

Pushing and braking aid

movilino

Translation of the original user's manual

GB



Ideen bewegen mehr



CE-Declaration of conformity

The company AAT Alber Antriebstechnik GmbH herewith declares that the products of the pushing and braking aid movilino were developed and manufactured in concordance with the regulations of the European Union, EEC Guidelines 2007/47/EG and 2006/42/EG.

This declaration becomes void if the above mentioned devices have been altered without the consent of Alber Antriebstechnik GmbH.



Signature of the manufacturer:

Markus Alber
Managing shareholder
AAT Alber Antriebstechnik GmbH



The pushing and braking aid movilino is being tested according to the norm DIN EN 12184 and 12182 at the institution for certification of medical products GmbH, Technical University Berlin.



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1 General information

Congratulations! The movilino is a pushing and braking aid operated by an assistant. Special brackets make it possible to mount the movilino easily to almost any type of wheelchair.

movilino supports the assistant in pushing and braking a wheelchair. It facilitates driving on slopes and brakes automatically when going downhill providing safety.

With the movilino one person could be carried safely and without any effort up to a increase of 18%. The movilino is suitable for the transportation on level base; he is compact, light and versatile.

The sticker with the device's serial number is located on the side of the housing.

1.1 How to use this user's manual

The user's manual is part of the delivery package and instruct you step by step about the safe and adequate use of the movilino. Operating the movilino takes a certain skill.

Please read this user's manual carefully and particularly take note of the safety instructions before you use the movilino for the first time.

After reading, please store this user's manual at an appropriate place for further reference.

1.2 Instruction

In the interest of your safety the movilino a only be operated by trained personnel.

Instruction on how to operate the device is part of the delivery package and takes place with your authorized dealer or an AAT representative.

Please read this user's manual carefully and particularly take note of the safety instructions before you use the movilino for the first time.

1.3 Care and maintenance

One of the most important aspects concerning the maintenance of the movilino is charging the seal lead acid batteries. They are part of the battery pack and must be charged every time after using the device.

Other than that your movilino does not need much care or maintenance. More extensive instructions you find in chapter 8.

1.4 Warranty and liability

For damage that was caused by inadequate use disregarding this manual we assume no liability whatsoever. (Please read chapter 9 for more detailed information concerning warranty and liability).

2 Description of the product

2.1 Adequate use

Please use the braking and pushing aid movilino exclusively for the transportation of physically disabled persons.

Said person should be able to sit properly without help, otherwise you should secure them with a safety belt. The latter is an accessory available at AAT Alber Antriebstechnik GmbH.

In addition, the arms of the person to be transported should not protrude over the arm rests of the wheelchair during the transportation process.

- ☞ In the interest of your safety you may not use the movilino on escalators or moving belts!
- ☞ Transporting other kinds of loads is explicitly prohibited!
- ☞ Only authorized operators may use the movilino. Therefore never leave the movilino unattended.
- ☞ Due to safety reasons the movilino may only be operated by trained personnel who are physically and intellectually capable to handle the device in all situations of operation.
- ☞ Please note the wheelchair manufacturer's specifications (wheels' air pressure, maximum approved total weight, maximum incline, etc.) when using the movilino. You may under no circumstances exceed the specified limiting values!
- ☞ You should avoid operating the device on unfortified grounds (sand, mud, loose gravel, ice or snow) as well as crossing deep puddles (maximum depth approximately 2.5 cm) with it.



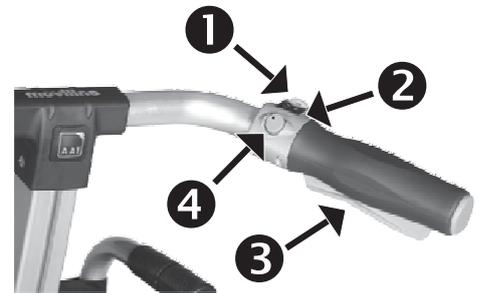
2.2 Features of the movilino

- ❶ = handle
- ❷ = column
- ❸ = brackets
- ❹ = power unit
- ❺ = battery pack



2.2.1 Control unit

- ❶ = safety chip for the engine immobiliser
- ❷ = ON/OFF switch
- ❸ = rocker switch forward/backward
- ❹ = speed control



2.2.2 Overview

- ❶ = control unit
- ❷ = tightening knob for the handles' height adjustment
- ❸ = tightening knob for the column
- ❹ = light emitting diode
- ❺ = drive wheels
- ❻ = small wheels
- ❼ = lower rod
- ❽ = recessed handle
- ❾ = upper rod
- ❿ = socket for the power cable
- ⓫ = handle



2.3 Technical data

measurements	height = min. 926 mm, max. 1128 mm width: handle = 636 mm, power unit= 230 mm depth: handle = 233 mm, power unit = 307,5 mm
weight	power unit= 10,5 kg handle unit = 2,5 kg battery pack = 9,0 kg power cable = 220 g bag for batteries plus velcro straps = 180 g charger = 740 g total weight = 23,14 kg
limits for mounting the device on a wheelchair	seat width of 32 cm or more
max. approved total weight	170 kg (person, wheelchair, movilino)*
speed	continually adjustable 6 km / h forward 3 km / h backward
running-in, slowing period	approximately 10 seconds
braking and climbing capacity	up to 18 %**
capacity with one battery charge	over 21 km***
batteries	2 x 12 V / 16 Ah
direct current motor	24 V / 200 W
storing and operating temperature	- 20° C to + 60° C / - 10° C to + 50° C
noise level	the device's A weighted noise level lies typically below 60 dB
vibration specifications	the weighted RMS value of acceleration the upper body is exposed to lies typically below 2,5 m/s ² .

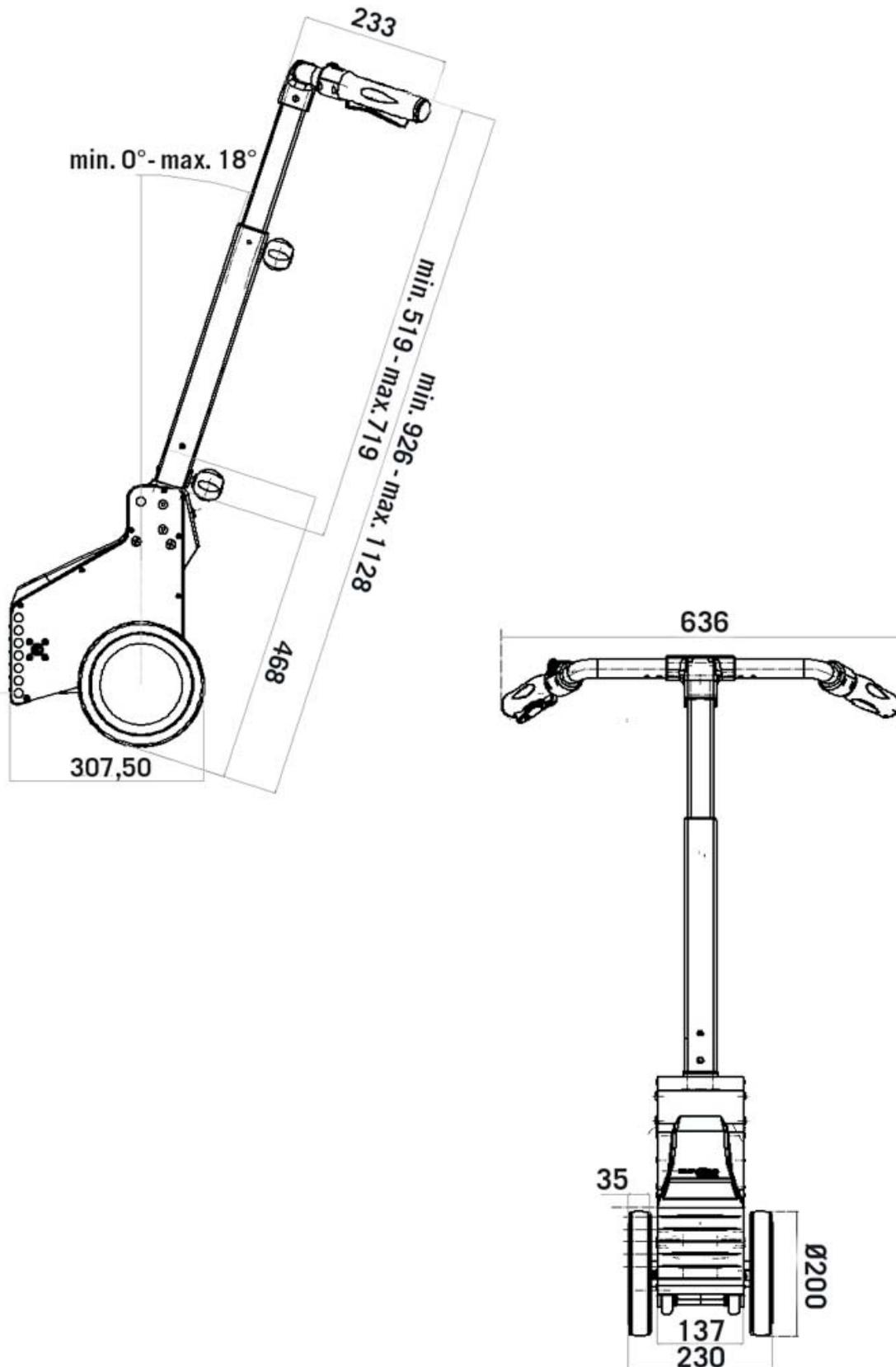
* Limiting values stipulated by the wheelchair manufacturers must be noted and observed.

** Braking and climbing capacity depend among other things on the weight of the person to be transported as well as the ground profile, terrain, temperature, etc.

*** According to ISO 7176-4 the range depends among other things on the person's weight, the ground, territory, temperature, etc.

In the interest of progress we reserve the right for technical changes.

2.4 Dimensioned sketch



2.5 Standard scope of delivery

The following is part of the standard scope of delivery:

- ❶ = movilino power unit plus handle
- ❷ = battery pack
- ❸ = charger

...as well as the components mounted to the wheelchair, power cable and bag for the battery pack plus the user's manual (no picture).

In addition, it is necessary to mount brackets to the wheelchair. (this is not included in the delivery package).



2.6 Optional accessories

We offer the following accessories for your personal needs and wishes:

Spokes' protection, mega battery pack, anti-tilt support, voltage converter, hip belt and handle for left-handed control.

3 Assembly

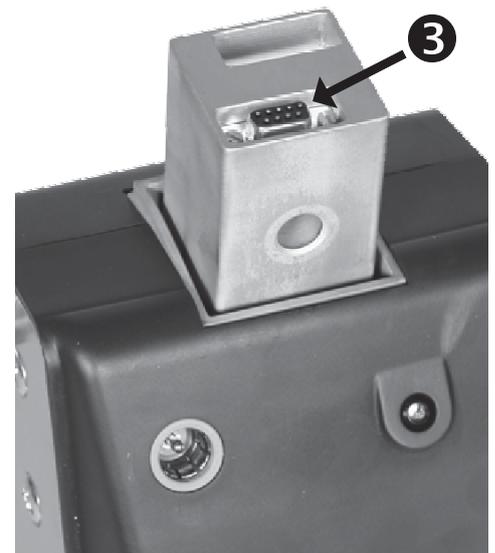
With a few movements you can assemble the movilino by means of several fixtures and tightening knobs. Disassembly is just as easy.

3.1 Handle

First connect the handle with the power unit by inserting the column ❶ into the holding device ❷ on the power unit.



A 9-pin Sub-D socket connector ❸ located in the power unit's holding device makes the electrical connection.



Secure the connection with the tightening knob ④.

- ☞ Please always make sure that the handle is safely connected to the power unit.
- ☞ Please only connect the handle with the power unit, if both parts are clean and dry. Should there be dirt or moisture the two parts should never be connected.
- ☞ Clean and dry the Sub-D socket connector with a regular cleaning cloth.
- ☞ You may not connect other devices to this Sub-D socket connector. This could destroy the movilino or the other electric devices.



3.2 Brackets

The movilino may only be used, if your wheelchair has been supplied with special brackets.

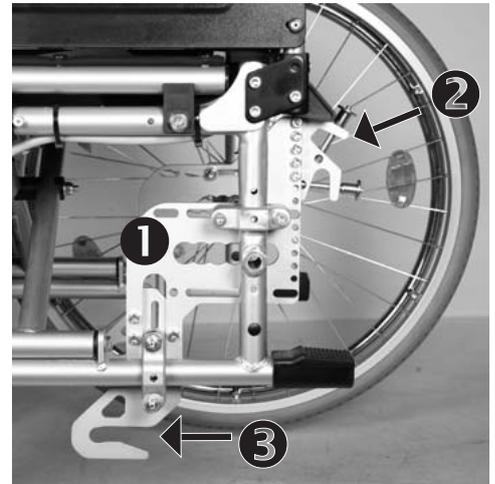
These brackets may only be mounted by AAT Alber Antriebstechnik or authorized personnel.

3.2.1 Bracket on the wheelchair

The wheelchair must be equipped with a bracket in order to attach the movilino to the wheelchair.

AAT Alber Antriebstechnik GmbH offers a universally applicable mounting system. We attach a holding device **1** on both sides of the wheelchair's frame. This holding device has an upper **2** and lower **3** bracket.

All brackets are specially designed for and adjusted to each individual wheelchair; therefore, the brackets you see in the picture may look different from your wheelchair brackets.



 Please check whether the brackets are securely fastened before each use. Should screw fastenings be loose, you may not use the movilino. In such case, please contact your local dealer immediately.

3.2.2 Bracket on the movilino

On your movilino you find an upper **4** and lower **5** rod. To adjust the lower rod's height there are several vertical holes drilled into the housing of the movilino.

Your authorized dealer or AAT Alber Antriebstechnik GmbH adjusts the height at which the movilino is mounted to your type of wheelchair.

On both sides of the upper rod there are rings **6**. The position of said rings are also adjusted to your type of wheelchair.



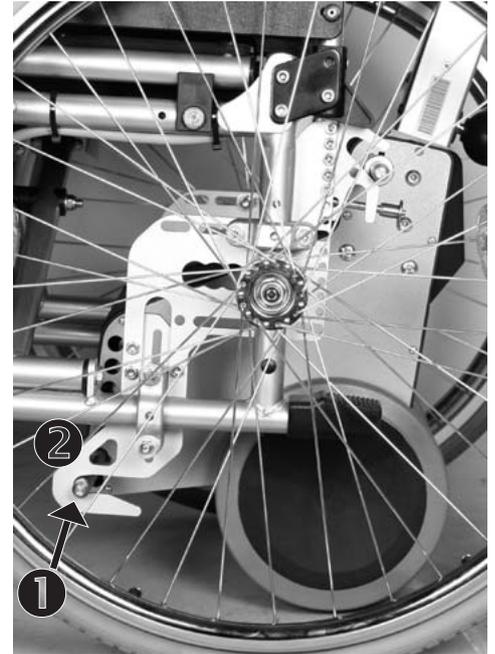
3.2.3 Insert the movilino into the lower bracket on the wheelchair

1. Please use the locking brakes of your wheelchair to avoid any movement of the chair while the movilino is being mounted.
2. Tilt the movilino slightly backwards. As soon as the device sits on its wheels you may push the movilino back and forth. This only works if you keep the device tilted backwards!

 These helping wheels are only active when the device is tilted!

 Make sure that the anti-tilt support is removed!

3. Now push the movilino from behind the wheelchair under the chair until the lower rod **1** is inserted all the way into the lower bracket **2** of the wheelchair.



3.2.4 Insert the movilino into the upper bracket on the wheelchair

There are two possibilities to insert the movilino into the upper brackets on the wheelchair.

Possibility 1:

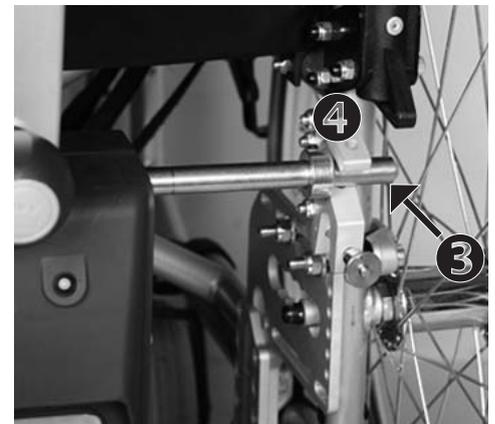
1. Tilt the movilino forward to lift the upper bracket.
2. The movilino, aligned in the center of its upper support **3** slides into the upper brackets **4** the adjusting rings rest snugly against the inside of the brackets on both sides.

Possibility 2:

3. Plug the power cable into the movilino's battery pack as described in chapter 3.3.
4. Insert the safety chip for the engine immobiliser into its appropriate slot.
5. Now turn on the device. At this point the running wheels are automatically moving downward and the upper support is lifted up.
6. Is the movilino aligned in the center of its upper support **3** slides into the upper brackets **4** the adjusting rings rest snugly at the inside of the brackets on both sides.

 Please make sure that the lower support is properly hooked into the lower brackets on the wheelchair! This goes for both possibilities!

 The adjusting rings must always be at the inside of the brackets!

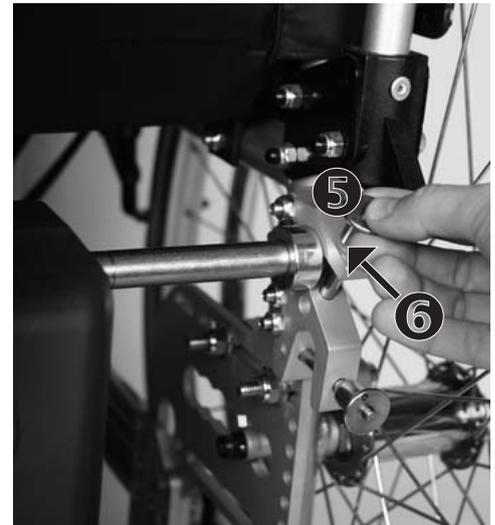


3.2.5 Fix the movilino to the wheelchair

1. Take one of the quick pins and with your thumb push down the quick pin in the middle ⑤.
2. Put the quick pin all the way into the drilled hole of one of the upper brackets on the wheelchair ⑥ and release the quick pin.
3. Now take the other quick pin and put it into the other bracket on the wheelchair as described in point 2.

Only by using quick pins a strong connection between movilino and wheelchair is secured.

- ☞ The movilino may only be operated, if the quick pins are securely locked in the wheelchair's brackets.
- ☞ The wheelchair's wheels may not be removed when you operate the movilino!



3.3 Attach the battery pack

The bag for the battery pack is located under the seat of the wheelchair. Simply slide the battery pack into its bag and fix it with a velcro strip.



Afterwards you can insert the plug of the power cable into the socket on the battery pack.

- ☞ Please make sure that the power cable's plug is dry and clean.



Plug the power cable's plug into the socket on the movilino.

- ☞ Please make sure that the power cable's plug is dry and clean.



If the device is already attached to the movilino as described in chapter 3.2 you are ready to go.

3.4 Detach the battery pack

To detach the movilino from your wheelchair, please repeat the process in reversed order (see chapter 3.2.3 – chapter 3.3)

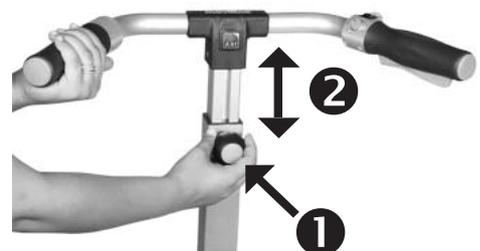
- ☞ First remove the power cable from its socket on the movilino.
- ☞ Please make sure that the anti-tilt support is also removed!

3.5 Adjust the handle

Please adjust the handle to the appropriate and for the operator comfortable position.

Release the tightening knob ❶ by turning counter clockwise. Pull out the handle to the appropriate height ❷ (maximum shoulder height). Then re-tighten the tightening knob.

- ☞ Please always make sure that the tightening knob is secure!
- ☞ Please adjust the handle exactly according to instructions (see picture).



Attention: avoid bruising at the nut's opening!!!

3.6 Anti-tilt support

You may operate the movilino only with installed anti-tilt support.

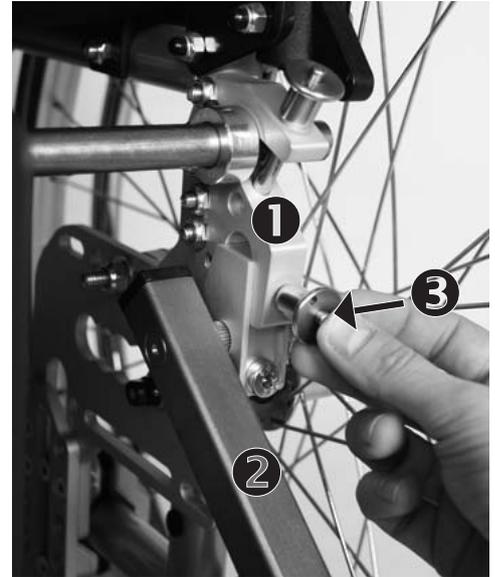
If your wheelchair does not have a tilt support, which is standard with most wheelchair manufacturers, we can equip your wheelchair with the necessary anti tilt support as an optional accessory of the movilino.

Holding devices for our anti-tilt support are already mounted on the brackets of the movilino.

3.6.1 Attaching and removing the anti-tilt support

Brackets with holding device for the anti-tilt support

Slide the tilt support **2** all the way into the holding device **1** on the movilino. Pay attention on the label at the anti-tilt support. Lock it with the quick pin. Push the quick pin into the drilling on the holding device while you press the unlocking button **3** at the top of the quick pin. When the quick pin is inserted all the way you release the unlocking button on the quick pin.



-  Please check whether the quick pins are tightly secured in the holding devices. If you can remove the quick pins without pressing the unlocking button, they are not secured properly.
-  Please make sure that the tilt support is not jammed whenever you use the movilino.
-  Please do not drive backwards against a wall with mounted tilt supports.
-  Please note that no tilt support can secure all potentially difficult situations, thus avoid any instable situations even with mounted tilt supports.

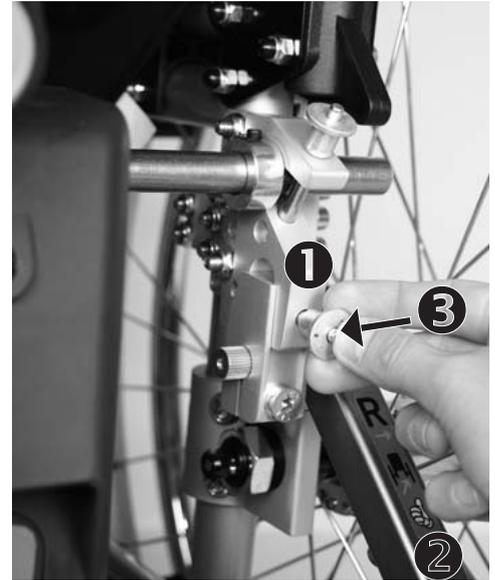
To remove the tilt support you press the unlocking button on the quick pin while you pull it out. Then take off the tilt support.

Brackets movilino/s-max

Slide the tilt support **2** all the way into the holding device **1** on the movilino. Pay attention on the label at the anti-tilt support. Lock it with the quick pin. Push the quick pin into the drilling on the holding device while you press the unlocking button **3** at the top of the quick pin. When the quick pin is inserted all the way you release the unlocking button on the quick pin.

-  Please check whether the quick pins are tightly secured in the holding devices. If you can remove the quick pins without pressing the unlocking button, they are not secured properly.
-  Please make sure that the tilt support is not jammed whenever you use the movilino.
-  Please do not drive backwards against a wall with mounted tilt supports.
-  Please note that no tilt support can secure all potentially difficult situations, thus avoid any instable situations even with mounted tilt supports.

To remove the tilt support you press the unlocking button on the quick pin while you pull it out. Then take off the tilt support.



3.7 Functional check

-  Please check the device's electronic functions each time before using it (see chapter 6.1)!
-  Please regularly check the wear limit of the powered wheels (see chapter 4.4)!
-  Make sure that the battery pack is charged before you use the movilino!
-  Please make sure that the tilt support is not jammed whenever you use the movilino!

4 Safety instructions

- ☞ For a safe operation of the movilino it is important that you observe and adhere to all warning signs and instructions in this user's manual as well as the warning signs and instructions on the device itself.

All general rules for the safe use of a wheelchair apply without reservation while operating the movilino. You must always observe the limit values and instructions indicated by the manufacturer (e.g. air pressure, maximum total weight, maximum inclination, etc.). Limit values may never be exceeded.

To assure a safe use of the movilino, it is indispensable to observe the following directions.

4.1 Special information concerning the operation: Generally all of the wheelchair's specific limiting values indicated by the manufacturer must be observed.

In the interest of your safety the pushing and braking aid movilino may not be used on escalators, stairs, moving walkways or unfortified surfaces. You may only move the wheelchair plus mounted movilino manually, if the device is turned off. Please observe the instructions and limiting values of your wheelchair's manufacturer.

Before each operation you must put the safety chip for the engine immobiliser into its slot at the handle unit. Always make sure it has snapped into place because otherwise the movilino does not work.

- ☞ The wheelchair's wheels may not be removed!

Please make yourself familiar with handling the device and its driving characteristics. Please use it first on level ground until you feel secure handling it. Also practise at a low speed.

- ☞ In the beginning, please always turn the speed control to its lowest speed and increase it until you reach the desired pace.

- ☞ Please reduce the speed before going downhill.

- ☞ On slopes and inclines the movilino must always be activated!

Although the movilino manages inclines up to 18%, you may under no circumstances exceed the maximum approved inclination stipulated by your wheelchair manufacturer. (Ramps in public places generally have an inclination of approximately 6%).

- ☞ Please cross over obstacles such as curbs on sidewalks with a turned off movilino. Crossing over higher curbs should be done backwards because the rollers may jackknife. Please pull the wheelchair at its handle not at the ones of the movilino. Also always check the height of your anti-tilt support and keep in mind the wheelchair manufacturer's stipulated maximum height.

The current road traffic regulations apply when you use the movilino on public roads. Should there be additional devices necessary, you need to mount them to your wheelchair as soon as possible. In such case, please contact your local dealer.

Please avoid driving parallel on steep slopes to avoid a tilting over sideways of your wheelchair. Always counter-steer when the curb on the sidewalk is slanting downward and remain at a safe distance to the curb.

Please do not drive to the edge of stairs or precipices with the movilino turned on.

☞ Please do not attach anything to the movilino's handle!

Please check the anti-tilt support before each use. Please do not drive backwards against a wall with mounted anti-tilt support because they could jam and thus not function properly.

☞ Attention, if the powered wheels do not automatically go upward anymore, it is difficult to remove the movilino. You need a lot more physical power (see chapter 3.2.3 – 3.3). In such case please first apply the locking brakes!

When you use mass transportation such as bus, subway, tram, etc.) please turn off the movilino and use the locking brakes on your wheelchair.

Please pay extra attention when crossing streets, intersections or railway crossings.

Please never cross rails (e.g. railway tracks) in a parallel way because the wheels could be jammed.

4.1.1 Environmental conditions, electro-magnetic compatibility: Electro-magnetic compatibility means that an electric device functions properly in its electro-magnetic environment without influencing other devices in the same environment.

The movilino successfully passed all the EMV tests required by law. Nevertheless, always check whether the device's electronic functions work properly before each use. This is particularly important if there is an aerial mast nearby.

☞ Please note that the movilino may interfere with other electronic devices' sensitive electro-magnetic fields (e.g. anti-theft systems in department stores). This may also happen if you connect other devices.

☞ Also make sure that the movilino is not operated in close proximity to medical devices with a high potential for danger and/or life-supporting functions as well as diagnostic devices.

4.1.2 Climate: To ensure proper functioning it is not advisable to expose the movilino to freezing conditions. Should this be unavoidable, always put the device in a non-freezing environment for at least one hour before using it (see chapter 2.3).

☞ At this point check the device before operation. Should your movilino not function properly, please call your local dealer or AAT directly.

4.2 Instruction: In the interest of your safety the movilino may only be operated by people instructed in the use of the device and further by people who are physically and mentally capable to manage the movilino in all situations that may occur while using it.

4.3 Operation / attendant: Thorough instruction into the use of the movilino by your dealer or a representative of AAT Alber Antriebstechnik is part of the delivery package and takes place at an appointment of your choice. This is a free service at no extra charge.

☞ Do not use the movilino without being trained to operate it.

For safety reasons, please never leave the movilino unattended. Should this be unavoidable, please take out the safety chip for the engine immobiliser, so nobody unauthorized may use the device.

Only an attendant and not the wheelchair driver him- or herself may use the pushing and braking aid, movilino, because of the danger of tilting the wheelchair, especially when driving on slopes. The attendant must be able to catch the wheelchair plus the person sitting in it, if the chair should tilt backwards. Anti-tilt supports are obligatory!

Should you feel insecure handling the movilino, please contact AAT Alber Antriebstechnik GmbH or your authorized dealer.

4.4 Wear limit: At the inside of the powered wheels the wear limit is marked with arrows. Should the profile have reached the tip of the arrow both wheels must be exchanged. In such case, please contact your local dealer immediately.

☞ Please make sure that both wheels are exchanged!

4.5 Lifting capacity: The maximum total weight of 170 kg is composed of the weight of the person to be transported plus the weight of the wheelchair and the movilino. This weight may under no circumstances be exceeded!

☞ Please use the movilino exclusively to transport people! It is strictly prohibited to transport goods with the device.

4.6 Care and maintenance: Please make sure that you charge the battery pack after each use of the movilino. If the movilino is not in operation, please turn off the device.

If the working elements of the device block, turn the movilino off immediately.

☞ Please note the wear limit of the powered wheels (see chapter 4.4)!

☞ Repairs may be done by authorized dealers or the manufacturer only. Please exclusively use AAT Alber parts and accessories.

Please note the extensive care and maintenance instructions in chapter 8.

4.7 Condition of paths, walkways etc.: You should avoid operating the device on unfortified grounds (sand, mud, loose gravel, ice or snow) as well as crossing deep puddles (maximum depth approximately 2.5 cm) with it.

Please avoid using the movilino in the rain, ice, snow or general wet conditions because then the wheels' grip on the ground is reduced. There is an increased danger of slipping and sliding. Please adjust your driving style accordingly.

4.7.1 Environmental conditions: Although the movilino has been tested for its electro-magnetic compatibility, you should still check its electronic functions before each use. This is particularly important if there is an aerial mast nearby.

4.8 Charge of the batteries: You should only use the movilino with fully charged batteries. The light emitting diode indicates the state of the batteries' capacity.



-  Please be careful when going downhill with full batteries. The drive down generates electricity which charges the batteries additionally. This may lead to excess voltage which in turn may lead to a turning off of the movilino. During regular use the device reduces its speed automatically to avoid overvoltage.
-  If the batteries are empty, the device goes into undervoltage. It stops. Yet the hub motor still drives upward so you may push the wheelchair manually.

4.9 Power unit: The movilino plus its power unit is for the most part covered by the housing. Nevertheless, please make sure that while driving you do not put fingers or hands into the rotating area (e.g. chain wheel or driving pinion). Always keep a safe distance.

4.10 Transport: You may remove the movilino's handle unit (see chapter 3.1) for transportation. Please lift the power unit exclusively by its recessed handle (see chapter 2.2.2)

-  Always turn off the movilino for transportation!
-  When you transport the device in vehicles, please secure it according to the relevant legal regulations in your country.

4.11 Mounting the brackets: Attaching the movilino's brackets to the wheelchair or making changes on said brackets may only be performed by the company AAT Alber Antriebstechnik or their authorized dealers.

The movilino may only be attached to wheelchairs which must be checked according to generally acknowledged technical norms, and their operator's manuals must be applied when using the movilino.

Before each use please check all the holding devices and attachments. Also make sure that the device itself functions properly. Should anything not work you may not use the movilino. In that event, please contact your local dealer.

4.12 Technical requirements:

-  You may not remove the wheelchair's wheels!

Please always check the air pressure of pneumatic steering rollers. The movilino driving qualities could be affected negatively, if there is not enough air in the rollers.

The air pressure in the wheelchair's wheels must correspond to the wheelchair manufacturer's stipulations.

The running wheels' condition also must be checked before each use. Should the wheels have reached their wear limit (see chapter 4.4) you may not use the movilino.

After you have inserted the safety chip for the engine immobiliser into its proper slot on the handle the movilino is ready to go. Therefore, please always check whether the chip is properly inserted before you use the device.

The wheelchair's locking brakes must be attached in such a way that the attendant may reach them easily.

It is indispensable to use anti-tilt support. Please make sure that they are not jammed before each use. Also never drive backwards against a wall with mounted anti-tilt support.



5 Operation

5.1 Maximum lifting capacity

Please make sure that the maximum lifting capacity of 170 kg (wheelchair, person and movilino) is not exceeded.

5.2 Battery pack

Please make sure that the batteries are fully charged before you use the movilino for the first time.

Extensive instructions you find in chapter 8.3

5.3 Power unit

Please regularly check the wear limit of the powered wheels.

Extensive instructions you find in chapter 4.4.

6 Control and display elements

Before we get to the actual instructions for operation, we would like to introduce the movilino's most important components to you.

Your movilino is ready to go when you receive it. Once the movilino is correctly mounted and connected, you can turn it on and use it immediately.

Please practise using it with an empty wheelchair to get a feeling for the machine and its functions.

6.1 Control unit

The wheelchair driver's attendant controls all of the movilino's functions by means of the control unit.

- ☞ It is possible to supply you with a left-handed control for additional charge.

6.1.1 ON/OFF switch

The ON/OFF switch ② is located on the control unit (standard version, right handle). It is possible to supply you with a left-handed control for additional charge.

After turning the movilino on with the ON/OFF switch, the device's electronics perform an automatic safety check. If there is no malfunction, the hub motor automatically moves downward. This process lasts approximately 5 to 10 seconds. Once the hub motor is completely lowered, you hear an acoustic signal.

- ☞ The movilino is equipped with a turn off feature: if the device is on and has not been used for 5 minutes, the turn off feature switches the movilino off automatically. In such case you can only use the movilino again by pressing the ON/OFF switch.

If the device is at a standstill for a longer period of time, please turn it off. The hub motor automatically moves back up. If it moves back all the way, you hear an acoustic signal once again. At this point you can push the wheelchair manually.

6.1.2 Speed control

The speed control ③ allows you to pre-select speed.

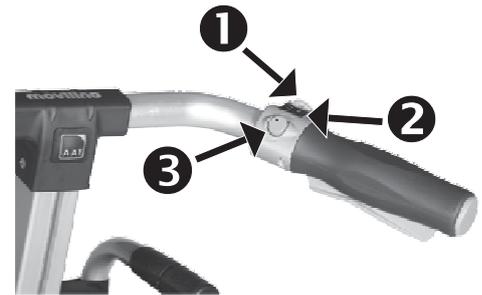
- ☞ Turn the speed control counter-clockwise all the way for minimum speed.

You must begin with minimum speed when you use the movilino for the first time.

6.1.3 Safety chip for the engine immobiliser

The movilino only works if you insert the the safety chip for the engine immobiliser ① into its proper slot. Please make sure that the chip snaps in because only then the movilino works properly.

If you do not insert the chip, you can turn on the device, but it does not work. This is a safety feature to ensure that no unauthorized person uses the movilino.



6.1.4 Rocker switch

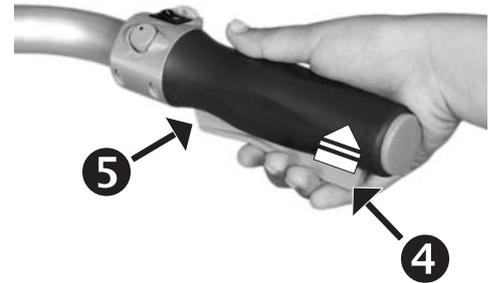
With the rocker switch you determine the direction and speed (up to the pre-selected speed) of the movilino.

☞ Use the rocker switch carefully.

To drive forward you press the longer back part of the rocker switch ④. To drive backward, please press the rocker switch's shorter front part ⑤.

The movilino speeds up the more you press the rocker switch until you reach the maximum pressure point. It slows down the more you release the rocker switch.

Two seconds after standstill is reached, an electro-magnetic parking brake becomes active.



6.1.5 Panic switch

If during an emergency you press the rocker switch too hard so that the pressure point is overcome, the so-called panic switch causes the movilino to go from driving mode into coast. As long as you keep the rocker switch pressed, you can drive the patient away from the dangerous situation.

However, as soon as you release the rocker switch the electromagnetic brake is activated.

Depending on particular circumstances the electro-magnetic brakes' strong effect may brake the wheelchair so abruptly that it stops immediately.

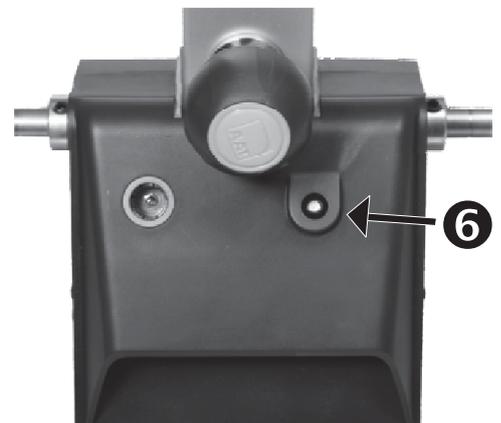
The panic switch works both ways going backward and forward as well as during malfunction (please see chapter 6.4 for trouble shooting).



6.2 Charge of battery

A light emitting diode ⑥ located on the control panel next to the ON/Off switch informs you about the charge of the battery.

- ☞ Green light, the charge of the battery lies between 70 – 100%.
- ☞ Yellow light, the charge of the battery lies between 40 – 70 %.
- ☞ Red light, the charge of the battery lies under 40 %. You must charge the battery immediately!



6.3 Control light to indicate malfunction

Malfunction is indicated by a blinking light emitting diode. If there is still an indication of malfunction, charge the batteries in case of low battery charge. For all other cases of malfunction, please contact your authorized dealer.

LED is blinking	Type of malfunction
1 x	Malfunction of the motor, the motor controller or the battery pack
2 x	Low voltage, batteries empty
3 x	Overvoltage
4 x	Electro-magnetic brake at fault
5 x	Indicator for excess voltage
6 x	Indicator for overstressing

In cases of malfunction such as the blinking of 1 – 4 times we consciously abstained from automatically activating the electro-magnetic brakes as soon as the malfunction is recognized while the device is driving.

- ☞ If you want to activate the electro-magnetic brake, push the rocker switch hard to overcome the pressure point and the panic switch is activated. Then release the rocker switch.

In all other cases of malfunction the electro-magnetic brake is automatically activated.

6.4 Trouble shooting

If there are problems using the movilino, please check the following trouble shooting chart and see whether you cannot fix them yourself.

Problem	Check and potential solution
movilino cannot be turned on	Is the charger connected to the movilino? If so, disconnect the charging cable and plug in the power cable
	Is the battery empty? If so, charge the batteries.
	Are the fuses damaged? If so, exchange the fuses
	If there is still a problem turning on the movilino, please contact your dealer.
Batteries don't charge	Please contact your dealer

6.5 Transport

For transportation you may remove the handle (see assembly chapter 3.1) and carry the climbing unit at the upper rod.

-  Note that the device weighs 10,5 kg!
-  Always turn off the movilino for transportation!
-  When transporting the movilino in a vehicle, always secure the device according to the legal rules and regulations.
-  The sealed lead acid batteries used in the movilino are not considered dangerous according to the IATA special guidelines A67 and GGVS Rn-Nr. 2801 A, section 2, and admitted to air travel by DOT and IATA.
-  Before using mass transportation such as buses or subways, etc. or your personal vehicle, please detach the movilino from you wheelchair!

7 Accessories

7.1 Battery pack

The movilino works with batteries and is delivered with one battery pack with charging electronics.

If you use the movilino often, i.e. if there are not sufficient breaks for the batteries to be recharged, we recommend you obtain an additional battery pack (available as an accessory). In such case one battery pack is in use while the other is being recharged at the same time.

- ☞ If you do not use the movilino both battery packs should be connected to the charger to increase their durability (see chapter 8.3.1).
- ☞ Please exclusively use the AAT Alber Antriebstechnik GmbH charger to charge your battery pack.

7.1.1 Exchange the battery pack

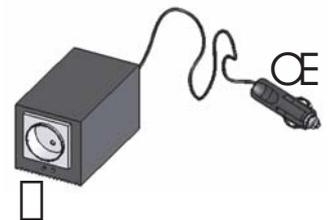
1. Turn off the movilino using the ON/OFF switch.
 2. First remove the power cable from its socket on the movilino. Afterwards remove the plug of the power cable from the socket on the battery pack.
 3. Please open the velcro strip of the bag for the battery pack and take out the battery pack.
- ☞ The battery pack should always be connected to the charger to extend its durability (see chapter 8.3.1)
 - ☞ Please exclusively use the AAT Alber Antriebstechnik GmbH charger to charge your battery pack.

The battery pack of the movilino is maintenance-free and rechargeable. Its durability depends directly on the number of charging/discharging cycles.

7.2 Voltage converter for your vehicle

We recommend the voltage converter for your vehicle, if you transport the stairclimber movilino in your car. The AAT voltage converter is designed for a 12 V electrical system. This voltage converter transforms 12 V / 24 V direct current (D.C.) into 230 V alternating current (A.C.)

The plug of the voltage converter ❶ is plugged into the cigarette lighter in your car or into the socket of the supply system. The automatic charger's 230 V connector ❷ is plugged into the socket of the converter.



8 Care, maintenance and recycling

To insure the movilino's safe and proper functioning we recommend a safety check done on the device every two years, even though there might not be any outer damage or malfunction evident.

- ☞ For safety reasons this safety check or repairs of any sort may only be performed by AAT Alber Antriebstechnik.

The device itself does not call for particular maintenance or care except for the occasional cleaning (see chapter 8.5).

8.1 New user

If the device goes to a new user, we recommend a safety check.

8.2 Charger

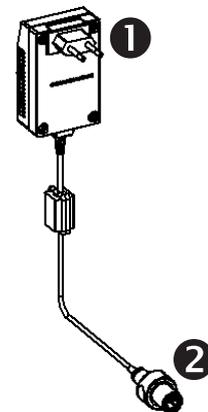
Please exclusively use the AAT Alber Antriebstechnik GmbH charger to charge your battery packs.

8.2.1 Automatic charger

The charger does not need any particular maintenance. The scope of delivery includes the AAT Alber Antriebstechnik GmbH charger. Plug ❶ is inserted into the wall outlet and plug ❷ into the socket on the device or the battery pack.

This automatic charger recharges your batteries 100%. As soon as the charging process is completed, it switches to a retaining mode, thus overcharging is impossible.

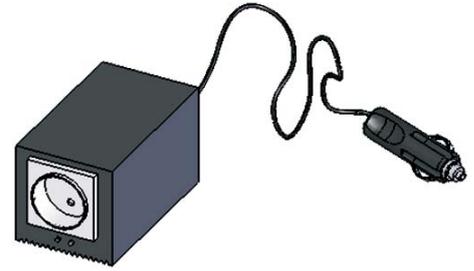
- ☞ Before using the charger, please read and follow all instructions and warning notes included with the charger.
- ☞ Exclusively use the AAT charger to charge the batteries.
- ☞ Check the charger regularly and protect it from oils, grease, aggressive cleaning agents, thinners and/or damage by sharp edges, etc.
- ☞ Repairs and service check-ups may only be performed by AAT Alber Antriebstechnik GmbH or their authorized personnel.
- ☞ Please do not disassemble or modify the charger!
- ☞ Please make sure that the charger is not exposed to dampness or humidity while charging the batteries.
- ☞ Never touch the plug with moist hands!



8.2.2 Voltage converter for your vehicle

The voltage converter does not need particular care or maintenance. Nevertheless, check your voltage converter regularly and protect it from oil, grease, aggressive cleaners, diluting agents and/or damage due to sharp edges, etc.

- ☞ Before using the voltage converter, please read and follow all instructions and warning notes printed on the voltage converter.
- ☞ Exclusively use the AAT Alber Antriebstechnik GmbH voltage converter!
- ☞ Check the voltage converter regularly and protect it from oil, grease, aggressive cleaning agents, thinners and/or damage by sharp edges, etc.
- ☞ Repairs and service check-ups may only be performed by AAT Alber Antriebstechnik GmbH or their authorized personnel.



8.3 Battery pack

The battery pack's sealed lead acid batteries should be recharged after each use. They are air-tight, maintenance-free, rechargeable and of excellent quality.

The battery pack undergoes a so-called self-discharge; therefore, you should connect your battery pack, whenever possible, to a charger. The charging automatism, which switches from charging the battery to retaining the charge when it is full, kicks in and keeps the battery from overcharging.

If you take good care of your battery pack by recharging it regularly, you prolong its durability. The movilino's electronics constantly check the battery's charge and thus prevent a total discharge, if used adequately.

-  Avoid a total discharge of the battery pack. Recharge it after each partial discharge, i.e. after each use of the movilino.
-  Charging your batteries is taking good care of them.

If your battery pack has not reached its full capacity, it is possible that with a new battery pack it takes a few charging/discharging cycles to build up the full capacity.

If fully charged batteries empty faster than usual, they are probably used up. In such case have your batteries checked by your local dealer and exchanged, if necessary.

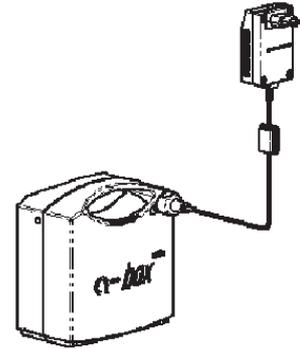
-  If the movilino is at a standstill for some time, please connect it to the charger to retain the charge. This does not damage the sealed lead acid batteries, on the contrary, it increases their durability.
-  If the battery pack is totally discharged, it takes a maximum of approximately 10 hours to recharge it.

The battery pack can be charged in any position. It is considered as safe as dry cells and admitted to air travel by DOT and IATA.

-  Always charge your battery pack with the AAT charger delivered with your movilino. This particular charger automatically turns off when the batteries are fully charged keeping them from being overcharged.

8.3.1 Charging with the automatic charger

To charge the batteries you may leave the battery pack in its bag attached to the wheelchair. First pull the plug of the power cable then insert the plug of the charger entirely into the charging socket. Finally plug the charger into the wall outlet.



- ☞ Since the movilino is supposed to be connected to the charger at all times whenever it is not in use, you need to remove the charger from the wall outlet and pull the plug from the charging socket on the battery pack every time before you use it.
- ☞ Before charging, please read and follow all instructions and warning notes printed on the charger.
- ☞ Exclusively use the AAT Alber Antriebstechnik GmbH charger!
- ☞ Never touch the plug with moist hands!

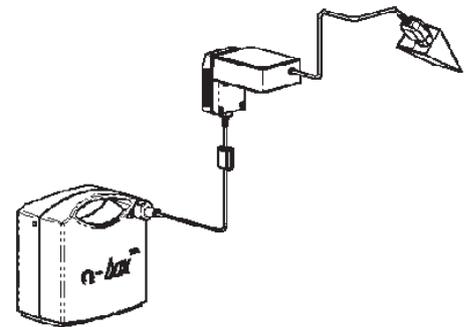
Signals of the charger

charger	LED orange	batteries are being charged
charger	LED green	batteries are fully charged, maintenance mode

8.3.2 Charging batteries in your vehicle

By means of the voltage voltage converter you may even charge your battery pack while driving your car.

First remove the power cable. Then fully insert the plug of the charger into the charging socket on the battery pack. Then connect the charger to the voltage voltage converter. Finally you plug the voltage converter into the cigarette lighter.



Afterwards you first pull the voltage converter's plug from the cigarette lighter before you disconnect it from the charger.

Signals of the charger and the voltage converter

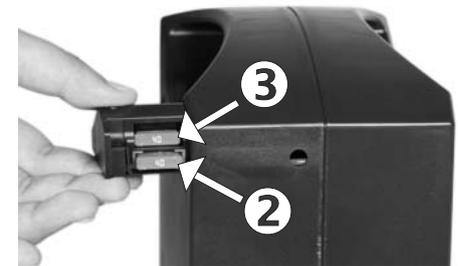
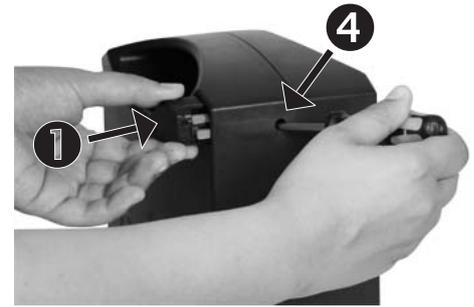
charger	LED orange	batteries are being charged
charger	LED green	batteries are fully charged, maintenance mode
voltage converter	beeping	12 V supply is low

8.4 Fuse

The battery pack has two fuses, each 40A, located in a special compartment ❶.

Once the lower fuse ❷ is burnt out, replace it by the upper, extra fuse ❸.

If a change of fuses is necessary, put a pin in the opening ❹ on the side of the battery pack. This unlocks the drawer, so you can pull it out.



- ☞ You may not mend or by-pass a defect fuse. Always replace it with an identical one of the same amperage.
- ☞ AAT Alber Antriebstechnik GmbH could offer you replacements of the fuses!
- ☞ Before you exchange the fuses, please remove the charger from the battery pack!
- ☞ Should your fuses burn out frequently, please contact AAT Alber Antriebstechnik GmbH or your authorized dealer.

8.5 Cleaning

Please clean your control unit, driving unit, battery pack and brackets with a mild household cleaner.

- ☞ Please keep in mind to clean the powered wheel with compressed air or with a dry brush regularly. It is possible that the powered wheel is excessive worn up because of contamination or deposits.
- ☞ Make sure that no water gets into the movilino; therefore, merely use a damp cloth for cleaning.
- ☞ In the interest of your safety, do not use a high-pressure cleaning device.
- ☞ Please make sure that your wheelchair is cleaned according to the manufacturer's specifications.

8.6 Recycling

The movilino and its battery pack are products of long durability. However, if your movilino is old and has reached the end of its lifespan you may return its components to AAT Alber Antriebstechnik GmbH or your local dealer to be recycled.

A new law concerning electric and electronic devices (ElektroG) has been passed on March 24, 2005 regulating the taking back and recycling of old electric and electronic devices.

According to the Federal Office of Environment Protection (German BDU) the movilino is considered a means of transportation and does not fall under the law concerning the recycling of old electric or electronic devices (ElektroG, §2 paragraph 1 sentence 1 (cross reference, Guideline of the European Parliament 2002/96/EG).



9 Warranty and liability

9.1 Warranty

AAT Alber Antriebstechnik GmbH grants a warranty of two years for all its products of type movilino including all its accessory parts (with the exception of the sealed lead acid batteries). The warranty begins at the date of purchase and covers failure of material and errors in manufacturing.

For the sealed lead acid batteries, always assuming correct maintenance, AAT Alber Antriebstechnik GmbH grants a warranty of 6 months from the date of purchase.

The warranty becomes void concerning defects or damage which are the result of the following:

- damage due to excessive strain
- damage due to improper handling
- violent damage
- natural wear and tear such as powered wheel
- improper and insufficient maintenance
- unauthorized constructional changes or inappropriate use of the device or its accessories
- using the movilino exceeding its maximum lifting capacity
- improper charging of the lead batteries.

9.2 Liability

The manufacturer AAT Alber Antriebstechnik GmbH is neither liable nor responsible for potential damage of the movilino in case of:

- improper handling of the device.
- repair, assembly or other work performed on the movilino by unauthorized persons.
- operation not in accordance with this user's manual.
- extraneous parts added or connected to the movilino .
- parts removed from the movilino .
- operation exceeding the maximum lifting capacity.
- no regular biannual maintenance check performed by AAT Alber Antriebstechnik GmbH or its authorized personnel.
- operation of the movilino with insufficiently charged batteries.
- the upper and lower brackets as well as the adjusting rings of the movilino were not properly adjusted to the respective wheelchair.



Ideen bewegen mehr

movilino



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