



TRANSLATION OF THE ORIGINAL

USER MANUAL

V-MAX⁺



CE

2024-02 (2.1)

EN

AAT service concept

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The V-MAX⁺ been successfully tested by TÜV Süd Product Service GmbH in Hanover according to DIN EN 12182, DIN EN 12184 and the relevant parts of ISO 7176-14.

The product is state of the art and complies with the associated technical safety requirements. Nevertheless, a low level of residual risks cannot be ruled out. Please observe the safety instructions to this end.

All serious incidents occurring in relation to the device must be reported to the manufacturer and to the competent authority of the Member State where the user and/or occupant is established.

Please note that the colours of the 3D images shown in this document may differ from those of the original product.



WARNING

Failure to observe this user manual, in particular the safety instructions can lead to defects in the V-MAX⁺ and endanger the operator and the occupant, as well as affect it in its proper function! There is an increased risk of injury! In the event of an infringement, claims for warranty and liability are excluded!

People with visual and reading impairments or intellectual disabilities should print out the user manual available on the website in enlarged letters or have this manual read to them, if necessary. You will also find all safety-relevant changes that have been made to the user manual on our homepage. All versions with details of the production period of the product are obtainable at:

www.aat-online.de/en > Service > Download area > Rehabilitation and ambulance transport > User manuals

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1 Symbols and safety instructions



DANGER - Immediately imminent danger

If not avoided, this will result in death or severe bodily injuries!



WARNING - Possibly imminent danger

If not avoided, this may result in death or severe bodily injuries!



CAUTION - Possibly imminent danger or harmful situation

If not avoided, this may result in minor bodily injuries or damage to property!



NOTE - Information by the manufacturer

General safety instructions



NOTE

If you have a visual disability, this user manual can be downloaded at: www.aat-online.de/en
> **Service** > **Download area** > **Rehabilitation and ambulance transport** > **User manuals**

Read the user manual prior to start-up and observe the warning notices and safety instructions.

In the event of reading disabilities, cover training content in more depth verbally.

The user manual must be kept in a safe place after reading through it.

It is not made exclusively of flame retardant materials. Keep the V-MAX⁺ away from sources of ignition.

The V-MAX⁺ may interfere with highly sensitive electromagnetic fields of other electronic devices (e.g. anti-theft devices).

Stability tests were performed under laboratory conditions. The V-MAX⁺ may behave differently under real conditions compared to laboratory tests.

Training may only be carried out by the manufacturer, the AAT field staff or the qualified specialist shop.

Do not operate the V-MAX⁺ with the drive shafts retracted as this may damage the device.



CAUTION

External heat sources may cause the surface temperature to rise (e.g. sunlight)!

Do not touch the affected surfaces in this case to avoid burns!



WARNING

Never reach into rotating/moving parts to avoid crushing.



DANGER

The V-MAX⁺ must not be operated in the case of severe visual impairment and/or blindness!

Do not exceed the total permissible weight and the maximum person weight, as this may lead to defects or overload the V-MAX⁺.

Avoid driving in heavy rain, ice, snow and on unsurfaced ground (sand, mud, loose crushed rock) to prevent slipping!

Do not use on escalators or travellers to avoid injuries caused by a crash or the falling out of the occupant and the occurrence of damage to property!

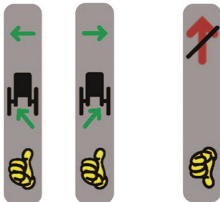
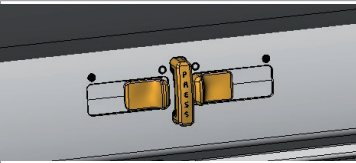
The operability of the V-MAX⁺ may be influenced by electromagnetic fields (e.g. by mobile phones, electric generators, or high-voltage sources)!

Do not store near medical devices, for example with a life support function, and diagnostic devices, as these may malfunction!

2 Explanation of the symbols on the packaging

Symbol	Explanation
	Handle with care The packaging including the product must be handled with special care.
	Protect from moisture Protect the packaging including the product from overly high air humidity. Cover during storage. If necessary, cover thoroughly with tarpaulins.
	Caution fragile Handle the packaging including the product carefully and never allow it to fall.
	This way up The packaging must be stored and transported in such a way that the arrows point upwards at all times. Any failure to comply with this rule, such as rolling or tilting the package, must be avoided.
	Temperature limit 0 to 40 °C Please do not store packaging incl. product and battery pack below/above the specified temperature limits.

3 Explanation of the symbols on the device

Symbol	Explanation
	CE marking Position: Type plate The product complies with the relevant provisions of the EC Regulation EC 2017/745 (MDR)
	Date of manufacture Position: Type plate Indicates the year the medical device was manufactured.
	Manufacturer Position: Type plate Shows the manufacturer of the medical device (AAT Alber Antriebstechnik GmbH)
	SN Position: Type plate Serial number of the product e.g. P3001XXXXXX
	Medical Device Position: Type plate
	Observe the user manual! Position: Type plate The user manual must be observed! (www.aat-online.de/en)
	Attention! Position: Type plate Refers to the need for the user to review the user manual and important safety-related information.
	Barcode Position: Type plate Contains the AAT serial number
	Technical safety test badge (refer to chapter Technical safety test) Position: Underside of drive unit Informs about the due date of the next technical safety test
	Attention: Risk of crushing! Position: Left-hand and right-hand sprocket roller holder Do not put your hands between the gear rim of the wheelchair wheels and the sprocket of the drive.
	Note Positioning of the anti-tip supports (refer to chapter 5.6) Position: Anti-tip supports Informs about the correct insertion of the anti-tip supports. Incorrectly inserted anti-tip supports are indicated by the "thumbs down" symbol and a red crossed out arrow.
	Marking aid Sliders Position: Drive unit Informs about the coupling status of the sliders The sliders are positioned at the filled dot = drive shafts disengaged The sliders are positioned at the unfilled dot = drive shafts engaged

4 Product description

4.1 Device overview



Manufacturer's information:

For a simplified assignment of the individual components, the numbers listed here are cited in full for the first time in the following chapters.

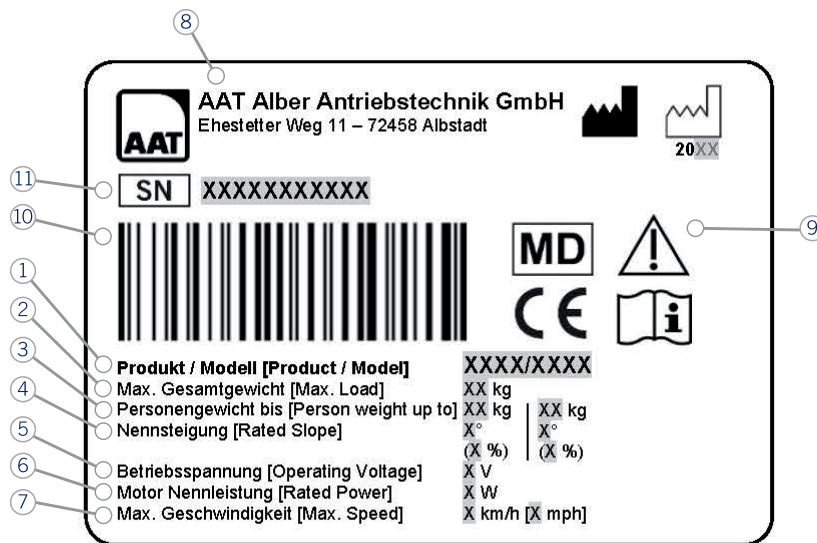


- ① Operating handle
- ② Pushing handle
- ③ Power cable
- ④ Mega battery pack
- ⑤ Battery bag for Mega battery pack
- ⑥ Handle mount at the rear
- ⑦ Wheels with sprocket
- ⑧ Spiral cable
- ⑨ Drive unit
- ⑩ ON/OFF switch with battery indicator
- ⑪ Locking pin for anti-tip support
- ⑫ Anti-tip support

- ⑬ Release button with sliders
- ⑭ Speed control
- ⑮ Touch rocker
- ⑯ Bracket for the drive unit

Type label incl. serial number (without figure)
on the back of the drive unit

4.2 Type plate incl. serial number



- | | |
|------------------------|--------------------------------------|
| ① Product / Model | ⑦ Max. speed |
| ② Max. total weight | ⑧ Manufacturer address |
| ③ Person weight up to | ⑨ Symbols (refer to chapter 3) |
| ④ Rated slope | ⑩ Barcode (refer to chapter 3) |
| ⑤ Operating voltage | ⑪ Serial number (refer to chapter 3) |
| ⑥ Rated power of motor | |

4.3 Intended purpose

The pushing and braking aids are intended for their use on a manual wheelchair and to assist the accompanying person while pushing and braking the wheelchair. The accompanying person of a single person in the wheelchair is assisted both on level surfaces and upward and downward slopes. The pushing and braking aids have been designed for indoor and outdoor use.

4.4 Intended patient population

The intended patient population includes all people with their own manual wheelchair. Users of the V-MAX+ may have a maximum total weight of persons and wheelchair of 272 kg.

4.5 Medical requirements and indication

There are no medical requirements.

A pushing and braking aid assists the accompanying person while pushing and braking the wheelchair. The use of the pushing and braking aid is intended for patients who are not able to move by themselves and accompanying persons who do not have sufficient physical endurance and strength to move the patient in the wheelchair.

The V-MAX+ is intended for patients with a total weight (patient + wheelchair) of more than 180 kg (maximum total weight of 272 kg).

4.6 Restrictions and contraindication

The pushing and braking aids must not be used if:

- the operator has obtained no training/instruction for the product
- the operator is not physically and mentally able to operate the device safely
- in the case of severe visual impairment and/or blindness
- more than one person shall be transported simultaneously
- the operator does not have adequate eyesight
- the braking effect is lost due to rain, wet conditions, snow or black ice
- the braking effect does not set in
- escalators or travelators shall be overcome
- medical devices with e.g. a life support function, and diagnostic devices are in the proximity
- it is not used according to the intended use
- objects shall be transported

4.7 User group

The pushing and braking aids have been designed for their use by:

- health care professionals and
- laymen.

Users are trained in the use of the device by means of a training course.

4.8 Technical data



WARNING - Do not exceed the total permissible weight and the maximum person weight, as this may lead to defects or overloading the V-MAX⁺.



NOTE - Observe the technical data.

Technology	V-MAX ⁺
Drive dimensions	Refer to chapter "Dimensional drawing"
Own weight	Drive unit incl. handles and cables = 12.6 kg kg; Mega battery pack = 14.6 kg Power cable = 0,2 kg; battery bag incl. Velcro tapes = 0.3 kg; Total weight (without wheelchair, battery pack) = 13.1 kg
Total permissible weight	300 kg (person, wheelchair, V-MAX ⁺) ^{(1), (4)}
Maximum person weight	252 kg ⁽⁴⁾
Widening of wheelchair by attachment	Min. 3.6 ⁽⁶⁾
Limit values during construction	From seat width 55, max. 0° camber
Max. attachment width	90 cm
Possible wheel sizes in inches	24"
Speed forward I backward	5.5 km/h I 3 km/h
Range with one charge of the batteries	Up to 11.5 km ⁽²⁾
Braking/rated slope for a total weight of up to 300 kg	Up to 12 % (6.8°) ⁽³⁾
Batteries	2 x 12 V / 22 Ah
Direct current motor	24 V / 419 W
Noise information	The A-weighted sound pressure level is typically below 59 dB(A)
Switching/actuating forces	Rocker forward / backward: 4 N - 5 N Panic circuit forward / backward: 42 - 46 N Buttons (ON/OFF, horn, speed selection): 0.74 N
Static stability downhill	Observe the wheelchair manufacturer's information
Static stability sideways	Observe the wheelchair manufacturer's information
Maximum surmountable obstacle height	Observe the wheelchair manufacturer's information and chapter 6.2
Storing/operating temperature: Device	-40 °C to +65 °C / -25 °C to +50 °C
Storing/operating temperature: Battery pack	-20 °C to +65 °C ⁽⁵⁾ / -25 °C to +50 °C ⁽⁵⁾
Charging temperature: Battery pack	0 °C to +40 °C
Resistance to ignition	Plastics: flammability classification V0 / Battery: flammability class 1
Vibration information	The weighted RMS value of acceleration, to which the upper body is subjected, is typically below 2.5 m/s ² .
Degrees of protection, IP class	IPX4
Adhesive label with serial number	Drive unit and back of the user manual

(1) Observe the maximum load according to the wheelchair manufacturer's information.

(2) According to ISO 7176-4, the distance range depends, among other factors, on the weight of the transported person, the ground, the terrain profile, the ambient temperature, etc.

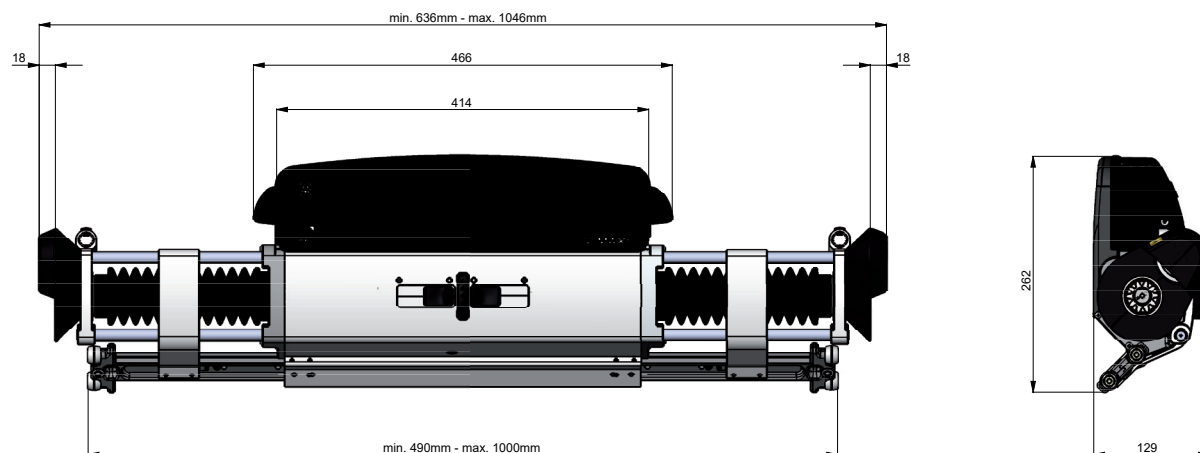
(3) The rated slope and braking ability also depend on the surface, terrain profile, ambient temperature etc.

(4) The person weight on the type plate and in the technical data were calculated using an assumed wheelchair weight of 20 kg.

(5) At temperatures below 0 °C the performance of the battery pack will decrease; therefore we recommend a storage temperature of at least 0 °C.

(6) The attachment width can vary further depending on the wheelchair model.

4.9 Dimensional drawing



4.10 Scope of delivery



4.11 Accessories



NOTE - Only use AAT Alber Antriebstechnik GmbH accessories.



- ① Bracket
- ② Spoke protector
- ③ Mega battery pack (additional)
- ④ Power cable (longer design - 900 mm)



- ⑤ Quick-release wheels with drum brake
- ⑥ Motor vehicle voltage converter 12 V / 230 V
- ⑦ Anti-tip supports
- ⑧ Lighting kit according to StVZO (German road traffic regulations) (no illustration)

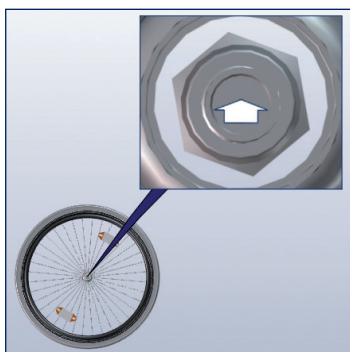
5 Assembly

5.1 Quick-release wheels



DANGER - Quick-release wheels must lock into place, as they may become detached unexpectedly!

If the original wheelchair wheels are still on the wheelchair, remove them and fit the pair of wheels with gear rim ⑦ included in the scope of delivery of the V-MAX⁺.



Position the drive wheel and press in the quick-release axle release button.



Adapt wheel.



Let go of the quick-release axle release button. Repeat this process on the other side.

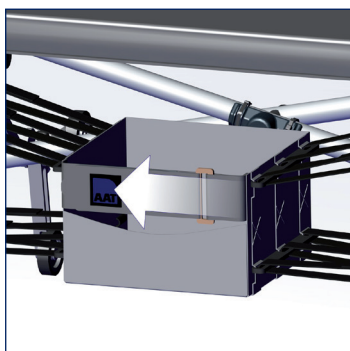
5.2 Battery pack



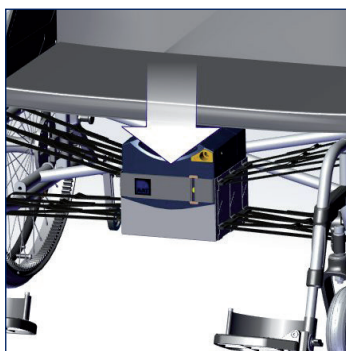
WARNING - Never short-circuit or connect the poles of the battery pack to avoid electric shocks!



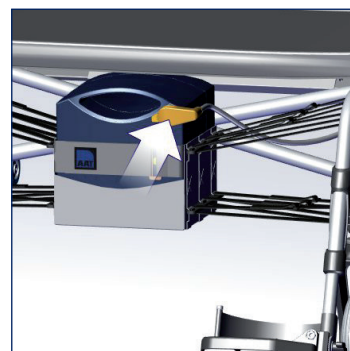
CAUTION - Plug-in contacts must be dry!



Detach the Velcro on the battery bag ⑤ pre-mounted on the wheelchair.



Place the battery pack ④ in the battery bag and fix with Velcro.



Insert the power cable ③ pre-mounted on the wheelchair into the battery pack's charging socket.

5.3 Drive unit



DANGER- The drive unit must be fully inserted in the bracket, as may otherwise move unexpectedly and the drive shafts cannot be extended correctly!

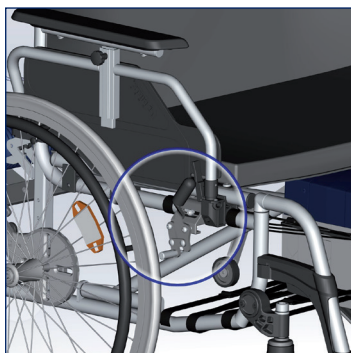


CAUTION - Plug-in contacts must be dry!

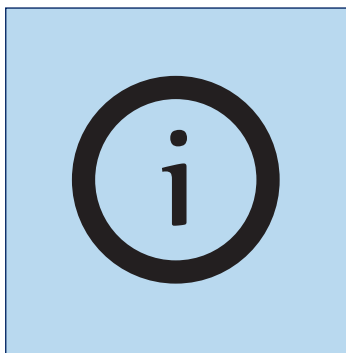


Manufacturer's information:

The width of the Delrin castor bracket is set especially for your wheelchair. If you have any questions or need to make any changes, please contact your authorised specialised dealer, the AAT field team or the manufacturer.

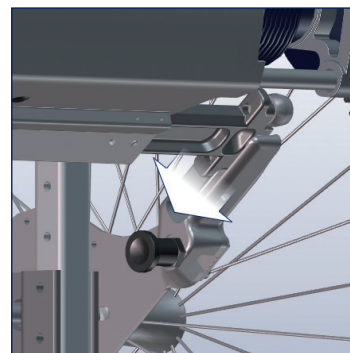


Activate the parking brakes to prevent the wheelchair from rolling away.

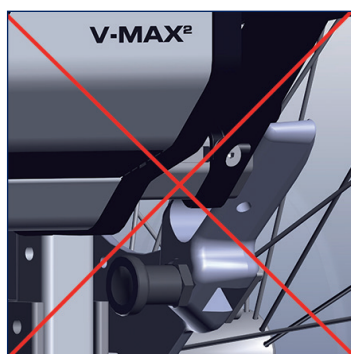


Manufacturer's recommendation:

Only release the parking brakes if chapter 5 has been carried out in full.

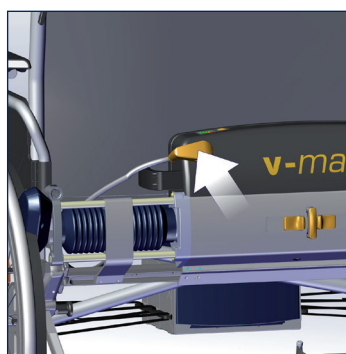


Fully insert the drive unit ⑨ into the wheelchair bracket ⑯ and make sure it has been inserted evenly.



Incorrect!

» »The V-MAX+ must lock into place completely!



Plug the other end of the power cable into the drive unit socket.

5.4 Attaching the operating and pushing handles - Standard handle mount



WARNING - The locking pins must engage, otherwise the handles can move abruptly!



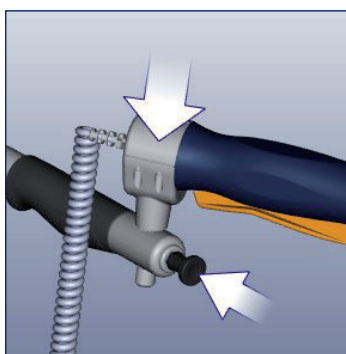
WARNING - Always operate with both hands to be able to react appropriately to dangerous situations. Never mount only one handle.



NOTE - When not using the V-MAX⁺, the handles are located in the mounts provided on the width adjustment and can be pulled out of them.



Pull the locking pins of the handle mounts ⑥.

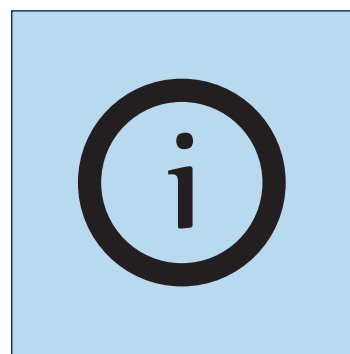


Plug the handle into the rear handle mount and snap in the locking pin.

» Operating handle on the right! ①

» Pushing handle on the left!

②

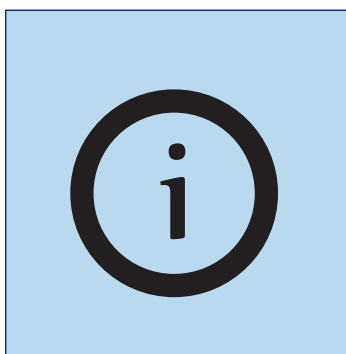


Repeat this process on the other side.

5.5 Attaching the operating and pushing handles - Equipment: cross tube



If your wheelchair is equipped with a cross tube, the handle mounts have been fitted to it.



Mounting is carried out by the manufacturer, the AAT field service or authorised specialist dealers.

» Make sure that the handle mounts are in a comfortable position.



Plug the handle into the handle mount and snap in the locking pin.

» Operating handle on the right! ①

» Pushing handle on the left!

②

5.6 Anti-tip supports



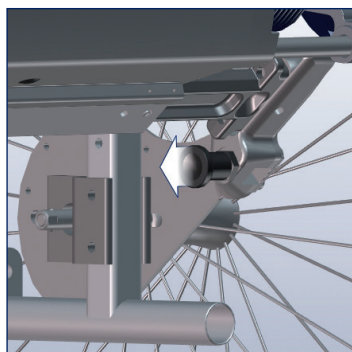
WARNING - Never use without both anti-tip supports to prevent the wheelchair from tipping backwards!



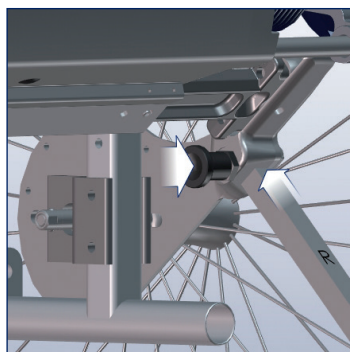
WARNING - Check the anti-tip supports before initial operation to ensure safety!

If anti-tip supports are not available on your wheelchair as standard, use AAT anti-tip supports in pairs! The wheelchair bracket determines which anti-tip supports you require.

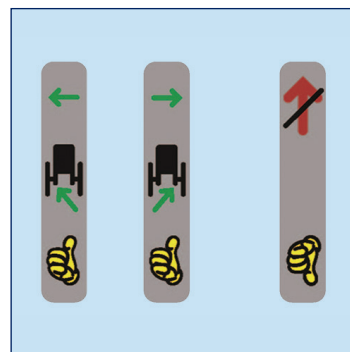
Option 1: Bracket with locking bolts



Remove the locking pin (11) of the bracket.

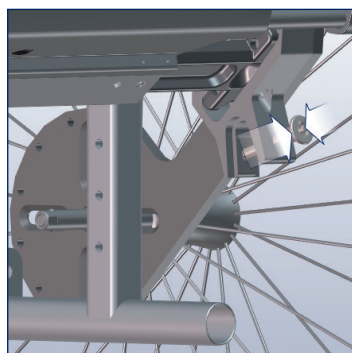


Push the anti-tip support (12) into the bracket and secure with the locking pin.

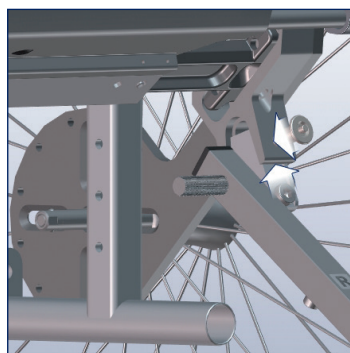


Observe the markings. Repeat process on the other side.

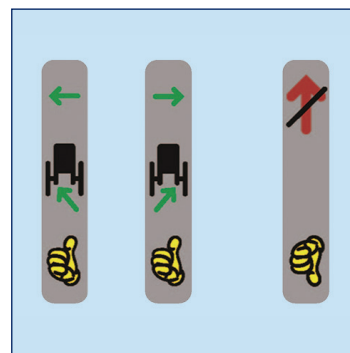
Option 2: Bracket with locking pin



Press in the locking pin button and pull it out.



Push the anti-tip support into the bracket and secure with the locking pin.



Observe the markings. Repeat process on the other side.

6 Starting up



DANGER - Operation only by a single, trained person. This person must be physically and mentally able to operate the V-MAX⁺ safely and must not suffer from cognitive impairment!



DANGER - Never use without both anti-tip supports to prevent the wheelchair from tipping backwards!



DANGER - Avoid parallel journeys on steep hillsides/rails, to prevent the wheelchair from overturning.



DANGER - Cross over roads, crossroads and railway crossings with increased caution!



DANGER - Avoid driving on slopes with the V-MAX⁺ deactivated, as there is no braking effect when doing so.



DANGER - Do not use on escalators or travellators to avoid injuries caused by a crash or the falling out of the occupant and the occurrence of damage to property!



WARNING - Practise outdoors on a level surface and at low speed!



WARNING - Drive down slopes at the lowest speed to avoid dangerous situations!



WARNING - Do not drive up stairs or steps to prevent the wheelchair from overturning!



WARNING - Avoid driving in heavy rain, ice, snow and on unsurfaced ground (sand, mud, loose crushed rock) to prevent slipping!



WARNING - During breaks, when using public transport (buses, trams, etc.) and when changing seats, switch off the V-MAX⁺ and apply the parking brakes of the wheelchair to prevent it from rolling away.



WARNING - When driving on public roads, observe the road traffic regulations!



WARNING - Always operate with both hands to be able to react appropriately to dangerous situations.



WARNING - Never reach into rotating/moving parts to avoid crushing.



WARNING - In the event of blocked drive elements or a change of the driving behaviour, switch off the V-MAX⁺ immediately and do not use it.



WARNING - Observe the maximum total permissible weight (refer to chapter 4.8).



CAUTION - Always overcome kerbs/obstacles backwards (see chapter 6.2)!



CAUTION - Maintain sufficient distance to the edge of the kerb to avoid damage!



CAUTION - When using seat supports (cushions, etc.), ensure that the occupant is securely seated to prevent the occupant from falling out or slipping!



NOTE - Never pull/lift by the handles of the V-MAX⁺ as they have not been designed for this. Use the pushing handles of the wheelchair.



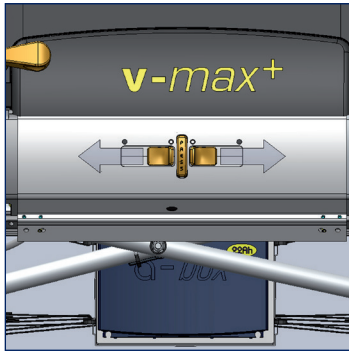
NOTE - Never drive backwards on walls with the anti-tip supports mounted so as not to damage the anti-tip supports.



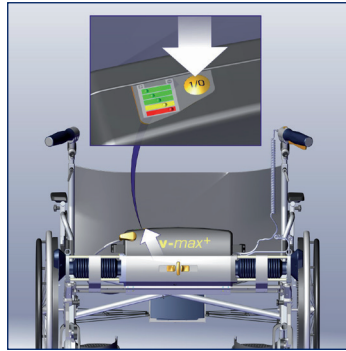
NOTE - Do not pull the power cable during use!



NOTE - Before first start-up, the battery pack must be fully charged!



Press the release button (PRESS) ⑬. The sliders detach and the drive shafts extend (the sliders are at filled dot).



Switch on the V-MAX+ via the ON/OFF switch ⑩.

6.1 Riding with the V-MAX+



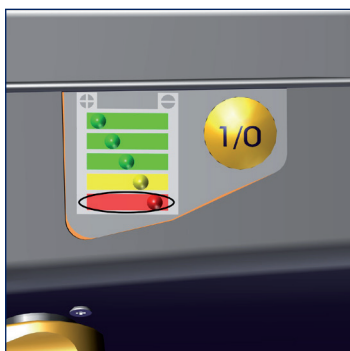
After switching on, the battery indicator first jumps to green. It updates within 30 seconds and then shows the actual charge level.



Green = battery full



Yellow = battery low
» Charge battery!



Red = battery empty

- » Charge battery!
- » Warning tone every 12 sec!



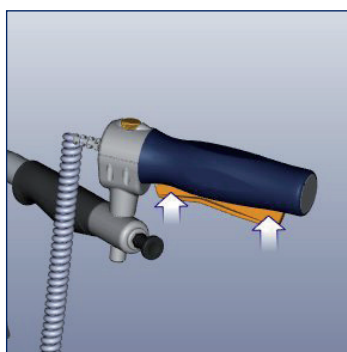
Manufacturer's note:

- » LED is lit green = charge level between 40 - 100 %
- » LED is lit yellow = charge level between 20 - 40 %
- » LED is lit red = charge level below 20 %
It is mandatory to recharge the battery.
- » **If the LED lights up red several times, refer to chapter 10 - Fault conditions and troubleshooting.**



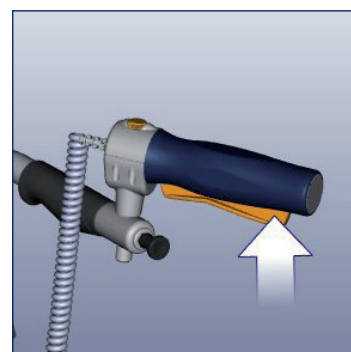
Select speed (14).

- » Practise at the lowest speed.



Press the touch rocker (15) in the desired direction of travel.

- » The direction can be changed while driving.
- » Steer with the handles.



Panic circuit

Press the touch rocker all the way down.

- » The V-MAX+ switches to freewheel.
- » When releasing, the V-MAX+ brakes automatically.
- » Regardless of the direction of travel.

Emergency stop function

When the touch rocker is released, the V-MAX+ stops automatically within 1 metre¹⁾ on level ground.

¹⁾ depending on the weight of the transported person, the ground, the terrain profile, etc.

6.2 Overcoming obstacles



NOTE - Never pull/lift by the handles of the V-MAX+ as they have not been designed for this. Use the pushing handles of the wheelchair.

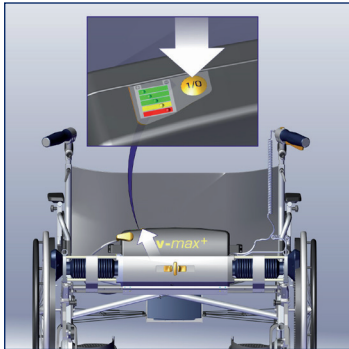


NOTE - Observe the wheelchair manufacturer's information on the maximum obstacle height in the user manual without fail!

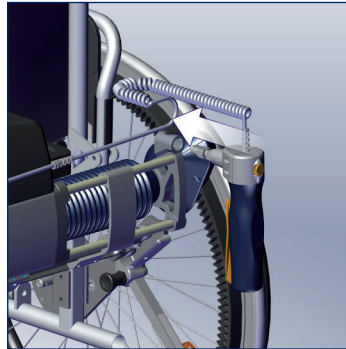


NOTE - Be mindful of the anti-tip supports if you need to climb edges or obstacles as they can otherwise be damaged.

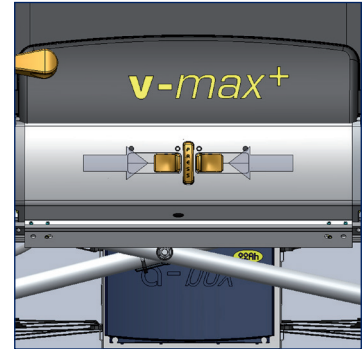
6.3 Deactivating the drive



Switch off the V-MAX⁺.
Press the ON/OFF switch.



If required:
» Insert the handles back into the corresponding mounts.



Press the slider buttons together in the direction of the release button (PRESS).
» The sliders must engage and are positioned at the "unfilled dot" mark.
» Drive shafts retract.

7 Removal

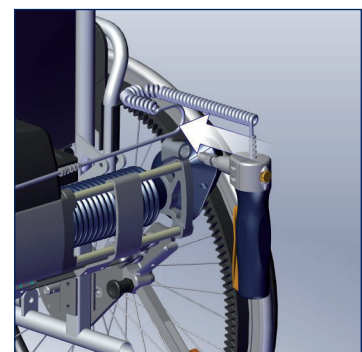
Removing the V-MAX⁺ from the wheelchair:

Perform the steps performed for mounting (chapter 5) in reverse order:

1. Remove the anti-tip supports (chapter 5.6)
2. Remove the operating and pushing handles (chapter 5.4 / 5.5)
3. Remove drive unit (chapter 5.3)
4. Remove battery pack (chapter 5.2)

If desired:

5. Remove pair of wheels with toothed rings (chapter 5.1)
6. Attach the original wheelchair wheels (proceed according to the wheelchair manufacturer's instructions.)



After removing the handles, insert them into the mounts on the width adjustment.

8 Transportation



WARNING - Do not use the V-MAX⁺ with wheelchair as a seat in a vehicle.



WARNING - Secure according to valid statutory provisions during transport in vehicles/ aeroplanes!



CAUTION - Switch off during transport!



CAUTION - Observe the vehicle's weight specifications!



NOTE - Store in a frost-free environment at least one hour prior to start-up to avoid malfunctions!



NOTE - Disconnect the battery pack from the device when transporting or shipping. This also applies to returns to the specialist trade or the manufacturer.



Information by the manufacturer:

Batteries are not considered dangerous goods according to IATA special provisions A67, GGV-SEB (Goods Transportation Regulations) and GGVSee (Goods Transportation Regulations over Sea)! Batteries are permitted for air travel in accordance with DOT and IATA! However, make sure you contact the airline company in advance before boarding a flight.

If you need transport certificates for the airline, you will find them on our homepage at: <https://www.aat-online.de/en> > Service > Download area > General > Declaration of harmlessness

Deactivate the V-MAX⁺ (refer to chapter 6.3)

Remove the V-MAX⁺ (refer to chapter 7).

- » Hold the V-MAX⁺ by the side handles.
- » The pair of wheels with gear rim do not have to be removed from the wheelchair.

Stow securely in the vehicle boot.

- » Do not place the pair of wheels on grip rings.

9 Care and maintenance



WARNING - Repairs and technical safety tests are performed by the manufacturer, the AAT field staff or the authorised specialist shop!



NOTE - Perform a visual inspection prior to each start-up! If parts are visibly defective or missing, contact the authorised specialist shop or the manufacturer!



NOTE - It is recommended to perform a technical safety test every two years. The inspection plate provides information about the latest date. Tip: After a change in operator/reuse.

9.1 Battery pack and charger



WARNING - Never short-circuit or connect the poles of the battery pack to avoid electric shocks!



CAUTION - During the charging procedure, ensure that cables are laid safely to avoid tripping over them!



CAUTION - Do not attempt to repair or bypass defective fuses to avoid electric shocks!



CAUTION - Protect against moisture to avoid electric shocks!



NOTE - Never carry the charger by the charging cable/charging line.



NOTE - Charge the battery pack after each use! Exhaustive discharge results in a loss in capacity and shortens the service life.



NOTE - Protect the charger and the motor vehicle voltage converter against oils, greases, aggressive cleaning agents, thinning agents or damage.



NOTE - Observe the user manual for the charger/voltage converter.



NOTE - Store the battery pack in a frost-free environment at least one hour prior to start-up to avoid malfunctions.



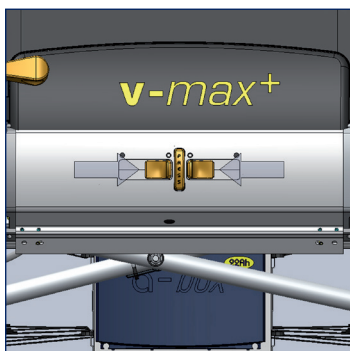
NOTE - Do not charge the battery near heat-sensitive or flammable materials.

Recommendation: Remove the battery from the charger for long-term storage (or non-use). Carry out regular trickle charges at intervals of 1 month, then remove the battery from the charger again.

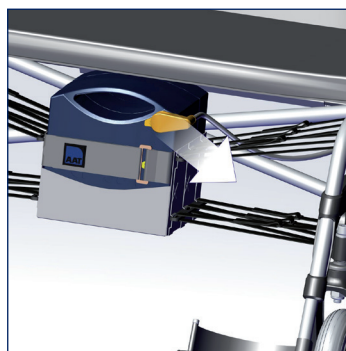


Information by the manufacturer:

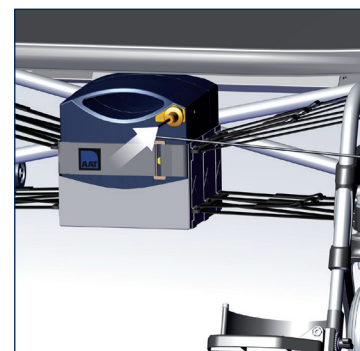
The battery pack is maintenance-free and rechargeable. New batteries only reach their full capacity after several charging cycles. During the charging process, the V-MAX⁺ cannot be operated.



Charging the battery pack
Deactivate the V-MAX⁺ (refer to chapter 6.3).

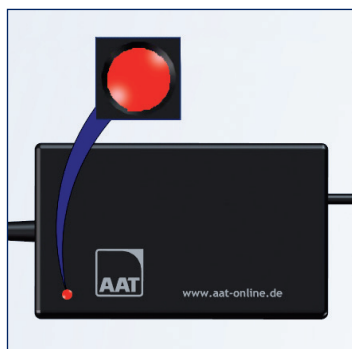


Unplug power cable.

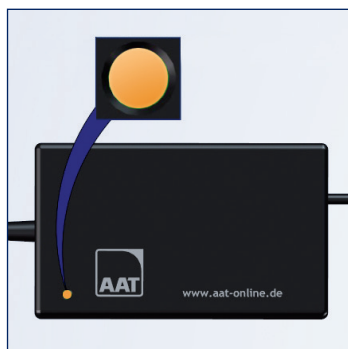


Connect the charger.

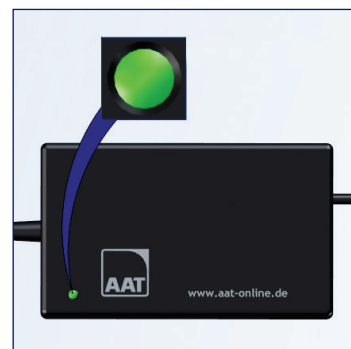
Information / status for LED colouring



LED red = battery empty
> please charge

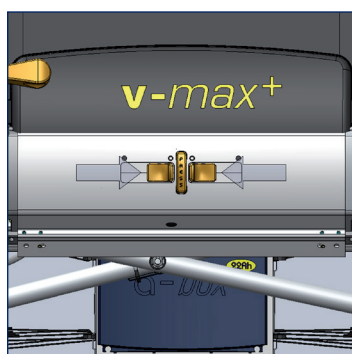


LED orange = battery is being
charged

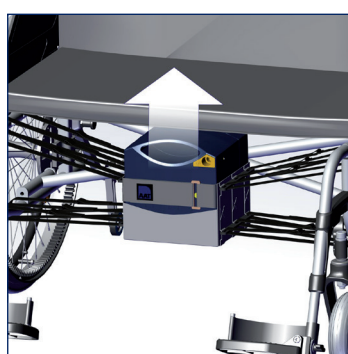


LED green = battery full
approx. 8 hours

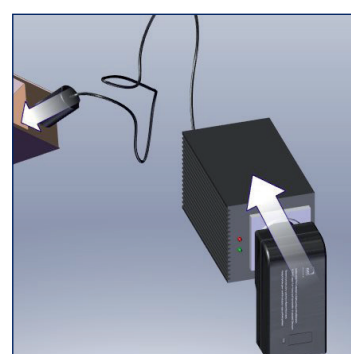
Charging the battery pack in the motor vehicle



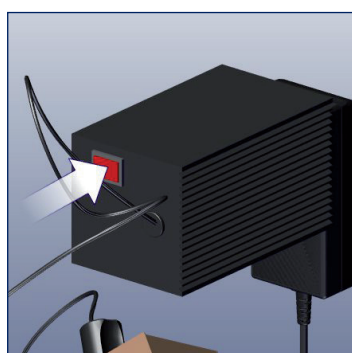
Deactivate the V-MAX+ (refer
to chapter 6.3) and unplug
power cable.



Remove the battery pack.
» Open Velcro and remove
battery pack.
» Connect charger to battery
pack.



Connect voltage transformer
and charger.



Switch on the voltage
converter.
Warning tone = low voltage!



LED green = battery full
approx. 10 hours



LED red = battery empty
> please charge

LED orange = battery is being
charged.

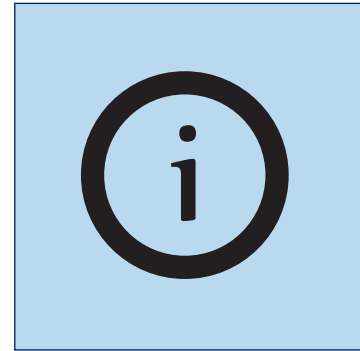
Information on the charger



Charger V-MAX+.



Possible error
LED does not light up.
Contact the manufacturer!



Observe the manufacturer's information in the charger's user manual!

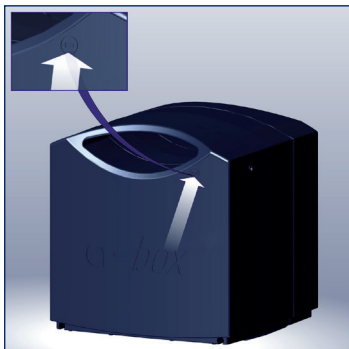
9.2 Replacing the fuse



NOTE - You may not mend or bypass a damaged fuse.



NOTE - Only fuses purchased from the specialist dealer or AAT may be used as replacement fuses!



Loosen latch with a sharp object.



Pull out fuse drawer.



Change fuse.
» Top fuse = replacement fuse!



Push in fuse drawer. The latch must lock into place!



If your fuses burn out frequently, please contact the authorised specialist dealer, AAT field team GmbH or the manufacturer.

Only use new fuses with **40 A**. Replacement fuses are available from the manufacturer.

9.3 Cleaning and disinfection



WARNING - No moisture must be allowed to enter the interior of the device!
This may result in electric shocks! Use only damp cloths for cleaning the device's surface!
Never use wet cloths!



WARNING - Test all safety-relevant functions after cleaning!



WARNING - Do not smoke during cleaning!



NOTE - Keep the V-MAX⁺ away from sources of ignition.



NOTE - Clean the drive unit, tooth segments and drive shafts in the event of dirt/deposits!



NOTE - Clean the wheelchair according to the manufacturer's information!



NOTE - Do not use a high-pressure cleaner!



NOTE - Do not use abrasive or aggressive agents (if necessary, test on an inconspicuous area first)!



NOTE - Do not use substances containing alcohol!



NOTE - Do not use acidic substances such as orange cleaner!

Wipe the surfaces of the V-MAX⁺ with mild household cleaning agents.
» Observe the manufacturer's information.

If you want to disinfect the V-MAX⁺, carry out a wipe disinfection.

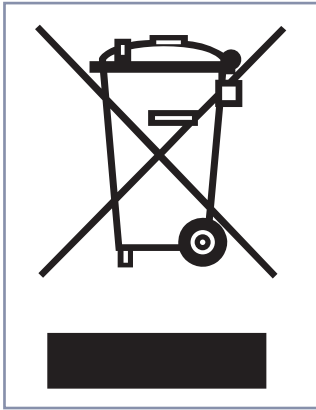
Use household disinfectants.
» Observe the manufacturer's information.

Possible disinfectants:

- Ecolab Oxy Wipe disinfectant wipes
- B15 disinfectant wipes orochemie
- Schülke mikrozyd sensitive wipes
- Sagrotan disinfection cleaner

9.4 Disposal

Your V-MAX⁺ and its batteries are durable products. After expiry of the natural service life, you can return these components to AAT Alber Antriebstechnik GmbH or their specialist dealers for disposal.



On this product you will find the symbol of the "crossed out dustbin" according to the WEEE Directive. This marking indicates that these products must be brought to a regional recycling facility when they have reached the end of their useful life.

Please check the applicable legislation in your country for the disposal of this product as the implementation of the WEEE Directive differs in the respective countries and/or , does not apply outside of Europe.

Alternatively, you can also return these products to AAT or the competent specialized dealers, where they are collected for correct disposal.

9.5 Long-term storage

If the V-MAX⁺ is not used for an extended period of time (e.g. over several months), observe the following information:

- Observe the wheelchair manufacturer's information if the wheelchair is to be stored!
- No moisture shall reach the inner parts of the device.
- Store in dry rooms and avoid excessive air humidity. Cover with film, if necessary!
- Protect against permanent exposure to sunlight!
- Unauthorised persons, especially children, should not have unsupervised access to the storage location of the V-MAX⁺!
- Remove the battery back before placing in storage!
- Observe the safety instructions in chapter 9.1 for placing the battery pack in storage!

If the V-MAX⁺ is to be put into operation again, clean the wheelchair and the product (chapter 9.3).

Check whether a technical safety test must be performed. (see chapter 9.6.)

If a technical safety test is not necessary, electrical function, anti-tip supports, brackets and, if necessary, the air pressure of the castors must be checked prior to start-up!

9.6 Technical safety testing



NOTE - Technical safety tests may only be performed by the manufacturer, the AAT field staff or the authorised specialist shop.



NOTE - It is recommended to perform a technical safety test every two years. The inspection plate provides information about the latest date. Tip: After a change in operator/reuse.



The test badge shows when the test is to be carried out at the latest!

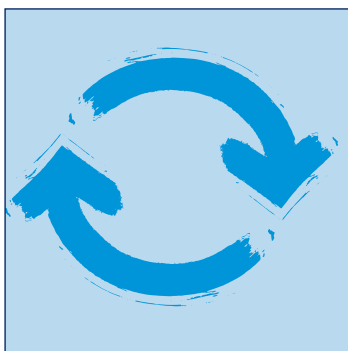
Improper use can lead to damage on the V-MAX⁺ which may impair the technical functionality. For this reason, a technical safety test should be carried out every 2 years. We also recommend the technical safety test before each reuse.

Training is required in order to be able to perform the technical safety testing. For more information, please visit:
www.aat-online.de/en

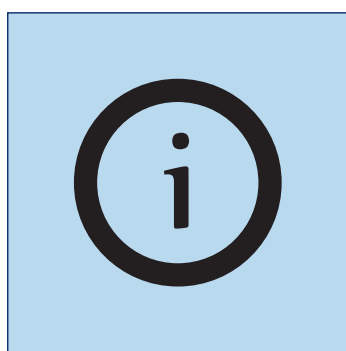
9.7 Reuse (change in operator)

The term reuse is used when the AAT product of patient X is to be used for another patient Y. In addition, there is a reuse when a patient receives a different wheelchair and therefore requires new add-on parts.

Please contact the manufacturer, the AAT field service or the authorised specialist shop.



The V-MAX⁺ is suitable for reuse.



A technical safety test and cleaning/disinfection work should be performed prior to each reuse. (see chapters 9.6 and 9.3)

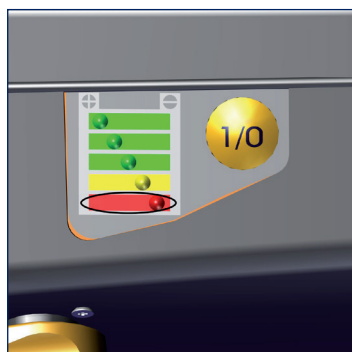
9.8 Corrective action/recall

If new important safety information regarding the handling of your product is available, we will inform you about this. As already stated at the beginning, you will always find the latest version of this user manual on our homepage.

Should any subsequent changes be made to the product or corrective action be taken, we will inform our authorised dealers in writing about all the affected serial numbers. If your product is affected by a recall, you will subsequently be informed about all further steps to be taken.

10 Fault conditions and troubleshooting

10.1 Fault conditions



The red LED is flashing.
» Observe any fault conditions!

Fault conditions

The LED is flashing	Fault condition
1 x	Motor controller, motor or battery pack faulty
2 x	Undervoltage, battery pack empty
3 x	Excessive voltage, battery pack
4 x	Error Electromagnetic brake
5 x	Overvoltage monitor
6 x	Overload monitor
7 x	Overtemperature monitor

10.2 Troubleshooting

Problem	Check and possible remedy
The V-MAX+ cannot be switched on	Is the power lead plugged into the drive unit and battery pack? No: Plug it in!
	Is the battery pack empty? Yes: Charge!
	Fuse broken? Yes: Change!
	Does the problem persist? Yes: Notify the manufacturer, the AAT field service, the authorised specialist dealer.
The V-MAX+ does not drive	Has the V-MAX+ been switched on? No: Switch it on.
	Does the problem persist? Yes: Notify the manufacturer, the AAT field service, the authorised specialist dealer.
Unable to load the battery pack	Is the charger connected? No: Connect it correctly!
	Does the problem persist? Yes: Notify the manufacturer, the AAT field service, the authorised specialist dealer.
Fuse often defective	Yes: Notify the manufacturer, the AAT field service, the authorised specialist dealer.

Damage on the wheelchair tyres	WARNING - While changing a wheel, no person may be sitting in the wheelchair! NOTE - Always replace tyres in pairs. 1. The wheelchair must be standing on a level and solid surface. Before removing a wheel, support the chassis so that it cannot tip over, and secure the wheelchair against tipping over and rolling away. Change of tyres: Lifting and fitting the tyre cover must be carried out using the appropriate mounting levers (bicycle accessories). Do not use screwdrivers or other pointed objects as levers. For queries, notify the manufacturer, the AAT field service, the authorised specialist dealer.
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11 Warranty and liability

Warranty

AAT Alber Antriebstechnik GmbH warrants the V-MAX⁺ (with the exception of the battery pack) and all accessories to be free from defects in material and workmanship for a period of two years from the date of receipt.

For the battery pack, always assuming correct care and maintenance, AAT Alber Antriebstechnik GmbH grants a warranty of six months from the date of purchase. The warranty on the V-MAX⁺ does not cover faults which are due to:

- damage as a result of excessive strain.
- any damage resulting from careless handling.
- violent damage.
- natural wear parts (driving wheels, wheelchair tyres).
- improper or inadequate maintenance by the customer.
- unauthorised structural changes or improper use of the V-MAX⁺ or its accessories.
- use of the V-MAX⁺ beyond the total permissible weight.
- improper charging of the battery pack.

Liability

The manufacturer of the V-MAX⁺, AAT Alber Antriebstechnik GmbH, cannot be held liable for any possible damage in the following cases:

- The V-MAX⁺ has been handled improperly.
- Repairs, assembly or other work have been performed by unauthorised personnel.
- The V-MAX⁺ has not been used in accordance with the user manual.
- No original AAT spare parts or accessories have been fitted or connected to the V-MAX⁺.
- Parts of the V-MAX⁺ have been removed.
- Loads were applied to the V-MAX⁺ beyond the permissible total weight.
- The V-MAX⁺ has not been serviced regularly (every 2 years) by the manufacturer, AAT field service or an authorised specialist dealer.
- The V-MAX⁺ has been operated with insufficiently charged batteries.



TRANSLATION OF THE ORIGINAL

EU DECLARATION OF CONFORMITY

We hereby declare under our
sole responsibility

AAT Alber Antriebstechnik GmbH

Ehestetter Weg 11

72458 Albstadt / Germany

SRN: DE-MF-000007581

that the pushing and braking aids as described in the following for manual wheelchairs

As of serial number: P3001240009

Risk class: Class I

(in accordance with Annex VIII,
Rule 1 and 13)

Pushing and braking aid **V-MAX+ P3001**

Article no. 310560

(Basis-UDI-DI) 4054959P3001ME

complies with the basic safety and performance requirements and applicable parts of the following
regulations and standards.

2017/745/EU (Medical Device Regulation)	ISO 7176-21; ISO 7176-14; EN 12184; EN ISO 21856; EN ISO 10993-1 IEC 60335-2-29; IEC 60335-1
2011/65/EU (Restriction of Hazardous Substances)	EN IEC 63000

The products are marked with **CE** in compliance with the regulations. This declaration is only valid
for the products with the article numbers indicated above. This declaration is replaced whenever there
is a significant change to the product, product family, standards and laws.

02/02/2024, Albstadt

Date, place

Daniel Mohr, PRRC (MDR 2017/745 Art.15)



Your contact persons:

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Serial number:



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