Pandhora®

MADE FOR YOUR HEALTH

USER MANUAL

Rev 10 - 04/09/2025

Devices / Devices

Pandhora EP3

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WELCOME

Dear Customer,

We are pleased to present a product from the EP3 range. Pandhora's products will help make your activities more pleasant and comfortable.

We invite you to visit our website at http://www.pandhora.it/ or on Facebook by accessing the page https://www.facebook.com/pandhorasrl/ to discover all Pandhora products and keep up to date with the latest news.

As a manufacturer, PANDHORA SRL declares that its electronic drives comply with the Medical Device Regulation (2017/745)

For any clarifications and information, please email info@pandhora.it

We thank you for choosing a product from the Pandhora family and wish you much enjoyment!

Kind regards,

The Staff of Pandhora S.r.l.

Pandhora®

20/05/2024

Declaration of Conformity

Pandhora s.r.l. declared under our sole responsibility that the product listed below :

Product : **Pandhora Ep3 Standard, Pandhora Ep3 Plus, Pandhora Ep3 Off-Road, Pandhora Ep3 Smart, Pandhora Ep3 Enduro**

Type: **Electric Add-on**

Intented Use: **The Electric add-on is intented to provide mobility to persons limited to a sitting position.**

Single Registration Number (SRN) : **IT-MF-000021648**

Basic UDI-DI : **8052536060ELECTRICEP3T5**

Manufactured By : **Pandhora S.r.l. , Via Pizzone 11/7 84085 Mercato San Severino (Salerno) ITALY**

Meets all the provisions of the of the regulation (EU) 2017/745 on medical devices, especially Annex I ,which apply to it.

Devices Classification according to Annex VIII **: Class I**

Applied harmonised standards, common specifications, national standard or other normative documents :

EN 12184:2022

Issue Date **:**

20/05/2024

Mercato San Severino

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Preliminary Information

FOREWORD

This User's Manual instructs in the use of the aids of the Pandhora EP3 family.

MANUFACTURER'S IDENTIFICATION DATA

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Hereinafter it will be referred to as: EP3.

This document is subject to change on the basis of technical innovations, without prior notice.

1 Reference Legislation

- Pandhora EP3's products comply with the Medical Devices Regulation (2017/745)
- EN 12184:2014 - Electrically powered wheelchairs, scooters and their charging systems.
- Directive EU2012/19/EC on the disposal of electrical and electronic equipment et seq.

2 Symbology

The symbols and their meanings used in this manual and on the device are described in the table.

Table 1

Definition of the specific symbols used in the manual:

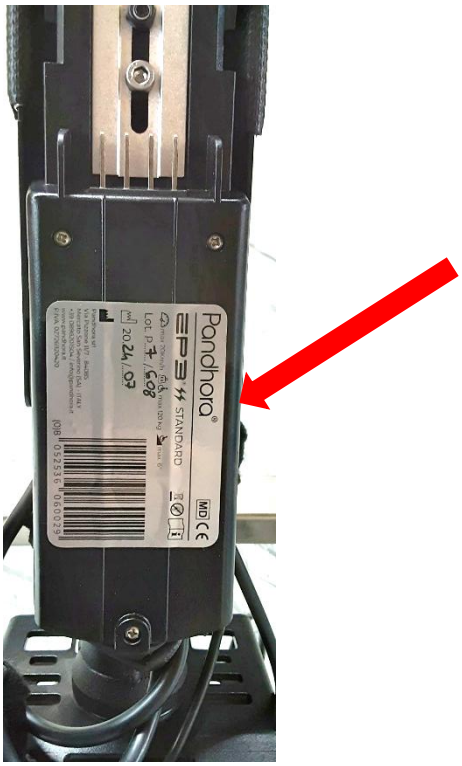
Term	Definition
WARNING!	Inform the user of possible risks of serious injury or death in the event that the recommendation is not followed
WARNING!	Inform the user of risks in the case the recommendation is not followed
	Inform the user of possible risks to the equipment in the case the recommendation is not followed
NOTE:	General recommendation o recommended procedure
	Refer to the manual or additional documentation

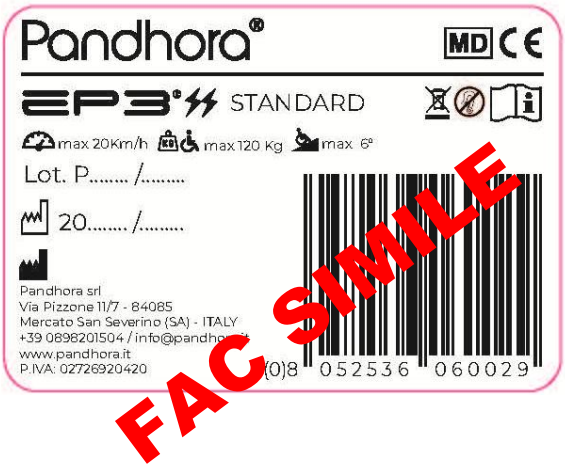
	Year/Month of manufacture
LOT. P..../.....	Serial number
	Maximum speed
	Maximum flow rate
	Manufacturer's data
	Maximum slope of use
	UDI (Unique Device Identification) Code
	Read the User Manual
	Disposal of electrical equipment via separate collection (special disposal, electrical components)
	CE marking

MD	MD (Medical Device) mark
Pandhora®	Pandhora Brand Logo
EP3	Model name

2.1 Label

The device is uniquely identifiable by means of the Serial Number (P__/____) on the device's nameplate label, which is affixed to the battery box. The meaning of the symbols is shown in Table 1 in section 2.





NOTES:

- In the event of a fault, contact the authorised technician immediately with all relevant details so that he can help you quickly.
- It is possible that the thrusters illustrated and described in this manual do not correspond exactly to the model purchased. However, all instructions are relevant, regardless of differences in detail.
- The manufacturer reserves the right to alter the weights, measurements and other technical data in this manual without notice. All numbers, measurements and capacities given in this manual are approximate and do not constitute specifications.

3 General Warnings

Please read and observe the following instructions carefully before using Pandhora EP3. The manufacturer Pandhora accepts no liability for failure to observe the contents of this document.

User requirements

This type of device can be used independently by a user:

- Be at least a teenager
- Have read the manual and had sufficient practice in the correct use of the device
- Be aware of the risks involved in using
- Have the psycho-physical capabilities to use it safely

WARNING! The following actions must not be carried out, as they could impair the correct functioning of the device and the conformity of individual parts:

- Inappropriate use
- Use of third-party parts and/or accessories not approved by the manufacturer
- Intervention by unauthorised personnel
- Absence of maintenance
- Inadequate maintenance

- The use of EP3 devices is specifically for disabled persons using a manual wheelchair.

- The use of EP3 devices in public spaces (streets, pavements, squares, cycle paths, etc.) must comply with the specific regulations of the country in which they are used. Pandhora is not liable in this respect for use that does not comply with the specific regulations in force.

- Should faults occur during use which endanger the safety of the user, the device must be taken out of service and the Pandhora technical service department must be contacted without delay.

- Use of spare parts and accessories that are not original or have not been verified by the manufacturer. Neither the compliance nor the safety of these components with the necessary safety and performance requirements can therefore be certified.

- Pandhora is not liable for any damage caused by the use of non-original spare parts or accessories.

- Installation of the product must be carried out according to the procedures defined by Pandhora, by authorised personnel. Neither the safety nor the effectiveness of the device can be assured in the event of violation of such procedures, nor can the validity of the warranty.

NOTE:

General warning for the user. Failure to follow these instructions could result in bodily injury, damage to the product or the environment!

Notice to the user: Serious accidents resulting from the use of this device must be reported to the manufacturer and to the competent authorities of the state where the user resides.

The maximum load capacity (represented by the weight of the user, the wheelchair and the weight of any accessories mounted on the wheelchair and the power unit) is stated on the serial number label. The serial number label is attached to the frame and can also be found in the User's Manual. The warranty is only valid if the product is used under the prescribed conditions and according to the specific intended use.

Duration

The expected service life of the front electronic drive is 5 years, provided that:

- is used in strict accordance with its intended use

- all service and maintenance requirements are met.

3.1 Security Warnings

	The user in the first phase of use must become familiar with driving in order to avoid possible risks due to incorrect use.
	The specifications indicated must be adhered to in order not to lower the manufacturer's safety level.
	EMC - The device complies with EN60601-1-2 standards on electromagnetic compatibility, but to ensure the safety of the user it is recommended not to use the equipment in the presence of strong environmental electromagnetic fields.
	Appropriate use of the EP3-equipped wheelchair is necessary by avoiding dangerous slopes, descending steps, proceeding without braking towards obstacles such as edges, artefacts, steps, etc.).
	The power unit must not be used in adverse weather conditions (thunderstorms, heavy rain/snow) or on slippery or uneven ground.

	Beware of skidding, which can be caused by strong winds.
	Take great care when driving over uneven surfaces; wheels, footpegs and kickstands could collide with these irregularities, causing damage.
	The use of the front e-propeller is only recommended for persons in the appropriate physical and mental condition to cope with public traffic.
	When circulating on public land, the road traffic code must be observed.
	Use only parts authorised by Pandhora.
	Make sure you know the general rules of the highway code!
	In the event of a collision, injuries, including serious injuries to body parts, could occur.
	To ensure stability when travelling in a straight line, avoid excessively abrupt handlebar movements whenever possible if you are travelling at high speed or during a turn
	There is a risk of skidding on wet asphalt or uneven ground. Therefore one must drive carefully and observe the conditions of use.
	Drive carefully at narrow passages.
	When moving, braking or manoeuvring, grip the handlebars firmly with both hands. Failure to do so may increase the risk of an accident when steering.
	When the electronic drive is left in direct sunlight, heat sources or low temperatures for a long period of time, some components can become very hot (>41 °C) or particularly cold (<0 °C).
	The presence of moving parts always entails the risk of trapping fingers. Always be very careful.
	The EP3 with front wheel has not been tested or approved according to ISO 7176-19. Therefore, transporting the wheelchair user with the EP3 attached to the transport vehicle is not permitted.
	Steps higher than 3 cm in height are forbidden along the direction of travel. (Fig.1)
	Take care to apply the right amount of force to the brake lever; too vigorous a grip could result in the wheel locking, causing instability.
	Make sure there are no obstructions of any kind before reversing.
	Perform some low-intensity braking before each use to ensure that the brake system is working properly.
	Make sure that the wheelchair to which the device is attached is in perfect condition

	Pay attention to anything that could damage the brake system
	With the use of EP3 devices, the turning radius increases, making manoeuvrability in tight spaces worse.
	Adjust the speed to suit the technical characteristics of the propulsion system, the terrain and the user.
	Observe the usage limits in the manual for the manual wheelchair on which the EP3 system is installed.
	The user is responsible for the scheduled maintenance of the drive system and accessories at the dealer (at least once a year), otherwise the warranty will be void.
	In the case of wet or uneven ground, the values for the maximum permitted slope are reduced in order to protect the safety of the user.
	Avoid contact with or ingress of liquids or dust into the device.
	Always use lights at night.
	This propeller is intended for the transport of one person only. Any other use is not in accordance with its intended purpose.
	Always drive on tarmac or even, non-sagging surfaces.
	Proceed slowly and carefully, particularly when making turns.
	Take care when negotiating kerbs, steps or potholes as these conditions increase the risk of tipping over.
	When transporting a combination system consisting of the front electronic drive and the wheelchair to a vehicle, the user must always be transferred to the seat of the vehicle and must never remain seated on the combination unit. During transport, the combination unit (without user) must be secured to the vehicle to prevent it from moving.
	The components of the brake system may reach temperatures during use that can cause burns and scalds on the skin, so be extremely careful when using them.
	Adapt your driving technique to your abilities.
	Exceeding the maximum capacity may damage the thruster and/or cause loss of control or serious injury to the user and persons close to him.
	Do not allow children, incapacitated, inadequately trained or physically unfit persons to use it.
	Never exceed a speed of 20 km/h because you could lose control of the wheelchair and roll over.
	Do not touch the engine as it can get very hot.

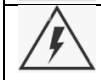
	It is forbidden to drive the engine on roads with a gradient greater than 10% (6°). (Fig.2)
	Do not attempt to overcome obstacles.
	It is forbidden to modify or remove device components. These operations are the responsibility of competent personnel.
	It is forbidden to use the device in poorly lit environments (at night, adverse weather conditions).
	It is forbidden to attempt a staircase.
	The device may not be used to transport more than one person.
	It is absolutely forbidden to travel in the lanes of Trains, Trams, Subways. Pay attention to any tracks embedded in the road surface and loopholes of any kind, which constitute a serious and grave danger to the safety of the user and the vehicle.
	Do not leave the battery exposed to heat or moisture when not in use.
	It is not permitted to use the EP3 device without it being connected to a manual wheelchair.
	Do not throw or expose the battery to water or other liquids.
	Do not allow children to interact with the battery pack.
	Do not use the battery to power systems other than the EP3.
	Do not attempt to open the battery.
	DANGER: Do not disconnect the power cables when the device is switched on
	DANGER: The voltages inside the device can cause very serious damage, sometimes even fatal.
	DANGER: Do not remove any cladding panels.
	DANGER: Maintenance operations must be carried out with the device switched off and disconnected from the mains.
	The surface temperature of the entire device can increase greatly when exposed to external heat sources. Caution.
	the brake system and especially the brake disc can reach very high operating temperatures during use. Caution.

Fig.1

Fig.2

WARNING!

Do not install any unapproved electronic equipment.

WARNING!

CHOKING **HAZARD** - This mobility aid contains small parts that may pose a choking hazard to small children under certain circumstances.

3.2 Intended use

Through the use of EP3 devices, an auxiliary pushing system can be added to most manual wheelchairs quickly and easily. By attaching the EP3 to the wheelchair, the front wheels are lifted, and a single steered wheel, belonging to the 'traction unit', is used instead. The EP3 fulfils the use class of the wheelchair to which it is attached according to CEI EN 12184. In addition, the EP3 fulfils the specifications required for class B with a maximum range of approximately 50 km (in the version equipped with a charged 48V 16 Ah battery, a flat route and a user weight of 75 kg).

In accordance with the definition of class B in CEI EN 12184, the device is intended for use in an indoor environment and capable of dealing with outdoor obstacles.

The connected wheelchair, when used on public roads, surfaces and areas, must be equipped with the accessories required by the Highway Code.

The traction device can be operated by persons (adults and adolescents) who:

- are physically and mentally capable of safely handling the engine in any situation (steering, brakes,...) and in compliance with the regulations in force for driving on public roads.

- have been informed and trained in its use by Pandhora or one of its authorised dealers.

Please note that the use of EP3 with a maximum speed setting above 6 km/h is only permitted in certain countries, please check the regulations in your country. In the absence of approval, and according to the Highway Code in force, the EP3 cannot be used on public roads, cycle paths and pavements. The user must be aware of the specific legislation regarding the use of wheelchairs and of the possible obligation of insurance for the EP3. When using the EP3 always follow the legislation in force in your country.

Any other use or misuse could lead to dangerous situations.

NOTE: It is possible that the thrusters illustrated and described in this manual do not correspond exactly to the model purchased. However, all instructions are relevant, regardless of differences in detail. The manufacturer reserves the right to alter the weights, measurements and other technical data in this manual without notice. All numbers, measurements and capacities given in this manual are approximate and do not constitute specifications.

3. Usage Environment

EP3 devices are designed for use with most manual wheelchairs on the market. The EP3 solutions allow both indoor and outdoor use, with the limitations stated in this document, and generally with the same limitations as manual wheelchair use.

NOTE:

The front electronic drive can be used on paved roads as well as on other non-sagging surfaces with different topographical characteristics. Avoid travelling over soft ground (e.g. gravel, sand, mud, snow or deep pools of water) as this could expose the user to unforeseen risks.

3.4 Safety instructions - Before each use

WARNING!

- Proceed with a visual check of the condition of the wheels, including those of the wheelchair (spokes and rims, tyre damage) and the tyre pressure. The correct tyre pressure is marked on the sidewall of the tyres.
- Insufficient or excessive tyre pressure could have a negative effect on brake operation, tyre wear and driving performance.
- Always check that the tyre tread depth is adequate.
- Check that the brakes are working properly. Do not use the power unit if it is not fully functional!

- Avoid damaging the cables. Take care not to twist the cables when sitting or moving from the wheelchair.
- Carry out a visual check of the fork for damage (e.g. cracks and breaks).
- Check the tightness of all components, especially bolts.
- Check that the handlebar is properly secured.
- Check the connecting elements between the thruster and the wheelchair.
- Always check the frame and other wheelchair components for damage.
- Check the operation of the lights.
- Make sure that the feet cannot slip off the wheelchair footrest. If necessary, use a suitable fastening component.
- Check all cables and electrical connections.
- Check that the battery is properly secured and fully charged.
- Switch on the battery and check the operation of the lights.
- Always wear a helmet.

3.4.1 Limits Of Use

The device must be used in accordance with the intended use described in the manual, any other use must be considered misuse. Improper use of the front thruster could put the user at risk. To ensure the safety of the user, it is absolutely necessary to comply with the rules contained in the manual. Modifications or adjustments carried out incorrectly or by unauthorised personnel increase the risk of accidents. If you use an electronic drive, you must always remember that you are part of road and foot traffic. For this reason, we would like to remind you that you are obliged to comply with the applicable traffic regulations.

4 Safety instructions - while driving

WARNING!

- Before tackling uphill or downhill routes, familiarise yourself with driving on level ground.
- Always grasp the handlebars with both hands because otherwise there is a high risk of an accident in the event of a steering error.
- Always adjust your speed to your driving skills and traffic/ground conditions.
- Take particular care when approaching ladders, edges, slopes or other dangerous areas.
- When negotiating a curve, reduce your speed to a walking pace and lean your body towards the inside of the curve.
- When standing still, e.g. at a pedestrian crossing, at a traffic light, on a slope or on a ramp of any kind, always apply the brakes.
- Due to the increased turning radius, steering may sometimes be impossible (e.g. in corridors or confined spaces).

- When moving in pedestrian areas, proceed at a walking pace.
- When using public roads and pavements, always follow the Highway Code.
- Avoid driving over unpaved or loose surfaces (e.g. gravelly, sandy, muddy, snowy, frozen ground or crossing deep pools of water).
- Avoid sharp turns.
- Avoid traversing sloping sections.
- Avoid steering when driving on slopes.
- On slopes, the traction of the drive wheel decreases and the effect of the braking system is significantly reduced. The driving style and speed should always be adjusted so that the wheelchair can always be stopped safely.
- Towing or use of a trailer is not permitted.
- Stairs are not allowed.
- Obstacles (e.g. kerbstones) must always be approached from the front/ perpendicular and at very low speed to avoid tipping over and possible injury. The maximum height of obstacles that can be overcome is 30 mm, but this limit also depends on the ground clearance of the front wheels.
- When tackling or overcoming an obstacle, you must prevent any part of the wheelchair, or any part of your body, from becoming trapped. Failure to do so could result in a fall and serious injury and/or damage to the product.
- When riding on wet surfaces, the risk of slipping increases due to decreased tyre grip. Adapt your driving style accordingly.
- Always use the mechanical main brake lever to slow the speed of the propeller.
- To prevent the drive wheel from slipping when braking, shift your body weight forward.
- When negotiating curves, avoid hard braking.

4.1 Safety instructions - At the end of the guide:

- When not in use, switch the device off immediately to avoid accidental activation/movement in case the accelerator is inadvertently touched.

5 Delivery

The front electronic thruster is supplied fully assembled and packed in a cardboard box to avoid damage during transport; loose components or parts to be assembled will be packed separately and placed in special cardboard boxes, inside the main box.

5.1 Opening the Packaging

- Check the cardboard container for external transport damage.
- Remove all packaging material.
- Pull out the two boxes containing the accessories.
- Carefully remove the thruster from its packaging and check that all components are present.
- Check all components for surface damage, scratches, dents, twists or other defects.
- Please read carefully the document 'Basic Info Ep3' inside the box with which the thruster is delivered.

- The package contains the thruster complete with:
  connection frame, with complete coupling system, display, front light, lithium-ion battery and battery charger.

5.2 Storage

Always store the front electronic drive in a dry environment, on an easy-to-clean surface and at room temperature (+5 °C to +25 °C).

5.3 Transport

The front e-propeller attached to a manual wheelchair is not designed to be used as a seat in a motor vehicle

WARNING!

- When transporting in a vehicle, DO NOT remain seated in the wheelchair with the propeller attached.
- Always use the vehicle seats.
- During transport, secure the product, and all its components, to prevent damage (e.g. by falling) and so that they do not present any risk to persons.

WARNING!

- When charging, ensure that the cables are not entangled, twisted or otherwise damaged.
- The thruster cannot be used if the cables are damaged.

Security:

- To protect the thruster against theft and to prevent unauthorised persons from using it, equip it with an appropriate security system, similar to a bicycle security system.
- For extra safety, switch off the engine and remove the battery.

6 Safety instructions for battery and charger

WARNING!

Before activating the battery and starting the charging process, read and follow the safety instructions and precautions below.

WARNING!

- Failure to follow safety instructions and precautions could damage the product or cause electric shock, fire and/or serious injury.
- A lithium-ion battery contains chemicals that could lead to dangerous reactions if the instructions given here are not followed.

WARNING!

The manufacturer accepts no liability for damage arising from failure to comply with these instructions.

WARNING!

Before first use, the battery must be fully recharged.

- The battery can only be used at temperatures between -20 °C and 60 °C.
- Do not expose the battery to heat (e.g. radiation) or open flames. Exposure to external heat can lead to battery explosion.
- In the unlikely event that the battery overheats or catches fire, ensure that it does not come into contact with water or other liquids. The only extinguishing agent permitted by the cell manufacturer is sand.
- If possible, recharge the battery after each use.
- Written authorisation must be obtained from the manufacturer for any other use.
- Do not open, or disassemble, the battery. Improper opening or deliberate destruction of the battery could result in serious injury. Furthermore, opening the battery will invalidate any warranty claim.
- Never connect the battery charging connectors to metal objects and ensure that the connectors never come into contact with metal objects (e.g. metal filings).
- If the charging connector is dirty, clean it with a clean, dry cloth.
- Never immerse the battery in water.
- The service life of the battery depends, among other things, on the storage environment. For this reason, never leave the battery for long periods of time in excessively hot places. In particular, use the trunk of a car parked in the sun only for transport and not as a storage place.
- The battery must not be subjected to mechanical shocks. However, if this should happen, have the battery checked by your dealer or authorised technician. Contact the service technician. Do not continue to use a damaged battery.
- When damaged or defective, a battery must be isolated and checked. Contact your authorised dealer with whom you can decide on the necessary actions for its return and repair. Do not re-use, or open, a defective/damaged battery.
- Always keep the battery clean and dry.
- Recharge the battery on a surface that is resistant to fire and heat. Do not place easily inflammable or otherwise flammable objects near the battery.
- Incorrect operation may cause overheating, fire or explosion.

Safety instructions and precautions for battery storage:

WARNING!

- Protect the battery immediately after disconnecting it from the charger or motor. Do not allow moisture or foreign particles (e.g. fragments, small chips, residues of metal filings or other conductive materials) to enter the battery.
- During storage, do not expose the battery to moisture of any kind (water, rain, snow, etc.).
- Before storage, charge the battery and check its charge every 3 months.
- Store the battery in a cool, dry place and protect it from damage or unauthorised use.
- To ensure optimal battery life, store the battery in a room with a temperature of 5 °C to 25 °C and a humidity of 0% to 80%.
- Do not store the battery in places where the temperature may exceed 45 °C or fall below -20 °C.
- Avoid direct exposure to sunlight.
- If the power unit is not in use, recharge the battery at least every 12 weeks to prevent damage.

Safety instructions and precautions for the charging process:

WARNING!

- Recharge the battery only in ventilated, dry and dust-free rooms.
- Do not charge the battery in or near flammable liquids or gases.
- When charging, do not expose the battery to moisture of any kind (water, rain, snow, etc.).
- Do not proceed with battery charging in environments where moisture could interfere with the battery.
- The battery should only be recharged at temperatures between 0 and 40 °C. If an attempt is made to charge the battery outside these temperature limits, the battery mechanism will automatically interrupt the charging process.
- Only use approved battery chargers for charging the battery. Your authorised dealer can provide the appropriate information.
- During periods of non-use, recharge the battery at least once a month to prolong its life cycle
- Do not leave the power cable connected for too long once charging is complete (green charger LED on)
- If the charger is damaged in any way DO NOT USE IT

Do not use the device charging, risk of injury and damage to the device

WARNING!

- The use of an unsuitable charger could lead to malfunctioning and reduce the service life of the battery. There is also a risk of fire and explosion.
- At the end of the charging process, disconnect the charger from the power supply before disconnecting it from the battery.
- After charging the battery, recirculate the air. In principle, battery charging must be supervised.
- Damaged batteries must not be recharged or reused.
- Do not use damaged chargers (plug, housing, cables).

Safety instructions and precautions for transporting and shipping the battery:

WARNING!

- The battery uses lithium-ion (Li-Ion) cells. The transport and shipment of the battery is therefore subject to strict compliance with the requirements of the regulations in force. For example, a defective battery can never be transported on an aeroplane.
- If the battery is defective, it will be necessary to take it to the authorised dealer in person as shipping lithium-ion batteries by post or other delivery systems involves very strict rules and regulations. Once again, it is recommended that you contact your authorised dealer.
- Since transport regulations can change from year to year, it is strongly recommended that you consult your travel agent, airline or shipping company before planning a trip so that you are aware of the regulations in force. Do not transport a defective battery on an aeroplane or pack it in your luggage.

Battery coupling/disconnection

ATTACHMENT:

1. Turn the key anti-clockwise
2. Slide the battery along the tracks
3. Turn the key clockwise to activate the security lock (padlock drawn on the lock)

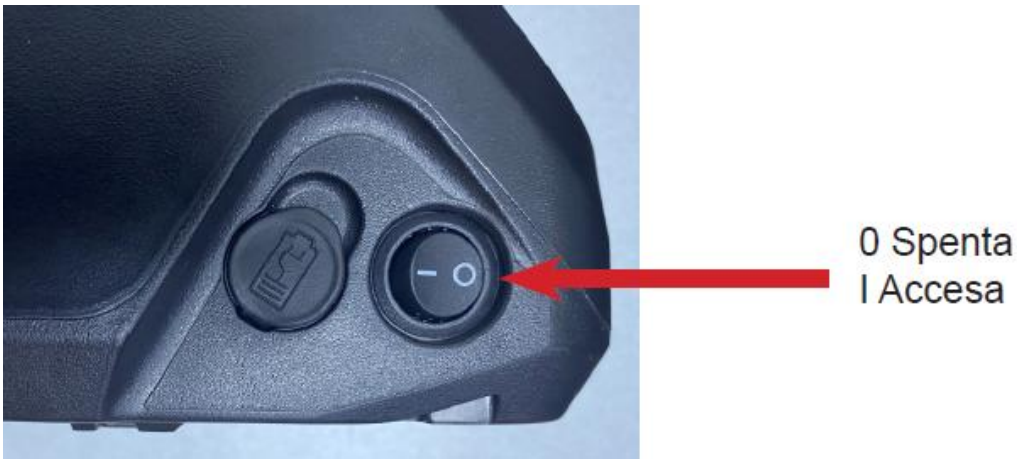
UNLOCKING:

1. Turn the key anti-clockwise (Fig.1)
2. Remove the battery by sliding it along the rails (Fig.2)

Fig.1 Fig.2

Turn the key anti-clockwise Remove the battery by sliding it upwards

Battery activation



⚠	Before each use of the device, check that the battery is correctly attached, then remove the key
⚠	Incorrect battery coupling could cause the battery to detach while driving
⚠	Failure to remove the key could result in the key rotating, impairing the attachment of the battery
⊘	Do not use the device with the key inserted

NOTE: If the battery is mounted on the power unit during transport in a motor vehicle, follow the transport regulations of UN3171.

Before shipping, please contact your authorised dealer information on transport arrangements.

6.1 Battery charging

It makes sense to always charge the battery, so you will always have maximum autonomy and maximum power output from the drive as the voltage is always high.

At the same time, the life of the battery is extended as lithium, in all its forms, has no memory effect, so you can recharge even when the battery is partially discharged. To check the battery charge, simply press the button on the side. Fig5-6

Do not leave the charger on 230 V voltage for too long when it has finished its charging cycle, green LED lit.

To recharge the battery, carry out the following instructions:

- Switch the device off (by holding down the "⏻ " button for a long time).

- Remove the battery from the holder by turning the key and sliding it upwards. Fig.1-Fig.2

- Connect the charger plug to the 230V 50Hz power supply. Fig.3

- Remove the protective cap on the side of the battery. Fig.4

- Connect the charger plug. Fig.5

- The LED light on the side of the charger indicates its status.

o Red: charging.

o Steady green: battery fully charged.

- Once battery charging is complete, first disconnect the plug from the power socket and only then the plug from the battery.

Fig.1 Fig.2

Turn the key anti-clockwise Remove the battery by sliding it upwards

Fig.3 Fig.6 Fig.7

Battery charger LED lights LED lights, battery status

Fig.4 Fig.5

Protective cap Connect plug

6.2 Correct use of the battery removal handle

The handle is designed exclusively to facilitate removing the battery from the holder.

When carrying the battery, always lift it correctly: one hand grasps the handle, while the other supports the battery from below.

7 Device Description

7.1 Product Composition

1 complete electric drive
2 manual wheelchair
3 system

7.2 Complete electric drive

1 handlebar
2 battery locking keys
3 battery
4 lighthouse
5 wheel
6 disc brake
7 motor
8 easel
9 mudguard
10 coupling arms
11 control unit integrated in the battery holder
12 bag hook
13 Handlebar stem, with tilt adjustment

7.3 Handlebar

The handlebars shown in the figure refer to a full optional configuration. The controls may vary depending on the model of propeller required.

Button

Headlight On/Off*
Increase speed level

Turning the device on/off

Decrease speed level

*To turn the headlight on/off, press and hold the UP button for 3 seconds

SPEED / GEAR

Pressing the UP button increases the speed level.
Pressing the DOWN key decreases the speed level.

The speed levels are proportional to the maximum speed of level 5.
E.g. if the maximum speed of level 5 is 20km/h, level 1 will allow a speed of 4km/h, level 2 of 8km/h, level 3 of 12km/h, level 4 of 16km/h and level 5 of 20km/h.

The maximum speed of level 5 for all thrusters is 20 km/h, with the exception of thrusters with a Tetra configuration, which have a maximum speed of 7 km/h.

Reverse gear

When reverse gear is engaged (pressing the button once), the display will show REVERSE flashing in orange.

ATTENTION!

Always pay attention before proceeding with the march. It is advisable to lower the speed to level 1.

REVERSE

CRUISE CONTROL (CC)

The Cruise Control function allows you to have a fixed speed while driving.

Pressing the button will activate this function which will make the engine proceed at the speed detected at the time of activation.

You can deactivate the Cruise Control function by doing two things:
- Press the brake lever
- Press the Cruise Control button

CRUISE

Brake

Pressing the brake lever will activate the electro-hydraulic braking.

To verify that the command is correctly activated, the electronic braking symbol will appear on the display.

During braking actions, the battery is recharged.

REGENERATIVE STATIC BRAKE (RBS)

Pressing the RBS button will activate this function which allows the engine to slow down in descent and charge the battery at the same time.

ATTENTION!

When this function is active, the engine will deactivate the march function. To accelerate again, press the button again to deactivate the RBS function.

BRAKING ELECTRONICS

ESS

The ESS button activates a function that correlates strictly accelerating and braking on the accelerator.

Allows the engine to brake during release of the accelerator.

To verify that the command is correct activated, the electronic braking symbol will appear on the display when the engine is not in motion. The symbol will disappear as soon as you accelerate.

BRAKING ELECTRONICS

WARNING! It is absolutely forbidden to modify the functional parameters of the EP3 device via the display interface, even accidentally. The guarantee will not cover any damage or malfunction resulting from such actions.

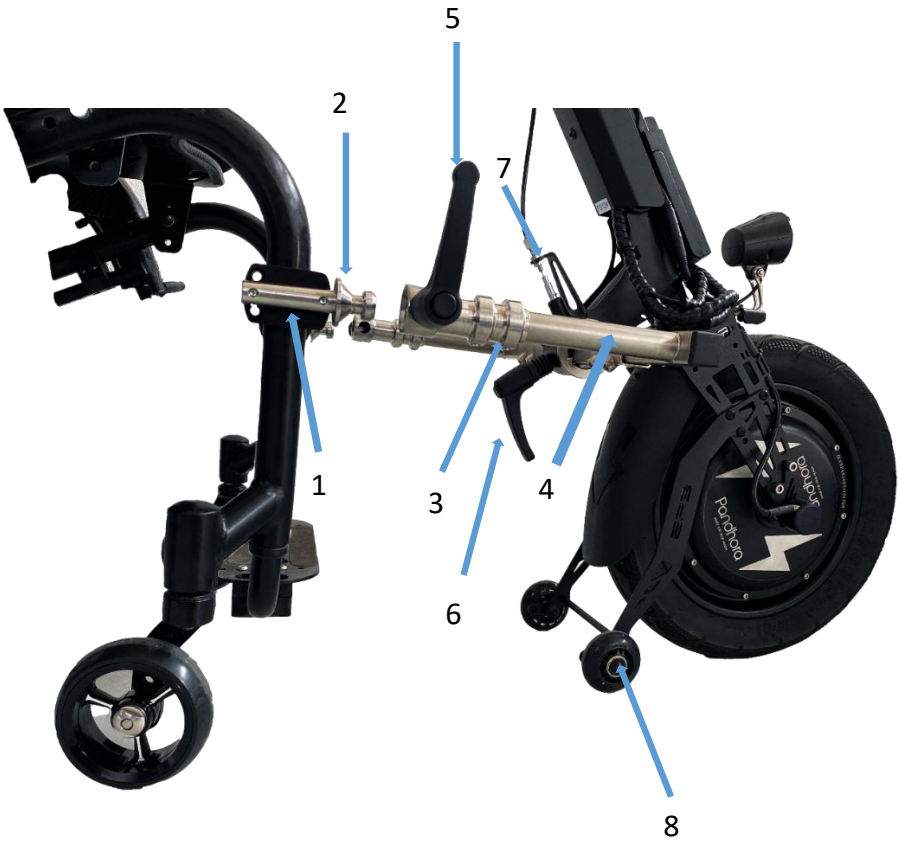
8 EP3 Installation on Wheelchair

- Ensure that the wheelchair frame is compatible with the mounting clamps and the EP3 drive. Contact Pandhora srl - Benefit Society to ascertain compatibility.

Installation must only be carried out by technicians authorised by Pandhora srl, no liability is accepted for incorrect installation.
WARNING! If the clamps or frame of the wheelchair are not compatible, there is a risk that the drive will not be securely connected to the wheelchair, with the risk of damage to both the product and persons.

Please refer to the specific clamp mounting manual before mounting. The clamp mounting information below is indicative only.

List of fastening components



1. Universal clamp
2. Conical plug
3. Depth adjuster
4. Arm
5. Lateral clamping lever
6. Central clamping lever
7. Positioning plunger
8. Easel

8.1 Coupling the EP3 Drive to the Wheelchair. (Side attachment

- Make sure the engine is switched off.
- Place both the wheelchair and the propeller on a perfectly level floor.

⚠ WARNING! If the thruster or wheelchair is not placed on a perfectly level floor at the time of coupling there is a risk that it may move freely with damage to both the user and the device.

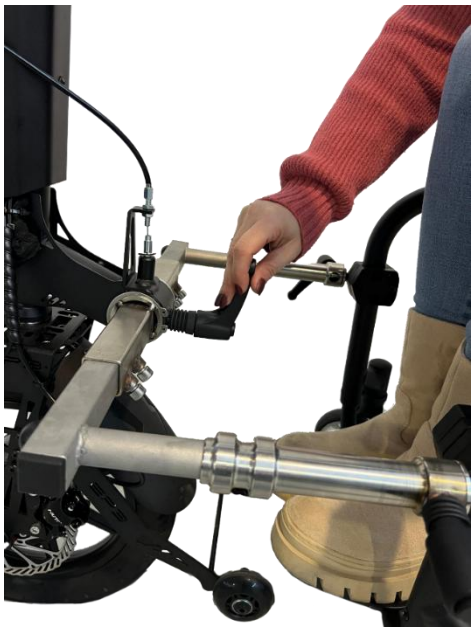
- Release the positioning plunger and place the side arms parallel to the floor.
- Apply the parking brakes on the wheelchair, then bring the propeller a few centimetres in front of the wheelchair.

- Ensure that the adjusters are aligned with the conical pins

- Couple the tapered pins with the depth adjusters and tighten the side clamping levers, turning clockwise

- Unlock the positioning plunger by pushing the release lever forward

- Release the lever and push the handlebar forward until you hear a 'click'.
- Two configurations are possible:
  - Comfort (first shot); recommended for very even surfaces
  - Sport (second shot); the one shown in the picture provides maximum grip



- Tighten the central clamping lever, help yourself by operating the brake lever on the power unit, push the handlebars forward slightly to facilitate the manoeuvre; then make sure that the front wheels of the wheelchair are raised off the ground by approximately 3 cm.

- The device is ready to drive. Disengage the wheelchair brakes, then switch it on and gently operate the accelerator.

NB: Only with the PANDHORA PEVO wheelchair variable backrest version, once the thruster has been lifted off the ground the backrest can be readjusted for a correct posture at all times even while driving with the thruster.

8.2 Coupling the EP3 Drive to the Wheelchair. (Central coupling

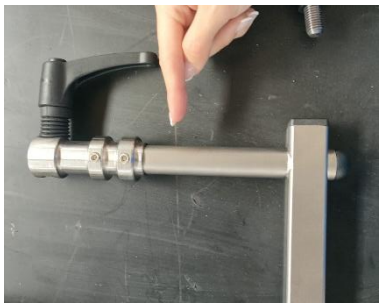
Type of connection

The type of connection to the wheelchair remains the

NB: The detachable bow should be as parallel as possible to the ground plane.

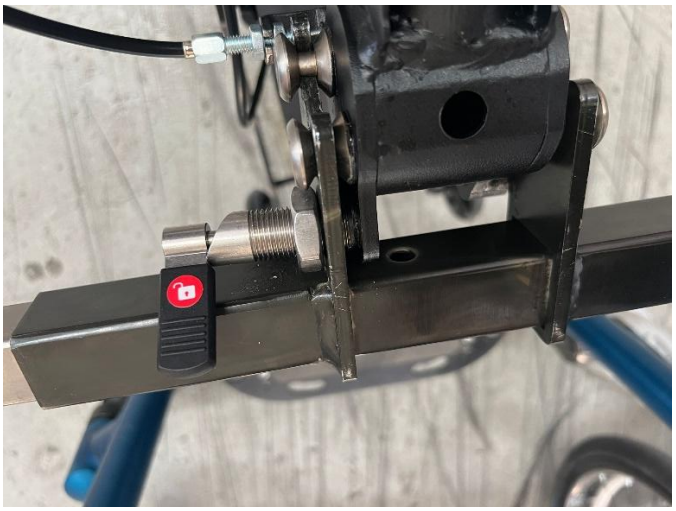
Supplied arms

NB: Check that with maximum steering there is no interference between the stand and the wheelchair platform.

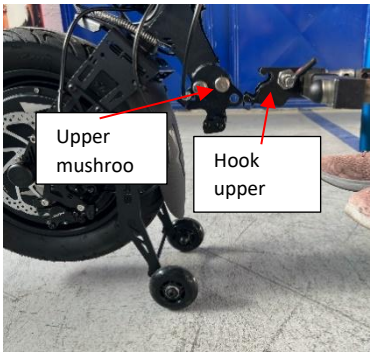


Connecting EP3 to the wheelchair

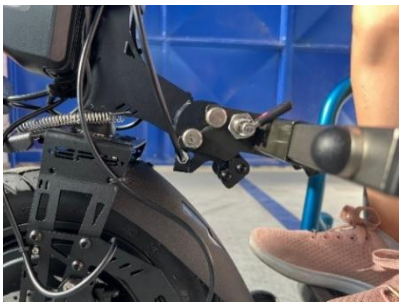
Make sure the security lever is open (red open padlock



Slightly lower the handlebars by raising the wheel about 2 cm off the ground as shown in the illustration, move the thruster freely towards the connecting mechanism without interference. (the upper mushroom of the thruster must fit inside the upper hook of the bow)



Operate the release lever and firmly push the handlebar forward until the lower hook intercepts the lower mushroom, then release the release lever.



Turn the safety lever downwards and ensure that the spring plunger goes through the hole as shown.

NB: push the handlebar forward slightly so that the spring plunger can enter the hole freely.

8.3 Uncoupling the EP3 Drive Unit from the Wheelchair

WARNING! If the thruster or wheelchair is not placed on a perfectly level floor at the time of decoupling, there is a risk that it may move freely with damage to both the user and the device.

Carry out the actions mentioned in the previous paragraph in reverse order.

9 Technical Specifications

- Clamping knobs attached to the thruster (Patented)
- Conical hooks (or conical pins) (Patented)
- Fork with integrated kickstand (Patented)
- Power from 500 W to 1000 W
- Removable 36V 13Ah and 48V 16 Ah lithium battery with quick battery status indication LED in accordance with EMC2004/108/EC issued by the European Union regarding Classification
- Reverse gear
- Backlit multifunctional LCD/COLOR display with USB port
- Integrated control unit in the battery holder
- Cruise Control (on request)
- Electro-Hydraulic Disc Brake
- Comfort grips with design for better palm rest
- Front LED headlight
- Reinforced aluminium rim
- Reinforced steel fork
- 5 power levels
- Weight 7.7 to 16 kg depending on model and accessories
- Autonomy of up to 50 km (on level ground and 75 kg user weight)

10 Handling Precautions

WARNING!

- The battery is supplied with a battery charger, it is absolutely forbidden to use any other type of battery charger.
- The battery is removable by operation of the supplied key.
- If the device is not in use, remember to charge the battery at least once a month and disconnect it from the control unit.
- Do not use the device after consuming alcohol or if the user's psychophysical abilities are impaired
- Any kind of noise or excessive play of moving parts could be a sign of malfunction. Contact Pandhora srl for assistance.
- Use the drive only in suitable spaces permitted by law.
- Do not use the engine in adverse weather conditions such as rain or fog.
- Do not use the thruster for weights over 120 kg.

- Do not climb steps on bends.
- Do not climb steps higher than 3 cm.
- Before each start, always check whether reverse gear is engaged.
- Before driving forwards or backwards, check for the presence of people or obstacles.
- In case of obstacles, precipices and dangers of any kind that are not located at a safe distance, switch off the EP3 and manually move the wheelchair to a safe place.
- When coupling and decoupling the device, pay attention to your limbs, sharp impacts with possible injury may occur. Always handle with care and in a gentle manner. Get help if necessary.
- If the battery is swollen or damaged, do not use the device and contact an authorised Pandhora centre immediately.
- If the charger is damaged, do not use it under any circumstances, risk of electric shock. Contact an authorised Pandhora centre immediately.
- Do not use the device on disconnected ground.

11 Accessories

The accessories that can be fitted to the ep3 are listed in the order form. Any other accessories are not permitted.

Thumb throttle

In place of the twist-grip throttle

Horizontal Vertical

Aircraft battery

Battery that can be taken on board an aircraft.

Available 36V 8Ah and 48V 6Ah (288Wh)

Comfort release lever

Tetra handlebar

01

02

Mirrors

Rear view mirrors are safety devices that allow the driver to check the area behind and to the sides of the vehicle, reducing blind spots. They can be adjusted manually.

Bell

Duffel bag for EP3

12 Technical Data EP3

12.1 Device Classification

According to the Medical Devices Directive	Risk class I
Protection against electrical hazards	Class II
Degree of protection against direct and indirect contacts	Type B
Use in oxygen-rich environments	No protection
Conditions of use	Luminaire for continuous operation

12.2 Technical Specifications

MODEL	**EP3**
MAXIMUM USER WEIGHT	120 Kg[1]
MAXIMUM TOWABLE WEIGHT (INCLUDING USER AND ACCESSORIES, AND PANDHORA EP3)	130 Kg
MAXIMUM SLOPE	Up to 10%[2]
DIMENSIONS	Max. height: 126 cm Max. width 52 cm Max. depth 61 cm
WEIGHT	Total 7.7-16 kg
INSTALLATION CONDITIONS ON THE WHEELCHAIR.	From a front tube width of 20 cm
MAXIMUM PERMITTED SPEED	6 km/h [3]
STEERING WHEEL TYPE	With reinforced aluminium rim
WHEEL DIAMETER	8,5"-10"-12"- 14"-14.5"-16"
PNEUMATIC TYPE	Road/Cross
DISK BRAKE	Diameter 140-160 cm
Li-Ion BATTERY	48V 16Ah 768 Wh - 36V 13Ah 468 Wh 48V 6Ah 288Wh - 36V 8Ah -288Wh
BATTERY WEIGHT	3.8 - 3.2 kg 2.8 - 2.2 kg
POWER SUPPLY	48 V 54.6 V 2 A - 36 V 42.0 V 2A
ELECTRIC MOTOR POWER	From 500 - 1000 W
AUTONOMY	Up to 40-50 km (fully charged) [4]

12.3 Environmental Conditions Of Use

Temperature	Min -10°C -max + 40°C

[1] In any case, the maximum load-bearing capacity of the wheelchair, which is specified by the manufacturer, must be observed and adhered to.

[2] In any case, the manufacturer's requirements for the wheelchair must be observed and adhered to.

[3] The maximum permitted speed is 6 km/h on public areas and 12 km/h on cycle paths. In private areas and roads not open to the public, the speed may be even higher than 12 km/h, (speed limits are dependent on the laws in force).

[4] Figure based on a charged 16 A battery, flat route and user weight of approx. 75 kg.

Humidity	Max. 90% non-condensing
Atmospheric pressure	800-1060 hPa

12.4 Environmental Transport Conditions

Temperature	Min -10°C -max + 50°C
Humidity	Max. 90% non-condensing
Atmospheric pressure	700-1060 hPa

13 Equipment Disposal (Italy)

Pursuant to Art. 13 of Legislative Decree no. 151 of 25 July 2005 "Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC on the reduction of the use of hazardous substances in electrical and electronic equipment and the disposal of waste". When disposing of the 'EP3', the user is responsible for delivering each end-of-life part to the appropriate collection facilities.
Used batteries must be taken to collection points for recycling. This product complies with the EU2012/15/EU directive. The symbol of the crossed-out wheeled bin on the appliance indicates that the product, at the end of its life, must be treated separately from household waste and must be handed in at a separate collection point for electrical and electronic equipment, or returned to the seller when purchasing a new equivalent appliance. The user is responsible for taking the end-of-life equipment to the appropriate collection facilities. Abandonment and unauthorised disposal of the product by the user entail the application of the administrative sanctions set out in Legislative Decree No. 152/2006 (Articles 255 and 256).
For more detailed information on the available collection systems, please contact your local waste disposal service.

⚠	Disposal of the equipment inside EP3 devices must absolutely comply with the specific regulations of the country in which they are used. Pandhora is not liable in this respect for use that does not comply with the specific regulations in force.

14 Maintenance

With regular maintenance, the safe, reliable and effective operation of the device can be guaranteed. Lack of or insufficient maintenance does not guarantee the validity of the warranty.

- Carry out at least a bi-monthly (if not monthly) check of the front wheel tyre pressure, the tyre pressure is marked on the tyre. A deflated tyre affects the smoothness of the vehicle and fuel consumption

The blue arrow indicates the tyre characteristics, the red arrow indicates the inflation valve. The correct pressure varies depending on the tyre.

- For inflation use a compressor or pump equipped with a pressure gauge
- After long journeys over rough terrain and in any case every month, check the tightness of the adjusting screws and fasteners.
- Carry out a monthly check of the tightening of the wheel axle fixing nuts with a torque spanner set at 35 Nm for the Standard (14") , Smart (12") and Enduro 816") models; at 40 Nm for the Cross (10"), Plus (14") and Off-road (14.5") models.
- Check, before each use, that the accelerator and brakes are working properly.
- Check the battery before each use

⚠ Only install spare parts authorised by Pandhora Srl - Benefit Society.

For the replacement of the battery, any other electrical components and wear parts (braking system in general) only contact Pandhora Srl authorised technicians

Transport by car

Before charging the device in the car, take care to switch it off.
Loosen the handlebar stem locking screw by turning it anti-clockwise (or the clamp that adjusts the handlebar angle) and fold the handlebar onto itself in order to reduce the overall dimensions as shown in the photo and according to your physical capabilities and space inside the vehicle, load it into the car.

15 Cleaning

Constant cleaning of the device, in all its parts, guarantees a longer life and better functionality.

Advice:

- Before cleaning, switch off the device and disconnect the battery.
- Do not use abrasive substances, aggressive detergents and high-pressure cleaners.
- Clean the device with a soft, moistened cloth; to avoid the introduction of water, use a common, non-aggressive detergent.
- Dry the device thoroughly after driving in the rain.
- If the device is soiled, soften the dirt as soon as possible and remove it; then carefully dry the device.
- Carry out external cleaning of the entire device after each outing on muddy terrain, and carry out at least one cleaning per month.
- Do not wash parts with running water, be careful not to get electrical parts (display, battery and motor) wet
- Immediately dry the parts after washing them with a soft cloth.

16 Malfunctions

Should a fault occur while using the EP3 device, please contact Pandhora srl or an authorised Pandhora dealer.

17 Product Warranty

In order to protect both customers and distributors, we require mandatory photos of the EP3 propulsion system installation as per the format below in order to activate the warranty.

Photo 1
From a fairly low angle, take a side photo of the wheelchair and propulsion unit connected, showing the height of the wheel in relation to the ground.

Photo 2
From a fairly low angle, take a side photo of the wheelchair and propulsion unit disconnected.

Photo 3
From a low and front-facing position, take a photo of the wheelchair equipped with the clamps.

Photo 4
Take a close-up photo of the external side clamp.

Photo 5
Take a close-up photo of the internal side clamp.

Please send the photos to one of the following email addresses, specifying the product batch number: **info@pandhora.it**

Regulatory References

Products supplied by Pandhora Srl – Benefit Corporation are guaranteed under the terms and conditions set forth by Legislative Decree 206/05 and subsequent amendments against manufacturing defects, defects in materials used, and non-compliance, for a duration of 24 months starting from the delivery date to the consumer, with the exception of custom-made devices, which are subject to the provisions of DM 332/99 and DPCM 12/01/2017 Annex 5. The start date of the warranty can be documented by the delivery note.

The warranty is strictly limited to the free repair or replacement of parts recognized as defective. The warranty applies on the condition that the purchaser provides proof of having complied with the instructions in the user manual and has duly and correctly carried out the necessary periodic maintenance.

Scope of Application

The warranty covers material and manufacturing defects present at the time of delivery.

The defect must be reported within 2 months of discovery, otherwise the right will lapse (Art. 132 Legislative Decree 206/2005).

Only the authorized distributor/retailer may enforce warranty rights against Pandhora Srl – Benefit Corporation; therefore, the customer is not entitled to do so directly (these warranty conditions are provided for informational purposes only).

Warranty Terms

Pandhora S.r.l. – Benefit Corporation guarantees:

- **Pursuant to Article 132 of the Consumer Code**, the product is covered by a legal warranty of conformity for **24 months from the date of delivery**, exclusively for the end consumer (B2C).
- Structural and rigid components are guaranteed against material and manufacturing defects for a period of **24 months from the date of delivery**.
- **Pursuant to Art. 130 paragraph 4 and by way of derogation from Art. 133 paragraph 1, Legislative Decree 206/2005**, adequate notice is given that certain devices have a warranty shorter than 24 months, such as **batteries, chargers, and electrical components**, which are covered by a **12-month warranty from the date of delivery**.

The battery is considered a consumable item; any replacement batteries will be covered for the remaining duration of the original warranty, up to a maximum of 12 months from the initial product delivery date.
Parts subject to normal wear are not covered by the warranty, except in cases of abnormal wear due to manufacturing defects.

Warranty Conditions

The warranty is valid only if:

- The product is used correctly and in accordance with the user manual.
- No unauthorized modifications have been made.
- Serial numbers or identification labels have not been removed or altered.

The warranty becomes immediately void in the following cases:

- Damage caused by accidents, impacts, falls, improper use, or lack of maintenance.
- Repairs, disassembly, or modifications performed by unauthorized workshops or using non-original components.

- Damage caused by improper storage conditions or causes not attributable to the manufacturer.
- Removal or tampering with the serial number plate.
- **Modification of the speed beyond the legal limit of 20 km/h according to UNI EN 12184/2022 results in the immediate voiding of the warranty.**

Replacement of a part or any warranty intervention does not extend the duration of the original warranty.

Warranty Exclusions

Pursuant to Article 130 of the Consumer Code, the warranty does not apply in cases of:

- Damage resulting from improper use, accidents, falls, impacts, or negligence.
- Modifications, repairs, or disassembly performed by unauthorized workshops or with non-original spare parts.
- Causes not attributable to the seller/manufacturer.

The warranty does **not** cover:

- Ordinary maintenance, adjustments, programming, and periodic checks.
- Batteries beyond the 12-month specific warranty.
- Additional costs (e.g., repair, packaging, labor costs, etc.).
- Parts subject to normal wear, including (non-exhaustive list):
    - Tires, inner tubes, wheel rings, solid wheels
    - Cushioned parts, coverings
    - Handles, grips
    - Fuses, bulbs, motor brushes, brake pads

Service Procedure

During the warranty period:

- The customer must contact the nearest authorized dealer or Pandhora S.r.l. – Benefit Corporation.
- Repairs will be carried out at an authorized service center or via shipment at the customer's expense (unless otherwise agreed).
- If the fault is covered under warranty, repair or replacement will be free of charge.
- If the defect does not exist or is not covered by the warranty, the costs will be charged to the customer.

Service is provided during normal business hours (excluding holidays, vacation periods, and force majeure events). Visits requested by the customer for simple adjustments or maintenance are chargeable.

Limitations and Liability

- The warranty does not cover transportation, shipping, or labor costs unless the defect is recognized.
- The warranty is personal and non-transferable.

Pandhora S.r.l. – Benefit Corporation is not liable for:

- Damage resulting from negligence, improper use, tampering, incorrect installation (see “Warranty Activation” section), or maintenance by unauthorized personnel.
- Transportation, shipping, or labor costs, unless otherwise agreed.

The warranty does not cover:

- Damage due to transport not reported directly to the carrier upon delivery.
- Repairs carried out by unauthorized service centers or personnel.
- Damage caused to property or persons during the use of our products.
- Damage caused by willful misconduct or negligence of the purchaser, or by improper or incorrect use of the device.
- Damage to the device, property, or persons resulting from the use of any device, accessory, or object installed/added to the wheelchair without written authorization from Pandhora S.r.l. – Benefit Corporation.

Any claims for compensation are excluded, except for those expressly mentioned in the previous paragraphs of this chapter.