# HANDBIKE BATEC ELECTRIC

• MINI 2

- ELECTRIC 2 (RAPID 2)
- SCRAMBLER 2



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## WELCOME

First of all, we'd like to congratulate you on your purchase of a HAND-BIKE BATEC ELECTRIC, manufactured by BATEC MOBILITY S.L.

All of the products designed, manufactured and distributed by BATEC MOBILITY comply with European Regulation (EU) 2017/745 concerning medical devices.

Each HANDBIKE BATEC ELECTRIC is assembled individually by hand, to ensure maximum quality. The fact that the inventor, founder and current director of BATEC MOBILITY and many of our employees are HANDBIKE BATEC ELECTRIC users allows us to apply our direct experience gained over many years of use to our products.

Here at BATEC MOBILITY we're committed to ensuring that each new user gets the most out of their HANDBIKE BATEC ELECTRIC, thus gaining greater mobility and independence.

It is very important that you read this manual and the safety instructions carefully before using the product. This will help you understand how your HANDBIKE BATEC ELECTRIC is made and how you should use it for maximum comfort and safety.

For our part, we're available at any time to answer any questions you may have or provide any services you may need.

# 1. INTENDED PURPOSE, INDICATIONS AND CONTRAINDICATIONS

The HANDBIKE BATEC ELECTRIC is a device that attaches to a manual wheelchair and is used like a hand-operated cycle. This creates a three-wheeled vehicle that allows the user to get around with help from the electric motor on the front wheel. With this, the user's abilities are optimised and they can be more self-sufficient.

HANDBIKE BATEC ELECTRIC has CE marking as a class I medical device according to the requirements of Regulation (EU) 2017/745 concerning medical devices.

All the HANDBIKE BATEC ELECTRIC models operate in a similar manner, the only change being the wheel size, top speed and features. See Section 3 (MODELS).

First, the handbike must be attached to a wheelchair. Once the two parts have been joined, we have a three-wheeled vehicle with the seat on the wheelchair and transmission and traction on the front wheel. To operate the handbike, just activate its transmission by pedalling with your hands or pressing on the accelerator. This will provide traction to the front wheel.

This product aims to provide wheelchair users (people with a disability that makes it impossible for them to walk) with attractive, practical products that are useful both in their daily life and for doing recreational activities and sport.

Thanks to the product configuration, users can do longer and more complicated trips than with a wheelchair alone, boosting independence and autonomy.

## INDICATIONS

The HANDBIKE BATEC ELECTRIC is indicated for users with the following characteristics:

- With a disability affecting the lower limbs, who use a wheelchair and whose upper limbs are not affected and have full functionality of their hands. For these users, models with either the standard or PARA set-up are indicated.
- With a disability affecting the lower limbs, who use a wheelchair and whose upper limbs are partially affected and have good functionality of their arms and partial functionality of their hands, enough to accelerate, brake and turn without risk. For these users, models with the TETRA set-up are indicated. For those with spinal injuries, the most severe level that can use models with the TETRA set-up is functional C6. It is essential to have good biceps function and firm wrist extension.
- With a total or partial disability affecting the lower limbs, who use a wheelchair and whose upper limbs are partially affected and have full functionality (arm and hand) on at least one side. For these users, models with the HEMI set-up are indicated.

Additionally, for safety reasons, the HANDBIKE BATEC ELECTRIC may only be used by people who:

- Have been instructed on how to operate it.
- Have the physical and psychological conditions required to operate it safely in all situations.
- Are able to brake the wheelchair and stop it if the device fails.

#### CONTRAINDICATIONS

The HANDBIKE BATEC ELECTRIC is not recommended in the following cases:

- People whose physical and/or psychological condition does not allow them to move around safely in situations with traffic.
- People who weigh over 110 kg.
- For the quad models, quadriplegic people who don't have at least the arm mobility described in this user manual.
- For the standard models, people who don't have enough hand strength to stop the device using the brake levers.
- For the hemi models, people who don't have enough strength in their working hand to stop the device using the brake levers.
- People with a visual impairment that impedes them from legally driving a vehicle.

If you are unsure, please check with a professional.

#### SPEED

We would like to point out that the versions of the device which drive faster than 6 kph are only permitted in road traffic in certain countries and otherwise may only be used on private land. In the absence of approval, in accordance with the road traffic laws, the versions which drive faster than 6 kph version may not be driven on public roads or even cycle ways. It is your responsibility to find out the information about which legal regulations apply in your particular country and about the insurance or driving licence obligations for versions which drive faster than 6 km/h.

# 2. SAFETY MEASURES AND GENERAL PRECAUTIONS

## 2.1. BEFORE USING YOUR BATEC HANDBIKE FOR THE FIRST TIME

# IMPORTANT!

Before using your HANDBIKE BATEC ELECTRIC for the first time, read this user manual carefully.

- Don't exceed the maximum weight of 110 kg. This includes the user's weight and any other object being carried.
- The HANDBIKE BATEC ELECTRIC isn't compatible with all wheelchairs on the market. Before installing it, check the current BATEC Compatibility Table on our website (www.batec-mobility.com).
- It is important to start out slowly the first time you use your HAND-BIKE BATEC ELECTRIC in order to learn the sensations you get and become familiar with it. Each new manoeuvre is a potential risk. Be particularly careful with turns and speed.
- Choose a calm place to use your HANDBIKE BATEC ELECTRIC the first time.
- Have someone help you become familiar with your HANDBIKE BATEC ELECTRIC. Each new manoeuvre can put you at risk of injury. Never use your HANDBIKE BATEC ELECTRIC alone until you have gained the necessary skill level. When someone is helping you, it is important for them to have read the user manual beforehand as well.
- Safe use of the HANDBIKE BATEC ELECTRIC requires training and experience.

- The HANDBIKE BATEC ELECTRIC is a medical device classified as a technical aid for mobility and we recommend consulting your local regulations on the circulation of such vehicles. BATEC MOBILITY S.L. can provide you with the Declaration of Conformity as a medical device or certification as a technical aid, if required.
- Check local laws regarding add-on handbikes and wheelchairs, as they may vary depending on your location.
- Always do a safety check on your HANDBIKE BATEC ELECTRIC before each use. To do this, check:
- Conditions of the fixed or removable axles on the rear wheels of your wheelchair.
- The Velcro on the seat and backrest of your wheelchair.
- Tyre pressure on your wheelchair. If it is too low, there is a greater risk of tipping over and greater wear (recommended pressure for wheelchair: see side of tyre).
- HANDBIKE BATEC ELECTRIC tyre pressure (recommended pressure: depends on model).
- Conditions of the HANDBIKE BATEC ELECTRIC frame.
- All parts, in particular any screws, are properly tightened.
- Brakes are working properly.
- Make sure that all electrical connections are in good conditions and properly connected.
- Make sure the battery is connected.
- The HANDBIKE BATEC ELECTRIC attaches and detaches from the wheelchair properly.

## 2.2. DURING USE

- The HANDBIKE BATEC ELECTRIC must only be used to transport one person at a time.
- The HANDBIKE BATEC ELECTRIC is only recommended for people with the physical and mental state necessary to travel in situations with vehicle traffic.

- Avoid unnecessary risks like excess speed, fast turns and leaning to the side. Also avoid travelling over objects that may cause you to brake sharply or tip over.
- The safest way to drive the HANDBIKE BATEC ELECTRIC is on level surfaces without obstacles. Use ramps whenever possible. Always be extremely careful when crossing the road.
- Use reflectors on your HANDBIKE BATEC ELECTRIC and wheelchair or on your clothes to make you more visible to drivers. In situations with reduced visibility, always use lights.
- There is a risk of skidding on wet surfaces, gravel or irregular terrain, reduce your speed and use extra caution. Don't use the HANDBIKE BATEC ELECTRIC on mud or ice.
- Make sure your feet are properly positioned on the footrest of the wheelchair and that the seatbelt is properly adjusted.
- When you use your HANDBIKE BATEC ELECTRIC, control your speed and only ride as fast as appropriate for the given ground conditions. By maintaining a prudent speed, you will avoid unnecessary risks. Don't ride the HANDBIKE BATEC ELECTRIC faster than you would travel in a wheelchair alone.
- The maximum recommended speed on pavements and in pedestrian areas is 6 km/h.
- When you need to turn, remember to slow down and be extra careful. If you take a turn to quickly, you may lose control of the HAND-BIKE BATEC ELECTRIC and run the risk of tipping over or crashing. Lean your body into the curve for better stability and to reduce the risk of tipping over.
- While driving and braking, hold the grips firmly with both hands in order to avoid any accidents caused by steering error.

# CAREFUL!

- Going up or down kerbs isn't recommended, as there is a risk of tipping over. When you can't avoid a kerb, we recommend you:
- Get help whenever possible.
- Take the kerb perpendicularly, so that both wheels of your wheelchair go over the kerb at the same time. Going over a kerb in any other way significantly increases the risk of tipping over.
- Avoid banging the HANDBIKE BATEC ELECTRIC when going up or down over a kerb, as this could damage both the HANDBIKE BATEC ELECTRIC and your wheelchair.
- The HANDBIKE BATEC ELECTRIC and the wheelchair must roll gently over the kerb on all wheels.

• See also figures 61 and 62.

- When travelling up or down a hill, we recommend you:
- Get help whenever possible while on a hill.
- Stay a straight course.
- When going up steep hills, lean forward to put more weight on the front wheel and improve traction.
- Avoid unnecessary turns and never turn sharply, as this puts you at risk of tipping over.
- When going downhill, go slowly, braking continuously, and avoid braking sharply.
- Don't use the brakes on your wheelchair; this could cause them to lock up and you to lose control.
- The maximum recommended slope is 10°, as steeper inclines could make the parking brake less effective. Also take into account that the safe braking distance on hills can be much longer than on flat terrain.
- When travelling long distances we recommend you carry an extra battery.

- Make sure the grip on your wheels is proper conditions.
- Make sure you are familiar with braking distances at various speeds.
- Only use accessories approved by BATEC MOBILITY. Check www.batec-mobility.com.
- NEVER use your HANDBIKE BATEC ELECTRIC with a child on your lap, as there is a high risk
- The BATEC ELECTRIC HANDBIKE could be affected by electromagnetic fields (for example, shop alarm systems, automatic doors, etc.) and its handling could also be affected by electromagnetic fields (for example, mobile phones, electric generators and high-voltage power sources).
- The following manoeuvres are not allowed:
- Riding up or down stairs or staircases.
- Riding at an angle on the pavement.
- 180° turns on steep hills.
- Sharp movements.
- Sharp braking on a curve.

# 

There is a risk that fingers may get smashed in several parts of the product (openings and spaces between fixed accessible parts) during intended use. (See fig. 1, 2)

# CAREFUL!

There is a risk that feet may get smashed (openings and spaces between fixed accessible parts) during intended use. (See fig. 3)

## 2.3. GENERAL PRECAUTIONS

# CAREFUL!

- Remember to always turn off the BATEC ELECTRIC HANDBIKE before attaching or detaching it to the wheelchair.
- Do not use the BATEC ELECTRIC HANDBIKE if it behaves abnormally or erratically.
- Do not use the BATEC ELECTRIC HANDBIKE with dead batteries.
- Take your HANDBIKE BATEC ELECTRIC to a distributor or technical service provider authorised by BATEC MOBILITY regularly for servicing.
- Avoid contact or proximity to fire, particularly lit cigarettes.
- If the HANDBIKE BATEC ELECTRIC is exposed to direct sunlight or low temperatures for an extended period of time, the HANDBIKE BATEC ELECTRIC pieces may overheat (>41°C) or become too cold (<0 °C).
- Only use our charger to charge the battery.
- If you don't use your HANDBIKE BATEC ELECTRIC for an extended period of time, make sure the battery is fully charged and recharge it every 2 months to avoid damage caused by "deep discharge".
- Keep the HANDBIKE BATEC ELECTRIC out of the reach of children when not under adult supervision.
- Do not open the battery, as there is a risk of explosion and/or fire. .

## 2.4. LIFESPAN

The BATEC ELECTRIC HANDBIKE has a lifespan of at least 5 years, as long as it is used according to the indicated operating conditions and receives proper maintenance and revisions, as indicated.

The life of the battery is between 200 and 500 charging cycles, and between 1 and 3 years, depending on several factors, including temperature, frequency of use, consistency of use and other individual issues (user weight, driving style, terrain, etc.).

#### Disposing of the product

The BATEC ELECTRIC HANDBIKE is an electric/electronic device, so it must be disposed of properly. Please check with your local waste-management centre. Contact BATEC MOBILITY if you have any questions.



# **3. MODELS: CHARACTERISTICS AND PARTS**

# INFORMATION!

The Batecs shown and described in this manual may not be exactly the same as the model you own. However, all of the instructions provided here apply. The manufacturer reserves the right to modify the weights, measurements and other technical details in this manual without prior notice. All figures, measurements and capacities in this manual are approximate and not technical specifications. The manufacturer reserves the right to modify this manual without prior notice. The most current version of the manual is always available online: https://support.batec-mobility.com/en/support/

There are several models of HANDBIKE BATEC ELECTRIC: MINI 2, ELEC-TRIC 2 and SCRAMBLER 2 (2018 platform). All of the HANDBIKE BATEC ELECTRIC models have the same anchoring system and the same type of structure, only wheel size, top speed and features:

- MINI 2: powered by an electric motor on the 12" front wheel. (See fig. 4a)
- ELECTRIC 2: powered by an electric motor on the 18" front wheel. (See fig. 4b)
- SCRAMBLER 2: powered by an electric motor on the 19" front wheel (all terrain). (See fig. 4c)

The various models of HANDBIKE BATEC ELECTRIC are designed for users with full hand function in their standard configuration. For users without full hand function, we have specially adapted controls, sold under the name QUAD. For users who only have functional difficulties in one of their upper limbs, we offer controls specially adapted to this situation, sold under the name HEMI. More information in the box below. The HANDBIKE BATEC ELECTRIC models (Mini 2, Electric 2 and Scrambler 2) are sold with different speed limits depending on the country, region or client. (See fig. 60)

# INFORMATION!

SKILLS NEEDED TO USE THE BATEC HANDBIKES: HANDBIKES BATEC are only recommended for people with the physical and psychological conditions to circulate in traffic. The standard HANDBIKE BATEC ELEC-TRIC models require full use of hands and arms.

To use the models with QUAD controls, users must have good arm function and partial hand function, enough to accelerate, brake and turn without danger. This is why BATEC MOBILITY always offers users the option to test the product before purchasing.

The most serious spinal cord injury compatible with use of the HAND-BIKE BATEC ELECTRIC QUAD is functional C6 (good biceps function and wrist motion is essential).

To use versions equipped with HEMI controls, users must have full functionality (hand and arm) in at least one of their upper limbs. (See fig. 5)

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## 3.1. HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2

3.1.1. Characteristics

### MINI 2

- Material: Aluminium 7005 T6/ Aluminium 6061 T6
- Motor: Brushless 350 W 350 RPM / Peak power: 600 W / Reverse gear

- Top speed: depending on the model. (See fig. 60)
- Battery: several battery options available:
- 280 Wh (7.8 Ah) battery with 22-km battery life\*
- 522 Wh (14.5 Ah) battery with 40-km battery life\*
- \* Battery life calculated under the following conditions: 75-kg user, extra-light wheelchair, flat terrain, no wind and steady speed of 15 km/h. May vary  $\pm$ 20 % depending on the battery.
- Super-fast 4A charger
- The BATEC power and steering system has a V-0 flammability rating, according to UL94 standards.
- Tyre: 12" ultra-grip
- Rim: 12" double-wall aluminium
- Brakes: Avid Avid BB5 140 mm mechanical disc brakes with aluminium levers and parking brake.
- Headset: 1.1/8 black
- Handlebar: Matte black aluminium
- BATEC EASY-FIT regulation system (Pat. Pend.)
- BATEC EASY-FIX anchor system (Pat. Pend.)
- BATEC SAFE-FEET stand frame (Pat. Pend.)
- 100 lumen front LED light, runs off main battery
- Dual LED tail light on the stand frame
- ALL-IN-ONE display panel (battery indicator, 3-speed selector and rear gear, cycle computer, front and rear lights, and horn, all with 4 buttons on the handlebar)
- Weight: 10.9 kg (without battery)
- Dimensions: (See fig. 6, 7)

### ELECTRIC 2

- Material: 7005 T6 aluminium. Removable dropout to change the tyre.
- Motor: 250 RPM, 900 W brushless motor / Nominal power: 900 W / Reverse gear
- Top speed: 25 km/h
- Battery: several battery options available:
- 280 Wh (7.8 Ah) battery with 22-km battery range\*
- 522 Wh (14.5 Ah) battery with 40-km battery range\*
- \* Battery range calculated under the following conditions: 75-kg user, extra-light wheelchair, flat terrain, no wind and steady speed of 15 km/h. Life may vary  $\pm$ 20 % depending on the battery.
- Fast 4A charger
- Tyre: Exclusive ultra-grip 18"
- Rim: 18" double-wall aluminium
- Brakes: Avid BB5 180 mm mechanical disc brakes. Aluminium levers with parking brake and throttle cut-off.
- Headset: 1.1/8 black
- Handlebar: Black matte aluminium
- HANDBIKE BATEC ELECTRIC EASY-FIT regulation system
- HANDBIKE BATEC ELECTRIC EASY-FIX anchor system
- HANDBIKE BATEC ELECTRIC SAFE-FEET stand frame
- 700 lumen front LED light, runs off main battery
- Dual LED tail light on the stand frame
- ALL-IN-ONE LCD screen (battery gauge, 3-speed regulator and rear gear, cycle computer, front and rear lights, and horn, all with 4 buttons on the handlebar)
- Removable weights

- Weight: 14.9 kg (without battery/weights)
- Dimensions: (See fig. 8)

#### RAPID 2

- Colour: graphite with red trim
- Top speed: depending on the model. (See fig. 60)
- Autonomy:
- 22 km\* with 280-Wh battery
- 50 km\* with 679-Wh battery
- \* Autonomy calculated with: 75-kg user, ultra-light wheelchair, flat terrain, no wind and a steady speed of 15 km/h. May vary  $\pm 20$  % depending on the battery.
- Motor: 300-RPM brushless / Nominal power: 1440 W / Peak power: 1620 W
- Reverse gear
- $\bullet$  Batteries with connector only suitable for use with the BATEC RAPID 2 and BATEC SCRAMBLER 2 48 V 678 Wh
- Optional flight-safe battery 36/48 W 280 Wh (can't be chosen as the main battery as it limits the performance of the BATEC RAPID 2 due to 36 V power).
- Fast 3A charger
- Chassis: Black aluminium 7005 T6 headset 1.1/8 / Removable dropout to change the tyre
- Matte black aluminium handlebar
- Avid BB7 mechanical brakes / Aluminium levers with parking brake and throttle cut-off. 180 mm Galfer Wave floating rotor disc
- Tyre: Exclusive ultra-grip 18"
- Rim: 18" black double-wall aluminium

- 700-lm front light with running lamp. Dual LED tail light on the stand frame
- All-in-one LCD screen with cycle computer and battery gauge
- USB port Horn
- BATEC ACOPLA support
- Removable Scrambler QR weights
- Weight 15.9 kg (without battery or weights)
- Dimensions:: (See fig. 9)

### SCRAMBLER 2

- Material: 7005 T6 aluminium. Removable dropout to change the tyre
- Motor: 250 RPM, 900 W brushless motor / Nominal power: 1440 W / Peak power: 1620 W / Reverse gear
- Top speed: depending on the model. (See fig. 60)
- Battery:
- 679 Wh (14.5 Ah) battery with 50-km battery range\*
- \*Battery range calculated under the following conditions: 75-kg user, extra-light wheelchair, flat terrain, no wind and steady speed of 15 km/h. Life may vary  $\pm$ 20 % depending on the battery.
- Fast 3A charger
- Tyre: 19" ultra-grip Maxxis
- Rim: 19" double-wall aluminium
- Brakes: Avid BB7 mechanical brakes / Aluminium levers with parking brake and throttle cut-off / 203-mm Galfer Wave rotor disc
- Headset: 1.1/8 FSA Orbit Mx black
- Handlebar: Ultra-wide aluminium

- HANDBIKE BATEC ELECTRIC EASY-FIT regulation system
- HANDBIKE BATEC ELECTRIC EASY-FIX anchor system
- Stand frame with suspension
- New dual 1400-lumen front lights
- Dual LED tail light on the stand frame
- ALL-IN-ONE LCD screen (battery gauge, 3-speed regulator and rear gear, cycle computer, front and rear lights, and horn, all with 4 buttons on the handlebar)
- Removable Scrambler QR weights
- Weight: 16.1 kg (without battery/weights)
- Dimensions: (See fig. 10)

# 3.1.2. Parts of the HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 (See fig.11a, 11b, 11c, 11d, 11e, 11f, 11g)

# 3.1.3. Parts of the HANDBIKE BATEC ELECTRIC QUAD MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 (See fig.12)

## 3.1.4. Parts of the HEMI control for the HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 (See fig.13)

A left-handed version is also available with symmetrical controls regarding the one displayed.

# 4. OPERATING THE HANDBIKE BATEC ELECTRIC / USER GUIDE

### 4.1. DELIVERY

Your new HANDBIKE BATEC ELECTRIC will be delivered in a cardboard box. In order to prevent damage during transport, parts that must be assembled later, like the battery, are packaged separately inside the cardboard box.

## 4.2. UNPACKING

- Check that the outside of the cardboard box hasn't been damaged in any way during transport.
- Remove all of the packing materials.
- Remove the parts of the HANDBIKE BATEC ELECTRIC (including the battery and charger) from the cardboard box and check that they are all there.
- Check that all the parts are in proper conditions, without any sort of damage, scratches, tears, dents, irregularities or other defects.
- If you find any problems, or if any pieces are missing, notify the authorised distributor immediately.

## 4.3. ELEVATION, TRANSPORT AND STORAGE

The HANDBIKE BATEC ELECTRIC has been designed so that users can easily remove and detach the battery on their own.

• When taking the HANDBIKE BATEC ELECTRIC on any means of transport (car, bus, train, plane, etc.), we recommend removing the battery before your journey: turn the battery key to OPEN, remove the key and then remove the battery.

- When lifting the HANDBIKE BATEC ELECTRIC, we recommend removing the weight as indicated in section 3.10 and the battery as per section 4.9.1.
- When transporting the HANDBIKE BATEC ELECTRIC in the boot of a vehicle, we recommend leaving it attached to a wheelchair whenever possible.

The BATEC HANDBIKE is not designed to be used as a means of transport inside a vehicle.

The HANDBIKE BATEC ELECTRIC ELECTRIC should be stored in a cool, dry place, protected from direct sunlight and rain. It should not be kept out of use for more than two months.

## 4.4. ATTACHING THE HANDBIKE BATEC ELECTRIC:

- Step 1: Get in front of the HANDBIKE BATEC ELECTRIC, with the handlebar centred in front of the wheelchair, with the brake on. (See fig. 14a, 14b)
- Step 2: Grab the HANDBIKE BATEC ELECTRIC by the handlebar and pull it towards you, rolling the frame stand until the detaching ramp on the anchoring bar touches the front axle of the bar on the wheel-chair. (See fig. 15)
- Step 3: Tip the handlebar, lifting the front wheel, while pulling the HANDBIKE BATEC ELECTRIC towards you. When the detaching ramp has passed the front axle of the bar on the wheelchair, let go of the handlebar and put the front wheel back on the ground. (See fig. 16a, 16b)
- Step 4: Take off the brake on the wheelchair and push gently on the HANDBIKE BATEC ELECTRIC handlebar to make sure the front axle is securely in place.
- Step 5: Push the handle until it clicks, so that both the wheels on the HANDBIKE BATEC ELECTRIC stand frame and the front wheels on the wheelchair are off the ground. Your HANDBIKE BATEC ELECTRIC is now attached. (See fig. 17)

## 4.5. DETACHING THE HANDBIKE BATEC ELECTRIC

- Step 1: Make sure your HANDBIKE BATEC ELECTRIC is switched off. (See fig. 18)
- Step 2: Push the anchor lever forward with the palm of your hand until you feel it come free. Don't let go of the lever and set the HAND-BIKE BATEC ELECTRIC on the ground. Advice: lean your torso back to take weight off the lever. This will make it much easier to detach the HANDBIKE BATEC ELECTRIC. (See fig. 19)
- Step 3: Tilt the handlebar, lifting the front wheel, while you push the HANDBIKE BATEC ELECTRIC away from you. (See fig. 20)
- Step 4: When the detaching ramp has gone over the front axle of the wheelchair bar, let go of the handlebar and set the front wheel down again. Your HANDBIKE BATEC ELECTRIC is now detached. (See fig. 21)

# ADVICE!

Practice attaching and detaching your HANDBIKE BATEC ELECTRIC calmly and you'll see that, in just a few weeks of use, it will become automatic.

# 4.6. USING THE HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 CONTROLS

- You can find out the meaning of all the symbols used on the controls of the BATEC ELECTRIC HANDBIKE in Figure 58.
- Turn on: Turn the key on the right side of the battery clockwise to the ON position. It will do a system check: don't start using your HAND-BIKE BATEC ELECTRIC until it has finished with the system check and all the lights are on. (See fig. 22)

# IMPORTANT!

For the safety check to be completed properly, the wheel of the HAND-BIKE BATEC ELECTRIC must be stopped and the user must have squeezed the brake levers on the HANDBIKE BATEC ELECTRIC at least once.

- Turn off: Turn the key on the battery anti-clockwise to the OFF position. If you leave it in the OPEN position, your HANDBIKE BATEC ELECTRIC will be off and the battery will be ready to remove. (See fig. 22)
- Speed up: The throttle is on the right grip on the handlebar. It works just like a motorbike, meaning you can regulate your speed by turning the throttle on the grip. (See fig. 23)
- Brake: The HANDBIKE BATEC ELECTRIC has two brake levers on the handlebar that activate the disc brakes. Squeeze the lever to activate the brakes. Advice: Use one hand to accelerate and the other to brake. Advice: Always keep two fingers on the brake lever in order to respond quickly. Pressing on the brake lever and the red lever at the same time blocks the brake lever, acting as a parking brake. (See fig. 24)
- Front and back gears:
- There are two operating modes: Front and back gears:
- In front gear, there are 3 speed limits (position 1, position 2 and position 3), each with a light indicator on the display panel.
- In back gear, there is only one speed and one light indicator on the display panel.
- When the HANDBIKE BATEC ELECTRIC is switched on, it will always be in front gear, position 1.
- In front gear, press button F to choose the desired speed limit (position 1, position 2 or position 3).
- Press the R button to switch to back gear. This mode will only be activated if the HANDBIKE BATEC ELECTRIC is sopped and the throttle is not engaged. Press the F button to switch back to front gear. (See fig. 25)

- Freewheel mode: To use the HANDBIKE BATEC ELECTRIC in freewheel mode:
- Switch the device off with the key.
- To move forwards or backwards, use the rims on the wheelchair to move the HANDBIKE BATEC ELECTRIC and wheelchair in the desired direction.
- To turn, turn the HANDBIKE BATEC ELECTRIC with one hand while propelling the wheelchair with the other.
- To stop, use the HANDBIKE BATEC ELECTRIC brakes or the rim on the wheelchair.
- Lights: There is a button on the HANDBIKE BATEC ELECTRIC handlebar to switch on the front and rear lights. When you push the button, the front light will go on in normal mode and the light indicator on the display panel will turn green. When you push the front light button again, it changes to high-beam mode, and so on. To turn off the lights, hold the button down for 2 seconds. The front light is below the battery and the two rear lights, on either side of the stand frame. (See fig. 26a, 26b, 26c)

# 4.7. USING THE HANDBIKE BATEC ELECTRIC QUAD MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 CONTROLS

- You can find out the meaning of all the symbols used on the controls of the BATEC ELECTRIC HANDBIKE in Figure 58.
- Turn on: Turn the key on the right side of the battery clockwise to the ON position. It will do a system check: don't start using your HAND-BIKE BATEC ELECTRIC until it has finished with the system check and all the lights are on. (See fig. 27)
- Turn off: Turn the key on the battery anti-clockwise to the OFF position. If you leave it in the OPEN position, your HANDBIKE BATEC ELECTRIC will be off and the battery will be ready to remove. (See fig. 27)
- Speed up: Pull the HANDBIKE BATEC ELECTRIC QUAD MINI handlebar towards you to activate the throttle. (See fig. 28)

- Brake: Push the HANDBIKE BATEC ELECTRIC QUAD MINI handlebar away from you to activate the brake. (See fig. 29)
- Front and back gears:
- There are two operating modes: Front and back gears:
- In front gear, there are 3 speed limits (position 1, position 2 and position 3), each with a light indicator on the display panel.
- In back gear, there is only one speed and one light indicator on the display panel.
- When the HANDBIKE BATEC ELECTRIC is switched on, it will always be in front gear, position 1.
- In front gear, press button F to choose the desired speed limit (position 1, position 2 or position 3).
- Press the R button to switch to back gear. This mode will only be activated if the HANDBIKE BATEC ELECTRIC is sopped and the throttle is not engaged. Press the F button to switch back to front gear. (See fig. 30)
- Freewheel mode: To use the HANDBIKE BATEC ELECTRIC in freewheel mode:
- Switch the device off with the key.
- To move forwards or backwards, use the rims on the wheelchair to move the HANDBIKE BATEC ELECTRIC and wheelchair in the desired direction.
- To turn, turn the HANDBIKE BATEC ELECTRIC with one hand while propelling the wheelchair with the other.
- To stop, use the HANDBIKE BATEC ELECTRIC brakes or the rim on the wheelchair.
- Lights: There is a button on the HANDBIKE BATEC ELECTRIC handlebar to switch on the front and rear lights. When you push the button, the front light will go on in normal mode and the light indicator on the display panel will turn green. When you push the front light button again, it changes to high-beam mode, and so on. To turn off the lights, hold the button down for 2 seconds. The front light is below the battery and the two rear lights, on either side of the stand frame.(See fig. 31a, 31b, 31c)

# 4.8. OPERATING THE HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 (RAPID 2) / SCRAMBLER 2 HEMI CONTROLS

- You can find out the meaning of all the symbols used on the controls of the BATEC ELECTRIC HANDBIKE in Figure 58.
- Turn on: Turn the key on the right side of the battery clockwise to the ON position. It will do a system check: don't start using your HAND-BIKE BATEC ELECTRIC until it has finished with the system check and all the lights are on. (See fig. 32)
- Turn off: Turn the key on the battery anti-clockwise to the OFF position. If you leave it in the OPEN position, your HANDBIKE BATEC ELEC-TRIC will be off and the battery will be ready to remove. (See fig. 32)
- Speed up: The throttle is on the right or left grip on the handlebar. (See fig. 33)
- Brake: Pressing on the brake lever and the red lever at the same time blocks the brake lever, acting as a parking brake. (See fig. 34)
- Front and back gears:
- There are two operating modes: Front and back gears:
- In front gear, there are 3 speed limits (position 1, position 2 and position 3), each with a light indicator on the display panel.
- In back gear, there is only one speed and one light indicator on the display panel.
- When the HANDBIKE BATEC ELECTRIC is switched on, it will always be in front gear, position 1.
- In front gear, press button F to choose the desired speed limit (position 1, position 2 or position 3).
- Press the R button to switch to back gear. This mode will only be activated if the HANDBIKE BATEC ELECTRIC is sopped and the throttle is not engaged. Press the F button to switch back to front gear. (See fig. 35)
- Freewheel mode: To use the HANDBIKE BATEC ELECTRIC in freewheel mode:

- Switch the device off with the key.
- To move forwards or backwards, use the rims on the wheelchair to move the HANDBIKE BATEC ELECTRIC and wheelchair in the desired direction.
- To turn, turn the HANDBIKE BATEC ELECTRIC with one hand while propelling the wheelchair with the other.
- To stop, use the HANDBIKE BATEC ELECTRIC brakes or the rim on the wheelchair.
- Lights: There is a button on the HANDBIKE BATEC ELECTRIC handlebar to switch on the front and rear lights. When you push the button, the front light will go on in normal mode and the light indicator on the display panel will turn green. When you push the front light button again, it changes to high-beam mode, and so on. To turn off the lights, hold the button down for 2 seconds. The front light is below the battery and the two rear lights, on either side of the stand frame. (See fig. 36a, 36b, 36c)

#### ANTI-SLIP SYSTEM

#### To activate the Anti-Slip System:

This is only possible if the HANDBIKE BATEC ELECTRIC is stopped and the throttle not engaged (see Fig. 58).

- Press the Front gear button (8) for 3 seconds.
- The light indicator (1) (2) (3) on the display panel will blink.
- The Anti-Slip System is now active.

When the Anti-Slip System is active for 2 seconds, it stops the HAND-BIKE BATEC ELECTRIC from sliding back on a hill and keeps the wheel from sliding when starting.

### Deactivate the Anti-Slip System:

This is only possible if the HANDBIKE BATEC ELECTRIC is stopped and the throttle not engaged.

- Press the Front gear button (8) for 3 seconds.
- The light indicator (1) (2) (3) on the display panel lights up.

The Anti-Slip System is no longer active.

With the Anti-Slip System deactivated, the HANDBIKE BATEC ELECTRIC will once again behave as normal.

The Anti-Slip System comes standard on the SCRAMBLER 2 model. For other models, please check.

## 4.9. BATTERY

BATEC MOBILITY has several 36-V lithium-ion batteries: 280 Wh and 522 Wh, and 1 48 V 679 Wh lithium-ion battery. Each without memory effect and with a cable-free connection system.

THE 280 WH BATTERY COMPLIES WITH IATA-DGR REGULATIONS for air travel with batteries in mobility-aid devices. (See fig. 37)

Lithium ion batteries have many advantages over other batteries, mainly due to their flexibility. They don't have to be completely charged every time they are used, nor do they have to be used continuously or fully drained each time.

BATEC MOBILITY only uses batteries with the safest technology available, including the BMS smart battery management system.

HANDBIKE BATEC ELECTRIC batteries don't require any maintenance.

#### **4.9.1 BASIC BATTERY USE**

#### Inserting and removing the HANDBIKE BATEC ELECTRIC battery

You don't need to touch any connectors to insert or remove the battery from your HANDBIKE BATEC ELECTRIC, as this is done automatically. (See fig. 38)

• To remove the battery: Turn the key to the REMOVE BATTERY position (OPEN). Grab the handle of the battery and pull up gently until the battery comes fully of the guide. (See fig. 39)

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• To insert: Grab the battery by the handle. Set the lower right corner of the battery in the side support tab until it clicks into the guide. Slide the battery down slowly until it is resting completely in the mount. (See fig. 40)

# IMPORTANT!

If you leave the battery in the OFF AND REMOVE KEY WITH DETACH-ING LOCK position (OFF), you won't be able to remove it.

## Connecting the battery:

To connect the HANDBIKE BATEC ELECTRIC battery, simply turn the key to the ON position and use your HANDBIKE BATEC ELECTRIC normally. (See fig. 41)

The battery charging system is protected by the smart battery management system (BMS), which cuts power if there is a surge or if any of the battery cells are too discharged. (See fig. 42)

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Never, under any circumstances, use the discharging port on the battery to charge it or power it in any way, whether with an external power source or regenerative brake system.

# Charging the battery:

- The HANDBIKE BATEC ELECTRIC battery is charged with the 3-pin XLR port on the side of the battery. (See fig. 43)
- Only charge the battery with the original BATEC MOBILITY charger provided with your HANDBIKE BATEC ELECTRIC.

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Never, under any circumstances, use chargers from other manufacturers or a charger from another HANDBIKE BATEC ELECTRIC, as the specifications for each HANDBIKE BATEC ELECTRIC series are different.

- Recharge time for the BATEC MOBILITY battery is 3 hours. Both the charger and the battery management system cut the power when the battery is fully charged.
- Charging the battery: To charge the battery, the key must be in the OFF or OPEN position. You can charge the battery whether or not it is attached to the HANDBIKE BATEC ELECTRIC. Turn the cover of the charging port, plug the charger first into the port and then into a socket, then turn the charger on.

## Storing the battery

Lithium ion batteries have a smart battery management system (BMS) that uses a small amount of power to monitor the battery at all times. The amount used is very small but if you store the battery fully discharged, in just a few weeks the BMS can run out of power.

If this happens, the battery can never be used again. As a result, we strongly recommend you follow these instructions carefully:

- Charge the battery fully before storing it.
- Always store the battery with the key in the OFF position.
- Charge the battery fully at least every 2 months.
- If the battery doesn't work after being stored for a period of time, for your safety it must be disposed of. .

### 4.9.2. BATTERY SAFETY INFORMATION

It is widely known that lithium ion batteries can be dangerous, and for good reason. Batteries used in vehicles, like those in the Batecs, have enough stored energy and potentially dangerous material to cause a significant incident if not used properly or in the case of negligence.

### BATEC MOBILITY ONLY USES LITHIUM BATTERY TECHNOLOGY IT CONSID-ERS STABLE AND SAFE.

All BATEC MOBILITY batteries use safety systems, including the smart battery management system (BMS), which monitors the battery at all times.

In addition to all of the built-in safety systems, to minimise the danger if a problem were to arise with elements outside the battery, such as improper functioning of the electrical installations or problems with the general power grid, we strongly recommend you follow these instructions carefully:

# CAREFUL!

- Only charge the battery under supervision.
- Don't charge the battery while using your BATEC ELECTRIC HAND-BIKE: Danger of electrocution and accidents.
- Don't charge the battery while asleep at night.
- Charge the battery well away from any flammable objects.
- Never use the discharging port to charge the battery and vice versa, never use the charging port to discharge it.
- Only use the BATEC MOBILITY charger provided with your HANDBIKE BATEC ELECTRIC to charge the battery.
- Never charge the battery near a heat source.
- Never charge the battery in temperatures below 0°C.

- Always store the battery fully charged.
- Don't allow the inside of the battery to be manipulated in any way, as there is a risk of explosion and/or fire.

### 4.9.3. ADDITIONAL INFORMATION ON THE BATTERY

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#### Using the battery in cold conditions

The performance of lithium batteries is limited, both in terms of power and battery life, in low temperatures (below 0°C). It isn't a dangerous situation but it is bothersome, so we recommend storing the battery inside under these circumstances. Never charge the battery in temperatures below 0°C.

#### Using the battery in damp conditions

The casing of the BATEC MOBILITY battery provides good protection against rain and dampness for the cells and circuits inside. This protection is enough for the battery to withstand these conditions occasionally but regular, prolonged exposure to damp and rainy conditions may cause the battery to stop working properly. Thus, we recommend you avoid these circumstances and use the HANDBIKE BATEC ELECTRIC as little as possible in rainy or snowy conditions.

#### Battery life

The life of the battery is between 200 and 500 charging cycles, and between 1 and 3 years, depending on several factors, including temperature, frequency of use, consistency of use and other individual issues (user weight, driving style, terrain, etc.).

To get the most out of your battery we recommend you:

# IMPORTANT!

- Drive gently at moderate speeds.
- Avoid exposure to high temperatures.
- Avoid exposure to low temperatures (below 0°C).
- Avoid leaving the battery unused for long periods of time.

The battery won't just die suddenly; it gradually begins to perform more poorly. If your battery suddenly stops working, it is normally due to a technical problem and not the end of its lifespan.

## Disposing of the battery

As with all batteries, the BATEC MOBILITY batteries must be disposed of properly. Check with your local waste-management centre. Contact BATEC MOBILITY if you have any doubts.



### Battery indicator operation

The battery status indicator is on the display (LCD panel) of the BATEC ELECTRIC HANDBIKE. The indicator is made up of several bars that indicate the % of energy available. (See fig. 59)

# IMPORTANT!

When the system detects that there is less than 20% battery charge available, it can limit the HANDBIKE BATEC ELECTRIC to position 1 (maximum speed: 6 km/h or 3 km/h, depending on the model) to save power.

## 4.9.4. TECHNICAL SPECIFICATIONS OF THE 280 WH BATTERY

- Dimensions: 350 x 140 x 60 mm
- Weight: 2.6 kg
- Power: 280 Wh
- Voltage: 36 V
- Maximum discharge current: 29 A
- Maximum charge current: 5 A
- Internal resistance: 200 mOhm
- BMS consumption: < 0.2 mA when on; < 0.02 mA when off
- Battery range by model:
  - HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2 / RAPID 2 / SCRAM-BLER 2: 22 km\*

## 4.9.5. TECHNICAL SPECIFICATIONS OF THE 522 WH BATTERY

- Dimensions: 350 x 140 x 60 mm
- Weight: 4 kg
- Power: 522 Wh
- Voltage: 36 V
- Maximum discharge current: 29 A
- Maximum charge current: 5 A
- Internal resistance: 200 mOhm
- $\bullet$  BMS consumption: < 0.2 mA when on; < 0.02 mA when off
- Battery range by model:
  - HANDBIKE BATEC ELECTRIC MINI 2 / ELECTRIC 2: 40 km\*

#### 4.9.6. SPECIFICATIONS OF THE 679 WH BATTERY

- Dimensions: 350 x 140 x 60 mm
- Weight: 4.6 kg
- Power: 679 Wh
- Battery: Panasonic PF 2.9 Ah
- Nominal voltage: 46.8 V
- Nominal charge: 14.5 Ah
- Maximum discharge current: 25 A
- Maximum charge current: 5 A
- Battery range by model HANDBIKE BATEC ELECTRIC SCRAMBLER 2 / RAPID 2: 50 km\*
- \* Battery range calculated under the following conditions: 75-kg user, extra-light wheelchair, flat terrain, no wind and steady speed of 15 km/h. Range may vary  $\pm 20$  % depending on the battery.

## 4.10. WEIGHTS

Some HANDBIKE BATEC ELECTRIC models are equipped with standard weights to improve traction. The weights are located on the fork, one on each side. They each weigh 2.4 kg. To make it easier to transport the HANDBIKE BATEC ELECTRIC, the weights can be removed.

- To remove the weights:
- 1) Hold the weight with one hand, press on the red button, tilting it so the bottom part comes away from the HANDBIKE BATEC ELECTRIC. (See fig. 44)
- 2) Remove the weight. (See fig. 45)
- To insert the weights:
  - 1) Hold the weight with one hand. Tilt it slightly and insert the two tabs into the weight mount slot. (See fig. 46)
  - 2) Push the bottom of the weight inward until it clicks into place. (See fig. 47)

# **5. INSTALLATION AND ADJUSTMENTS**

# 5.1. INSTALLATION OF THE HANDBIKE BATEC ELECTRIC ON A WHEELCHAIR

To anchor a HANDBIKE BATEC ELECTRIC to a wheelchair, you must first install a BATEC DOCKING-BAR (pat. pending). The BATEC DOCK-ING-BAR can be installed on most wheelchairs on the market, whether fixed or folding frame.

# IMPORTANT!

An updated list of wheelchairs compatible with the HANDBIKE BATEC ELECTRIC is available in the support section of the BATEC MOBILITY website.

The HANDBIKE BATEC ELECTRIC must be installed on a wheelchair by a qualified professional authorised by BATEC MOBILITY. Contact BATEC MOBILITY to find the authorised installation professional closest to you.

## 5.2. USER ADJUSTMENTS

Once the HANDBIKE BATEC ELECTRIC is properly installed on the wheelchair, there are several adjustments that must be made in order to fit the HANDBIKE BATEC ELECTRIC to the user's level of mobility, type of disability and size.

These adjustments can be done easily with the tools and instructions provided with the HANDBIKE BATEC ELECTRIC and basic mechanical knowledge.

The following adjustments can be made:

- Adjusting the distance between the HANDBIKE BATEC ELECTRIC and the wheelchair.
- Adjusting the angle of the stem on the HANDBIKE BATEC ELECTRIC.
- Adjusting the height of the handlebar on the HANDBIKE BATEC ELECTRIC.

# 5.2.1. ADJUST THE DISTANCE BETWEEN THE HANDBIKE BATEC ELECTRIC AND THE CHAIR

With the HANDBIKE BATEC ELECTRIC anchored, adjust the distance between the HANDBIKE BATEC ELECTRIC and the wheelchair so that there is as little space as possible between the user's feet and the stand frame, using the telescopic anchoring bar and the screws indicated. If the user doesn't have any other preference or limitations, we recommend a distance of 8 cm. (See fig. 48)

## 5.2.2. ADJUST STEM ANGLE (EXCEPT MINI 2 MODEL)

With the HANDBIKE BATEC ELECTRIC anchored, adjust the angle of the stem on the HANDBIKE BATEC ELECTRIC in order to fit the handlebar to the user's arm length, using the screws indicated. The upper and lower screws must be set on the same number. If the user doesn't have any other preference or limitations, we recommend position 3. (See fig. 49)

## 5.2.3. ADJUST STEM HEIGHT

With the HANDBIKE BATEC ELECTRIC anchored, adjust the stem height on the HANDBIKE BATEC ELECTRIC with the Quick Release lever. (See fig. 50)

# CAREFUL!

Do not fit over the MAX mark on the stem.

## 5.2.4. LCD CONSOLE ADJUSTMENTS

- 1. Switch on the battery to see the INFORMATION SCREEN. (See fig. 51)
- Press M (mode) button to move between all functions in loop sequence from one function screen to another as CLOCK / ODO (odometer) RT (partial time) / TT (total time) AVG (average speed) / MAX (maximum speed) TRIP 1 / ODO TRIP 2 / ODO. (See fig. 52)
  - Press R (reset) button for 2 seconds to reset TRIP 2, AVG and MAX from stored values to zero individually.
  - Data of TRIP 1, AVG and RT can be reset at the same time when one of the three data functions is being reset.
  - ODO, CLOCK and TT data cannot be reset.
- 3. Press M and R buttons simultaneously for 2 seconds to display the SETTING SCREEN 1. (See fig. 53)
- 4. Press M button to move between all functions in loop sequence from one function screen to another as 12/24 hour, clock, circumference wheel number and Km/h or MPH.
  - Press R button to increment the flashing digit by 1 or convert units.
  - Press M button to confirm the digit setting and jump to next digit or next setting screen to be set.
  - The c (circumference number) values are those:
     HANDBIKE BATEC ELECTRIC Mini 2: 947
     HANDBIKE BATEC ELECTRIC Electric 2: 1445
     HANDBIKE BATEC ELECTRIC Scrambler 2: 1621
  - Press M for 2 seconds at any setting screen to finish the setting and go to INFORMATION SCREEN
- 5. On SETTING SCREEN 1 (step 4) pressing M and R buttons simultaneously for 2 seconds will display the SETTING SCREEN 2. (See fig. 54)
  - Battery voltage value is on the bottom and manufacturer fine adjustment battery value is on top.
- 6. To return to INFORMATION SCREEN and fix all settings press M but-

ton for 2 seconds, if the screen displays SETTING SCREEN 1 press M button for 2 seconds again. (See fig. 55)

# IMPORTANT!

- Do not change the battery voltage value and fine adjustment battery value.
- Don't exit SETTING SCREEN 1 by switching off the battery.
- If the battery is fully charged and the screen display shows the following when switching on, you must follow steps 3, 5 and 6. (See fig. 56)

# 6. MAINTENANCE AND REPAIRS

Your HANDBIKE BATEC ELECTRIC has been carefully designed for optimal performance, but it is important that you carry out certain preventative maintenance tasks in line with the use you give your HAND-BIKE BATEC ELECTRIC. This will greatly reduce the chance of problems and increase the lifespan of your HANDBIKE BATEC ELECTRIC.

In order to minimise the risk of accidents and/or damage to your HANDBIKE BATEC ELECTRIC, it is very important to have all repairs carried out by an authorised BATEC MOBILITY distributor.

Remember that your main source of information and help is the distributor that delivered your HANDBIKE BATEC ELECTRIC, who can also respond to any questions regarding adjustments, maintenance and the warranty.

As you are a member of the "BATEC MOBILITY Family", we encourage you to stay in touch with your BATEC HANBDIKE representative in order to make the most of the product.

We propose the follow preventative maintenance plan schedule:

# PREVENTATIVE MAINTENANCE PLAN SCHEDULE

TO BE CHECKED	6 months 500 km	1 year 1000 km	1.5 years 1500 km	2 years 2000 km	2.5 years 2500 km
Frame tube torque (18 nm)	1		1		1
Steering angle regulator torque (18 nm)	1		1		1
Anchoring bar torque (8 nm)	1		1		1
Hub motor torque (40 nm)	1	1	1	1	1
BATEC DOCKING BAR	1	1	1	1	1
Thickness (minimum 1 mm) brake pads	1	1	1	1	1
Break cable and cover	1		1		1
Gear-shift cable and cover	1		1		1
Gear shifter	1		1		1
Chain	1		1		1
Tyre pressure (bar according to model) and treads (≥ 1 mm)	1	1	1	1	1

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# **PREVENTATIVE MAINTENANCE PLAN SCHEDULE**

TO BE CHECKED	3 years 3000 km	3.5 years 3500 km	4 years 4000 km	4.5 years 4500 km	5 years 5000 km
Frame tube torque (18 nm)		1		1	
Steering angle regulator torque (18 nm)		1		1	
Anchoring bar torque (8 nm)		1		1	
Hub motor torque (40 nm)	1	1	1	1	1
BATEC DOCKING BAR	1	1	1	1	1
Thickness (minimum 1 mm) brake pads	1	1	1	1	1
Break cable and cover		1		1	
Gear-shift cable and cover		1		1	
Gear shifter		1		1	
Chain		1		1	
Tyre pressure (bar according to model) and treads (≥ 1 mm)	1	1	1	1	1

#### Checking tyre pressure:

Make sure the tyre pressure is as recommended for each model and that there are no irregularities on the surface.

#### Cleaning the HANDBIKE BATEC ELECTRIC:

Clean the frame with soap and warm water. Use car soap or another non-abrasive cleaning agent. Dry it carefully. Never use a pressure washer to clean it.

### Disinfecting the HANDBIKE BATEC ELECTRIC

To disinfect the HANDBIKE BATEC ELECTRIC, follow the steps below:

- Use a hydro-alcoholic sanitiser and a cloth.
- Wet the cloth with a generous amount of sanitiser.
- Rub the cloth over any surfaces that come in contact with the user: handlebars, buttons, display panel and detaching lever.
- Leave to air dry.

# IMPORTANT!

Sand and salt water can damage some parts of the HANDBIKE BATEC ELECTRIC after prolonged contact. Clean it after use in these conditions.

#### Cleaning front and rear wheels:

Make sure the front wheel and rear wheels turn freely and eliminate any dirt.

#### **Checking brakes:**

Make sure that when you squeeze the brake levers, both have sufficient contact with the disc for effective braking.

### Greasing cables and chains:

Apply a drop of grease or light coat of Teflon spray to the cable connecting levers and to chains, after removing the old grease. After applying, remove any excess grease.

#### Greasing the transmission mechanism:

Apply a drop of grease or light coat of Teflon spray to the transmission mechanism, after removing the old grease. After applying, remove any excess grease.

#### Having HANDBIKE BATEC ELECTRIC serviced by an authorised distributor:

The recommended preventive maintenance and any repairs to your BATEC ELECTRIC HANDBIKE must be done by a company authorised by BATEC MOBILITY.

#### Replacing tyres and inner tubes:

Before installing a new inner tube, check the base of the rim and inside wall of the tyre to remove any foreign bodies and, if necessary, clean well. Check the conditions of the rim tape, particularly around the valve hole. Only strong, properly placed rim tape can provide longterm protection against damage to the inner tube caused by burrs and sharp spoke heads.

Before inflating the inner tube, check the whole tube to make sure it hasn't got stuck between the tyre and the rim. Carefully pull on the valve and extract it for optimal installation.

#### Reusing the BATEC ELECTRIC HANDBIKE

The BATEC ELECTRIC HANDBIKE can be reused. If you would like to reuse it, please contact the distributor where you purchased it and they will take care of sending the unit to be reused to the BATEC MO-

BILITY facilities. The unit to be reused will be checked, given a tune-up and re-checked.

# CAREFUL!

After installing the new inner tube, check tyre pressure. It is essential to keep pressure at specified levels and to make sure tyres are in proper conditions in order to ensure your personal safety and keep your HANDBIKE BATEC ELECTRIC in proper working order.

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# IMPORTANT!

As the necessary maintenance varies between users, check with your BATEC MOBILITY representative to establish a periodic maintenance schedule that fits your specific use.

# E IMPORTANT!

Always do a safety check of your HANDBIKE BATEC ELECTRIC before using. Improper maintenance may invalidate the warranty.

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# 7. LABEL

All BATEC ELECTRIC HANDBIKES have a label on the bottom of the frame bar with the following information: (See fig. 57)

### SYMBOLS:

	Manufacturer
SN	Serial number
REF	Catalogue number
CE	This product complies with the requirements of Regulation (EU) 2017/745 on medical devices
	Date manufactured
Í	See user instructions
MD	With the text "Medical Device"
	Check warnings (battery)
	EN 12184:2014 – Wheelchair not intended for use as a seat in a motor vehicle
<b>O</b> KG	ISO 7000 – Maximum weight allowed

When ordering spare parts or lodging claims, please provide the information on the label.

## 8. WARRANTY

#### 8.1. WARRANTY PERIOD

BATEC MOBILITY guarantees all hard and structural parts for a **period of two (2) years** from the date of delivery in the case of material defects or labour for the original registered owner.

BATEC MOBILITY guarantees the BATTERY for a **period of one (1)** year from the date of delivery in the case of material defects or labour for the original registered owner. The BATTERY is considered a fungible part.

## **8.2. WARRANTY CONDITIONS**

- Fungibles (except for the BATTERY, which has a one-year warranty) are excluded from the warranty, except in the case of premature wear on said parts caused by original manufacturing defects. These elements include tyres, inner tubes, handles, cables for brakes, gear shifter and anchoring, stand frame wheels and similar parts.
- If you have any questions regarding the warranty, BATEC MOBILITY recommends first contacting your authorised BATEC MOBILITY distributor, who will explain the solutions available for the problem.
- BATEC MOBILITY shall not be held responsible for any defects that may arise as a result of improper use or storage of the HANDBIKE BATEC ELECTRIC. If BATEC MOBILITY considers that a part has not been properly installed, used or stored, the warranty will be invalidated. Some examples are as follows:
- The product or part hasn't been maintained according to BATEC MOBILITY recommendations, as detailed in the user instructions and maintenance instructions.
- Non-original accessories have been used.

- The HANDBIKE BATEC ELECTRIC or its parts have been damaged due to negligence, accident or improper use.
- The HANDBIKE BATEC ELECTRIC or its parts have been modified in a way that is not in line with BATEC MOBILITY specifications or have undergone repairs without notifying the authorised distributor or technical service provider.
- BATEC MOBILITY reserves the right, with any claim, to require the claimant to send all parts to BATEC MOBILITY for replacement or repair at their own cost. If any of the parts are found to be defective, BATEC MOBILITY will determine whether to replace, repair or maintain the parts.
- This warranty doesn't include transport, shipping or labour costs for removing and reinstalling the parts. BATEC MOBILITY will charge the claimant for any costs incurred if the parts are found not to be defective or the damage has been caused by events not covered under this warranty.
- Defective parts will be repaired or replaced exclusively by BATEC MO-BILITY or a duly qualified official BATEC MOBILITY service provider.
- BATEC MOBILITY doesn't ensure any of its products or parts will be available on the market or suitable for any particular purpose and provides no guarantee, express or implied, beyond the attached limited warranty.
- Replacement parts installed during the original warranty period shall have an additional 2-year warranty. For the BATTERY, as it is considered a fungible part, the replacement unit shall be under warranty for the remaining warranty period on the original BAT-TERY, up to 1 year from the date the HANDBIKE BATEC ELECTRIC was delivered.
- This warranty is non-transferable: This warranty is only valid for the original registered user, who must provide the original receipt as proof of purchase.

- BATEC MOBILITY shall not be held responsible for any products not purchased at the recommended retail price.
- Except where prohibited by law, this limited warranty constitutes the full agreement between the owner and BATEC MOBILITY regarding any sort of liability that may arise concerning any parts on the HAND-BIKE BATEC ELECTRIC products.

# IMPORTANT!

• **BATEC MOBILITY** and the competent authority in the Member State of residence **should be notified of any serious incidents** related to the use of the product.

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## 8.3. WARRANTY CARD

With the rest of the documentation for your HANDBIKE BATEC ELEC-TRIC, you will find a Warranty Card with all the details regarding your HANDBIKE BATEC ELECTRIC. You can use this card to provide all the details of your HANDBIKE BATEC ELECTRIC if a situation arises that requires the warranty.

# 9. REVISIONS LIST

Version	Summary / justification of changes	
2.0	Updated speeds, specifications, functions, warnings, images	
1.0	To adapt to the requirements of Regulation (EU) 2017/745	

# FIGURES

# **FIGURAS / FIGURES / FIGURES**

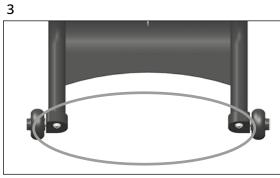


Between buttons

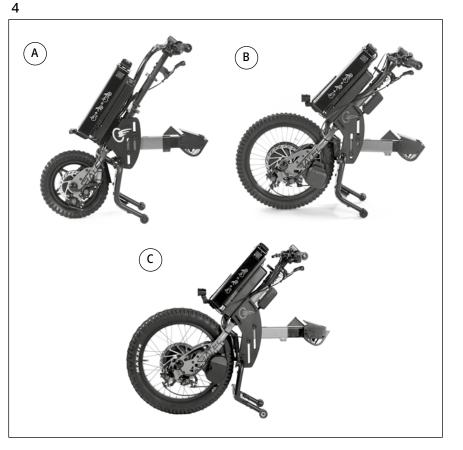
2

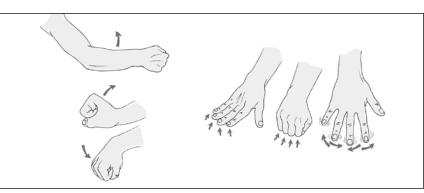


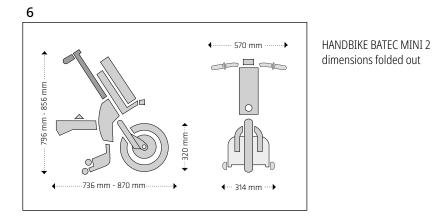
In adjustment slots

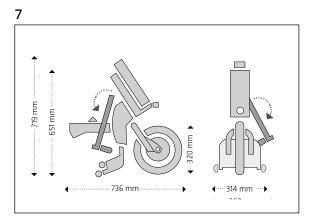


Between the product support structure (installed on the wheelchair) and the ground

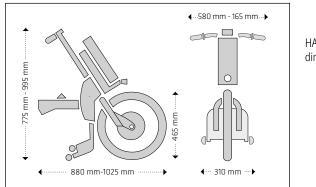




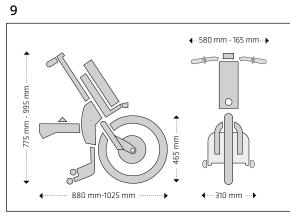




HANDBIKE BATEC MINI 2 dimensions folded in



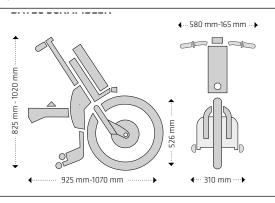
HANDBIKE BATEC ELECTRIC 2 dimensions



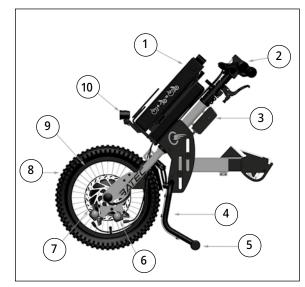
HANDBIKE BATEC RAPID 2 dimensions

10

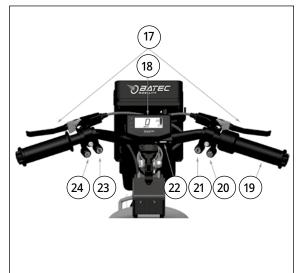
8



# HANDBIKE BATEC SCRAMBLER 2 dimensions



- 1. Battery
- 2. Handlebar
- 3. Controller
- 4. BATEC SAFE-FEET stand frame 5. Tail lights
- 6. Brake caliper
- 7. Disc brake
- 8. Tyre 9. Rim
- 10. Front light

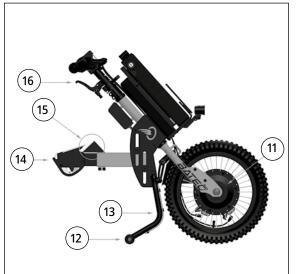


17. Brake levers
 18. ALL-IN-ONE display panel
 19. Twist throttle
 20. Horn button

21. Front gear button

22. USB charging port23. Reverse gear button24. Lights button

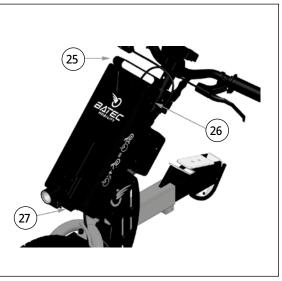
#### 11b



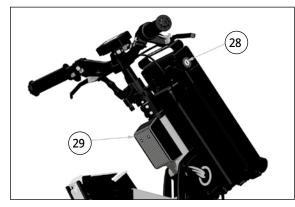
- 11. Motor
- 12. Rear wheels
- 13. Foot protector
- 14. Anchoring bar
- 15. Detaching ramp 16. Anchor lever

### 11d

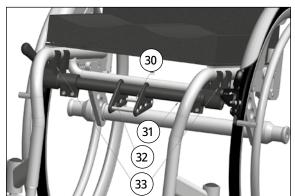
11c



# Handle Charging port Battery mount



11f



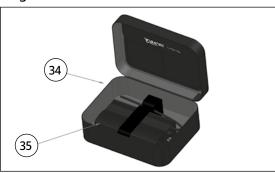
30. DOCKING-BAR / Rear axle of the BATEC DOCKING-BAR

28. Key

29. Main control panel

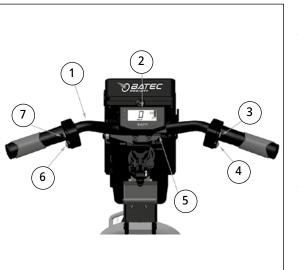
31. BATEC DOCKING-BAR 32. Front axle of the BATEC DOCKING-BAR 33. Clamps

11g



# 34. Bag

35. Charger



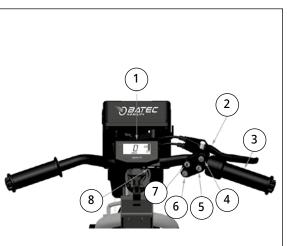
1. Gas & Brake handlebar 2. Display panel

3. Horn button 4. Front gear button

5. USB charging port 6. Reverse gear button 7. Lights button

13

12



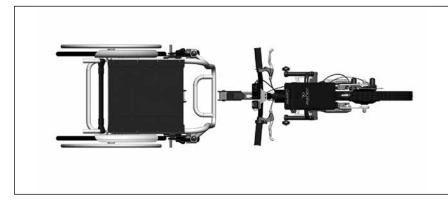
1. ALL-IN-ONE display panel 2. Double brake lever

3. Twist throttle 4. Horn button

5. Front gear button 6. Lights button 7. Reverse gear button 8. USB charging port

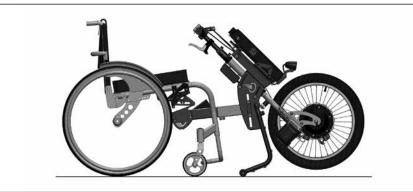








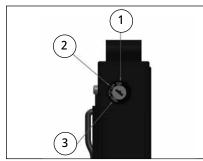
16a





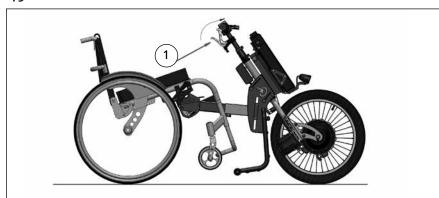




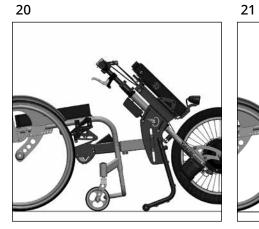


 Turn on (ON)
 Turn off and remove key with detaching lock (OFF)
 Detach battery (OPEN)

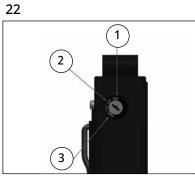
19



1. Anchor lever

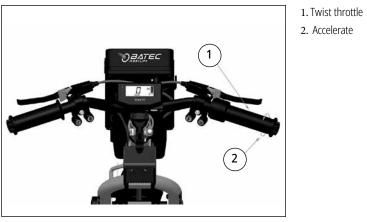


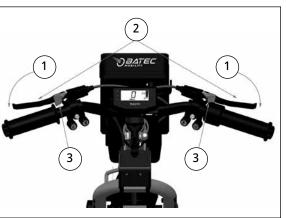


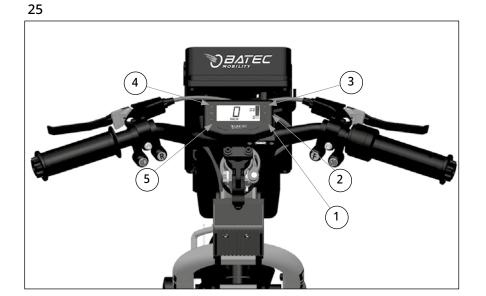


 Turn on (ON)
 Turn off and remove key with detaching lock (OFF)
 Detach battery (OPEN)

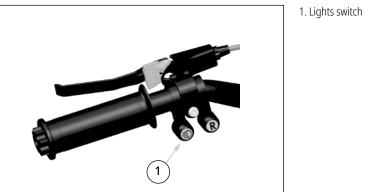




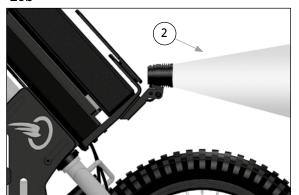




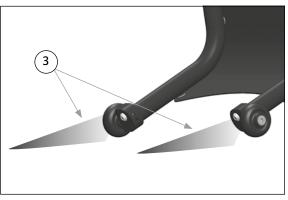
- Position 1
   Position 2
- 3. Position 3
- 4. Reverse gear
   5. Low-battery indicator



### 26b

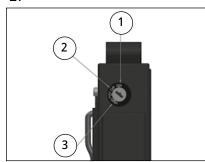


26c



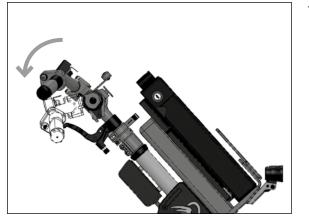
3. Rear lights

2. Lights on

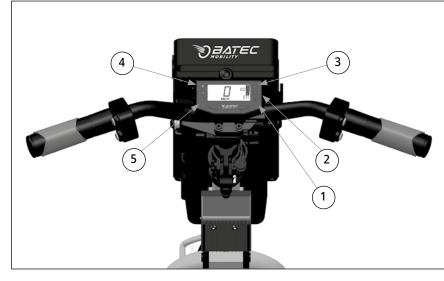


1. Turn on (ON) 2. Turn off and remove key with detaching lock (OFF) 3. Detach battery (OPEN)

28



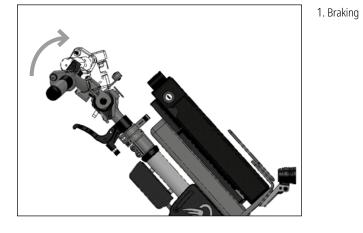
1. Accelerate



FIG

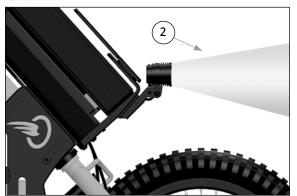
- Position 1
   Position 2
   Position 3

- 4. Reverse gear
   5. Low-battery indicator

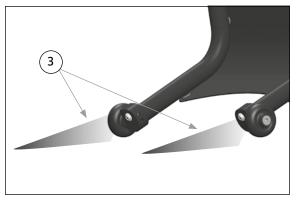






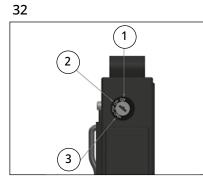






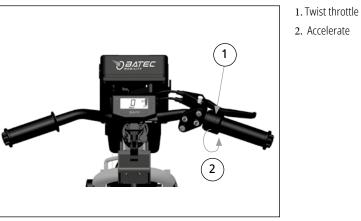
3. Rear lights

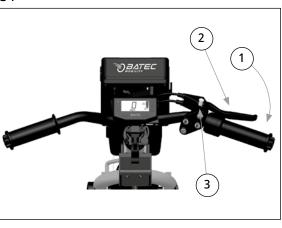
2. Lights on

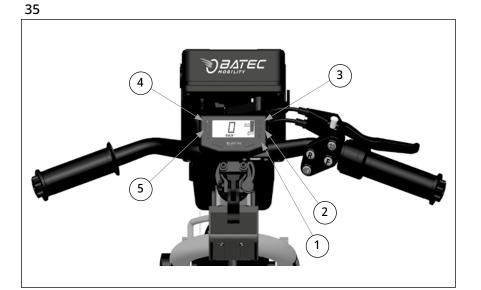


 Turn on (ON)
 Turn off and remove key with detaching lock (OFF)
 Detach battery (OPEN)

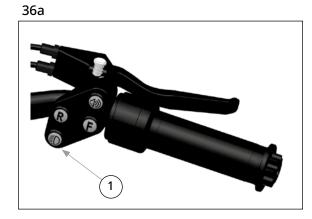




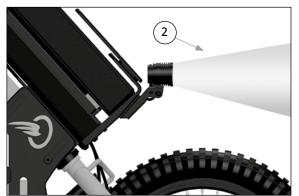




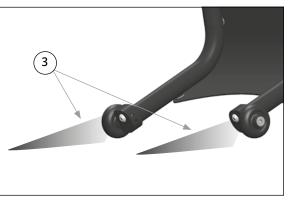
- Position 1
   Position 2
- 3. Position 3
- 4. Reverse gear
   5. Low-battery indicator



#### 36b







FIG

1. Lights switch

2. Lights on

3. Rear lights



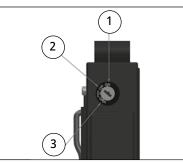
39



Battery
 Battery guide

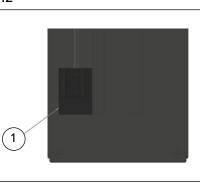


#### 41

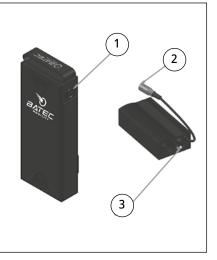


 Turn on (ON)
 Turn off and remove key with detaching lock (OFF)
 Detach battery (OPEN)





#### 43



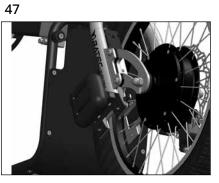
1. Discharging port

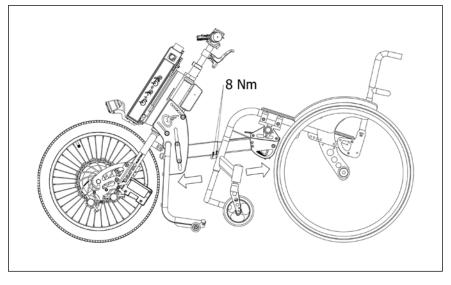
- Charging port
   Connect to
- charging port
- 3. Green light, charger plugged in / Orange light, charging Green light, fully charged

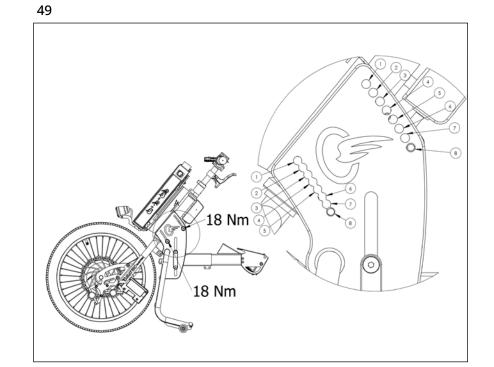


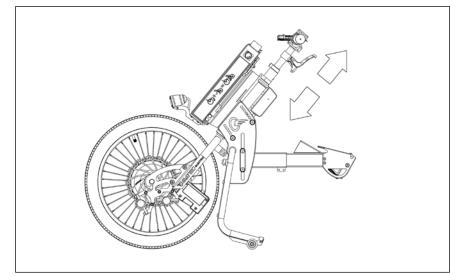




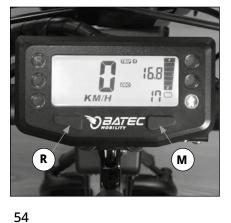












53





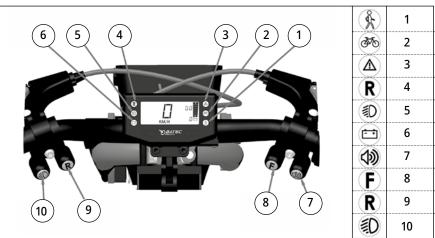
55



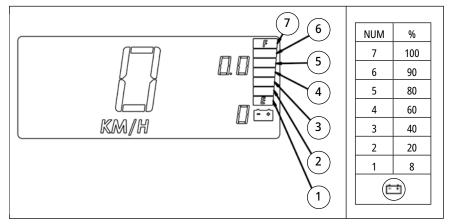


	BATEC MOBILITY S.L. IIIa de Buda, 2 - 08192 Sant Quirze del Vallès (Garcelona) SPANI <b>T</b> + 34 93 544 2003 info@batec-mobility.com   www.batec-mobility.com	Œ
PRODUCT		KG max.110 kg
REF		
SN		MD
$\sim$		Medical Device
PNT-013/8.0		

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- 1. Light indicator Position 1
- 2. Light indicator Position 2
- 3. Light indicator Position 3
- 4. Light indicator Reverse
- 5. Light indicator Lights
- 6. Light indicator Low battery
- 7. Button Horn
- 8. Button Go forward
- 9. Button Reverse
- 10. Button Lights



BATEC HANDBIKE ELECTRIC Maximum speeds (km/h)	×	<b>A</b>	
Model	Position 1	Position 2	Position 3
BATEC MINI 2 Std. configuration	6	15	20
BATEC MINI 2 Limited to 15km/h	б	10	15
BATEC MINI 2 Limited to 10km/h	б	10	10
BATEC MINI 2 Limited to 6km/h	3	4,5	6
BATEC ELECTRIC 2 Std. configuration	б	15	25
BATEC ELECTRIC 2 Limited to 15km/h	б	10	15
BATEC ELECTRIC 2 Limited to 10km/h	б	10	10
BATEC ELECTRIC 2 Limited to 6km/h	3	4,5	6
BATEC RAPID 2 / SCRAMBLER 2 Std. configuration	6	15	30
BATEC RAPID 2 / SCRAMBLER 2 Limited to 15km/h	6	10	15
BATEC RAPID 2 / SCRAMBLER 2 Limited to 10km/h	6	10	10
BATEC RAPID 2 / SCRAMBLER 2 Limited to 6km/h	3	4,5	6

#### HANDBIKE BATEC ELECTRIC

Masa máxima del ocupante / Maximum occupant mass / Massa màxima de l'ocupant: 110 kg

Denominaciones e información ISO / Disclosure information (ISO)/ Denominacions i informació ISO

Referencia o	le norma / Standard reference / Referència de norma	MINI 2 max.	SCRAMBLER 2 max.
ISO 7176-2	Estabilidad dinámica en rampa marcha atrás Rearward dynamic stability on ramp Estabilitat dinàmica en rampa marxa enrere	10 <sup>0</sup>	70
ISO 7176-2	Estabilidad dinámica en rampa hacia delante Forward dynamic stability on ramp Estabilitat dinàmica en rampa cap endavant	10 <sup>0</sup>	70
ISO 7176-2	Estabilidad dinámica lateral en rampa Lateral dynamic stability on ramp Estabilitat dinàmica lateral en rampa	10 <sup>0</sup>	70
ISO 7176-2	Estabilidad dinámica lateral en giro circular Lateral dynamic stability while turning in a circle Estabilitat dinàmica lateral en un gir	0	0
ISO 7176-2	Estabilidad dinámica lateral en giro repentino Lateral dynamic stability while turning suddenly Estabilitat dinàmica lateral en un gir sobtat	0	0
ISO 7176-2	Estabilidad dinámica marcha atrás subiendo un bordillo Rearward dynamic stability traversing step forward Estabilitat dinàmica marxa enrere pujant una vorada	50 mm	50 mm
ISO 7176-2	Estabilidad dinámica marcha atrás bajando un bordillo Rearward dynamic stability traversing step backward Estabilitat dinàmica marxa enrere baixant una vorada	50 mm	50 mm
ISO 7176-2	Estabilidad dinámica hacia delante subiendo un bordillo Forward dynamic stability traversing forward up a step Estabilitat dinàmica cap endavant pujant una vorada	50 mm	50 mm
ISO 7176-2	Estabilidad dinámica hacia delante bajando un bordillo Forward dynamic stability traversing forward down a step Estabilitat dinàmica cap endavant baixant una vorada	50 mm	50 mm
ISO 7176-2	En marcha hacia delante en ángulo oblicuo hacia un bordillo en bajada / Travelling forward at an oblique angle to a downward step / Anar cap endavant en angle oblic cap a una vorada en baixada	50 mm	50 mm
ISO 7176-10	Altura máxima de obstáculo superable y descendible en mm, operación de referencia / Maximum obstacle height that can be climbed and descended in mm, reference operation / Alçària màxima (en mm) que pot fer un obstacle i que no impedeixi pujar-lo o baixar-lo, operació de referència	25 mm	25 mm

El HANDBIKE BATEC ELECTRIC limitado a 15 km/h cumple con las siguientes normas: a) sistemas impulsor y de mando para sillas de ruedas eléctricas - requisitos y métodos de ensayo (ISO 7176-14)

b) ensayo climático de las sillas de ruedas eléctricas

The HANDBIKE BATEC ELECTRIC limited 15 km/h conforms to the following standards: a) power and control systems for electric wheelchairs - requirements and test methods (ISO 7176-14)

b) climatic test in accordance with ISO 7176-9

El HANDBIKE BATEC ELECTRIC limitat a 15 km/h s'ajusta als estàndards següents: a) sistemes de control i energia per a cadires de rodes- requeriments i mètodes d'assaig (ISO 7176-14)

b) assaig climàtic d'acord amb l'ISO 7176-9

