Ambulances and driving services
Reliable aids for emergency rescue teams and driving services

Relief for your personnel

STAIR CLIMBERS
by AAT

Ideen bewegen mehr
The company AAT Alber Antriebstechnik GmbH is a manufacturer of mobile, versatile and convenient stair climbing systems and add-on engines in the field of rehabilitation and transportation technology.

All products by AAT are conceived as client-oriented, highly convenient solutions that convince by top quality and state of the art, innovative technology. Thus, AAT as a brand stands for customer satisfaction, flexibility, high quality, innovation and reliability.

With the slogan “Ideen bewegen mehr” (ideas move you) AAT confidently communicates a promise to the world at large and simultaneously it sets high standards for itself.

Years of experience in the field of rehabilitation and transportation technology gives distinction to the great reliability of the products. Highly motivated employees, with their dedication and their creative ideas, make an essential and profound contribution to the products’ quality.

Germany as a location for business is an essential aspect of AAT’s philosophy. In order to react quickly and appropriately to clients’ wishes, AAT attaches great importance to the fact that the majority of their contractors produce in Germany, for the most part even in its immediate vicinity.

The main idea when developing new products is to help people. Thus new fields open up in which original and creative ideas are realized, implemented with the latest knowledge in science and research.

AAT’s products are continuously subject to improvement to do justice to accelerated change in today’s society. Attributes such as safety, versatility, comfort and convenience characterize its products.

In the field of rehabilitation, the stair climbers make it possible to simply conquer the problem of overcoming stairs. This makes a person independent, be it in a private or a professional environment.

In the field of transportation technology, the stair climber makes it possible to transport heavy loads up and down stairs without any problems relieving personnel and staff from carrying said heavy loads.

The add-on engines with their modern technology increase the radius of action and enable a person to be independent and mobile in his or her daily life at home or en route.

Stair climbing systems offering special solutions for airports, ambulances, emergency vehicles as well as the hotel and restaurant business represent AAT’s wide range of mobile stair climbing aids.

Finally, the product portfolio by AAT is completed by customized stair lifts enabling a person to be more mobile in a familiar environment.
CR230
with integrated seat

s-max+
with integrated seat

s-max
to attach to various transportation chairs

s-max sella vario
with seat and brackets

Technical data

Accessories

Service
When transporting patients, often they have to be carried up and down stairs, either from and to the patients’ apartments, or their houses, or on the way to the doctor because there is no elevator in the building.

Paramedics have to overcome this type of obstacles on a daily basis. Therefore, slipped disks are not uncommon and frequently such physical strains lead to permanent damage to health.

With the help of the stair climber s-max, one person alone is capable of transporting a patient comfortably upstairs and downstairs. It makes no difference whether the stairs are inside or outside because the s-max can be used almost everywhere. In addition, stair coverings are not damaged.

The stair climber, s-max, can be attached to a great number of transportation chairs—also in a used state or retroactively. Depending on the frame and the measurements of the chair, either the s-max 135 or the s-max 160 are used.

When transported in a vehicle, the s-max 160 can stay attached to the ALS 300 of the company Utila, as well as the Dlouhy Ecocraft light. Both combinations are tested (crash test) and approved by the TÜV Rhineland according to EN 1789:2007+A2:2014. With all other transportation chairs, the stair climber needs to be transported in a separate storing place in the vehicle. There are diverse possibilities available by various vehicle reconstruction companies.

A special power jack on the stair climber in connection with charging components makes it possible to charge the device during the ride.

To use the s-max is really easy. The continuously adjustable climbing speed facilitates climbing difficult stairs allowing for an optimum adjustment to each complicated situation of transportation. In addition, the s-max serially offers the ComfortStep, which makes climbing comfortable and a low vibration experience.
The patient can be driven directly into the ambulance over a ramp.
The lifting and carrying of persons/patients up and down stairs on a daily basis is one of the greatest physical challenges for the personnel of rescue services and ambulances.

Often this type of work leads to acute or chronic back pains or injuries.

Due to the tendency of an increase in patients’ weights and the continuously increasing number of missions, it is indispensable to search for solutions to physically relieve your personnel in the long run. AAT presents the solution with the newly developed mobile stair climber CR230.

The maximum person’s weight the CR230 can manage is 230 kg.

Advantages that convince:
- Maximum person’s weight of 230 kg
- Foldable, thus space-saving in storage
- Sturdy and state of the art quality “made in Germany”
When strain turns into relief

A special charging jack on the stair climber in connection with specifically provided charging components make it possible to charge the device in the vehicle while driving to an emergency call.

The CR230 is a stair climber with a foldable, integrated seat. It can be folded in next to no time and is easily stored thanks to its compact dimensions.
The ideal attendant for daily use

With the extendable guide handle you have the chance to direct the CR230 while climbing the stairs. Moreover the second person convey the patient a comfortable and safe feeling. The function of this person is only safeguarding, but not elementary necessary for operating.

The climbing speed of the CR230 is continuously adjustable. Safety brakes stop automatically at the edge of the stairs. Thereby you could correct on the stairs on any time.

The control unit and the grips are designed considering the latest ergonomic findings.
ComfortStep

ComfortStep is a standard feature of each s-max and CR230 stair climber and works in the single step as well as the continuously climbing mode.

Further features such as the double LED to light up dark stairs or the multi-level display to indicate the batteries’ capacity complete the CR230’s standard equipment.
ComfortStep
Climbing stairs newly defined!
The transportation of bariatric persons up and down stairs is often a great challenge. Sometimes it takes up to 8 people to painfully carry a patient in a carry-sling up and down stairways. In most cases this is an unpleasant experience for both, patient and personnel.

Advantages, that convince

- With the c-max+ 2 people can transport a patient safely and comfortably up and down stairs all the way to the ambulance
- Maximum weight of the patient is 300 kg
- Safe due to automatic brakes
- Suitable for almost all kinds of stairs
- The climbing system is low in maintenance and reliable as proven manifold
- “Made in Germany”, state of the art, top quality, and sturdy

The increased model c-max+ is laid out for 300 kg (maximum weight of the person).
Innovative technology –
for more safety and comfort

The following device combinations respectively stair climbers are crash tested according DIN EN 1789:2007+A2:2014.

- s-max D1604 with the transportation chair Utila ALS 300 and the original Utila floor rail
- s-max D1604 with the transportation chair Utila ALS 300 and the original AAT floor rail
- s-max D1604 with the transportation chair Stollenwerk 6001 and the original Stollenwerk floor rail
- s-max D1604 with the transportation chair Stollenwerk 6001 and the original AAT floor rail
- s-max D1604 with the transportation chair Dlouhy Ecocraft light and the original Dlouhy floor rail
- s-max D1604 with the transportation chair Dlouhy Ecocraft light and the original AAT floor rail
- CR230 with the original AAT floor rail or locking system for floor mounting
- c-max+ with the original AAT floor rail and an additional retractor restraint system
- c-max+ with the original AAT locking system for wall mounting

The versions with the AAT floor rail are also available with an electrical unlocking mechanism.

Floor rails from AAT

To lock selected devices and device combinations in an ambulance vehicle we offer various floor rails with a manual or electrical unlocking mechanism.
Safety in XXL –

Crash tested mounting systems for the c-max+

For fixing the c-max+ in the unfoldable condition a special mounting system is required.

This system contains an AAT floor rail and additionally a retractor restraint concept.

The locking takes place in the „allsafe“ airline track „heavy-duty“. 
Easy and safe fixing —
Crash tested mounting systems for the CR230

For fixing the CR230 in the unfoldable condition a mounting system with a special AAT floor rail is required.

The locking takes place in the „allsafe“ airline track „heavy-duty“. The AAT floor rails are available with a mechanical as well as an electrical unlocking mechanism.
s-max 160

Dlouhy Ecocraft light

The s-max 160 in combination with the Dlouhy Ecocraft light has been tested (crash test) and approved by the TÜV Rhineland according to EN 1789:2007+A2:2014.
The Utila ALS 103 / ALS 105 can be combined with the s-max 135.

The s-max 160 in combination with the transportation chair ALS 300 by the company Utila has been tested (crash test) and approved by the TÜV Rhineland according to EN 1789:2007+A2:2014.
s-max 160

Utila ALS 400

The s-max 160 can be used in combination with the transportation chair ALS 400 by the company Utila.
s-max 160

Stollenwerk 6001

The s-max 160 can be mounted to the Stollenwerk 6001.
Special installations provide a safe place inside the ambulance for each unit.
The s-max 160 can be mounted to the Stair-PRO 6251 by Stryker.

The s-max 135 can be mounted to the model Stryker Stair-PRO 6252, equipped with a transportation crawler. With a special adaptation the mounting and use of the s-max 160 is also possible.
**FURTHER COM**

**s-max 160**
SYSTEM STROBEL transportation chair

**s-max 135**
Medirol Clubman K116

**s-max 160**
Atos Star Europa
FURTHER COMBINATIONS

s-max 160
Kartsana

s-max 160
Pensi

s-max 135
FERNO 59 T

s-max 160
Evac-chair carry lite
Your solution for all wheelchair transports —
with the right accessories

Transporting persons in their own wheelchair is a great challenge in various ways. Many buildings have stairs already in the foyer or the entrance area.

With the help of the stair climber s-max in combination with the universal rack SDM7 it is possible to transport a person in his own wheelchair easily and comfortably up and down stairs. Incidentally, it does not matter whether the stairs are inside or outside.

The combination s-max / SDM7 is available with a maximum lifting capacity of 155 kg or 160 kg.

Because of its universal application such as for the transportation of ill or handicapped people or its use in public buildings, the SDM7 becomes your ideal and indispensable solution for all problems of transportation.
Intelligent accessories by AAT
To transport people with less mobility or in their own wheelchair is a particularly challenge in many respects. In many buildings staircases have to overcome not only in the entrance area.

Especially for this purpose the s-max sella vario was developed. It offers the possibility to manage both transport situations with one device.

With the s-max sella vario it is possible to transport a person in their own wheelchair or a mobility-impaired person seated very convenient over staircases. It is equal whether if it’s a matter of inside or outside staircases.

The total weight approved of the s-max sella vario depends to the version of use. In use with the integrated seat the total weight approved is 195 kg, as universal rack 160 kg.

The operation of the s-max sella vario is very easy. After a short training the operator could handle the device safely. The continually adjustable climbing speed relieves to overcome difficult staircases and enables a best adaptation to each transport situation. Furthermore the standard integrated safety chip protects against unauthorized use.

Based on the universal application possibilities the s-max sella vario becomes to the perfect favourable and indispensable transport solution.

With just a few movements the handle units can be exchanged.
ComfortStep

The combination of pleasant driving characteristics and a comfortable climbing experience

ComfortStep was developed for the stair climber series s-max and c-max. It revolutionizes the previously existing climbing kinematics of these stair climbers.

For the transported person this is particularly evident because of a comfortable climbing process characterized by low vibrations.

ComfortStep is a standard component of each s-max and c-max stair climber. It works in the single step mode as well as in the regular climbing mode.

The adaptation to a variety of step heights is a further function provided by ComfortStep. This makes an easy and individual adaptation to your particular stairs possible.

Advantages that convince

- Pleasant and comfortable climbing process
- Individually adjustable to various steps’ heights
- Available for the single step mode as well as the regular climbing mode
ComfortStep

Climbing stairs newly defined!
Ambulances and driving services

Reliable aids for emergency rescue teams and driving services
### Technical data

<table>
<thead>
<tr>
<th></th>
<th>CR230</th>
<th>c-max*</th>
<th>s-max 135</th>
<th>s-max 160</th>
<th>Version with wheelchair universal rack</th>
<th>Version with integrated seat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total weight approved</td>
<td>268 kg</td>
<td>380 kg</td>
<td>155 kg</td>
<td>180 kg</td>
<td>180 kg (s-max sella vario + Person + Rollstuhl)</td>
<td>195 kg (s-max sella vario + Person)</td>
</tr>
<tr>
<td>Max. weight of the person</td>
<td>230 kg</td>
<td>300 kg</td>
<td>115 kg</td>
<td>140 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climbing speed</td>
<td>7 — 19</td>
<td>3 — 8</td>
<td>5 — 20</td>
<td>8 — 23</td>
<td>8 — 23</td>
<td></td>
</tr>
<tr>
<td>Range with one charge of the batteries</td>
<td>approx. 20 levels (equals 300 steps)</td>
<td>approx. 20 levels (equals 300 steps)</td>
<td>approx. 26 levels (equals 300 steps)</td>
<td>approx. 20 levels (equals 300 steps)</td>
<td>approx. 20 levels (equals 225 / 300 steps)</td>
<td></td>
</tr>
<tr>
<td>Max. height of step I extended</td>
<td>210 l 225 mm</td>
<td>210 mm</td>
<td>220 l 235 mm</td>
<td>220 l 235 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width, handle</td>
<td>496 mm</td>
<td>527 mm</td>
<td>495 mm</td>
<td>495 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>1044 l 864 mm</td>
<td>1186 l 1030 mm</td>
<td>362 mm</td>
<td>362 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height min.</td>
<td>1302 l 150 mm</td>
<td>1490 l 1837 mm</td>
<td>1150 l 1550 mm</td>
<td>1150 l 1550 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batteries</td>
<td>2 x 12 V / 5 Ah</td>
<td>2 x 12 V / 5 Ah</td>
<td>2 x 12 V / 3,3 Ah</td>
<td>2 x 12 V / 3,3 Ah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight, climbing unit</td>
<td>33.5 kg</td>
<td>74.8 kg</td>
<td>19 kg</td>
<td>20.1 kg</td>
<td>30 kg</td>
<td>39.1 kg</td>
</tr>
<tr>
<td>Weight, battery pack</td>
<td>4.2 kg</td>
<td>4.5 kg</td>
<td>3.0 kg</td>
<td>3.0 kg</td>
<td>3.0 kg</td>
<td></td>
</tr>
<tr>
<td>Total weight</td>
<td>37.7 kg</td>
<td>79.3 kg</td>
<td>22 kg</td>
<td>23.1 kg</td>
<td>33 kg</td>
<td>42.1 kg</td>
</tr>
</tbody>
</table>

(1) Please note the maximum load stipulated by the wheelchair manufacturer.

(2) The climbing speed as well as the range with one charge of the batteries is reduced if the ComfortStep is activated.

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

The company AAT Alber Antriebstechnik is a member of the QVH and has been awarded the quality stamp according to the inspection of quality standards for medical vehicles. AAT is certified according to DIN EN ISO 9001:2008 and EN ISO 13485:2003 + AC:2007.
Innovative details with great impact!

Inclination indicator

The inclination indicator supports you to find the ideal angle when climbing up or down.

If the device will be held too steep or flat the handle begins to vibrate.

Integrated LED lighting

Among others an integrated LED lighting is part of the well-engineered safety concept of the CR230 and s-max 135.

Therefore the stairs will be optimum illuminated in the dark and a safe operation is possible.
With the right accessories —
equipped for all kinds of situations

Head rest
Widening of the arm rests
Seat belt system including hip belt
Hip belt
Inclination indicator
Increase of climbing height
Voltage converter
Universal box step
Locking system for wall mounting s-max
AAT floor rail with an electrical or mechanical unlocking system

<table>
<thead>
<tr>
<th>Accessories</th>
<th>CR230</th>
<th>c-max*</th>
<th>s-max 135</th>
<th>s-max 160</th>
<th>s-max sella vario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head rest</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Arm rests</td>
<td>•</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Widening of the arm rests</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>•</td>
</tr>
<tr>
<td>Seat belt system including hip belt</td>
<td>-</td>
<td>-</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Hip belt</td>
<td>-</td>
<td>-</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Inclination indicator</td>
<td>-</td>
<td>-</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Increase of step's height</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Car charger</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Voltage converter</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Floor rail</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Locking system for wall mounting s-max</td>
<td>-</td>
<td>-</td>
<td>•</td>
<td>•</td>
<td>-</td>
</tr>
<tr>
<td>Locking system for wall mounting c-max*</td>
<td>-</td>
<td>•</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Locking system for floor mounting CR230</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Further accessories on request.
AAT Serviceconcept
Customer service at the highest stage

With our professional service concept AAT proves once again its high claim of quality and offers his clients an all-inclusive package.

We are there for you!

SERVICE-CENTER

Phone: +49.7431.12 95-550
Telefax: +49.7431.12 95-540
E-Mail: service@aat-online.de

- Spare parts
- Repairs processing
- Technical advice
- Product seminars

- Show room exhibition devices
- Re-use
- Complaints
- Loaner devices
Groundbreaking, due to innovative technology —

Stair climbers of AAT convince on all counts

Our incentive at AAT is to offer you more mobility and quality of life by means of intelligent technology. All our know-how and expertise gained in many years of experience developing powered systems for wheelchairs and climbing aids produced an intelligent, reliable and safe system that offers numerous advantages.