

2. Speed Adjustment

The motor offers variable speed control. Use the '+' and '-' buttons on the control panel to increase or decrease the maximum speed (RPM). The display shows the current maximum RPM setting. The minimum speed is 200 RPM, and the maximum is 4500 RPM.

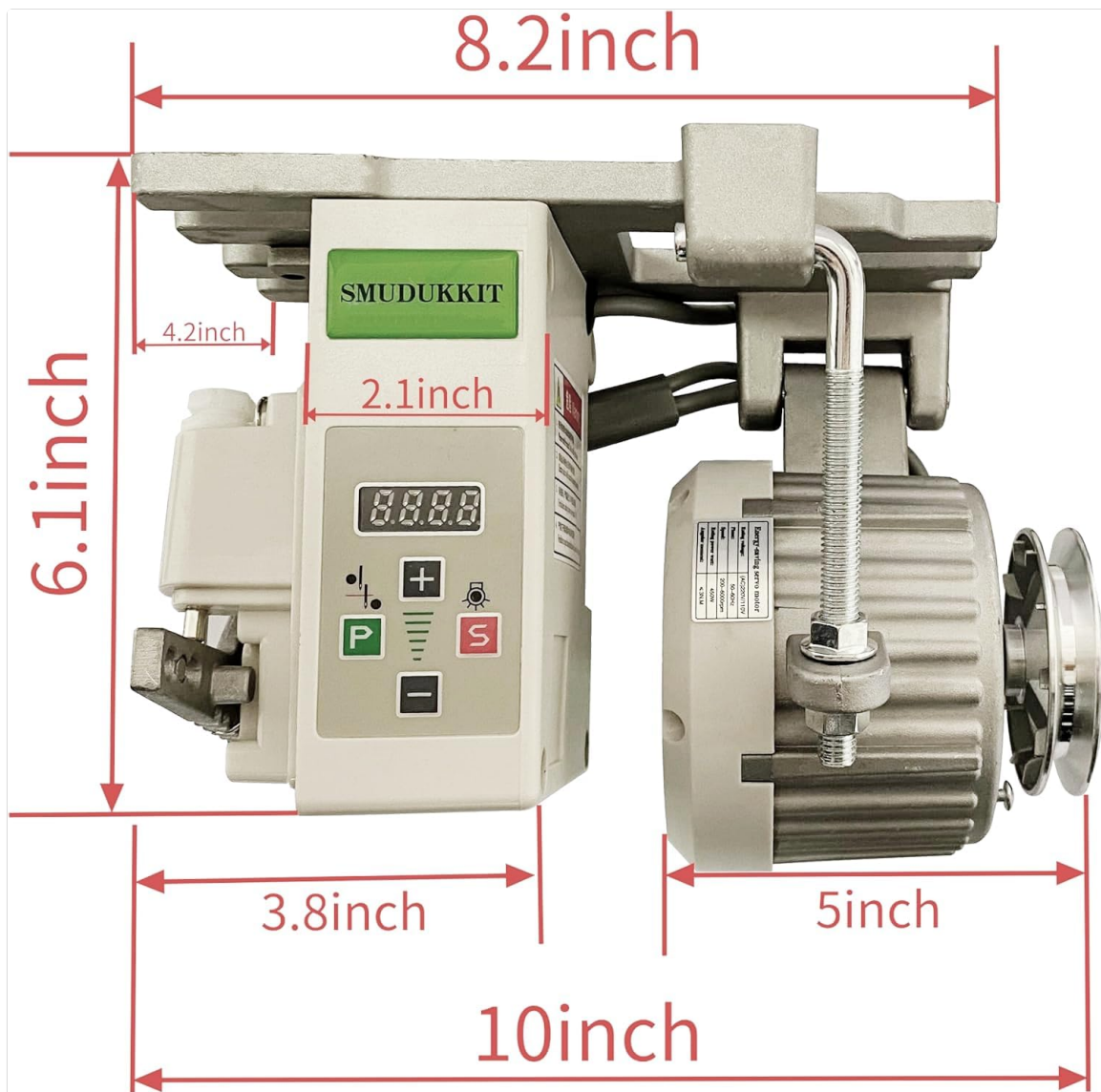


Figure 6: The control panel with '+' and '-' buttons for speed adjustment, and 'P' and 'S' buttons for programming and special functions.

3. Needle Up/Down and Sewing Light

- The control panel includes a needle up/down selection feature. Consult the included instruction pamphlet for specific button functions related to needle positioning.
- If your sewing machine has a compatible light plugged into the motor unit, you can turn it on or off using the designated button on the control panel.

4. Adjusting Foot Pedal Pressure

The foot pedal's responsiveness can be adjusted. On the side of the motor, there is a spring mechanism that controls the downward pressure required on the foot pedal. Moving the spring to different notches will change the pedal's feel. Adjust this to your preference for a longer or shorter throw.

5. Changing Motor Direction (CW/CCW)

To change the motor's rotation direction (Clockwise/Counter-Clockwise):

1. Ensure the motor is powered on.
2. Press the 'P' button and the '+' button simultaneously. The display will show 'P-00'.
3. Press '+' to navigate to 'P-02'.

4. Press 'P' to change the value from '0' to '1' or '1' to '0' to switch direction.
5. Press 'S' to save the setting.

Your browser does not support the video tag.

Video 1: Demonstration of the SMUDUKKIT servo motor's operation, including power-on, speed adjustment, and changing rotation direction via the control panel settings.

MAINTENANCE

The brushless design of this servo motor requires minimal maintenance. Regularly inspect the drive belt for wear and tear, and ensure proper tension. Keep the motor and control unit clean and free from dust and debris. No internal lubrication is typically required for brushless motors.



Figure 7: The motor casing features cooling fins to dissipate heat, contributing to its longevity.

TROUBLESHOOTING

- **Motor not starting:** Check power connections, ensure the separate power switch is ON, and verify the foot switch cable is securely connected.
- **Motor running erratically:** Ensure the drive belt is correctly tensioned and not slipping. Check for any obstructions around the motor or pulley.
- **Unusual noise or vibration:** Verify all mounting bolts are tight and rubber dampeners are correctly installed. Inspect the motor for any visible damage.
- **Speed control issues:** Ensure the '+' and '-' buttons are functioning correctly and the display shows the desired RPM. If issues persist, consult the detailed instruction pamphlet for advanced parameter settings.

SPECIFICATIONS


Feature	Detail
Brand	SMUDUKKIT
Model	450W Servo Motor
Type	Brushless Servo Motor
Power	450 Watts (3/5 HP)
Voltage	AC 110V, 50/60Hz
Speed Range	200 - 4500 RPM
Material	Metal
Item Weight	7.85 pounds
Motor Pulley Diameter	75 mm (standard)

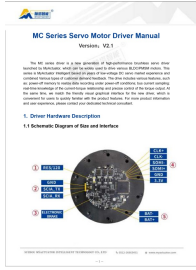




WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the contact details provided in the original product packaging or visit the official SMUDUKKIT website. Keep your purchase receipt for warranty claims.

© 2025 SMUDUKKIT. All rights reserved.

Related Documents - 450W Servo Motor

<div><p>Operating manual SV 550</p><p>GLOBAL</p></div>	<p>Global SV 550 Energy Saving Servo Motor Operating Manual</p> <p>Comprehensive operating manual for the Global SV 550 energy-saving industrial sewing machine brushless motor, covering safety, product introduction, installation, parameter settings, environmental requirements, and troubleshooting.</p>
--	--

	<p>MC Series Servo Motor Driver Manual V2.1 - MyActuator</p> <p>Comprehensive manual for the MyActuator MC Series Servo Motor Driver (Model MC300A), detailing hardware, interface definitions, parameters, functions, and connection diagrams for BLDC/PMSM motors.</p>
	<p>Ferm JSM1028P Jigsaw 450W User Manual and Safety Instructions</p> <p>This comprehensive user manual provides essential information for operating the Ferm JSM1028P 450W Jigsaw safely and effectively. It includes detailed safety warnings, product features, technical specifications, assembly instructions, operating procedures, maintenance guidelines, and environmental disposal information. Essential reading for all users.</p>
	<p>ZEUS Z2300 Unmanned Vehicle Servo Technical Specification</p> <p>Comprehensive technical details for the ZEUS Z2300 Unmanned Vehicle Servo, including specifications, dimensions, performance data, connectivity, and product information from MARK STAR Servo-tech Co., Ltd.</p>
	<p>Motor Power Company TETRA COMPACT 4 Series Brushless Servo Motors: Technical Specifications and Dimensions</p> <p>Comprehensive technical documentation for the Motor Power Company TETRA COMPACT 4 series of high-performance brushless servo motors. Includes detailed specifications, product lineup, ratings, torque-speed curves, external dimensions, feedback options, brake features, and wiring diagrams.</p>
	<p>VEVOR JK-9803 Sewing Machine User Manual</p> <p>Comprehensive user manual for the VEVOR JK-9803 sewing machine, covering safety instructions, installation, operation, adjustments, and troubleshooting.</p>