

PHANTOM

USER MANUAL

VELDURO

Welcome to the Velduro family!

This quick-start manual explains the basic operation of your Velduro Phantom. Please read this manual, even if you have been riding for years.

Quick Things to Know about your Velduro

Take It Easy at First

Yeah, full power is a blast. But trust us, get friendly with your velduro before cranking it up. Start on the lowest assist level for your first ride and get fully used to the power then try the higher level.

Brake Earlier Than You Think

E-bikes pack more speed and more weight than regular bikes. That means you'll need more time to stop.

People Won't Expect Your Speed

You might look like you're on a regular bike, but you're zipping along way faster. Be aware and considerate of others as you approach or pass

Don't Mess With the Speed Limit

Your bike's top speed is already set for where you live.

Please read following instructions carefully before use and keep them for future reference. The illustrations in this guide might not match the actual product exactly. During assembly, it's crucial to use the torque wrench correctly to ensure all fasteners are tightened to the required torque.

This manual contains important safety information and useful suggestions about the proper use and maintenance of your e-bike.

Your Velduro Phantom adopts the AVINOX system. Please scan the QR code at the bottom right to download the AVINOX RIDE app for additional system customizing options.



Avinox ride App



<https://www.avinox-ebike.com/cn/avinox-system/downloads>

What's in the box?

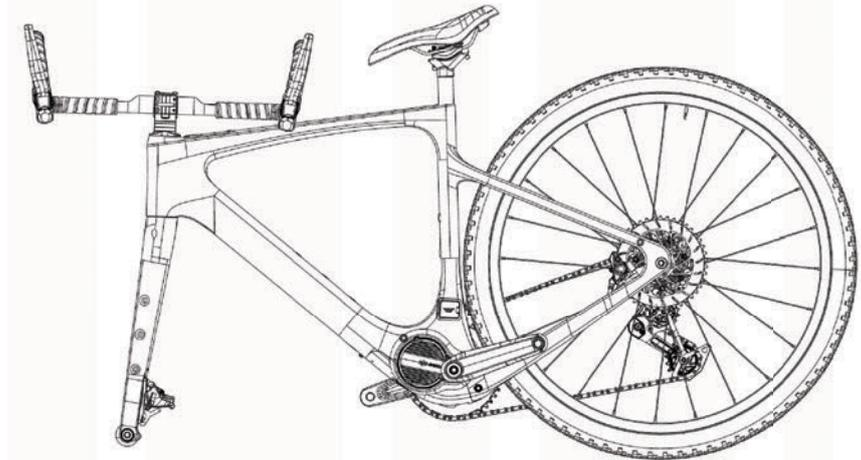
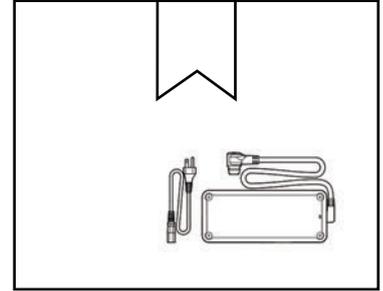
Your e-bike arrives 90% pre-assembled.

Open the carton, and you'll find:

The main ebike protected by eco-friendly wrap

The front wheel packed separately

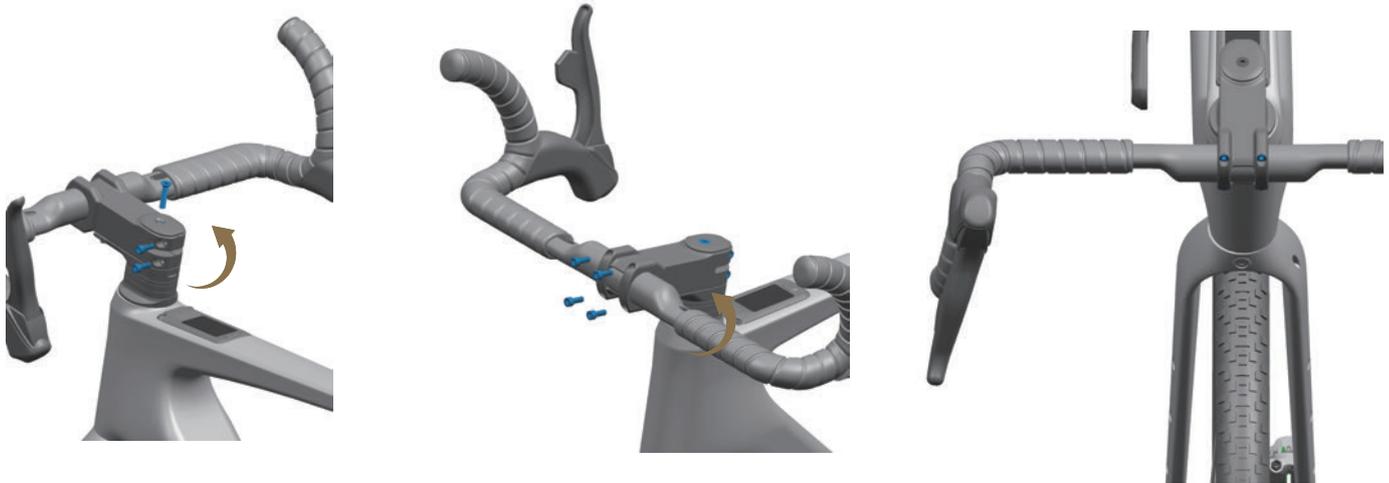
An accessories box containing the charger and a precision screwdriver for installing the SIM card for the display screen.



Stem&Handlebar install:

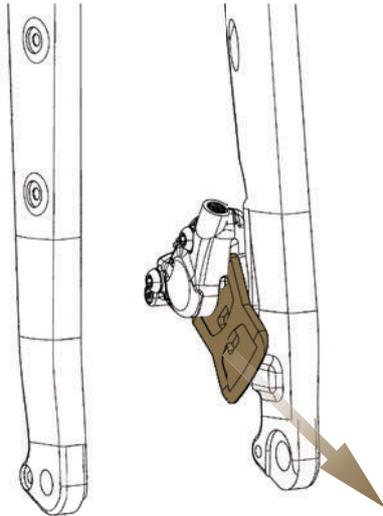
Rotate the Stem : When your bicycle arrives, the handlebar and stem are already mounted but not in the correct position. Use H4 and H5 wrenches to loosen the screws on the stem and headset cap respectively. Rotate the stem until it is perpendicular to the fork. Then tighten the stem and headset cap screws to the specified torque.

Rotate the Handlebar: Loosen and remove the four screws on the stem cap. Peel off the protective film from the handlebar. Reinstall the handlebar onto the stem, adjust it to a comfortable angle, and secure the stem cap. Ensure there are no gaps on the top side. Tighten the stem cap screws to the specified torque.



Front wheel install:

- **Open & Insert Wheel :** Remove the caliper block from the front caliper, rotate and remove the thru axle. Install wheel into dropouts. Ensure axle slides through drive-side dropout and hub.
- **Thread Axle:** Open axle lever fully. Turn axle clockwise 5-6 complete turns into axle nut.
- **Close Lever:** Firmly close lever. The lever should leave an imprint on your hand. Critical: Closed lever must be 1-20 mm in front of fork leg.
- **Settle Fork & Tighten:** Compress fork several times (If with suspension fork).



WARNING:

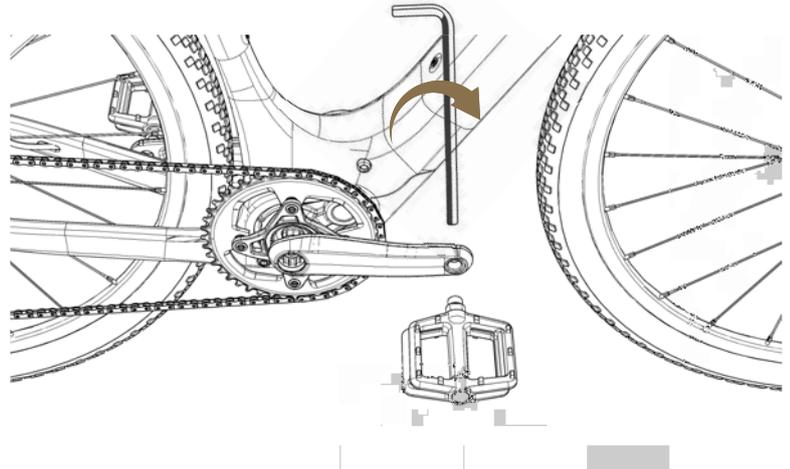
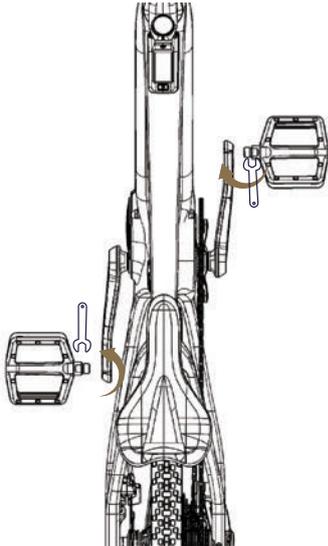
Do not apply the brakes until the wheels are completely installed.

Pedal install(not included):

Identify Pedals: Identify your pedals correctly before you install them, you will find L(left) / R(right) on the pedal. And confirm which tool is needed for the pedal installation: Allen Key or Open End Wrench

Open End Wrench : Slide correct sized wrench onto pedal nut.
Both pedals tighten towards the front of the bike. R (clockwise) / L (counter - clockwise) tightening.

Allen key : Insert correct key into pedal axle socket. Match R/L axle to crank arm hole, keep straight.
Both pedals tighten towards the front of the bike. R (clockwise) / L (counter - clockwise) tightening.



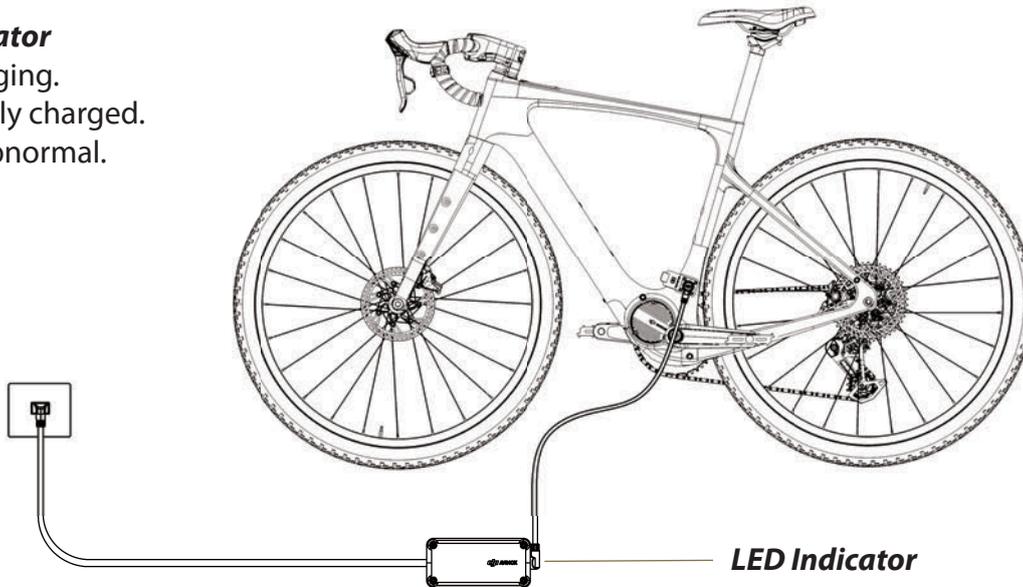
Battery Charging:

Open the charging port cover and connect the charger.
During charging, the bike screen will display the current battery level.
Unplug the charger and close the port cover after the battery is fully charged.

DO NOT pull the power cable by force when removing the charger.
Make sure to use the official charger to charge the battery.
Make sure not to move the bike and place the charger on a level surface while charging.
Make sure nothing covers your charger as it generates heat.

LED Indicator

Red: Charging.
Green: Fully charged.
Yellow: Abnormal.



Pair and Activate:

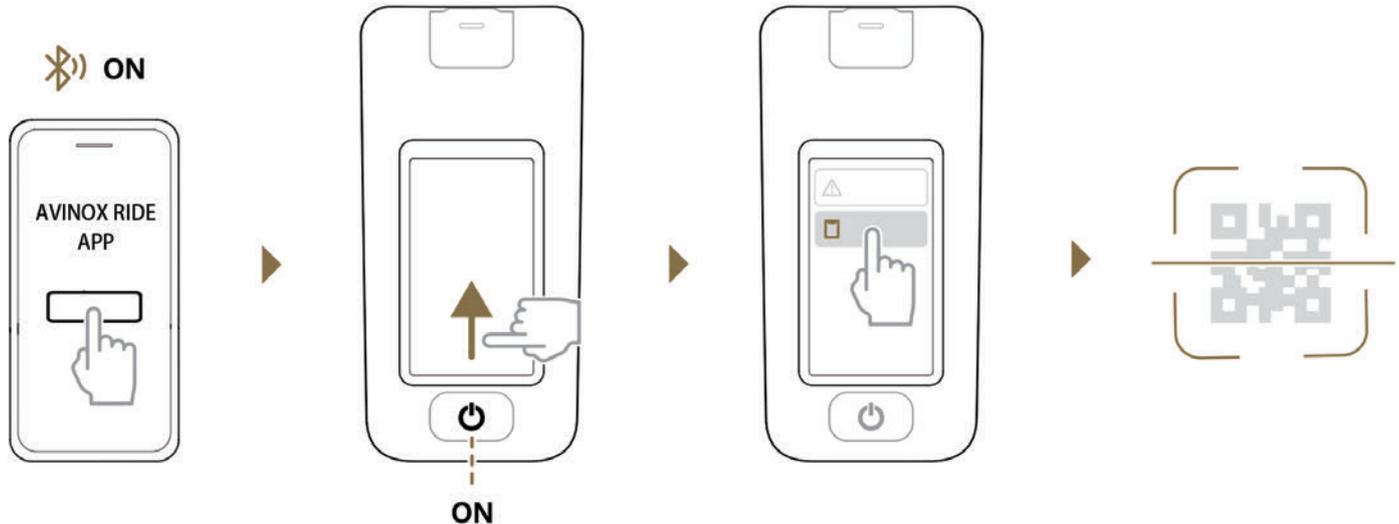
To pair your Velduro electric bike with the Avinox Ride App, follow these steps:

Enable Bluetooth on your phone and open the Avinox Ride App.

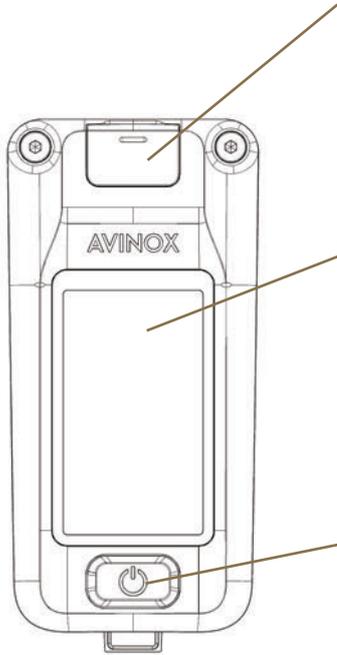
Turn on your Velduro electric bike and swipe up.

Follow the on-screen prompts in the app to begin the pairing process.

Scan the provided QR code to complete the connection.



Display Screen and USB-C Charge Port:



Type-C charging port (65W)

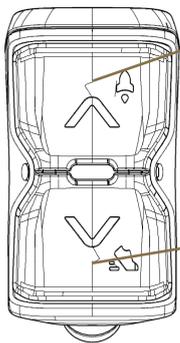
Gently pry open the plastic cover from the front of the Display. Use the USB-C cable to connect the control display with an external device, and then power on the control display to charge the connected device.

Touch screen

After the control display is powered on, it will show the home screen page. Tap or swipe on the screen to interact with the control display. Home Screen: Display the basic information. Swipe left/right: Enter the ride data pages, which can be customized in the app. Swipe up: Enter Settings to add accessories, set the recording mode and more.

Screen power button: Press and hold to power on/off. Press and hold for 5 seconds to force power off. When powered on for the first time, follow the prompts to select the language and activate the system. After powering on, press to switch the assist modes between Off, Auto, Eco, Trail, and Turbo.

Display controller:

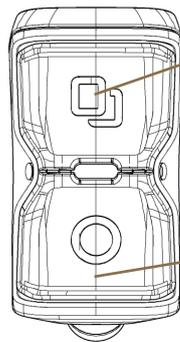


Assistance Level Increase Button:

Press to switch the assist modes in the order of: Off > Auto > Eco > Trail > Turbo. Press and hold to activate Boost mode and the bike screen will display a countdown while emitting a beep sound. Press the power button or assistance level increase/decrease buttons to exit Boost mode.

Assistance Level Decrease Button:

Press to switch the assist modes in the order of : Turbo > Trail > Eco > Auto > Off. Press and hold and then release the button to activate Walk mode. Once activated, press and hold the button to get power assistance to help pushing the bike uphill. Press any other button to exit Walk mode.



Screen Switch Button (customizable): Press to control the bike screen to slide right. Swipe up on the bike screen to enter Settings, and then you can customize functions for the button in Customize Controls.

Function Button (customizable): Press to control the bike screen to slide left. When the bike screen is on Settings page, press to return to previous page. Swipe up on the bike screen to enter Settings, and then you can customize functions for the button in Customize Controls.

Assist Mode:

Standard Mode

The four standard modes provide different assistance levels for various riding conditions:

Auto: Automatically adjusts assistance based on riding conditions, offering moderate help to extend range.

Eco: Gradual acceleration and low assistance(save battery).

Trail: Moderate acceleration and stronger assistance.

Turbo: Maximum assistance. Be aware your battery will deplete faster in turbo mode.

Boost Mode

Besides standard modes, the drive system has Boost mode—providing extra short-term assistance for higher torque/power (great for obstacles or steep climbs).

Press & hold \wedge to activate. Assistance stops when pedaling ceases.

Exit by pressing the power or assistance adjustment buttons.

Walk Mode

Press & hold \vee to activate. Hold the button for power assistance when pushing the bike or starting on inclines. Auto-holds to prevent rolling back on slopes.

Assistance turns off automatically when you release or speed exceeds 6 km/h.

Stationary Gear Shifting

Works in Walk mode: After activation, press the shift lever, lift the rear wheel, then press \vee twice to shift gears quickly.

Warnings

Use Walk mode only when pushing the bike—improper use risks accidents/injury.

Keep your body away from the rotating crank/pedals when using Walk mode for pushing or shifting.

Nano-SIM card install

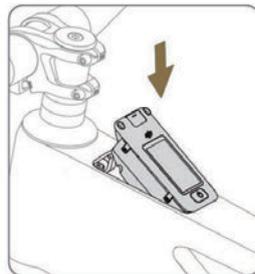
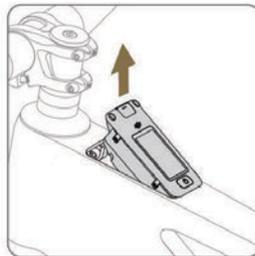
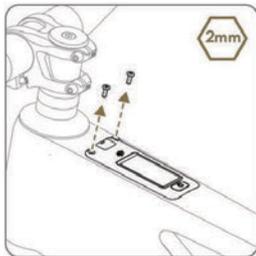
Use 2mm Allen key to remove the two screws from the component on the bar.

Lift the display upwards from the front side as shown by the gold arrow.

Detach the sim card cover from the back side and remove the two screws with Phillips screwdriver included in the your accessories box.

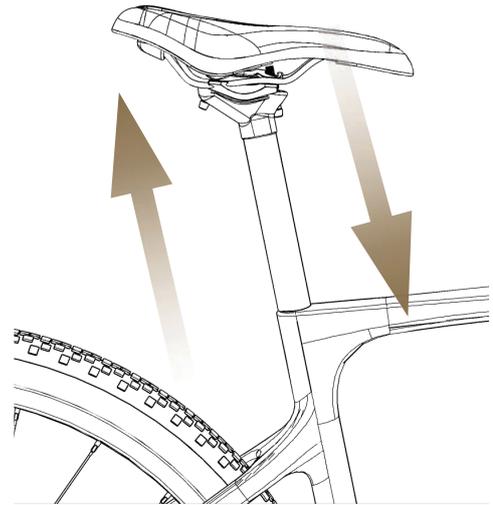
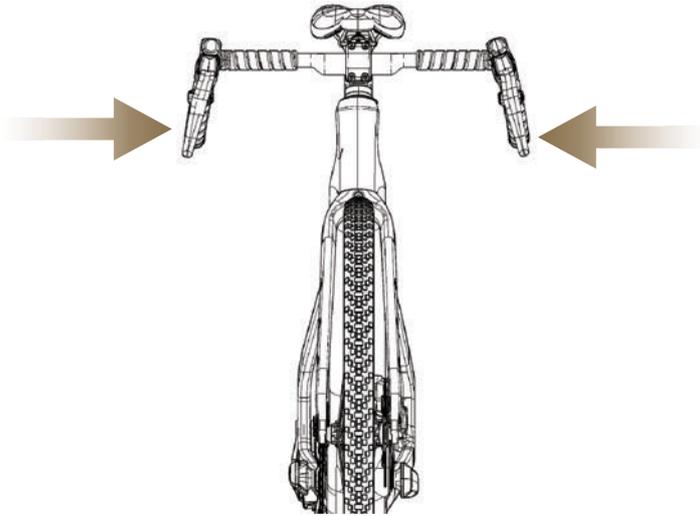
Insert SIM card into the slot, making sure the insertion depth is ≤ 0.75 mm.

When removing from the frame, it is recommended to pry up the control display using a tool instead of pulling the Type-C port cover.



Dropper seatpost(Only for Phantom R):

■ **How to use:** Press both shift levers together to lower the seatpost. Press again to raise the dropper back.



Fork adjustment(Only for Phantom R):

Before riding, set up the fork according to your weight.

While riding, you can further adjust as needed, based on your experience and terrain conditions.

To adjust air spring pressure, 1. remove the air cap.

2. Attach a high pressure shock pump to the air inflation valve and inflate to the recommended pressure.

3. Reinstall the air cap.



Fork Recommended Air Pressure

| Weight | Phantom R |
|---------|------------|
| <55kg | <90psi |
| 55-63kg | 90-110psi |
| 63-72kg | 110-130psi |
| 72-81kg | 130-150psi |
| 81-90kg | 150-170psi |
| >90kg | >170psi |

Note: If you are not well trained in cycle assembly, this procedure must be checked by a cycle technician.

Note: The max fork pressure should be under 200PSI.

Tire adjustment:

Before riding, inflate the tires to the recommended pressure according to the total weight(rider+bike). Prepare a Presta valve pump with an air pressure gauge.

Your bike comes with inner tubes but is **tubeless ready**. You can convert to tubeless by removing the inner tubes, installing tubeless valves, and adding sealant. This upgrade reduces the risk of flats and allows lower tire pressures for better traction.



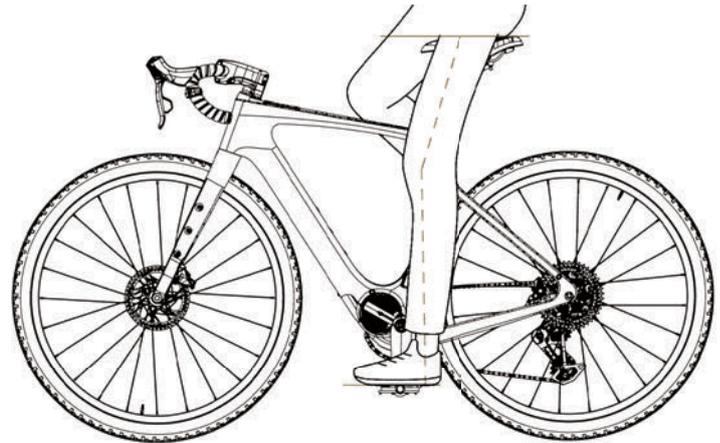
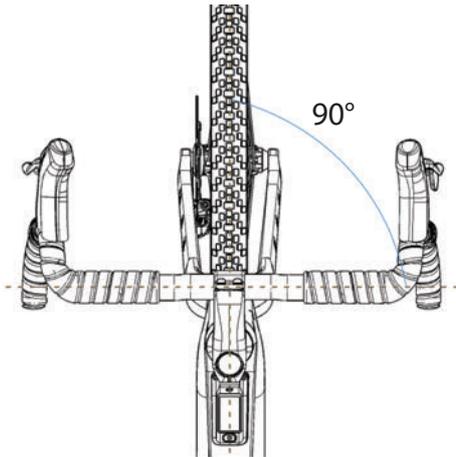
| Weight | Front Wheel | Rear Wheel |
|--------|-------------|------------|
| 50kg | 28psi | 30psi |
| 60kg | 30psi | 32psi |
| 70kg | 31psi | 33psi |
| 80kg | 33psi | 35psi |
| 90kg | 35psi | 37psi |
| 100kg | 37psi | 39psi |
| 110kg | 38psi | 41psi |
| 120kg | 40psi | 43psi |

Note: if you are not well trained in cycle assembly, this procedure must be checked by a cycle technician.
Note: : The max tire size for the Phantom is 700X50C, and we recommend as 45C.

Before Your First Ride:

Before start your first ride, make sure that all assembly and adjustment has been properly completed.

Assemble the bike in strict accordance with the instructions. Complete the initial setup of the bike. Properly adjust the tires and suspension. It is recommended that the seat be adjusted to the proper height according to the riding position shown in the illustration, The handlebar must be kept 90 degrees (perpendicular to the front wheel) and locked. E-bikes are significantly different from ordinary bicycles. Before riding, be sure to fully understand the functions of each component such as the brakes, transmission, seat and drive system. Read the safety guidelines carefully before use. Strictly observe the intended use of the e-bike, load limitations and all relevant laws and regulations.



Bike Maintenance:

To keep your bike working well and safe to ride, have an authorized Velduro retailer check and maintain it regularly.

- Fixing and maintaining a bike needs professional skills and tools. For safety, please ask an authorized retailer for help with repairs not in this manual.
- How long parts last depends on how and how often you ride. Have an authorized retailer check the bike and parts for wear regularly.
- Don't try to fix or maintain the bike unless you know the right steps. Wrong steps can damage the bike and cause accidents.
- If the bike is damaged, stop using it right away. Have an authorized retailer inspect it completely.
- Always turn off the system when checking or maintaining the bike.
- When using a repair stand, don't clamp it to the frame, this could damage the frame. Please clamp to the extended seatpost
- Check that tire pressure, spoke tension, suspension air pressure is within the correct range before ride.
- Check immediately when there is cracking noise or other abnormal noises.

Clean your bike regularly

- Wipe your bike with a damp cloth and mild soap. Don't use strong chemicals or alcohol.
- Check the manufacturer's instructions for how to clean the gears and derailleur properly and regularly.
- Make sure all port covers are closed when cleaning.
- Don't use a high-pressure washer on electrical parts, bearings, or seals.

After cleaning your bike, lubricate the transmission and moving parts as needed (follow manufacturer instructions). Consult an authorized retailer for advice on suitable lubricants and recommended lubrication frequency.

Thru-axle: Lubricate regularly—frequency depends on how often you remove the wheels.

Intended Use:

This bike is engineered for Condition 2 use. Below is a breakdown of what Condition 2 entails:

Warning: This bike is not designed for MTB use. Misusing it outside its intended purpose (Condition 2) could damage the frame, components, or cause injury.

What Condition 2 Includes:

Riding Surfaces: Combines all of Condition 1 (flat, smooth paved roads where tires stay on the ground) with unpaved gravel roads and moderate-grade trails.

Riding Style: Tires may occasionally lift off the ground during rides (e.g., over small bumps).

Jumping Limit: Supports jumps up to <15 cm in height.

Regular Inspection:

Bike mechanical parts don't last forever—using them past their lifespan can cause sudden damage. Inspect your bike regularly to avoid accidents from damaged parts.

Some parts can be inspected and maintained by yourself without special tools or skills. For others, use an authorized retailer or professional bike shop as the manufacturer directs.

- Check the manufacturer's instructions for more details on servicing parts.
- Maintain the fork regularly as the manufacturer directs.
- The maintenance timelines in this manual are just a guide—inspect your bike promptly based on how and how often you ride.
- After long rides, bad weather, or rain, fully inspect and maintain your bike.

ATTENTION -On the rear wheel, your Avinox sensor disc needs to be 0.8-1.8mm distance away from the frame sensor. If the distance is larger than this then your Avinox system may will not be able to accurately detect the motor system. 'Tip' - if needed place a small washer behind the sensor on the frame to bring it closer to the sensor disc.

Regular Inspection:

First Inspection

- Have an authorized retailer inspect your new bike after you've used it for some time.

Every Month

- Check that handlebar grips are secure.
- Check that the transmission works normally. Use professional tools or ask a bike shop to check if the chain is stretched.
- Check the speed sensor for dirt or foreign matter.
- Check brake rotors and pads for wear. Replace if needed.
- Check tires for damage or wear.
- Check spokes for looseness or damage.
- Check if cranks are loose. Tighten to the correct torque if they are.

Every Six Months

- Check frame for cracks or damage.
- Check and lubricate the hub, headset, and other friction parts.
- Clean and tighten cranks, chainring, and cassette.
- Check frame for internal cracks.

Every Year

- Inspect and service the headset.
- Inspect and service the pivot bearings.
- Replace brake fluid yearly as per the manufacturer's instructions to maintain braking performance.
- Better to return your bike to the dealer shop for complete service.

Battery Maintenance:

- Charge the battery between 0°C–40°C (32°F–104°F). Charging in this range extends battery life.
 - Store the battery in a cool, dry place away from direct sunlight, between 0°C–40°C (32°F–104°F).
 - Check battery level and cycle counts regularly. After 500 cycles, capacity may drop slightly but won't affect riding.
 - Charge the battery when it drops below 10% to avoid shortening its life.
 - If stored for long, battery life may decrease. Fully charge and discharge it at least once every 3 months to maintain performance.
-
- Unplug the battery when fully charged. Overcharging can damage battery cells.
 - Charging in high temperatures shortens battery life. Let the battery cool to room temperature after riding before charging. Charging between 0°C–40°C (32°F–104°F) greatly extends its life.
 - Remove the battery from the frame for long-term storage and keep it away from children.
 - For long-term storage, discharge the battery to 30%. Storing it too full shortens life; storing it too empty may cause over-discharge.
 - Before transport, discharge the battery to below 30%. Use a dedicated case for long trips or shipping to prevent damage. Never transport a damaged battery.

Warning

- Stop using the battery if the charger port or cable is worn or damaged.

Riding Safety:

Weight Limit

Total weight limit: 136KG

Rider weight limit: 100KG

Cargo weight limit: 20KG

Maximum permissible total weight: 120KG

The weight of EPAC: 16KG

After assembling your bike, review the Safety Guidelines and this manual thoroughly. Understand all safety warnings and complete pre-ride safety checks. Ensure you're fully familiar with the bike's features before you start riding.

- E-bikes accelerate faster than standard bikes. Stay vigilant about terrain and obstacles while riding.
- Avoid sudden, heavy front-wheel braking—this can lift the rear wheel and cause a fall.
- Watch for road hazards like potholes, road edges, drains, or debris that could damage wheels.
- Shift gears correctly: Press the shift lever, then pedal forward to move the derailleur.
- Don't move the bike backward if the chain is on the large cassette—this can damage the drivetrain.
- Keep your body clear of the chainring's sharp teeth, moving chain, and spinning wheels.
- Brake rotors and motors can get hot during use—do not touch them.

After an impact, ensure your safety first, then inspect for frame deformation/damage, loose bolts/parts, battery port/securement issues, display errors, wheel attachment/alignment, handlebar/stem damage/fixation, component centering, and transmission functionality before continuing to ride.

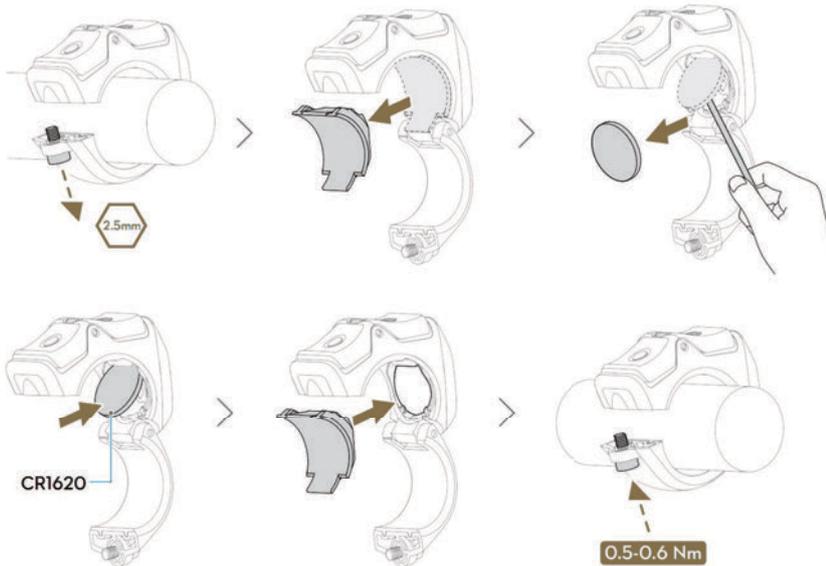
Replacing Battery of Screen Controller:

The indicator of the wireless controller will flash red when the battery level is too low.

To replace, first use a 2.5mm tool to open the controller cover. Then, carefully take out the old CR1620 battery without using metal tools. Next, insert a new CR1620 battery correctly. Finally, close the cover and tighten it to 0.5-0.6 Nm.

DO NOT use metal tools to remove the battery as it may cause a short circuit.

Make sure to clean the installation area and the bolts after multiple disassembly. Otherwise, it may cause abnormal noise during attaching and detaching.



Replacing Battery of e-shifter:

Fold the hood cover forward, then use a Phillips #1 screwdriver to remove the four battery hatch screws. Remove the battery cover and battery.

Install a new CR2032 battery with the positive + sign facing outward, then install battery hatch and battery hatch bolts.

Use a #1 Phillips screwdriver to gently tighten the battery hatch bolts until they are hand tight.



DEFY THE LIMIT.

VELDURO