CE USER MANUAL

Lacros Electric Folding Bicycles

ELECTRIC (FOLDING) BICYCLES FROM THE NETHERLANDS
INTELLIGENT, RELIABLE AND COMFORTABLE

EN

WWW.LACROS.NL

For your safety

The issue of safety cannot be overstated, so please read the following safety instructions carefully. More safety tips will be discussed later in this manual:

1. The LACROS electric bicycle is equipped with an electric motor. It is of great importance that you get used to the bike quickly. We advise you to choose quiet roads for your first "cycle practices" with little traffic situations and a pleasant road surface.
2. Do not immediately step on the pedal when you start a bicycle ride; this can lead to dangerous situations. Always sit down on the saddle first before you start cycling.
3. It is the rider's responsibility to steer and brake.
4. Preferably cycle the first rides without electric assistance to get familiar with your bicycle. After that, you can start with pedal assistance at a low setting.
5. The brakes are equipped with 'ABS' safety. As a result, the electric assistance switches off when braking.
6. Our employees always test the LACROS bicycles. Please get in touch with us if you have any doubts about the bike and/or the bicycle's electrical installation.
7. Never leave the battery and charger in direct sunlight. The battery is protected against heat, but intense heating should be avoided.
8. Never use a charger other than the one supplied by Shinga B.V. Always use the original charger for your safety.
9. We advise wearing a helmet while cycling. Always check the tire pressure and handlebar and saddle clamps before departure, and take into account a longer braking distance during bad weather conditions.

The LACROS bicycles are delivered in accordance with the most recent European directives (page 3). In case you have any questions or comments, don't hesitate to get in touch with us.

We are always available for users of LACROS bicycles:

Email: service@lacros.nl

Telephone: +31 73 203 2487

Thank you for your trust,

Team Lacros

Quality standard

Your product concerns an electric folding bicycle. The A-weighted emission sound pressure level at the driver's ears is less than 70 dB(A). The bike can be folded at one or two locations, at the handlebar stem and/or at the middle of the frame. The electric drive is equipped with pedal assistance and is powered by an external battery. This battery can be positioned in different locations, such as in the luggage carrier or the frame. The battery is charged utilizing an external charger. This external charger is considered a separate product and is CE certified (based on the Low Voltage Directive and the EMC Directive).

The battery's input voltage is 36V, the motor's capacity is 180W or 250W, and the vehicle's maximum speed is 25 km/h.

Based on the above product description, the following directives apply:

- EMC-Directive: 2014/30/EU
- Machinery Directive: 2006/42/EC
- ROHS Directive: 2011/65/EU

The Low Voltage Directive does not apply because the input voltage is only 36V. The charger of the battery is separately labeled with a CE mark.

From the above directives, several (harmonized) standards are applicable.

The following three standards are relevant in this context and should be used as input for all other documentation:

- EN 15194:2017 (Bicycles - Electrically supported bicycles – EPAC Bicycles)
- NEN-EN-ISO 4210-1:2014
- EN ISO 12100:2010

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The saddle and handlebar height

Figure 1: seat or handlebar post

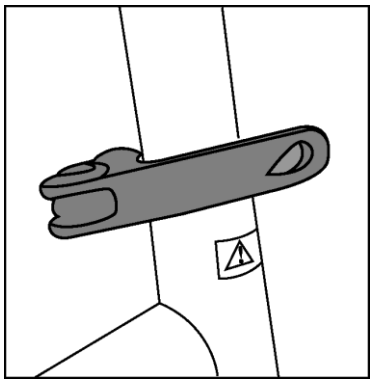
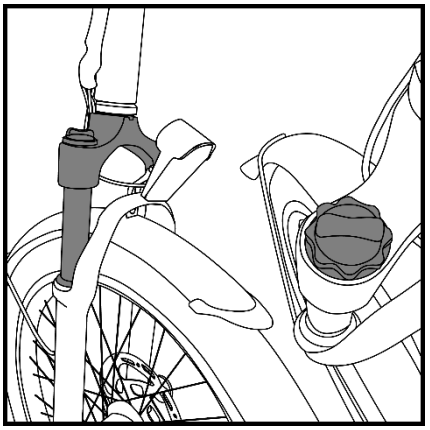


Figure 2: seat or handlebar post

It is possible to adjust the saddle and handlebar height by loosening the clamp in figure 2. Subsequently, you can move the seat or handlebar up or down. Fasten the clamp again at the right height. Pay attention to the rippled line that is engraved in the seat post and stem. This line shows the minimum length that should remain in the frame (seat post) or the steering column (handlebar post).

The front fork suspension (n/a on all models)

The front fork suspension, if applicable, can be set by turning the "preload" rotary knob. When you turn the knob in the "+" direction, clockwise, the suspension becomes stiffer, and when you turn the knob in the "-" direction, counterclockwise, the suspension is set looser. We recommend that at a higher load the suspension should be set stiffer so that the maximum suspension travel is not reached too quickly.



The Tire Pressure

The maximum permitted tire pressure varies per type of tire. Therefore, always look at the side of the tire first before inflating it to ensure you don't exceed the limit.

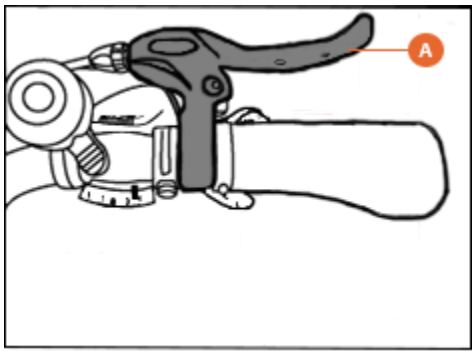
We recommend the following tire pressures:

Model	Tire pressure (Bar/psi)	
Scamper, Ambling, Sketch Nestor, Canter, Trotter, Sierra	3.0-4.0	50.8-58.0
Mustang	1-1.3	14.5-18.9
Gemini, Papillon	2-2.3	29.0-33.4

The tires are equipped with a Dutch valve (Blitz) or a car valve (Schräder). A tire with a Dutch valve can be inflated with a standard bicycle pump. An adapter nipple also fits on these valves so that you can inflate the tire with a car tire pump.

The Brakes

Our bicycles are equipped with two brake levers (A). We recommend using both brake levers when braking. You can operate the rear and front brakes by squeezing the right and left brake levers.



Your bicycle may be equipped with rim brakes, disc brakes, and/or roller brakes. The three figures below show the types of brakes which may be fitted on your bicycle.

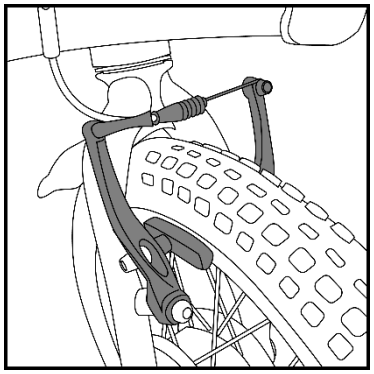


Figure 1: Rim brake

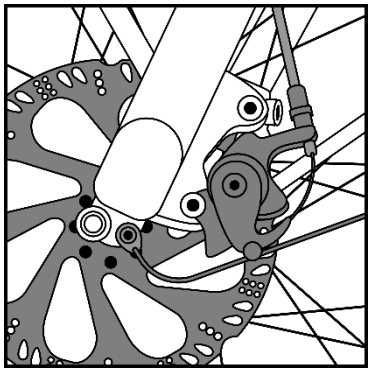


Figure 2: Disc brake

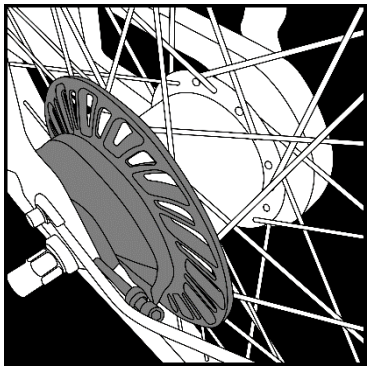


Figure 3: Rollerbrake

For your safety:

- Note that rims and brake pads may be hot after using rim brakes.
- Note that brake discs, calipers, and pads may be hot after using disc brakes. The rims are not part of the braking system.
- Rim and disc brakes should be properly braked in and grease-free to prevent squeaky brake noises. In addition, brake the first kilometers with an even brake action. This ensures that the brake pads take the shape of the rim or disc, creating an optimal braking surface.

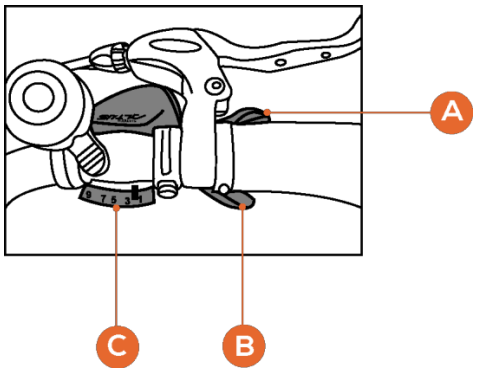
Gears

Derailleur

Note: you should keep pedaling when switching gears. In addition, not much force should be put onto the pedals while shifting to keep the derailleur in good condition.

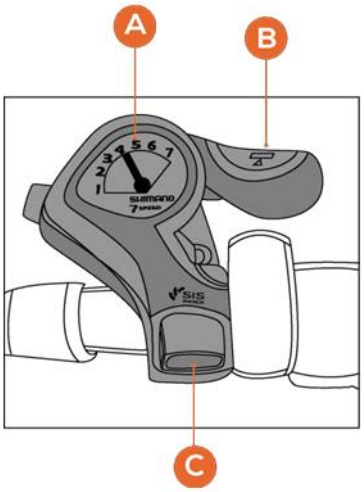
Type 1

The shift mechanism of the derailleur is located on the right side of the steering wheel. It has a "+" (A) and "–" (B) thumb/finger control. Press (A) to shift up and press (B) to shift down. At (C), you can read the current gear.



Type 2

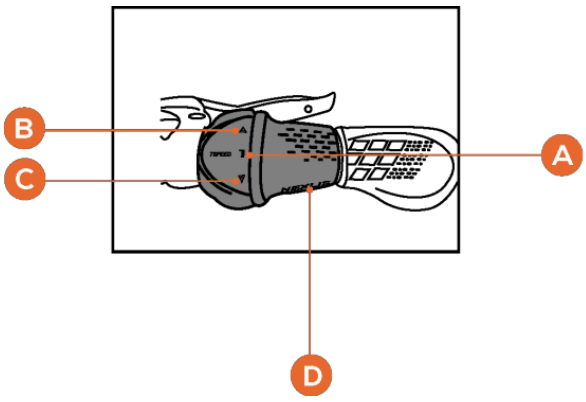
The shift mechanism of the derailleur is located on the right side of the steering wheel. It has a "+" (C) and "–" (B) thumb control. Press (C) to shift up and press (B) to shift down. At (A), you can read the current gear.



Hub gear

The hub gear can be controlled on the right side of the steering wheel. By turning knob (D), the gear can be shifted up or down.

(A) Gear indication
(B) Upshift
(C) Downshift
(D) Rotary knob to switch gears

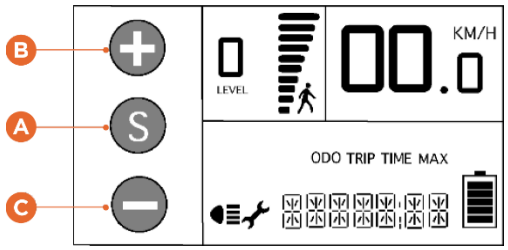


Control system front and rear hub motor

SM100 Display

Turn on the display

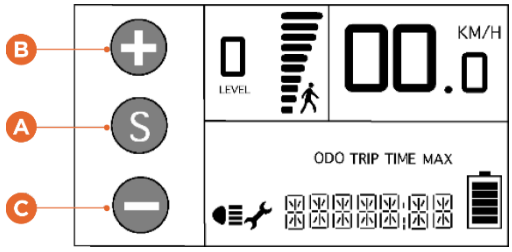
Press the "**S**" or "⏻" button (A) on the left side of the display to switch on the bicycle's electrical circuit. Note that the battery should already be powered on. A menu appears on the display; the electrical circuit is switched on.



(A) On/off button display
(B) Increase motor support and light switch
(C) Decrease motor support

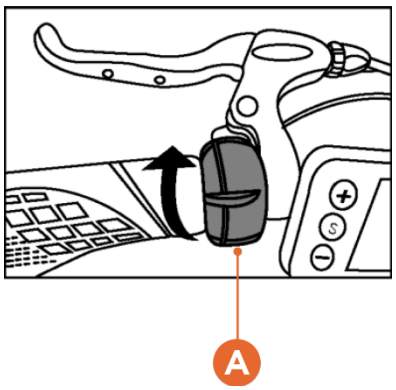
Turn bicycle lights on and off

Hold the "**+**" button (B) for a few seconds to turn on the bicycle lights. The light symbol appears on the display. Hold the ''**+**'' button (B) again for a few seconds to turn off the bicycle lights.



Thumb lever walking assist

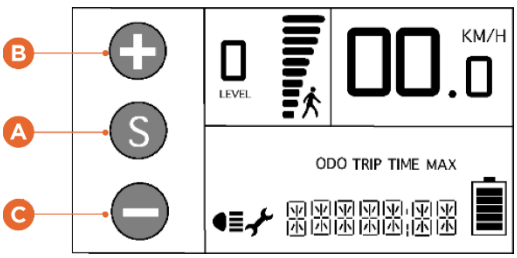
The walking assist is activated by pushing the thumb lever (A) forward at a standstill, providing support up to 6 km per hour. (Note: the walking assist via the thumb lever does not work when the bicycle is in support level "0".) The walking assist will also be activated when the "**–** " button on the display is pressed for a few seconds.



Note: when using the thumb lever while cycling, the electrical support goes directly to its maximum (25km/h).

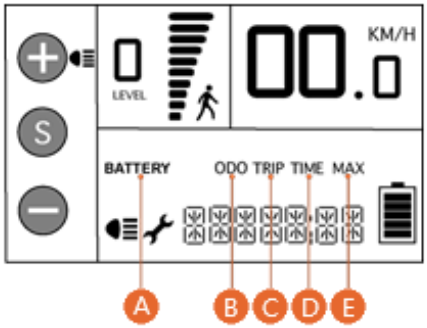
Switch between the 9 levels of support

The electrical support has 9 levels. These are displayed at the top left of the display. These 9 levels can be operated by briefly pressing the "**+**" (B) and "**–**" (C) buttons.



Additional display options

By pressing the "**S**" or "⏻" button sequentially, you can browse through various information at the bottom of the display:

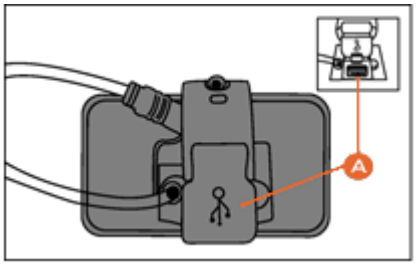


(A) Battery voltage (BATTERY)
(B) Total km/miles (ODO)
(C) Trip reading (TRIP)
(D) Cycling time (TIME)
(E) Maximum speed (MAX)

Please note: Trip, Time, and Maximum speed will be reset by pressing and holding the "**S**" key and the "**–**" key together for two seconds.

USB port

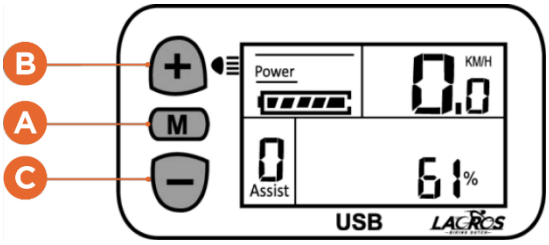
Below the display, you will find a USB port (A) where, for example, a phone or navigation device could be charged during cycling. Charging only works when the display is turned on.



BS200 Display

Turn on the display

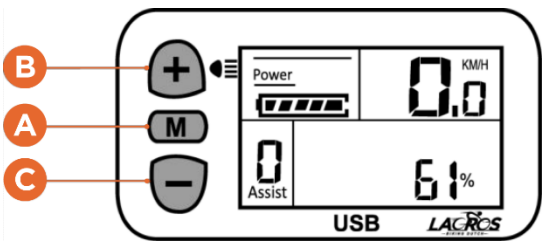
Press the "**M**" button (A) on the left side of the display to turn on the bicycle's electrical circuit. Note that the battery should already be powered on. A menu appears on the display; the electrical circuit is switched on.



(A) On/off button display
(B) Increase motor support and light switch
(C) Decrease motor support

Turn bicycle lights on and off

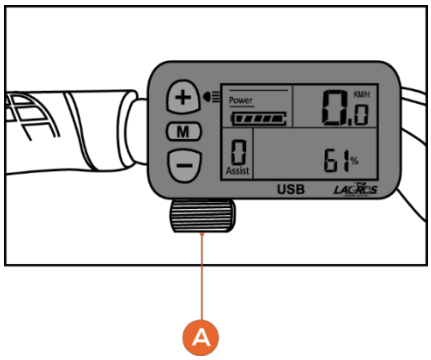
Hold the "**+**" button (B) for a few seconds to turn on the bicycle lights. The light symbol appears on the display. Hold the "**+**" button (B) again for a few seconds to turn off the bicycle lights.



Thumb lever walking assist

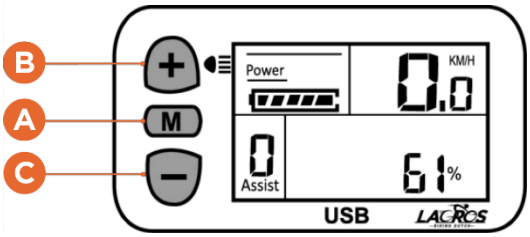
By pushing the thumb lever (A) down at a standstill, you activate the **walking assist**, giving support up to 6 km per hour. (Note: the walking assist via the thumb lever does not work when the bicycle is in support level "0".)

Note: when using the thumb lever while cycling, the electrical support goes directly to its maximum (25km/h).



Switch between the 9 levels of support

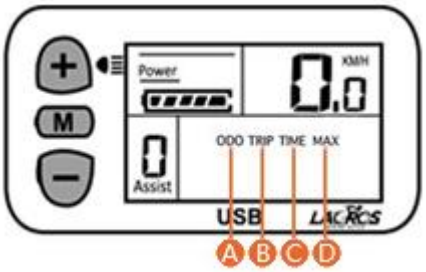
The electrical support has 9 levels. These are displayed in the lower-left corner of the display. These 9 levels can be controlled by briefly pressing the ''**+**'' (B) and ''**–**'' (C) keys.



Additional display options

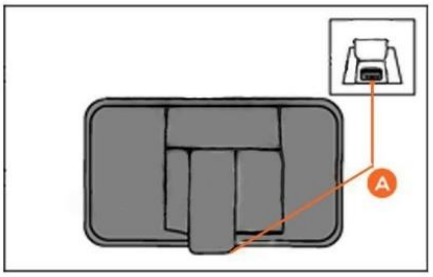
By pressing the ''**M**'' button sequentially, you can browse through various information at the bottom of the display:
(A) Total km/miles (ODO)
(B) Trip reading (TRIP)
(C) Cycling time (TIME)
(D) Maximum speed (MAX)

Note: when using the thumb lever while cycling, the electrical support goes directly to its maximum (25km/h).



USB port

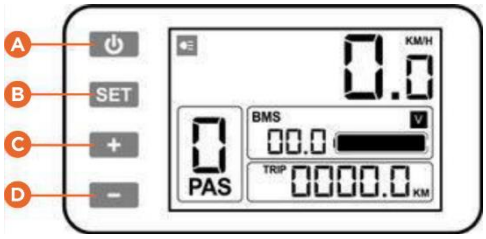
Below the display, you will find a USB port (A) where, for example, a phone or navigation device could be charged during cycling. Charging only works when you press and hold the ''**M**'' key and the '**+**' key for two seconds. This will activate the USB port.



C500B Display

Turn on the display

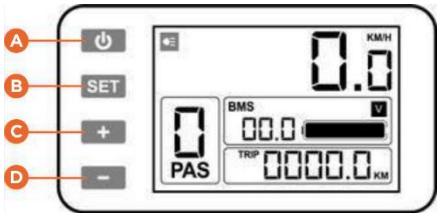
Press the "⏻" button (A) on the left side of the display to turn on the bicycle's electrical circuit. Note that the battery should already be powered on. A menu appears on the display; the electrical circuit is switched on.



(A) On/off button display and light switch
(B) Menu view
(C) Increase motor support
(D) Decrease motor support

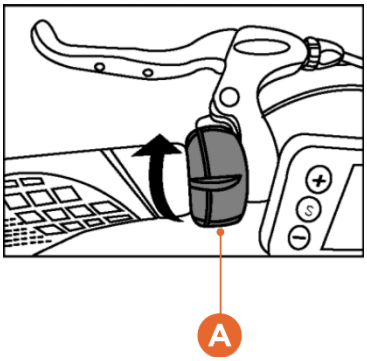
Turn bicycle lights on and off

Press the "⏻" button (A) to turn on the bicycle lights. The light symbol appears on the display. Press the "⏻" button (A) again to turn off the bicycle lights.



Thumb lever walking assist

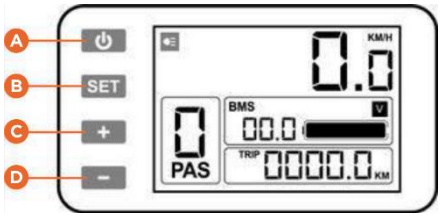
The walking assist is activated by pushing the thumb lever (A) forward at a standstill, providing support up to 6 km per hour. (Note: the walking assist via the thumb lever does not work when the bicycle is in support level "0".) The walking assist will also be activated when the "– " button on the display is pressed for a few seconds.



Note: when using the thumb lever while cycling, the electrical support goes directly to its maximum (25km/h).

Switch between the 9 levels of support

The electrical support has 9 levels. These are displayed at the top left of the display. These 9 levels can be operated by briefly pressing the "**+**" (C) and "**–**" (D) buttons.

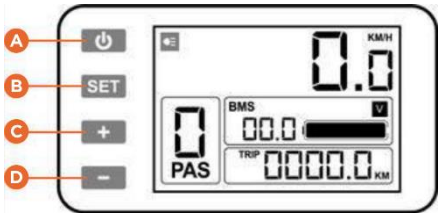


Additional display options

By pressing the ''**SET**'' button sequentially, you can browse through various information at the bottom of the display: total km/miles mode (ODO), trip reading (TRIP), and cycling time (TIME).

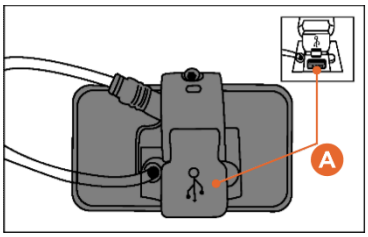
Reset trip reading

Press and hold the "**SET**" key (B) for a few seconds until another menu appears. Then press the "**–**" key (D) once. The trip mode has now been reset. Press the "**SET**" button (B) again to return to the default menu.



USB port

Below the display, you will find a USB port (A) where, for example, a phone or navigation device could be charged during cycling. Charging only works when you press and hold the ''**SET**'' key and the ''**+**'' key for two seconds. This will activate the USB port.



The operation of the electrical support

The bicycle functions generally on PAS (pedal assistance) utilizing a magnet-rotation sensor. This means that the electrical assistance starts when the pedals rotate. In addition, a thumb lever is located on the handlebar, which can activate the maximum assistance, apart from assistance levels 1 to 9. As long as the thumb lever has a forward position (during pedal rotation), the motor will give the maximum assistance, comparable with assistance level 9 on the display.

Support is interrupted when:

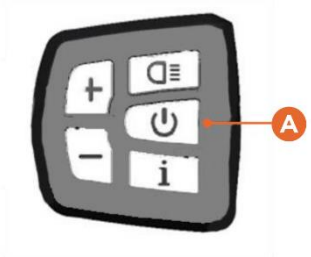
- The pedals stop rotating;
- the brakes are being used;
- the thumb lever is released when in use.

Mid-drive motor control system

Bafang mid-drive motor

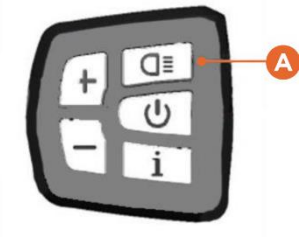
Control Panel

The display's control panel is located on the left side of the steering wheel. Press and hold the "⏻" button (A) for a few seconds to turn on the display.



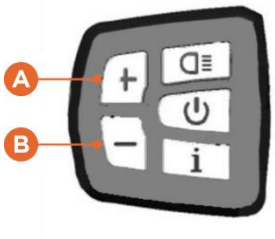
Bicycle Lights

The bicycle lights turns on automatically at dusk or manually by pressing the light button (A) for two seconds; this also applies to turning off the bicycle lights. When the bicycle lights are operated manually, the sensor, which is located on the backside of the display, is switched off until the moment the display is switched on again. The light symbol appears on display to show the lights are switched on.



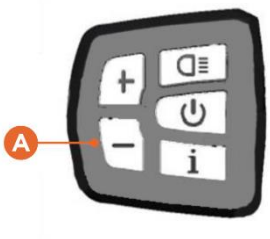
Support modes

You can choose five support modes with the ''+'' (A) and ''–'' (B) buttons. The modes are displayed at the bottom of the display.



Walking assist

The walking assist is switched on by holding down the ''–'' button (A). The word 'walk' will appear on the screen, and the bicycle will provide support up to 6 km/h. The walking assist switches off when you release the ''–'' button.



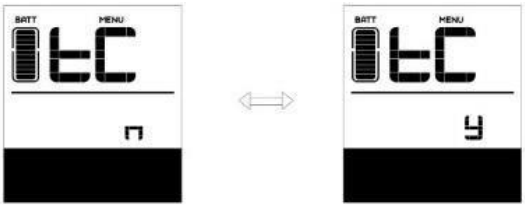
Additional display options

By pressing the information button (A) sequentially, you can browse through various information:

TOTAL = Total mileage
TRIP = Trip reading
RANGE = Range in selected support mode
MAX = Maximum speed

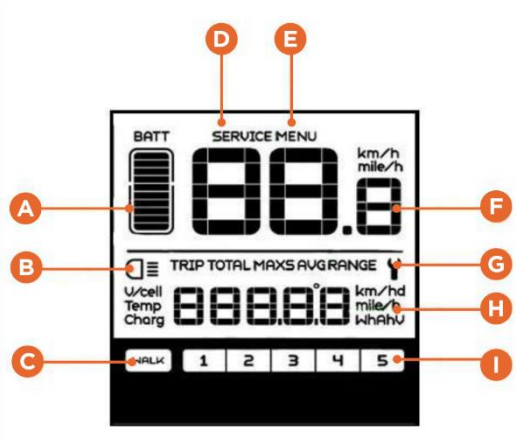
Resetting trip reading

Press the information key (A) twice in a row, a menu will appear where the letter "**n**" will be displayed. When the "**+**" key is pressed, the "**n**" will change to a "**y**." Then wait eight seconds for the display to return to the home screen. The trip mode has now been reset.



Display symbols

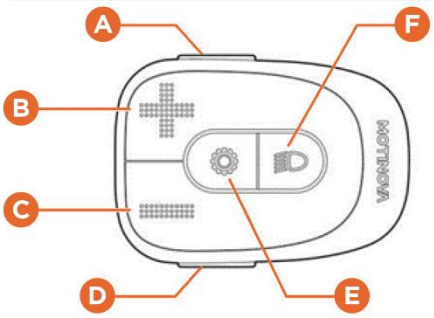
(A) Battery indication
(B) Lights
(C) Walking assist
(D) Service notification
(E) Menu
(F) Speed
(G) Error symbol
(H) Mileage
(I) Support mode



Motinova mid-drive motor

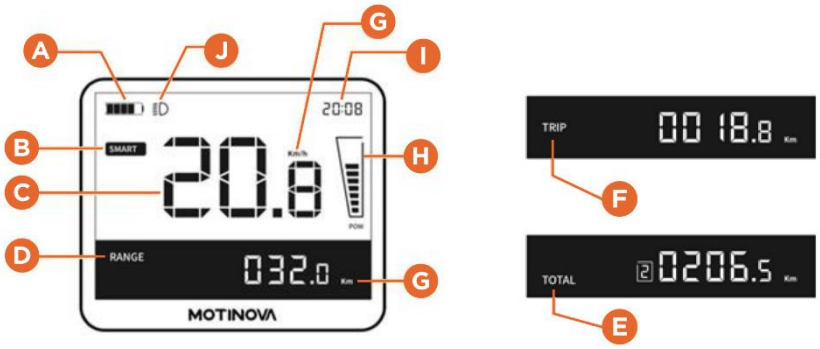
Control panel

(A) On/off button display
(B) Increase support (keep pressed for two seconds for automatic switching between support modes)
(C) Decrease support
(D) Walking assist
(E) Settings
(F) Lights



Display symbols

(A) Battery capacity
(B) Support mode
(C) Speed indication
(D) Range
(E) Total mileage
(F) Trip reading
(G) Speed unit
(H) Power
(I) Time
(J) Light symbol



System time

You can adjust the system time in the following way (the bicycle must be stationary):

1. Press and hold the "**Settings**" button for longer than 1.5 seconds.
2. In the settings mode, you can press the "**+**" or "**–**" key to select "**hour**" or "**minute**."
3. To adjust a value, briefly press the "**Settings**" key. After this, the value of "**hour**" or "**minute**" flashes.
4. The value can be adjusted with the "+" or "–" key.
5. By pressing the "**Settings**" button, the change will be saved.
6. After the adjustment, you can exit the settings mode by pressing and holding the "**Settings**" button for more than 1.5 seconds.

Speed unit

There are two possible settings for the speed unit, km/h or mile/h. If the setting changes, the values are automatically adjusted. You can adjust the speed unit in the following way (the bicycle must be stationary):

1. Press and hold the "**Settings**" button for longer than 1.5 seconds.
2. In the settings mode, you can press the "**+**" or the "**–**" button to select the "**speed unit**."
3. Then the "**Settings**" button should be pressed to confirm the desired flashing symbol.
4. The value can be adjusted with the "+" or "–" key.
5. By pressing the "**Settings**" button, the change will be saved.
6. After the adjustment, you can exit the settings mode by pressing and holding the "**Settings**" button for more than 1.5 seconds.

Reset trip reading

The trip distance can be deleted, but the total mileage cannot be erased. This operation works as follows:

1. Press and hold the "**Settings**" button for longer than 1.5 seconds.
2. In the setting mode, you can press the "**+**" or the "**–**" button to select the "**trip mode**."
3. Then press the "**Settings**" button to confirm the desired flashing symbol.
4. The trip distance will be deleted by holding the "–" key for more than 1.5 seconds (this action is irreversible).
5. By pressing the "**Settings**" button, the change will be saved.
6. After the adjustment, you can exit the settings mode by pressing and holding the "**Settings**" button for more than 1.5 seconds.

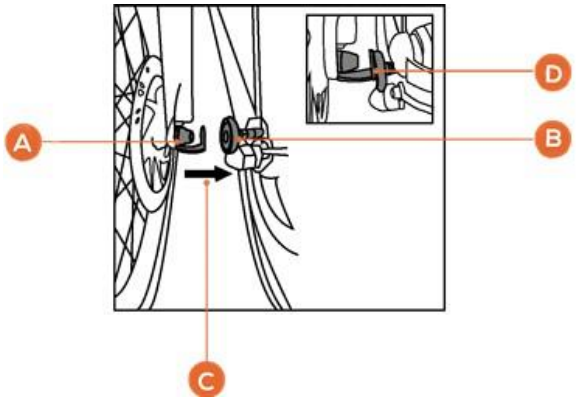
Scamper, Ambling, and Sketch Nestor

Unfolding the bicycle

Magnetic frame lock (Scamper and Ambling)

Push the wheels away from each other to unlock the magnetic frame lock.

(A) Metal locking plate
(B) Magnet
(C) Locking direction
(D) Locked position

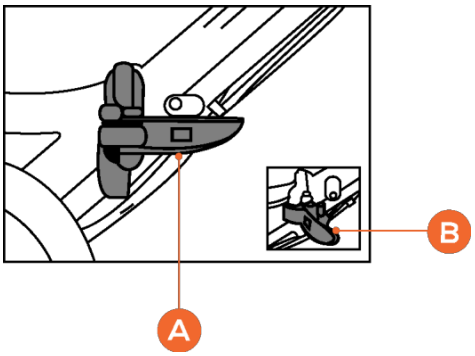


Unfolding the Frame (Scamper and Ambling)

Spread the front and back parts of the frame until the frame is straight and the hinge is closed.

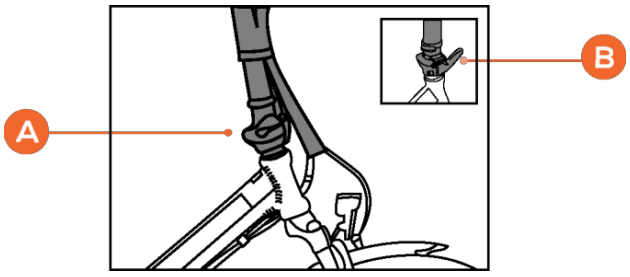
Securing the frame clamp (Scamper and Ambling)

Secure the frame clamp (A + B) by clamping the hook behind the frame's rear part, and then pushing the clamp against the front part of the frame.
Press the plastic locking cap onto the frame clamp.



Unfolding and securing the handlebar

Fold the steering column upwards (A) and secure it with the handlebar clamp (B). Make sure that the round head screw snaps well into the handlebar clamp.
Secure the handlebar clamp by turning the locking ring into the handlebar clamp (located around the steering column at the height of the handlebar clamp).

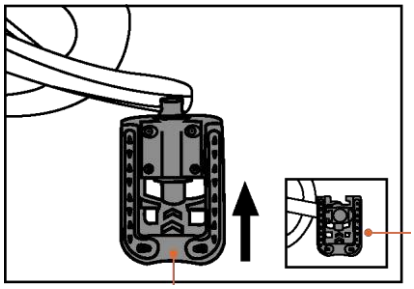


Unfolding the pedals

Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

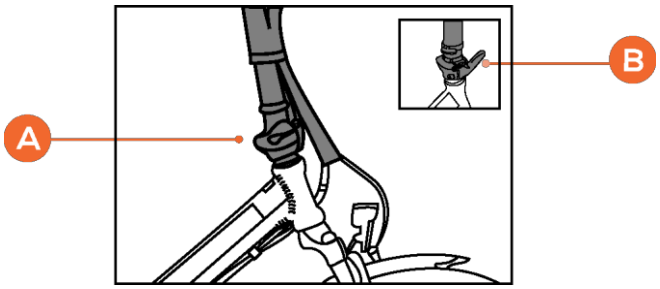
Folding the pedals



Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

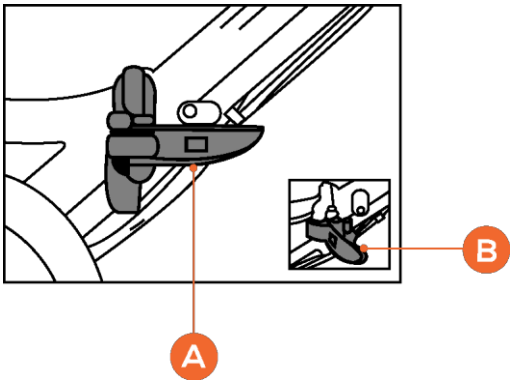
Note: position the pedals so they cannot damage the frame when the bicycle is folded.

Handlebar clamp



First, turn the plastic locking ring of the handlebar clamp. Pull the clamp (B) away from the handlebar hinge, then fold the steering column (A) downward.

Frame clamp (Scamper and Ambling)



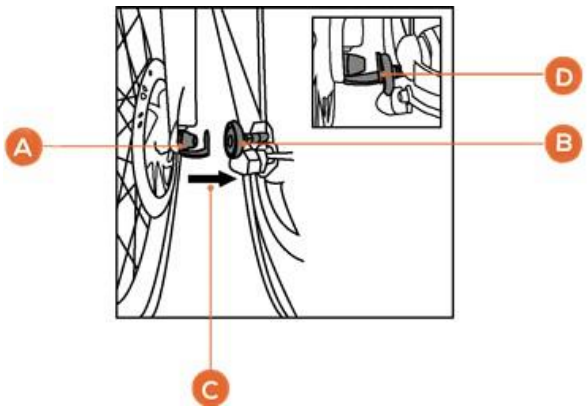
Open the middle hinge mount (on the right side of the frame tube) by raising the plastic locking cap. Now pull the clamp (A + B) outwards to loosen it. The frame is now open and ready to be folded.

Note: do not force the frame clamp to loosen; the system works with medium force.

Folding the frame (Scamper and Ambling)

Stand to the left of the bicycle, fold the stand and then fold the front wheel towards the rear wheel such that the wheels are positioned close together. At the bottom side, a triangular bracket is mounted on which the bicycle can stand when folded.

Note: the stand of the S600 (XL) with Bafang mid-drive motor should be unfolded so that the bicycle can stand on it when folded.



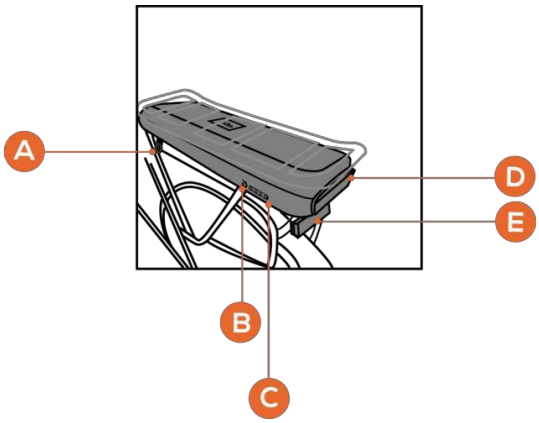
Locking folded position (Scamper and Ambling)

Secure the bicycle's wheels by pushing them together so the magnet and metal locking plate (A + B = D) attract each other (C).

The Battery

Turning on the battery and reading the battery indication

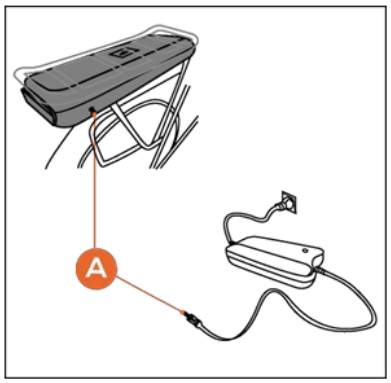
The battery of these Lacros bicycles is located in the luggage carrier. Turn on the electrical system using the button on the left side of the battery (B). Please note you have only activated the battery, and the display is still switched off. The number of lights (C) gives a rough indication of the battery charge. **You can turn off the battery by pressing and holding the power button for four seconds until the display switches off.**



(A) Lock
(B) Power button
(C) Battery charge indication
(D) Brake light
(E) Rear light

How to charge the battery

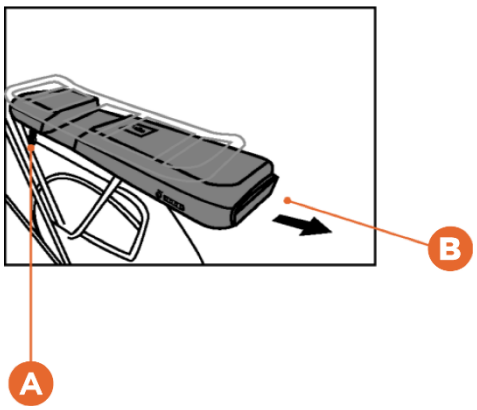
The battery has one charging point (A) on the right side. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.



Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.

Removing the battery

The battery can be removed from the luggage carrier by turning the key of the battery tray lock (A) to the left and then gently pulling the battery (B) backward. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.

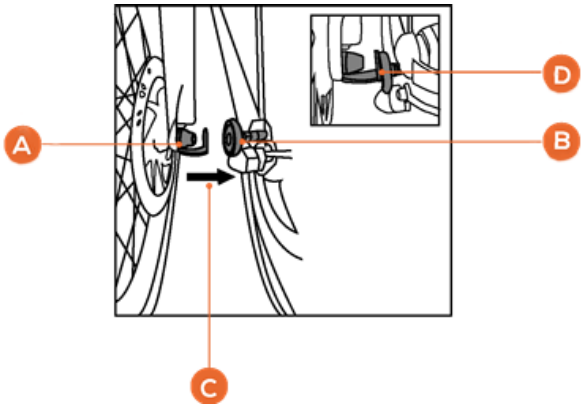


Canter

Unfolding the bicycle

Magnetic frame lock

Push the wheels away from each other to unlock the magnetic frame lock.



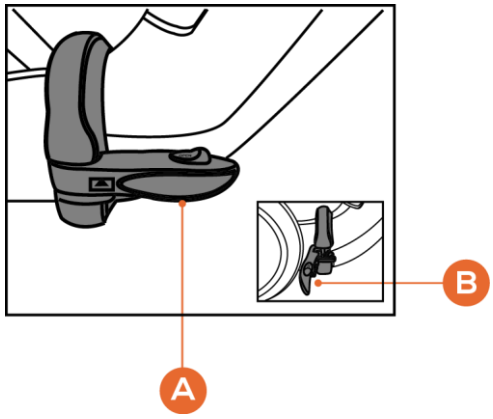
(A) Metal locking plate
(B) Magnet
(C) Locking direction
(D) Locked position

Unfolding the frame

Spread the front and back parts of the frame until the frame is straight and the hinge is closed.

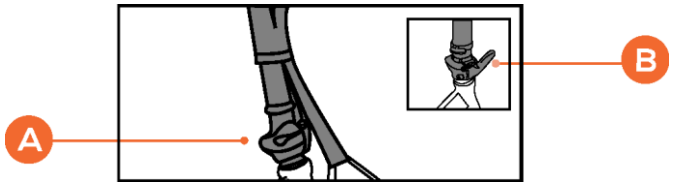
Securing the frame clamp

Secure the frame clamp (A +B) by pushing it against the frame. Make sure the round head screw snaps well into the frame clamp.



Unfolding and securing the handlebar

Fold the steering column upwards (A) and secure it with the handlebar clamp (B). Make sure that the round head screw snaps well into the handlebar clamp.
Secure the handlebar clamp by turning the locking ring into the handlebar clamp (located around the steering column at the height of the handlebar clamp).



Unfolding the pedals

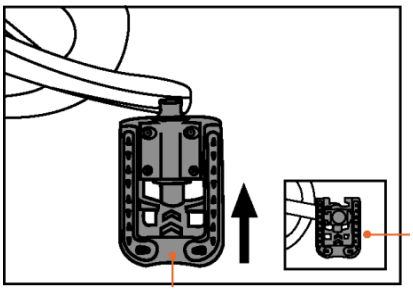
Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

Folding the pedals

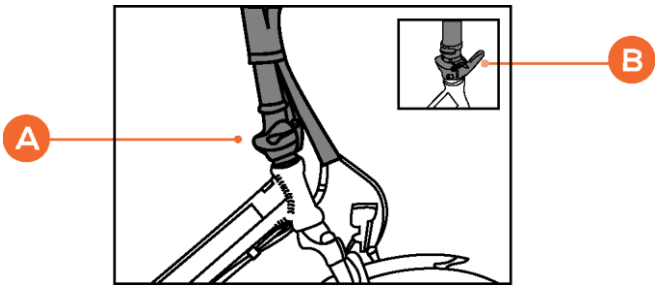
Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

Note: position the pedals so they cannot damage the frame when the bicycle is folded.



Handlebar clamp

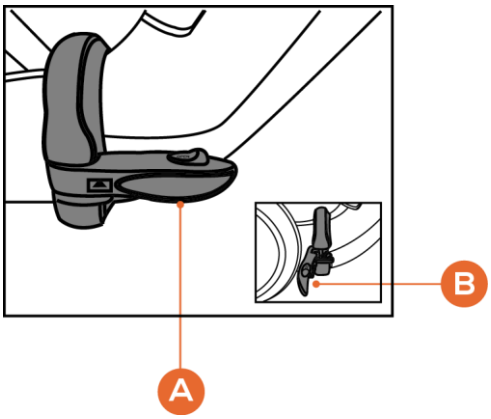
First, turn the plastic locking ring of the handlebar clamp. Pull the clamp (B) away from the handlebar hinge, and then fold the steering column (A) downward.



Frame clamp

Unlock the middle clamp by sliding the slider in the direction of the arrow. Now pull the clamp (A + B) outwards to loosen it. The frame is now open and ready to be folded.

Note: do not force the frame clamp to loosen; the system works with medium force.

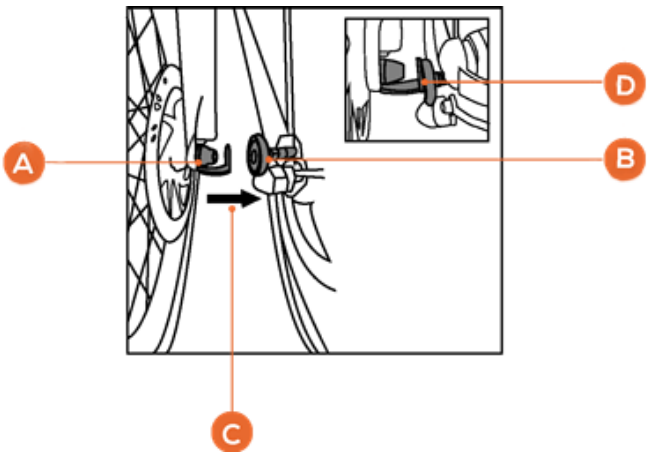


Folding the frame

Stand to the left of the bicycle, fold the stand and then fold the front wheel towards the rear wheel such that the wheels are positioned close together. At the bottom side, a triangular bracket is mounted on which the bicycle can stand when folded.

Locking folded position

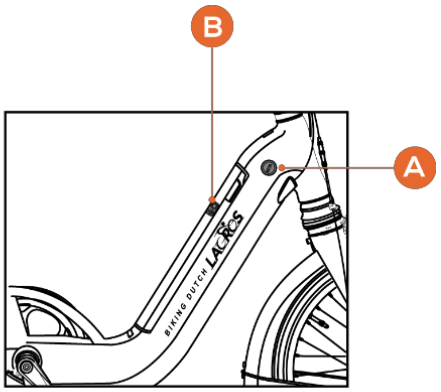
Secure the wheels of the bicycle by pushing them together so the magnet and metal locking plate (A + B = D) attract each other (C).



The Battery

Turning on the battery

The battery of the Lacros Canter is located in the frame. Turn on the electrical system using the button on the top side of the battery (B). Please note you have only activated the battery, and the display is still switched off.

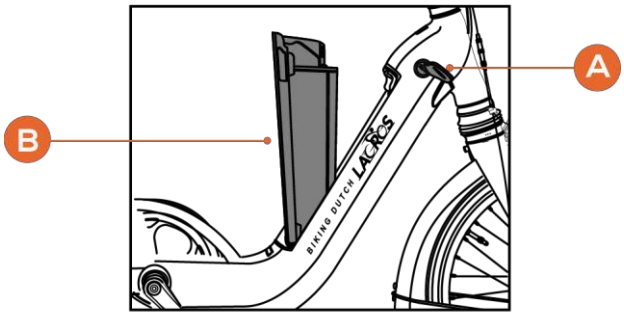


(A) Lock
(B) Power button

How to charge the battery

The battery has one charging point on the left side. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.

Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.



Removing the battery

The battery can be removed from the frame by first unlocking the battery with the key (A) and then gently pulling the battery (B) backward. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.

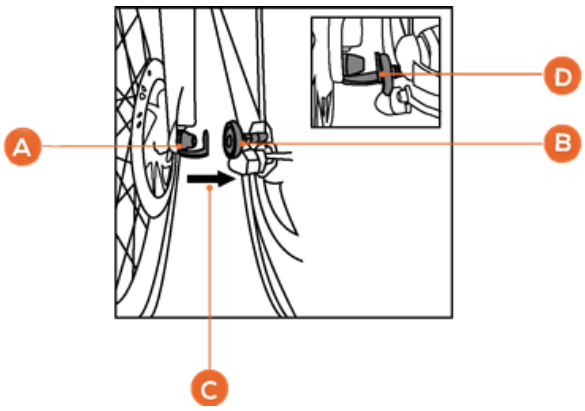
Trotter

Unfolding the bicycle

Magnetic frame lock

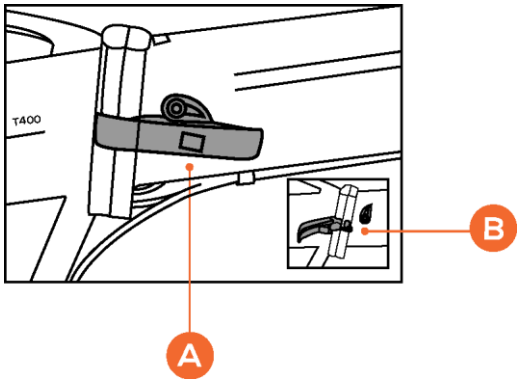
Push the wheels away from each other to unlock the magnetic frame lock.

(A) Metal locking plate
(B) Magnet
(C) Locking direction
(D) Locked position



Unfolding the frame

Spread the front and back parts of the frame until the frame is straight and the hinge is closed.

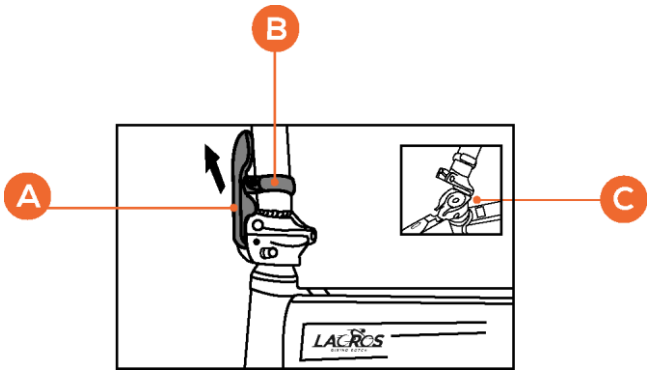


Securing the frame clamp

Secure the frame clamp (A +B) by pushing it against the frame. Make sure the round head screw snaps well into the frame clamp.
Press the plastic locking cap into the frame clamp.

Unfolding and securing the handlebar

Fold the steering column upwards (C) and secure it with the handlebar clamp (A). Make sure that the round head screw snaps well into the handlebar clamp.
Secure the handlebar clamp by turning the locking ring (B) into the handlebar clamp (located around the steering column at the height of the handlebar clamp).



Unfolding the pedals

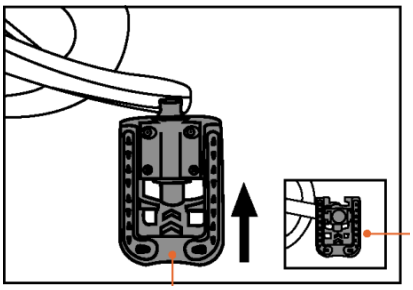
Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

Folding the pedals

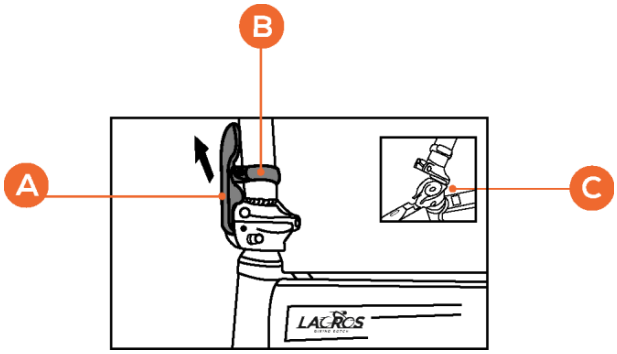
Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

Note: position the pedals so they cannot damage the frame when the bicycle is folded.



Handlebar clamp

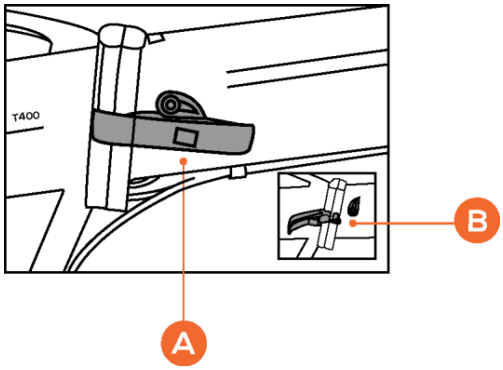
First, turn the plastic locking ring of the handlebar clamp. Pull the clamp (A) away from the handlebar hinge, and then fold the steering column (C) downward.



Frame clamp

Unlock the middle clamp by turning the plastic locking cap. Now pull the clamp (A + B) outwards to loosen it. The frame is now open and ready to be folded.

Note: do not force the frame clamp to loosen; the system works with medium force.

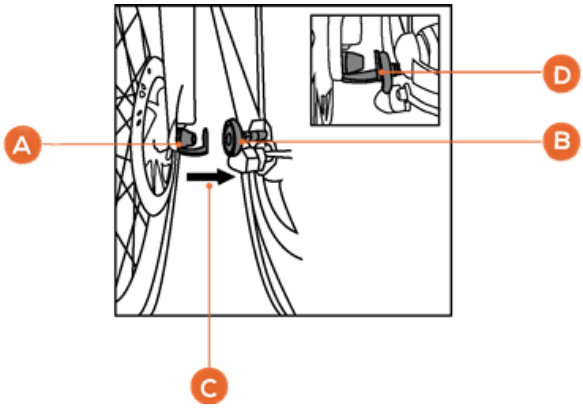


Folding the frame

Stand to the left of the bicycle, fold the stand and fold the front wheel towards the rear wheel so that the wheels are close together. At the bottom side, a triangular bracket is mounted on which the bicycle can stand when folded.

Locking folded position

Secure the bicycle's wheels by pushing them together so the magnet and metal locking plate (A + B = D) attract each other (C).

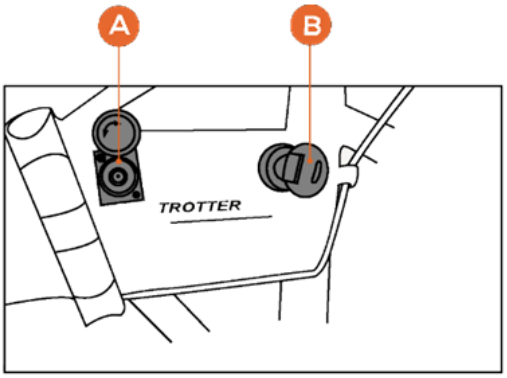


The Battery

Turning on the battery

The battery of the Lacros Trotter is located inside the frame. Turn on the electrical system using the key on the left side of the bicycle. Please note you have only activated the battery, and the display is still switched off.

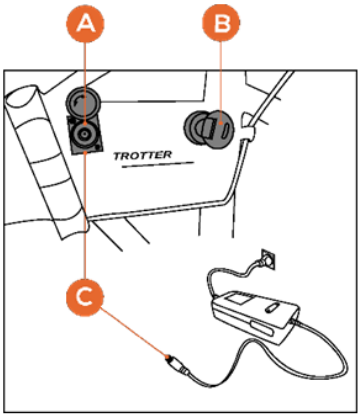
(A) Charging point
(B) Power on/off



How to charge the battery

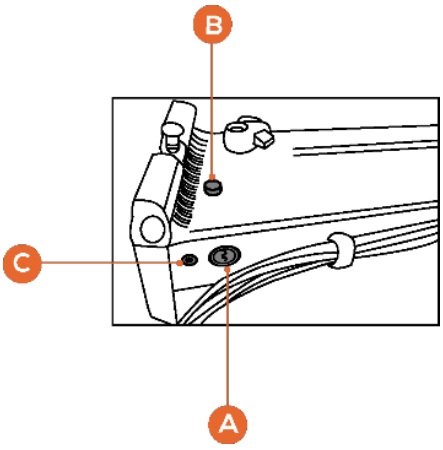
The battery has one charging point (A) on the left side. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.

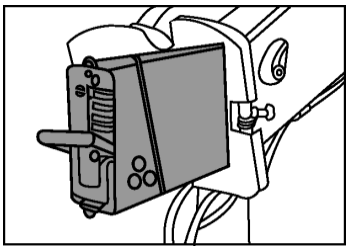
Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.



Removing the battery

First step is to fold the bike. The battery can be removed from the frame by unlocking the battery with the key (A) and then gently pulling the battery (B) backward. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.



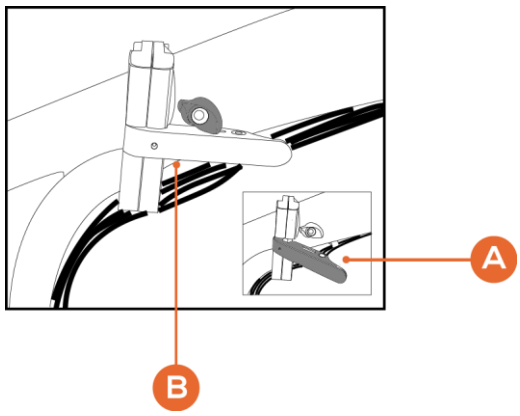


Mustang

Unfolding the bicycle

Unfolding the frame

Spread the front and back parts of the frame until the frame is straight, and the hinge is closed.

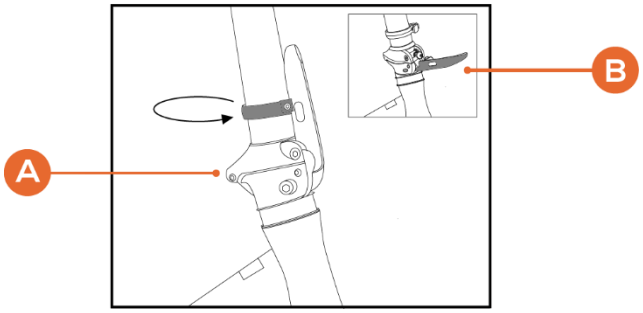


Securing the frame clamp

Secure the frame clamp (A +B) by pushing it against the frame. Make sure the round head screw snaps well into the frame clamp.
Press the plastic locking cap into the frame clamp.

Unfolding and securing the handlebar

Fold the steering column upwards (A) and secure it with the handlebar clamp (B). Make sure that the round head screw snaps well into the handlebar clamp.
Secure the handlebar clamp by turning the locking ring into the handlebar clamp (located around the steering column at the height of the handlebar clamp).



Unfolding the pedals

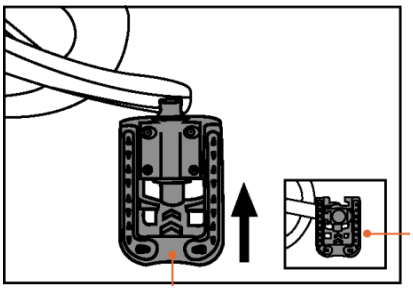
Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

Folding the pedals

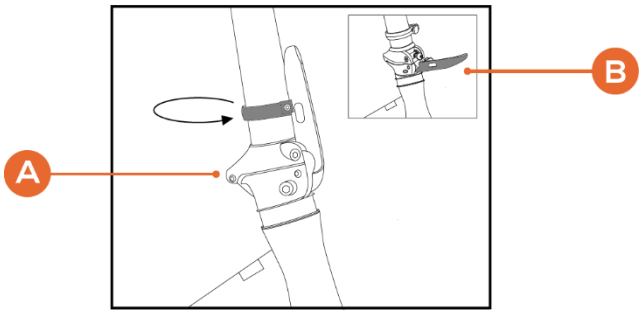
Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

Note: position the pedals so they cannot damage the frame when the bicycle is folded.



Handlebar clamp

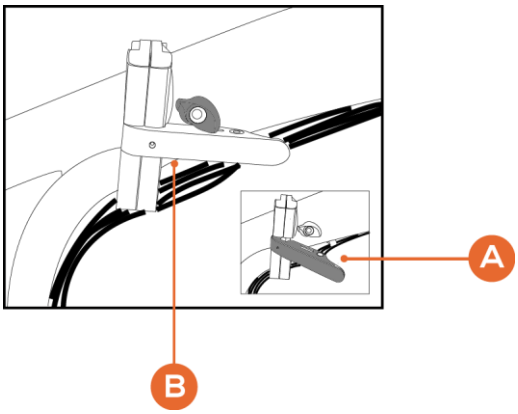
First, turn the plastic locking ring of the handlebar clamp. Pull the clamp (B) away from the handlebar hinge, and then fold the steering column (A) downward.



Frame clamp

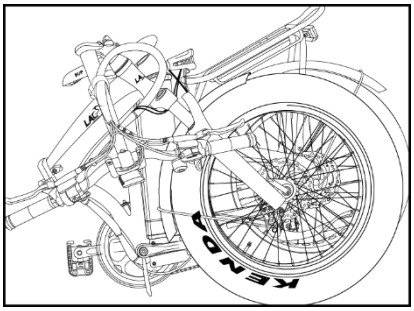
Unlock the middle clamp by turning the plastic locking cap. Now pull the clamp (A + B) outwards to loosen it. The frame is now open and ready to be folded.

Note: do not force the frame clamp to loosen; the system works with medium force.



Folding the frame

Stand to the left of the bicycle, fold the stand and fold the front wheel towards the rear wheel so that the wheels are close together. At the bottom side, a triangular bracket is mounted on which the bicycle can stand when folded.

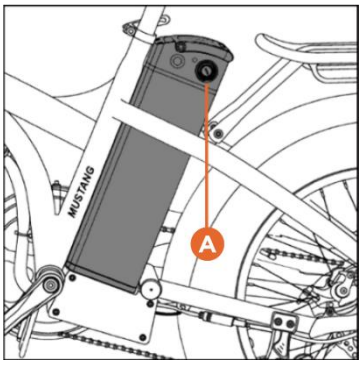


The Battery

Turning on the battery and reading the battery indication

The battery of the Lacros Mustang is located behind the saddle. Turn on the electrical system by turning the key (A) to the right. Please note you have only activated the battery, the display is still switched off. The number of lights on top of the battery gives a rough indication of the battery charge. **You can turn off the battery by turning the key to the left.**

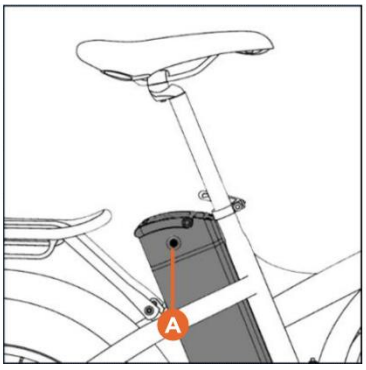
(A) Lock + battery on/off switch



How to charge the battery

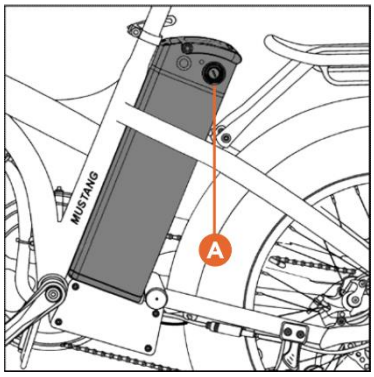
The battery has one charging point (A) on the right side. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.

Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.



Removing the battery

The battery can be removed from the holder by pressing the key (A) and turning it to the left. Now you can gently pull the battery upwards. Before you do this, remove the seat post with the saddle from the bicycle. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.

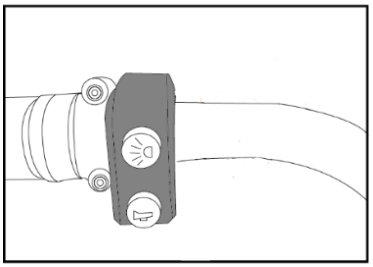


Turning the bicycle lights on and off

Press the red button to switch on/off the bicycle lights.

Horn

Use the green button to activate the horn.

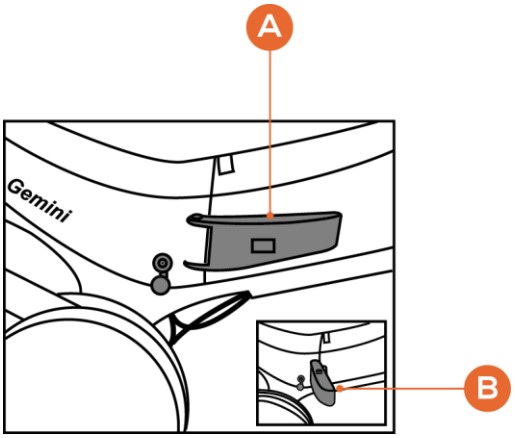


Gemini

Unfolding the bicycle

Unfolding the frame

Spread the front and back parts of the frame until the frame is straight, and the hinge is closed.

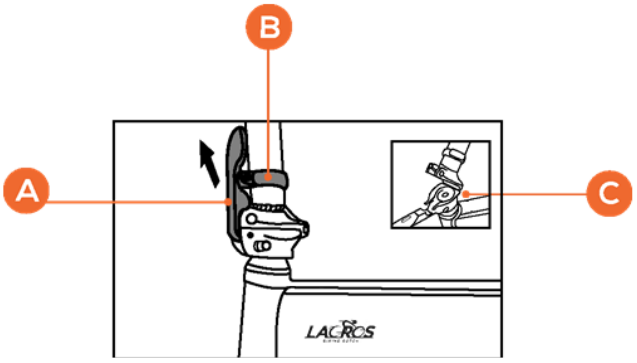


Securing the frame clamp

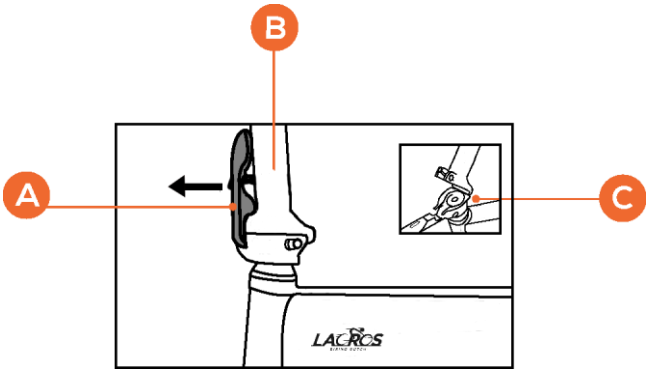
Secure the frame clamp (A +B) by pushing it against the frame. Make sure the round head screw snaps well into the frame clamp.

Unfolding and securing the handlebar

Fold the steering column upwards (A) and secure it with the handlebar clamp (B). For the Gemini G200/G400, ensure that the round head screw snaps well into the handlebar clamp. **Secure the handlebar clamp by turning the locking ring (B) into the handlebar clamp, located around the steering column at the height of the handlebar clamp. (This does not apply to the Gemini Action models)**



Handlebar clamp Gemini G200/G400



Handlebar clamp Gemini Action

Unfolding the pedals

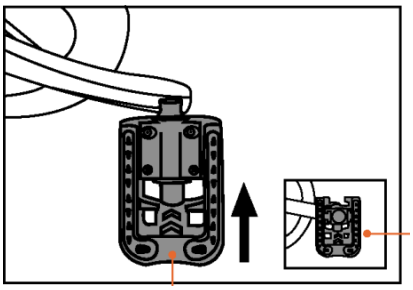
Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

Folding the pedals

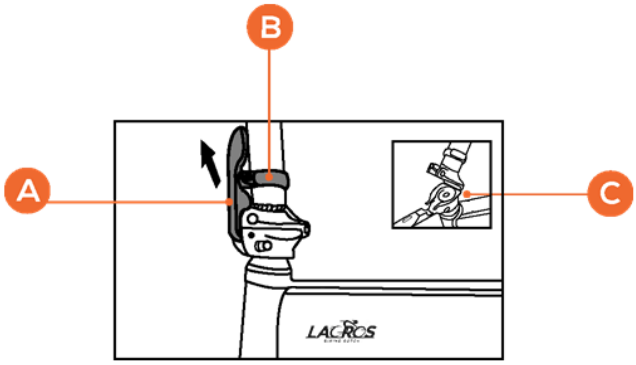
Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

Note: position the pedals so they cannot damage the frame when the bicycle is folded.



Handlebar clamp

First, turn the plastic locking ring of the handlebar clamp. (Not applicable to the Gemini Action models). Pull the clamp (A) away from the handlebar hinge, and then fold the steering column downward (C).

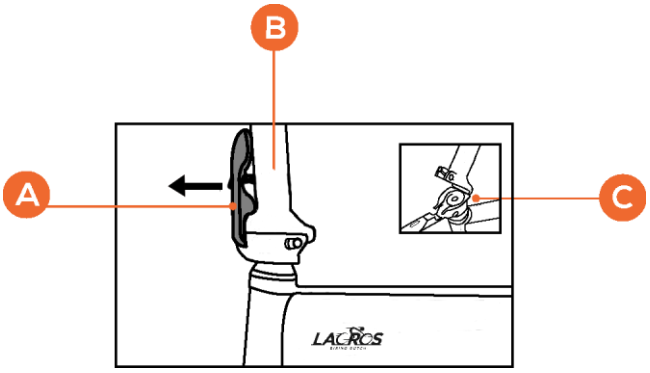


Handlebar clamp Gemini G200/G400

Frame clamp

Unlock the middle clamp by pushing the button on top of the clamp. Now pull the clamp (A + B) outwards to loosen it. The frame is now open and ready to be folded.

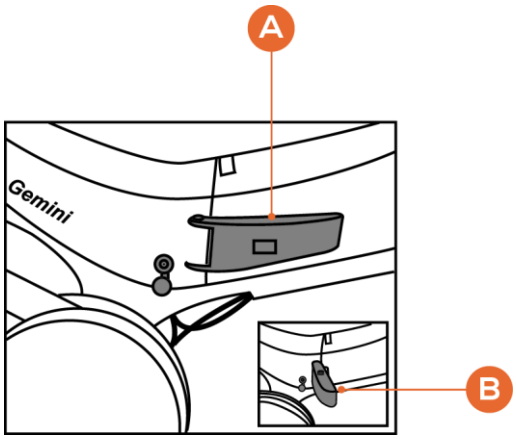
Note: do not force the frame clamp to loosen; the system works with medium force.



Handlebar clamp Gemini Action

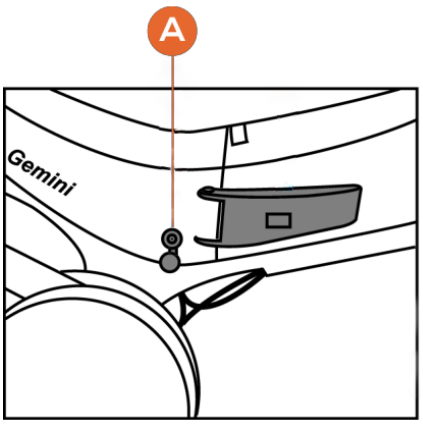
Folding the frame

Stand to the left of the bicycle, fold the stand and then fold the front wheel towards the rear wheel such that the wheels are positioned close together. At the bottom side, a bracket is mounted on which the bicycle can stand when folded.



The Battery

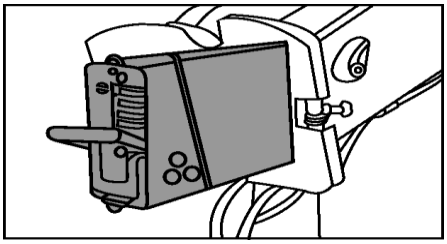
How to charge the battery



The battery has one charging point (A), located on the right side of the Gemini G200/G400 models and on the left side of the Gemini Action models. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.

Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.

Removing the battery

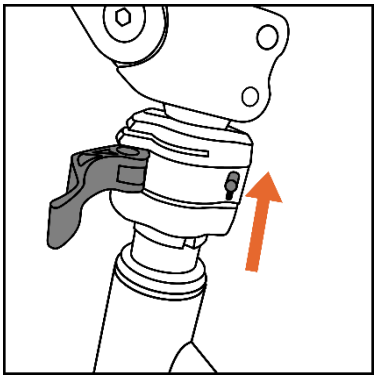


The battery can be removed from the frame by first unlocking the battery with the key and then gently pulling the battery backward. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.

Sierra

Turning the handlebar

The handlebar can be turned by loosening the clamp and pushing the pin upwards.



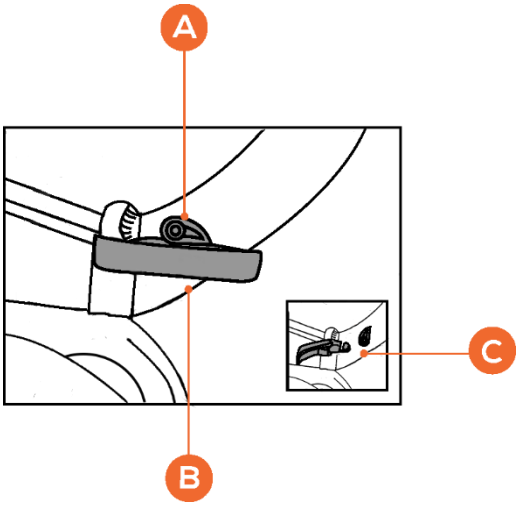
Unfolding the bicycle

Unfolding the frame

Spread the front and back parts of the frame until the frame is straight and the hinge is closed.

Securing the frame clamp

Secure the frame clamp (A +B) by pushing it against the frame. **Then press the plastic locking cap into the frame clamp.**



Unfolding the pedals

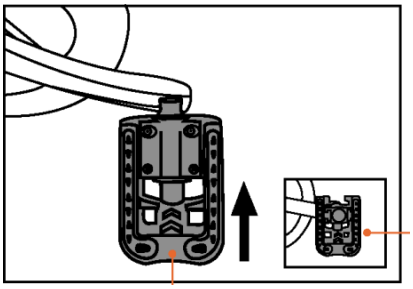
Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

Folding the bicycle

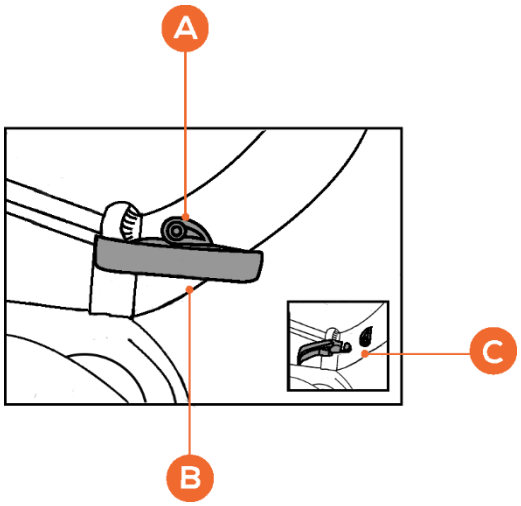
Folding the pedals

Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

Note: position the pedals so they cannot damage the frame when the bicycle is folded.



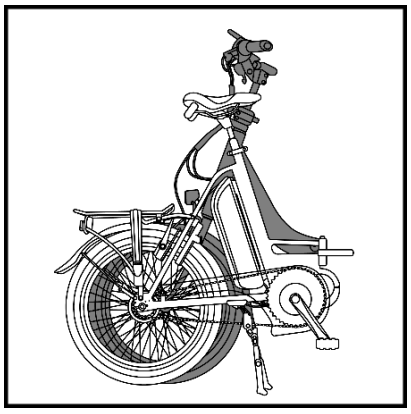
Frame clamp



Unlock the middle clamp by turning the plastic locking cap (A). Now pull the clamp (B + C) outwards to loosen it. The frame is now open and ready to be folded.

Note: do not force the frame clamp to loosen; the system works with medium force.

Folding the frame

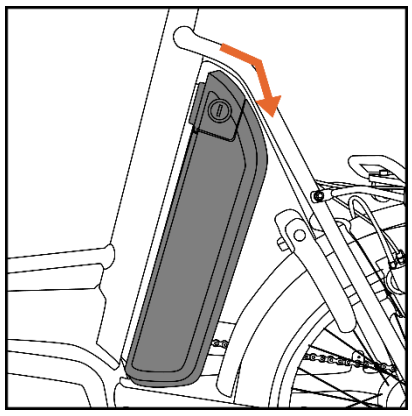


Stand to the left of the bicycle and fold the front wheel towards the rear wheel such that the wheels are positioned close together.

Note: make sure the stand is unfolded so the bicycle can stand on it when folded.

The Battery

Removing the battery



The battery of the Lacros Sierra is located behind the saddle. The battery can be removed from the bicycle by first turning the key to the battery tray lock. Now gently pull the battery backward. Ensure the battery is locked again when you put it back in. The battery could otherwise start vibrating while cycling.

How to charge the battery

The battery has one charging point on the left side. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green, and the charger may be disconnected.

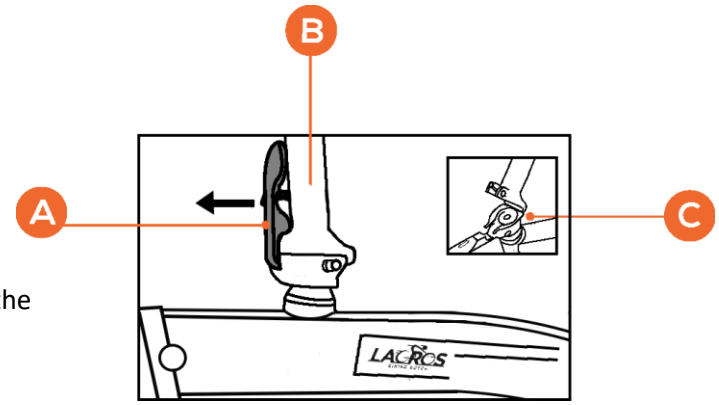
Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.

Papillon

Unfolding the bicycle

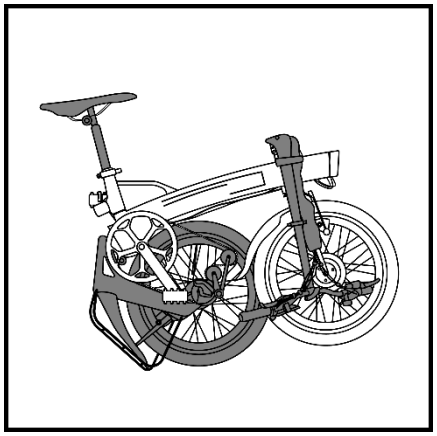
Unfolding and securing the handlebar

Fold the steering column upwards (A) and secure it with the handlebar clamp (B).



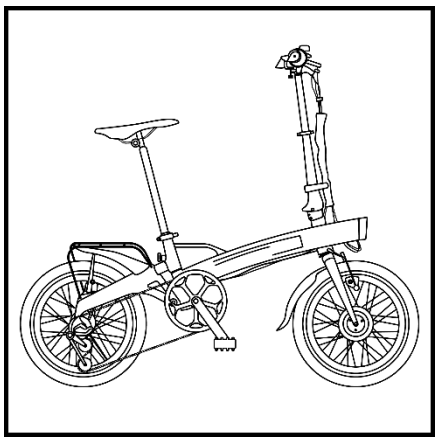
Unfolding the frame

Stand to the left of the bicycle and hold the bike at the handlebars and the curved bar in the middle. Then pull the bar upward and move the rear wheel backward. Do this in a fluid motion.



Unfolding the pedals

Unfold the pedals by pushing them into a horizontal position. The pedals will automatically go into the correct position.

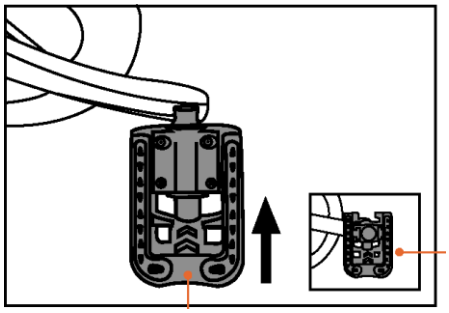


Folding the bicycle

Folding the pedals

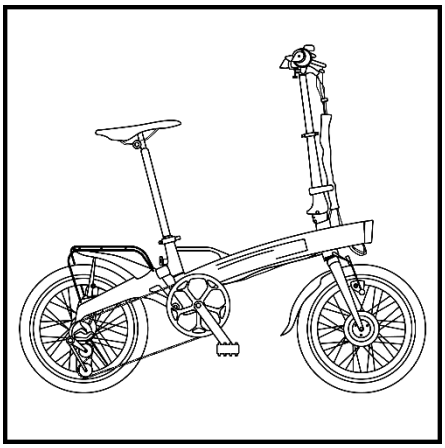
Fold the pedals by pushing the entire pedal toward the bicycle and then folding it.

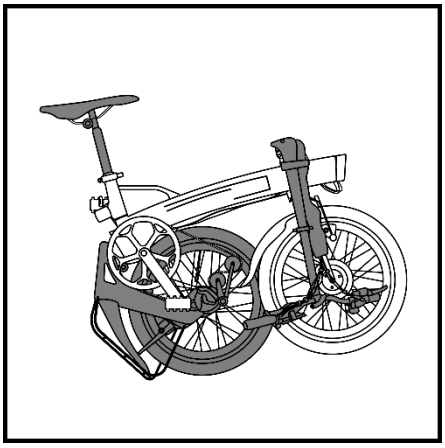
Note: position the pedals so they cannot damage the frame when the bicycle is folded.



Folding the frame

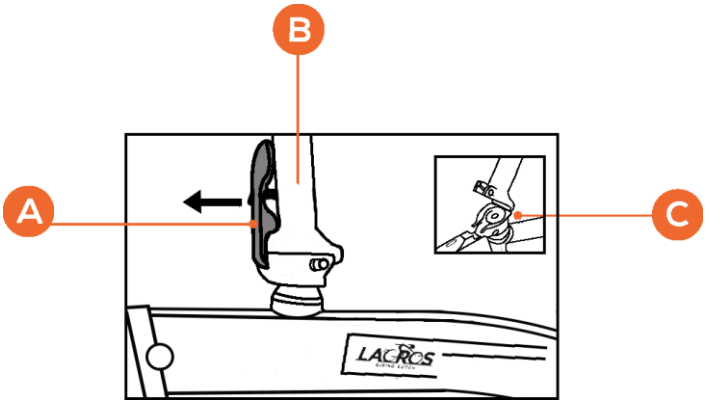
Stand to the left of the bicycle, fold the stand and then hold the bike at the handlebars and the curved bar in the middle. Now pull the bar upward and move the bicycle backward. The rear wheel and the front wheel now move toward each other. The luggage carrier should be used as a stand, as shown in the right image below.





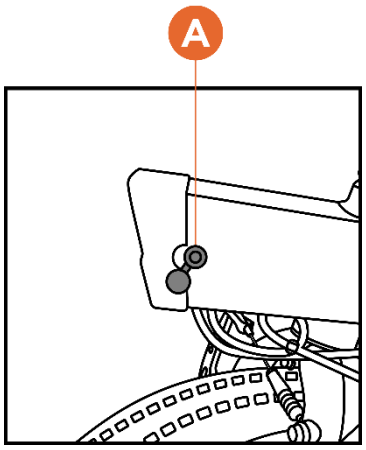
Handlebar clamp

Press the red button and pull the clamp (A) away from the handlebar hinge. Then fold the steering column downward (C).



The Battery

How to charge the battery



The battery of the Lacros Papillon is located inside the frame. The battery has one charging point (A) left behind the front lamp. Connecting the charger to the battery is recommended before plugging the 220V plug into the socket. The charger stops charging as soon as the battery is full. The light on the charger now turns green and the charger may be disconnected.

Indication on the charger:
Red = The battery is charging.
Green = The battery is fully charged.

Range

The range, the distance in kilometers that can be traveled with a fully charged battery, is influenced by several factors:

- Capacity (Ah) and voltage (V) of the battery;
- motor support level;
- load on the bicycle;
- amount of pedaling power delivered by the rider;
- ambient temperature (the capacity of the battery decreases below 10°C);
- wind force;
- tire pressure;
- condition of the road surface;
- age of the battery (the range decreases as the battery ages).

Battery & Charging

General

- The battery can be charged in and out of the bicycle. (n/a on the Papillon).
- Ensure the contact points of the battery and the battery bay are fully aligned when placing the battery back.

Charging advice

- Always charge the battery with the Lacros charger supplied with the bicycle. Do not use a different charger.
- The first two charges of a new battery should be more than 60%. To achieve this, wait the first two times to charge until the battery charge indicator on the display has dropped below 40%.
- After the battery is fully charged, charging stops automatically. Only when the red indicator light on the charger becomes visible again will the battery charge.
- After two full charges (first two charges), the battery does not have to be at least 40% empty again before charging. The battery can be connected to the charger repeatedly, even after short trips.
- The battery remains in good condition when you recharge the bicycle after each use, regardless of the distance.
- The warranty on the battery expires if a deep discharge is detected (this can only happen if you leave the battery on and put it away for a long time without recharging it).
- In case of long-term storage: fully charge the battery, disconnect the battery from the charger and the bicycle, and turn off the battery. (Turning off the battery is impossible for the Trotter, Gemini, and Papillon models.) The battery is switched off when your bicycle's display turns off.
- Charge the battery at least once every two months.
- The battery performs less below 10 °C, it then has less capacity, and you will be able to cycle fewer kilometers on a single battery charge.

Warnings

Please read the warnings below carefully.

- Do not expose the battery to fire or heat.
- Battery operating temperature: 5°C~40°C
- Battery storage temperature: -20°C~60°C
- Do not drop the battery or damage it.
- Do not submerge the battery in water or any other liquid.
- Keep the battery away from children.
- Never open the battery without permission from Shinga B.V. The battery is provided with a seal. The warranty is violated if the seal is broken without the explicit consent of Shinga B.V.
- Do not charge the battery in direct sunlight or below 0°C.
- Read the charger label carefully.
- Do not put liquids or metal inside the charger.
- Do not connect the charger to the battery with wet hands.
- Do not touch the charger in case of lightning.
- Do not use the charger in a very humid environment.
- Do not use the charger for anything other than charging the corresponding battery.
- Ensure good ventilation for the battery and charger when the charger is in use.
- Do not connect the charger to a power outlet when the charger is not in use.

Safety rules

General

- Please read the supplied manual of your bicycle carefully before your first use.
- Check the screw connections and condition of all parts of your bicycle before each use.
- Our bicycles are intended for use on public roads only and are not designed for competitions, stunts, jumping, or off-road use.
- Strictly adhere to the traffic rules.
- The maximum speed of the vehicle is 25 Km/h.
- Loose or long garments could pose a danger when cycling.
- Be careful not to get caught between moving parts.
- Note that disc brakes, calipers, and pads could be hot after using disc brakes.
- Note that rims and brake pads could be hot after using rim brakes.
- Do not cycle with loose and/or missing spokes.
- Keep kids away from moving parts.
- Never disassemble the bicycle yourself. If a part replacement is necessary, please get in touch with your Lacros dealer or Shinga B.V. for the relevant part. We always recommend using original parts.
- Do not lend your bicycle to people with little experience with an electric bike.
- Do not drive under the influence of mind-altering substances.

- Never load the bicycle over its maximum carrying capacity.
- It is allowed to mount a child seat on the luggage carrier of the bicycle. Pay attention to the maximum carrying capacity of the luggage carrier and always follow the manufacturer's instructions for the child seat.
- Do not modify anything about your vehicle yourself. As a result, the warranty and liability will lapse. Maintenance, as described in this manual, is permitted. If you want to modify your bicycle, please first contact your Lacros dealer or Shinga B.V.
- If the front fork, steering column, or handlebar are bent after an accident, they may under no circumstances be bent back to their original position to prevent breakage. Contact your Lacros dealer or Shinga B.V. directly to have the damaged parts replaced.
- Rims are subject to wear and tear. Have your rim checked by your Lacros dealer or Shinga B.V. if it shows damage, pay specific attention to (small) cracks.
- Improper use of the bicycle can lead to dangerous situations.

Warning symbols

Figure 1: Handlebar or seat post

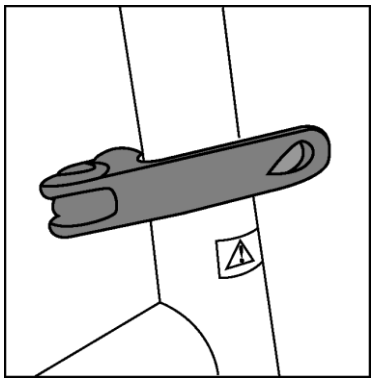


Figure 2: Handlebar or saddle clamp

- **Handlebar and seat post: see figure1.** A rippled line is engraved in the seat and handlebar post. This is the minimum length that the seat post should remain in the frame or the handlebar post in the steering column.
- **Handlebar and seat clamp: see figure2.** These clamps allow you to set the saddle and handlebars to the correct height. Make sure these clamps are securely fastened.

Your bicycle is equipped with several warning stickers. These stickers can be recognized by a triangle with an exclamation mark. The following stickers may be present on your bike:

Text on sticker	Additional explanation
CAUTION please read the owner's manual thoroughly before using this product	
Make sure the safety mark on the seat post always stays within the seat tube. Don't ride this bicycle as MTB-BMX-DJ	MTB = Mountain bike BMX = Bicycle Motocross DJ = Dirt Jump
WARNING for your own safety, make sure each folding hinge is locked before riding	

Attention. Turning these 2 screws is prohibited. It will lower lever sensitivity	
WARNING This bicycle is not designed for competition, stunting, jumping, or off-road use. Bicycling can be hazardous. Always wear a safety helmet and follow all local laws. Max load: read the manual. Please check the chain tension and turn off the power of the bicycle before use or pushing the bicycle to avoid accidentally triggering the booster sensor.	Booster sensor = Magnetic rotation sensor
WARNING Review and follow all safety instructions contained in the owner's manual. For your safety, never misuse, abuse of improperly install, maintain, or modify this part, always keep in mind safety first. CAUTION: This product is not recommended for downhill competition, stunt riding or any aggressive off-road riding.	

Warnings

Please read the warnings below carefully.

- Like all mechanical components, an EPAC, Electrically Power Assisted Cycle (electric bicycle), is subject to wear and tear and high voltages. Different materials and components can react to wear or stress fatigue in different ways. If the design life of a part is exceeded, it can suddenly fail, potentially injuring the driver. Any kind of cracking, scratching, or color changes in heavily loaded areas indicate that the service life of the part has been reached and that it needs to be replaced.
- For composite components, impact damage may be invisible to the user; the manufacturer will explain the consequences of impact damage and that in the event of a shock composite components must be returned to the manufacturer, for inspection or to be destroyed and replaced.
- Composite components are sensitive to high temperatures (heat radiation) in a closed environment.

Frame number

The frame number of the Gemini is located under the left crank to which the pedal is attached, and the frame number of the Papillon is located at the bottom of the bicycle at the level of the pedals. For all other models, the frame number can be found on the front of the bike. It is punched into the frame just above the front fork.

Maintenance

Your e-bicycle needs regular maintenance. Shinga B.V. or your Lacros dealer can advise you on optimal use and maintenance. If you have any questions or problems with your e-bicycle, don't hesitate to contact the Lacros dealer or Shinga B.V.

We recommend the first service of your bicycle after 1000 km. After this, we recommend you service the bike annually or every 2500 km. To extend the life of your bicycle, we recommend keeping the chain and derailleur clean. Lubricate your chain with chain oil once every 3 months. Check the screw connections regularly and tighten them if necessary. We advise you always to use original components for your safety if parts need to be replaced. These components are for sale at Shinga B.V. or your Lacros dealer.

For maintenance instructions, you can consult the Lacros by Shinga YouTube page, which can be found at www.youtube.com/ShingaBicycles. Here you will find, among other things, videos with instructions for adjusting your brakes, changing brake pads, and tensioning the bicycle chain.

Legal Requirements

According to European legislation, the described vehicle is an electric bicycle because the vehicle complies with the following rules:

- From 6 km/h, the support is only active when the user pedals himself;
- the support is active up to a maximum of 25 km/h;
- the maximum delivered power is equal to 250 Watts.

According to Dutch law, the described vehicle is a bicycle because the vehicle has the following parts:

- two independent, well-functioning brakes;
- front light with white or yellow light & rear light with red light and reflector;
- wheel reflector and/or reflective tires and/or reflective rims;
- pedals with yellow reflectors.

Environment

Following the environmental regulations for the intake and processing of batteries of the Dutch Ministry of VROM, we advise you always to return the battery to your Lacros dealer or Shinga B.V. They are obliged to collect the battery and take care of the further processing of the battery.

Technical specifications

Scamper S200/S400 (XL)

• Dimensions unfolded (L x W x H):	160x60x113cm (20")	173x60x128cm (24")
• Dimensions folded (L x W x H):	90x40x72cm (20")	90x40x80cm (24")
• Frame:	Aluminum	
• Motor type:	Rear hub motor	
• Motor voltage:	36V	
• Motor power:	250W	
• Sensor:	Magnet rotation	
• Battery type:	Lithium polymer (heat-resistant cells)	
• Battery Specifications:	36V, 10.4Ah/13Ah/17.5Ah	
• Range:	30-120km (10.4Ah/13Ah/17.5Ah)	
• Pedal assistance:	9 levels	
• Gears:	Shimano 7 derailleur	
• Brakes:	Disc brakes	
• Maximum load luggage carrier:	25 kg	
• Maximum load:	130 kg S200 (XL)	140 kg S400 (XL)
• Gross weight:	24 kg (20")	25.5 kg (24")
• Net weight (without battery and saddle):	19.5 kg (20")	21 kg (24")
• Wheel diameter:	20 inch	24 inch
• Maximum speed:	25 km/h	25 km/h

Scamper S600 (XL) with Bafang mid-drive motor

• Dimensions unfolded (L x W x H):	160x62x113cm (20")	173x66x128cm (24")
• Dimensions folded (L x W x H):	86x40x80cm (20")	95x40x88cm (24")
• Frame:	Aluminum	
• Motor type:	M400 Bafang mid-drive motor	
• Motor voltage:	36V	
• Motor power:	250W	
• Sensor:	Pedal force sensor with magnetic rotation sensor	
• Battery type:	Lithium polymer (heat-resistant cells)	
• Battery Specifications:	36V, 13Ah/17.5Ah	
• Range:	40-100km (13Ah/17.5Ah)	
• Pedal assistance:	5 levels	
• Gears:	Shimano 7 hub gear	
• Brakes:	Rollerbrake and disc brake	
• Maximum load luggage carrier:	25 kg	
• Maximum load:	130 kg	
• Gross weight:	27kg (20")	28.5kg (24")
• Net weight (without battery and saddle):	22.5kg (20")	24kg (24")
• Wheel diameter:	20 inch	24 inch
• Maximum speed:	25 km/h	25 km/h

Scamper S600 (XL) with Motinova mid-drive motor

• Dimensions unfolded (L x W x H):	160x63x115cm (20")	173x63x130cm (24")
• Dimensions folded (L x W x H):	90x40x72cm (20")	90x40x80cm (24")
• Frame:	Aluminum	
• Motor type:	CS500 Motinova mid-drive motor	
• Motor voltage:	36V	
• Motor power:	250W	
• Sensor:	Pedal force sensor with magnet rotation sensor	
• Battery type:	Lithium polymer (heat-resistant cells)	
• Battery specifications:	36V, 13Ah/17.5Ah	
• Range:	40-100km (13Ah/17.5Ah)	
• Pedal assistance:	5 levels	
• Gears:	Shimano 7 hub gear	
• Brakes:	Rollerbrake and disc brake	
• Maximum load luggage carrier:	25 kg	
• Maximum load:	130 kg	
• Gross weight:	26.5 kg (20")	28 kg (24")
• Net weight (without battery and saddle):	22 kg (20")	23.5 kg (24")
• Wheel diameter:	20 inch	24 inch
• Maximum speed:	25 km/h	25 km/h

Ambling A200/A400 (XL)

• Dimensions unfolded (L x W x H):	165x60x108cm (20")	170x60x120cm (24")
• Dimensions folded (L x W x H):	88x40x72cm (20")	92x40x80cm (24")
• Frame:	Aluminum	
• Motor type:	Rear hub motor	
• Motor voltage:	36V	
• Motor Power:	250W	
• Sensor:	Magnet rotation	
• Battery type:	Lithium polymer (heat-resistant cells)	
• Battery Specifications:	36V, 10.4Ah/13Ah/17.5Ah	
• Range:	30-120km (10.4Ah/13Ah/17.5Ah)	
• Pedal assistance:	9 levels	
• Gears:	Shimano 7 derailleur	
• Brakes:	Disc brakes	
• Maximum load luggage carrier:	25 kg	
• Maximum load:	130 kg A200 (XL)	140 kg A400 (XL)
• Gross weight:	23.5 kg (20")	24.5 kg (24")
• Net weight (without battery and saddle):	19 kg (20")	20 kg (24")
• Wheel diameter:	20 inch	24 inch
• Maximum speed:	25 km/h	25 km/h

Sketch Nestor

- Dimensions unfolded (L x W x H): 176x62x119cm
- Dimensions folded (L x W x H): 176x22x78cm
- Frame: Aluminum
- Motor type: CS500 Motinova mid-drive motor
- Motor voltage: 36V
- Motor power: 250W
- Sensor: Pedal force sensor with magnet rotation sensor
- Battery type: Lithium polymer (heat-resistant cells)
- Battery specifications: 36V, 13Ah/17.5Ah
- Range: 50-110km (13Ah/17.5Ah)
- Pedal assistance: 5 levels
- Gears: Shimano Nexus hub 8
- Brakes: Rollerbrake and disc brake
- Maximum load: 120 kg
- Gross weight: 24.5 kg
- Net weight (without battery and saddle): 19 kg
- Wheel diameter: 24 inch
- Maximum speed: 25 km/h

Canter C200

- Dimensions unfolded (L x W x H): 160x62x113cm
- Dimensions folded (L x W x H): 86x45x72cm
- Frame: Aluminum
- Motor type: Rear hub motor
- Motor voltage: 36V
- Motor power: 250W
- Sensor: Magnet rotation
- Battery type: Lithium polymer (heat-resistant cells)
- Battery Specifications: 36V, 13.6AH
- Range: 40-80km
- Pedal assistance: 9 levels
- Gears: Shimano 7 derailleur
- Brakes: Disc brakes
- Maximum load luggage carrier: 25 kg
- Maximum load: 130 kg
- Gross weight: 25 kg
- Net weight (without battery and saddle): 19 kg
- Wheel diameter: 20 inch
- Maximum speed: 25 km/h

Trotter T200/T400 (XL)

• Dimensions unfolded (L x W x H):	160x60x113cm (20")	165x60x108cm (24")
• Dimensions folded (L x W x H):	90x40x69cm (20")	100x40x78cm (24")
• Frame:	Aluminum	
• Motor type:	Rear hub motor	
• Motor voltage:	36V	
• Motor Power:	250W	
• Sensor:	Magnet rotation	
• Battery type:	Lithium polymer (heat-resistant cells)	
• Battery Specifications:	36V, 10.4Ah/13.6Ah	
• Range:	30-80km (10.4Ah/13.6Ah)	
• Pedal assistance:	9 levels	
• Gears:	Shimano 7 derailleur	
• Brakes:	Disc brakes	
• Maximum load luggage carrier:	25kg	
• Maximum load:	130 kg T200 (XL)	140 kg T400 (XL)
• Gross Weight:	23 kg (20")	24.5 kg (24")
• Net weight (without battery and saddle):	19.5 kg (20")	21 kg (24")
• Wheel diameter:	20 inch	24 inch
• Maximum speed:	25 km/h	25 km/h

Mustang M250

• Dimensions unfolded (L x W x H):	160x60x113cm
• Dimensions folded (L x W x H):	100x55x78cm
• Frame:	Aluminum
• Motor type:	Rear hub motor
• Motor voltage:	36V
• Motor Power:	250W
• Sensor:	Magnet rotation
• Battery type:	Lithium polymer (heat-resistant cells)
• Battery specifications:	36V, 13Ah
• Range:	40-60km
• Pedal assistance:	9 levels
• Gears:	Shimano 7 derailleur
• Brakes:	Disc brakes
• Maximum load luggage carrier:	25 kg
• Maximum load:	130 kg
• Gross weight:	27 kg
• Net weight (without battery and saddle):	24 kg
• Wheel diameter:	20 inch
• Maximum speed:	25 km/h

Gemini G200/G400 (Action)

- Dimensions unfolded (L x W x H): 135x62x100cm
- Dimensions folded (L x W x H): 80x40x58cm
- Frame: Magnesium (G200/G400) PVC (G400 Action)
- Motor type: Rear hub motor
- Motor voltage: 36V
- Motor power: 250W
- Sensor: Magnet rotation
- Battery type: Lithium polymer (heat-resistant cells)
- Battery Specifications: 36V, 7.8Ah (G200/G400) 36V, 5.2Ah (G400 Action)
- Range: 30-40km (G200/G400) 20-30km (G400 Action)
- Pedal assistance: 9 levels (G200/G400) 3 levels (G400 Action)
- Gears: Shimano 7 derailleur (G200/G400) N/A (G400 Action)
- Brakes: Disc brakes
- Maximum load luggage carrier: 15 kg (G200/G400) N/A (G400 Action)
- Maximum load: 120 kg (G200/G400) 120 kg (G400 Action)
- Gross weight: 22 kg (G200/G400) 21 kg (G400 Action)
- Net weight (without battery and saddle): 19 kg (G200/G400) 18 kg (G400 Action)
- Wheel diameter: 16 inch
- Maximum speed: 25 km/h

Sierra

- Dimensions unfolded (L x W x H): 158x62x122cm
- Dimensions folded (L x W x H): 88x36x102cm
- Frame: Aluminum
- Motor type: M400 Bafang mid-drive motor
- Motor voltage: 36V
- Motor power: 250W
- Sensor: Pedal force sensor with magnet rotation sensor
- Battery type: Lithium polymer (heat-resistant cells)
- Battery specifications: 36V, 14.5Ah
- Range: 60-100km
- Pedal assistance: 5 levels
- Gears: Shimano 8 hub
- Brakes: Hydraulic disc brakes
- Maximum load luggage carrier: 25 kg
- Maximum load: 120 kg
- Gross weight: 26 kg
- Net weight (without battery and saddle): 22.5 kg
- Wheel diameter: 20 inch
- Maximum speed: 25 km/h

Papillon

- Dimensions unfolded (L x W x H): 128x63x109cm
- Dimensions folded (L x W x H): 93x25x71cm
- Frame: Aluminum
- Motor type: Front hub motor
- Motor voltage: 36V
- Motor power: 180W
- Sensor: Magnet rotation
- Battery type: Lithium polymer (heat-resistant cells)
- Battery specifications: 36V, 10.4Ah
- Range: 30-50km
- Pedal assistance: 9 levels
- Gears: Shimano 3 hub gear
- Brakes: Rim brakes
- Maximum load luggage carrier: 15 kg
- Maximum load: 120 kg
- Gross weight: 17 kg
- Net weight (without saddle): 16 kg
- Wheel diameter: 20 inch
- Maximum speed: 25 km/h

EC Declaration

Supplier:	Technical File:	Manufacturer:
SHINGA B.V. NIEUWE EERDSEBAAN 16 5482 VS SCHIJNDEL NETHERLANDS	SHINGA B.V. NIEUWE EERDSEBAAN 16 5482 VS SCHIJNDEL NETHERLANDS	SHINGA B.V. NIEUWE EERDSEBAAN 16 5482 VS SCHIJNDEL NETHERLANDS

Product: Electric folding bicycle

Model: LACROS Scamper S200(XL)/S400(XL)/S600(XL), Ambling A200(XL)/A400(XL), Sketch Nestor, Canter C200, Trotter T200, T400(XL), Mustang M250, Gemini G200/G400(Action), Sierra, Papillon

THIS ELECTRIC BICYCLE IS PRODUCED ACCORDING TO AND IN APPLIANCE WITH THE DIRECTIVES OF THE EUROPEAN UNION ON ELECTRIC BICYCLES WITH A MAXIMUM SPEED < = 25 KM/H AND A MAXIMUM (MOTOR) OUTPUT OF 250W

THE FOLLOWING "EN" (ISO) STANDARDS APPLY:

EN ISO 12100:2010; EN ISO 13854:2019; EN ISO 14120:2015; EN ISO 13857:2019; EN ISO 4210-1 to 9:2014; EN15194:2017

COMPLIANCE TO THE EC DIRECTIVES:

MACHINERY DIRECTIVE (2006/42/EC); LOW VOLTAGE DIRECTIVE (2014/35/EU);

ELECTROMAGNETIC COMPATIBILITY DIRECTIVE (2014/30/EU), ROHS DIRECTIVE (2011/65/EU)

EC EXECUTIVE BODY CERTIFICATION: ENTE CERTIFICAZIONE MACHINE S.R.L., VIA MINCIO 386, 41056 SAVIGNANO, ITALY; NOTIFIED BODY EC TYPE OF RESEARCH NUMBER: 1282

CERTIFICATE NUMBER: 111123/ZJV845

CERTIFICATE DATE: NOVEMBER 2011

Lacros EU Declaration of Conformity

Lacros certificate of Compliance ROHS Declaration

“

LIFE IS LIKE RIDING A BICYCLE.

TO KEEP YOUR BALANCE, YOU MUST KEEP MOVING.

- ALBERT EINSTEIN