

## VAKOLE Y20 PRO

# VAKOLE Y20 PRO 20" Folding Electric Bicycle User Manual

Model: Y20 PRO

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## INTRODUCTION

Thank you for choosing the VAKOLE Y20 PRO 20" Folding Electric Bicycle. This manual provides essential information for the safe assembly, operation, and maintenance of your e-bike. Please read it thoroughly before your first ride and keep it for future reference. Proper understanding and adherence to these instructions will ensure optimal performance and longevity of your bicycle.



Image: The VAKOLE Y20 PRO folding electric bicycle in its full, unfolded state, showcasing its design and features.

## SAFETY INFORMATION

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Your safety is paramount. Always wear a helmet and appropriate safety gear when riding. Familiarize yourself with local traffic laws and regulations regarding electric bicycles.

### General Safety Guidelines:

- Perform a pre-ride inspection before each use, checking brakes, tires, and battery level.
- Ensure all quick releases and fasteners are securely tightened.
- Do not ride under the influence of alcohol or drugs.
- Be aware of your surroundings and ride defensively.
- Avoid riding in adverse weather conditions or on slippery surfaces.
- Do not exceed the maximum weight capacity of the bicycle.
- Keep hands and feet clear of moving parts.
- Always use headlights and taillights when riding in low light conditions.

## Battery Safety:

- Use only the charger provided by VAKOLE.
- Do not expose the battery to extreme temperatures or direct sunlight for extended periods.
- Do not attempt to open or modify the battery pack.
- Charge the battery in a well-ventilated area, away from flammable materials.
- If the battery is damaged or shows signs of overheating, discontinue use immediately and contact support.

## SETUP & ASSEMBLY

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Your VAKOLE Y20 PRO electric bicycle requires some assembly before its first use. Please follow these steps carefully. A multi-function tool kit is included to assist with assembly.

### 1. Unpacking and Initial Inspection

1. Carefully remove the bicycle and all components from the packaging.
2. Inspect for any visible damage during shipping. Report any damage to your retailer immediately.
3. Ensure all included accessories are present: multi-function tool kit, phone holder, charger, front basket.

### 2. Unfolding the Bicycle

The Y20 PRO is designed for easy folding and unfolding.

1. Place the folded bicycle on a flat, stable surface.
2. Release the frame folding latch, typically located in the middle of the main frame tube.
3. Carefully unfold the frame until it locks into place. Ensure the latch is fully engaged and secured.
4. Adjust the handlebar stem to its upright position and secure the quick-release lever.
5. Adjust the seat post to your desired height and secure the quick-release lever.



Image: The VAKOLE Y20 PRO electric bicycle folded and stored in a car trunk, demonstrating its compact size for transport.

### 3. Front Wheel Installation

If the front wheel is not pre-installed, follow these steps:

1. Align the front wheel with the fork dropouts. Ensure the brake rotor slides correctly into the brake caliper.
2. Insert the quick-release skewer or axle through the hub and secure it according to the manufacturer's instructions.
3. Tighten the quick-release lever or axle nuts firmly.

#### **4. Pedal Installation**

- Identify the left (L) and right (R) pedals.
- The right pedal (R) threads clockwise into the right crank arm.
- The left pedal (L) threads counter-clockwise into the left crank arm.
- Tighten securely with a wrench.

#### **5. Battery Installation and Initial Charge**

The 48V 20Ah battery is typically integrated into the frame.

1. Insert the battery into its compartment, ensuring it clicks securely into place.
2. Use the provided key to lock the battery. Remove the key before riding.
3. Connect the charger to the battery charging port and then to a power outlet.
4. Allow the battery to fully charge before your first ride. The charging indicator on the charger will change color when complete.



Image: Close-up view of the VAKOLE Y20 PRO's integrated battery pack, showing the keyhole for locking and unlocking the battery.

## 6. Pre-Ride Checks

- **Tires:** Ensure tires are inflated to the recommended pressure (check sidewall for range). The 4.0-inch fat tires provide strong grip and comfort.
- **Brakes:** Test both front and rear hydraulic disc brakes for proper function and responsiveness.
- **Handlebars & Seat:** Confirm handlebars and seat post are securely tightened and at a comfortable height.
- **Gears:** Check that the 7-speed Shimano gear system shifts smoothly.
- **Lights:** Verify headlights, taillights, and turn signals are operational.

## OPERATION

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Operating your VAKOLE Y20 PRO is intuitive, offering both pedal-assist and throttle modes (where permitted by local regulations).

### 1. Powering On/Off

- To power on the e-bike, press and hold the power button on the display unit.

- To power off, press and hold the power button again until the display turns off.

## 2. Display Functions

The intelligent display shows important information such as speed, battery level, and pedal assist level. Refer to the specific display manual for detailed functions and settings.

## 3. Pedal Assist System (PAS)

The Y20 PRO features a 5-level pedal assist system.

- Use the '+' and '-' buttons on the control panel to adjust the assist level.
- Level 0: No electric assistance.
- Level 1-5: Increasing levels of motor assistance. Level 1 provides minimal assistance, suitable for low speeds, while Level 5 provides maximum power for steep inclines or higher speeds.
- The motor engages when you start pedaling and disengages when you stop or apply the brakes.

## 4. Throttle Operation (if applicable)

Your e-bike may be equipped with a throttle for electric-only propulsion.

- Twist the throttle grip to engage the motor without pedaling.
- *Note:* In some regions (e.g., Germany), electric-only throttle operation without pedaling may be restricted or prohibited for certain e-bike classifications. Always comply with local regulations.

## 5. Gear Shifting

The 7-speed Shimano gear system allows you to adjust your pedaling effort to different terrains.

- Shift gears smoothly by pedaling lightly while operating the shifter.
- Lower gears (larger cogs) are for climbing hills, higher gears (smaller cogs) are for flat terrain and speed.





Image: Close-up of the VAKOLE Y20 PRO's rear wheel, showing the Shimano Tourney TZ derailleur and 7-speed cassette, responsible for gear changes.

## 6. Hydraulic Disc Brakes

The Y20 PRO is equipped with hydraulic disc brakes for superior stopping power and control.

- Apply both brake levers gently and evenly for controlled stopping.
- Avoid sudden, hard braking, especially at high speeds or on loose surfaces.
- Hydraulic brakes offer excellent heat dissipation and durability.

## 7. Smart App Control (Key Disp)

The Y20 PRO supports the Key Disp smart application, enhancing your riding experience.

- Download the Key Disp app from your smartphone's app store.
- Pair your e-bike with the app via Bluetooth.
- The app allows you to track your bike's position (iOS only) and customize various bike settings.

## MAINTENANCE

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Regular maintenance is crucial for the safety, performance, and longevity of your VAKOLE Y20 PRO electric bicycle.

### 1. Battery Care

- Charge the battery regularly, even if not in use, to maintain its health.
- Avoid completely draining the battery.
- Store the battery in a cool, dry place, ideally between 10°C and 20°C (50°F and 68°F).
- Do not store the battery fully charged or completely empty for extended periods. Aim for 50-70% charge for long-term storage.

### 2. Tire Pressure

- Check tire pressure before each ride.
- Maintain pressure within the range indicated on the tire sidewall. Proper inflation improves efficiency and reduces the risk of punctures.
- The 4.0-inch fat tires may require lower pressures for off-road comfort and grip, and higher pressures for road efficiency.

### 3. Brake System

- Regularly inspect brake pads for wear and replace them when necessary.
- Check brake fluid levels and bleed the hydraulic system if braking feels spongy or inconsistent. This should ideally be done by a qualified bicycle mechanic.
- Ensure brake rotors are clean and free of oil or grease.

### 4. Chain and Drivetrain

- Keep the chain clean and lubricated to ensure smooth shifting and prevent premature wear.
- Inspect the chain, cassette, and chainring for wear or damage.
- Adjust the derailleur if shifting becomes imprecise.

### 5. General Cleaning

- Clean your e-bike regularly with a damp cloth and mild soap.
- Avoid using high-pressure washers directly on electrical components or bearings.
- Dry the bicycle thoroughly after cleaning.

## TROUBLESHOOTING

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This section addresses common issues you might encounter with your VAKOLE Y20 PRO. For problems not listed here, please contact customer support.

### 1. E-bike Does Not Power On

- **Check Battery:** Ensure the battery is fully charged and securely installed. Verify it is locked into place with the key.
- **Battery Connection:** Confirm all battery connections are firm.
- **Display Cable:** Check if the display unit's cable is properly connected.



## 2. Motor Not Providing Assistance (PAS)

- **PAS Level:** Ensure the pedal assist level is set to 1 or higher on the display.
- **Pedaling:** The motor only engages when you are pedaling.
- **Brake Levers:** Check if brake levers are fully released; some e-bikes have cut-off switches that disengage the motor when brakes are applied.
- **Battery Level:** Verify the battery has sufficient charge.

## 3. Reduced Range

- **Tire Pressure:** Under-inflated tires significantly reduce range.
- **Terrain & Riding Style:** Frequent use of higher PAS levels, riding uphill, or carrying heavy loads will reduce range.
- **Temperature:** Cold weather can temporarily reduce battery performance and range.
- **Battery Health:** Over time, battery capacity may degrade. Ensure proper battery care as outlined in the Maintenance section.

## 4. Brakes Squealing or Ineffective

- **Contamination:** Clean brake rotors and pads if contaminated with oil or grease.
- **Pad Wear:** Inspect brake pads for wear and replace if necessary.
- **Hydraulic System:** If braking feels spongy, the hydraulic system may need bleeding or fluid replacement by a professional.

## SPECIFICATIONS

Key technical specifications for the VAKOLE Y20 PRO electric folding bicycle.

Feature	Detail
Model Number	Y20 PRO
Brand	VAKOLE
Wheel Size	20 Inches
Tire Type	4.0-inch Fat Tires
Battery	48V 20Ah (960 Wh)
Estimated Range	80 - 110 km (50 - 68 miles) per charge
Motor Power	250 Watts (rated)
Max Speed	25 km/h (15.5 mph) (regulated for EU standards)
Torque	60 N.M
Brakes	Hydraulic Disc Brakes (Front & Rear)
Gears	7-Speed Shimano
Frame Material	Alloy Steel
Suspension	Front Fork Suspension

Feature	Detail
Special Features	Digital Display, Foldable, Portable, Smart App Control (Key Disp)
Item Weight	36 kg (79.4 lbs)
Folded Dimensions	96 x 44 x 75 cm (37.8 x 17.3 x 29.5 inches)
Unfolded Dimensions	172 x 65 x 105 cm (67.7 x 25.6 x 41.3 inches)
Recommended Rider Height	165 - 200 cm (5'5" - 6'7")
Included Components	Multi-function tool kit, Phone holder, Charger, Front Basket



Image: Diagram illustrating the weight and dimensions of the VAKOLE Y20 PRO electric bicycle, both folded and unfolded, along with recommended rider height.

## WARRANTY & SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact the retailer directly. VAKOLE is committed to providing quality products and customer satisfaction.

### Customer Support:

If you encounter any issues or have questions regarding your VAKOLE Y20 PRO electric bicycle, please contact your point of purchase or the VAKOLE customer service team. Have your model number (Y20 PRO) and purchase date ready when contacting support.