

SMUDUKKIT SMMB-02

SMUDUKKIT 550W Industrial Sewing Machine Servo Motor Instruction Manual

Brand: SMUDUKKIT | Model: SMMB-02

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your SMUDUKKIT 550W Industrial Sewing Machine Servo Motor. This high-performance servo motor is designed for industrial sewing machines, offering energy efficiency, low noise, and precise speed control.

Key Features:

- **Powerful & Efficient Performance:** 550W high-torque servo motor for smooth and stable operation, ideal for high-speed and precision stitching.
- **Energy-Saving & Eco-Friendly:** Consumes up to 70% less electricity compared to traditional clutch motors.
- **Ultra-Quiet & Low Vibration:** Equipped with noise-reduction technology for a comfortable sewing experience.
- **Adjustable Speed & Precision Control:** Speed range from 200 to 4200 RPM for various sewing applications.
- **Durable & Easy to Install:** Constructed with high-quality components for long-lasting durability, compact and lightweight design for quick installation.

2. PACKAGE CONTENTS

Please verify that all the following components are included in your package:

- 550W Servo Motor
- Multi-function Speed Controller
- Integrated Aluminum Alloy Mounting Bracket
- Adjustable Treadle Rod

- Belt Guard
- Installation Hardware (various bolts, nuts, washers, vibration dampeners)
- Wire Management Clips



Figure 2.1: Overview of the SMUDUKKIT 550W Industrial Sewing Machine Servo Motor, including the motor unit, speed controller, and various accessories.

3. SETUP & INSTALLATION

Follow these steps to properly install your SMUDUKKIT 550W Servo Motor.

3.1. Motor to Bracket Assembly

1. Prepare the threaded L-bracket by threading one nut and a flat washer onto it.
2. Insert the L-bracket into the non-threaded hole on the motor's mounting bracket.
3. Attach the large bolt with a lock washer and flat washer on one side of the motor bracket. On the other side, use five washers as spacers.

4. Drop the fitting with a hole over the threaded L-bolt. Ensure the fastener is backed out enough to clear the bracket, then thread it into place.
5. On the threaded L-bolt, add a flat washer, lock washer, nut, and the protective end cap. This assembly allows for belt tension adjustment.
6. Tighten the large fastener just enough to compress the lock washer, allowing for bracket adjustment.



Integrated aluminum alloy mounting bracket

Figure 3.1: Close-up of the integrated aluminum alloy mounting bracket, designed for secure and stable motor installation.

3.2. Controller Connection

Connect the motor wires to the multi-function speed controller. Each fitting is uniquely sized to prevent incorrect connections.

1. Locate the six-pin connector from the motor and plug it into the corresponding port on the controller.
2. Locate the ten-pin connector from the motor and plug it into its corresponding port on the controller.
3. Slide the protective covers back into place over the connections.
4. An additional 110V outlet is available on the controller for connecting a sewing machine light, if desired.

High-precision brushless speed controller.



Figure 3.2: The high-precision brushless speed controller, showing the digital display and control buttons.

3.3. Mounting to Sewing Machine Table

Secure the assembled motor and bracket to the underside of your sewing machine table.

1. Orient the carriage bolts and vibration dampeners with the small tab pointing downwards.
2. Start by installing two carriage bolts with dampeners to initially secure the motor bracket to the table.
3. Manually add the third carriage bolt to complete the installation.

3.4. Belt Installation and Tensioning

The motor comes standard with a 75mm pulley. Adjust the hardware on the L-bolt to achieve the correct belt tension for your sewing machine.

3.5. Wire Management

Use the provided wire management clips to secure all cables, keeping them clear of the rotating pulley and other moving parts to ensure safe operation.

4. OPERATING INSTRUCTIONS

Familiarize yourself with the controller functions for optimal use.

4.1. Power On/Off

- Flip the red switch on the controller to the 'I' position to power on the motor.
- Flip the red switch to the 'O' position to power off the motor.

4.2. Speed Adjustment

- Use the **+** button to increase the motor speed (RPM).
- Use the **-** button to decrease the motor speed (RPM).
- The digital display shows the current RPM setting. The minimum speed is 500 RPM, and the maximum speed is 4200 RPM.

4.3. Needle Position Control (If applicable)

- Press the **N** button to control the needle's up or down position, if your sewing machine is equipped with a compatible needle position sensor.

4.4. Rotation Direction

- Press the **R** button to change the direction of motor rotation to suit your specific sewing machine's requirements.

5. MAINTENANCE

The SMUDUKKIT 550W Servo Motor is designed for minimal maintenance due to its brushless design.

- **Cleaning:** Regularly wipe down the motor and controller with a dry, soft cloth to remove dust and debris. Ensure the motor's cooling fins are clear for optimal heat dissipation.
- **Brushless Advantage:** As a brushless motor, it does not have carbon brushes that wear out, contributing to a longer lifespan and reducing the need for frequent maintenance.
- **Belt Inspection:** Periodically check the drive belt for wear, cracks, or proper tension. Adjust tension as needed using the L-bolt assembly.
- **Connection Check:** Ensure all electrical connections remain secure and free from damage.

Aluminum housing motor, better heat dissipation.



Longer Lifespan & Maintenance-Free

Without carbon brushes to wear out, this motor has a longer lifespan and requires little to no maintenance, reducing downtime and replacement costs.

Figure 5.1: Illustrates the internal components of a brushless motor, highlighting its design for longevity and reduced maintenance.

6. TROUBLESHOOTING

If you encounter issues with your SMUDUKKIT 550W Servo Motor, consider the following general troubleshooting steps:

- **No Power:** Ensure the power cord is securely plugged into a functional outlet and the controller's power switch is in the 'ON' position.
- **Motor Not Running:** Verify that all motor-to-controller connections are firm and correctly seated. Check the speed setting on the controller; ensure it's not set to 0 RPM.
- **Incorrect Rotation:** Use the 'R' button on the controller to adjust the rotation direction to match your sewing machine.
- **Unusual Noise/Vibration:** Check the drive belt for proper tension and alignment. Ensure all mounting hardware is securely tightened.
- **Speed Inconsistency:** Confirm that the speed settings on the controller are appropriate for your task.

For persistent issues, please contact customer support.

7. SPECIFICATIONS

| Feature | Specification |
|---------------|----------------|
| Model Number | SMMB-02 |
| Power Output | 550 Watts |
| Voltage | 110 Volts (AC) |
| Maximum Speed | 4200 RPM |
| Minimum Speed | 500 RPM |




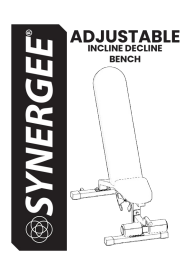
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|--------------------|-----------------------|
| Product Dimensions | 10 x 4.5 x 6.2 inches |
| Weight | 8.5 Pounds |

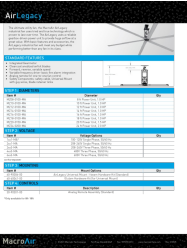

8. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact SMUDUKKIT customer service directly. Keep your purchase receipt for any warranty claims.

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Related Documents - SMMB-02

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|---|---|
|  | <p>VEVOR Servo Motor User Manual - Operation, Parameters, and Troubleshooting</p> <p>Comprehensive user manual for VEVOR servo motors, covering front panel operation, parameter settings, error codes, and troubleshooting for sewing machines.</p> |
|  | <p>GE Fanuc Automation Series 30i/31i/32i Parameter Manual</p> <p>This parameter manual provides detailed information on setting and managing parameters for GE Fanuc Automation's Series 30i, 31i, and 32i Computer Numerical Control (CNC) products, covering various models and their configurations.</p> |
|  | <p>The Power of PackML: A Comprehensive Guide to Implementation and Benefits</p> <p>Explore the PackML standard (ISA-TR88.00.02) for industrial automation. This guide covers implementation strategies, state models, modularization, case studies from P&G and Nestlé, and evolving machinery specification approaches, sponsored by Yaskawa.</p> |
|  | <p>Synergee Adjustable Incline Decline Bench Assembly Manual</p> <p>Comprehensive assembly guide for the Synergee Adjustable Incline Decline Bench, detailing all parts, hardware, and step-by-step instructions for proper setup.</p> |

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|  | <p>MacroAir AirLegacy Industrial HVLS Fan - Specifications and Features</p> <p>Explore the MacroAir AirLegacy industrial High Volume Low Speed (HVLS) fan. This document details its features, specifications, available diameters, voltage options, mounting, controls, optional extensions, powder coating, and basic technical data for optimal airflow and efficiency.</p> |
|  | <p>HMF Transport Case Combination Lock Instructions</p> <p>Instructions for changing the combination lock on HMF transport cases, including models 14401-02 through 14651-02. Provides clear steps in English.</p> |