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› [ENGWE](#) /

› [ENGWE Y400 Folding Electric Scooter User Manual](#)

ENGWE Y400

ENGWE Y400 Folding Electric Scooter User Manual

Model: Y400

1. IMPORTANT SAFETY INFORMATION

Before operating the ENGWE Y400 electric scooter, please read this manual thoroughly. Failure to follow instructions and safety warnings may result in serious injury, property damage, or death. Always wear a helmet and appropriate protective gear. Ensure you understand local laws and regulations regarding electric scooter use.

- Always wear a certified helmet and other protective gear (knee pads, elbow pads, wrist guards).
- Do not ride in wet conditions, heavy rain, or through deep puddles, despite the IPX5 rating.
- Avoid riding at night or in low visibility conditions. If unavoidable, use the scooter's lighting system and wear reflective clothing.
- Maintain a safe speed and always be aware of your surroundings, pedestrians, and other vehicles.
- Do not perform stunts or sudden maneuvers.
- Ensure all bolts and quick releases are securely tightened before each ride.
- The maximum load capacity is 120 kg (264 lbs). Do not exceed this limit.
- This scooter is designed for adults.

2. PRODUCT OVERVIEW

The ENGWE Y400 is a folding electric scooter designed for commuting and off-road use, featuring a powerful motor, long-range battery, and dual suspension system.

Key Features:

- **Motor:** 500W (Peak 830W) Brushless Hub Motor with 28Nm Torque.
- **Top Speed:** Up to 28 MPH.
- **Range:** Up to 31 miles per charge (in WALKING GEAR mode, dependent on rider weight and conditions).
- **Battery:** 48V 13.5Ah (648Wh) with BMS Protection System.
- **Suspension:** C-shaped front shock absorbers and rear suspension for a smooth ride.
- **Tires:** 10-inch vacuum off-road tires for superior grip and stability.

- **Brakes:** Front and Rear Dual Disc Brakes.
- **Display:** Intelligent LCD screen showing speed, battery level, and distance.
- **Lighting System:** Front headlight, taillights, and turn signals.
- **Foldable Design:** Compact folding for easy storage and transport.
- **Waterproof Rating:** IPX5.
- **Certification:** UL 2272 Certified.



Figure 2.1: Overview of ENGWE Y400 key features and specifications.

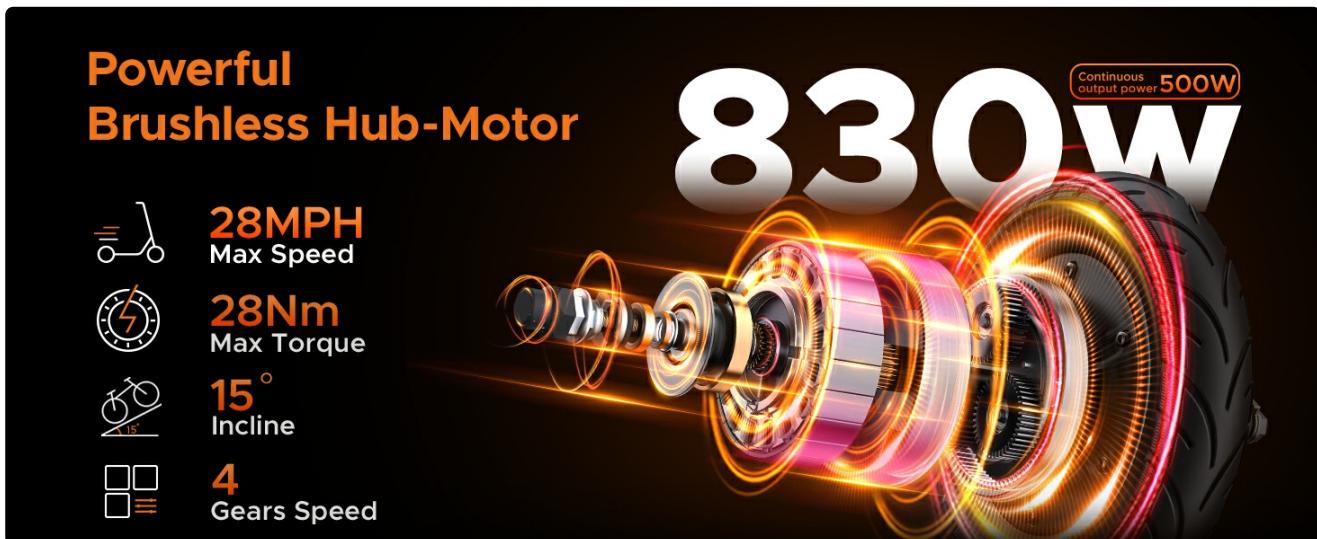


Figure 2.2: Detailed view of the 830W peak brushless hub motor and its performance metrics.



Figure 2.3: High-capacity battery with BMS protection system details.

3. SETUP AND ASSEMBLY

The ENGWE Y400 scooter arrives approximately 85% pre-assembled. Basic assembly involves unfolding the scooter, securing the handlebar, and performing initial checks.

3.1 Unfolding the Scooter

1. Place the scooter on a flat, stable surface.
2. Release the folding latch mechanism located near the base of the steering column.
3. Carefully lift the steering column until it locks into the upright position. Ensure the locking mechanism is fully engaged.
4. Unfold the handlebars and secure them in place if they were folded separately.

3.2 Handlebar Adjustment

The handlebar height can be adjusted for rider comfort. Loosen the quick-release clamp on the steering column, adjust to the desired height, and securely tighten the clamp.

3.3 Initial Checks

- Verify that both tires are properly inflated to the recommended pressure (check tire sidewall for details).
- Test the brakes to ensure they are functioning correctly and provide adequate stopping power.
- Check that all lights (headlight, taillight, turn signals) are operational.
- Ensure the throttle and display are working.
- Confirm all visible bolts and connections are tight.

4. OPERATING INSTRUCTIONS

4.1 Charging the Battery

Before first use, fully charge the scooter's battery. Connect the charger to the charging port on the scooter, then plug it into a power outlet. The charging indicator on the charger will change color when fully charged (approximately 7-8 hours). Do not overcharge.

4.2 Powering On/Off

Press and hold the power button on the LCD display to turn the scooter on or off.

4.3 Handlebar Controls



Figure 4.1: ENGWE Y400 Handlebar Control Layout.

- **Display Screen:** Shows current speed, battery level, riding mode, and distance.
- **Thumb Throttle:** Controls acceleration. Press down to increase speed.
- **Brake Levers:** Located on both sides of the handlebar for front and rear disc brakes.
- **Light Switch:** Activates the front headlight and taillights.
- **Horn Button:** Sounds the horn.
- **Turn Signal:** Activates left or right turn signals.
- **M Button:** Used to cycle through riding modes (ECO, PACE, SPORT, WALKING GEAR).
- **S Button:** May be used for additional settings or functions depending on the model.
- **Key Switch:** For security and to enable power.

4.4 Riding Modes

The Y400 offers four riding modes, selectable via the 'M' button on the handlebar:

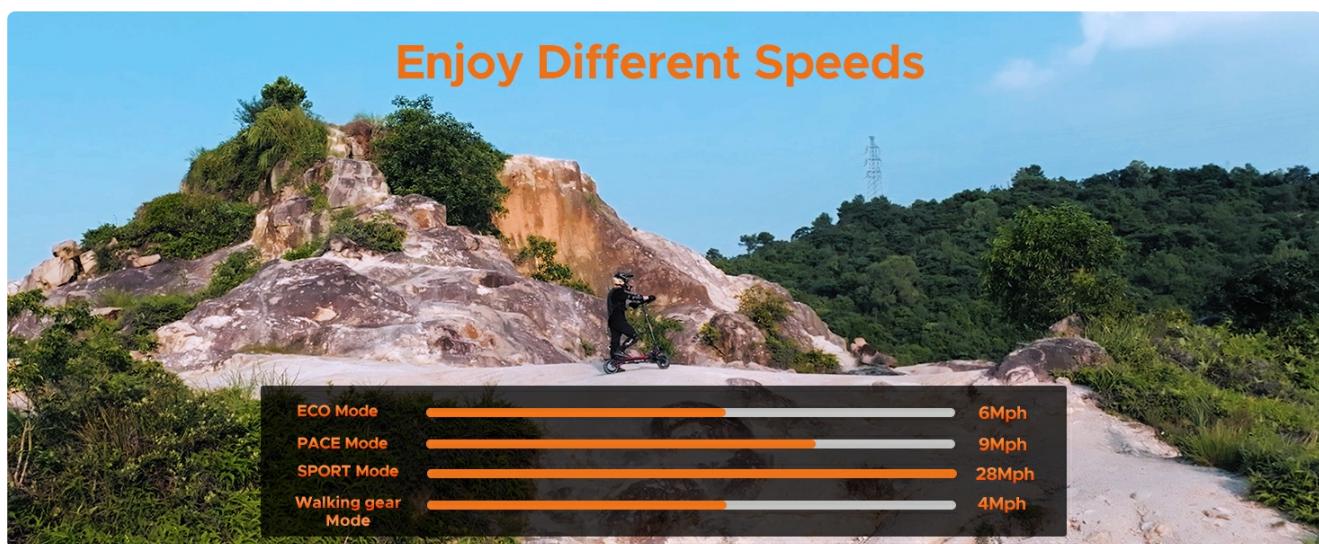


Figure 4.2: Available Riding Modes and their approximate maximum speeds.

- **WALKING GEAR Mode (approx. 4 MPH):** Lowest speed, ideal for crowded areas or walking alongside the scooter.
- **ECO Mode (approx. 6 MPH):** Energy-saving mode for extended range and gentle acceleration.
- **PACE Mode (approx. 9 MPH):** Balanced mode for moderate speed and range.

- **SPORT Mode (approx. 28 MPH):** Maximum performance mode for highest speed and acceleration.

4.5 Lighting System

The scooter is equipped with a comprehensive lighting system for safety.



Figure 4.3: Front headlight, rear reflector, and turn signals.

- **Front Headlight:** Provides illumination for riding in low light. Activate using the light switch.
- **Taillights:** Enhance visibility from the rear. Activate with the headlight.
- **Turn Signals:** Use to indicate turns, operated via the turn signal switch on the handlebar.

4.6 Folding and Storage

To fold the scooter for storage or transport:

1. Ensure the scooter is powered off.
2. Locate and release the folding latch mechanism.
3. Carefully fold the steering column downwards until it clicks into the folded position.
4. The handlebars may also fold for a more compact size.



Figure 4.4: Folded scooter for compact storage.

5. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your ENGWE Y400 scooter.

5.1 Battery Care

- Charge the battery regularly, even if not in use, to maintain its health.
- Avoid completely draining the battery.
- Store the scooter in a cool, dry place away from direct sunlight and extreme temperatures.

5.2 Tire Maintenance

- Regularly check tire pressure and inflate to the recommended PSI (found on the tire sidewall).
- Inspect tires for wear, punctures, or damage before each ride.

5.3 Brake System

- Periodically check brake pads for wear and replace if necessary.
- Ensure brake levers operate smoothly and provide firm stopping power. Adjust brake cables if needed.

5.4 Cleaning and Storage

- Clean the scooter with a damp cloth. Do not use high-pressure water jets or corrosive cleaners.
- Store the scooter in a dry, secure location.



Figure 5.1: The scooter features an IPX5 waterproof rating, but fair weather riding is recommended.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your ENGWE Y400 scooter.

Problem	Possible Cause	Solution
Scooter does not power on	Low battery; Power button not pressed correctly; Key not inserted/turned.	Charge the battery; Press and hold the power button; Ensure key is inserted and turned to ON position.
Motor not engaging / No acceleration	Throttle issue; Brake engaged; Low battery; Loose connection.	Check throttle connection; Ensure brake levers are fully released; Charge battery; Inspect motor connections.

Problem	Possible Cause	Solution
Reduced range or speed	Low tire pressure; Heavy load; Riding uphill; Battery degradation.	Inflate tires to correct pressure; Reduce load; Use appropriate riding mode; Contact support if battery performance significantly drops.
Brakes feel weak	Worn brake pads; Loose brake cable; Air in hydraulic system (if applicable).	Inspect and replace brake pads; Adjust brake cable tension; Consult a professional for hydraulic brake issues.
Unusual noises during operation	Loose components; Debris in wheels/brakes; Motor issue.	Check all bolts and connections; Inspect wheels and brakes for foreign objects; If motor noise persists, contact support.

7. SPECIFICATIONS

Detailed technical specifications for the ENGWE Y400 electric scooter.

Specification	Value
Brand	ENGWE
Model Name	Y400
Motor Power	500W (Peak 830W)
Max Speed	28 MPH
Max Range	31 Miles
Battery Capacity	48V 13.5Ah (648Wh)
Charging Time	7-8 Hours
Max Torque	28Nm
Max Climbing Angle	15°
Tire Size	10 Inches (Vacuum Off-Road)
Suspension Type	C-shaped Front, Rear Dual Suspension
Brake Style	Front and Rear Disc Braking
Frame Material	Aluminum
Item Weight	24.6 KG (54.23 lbs)
Max Load Capacity	120 KG (264 lbs)
Product Dimensions (Unfolded)	45.5" L x 23.6" W x 50.1" H (115.6 x 59.9 x 127.3 cm)
Product Dimensions (Folded)	43.98" L x 8.39" W x 22.56" H (111.8 x 21.3 x 57.3 cm)
Waterproof Rating	IPX5
Certification	UL 2272 Certified

Specification	Value
Recommended Age Range	Adult
Included Components	Scooter, Instruction manual, Tool Kits



8. WARRANTY AND SUPPORT

ENGWE provides comprehensive support for your Y400 electric scooter.

8.1 Warranty Information

The ENGWE Y400 electric scooter comes with a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects and workmanship under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or normal wear and tear. Please retain your proof of purchase for warranty claims.

8.2 Customer Service

For any questions, technical assistance, or warranty claims, please contact ENGWE customer service. Our team is available 24/7 to assist you.

- **Contact Information:** Refer to the contact details provided on the ENGWE official website or your purchase

documentation.

- **Assembly Videos:** Assembly videos are available for reference to assist with initial setup.

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