



Avantgarde 4

EN Instructions for use (user) 3

Table of contents

EN

1	Foreword	5
2	Product description	6
2.1	Function	6
2.2	Product overview	6
3	Intended use	9
3.1	Indications for use	9
3.1.1	Special features of the CLT and CLT Ultra options	9
3.2	Indications	9
3.3	Contraindications	9
3.3.1	Absolute Contraindications	9
3.3.2	Relative Contraindications	9
4	Safety	9
4.1	Explanation of warning symbols	9
4.2	Safety instructions for use	9
4.3	Side effects	12
4.4	Further information	13
4.5	Nameplate and warning labels	13
5	Delivery	13
5.1	Scope of delivery	13
5.2	Options	13
5.3	Storage	14
5.3.1	Storage during daily use	14
5.3.2	Storage during extended disuse	14
6	Preparing the product for use	14
6.1	Assembly	14
7	Use	15
7.1	Instructions for use	15
7.2	Getting in and transferring	15
7.3	Legrests	16
7.3.1	Removing and attaching the leg supports	16
7.3.2	Folding the foot plate up and down	19
7.3.3	Adjusting the angle of the elevating leg support	20
7.3.4	Removing and fastening the calf strap	21
7.3.5	Adjusting the leg supports	22
7.4	Seat cushion and back upholstery	22
7.4.1	Removing and fastening the seat cushion	22
7.4.2	Removing and fastening the back support pad	23
7.5	Backrest	23
7.6	Side panels	24
7.6.1	Removing the side panels	24
7.6.2	Adjusting the height of the forearm support	25
7.6.3	Adjusting the depth of the forearm support	25
7.6.4	Removing the separate "swing away arm support" with padding	25
7.6.5	Adjusting an arm support with swivel unit	26
7.7	Push handles	26
7.7.1	Adjusting the height of the push handles	27
7.7.2	Removing the push handles	27
7.7.3	Folding the push handles	28
7.8	Stabiliser bar	28
7.9	Drive wheels	29
7.9.1	Removing and mounting the drive wheels	29
7.9.2	Rear wheel with one-handed operation (double push rings)	30
7.10	Caster wheels and caster forks	31
7.10.1	Approach in case of stiffness	32

7.11	Wheel locks	32
7.11.1	Using the wheel locks	32
7.11.2	Drum brake	33
7.11.3	Knee lever wheel lock for user and attendant	34
7.11.4	Using the plug-on wheel lock lever extension	34
7.12	Anti-tipper/tip-assist	35
7.12.1	Activating and deactivating the anti-tipper	35
7.12.2	Using the tip-assist	36
7.13	Transport wheels	36
7.13.1	Using the transport wheels	36
7.14	Lap belt (seat belt)	37
7.15	Tray	38
7.16	Additional options	39
7.17	Disassembly and transport	39
7.18	Use in vehicles for transporting persons with reduced mobility	40
7.18.1	Restrictions for use	41
7.18.2	Required accessories	42
7.18.3	Using the product in a vehicle	42
7.19	Care	45
7.19.1	Cleaning	45
7.19.1.1	Cleaning by hand	45
7.19.1.2	Cleaning the seat cushion	45
7.19.1.3	Cleaning belts/straps	46
7.19.2	Disinfection	46
8	Maintenance and repair	47
8.1	Maintenance	47
8.1.1	Maintenance intervals	47
8.1.2	Maintenance tasks	47
8.2	Repair	48
8.2.1	Inner tube, rim tape and tyre replacement	48
9	Disposal	49
9.1	Disposal information	49
10	Legal information	49
10.1	Liability	49
10.2	Warranty	49
10.3	Lifetime	49
11	Technical data	50
12	Appendices	51
12.1	Threshold values for wheelchairs transportable by train	51

1 Foreword

INFORMATION

Date of last update: 2023-04-26

- ▶ Please read this document carefully before using the product and observe the safety notices.
- ▶ Obtain instruction from the qualified personnel in the safe use of the product.
- ▶ Please contact the qualified personnel if you have questions about the product or in case of problems.
- ▶ Report each serious incident related to the product to the manufacturer and to the relevant authority in your country. This is particularly important when there is a decline in the health state.
- ▶ Please keep this document for your records.

INFORMATION

- ▶ New information regarding product safety and product recalls as well as the declaration of conformity can be obtained at ccc@ottobock.com or from the manufacturer's service department (visit www.ottobock.com for addresses).
- ▶ You can request this document as a PDF file at ccc@ottobock.com or from the manufacturer's service department. The PDF file can also be displayed in a larger size.

You have received a product that is very versatile for everyday use at home and outdoors.

In order to exclude injuries of any type, familiarise yourself with the handling, functions and intended use of the product before using it. These instructions for use provide you with the related necessary information.

Please note the following in particular:

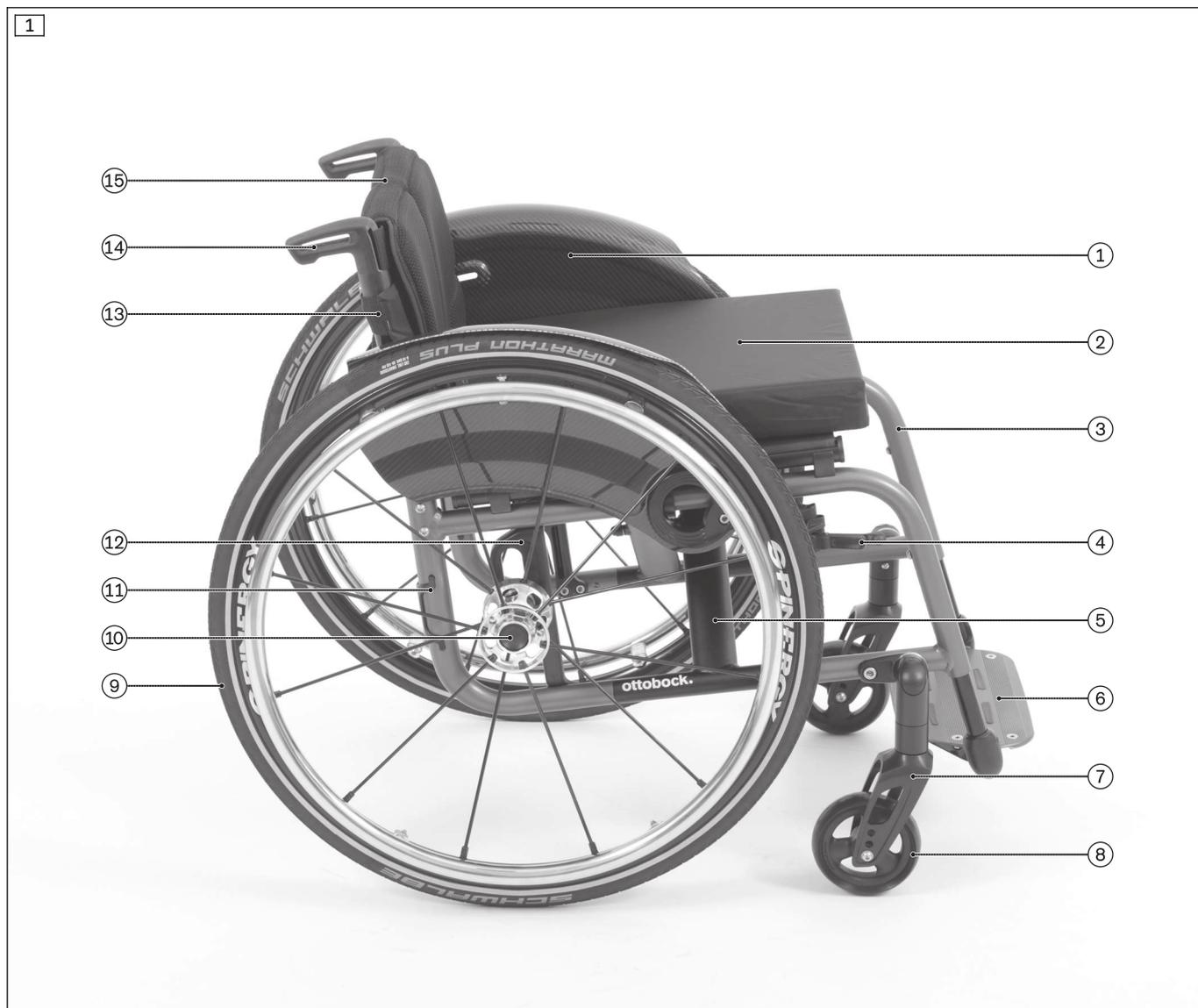
- All users and/or their attendants must be trained by qualified personnel in the use of the product. In particular, users and/or attendants must be informed of the residual risks with the aid of the safety notices in the instructions for use (user).
- The product was adapted to the needs of the user. Subsequent changes may be made only by qualified personnel. We recommend checking the product settings **once per year** to ensure optimal treatment over the long term. Especially for users with a changing anatomy (for example body dimensions, weight), an adjustment at least **once every six months** is recommended.
- Your product may differ from the models shown. In particular, not all the options described in these instructions for use will be installed on your product.
- The manufacturer reserves the right to make technical changes to the model described in these instructions for use.

2 Product description

2.1 Function

The wheelchair is intended exclusively for transporting one person on the seat.
The wheelchair can be used on solid ground both indoors and outdoors.

2.2 Product overview

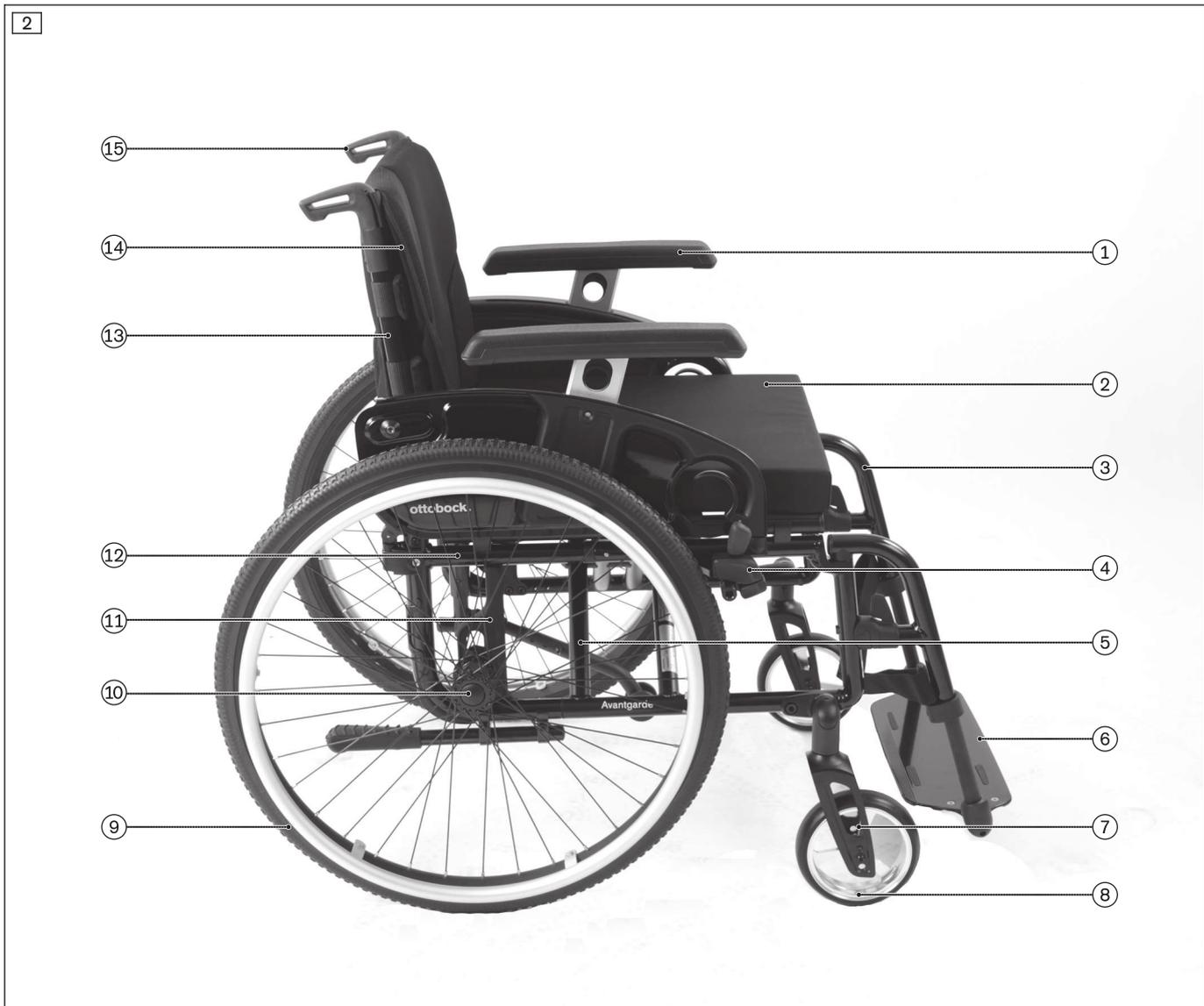


Avantgarde DS and Avantgarde DF version S (figure shows Avantgarde DS)

Maximum load (in combination with double crossbrace): 140 kg

Thanks to its closed frame geometry, the Avantgarde DS and Avantgarde DF version S facilitate very rigid and sporty driving characteristics.

1	Side panel with clothing guard	9	Drive wheel with handrim
2	Seat/seat pad	10	Release button for quick-release axle
3	Front frame	11	Rear frame
4	Scissor wheel lock	12	Drive wheel adapter
5	Crossbrace	13	Back support tube
6	Single-panel foot plate	14	Push handle
7	Caster fork	15	Back support/back support upholstery
8	Caster wheel		

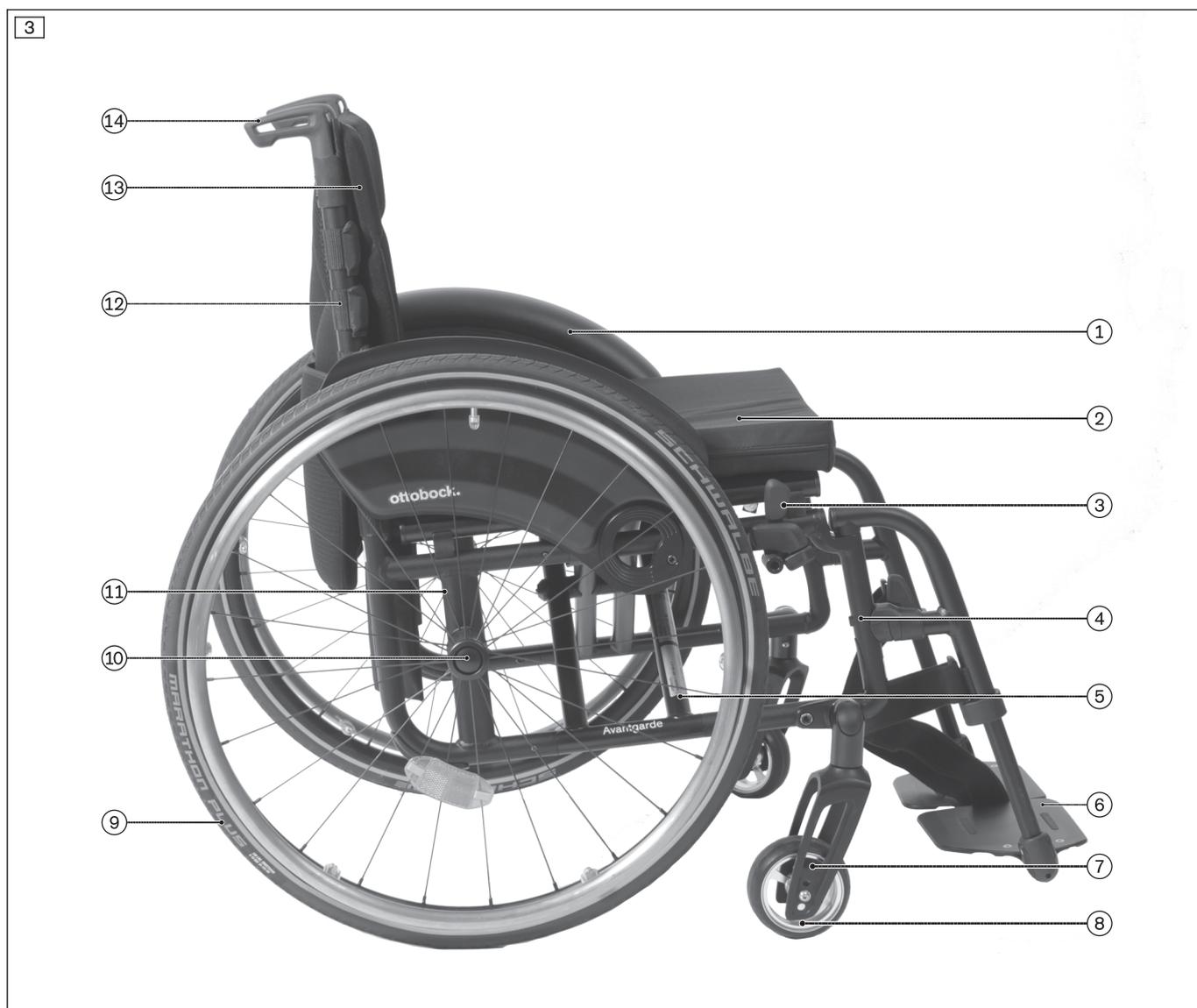


Avantgarde DV and Avantgarde DF version V (figure shows Avantgarde DV)

Maximum load (in combination with double crossbrace): 140 kg

Thanks to its frame geometry, the Avantgarde DV and Avantgarde DF version V offer precise leg guidance with the possibility of swinging away and removing the leg supports. When the leg supports are removed, the upright frame front section allows the wheelchair to be manoeuvred close to objects.

1	Side panel with arm support/arm pad	9	Drive wheel with handrim
2	Seat/seat pad	10	Release button for quick-release axle
3	Front frame with removable, swing-away leg support	11	Drive wheel adapter
4	Knee lever wheel lock	12	Rear frame
5	Crossbrace	13	Back support tube
6	Single-panel foot plate	14	Back support/back support upholstery
7	Caster fork	15	Push handle
8	Caster wheel		



Avantgarde CLT

Maximum load (in combination with single crossbrace): 100 kg

The Avantgarde CLT is the weight-optimised sports version for particularly active users. In the version CLT "welded", subsequent modification of the wheel position and back support height was sacrificed in favour of saving additional weight.

1	Side panel	8	Caster wheel
2	Seat/seat pad	9	Drive wheel with handrim
3	Knee lever wheel lock	10	Quick-release axle release button
4	Front frame with removable, swing-away leg support	11	Rear frame with permanently welded drive wheel attachment device
5	Crossbrace	12	Back tube
6	Foot plate (here segmented foot plate, aluminium)	13	Back support/back support upholstery
7	Caster fork	14	Push handle

3 Intended use

The safe use of the product can only be ensured in case of intended use in accordance with the information contained in these instructions for use. The user is ultimately responsible for accident-free operation.

3.1 Indications for use

The wheelchair is intended for everyday indoor and outdoor use, by the user or an attendant, of people with temporary or permanent limitations of the ability to walk, inability to walk or difficulty standing up.

The product is suitable for users with intact skin whose anatomy (such as body dimensions and weight) permits the intended use of the product.

The wheelchair may only be used with the options listed on the product order form.

Ottobock assumes no liability for combinations with medical devices and/or accessories from other manufacturers outside the modular system.

Combinations based on a combination agreement that have been evaluated for effectiveness and safety are an exception to this.

3.1.1 Special features of the CLT and CLT Ultra options

When fitted with the CLT option, the wheelchair features a permanently welded drive wheel adapter for mounting the drive wheel; when fitted with the CLT Ultra option, the wheelchair additionally features a permanently welded back. In these weight-saving versions, the drive wheel and back height cannot be subsequently adjusted. Furthermore, installation of certain options (e.g. anti-tipper) is not possible with these versions.

For these reasons, these wheelchair versions are intended only for experienced users with sporting ambitions who, thanks to their physiological capabilities, are able to handle the wheelchair proficiently. Before supplying one of these versions, the user should be examined intensively for suitability (adequate physiological capabilities).

3.2 Indications

- Minor to pronounced or complete restrictions of mobility

3.3 Contraindications

3.3.1 Absolute Contraindications

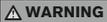
- None known

3.3.2 Relative Contraindications

- Failure to meet physical or mental requirements

4 Safety

4.1 Explanation of warning symbols

 WARNING	Warning regarding possible serious risks of accident or injury.
 CAUTION	Warning regarding possible risks of accident or injury.
 NOTICE	Warning regarding possible technical damage.

4.2 Safety instructions for use

Hazards during preparation for use

 WARNING
Independent modification of settings
Serious injuries to the user due to improper changes to the product
<ul style="list-style-type: none"> ▶ Do not modify the settings established by the qualified personnel. Only the settings described in the section "Use" in these instructions for use may be adjusted independently. ▶ In case of problems with the settings, please contact the qualified personnel who adjusted your product.

⚠ WARNING

Settings outside the safety limits

Tipping over, falling due to adjustment errors because of failure to observe the physical/psychological requirements of the user

- ▶ In certain versions and with certain settings, the product tends to tip backwards due to its design. This is an intentional feature designed to enable users with the corresponding physical prerequisites to manoeuvre quickly and nimbly.
- ▶ Users with the necessary physical and psychological preconditions can be supplied with such versions/settings. If the physical/psychological preconditions change, the product may no longer be used with these settings. Inform the responsible qualified personnel immediately in this case.

⚠ WARNING

Improper handling of packaging materials

Risk of suffocation due to neglect of the duty to supervise

- ▶ Packaging materials must be kept out of the reach of children.

Risk of hand injuries

⚠ CAUTION

Heat development when braking with handrims

Burns due to insufficient hand protection

- ▶ Wear wheelchair gloves when travelling at high speeds.

Hazards while driving

⚠ CAUTION

Lack of driving experience

Tipping over, falling due to errors in handling the product

- ▶ Practise on level, open ground first.
- ▶ Learn with the support of an assistant how the product reacts to changes in centre of gravity, e.g. downward or upward slopes, inclines or when overcoming obstacles.

⚠ CAUTION

Leaning forward in the wheelchair

Tipping over, overturning due to incorrect centre of gravity

- ▶ Do not lean too far out of the wheelchair when trying to pick up objects.
- ▶ Lean well forward with your upper body when climbing gradients, overcoming obstacles on gradients or on ramps. If users cannot lean their upper body forward, accompanying persons must support the wheelchair from behind.

⚠ CAUTION

Risky operation

Falling, tipping over backwards due to approaching obstacles incorrectly

- ▶ Push slowly when crossing obstacles (e.g. steps, curbs) and negotiating uphill or downhill slopes and inclines.
- ▶ Never cross obstacles at an angle. Always approach obstacles head on (at an angle of 90°).
- ▶ Raise the front wheels before crossing obstacles.
- ▶ Avoid collisions with obstacles and dropping off curbs/ledges.
- ▶ Avoid riding cross-country.

⚠ CAUTION**Lack of tipping resistance on public transport**

Tipping over, user falls, damage to the product due to incorrect positioning

- ▶ When using public transit, always observe the currently applicable legal requirements and the safety notices of the public transit operator.
- ▶ Use the permanently installed seats in the vehicle. If you depend on using your wheelchair as a seat, please use the designated wheelchair spaces and safety securing equipment provided. Always ensure that you are held in place securely.

⚠ CAUTION**Incorrect handling at level crossings**

User may fall or tip over due to driving error

- ▶ Only cross railway systems and railway tracks in the designated areas.
- ▶ Negotiate level crossings so the caster wheels of the product cannot get caught in the gap between the rail and the road surface.

⚠ CAUTION**Driving in the dark**

Risk of collisions with other traffic participants due to lack of lighting

- ▶ Wear bright clothing or clothing with reflectors.
- ▶ Install active lighting on your product.
- ▶ Ensure that the reflectors on the product are clearly visible.

Hazards when overcoming obstacles**⚠ WARNING****Overcoming steps and obstacles without assistance**

Tipping over, falling of the user due to failure to observe transportation instructions

- ▶ Always have accompanying persons help you negotiate steps and other obstacles.
- ▶ Use available facilities (e.g. access ramps or lifts).
- ▶ If such facilities are not available, have 2 assistants carry you over the obstacle.

⚠ WARNING**Improper lifting by attendants**

Tipping over, falling of the user due to lifting by removable components

- ▶ Only lift the product by firmly mounted components (e.g. main frame, push handles).
- ▶ Be sure that the clamping levers of the height-adjustable push handles are firmly tightened.

⚠ WARNING**Reduced ground clearance with the "foot-propelled chair" option**

Tipping over, falling due to getting caught on obstacles

- ▶ Please note that wheelchairs with the "foot-propelled wheelchair" option might fall below the minimum ground clearance of **40 mm** depending on the selected settings for the lower leg length and the front seat height.
- ▶ Adjust your driving to the reduced ground clearance and exercise particular caution with obstacles on the ground e.g. steps, curbs and thresholds.

Hazard in case of broken skin**⚠ CAUTION****Skin damage**

Skin damage or pressure points due to overloading

- ▶ Check your skin for intactness before and during use of the product.
- ▶ Pay attention to diligent skin care and pressure redistribution by interrupting the use of the product.
- ▶ If skin damage or other problems occur during use, stop using the product. Contact the qualified personnel.

Hazards due to fire, heat and cold

CAUTION

Extreme temperatures

Hypothermia or burns due to contact with components, failure of components

- ▶ Do not expose the product to any extreme temperatures (e.g. direct sunlight, sauna, extreme cold).
- ▶ Do not leave the product in the immediate vicinity of heaters.

Hazards due to improper use of the product

WARNING

Overloading

Severe injuries if the product tips over due to overloading, damage to the product

- ▶ Do not exceed the maximum load capacity (see the nameplate and section "Technical data").
- ▶ Please note that certain accessories and add-on components will reduce the remaining load capacity.

WARNING

Exceeding the service life

Serious injuries due to failure to observe the manufacturer's requirements

- ▶ Using the product beyond the specified expected service life leads to increased residual risk.
- ▶ Observe the specified service life.

WARNING

Incorrect pushing or pulling of the wheelchair

Risk of falling, tipping over due to user error

- ▶ Only the push handles may be used for pushing or overcoming obstacles. The tip-assist should be used in addition.
- ▶ If a stabiliser bar is installed, it must **not** be used for pulling or pushing.
- ▶ The attendant should make sure that he/she has a secure stance and firm grip (on both sides).
- ▶ In case of damage, have the push handles repaired promptly.

CAUTION

Use of the product during diagnostic examinations and therapeutic treatment

Impairment of the examination results or the effectiveness of treatment due to interactions of the product with devices that are used

- ▶ Make sure that examinations and treatments are carried out exclusively under the prescribed conditions.

CAUTION

Uncontrolled driving behaviour, unexpected sounds or odours

Falling, tipping, collision with persons or nearby objects due to defects

- ▶ If any faults, defects or other hazards that can lead to personal injury are detected, the product must be taken out of service immediately. This includes uncontrolled movements as well as sounds that are unexpected or previously not noted or odours that deviate significantly from the state of the product at the time of delivery.
- ▶ Contact the qualified personnel.

NOTICE

Use under incorrect environmental conditions

Damage to product due to corrosion or abrasion

- ▶ Do not use the product in salt water.
- ▶ Make sure that the wheel bearings are not damaged by sand or other particles.

4.3 Side effects

The following side effects may occur during use of the product:

- Neck, muscle and joint pain
- Circulatory disorders, pressure sores

Contact a doctor or therapist in case of problems.

4.4 Further information

INFORMATION

The serial number required for enquiries and ordering spare parts and accessories is found on the nameplate. For explanations of the nameplate, see the section "Nameplate" (Nameplate).

INFORMATION

Even in the event of compliance with all applicable guidelines and standards, alarm systems (e.g. in department stores) may respond to your product. Should this happen, remove your product from the area where the alarm was triggered.

4.5 Nameplate and warning labels

The nameplates are found on the crossbrace.

Label	Meaning
	A Manufacturer's product name
	B CE marking
	C Maximum load (see section "Technical data")
	D Manufacturer information/address
	E Serial number ¹⁾
	F Manufacturing date ²⁾
	G Symbol for medical device
	H WARNING! Read the instructions for use before using the product. Observe important safety-related information (e.g. warnings, precautions).
	I Manufacturer's reference number for the product variant
	J Serial number (PI) ^{3),1)}
	K Global Trade Item Number (DI) ⁴⁾

1) YYYY = year of manufacture; WW = week of manufacture; PP = production site; XXXX = sequential production number

2) YYYY = year of manufacture; MM = month of manufacture; DD = day of manufacture

3) UDI-PI to GS1 standard; UDI = Unique Device Identifier, PI = Product Identifier

4) UDI-DI to GS1 standard; UDI = Unique Device Identifier, DI = Device Identifier

Label	Meaning
	<p>Fixation point to attach the product in vehicles for transporting persons with reduced mobility.</p> <p>The product is approved as a seat in a vehicle for transporting persons with reduced mobility only if this symbol is stuck onto the fixation points of the product.</p>

5 Delivery

5.1 Scope of delivery

- Wheelchair ready for use
- Instructions for use (user)
- Instructions for use for accessories (depending on equipment)

5.2 Options

The standard model can be fitted to the user's personal requirements thanks to a large range of options. For use of these options: see page 15 ff.

5.3 Storage

5.3.1 Storage during daily use

The product should always be stored so it is protected against external influences.

5.3.2 Storage during extended disuse

The product must be stored in a dry place. Specific information for extended storage: see page 50.

It is not necessary to disassemble the product.

Maintain sufficient clearance from sources of heat. If the product is parked for an extended period of time or the tyres overheat (e.g. in the vicinity of radiators or in case of exposure to strong sunlight behind glass), the tyres may become permanently deformed.

During extended storage, the knee lever wheel lock on wheelchairs with PU tyres (= tubeless tyres) must be released since tyre deformation may otherwise result.

6 Preparing the product for use

6.1 Assembly

⚠ CAUTION

Exposed pinch points

Crushing, pinching due to incorrect handling

- ▶ When folding the wheelchair out or together, only grip by the specified components.

⚠ CAUTION

Failure to verify readiness for use before putting into operation

Tipping, falling due to incorrect adjustment or installation

- ▶ Before you start using the wheelchair for the first time, check the chosen wheelchair settings with the support of qualified personnel.
- ▶ After every assembly, check for proper mounting of the drive wheels. The quick-release axles must be securely locked in the receiver bushings.
- ▶ Pay particular attention to the stability against tipping, free running of the drive wheels and correct function of the wheel locks.
- ▶ Check the tyre pressure. The correct tyre pressure is printed on the sidewall. Ensure that the pressure is the same in both tyres.

INFORMATION

On the topic of disassembly/transport: see page 39.

It takes just a few simple steps to prepare the wheelchair for use:

- 1) Attach the drive wheels to the quick-release axle mounting (see fig. 4). The quick-release axles must not be removable after releasing the press button.
INFORMATION: With “lock-release assist” option: see page 29. With “drive wheel for one-handed operation” option: see page 30.
- 2) Loosen the safety strap (see fig. 5).
- 3) Unfold the wheelchair (see fig. 6).
INFORMATION: While next to the wheelchair, tip it slightly towards you and press on the edge of the seat upholstery closest to you.
- 4) **Only with “stabiliser bar” option:** Insert the stabiliser bar (see page 28).
- 5) **Only with “drive wheel for one-handed operation” option:** Insert the telescoping rod (see page 30).
- 6) **If necessary:** Attach the leg supports (see page 16).
Fold down the foot plates. With a single-panel foot plate, make sure the foot plate support is locked into the mounting (see fig. 7).
- 7) Fit the seat cushion (see page 22). The seat cushion is secured against sliding by being pressed onto the hook-and-loop closure.



7 Use

7.1 Instructions for use

- Attaching loads (e.g. backpacks) can adversely affect stability. Therefore, suspending additional loads on the wheelchair is not permitted.
- The recommended overall width for manual wheelchairs in an operational state is **700 mm**. This specification should ensure unhindered use of escape routes, for example. Note that the product dimensions can exceed the recommended values for dimensions and the movement range of manually powered wheelchairs in variants with very large seat widths (see see page 50 ff.).
- The wheelchairs in this series comply with the minimum technical requirements for wheelchairs transportable by train. Please note that it is possible that not every individual wheelchair will meet the minimum requirements due to the variation in designs (please see see page 51 for further details).

7.2 Getting in and transferring

CAUTION

Incorrect handling when getting in

Risk of falling, tipping or rolling away due to incorrect handling

- ▶ Activate the wheel lock each time before you get into or out of or transfer to or from the wheelchair.
- ▶ Always get into the wheelchair from the side, where possible.
- ▶ Never step on the foot plates when getting in and out.
- ▶ Do not support yourself on the wheel lock when getting in/out.

Users can choose the method for getting into and out of the wheelchair which is most suitable for them. The respective procedure should be discussed and practised with a therapist.

As a rule, the frame tubes, seat bottom or side panels can be used as supports for getting into the wheelchair.

If getting in independently is not possible, transferring or getting in always has to be performed with the help of an assistant. The manufacturer also offers transfer aids for getting in, such as transfer boards.

7.3 Legrests

⚠ CAUTION

Improper use of the legrests

Tipping over, falling due to errors in handling the product

- ▶ Fold up the footplates before getting in.

⚠ WARNING

Reduced ground clearance with the "foot-propelled chair" option

Tipping over, falling due to getting caught on obstacles

- ▶ Please note that wheelchairs with the "foot-propelled wheelchair" option might fall below the minimum ground clearance of **40 mm** depending on the selected settings for the lower leg length and the front seat height.
- ▶ Adjust your driving to the reduced ground clearance and exercise particular caution with obstacles on the ground e.g. steps, curbs and thresholds.

⚠ CAUTION

Improper use of the leg supports

Abrasions due to sharp edges, skin irritation

- ▶ To prevent injuries on the soles of the feet, do not use the leg supports while barefoot.

The legrests support the user's legs.

The height of the legrest has been adjusted by qualified personnel to the length of the user's lower legs.

The angle of the footrest has been set by the qualified personnel so that it allows the ankles to rest in a comfortable position.

7.3.1 Removing and attaching the leg supports

The leg supports of the Avantgarde DV and Avantgarde DF version V can be removed to make it easier to get in and out as well as for transport.

Removing the leg supports – leg support with leg support holder on the Avantgarde DV

- 1) Fold the foot plate up (see fig. 8).
- 2) Pull the release lever on the leg support to the side (see fig. 9).
- 3) Swing the leg support out by **90°** and remove it from the leg support retainer (see fig. 10).

Attaching the leg supports – leg support with leg support holder on the Avantgarde DV

- 1) Hold the leg support **90°** out to the side and insert it into the leg support retainer (see fig. 11).
- 2) Swing the leg support into the direction of travel until it engages (see fig. 10).
- 3) Fold the foot plate down (see fig. 8).





Removing the leg supports – leg support with leg support holder on the Avantgarde DF version V

- 1) Open the calf strap.
- 2) Push the release lever for the leg support back (see fig. 12).
- 3) Swing the leg support out by 90° (see fig. 13) and remove it from the leg support retainer (see fig. 14).

Attaching the leg supports – leg support with leg support holder on the Avantgarde DF version V

- 1) Hold the leg support 90° out to the side and insert it into the leg support retainer (see fig. 14).
- 2) Swing the leg support into the direction of travel until it engages (see fig. 15).
- 3) Fasten the calf strap.

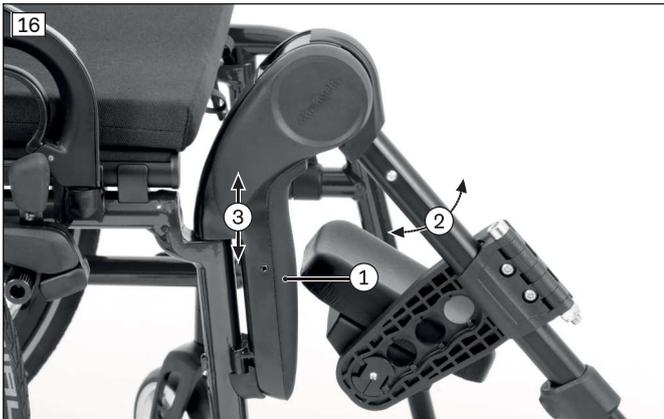


Removing the leg supports – elevating leg support on the Avantgarde DV

- 1) Activate the release lever (see fig. 16, item 1).
- 2) Swing the leg support outwards and to the side by 90° (see fig. 16, item 2) and pull up to detach (see fig. 16, item 3).

Attaching the leg supports – elevating leg support on the Avantgarde DV

- 1) Hold the leg support out to the side by **90°** and insert the pivot bearing into the leg support retainer (see fig. 16, item 3).
- 2) Swing the leg support into the direction of travel until it engages (see fig. 16, item 2).



Removing the leg supports – elevating leg support with automatic length adjustment on the Avantgarde DF version V

- 1) Lift the leg support (see fig. 17, item 1).
- 2) Swing the leg support outwards and to the side by **90°** and pull up to detach (see fig. 17).

Attaching the leg supports – elevating leg support with automatic length adjustment on the Avantgarde DF version V

- 1) Hold the leg support out to the side by **90°** and insert the pivot bearing into the leg support retainer (see fig. 18, item 1).
- 2) Swing the leg support into the direction of travel until it engages (see fig. 18).



Removing the leg supports – amputation leg support on the Avantgarde DF version V

- 1) Lift the leg support (see fig. 19, item 1).
- 2) Swing the leg support outwards and to the side by **90°** and pull up to detach (see fig. 19).

Attaching the leg supports – amputation leg support on the Avantgarde DF version V

- 1) Hold the leg support out to the side by **90°** and insert the pivot bearing into the leg support retainer (see fig. 20, item 1).
- 2) Swing the leg support into the direction of travel until it engages (see fig. 20).



7.3.2 Folding the foot plate up and down

Segmented footplate

- Hold the footplate by the edge and fold it up or down (see fig. 8).

Folding up and swinging away the single-panel foot plate

- 1) Disengage the foot plate on one side and fold it up to the side (Avantgarde DS/DV: see fig. 21, Avantgarde DF: not illustrated).
- 2) If required, the foot plate can be swung away to the side after it is folded up (see fig. 22).



Folding down the single-panel foot plate

- Fold down the foot plate, making sure the foot plate support locks into the mounting (Avantgarde DS/DV: see fig. 21, Avantgarde DF: not illustrated).

Additional option “locking device for single-panel foot plate”

With this additional option, the foot plate can also be locked in the support (Avantgarde DS/DV: see fig. 23, Avantgarde DF: see fig. 25).

Proceed as follows to fold the foot plate up and down:

- 1) Release the locking device by pulling on the key ring (Avantgarde DS/DV: see fig. 24, Avantgarde DF: see fig. 26). Fold the foot plate up to the side.
- 2) If required, the foot plate can be swung away to the side after it is folded up (see fig. 22).
- 3) Fold down the foot plate and make sure the foot plate locking device engages in the receiver (Avantgarde DS/DV: see fig. 23, Avantgarde DF: see fig. 25).



7.3.3 Adjusting the angle of the elevating leg support

Adjusting the angle – elevating leg support on the Avantgarde DV

- 1) Activate the release lever (see fig. 27, item 1) and swing the leg support upwards or downwards.
Alternatively: The leg support can be elevated to the desired position by simply pulling up (see fig. 28).
 - 2) Move the leg support to the desired angle.
- The leg support automatically snaps into place in the next free position (see fig. 29).





Adjusting the angle – elevating leg support with automatic length adjustment on the Avantgarde DF version V

INFORMATION

Please note that the angle of the elevating leg support with automatic length adjustment/calf support cannot be adjusted (disengaged) under load, otherwise the mechanism may tilt or block.

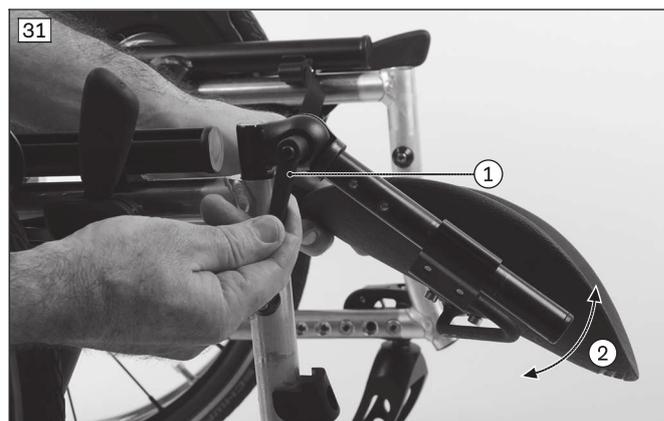
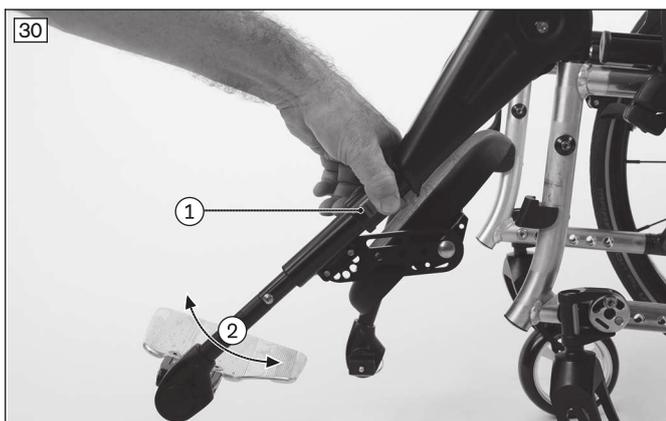
- 1) Press the red actuating button with the text “Press” on the leg support (see fig. 30, item 1).
- 2) Adjust the angle and allow the leg support to engage (see fig. 30, item 2).
- 3) **Alternatively:** The leg support can be elevated to the desired position by simply pulling up.

Adjusting the angle – amputation leg support on the Avantgarde DF version V

INFORMATION

Please note that the angle of the amputation leg support/calf support cannot be adjusted (disengaged) under load, otherwise the mechanism may tilt or block.

- 1) Release the clamping lever (see fig. 31, item 1).
- 2) Rotate the leg support to the desired angle (see fig. 31, item 2).
- 3) Engage the clamping lever.



7.3.4 Removing and fastening the calf strap

The calf strap offers additional support for the user's legs. It also prevents the feet from sliding off the foot plate into the danger area. The calf strap can be removed for cleaning.

Fastening the calf strap

- 1) Open all hook-and-loop closures.
- 2) Thread the calf strap through the eyelet on the end piece of the leg support holder and fasten it with hook-and-loop (see fig. 33, see fig. 34, item 1).
- 3) **Only with segmented plastic foot plates:** Thread the calf strap through the eyelet on the side of the foot plate and fasten it with hook-and-loop (see fig. 34, item 2; see fig. 35).

- 4) **Only with segmented aluminium foot plates:** Fasten the calf strap on the underside of the foot plate with hook-and-loop (not pictured).
- 5) Adjust the length and fasten the hook-and-loop closure (not pictured).

Removing the calf strap

- 1) Open all hook-and-loop closures.
- 2) Remove the calf strap.



7.3.5 Adjusting the leg supports

Further adjustments may be made only by qualified personnel.

7.4 Seat cushion and back upholstery

⚠ WARNING

Seat cushions and back support pads may ignite
 Burns due to user error

- ▶ The seat and back support upholstery as well as seat cushions, padding and covers fulfil the normative requirements for flame resistance. However, they may still ignite if fire is handled improperly or negligently.
- ▶ Keep away from all ignition sources, especially lit cigarettes.

⚠ CAUTION

Wear of the seat and back upholstery
 Loss of functionality due to prohibited continued use

- ▶ Have the seat and back upholstery replaced immediately in case of damage.

The product is equipped with seat and back upholstery. Hook-and-loop fasteners on the seat upholstery are used to attach the seat cushion. The seat cushion ensures pressure relief during use of the wheelchair. It was chosen by qualified personnel according to the needs of the user.

7.4.1 Removing and fastening the seat cushion

The seat cushion can be removed from the wheelchair for cleaning.

- 1) Lay the seat cushion onto the seat upholstery and secure it against sliding by pressing it onto the hook-and-loop fastener (see fig. 36).
- 2) To remove, detach the seat cushion from the hook-and-loop fastener on the upholstery.



7.4.2 Removing and fastening the back support pad

The back padding can be removed from the wheelchair for cleaning.

Removing the back support pad

- 1) Remove the seat cushion.
- 2) Pull the back support pad off the seat upholstery towards the rear (see fig. 37).
- 3) Pull the back support pad off the hook-and-loop straps of the back support upholstery (see fig. 38).

Fastening the back support pad

- 1) From the rear, apply the edge of the back support pad to the upper hook-and-loop strap (see fig. 38).
- 2) Fold down the back support pad and secure it to the upholstery straps with hook-and-loop fasteners (see fig. 38).
- 3) Pull the part of the flap that can be fastened forward and attach it to the seat upholstery with the hook-and-loop fastener (see fig. 37).



7.5 Backrest

The product can be equipped with a fixed back support, angle-adjustable back support or with a Baxx back support.

Permanently welded back support (not illustrated)

The back support cannot be set or adjusted. The manufacturer offers 4 variants with a fixed height and an angle of $0^{\circ}/-5^{\circ}/-10^{\circ}/-15^{\circ}$.

Height-adjustable/adaptable back support (not illustrated)

The different versions of the back support tube permit fixed height adjustments by qualified personnel in increments of **25 mm** within an adjustment range of **250 to 550 mm**.

Angle-adjustable back support (see fig. 39)

The different versions of the back support tube permit fixed height adjustments of the back support by qualified personnel within an adjustment range of **300 to 500 mm**. The inclination of the back support to the seat bottom can be adjusted by qualified personnel from **+9° to -15°** in 6° increments (for back supports in combination with side panel with arm pad only from **+3° to -9°**).

Baxx back support (see fig. 40)

With an anatomically shaped rigid back plate made of aluminium, the back system enables the best possible positioning. Large openings in the back shells provide for a low weight and easy handling.

Detailed information regarding use, cleaning and maintenance can be found in the included instructions for use.

**7.6 Side panels****CAUTION****Pinching at the side panels**

Pinching, crushing due to lack of caution in danger areas

- ▶ Pay attention not to pinch parts of your body between the side panel or frame parts.

The side panels protect the user and his/her clothing from getting dirty.

If armrests have been installed on the wheelchair, they offer the user additional support for the forearms.

7.6.1 Removing the side panels

To make getting into the wheelchair easier and for transportation, the side panel with arm pad can be removed.

CAUTION**Incorrect use of the side panel**

Health hazard, risk of breakage of the side panel mounting due to incorrect use

- ▶ Fold the side panel down such that it engages audibly in the side panel mounting.

INFORMATION

When using the side panel with arm pad in combination with an angle-adjustable back support, the back support angle can only be adjusted from **+3° to -15°**.

Folding back/removing

- 1) Press the release lever of the side panel with arm pad (see fig. 41).
- 2) Fold up the side panel with arm pad up by approx. **90°**.
- 3) Turn the side panel with arm pad towards the back support and pull it out of the side panel mounting (see fig. 42).



Attaching/closing

- 1) Turn the side panel with arm pad towards the back support and insert it into the side panel mounting (see fig. 42).
- 2) Rotate the side panel with arm pad parallel to the seat surface and fold it down.
- 3) Ensure that the side panel with arm pad engages audibly in the mounting on the frame tube.

7.6.2 Adjusting the height of the forearm support

The height of the forearm support on the side panel can be set to various positions without the use of tools.

- 1) Pull the release lever in the round opening in the side panel upwards and adjust the desired height. (see fig. 43, item 1).
- 2) Let go of the release lever. The forearm support locks into place automatically.

7.6.3 Adjusting the depth of the forearm support

The depth of the forearm support long, "depth-adjustable" on the side panel with arm pad, can be set to various positions without the use of tools.

- 1) Press the release button in the forearm support and adjust the desired depth (see fig. 44, item 1).
- 2) Let go of the release button. The forearm support locks into place automatically.



7.6.4 Removing the separate "swing away arm support" with padding

To make getting in and transporting the wheelchair easier, the armrests can be folded away or removed.

- 1) Pull the armrests up out of the holders (see fig. 45).
- 2) Fold the armrests away by 90° (see fig. 46) or remove them.
- 3) After getting in, slide the armrests down into the holders again.



7.6.5 Adjusting an arm support with swivel unit

INFORMATION

After adjusting the swivel unit, please always make sure that the lock pins have safely snapped in place.

The swivel unit allows the support angle and the rotation setting of an arm support to be adjusted individually.

Adjusting the support angle

- 1) Pull the release button outwards (see fig. 47, item 1).
- 2) Lift up the arm support at the front end and adjust it to the desired angle (see fig. 47, item 2).
- 3) Let go of the release button. The arm support will be secured in its position.

Adjusting the rotation setting in 15° increments

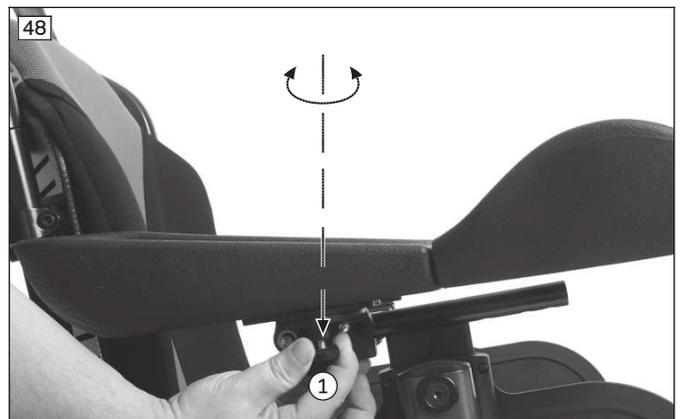
- 1) Pull the release button downwards (see fig. 48, item 1).
- 2) Move the arm support to the desired rotation setting (see fig. 48, item 2).
- 3) Let go of the release button. The arm support will be secured in its position.

Continuously adjusting the rotation setting

- 1) Pull the release button downwards (see fig. 48, item 1).
- 2) Turn the release button 90° (not pictured). The arm support can be rotated freely in this position.
- 3) Move the arm support to the desired rotation setting (see fig. 48, item 2).
- 4) Let go of the release button. The arm support will be secured in its position.

Adjusting the depth of the arm support

- 1) Loosen the Allen head screws under the arm support (not pictured).
- 2) Slide the arm support to the desired depth.
- 3) Re-tighten the Allen head screws under the arm support.



7.7 Push handles

The push handles make pushing the wheelchair easier for the attendant.

Some of the push handle designs allow the height to be adjusted to suit the needs of the attendant.

7.7.1 Adjusting the height of the push handles

To enable ergonomic pushing by the attendant, the wheelchair can be equipped with height-adjustable push handles (“telescoping” push handle: see fig. 49, “height-adjustable, removable” push handle: see fig. 50, “height-adjustable, removable for Baxx” push handle: see fig. 51).

- 1) Release the clamping lever.
- 2) Adjust the height of the push handle.

INFORMATION: Adjust both push handles to the same height.

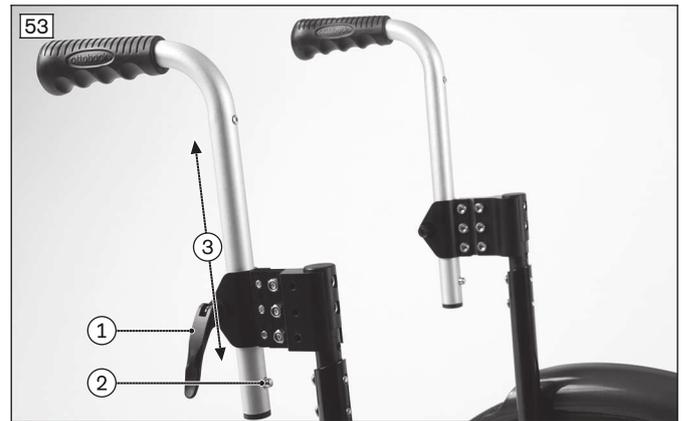
- 3) Engage the clamping lever.



7.7.2 Removing the push handles

Push handles of the “height-adjustable, removable” type can be removed from the back support tube when needed.

- 1) Release the clamping lever (see fig. 52, see fig. 53, item 1).
 - 2) Push in the tripod spring (see fig. 52, see fig. 53, item 2) and pull the push handle up and out of the adapter (see fig. 52, see fig. 53, item 3).
 - 3) To install, push in the tripod spring again and insert the push handle into the adapter.
 - 4) Firmly close the clamping lever (see fig. 52, see fig. 53, item 1).
- Both push handles must be installed at the same height.



7.7.3 Folding the push handles

The folding push handles can be folded down by 90° .

Folding the push handle

- 1) Press the push handle release buttons on both sides (see fig. 54).
- 2) Fold the push handle down by 90° .

CAUTION! Make sure the fingers are not pinched between the push handle and back support.

Unfolding the push handles

- 1) Fold the push handle up by 90° .
- 2) Allow the push handle to audibly lock in place in the active pushing position.



7.8 Stabiliser bar

The stabiliser bar between the push handles increases the wheelchair's stability, especially in case of high loads (see fig. 55). It has to be opened before folding the wheelchair.

Please note: Using the stabiliser bar for pushing and pulling the wheelchair is not permitted. Always use the push handles for this purpose.

Opening the stabiliser bar

- 1) Loosen the star knob screws (see fig. 55, item 1).
- 2) Fold the stabiliser bar down (see fig. 56, item 2).

Closing the stabiliser bar

- 1) Fold the stabiliser bar up until the opening is against the screw of the star knob.
- 2) Hand-tighten the star knob screws.



7.9 Drive wheels

⚠ WARNING

Improper assembly of removable wheels

Tipping, falling over of the user due to wheels coming off

- ▶ After each assembly, verify the proper fit of the removable wheels. The quick-release axles must be firmly locked in the wheel attachment.

⚠ WARNING

Defective tyres

Accidents/falling due to poor traction, reduced braking force or lack of manoeuvrability

- ▶ Maintain sufficient tyre pressure. Note the information in the section "Technical data" or on the tyre sidewall.
- ▶ Ensure that the pressure is the same in both tyres.
- ▶ Ensure that the tyres have sufficient tread depth.

⚠ CAUTION

Reaching into exposed drive parts

Crushing, pinching due to incorrect handling

- ▶ Do not reach between the drive wheel and wheel lock or drive wheel and side panel when driving the product.
- ▶ Do not reach into the spokes of the rotating drive wheel while riding in the product.

⚠ CAUTION

Heat development when braking with handrims

Burns due to insufficient hand protection

- ▶ Wear wheelchair gloves when travelling at high speeds.

The wheelchair is moved, steered, braked and stopped with the help of the handrims on the drive wheels. To make transport easier, drive wheels with quick-release axle can be taken off the wheelchair.

7.9.1 Removing and mounting the drive wheels

⚠ CAUTION

Incorrect removal/attachment of the wheels

Tipping, falling due to incorrect installation

- ▶ The user is not permitted to sit in the wheelchair during wheel replacement.
- ▶ For changing wheels, set the wheelchair onto a solid surface.
- ▶ To change the wheels, secure the wheelchair against tipping over or rolling away.
- ▶ If the drive wheel does not lock securely or has too much sideways play, contact the qualified personnel promptly.

Rear wheels with quick-release axle

- 1) Release the wheel lock.
- 2) Grip the area between the spokes near the hub with your fingers.

- 3) Use your thumb to press in the push-button on the quick-release axle.
- 4) Remove or mount the drive wheel.

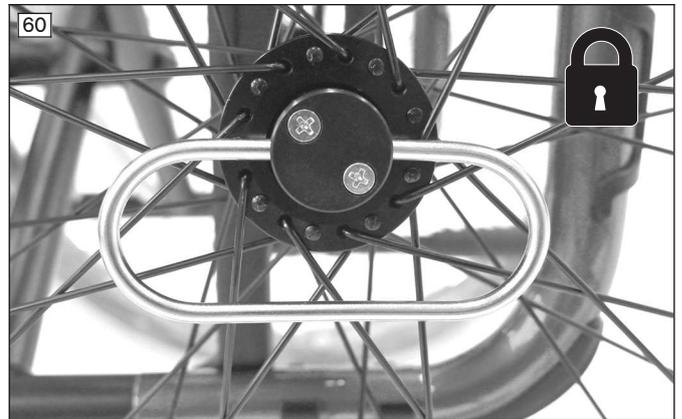
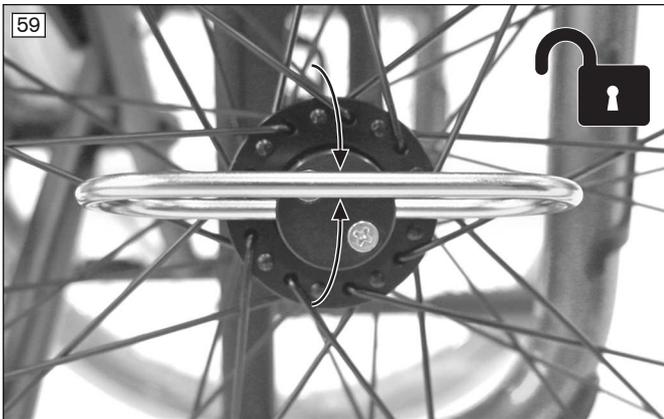
After mounting: The drive wheels must not be removable after releasing the push-button on the quick-release axle.



Drive wheels with lock-release assist

The quick-release axle with lock-release assist for people with quadriplegia makes it possible to install the drive wheels even in case of severely limited mobility of the arms and hands.

- 1) Open the lock-release assist so that the handle faces out perpendicular to the wheel (see fig. 59).
→ The quick-release axle is unlocked and can be pulled out.
- 2) Remove/insert the wheel.
- 3) Close the lock-release assist so that the handle is parallel to the wheel (see fig. 60).
- 4) Check that the wheel and quick-release axle are securely positioned.
→ When closed, the wheels have to fit on the wheel attachment devices without play.



7.9.2 Rear wheel with one-handed operation (double push rings)

The wheel set for one-handed operation allows hemiplegics or unilateral amputees for example to operate the wheelchair with one hand (see fig. 61).

- **Using the outer and inner handrim together:** Both wheels are driven together. The wheelchair drives straight ahead.
- **Using only the outer handrim:** Only the drive wheel is moved. The wheelchair can be steered with forward, stopping or backward movements of the handrim.

The one-hand drive is supplied with special quick-release axle mountings and a telescoping rod.

Using drive wheels for one-handed operation

- 1) Insert the drive wheels for the one-hand drive into the quick-release axle mounting (see fig. 62) and lock them by rotating the locking bolt by 90° (see fig. 63).
- 2) Insert the telescoping rod. To do so, set one side of the telescoping rod onto the wheel pivot protruding from the inside of the quick-release axle mounting (see fig. 64).
- 3) Compress the telescoping rod and set the other end of the rod onto the second wheel pivot.

Detaching drive wheels for one-handed operation

- 1) Compress the telescoping rod and remove it (see fig. 64).
- 2) Open the locking device on the quick-release axle. To do so, turn the locking bolt by 90° (see fig. 63).
- 3) Remove the drive wheel.



7.10 Caster wheels and caster forks

⚠ WARNING

Failure of caster wheels or caster forks

Falling, severe injury due to the wheelchair tipping over

- ▶ Regularly inspect the caster wheels and caster forks for damage.
- ▶ Regularly clean and oil the caster wheel axles and the threaded axles on the caster forks, especially in case of stiffness.
- ▶ Inform the responsible qualified personnel in case of permanent changes to the driving characteristics.

⚠ CAUTION

Incorrect caster wheel position when leaning forward in the wheelchair

Tipping over, falling due to incorrect caster wheel positioning

- ▶ Prior to activities that require you to bend forward in the wheelchair (e.g. tying your shoes), maximise the stability of the wheelchair.
- ▶ In order to do so, push the wheelchair backwards until the caster wheels turn forward.

The combination of caster wheels and caster forks ensures the ability to hold a straight line and navigate bends securely.

The caster wheels and caster forks have been chosen by the qualified personnel according to the needs of the user.

7.10.1 Approach in case of stiffness

NOTICE

Using sharp or pointed objects

Damage to the caster wheels or caster forks

- ▶ Do not use pointed or sharp objects when removing dirt.

In case of stiffness, the caster wheel axles should be cleaned and oiled.

Oiling the caster axle

- 1) Remove dirt (such as hairs) from the caster axle between the caster wheel and caster fork.
- 2) Lubricate the caster axle between the caster wheel and caster fork with a few drops of thin, resin-free oil (sewing machine oil).

7.11 Wheel locks

The wheel locks secure the parked wheelchair against rolling away.

The drum brakes allow the attendant to slow the wheelchair easily and safely by activating the wheel lock lever on the push handles.

7.11.1 Using the wheel locks

⚠ WARNING

Improper use of the wheel lock

Falls due to abrupt braking, rolling away of the product, crushing of hands

- ▶ Do not use the wheel lock as a driving brake.
- ▶ Always engage the wheel lock on both sides.
- ▶ Engage the wheel lock to prevent the product from moving when it is parked on uneven ground or during transfers (e.g. into a car).
- ▶ Do not reach between the rear wheel and the wheel lock when driving the product.
- ▶ Ensure that the knee lever wheel lock is properly adjusted (max. **5 mm** gap between wheel lock bolt and tyre). The wheel lock bolt must lock the drive wheel securely when stationary.
- ▶ Please contact the qualified personnel who adjusted your product for readjustment of the wheel lock.

Activating/deactivating the knee lever wheel lock

- 1) Push the handle of the knee lever wheel lock forward (see fig. 65, item 1; variant with wheel lock lever extension: see fig. 66, item 1).
→ The wheel lock bolt secures the wheel.
- 2) Pull the handle of the knee lever wheel lock up (see fig. 65, item 2; variant with wheel lock lever extension: see fig. 66, item 2).
→ The wheel lock bolt releases the wheel.



Activating/deactivating the scissor wheel lock

- 1) Reach under the seat and pull the handle of the scissor wheel lock towards the back from the side (see fig. 67).
→ The wheel lock bolt secures the wheel.

- 2) Pull the handle of the scissor wheel lock forwards to unfold (see fig. 68).
→ The wheel lock bolt releases the wheel.



Activating/deactivating the knee lever wheel lock for one-handed operation

This wheel lock is recommended especially for hemiplegics. It can be used either on the right or left side and ensures the safe locking of both drive wheels with a pull-wire system.

INFORMATION

Note that the wheel lock lever extension must always be attached when releasing or engaging the wheel lock.

- 1) Push the handle of the knee lever wheel lock forward (see fig. 69, item 1).
→ The wheel lock bolt secures the wheel.
- 2) Pull the wheel lock lever upwards (see fig. 69, item 2).
→ The wheel lock bolt releases the wheel.



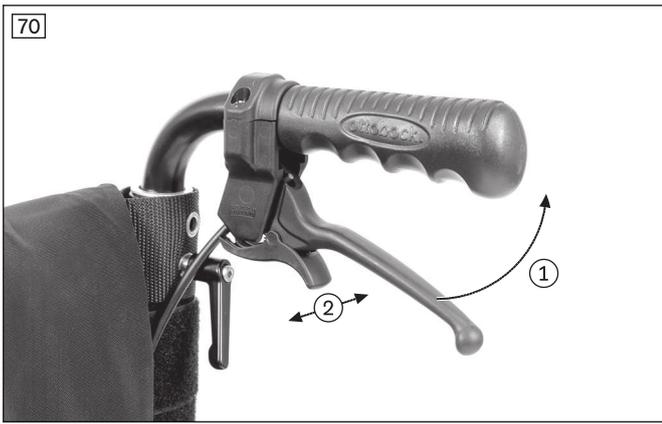
7.11.2 Drum brake

The drum brakes allow the attendant to slow the wheelchair easily and safely by activating the wheel lock lever on the push handles.

Activating/deactivating the drum brake

- 1) Pull the brake lever (see fig. 70, item 1).
- 2) If necessary, secure the brake lever by additionally actuating the lock slide (see fig. 70, item 2).
- 3) Deactivate the brake by actuating the brake lever again or pressing the lock slide.

The drive wheels can still be removed via the quick-release axles when the brake lever is released.



7.11.3 Knee lever wheel lock for user and attendant

This wheel lock type can be used by both the user and an attendant.

INFORMATION

- ▶ Operation of the wheel lock by the user is the same as for the knee lever wheel lock described above.
- ▶ Operation of the wheel lock levers by the attendant is the same as for the drum brake described above.

Activation/deactivation by the user

- 1) Push the handle of the knee lever wheel lock forward (see fig. 71, item 1).
→ The wheel lock bolt secures the wheel.
- 2) Pull the wheel lock lever upwards (see fig. 71, item 2).
→ The wheel lock bolt releases the wheel.

Activation/deactivation by the attendant

- 1) Pull the brake lever (see fig. 70, item 1).
- 2) Secure the wheel lock lever by additionally actuating the lock slide (see fig. 70, item 2).
→ The wheel lock bolt secures the wheel.
- 3) Deactivate the wheel lock by actuating the brake lever again or pressing the lock slide (see fig. 70, item 1/2).
→ The wheel lock bolt releases the wheel.



7.11.4 Using the plug-on wheel lock lever extension

The “plug-on wheel lock lever extension” option makes the knee lever wheel lock easier to use. The wheel lock lever extension can be removed for easier transfer into the wheelchair. The wheel lock lever extension is attached to the wheel lock lever with a rubber band.

Removing/mounting the wheel lock lever extension

- 1) Pull the handle of the wheel lock lever extension forward or up, away from the wheel lock lever (see fig. 72, left).
- 2) Fold the wheel lock lever extension either forward (see fig. 72, right) or to the side (see fig. 73).

- 3) To mount, pull on the handle of the wheel lock lever extension and slide the wheel lock lever extension back onto the wheel lock lever.



7.12 Anti-tipper/tip-assist

⚠ WARNING

Anti-tipper not activated

Tipping over, falling of the user due to improper operation of a safety device

- ▶ Ensure that an installed anti-tipper is activated before travelling over obstacles and on inclines.
- ▶ The anti-tipper has to engage audibly prior to use. Proper engagement must be checked by the user or an attendant.
- ▶ The use of an anti-tipper is highly recommended for transfemoral amputees and inexperienced users.

⚠ WARNING

Incorrectly adjusted anti-tipper

Tipping over, falling of the user due to errors in handling the product

- ▶ If only one attendant helps in overcoming steps, the attendant must first deactivate the anti-tipper so that it cannot collide with the steps during transport.
- ▶ The attendant must activate the anti-tipper again after overcoming the steps.

⚠ WARNING

Incorrectly adjusted anti-tipper

Risk of falling as a result of incorrectly adjusted anti-tipper.

- ▶ The anti-tipper may only be adjusted by qualified personnel.

The anti-tipper prevents the wheelchair from tipping backwards when overcoming obstacles and going uphill. It is set for a maximum ground clearance of **50 mm** and so that the anti-tipper rollers, as a minimum, project fully beyond the largest diameter of the drive wheels.

The tip-assist makes overcoming obstacles easier for the attendant.

7.12.1 Activating and deactivating the anti-tipper

A mounted anti-tipper must always be active.

When overcoming obstacles (such as steps and curbs that are not lowered) **upwards**, the anti-tipper rollers contact the ground.

When overcoming obstacles (such as steps and curbs that are not lowered) **downwards**, the anti-tipper has to be deactivated by the user or attendant to avoid damaging the anti-tipper.

Activation

- 1) Push the anti-tipper down with the hand or foot (see fig. 74).
- 2) Swing the anti-tipper back and allow it to engage (see fig. 75).

Deactivation

- 1) From above, press on the anti-tipper with the hand or foot until it disengages (see fig. 76).
- 2) Rotate the anti-tipper forwards by **180°** and release it (see fig. 75).



7.12.2 Using the tip-assist

- 1) At an obstacle, place one foot on the tip-assist and push down (see fig. 77).
- 2) The wheelchair can be tipped easily by simultaneously pressing down on the push handles.

7.13 Transport wheels

⚠ CAUTION

Knee lever wheel lock when the drive wheels are removed

Risk of accident, falling due to loss of functionality of the knee lever wheel lock

- ▶ Note that a wheelchair with transport wheels can only be braked by an attendant.

⚠ CAUTION

Incorrect height setting

Risk of tipping or falling due to the sloped product setting

- ▶ Always adjust the height equally on both sides.

The transport wheels permit movement through very narrow passages (e.g. in trains or aircraft).

Transport wheels take the place of the drive wheels. In order to move, an attendant is required to push the wheelchair.

7.13.1 Using the transport wheels

- > Prior to use, verify whether the transport wheels have been set to the same height. If this is not the case: Press in the locking pin and adjust the height equally on both sides. The locking pin must engage audibly.
- 1) Remove the drive wheels.
Whenever possible, this should be done when the user is not sitting in the wheelchair. If the user is sitting in the wheelchair, proceed as follows:
 - 2) The first attendant holds the wheelchair in a stable position so that the drive wheels are relieved in turn.
 - 3) The second attendant carefully removes the first and second drive wheel one after the other.
- The wheelchair can now be pushed on the transport wheels.



7.14 Lap belt (seat belt)

⚠ CAUTION

Incorrectly adjusted lap belt

Malpositions, illness, falling of the user due to installation/adjustment errors

- ▶ Do not modify the settings established by the qualified personnel. In case of problems with the adjustments (unsatisfactory sitting position) please contact the qualified personnel who fitted the product.
- ▶ The lap belt has to fit closely but not too tightly so the user is not injured. It should be possible to slide two fingers comfortably between the belt and thigh.
- ▶ Have the settings of the belt system checked regularly. Adjustments may be required due to the growth of the user or because of changes in the course of the disease or different clothing.

The lap belt (seat belt) prevents the user from slipping and supports positioning.

It is installed on the product by qualified personnel if needed and adapted to the requirements of the user.

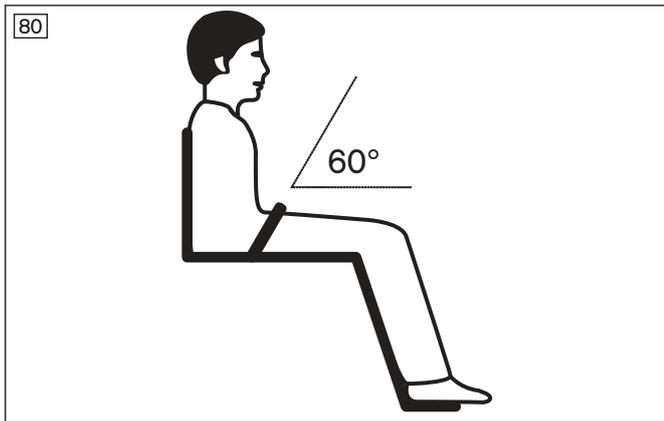
Information about subsequent acquisition and mounting is provided by the qualified personnel that handed over the product.

Using the lap belt

- 1) Open the buckle.
- 2) Place the user in an upright, 90° seated position (if physiologically possible). Ensure that the back is up against the back support pad (if physiologically possible).
- 3) Close the buckle.
- 4) The lap belt should be at an angle of about **60°** to the seat bottom. The belt strap should run across the thighs in front of the pelvic bones (see fig. 80).

Possible errors

- The lap belt is positioned above the user's pelvis in the area of the soft part of the stomach.
- The user does not sit upright in the seat.
- If the lap belt is too loose, the user can shift/slide out to the front.
- During the installation/adjustment, the lap belt is routed over parts of the seating system (e.g. over forearm supports or seat pads). This causes the lap belt to lose its retaining function.



7.15 Tray

⚠ WARNING

Product catching fire

Burns due to user error

- ▶ The product is flammable. The possibility that it may catch fire if exposed to an ignition source cannot be excluded. Therefore, the utmost caution must be exercised in the vicinity of an open flame.
- ▶ Keep away from all ignition sources.

⚠ CAUTION

Improper adjustment

Crushing or pinching due to adjustments which are too tight

- ▶ Do not pinch the user when sliding in the product.

⚠ CAUTION

Driving with objects on the tray top

Injuries due to unsecured objects

- ▶ Remove all objects from the tray top prior to travelling.

⚠ CAUTION

Improper lifting by attendants

Tipping over, user falls due to lifting by removable components

- ▶ The product must not be lifted by the tray.

NOTICE

Overloading

Damage to the product due to user error

- ▶ Do not load the tray with heavy objects.
- ▶ No persons may sit or lean on the tray.

INFORMATION

The tray cannot be installed on the forearm support long, "depth-adjustable."

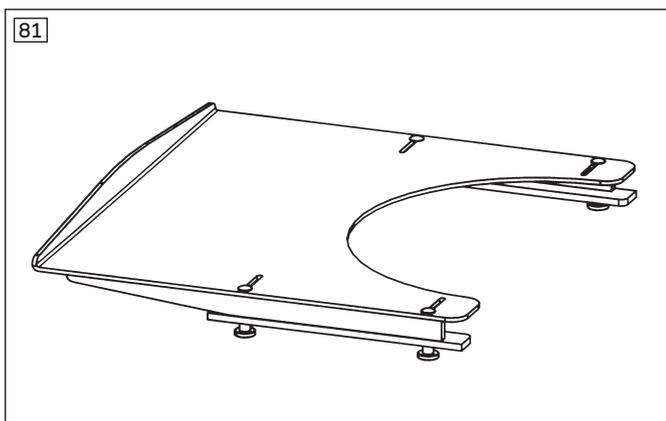
The tray serves as a supporting surface during meals, when working or when playing. The clear material allows visibility of the legs and correction of the sitting posture.

Prior to use in a vehicle for transporting persons with reduced mobility, the tray has to be removed.

Mounting/removing the tray

- 1) Slide the tray on to the armrests.
- 2) Pull the tray off the armrests.

Always guide the tray parallel to the armrests to avoid canting.



Mounting/removing the half tray

- 1) Slide the tray onto the arm support.
- 2) Pull the tray off the arm support.

Always guide the tray parallel to the arm support to avoid canting.



7.16 Additional options

The product may be equipped with additional options.

The options are firmly mounted to the product by qualified personnel or the manufacturer and are pre-adjusted by qualified personnel at delivery.

7.17 Disassembly and transport

⚠ CAUTION

Exposed pinch points

Crushing, pinching due to incorrect handling

- ▶ When folding the wheelchair out or together, only grip by the specified components.

NOTICE

Deformation of the folded backrest

Problems unfolding due to unallowable loads

- ▶ Never rest heavy objects on the backrest when it is folded in.

INFORMATION

- ▶ When transporting the wheelchair in vehicles, fold it up and remove the wheels and leg supports if necessary.
- ▶ Follow the IATA (International Air Transport Association) rules and those of the relevant airline when transporting the wheelchair in an aircraft. Inform the airline several days before your flight. Use the SSR (special service request) codes to describe the type of limited mobility if necessary. You can for example research these on the Internet.

The wheelchair must be prepared for transport in a passenger vehicle.

- 1) Single-panel foot plate: Fold up and swing away the foot plate to the side (see fig. 7, see fig. 22).
Segmented foot plate: Fold up both sections (see fig. 8).
INFORMATION: The leg supports of the Avantgarde DV and Avantgarde DF version V can also be removed, further reducing the packing size (see page 16).
- 2) Remove the seat cushion.
- 3) **Only with “stabiliser bar” option:** Remove the stabiliser bar before folding (see page 28).
- 4) **Only with “drive wheel for one-handed operation” option:** Before folding, remove the telescoping rod (see page 30).
- 5) Pull up the seat upholstery until the wheelchair folds together (see fig. 84).
- 6) Fasten the safety strap (see fig. 85).
- 7) Insert four fingers between the spokes of the drive wheel and press the knob of the quick-release axle with your thumb. Pull off the drive wheel outwards (see fig. 4).
INFORMATION: With “lock-release assist” option: see page 29. With “drive wheel for one-handed operation” option: see page 30.



7.18 Use in vehicles for transporting persons with reduced mobility

⚠ WARNING

Use in vehicles for transporting persons with reduced mobility

Serious injuries in case of accidents due to user error

- ▶ Always use the seats and personal restraint systems in the vehicle for transporting persons with reduced mobility first. This is the only way to ensure optimum protection of passengers in the event of an accident.
- ▶ The product may be used as a seat in a vehicle for transporting persons with reduced mobility if the safety elements provided by the manufacturer and appropriate fastening and personal restraint systems are used. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- ▶ Never transport more than one person in the product.
- ▶ Use the product in a vehicle for transporting persons with reduced mobility only with the back support in a vertical position.
- ▶ Note the limitations regarding installed options (see page 41).

⚠ WARNING

Using the belt system or positioning aid as a passenger restraint system in vehicles for transporting persons with reduced mobility is prohibited

Serious injuries due to improper handling of the product

- ▶ Under no circumstances may the belts and positioning aids that come with the product be used as part of a passenger restraint system in vehicles for transporting persons with reduced mobility.
- ▶ Note that the belts and positioning aids that come with the product are intended only as additional support for the user sitting in the product.

The product has been tested by the manufacturer according to ISO 7176-19 and may be used as a seat in vehicles for transporting persons with reduced mobility subject to the conditions defined below.

The product must be sufficiently secured during transport in vehicles for transporting persons with reduced mobility. The illustrations that follow show an example for anchoring in a motor vehicle.

The manufacturer is not responsible for the fastening systems that are used. Ensure that only fastening systems that meet the applicable legal requirements and are designed for the overall weight of the product including the user are used.

The transport weight of the person to be transported in a vehicle for transporting persons with reduced mobility corresponds to the maximum permissible user weight (see page 50).

7.18.1 Restrictions for use

Equipment versions and options not approved for transportation in a vehicle for transporting persons with reduced mobility

WARNING

Improper use in vehicles for transporting persons with reduced mobility

Risk of serious injury when using the product as a seat

- ▶ The manufacturer has **not** approved wheelchairs with the equipment versions and options listed below for use as a seat in vehicles for transporting persons with reduced mobility.
- ▶ In vehicles for transporting persons with reduced mobility, only use the seats installed in the vehicle with the corresponding personal restraint systems.
- ▶ Please contact the qualified personnel for up-to-day information regarding transportation in a vehicle for transporting persons with reduced mobility.

Equipment version
CLT
CLT Ultra
Standard in combination with a "permanently welded" drive wheel adapter
Option
Crutch holder with tip-assist right/left (Avantgarde DS and Avantgarde DF version S)
Crutch holder (Avantgarde DV and Avantgarde DF version V)
Wheelbase extension
Angle-adjustable back support
Back support height < 400 mm
Shock absorber

Options that restrict use in vehicles for transporting persons with reduced mobility

WARNING

Using the product with certain settings and/or installed options

Severe injury in case of accidents due to options coming loose

- ▶ Before using the product as a seat in a vehicle for transporting persons with reduced mobility, remove options that need to be taken off for safe transportation in such a vehicle. Please observe the following table.
- ▶ Stow all removed options securely in the vehicle.
- ▶ Please note that certain settings on the product exclude the use of the product in a vehicle for transporting persons with reduced mobility.

Option ¹⁾	Remove the option including mounting accessories ²⁾	Observe notice regarding the option	Observe the instructions for use
Tray	X		
Transport wheel		X ³⁾	
Lap belt		X ⁴⁾	
Add-on drive ⁵⁾	X		X ⁶⁾
Custom fabrication versions on customer request			X ⁷⁾

¹⁾ Not all of the options named are installed on all products.

²⁾ Applies to all parts that can be removed without the use of tools.

³⁾ Transport wheels can remain on the wheelchair with installed drive wheels during transportation in a vehicle for transporting persons with reduced mobility.

- 4) The lap belt can be used to position the passenger during transportation. Using the personal restraint system is nevertheless required.
- 5) Add-on drives have not been tested by Ottobock and may not be used on wheelchairs in vehicles for transporting persons with reduced mobility.
- 6) If the manufacturer of the add-on drive permits use in vehicles for transporting persons with reduced mobility, the instructions for use of the add-on drive must be observed.
- 7) Note possible exclusions in the additional documentation included on delivery of the custom fabrication.

7.18.2 Required accessories

Four belt loops are necessary in order to use the product as a transport seat in a vehicle for transporting persons with reduced mobility (tested according to ISO 10542-1 or comparable test standards). The qualified personnel who fitted the wheelchair can provide more information.

Required materials

- Four belt loops (e.g. from the manufacturers Q'STRAIT or Unwin Safety Systems, tested according to ISO 10542-1)

7.18.3 Using the product in a vehicle

⚠ WARNING

Positioning in vehicles for transporting persons with reduced mobility

Serious injuries in case of accidents due to user error

- ▶ Positioning of the product in vehicles for transporting persons with reduced mobility may only be performed by the qualified personnel.
- ▶ The product must always face forwards when it is used as a seat in a vehicle for transporting persons with reduced mobility.
- ▶ Instruct the qualified personnel regarding the mounting points on your product described below.

⚠ WARNING

Inadequate transportation safety

Loss of safe restraint due to failure to observe transportation instructions

- ▶ Observe the following instructions for correct transport safety in the vehicle for transporting persons with reduced mobility.
- ▶ If necessary, instruct the qualified personnel on the following information.

Securing the product in the vehicle for transporting persons with reduced mobility

The wheelchair is secured in the vehicle for transporting persons with reduced mobility with the help of four belt loops, on which the vehicle side wheelchair restraint belts are attached (see fig. 86; see fig. 87).

The fixation points of the belt loops are marked with stickers. These stickers show where the user has to pass the belt loops around the frame tube:

- The stickers that label the front fixation points are found on the front frame tube on each side (Avantgarde DV and Avantgarde DF version V example: see fig. 88, item 1).
- The stickers that label the rear fixation points are found on the rear frame tube on each side (Avantgarde DV and Avantgarde DF version V example: see fig. 89, item 1).

86



87





Attaching the belt loops

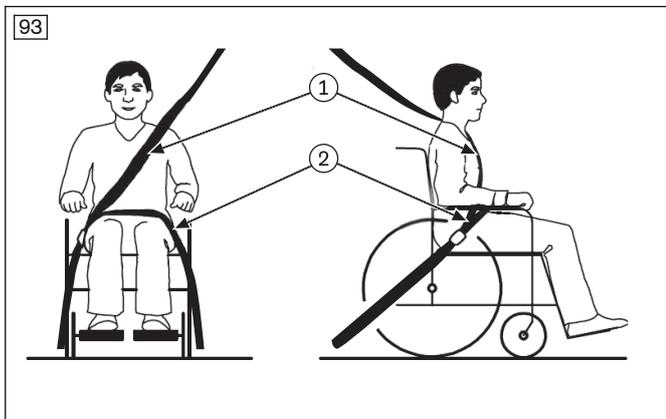
- 1) Position the product in the vehicle for transporting persons with reduced mobility. For more information, please also refer to our brochure with the order number 646D158=ALL_INT.
- 2) **Front fixation points:** Attach one belt loop around each of the frame tubes on the left and right of the front frame, wrapping them around the frame tubes at the marked position once or twice depending on the length (Avantgarde DS and Avantgarde DF version S: see fig. 90, item 1; Avantgarde DV and Avantgarde DF version V: see fig. 91, item 1).
- 3) Engage the hook of the respective vehicle side wheelchair restraint belt in the belt loops (Avantgarde DS and Avantgarde DF version S: see fig. 90, item 2; Avantgarde DV and Avantgarde DF version V: see fig. 91, item 2).
- 4) **Rear fixation points:** Attach one belt loop around each of the frame tubes on the left and right, wrapping them around the frame tubes at the marked position (see fig. 92, item 1).
- 5) Engage the hook of the respective vehicle side wheelchair restraint belt in the belt loop (see fig. 92, item 2).
- 6) Tighten the vehicle side wheelchair restraint belts at the front and rear as firmly as possible.
 - Avantgarde DS and Avantgarde version S: The product showing the correct positioning of the attachment straps (see fig. 86).
 - Avantgarde DV and Avantgarde version V: The product showing the correct positioning of the attachment straps (see fig. 87).





Information on correct transport safety of the user in the vehicle for transporting persons with reduced mobility

- Using the personal restraint system of the vehicle for transporting persons with reduced mobility is required. Attaching personal restraint systems of the vehicle for transporting persons with reduced mobility to the wheelchair is not permitted. The 3-point restraint has to be realised entirely on the vehicle:
 - The lap belt of the personal restraint system is usually attached by the qualified personnel to the left and right sides respectively on the mounting point/pin of the rear lashing straps (wheelchair restraint belts on the vehicle bottom).
 - The shoulder belt of the personal restraint system is usually mounted on the vehicle pillar and is attached by the qualified personnel to the corresponding mounting point/pin provided on the lap belt.
- The straps of the personal restraint system must always be routed close to the user's body. The straps must not be routed over the side panels and wheels (see fig. 93 item 2).
- The shoulder belt must always be routed over the user's shoulder (see fig. 93, item 1).
- The belt strap must not be twisted on the user's body.



Placement of the personal restraint system integrated in the vehicle for transporting persons with reduced mobility

- 1) Pull each end of the restraint lap belt from the inner side of the seat through to the outside (see fig. 94).
- 2) Engage the ends of the restraint lap belt on the mounting point/pin of the rear lashing straps on the left and right sides respectively (see fig. 95).
- 3) Secure the shoulder harness on the mounting point/pin provided on the lap belt (not illustrated).
 - The restraint lap belt is pulled through and fastened.
 - The belt runs between the side panel and seat cushion on each side.



7.19 Care

⚠ CAUTION

Lack of or improper cleaning

Health hazard due to infections, damage to the product due to user error

- ▶ Clean the product at regular intervals.
- ▶ Check the driving behaviour of the product after cleaning it.

INFORMATION

Take note of the washing and care instructions on the sewn-in labels on the fabric covers and other textile parts of the product.

7.19.1 Cleaning

Clean the product regularly depending on the degree of soiling and frequency of use, **at least 1x per month**:

To avoid contamination with germs, clean seat cushions and back support upholstery whenever they get soiled.

7.19.1.1 Cleaning by hand

- 1) Clean the padding and upholstery with warm water and a mild detergent.
- 2) Remove any spots with a sponge or a soft brush.
- 3) Rinse with clear water and let the components dry.

Important information on cleaning

- Clean plastic parts, frame parts and the chassis and wheels with a mild cleaner and a damp cloth. Dry thoroughly afterwards.
- Do not use any aggressive cleaners, solvents or hard brushes etc.
- Do not clean the product with a pressure washer or a jet of water. The penetration of water can cause corrosion.

7.19.1.2 Cleaning the seat cushion

Standard seat cushion

- ▶ Clean the seat cushion according to the attached care label.

Seat cushion with foam core

- 1) Open the zip and remove the foam core (see fig. 96).
- 2) Clean the cover according to the attached care label.
- 3) Hand wash all foam parts at **40 °C** using a mild, environmentally friendly detergent. Allow to air dry.
- 4) Reinsert the foam core with proper alignment. Close the zip.



Important information on cleaning

- For more information on cleaning seat cushions, see the care instructions on the product or the supplied instructions for use.

7.19.1.3 Cleaning belts/straps

Cleaning a belt system with metal closure

INFORMATION

Observe the washing recommendations on the product and the information in the corresponding instructions for use provided for the product.

- Straps with metal closures **may not be washed in the washing machine** as the penetration of water could cause corrosion and subsequent malfunctions.
- Clean the belt straps by gently dabbing them with warm soapy water (with some disinfectant) or carefully wipe with a dry, clean, absorbent cloth.

Cleaning a belt system with plastic closure

- Depending on the model, belts/straps with plastic buckles can be washed in the washing machine between **40 °C** and **60 °C**.
- **Recommendation:** Use a laundry bag or net and mild detergent.
- Alternatively, the belt straps can be cleaned by gently dabbing them with warm soapy water (with some disinfectant) or carefully wiped with a dry, clean, absorbent cloth.

Additional cleaning instructions

- Allow the belts to air dry. Ensure that the belts and pads are completely dry before installation.
- Do not expose the belts to direct heat (e.g. sunshine, stove or radiator).
- Do not iron or bleach the belts.

7.19.2 Disinfection

- 1) Thoroughly clean the pads and handles before disinfecting.
- 2) Wipe all parts of the wheelchair with a disinfectant.

Important information about disinfecting

- If the product is used by more than one person, using a conventional disinfectant is required.
- Only use colourless water-based disinfectants. Follow the instructions for use provided by the disinfectant manufacturer.

8 Maintenance and repair

8.1 Maintenance

WARNING

Insufficient maintenance

Severe user injuries, damage to the product due to failure to observe maintenance intervals

- ▶ Only carry out the maintenance tasks described in this section. All other maintenance and service tasks may only be carried out by qualified personnel.
- ▶ The functionality and operating safety of the product must be verified and a service performed at least **once per year**.
- ▶ For users with a changing anatomy (for example body dimensions, weight) or users with a changing clinical picture, have the product inspected, adjusted and serviced at least **once every six months**.

- The function of the product should be checked **before each use**.
- The product may not be used if defects are noted. This applies in particular in case of instability of the product or altered driving characteristics as well as problems with the user's seating position or the stability of the seat. Inform the qualified personnel promptly for the rectification of defects.
- This also applies if loose, worn, bent or damaged components, cracks in the frame or broken frame components are identified.
- Some maintenance tasks can be carried out to a certain extent by the user at home (see the sections "Maintenance intervals" and "Maintenance tasks").
- Failure to maintain the product can lead to injuries for the user of the product.

8.1.1 Maintenance intervals

The functions described below must be checked by the user or an attendant at the specified intervals:

Inspection task	Before each use	Monthly	Quarterly
Functional test of the wheel locks	X		
Sagging of the seat or back upholstery		X	
Stability of the legrests		X	
Visual inspection of wear and tear parts (e.g., tyres, bearings)		X	
Soiling of bearings		X	
Damage to the handrim		X	
Air pressure (information see tyre sidewall)		X	
Wear and tear of the folding device		X	
Check of the spoke tension on the drive wheels			X
Check of all bolted connections			X
Check the legibility of all labels and markings on the product		X	

8.1.2 Maintenance tasks

To ensure smooth operation at all times, users or attendants with some technical skills can maintain some parts of the product:

- Screw connections must be periodically checked for tightness, especially during the initial period of use or after adjustments have been made to the wheelchair. If a screw connection loosens repeatedly, contact the qualified personnel promptly.
- Particles of dirt and hair accumulate on the caster wheel axle and threaded axle of the caster fork over time. This makes the steering stiffer. Regularly remove dirt and oil the axles. See the section "Approach in case of stiffness".
- The drive wheels are equipped with a quick-release axle system as standard equipment. To keep this system operational, ensure that no dirt adheres to the quick-release axle or receiver bushing. Periodically lubricate the quick-release axle lightly with thin, resin-free oil (sewing machine oil).
- If the wheelchair becomes wet, it should be rubbed dry again.

8.2 Repair

⚠ WARNING

Prohibited repairs

Severe user injuries, damage to the product due to adjustment and installation errors

- ▶ Only carry out the repairs described in this section. All other repairs may only be carried out by the qualified personnel.

8.2.1 Inner tube, rim tape and tyre replacement

⚠ CAUTION

Improper tyre replacement

Injuries to the user due to incorrect installation, product damage

- ▶ No person is permitted to sit in the wheelchair during tyre replacement
- ▶ Before removing a wheel, support the product so it cannot tip over.
- ▶ Always replace the tyres in pairs. Two differently worn tyres affect the directional stability of the wheelchair.

INFORMATION

When driving outdoors, always carry a repair kit and tyre pump (when using pneumatic tyres) in case of emergency.

Suitable tyre pumps are listed on the order form and are supplied with the product. An alternative is tyre foam, which fills your tyre and then hardens (available from bicycle shops, etc.).

Repairing flat tyres requires only the necessary tools and users may change tyres themselves if they wish:

Removal and preparing for installation

- 1) Carefully remove the tyre from the rim using appropriate tools.
INFORMATION: Take care not to damage the rim or the inner tube.
- 2) Unscrew the valve nut from the valve and remove the tube.
- 3) Repair the tube according to the directions in the repair kit or replace it with a new tube.
- 4) Before fitting the tyre again, inspect the rim bed and tyre inner wall for foreign objects. This could have caused the puncture.
- 5) Before installing the tube, check that the rim band is in proper condition. The rim band protects the tube from being damaged by the ends of the spokes.



Replacing the rim band (only when necessary)

- 1) If the rim band needs to be replaced, remove it from the rim.
- 2) Install the new rim band on the inside of the rim, making sure the valve opening is in the right position.
- 3) Glue the rim band in place if this is intended. Ensure that all spoke ends are covered.

Installing the tube and tyre

- 1) Behind the valve, push one side of the tyre over the edge of the rim.
- 2) Slightly inflate the tube until it starts to assume its round shape.
- 3) Unscrew the valve nut from the tube and push the valve through the valve opening in the rim.

- 4) Insert the tube into the tyre.
- 5) Mount the other side of the tyre on the rim, starting from the position across the valve. Ensure that the tube is not pinched between the tyre and rim during this process.



Inflating the tube

- 1) Ensure that the valve is positioned perpendicularly for proper positioning of the tube and tyre in the region of the valve.
- 2) Firmly screw on the valve nut.
- 3) Inflate the tube so that the tyre can still be pressed in easily with your thumb.
INFORMATION: If the circumferential lines on the two sides of the tyre are both at an even distance from the rim, the tyre is centred. If not, let some air out and realign the tyre.
- 4) Inflate the tube to the maximum pressure specified by the tyre manufacturer (see information printed on the tyre sidewall).
- 5) Firmly screw the valve cap onto the valve.

9 Disposal

9.1 Disposal information

Return the product to the qualified personnel for disposal.

All components of the product must be disposed of properly in accordance with the respective national environmental regulations.

10 Legal information

All legal conditions are subject to the respective national laws of the country of use and may vary accordingly.

10.1 Liability

The manufacturer will only assume liability if the product is used in accordance with the descriptions and instructions provided in this document. The manufacturer will not assume liability for damage caused by disregarding the information in this document, particularly due to improper use or unauthorised modification of the product.

10.2 Warranty

Further information on the warranty terms and conditions is available from the qualified personnel that adapted this product or the manufacturer's service department.

10.3 Lifetime

Expected lifetime: **4 years**

The design, manufacturing and requirements for the intended use of the product are based on the expected lifetime. These also include the requirements for maintenance, ensuring effectiveness and the safety of the product.

11 Technical data

INFORMATION

- ▶ Much of the technical data below is given in mm. Please note that product settings – unless otherwise specified – cannot be adjusted in the mm range but only in increments of approx. **0.5 cm** or **1 cm**.
- ▶ Note that the values achieved during adjustment may deviate from the values specified below. The deviation can be **±10 mm** and **±2°**.

Avantgarde DS/DV and Avantgarde DF version S and version V – general information

	DS	DV	DF version S	DF version V
Max. load [kg]	140 ¹⁾	140 ¹⁾	140	140
Weight [kg]	from 8.7 ²⁾	from 9.7 ²⁾	from 8.7 ²⁾	from 9.7 ²⁾
Transport weights [kg]	Frame: from 6.1 ²⁾ Drive wheel 24": from 1.3 (including quick-release axle) ²⁾	Frame: from 5.6 ²⁾ Leg support: from 0.75 ²⁾ Drive wheel 24": from 1.3 (including quick-release axle) ²⁾	Frame: from 6.1 ²⁾ Drive wheel 24": from 1.25 ²⁾	Frame: from 5.6 ²⁾ Leg support: from 0.9 ²⁾ Drive wheel 24": from 1.25 ²⁾
Seat width [mm]	320 – 520	320 – 520	320 – 520	320 – 520
Front seat height [mm]	380 – 540	380 – 540	390 – 550	390 – 550
Rear seat height [mm]	360 – 510	360 – 510	360 – 510	360 – 510
Seat depth [mm]	360 – 540	360 – 540	360 – 520	360 – 520
Overall length [mm]	720 – 1040 ³⁾	720 – 1040 ³⁾	720 – 1040 ³⁾	785 – 1080 ³⁾
Overall width [mm]	490 – 725	490 – 725	490 – 725	490 – 725
Overall height [mm]	580 – 1100	580 – 1100	580 – 1100	580 – 1100
Folding size from [mm]	260	260	260	260
Back support angle [°]	-9 – +15	-9 – +15	-9 – +15	-9 – +15
Back support height [mm]	250 – 550	250 – 550	250 – 550	250 – 550
Lower leg length [mm]	160 – 550 ⁴⁾⁵⁾	160 – 550 ⁴⁾⁵⁾	160 – 550 ⁴⁾⁵⁾	160 – 550 ⁴⁾⁵⁾
Angle between leg support and seat bottom [°]	0 – 15	0 – 15	0 – 15	0 – 15
Distance from arm support to seat [mm]	245 – 340	245 – 340	245 – 340	245 – 340
Positioning of the arm support [mm]	175 – 250	175 – 250	175 – 250	175 – 250
Horizontal axle position [mm]	32.5 – 150.5	32.5 – 150.5	32.5 – 150.5	32.5 – 150.5
Anterior frame angle [°]	70/80	75	70/80	75
Drive wheels	22", 24", 25"	22", 24", 25"	22", 24", 25"	22", 24", 25"
Caster wheels	3", 4", 5", 5.5", 6"	3", 4", 5", 5.5", 6"	4", 5", 5.5", 6", 7"	4", 5", 5.5", 6", 7"
Permissible tyre type	Pneumatic, PU or solid rubber / 1", 1.1", 1 3/8"	Pneumatic, PU or solid rubber / 1", 1.1", 1 3/8"	Pneumatic, PU or solid rubber / 1", 1.1", 1 3/8"	Pneumatic, PU or solid rubber / 1", 1.1", 1 3/8"
Min. tyre pressure [bar]	7 ⁶⁾	7 ⁶⁾	7 ⁶⁾	7 ⁶⁾
Minimum turning radius [mm] ⁷⁾	560 – 740	560 – 740	560 – 740	560 – 740
Handrim diameter [mm]	470 – 560	470 – 560	470 – 560	470 – 560
Maximum permissible inclination [°]/[%] ⁸⁾⁹⁾¹⁰⁾	7 / 12.3	7 / 12.3	7 / 12.3	7 / 12.3

¹⁾ With CLT, CLT Ultra option, fixed welded drive wheel adapter version, CLT crossbrace: 100 kg

²⁾ The specified weights vary according to the selected options and variant.

³⁾ +95 mm with wheelbase extension

⁴⁾ Measurement from top of seat upholstery to top of foot plate.

⁵⁾ lower leg length minus thickness of seat cushion used.

- 6) Varies according to tyre option; see the marking on the tyre wall.
- 7) In accordance with ISO 7176-5.
- 8) Also applies for parking with wheel lock engaged.
- 9) Applies to all directions (upwards, downwards, sideways).
- 10) In accordance with ISO 7176-1.

Ambient conditions

Temperatures and relative humidity	
Temperature during use [°C (°F)]	-10 to +40 (14 to 104)
Transport and storage temperature [°C (°F)]	-10 to +40 (14 to 104)
Relative humidity [%]	45 to 85; non-condensing

12 Appendices

12.1 Threshold values for wheelchairs transportable by train

INFORMATION

- ▶ The products in this series fully satisfy the minimum technical requirements of Regulation (EU) No. 1300/2014 regarding train accessibility for people with disabilities. However, not all versions can comply with all threshold values due to different settings.
- ▶ With the help of the table that follows, you or the qualified personnel can take measurements and verify whether the specific product in question meets the threshold values.

Characteristic	Threshold value (according to Regulation (EU) No. 1300/2014)
Length [mm]	1200 (plus 50 mm for the feet)
Width [mm]	700 (plus 50 mm on each side for the hands when moving)
Smallest wheels ["]	approx. 3 or greater (according to the directive, the smallest wheel must be able to overcome a gap measuring 75 mm horizontally and 50 mm vertically)
Height [mm]	max. 1375; including a 1.84 m large male wheelchair user (95th percentile)
Turning radius [mm]	1500
Maximum weight [kg]	200 (for wheelchair and user, including any baggage)
Maximum obstacle height that can be overcome [mm]	50
Ground clearance [mm]	60 (at an upward slope angle of 10°, ground clearance must measure at least 60 mm under the foot support for going forward at the end of the slope)
Maximum inclination angle on which the wheelchair will remain stable [°]	6 (dynamic stability in all directions) 9 (static stability in all directions, also when wheel lock engaged)

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