

Makka

Manual

Welcome to CAKE!

We are extremely flattered that you have chosen to ride a CAKE electric motorbike. It's our obligation to do the best we can to serve you with the product, information, service and spare parts for an effortless experience. Our ambition is to develop uncompromising high-performance motorbikes.

CAKE's mission is to inspire people, contributing to speeding up the journey towards a zero-emission society, combining excitement with responsibility. To optimize the performance and benefits for a lightweight electric motorbike.

Established with an electric drivetrain, establishing a new category, we needed to start from scratch. Every little detail, hard, and software has been engineered, designed, and chiseled for perfection while considering the perspectives of sustainability.

Explore with Respect.

Stefan Ytterborn, Founder & CEO

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2. Safety

2.1 Owner's manual

Before riding the vehicle for the first time, read through this entire manual and make sure you fully understand it. Contact service@ridecake.com if any questions.

The manual contains useful and important information on how to operate, service, and customize the vehicle, and protect yourself from injury.

This manual is being updated continuously. Make sure you have the latest version; visit ridecake.com/manuals.

If the owner sells the vehicle, the manual is part of the purchase.

2.2 Risk symbols

Safety instructions are emphasized in the text. Read them carefully to avoid hazardous situations and to operate the vehicle safely.



Danger A hazard that will immediately lead to death or serious permanent injury.



Warning A hazard that may lead to death or serious permanent injury.



Caution A hazard that may lead to minor injuries.

Notice A hazard that may lead to machine, material, or environmental damage.

2.3 Intended use

This vehicle is designed and built for use on public roads. The lithium battery is designed and built for the Makka vehicle. The charger is designed and built for the lithium battery.

2.4 Misuse

Only use the vehicle and its accessories, battery, and charger as intended. Ensure to use the stated fluids and tools when servicing.

Misuse may lead to danger for people, property, or the environment.

2.5 Safety labels and marks on the product

Information labels and warning labels are attached to the product. Do not remove any labels, as you or others may then not recognize danger.

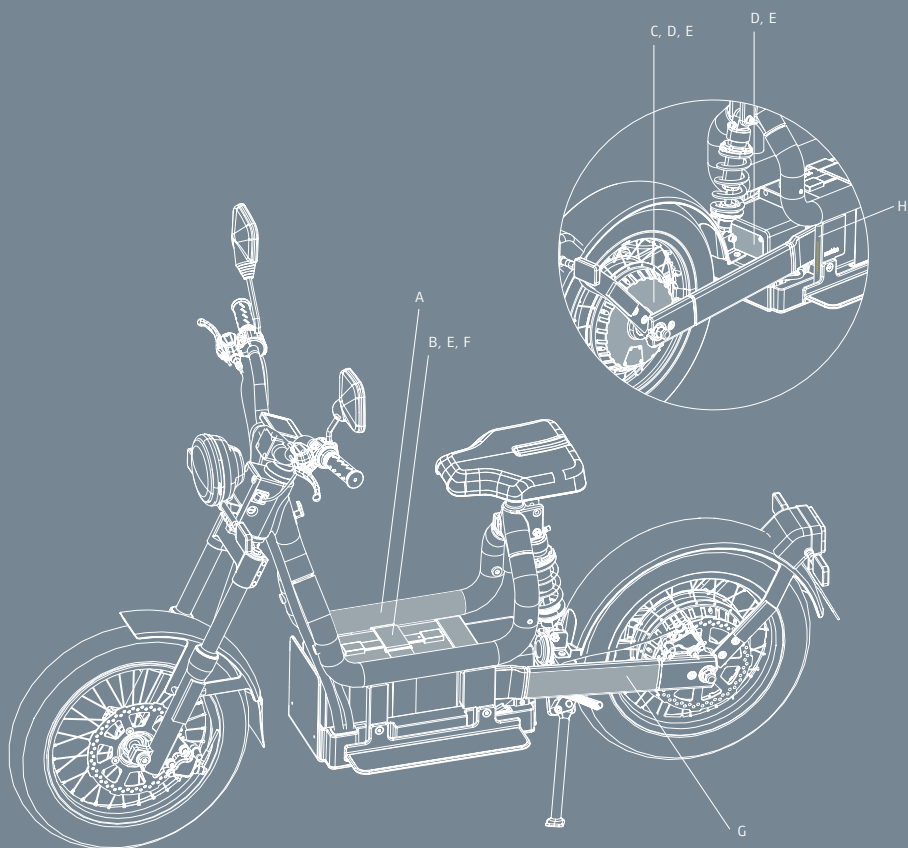



Fig. 1
Placement of safety labels and marks on the vehicle

A Type label

Cake 0 Emission AB L1e-B YW2XXXXXXXXXXXXXX --dB(A) - --min 4,0 kW 45 km/h max 245 KG	CAKE 0 EMISSION AB HAMMARBY FABRIKSV. 43 120 30 Stockholm Sweden 
---	---

B Electric battery



C Electric motor



D Hot parts



E No high-pressure cleaning



F Fire hazard



G Tire pressure

F: GAWR/PNBE TDB KG (TDB LB) --- 3.00x14 TIRE/PNEU --- 1,85x14 RIM/JANTE --- 225 KPA (32 PSI) COLD/FROID
R: GAWR/PNBE TDB KG (TDB LB) --- 3.00x14 TIRE/PNEU --- 1,85x14 RIM/JANTE --- 225 KPA (32 PSI) COLD/FROID

H Vehicle Identification Number (VIN)

YWXXXXXXXXXXXXXXXXXX

2.6 Safety advice

Tampering warning

Tampering with the vehicle is prohibited, or safe operation cannot be guaranteed, and the warranty coverage will become void.

Examples of prohibited tampering:

- Modifying any part of the vehicle.
- Opening the battery.
- Opening the charger.
- Misusing the vehicle.

Safe operation

Each of the below safety instructions is repeated where relevant.



WARNING! Risk of personal injury.

Do not use the vehicle if you are not fit to ride due to alcohol, drugs, or medicine.

Do not use the vehicle if you are physically or mentally impaired.

Do not ride with a passenger unless you have installed a proper CAKE passenger seat, see ridecake.com/en/products/spare-parts/.

The vehicle is completely silent when it has been powered on but is at a standstill. Anyone not realizing the vehicle is powered on may get hurt if the throttle is accidentally twisted. Do not forget to power off.

There is no foot brake. Remember that you control both the rear and front brakes from the handlebar.

When slowing down using the motor brake, other road users are not notified of your slowing down. Use the motor brake with caution. Always use the mechanical brakes to bring the vehicle to a standstill.

When charging, always first connect the charger to the battery. Thereafter, connect the charger to the mains supply.

Safe charging cannot be guaranteed if another charger or battery than the intended is used. Only use the intended charger. Only use the intended battery.

Regularly examine the charger for any damages, especially the cord, plug, and enclosure. Do not use a damaged charger. Contact *CAKE Service & support*.

During charging, place the battery in a well-ventilated area.



WARNING! Risk of burns. Stay clear of vehicle parts that are hot after usage.



CAUTION! Do not leave the battery unattended during charging. Never ride the vehicle above your comfort level. Always ride according to your riding skills.

- Make sure you have the correct driving license to ride the vehicle.
- Follow the local traffic laws and regulations.
- Adhere to the vehicle warning labels.
- Only operate the vehicle for its intended use.
- Always operate the vehicle in a safe manner for people, animals, and the environment.
- Only operate the vehicle when it is in perfect technical condition.
- Always wear a helmet and appropriate clothing.

Accident/damaged vehicle



WARNING! Fire hazard. Do not use a damaged battery, as it is highly flammable. A damaged battery may self-ignite. If the vehicle should catch fire, inform the fire brigade that it is an electrical vehicle with a lithium battery.

After an accident or fall, check the vehicle for any damages. Do not ride the vehicle if it requires service. If in doubt, do not ride the vehicle but contact *CAKE Service & support*.

Service and work on the vehicle



DANGER! Risk of electric shock.

Do not open the battery. Do not open the charger.

Work on the battery and charger must only be performed by an authorized CAKE workshop.

Remove the battery before starting any work on the vehicle.



WARNING! Risk of personal injury. If another brake fluid than the stated is used, the brakes may cease to function. Only use the stated brake fluid DOT3 or DOT4.



CAUTION! The electrical components of the vehicle may be damaged if cleaned improperly. This may in turn cause personal injury and/or damage to the vehicle or other property. Do not flush the vehicle with water. Do not use a pressure washer or a water hose to clean the vehicle/battery.

NOTICE When the battery is not connected to the vehicle or the charger, the battery must be stored indoors. Otherwise, humidity may enter through the inlet and permanently damage the battery.

Service the vehicle according to the service schedule. Do not drop the battery, or it may be permanently damaged.

Spare parts and accessories

For safety reasons, only use spare parts and accessories recommended by CAKE. CAKE accepts no liability for any damage or loss caused by other spare parts or accessories.

When required by this manual, have spare parts and accessories installed by an authorized CAKE workshop. Visit ridecake.com/en/products/spare-parts/ for spare parts and accessories.

Disposal

Dispose of used parts and material in a safe way, respecting the environment and local laws and regulations, e.g., oil, other auxiliary fluids, and components. It is prohibited to dispose of electrical devices, such as the charger and the battery in the household waste. Dispose of electrical devices in local recycling centers.

Aluminum parts are marked with their aluminum quality, such as "6061" or "7075". Dispose of it accordingly.

Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Please, contact CAKE if you need support in this matter.

2.7 Customer service

Visit ridecake.com/en/service-support/ for information on authorized dealers and workshops.

3. Warranty

Only authorized CAKE workshops may perform work on the vehicle where this is required by this manual, or the warranty will be void. The warranty does not cover damage or secondary damage caused by vehicle tampering. The warranty does not cover unintended use.

4. Getting started

4.1 Unboxing the vehicle

1. Unbox, see the instruction video on ridecake.com/en/makka-manuals-and-videos/. The delivery from CAKE includes:

- 1x Preassembled CAKE Makka

- 1x Battery charger

- 1x Toolset

- 2x Side-view mirror

- 2x Reflector

- 2x Key for steering lock and battery lock

- 2x Grey key card for activating the vehicle

- 1x White master key card: required to reprogram a new grey key card if one is lost.

NOTICE Do not keep the white master key with the vehicle. Keep it safe.

2.  Once unpacked, recycle packaging in accordance with local laws and regulations.

4.2 Preparing for use

 **WARNING!** When charging, always first connect the charger to the battery. Thereafter, connect the charger to the mains supply.

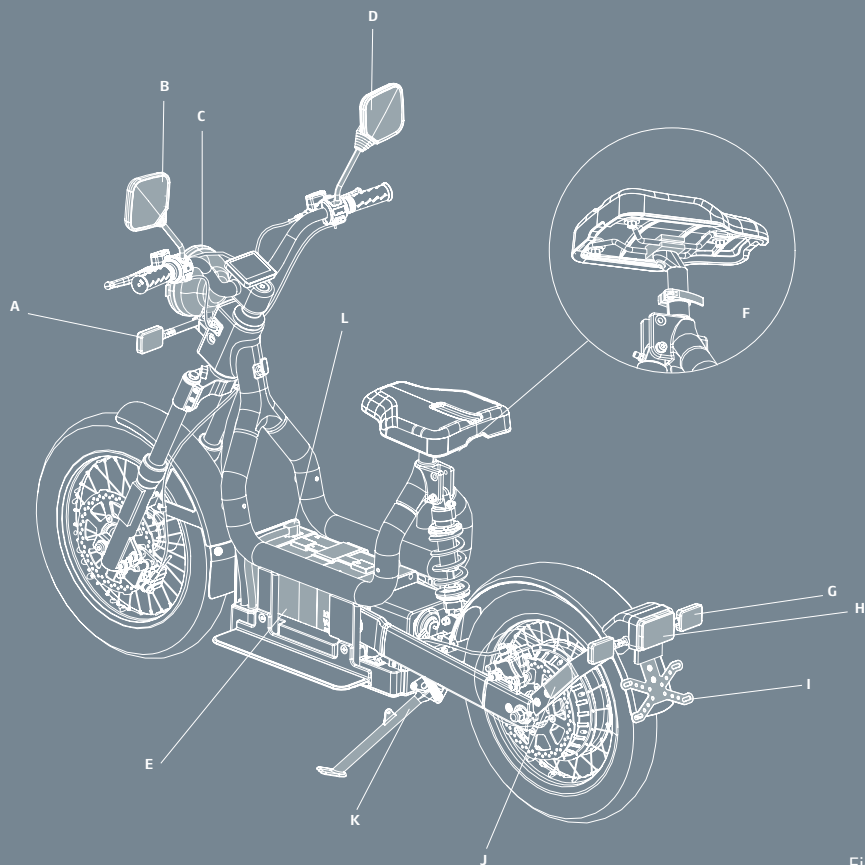


Fig. 2

- A. Front turn signal x 2
- B. Side view mirror left
- C. Headlight
- D. Side view mirror right
- E. Battery
- F. Saddle height clamp

- G. Rear turn signal x 2
- H. Tail light
- I. Licence plate bracket
- J. Rear fenders with reflectors x 2
- K. Side-stand
- L. Battery connector

- Charge the battery to 100%, i.e., until the charger LED is steady green, see *Charging the battery*. (Due to shipping regulations, the battery state of charge is low during transport.)
 - Check that the handlebar is properly fastened. If needed, adjust the handlebar angle to optimize rider comfort, see *Adjusting the handlebar angle*.
 - Check that the front wheel is properly fastened, see *Checking that the wheels are fastened*.
 - Check that the saddle is properly fastened. If needed, adjust the saddle angle, depth or height, see *chapter 8.10 Saddle*.
 - Mount the side-view mirrors, see *Mounting/adjusting the side-view mirrors*.
 - Mount the license plate in accordance with applicable law.
 - Stick the reflectors to the side of the rear fender. Mandatory in the US only.
 - Remove the protective film from the display.
-
- Read the safety instructions.
 - Get to know the controls.
 - Ensure the vehicle is registered and insured in accordance with applicable laws.

4.3 Powering on

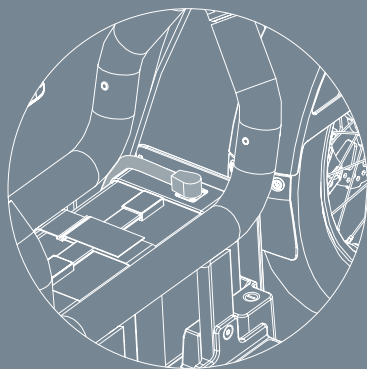


Fig. 3
Battery cable entry on the battery

1. Plug the battery cable into the battery, see Fig. 3. The lock mechanism makes a clicking sound.

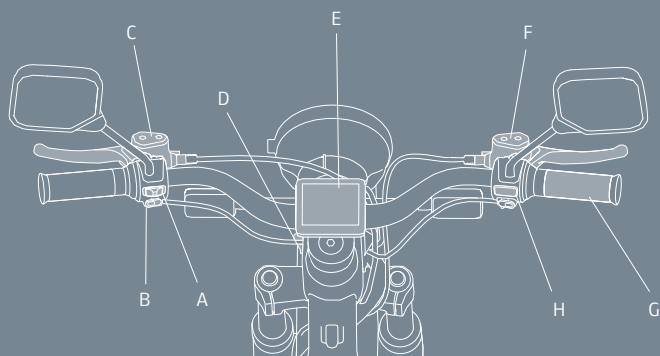
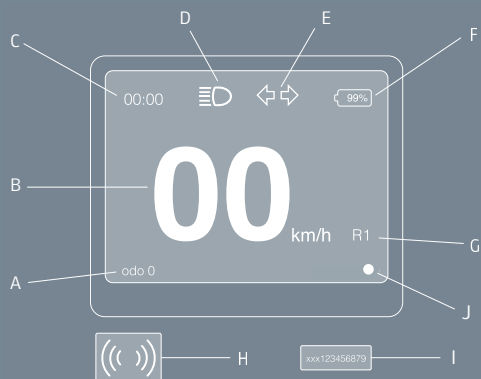


Fig. 4

- | | |
|--------------------------|------------------------|
| A. Head/taillight button | E. Display |
| B. Turning lights button | F. Front brake |
| C. Rear brake | G. Right hand throttle |
| D. Steering lock key | H. Start button |

2. Push and hold the start button for 2 seconds, see Fig. 4. => The key card symbol is shown pulsating on the display.
3. Place the key card on the key card symbol => Headlights and taillights light up. The vehicle is activated and unlocked.



- | |
|----------------------------------|
| A. Odometer |
| B. Speedometer |
| C. Time |
| D. Head/tail lights |
| E. Turn signals |
| F. Battery level |
| G. Ride mode |
| H. Key card symbol (at start-up) |
| I. Error indication |
| J. Side stand (when down) |

Fig. 5

4. Fold up the side-stand. => On the display, the side-stand symbol disappears, see Fig. 5.

5. To change ride mode, briefly push the start button. Pushing and holding the same button for 3 seconds when at a standstill, powers off the vehicle.
6. Get ready for your first Makka ride!



WARNING! Risk of burns. Stay clear of vehicle parts that are hot after usage.

4.4 Downloading the Ride CAKE app

Download the app to access the below features, and to make vehicle customizations.



1. In App Store, search Ridecake and download the CAKE app. (The app will be available for Android end of 2022).
 2. Create an account using the Connectivity ID that you received in an email at the vehicle delivery.
 3. Power on the vehicle, see *Powering on*.
 4. Once logged in, standing by the vehicle, enable Bluetooth on your mobile device.
 5. When asked to pair with Cake, answer Yes. => The vehicle is connected to your mobile device. You can start using the below app features.
- Battery level check
 - Brake mode change
 - Track and share rides
 - Troubleshooting
 - Ride mode change
 - Speedometer check
 - Vehicle location/GPS

4.5 Riding



WARNING! Risk of personal injury. The vehicle is completely silent when it has been powered on but is at a standstill. Anyone not realizing the vehicle is powered on may get hurt if the throttle is accidentally twisted. Do not forget to power off.

There is no foot brake. Remember that you control both the rear and front brakes from the handlebar.

Risk of burns. Stay clear of vehicle parts that are hot after usage.

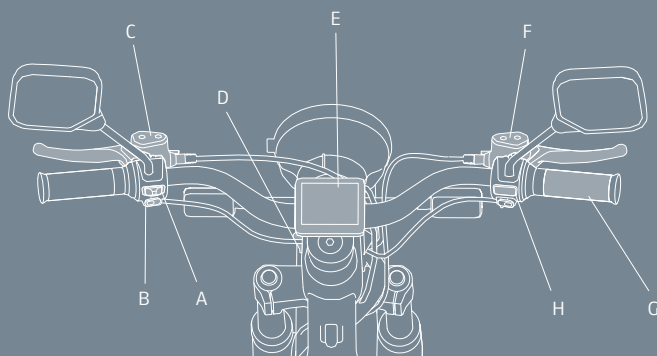


Fig. 6

- | | |
|---------------------------|------------------------|
| A. Head/tail light button | E. Display |
| B. Turning lights button | F. Front brake |
| C. Rear brake | G. Right hand throttle |
| D. Steering lock key | H. Start button |

- To accelerate, use the right-hand throttle, see Fig. 6.
- When braking, apply more pressure on the front brake, and less on the rear.
- When the vehicle is at a standstill (0 km/h / mph) for 10 minutes, the vehicle automatically powers off.

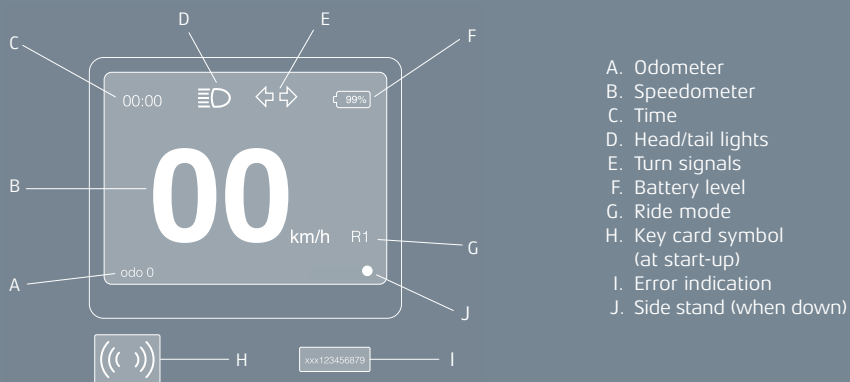


Fig. 7

- Start using Ride mode 1, see Fig. 7, to get used to how an electric motor vehicle works. The motor/throttle is very sensitive.

5. Description

5.1 General description

The Makka comes in four models: Range, Range :work, Flex, and Flex :work.

	Range	Range :work	Flex	Flex :work
Top speed	25 km/h / 15.5 mph	25 km/h / 15.5 mph	45 km/h / 28 mph	45 km/h / 28 mph
Nominal power	1000 W	1000 W	2700 W	2700 W
Range (WMTC-II)	66 km/41 mi	132 km/82 mi	54 km/33.5 mi	108 km/67 mi
Driver’s license requirement	EU: none US: refer to local law	EU: none US: refer to local law	EU: AM or B US: refer to local law	EU: AM or B US: refer to local law
License plate requirement	Refer to local law.	Refer to local law.	Refer to local law.	Refer to local law.
Ride mode 1 (R1)	25 km/h Peak: 1000 W	25 km/h Peak: 1500 W	45 km/h Peak: 2700 W	45 km/h Peak: 3600 W
Ride mode 2 (R2)	Default settings: 25 km/h Customizable Peak: 800 W	Default settings: 25 km/h Peak: 1000 W	Default settings: 45 km/h Peak: 1800 W	Default settings: 45 km/h Peak: 2700 W
Brake mode Customizable	Default setting: 100 % motor brake, activates when braking			

5.1.1 Makka :work

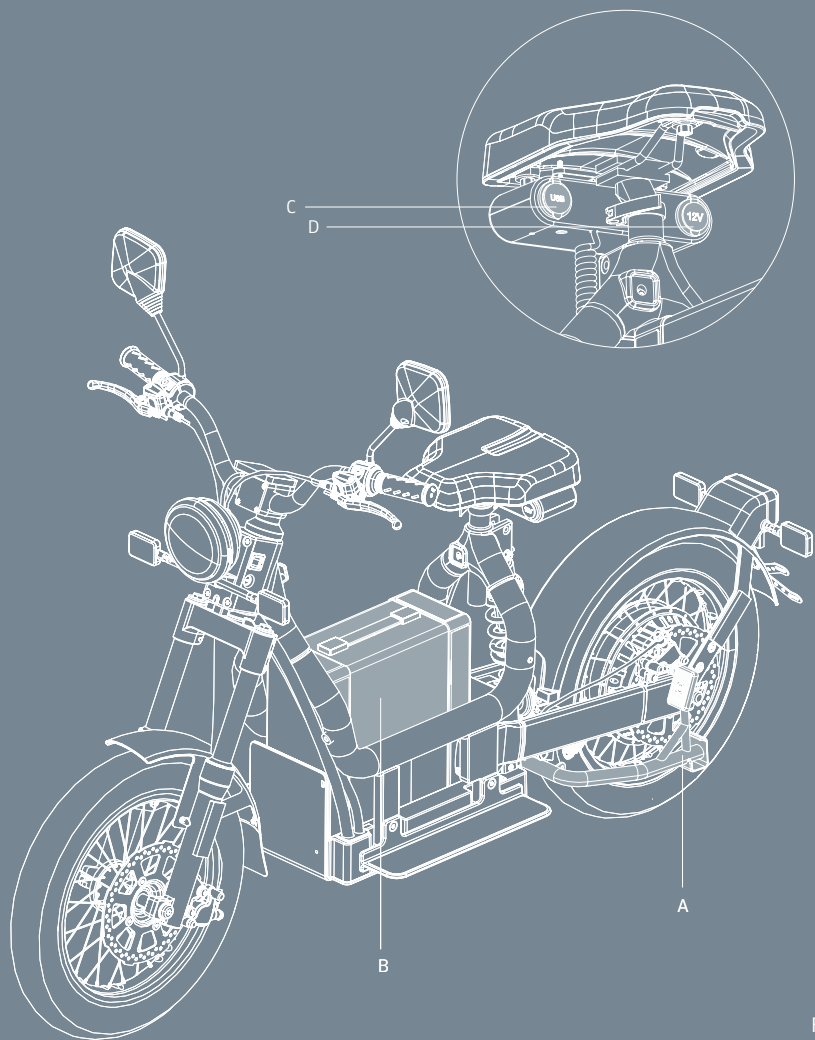


Fig. 8
Makka :work

- A. Central stand instead of a side stand
- B. XL battery
- C. USB outlet
- D. 12V outlet

5.2 Battery

The battery has 4 LEDs indicating the state of charge (SOC).

●●●●	4/4 100-75%
●●●○	3/4 75-50%
●●○○	2/4 50-25%
●○○○	1/4 25-0%

5.3 Display

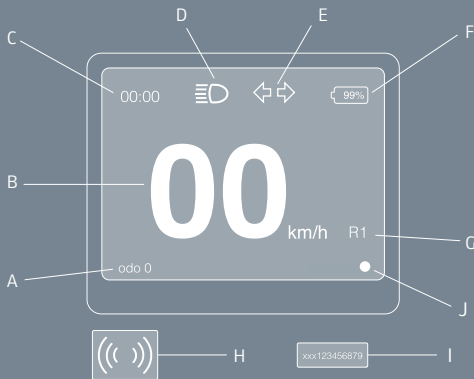


Fig. 9
Display

Speedometer unit

The speedometer unit, (B) in Fig. 9, is factory preset, depending on in which country the vehicle is sold. Contact ridecake.com/en/service-support/ to change it.

Side-stand

When the side-stand is down, the vehicle is automatically deactivated. This is indicated by a white dot on the display, (J) in Fig. 9. The side-stand is located on the left-hand side of the vehicle.

Error indication

The code, (I) in Fig. 9, is an error code that can be interpreted in the CAKE app. Most errors indicated by such a code must be solved by CAKE.

Clock

The clock on the display, (C) in Fig. 9, is autonomous and taken from the bike's GPS position.

If the clock is not correct, please make sure that your bike is in an area with good GPS signal and let the bike be turned on for a minimum of 1 hour in order for the bike to adjust the GPS location and change the time accordingly.

5.4 Ride modes

The vehicle has two ride modes, (G) in Fig. 9.

Ride mode 1 (R1) uses 100 % of the motor power. Ride mode 2 (R2) does not use 100 % of the motor power but provides the best range.



The setting can be customized in the CAKE app, see *Downloading the Ride CAKE app*.

5.5 Brake modes



The vehicle has one brake mode, factory preset to maximum brake mode. It can be customized in the CAKE app. When you brake and the brake light comes on, the motor brake is activated. The braking power is regenerated into the battery, i.e., the battery is charged, and the range increases.



WARNING! Risk of personal injury. When slowing down using the motor brake, other road users are not notified of your slowing down. Use the motor brake with caution. Always use the mechanical brakes to bring the vehicle to a standstill.

6. Operating



WARNING! Risk of burns. Stay clear of vehicle parts that are hot after usage.

6.1 Handling the battery



WARNING! Fire hazard. Do not use a damaged battery, as it is highly flammable. A damaged battery may self-ignite.

NOTICE When the battery is not connected to the vehicle or the charger, the battery must be stored indoors. Otherwise, humidity may enter through the inlet and permanently damage the battery.



Pay close attention to how to handle and care for the battery and charger in a safe way. If the vehicle has not been used for more than 2 weeks, fully charge the battery before riding. The battery can be charged in the two following ways:

- Removed from the vehicle.
- Attached to the vehicle. However, while charging, the battery must be disconnected from the vehicle. The battery cannot be connected to the vehicle and charger simultaneously.

Storing and charging to optimize the battery life span



WARNING! Risk of personal injury.

When charging, always first connect the charger to the battery. Thereafter, connect the charger to the mains supply.

Safe charging cannot be guaranteed if another charger or battery than the intended is used. Only use the intended charger. Only use the intended battery.

Regularly examine the charger for any damages, especially the cord, plug, and enclosure. Do not use a damaged charger. Contact *CAKE Service & support*.

During charging, place the battery in a well-ventilated area.



CAUTION! Do not leave the battery unattended during charging.

NOTICE When the battery is not connected to the vehicle or the charger, the battery must be stored indoors. Otherwise, humidity may enter through the inlet and permanently damage the battery.

- As a rule, store the battery indoors.
- If the vehicle will not be used for more than 2 weeks; disconnect the battery cable; store the battery indoors.
- Store the battery with a 30%-80% state of charge, or the battery may permanently lose performance.
- Store the battery at 10°-20°C/50°-68°F, or the battery may permanently lose performance.
- If the vehicle is stored indoors and will be used within a week, the battery may remain in the vehicle, but with the battery cable unplugged.
- If the vehicle has not been used for more than 2 weeks, fully charge the battery before riding.
- Do not charge the battery below 0°C/32°F, or the battery may permanently lose performance.

Checking the battery state of charge (SOC)

To check the battery SOC, do either of the following:

- Push the battery button. => The 4 battery LEDs are activated and indicate the SOC.
- When the vehicle has been activated, see SOC indication on the display.
- Check the SOC in the CAKE app.



Charging the battery

 **WARNING!** Risk of personal injury.

When charging, always first connect the charger to the battery. Thereafter, connect the charger to the mains supply.

Safe charging cannot be guaranteed if another charger or battery than the intended is used. Only use the intended charger. Only use the intended battery.

Regularly examine the charger for any damages, especially the cord, plug, and enclosure. Do not use a damaged charger. Contact *CAKE Service & support*.

During charging, place the battery in a well-ventilated area.

 **CAUTION!** Do not leave the battery unattended during charging.

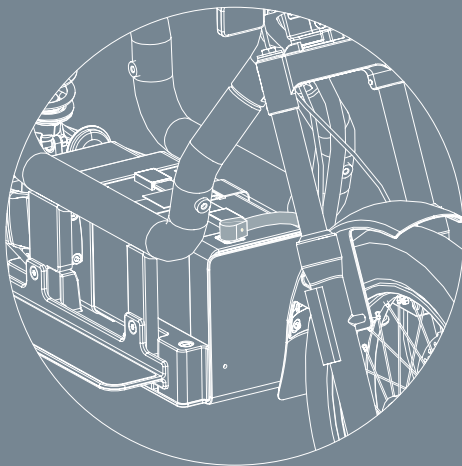


Fig. 10
Battery cable entry on the battery

1. Remove the battery cable from the battery; push the yellow button, then pull the cable upwards, see Fig. 10.
2. Plug the battery charger cable into the battery. The lock mechanism makes a clicking sound.

3. Connect the charger to the mains supply. => The charger light is a steady red. A red blinking light indicates that something is wrong, see *Troubleshooting*.
4. Wait until the charger light is a steady green. => The battery is fully charged.
3. Disconnect the charger from the mains supply.
4. Unplug the charger from the battery: push the yellow button, then pull the cable upwards.
5. Plug the battery cable into the battery. The lock mechanism makes a clicking sound.

Removing the battery

NOTICE When the battery is not connected to the vehicle or the charger, the battery must be stored indoors. Otherwise, humidity may enter through the inlet and permanently damage the battery.

If you get water in the connector of your battery. Turn the battery upside down to remove any body of water. Proceed with using pressurised air to blow away any remaining water, or put the battery inside to let it dry completely

See the instruction video on ridecake.com/en/makka-manuals-and-videos/.

1. Disconnect the battery cable from the battery; push the yellow button, then pull the cable upwards.
2. Use the key to unlock the battery from the battery holder.
3. Loosen the velcro strap.
4. Carefully remove the battery, or you may cause marks on the frame.

Attaching the battery

1. Place the battery in the battery holder.
2. Fasten the velcro strap over the battery handle.
3. Use the key to lock the battery to the battery holder.
4. Attach the battery cable.

6.2 Before every ride

For your safety, ensure that the vehicle is in perfect technical condition before every ride. Check the following:

- The brakes function properly.
- The tires and wheels are roadworthy.
- Check that the throttle can move freely without getting stuck.
- The lights' function: taillight, brake light, headlight, turn signals, and the horn.
- The seat clamp is fastened.
- The battery is locked and strapped down.

6.3 Starting

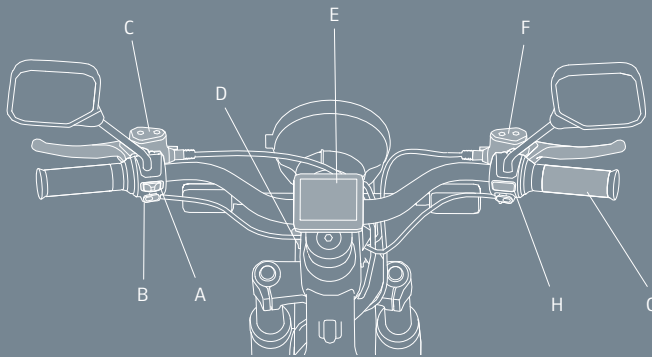


Fig. 11
Handlebar controls

1. Push and hold the start button for 2 seconds, (H) in Fig. 11. => The key card symbol is shown pulsating on the display.
2. Place the key card on the key card symbol => Headlights and taillights light up. The vehicle is activated and unlocked.
3. Fold up the side-stand. => On the display, the side-stand symbol disappears.

6.4 Accelerating

Twist the throttle grip, (G) in Fig. 11. The power increases gradually.

6.5 Changing brake mode



Change the brake mode in the CAKE app, see *Downloading the Ride CAKE app*.

6.6 Changing ride mode (R1) (R2)

When the vehicle is active, push the start button, (H) in Fig. 11, to toggle between ride mode 1 and ride mode 2.

6.7 Braking



WARNING! Risk of personal injury. There is no foot brake. Remember that you control both the rear and front brakes from the handlebar.

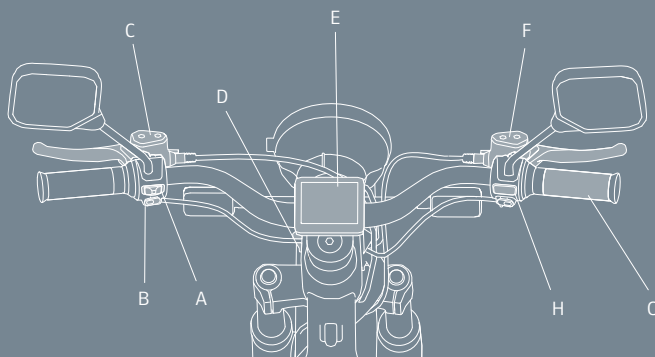


Fig. 12
Handlebar controls

Apply pressure to the front (F) and rear (C) brake. Apply more pressure on the front/right, and less on the rear/left.

6.8 Powering off/locking

1. Bring the vehicle to a standstill.
2. Push and hold the start button for 3 seconds. => Explore with respect briefly shows on the display. Headlights and taillights are turned off. => The vehicle is deactivated and locked.

NOTICE CAKE recommends you also use an approved chain and padlock to prevent theft.

6.9 Activating steering lock

CAKE recommends you activate the steering lock to prevent theft. See the instruction video on ridecake.com/en/makka-manuals-and-videos/.

1. Turn the handlebar to the left.
2. Put the key in the keyhole and lock. => The handlebar is locked. Once you remove the key, the handlebar should have a limited range of motion.

NOTICE The key can be lost or stolen. Never leave the key in the steering lock keyhole.

6.10 Storing the vehicle

NOTICE If the vehicle is stored outdoors, remove the battery, and place the battery indoors, see *Storing and charging to optimize the battery life span*.




To avoid unnecessary aging and/or discoloration, store the vehicle in a dry and cool place. CAKE recommends you use the vehicle at least once a month to preserve all vehicle components in good condition. Pay close attention to how to handle and care for the battery in a safe way, see *Handling the battery*.


7. Service schedule

Other service intervals may apply in your country, and service intervals may change due to technical development. Please check *ridecake.com* for the latest service schedule.

Required work	Every 2000 km	Every 4000 km	Every 6000 km
Checking that the footplate is fastened	x		
Checking the tire depth	x		x
Checking the tire pressure	x		x
Checking that the headlight is fastened	x	x	x
Checking that the taillight is fastened	x	x	x
Checking that the brake disc screws are tightened, front and rear	x		
Checking that the brake fluid is not too low		x	
Checking the brake hoses for damages		x	
Checking that the brake pads are not worn		x	
Performing a test drive to check the brake system	x	x	x
Checking the forks for any leakage		x	
Checking the brake discs for damages			x
Checking that the headset is fastened			x
Checking the rims for damages			x
Checking that the rear axle is fastened			x
Checking that the rear shock bolts are tightened			x
Checking that the rear swing mount is fastened			x
Checking that the saddle is fastened			x
Checking that the spokes are firmly attached			x
Checking the front wheel bearings			x
Checking the rear wheel bearings			x
Checking the wire harness for damages			x


8. Work on the vehicle and its accessories

 **DANGER! Risk of electric shock. Work on the battery and charger must only be performed by an authorized CAKE workshop. Do not open the battery. Do not open the charger.**

 **WARNING! Risk of personal injury. Remove the battery before starting any work on the vehicle.**

Perfect operation and premature wear prevention require that maintenance, care, and tuning work be carried out. Operating the vehicle in difficult conditions, e.g., sand and mud may lead to more rapid wear of components. Use the substances, e.g., oils and lubricants specified.

8.1 Tools, materials, and substances used

 **WARNING! Risk of personal injury. If another brake fluid than the stated is used, the brakes may cease to function. Only use the stated brake fluid DOT3 or DOT4.**

- Allen key: 5mm, 6mm, 8mm, 10mm
- Wrench: 8mm, 10mm, 13mm, 21mm, 22mm, 24mm
- Torx: 20, 25, 30, 45
- Pump with manometer/Compressor
- Measuring stick
- Brake fluid: DOT3 or DOT4
- Calipers

8.2 Brake system

Checking that the brake disc screws are tightened, front and rear 

Tool: Torx 30.

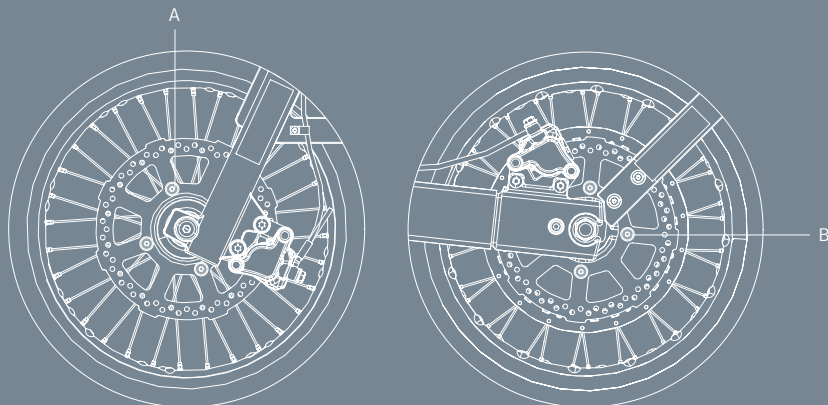


Fig. 13
Brake disc screws, front and rear

1. On the front wheel (A), check that the 4 screws are tightened to 17Nm.
2. On the rear wheel (B), check that the 4 screws are tightened to 17 Nm.

Checking that the brake fluid is not too low 

Material: Brake fluid DOT3 or DOT4

Wanted state: See Fig 14. When squeezing the brakes, there should be resistance.

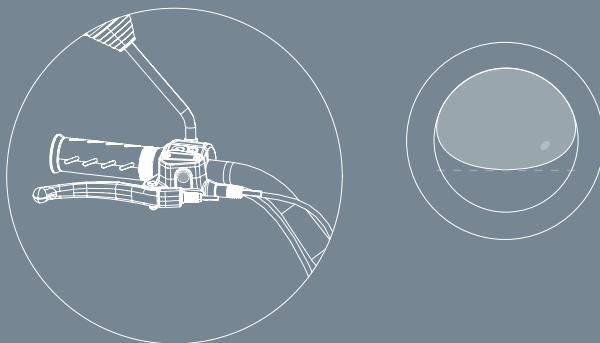


Fig. 14
Correct brake fluid level

1. Check that the air bubble is no bigger than in Fig 14.
2. A bigger air bubble than indicated in Fig 14 means that there is a brake system leakage somewhere, see *Checking the brake hoses for damages*.

Checking the brake hoses for damages

Wanted state: The handlebar brakes, the brake hoses, and the brake caliper should be free from brake fluid. Any brake fluid on these parts may indicate brake hose damage.

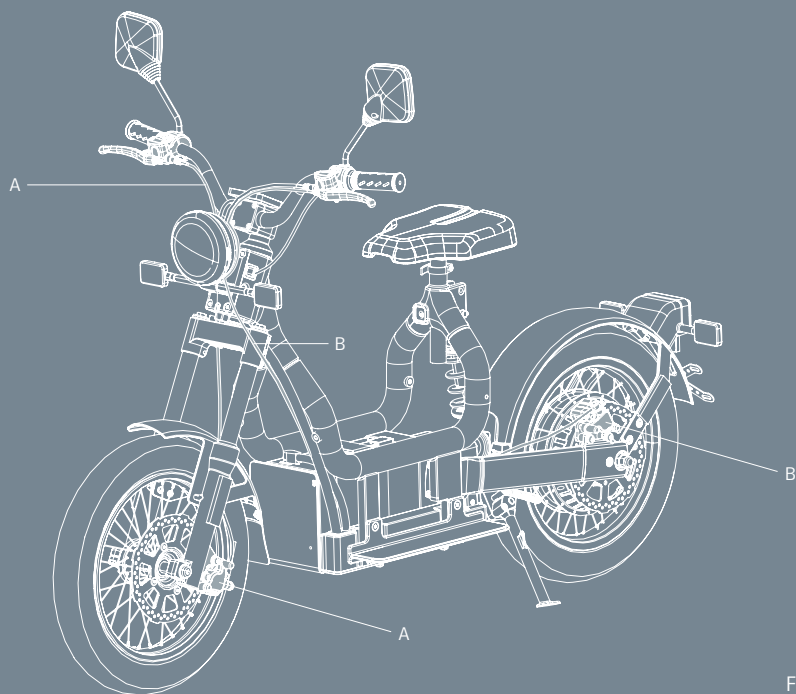


Fig. 15
Brake hoses

1. Check the front brake hoses (A) for damages. Look for brake fluid on the handlebar brakes, the hoses, and the brake caliper.
2. Check the rear brake hoses (B) for damages. Look for brake fluid on the handlebar brakes, the hoses, and the brake caliper.
3. Have any damaged brake hose replaced by an authorized CAKE workshop.

Checking that the brake pads are not worn

Tool: Calipers.

Wanted state: Minimum 1mm brake pad.

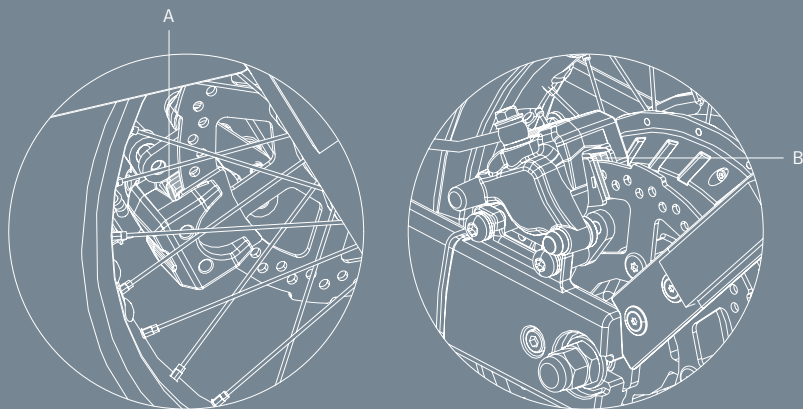


Fig. 16
Brake pads on the front
and rear brake caliper

1. On both the front (A) and the rear (B) brake caliper, check that the brake pads are not worn to the aluminum rim.
2. If necessary, replace the brake pads, see the instruction video [How to change the brake pads on *ridecake.com/en/kalk-manuals-and-videos/*](https://ridecake.com/en/kalk-manuals-and-videos/).

NOTICE The video is applicable for both the Makka and Kalk vehicles.

Checking the brake system

Once the brake pads, brake fluid, and brake hoses have been checked and/or repaired, perform a test drive to check the brake system.

Checking the brake discs for damages

Wanted state: A straight brake disc without any indentations.

1. Check the brake discs of both wheels for any damages.
2. If necessary, order a new brake disc from CAKE and mount it, see *Replacing the front wheel brake disc* and/or *Replacing the rear wheel brake disc*.

Replacing the front wheel brake disc

Tool: Allen key 6mm, 8mm, 10mm, wrench 21mm, Torx 30, a bucket of clean water with non-abrasive detergent, and a cloth.

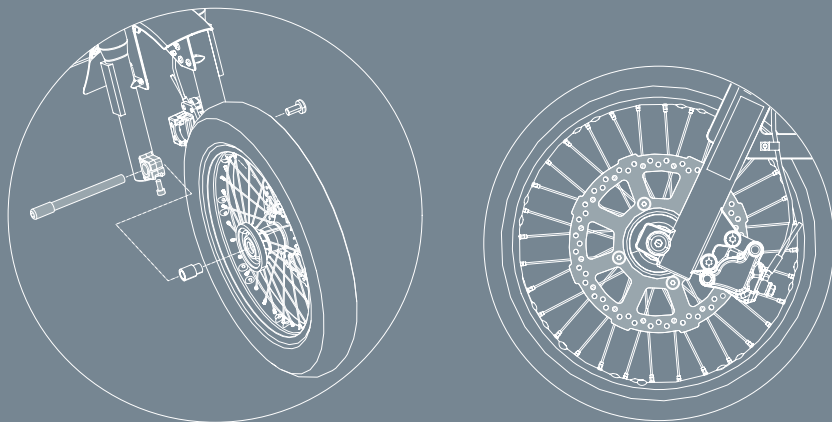


Fig. 17
Unscrewing the front wheel
axle and the brake disc screws

1. Place the vehicle on a stand or similar.
2. Loosen the screw clamping the wheel axle. Use Allen key 6mm.
3. Unscrew the front wheel axle and remove the wheel. Use Allen key 8 and 10mm.
4. Unscrew the 4 screws attaching the brake disc to the wheel. Use Torx 30.
5. Clean the wheel.
6. Attach the new brake disc to the wheel. Tighten the 4 screws to 17Nm. Use Torx 30.
7. Mount the wheel. Tighten the wheel axle screw. Use Allen key 8mm and 10mm.
8. Tighten the screw clamping the wheel axle to 17Nm. Use Allen key 6mm.
9. Perform a test drive to check the brake system.

Replacing the rear wheel brake disc

CAKE recommends an authorized CAKE workshop perform this service task.

Tool: Allen key 6mm, wrench 8mm, 22mm, 24mm, Torx 20, 25, 30

1. Remove the battery.
2. Remove the control box lid. Unscrew the 4 screws. Use Torx 25.
3. Disconnect the motor sensor cable.
4. Disconnect the motor cables by unscrewing the blue, green, and yellow cables. Use an 8mm wrench.
5. On the swing arm, unscrew the 2 cable holder screws. Use Torx 25.
6. On the swingarm bridge, unscrew the 2 fender screws. Use Torx 30.
7. Unscrew the 4 fender screws. Use Torx 20. Remove the rear fender.
8. Loosen the wheel axle nut. Use wrench 22mm and 24mm.
9. Unscrew the 2 screws holding the motor bracket. Use Allen key 6mm.
10. Carefully pull out the wheel.
11. Unscrew the 4 screws attaching the brake disc to the wheel. Use Torx 30.
12. Clean the wheel.
13. Attach the new brake disc to the wheel. Tighten the 4 screws to 17Nm. Use Torx 30.
14. Mount the wheel. Tighten the wheel axle nut to 50Nm. Use wrench 22mm and 24mm.
15. Mount the motor bracket. Tighten the 2 motor bracket screws to 20 Nm. Use Allen key 6mm.
16. Tighten the wheel axle nut to 50Nm. Use wrench 22mm and 24 mm.
17. Mount the rear fender. Tighten the 4 fender screws to 10Nm. Use Torx 20.
18. Use an 8mm wrench to connect the motor cables according to the following:
 - I. Blue --> U
 - II. Green --> V
 - III. Yellow --> W
19. Connect the motor sensor cable.
20. Attach the control box lid.
21. On the swing arm bridge, tighten the 2 fender screws. Use Torx 30.
22. On the swing arm, tighten the 2 cable holder screws. Use Torx 25.
23. Attach the battery.
24. Perform a test drive to check the brake system.

8.3 Chassis

Checking that the footplate is fastened

Tool: Torx 45.

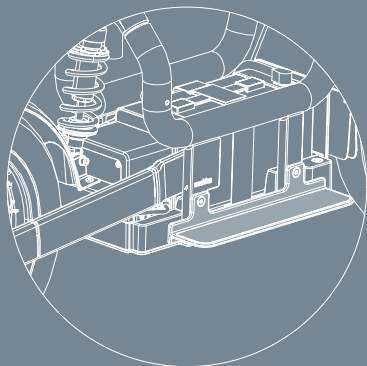


Fig. 18
Footplate

1. On both sides of the vehicle, check that the 2 screws are tightened.
2. Perform a test drive to check for loose parts.

Checking that the headset is fastened

Tool: Allen key 8mm.

1. Align yourself in front of the headset.
2. Manually check that the headset is fixed to the frame.
3. Ensure the handlebar is aligned with the wheel.
4. If necessary, remove the stem and the steering spacer to adjust the bearing nut underneath the stem for ideal tension and bearing support.
5. Perform a test drive to check for loose parts.

Checking that the rear axle is fastened

Tool: Wrench 22mm, 24mm.

1. Check that the nuts of the rear axle are fastened.
2. Perform a test drive to check for loose parts.

Checking that the rear shock bolts are tightened

Tool: Allen key 6mm, wrench 13mm.

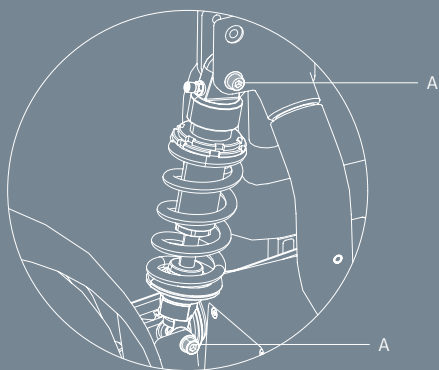


Fig. 19
Rear shock bolts

1. Check that the 2 rear shock bolts (A), holding the frame and swing are tightened.
2. Perform a test drive to check for loose parts.

Checking that the rear swing mount is fastened

Tool: Allen key 6mm, 8mm.

1. Remove the battery.
2. Check that the first swing screw is tightened by doing the following:
 - I. Loosen the 2 swing arm screws. Use Allen key 6mm.
 - II. Tighten the through screw to 30Nm. Use Allen key 8mm.
 - III. Tighten the 2 swing arm screws to 20Nm. Use Allen key 6mm.Ensure the swing arm clamp has equal spacing.
3. Check that the second swing screw is tightened by repeating steps I-III above.
4. Perform a test drive to check for loose parts.

8.4 Cleaning the vehicle

⚠ CAUTION! The electrical components of the vehicle may be damaged if cleaned improperly. This may in turn cause personal injury and/or damage to the vehicle or other property. Do not flush the vehicle with water. Do not use a pressure washer or a water hose to clean the vehicle/battery.

1. Ensure the vehicle stands firmly.
2. Ensure the battery connector is connected to the battery. Both the battery and the battery cable are sensitive to humidity.
3. Clean the vehicle using a cloth and a bucket of water with non-abrasive detergent.

8.5 Electrical system

Checking the wire harness for damages 🔧

Wanted state: The wire harness must be in such a state that it fully protects the wires inside it.

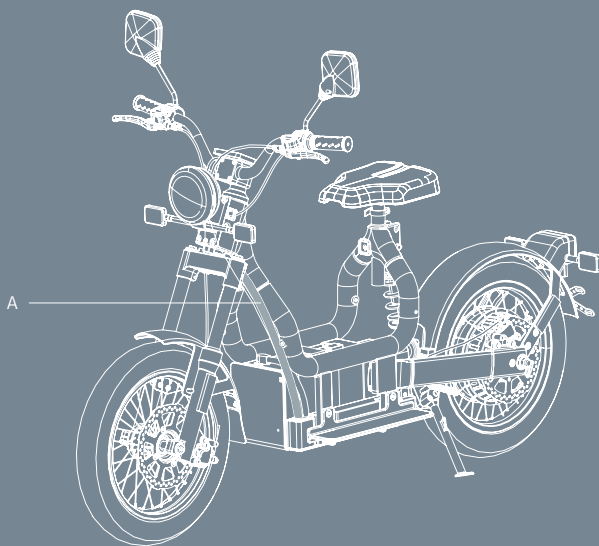


Fig. 20
Wire harness

1. Check the wire harness, (A) for any damages.
2. If the wire harness is damaged and does not cover all wires, contact an authorized CAKE workshop.

Checking the front connectors

Tool: Allen key 5mm, wrench 12mm, Torx 45.

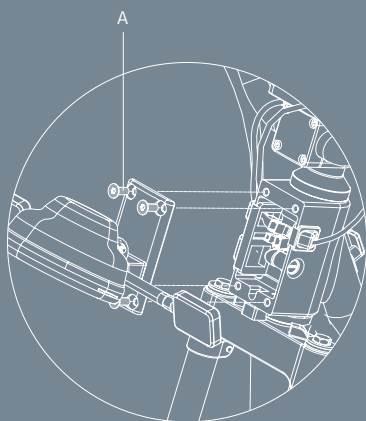


Fig. 21
Accessing the front connectors

1. Carefully fold up the rubber protection enclosing the headlight.
2. Unscrew the headlight.
3. Unscrew the 4 screws (A) holding the plate to access the front connectors.
4. Check that the connectors are properly fastened.
5. Attach the plate. Tighten the 4 screws holding the plate to 17Nm.
6. Fasten the headlight to 10Nm.
7. Fold down the rubber protection enclosing the headlight.

8.6 Suspension, fork, rear

Checking the forks for any leakage

Wanted state: When applying pressure to the handlebar/forks, it should bounce back. There should be no oil leakage on the fork suspension sealings.

1. Check that the handlebar/forks bounce back when applying pressure to it.
2. Check for any oil on the fork suspension sealing.
3. If necessary, order a new fork suspension from CAKE and mount it, see *Replacing a fork suspension*.

Replacing a fork suspension

Tool: Allen key 5mm, 8mm, 10mm, Torx 30.

1. Place the vehicle on a stand or similar.
2. Loosen the screw clamping the wheel axle. Use Allen key 6mm.
3. Remove the wheel by unscrewing the front wheel axle. Use Allen key 8mm and 10mm.
4. Unscrew the 6 screws behind the front fender. Use Torx 30.
5. Unscrew the 6 top screws. Use Allen key 5mm. Remove the fork suspension.
6. Mount the new fork suspension. Tighten the 6 screws to 10Nm.
7. Mount the wheel. Tighten the wheel axle screw to 50Nm. Use Allen key 8mm and 10mm.
8. Tighten the screw clamping the wheel axle to 17 Nm. Use Allen key 6mm.
9. Perform a test drive to check the brake system.

Fastening the rear suspension

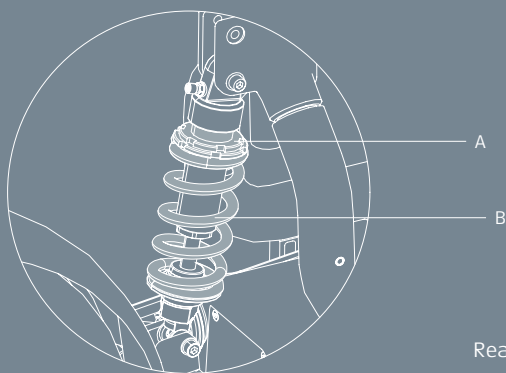


Fig. 22
Rear suspension spring and adjustment ring

1. Check that there is no gap between the rear suspension spring (B) and the adjustment ring (A).
2. If necessary, tighten the adjustment ring.
3. Tighten the stop screw of the adjustment ring.

8.7 Handlebar

Adjusting the handlebar angle

See the instruction video on ridecake.com/en/makka-manuals-and-videos/.

Tool: Allen key 5mm.

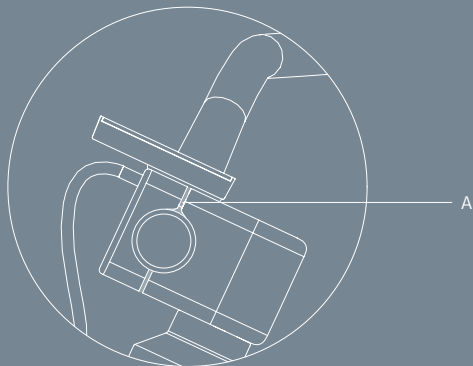


Fig. 23
Gap between the upper and lower stem

1. Loosen the 4 stem bolts.
2. Adjust the handlebar angle and center the handlebar. Make use of the handlebar guidelines.
3. Tighten the 4 stem bolts to 10Nm.
4. Ensure to tighten the upper and lower bolts equally. Check that the gap (A) between the upper and lower stem is equal. See Fig 23.

Mounting/adjusting the side-view mirrors

See the instruction video on ridecake.com/en/makka-manuals-and-videos/.

Tool: Toolset wrench included in the vehicle delivery.

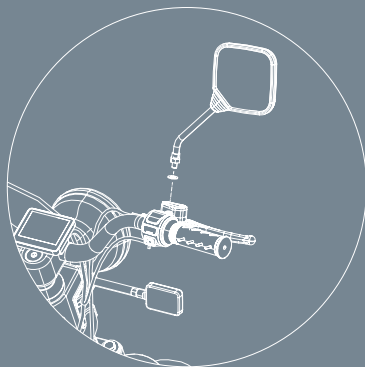


Fig. 24
Mounting the side-view mirrors

1. Place the washer between the handlebar and the nut.
2. Tighten the nut.

8.8 Key card

Using another RFID device as a key card

The key card is an RFID device. If you have another RFID device, it may be possible to use it as a key card for the vehicle. To find out, see *Programming a key card*, but exchange the key card with your own RFID device.

Programming a key card

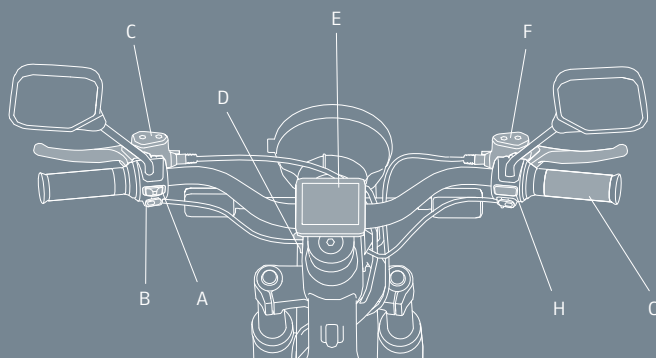


Fig. 25
Handlebar controls

1. Push and hold the start button (H) in Fig. 25. => The key card symbol is shown.
2. Place the white master key on the key card symbol. => The display shuts down.
3. Push and hold the start button. => The key card symbol and 1 are shown.
4. Place the white master key on the key card symbol. => The key card symbol and 2 are shown.
5. Place a grey key card on the key card symbol. => The key card symbol and 3 are shown.
6. Place the second grey key card on the key card symbol. => The display shuts down. The reprogramming is done. The vehicle can be started with the programmed keys.

Lost key card

When a key card is lost, do the following:

1. Order a new key card from CAKE at ridecake.com/en/service-support/.
2. Program it, see *Programming a key card*.

8.9 Lights

Checking that the headlight is fastened

Tool: Allen key 5mm, wrench 10mm.

1. Manually check if the headlight is firmly attached. If needed, fasten it; continue below.
2. Carefully fold up the rubber protection enclosing the headlight.
3. Fix the nut while tightening the screw.
4. Perform a test drive to check for loose parts.

Checking that the taillight is fastened

Tool: Allen key 5mm, wrench 10mm.

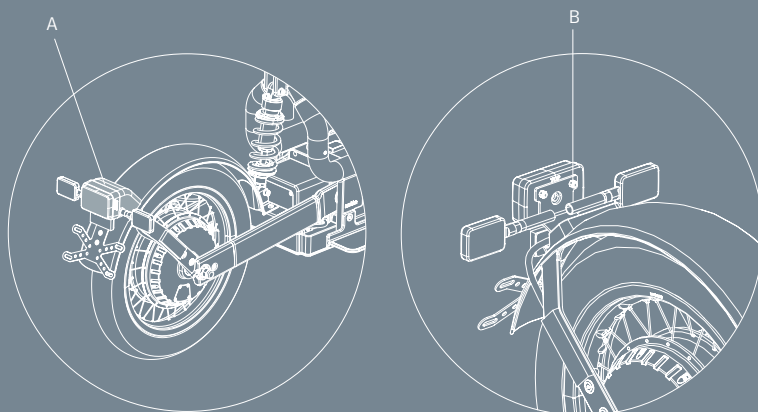


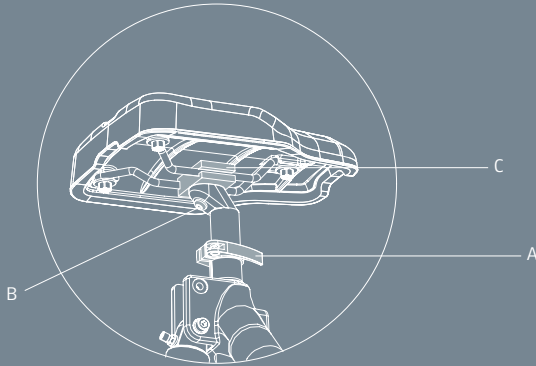
Fig. 26
Taillight attachment

1. Manually check if the taillight is firmly attached. If needed, fasten it; continue below.
2. Carefully fold away the rubber protection (A) enclosing the taillight.
3. The nut is located under the rubber protection, and the screw is located between the rear fender and the tire. Fix the nut while tightening the screw (B).
4. Perform a test drive to check for loose parts.

8.10 Saddle

Checking that the saddle is fastened

Wanted state: The saddle is fastened and the saddle clamp groove aligns with the subframe groove.



- A. Clamp
- B. Adjustment screw
- C. Angle and depth adjuster

Fig. 27

1. Check that the saddle clamp, see Fig. 27 (A) is properly fastened to the frame.
2. Perform a test drive to check for loose parts.

Adjusting the saddle height

1. Flip the saddle height lever backward.
2. Hold the nut located opposite the saddle height lever.
3. Rotate the saddle height lever counterclockwise until the saddle is loose.
4. Adjust the saddle height.
5. Ensure not to raise it above the seat pole mark "Min. insertion".
6. Ensure the saddle clamp groove aligns with the subframe groove.
7. Hold the nut and rotate the saddle height lever clockwise.
8. Tighten the nut.
9. Flip the saddle height lever forward to lock it.

Adjusting the saddle angle and/or depth

Tool: Allen key 6mm.

1. Loosen the saddle adjustment screw, see (B) in Fig 27.
2. Adjust the saddle angle and/or depth, see (C) in Fig 27.
3. Tighten the saddle adjustment screw to 10Nm.

8.11 Wheels, tires

Checking the tire depth

Tool: Measuring stick.

Wanted state: Minimum 2mm.

1. Measure the tire depth on the front and rear tires.
2. If necessary, replace the wheel/s, see *Replacing the front wheel and/or Replacing the rear wheel*.

Checking the tire pressure

Tool: Pump with manometer or compressor. Wanted state: 200 kPa / 29 psi / 2 bar when cold.

1. Unscrew the valve.
2. Attach the tire pressure gauge to the nipple.
3. If necessary, increase the air pressure.
4. Remove the gauge and reattach the valve to the nipple.

Checking that the spokes are firmly attached

Wanted state: Each spoke is firmly attached to the wheel.

1. Manually check for any play on each spoke.
2. If one or more spokes are not firmly attached, contact an authorized CAKE workshop.

Checking the rims for damages

Wanted state: A smooth rim without any dents or cracks on the edge or at the spokes.

1. Check the rims for any damages.
2. If necessary, order a new wheel from CAKE and mount it, see *Replacing the front wheel* and/or *Replacing the rear wheel*.

Checking that the wheels are fastened

Tool: Front wheel: Allen key 6mm, 8mm, 10mm.

Rear wheel: wrench 22mm, 24mm.

1. Check that the front wheel is fastened.
2. Check that the rear wheel is fastened.

Checking the front wheel bearings

Wanted state: When rotated, the bearings should slide smoothly.

1. Place the vehicle on a stand or similar.
2. Loosen the screw clamping the wheel axle. Use Allen key 6mm.
3. Unscrew the front wheel axle and remove the wheel. Use Allen key 8mm and 10mm.
4. On both sides of the wheel, rotate the bearings.

NOTICE If you remove the spacers, note which spacer belongs to which side. They must not switch sides.

5. If one of the two bearings does not run smoothly, CAKE recommends you replace both bearings. Contact an authorized CAKE workshop.
6. If the hub is damaged, replace the entire wheel. Order a new wheel from CAKE.
7. Mount the wheel. Tighten the wheel axle screw to 50Nm.
8. Tighten the screw clamping the wheel axle to 17Nm. Use Allen key 6mm.

Checking the rear wheel bearings

CAKE recommends an authorized CAKE workshop perform this service task.

Tool: Allen key 6mm, wrench 22mm, 24mm, Torx 20, 25, 30.

Wanted state: When rotated, the bearings should slide smoothly

1. Remove the battery.
2. Remove the control box lid. Unscrew the 4 screws. Use Torx 25.
3. Disconnect the motor sensor cable.
4. Disconnect the motor cables by unscrewing the blue, green, and yellow cables. Use an 8mm wrench.
5. On the swing arm, unscrew the 2 cable holder screws. Use Torx 25.
6. On the swingarm bridge, unscrew the 2 fender screws. Use Torx 30.
7. Unscrew the 4 fender screws. Use Torx 20. Remove the rear fender.
8. Loosen the wheel axle nut. Use wrench 22mm and 24mm.
9. Unscrew the 2 screws holding the motor bracket. Use Allen key 6mm.
10. Carefully pull out the wheel.
11. On both sides of the wheel, rotate the bearings. If the bearings do not run smoothly, there may be an issue with the bearings and/or the hub. Contact an authorized CAKE workshop. Otherwise, continue below.
12. Mount the wheel. Tighten the wheel axle nut to 50Nm. Use wrench 22mm and 24mm.
13. Mount the motor bracket. Tighten the 2 motor bracket screws to 20 Nm. Use Allen key 6mm.
14. Tighten the wheel axle nut. Use wrench 22mm and 24 mm.
15. Mount the rear fender. Tighten the 4 fender screws to 10Nm. Use Torx 20.
16. Use an 8mm wrench to connect the motor cables according to the following:
 - I. Blue --> U
 - II. Green --> V
 - III. Yellow --> W
17. Connect the motor sensor cable.
18. Attach the control box lid.
19. On the swing arm bridge, tighten the 2 fender screws. Use Torx 30.
20. On the swing arm, tighten the 2 cable holder screws. Use Torx 25.
21. Attach the battery.

Replacing the front wheel

Tool: Allen key 6mm, 8mm, 10mm.

1. Place the vehicle on a stand or similar.
2. Loosen the screw clamping the wheel axle. Use Allen key 6mm.
3. Unscrew the front wheel axle and remove the wheel. Use Allen key 8mm and 10mm.
4. Mount the new wheel. Tighten the wheel axle screw to 50 Nm.
5. Tighten the screw clamping the wheel axle to 17 Nm. Use Allen key 6mm.

Replacing the rear wheel

CAKE recommends an authorized CAKE workshop perform this service task.
Tool: Allen key 6mm, 8mm, wrench 22mm, 24mm, Torx 20, 25, 30.

1. Remove the battery.
2. Remove the control box lid. Unscrew the 4 screws. Use Torx 25.
3. Disconnect the motor sensor cable.
4. Disconnect the motor cables by unscrewing the blue, green, and yellow cables. Use an 8mm wrench.
5. On the swing arm, unscrew the 2 cable holder screws. Use Torx 25.
6. On the swingarm bridge, unscrew the 2 fender screws. Use Torx 30.
7. Unscrew the 4 fender screws. Use Torx 20. Remove the rear fender.
8. Loosen the wheel axle nut. Use wrench 22mm and 24mm.
9. Unscrew the 2 screws holding the motor bracket. Use Allen key 6mm.
10. Carefully pull out the wheel.
11. Mount the new wheel. Tighten the wheel axle nut to 50Nm. Use wrench 22mm and 24mm.
12. Mount the motor bracket. Tighten the 2 motor bracket screws to 20 Nm. Use Allen key 6mm.
13. Tighten the wheel axle nut to 50Nm. Use wrench 22mm and 24 mm.
14. Mount the rear fender. Tighten the 4 fender screws to 10Nm. Use Torx 20.

9. Troubleshooting

Problem	Possible cause	Remedy
Powering on/starting		
The vehicle does not power on.	The battery cable is disconnected	Check that the battery cable is connected.
	The battery is discharged.	Check that the battery is charged by pushing the battery state-of-charge button. Charge the battery. If the vehicle has not been used for more than 2 weeks, fully charge the battery.
The vehicle is powered on but does not drive when engaging the throttle.	The side-stand may be folded down, shown by a white dot on the display.	Fold up the side-stand.
	The battery may be discharged.	Check that the battery is charged by pushing the battery state-of-charge button. Charge the battery. If the vehicle has not been used for more than 2 weeks, fully charge the battery.
	There is a motor issue.	1. Check if the display shows a digit code in the lower right corner. Use the CAKE app/Diagnostics to possibly solve the issue. 2. Contact an authorized CAKE workshop.
There is a noise when riding.	There are loose screws.	Check for loose parts, see Chassis, Lights, Saddle, Wheels.
	There is a motor issue.	1. Check if the display shows a digit code in the lower right corner. Use the CAKE app/Diagnostics to possibly solve the issue. 2. Contact an authorized CAKE workshop.

Problem	Possible cause	Remedy
The key card does not work.	You did not place the key card on the key card symbol of the display.	After pushing the start button, ensure the display shows the key card symbol. Ensure to place the key card on the key card symbol of the display.
	The key card needs reprogramming.	Reprogram the key card, see <i>Programming a key card</i> .
When placing the key card on the display, the display lights up, but the lights do not.	There is a loose connector in the display.	Check the display connectors, see <i>Checking the front connectors</i> .
		Contact an authorized CAKE workshop.
Charger/battery		
The charger shows red blinking light.	Momentary loose contact.	1. Disconnect the charger from the mains supply. 2. Unplug the charger cable from the battery. 3. Replug the charger cable to the battery. 4. Connect the charger to the mains supply.
	Other error	DANGER! Risk of electric shock. Contact <i>CAKE Service & support</i> . Do not attempt to solve the problem in any other way!
The battery LEDs do not light up.	The battery is discharged.	Charge the battery. If the vehicle has not been used for more than 2 weeks, fully charge the battery.
	The battery is damaged.	DANGER! Risk of electric shock. Contact <i>CAKE Service & support</i> . Do not attempt to solve the problem in any other way!

Problem	Possible cause	Remedy
Neither the battery nor the charger light up.	The outlet does not work.	Ensure that the outlet works.
Display		
The display does not activate when pushing the start button.	The battery cable is not connected.	Connect the battery cable to the vehicle.
	The battery is discharged.	Charge the battery. If the vehicle has not been used for more than 2 weeks, fully charge the battery.
	The display is damaged.	Contact an authorized CAKE workshop.
	The start button is damaged.	Contact an authorized CAKE workshop.
The ride mode does not change	The vehicle needs restarting.	Disconnect the battery. Wait 15-30 seconds before reconnecting the battery.
	The controller in the control box is damaged.	Contact an authorized CAKE workshop.
The display speedometer shows the wrong unit.	The setting is wrong.	Contact an authorized CAKE workshop.
The display does not show the time/shows incorrect time.	The vehicle does not have a GPS position, due to having been stored indoors for a long time.	Park the vehicle outdoors for a while.
	The connectivity module in the control box is discharged.	Charge the battery and attach it to the vehicle. If the problem persists, contact an authorized CAKE workshop.

Problem	Possible cause	Remedy
The display does not show the battery level, although the vehicle starts.	The battery is damaged.	DANGER! Risk of electric shock. Contact <i>CAKE Service & support</i> . Do not attempt to solve the problem in any other way!
The display odometer shows 0.	The controller in the control box has not started.	Try restarting the vehicle.
	The controller in the control box is damaged.	Contact an authorized CAKE workshop.
The display shows a digit code in the lower right corner.	The code is an error code that can be interpreted in the CAKE app. Most errors indicated by such a code must be solved by CAKE.	Use the CAKE app to interpret the code and possibly solve the issue.
		Contact an authorized CAKE workshop.
Suspension, fork, rear		
When applying pressure to the handlebar/forks, it does not bounce back.	Dirt has entered through the fork suspension sealing.	Contact an authorized CAKE workshop.
There is oil leakage on the fork suspension sealings.		
There is a gap between the rear suspension spring and the adjustment ring. The suspension does not fully dampen impacts.	The adjustment ring of the rear suspension is loose.	Check the rear suspension, see <i>Fastening the rear suspension</i> .

10. Spare parts and accessories

Please, see ridecake.com/en/products/spare-parts/.

11. Technical data

11.1 Makka Range and Makka Range :work

Technical data are the same for both models unless indicated otherwise.

Ride mode		
Range	Two ride modes for extended range or balanced performance.	
Range :work	One custom ride mode. Three preset ride modes, selectable in the CAKE app.	
Charger		
Type	10 A external charger	
Outlets	110/220V	
0-80 %	Range: 2 hours	Range :work: 3 hours
0-100 %	Range: 4 hours	Range :work: 6 hours
Battery		
Removable, can be charged when installed in the vehicle or separately. Smart charging system. Integrated SOC indicator.		
Cells	18650 lithium cells	
Voltage (nominal)	48V	
Capacity	Range: 31Ah/1.5kWh Range :work: 62Ah/3.0kWh	
Drivetrain		
Type	Direct drive (hub motor)	
Electric motor	Interior permanent magnet motor	
Peak power	Range: 1.8kW	Range :work: 2.0kW
Torque (wheel)	60Nm	

Brake, brake modes Motorcycle brake system, two-piston calipers. Hand lever for both front brake and rear brake. EBS (Electronic braking system) regenerative braking. High-efficiency FOC (Field-oriented Control).	
Disc	Stainless steel Ø 220mm
Front suspension	
Type	Single crown RWU spring fork
Travel	90mm
Rear suspension	
Type	Spring shock with adjustable pre-load
Travel	120mm
Wheels and tires	
Hubs	Forged and CNC aluminum CAKE
Rims	14" x 1.85"
Tires	14" x 3.00"
Frame	
Build	6061 aluminum – extruded, forged, machined, welded, and painted
Fenders and bodywork	
Material	PP plastic
Handlebar	
Material	Aerospace-grade 7050 aluminum
Interface	31.8mm
Width	700mm
Rise	117.5mm
Display TFT display with battery SOC, speedometer, odometer, ride mode selection, brake mode selection, and telltales.	
Dimensions	
Wheelbase	1210mm / 47.5"
Seat height (adjustable)	790mm / 31"
Ground clearance	260mm / 10.25"
Fork angle	25°
Trail	78.1mm / 3"
Offset	21.7mm / 0.85"

Regulatory		
Classification	EU: L1e–B	US*: Motor-driven cycle
License requirement	EU: AM or B	US*: Car, M1, M2
Max load (vehicle, battery, rider, passenger, carry-on items)	245kg	
* Always check your local regulations, classifications, and license requirements.		

11.2 Makka Flex and Makka Flex :work

Technical data are the same for both models unless indicated otherwise.

Ride mode		
Flex	Two ride modes for extended range or balanced performance.	
Flex :work	One custom ride mode. Three preset ride modes, selectable in the CAKE app.	
Charger		
Type	10 A external charger	
Outlets	110/220V	
0-80 %	Flex: 2 hours	Flex :work: 3 hours
0-100 %	Flex: 4 hours	Flex :work: 6 hours
Battery		
Removable, can be charged when installed in the vehicle or separately. Smart charging system. Integrated SOC indicator.		
Cells	18650 lithium cells	
Voltage (nominal)	48V	
Capacity	Flex: 31Ah/1.5kWh Flex :work: 62Ah/3.0kWh	
Drivetrain		
Type	Direct drive (hub motor)	
Electric motor	Interior permanent magnet motor	
Peak power	Flex: 2.7kW	Flex :work: 3.6kW
Torque (wheel)	60Nm	

Brake, brake modes Motorcycle brake system, two-piston calipers. Hand lever for both front brake and rear brake. EBS (Electronic braking system) regenerative braking. High-efficiency FOC (Field-oriented Control).	
Disc	Stainless steel Ø 220mm
Front suspension	
Type	Single crown RWU spring fork
Travel	90mm
Rear suspension	
Type	Spring shock with adjustable pre-load
Travel	120mm
Wheels and tires	
Hubs	Forged and CNC aluminum CAKE
Rims	14" x 1.85"
Tires	14" x 3.00"
Frame	
Build	6061 aluminum – extruded, forged, machined, welded, and painted
Fenders and bodywork	
Material	PP plastic
Handlebar	
Material	Aerospace-grade 7050 aluminum
Interface	31.8mm
Width	700mm
Rise	117.5mm
Display TFT display with battery SOC, speedometer, odometer, ride mode selection, brake mode selection, and telltales.	
Dimensions	
Wheelbase	1210mm - 47.5"
Seat height (adjustable)	790mm - 31"
Ground clearance	260mm - 10.25"
Fork angle	25°
Trail	78.1mm - 3"
Offset	21.7mm - 7/8"

Regulatory		
Classification	EU: L1e-B	US*: Motor-driven cycle
License requirement	EU: AM or B	US*: Car, M1, M2
Max load (vehicle, battery, rider, passenger, carry-on items)	245kg	
* Always check your local regulations, classifications, and license requirements.		

11.3 Battery charger

Model	Input	Output	Output power max	Batteries specifications
PLD500-EV-CM35-5409	100-240VAC 7A Max	54.6VDC 9A	491.4W	Lithium battery, 48VDC, Capacity of 31.2Ah Max, 1pcs

12. Contact and Support

If you have any problems or questions regarding the vehicle, please contact us at service@ridecake.com

For general questions and information, please contact us at hello@ridecake.com.

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This manual is being updated continuously. Make sure you have the latest version; visit ridecake.com/manuals.

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This document is valid for the following models:

Makka Range
Makka Range :work
Makka Flex
Makka Flex :work
Makka Polestar Edition

