

Product Operation Manual



M O D E L : R o o d e r M 2

Please read this manual carefully! This product operation manual contains safety precautions for the vehicle!

Please do not use an electric two-wheeled motorcycle without fully understanding its performance!

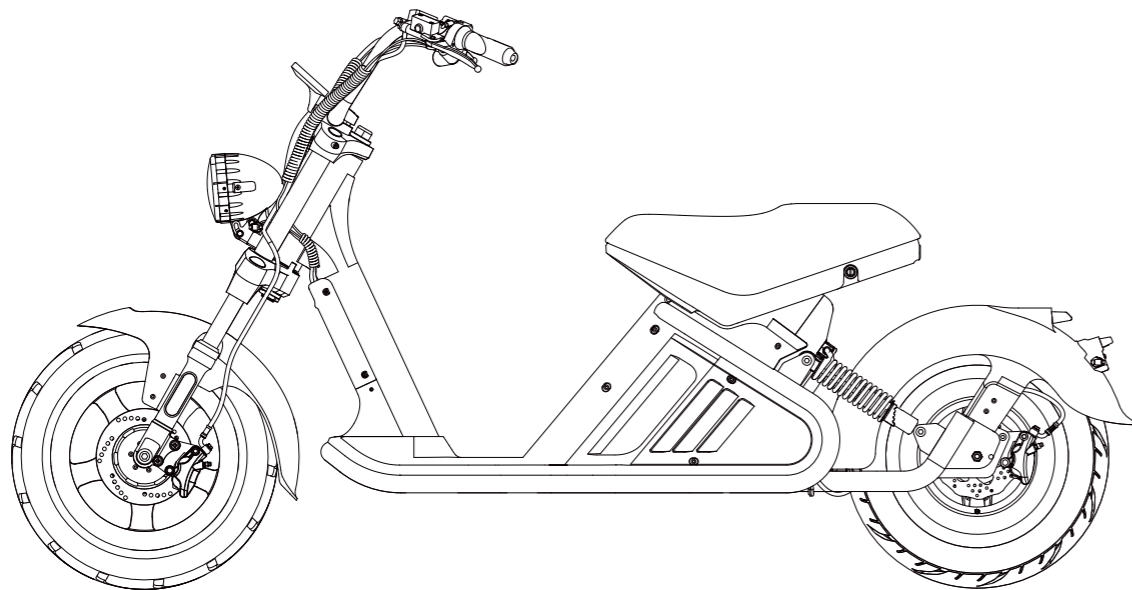
Please keep this product operation manual properly!

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1 Product Overview

Thank you for purchasing M2 electric two wheeled motorcycle, hereinafter referred to as M2. Please read this manual carefully before riding and keep it properly. Do not ride directly until the performance of M2 is known. Please read the important safety items in this manual carefully. During riding, please abide by the local laws and regulations and ride safely.



2 Notes for Safe Riding

- Please read this product operation manual carefully. Please do not use an electric two-wheeled motorcycle without fully understanding its performance.
- Please obey the traffic laws and regulations. Don't go in a direction not allowed by traffic regulations, run a red light, etc. Don't use your mobile phone while riding.
- Please do not use the third-party accessories or disassemble, crack or modify without permission. The loss caused by this will be borne by you and you will lose our warranty commitment.
- As the product is constantly improved, the vehicle you purchased may be slightly different from the one in this manual. Please refer to the actual vehicle. If you have any questions about the usage, repair and installation of the vehicle, please contact our dealer or after-sales service center.

△For the safety of you and others, please read the following carefully:

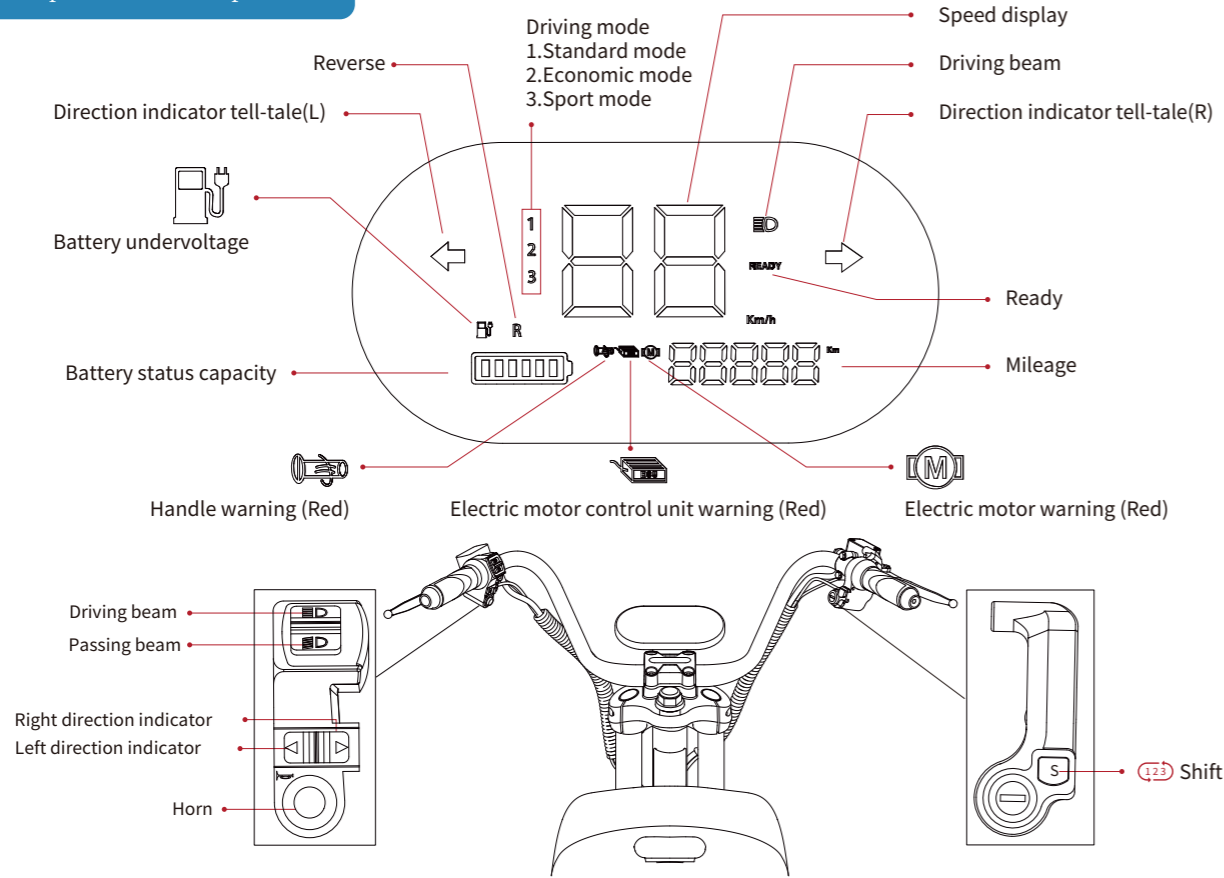
Riders shall abide by traffic laws and regulations and take care to ride safely

- Before riding, please carefully read the Product Operation Manual and check whether all parts and components are in good condition to ensure your riding safety. If any problem is found, please contact the dealer or after-sales service center in a timely manner.
- To ensure your safety, please wear safety helmet, gloves and other protective equipment during riding. Please do not wear loose clothing, as it will make you uncomfortable and unsafe while riding.
- You should be in good health and not tired so that you can control the vehicle in good condition. Riding is prohibited after taking drugs or drinking alcohol.
- This vehicle is not restricted under the rain and snow weather, but cannot excessively wade through the water. Wading through the water forcibly when the water level exceeds 10 cm depth may cause short circuit of electrical components and circuits of the vehicle, please be sure to pay attention!
- Please observe the traffic laws and regulations. Please slow down in rain, snow and slippery areas. Please increase the braking distance when braking to ensure safety.
- Please do not disassemble the parts and components by yourself.

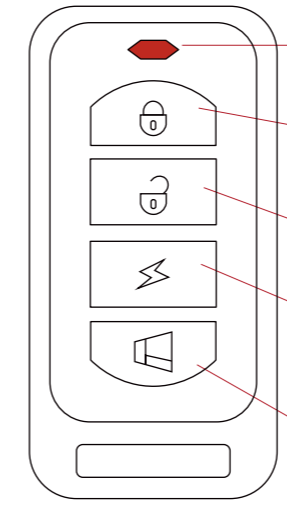
Riders shall abide by traffic laws and regulations and take care to ride safely

- Do not park electric motorcycles in building foyers, evacuation stairs, walkways and emergency exits;
- Do not charge and park the electric motorcycle in the residential building. When charging, the electric vehicle shall be far away from combustibles, and charging time shall not be too long.

3 Description of Components



4 Key and remote control



- Indicator light
Press any key, the indicator light flashes, indicating normal operation.
- Lock key
Press this key, and the vehicle will enter the deployment state.
- Unlock key
Press this key to release the alert mode of the vehicle.
- Electric start key
Press this key twice, the vehicle will enter the power on state and can ride.
- Search key
Press this key, the vehicle will sound a warning tone to confirm the parking position.

Remote control

Note: Before using the remote control, please ensure that the battery has been properly installed in the vehicle body, and that the straight-line distance between the remote control and the vehicle should be less than 50 m.

5 Battery and Charger

Battery operation instructions

The vehicle will provide you with two ways of battery charging and body charging for you to choose.

External charging mode

Take out the battery and insert the charging plug of the charger into the battery charging port for external charging. At this point, the battery's electric quantity indicator light will light up.

Vehicle charging mode

Put the battery into the battery holder, connect the power plug to the battery, and then insert the charging plug of the charger into the vehicle body charging port in the seat cask to charge the whole vehicle.

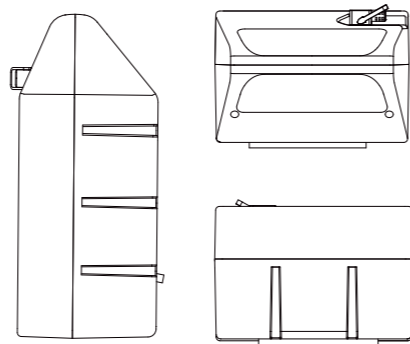
Description of the battery's electric quantity indicator light

In the charging state, it displays how much electric quantity the battery has. When the vehicle is fully charged, all the indicator lights will stay on and no longer blink.

In the non-charging state, if you press the electric quantity display key:

- Under normal conditions, the indicator light will display the electric quantity in the battery.
- If the electric quantity in the battery is less than 20%, a section of indicator light will blink to remind you to charge.
- When the vehicle is fully charged, the charger will appear green, indicating that it has been fully charged.

Detail:



Instructions before battery use

- Before use, please confirm that the battery is the original battery of the whole vehicle. Please do not use batteries of other brands or other models.

Check whether the appearance of the battery is in good condition and ensure that there is no damage, leakage, heat generation, water immersion, smoke and other obvious phenomena.

In order to ensure the safety of transportation, the battery's ex-factory electric quantity is about 30%. It is a normal phenomenon that there is low or no electric quantity when it is used for the first time due to the electric quantity consumption factors such as transportation and storage period. Please do not worry and just charge it according to the charging instructions.

The used batteries shall not be disassembled without authorization and shall be returned to the relevant professional departments for recycling and disposal.

Use environment



Please use the battery at
-10°C-45°C



Please keep the battery from
getting wet with water, beverages
and corrosive liquids



Please keep the battery away
from heat source, open fire, flammable
and explosive gas (liquid)

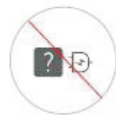


Please prevent metal foreign
matters from entering the battery
compartment

At low temperature, the available capacity of the battery will experience attenuation to different degrees. specific reference degrees are as follows: The available capacity is 70% at -10°C, 85% at 0°C, and 100% at 25°C. If the battery smells, heats up, distorts and has other abnormal conditions, please stop using it immediately, stay away from the battery and contact the after-sales department.

A Battery is not a part that can be repaired by users. If there is any abnormal phenomenon, please contact the after-sales department for maintenance. Users who disassemble the battery without permission will not enjoy the policy of "three guarantees", and unauthorized disassembly may cause the battery to produce heat, smoke, fire or explosion.

Charging environment



Please use the original charger matching with the battery for charging, and do not use a charger of other brands or models for charging.



Please charge the battery at an ambient temperature of 0°C-35°C.



Do not charge for more than 12 hours, so as not to affect the battery life.

- In the early stage of charging, the electric quantity will rise quickly, but in the later stage, it will rise slowly, which is the procedure set for charging safety and is a normal phenomenon.
- During charging in winter, when the outdoor temperature is low and the environment is below 0P, the battery charging will stop, which is a normal phenomenon. Please place the battery at an appropriate ambient temperature for charging to ensure the charging effect.
- During the charging process, some aluminum case chargers have temperature rise effect and higher surface temperature, which is normal. Please feel free to use. Please be careful to avoid the touch of children.

Notes for charger use

- The charger can only be used indoors.
- Charging in confined space or under hot sun or high temperature is strictly prohibited; do not put the charger in the seat cask or tail box for charging.
- When charging, you should first plug in the battery, then add the power supply; when the vehicle is fully charged, you should cut off the power supply first and then unplug the battery.
- When the green light is on, the power shall be cut off in time. Do not connect the charger to the AC power without load for a long time without charging.
- During the charging process, if there is any abnormality or peculiar smell in the indicator light or overheating of the charger case, stop charging immediately and repair or replace the charger.
- It is prohibited to disassemble or replace the components of the charger by yourself.
- The charger shall be replaced to match the battery model.

Charging environment

- If the battery is placed on the vehicle, the work of the intelligent system and alarm system of the vehicle will consume the electric quantity of the battery in real time. After the vehicle is placed for a period of time, the meter will display the decrease of the electric quantity, which is a normal phenomenon. In general, if the vehicle is parked for 8 hours, the electric quantity of the battery will be consumed by about 5%, which is a normal phenomenon.
- Please store the battery at an ambient temperature of 0°C - 25°C. Please do not store the battery in an environment higher than 40°C, otherwise the battery will experience irreversible capacity attenuation.
- For vehicles that are not in use for a long time (such as in winter, summer or other special circumstances), the battery shall be taken out for separate storage and maintained and charged regularly, or the battery may be completely depleted and irreversibly damaged. Battery failure caused by such problems will not be included in the range of "three guarantees".
- For the battery, the most appropriate storage capacity is 50%. If it is lower than 10% or higher than 90%, long-term storage will lead to irreversible capacity attenuation of the battery.
- For the lithium battery, the technical standards of the electric quantity consumption protection mode for safe storage are as follows:
 - (1) If it is not used for a long time and stored on the vehicle (without unplugging the battery), the safety period shall be at most one month, otherwise the battery feed may occur and the problem cannot be repaired.
 - (2) If it is not used for a long time, the electricity quantity shall not be less than 50%, and it shall be stored separately or placed on the vehicle (disconnect the plug). The maximum safety period is 3 months. Otherwise, battery feeding, which cannot be repaired may occur.
- Avoid storing the battery in a place where there is a risk of falling, which may cause uncontrollable damage to the battery and may lead to leakage, heating, smoking, fire or explosion of the battery.

The battery undervoltage caused by the above-mentioned improper behaviors shall not be covered by the warranty.

Precautions for battery use

- Please make sure that the battery had been exhausted when you use the battery for the first time, then charge it and repeat this process for two or three times to ensure that the actual capacity of the battery is consistent with the displayed capacity on the dashboard.
- Ensure that the battery power is not less than 20% and charge it in time, which can prolong the service life of the battery.
- In daily life, it is recommended to use a mid-range speed. Start slowly and operate the throttle handle to accelerate gradually, which also can prolong the battery life.
- As the number of times the battery is used increases, there will be deviation between the actual capacity of the battery and the displayed capacity on the dashboard. Please fully discharge and recharge the battery regularly (no more than 3 months). The internal battery cell and intelligent system can automatically calibrate the electricity quantity to improve your experience.
- It is recommended to check the power plug of the battery every two months for carbon deposition and oxidation blackening on the contact reed.

△The battery shall not be placed in the rain or get or even be soaked in the water. The whole battery compartment shall not be soaked in the water, otherwise water will enter the battery, causing internal short circuit and permanent failure of the battery. In the above-mentioned case, it is strictly prohibited to charge the whole vehicle or battery again, otherwise it will cause fire, combustion and explosion. Please hand over the battery to the designated network for maintenance immediately.

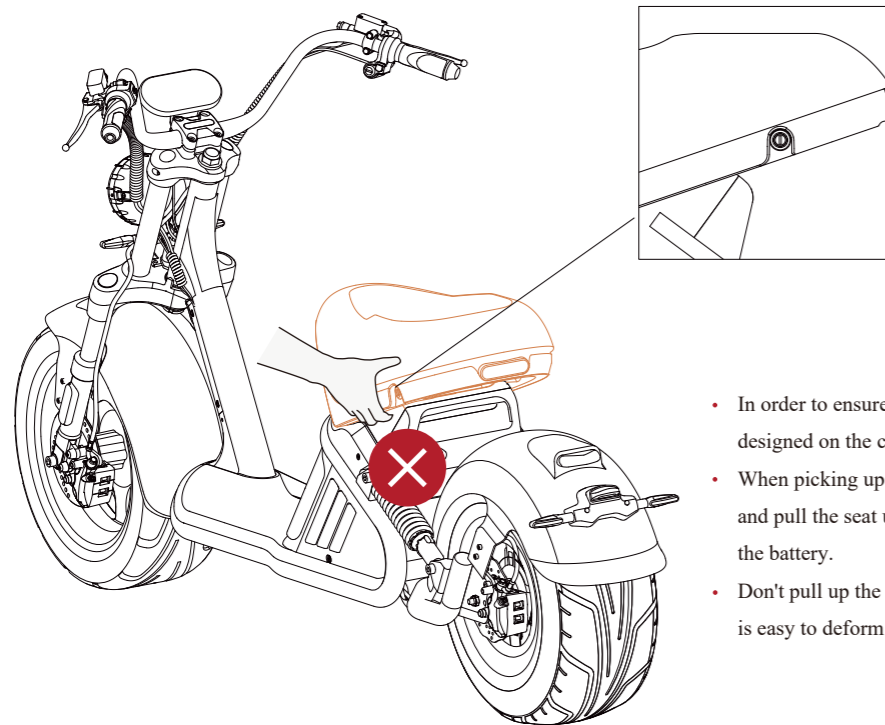
6 Troubleshooting

Problem phenomenon	Reason	Treatment method
Turn on the power supply, but the whole vehicle has no power output	No power supply to the vehicle	1. Check whether the power plug is connected properly 2. Battery undervoltage. Please charge it.
Turn on the power supply and turn the speed regulating handle, and the motor does not start up.	<ol style="list-style-type: none"> The vehicle is braked The vehicle is parked The side brace is not retracted. Start switch failure 	<ol style="list-style-type: none"> Check whether the brake handle is in the braking state Refer to that "start-up operation" section of the instruction manual Pack up the side brace Contact the after-sales service and check the start switch
Insufficient endurance mileage	<ol style="list-style-type: none"> Low battery Insufficient tire pressure Frequent brake and start or overloading Battery aging or normal electric quantity decay Low ambient temperature or reduced battery capacity 	<ol style="list-style-type: none"> Check the charger for damage Check the tire pressure before use Develop good driving habits Replace the battery It is normal
The battery cannot be charged	<ol style="list-style-type: none"> The charger plug is not connected properly The battery temperature is too low The battery temperature is too high 	<ol style="list-style-type: none"> Check whether the plug connection is loose Wait for the battery to recover to the normal temperature Wait for the battery to recover to the normal temperature

Judgment of common faults and troubleshooting of lithium battery

Problem phenomenon	Reason	Treatment method
The battery has no electricity and light bar is not on after pressing the button	The battery runs out	Charge
After turning on the power, light bars all flash	The battery runs out or the battery failed	Charge it and contact the branches for detection
When driving at low power, such as 5%, the power is off and the screen turns black.	The battery runs out, which is normal	Charge it
After parking, power on within a short period of time, such as 1 to 2 hours, the displayed capacity increases or decreases dramatically	Internal calibration calculation of battery cell electric quantity is a supplement to inaccurate dynamic electric quantity for riding.	Normal service
When driving with normal electric quantity, such as 15%, the power is off and the screen turns black	It is normal to see the battery runs out Long-term use of batteries leads to the inaccurate calculation of capacity	Carry out fully charging and discharging
After parking, power on within a short period of time, such as 1 to 2 hours, the displayed capacity increases or decreases dramatically	It is normal to see the battery runs out Long-term use of batteries leads to the inaccurate calculation of capacity	Normal use
After parking, power on within a long period of time. For example, the displayed capacity of the dashboard decreases dramatically overnight	The alarm consumes electricity about 5% for 8 hours	Normal use

7 Precautions for battery extraction



- In order to ensure the safety of the battery, a key lock is designed on the car seat.
- When picking up the battery, first use the key to unlock and pull the seat up, Pull out the power plug and pull out the battery.
- Don't pull up the car seat without unlocking. The car seat is easy to deform and damage due to its soft material.

8 Maintenance and Servicing

Inspection items of regular maintenance

Regular maintenance can extend the value of vehicles from products to daily use.

Adjustment in run-in period: After using the new purchased vehicle for one month (distance: 500km), conduct adjustment in run-in period so that the vehicle can be integrated into your life in the most perfect posture.

First maintenance: After using the new purchased vehicle for four months (distance: 1,500km), carry out the first maintenance for your vehicle that has been with you for several months.

Second maintenance: After using the new purchased vehicle for ten months (distance: 3,000km), carry out the second maintenance to prolong the service life of your vehicle.

All maintenance items are shown in the following table. The actual maintenance items can be flexibly selected according to the vehicle type, riding mileage and time:

Description	Inspection item
Structural member	Nut fastener of the whole vehicle
	Bolt fastener of the whole vehicle
Brake system	Tire inspection
	brake fluid inspection
	Abnormal sound inspection when braking
	Braking effect inspection
Electrical components	Brake disc inspection
	Inspection of power lock and alarm
	Light inspection
	Inspection of the dashboard
Electrical components	Combined switch inspection
Electrical components	Voltage inspection of the charger
	Inspection of the function of APP
Suspension + steering system	Front and rear shock absorption inspection
	Steering inspection of the handlebars
Battery	Front wheel inspection
	Appearance inspection of battery box
	Waterproofness inspection
	Battery detection
Vehicle riding	Charging test
	Vehicle operation inspection
	Inspection of abnormal sound of whole vehicle
	Parking inspection

Vehicle cleaning

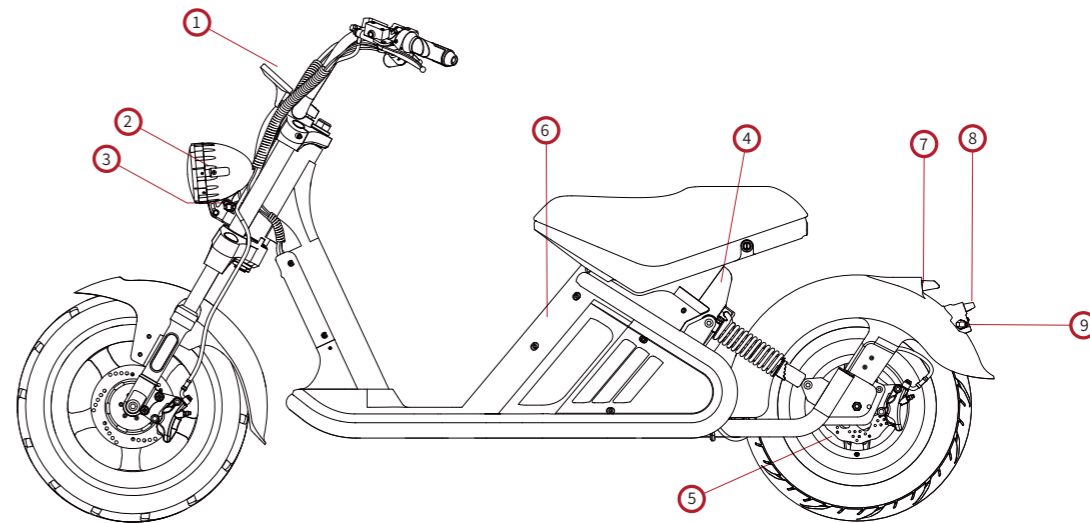
Please scrub the vehicler with tap water and a neutral detergent. After that, wipe it clean with a soft cloth.

A It is prohibited to use high-pressure water gun to directly wash the battery box on both sides and inside the rear. The charger, controller and other electronic parts are located in the side cover above the rear wheel. Do not flush directly to avoid water damage.

vehicler storage method

- Please store the vehicler in a stable, well-ventilated and dry position.
- Avoid the exposure of vehicler to the sun and rain as much as possible, which can reduce the damage or aging of parts.
- For long-term storage, please refer to Instructions for Battery Use and Maintenance for battery maintenance.
- When reusing after long-term storage, please fully charge the battery.
- Please confirm there is no abnormality in all parts before riding.

9 Basic parameters



No.	Part Name	No.	Part Name
1	Speedometer	5	Electric motor
2	Head lamp (driving/passing beam) front position lamp Daytime running lamp	6	Electric motor control unit
3	Front direction indicator	7	Brake light/rear light
4	Propulsion battery	8	Rear registration plate lamp
		9	Rear direction indicator

Items	Parameters
Model	M2
Overall dimensions Length * Width * Height (mm)	2091x834x1074mm
Frame material	Seamless steel tube
Curb weight of the scooter (kg)	76kg
Maximum speed (km/h)	75km/h
Tire size (front and rear wheels)	12 inch aluminum wheel
Tire pressure (Front/Rear) (KPa)	Front 300/rear 350
Types of power storage batteries	Lithium battery
The capacity of power storage batteries	Configuration I: 20Ah Configuration II: 30Ah
Numbers of power storage batteries	1
Braking mode	Front and rear hydraulic disc brake
Motor type	Permanent magnet
Rated voltage of motor controller (V)	60 V
Rated output power of the motor (W)	3000 W
The current of controller	45 A
Working principle of motor	DC motor

Warranty card

User name _____ Address _____ Postcode _____
 Engine No. _____ VIN _____ Date of purchase _____

Maintenance record sheet Distribution (seal):

Date	Repair and replacement	Repairman	Comments

Note: This warranty card is invalid without the seal of the distributor.

