ASSIST

Assist Step-Thru & Cross-Bar E-bike Front Motor Drive System Owner's Manual

Contents

Safety information

WARNING

There is an increased risk of injury – even fatal – if you do not follow instructions.

WARNING

There is a risk of serious injury – even fatal – if you do not follow instructions.

Managing the battery

- Use only batteries and chargers from EVERGRAND with your bike. Use of other battery packs can cause injury and involve a risk of fire. If you use other battery packs, EVERGRAND will assume no liability or warranties.
- Do not throw the battery pack into a fire.
- The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- Do not use the battery for any other purpose.
- Avoid contact with metal objects (paper clips, coins, keys, nails, screws or other small metal objects, as this may cause a short-circuit. Shorts caused in this way will invalidate any warranty claims.
- Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- Do not connect, or disconnect the battery pack / charger with wet hands.
- Keep the battery / charger out of reach of children/animals.

How safe riding is ensured

- While riding, do not focus your attention too much on the screen, as this can lead to accidents.
- Ensure that the wheels are securely attached to the bike before you begin your trip. If the wheels are not securely attached, the bike may fall over, causing severe damage.
- When riding a power-assisted bike, be sure that you are completely familiar with the starting characteristics of the bike before riding on multi-lane roads and footpaths. If the bike suddenly switches on, accidents can happen.
- If applicable, check that the bike lights are working before you ride at night.

How safe maintenance is ensured

- Remove the battery pack from the eBike before you start working on it (e.g., assembly work, maintenance, working on the chain, etc.), before transporting it by car or plane, or before storing it. There is a risk of injury in case of accidental activation of the eBike system.
- Be sure to remove the battery before you perform wiring or installation work on the bike. Otherwise there is a danger of electric shock.
- When you install this product, be sure to follow the instructions given in the user manual. We also recommend that you use only genuine EVERGRAND parts. If nuts and bolts are left loose or the product is damaged, the bike may fall over suddenly and cause serious injury.
- After you have carefully read the user manual, store it in a safe place for later reference.
- Ensure that unused connections are provided with caps.
- Contact the retailer for installation and adjustment of the product.
- To allow riding in wet weather, the product is designed to be completely waterproof. Nevertheless, do not expose the product intentionally to water.
- Do not expose the bike to high-pressure cleaning. If water should penetrate into one of the components, operating problems or rust may result.

Managing the battery

- Do not subject the battery or the charger to physical shocks, e.g., by dropping.
- Fluid that leaks from the battery pack may cause skin irritation or burns. In the event of accidental contact, rinse with water. If fluid gets in your eyes, seek medical advice.
- If you detect a strange odour or smoke, pull the plug.
- Ensure that the power plug is fully inserted into the wall outlet.
- Pull on the plug instead of the cable to unplug the power cord from a wall outlet.
- Do not place anything on the cable. Do not lay anything on the cable.
- Do not bend the cable. The cable must not be rolled up while charging.
- It is dangerous to use a single outlet for multiple devices.
- If the cable or plug is damaged, replace the parts with new ones. Contact your authorized dealer.
- Always keep your charging set away from flammable gases when charging.
- The charger can be hot. Do not cover the charger.
- The charger can be hot. Do not place the charger on floor coverings such as carpets, tatamis, etc.
- The charger can be hot. Avoid long skin contact with the charger.
- Do not immerse the battery or the charger. Do not use in rain.
- Do not charge the battery for more than 24 hours continuously.
- If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the battery.

⚠WARNING

There is a danger of personal injury or property damage

How safe riding is ensured

Follow the instructions in the user manual of the bike to ensure a safe ride.

Managing the battery

- The battery comes with a 40% charge. Discharge and charge the battery fully, twice to reach an optimum range.
- Charge the battery before riding.
- The charger can be used with an input voltage in the range of 100V to 240V AC.
- After charging pull the cable from the battery and from the wall outlet.
- Keep the power plug clean and dust free. The charger should be cleaned regularly.
- Do not rotate the pedals while the battery is being charged and the battery is on the battery holder.
- Provide ventilation/venting while the battery is charging in enclosed spaces.
- During storage keep the battery at a charge level of at least 40%.and charge once every 3 months。
- Charge the battery at room temperature between 5°C and 35°C (41°F and 95°F).

Safe use of the product

- Examine the battery charger regularly for damage, especially the cable, plug and housing. If the battery charger is damaged, it must only be used after it has been repaired.
- This product must not be used by persons (including children)□with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, unless they are supervised by a person responsible for their safety, or instructed in the use of the product.
- Do not let children play near the product.

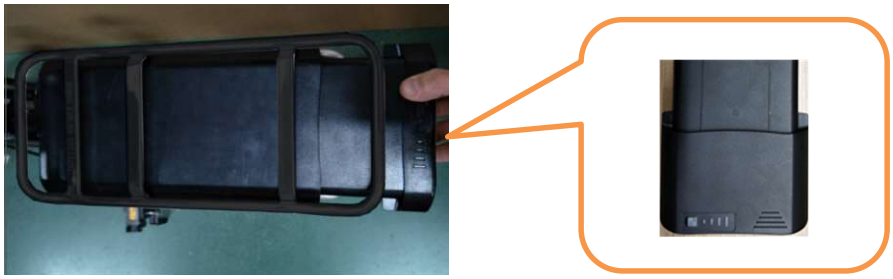
⚠ WARNING

- Please ensure that all carrier screws are fastened before riding；
- Please note that the maximum load of the carrier is 25 kg, cargo weight shall not exceed 25 kg；
- Please do not replace or modify the carrier；
- To prevent the accident，please check and replace the screws of carrier periodically；
- When pick up the goods, please pay attention to the body balance to avoid accident；
- It's not allowed to carry the children without safety protection；
- Please note that the carrier is not designed to pull a trailer;
- Please note that the bicycle may have different performance (especially the steering and braking) when the carrier is loaded;
- Reflectors are not allowed to obscured when the carrier is ride by goods or people;
- The tightening torque of the screws between the carrier and the frame should be 14N.M;
- Please note that carrier is not designed as the attachment of a child-seat;
- Please ensure that all the luggage on the carrier will be securely fixed in accordance with the manufacturer's instructions and there are no any loose straps which can get caught into the wheels;
- Please make sure distribute luggage evenly on the carrier.

Riding the E-Bike

1

Fit the battery and push the battery ON/OFF button



Note:

If the battery is not used for 4 hours or longer, it will automatically go into sleep mode. Press the power button on the battery for five seconds

2

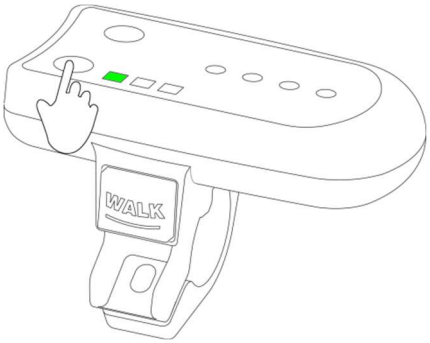
Switch on the bike

Press 2 sec.

The handlebar display goes through a self-check routine, where all LEDs flash. The number of permanently lit red LEDs indicates the state of charge of the battery. The MODE defaults to 'LOW'.

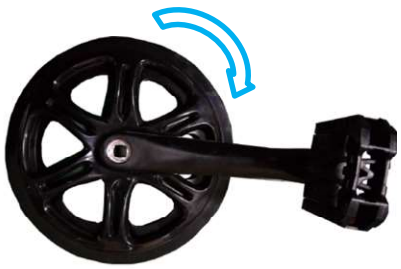
3

Select mode



4

Start riding

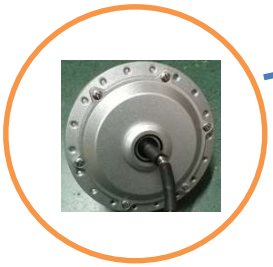


Product characteristics

Display

Battery

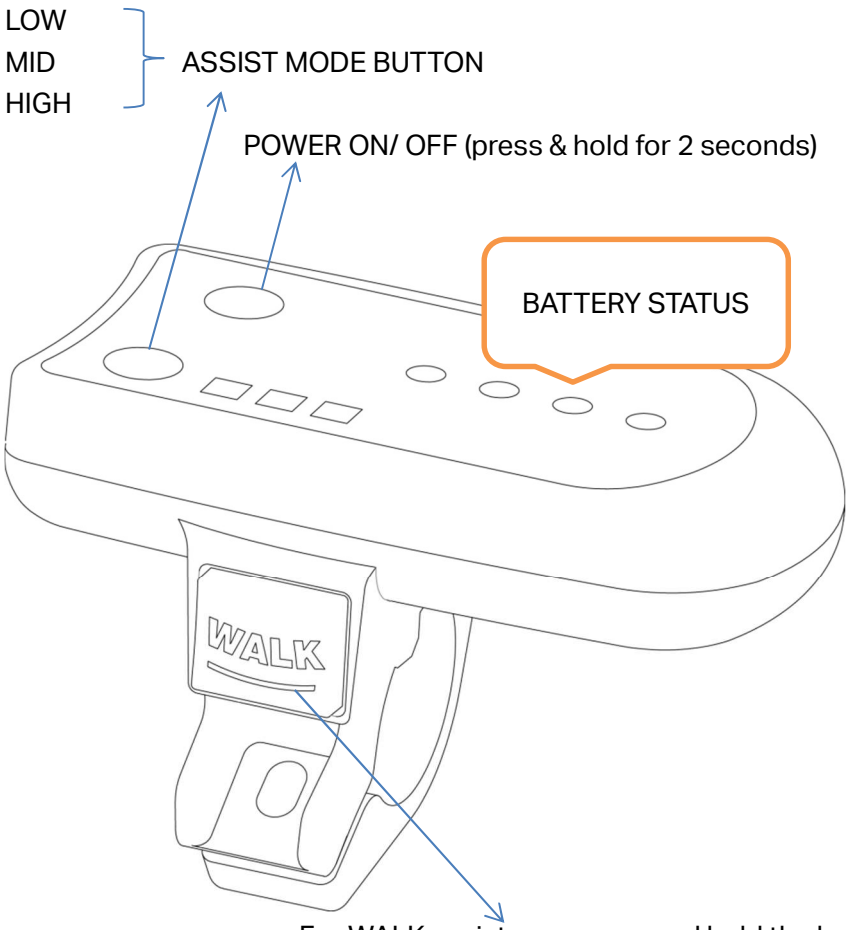
Motor



Product specification

Operating temperature range during discharge	-15℃ to 60℃
Operating temperature range during charge	0℃ to 45℃
Storage temperature (battery)	-20℃ to 60℃
Humidity (storage)	up to 80%
Charging voltage	100V to 240VAC
Charging time	approx. 5 hours
Battery type	Lithium ion battery
Capacity	208.8Wh
Nominal voltage	24VDC
Motor type	Front-wheel drive
Motor type	Brushless DC Motor
Nominal motor power	250W
Maximum motor power	350W
Torque	35Nm

Display



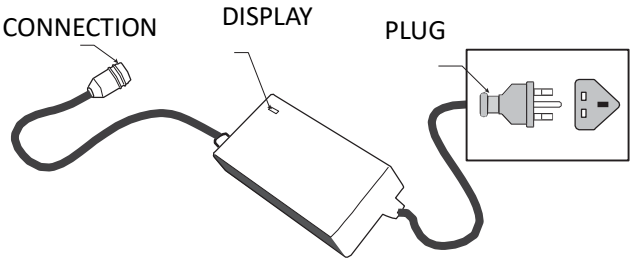
Battery

Battery release key

Important!
Your bike is supplied with three battery lock keys; please keep the spare key safely. We can order you a replacement if you can provide the key number.
Please note your key number here-

- If the E-Bike not in use, remove the battery and store it at a temperature between 0°C and 40°C in a dry environment.
- Do not store the battery with low capacity for a longer period.
- For storage, the battery should have a capacity of at least 40%. And charge once every 3 months.
- It is recommended to always discharge the battery completely and then fully charge it.

Battery charger

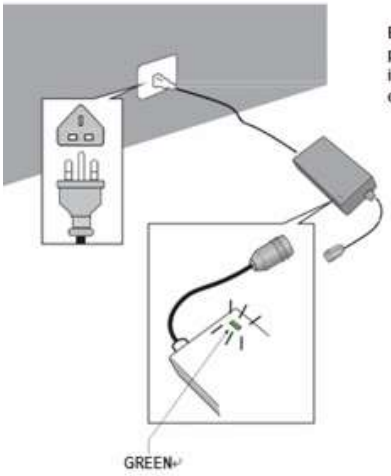


⚠WARNING

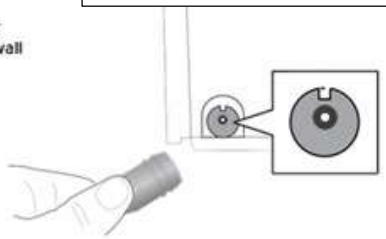
- Use only batteries and chargers from EVERGRAND with your bike. Use of other battery packs can cause injury and involve risk of fire. If you use other battery packs, we will assume no liability or honour warranties
- The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short- circuit. Shorts caused in this way will invalidate any warranty claims.
- Do not open the battery pack. This could cause a short circuit.
- Opening of the battery package will invalidate any warranty claims.
- Do not connect, or disconnect the battery pack/charger with wet hands.
- Keep the battery/charger out of reach of children and animals.

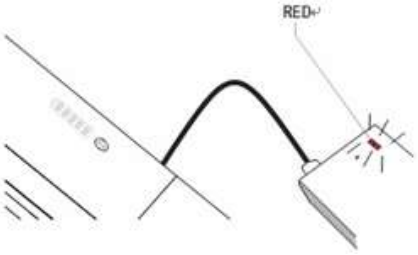
Charging the battery

Battery must be switched ON before charging



Ensure that the power plug is fully inserted into the wall outlet.





The LED on the charger changes to green when the battery is fully charged

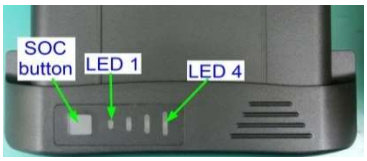
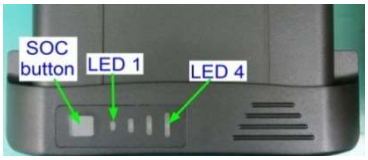
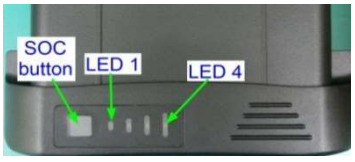
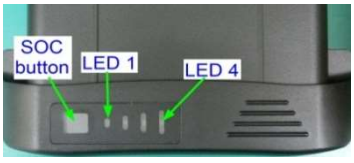
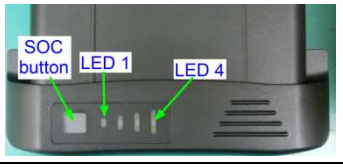
WARNING

- Do not subject the battery or the charger to physical shocks, e.g., by dropping. Rinse in the event of accidental contact with water. If fluid gets in your eyes, seek medical advice. Fluid that leaks from the battery pack may cause skin irritation or burns.
- Do not bend the cable. The cable must not be rolled up while charging.
- The charger can be hot. Do not wrap the charger and place it on floor coverings such as carpets, etc.
- If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the batter
- For best performance in cold weather, always remove the battery from the bike & take it into a warm environment for charging. It will get a higher charge & will supply power better when it is warm when replaced on the bike.

Battery LED indicators

State of current charge

You can press SOC button while you are charging the battery

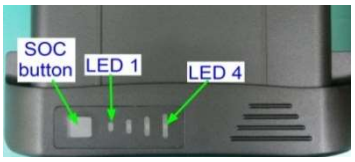
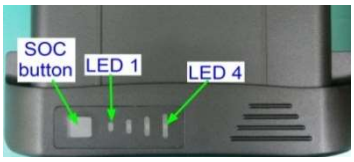
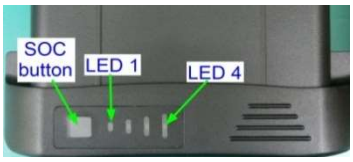
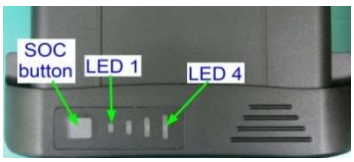
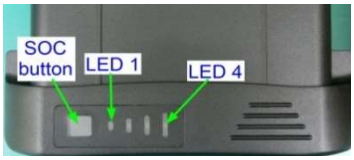
	LED 1 Flashing : < 10% SOC	Charge Time From 0
	LED 1 ON : 11% ~ 25% SOC	
	LED 1 ~ LED 2 ON : 26% ~ 50% SOC	
	LED 1 ~ LED 3 ON : 51% ~ 75% SOC	
	LED 1 ~ LED 4 ON : 76% ~ 100%	Approx. 5 hours

Battery fault indication

Error Condition	Catalog	How to do
Cannot turn on battery (these LEDs have not one-by-one running flash)	Power ON/OFF switch malfunction	Battery pack needs to be returned to manufacturer for repairing.
Turn on battery pack, and battery cannot work (these LEDs have one-by-one running flash)	Battery pack voltage too low	Check battery pack output voltage. If its output voltage is lower than 20V, please charge the battery.
	Over current protection	Remove battery pack from its frame and check motor controller is broken or not.
	Cannot discharge	Battery pack needs to be returned to manufacturer for repairing.
	Battery pack temperature too high	Touch battery pack outside surface. If its temperature is too high, waiting for the battery's temperature cool down to normal.
	Battery pack temperature too low	Touch battery pack outside surface. If its temperature is too low, try to make battery pack getting warmer. Please do not charge battery pack when environment temperature is lower than 0 degree C.
When the charger plug-in without charging normally (these LEDs have not one-by-one flashing)	BMS have some problem	Battery pack need to be returned to manufacturer for repairing.
When the charger plug-in without charging normally (these LEDs have one-by-one flashing)	Over voltage protection	Do not charge battery pack, Check if the charger is the right one or is normal or not. Keep it discharge until over voltage protection removed.
	Battery pack temperature too high	Touch battery pack outside surface. If its temperature is too high, waiting for the battery's temperature cool down to normal.
	Battery pack temperature too low	Touch battery pack outside surface. If its temperature is too low, try to make battery pack getting warmer. Please do not charge battery pack when environment temperature is lower than 0 degree C.
	Over current protection	Remove charger from battery and check charger is broken or not.
Turn off the power during riding	Battery pack voltage too low	Check battery pack output voltage. If its output voltage is lower than 20V, please charge the battery.
	Over current protection	Remove battery pack from its frame and check motor controller is broken or not.

Battery capacity remaining indication

If you press the 'SOC' button, the LEDs will indicate the 'state of charge' (remaining total capacity) of the battery, against its capacity when new.

	Remaining total capacity
	LED 1 Flashing : < 10% SOC
	LED 1 ON : 11% ~ 25% SOC
	LED 1 ~ LED 2 ON : 26% ~ 50% SOC
	LED 1 ~ LED 3 ON : 51% ~ 75% SOC
	LED 1 ~ LED 4 ON : 76% ~ 100%

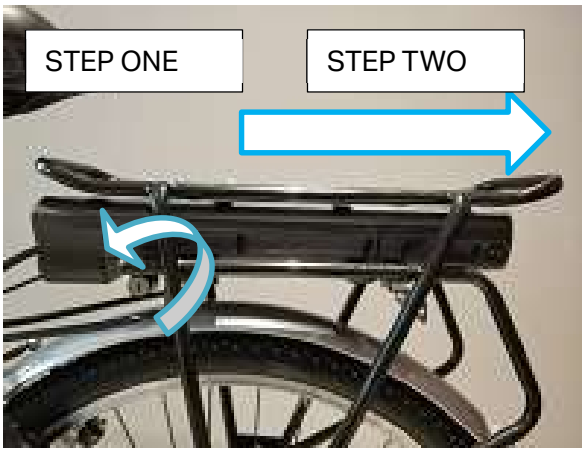
Battery complete shut down

To completely shut down the battery press the 'Power/SOC' button the battery management system will enter the power off mode.

Fitting the Battery

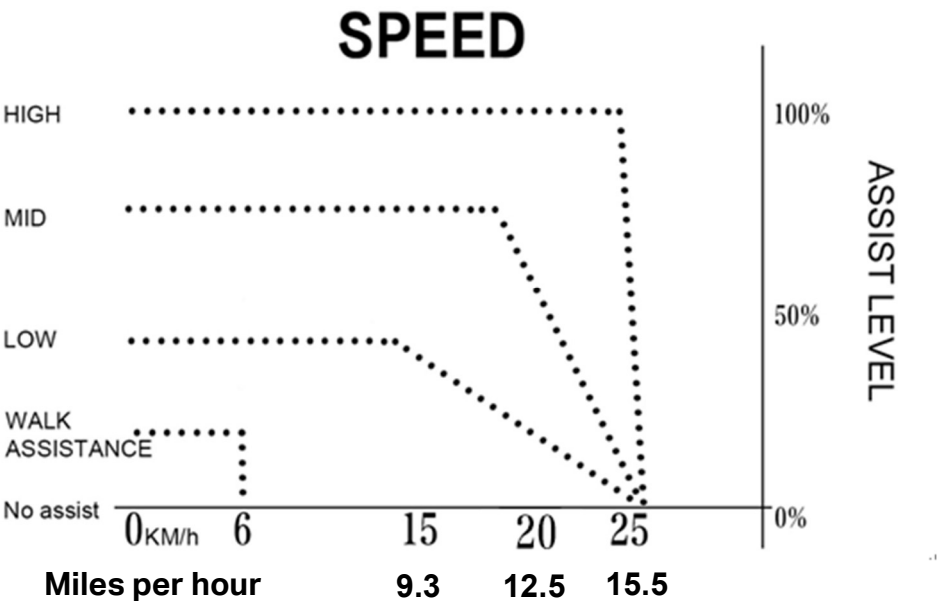
The battery must latch on with an audible click

Removing the battery

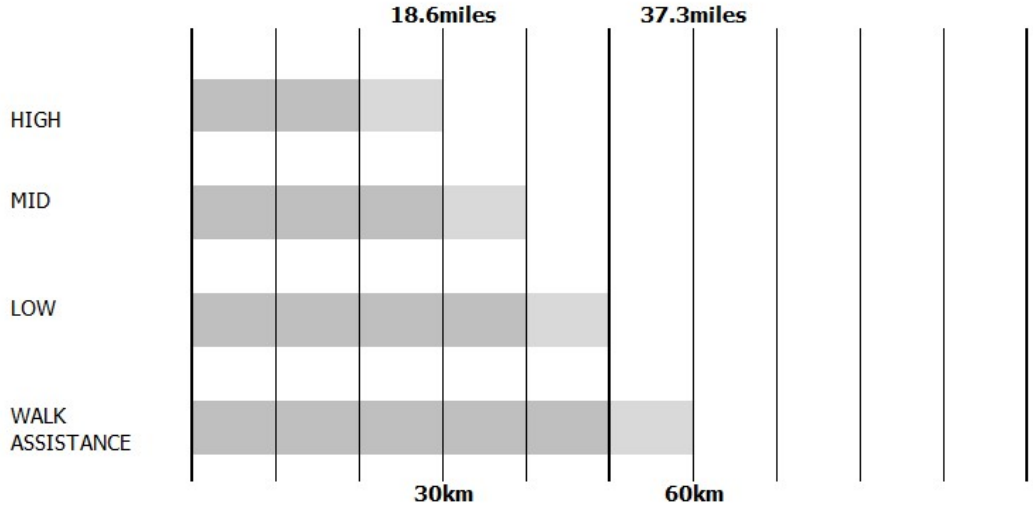


Unlock with the key & slide out the battery

Assistance levels and speed



Range

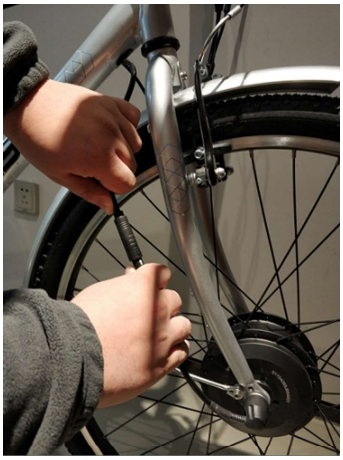


Factors which affect the range

The above figures are based on a speed of 20 km/h on a level road at 15°C–20°C. The range is influenced by many factors:

- Weight of the rider
- Weight of the luggage
- Selection of path
- Experience and concentration of the rider
- State of maintenance of the E-Bike
- Type, condition and air pressure in the tires
- Nature of the route
- Speed, average speed and changes in speed
- Traffic flow, for example, stop and go
- Wind direction and wind speed

Removing the front wheel (to repair a puncture)



- Take off the two cable ties holding of the wire harness and unplug the two parts of the motor connector.
- Release the two ‘arms’ of the front V brake by pulling on the front brake cable ‘noodle’ & releasing it from the ‘cage’ on the top of the arm

- Remove the rubber caps from both front wheel nuts & loosen the nuts (19 mm spanner). You may need to remove the nuts to release the wheel.

- Having repaired puncture, refit the front wheel. Take care to ensure the motor cable is pointing directly downwards to align the anti-rotation toothed washers on the wheel axle with the dropout slots.
- Firmly tighten both wheel nuts to 40 +/-5 Nm

- Push the two parts of the motor cable connector together, making sure that the moulded arrows are aligned
- Replace the rubber wheel nut caps & clip / cable tie the motor cable back along the fork leg.
- Reconnect the front V brake.

EC Declaration of Conformity

The equipment which accompanies this declaration is in conformity with the following EU Directives:-

83/37/EC Machinery Directive
2006/95/EC Low Voltage Directive
2004/108/EEC Electromagnetic Compatibility Directive
2001/95/EC General Product Safety Directive
2012/19/EU Waste Electrical and Electronic Equipment Directive
2006/66/EC Batteries Directive

Manufacturer:- EVERGRAND BICYCLE VIETNAM CO., LTD Block R1 & R2, Street D6 & N11, Nam Tan Uyen Industrial Park, Khanh Binh Ward, Tan Uyen Dist., Binh Duong Province
Represented in the EU by:- Halfords Plc, Redditch, B98 0DE.
A copy of the Technical file for this equipment is available from:- the EU address above.

Description of Equipment
Halfords Assist Cross-Bar & Step-Thru 250 W Front Motor Drive System, 8.7Ah Li-Ion Battery & Battery Charger

The following harmonized standards have been used:-
EN 15194:2009 + A1:2011 Cycles – Electrically power assisted cycles – EPAC Bicycles

Other key standards used:-
UN/DOT 38.3 UN Manual of Tests and Criteria Transportation Testing Li Batteries.

Authorised signatures of *manufacturer and EU representative*

	Manufacturer	EU representative
Signature:		
Name of signatory:	***Billd Lee***	***Chris Hall***
Position in company:	***QC Manager***	***Head of Quality***
Place and Date:	***Vietnam Feb 2019***	***Redditch UK Feb 2019***

Halfords e-bike specific warranty conditions

Your ASSIST e-bike is guaranteed against manufacturing defects arising from faulty workmanship or materials for 2 years from the original date of sale.

Providing that the cycle:

- Has been properly cared for, regularly serviced and maintained.
- Has not been ridden as part of a commercial use (e.g. hire, courier or delivery service, etc.).
- Has only been fitted with parts recommended by Halfords.
- Has not been modified or altered in any way, in particular no modifications to the motor
- Has not been damaged by accident or misuse.

Any failure caused by normal wear and tear or a lack of servicing and maintenance is excluded.

Under the terms of this guarantee Halfords will bear the cost of the replacement parts and labour to carry out the repair.

Important: This guarantee applies only to cycles used under normal riding conditions.
This guarantee does not affect your statutory rights.

Battery pack specific warranty conditions

The battery pack is guaranteed over the warranty period to provide a minimum of 500 charging cycles and to hold at least 60% of its nominal battery capacity.

This is dependent upon the correct use, regular re-charging, correct preparation for storage and storage (as detailed in the EVERGRAND Owner's Manual).
Halfords will be able to confirm the exact number of charge cycles and whether the battery has been correctly charged / stored from the information that is recorded in the battery pack monitoring and control electronic circuit.

Information on Waste Disposal for Consumers of Electrical & Electronic Equipment

This mark on a product and/or accompanying documents indicates that when it is to be disposed of, it must be treated as Waste Electrical & Electronic Equipment (WEEE).
Any WEEE marked waste products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used.
For proper treatment, recovery and recycling; please take all WEEE marked waste to your Local Authority Civic waste site, where it will be accepted free of charge.
If all consumers dispose of Waste Electrical & Electronic Equipment correctly, they will be helping to save valuable resources and preventing any potential negative effects upon

human health and the environment, of any hazardous materials that the waste may contain.

Please recycle your spent batteries.

Batteries should not be disposed of in unsorted municipal waste, but separately collected to facilitate the correct treatment and recycling of the substances they contain. The recycling of batteries ensures the recovery of these valuable materials and prevents any potentially harmful effects upon both the environment and human health. Please contribute to battery recycling by segregating all spent batteries and actively participating in their collection and recycling. Various battery collection schemes will be in operation in different areas of the country. However, battery collection bins will be available at retail stores that sell batteries as well as at schools, libraries and other public buildings.