



Yomper +

Removable electric motorization for wheelchair

User guide

v2.7.2 06/03/2020

Data sheet

Autonomy: from **18 to 27km** depending on the battery

Max. speed (on flat area): **6km/h**

Maximum speed (angled area 3%): **4km/h**

Motor power: **250 W**

Motor voltage: **24 V**

Operating temperature: **-25°C to +50°C**

Theoretical consumption in a straight line: **5,9Wh/km**

Theoretical consumption while driving: **22,5Wh/km**

Total weight: **5,80kg** (batterie 6Ah), **6,23kg** (batterie 10Ah)

Product lifetime: 5 years

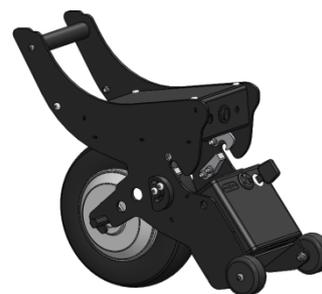
Bluetooth LE technology Included:

FCC ID: T9JRN4020

IC ID: 2324B-1

Control unit operating time when starting with a full charge: 30 hours

Note: these values have been measured with a passenger of 100kg. Autonomy and speed may vary depending on the use conditions.



Yomper v2.0
By Acekare

Frame

- Overall length: **375mm**
- Overall width: **150mm**
- Overall height: **349mm**
- Weight: **4,65kg** (+0,9kg for the holder)
- Wheel diameter: **8 inches** (203mm)

Battery

- Battery type : **Lithium-ion**
- Nominal tensio : **24v**
- Minimum tension (discharged): **19v**
- Maximum tension (charged): **29,4v**
- Overall dimensions: length 12cm x width 11,3cm x height 11,3cm
- Weight: **1,16kg** for the battery 6Ah, **1,58kg** for the battery 10Ah

Compatibility

- Wheelchair with fixed rigid frame
 - Wheel diameter of the manual wheelchair: **24 inches** (ETRTO 540mm)
 - Diameter of the camber bar: **23 to 33mm**
 - Diameter of the bar under the base: **15 to 40mm**

- Interaxis between those 2 bars: **130 to 290mm**
- **Wheelchair with foldable frame, standard cross-brace: from 33cm to 55cm seat width**
- **Weight of the user: 150kg max**

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1 Introduction

1.1 Presentation of the Yomper

The Yomper is exclusively designed to provide pushing assistance to manual wheelchairs in order to allow users with a weight ranging from 14 to 150 kg to move around with less efforts. Its use is strictly reserved for people who are physically and mentally capable to move, to maneuver and to brake a manual wheelchair with electric assistance by themselves or with an attendant.

The attendant can be helped with pushing the manual wheelchair thanks to an optional device for a third party. This one must be able (physically and mentally) to drive in all conditions a manual wheelchair with someone sitting in it

Yomper motor has one freewheel which it means that with the device turned on or turned off, you can still go forward and backward without resistance.

The engine of the Yomper is equipped with a freewheel. This means that with the unit switched on or off, you can move forward and backward without resistance.

The Yomper is also highly recommended for manual wheelchairs that answer the dimensions "*Compatibility wheelchair*" given in the characteristics sheet, page 3 of this manual.

The Yomper must be set up by a professional. It is his responsibility to check the capacity of the user to handle the Yomper.

1.2 Important informations

A non-compliant use of the Yomper or the manual wheelchair to which it is attached, depending on the surface, the climate, the traffic conditions, can present potential danger and cause damages to the manual wheelchair or the Yomper. The Yomper must be handled and used according to the following recommendations:

- The user is physically and mentally able to use a manual wheelchair and the Yomper in all conditions and situations.
- More specifically, any user and attendant must be able to move and maneuver a manual wheelchair with the Yomper (to go forward/backward, to brake...)
- The user has understood and read the instruction manual entirely.
- No technical modification has been made on the material.

The user must take the time to tame the performances of the Yomper by using it in a secure area, free from any danger. The user must become familiar with the forward motion, the braking, the speeding up and the maximum speed of the material before venturing outside, where risky situations may happen. It is highly advised not to use the Yomper outside until the user masters it inside easily.

If a dysfunction appears, stop the Yomper and get in touch with the technical team. Any use, non-compliant with the instructions of the manual or the recommendations of your seller, or with the technical limits defined by the supplier of your Yomper or your manual wheelchair is considered as a bad use of the Yomper.

ACEKARE is not responsible for any material damages or bodily harm that may occur during the wrong use of the Yomper or, because the instructions of this manual were not followed.

If you have any difficulties understanding the warnings and instructions found in this manual, get in touch with your dealer or supplier.

1.3 Caution



All precautions detailed by the supplier of your manual wheelchair must be followed and added to the recommendations defined in this manual. Any negligence to follow these recommendations may cause serious bodily harm.



- The handling or use of the Yomper by someone who hasn't received the instructions of this manual may cause serious bodily harm.
- You need to get familiar with the performances of the Yomper before using it regularly. Do not drive outside until you handle perfectly the system, without colliding the walls or any other object.
- The addition of the Yomper to the manual wheelchair gives different sensations. Take the time to get familiar with these new sensations.
- The using methods of the Yomper are different for all users depending on their functions and levels of disability.
- **Using anti tipping wheels is COMPULSORY with a Yomper. It will help you not to tip over, but will also limit the ability to be pulled on pavements or for any other maneuvers.**
- The specificities given by the supplier of the manual wheelchair may be slightly affected by the addition of the Yomper.
- Do not take an escalator or a moving pavement with your Yomper. You may be seriously injured.
- Do not bend backwards to reach objects, it may tip over your wheelchair.
- The center of gravity of the manual wheelchair may be affected by the addition of the Yomper.
- Do not bend forwards, do not change your position on the seat to reach something in front of you, your wheelchair may tip over (forwards or on the side).
- Do not make your manual wheelchair spin without assistance, unless you are used to doing it.
- Do not stand on the frame of the manual wheelchair.
- Your manual wheelchair is not conceived for working out with weight and is not safe as a seat during your work out. It changes the stability of your wheelchair and may tip it over.
- Make sure your battery is fully charged before using it.





- Always switch off the control box when you're parked to avoid the wheelchair to get moving accidentally.
- The Yomper is not made for a use under heavy rains, under the snow, on wet or frozen areas, it may cause dysfunctions or damages. Do not use in these conditions or on these surfaces.
- Do not use the Yomper on uneven or slippery areas, extreme hills or unstable ground. It may cause injuries or damages to the Yomper and cancel the warranty.
- Be very careful when you use the Yomper in confined spaces. Reduce the power to reduce the risks of damages or injuries.
- The 'outdoor' mode is not planned for a use indoors. Be careful when you choose this mode, especially inside.
- To go uphill or downhill, refer to the instructions and specifications given by the manufacturer of your manual wheelchair.
- Driving on pavements or obstacles may cause your wheelchair to tip over and cause serious injuries. Switch off the Yomper when you drive in these conditions. If you have any doubt before an obstacle, ALWAYS ask for help. Be conscious of your capacities and personal abilities. Develop your capacities only with a help of another person.
- When you cross roads, junctions, level crossings or when you're driving up or down hills, ask someone to come with you for safety reasons.
- Be careful when you transfer. All necessary precautions must be taken to reduce the distance during the transfer and make sure that the wheels will be blocked to prevent them from moving. Always switch off the Yomper and remove it if necessary during the transfer.
- The Yomper is not made for climbing steps or pavements. Only try this manoeuvre if absolutely necessary and ask for help. Switch off or disarm your Yomper.
- The Yomper is made to be used with a seat cushion. It is highly advised to use a cushion when you are using the Yomper.
- Don't try to attach the Yomper to a wheelchair that doesn't answer the dimensions 'Compatibility manual wheelchair' in the characteristics sheet, page 3 from this manual.
- Any alteration of the Yomper cancels the warranty and may create a dysfunction in terms of safety.



Note: The drawings of the Yomper showed in this manual may vary slightly from your material.

1.4 Interférences électromagnétiques (EMI)

Interferences come from radio sources, for exemple : radio/TV transmitters, mobile phones, walkie-talkies, etc. There are numerous sources of EMI in our environment, some can be avoided, others are not visible. Electronic systems such as the Yomper are sensitive to EMI, depending on their strength. These interferences may cause the unintentional start of the Yomper or damages in the control system, potentially resulting in failures and costly repairs.

Each electric wheelchair or system of this type can resist EMI up to a certain point, also known as the level of 'immunity'. If the level of immunity is high, the risk of EMI is less important. A level of immunity of 20V/m offers enough protection from everyday sources. The Yomper has been tested and resists up to 20V/m.

Even if it is equipped with a strong protection system, any alteration of the wheelchair or addition of accessories may affect this immunity. Pieces coming from other suppliers have unknown properties and their interaction with the Yomper hasn't been tested.

Electromagnetic energy becomes more intense when you get closer to the source. Thus, it is advised not to use the Yomper close to radio sources. We can distinguish 3 categories of EMI :

- Long distance transmitters: radio sources, commercial radios, antennas of station TV towers and amateur radios.
- Medium distance mobile transmitters: radio sources, including radios used by emergency vehicles, tractors, taxis.
- Mobile transmitters: from which the waves are not very powerful: walkie-talkies, CBs, mobile phones and other means of personal communication.

Wireless phones, MP3 or CD players, TV or AM/FM radios present no risks.

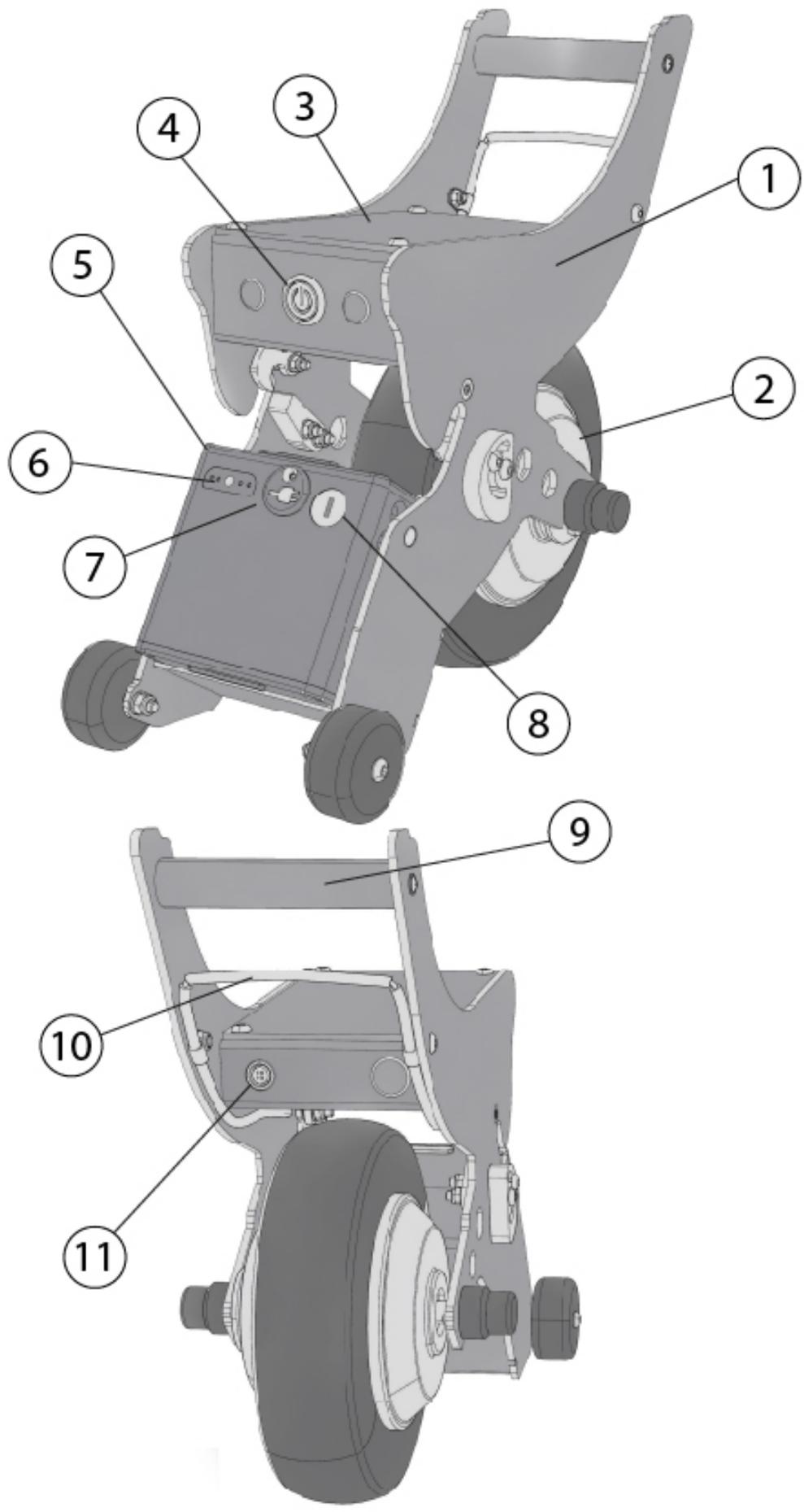
If the Yomper starts unintentionally, switch off the system and report the incident to the technical team (locate any source of EMI close by when the incident occurred).

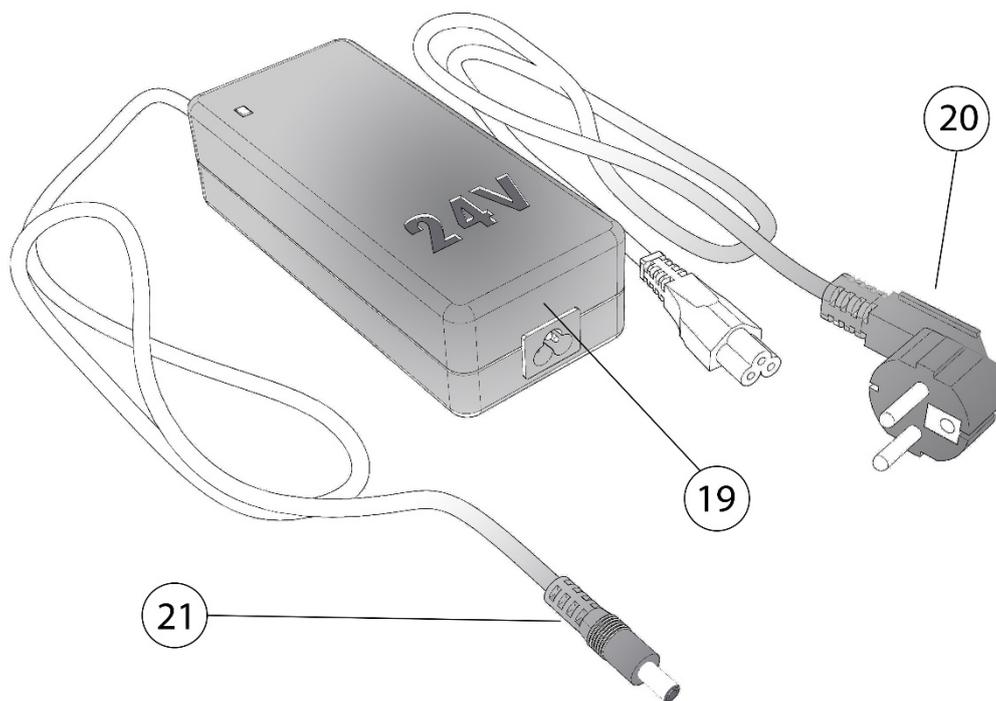
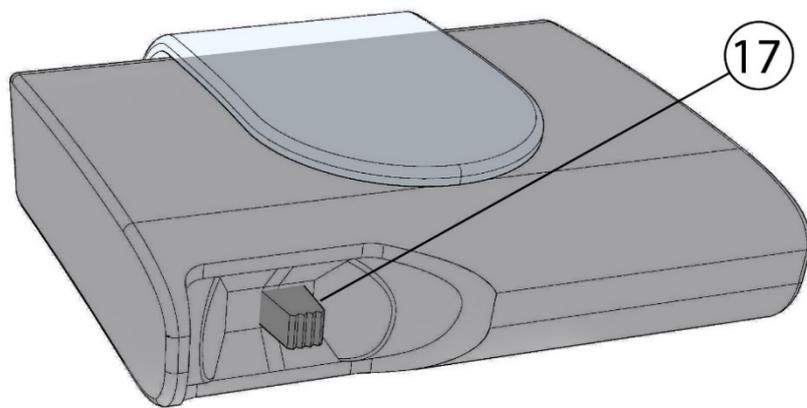
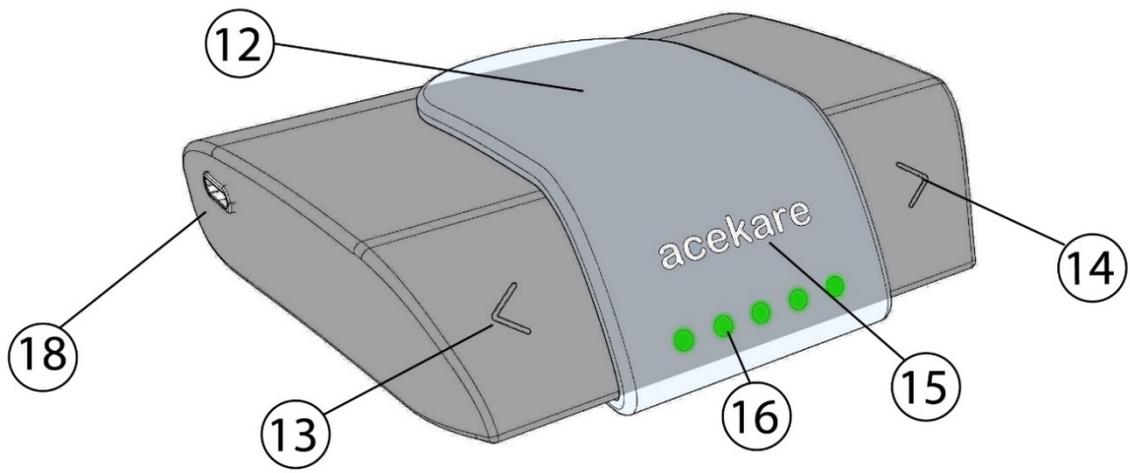
1.5 Liste of components

Here is the list of the components that constitute the Yomper :

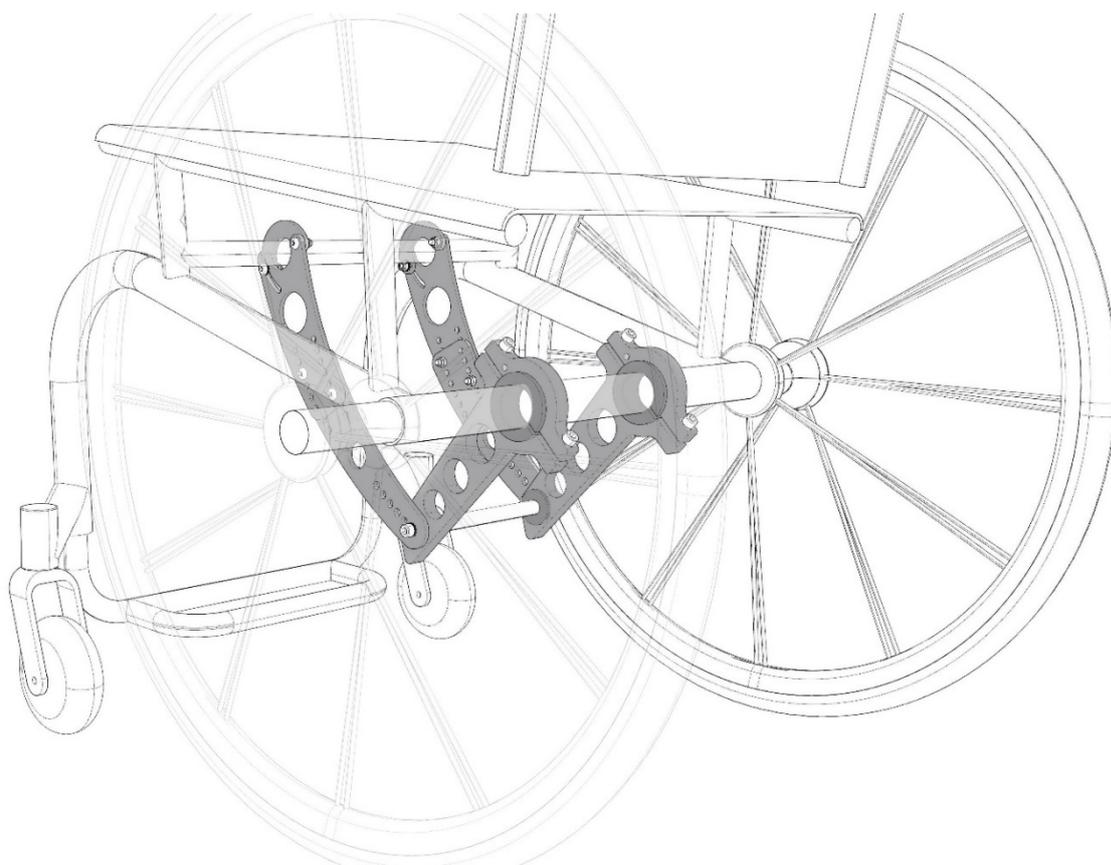
Yomper parts	
1	Aluminium frame

2	Brushless motor 24V 250 W
3	Electronic controller
4	Yomper Power switch button. Blink fast when Yomper is switch on and not connected to the control box button. Light is on when Yomper is switch on and connected. Blink slowly when Yomper is switch on and the motor is running.
Lithium battery 24V	
5	Lithium battery 24V
6	Battery gauge
7	Battery charge socket 24V
8	Key switch of the battery
Rear part	
9	Carry handle
10	Frame release lever
11	Attendant throttle socket
Control box	
12	Main button : start/stop
13	Increase/decrease speed level (depending on control box orientation)
14	Decrease/Increase speed level (depending on control box orientation)
15	OLED screen
16	LED strip: Indicator of speed level and chosen mode (green=indoor mode, red=outdoor mode) Light is on when the motor is running Blinking when motor is off
17	Power switch button of the control box
18	Micro USB charging socket
Battery charger 24V	
19	Charger 24V
20	220V power supply plug of the charger
21	Charger charging socket

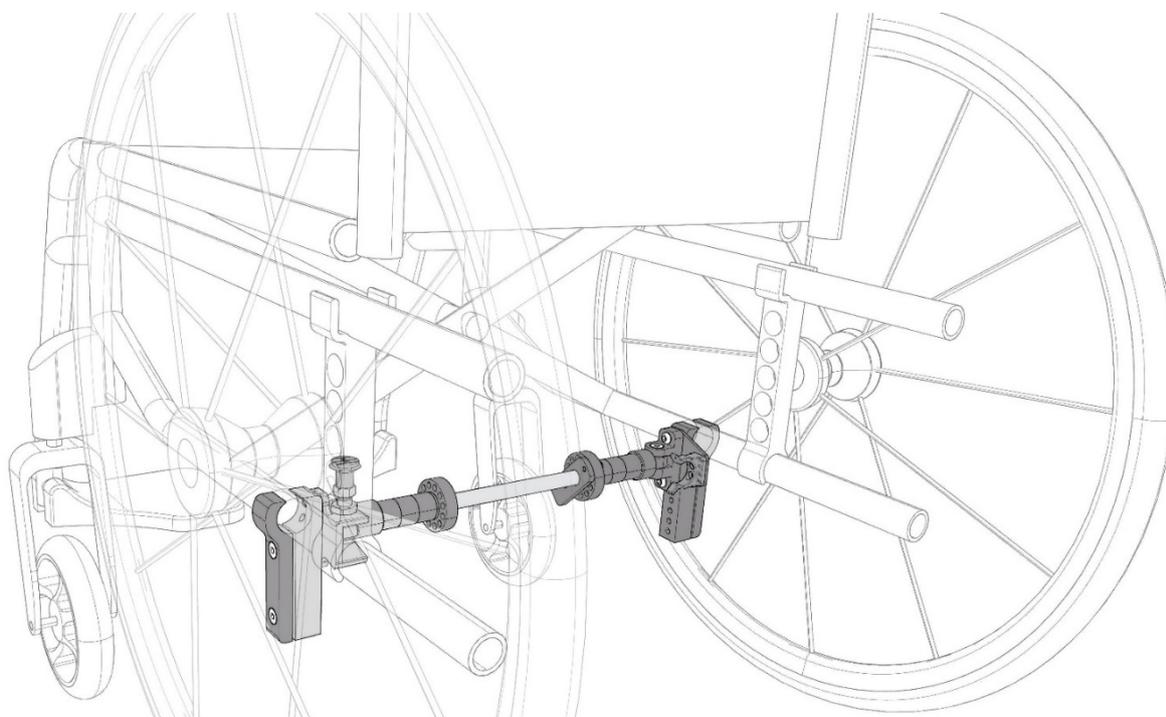




Mounting bracket for rigid wheelchair



Mounting bracket for foldable wheelchair



1. Before you go with your Yomper

1. Installing the Yomper mounting bracket (by a professional)

1.6



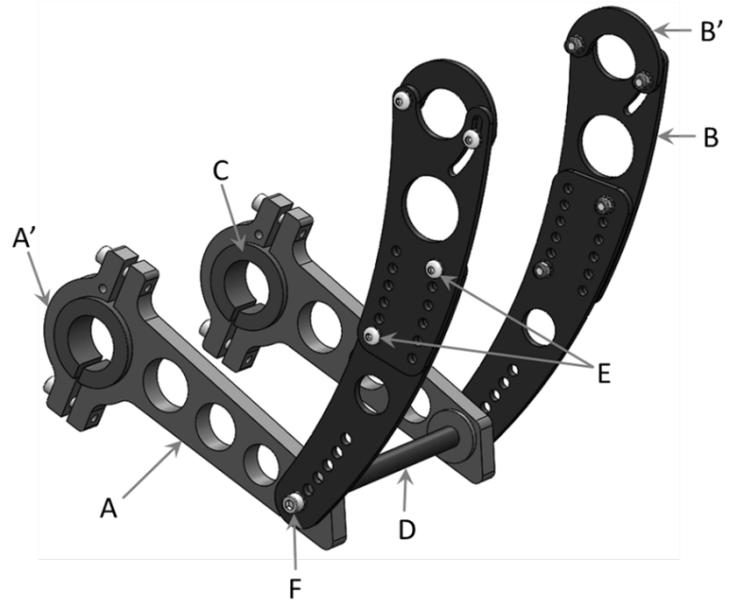
The installation must be carried out in our workshops or by your medical equipment dealer.

1.6.1 Mounting bracket for rigid wheelchair

The mounting bracket of the Yomper is delivered already assembled.

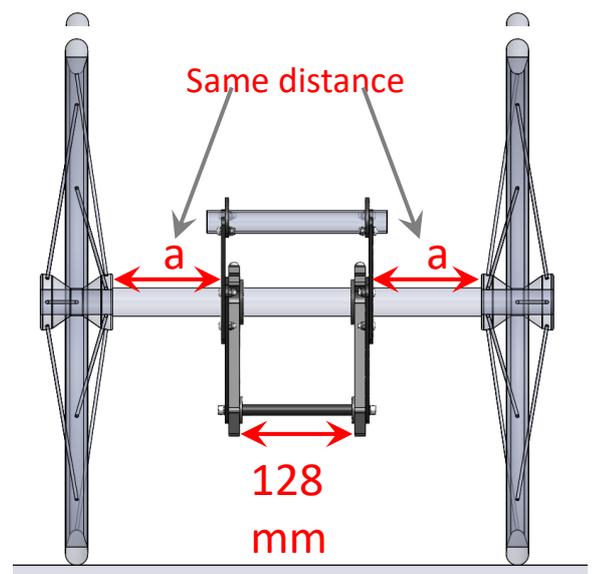
It consists of the following elements:

- 2 parties fixes (A)
- 2 brides (A')
- 2 length adjustment parts (B)
- 2 brides (B')
- 2 rubber spacers (C)
- one axis (D)
- 4 adjusting screws (E)
- 2 axle fixing screws (F)



A properly installed mounting bracket must meet the following requirements:

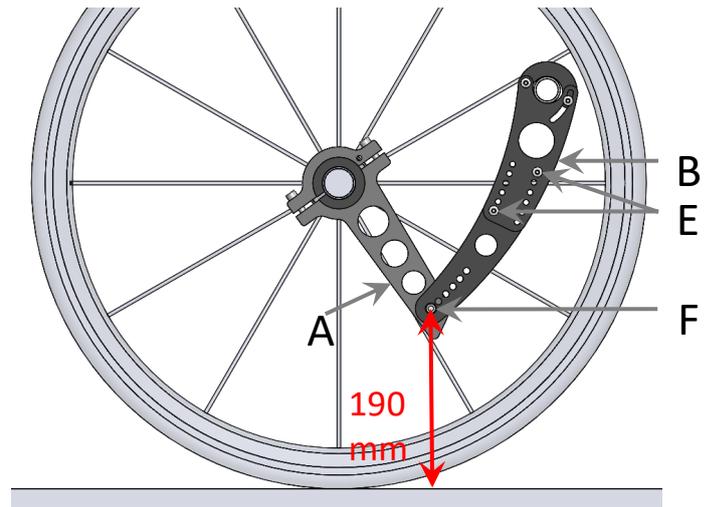
- **128 mm** gap between the 2 flanges (see red arrow)
- The whole is perfectly **centered**



- The F-point is 190mm from the ground
- The set is perfectly screwed and does not move
- Flanges (A) are well oriented (NT point down)

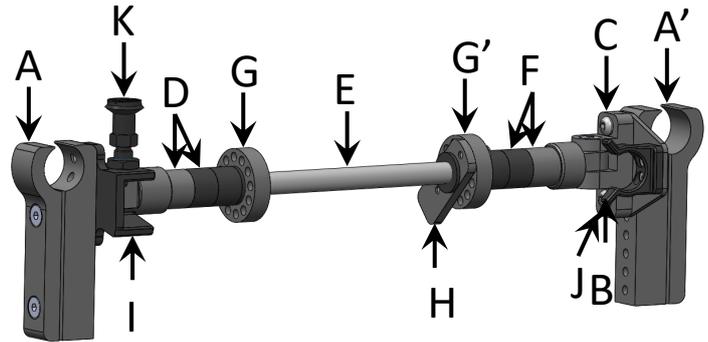


Be careful, if the flanges are misaligned, the Yomper stop will not work, which can cause a fall during a two-wheeled passage.



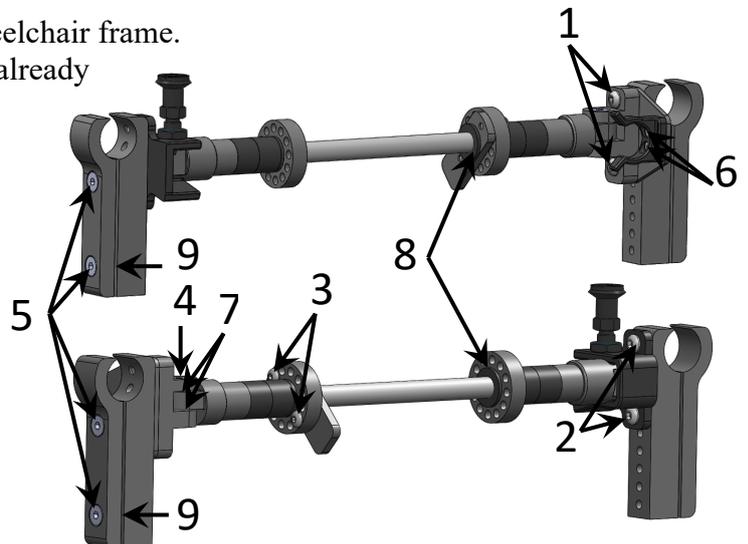
1.6.2 Mounting bracket for foldable wheelchair

- 2 flanges (A and A') – YPU0204
- 1 Clip (B) – YPU0209
- 1 pivot (C) – YPU0202
- 1 bar-left side + spacers (D) – YPU0200 + spacers
- 1 bar-central part (E) – YPU0212
- 1 bar-right side + spacers (F) – YPU0201 + spacers
- 2 locknuts (G and G') – YPU0205
- 1 stop (H) – YPU0206
- 1 bar bracket (I) – YPU0203
- 1 clip holder (J) – YPU0207
- 1 indexing finger (K) – YPU0208



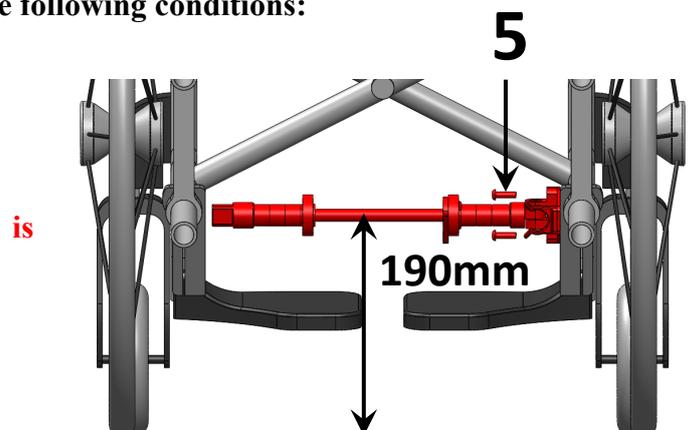
The 2 flanges (A and A') will come to attach to the wheelchair frame.
All the hardware necessary for mounting the support is already in place:

1. 2 M6 x 20 curved head screws (1)
2. 2 head screws M6 x 12 (2)
3. 2 M5 x 14 slotted head screws (3)
4. 1 countersunk screw M6 x 25 (4)
5. 4 countersunk screws M6 x 20 (5)
6. 2 countersunk screws M3 x 10 (6)
7. 2 white nylon washers (7) – YPU0216
8. 2 black nylon washers (8) – YPU0217
9. 2 x 2 washers M6 (9) – YPU0128

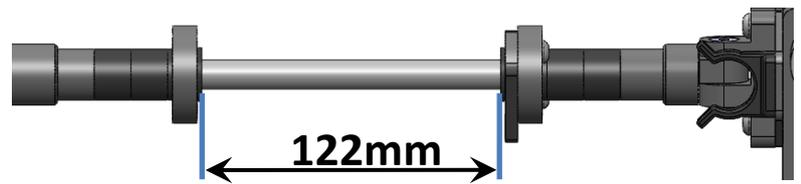


A properly installed folding frame holder must meet the following conditions:

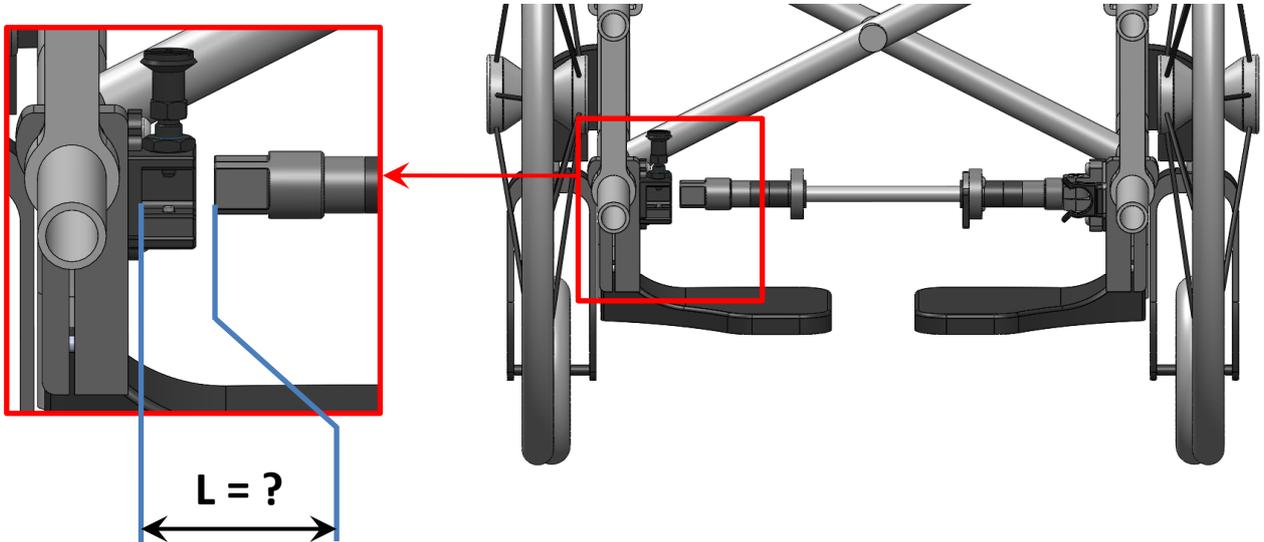
- **The correct setting of this 190mm height is indispensable for the safety of the user.**



- The distance between the 2 black nylon washers (8) must be 122mm



- The support must close and open without discomfort, and lock securely.

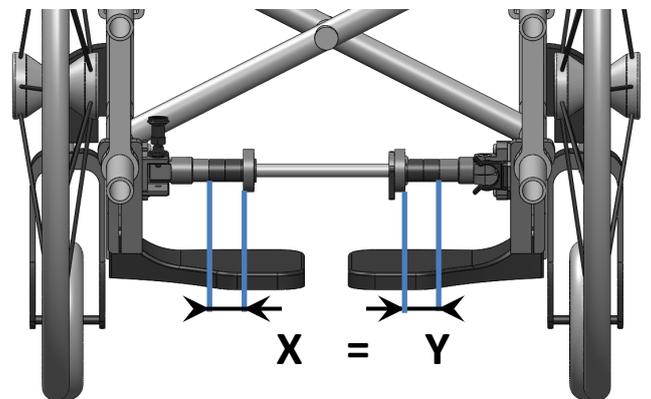


- For proper operation of the system, it is necessary to have $L = 2\text{mm}$

1.6.2.1

1.6.2.2

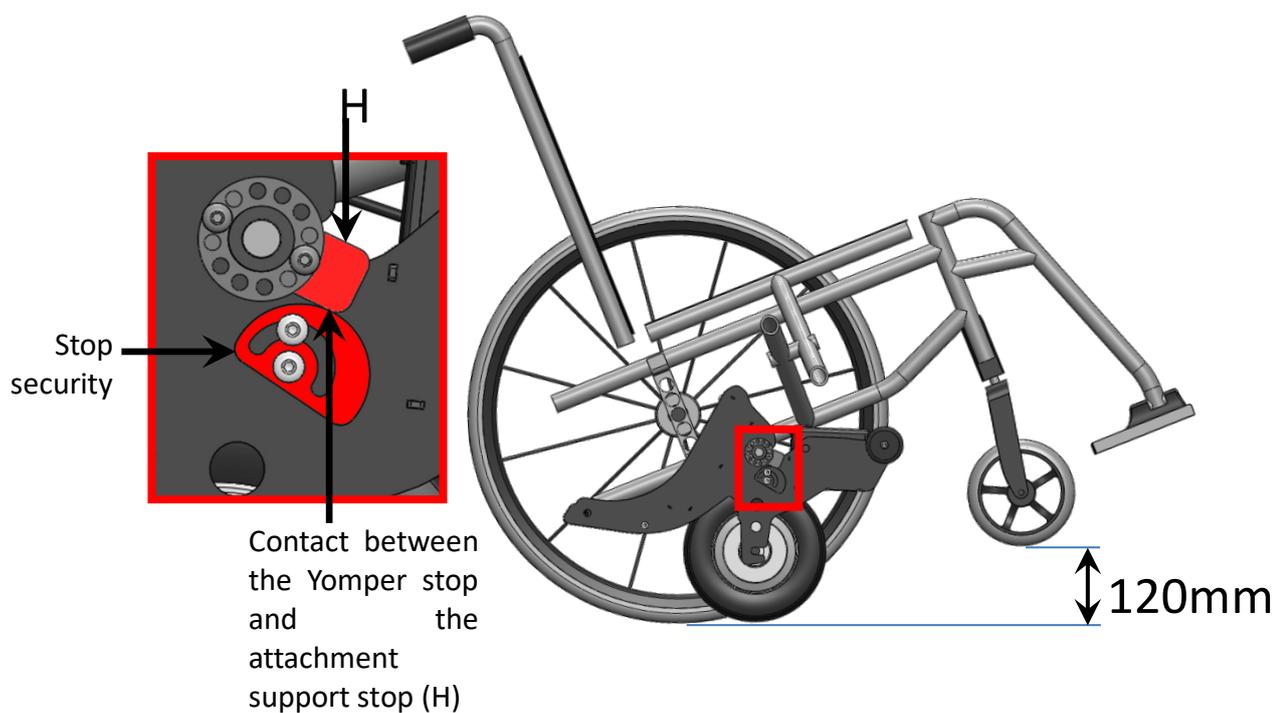
- For proper operation, the Yomper must be **centered under the wheelchair**



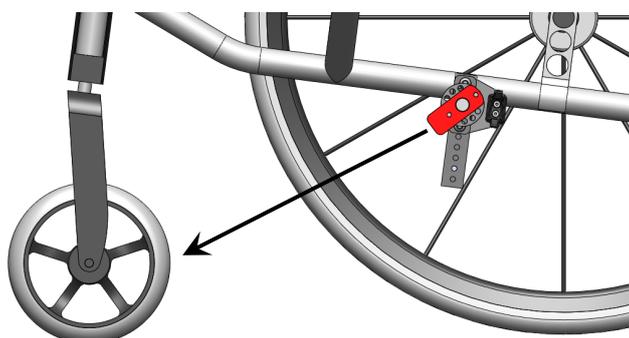
- **The stop (H) prevents the Yomper from tilting the chair backwards.** The Yomper and support stops must come into contact when the front wheels of the wheelchair are raised 120mm.



The correct setting of the stop is indispensable for the safety of the user.



- If the stop is incorrectly adjusted, adjust the position of the stop (H) on the counter nut (G ') (coarse adjustment) and then the position of the yomper stop (final fine adjustment).



Attention to the adjustment of the stop (H): it must be facing the front wheels of the wheelchair

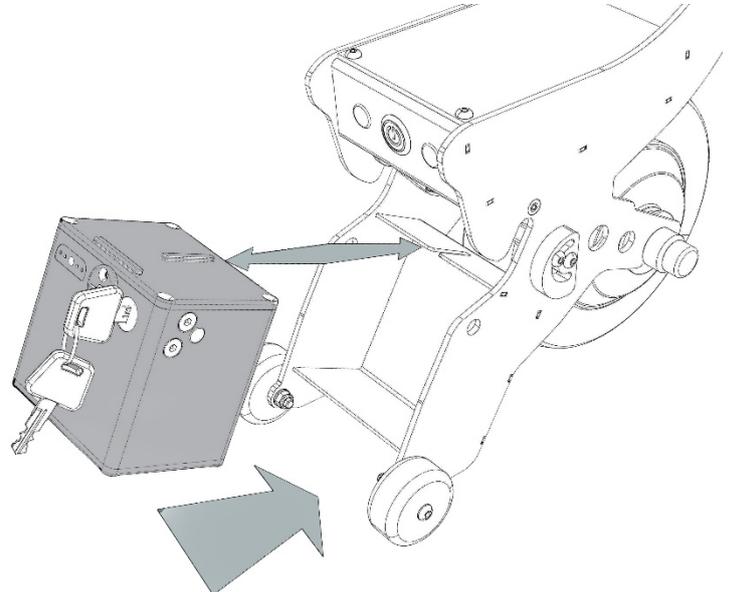
Check that the Yomper can always be set up and removed easily from the bracket.

1.7 Checking the battery

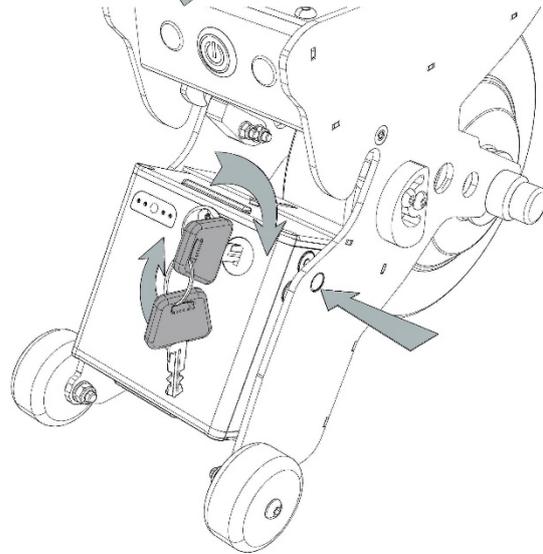
1.7.1

1.7.2 Checking the correct battery circuit

The battery is positioned directly in its housing on the Yomper. Just put it in place respecting the meaning. To avoid any errors, a **decryption** is integrated in the upper part of the battery.



Once the battery is installed, give a **key turn to lock and secure** the battery in its slot.



1.7.3 Battery life indicator

A battery indicator is located on the front of the battery. It is broken down into 4 levels and gives an approximate indication of the battery charge level.

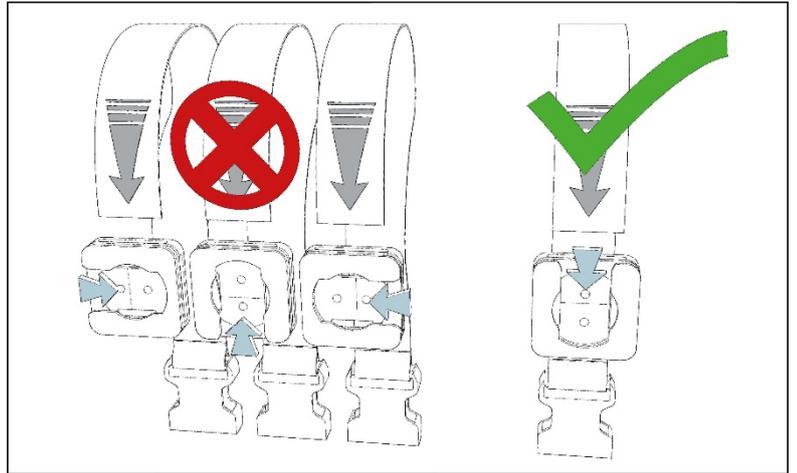


- ● ● ● Entre 70 et 100% de la charge (4 LED allumées)
- ● ● ○ Entre 45 et 70% de la charge (3 LED allumées)
- ● ○ ○ Entre 20 et 45% de la charge (2 LED allumées)
- ○ ○ ○ Moins de 20% de la charge (1 LED allumée)

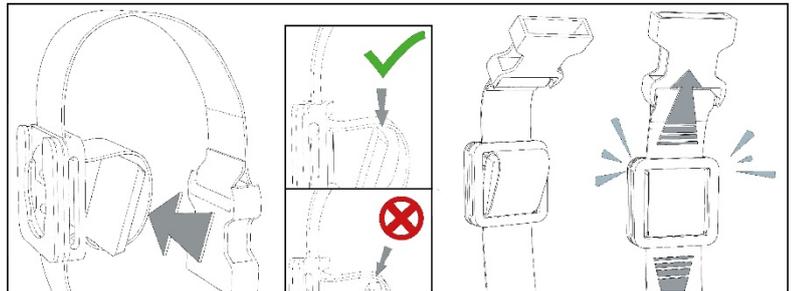
1.8 Setting up the control box

1.8.1 On the leg

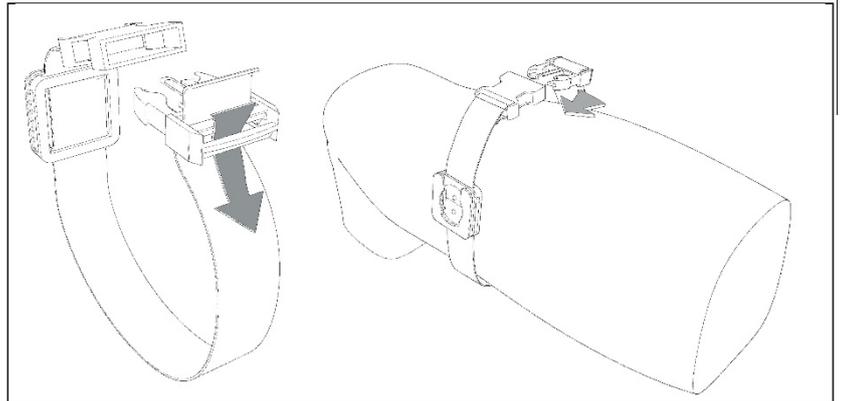
- Check the direction of the strap



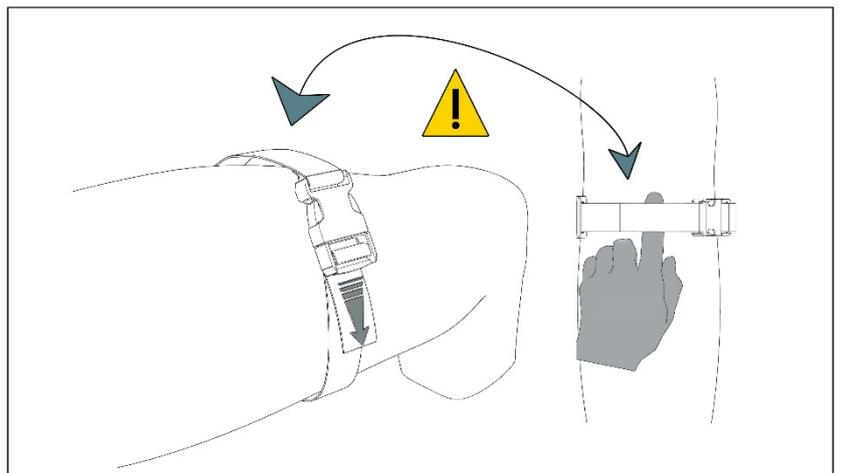
- Put in place the strap "blocker"



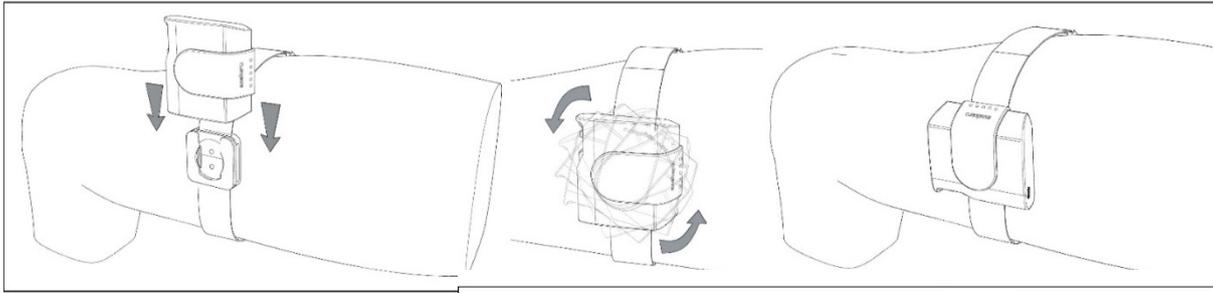
- Clip and rotate the strap so that the housing bracket is properly positioned



- Tighten the strap
- Caution: do not tighten the strap too tightly, a finger must be able to pass between the strap and your leg. Otherwise, it may interfere with your bloodstream.

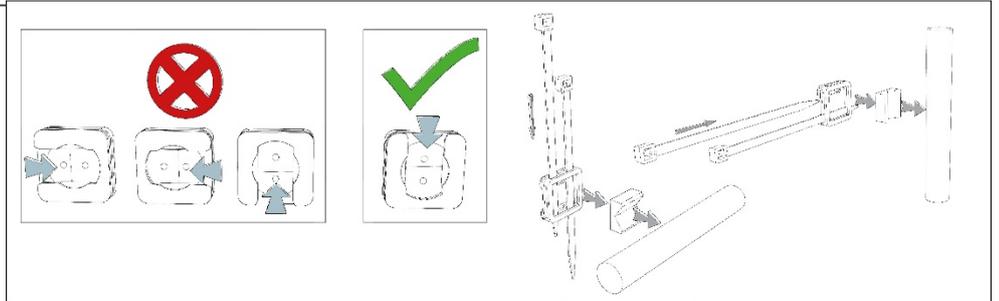


- Set up the control box, snap and rotate

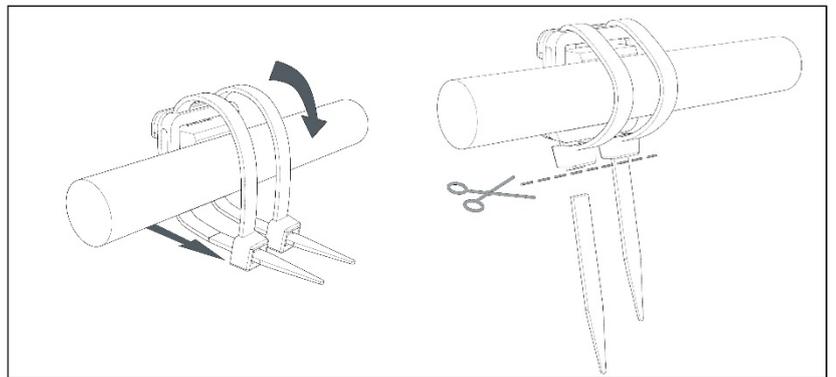


1.8.2 On the wheelchair

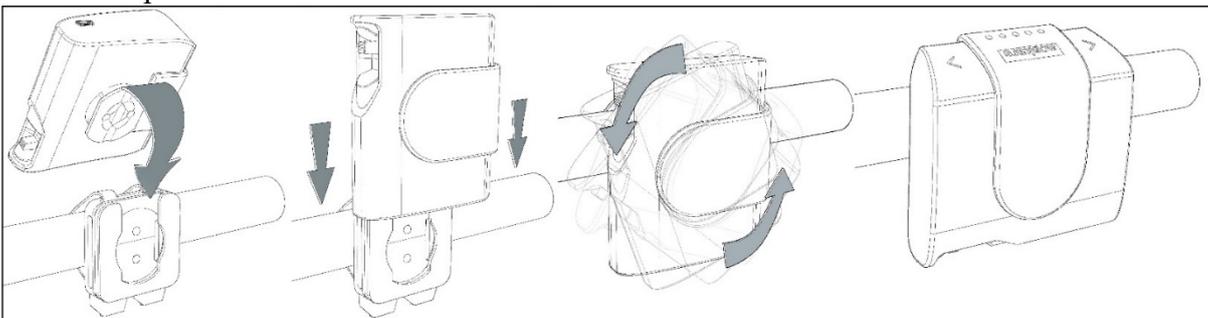
- Pay attention to the direction of positioning
- Use the supplied serflex as well as the rubber "blocker"



- Tighten on the tube
- Cut the protruding part of the serflex



- Snap and rotate the control box to lock.

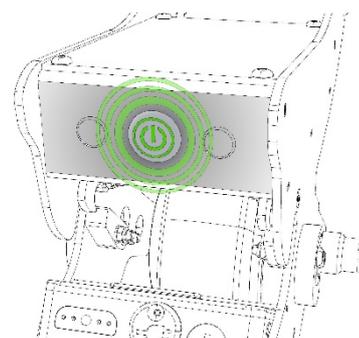


1.9 Setting up and ignition of the Yomper



First of all:

- Check that the control box is in the off position (screen off, LED off).
- **Turn on the Yomper by pressing the POWER button (4).** A flashing LED indicates that the Yomper is waiting for its connection with the control box.



The handle of the Yomper was deliberately placed in height to facilitate its installation.

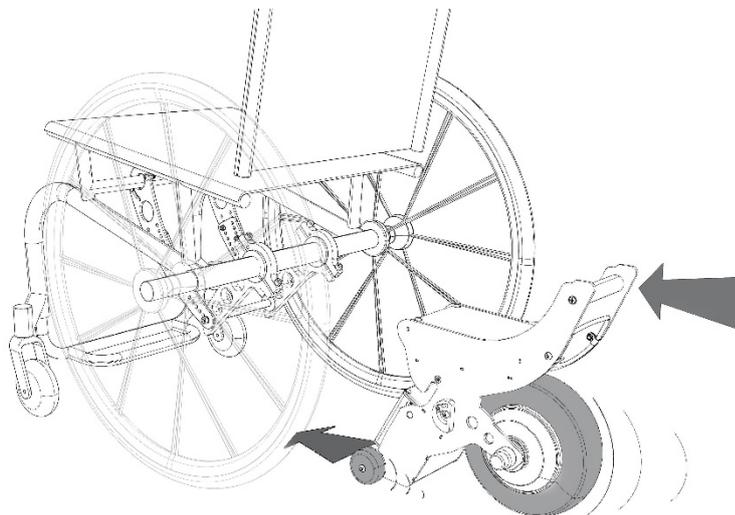
The front casters of the Yomper serve for its stability for the setting up only. You do not need to make any effort to put it in place, place it on the ground and roll it.



ATTENTION

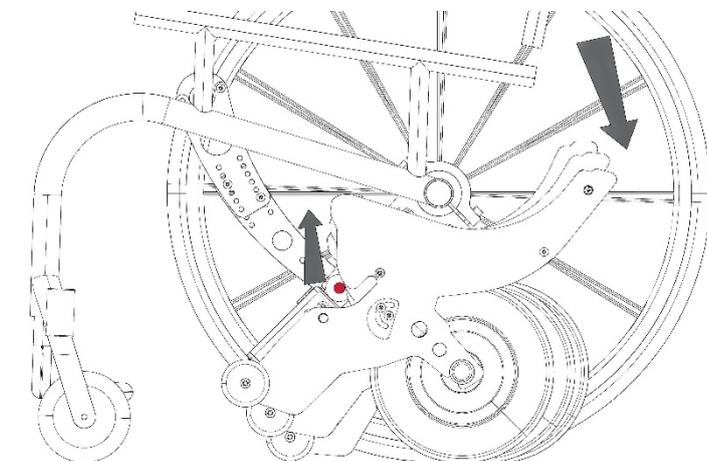
When installing, do not place your fingers on the Yomper support bar at the risk of injury.

Place the Yomper on the floor behind the wheelchair and **roll** it forward as indicated by the arrow.

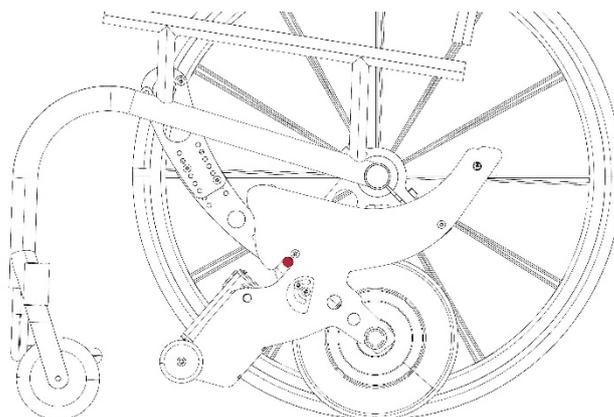


Always push the Yomper. The spout of the frame comes to be supported on the drawbar.

The Yomper lifts and locks automatically on the hitch bar of the wheelchair.



CAUTION : once in place, check that the Yomper is correctly engaged and well in the axle of the wheelchair.



2

3 Using the Yomper

3.1 Basic operation

The Yomper has 2 modes: indoor and outdoor.

In each mode, you have 5 speeds configurable by your care, within the limits set by a healthcare professional.

3.1.1 Indoor mode

Indoor (green LEDs) : the Yomper effortlessly drives you to the desired speed, and stops as soon as it senses resistance (for example, braking on the handrails).

The perceived resistance is parameterized by your care within the limits set by a healthcare professional.

Attention: an important resistance has the advantage of facilitating the use of the Yomper on slight slopes but has the disadvantage that the Yomper will be difficult to stop with the handrails.

A low resistance has the advantage that the Yomper is easy to stop with the handrails but has the disadvantage that the Yomper will stop easily on slight slopes, slope.

Recommendation of use: use in the street with the world, to circulate alongside other people, in a shopping center...

Operating restriction: on smooth surfaces (marble, waxed floors, ...), wet or with little adhesion, the motor can skate during braking. In this case the Yomper will not necessarily understand that it must stop. It is therefore necessary to press the main button of the control box to stop the electrical assistance.

3.1.2 Outdoor mode

Outdoor (Red LEDs) : the only way to stop it will be to press the main button on the control box.

The Yomper only stops in case of resistance **very very** important, in slopes too important to be able to drive your armchair safely.

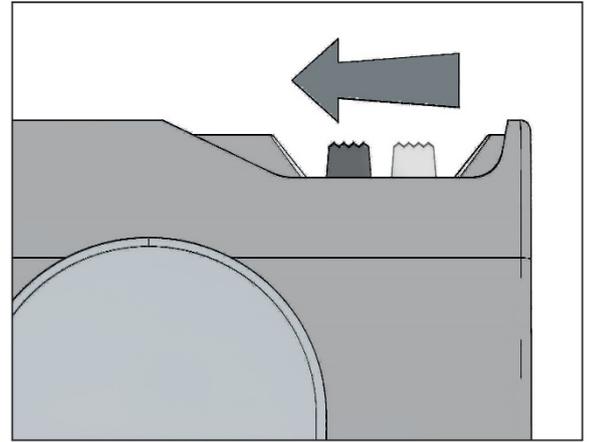
Recommendation for use: use in coast, on clear terrain and over long distances.

Operating restriction: on smooth surfaces (marble, waxed floors, ...), wet or with little adhesion, the motor can skate, it is necessary to provide to assist manually to improve the assistance.

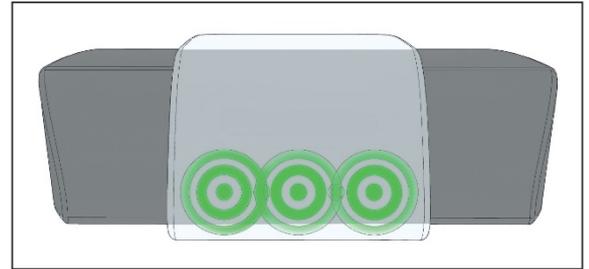
In the rib, you have to lean forward to avoid tipping.

3.2 Switching on the control box

1. Turn on the control box (slide the ON/OFF button on the control box)

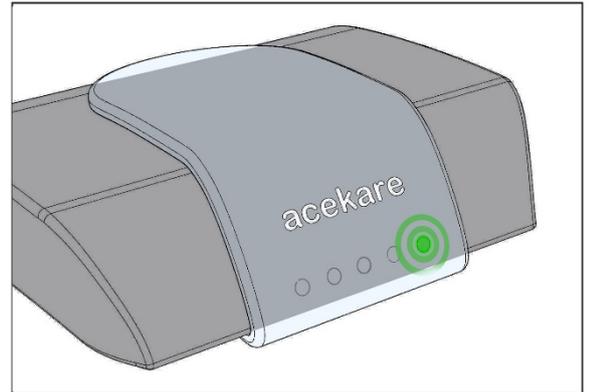


2. During the connection phase, LEDs 1, 3 and 5 Flash.

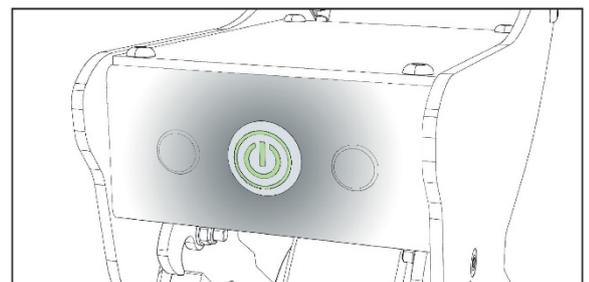


3. The case lights up, the display shows: connected, then goes to the default display of the Yomper (control unit autonomy level and Yomper autonomy).

4. The LED Strip flashes green at the first speed (indoor mode).



5. The power button LED on the Yomper will no longer blink.

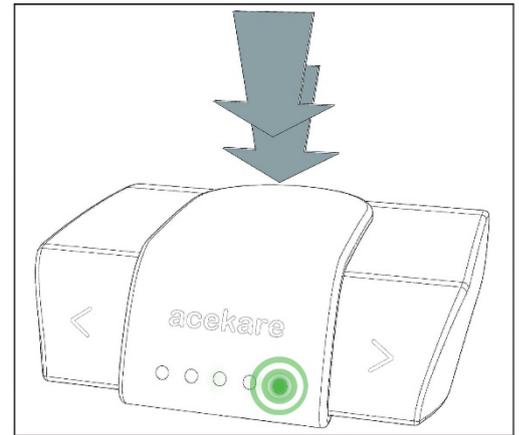


You are ready to use the Yomper.

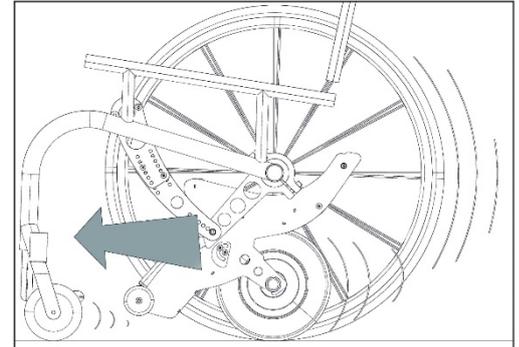
NB: by default, your enclosure is factory connected with your Yomper. It is possible to pair it with another case, see setting up the Yomper.

3.3 Starting the Yomper engine

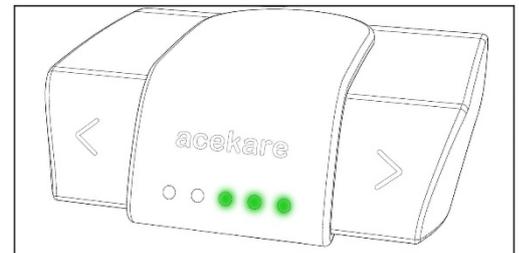
1. Press the main button on the control unit twice



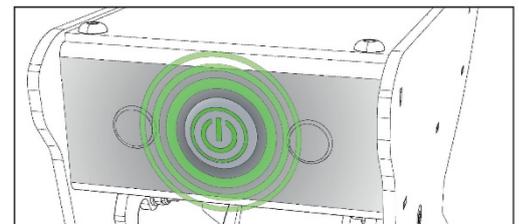
2. The Yomper starts instantly at speed 1 (see the led Strip), respecting the parameterized Acceleration (cf parameters)



3. The led Strip is fixed while the Yomper engine is running



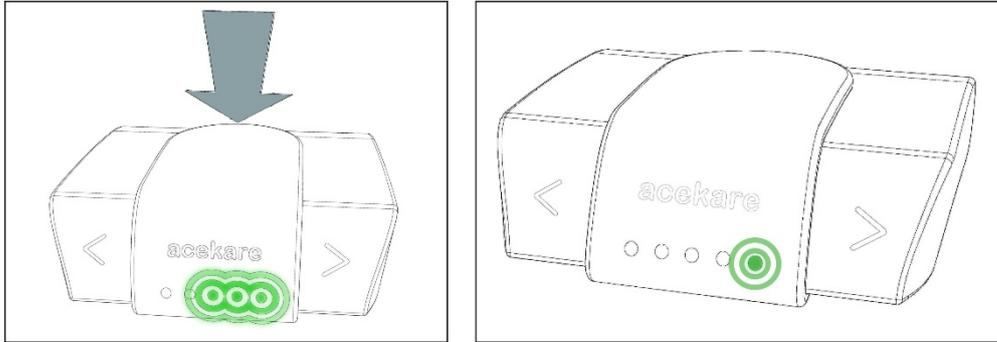
4. The Yomper power LED flashes slowly



3.4 Stop of the Yomper

In indoor and outdoor mode

1. Press the main button once, the Yomper engine stops
2. The Yomper power LED switches back to fixed
3. If you stop, the speed level will go back to 1 for safety (to avoid a too violent reboot inadvertently).
4. Attention: you have to brake the wheelchair, the Yomper does not have brakes, it goes freewheeling

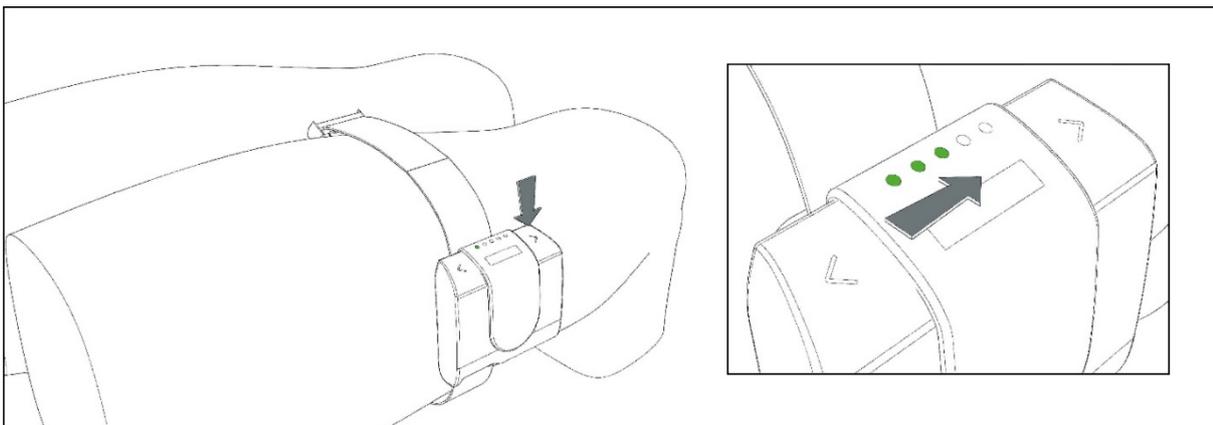


In indoor mode (green led Strip)

5. You can also **brake on the handrails** to stop the engine of the yomper
6. Once stopped, the led Strip switches to fixed ignition

3.5 Speed increase

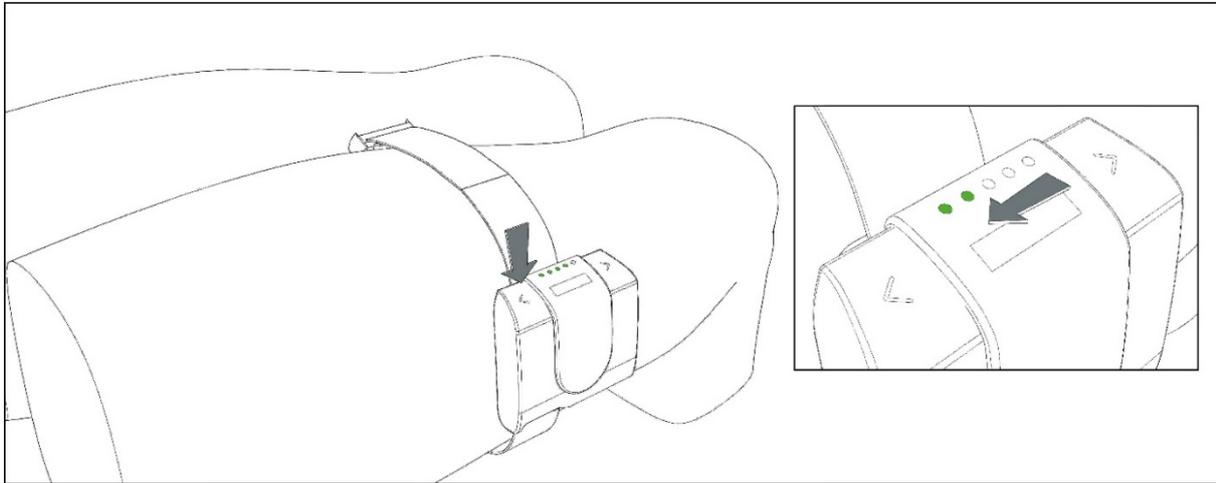
- You can change the speed of the Yomper during driving or when it is stopped
- Press the arrow **furthest** away from you to **increase** the speed
- The number of LEDs lit represents the selected speed level. When you press, a new LED will illuminate
- Once the maximum (5), a new support has no effect
- The actual speed at which you propel the Yomper depends on:
 1. Selected speed (from 1 to 5)
 2. From current mode (indoor, LED Strip in green, outdoor, LED Strip in red)
 3. The setting of the Yomper



3.6 Reduced speed

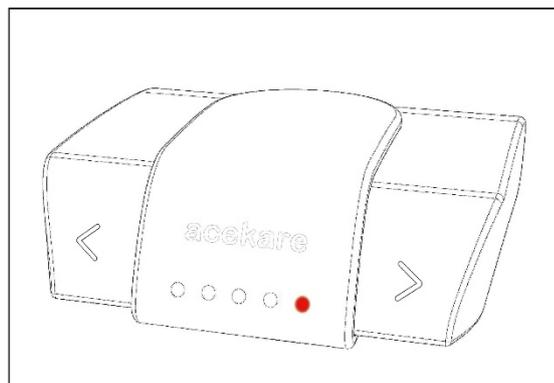
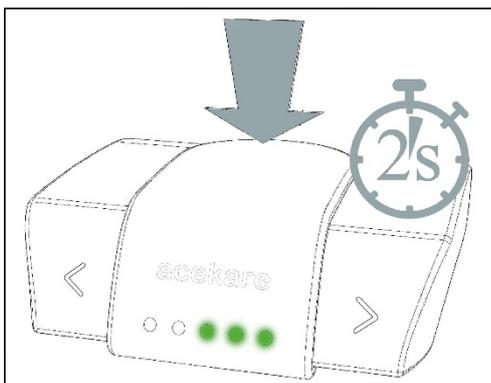
- You can change the speed of the Yomper by rolling or stopping
- Press the arrow **closest** to you to **decrease** the speed
- The number of LEDs lit represents the selected speed level. When you press, an LED turns off

- At least once (1), a new support has no effect on the
- The actual speed at which you propel the Yomper depends on:
 1. Selected speed (from 1 to 5)
 2. From current mode (indoor, LED Strip in green, outdoor, LED Strip in red)
 3. The setting of the Yomper



3.7 Change of indoor/outdoor mode

- To change mode (indoor, outdoor), press the main button for more than 2 seconds
- The led Strip changes color
 1. You were in indoor mode (green), you switch to outdoor mode (red)
 2. You were in outdoor mode (red), you switch to indoor mode (green)
- Your actual speed will automatically revert to level 1 (lowest)

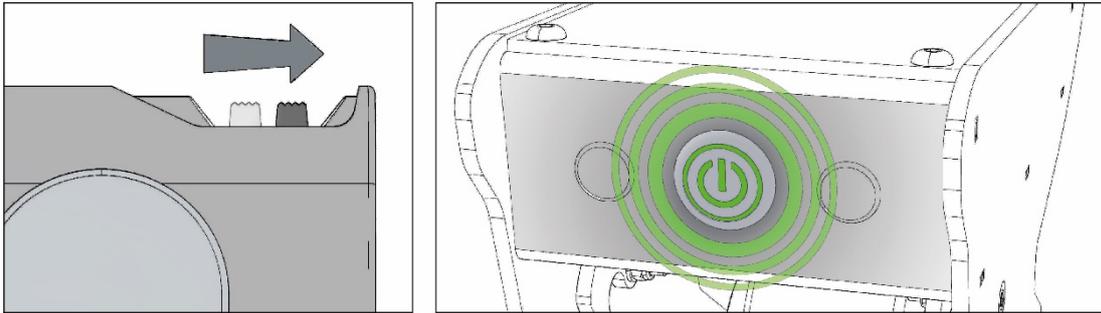


Attention, in outdoor mode, only pressing the main button will allow you to stop the engine of the Yomper

3.8 Switching off the control box (setting the Yomper standby)

- Slide the ON/OFF button on the control box to turn the control box off
- The display and LED strip of the control box will turn off
- The POWER button LED on the Yomper switches to fast flashing

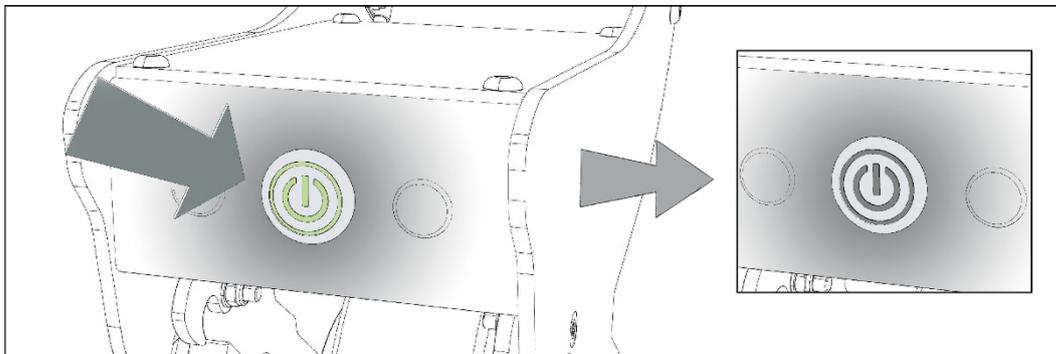
- You can leave the Yomper on: it goes into standby mode and can remain in this state for several days. It is still strongly advised to turn it off physically every night.
- If you leave the Yomper on, you can re-light the control unit, and reuse the Yomper as soon as the connection is established (fixed LED).



It is advisable to turn off your control box as soon as you no longer use the yomper. The system is then safe and cannot start inadvertently.

3.9 Extinction of the Yomper

- **Turn off the control box before you lean**
- Remove the Yomper (see next chapter)
- Press the POWER button on the front of the Yomper, the POWER button LED will turn off.



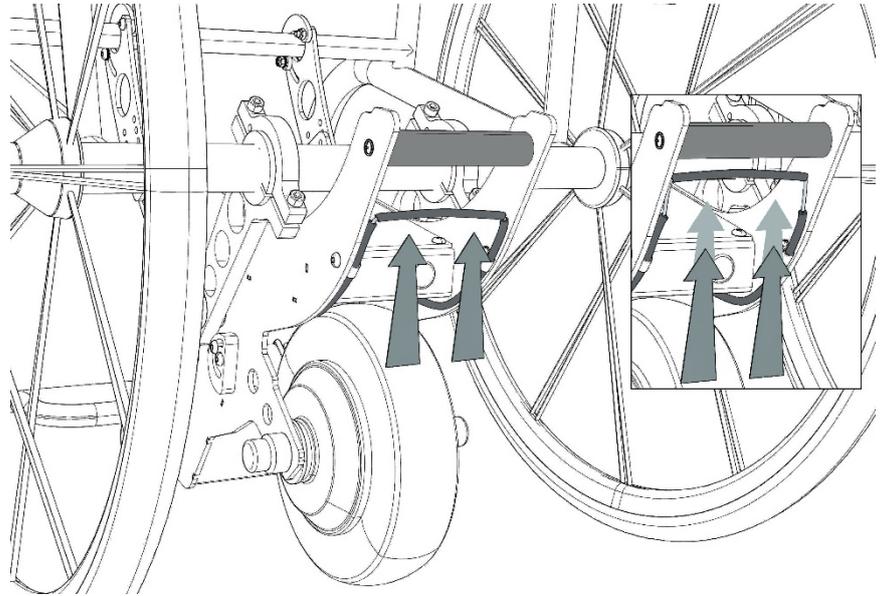
It is advisable to turn off your Yomper every night.

3.10 Remove the Yomper

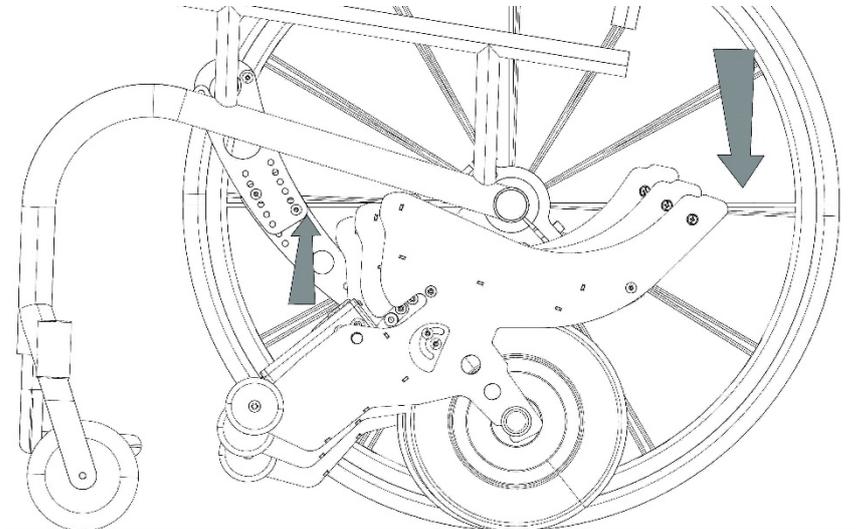
Prerequisite:

- Switch off the control box
- Unplug the third-party inverter

Press the handle and the unlocking cable.



At the same time, press the handle to bring it to the low position and lift the front of the Yomper.



Pull the Yomper backwards.

The Yomper is now cleared, you can store it dry.

4 Use his wheelchair, Yomper off

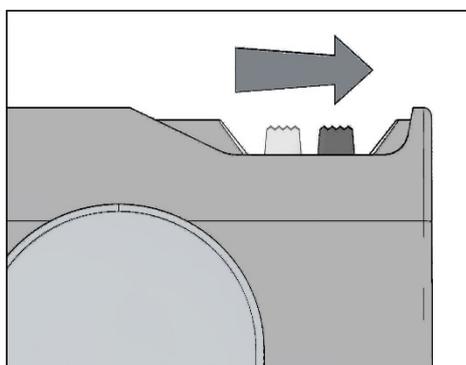
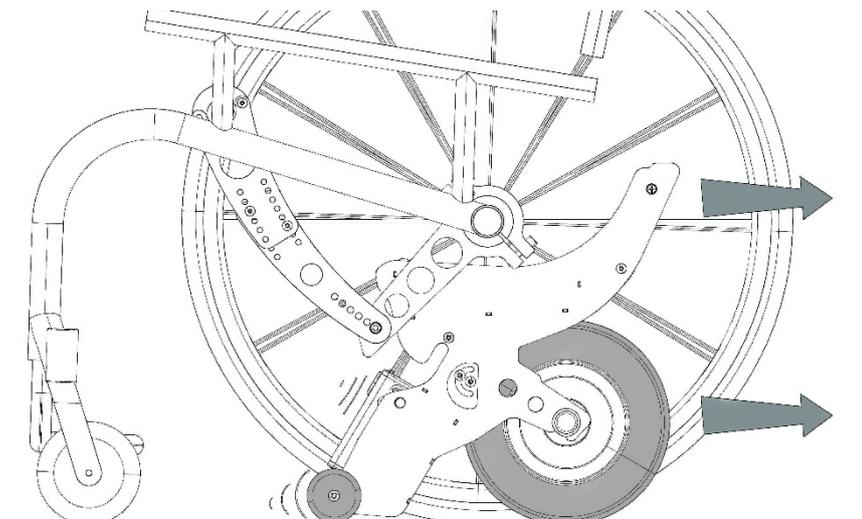
You can leave your Yomper off attached to your chair all day safely:

- The Yomper is by design a freewheel system and placed in the axis of the wheels: you will hardly feel it, even off



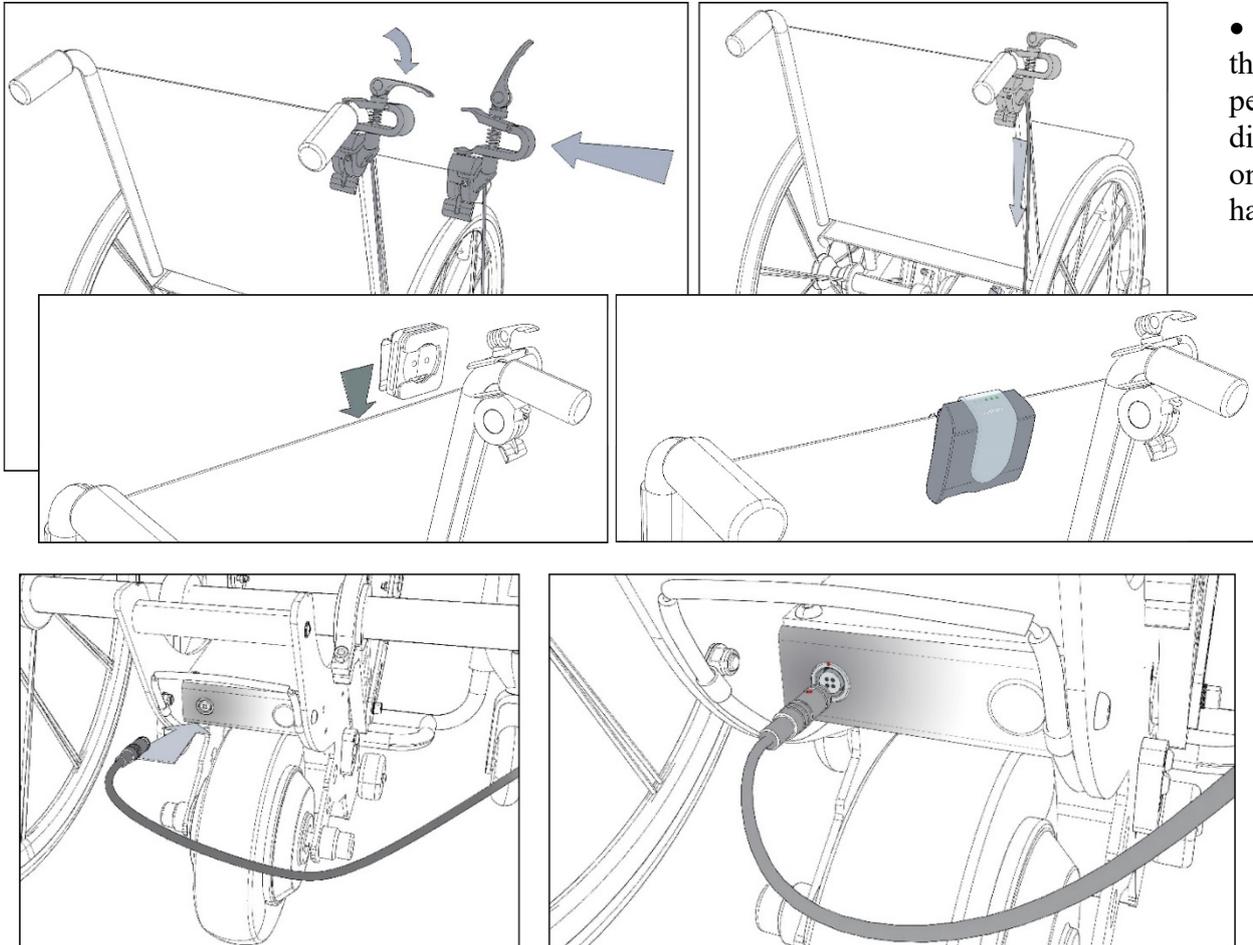
- **As soon as you no longer wish to use the Yomper, remember to turn off the control box, the yomper will not be able to start.**

- If you want to reuse the Yomper, turn on the control box again, the Yomper will reconnect.



5 Use by a third person (option)

 To avoid mishandling, we recommend connecting the third-party inverter **after** attaching the Yomper to the wheelchair.



- Set up the third person dimmer on the handle

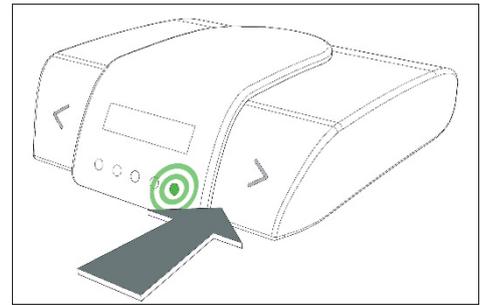
- Connect the third person drive to the rear of the Yomper
- Place the control box at the backrest level using the supplied clip
- When connecting, the third-party inverter takes the hand on the control box for the measurement of the speed
- The maximum limits of the third person inverter correspond to the speed selected on the control box
- If you do not wish to use the control box, connect the third-party drive directly, and wait for a very fast flashing. You can then use the third person drive alone, it will be limited to 6km/h Max.

 To avoid any malfunction, it is necessary to be careful to leave free the passage of the cable of the third person drive. The cable of the third person inverter must be able to be removed easily, it must not be kinked in the tubing of the wheelchair or the Yomper.

6 Changing the OLED display

- When the Yomper is stopped (flashing LED)

- A long press on "<" or ">" changes the display
- By default, the display shows:
 1. Control box battery level
 2. Yomper autonomy level
 3. Speed of the Yomper

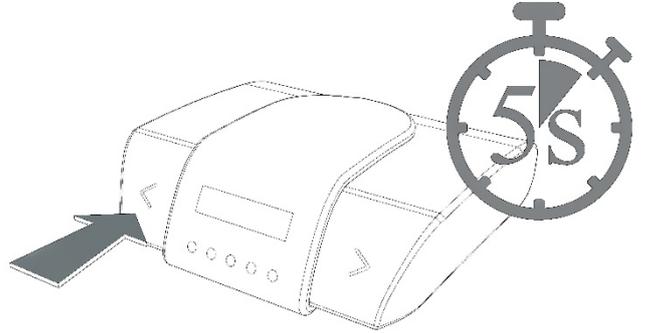


7 Setting up the Yomper

To change the setting, the Yomper must be stopped or turned off.
Press the ">" button (furthest away from you) for more than 5 seconds.

The menu works the following way:

- Main button: choice validation
- "<" and ">" for navigating or modifying values
- Main button during 2s: back to the previous menu
- "<" Button for more than 2s from the main menu: you must restart the button to consider the changes.



The menus:

- Scan: pairing the button with a Yomper
- Indoor speed: choice of 5 internal speeds, within the limit of the ceiling set by the healthcare professional
- External speed: choice of 5 external speeds, within the limit of the ceiling set by the healthcare professional
- Acceleration: choice of acceleration level (1 to 5, 5 being the strongest acceleration)
- Resistance: choice of resistance force to stop the wheelchair in inner mode (1 to 5, 5 being the strongest resistance)
- Case direction: choice of left or right direction for placement on the wheelchair (reverse the buttons "<" and ">" and the direction of display of the led Strip/
- Default view: choosing the default view
- User weight: for calculating the autonomy
- Tyre type: for calculating the autonomy
- Firmware: displays the firmware information of the enclosure and the Yomper
- Data: displays the data stored in the Yomper (number of kilometers travelled total, time of use inside/outside, number of uses, number of Ah consumed by the battery since the purchase)

functioning:

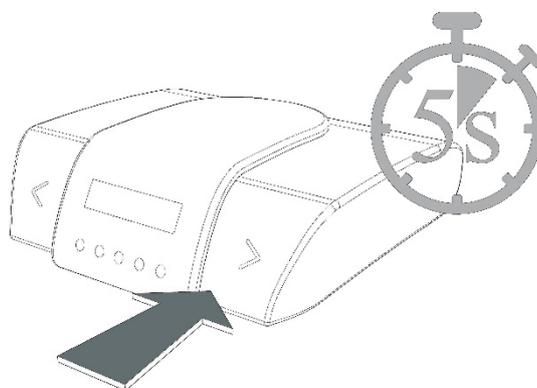
- Press "<" or ">" to change the menu
- Enter the menu via the main button
- Select the value you want to change, change the value to "<" or ">", confirm your choice with the main button

Example: changing speed 2, in indoor mode

- Press ">"
- Press the main button to enter the menu "indoor speed"
- Press ">" to display: "speed 2 INT"
- Press the main button to enter the speed change
- Press "<" or ">" to change the value of the
- Press the main button to confirm and save your choice
- Press 2s on the main button to go back => main menu
- Press 2s on the main button to go back => restart the button

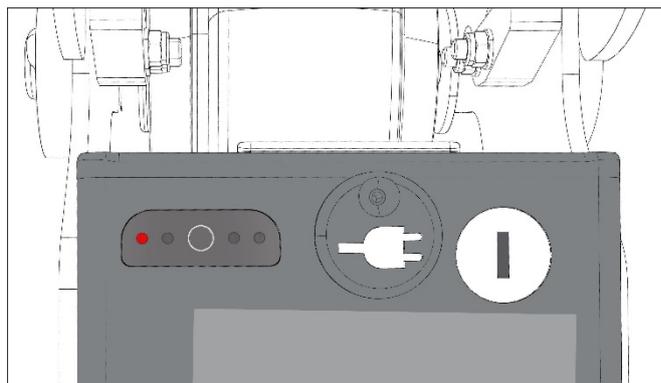
8 Maximum speed

The maximum parameterized speed of the Yomper is restrained during the factory setting according to your order form (and at 6km/h by default). It will always be possible to the reseller with the appropriate hardware to modify this factory setting.



9 Yomper refill

We recommend charging the battery when the **last red light** is on:



- **WARNING:** Switch off the Yomper thanks to the button provided for this purpose (CF § 2)
- Plug the charger into the 220V mains:

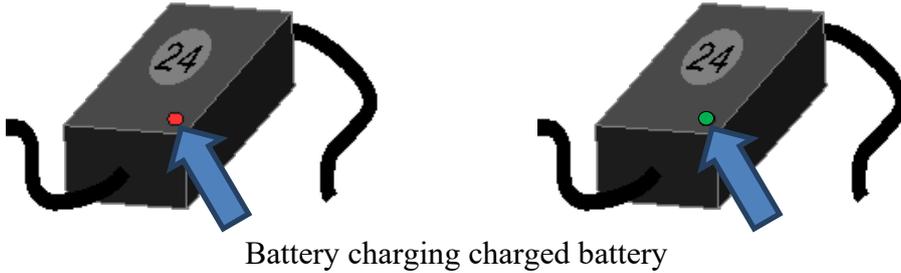
Vers le secteur 220V



- Connect the charger to the battery as shown below:



Charging the charger light is **Red** then it turns **Green** after the battery is charged.



To fully charge the battery (if it was completely empty), it is necessary to:

- **Approx. 4H** for **24V 6ah** battery
- **About 6h** for **24V 10ah** battery

Do not unplug the charger until the light is red.

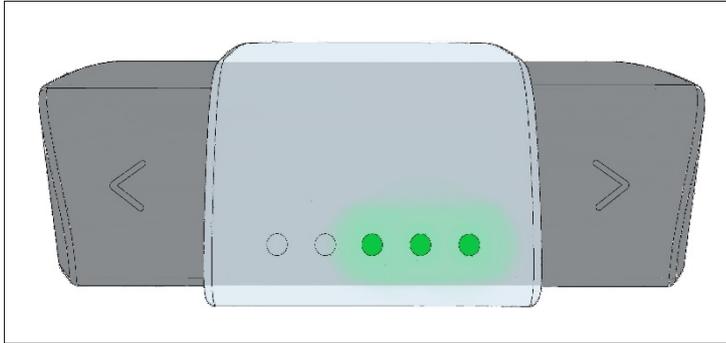


- Do never charge the batteries near flammable liquids or gases.
- In the (unlikely) event of a battery overheating or catching on fire, you must ensure that the battery does not meet water or other liquids. The only suitable extinguishing agents recommended by the battery manufacturers are sand or a Class D fire extinguisher.
- Do not charge in areas where moisture may condense on the components of the Yomper and its battery.
- Do never charge the battery at temperatures below 0 °C or above 40 °C. If you attempt a charging process outside of this temperature range, the charging process will be automatically stopped.

10 Charging the control box

To load the control box:

- Connect the micro USB cable to the control box (18)
- Check that **the housing is turned on (if the button is off, there is no charge)**
- Connects the cable to the mains or to a USB device for charging
- A charge indicator appears on the control box screen
- To fully charge the control box, it takes approx. 2h



11 Special conditions of use

Use in steep slope: it is necessary to lean forward not to tilt backwards.

Sidewalk crossing: the Yomper must be stopped (pressing the main button) before going up or down a sidewalk.

Use in 2-wheel mode: the Yomper must be stopped (pressing the main button) before making 2 wheels or you may switch back when the Yomper engine touches the ground.

Use in any terrain: the Yomper is not intended to do any terrain. The control box must be turned off before using the Yomper in a very rough terrain passage.

12 Information and maintenance of the Yomper

12.1 Maintenance

In Germany, the maintenance of medical products is regulated by law in the Medical Device Directive (MPBetreibV), Section 7.

According to this law, maintenance measures (especially inspections and servicing) are required in order to ensure continuous, safe and proper operation of medical products. After an analysis of the market, it has been found that two years would be a reasonable lapse of time for the maintenance of our products when used under normal operating conditions.

This defined lapse of time may vary depending on the actual use of the product and the behavior of the user. Checking the degree of use and the user behavior is the responsibility of the operator. In any case, we strongly recommend that you clarify beforehand to what extent the cost of the maintenance work for our products is covered by your health insurance provider, especially regarding any existing contracts.

12.2 Review period

Regularly check the clamping of the various mechanical parts of the support.

Once a year, have the different mechanical components checked by your dealer, as well as the condition of the Yomper tyre and its good inflation.

12.3 Cleaning

Use a damp cloth to clean the Yomper.

Be careful, immersion in water or constant wetness can damage the motor and the control unit.

Likewise, never clean these components with water or with a high-pressure cleaner.

Always ensure that no liquid or moisture gets into the components.

Be very careful when cleaning all the components of the Yomper. Please, consider the following instructions:

- Regarding all cleaning processes, only cloths slightly moistened with water may be used.
- Never use scouring pads, abrasive detergents or aggressive chemicals products.
- Never put the Yomper under water to clean its components: do not use a hose or a high-pressure water jet because it will wet the system and cause irreparable damage to the electronics.

Acekare accepts no liability for any damage due to the entry water inside the device. Please note that such damage is not covered by our warranty.

12.4 Storage

If the manual wheelchair and then, the Yomper are going to be stored for an extended period (e.g. several months), please consider the following instructions:

- Store the wheelchair according to its manufacturer's specifications.
- Protect the components of the Yomper with plastic wrap to keep moisture out.
- Store the wheelchair and all the Yomper components in a dry room.
- Ensure that no moisture penetrate or drip onto the Yomper components.
- Make sure that the Yomper is not continuously exposed to solar radiation (e.g. through windows).
 - Ensure that unauthorized persons (especially children) be supervised when entering this room.
- Read the notices to know how to store the battery pack.
- Clean both the Yomper and the wheelchair before using it back.
- Check if a maintenance is required before recommissioning. If yes, fix an appointment to get it done.

12.5 Material and protection

- All the components of the Yomper are made of corrosive resistant and detergent resistant products: aluminum frame, stainless steel screws, and plastics.

12.6 Reuse

If your Yomper has been provided to you by your health insurance company and you do not need it anymore, please contact your health insurer, an Acekare representative, or your authorized specialist retailer.

Your Yomper will then be easily and efficiently reused. Before the Yomper is re-used, it should undergo maintenance. The brackets and adapter axles used to attach the components of the Yomper to your wheelchair can be easily and quickly removed by your authorized specialist retailer or an Acekare representative and be clipped to another wheelchair.

In addition to the cleaning instructions specified in chapter 12.3, all the external and accessible plastic parts of the Yomper components need to be disinfected before they can be re-used. To do this, use a detergent suitable disinfection according to the manufacturer's instructions.

12.7 Disposal

This device, its batteries and its accessories are durable products. Nevertheless, they may contain harmful substances which can damage the environment if the parts are disposed of in some locations (e.g. landfills) that are not intended for the disposal of such materials according to the applicable statutory regulations for the country concerned. In accordance with the WEEE Directive, the product is labelled with a "crossed-out bin" symbol which reminds you to sort it. Please, protect the environment and return the product to your local recycling center at the end of its service life. As this product is not covered by the regulations of the WEEE Directive in all European countries, please familiarize yourself with the applicable waste disposal regulations in your country. The Yomper can also be returned to your authorized specialist retailer or directly to Acekare to be disposed of in a legal and environmentally friendly way.

13 Information and maintenance of the battery part

13.1 Autonomy

The autonomy will depend on several parameters:

- the total weight of the wheelchair in charge,
- the difference in your journey,
- the frequency of stops and then restarts,
- outdoor temperature (batteries do not like cold and can lose up to 40% of their performance below 5 °c).

In General, we notice an autonomy of **18km** with a lithium-ion battery of **24V 6ah**.

13.2 Maintenance and running-in of the battery

To optimize the lifetime of the Yomper, the battery needs to be running-in at least once a year. A running-in period deals with making the battery go through 5 complete discharge and charge cycles. This is the process to do 1 cycle:

- Put the battery in charge until the battery is full (100%)
- Use the battery till the last light goes red
- Put it back in charge until the battery is full (100%)

Maintenance-free, rechargeable lithium-ion batteries are integrated in the drive unit and in the control unit. Read and consider the following safety instructions and precautions prior to starting up the Yomper and prior to the charging process.

Failure to comply with the safety precautions and instructions may damage the product or result in electric shock, fire and/or serious injuries. Lithium-ion batteries contain chemical substances, which may cause hazardous reactions if the safety instructions specified here are disregarded. Acekare will not be held liable for damage caused by non-compliance with the general information and safety instructions.

13.3 Cleaning

The cleaning of the battery is done using a slightly damp cloth. Do not use detergent or flammable or corrosive products.

13.4 Storage

The battery must be **stored off and charged with a minimum of 75%**, protected from moisture and from cold.

In case of prolonged storage, remember to recharge the battery every month.

14 Résolution de problèmes

Breakdown	Cause possible	Solution
Power	Battery is not properly inserted	Check the battery installation on its support
Power	The battery is discharged	Check the battery charge level and charge it if necessary
Motorized wheel	The engine forces when going uphill	This is normal, when the slope is too large you have to manually assist the Yomper.
Motorized wheel	The engine forces on the plate	Check that the maximum allowable load has not been exceeded and that the correct speed is set or selected. If not, contact your dealer for analysis.
Motorized wheel	Noise and vibrations appear when the motorized wheels rotate	Contact your dealer for analysis
Motorized wheel	The engine stall in slope	This is normal, when the slope is too large you have to manually assist the Yomper or play with the speeds of the Yomper. When your battery is low (< 20%), it can happen that the Yomper stall during intense exertion. After a few seconds, you will be able to leave, we advise to help the Yomper on the important slopes, you can use the Yomper without problem on more flat surfaces. If you have many courses requiring constant Yomper effort, or in case of significant user weight, we recommend the optional battery that will be more efficient over time.
Distance per load decreases	Low temperature environment below 0 °c	This is normal, these are the characteristics of lithium batteries.
Distance per load decreases	Driving on roads or slopes with climbs and descents.	This is normal, on such journeys the energy consumption is more important.
Distance per load decreases	The battery has reached its end of life	Contact your dealer for battery replacement.
Loading	Battery charging is damaged	Contact your dealer for replacement

15 Warranty

15.1 Included in warranty

Included in the warranty	Warranty period (from the date of purchase)
Frame	3 years
Motor	2 years
Electronics and accessories	2 years
Battery	2 years

To be able to benefit from the guarantee of new products, it is imperative to keep the purchase invoice of the product. This invoice is required for any incident opening with ACEKARE after-sales service during the warranty period, otherwise all repair costs will be charged.

ACEKARE will repair or replace to the warranty holder, free of charge, the parts being covered by the warranty after a verification by an authorized representative of ACEKARE and if the latter **has found defects in materials and/or workmanship**. The cost of the return of the equipment remains the responsibility of the buyer.

For any repairs beyond the warranty period, the costs of materials and transportation costs will be charged and will be borne by the purchaser.

15.2 Warranty exclusions

1-warranty exclusions extend to the following items:

- tire and cable shop
- components damaged by negligence, accident, misuse, overloading, commercial use, malfunction, poor maintenance or poor storage
- circumstances beyond the control of ACEKARE
- modifications and/or repairs made without the written consent of ACEKARE

2-If the serial number on the chassis is not original or has been modified or does not match the one on the warranty card or if the serial number on the warranty card is changed, the warranty will be cancelled.

3-the guarantee is transferable from particular to particular.

As a Distributor, our responsibility is to repair or replace damaged parts.

To the extent permitted by law, this warranty statement replaces all other warranties such as writing, oral, expressive or implied warranties, including warranties of merchantability or any particular purpose application, in the event of a conflict between the same, this warranty statement shall prevail.

15.3 Discontinuance

ACEKARE disclaims any liability for any bodily injury or property damage resulting from improper or dangerous use of this manual wheelchair operator system.

If you have any questions about the Yomper and its operation safely, do not hesitate to contact your retailer.

Manufacturer

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33310 LORMONT, France

+33 (0) 9 80 80 85 15

contact@acekare.com