

en

## ***Electric wheelchair***

Model 1.610 / 1.611 / 1.612 /  
1.613 / 1.615 / 1.616

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## ***Operating manual***

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# INTRODUCTION

We thank you for the confidence you have placed in our company by choosing an electric wheelchair from this series.

With all equipment and their accessories the electric wheelchair offers the respective adaptation to your disability.

Like any other vehicle, an electric wheelchair is a technical aid. It is subject to explanations, requires regular care and can cause danger when used improperly. The correct handling must therefore be learned. This operating manual is to help you get accustomed to the handling of the electric wheelchair as well as to prevent accidents.

## **Note:**

Please note that the illustrated equipment variants can deviate from your model.

We have therefore also listed chapters with options that might not be applicable for your vehicle.

## Important information

### **Attention:**



Read and observe the following documentation belonging to the electric wheelchair before first use:

- this operating manual,
- the operating manual < *Operating module* > ,
- the safety and general handling instructions < *Electric vehicles* > .

## **Note:**

Children and juveniles should read the documentation belonging to the electric wheelchair together with their parents respectively a supervisor or accompanying person before first use.

Users with visual impairments can find the PDF-files of above mentioned documents on our website under:

< [www.meyra.com](http://www.meyra.com) > .

 Contact your specialist dealer when required.

Alternatively users with visual impairments can have the documentation read out by a helper.

Additional information about our products can be found on our website:

< [www.meyra.com](http://www.meyra.com) > .

 Contact your specialist dealer when required.

# INDICATIONS

If the following indications occur we recommend the application of this mobility product:

 Walking disability resp. extremely limited walking ability as part of the basic need to move around in your own home.

 The need to be able to leave home for a short walk in fresh air or in order to reach the places, commonly in the perimeter of the home, required to fulfil basic needs.

## **SPECIFICATIONS**

The electric wheelchair is an environment-friendly electric vehicle. The electric wheelchair models 1.610, 1.611, 1.612, 1.613 and 1.615 were developed for adolescents and adults and model 1.616 for adolescents and adults of small stature in order to enlarge the radius of action in patient care or age-related limitations.

- ✎ The model has been assigned the 'Use Class B' as per the EN12184 standard.

## **LIST OF MODELS**

This operating manual applies to the following models:

Model 1.610  
Model 1.611  
Model 1.612  
Model 1.613  
Model 1.615  
Model 1.616

## **ACCEPTANCE**

All products are checked for faults in the factory and packed in special boxes.

- ✎ **Note:**  
However, we request that you check the vehicle for possible transport damage immediately on receipt – preferably in the presence of the carrier.
- ✎ The packaging of the wheelchair should be stored for a further transport that might become necessary.

## **USE**

The electric wheelchair, with attached leg supports and arm supports, serves exclusively for the conveyance of one sitting person. Other pulling or transporting uses do not comply with its intended purpose.

This model is an electric wheelchair especially for indoor and outdoor use on firm, level surfaces.

The electric wheelchair offers manifold adjustment possibilities to individual vital statistics.

The wheelchair should be adapted to your needs by a specialist dealer before the first use. The adaptation will take into account the driving experience, the physical limits of the user and the main place of use of the wheelchair.

### **Attention:**

- ! Always have adaptation and adjustment work carried out by a specialist dealer.

National regulations may prevent taking them on busses or trains.

- ✎ Inform yourself at the transportation companies concerning limitations.

## ADJUSTMENT

The specialist workshop will hand out the electric wheelchair to you under consideration of all relevant safety instructions, ready for operation and adjusted to your needs.

### **Note:**

We recommend a regular control if the wheelchair adjustment in order to ensure a long-term optimal provision even with changing illness/handicap patterns of the user. Especially for children and juveniles an adjustment every 6 months is recommendable.

-  We recommend regular medical exams in order to ensure safety for active participation in traffic.
-  Retrospective adjustments should be carried out solely by the specialist dealer!

## LIFE SPAN

We expect an average life span of about 5 years for this product, as far as the product is applied for its designated purpose and all maintenance and service guidelines.

The life span of your product depends upon the frequency of use, the application environment and care.

The implementation of spare parts can prolong the life span of the product. As a rule spare parts are available up to 5 years after production is discontinued.

-  The indicated lifespan does not constitute additional guarantee.

## BASE POSITION

### **Attention:**

-  Only drive on slopes, inclines and obstacles in the basic position of the seat rising function, back inclination and seat angle. – Danger of overturning!

Basic position is to be understood as:

- Seat height adjustment in the lowest position
- Back inclination in upright position
- Seat inclination in horizontal position (but max 10°)

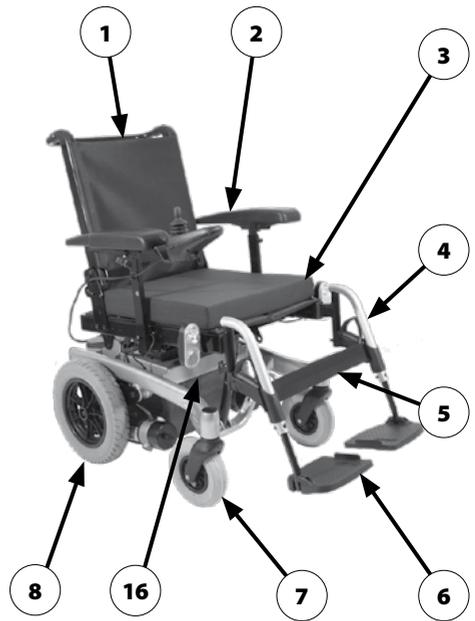
# OVERVIEW

## Model 1.610

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Seat cushion
- (4) Leg support
- (5) Calf belt
- (6) Footplate
- (7) Steering wheel
- (8) Driving wheel
- (9) Shunting rod
- (10) Operating module
- (11) Front lighting
- (12) Selection lever drive-/push mode
- (13) Support castor
- (14) Battery case
- (15) Rear lighting
- (16) Type plate



# OVERVIEW

## Model 1.611

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Seat cushion
- (4) Leg support
- (5) Calf belt
- (6) Footplate
- (7) Steering wheel
- (8) Driving wheel
- (9) Shunting rod
- (10) Operating module
- (11) Front lighting
- (12) Selection lever drive-/push mode
- (13) Support castor
- (14) Battery case
- (15) Rear lighting
- (16) Baggage rack
- (17) Type plate



# OVERVIEW

## Model 1.612

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Seat cushion
- (4) Leg support
- (5) Calf plate
- (6) Footplate
- (7) Steering wheel
- (8) Driving wheel
- (9) Shunting rod
- (10) Operating module
- (11) Front lighting
- (12) Selection lever drive-/push mode
- (13) Support castor
- (14) Battery case
- (15) Rear lighting
- (16) Baggage rack
- (17) Type plate



# OVERVIEW

## Model 1.613

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Operating module
- (4) Front lighting
- (5) Driving wheel
- (6) Leg support
- (7) Support castor
- (8) Selection lever drive-/push mode
- (9) Steering wheel
- (10) Rear lighting
- (11) Shunting rod
- (12) Type plate



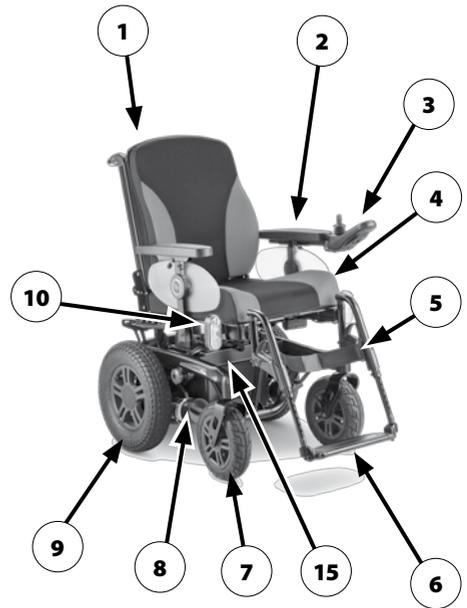
# OVERVIEW

## Model 1.615

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Operating module
- (4) Seat cushion
- (5) Calf belt
- (6) Footplate
- (7) Steering wheel
- (8) Selection lever drive-/push mode
- (9) Driving wheel
- (10) Front lighting
- (11) Shunting rod
- (12) Baggage rack
- (13) Support castor
- (14) Leg support
- (15) Type plate



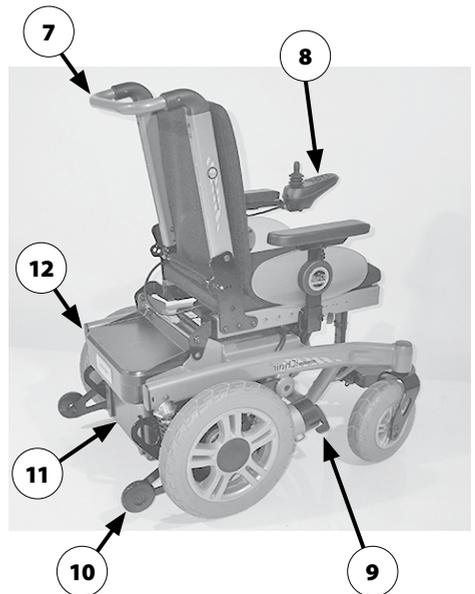
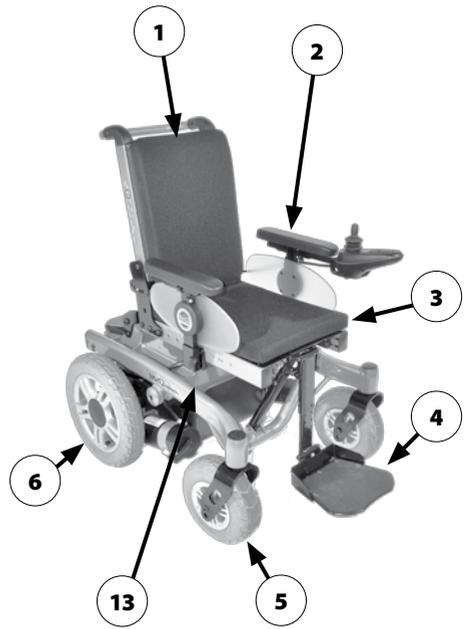
# OVERVIEW

## Model 1.616

The overview shows the most important components and operating devices of the electric wheelchair.

Pos. Description

- (1) Back support
- (2) Arm support
- (3) Seat cushion
- (4) Footplate
- (5) Steering wheel
- (6) Driving wheel
- (7) Shunting rod
- (8) Operating module
- (9) Selection lever drive-/push mode
- (10) Support castor
- (11) Battery case
- (12) Lighting
- (13) Type plate



# HANDLING THE ELECTRIC WHEELCHAIR

## Securing the electric wheelchair

The electric wheelchair is to be secured as follows to prevent it from rolling off unintentionally:

1. Switch the selection lever for drive-/push mode up to drive mode on both sides.
2. Switch off the operating module.

## Functional checks

The functions and safety of the electric wheelchair must be checked before the start of each journey.

- ☞ For this observe chapter < *Inspections before starting to drive* > in the accompanying documentation.

## Driving

You define the speed and direction yourself with the joystick movements (driving and steering lever) while driving as well as the preadjusted maximum final speed of your electric wheelchair.

# BRAKES

## Service brake

The motors work electrically as operating brake and carefully brake the electric wheelchair down without jerks to stillstand.

## Braking the wheelchair

For allotted braking of the wheelchair slowly guide the joystick (steering and driving lever) back to the centre position (zero-setting).

- ☞ The electric wheelchair stops in shortest distance after releasing the joysticks.

## Parking brake

The parking brakes are only effective when the selection lever drive-/push mode is set to drive mode on both drives. They disengage automatically when the wheelchair starts off.

The parking brakes are manually disengaged by switching the selection lever drive-/push mode on both drives to push mode.

## Locking the brakes

To engage the brakes swivel the selection lever drive-/push mode on both sides as far as possible into drive mode [1].

- ☞ Activation of the selection lever is intended for an accompanying person.

### Attention:

- ! It should not be possible to push the electric wheelchair forward when the brakes are engaged.



## Releasing the brakes

To loosen the brakes swivel the selection lever drive-/push mode on both sides down as far as possible into push mode [2].

- ☞ Activation of the selection lever is intended for an accompanying person.

### Attention:

- ! Only transfer into or out of the electric wheelchair when the electric wheelchair is switched off and the selection lever drive-/push mode on both sides is in drive mode!
- An unintentional movement of the joysticks (driving and steering lever) can otherwise lead to an uncontrolled start of the electric wheelchair! – Danger of accident!



## Drive-/push mode

### Attention:

- ! Only switch the electric wheelchair to push mode when it is standing still for positioning or in case of emergencies, but not on slopes/hills.
- ☞ The electric magnetic brakes are switched off in the push mode.
  - A braking of the electric wheelchair is then only possible by switching to the drive mode.
- ☞ Grab hold of the shunting handle and back support in order to shunt the electric wheelchair.

### Selecting the push mode

1. Switch off the operating module because the pushing will otherwise be made difficult by the electric system.
  - ☞ Therefore observe operation manual < *Operating module* >.
2. Disengage the brakes [1].
  - ☞ Therefore observe chapter *Releasing the brakes* on page 17.

The electric wheelchair can now be pushed.

### Selecting the motor mode

1. Activate the brakes [2].
  - ☞ Therefore observe chapter *Locking the brakes* on page 17.
2. Switch the operating module on.
  - ☞ Therefore observe operation manual < *Operating module* >.

The electric wheelchair is now ready for use again.



# SELECTING THE OPERATION

In order to obtain operational readiness of the electric wheelchair the following directions are to be carried out in the indicated order.

 **Note:**

Charge the drive batteries via the operating module before the first journey.

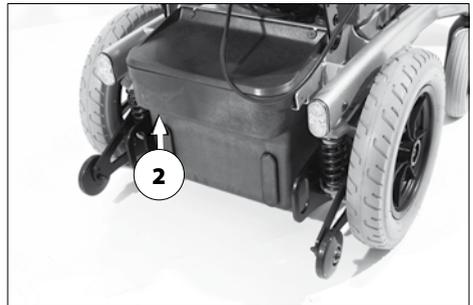
1. Selecting the motor mode

Switch the drive motors to the drive mode [1]. – For this engage the brakes.

 Observe chapter *Locking the brakes* on page 17.

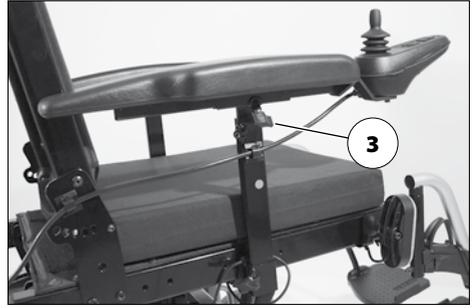
2. Check the correct fit of the battery/ mains fuse

 The blade fuse for the battery/main current has to sit tightly in the fuse holder (2).



3. Position of the operating module

- ☞ The operating module should be positioned in such a way that you can comfortably and safely steer the electric wheelchair.
- ☞ The distance of the operating module to the padded arm supports can be adjusted after loosening the clamping screw (3).



**Attention:**

! After the adjustment retighten the clamping screw.

- ☞ For this observe chapter *Positioning the operating module* on page 22.

4. Switch the operating module on

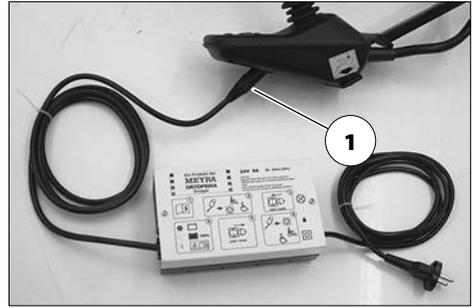
- ☞ Press the On/Off-key (4) on the control panel of the operating module.
- ☞ Therefore observe operation manual < *Operating module* >.



## Pre-operation checks

Before starting to drive, the following should be checked:

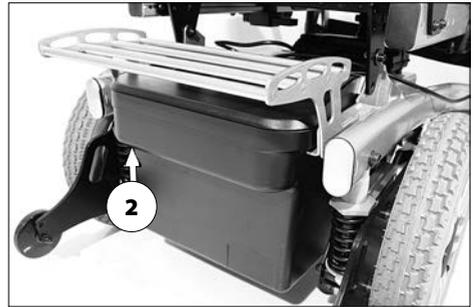
- ☞ the battery charging condition,
  - ☞ the setting of the preselected final speed.
- For this observe the operating manual < *Operating module* >.



## Battery charging procedure

☞ For the battery charging procedure also observe the operating manual of the battery charger.

1. Lock the electric wheelchair.
  - ☞ Therefore observe chapter *Securing the electric wheelchair* on page 16.
2. Insert the charger plug into the battery charging socket (1) of the operating module.



### Attention:

- ! Do not insert any objects other than the battery charger plug into the battery charging socket.
- – Danger of short circuit!
3. Switch the battery charger on, resp. insert the main plug of the battery charger into the corresponding power socket.
    - ☞ The charging procedure is initiated.
    - ☞ The charging procedure only runs with an intact mains/battery fuse (2)!
  4. After a completed charging procedure disconnect the battery charger from the socket and remove the battery charging plug from the battery charging socket.

## Positioning the operating module

### Function description

You will find a detailed description of the keys and symbols in the operating manual for < *Operating module* >.

The position of the operating module can be adjusted to suit the individual size of the user. The operating module can also be removed for transportation or storage and can be laid on the seat or stored separately.

### Attention:

! Switch off the operating module before adjusting/removing it.

### Adjusting the distance to the padded arm support

Slacken the clamping screw distance adjustment (1). Afterwards slide the operating module into the desired position. In doing so carefully guide the cable and retighten the clamping screw (1) securely.

### Removing the operating module

In order to remove the operating module loosen the clamping screw (1) and disconnect the plugged connection (2) (4).

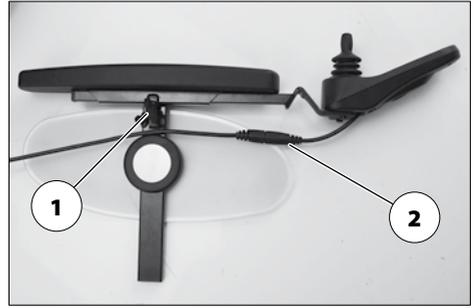
⚠ Do not pull on the cable while doing so.

Afterwards pull out the operating module toward the front out of the arm support tube.

### Inserting the operating module

For drive mode insert the operating module from the front into the arm support tube [3] and adjust the distance to the padded arm support.

⚠ Therefore observe chapter *Adjusting the distance to the padded arm support* on page 22.



Afterwards re-establish the plugged connection (4) (2).

⚠ Check the function of the operating module.

## Swivelling the operating module

With the optional swivel away operating module adapter [1] the operating module can be swivelled back to the side (2) so that it is located parallel to the arm support. This makes it possible, for example:

- to drive closer to a table,
- remove the operating module more easily.

For regular drive mode the operating module can be swivelled back toward the front until it engages back into the magnetic lock [1].

### **Note:**

The power of the magnets (3) can be reduced, for example with tape on top of the magnets, for easier swivelling of the operating module.

-  Should the operating module be positioned too close to the arm support, move it forward before swivelling.

### **Attention:**

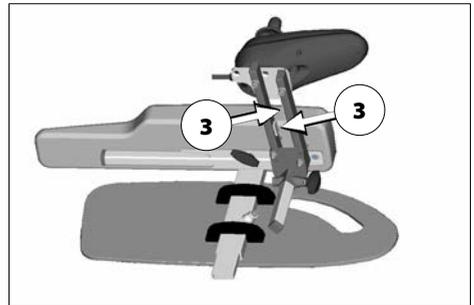
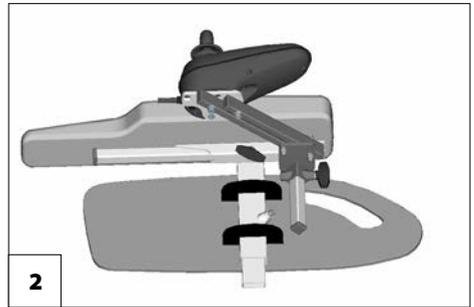
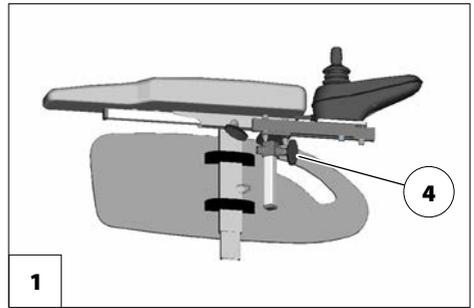
-  Do not grab into the area of the cross brace. – Danger of squashing!

## Height adjustment of the operating module

Loosen the clamping screw (4) to adjust the height of the operating module.

### **Attention:**

-  After the adjustment retighten the clamping screw.



## LEG SUPPORTS

### Attention:

- ! Before any actions on the leg supports the wheelchair is to be secured against unintentional rolling motions.
- ☞ Therefore observe chapter *Securing the electric wheelchair* on page 16.

## Calf belt

The removable calf belt (1) prevents the feet from sliding off the back of the footplates.

### Attention:

- ! Do not drive without the calf belt.  
– Danger of accident!
- ☞ **Note:**  
The calf belt must be removed in order to swivel away the leg supports [2].
- ☞ The calf belt is omitted for height adjustable leg supports and is replaced by a calf pad.



## Removing the calf belt

For removal the calf belt is to be pulled from the attachment pins (3).

## Attaching the calf belt

For attachment both loops of the calf belt are slid over the attachment pins [4].

## Length adjustment of the calf belt

For length adjustment, the calf belt is guided around the special attachment pins (2) and adjusted in length with a velcro fastener.

## Lower leg support

For entry or exiting the footplates resp. footboard is to be folded upward [1] + [2] or the central leg support [2] lowered to the floor.

- ☞ Check the locking points!
- Remove both feet from the footplates.
- Remove the calf belt (3), if present.
- ☞ Therefore observe chapter *Calf belt* on page 24.
- ☞ Before starting to drive the footplates resp. footboard need to be folded back down [4] and the calf belt attached.

## Footplates

The footplates can be folded outward and up [1] resp. inward and down [4].

## Footboard

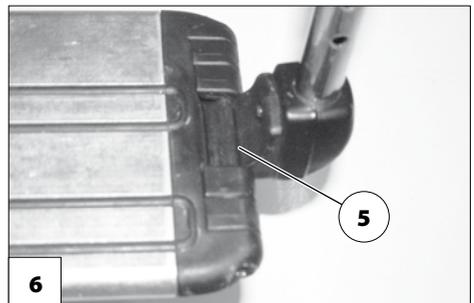
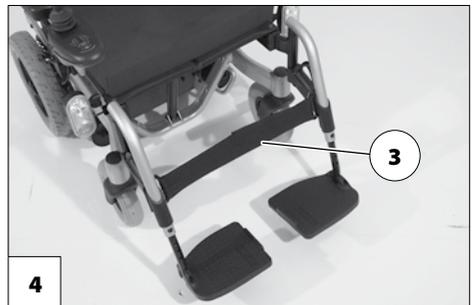
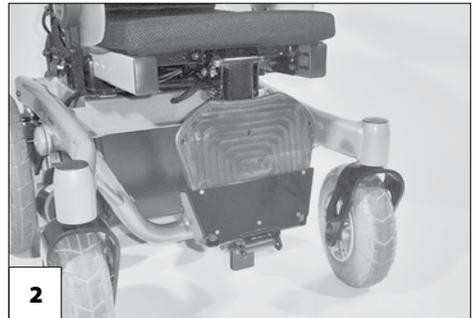
Fold the footboard up before swivelling away and removing the upper leg support.

## Folding up the footboard

In order to fold up the footboard lift the loose end of the footboard (5) as far as possible.

## Folding the footboard down

In order to fold down the footboard, lower the loose end of the footboard as far as possible down onto the footboard bracket [6].



## Leg support upper part

The upper leg support with an inserted lower leg support is termed leg support.

### Turning the leg supports to the side

For easy transfer out of/into the electric wheelchair as well as driving closer to a closet, bed or bathtub the leg supports can be swivelled away toward the in-/outside [1] and [2].

#### **Note:**

Remove the calf belt before swivelling away the leg supports.

 Therefore observe chapter *Calf belt* on page 24.

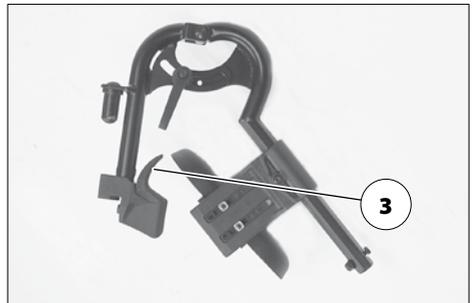
#### **Attention:**

 Leg supports turned to the side are released automatically and can easily come off. Note this when handling (e.g. transport).

– Fold up the footplates resp. footboard in order to swivel away the leg supports.

 Therefore observe chapter *Lower leg support* on page 25.

– Afterwards pull or press the respective locking lever (3) backward and swivel the corresponding leg support outward.



## Swivelling in the leg supports

For inward swivelling, let the leg supports swivel forward until the lock audibly engages [1].

 **Note:**

After audibly swivelling the leg supports inward check the respective locking device.

-  Afterwards observe chapter *Lower leg support* on page 25.



## Removing the leg supports

For easy transfer into and out of the electric wheelchair as well as a reduced wheelchair length (important for transport) the leg supports can be removed [1].

### **Note:**

Remove the calf belt before swivelling away the leg supports.

 Therefore observe chapter *Calf belt* on page 24.

- For removal first swivel the leg support sideways and then remove them toward the top [1].

 Therefore observe chapter *Turning the leg supports to the side* on page 26.

 Watch for possible danger of jamming!

## Attaching the leg supports

- For inserting press the leg supports, swivelled to the side, parallel to the front frame tube and lower it into place [2]. – In doing so the holding pin must slide into the frame tube.

### **Note:**

After attachment swivel the leg supports inward [3].

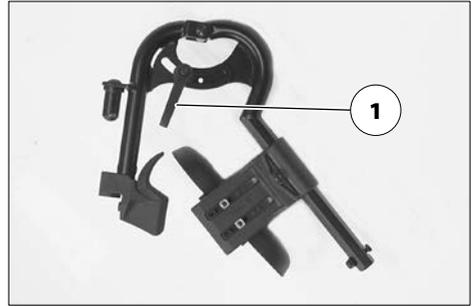
 Therefore observe chapter *Swivelling in the leg supports* on page 27.



## Mechanically height-adjustable leg supports

### Attention:

- ! Never put the free hand into the adjustment mechanism while adjusting the height adjustable leg support. – Danger of jamming!
- Have the leg support that is to be adjusted secured against falling away by an accompanying person.



### Lifting/lowering the leg support

1. Before lifting/lowering relieve the leg support by an accompanying person by slightly lifting it up.
2. Afterwards loosen the clamping lever (1) and have the leg support lifted/lowered slowly to the desired level by an accompanying person.

### Attention:

- ! Do not let the leg support drop on its own weight. – Danger of injury!
3. After the adjustment retighten the clamping lever (1).

## Electrically height-adjustable leg support

The electrically height adjustable leg support [1]+[2] automatically receives electric contact when hooked on.

### Attention:

- ! Never put the free hand into the adjustment mechanism while adjusting the height adjustable leg support. – Danger of jamming!

### Height adjustment

For height adjustment, raise or lower the leg support to the desired height via the operating module (1)+(2).

- ☞ Therefore observe operation manual < *Operating module* >.

### Attention:

- ! Observe the safety and general handling instructions < *Electronic vehicles* >!



## Removing the electrically height adjustable leg support

In order to remove the leg support, depending on version, first pull the locking lever (1) back, press it in or fold it up or down.

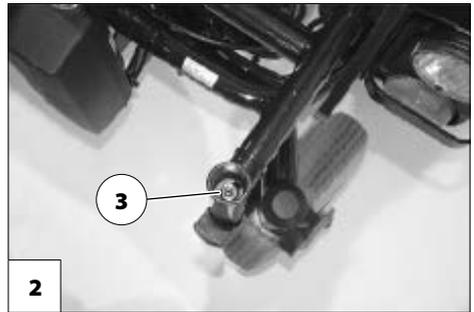
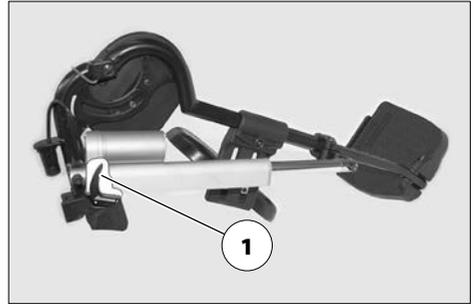
Afterwards swivel the leg support sideways and remove it toward the top [2].

- ☞ Therefore observe chapter *Turning the leg supports to the side* on page 26.

### Attention:

! When the electrically height adjustable leg supports are removed the electric contact (3) needs to be protected from dampness, water and dust or dirt (e. g. for longer storage)!

- ☞ Possible function error of the electrical adjustment.
- ☞ For protection you can for example use the optional cover cap.



## Hanging the electrically height adjustable leg support into place

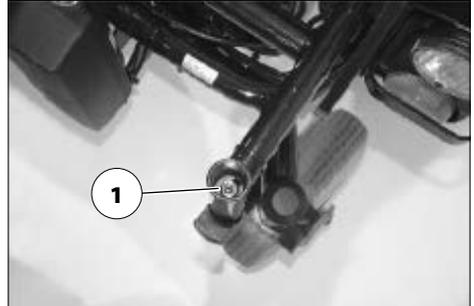
### ☞ Note:

After attachment swivel the leg supports inward.

- ☞ Therefore observe chapter *Swivelling in the leg supports* on page 27.

Press the leg supports, swivelled to the side, parallel to the front frame tube and lower it into place. – In doing so the holding pin must slide into the frame tube (1).

- ☞ Conduct a function test on the electrically height adjustable leg support!



# ARM SUPPORTS

## Attention:

- ! Do not use the arm supports [1] to lift or carry the electric wheelchair.
- Do not drive without the arm supports!

## Removing the arm support

To remove the arm support, loosen the clamping screw (2) first and then pull out the arm support toward the top .

### Note:

The operating module (4) must be removed first if the arm support on the control side is to be removed.

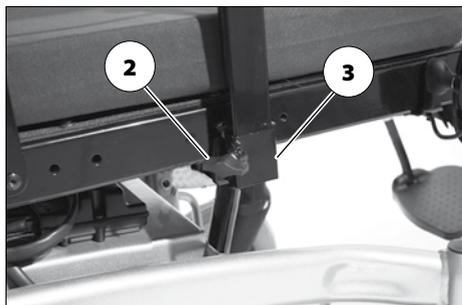
 Therefore observe chapter *Removing the operating module* on page 22.

## Inserting the arm support

For inserting the arm support, first slide the arm support as far as possible into the bracket (3) and then tighten the clamping screw (2).

### Note:

For inserting the operating module (4) observe chapter *Inserting the operating module* on page 22.



## Illuminated clothes guard discs

### Attention:

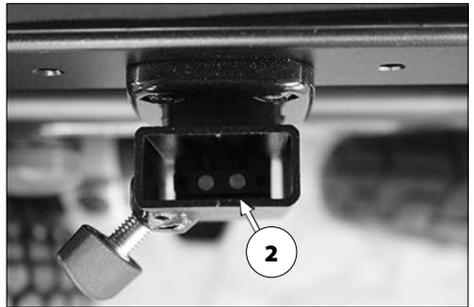
- ! A selected lighting is still active after switching off the operating module.
- Activated lighting may not be used where the German road traffic regulations are valid.

### Activating/deactivating the lighting on the clothes guard discs

Activate the switch (1) to switch the lighting on or off.

### Attention:

- ! When the arm supports are removed the electric contacts (2) need to be protected from dampness, water and dust or dirt (e. g. for longer storage)!

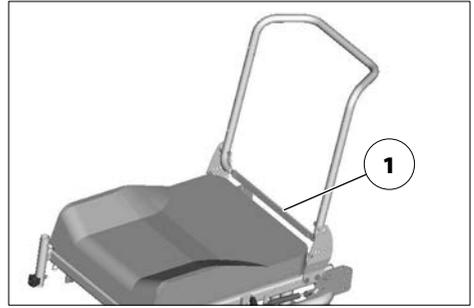


# BACK SUPPORT

The back support can be folded down for storage or transport.

**Note:**

For better demonstration of the wire cable (1) the back support is shown without cushion.



## Folding down the back support

- If required remove the seat pad (velcro fastener).
- Disengage the back support by pulling or pressing the wire cable (1) at its centre and fold it onto the seat [2].

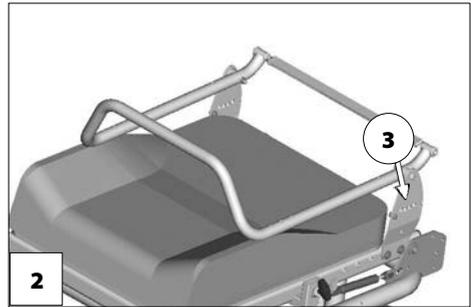
## Unfolding the back support

- For this raise the back support and pull the pressure bolts inward by pulling or pressing on the wire cable (1).
- Release the wire cable in order to lock the back support in the desired position (3). – Slide the back support until the pressure bolts audibly click into place.
- If required replace the seat pad.

**Note:**

The greasing of the thrust bolts is recommended for an easier latching of the backrest.

- ☞ Check the lock of the back support.



- ☞ Check the lock of the back support.

## Adjusting the back support angle

- Unlock the back support by pulling or pressing the centre of the wire cable (1).
- Release the wire cable in order to lock the back support in the desired position (3). – Slide the back support until the pressure bolts audibly click into place.

## Secure positions of the back support

The diverse possible seat adjustments also includes such settings, that may only be used as resting positions, since they might lead to instable driving conditions in drive mode.

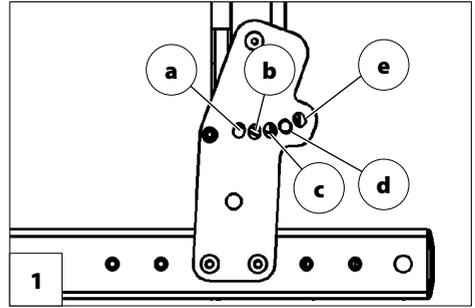
Depending on the set seat inclination you may only select certain back support adjustments for driving on hills [1].

### **Note:**

For your safety you should have the set seat inclination confirmed by your specialist dealer and marked in the chart!

### **Attention:**

 Any change to the seat inclination will lead to different safe back support adjustments!



### **Example:**

Adjusted seat inclination:.....6°

The pressure bolt of the back support may only be in positions c, d, or e when driving on hills/slopes.

## Model 1.610/1.611

Seat inclination	Adjusted seat inclination	safe position of the back support inclination [1]
0°		c, d
2°		c, d
4°	manufacturer setting	c, d
6°		c, d, e
8°		d, e
10°		d, e

## Model 1.612 / 1.615

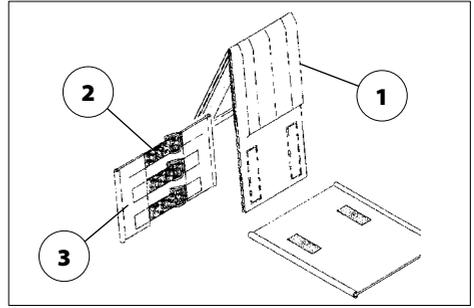
Seat inclination	Adjusted seat inclination	safe position of the back support inclination [1]
0°		c, d
4°	manufacturer setting	c, d
8°		c, d, e
12°		c, d, e

## Adjustable back

The adjustable back is adjustable through a velcro strap on the spanning straps (2).

### Removing the back support upholstery

For removal, first pull off the rear part of the back support upholstery (1), then fold it over to the front and pull it off of the adjustable back strap (3).



### Placing the back support upholstery

For placing the back support upholstery (1), lay it centred around the upper velcro straps (2) and attach it to the adjustable back strap with the velcro fasteners (3).

☞ For a soft upper edge you should leave a little space between the upper spanning belt (2) and the folded back support upholstery (1).

#### ☞ **Note:**

When the user leans against the back support upholstery (1) again, pay attention that:

- ☞ The pressure of the back must be spread evenly throughout the back support upholstery.
- ☞ A complete hand should fit in between the cushion and back at the upper edge of the back support upholstery.
- ☞ The head of the user must be held in balance through the adjustment of the spanning straps.



The extended parts of the back support are fastened to the top or bottom seat surface depending on the adjusted back support height (4).

## Electrically adjustable back support

The back support [1] is electrically adjustable.

 **Note:**  
Herefore view the operating manual < *Operating module* >.

 **Attention:**  
Only adjust the back support when the electric wheelchair is standing on a level surface. A danger of tipping over exists on gradients!

### Folding down the electrically adjustable back support

Fold open the safety latch (3) first for folding over the electrically adjustable back support [2], then remove the pin (4).

 At the same time hold the back support and motor in position with one hand on the shunting rod (6).

Afterwards place the motor onto the lower rack and fold the back support forward [2].

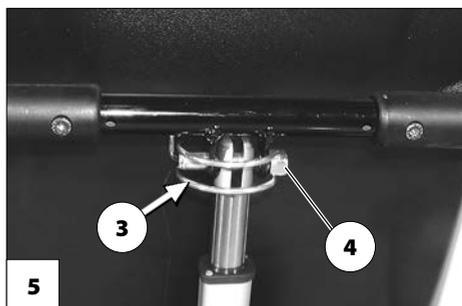
 Reinsert the pin (4) in order to prevent loss.

### Unfolding the back support

After raising the back support [1] remove the pin (4), lift the motor and hang it into place. The reinsert the pin (4) and fold the safety bracket close [5].

 Check the locking device after raising the back support up and reinserting the pin.

 Keep the pin clean at all times for flawless function.



## Back support upholstery

The back support upholstery is secured to the back support shell with Velcro fasteners and can be pulled off [1].

## Secure positions of the back support

The diverse possible seat adjustments also includes such settings, that may only be used as resting positions, since they might lead to instable driving conditions in drive mode.

The electric wheelchair is equipped with a tilting switch, that limits the back support angle in combination with the seat angle.

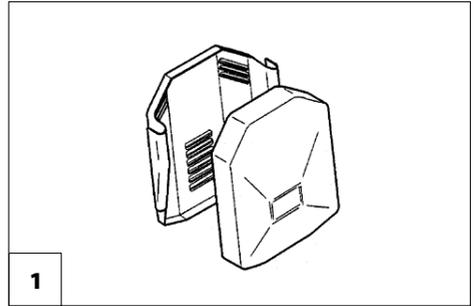
### 🔊 **Note:**

The maximum back support adjustment is only possible with a seat angle of 0°.

- 🔊 If the safe angle, even while driving, is exceeded the wheelchair automatically brakes to a stop and a < beep > will sound at every movement of the joystick. Continuing to drive is only possible when the back support, resp. seat angle is reduced.

### **Attention:**

- ! Any change to the seat inclination will lead to different safe maximum back support adjustments!



# SEAT

## Seat pad

The seat pad [1] is attached to the seat plate with velcro straps and can be removed for cleaning and maintenance.

Replace and attach the seat pad again after cleaning or maintenance [1]. – Velcro fastener.



## Seat cushion

The seat cushion is placed with the burling side onto the seat plate [2].



## Seat inclination

### Attention:

- ! Only adjust the seat angle [3] when the electric wheelchair is standing on a horizontal, level surface. A danger of tipping over exists on gradients!
- The seat-angle adjustment is not linked with an automatic speed reduction function.
- An increased danger of tipping over exists with a reclined back support.
- Before driving make sure that you have not adjusted a negative seat inclination, resp. that the seat inclination ensures a safe sitting position even while driving on hills/slopes.



## Manually adjusting the seat angle (only with model 1.613)

To adjust the manual seat inclination, open the folding plug (3) and insert it into a different hole (5)–(8) of the adjustment tube (4).

- After repositioning the folding plug, make sure that it is closed correctly.

## Electrically adjusting the seat angle

The seat inclination [1] is administrated through the operating module or a separate adjustment module.

- Note:**  
Therefore observe operation manual < *Operating module* >.

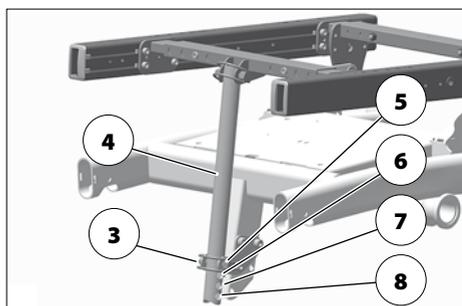
## Rising aid

The seat is angled forward for the stand-up aid [2] (negative seat inclination).

- The negative seat inclination setting serves as support for getting up when the vehicle is standing.
- When tilting the seat surface forward (rising aid) the steering wheels must face toward the back or one side, because otherwise the footplates will hit against the steering wheels.
- Adjustment of a negative seat inclination may lead to contact of the lower leg supports with the ground and to a lifting on the steering wheels.

### Attention:

- Before using the rising aid, secure the electric wheelchair and fold up the footplates.
- Therefore observe chapter *Securing the electric wheelchair* on page 16.



## Seat height adjustment

### Attention:

- ! Use of the seat height adjustment is only permitted on straight surfaces and during stillstand of the vehicle.

The seat height [1] can be adjusted through the operating module.

- ☞ Through this the seat height can be continuously adjusted up to.
  - ☞ For this observe chapter *Technical data* on page 56.
- ☞ Therefore observe operation manual < *Operating module* >.
- ☞ If the seat is moved upward from the basic position, the speed is limited to km/h and the acceleration damped.
  - ☞ For this observe chapter *Technical data* on page 56.
- ☞ The limitations to speed and acceleration are automatically reset as soon as the seat reaches the initial position..



## HEAD SUPPORT

The head support is swivel/proof, height- and depth adjustable and removable.

### Attention:

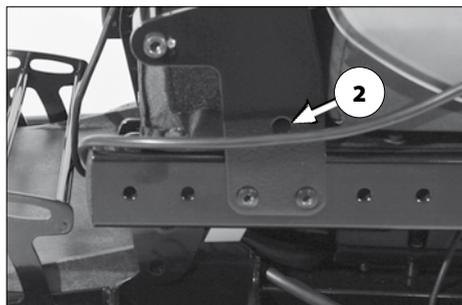
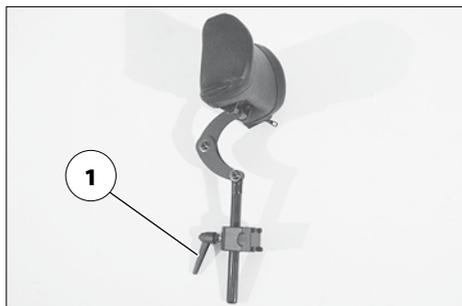
- ! We recommend the fitting of two rear-view mirrors for driving with a head support.

### Adjustment of the head support

The head support can be detached or adjusted in height after the clamping lever (1) has been slackened.

### Attention:

- ! The maximum height adjustment is indicated by the marking!



## RETAINING STRAP

The retaining strap is screwed on, from the outer side, at the respective back support holder (2).

- ⚠ The retrospective assembly of a retaining strap is only to be carried out by a specialist workshop!

### Attention:

- ! The retaining strap is not part of the retaining system for the electric wheelchair and/or the driver during transport in motor vehicles.



An existing retaining strap [3] on the electric wheelchair must always be applied, especially on model 1.613.

How to apply the retaining strap can be found in the extra document < *Sicherheits- und allgemeine Handhabungshinweise* >.

## USB CONNECTOR SOCKET

The USB connector socket serves to connect devices with a USB plug type A.

### Attention:

- ! The maximum power consumption may not exceed 1 A per connection.
- ⚡ The USB connector socket requires a permanent power supply. This may require a more frequent recharging of the batteries.

To connect devices, first pull of the clothes guard [1], then insert the USB plug.

If the USB connector socket is not used, close it with the splash protection cap [2].



# ATTENDANT CONTROL WITH PRIORITY SWITCH

The control unit for accompanying person enables the accompanying person an easy control of the electric wheelchair with auxiliary operating module.

## Positioning the controller

### Note:

Switch off the operating module before position adjustment! – This prevents an unwanted movement of the electric wheelchair.

## Height adjustment

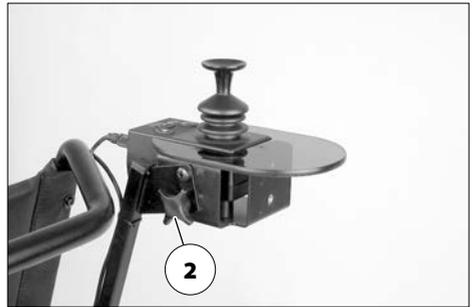
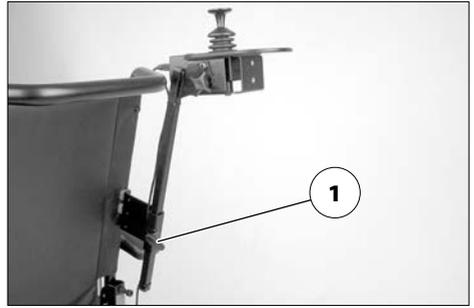
Hold the operating module and then slacken the clamping screw (1).

Move the operating module into the desired position and retighten the clamping screw.

## Angle adjustment

Hold the operating module and then slacken the clamping screw (2).

Swivel the operating module into the desired position and retighten the clamping screw.



## LIGHTING

For driving outdoors and on public roads the electric wheelchair can be fit with LED-lighting equipment.

The lighting is activated over the operating module for the driver.

 **Note:**

Observe the operating manual < *Operating module* > as well as the safety and general handling instructions < *Electric vehicles* >!



## REAR-VIEW MIRROR

### Removing the rear-view mirror

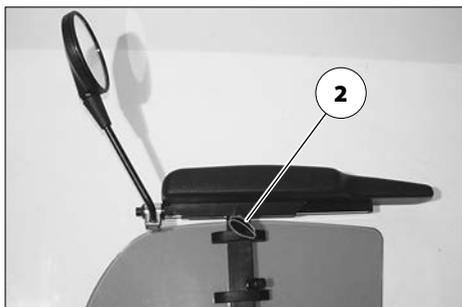
To remove the rear-view mirror loosen the clamping screw (2) and pull the rear-view mirror forward out of the arm support tube.

 **Note:**

Carefully place the rear-view mirror down and protect the mirror glass from strain or other objects.

 The rear-view mirror is to be kept clean at all times.

Use common glass cleanser to clean the mirror. In doing so the manufacturers instructions are to be observed.



### Attaching the rear-view mirror

For drive mode insert the rear-view mirror from the front into the arm support tube and tighten the clamping screw (2).

### Adjusting the rear-view mirror

1. Preadjust the rear-view mirror by turning the clasp.
2. Turn the rear-view mirror on the attachment rod and ball joint until you reach the desired angle.

## LOADING AND TRANSPORTATION

- ☞ Do not use the back support, leg supports, arm supports or restraints to lift the electric wheelchair!

### Attention:

- ! The electric wheelchair must be switched off before lifting!

### Loading

The electric wheelchair can be loaded with the aid of ramps or lifting platforms.

- ☞ **Note:**  
Observe safety and general handling instructions < *Electric vehicles* > chapter < *Ramps and lifting platforms* >.

### Transport of people inside a motor vehicle

To determine if your electric wheelchair is approved as a seat for person transport inside a motor vehicle, please look at the type plate of your wheelchair.

### ☞ Note:

Electric wheelchairs that are not suited for use as a seat for transport in a motor vehicle are marked with an additional label. – For this observe chapter *Meaning of the labels on the electric wheelchair* on page 75.

- ☞ Observe the guideline < *Safety with Meyra-wheelchairs, also during transport in motor vehicles* >! – This document and further information can be accessed on our website < [www.meyra.com](http://www.meyra.com) > in the < *Download Archive* >.

## Transport security

The electric wheelchair is only to be secured through the anchoring positions (1)+(3) resp. (2)+(4).

- ✎ The procedure for securing the wheelchair can be read in the document < *Safety and general handling instructions electric vehicles* > chapter < *Transport in motor vehicles or with conveyors* >.

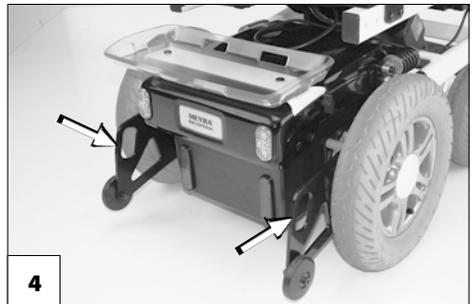
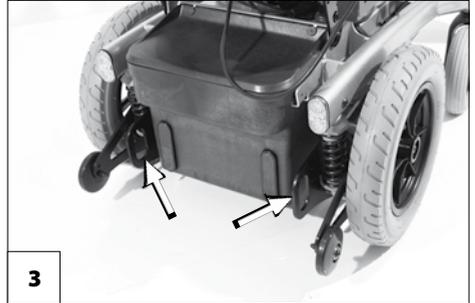
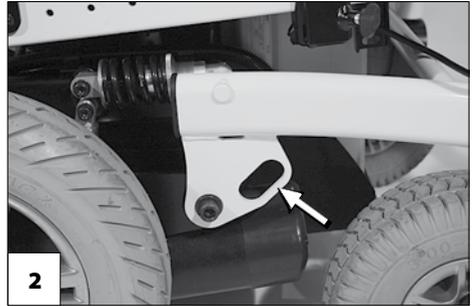
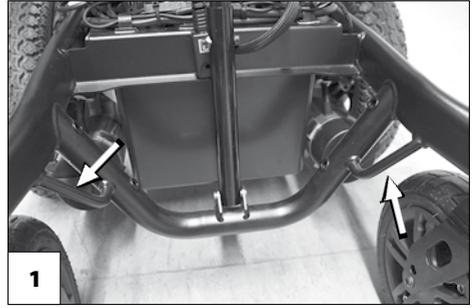
## MAINTENANCE

An incorrect or neglected cleaning and maintenance results in a limitation of the product liability.

### Maintenance

The following maintenance Instruction gives you a guide for carrying out the maintenance work.

- ✎ They do not give information about the actual extent of work required on the vehicle.



## Maintenance schedule

WHEN	WHAT	REMARK
<b>Before starting out</b>	<b>General</b> Test for faultless operation.	Carry out test yourself or with a helper.
	<b>Checking the magnetic brake</b> Move the selection lever for the drive/push mode into the drive mode position on both sides.	Carry out test yourself or with a helper.  If the electric wheelchair can be pushed, have the brakes repaired immediately by the specialist workshop. – Danger of accident!
Especially before driving in the dark	<b>Lighting</b> Check the lighting equipment and reflectors for flawless functioning.	Carry out test yourself or with a helper.
<b>Every 2 weeks</b> (depending on distance covered)	<b>Check air pressure of the tyres</b> Tyre filling pressure:  View <i>Technical data</i> on page 56.	Carry out test yourself or with a helper. Use a tyre gauge.
	<b>Adjustment screws</b> Screws and nuts are to be checked for tight fit.	Carry out test yourself or with a helper.  Retighten the loosened adjustment screws.  Contact specialist workshop upon demand.
<b>Every 6-8 weeks</b> (depending on distance covered)	<b>Wheel attachments</b> Wheel nuts or screws are to be checked for tight fit	Do it yourself or with the aid of a helper.  Securely tighten any loosened wheel nuts or screws and retighten again after 10 operating hours or resp. 50 km.  Contact specialist workshop upon demand.

WHEN	WHAT	REMARK
<p><b>Every 2 months</b> (depending on distance covered)</p>	<p><b>Check tyre profile</b> Minimum tread = 1 mm</p>	<p>Carry out a visual check yourself or with a helper.  If the tyre profile is worn down or if the tyre is damaged, consult a specialist workshop for repairs.</p>
<p><b>Every 6 months</b> (depending on frequency of use)</p>	<p>Check</p> <ul style="list-style-type: none"> <li>- Cleanness.</li> <li>- General condition.</li> </ul>	<p>View &lt; <i>Service</i> &gt; in document &lt; <i>Safety and general handling instructions electric vehicles</i> &gt;.  Do it yourself or with the aid of a helper.</p>
<p>Manufacturer recommendation: <b>Every 12 months</b> (depending on frequency of use)</p>	<p><b>Maintenance jobs</b></p> <ul style="list-style-type: none"> <li>- Vehicle</li> <li>- Battery charger</li> </ul>	<p>To be carried out by the specialist dealer.</p>

## Fuses

### Replacing the fuses

Before replacing fuses, park the electric wheelchair on a level surface and secure it from rolling away.

- 🔧 Therefore observe chapter *Securing the electric wheelchair* on page 16.

#### Attention:

- ! Only replace the safety fuse with a safety fuse of the same type!

New fuses can be obtained for example at petrol stations.

#### Note:

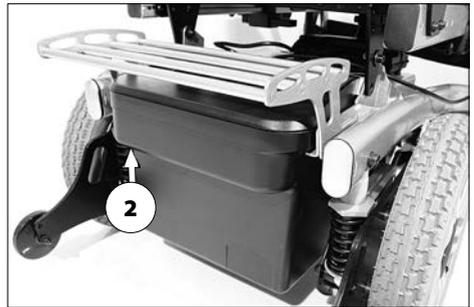
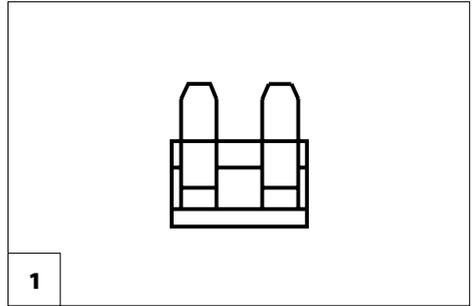
- If the safety fuse blows again, take the battery to a specialist dealer for repair.

### Fuse

Mains-/battery fuse [1]

The blade fuse for the battery current is plugged inside the fuse holder (2) of the battery case.

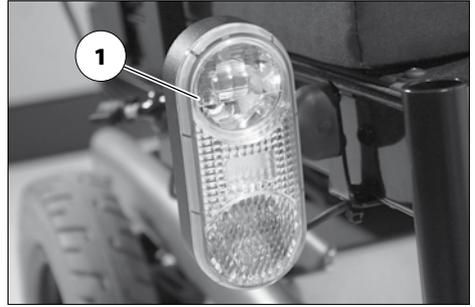
- 🔧 *Technical data* on page 56 to be observed!



## Lighting

The lighting (1)+(2) is equipped with longlife LED-technology.

- 🔧 **Note:**  
If a turn-signal bulb is defective, the remaining one blinks at double frequency.
- 🔧 Immediately have a defective LED-lamp repaired by a specialist workshop.



## Headlights

The housing of the light (1) must be adjusted so that the light cone is visible on the driving surface. – The lower edge of the light cone should be set at distance of 3 meters to the front of the electric wheelchair.

- 🔧 **Note:**  
The lighting case might need to be re-adjusted after adjustment of the seat inclination.
- 🔧 If needed go to a specialist workshop for adjustment.



## Fault correction

Fault	Cause	Remedy
Battery indicator on the operating module does not light up after the switch-on.	Battery fuse is defective or not correctly inserted.	Replace defective fuse or clean contacts and insert correctly.
	Plug connection of the power supply without contact.	Check the plug connections.
The battery gauge blinks after the switch-on.	One or both of the drive motors are switched to push mode.	Move the selection lever for the drive/push mode into the drive mode position on both sides.
	Plug connection at one of the drives without contact.	Check the plug connections.
	Malfunction in the electronics.	Have it repaired by the specialist workshop. (Push mode) Selection lever in driving mode position.
	Not listed faults.	View < <i>Error diagnostics</i> > in the operating manual for the operating module.
Lighting not active.	LED-lamp defective.	Let it be repaired or replaced by a specialist workshop.
	Lighting fuse or drive electronics defective.	Let it be repaired or replaced by a specialist workshop.

# SERVICE

## Tyres

The following items need to be checked:

- the air pressure (only on pneumatic tyres)
  - ☞ Therefore observe chapter *Technical data* on page 56 or the lettering on the side of the tyre coat.
- free of damages.

## Cleaning and maintenance

Do not clean the electric wheelchair with a high-pressure cleaner! – Danger of short circuit!

Keep the lighting components clean at all times and check for correct functioning before each journey.

Silicone free water based cleaning agents and care products should be used for the care of the vehicle.

- ☞ In doing so the manufacturers instructions are to be observed.

Do not use aggressive cleaning agents e.g. solvents, or hard brushes etc.

## Upholstery and covers

The cushions and covers are normally fit with care instructions (instruction for care).

- ☞ Therefore observe chapter *Meaning of the symbols on the washing instruction* on page 77.

In all other cases the following information is true:

- ☞ Clean the upholstery with warm water and hand washing liquid.
- ☞ Remove spots with a sponge or a soft brush.
  - Wash off persistent dirt with commercial fine detergent.

- ☞ Do not soak! Do not machine wash!

Follow-up with clean water and allow to dry.

## Plastic parts

The plastic panelling is attacked through non-ionic tensides as well as solvents and especially alcohol.

The plastic panels and parts are made of high-quality plastic.

Only clean the plastic parts with warm water and neutral detergent or soft soap.

When using commercial plastic cleansers the manufacturers application instructions are to be observed.

## Finish

The high quality finish ensures an optimum of protection against corrosion.

Should the coating be damaged with scratches or similar, these areas can be touched up with our paint pen available at the specialist dealer.

Slight lubrication of moving parts will ensure for their long functioning.

## Disinfection

If the product is used by more than one person (for example in a care centre), the use of a commercial disinfectant is mandatory.

Before disinfection the upholstery and handles are to be cleaned.

A spray- or wiping disinfection is permitted with tested and accredited disinfectants.

- ☞ In doing so the manufacturers instructions are to be observed.

A list of the disinfectants and disinfection means tested and approved by the Robert Koch Institute can be found under:

< <http://www.rki.de> >.

During the use of disinfectants it can happen that surfaces might be affected in such a fashion that the long term functionality of parts can be limited.

## Reinstallation

Before reimplementation the electric wheelchair is to undergo a complete inspection.

- ☞ The hygienic measures required for reinstallation are to be carried out in correspondence with the validated hygienic plan.

Should your specialist dealer carry out a revision/reconditioning or make fundamental changes to your vehicle, without the use of original spare parts, this under certain conditions may result in a remarketing of your vehicle. This will further entail that your specialist dealer might need to conduct new conformity assessments and tests.

## Repairs

Trustfully contact your local specialist dealer or another specialist workshop for carrying out repairs. They are briefed in carrying out the work and have educated personnel.

## Customer Service

In case you have questions or require help, please contact your local specialist dealer, who will provide counselling, customer service and repairs.

## Spare parts

Safety relevant parts or assembly groups are only to be assembled in a specialist workshop. – Danger of accident!

Spare parts can only be ordered from specialist dealers. In case of repair work, only original spare parts are to be used!

- ☞ Spare parts from other manufacturers can cause malfunctions.

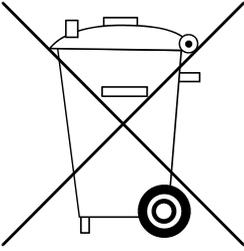
A list of spare parts with the according part numbers and drawings is kept by your specialist dealer.

In order to ensure the correct delivery of a spare part, always quote the corresponding serial number (SN) of the vehicle! You will find this on the type plate.

Whenever changes/modifications are carried out on the vehicle by the specialist dealer, the supplementary information, e.g. assembly/operating instructions must be attached to the operating manual of the vehicle, the date of the modification must be recorded and stated when ordering spare parts.

This should prevent wrong order details on future spare parts orders.

## Disposal



The disposal must comply with the respective national law.

Please enquire about local disposal arrangements at your municipal authority.

The vehicle packing material can be disposed of as recyclable material.

The metal parts can be disposed of as recyclable scrap metal.

The plastic parts can be disposed of as recyclable plastic.

Electrical parts and printed circuit boards can be disposed of as electrical scrap.

# TECHNICAL DATA

## Maximum range

The maximum range depends to a large extent on the following factors:

- battery condition,
- weight of the driver,
- driving speed,
- driving style,
- road surface condition,
- driving conditions,
- ambient temperature.

The nominal values given by us are realistic under the following conditions:

- Ambient temperature of 27 °C.
- 100 % rated drive battery capacity as per the DIN standard.
- new condition of the drive batteries with more than 5 charging cycles.
- Nominal load of 100 kg.
- Without repeated acceleration.
- Level, firm driving surface.

The maximum range is greatly reduced by:

- frequent uphill driving,
- insufficient charging condition of the drive batteries,
- low ambient temperature (e.g. in winter)
- frequent acceleration and braking (e.g. in city traffic)
- aged, sulphated drive batteries,
- frequently necessary steering manoeuvres,

- reduced driving speed (especially at walking speed).

In practical use, the maximum range under 'normal conditions' is then reduced to approx. 80 – 40 % of the nominal value.

## Hill climbing ability

Gradients in excess of the permitted values (e.g. ramps) should for safety reasons only be driven when the wheelchair is empty!

## Values acc. to ISO 7176-15 for model 1.610

	min	max
Overall length with leg support	1080 mm	– mm
Overall width	580 mm	750 mm
Overall dimensions	– kg	220 kg
User weight (incl. additional load)	– kg	120 kg
Weight of the heaviest part	4.5 kg	– kg
Actual seat depth	400 mm	530 mm
Actual seat width	430 mm	550 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	430 mm	600 mm
Seat angle	-2°	26°
Back support angle	-10°	50°
Back support belt height	450 mm	570 mm
Foot support to seat (lower shank length)	280 mm	500 mm
Static stability downhill	–°	8.5°
Static stability uphill	–°	8.5°
Static stability lateral	–°	8.5°
Dynamic stability uphill	–°	8.5°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	240 mm	350 mm
Back support to front edge of arm support	330 mm	450 mm
Obstacle height	– mm	60 mm
Minimal turning radius	840 mm	–
Forward top speed (depending on equipment)	– km/h	6 km/h
Minimum breaking distance from top speed	– mm	1000 mm
Maximum range (with 6 km/h)	28 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.610

	min	max
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1300 mm	
Drive controller	24 V / 60 A	24 V / 90 A
Engine output (6 / 10 km/h)		180 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	110 kg
Permitted axle load rear	- kg	150 kg
Ground clearance drive		60 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	94 kg	111 kg
Empty weight (without drive batteries)	65 kg	
Overall height	930 mm	1130 mm
Seat cushion thickness	60 mm	70 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	920 mm	- mm
Width (without arm supports)		580 mm
Height (without arm supports)	560 mm	660 mm

### Climatic data

Ambient temperature		-25 °C to +50 °C
Storage temperature with drive batteries		-25 °C to +50 °C
Storage temperature without drive batteries		-40 °C to +65 °C

min

max

Steering wheel

230 x 70 mm (9")

puncture proof / puncture safe

260 x 70 mm (10")

puncture proof / puncture safe

Driving wheel

320 x 75 mm (12.5")

puncture proof / puncture safe

356 x 75 mm (14")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

6 A

12 A

## Values acc. to ISO 7176-15 for model 1.611

	min	max
Overall length with leg support	1130 mm	– mm
Overall width	580 mm	800 mm
Overall dimensions	– kg	320 kg
User weight (incl. additional load)	– kg	160 kg
User weight (incl. additional load) with seatlift	– kg	140 kg
Weight of the heaviest part	4.5 kg	– kg
Actual seat depth	400 mm	560 mm
Actual seat width	380 mm	650 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	440 mm	530 mm
Seat surface height at front edge (without seat cushion) with Seatlift	460 mm	790 mm
Seat angle	-2°	26°
Back support angle	-10°	50°
Back support belt height	450 mm	570 mm
Foot support to seat (lower shank length)	280 mm	500 mm
Static stability downhill	–°	8.5°
Static stability uphill	–°	8.5°
Static stability lateral	–°	8.5°
Dynamic stability uphill	–°	8.5°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	240 mm	350 mm
Back support to front edge of arm support	330 mm	450 mm
Obstacle height	– mm	60 mm
Minimal turning radius	840 mm	–
Forward top speed (depending on equipment)	6 km/h	10 km/h
Minimum breaking distance from top speed	1000 mm	2100 mm
Maximum range	25 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.611

	min	max
Lifting height Seatlift		300 mm
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1300 mm	
Drive controller	24 V / 70 A	24 V / 120 A
Engine output (6 / 10 km/h)	220 W	350 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	140 kg
Permitted axle load rear	- kg	180 kg
Ground clearance drive		60 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	100 kg	136 kg
Empty weight (without drive batteries)	65 kg	
Overall height	930 mm	1130 mm
Seat cushion thickness	60 mm	150 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	830 mm	- mm
Width (without arm supports)	580 mm	620 mm
Height (without arm supports)	570 mm	660 mm

### Climatic data

Ambient temperature	-25 °C to +50 °C
Storage temperature with drive batteries	-25 °C to +50 °C
Storage temperature without drive batteries	-40 °C to +65 °C

min

max

Steering wheel

230 x 70 mm (9")

puncture proof / puncture safe

260 x 70 mm (10")

puncture proof / puncture safe

Driving wheel

320 x 75 mm (12.5")

puncture proof / puncture safe

356 x 75 mm (14")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

6 A

12 A

## Values acc. to ISO 7176-15 for model 1.612

	min	max
Overall length with leg support	1120 mm	– mm
Overall width	630 mm	800 mm
Overall dimensions	– kg	320 kg
User weight (incl. additional load)	– kg	160 kg
User weight (incl. additional load) with seatlift	– kg	150 kg
Weight of the heaviest part	4.5 kg	– kg
Actual seat depth	400 mm	560 mm
Actual seat width	380 mm	650 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	460 mm	520 mm
Seat angle	-2°	33°
Back support angle	-10°	50°
Back support belt height	450 mm	570 mm
Foot support to seat (lower shank length)	280 mm	500 mm
Static stability downhill	–°	8.5°
Static stability uphill	–°	8.5°
Static stability lateral	–°	8.5°
Dynamic stability uphill	–°	8.5°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	240 mm	350 mm
Back support to front edge of arm support	330 mm	450 mm
Obstacle height	– mm	60 mm
Minimal turning radius	900 mm	–
Forward top speed (depending on equipment)	6 km/h	10 km/h
Minimum breaking distance from top speed	1000 mm	2100 mm
Maximum range	25 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.612

	min	max
Lifting height Seatlift		300 mm
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1350 mm	
Drive controller	24 V / 70 A	24 V / 120 A
Engine output (6 / 10 km/h)	220 W	350 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	160 kg
Permitted axle load rear	- kg	220 kg
Ground clearance drive		70 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	115 kg	118 kg
Empty weight (without drive batteries)	71.5 kg	
Overall height	970 mm	1140 mm
Seat cushion thickness	60 mm	150 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	870 mm	- mm
Width (without arm supports)	630 mm	630 mm
Height (without arm supports)	590 mm	680 mm

### Climatic data

Ambient temperature	-25 °C to +50 °C
Storage temperature with drive batteries	-25 °C to +50 °C
Storage temperature without drive batteries	-40 °C to +65 °C

min

max

Steering wheel

260 x 70 mm (10")

puncture proof / puncture safe

Driving wheel

356 x 75 mm (14")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

6 A

12 A

## Values acc. to ISO 7176-15 for model 1.613

	min	max
Overall length with leg support	1065 mm	1130 mm
Overall width	620 mm	800 mm
Overall dimensions	– kg	280 kg
User weight (incl. additional load)	– kg	160 kg
User weight (incl. additional load) with seatlift	– kg	140 kg
Weight of the heaviest part	4.5 kg	– kg
Actual seat depth	400 mm	560 mm
Actual seat width	380 mm	650 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	440 mm	510 mm
Seat surface height at front edge (without seat cushion) with Seatlift	460 mm	760 mm
Seat angle	4°	26°
Back support angle	-10°	50°
Back support belt height	450 mm	570 mm
Foot support to seat (lower shank length)	280 mm	450 mm
Static stability downhill	–°	6°
Static stability uphill	–°	6°
Static stability lateral	–°	6°
Dynamic stability uphill	–°	6°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	240 mm	350 mm
Back support to front edge of arm support	330 mm	450 mm
Obstacle height	– mm	60 mm
Minimal turning radius	650 mm	–
Forward top speed (depending on equipment)	6 km/h	10 km/h
Minimum breaking distance from top speed	1000 mm	2100 mm
Maximum range	25 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.613

	min	max
Lifting height Seatlift		300 mm
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1150 mm	
Drive controller	24 V / 70 A	24 V / 90 A
Engine output (6 / 10 km/h)	220 W	300 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	180 kg
Permitted axle load rear	- kg	140 kg
Ground clearance drive		60 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	108 kg	125 kg
Empty weight (without drive batteries)	79 kg	
Overall height	960 mm	1080 mm
Seat cushion thickness	60 mm	150 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	910 mm	- mm
Width (without arm supports)	620 mm	620 mm
Height (without arm supports)	610 mm	680 mm

### Climatic data

Ambient temperature	-25 °C to +50 °C
Storage temperature with drive batteries	-25 °C to +50 °C
Storage temperature without drive batteries	-40 °C to +65 °C

min

max

Steering wheel

230 x 70 mm (9")

puncture proof / puncture safe

Driving wheel

356 x 75 mm (14")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

6 A

12 A

## Values acc. to ISO 7176-15 for model 1.615

	min	max
Overall length with leg support	1080 mm	– mm
Overall width	650 mm	800 mm
Overall dimensions	– kg	280 kg
User weight (incl. additional load)	– kg	160 kg
Weight of the heaviest part	4.5 kg	– kg
Actual seat depth	400 mm	560 mm
Actual seat width	380 mm	650 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	460 mm	530 mm
Seat angle	-2°	26°
Back support angle	-10°	50°
Back support belt height	530 mm	570 mm
Foot support to seat (lower shank length)	350 mm	500 mm
Static stability downhill	–°	8.5°
Static stability uphill	–°	8.5°
Static stability lateral	–°	8.5°
Dynamic stability uphill	–°	8.5°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	240 mm	350 mm
Back support to front edge of arm support	330 mm	450 mm
Obstacle height	– mm	60 mm
Minimal turning radius	840 mm	–
Forward top speed (depending on equipment)	6 km/h	13 km/h
Minimum breaking distance from top speed	1000 mm	3400 mm
Maximum range	35 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.615

	min	max
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1300 mm	
Drive controller	24 V / 70 A	24 V / 120 A
Engine output (6 / 13 km/h)	220 W	300 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	140 kg
Permitted axle load rear	- kg	180 kg
Ground clearance drive		60 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	111 kg	- kg
Empty weight (without drive batteries)	65 kg	
Overall height	- mm	1130 mm
Seat cushion thickness	60 mm	150 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	830 mm	- mm
Width (without arm supports)	650 mm	650 mm
Height (without arm supports)	590 mm	660 mm

### Climatic data

Ambient temperature		-25 °C to +50 °C
Storage temperature with drive batteries		-25 °C to +50 °C
Storage temperature without drive batteries		-40 °C to +65 °C

min

max

Steering wheel

260 x 70 mm (10")

puncture proof / puncture safe

Driving wheel

380 x 75 mm (15")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

12 A

## Values acc. to ISO 7176-15 for model 1.616

	min	max
Overall length with leg support	970 mm	– mm
Overall width	580 mm	800 mm
Overall dimensions	200 kg	280 kg
User weight (incl. additional load)	– kg	75 kg
Weight of the heaviest part	1.6 kg	– kg
Actual seat depth	300 mm	400 mm
Actual seat width	300 mm	440 mm
Folding length	– mm	– mm
Folding width	– mm	– mm
Folding height	– mm	– mm
Seat surface height at front edge (without cushion)	420 mm	470 mm
Seat angle	0°	30°
Back support angle	-10°	35°
Back support belt height	390 mm	440 mm
Foot support to seat (lower shank length)	250 mm	350 mm
Static stability downhill	–°	8.5°
Static stability uphill	–°	8.5°
Static stability lateral	–°	8.5°
Dynamic stability uphill	–°	8.5°
Angle leg support - seat surface	110°	180°
Arm support height from seat surface	180 mm	250 mm
Back support to front edge of arm support	300 mm	360 mm
Obstacle height	– mm	60 mm
Minimal turning radius	840 mm	–
Forward top speed (depending on equipment)	6 km/h	10 km/h
Minimum breaking distance from top speed	1000 mm	2100 mm
Maximum range	25 km	40 km
Axle horizontal position	– mm	– mm

## Further technical data for model 1.616

	min	max
Sound level		< 70 dB(A)
Protection class		IP X4
Turning area	1300 mm	
Drive controller	24 V / 70 A	24 V / 90 A
Engine output (6 / 13 km/h)	180 W	300 W
Main fuse		80 A
Lighting (option)		LED-technology 24 V
Additional load	- kg	10 kg
Permitted axle load front	- kg	90 kg
Permitted axle load rear	- kg	140 kg
Ground clearance drive		50 mm
Ground clearance battery tub		80 mm
Empty weight (with drive batteries)	108 kg	121 kg
Empty weight (without drive batteries)	65 kg	75 kg
Overall height	890 mm	925 mm
Seat cushion thickness	-	30 mm

### Transport dimensions

Length (incl. support castors, without leg supports)	790 mm	- mm
Width (without arm supports)	580 mm	- mm
Height (without arm supports)	610 mm	660 mm

### Climatic data

Ambient temperature	-25 °C to +50 °C
Storage temperature with drive batteries	-25 °C to +50 °C
Storage temperature without drive batteries	-40 °C to +65 °C

min

max

Steering wheel

190 x 50 mm (8")

puncture proof / puncture safe

230 x 70 mm (9")

puncture proof / puncture safe

Driving wheel

320 x 60 mm (12.5")

puncture proof / puncture safe

Drive batteries

2 x 12 V 63 Ah (5 h) / 73 Ah (20 h)

sealed, maintenance free

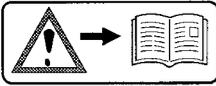
Max. battery dimensions (LxWxH)

260 x 174 x 205 mm

Charging current

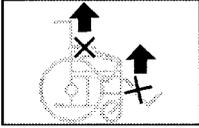
12 A

## Meaning of the labels on the electric wheelchair



### Attention!

Read the operating manuals and other provided documentation.



Do not lift the electric wheelchair at the arm supports or leg supports.  
Removable parts are not suitable for carrying.



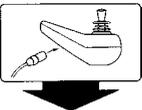
Drive mode



Push mode



Push only on level surfaces.



Indication for charging socket



The product is **not** approved as a seat within a motor vehicle.



Indication for danger of jamming. – Do not reach in here



Operation in moving transport vehicles. – Switch off or switch to driving program 3.

## Meaning of the symbols on the type plate



Manufacturer



Order number



Serial number



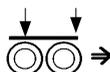
Production date (Year – Calendar week)



Permitted user weight



max. permissible total weight



Permitted axle weights



Max. permissible rising gradient



Max. permissible falling gradient

max. ... km/h

Permitted maximum speed



The product is approved as a seat within a motor vehicle



The product is **not** approved as a seat within a motor vehicle.

## Meaning of the symbols on the washing instruction

(the symbols correspond to European standard)



Gentle cycle with the indicated temperature in °C



Not suited for the dryer



Do not iron



Do not use chlorine bleach



No dry-cleaning possible

## Meaning of symbols on the label Seatlift

(only with model 1.613)



Seat depth



perm. user weight **without** Seatlift



perm. user weight **with** Seatlift

# INSPECTION CERTIFICATE

## Vehicle data:

Model:

Delivery note no.:

Serial-no.(SN):

### Recommended safety inspection 1st year (at least every 12 months)

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

### Recommended safety inspection 2nd year (at least every 12 months)

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

### Recommended safety inspection 3rd year (at least every 12 months)

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

### Recommended safety inspection 4th year (at least every 12 months)

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

### Recommended safety inspection 5th year (at least every 12 months)

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

## WARRANTY / GUARANTEE

We accept legal liability for this product within the scope of or general terms and conditions and warranty and in certain cases other verbal resp. agreed upon guarantees. For warranty and guarantee demands please contact your specialist dealer with following Warranty/Guarantee section and the there included information on model description, delivery note number with delivery date and serial number (SN).

The serial number (SN) can be read off of the type plate.

Precondition for the acceptance of liability in any case is the intended use of the product, the use of original spare parts by authorised dealers as well as maintenance and inspections in regular intervals.

Guaranty is not granted for surface damages, tyres of the wheels, damages due to loosened screws or nuts as well as worn out attachment holes due to frequent assembly work.

Furthermore, damage to the drive and electronics caused by improper cleaning using steam cleaning equipment or the deliberate or accidental flooding of the components are also excluded.

Interferences through radiation sources such as mobile phones with high transmission power, HiFi-equipment and other extreme interference radiators outside of norm specifications cannot be declared as warranty or guarantee claims.

### Attention:

- ! Failure to observe the instructions in the operating manual, improperly carried out maintenance work and, especially, technical changes and additions (add-ons) carried out without our prior consent will lead to a general loss of guarantee and product liability.

### Note:

This operating manual as a part of the product is to be handed out in case of a change of owner.

We reserve the right to make technical improvements.



The product conforms with the EC Directive 93/42/EEC (MDD) for medical products.

## Warranty / Guarantee section

Please fill out! Copy if necessary and send the copy to the specialist dealer.

# Warranty / Guarantee

Model designation:

Delivery note no.:

SN (view type plate):

Date of delivery:

Stamp of the specialist dealer:

## Inspection certificate for transfer

### Vehicle data:

Serial-no.(SN):

Model:

Delivery note no.:

Stamp of specialist dealer:

Signature: \_\_\_\_\_

Place, date: \_\_\_\_\_

Next safety inspection in 12 months

Date: \_\_\_\_\_

# NOTES

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Your specialist dealer

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