

TFCFL BSG60T

TFCFL 110V 200W AC High Torque Electric Gear Motor with Variable Speed Controller (Model BSG60T)

Instruction Manual

1. PRODUCT OVERVIEW

The TFCFL 110V 200W Electric Gear Motor with Variable Speed Adjustable Controller Governor Geared Motor is designed for applications requiring high torque and precise speed control. Featuring a 90-degree right-angle output and a 1:30K reduction ratio, this motor delivers 36NM of torque at 45 RPM. Its robust construction and efficient design make it suitable for various industrial and mechanical uses.

Key Features:

- **Premium Material:** Constructed from high-quality medium carbon tempered steel for durability, wear resistance, and corrosion protection.
- **Adjustable Speed:** High-precision speed regulator allows for a wide range of speed adjustments to suit different application requirements.
- **Large Torque:** Stable pure purple copper coil and a gear set with full ball bearings and tempered steel gears enhance motor torque for smooth and powerful operation.
- **High Efficiency & Heat Dissipation:** 200W motor with 45 RPM ensures high efficiency. Features a built-in cooling fan and bottom cooling window for effective heat dissipation, ensuring long-term stable operation.
- **Commutation Function:** Offers flexible normally open and normally closed control systems through wiring changes or switch additions.



Figure 1: TFCFL AC High Torque Electric Gear Motor with Speed Controller, illustrating various industrial applications.



Figure 2: TFCFL AC High Torque Electric Gear Motor and Speed Controller, shown with a circular collage of potential uses in manufacturing and packaging.

2. SAFETY INFORMATION

Please read this operating manual completely before use and pay particular attention to all safety instructions included. Failure to follow these instructions may result in injury or damage to the equipment.

- **Electrical Safety:** Do not plug or unplug the power cord while the power is on. Always ensure the power supply is disconnected before making any electrical connections or adjustments.
- **Physical Handling:** Do not knock or strike the machine. Handle the motor and controller with care to prevent damage to internal components.
- **Installation Environment:** Ensure the motor is installed in a stable environment, free from excessive moisture, dust, or corrosive substances.
- **Ventilation:** Ensure adequate ventilation around the motor to facilitate proper heat dissipation.
- **Qualified Personnel:** Installation and wiring should be performed by qualified personnel familiar with electrical systems and motor installations.

3. SETUP

This section provides instructions for the proper setup of your TFCFL Electric Gear Motor and Speed Governor. The package includes the Speed Reduction Motor, Speed Governor, and an English Manual. Please note that the power cord and mounting bracket are not included and must be sourced separately.

3.1 Unpacking and Inspection

- Carefully remove all components from the packaging.
- Inspect all parts for any signs of damage during transit. If any damage is found, contact your supplier immediately.
- Verify that all included components are present: 1 x Speed Reduction Motor, 1 x Speed Governor, 1 x English Manual.

3.2 Mounting the Motor

Mount the speed reduction motor securely to a stable surface using an appropriate bracket (not included). Ensure the mounting is rigid to prevent vibration during operation.

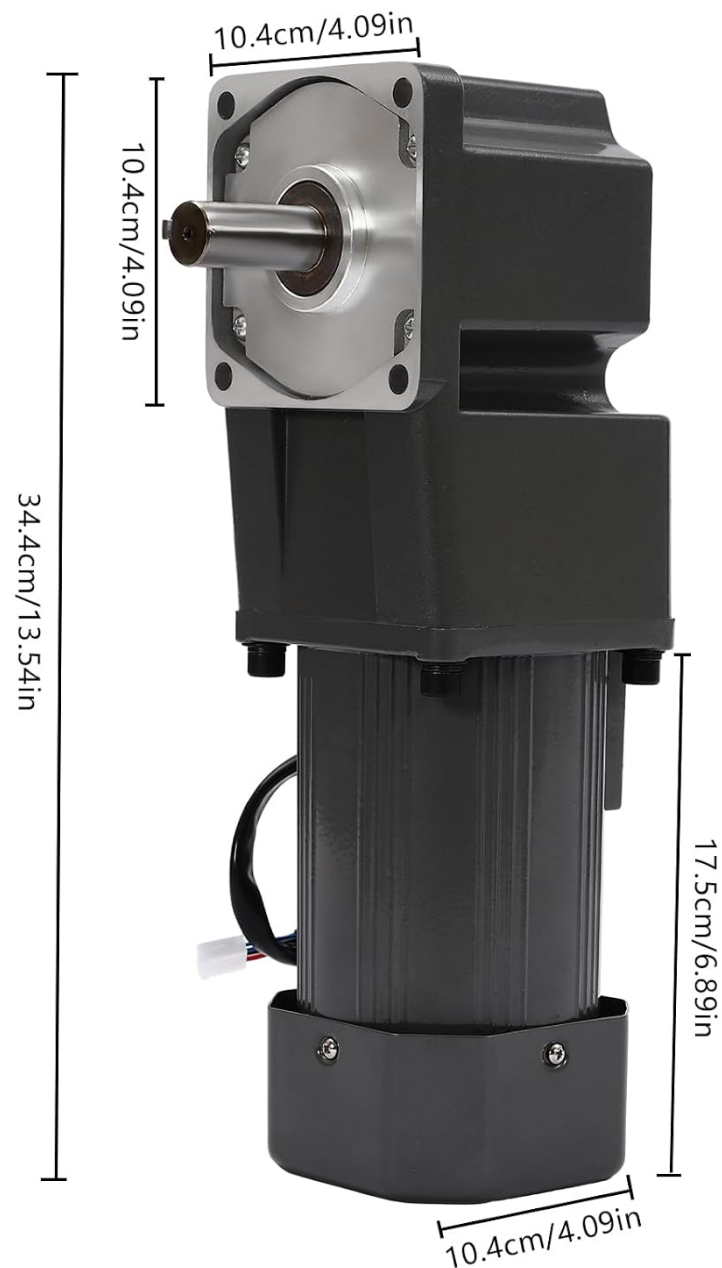


Figure 3: Dimensions of the TFCFL AC High Torque Electric Gear Motor assembly, showing overall height and gearbox dimensions.

200W adjustable/fixed speed right Angle motor

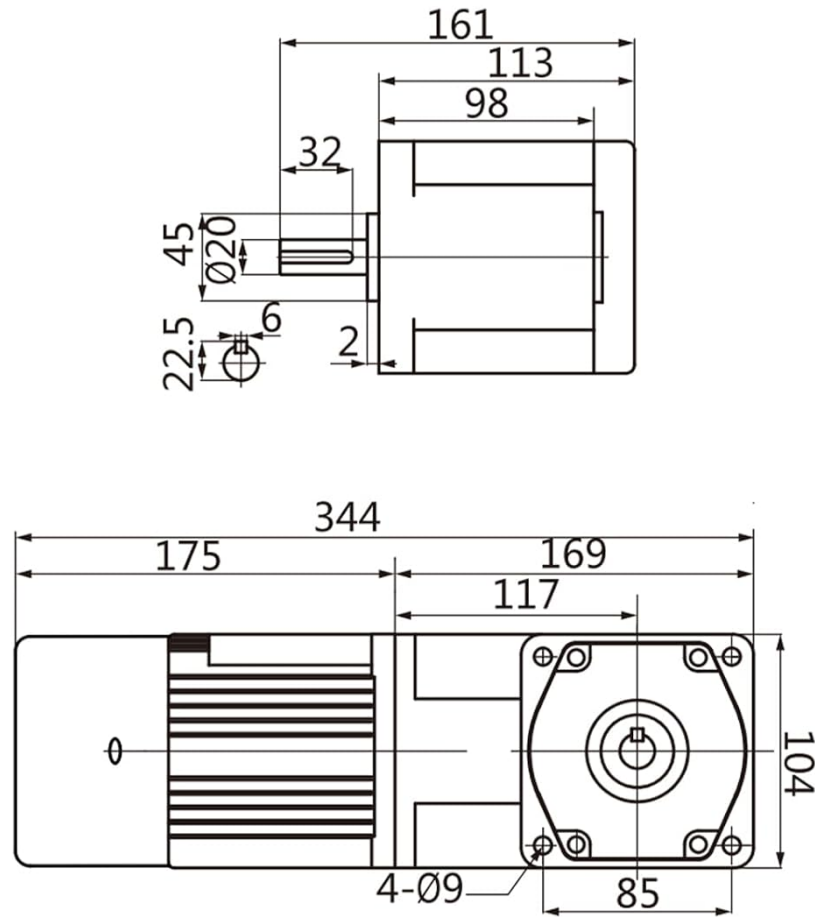


Figure 4: Detailed technical drawing providing precise dimensions for the 200W adjustable/fixed speed right angle motor, useful for mounting and integration.

3.3 Wiring the Speed Governor

Connect the speed governor to the motor and power supply according to the wiring diagram. Ensure all connections are secure and properly insulated.



Figure 5: Rear view of the speed governor, showing the wiring terminals and connection points for the motor and power supply.



Figure 6: Dimensions of the TFCFL speed governor, indicating its compact size for integration into control panels.

4. OPERATING INSTRUCTIONS

This section details how to operate your TFCFL Electric Gear Motor and Speed Governor effectively.

4.1 Speed Adjustment

The speed governor allows for precise adjustment of the motor's rotational speed. Use the knob on the governor to set the desired speed.

- Turning the knob towards 'Low' will decrease the motor speed and reduce the output force.
- Turning the knob towards 'High' will increase the motor speed and increase the output force.
- The normal and reasonable speed regulation range is typically 50% to 100% of the full speed.

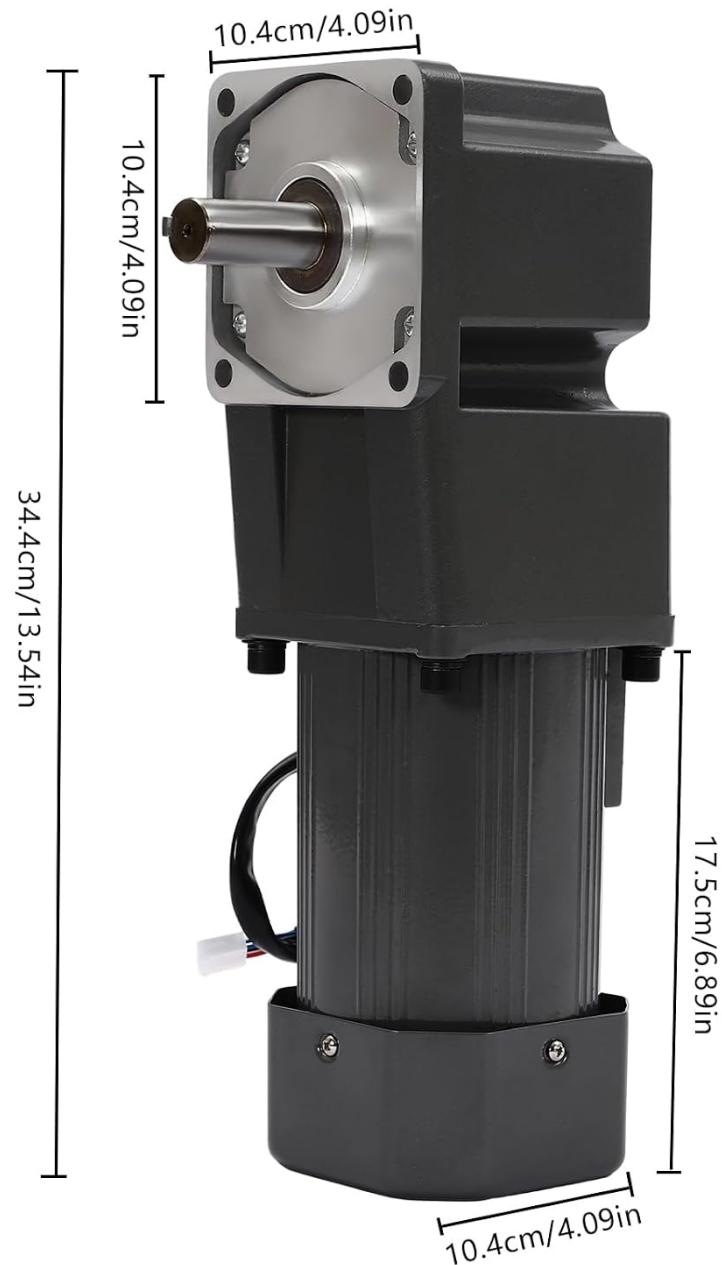


Figure 7: Front panel of the speed governor, showing the speed adjustment knob and power switch.

4.2 Speed Ratio and Torque

The relationship between speed ratio and torque is important for optimal performance:

- A larger speed reduction ratio results in slower speed but greater force (torque).
- A smaller speed reduction ratio results in faster speed but less force (torque).
- When the gearbox decelerates, a higher reduction ratio leads to higher force.
- The slower the speed regulated by the governor, the lower the torque.

4.3 Safe Operating Ranges

To ensure long-term stable operation, adhere to the following safe speed regulation ranges:

- For small loads: 50% of full speed to full speed.
- For large loads: 70% of full speed to full speed.

4.4 Commutation Function

The motor supports flexible normally open and normally closed control systems. This can be achieved by changing

the wiring or adding external switches, allowing for versatile integration into various control setups.

Your browser does not support the video tag.

Video 1: Official product video demonstrating the TFCFL AC High Torque Electric Gear Motor with Variable Speed Controller in operation.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your TFCFL Electric Gear Motor.

- **Cleaning:** The product's surface is smooth and easy to clean. Regularly wipe off dust and stains with a soft, damp cloth. Avoid using abrasive cleaners or solvents that could damage the finish.
- **Lubrication:** The gearbox features built-in solid lubricant, designed for smoother rotation and reduced maintenance requirements. No external lubrication is typically needed for the gearbox under normal operating conditions.
- **Inspection:** Periodically inspect the motor and governor for any loose connections, unusual noises, or signs of wear. Address any issues promptly.
- **Ventilation:** Ensure the cooling fan and bottom cooling window remain clear of obstructions to maintain effective heat dissipation.

6. TROUBLESHOOTING

This section provides guidance for common issues you might encounter with your motor.

- **Motor Not Starting:**
 - Check all power connections to ensure they are secure and the power supply is active.
 - Verify that the speed governor's switch is in the 'RUN' position.
 - Ensure the speed knob is not set to the absolute 'Low' position, which might prevent initial rotation.
- **Motor Running Erratically or with Reduced Power:**
 - Inspect wiring for any loose or damaged connections.
 - Confirm the motor is operating within its safe speed regulation range (50-100% for small loads, 70-100% for large loads).
 - Check for any mechanical obstructions or excessive load on the motor shaft.
 - Ensure adequate ventilation; overheating can lead to reduced performance.
- **Unusual Noise or Vibration:**
 - Check for loose mounting bolts or components.
 - Ensure the motor is not subjected to external impacts or knocking.
 - If the noise persists, it may indicate an internal issue; contact support.

7. SPECIFICATIONS

Detailed technical specifications for the TFCFL 110V 200W AC High Torque Electric Gear Motor.

Specification	Value
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Specification	Value
Brand	TFCFL
Model Name	PF5E0R
Model Number	BSG60T (Part Number: 88YF5S)
Power Supply	Wiring Voltage: 110V
Wattage / Horsepower	200 Watts
Rotational Speed	45 RPM
Torque	36 NM
Reduction Ratio	1:30 (30K)
Output	90° Right Angle Output
Material Type	Medium Carbon Tempered Steel
Gross Weight	10 kg / 22.05 lbs
Net Weight	9 kg / 19.84 lbs
Total Height	34.4 cm / 13.54 in
Reduction Box Size	10.4 x 10.4 cm / 4.09 x 4.09 in
Governor Size	10 x 6 x 9 cm / 3.9 x 2.4 x 3.5 in
Included Components	1 x Speed Reduction Motor, 1 x Speed Governor, 1 x English Manual
Manufacturer	WilkenUS

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact the seller or manufacturer directly. The manufacturer for this product is WilkenUS.

Please retain your purchase receipt for any warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question