

Stair climbing system

s-max sella

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 stair climbing system s-max sella were developed and manufactured in concordance with the current regulations of the European Union, EEC Guidelines 93/42/EG, 2007/47/EG and 2006/42/EG.

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



Signature of the manufacturer:

Markus Alber
Managing shareholder
AAT Alber Antriebstechnik GmbH



The stair climbing system s-max sella has been successfully tested and certified according to the standard design for stair climbing vehicles ISO 7176-23 and DIN EN 12182 at the Technical University of Berlin, Berlin-Cert.



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1 General information

Congratulations! With the acquisition of this stair climbing system you have a device that will quickly become a reliable and indispensable partner in transporting physically disabled people.

With the s-max sella you are able to transport one persons safely and effortlessly up- and downstairs; even winding stairs are no problem for the s-max sella. Driving on slopes is also possible. The safety brakes on both sides of the s-max sella ensure your safety.

Naturally the s-max sella is also suitable to drive on level ground. The device is lightweight, flexible and does not take up much space.

The s-max sella is capable of climbing stairs up to a step height of 22 cm. The minimum depth of the step's surface must be 12 cm regardless of the type of stairs (regular straight stairs or winding stairs).

The necessary step width concerning straight stairs is the width of the s-max sella plus an extra 10 cm for manoeuvring.

The minimum platform size for u-shaped stairs depends on factors such as the wheelchair's dimensions, etc. Your AAT representative or your authorized dealer are happy to advise you.

The sticker with the device's serial number is located inside the batteries' drawer. Remove the battery pack and read the number.



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 s-max sella. Operating the s-max sella takes a certain skill.


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

1.3 Care and maintenance

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

Other than that your s-max sella 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 s-max sella exclusively for the transportation of physically disabled persons.

Said persons 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 during the transportation process.

- ☞ In the interest of your safety you may not use the stair climbing device s-max sella on escalators or moving belts!
- ☞ Transporting other kinds of loads is explicitly prohibited!
- ☞ Only authorized operators may use the s-max sella. Therefore never leave the s-max sella unattended.
- ☞ Please do not use the s-max sella in rain, slippery and wet conditions, snow or ice due to the following potential safety hazards, e.g. danger of slipping restricted braking effect etc.
- ☞ Due to safety reasons the s-max sella may only be operated by trained personnel who are physically and intellectually capable to handle the device in all situations of operation.



Mastering stairs



Driving on slopes



Driving on level ground

2.2 Features of the s-max sella

handle/seat unit of the sella

1 = control unit

2 = handle

3 = tightening knob for the handles' horizontal adjustment

4 = tightening knob for the handles' height adjustment

5 = column

6 = release lever (to fold the seat/handle unit)

7 = tightening knob for the column

8 = release button (to unfold the seat/handle unit)



Climbing unit

9 = battery pack

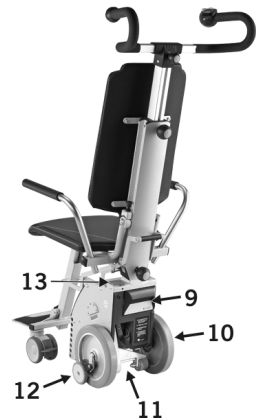
10 = main wheel

11 = climber

12 = safety brake

13 = membrane keypad

14 = recessed handle



handle/seat unit of sella

15 = arm rests (foldable)

16 = steering roller with wheel lock

17 = foot rest (foldable)

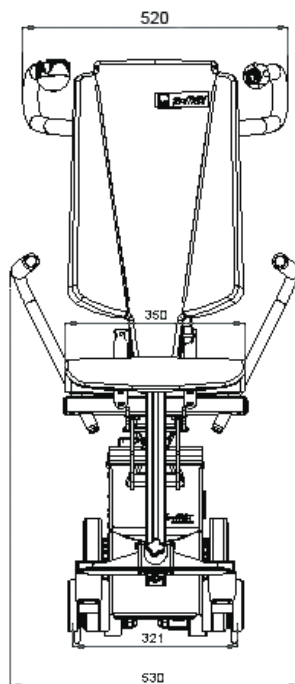
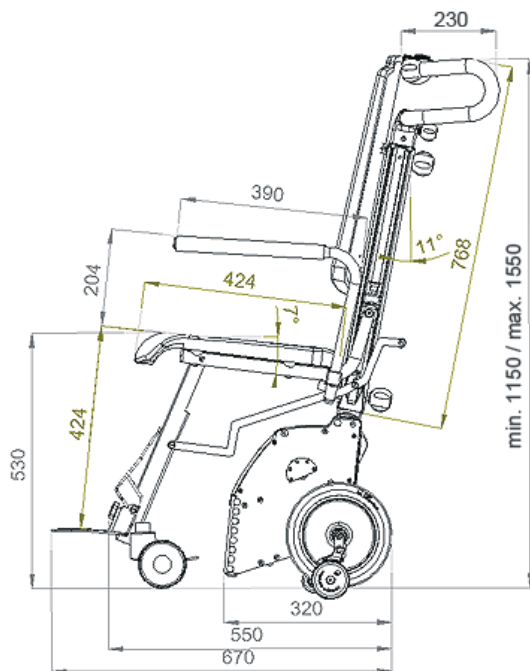
18 = tightening knob for the foot rest's height adjustment



2.3 Technical data

measurements	height = min. 1150 mm, max. 1550 mm width: handle = 520, climbing unit = 321 mm, total = 530 mm depth: handle = 230 mm, climbing unit = 320 mm, total = 670 mm
weight	climbing unit = 15,8 kg handle/seat unit = 14,8 kg battery pack = 3,0 kg both arm rests = 1,2 kg charger = 0,2 kg total weight = 35,0 kg
total weight approved	170 kg
max. weight of the person	135 kg
climbing speed	5 - 20 steps / minute, continually adjustable
range with one charge of the batteries on average load of 75 kg	approx. 26 levels (equates 390 steps)
range with one charge of the batteries on maximum load	approx. 11levels (equates 165 steps)
maximum height of step	22 cm 23.5 cm (extended)
batteries	2 x 12 V / 3,3 Ah sealed lead acid
direct current motor	24 V / 200 W
noise level	the device's A weighted noise level lies typically below 70 dB (A)
storing/operating temperature: device	0° C up to + 60° C / - 30° C up to + 50° C
storing/operating temperature: batteries	0° C up to + 60° C / - 30° C up to + 50° C
vibrations	the weighted RMS value of acceleration the upper body is exposed to lies typically below 2,5m/s ²

2.4 Dimensioned sketch



2.5 Standard scope of delivery

- 1 = charger including instructions
 - 2 = battery pack
 - 3 = handle/seat unit for s-max sella
 - 4 = climbing unit
- plus the user's manual



2.6 Optional accessories

- 1 = head rest
- 2 = voltage converter
- 3 = widened arm rests
- 4 = seat belt system including hip belt
- 5 = hip belt
- 6 = increase of the climbing height
- 7 = inclination indicator



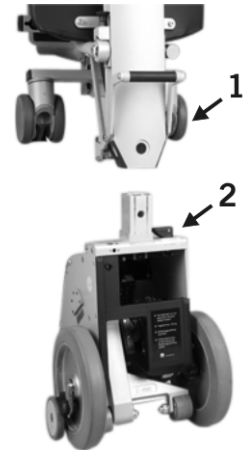
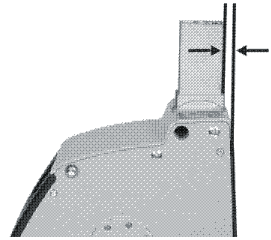
3 Assembly

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

3.1 Handle/seat unit

- ☞ The holding device has to be parallel to the housing.
- ☞ Only authorized AAT dealer or an AAT representative are allowed to adjust the holding device.

First connect the handle/seat unit with the climbing unit by inserting the column of the handle/seat unit ❶ (seat pointing forward) into the holding device ❷ on the climbing unit.

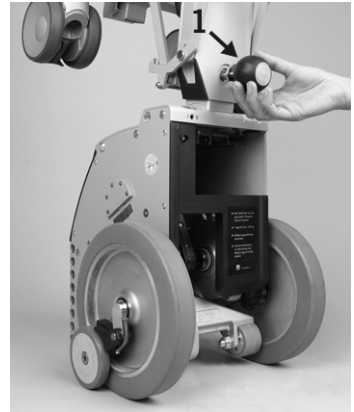


A 9-pin Sub-D socket connector ❸ located in the climbing unit's holding device makes the electrical connection.



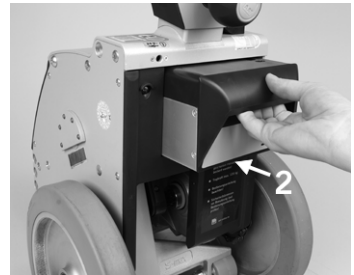
Secure the connection with the tightening knob ❶.

- ☞ Please always make sure that the handle/seat unit is safely connected to the climbing unit.
- ☞ Please only connect the handle/seat unit with the climbing 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 the Sub-D socket connector. This could destroy the s-max sella or the other electrical devices.



3.2 Attach the battery pack

Push the battery pack ❷ sideways into the climbing unit; once connected it is automatically locked.




3.3 Detach the battery pack

Push down the locking lever ❸ on the climbing unit and take out the battery pack.

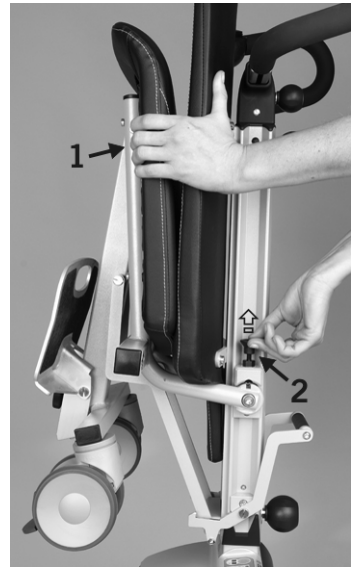


3.4 Fold out the handle/seat unit

1. Press the seat toward the back cushion ❶.
2. At the same time pull up the release button ❷.
3. Now pull down the seat.

 You must hear the seat click into place!

To fold up the s-max sella, please see the instructions in chapter 6.13



Tip:

Press down the seat so that it clicks into place properly!



3.5 Fold out the foot rest

Please fold out the foot rest to transport a person.



3.6 Arm rests


Insert the arm rests on both sides.

- ☞ Please always make sure that they are inserted properly.



3.7 Adjust the handle

3.7.1 Adjust the height of the handle

Release the tightening knob  by turning counter clockwise. Pull out the handle to the appropriate height (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!!!

3.7.2 Adjust the handle horizontally






In very narrow staircases or on winding stairs the handles may hit the wall. To be able to drive on such stairs the handles can be adjusted horizontally.

Release the tightening knob  counter clockwise and adjust the handle horizontally to the desired position. Then retighten the tightening knob.

-  Please always make sure that the tightening knob is secure.



3.8 Functional check

-  Please check the safety brakes each time before using the device (see chapter 6.4 and 8.5)!
-  Please also check the safety brakes' braking effect as described in chapter 6.4.1 and 6.4.2!
-  Please check the device's electronic functions each time before using it (see chapter 6.10 and 6.11)!
-  Regularly check whether the lining of the climber's rollers are undamaged (see chapter 8.6)
-  Make sure that the battery pack is charged before you use the device!

4 Safety instructions

- ☞ For a safe operation of the s-max sella 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.

4.1 Special information concerning the operation: Due to safety reasons the stair climber s-max sella may not be used on escalators and moving walkways!

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.

Warning: Radio wave sources may affect powered device control!

Radio wave source, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones, can affect your s-max sella. Following the warning listed below should reduce the chance of unintended brake release or movement, which could result in serious injury.

- ☞ Do not turn ON hand-held personal communication devices, such as citizens band (CB) radios and cellular phones, while the s-max sella is turned ON.
- ☞ Be aware of nearby transmitter, such as radio or TV stations, and try to avoid coming close to them.
- ☞ If unintended movement or brake release occurs, turn the powered s-max sella OFF as soon as it is safe.
- ☞ Be aware that adding accessories or components, or modifying the s-max sella, may take it more susceptible to interference from radio wave sources (Note: There is no easy way to evaluate their effect on the overall immunity to the s-max sella).
- ☞ Report all incidents of unintended movement or brake release to the s-max sella manufacturer, and note whether there is a radio wave source nearby.

Important EMI-Information:

- ☞ 20 Volts per meter (V/m) is a generally achievable and useful immunity level against interference from radio wave sources (as of May 1994) (the higher the level, the greater the protection).
- ☞ This device has an immunity level of 20 V/m with no accessories connected to the device.
- ☞ 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 s-max sella 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 s-max sella 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.

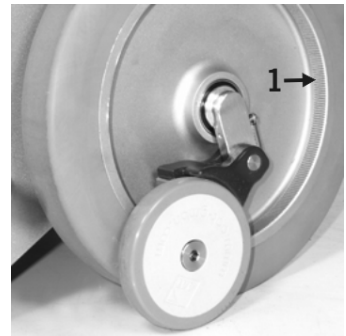
4.1.2 Climate: To ensure proper functioning it is not advisable to expose the s-max sella to freezing conditions. Should this be unavoidable, always put the device in a non-freezing environment for at least one hour before using it.

4.2 Instruction: The s-max sella may only be operated by trained personnel. In addition, the operator should be capable of lifting 1/3 of his or her own weight. Minors are not allowed to use the s-max sella; exempt from the above are adolescents over 16 years of age who have been trained under supervision to operate the s-max sella. While using the s-max sella you should always wear good shoes that do not slip.

4.3 Safety brakes: Please check the safety brakes each time before using the s-max sella (see chapter 6.4 and 8.5). The safety brakes, particularly the knurled surface of the brake drums **1** in the wheel rims, must be cleaned weekly or after contamination with spirit to ensure the optimum braking effect.

- ☞ Never smoke during the cleaning of the device as well as keep it away from ignition source.
- ☞ Please consider the danger warning of the manufacturer previous cleaning the device with spirit.
- ☞ Never use suds or greasy cleaners.

After cleaning the safety brakes must be checked as described in chapter 6.4.



4.4 Lining of the climber's rollers: Please check regularly whether the lining of each roller is undamaged (see chapter 5.4 and 8.6).

4.5 Lifting capacity: The approved total weight of 170 kg and the max. weight of the person of 135 kg may not be exceeded. (see chapter 5.1).

- ☞ You may under no circumstances use the s-max sella to transport goods.

4.6 Care and maintenance: Please make sure that you charge the battery pack after each use of the s-max sella.

If the s-max sella is not in operation, please turn off the device.

If the working elements of the device block, turn the s-max sella off immediately.

- ☞ 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: Please make sure that the paths and walkways you use with the s-max sella are free of obstacles and not slippery. Avoid operation on damaged stair linings, snow, ice, etc.




- ☞ The s-max sella may not be used in wet and rainy conditions.

4.7.1 Environmental conditions: Although the s-max sella 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 s-max sella with fully charged batteries. The light emitting diodes on the batteries' display indicate the state of the batteries' capacity. If the battery is almost empty you hear a signal tone. With the remaining battery charge a person can be safely transported down the stairs, since energy is fed back into the batteries while descending stairs. This means that the potential number of steps going downstairs is unlimited. If the battery is totally discharged you hear a constant acoustic signal.

4.9 Climbing mechanism: The climber is for the most part covered by the housing. However, please make sure that during the climbing process no hands or feet get into the vicinity of the rotating areas. Always keep a safe distance.

4.10 Transportation:

-  Please carry the climbing unit at its recessed handle as well as the battery pack's handle!
-  Always turn off the s-max sella for transportation!
-  When you transport the device in vehicles, please secure it according to the relevant legal regulations in your country.

5 Operation

5.1 Maximum lifting capacity

Please make sure that the max. weight of the person of 135 kg is not exceeded.

5.2 Battery pack

Please make sure that the sealed lead acid batteries ❶ are fully charged before you use the s-max sella for the first time.

Extensive instructions you find in chapter 8.3.

5.3 Safety brakes

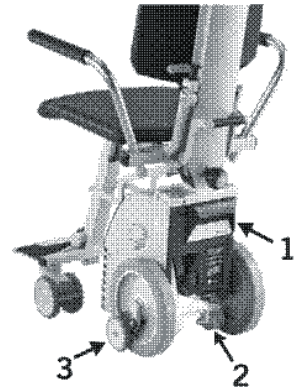
Before operating the s-max sella check the safety brakes ❷ every single time.

Extensive instructions you find in chapter 6.4

5.4 Rollers attached to the climber

Please check regularly whether the linings on both rollers ❸ attached to the climber are intact.

You find further information in chapter 8.6



6 Instructions for operation

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

6.1 Control unit

The control unit is situated on the right handle and consists of an UP/DOWN switch **1**, a speed control **2**, a safety chip for the engine immobiliser **3** and an ON/OFF switch **4**.



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

6.1.1 ON/OFF switch

If the s-max sella is not in operation, please turn the device off.

- ☞ The s-max sella 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 s-max sella off automatically. In such case you can only use the s-max sella again by pressing the ON/OFF switch.
- ☞ To assure safe operation of the s-max sella in dark stairways we equipped each s-max sella with 2 LEDs (lights). These lights are automatically activated when you turn on the s-max sella.
- ☞ Should you have opted for the inclination indicator, it will also be automatically activated when you turn on your s-max sella (see chapter 6.1.2).

6.1.2 Inclination indicator (optional)

If you wish the s-max sella can be equipped with an inclination sensor. Should you hold the device at an angle that is too high or too low, you will feel a vibration in the handle. The vibration increases the more you diverge from the ideal angle.

If the handle does not vibrate you are within the ideal inclination angle to operate the s-max sella with ease.

If your s-max sella has been equipped with this feature at your choice, it will vibrate for a few seconds every time you turn on the device. This is to tell you that the inclination indicator is active. Should this initial vibration not occur, please contact your authorized dealer or AAT Alber Antriebstechnik GmbH.



||| vibration zone

6.1.3 UP/DOWN switch

With the UP/DOWN switch you activate the climbing mechanism up- or downstairs.

- ☞ Wait a few seconds (approx. 2 sec.) after turning on the device before you push the UP/DOWN switch.

6.1.4 Speed control

The speed control enables you to adjust the speed continuously.

When you use the s-max sella for the first time, please choose the lowest speed.

6.1.5 Safety chip for the engine immobiliser


The UP/DOWN switch only works if you put the safety chip for the engine immobiliser into its slot. Please make sure that the chip is properly set to ensure safe and continuous operations.

If you do not put in the chip you can turn on the s-max sella, but you cannot drive with it. This feature makes sure that no unauthorized person uses the device.

6.2 Membrane keypad

6.2.1 Capacity of the batteries

On the membrane keypad you can check the batteries' capacity.

If the display  highlights the green area, your batteries are fully charged. If the yellow area is highlighted your batteries are running low. At this point you should charge your batteries.

If the display highlights the red area (LED is blinking), you hear a signal that recurs every 12 seconds.

- ☞ Once you hear the first signal, the batteries' capacity is sufficient for a maximum of 20 - 35, steps depending on the weight of the transported person.

If the display is blinking the electronics detected a mistake. Possible explanations you find in chapter 6.2.2.



6.2.2 Control light to indicate malfunction

Potential malfunction is indicated by a light diode.


In case of malfunction, turn the device first off and then on again. 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

LED is blinking	Identified malfunction
1 x	charging socket is defect
2 x	UP/DOWN switch is defective
3 x	error, motor control by H-bridge
4 x	error, power relay
5 x	malfunction, motor
permanent blinking	battery is defective, battery discharge

dealer.

6.2.3 Single step mode

Should you choose to turn off the single step mode manually you can do so by pressing the key **6** on the membrane keypad. The yellow LED above the pictogram with the continuous arrow **7** lights up as soon as you turn off the single step mode.

 Every time you turn the s-max sella, the single step mode is automatically activated.

If you activate the ON/OFF switch in that mode, the device will climb only one step at a time. The climbing system stops in the correct position.

The climbing mechanism cannot unintentionally be activated. You can take your time to move the main wheels to the next step's edge.

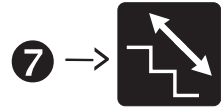
To continue climbing you simply release the UP/DOWN switch and then press it again.

6.3 Climber

The climber **3** (see picture) must be pulled in to topmost position by means of the UP/DOWN switch if you want to:

- drive on level ground and on slopes
- check the safety brakes
- begin climbing upstairs or downstairs

However, you need to fold out the climber by activating the UP/DOWN switch, direction up, whenever a person takes a seat in the s-max sella, so the device is supported by the climber (please also see chapter 6.5).



6.4 Safety brakes

There are safety brakes ❶ located on the climbing unit on both sides.

- ☞ Please check the safety brakes each time before you use the s-max sella.

You may check the brake effect either on top of the stairs or on level ground as described in chapters 6.4.1 and 6.4.2.

6.4.1 Test the required brake effect

Pull in the climber to its upmost position and tilt the s-max sella backwards approximately to a 45 degree angle of the column ❷.

If the s-max sella cannot be pushed forward ❸ by the handle in said position, but merely rolls backwards ❹, then the required brake effect for the safe operation of the s-max sella is granted.

- ☞ If the required brake effect is not guaranteed, you may, under no circumstances, use the s-max sella any more. Please contact your authorized AAT dealer or the manufacturer immediately.
- ☞ Should the brake not kick in, you may under no circumstances use the device. Please contact your authorized dealer or an AAT representative immediately.

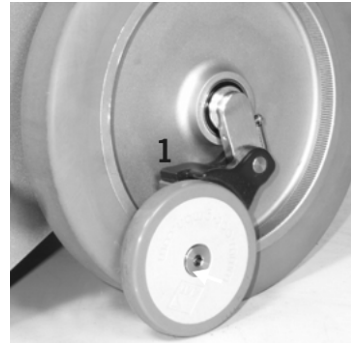
6.4.2 Test the required brake effect at the top edge of the stairs

- ☞ Please make this test without a person sitting in the chair.

Pull in the climber to its upmost position and tilt the s-max sella backwards approximately to a 45 degree angle of the column ❷.

Drive forward to the first step's edge (without person). If you cannot push the device over the edge of the step, the required braking effect for a safe operation of the s-max sella is granted.

- ☞ If the required brake effect is not guaranteed, you may, under no circumstances, use the s-max sella any more. Please contact your authorized AAT dealer or the manufacturer immediately.
- ☞ Should the brake not kick in, you may under no circumstances use the device. Please contact your authorized dealer or an AAT representative immediately.



6.5 Transportation of a person with the s-max sella

Please note that the s-max sella was developed to be operated by one person. Always use both hands when using the device.

- ☞ Only one person may be transported with the s-max sella.
- ☞ Please practice driving with the s-max sella on level ground, slopes and climbing up- and downstairs at first without a person sitting in the chair! Also make sure that while you practise using the s-max sella nobody is within close range of the potentially dangerous area underneath the device.

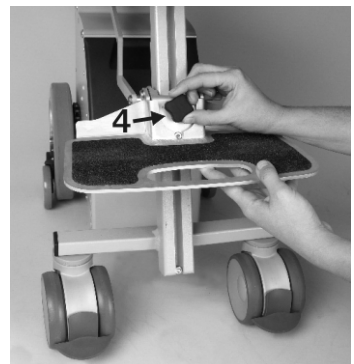
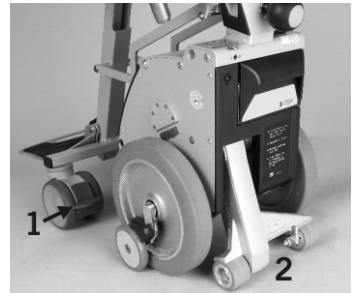
We suggest that you practice climbing up- and downstairs with the single step mode activated (see chapter 6.2.3). Also choose the lowest climbing speed for practicing (see chapter 6.1.4).

- ☞ Please do not exceed the maximum lifting capacity (see chapter 5.1).
- ☞ In the interest of your safety please always operate the s-max sella from behind, never sideways.

When a person takes a seat on the s-max sella, please follow these instructions:

1. First, lock the steering rollers' at their locking device ❶.
2. To avoid the s-max sella moving when a person takes a seat, you must fold out the climber in such a way that it rests on the ground ❷. Turn on the device and press the UP/DOWN switch, direction UP until the climber touches the floor.
3. Sitting down can be facilitated by folding out the arm rests ❸. If necessary, you can remove the arm rests altogether. After the person to be transported has taken a seat you put the arm rests back into their original position.
4. The foot rest must be folded down to transport persons with the s-max sella (see chapter 3.5). Loosen the tightening knob ❹ to adjust the foot rest in height. If necessary, please help the person putting the feet on the foot rest.

- ☞ Always check whether the foot rest is affixed properly.



6.6 Operation on level ground

After the person has been properly seated, you may transport him or her effortlessly on level ground (see picture). First loosen the locking device on the steering rollers. Afterwards make sure that the climber is pulled in entirely.

- ☞ You overcome a threshold by pulling the s-max sella backwards over it.



6.7 Adjust the handle

For climbing stairs or driving on slopes, comfortably and safely, adjust the height of the handle ❶ approximately to the level of the operator's shoulders. Release the tightening knob ❷ counter clockwise and adjust the handle as desired.

- ☞ After adjusting the handle, always make sure that it is securely fastened.



6.8 Tilting the stair climbing system

To drive on slopes or to climb stairs you must tilt the s-max sella, which can be done easily by means of the climber.

1. Turn on the s-max sella by pressing the ON/OFF switch.
2. Press the UP/DOWN switch direction DOWN until the climber lift the main wheels at least 1-2 cm off the floor (see picture).
3. Put your foot on the housing and tilt the s-max sella slightly toward you until you feel that the s-max sella is balanced.
4. The s-max sella is balanced if you feel neither pull nor push in the handle.
5. In order to drive on level ground, the climber must be pulled in entirely.

If you tilt the s-max sella further, or too much, the safety brakes engage and the s-max sella can't be moved forward any more.



6.9 Operation on slopes

To drive on a slope, make sure the handle is adjusted appropriately (see chapter 3.7.1 and 6.7). Now tilt the s-max sella slightly backwards and pull in the climber entirely (see chapter 6.8).

- ☞ For safety reasons we recommend you to ask another person to assist when driving on a slope.

6.9.1 Downhill

Drive forward to the edge of the slope. In order to slow down you need to tilt the s-max sella a bit more, so that the safety brakes are activated.

6.9.2 Uphill

Please drive backwards up a slope. In order to slow down you need to tilt the s-max sella a bit more, so that the safety brakes are activated.



6.10 Climbing upstairs

- ☞ You may only be permitted to transport a person with the s-max sella, if you have been properly trained in the device's operation.
- ☞ Please always practice climbing stairs without a person and by activating the single step mode plus the lowest climbing speed.
- ☞ Please always check the safety brakes before each use (see chapter 6.4 and 8.5).

The climbing process can be accomplished quickly and without problems if you adhere closely to the following instructions.

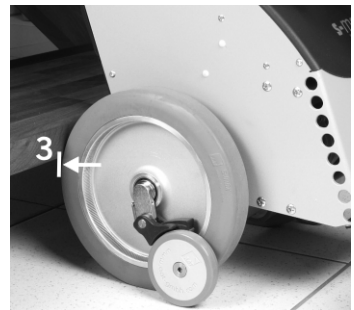
A tip before you start:

- ☞ Always pull the s-max sella a bit backwards during the entire climbing process, i.e. always keep the device under tension so that the wheels can touch down properly on the next step.
1. Adjust the handle to the appropriate height (see chapter 3.7.1 and 6.7).
 2. Turn the s-max sella on by pressing the ON/OFF switch.
 3. Deactivate the single step mode if necessary (see chapter 6.2.3).
 4. Pull in the climber to its topmost position by pressing the UP/DOWN switch (see chapter 6.3)
 5. Tilt the s-max sella slightly toward you (see chapter 6.8).
 6. Drive backwards to the stairs ❶ and move up 2 to 3 steps ❷.



Now the s-max sella is in its initial position for climbing upstairs.

- ☞ Make sure that both main wheels touch the lowest step ❸.

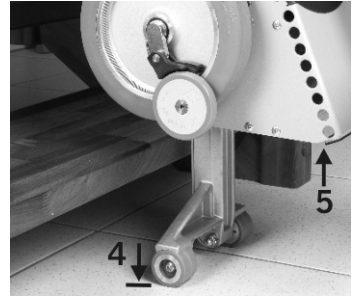


The climbing process takes place in two intervals.

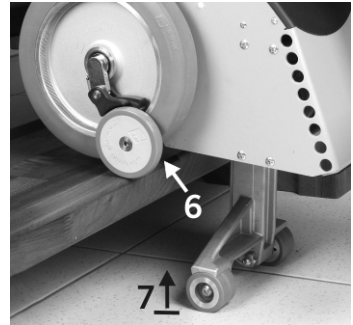
7. Press the UP/DOWN switch, direction UP to begin the climbing process by moving the climber downward.

☞ Always keep the device under tension during the entire climbing process, i.e. always pull it slightly backward toward you.

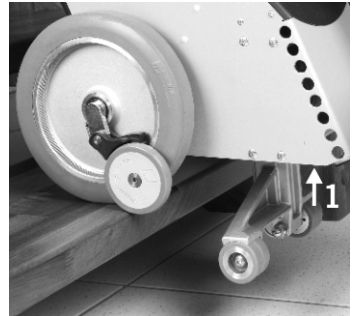
After the climber reaches the floor **4**, it assumes the load of the main wheels while the main wheels and the frame are lifted at the same time **5**.



The first interval is finished when the main wheels **6** touch down on the next higher step and resume the load of the climber **7**.



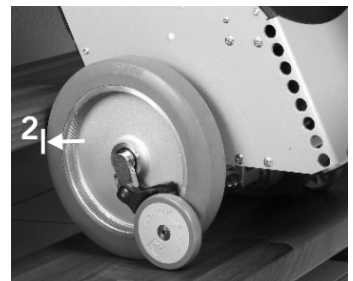
The second interval begins by pulling in the climber ❶. It is finished when the climber reaches its topmost position.



Because the s-max sella is always pulled slightly backward, it rolls automatically to the next step and reaches the initial position again - both main wheels touch the next step ❷.

Since the single step mode is activated each time before you turn on the s-max sella, the climbing process ends here. To resume climbing, you need to press the UP/DOWN switch once again, direction "UP".

At this point the climbing process repeats itself as described in point 7.

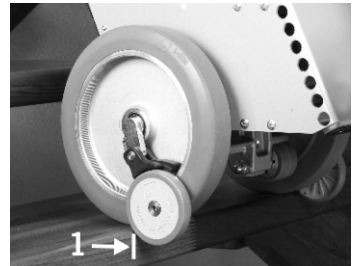


6.11 Climbing downstairs

- ☞ You may only be permitted to transport a person with the s-max sella, if you have been properly trained in the device's operation.
- ☞ Please always practice climbing stairs without a person and by activating the single step mode plus the lowest climbing speed.
- ☞ Please always check the safety brakes before each use (see chapter 6.4 and 8.5).

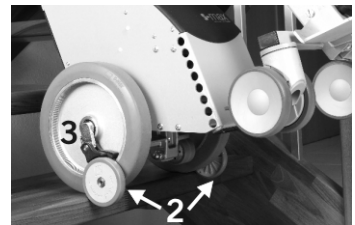
The climbing process can be accomplished quickly and without problems if you adhere closely to the following instructions.

1. Adjust the handle to the appropriate height (see chapter 3.7.1 and 6.7).
2. Turn the s-max sella on by pressing the ON/OFF switch.
3. Deactivate the single step mode if necessary (see chapter 6.2.3).
4. Pull in the climber to its topmost position by pressing the UP/DOWN switch (see chapter 6.3)
5. Tilt the s-max sella slightly toward you (see chapter 6.8).
6. Drive the s-max sella forward to the edge of the stairs **❶**.

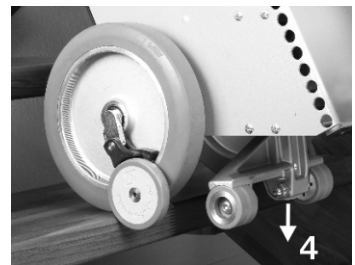


The sensitive rolls **❷** of the safety brakes **❸** keep the s-max sella from rolling over the edge.

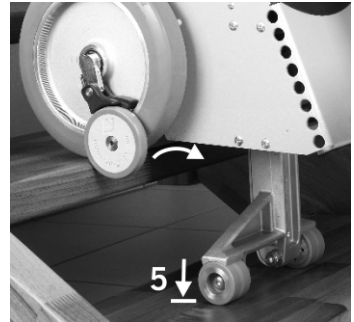
7. Press the UP/DOWN switch, direction DOWN and the descending process begins.



The drive retracts the climber downward **❹** and touches down on the next lower step.

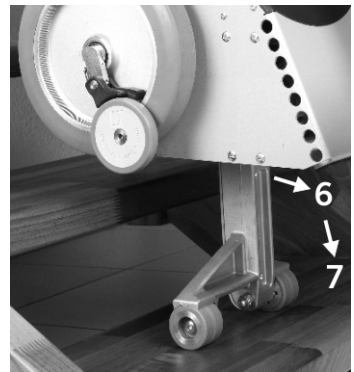


When the climber reaches the next lower step ⑤ it resume the load of the main wheels, while those plus the climbing frame are lifted off the higher step and then moves downward, away from the operator.



Now the main wheels and the climbing frame are moved forward ⑥ - away from the operator.

Afterwards the main wheels and the frame are lowered ⑦ by retracting the climber. This results in a small shift in load distribution, which you will feel at the handle by a slight pull forward.



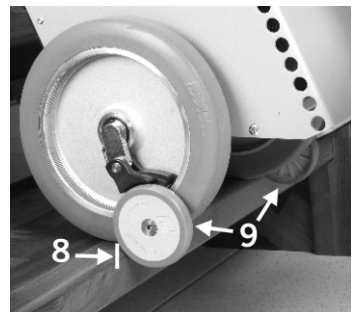
The main wheels rest now on the next step (see picture) and resume the load from the climber, which is retracted further.

Since the single step mode is activated every time you turn on the device, the climber is pulled in entirely and then the descending process ends at this point.

8. Again push the s-max sella all the way to the edge of the step ⑧, i.e. until the sensitive rolls of the safety brakes ⑨ stop the s-max sella.

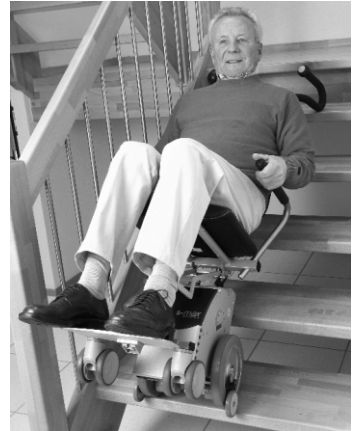
To continue descending you need to press the UP/DOWN switch again, direction DOWN.

At this point the climbing process repeats itself as described in point 7.




6.12 Laying the s-max sella down on the stairs

In an emergency the s-max sella may tilt backwards and lay down on the stairs. The safety brakes prevent the s-max sella from rolling down (see picture).



6.13 Fold up the handle/seat unit

To fold up the s-max sella, please follow these instructions:






1. Remove the arm rests (see chapter 3.6).
2. Fold up the foot rest (see chapter 3.5)
3. Push forward the release lever  (toward the column) and fold up the seat.
4. Push the seat's cushion toward the back until you hear it snap into place.

The s-max sella can be stored in a space-saving way.



6.14 Transport

For transportation you may remove the handle/seat unit of the s-max sella altogether (see assembly, chapter 3.1).

-  Please carry the climbing unit at its recessed handle as well as the battery pack's handle!
-  Note that the device weighs 15.8 kg!
-  Always turn off the s-max sella for transportation!
-  When transporting the s-max sella in a vehicle, always secure the device according to the legal rules and regulations.
-  The sealed lead acid batteries used in the s-max sella 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.

6.15 Trouble shooting

problem	check and potential solution
s-max sella cannot be turned on	Is the charger connected to the s-max sella? If so, disconnect the charging cable.
	Is the battery pack empty? If so, charge the batteries.
	Are the fuses damaged? If so, exchange the fuses.
	If there is still a problem turning on the s-max sella, please contact your dealer.
s-max sella do not drive	Is the safety chip for the engine immobiliser inserted? If so, please contact your dealer
Batteries don't charge	Please contact your dealer
The battery pack cannot be charged via the charging socket at the unit	Are the fuses of the unit damaged? If so, exchange the fuses.

If there are problems using the s-max sella, please check the following trouble shooting chart and see whether you can fix them yourself.

Potential malfunction is indicated by a light diode (see chapter 6.2.2).

7 Accessories

7.1 Battery pack

The s-max sella works with batteries and is delivered with one battery pack with charging electronics and safety latch.

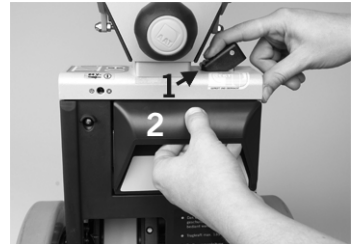
If you use the s-max sella often, i.e. if there are not sufficient breaks for the batteries to be recharged, we recommend you obtain an additional battery pack (available as an accessory). In such case one battery pack is in use while the other is being recharged at the same time.



- ☞ If you do not use the s-max sella both battery packs should be connected to the charger to increase their durability (see chapter 8.3.2).
- ☞ 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 s-max sella using the ON/OFF switch.
2. Press the release button ❶ on top of the climbing unit's housing until it disengages. Now you pull out the battery pack at its handle ❷ from its housing.
3. Push the other fully charged battery pack into its housing. This establishes the power connection and locks the battery pack.

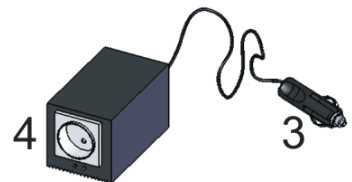


- ☞ The battery pack should always be connected to the charger to extend its durability (see chapter 8.3.2).
- ☞ Please exclusively use the AAT Alber Antriebstechnik GmbH charger to charge your battery pack.

7.2 Voltage converter for your vehicle

We recommend the voltage converter for your vehicle, if you transport the stairclimber s-max sella 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 ❸ is plugged into the cigarette lighter in your car or into the socket of the supply system. The automatic charger's 230 V connector ❹ is plugged into the socket of the converter.



8 Care, maintenance and recycling

To insure the s-max sella 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.

- ☞ In the interest of your safety repairs of any kind may only be done by personnel authorized by AAT Alber Antriebstechnik GmbH. We are happy to inform you about the contact address of the dealer closest to you.

The device itself (as opposed to the batteries) does not need any particular maintenance except for an occasional cleaning (see chapter 8.7).

8.1 New user

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

8.2 Charger

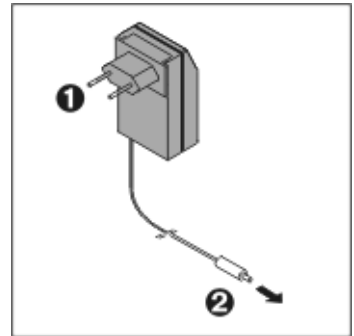
Please exclusively use the AAT Alber Antriebstechnik GmbH charger to charge your battery packs.

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.

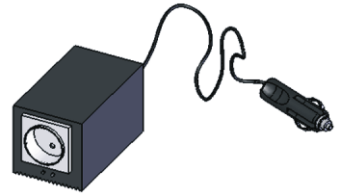
- ☞ Before using the charger, please read and follow all instructions and warning notes included with the charger.
- ☞ Exclusively use the AAT charger to charge the batteries.
- ☞ Check the charger regularly and protect it from oils, grease, aggressive cleaning agents, thinners and/or damage by sharp 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 included with 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. Technical details for the sealed lead acid batteries you find in chapter 8.3.1.)

The battery pack is subject to a so-called self-discharge. Therefore, you should connect the battery pack to the charger whenever possible. Due to the fact that the battery pack automatically goes into charge retention as soon as it is fully charged, an overcharge is impossible.

If your battery pack does not possess its full capacity yet, the reason may be that a new battery pack reaches its full capacity only after several charging/discharging cycles.

If fully charged batteries discharge more quickly as before, they are probably used up. In such case, please have your authorized dealer check and replace them, if necessary.

Tip:

- ☞ If the s-max sella 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.



8.3.1 Sealed lead acid batteries

There are two sealed lead acid batteries 12 V / 3,3 Ah in the battery pack of the s-max sella. These batteries are sealed, maintenance free, rechargeable and of top quality.

The batteries of your s-max sella can be discharged or recharged in any possible position. They are considered as safe as dry cells and admitted for air travel according to DOT and IATA.

The durability of sealed lead acid batteries depends primarily on the charge/discharge cycle. For instance, you may discharge them partially more than 1000 times and use up the entire capacity more than 200 times, if you avoid a total discharge entirely.

A total discharge does not only lead to a loss of the batteries' capacity, but also shortens their durability. Thus, do avoid a total discharge, by recharging the batteries whenever possible!

- ☞ Charging your batteries is taking good care of them
- ☞ Always charge your battery pack with the AAT charger delivered with your s-max sella. This particular charger automatically turns off when the batteries are fully charged keeping them from being overcharged.

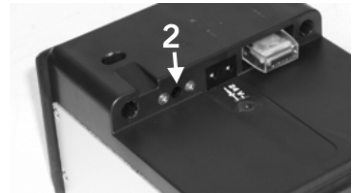
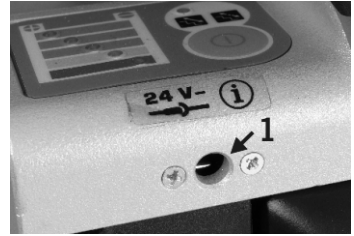
If fully charged batteries run empty faster as usual, then they are probably used up. In such case please have them checked and, if necessary, replaced by AAT Alber Antriebstechnik or its representative.

Damaged batteries you can turn in at designated places for proper recycling. You may also return them to your authorized AAT representative.

8.3.2 Charging the battery pack

- ☞ Before charging, please read and follow all instructions and warning notes included with the charger.
- ☞ Please always turn off the s-max sella before you charge the batteries!
- ☞ Exclusively use the AAT Alber Antriebstechnik GmbH charger!
- ☞ Never touch the plug with moist hands!

The battery pack may be charged either by means of the charging socket ❶ on the device or, if pulled out, by means of the battery pack's socket ❷ itself.

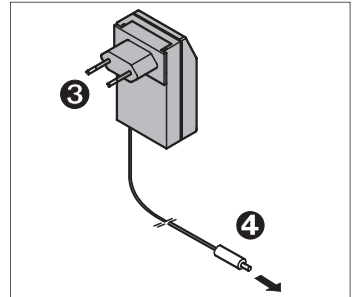


8.3.3 Charging with the automatic charger

1. Plug in the connector ❹ of the automatic charger to the socket on the s-max sella ❶ or on the battery pack ❷.
2. Plug in the connector ❸ to the wall outlet and the batteries are being charged.

The LED on the automatic charger indicates the charging process.

- ☞ Should you charge the batteries while they remain attached to the device, the latter cannot be used!



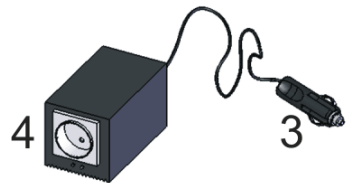
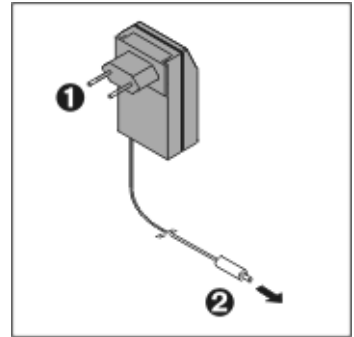
charger	LED orange	batteries are being charged
charger	LED green	batteries are fully charged, maintenance mode

Signals of the charger

8.3.4 Charging in a vehicle

1. Put the plug ② either into the socket on the battery pack or the socket on the s-max sella (please see chapter 8.3.2)
2. Then put the plug ① of the automatic charger into the 230 V connector ④ of the voltage converter.
3. Put the 12 V plug ③ into the cigarette lighter.
4. Turn on the voltage converter by pushing the switch and the batteries are being charged.

A control light (LED) on the charger and a beeper in the voltage converter allow the charging process to be monitored.



charger	LED orange	batteries are being charged
charger	LED green	batteries are charged, retaining of the charge
voltage converter	beeping	12 V supply is low

Signals of the charger and the voltage converter

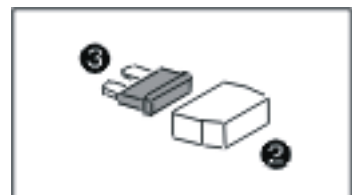
8.4 Fuses battery pack

The battery pack is equipped with a 30 A fuse protected by a cover ①.

- ☞ 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!

To exchange the fuse, pull out the cover ② and the fuse ③; insert the new one and replace the cover.

- ☞ Should your fuses burn out frequently, please contact AAT Alber Antriebstechnik GmbH or your authorized dealer.



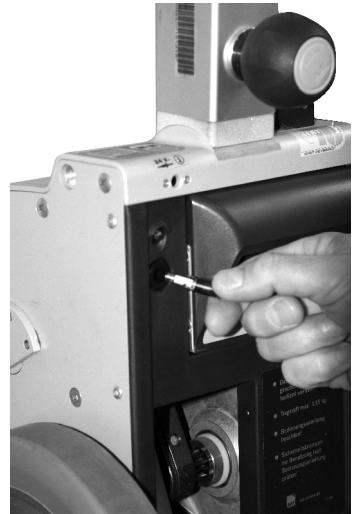
8.5 Fuses unit

The climbing unit is equipped with a 2 A fuse.

- ☞ 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!

To change the fuse, push the fuse holder in while turning it anticlockwise. Pull out the fuse holder and remove the defective fuse. Insert new fuse, turn fuse holder clockwise and fasten.

- ☞ Should your fuses burn out frequently, please contact AAT Alber Antriebstechnik GmbH or your authorized dealer.



8.6 Check brake lining

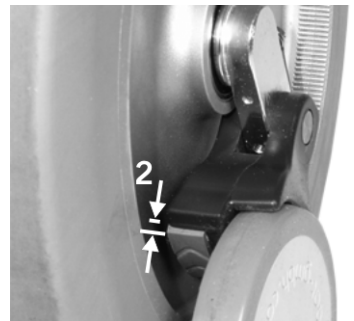
Please check the thickness of the safety brakes' lining ❶ regularly. The minimum thickness is 1 mm ❷. In case the lining is thinner than 1 mm ❷, the lining must be exchanged on both sides. Please contact AAT Alber Antriebstechnik GmbH or your authorized dealer.

- ☞ Please check the safety brakes before each use of the s-max sella (see also chapter 4.3 and 6.4).

The safety brakes, particularly the knurled surface of the brake drums in the wheel rims, must be cleaned weekly or after contamination with a spirit to ensure the optimum braking effect.

- ☞ Never smoke during the cleaning of the device as well as keep it away from ignition source.
- ☞ Please consider the danger warning of the manufacturer previous cleaning the device with spirit.
- ☞ Never use suds or greasy cleaners.

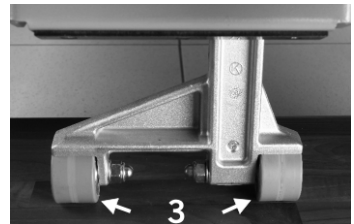
After cleaning the safety brakes must be checked as described in chapter 6.4.



8.7 Check the climbing feet

Please also check the climbing feet ❸ on a regular basis.

- ☞ If the lining is worn or broken, please have both rollers exchanged by AAT Alber Antriebstechnik GmbH or your authorized dealer.



8.8 Cleaning

All parts of the s-max sella - except the safety brakes and the knurled brake drums (see chapter 4.3) can be cleaned with a moist cloth; please use regular mild household cleaners.

- ☞ For safety reasons, please do not use a high-pressure cleaning device!
- ☞ Please use regular mild household cleaners and make sure that no water can get into the the s-max sella.

8.9 Recycling

The s-max sella and its battery pack are products of long durability. However, if your s-max sella is old and has reached the end of its lifespan you may return its components to AAT Alber Antriebstechnik GmbH or your authorized 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 s-max sella is considered a means of transportation and does not fall under this 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 s-max sella 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 one year 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 brake linings, gliding strip housing and climber, tread plate, climbing rollers
- improper and insufficient maintenance
- unauthorized constructional changes or inappropriate use of the device or its accessories
- using the s-max sella 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 s-max sella in case of:

- improper handling of the device.
- repair, assembly or other work performed on the s-max sella by unauthorized persons.
- operation not in accordance with this user's manual.
- extraneous parts added or connected to the s-max sella.
- parts removed from the s-max sella.
- operation exceeding the maximum lifting capacity.
- no regular biannual maintenance check performed by AAT Alber Antriebstechnik GmbH or its authorized personnel.
- operation of the s-max sella with insufficiently charged batteries.



Notes:



Ideen bewegen mehr

s-max sella

AAT Alber Antriebstechnik GmbH

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