

## HANGZHOU TROMOX TECHNOLOGY CO.,LTD

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The pictures in this manual are for reference only, please refer to the actual product.



# NOW

Non-renewable energy will be gradually replaced by sustainable energy, especially in the field of daily commuting. Lots of countries launch the policies to forbid further sales of fuel vehicles, instead, to encourage the development of new energy electric vehicles. Electrification and autonomous driving are the development trend for the future. The commercial application of community-based intelligent travelling has not really begun, but the trend of industrial integration to create intelligent way for community-based travelling is getting obvious.

Let's embrace the revolution!



TROMOX is an entrepreneurial company that applies high technology to daily commuting, integrates R&D activities with Internet sales, and focuses on creating unique travelling methods. Committed to breaking the antiquated ways, TROMOX intends to make travelling smarter, cooler, more fashionable and more environmentally friendly. In the rush of urban life, TROMOX aims at breaking boundaries and leading young riders around the world to discover new way of traveling and meanwhile exploring the fun.

Vision:

To become a global leader of intelligent electric motorcycle

Mission:

Intelligent technology makes traveling full of passion

The core value of the brand:



Unconventional



Interconnected



Passionate



Moxium Co.Ltd, sub-branch of TROMOX, focus on research and development for community based intelligent way of commuting.

Moxium applies big data, Internet of Things, unmanned driving, and 5G technology to create connection from one location to another in the community. It provides a comprehensive solution for community intelligent and efficient way of travelling.

# MINO

A MINI Portable Electric Motorcycle  
Like No Other.





By applying most advanced technologies, MINO, a mini and chic designed electric motorbike makes evolutionary step to further emphasize on light weight, durability, dynamism, efficiency, and great fun during riding. With an unwavering focus on quality, we are committed to providing global users with the top driving experiences in different occasions. Besides the zero emission contribution to the society, we take the responsibility to bring our users with driving excitement but not on expenses of safety.

## Light Weight Only 68kg

The whole vehicle is only 68kg. It has easy access to normal elevator in residential area or public transportations like the bus and train. With Mino, you are free to travel along the cities from one to the other.



### SPECIFICATION

Size (Length × Width × Height)	1500mm×725mm×925mm	Brake System	Hydraulic Brake	Battery	18650 Lithium
Wheel Base	1020mm	Intelligent System	Intelligent Control VCU	Max Speed	45km/h
Net Weight	68kg	Shock Absorber	Front: Converted/Spring oil damped type	Climbing Capacity	15° ( 27/100 )
Loading Capacity	100kg		Rear: Central/Spring oil damped type	Acceleration	10s ( 0~100m )
Transmission Model	Chain Drive	Tyre	Front: 90/90-10	Distance Per Charge	118km ( 30km/h )
Battery Voltage	60V21Ah/60V26Ah		Rear: 100/80-10	Rated Power	1200w
	60V31Ah/60V38Ah	Motor	Mid-drive motor	Peak Power	2500w
Torque	110N · m			Charge Time	6A/4.3h(60V26Ah )

### COLOR SCHEMES



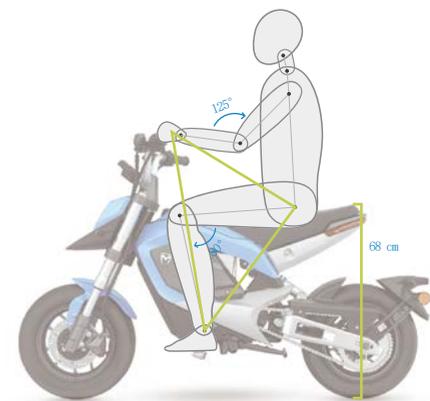
# FOR YOUR CONFIDENT CONTROL

## Ideal Ergonomic Design

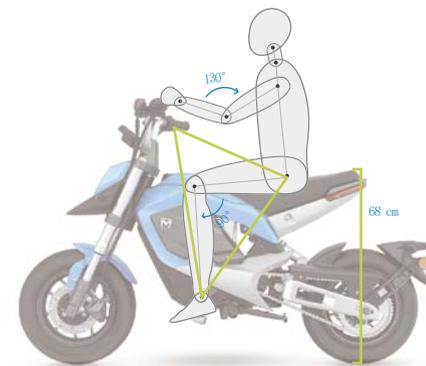
With ergonomic design, MINO takes care of all our users to sit always comfortably and relaxed during the ride.



The Golden Ratio of Three-point Sitting Position

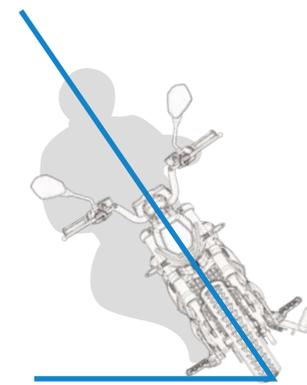


Male

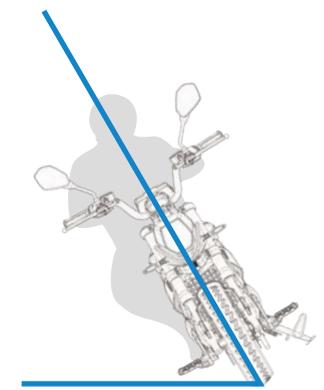


Female

Perfect Oblique Angle



Male



Female

# DOUBLE THE RANGE IN SECONDS

MINO uses removable battery which can be easily taken off and charged by household power supply. Tromox plans to provide battery swapping stations worldwide that our users can power up the bike in seconds.

► **High Capacity Automotive Use Power Pack**

Mino uses 18650 lithium battery which is specially applied in automotive industry. It ensures stability.

► **Aluminum Battery Case Perfectly Guarantee The Battery Safety**

Mino battery is placed in IP65 waterproof aluminum case for safety protection.

► **600+ Cycles of Charge and Discharge**

After 600 cycles of charge and discharge, the performance of the battery still remains above 80%.

► **Small And Easy To Carry**

Weighted only 9kg (60V, 21Ah), small and easy to carry.



Weighted only **9 kg** (60V, 21Ah)

Reduce carbon dioxide emissions annually by **590 kg**

Automotive-standard high density cell battery assures your riding in the city without worries.

**Maximum Range**

**118 km**



\*Battery performance varies by loads, temperature, wind speed, etc. 118km is the tested result under 25 degree and the rider is 75kg who drives 60v38Ah battery bike constantly under same speed. Actual range will vary based upon riding conditions and habits.

## TROMOX's BMS - Battery Management System

By using more accurate AI algorithm program, TROMOX BMS can provide eight protections for current, voltage, temperature and communication anomalies. Through icloud transmission, the battery data will be synchronized to the TROMOX's App, so as to timely learn the battery status and plan future trips for users.



OVERCHARGE PROTECTION



SHORT CIRCUIT PROTECTION



OVER-CURRENT PROTECTION



TEMPERATURE PROTECTION



OVER DISCHARGE PROTECTION



BATTERY EQUALIZATION



MOS ERROR PROTECTION



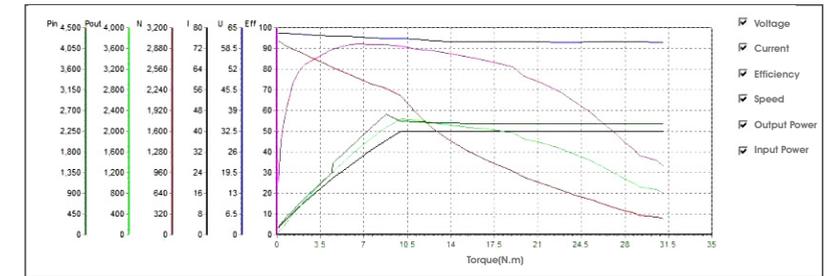
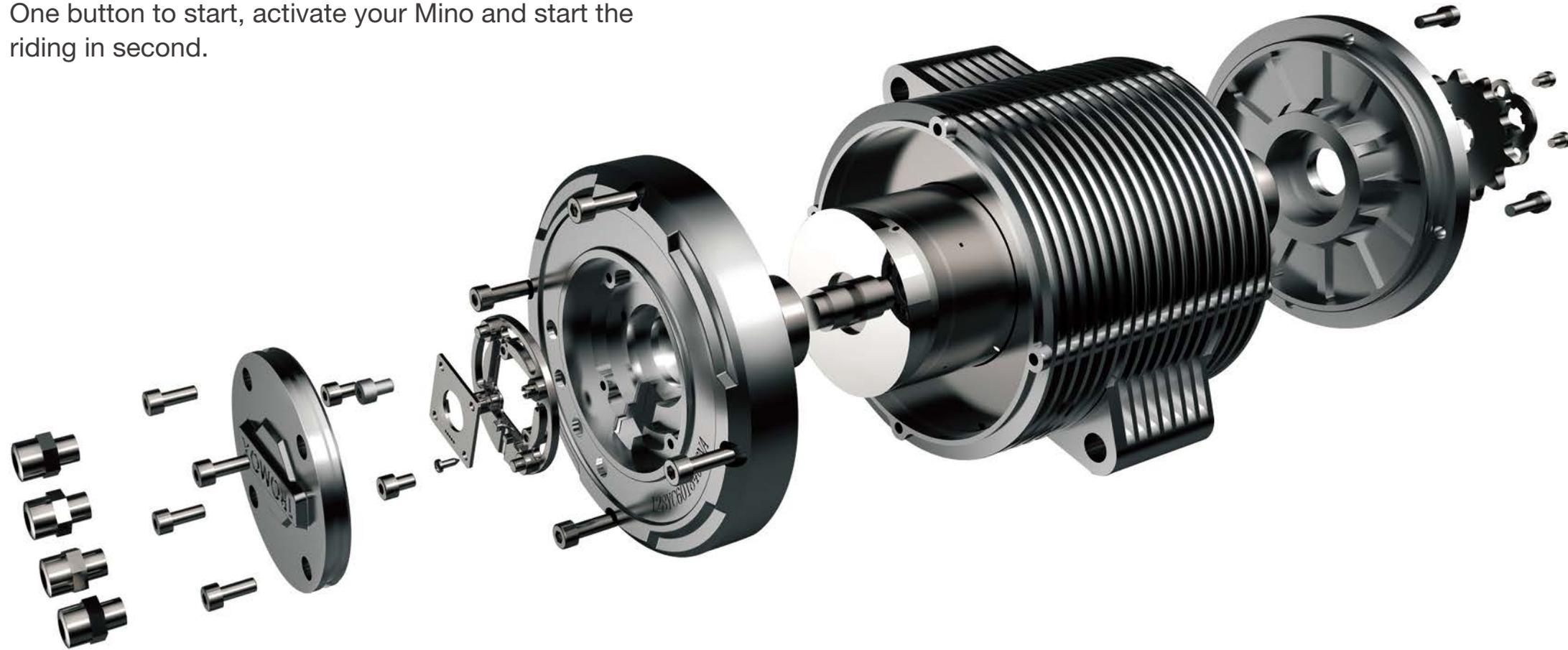
PRE-DISCHARGE PROTECTION



# POWER, ENRICHED WITH PASSION

## 110 N·M Peak Torque

One button to start, activate your Mino and start the riding in second.



### Revolutionary development of the motor

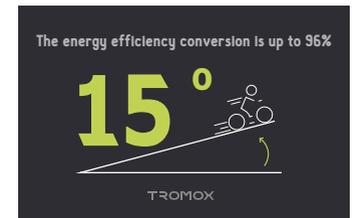
TROMOX empowered MINO with a new generation of urban vehicle power system which generates premium performance for the bike, in addition brings the rider great fun during riding. It uses rugged magnetic steel ring, both chain and belt final drive to achieve the maximum torque when the bike is in low speed. Not like the traditional hub motors, this new design brings more power to the bike and the riders is able to feel relax when they need to drive up the hill or slope.

## 10s

From 0-100m only 10s

### 15° Slope Easy Climbing

MINO's middle-positioned Motor generates balancing performance no matter driving on flat road or slope. The energy efficiency conversion rate is up to 96% while climbing up the 15° slope.



P  
1200

1.2 kW  
NOMINAL CAPACITY

1800

1800 RPM  
RATED SPEED

15

15  
CLIMBING HEIGHT

P  
2500

2.5 kW  
MAX CAPACITY

96%

96%  
ENERGY EFFICIENCY  
TRANSFORMATION

## Foc Vector Controller

MINO's FOC central control system increased the output power by 16%. With the high-precision control program, the performance potential of motor system is stimulated, and the whole vehicle power system is comprehensively upgraded.

LET'S EXPLORE THE INTELLIGENCE!



# INTERCONNECTION, ALWAYS BY YOUR SIDE

## The TROMOX Intelligent Central Control System

The Intelligent Central Control System consists of TROMOX APP, VCU, more than 20 sensors over all the vehicle and TROMOX icloud , which makes MINO a real intelligent vehicle, just like a smart phone.



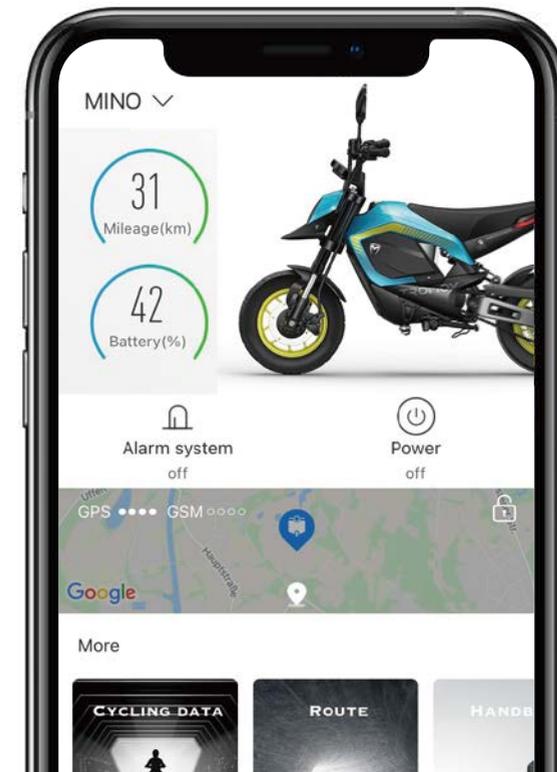
## The TROMOX VCU Upgraded to V3.1

The Tromox VCU is upgraded to V3.1 version, which adds OTA wireless update function. It makes it possible and easy in case the riders need to upgrade existing functions in the system.



## TROMOX APP View live data of your bike anytime!

With TROMOX APP, you can view detailed conditions of battery and figures of your bike in general. In the future, our users can expect more practical functions available on App, like social networking, online shopping , customer rewarding, etc.



- VEHICLE INFORMATION
- INTELLIGENT DETECTION
- ELECTRONIC FENCE
- GPS TRACK
- REMOTE START
- ERROR ALERT NOTIFICATIONS
- SPEEDING WARNING
- LOW BATTERY WARNING

# SMART RIDING

## Smart VA stereo screen with auto-sensing function

Neat but dynamic dash is being integrated with the entire vehicle design. Full-color symbols can avoid visual fatigue.

## IP65, LCD Cold Light

IP65 waterproof and dustproof construction which assures the dash is always in good operation instead of affected by weather conditions. Letters and symbols on the cold light LCS screen looks sharper that the rider always has clear vision.



## Ergonomic Button Design

Attentive designed buttons are comfortable to press and operate.



## Accurate control of the speed

Speed can be regulated and linearly optimized by the switch button on the handlebar. By changing the drive mode, rider can immediately feel the difference.

## 65° handle Angle

MINO's handlebar has a comfortable curve for the wrist, it makes you feel comfortable every time you press and operate it.



## Auto Start



# LIGHTER BUT STRONGER

## Aluminum Parts

Application of aluminum parts on the vehicle makes Mino very light. It weighs only 68 kilos. Easy to carry or load in transportation. Especially for female riders.



## Separate Carbon steel body frame

Mino's frame is made of premium quality carbon steel with seamless robot welding and applied electrophoretic coating technology, which makes it very durable.

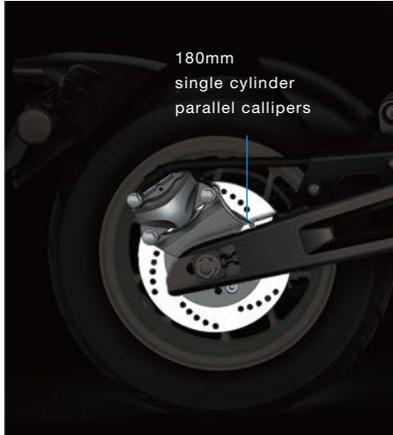
## Full Aluminum Rear Suspension

Mino has aluminum rear suspension. Together with the offroad tires, it brings our rider sportive driving experiences.

# SAFETY, EVERY DETAIL COUNTS

## High Efficiency Disc Brake System Makes Your Braking More Efficient

The 180mm disc brakes of both front and rear wheels are equipped with new single-cylinder parallel calipers. Comparing with the floating calipers of the same specification, it greatly improves the braking performance of the whole vehicle.



# HIGH LIGHT TRANSMISSION, HIGH EFFICIENCY

LED lighting system



### Head Light

MINO's LED balances low energy consumption with powerful lighting systems so that it has a high visibility on the road.

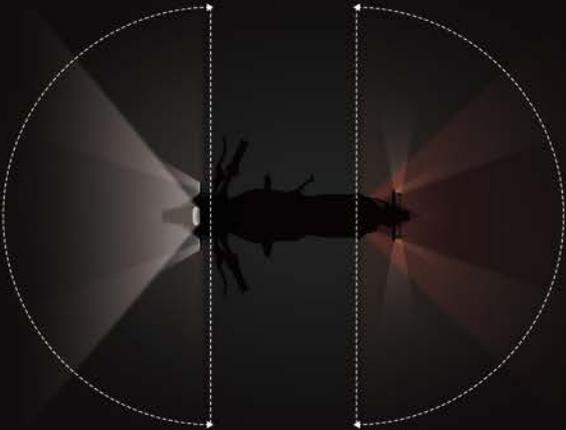


### 360° Lighting System

MINO uses a 360° lighting system to ensure your safety. The 270° semi-enclosed taillight and automatic indicator provide you maximum view during riding.

### Slight Adjustment of Light

By adjusting of the light refraction angle, both the illumination angle and length of the light are improved.





# CORE HEAT DISSIPATION SMOOTH DOWN-TILT DESIGN

The wind can go through but water can not penetrate  
which creates better safety



Thanks to safety design of heat dissipation system , wind can go through but  
water would fall along the down-tilt design which brings better safety.

Modern grey

Freedom white

Youth blue

Bright purple

Biscay green

Mysterious black



MINO

### Comfortable Seat Cushion

Elastic thickened pad conforms to your body's shape and reduces and equalizes sitting pressure. It is moderate hard that our riders can easily travel for long distance.

# COMFORTABLE EASY TO GO



### Adjustable shock absorber, no fear of various road conditions.

Mino is equipped with 570mm lightweight inverted hydraulic front shock absorber and 230mm rear independent shock absorber. The front and rear resistance can be adjusted according to the rider's comfort. The design of the inverted hydraulic front shock absorber also assures the rider's stable driving even on the uneven road.

# CUSTOMIZE YOUR MINO

## 30+ REFIT OPTIONS



MINO has more than 30 refitting holes, you can refit whatever you like, simple or practical.

AFTER MARKET ACCESSORIES			
			
Half helmet	Full face helmet	Rear rack	Side bag
			
Rearview mirror adjuster	Smartphone holder	Glove	T-shirt
			
Backpack	Backpack	Bike cover	Thermoses
			
Key chain	Mino model	Bandana	Banner