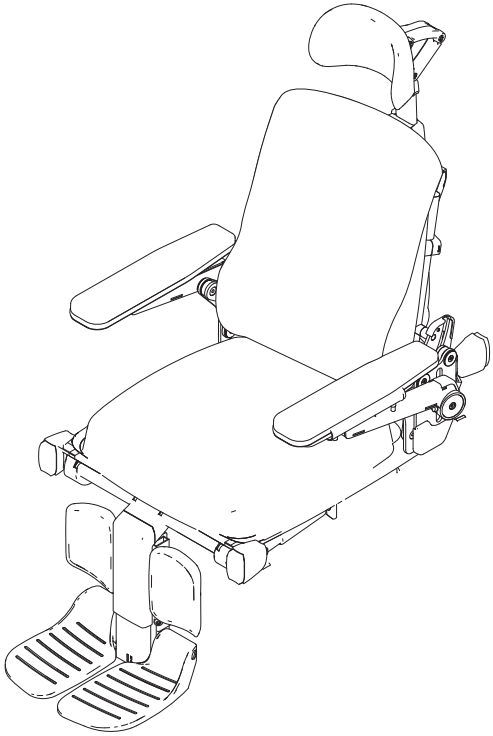
Seating system



Sedeo Pro+

USER MANUAL EN

SEDEO

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1 Introduction

1.1 This user manual

This user manual will help you to use and maintain your seating system safely This user manual is a supplement to Handicare's general wheelchair user manual.
Where necessary this user manual refers to other manuals as shown below:

- 🕮 Wheelchair: Refers to the general wheelchair user manual.
- 🕮 Controller: Refers to the user manual for the controller (only applicable for power wheelchairs).

Read this user manual and the other user manuals referred to carefully before using the product. If one of the user manuals was not included with your wheelchair, please contact your dealer immediately.
In addition to this user manual, there is also a service manual for qualified specialists.

If you are visually impaired, this document can be viewed in PDF format at www.SunriseMedical.eu or alternatively is available on request in large text.

1.2 For further information

Please contact your local, authorised Sunrise Medical dealer if you have any questions regarding the use, maintenance or safety of your wheelchair. In case there is no authorised dealer in your area or you have any questions, contact Sunrise Medical either in writing or by telephone.

For information about product safety notices and product recalls, go to www.SunriseMedical.eu

1.3 Symbols used in this manual

Note!
Pointing out possible problems to the user.

⚠ **Caution!**
Advice for the user to prevent damage to the product.

⚠ **Warning!**
Warnings for the user to prevent personal in jury.

Not following these instructions may result in physical injury, damage to the product or damage to the environment!

Symbols in illustrations
Each illustration includes icons and numbering to indicate what needs to be done and in which order.

Loosen by one turn with wing-nut

Tighten by one turn with wing-nut

Loosen by one turn with torx

Tighten by one turn with torx

Step 1, 2 etc.

An arrow, as part of an illustration, indicates that the component in question moves or needs to be moved in the direction indicated.

2 Safety

⚠ **Warning!**
Always follow the instructions given next to the warning symbols! Failure to follow these instructions may result in physical injury, damage to the wheelchair or damage to the environment. Where possible the warning symbols have been placed in the applicable paragraphs.

Be carefull when swing away/flip up parts. Contact with moving parts should be avoided.

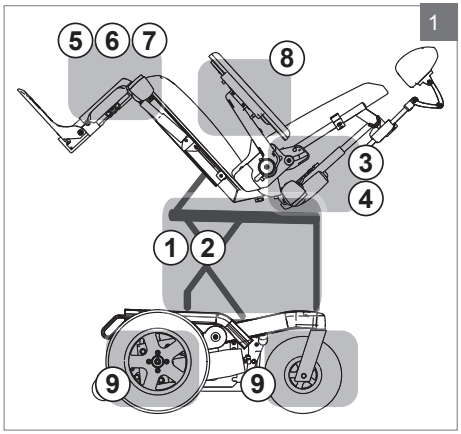
Take care when smoking.

Do not use wheelchair near open flame.

⚠ **Caution!**
Parts of the wheelchair that are intended, for service or repair, to be removed without the use of tools (e.g. armrest, legrest) can have an adverse effect on the support of the user if they are missing or not placed back in the right position.

2.1 Temperature

⚠ **Warning!**
Avoid exposing the wheelchair to direct sunlight for extended periods of time. Some parts of the wheelchair, such as the seat, the backrest and the armrests assembly, complete, can become hot if exposed to the sun for too long. This may cause burns or skin irritation.



2.2 Indicationsontheseatingsystem

The wheelchair must not be lifted up by the armrests assembly, complete and/or legrests.

The stability of the wheelchair is influenced by the adjustment of the seating system's centre of gravity. Such adjustments should be made by professionals only.

2.3 Moving parts

⚠ **Warning!**
Contact with the moving parts of the wheelchair should be avoided. A wheelchair has moving and rotating parts. Contact with moving parts may result in serious physical injury or damage to the wheelchair.

Moving/rotating parts:
1. Electrically tilt adjustment
2. Electrically high/low adjustment
3. Electrically reclining backrest
4. Electrically reclining antishear backrest
5. Electrically elevating legrests
6. Electrically elevating central legrest
7. Electrically elevating central legrest and electric height adjustment
8. Flip-up armrests
9. Wheels (turning and pivoting)

3 General description

3.1 Sedeo Pro+ product description

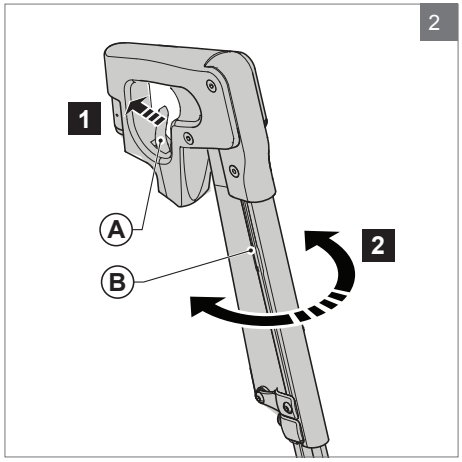
The wheelchair is fitted with a Sedeo Pro+ seating system. The Sedeo Pro+ seating system provides excellent support for the head, torso, arms and legs. Optimal body support ensures maximum independence for the wheelchair user.
The wheelchair must be adjusted by a qualified specialist. Incorrect settings may have negative consequences for seating posture.

> ⚠ **Caution!**
> Please study this manual carefully before using the seating system.

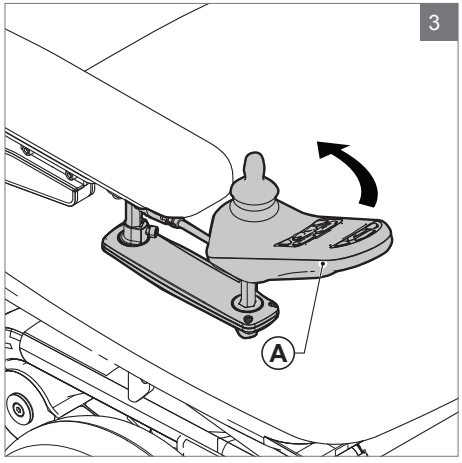
4 Use

4.1 Adjustments (by the user/ attendant)

Manually elevating legrest knee angle
The angle of the manually elevating legrests can be adjusted independently of each other.
1. Push handle (A) forwards.
2. Lift your leg.
3. Release the handle when in the desired position.

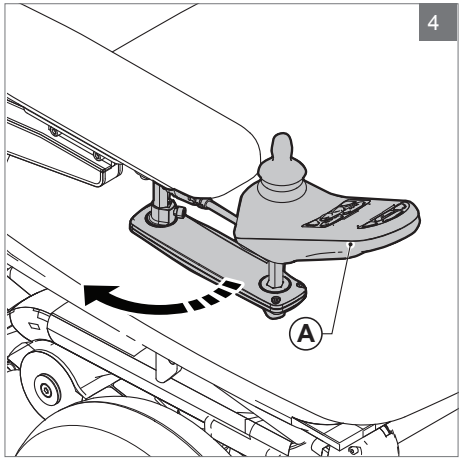


Moving the controller bracket inwards
1. Push (A) inwards until hearing a click.



Swing away the controller bracket
1. Push (A) outwards until hearing a click.

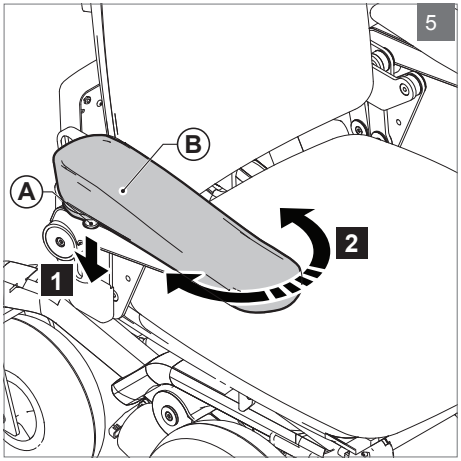
Note!
Swinging back the controller bracket will allow you to pull up close to a table. Full operation of the controller remains possible.



Hemiplegia armrest

1. Pull (A) out of the locked position and twist (B) into the desired position.

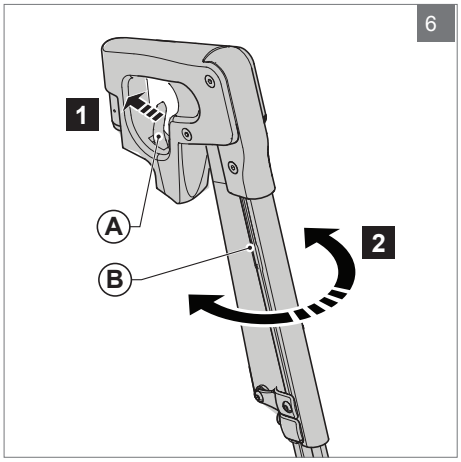
Note!
Ensure that (B) is properly secured!



4.2 Getting in and out of the wheelchair (transfer)

Forwards transfer

⚠ **Warning!**
Do not stand on the footplates. Putting your full weight on the footplates may lead to wheelchair damage and to hazardous situations, including the wheelchair tipping up.

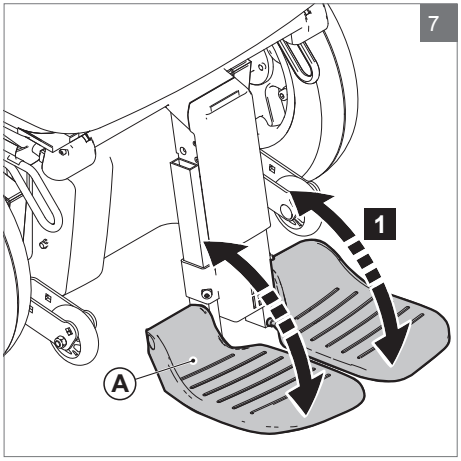


Swinging back and/or removing the standard legrest

1. Push (A) to the rear.
2. Swing (B) to the side.
3. Remove (B).

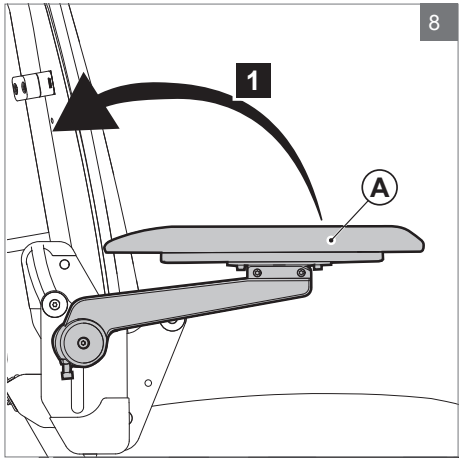
Flipping up the (electrical) central legrest footplate

1. Flip up (A).



Sideways transfer
Folding back the armrest assembly
1. Fold (A) to the rear.

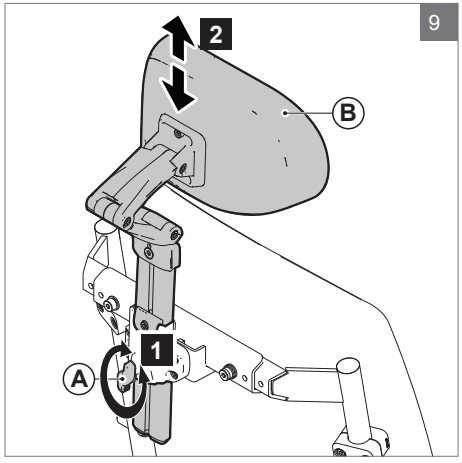
> ⚠ **Caution!**
> Remove the tray before folding back the armrest assembly.



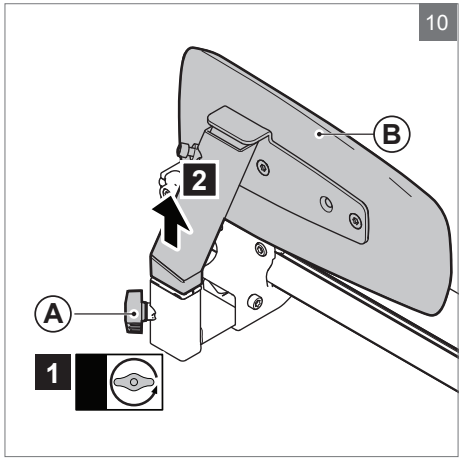
4.3 Options / accessories

Removing/positioning the headrest
1. Loosen (A) by one turn.
2. Slide (B) out of or into the receiver.
3. Tighten (A).

> **Note!**
> Always slide the headrest until it comes to a stop in the bracket.



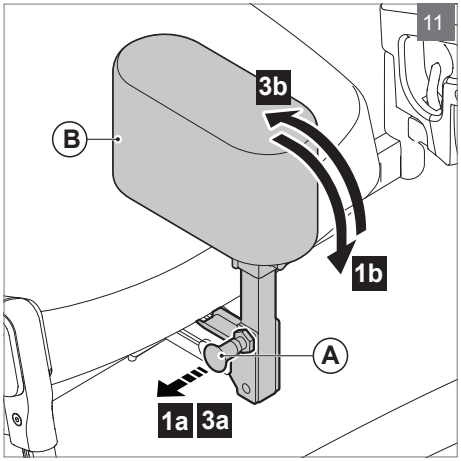
Removing the side cushion
1. Loosen (A) by two turns
2. Slide (B) up
3. When replacing the side cushion, tighten (A) by two turns



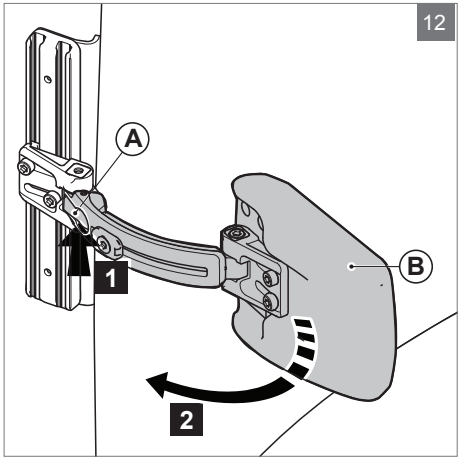
Flip down the abduction support
1. Pull (A) out of the locked position and fl ip down (B)
2. Release (A).

Flip up the abduction support
3. Pull (A) out of the locked position and fl ip up (B).
4. Release (A) in the locked position.

Note!
Ensure that (B) is properly secured!



Folding back the thoracic support
1. Press (A) to fold back (B).



5 Adjustments (to be carried out by a professional)

Note!
There are calibration marks on various parts of the seating system. The ex-factory settings are indicated.

5.1 Seat width

1. Unscrew (A) (with use of a ring spanner) and (B).
2. Adjust to desired seat width.
3. Place (A) (with use of a ring spanner) and (B) in new holes and tighten.

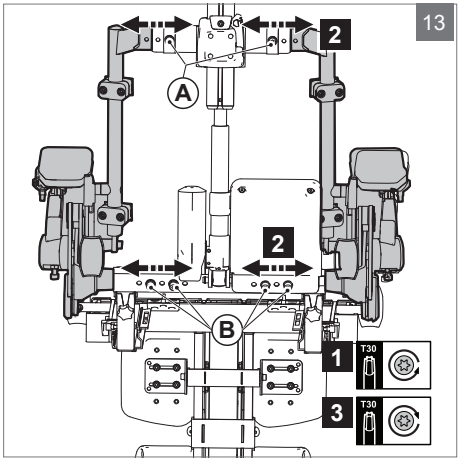
Note!
First adjust one side, then the other side.

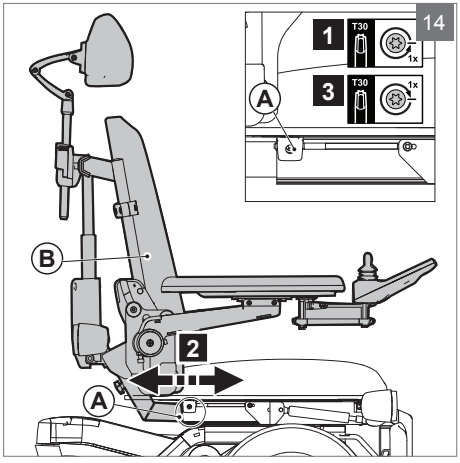
5.2 Seat depth

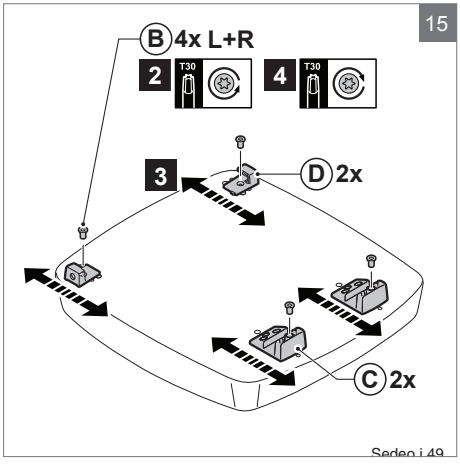
Backrest adjustment
1. Loosen (A) by one turn.
2. Adjust (B) to the desired position.
3. Tighten (A).

⚠ **Warning!**
The stability of the wheelchair is influenced by the adjustment of the seating system's centre of gravity.
Such adjustments should be made by professionals only.

Seating system adjustment
1. Remove the seat (see "Use - Reducing the seating system in size for transportation purposes").
2. Remove the screws (B).
3. Move (C) and (D).
4. Tighten the screws (B).
5. Replace the seat (see "Use - Setting up the seating system following transportation").



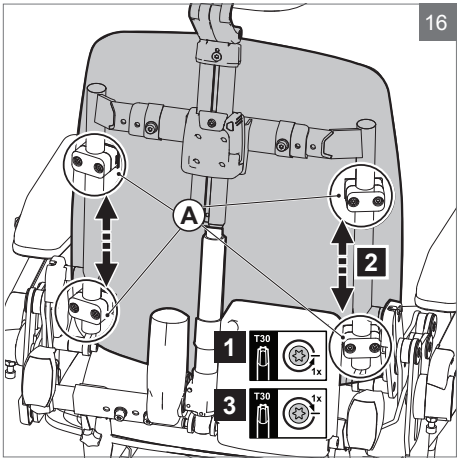




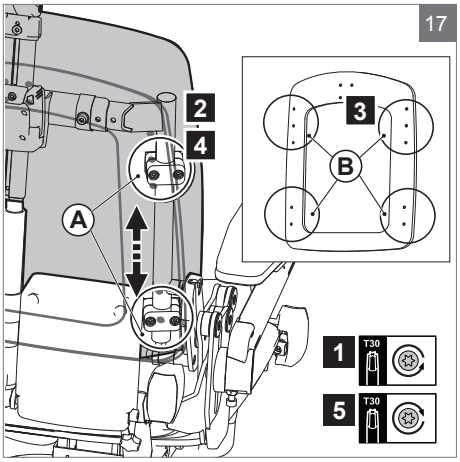
5.3 Backrest height

Note!
First loosen the velcro backrest flap from the seat frame.

Height (1)
1. Loosen the 8 screws (A) by one turn.
2. Adjust the backrest to the desired position.
3. Tighten the 8 screws (A).

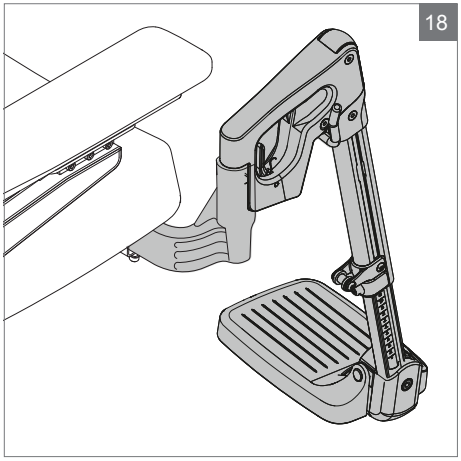


Height (2)
1. Remove the 8 screws (A, left and right).
2. Remove the 4 clamps of the backrest cushion
3. There are extra mounting holes in the wood of the backrest (B). Make holes in the fabric at the desired position.
4. Mount the clamps on the backrest
5. Mount the backrest on the frame by tighten the 8 screws (A).



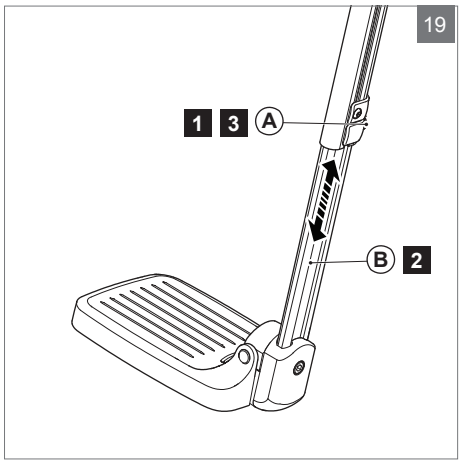
5.4 Standard and manually elevating legrest

Legrest width
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).

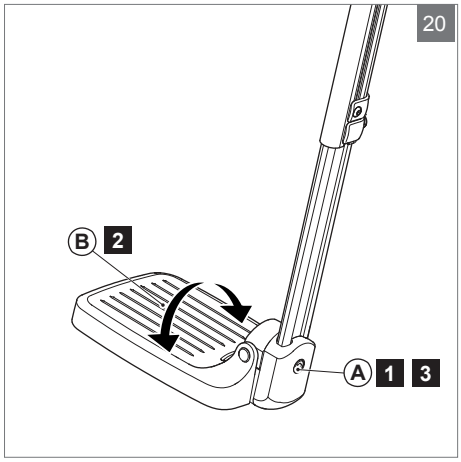


Lower leg length
1. Loosen screw (A) a few turns with a 4 mm Allen key.
2. Slide the footplate (B) in the desired position.
3. Tighten (A) securely.

> ⚠ **Caution!**
> Ensure that there is sufficient free space under (B) for the wheelchair to drive over obstacles.



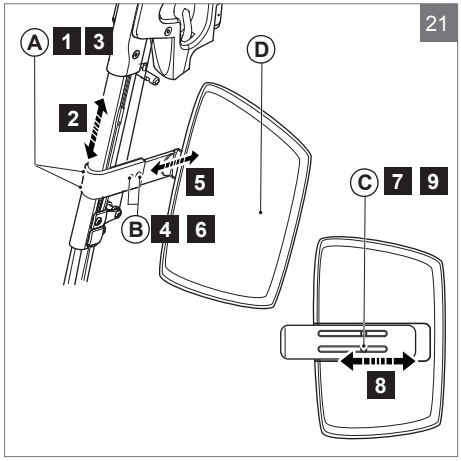
Footplate angle
1. Loosen sockethead screw (A) a few turns.
2. Adjust the footplate (B) angle to the desired position.
3. Tighten (A) securely.



Calf pad height
1. Loosen the Allen bolts (A) a few turns with a 4 mm Allen key.
2. Slide the calf pad (D) in the desired position.
3. Tighten (A) securely.

Calf pad depth
4. Loosen (B) a few turns
5. Slide the calf pad (D) in the desired position.
6. Tighten (B) securely.

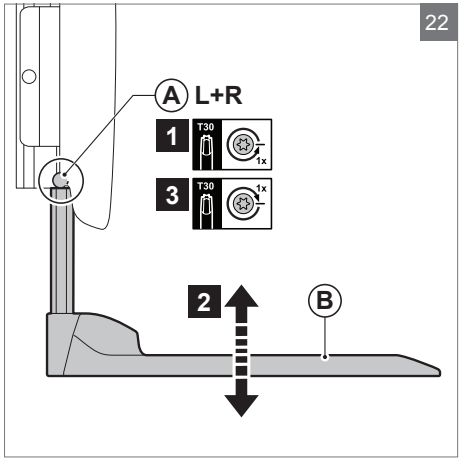
Calf pad width
7. Loosen (C) on the back of (D) a few turns
8. Slide the calf pad (D) in the desired position.
9. Tighten (C) securely.



5.5 Central legrest

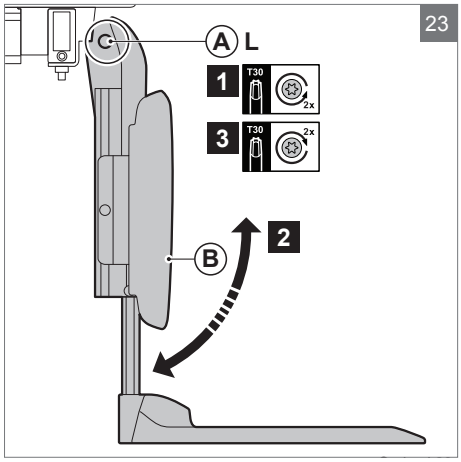
Lower leg length
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).

> ⚠ **Caution!**
> Ensure that there is sufficient free space under (B) for the wheelchair to drive over obstacles.

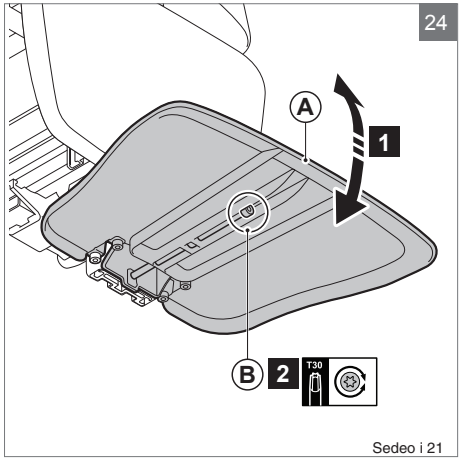


Knee angle
1. Loosen (A) by two turns.
2. Adjust (B) to the desired angle.
3. Tighten (A) by two turns.

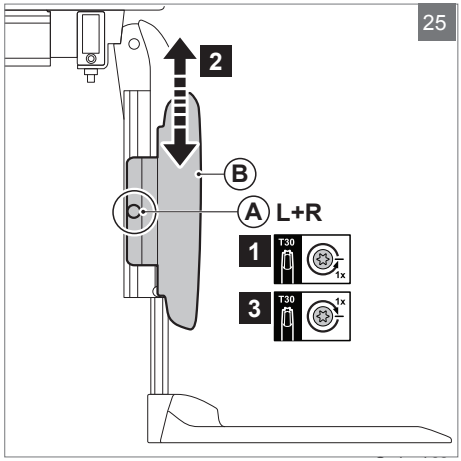
> ⚠ **Caution!**
> Change the height or knee angle if the footplate touches the castor wheels.



Ankle angle
1. Flip up (A).
2. Turn (B) in order to adjust the ankle angle as desired.
3. Fold (A) down.



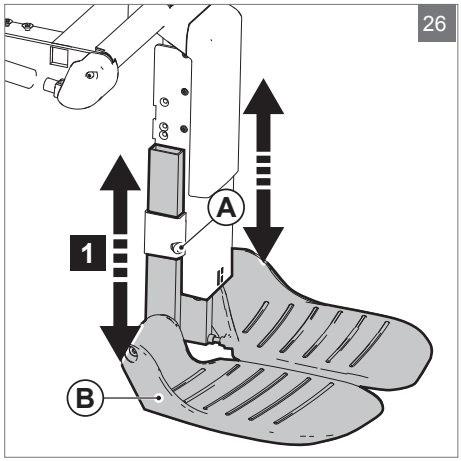
Calf pad height
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).



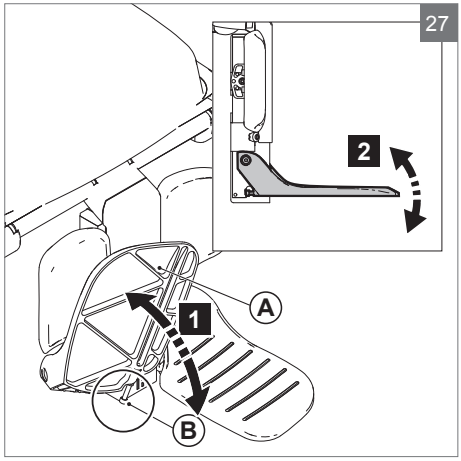
5.6 Electrical central legrest

Lower leg length
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).

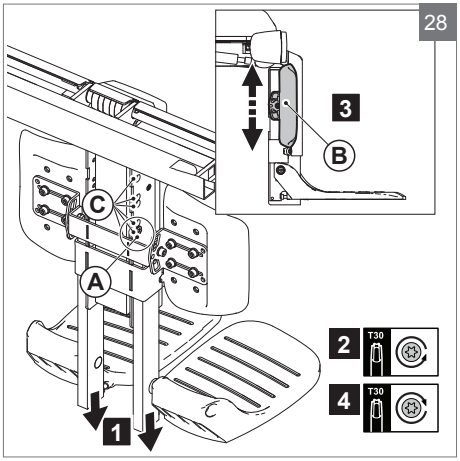
> ⚠ **Caution!**
> Ensure that there is sufficient free space under (B) for the wheelchair to drive over obstacles.



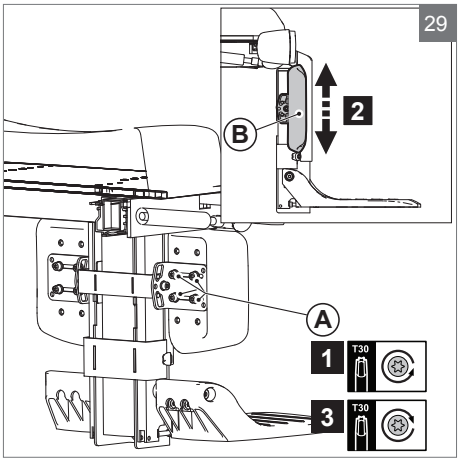
Ankle angle
1. Flip up (A).
2. Turn (B) in order to adjust the ankle angle as desired.
3. Fold (A) down.



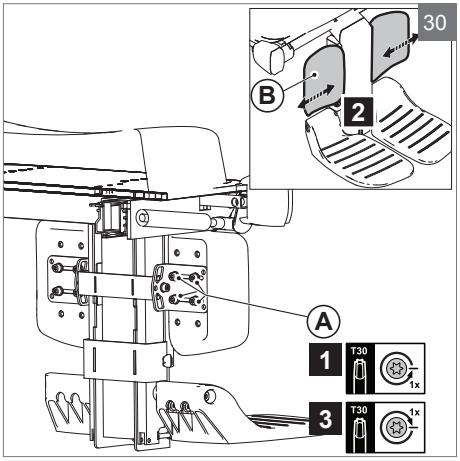
Calf pad height (1)
1. Lower the leg length
2. Unscrew (A) (2x)
3. Adjust (B) to desired height and move (A) to higher/lower holes (C)
4. Tighten (A) (2x)



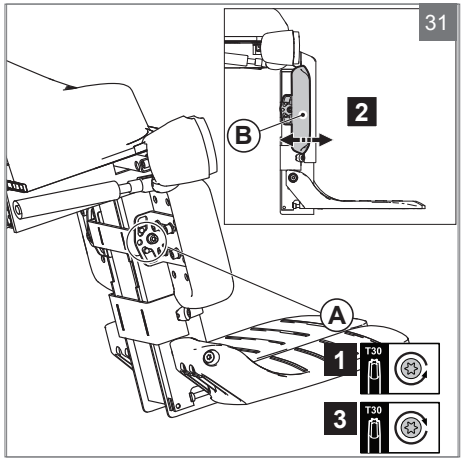
Calf pad height (2)
1. Unscrew (A)
2. Adjust (B) to desired height and move (A) to higher/lower hole.
3. Tighten (A)



Calf pad width
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).

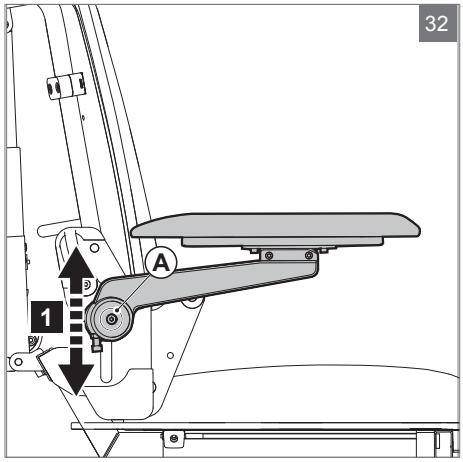


Calf pad depth
1. Unscrew (A)
2. Adjust (B) to desired depth and move (A) to new hole.
3. Tighten (A)

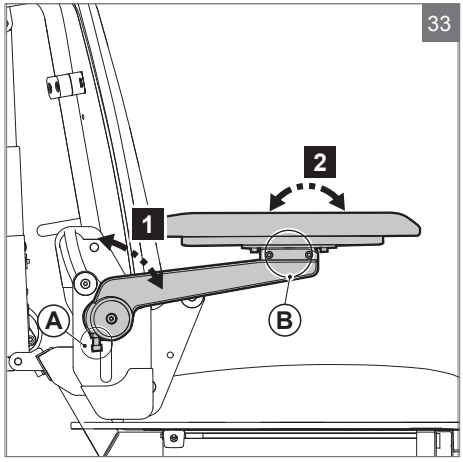


5.7 Armrest assembly

Note!
Ensure that the arms are supported well, without the shoulders being pushed upwards.



Armrest height (1)
1. Loosen (A) by one turn.
2. Adjust the armrest to the desired position.
3. Tighten (A).

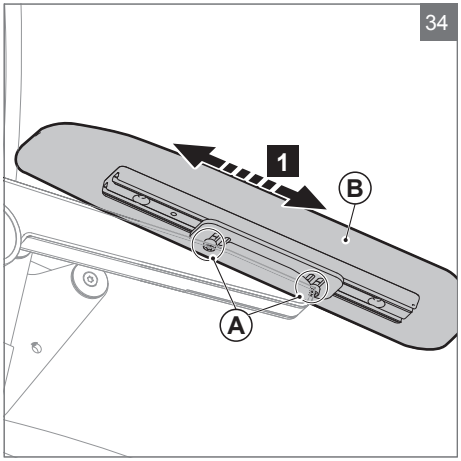


Armrest height (2)
1. Turn screw A to position the armrest height
2. Loosen B by one turn
3. Adjust the armrest angle
4. Tighten (B)

Armrest depth (1)

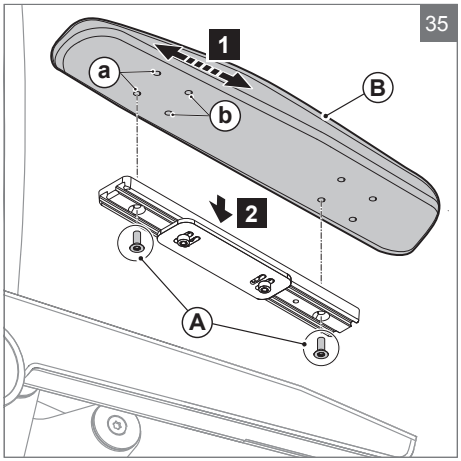
Note!
In case you cannot access the bolts (A) first adjust the armrest angle.

1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).



Armrest depth (2) (only armrest pad 40 cm)

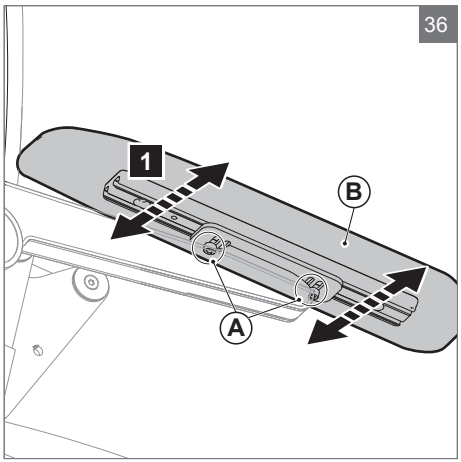
1. Loosen (A).
2. Position (B) into the desired position
   a Enlarge armrest depth
   b Reduce armrest depth
3. Tighten (A).



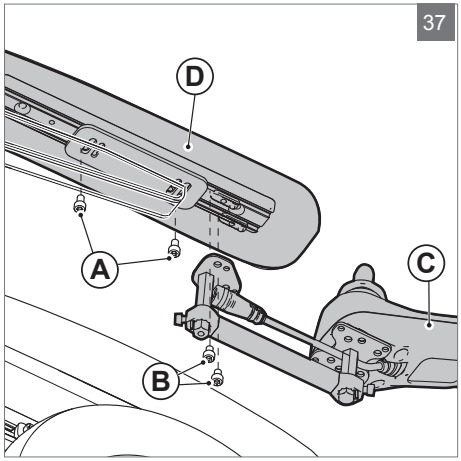
Armrest width (1)

Note!
In case you cannot access the bolts (A) first adjust the armrest angle.

1. Loosen (A) by one turn.
2. Slide (B) into the desired width.
3. Tighten (A).

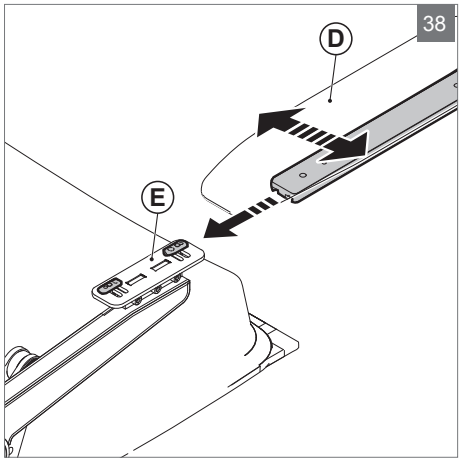


Armrest width (2)
To remove:
1. Remove (A) and (B).
2. Remove (C) and (D).



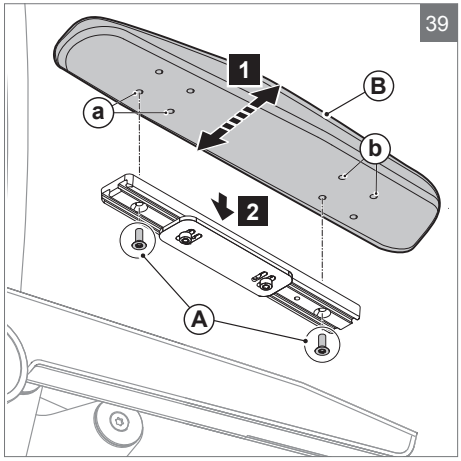
To position:
3. Slide (D) onto (E).

Note!
Ensure that the ridge on the terminal block falls into the opening

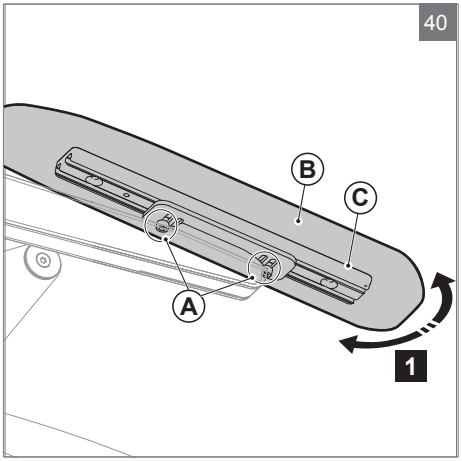


4. Adjust the depth of (D) and tighten (A).
5. Position the controller bracket and tighten (B).

Armrest width (3)
1. Loosen (A).
2. Position (B) into the desired position
   - a Left: Reduce armrest width
     Right: Enlarge armrest width
   - b Left: Enlarge armrest width
     Right: Reduce armrest width
3. Tighten (A).

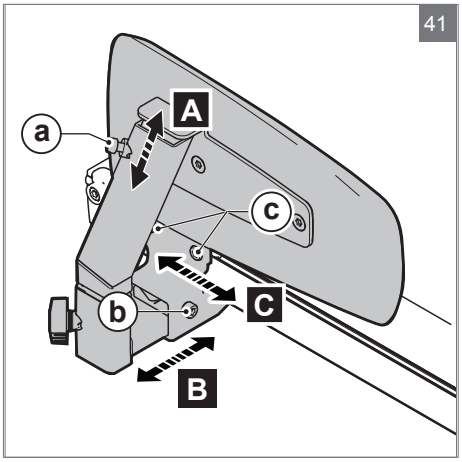


Armrest horizontal angle
1. Loosen (A).
2. Adjust (B) to desired position
   By positioning (A) into different sliders of (C) an additional horizontal angle can be achieved



Side cushion
Adjust the side cushion as follows:
1. Loosen the Torx screw.
2. Adjust the part ot the desired position.
3. Tighten the Torx screw

A/a. Height adjustment
B/b. Width adjustment
C/c. Depth adjustment



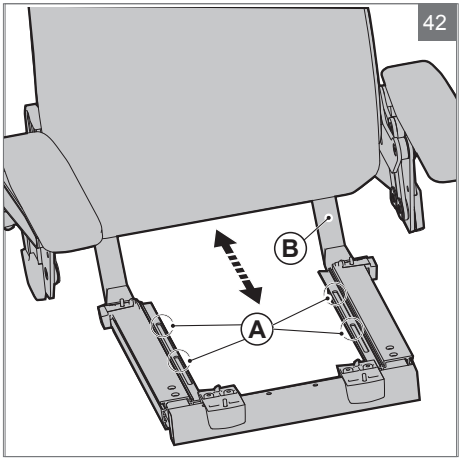
5.8 Adjusting the centre of gravity

⚠ **Warning!**
Changing the wheelchair´s centre of gravity may negatively influence the wheelchair´s driving characteristics and/or its dynamic stability. Such adjustments should be made by professionals only.

1. Loosen (A) by one turn.
2. Slide (B) forwards or backwards.
3. Tighten (A).

Note!
If the user's weight distribution is average, then the centre of gravity should be adjusted to the same setting as the seat depth.

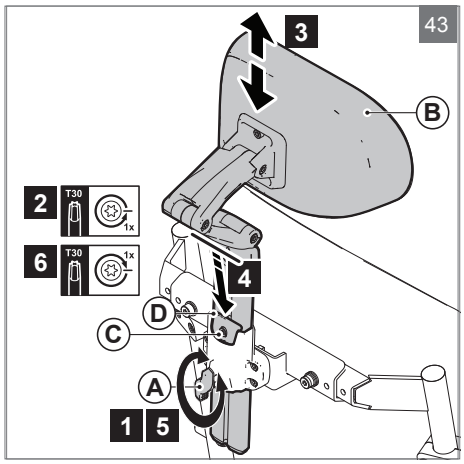
For better sliding release the seat depth adjustment



5.9 Headrest

Adjusting the memory setting / headrest height

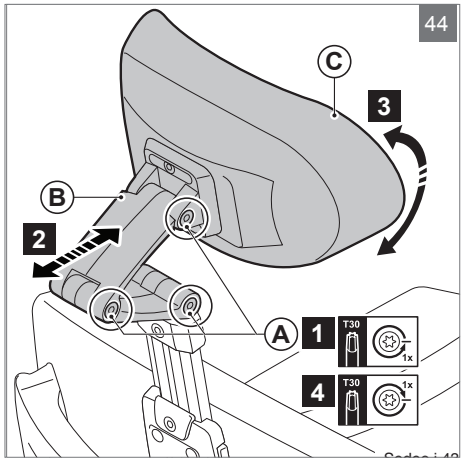
1. Loosen (A).
2. Loosen (C) by one turn.
3. Slide (B) into the desired position.
4. Slide (D) as far down as possible.
5. Tighten (A).
6. Tighten (C).



Headrest position

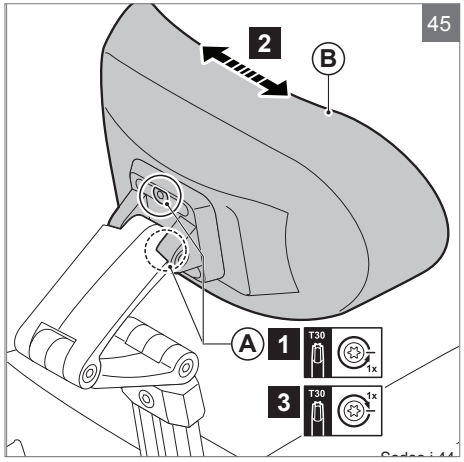
1. Loosen (A) by one turn.
2. Adjust (B) to the desired position.
3. Tighten (A).

Note!
Correct the headrest height and tilt the headrest cushion as required.



Headrest cushion width

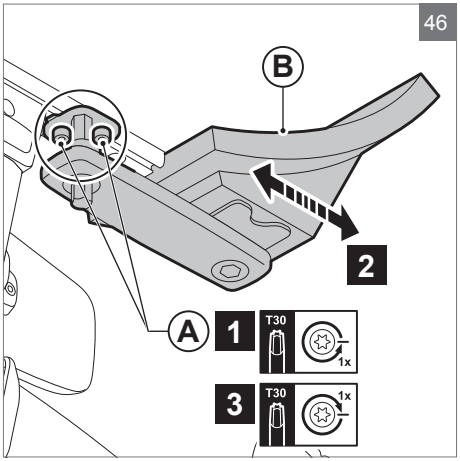
1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).



5.10 Fixed / swing-away controller bracket

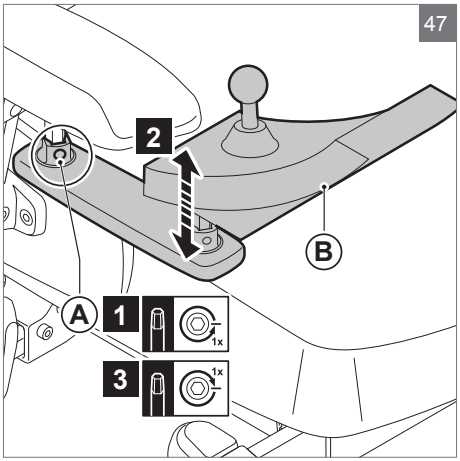
Depth

1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).



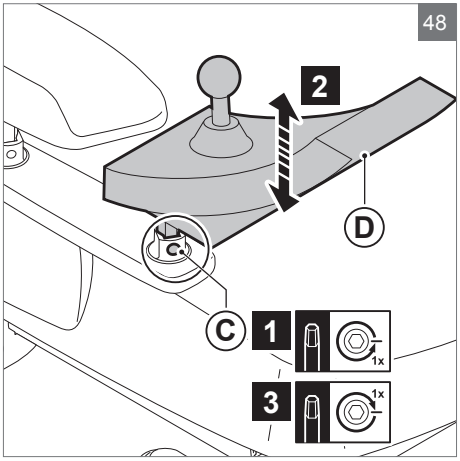
Height (1)

1. Loosen (A) by one turn.
2. Slide (B) into the desired position.
3. Tighten (A).



Height (2)

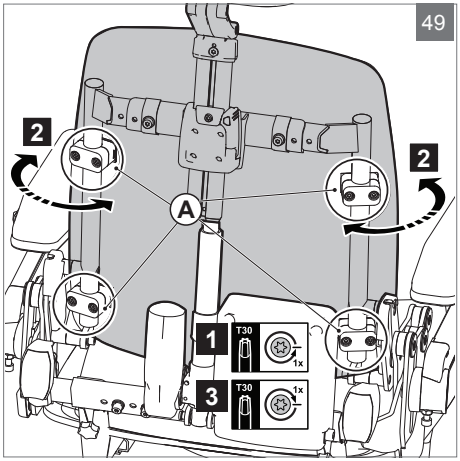
1. Loosen (C) by one turn.
2. Slide (D) into the desired position.
3. Tighten (C).



5.11 Backrest with adjustable straps - flexible

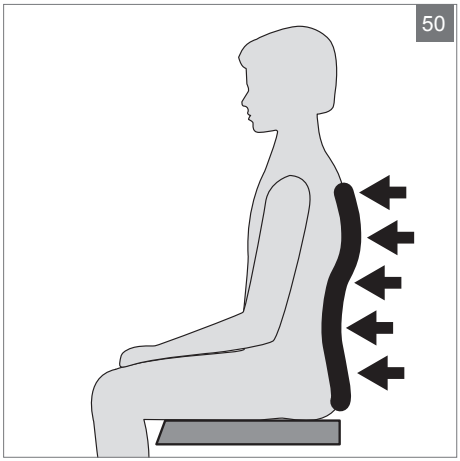
The sides of the backrest with adjustable straps can be adjusted as follows:

1. Loosen the 8 Torx screws.
2. Adjust the sides to the desired position.
3. Tighten the 8 Torx screws.

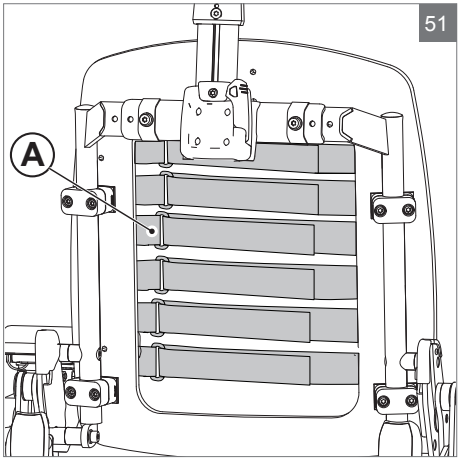


5.12 Velcro back curvature adjustment

1. Slacken all the straps a little before you begin to adjust the backrest. Start the adjustments with the lowest straps and work upwards.



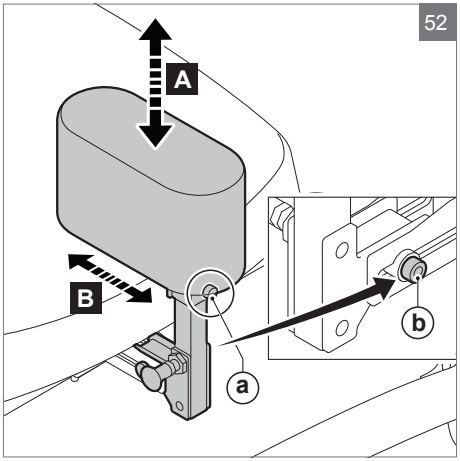
2. Tighten or loosen the straps (A) so that the user gets the maximum comfort and support.



5.13 Abduction support

Adjust the abduction support as follows:
1. Loosen the Torx screw.
2. Adjust the part to the desired position.
3. Tighten the Torx screw.

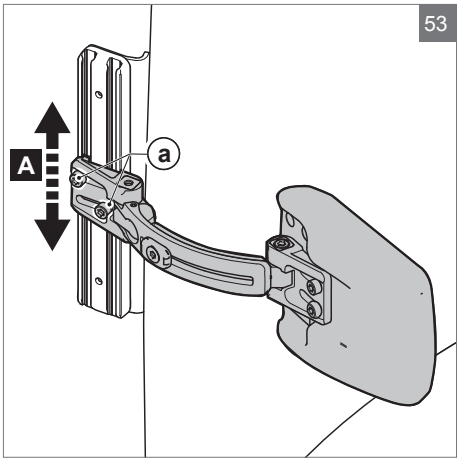
A/a. Height adjustment.
B/b. Depth adjustment.



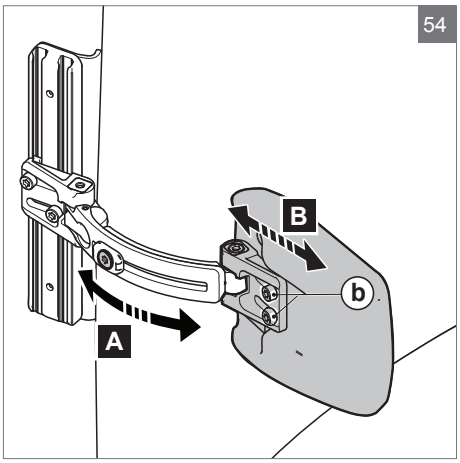
5.14 Thoracic support

Adjust the thoracic support as follows:
1. Loosen the Torx screw.
2. Adjust the part to the desired position.
3. Tighten the Torx screw.

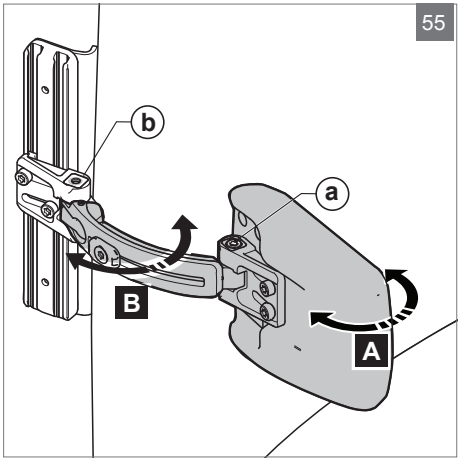
A/a. Rough adjustment of width
B/b. Height adjustment



A/a. Adjustment of bracket depth
B/b. Adjustment of cushion depth

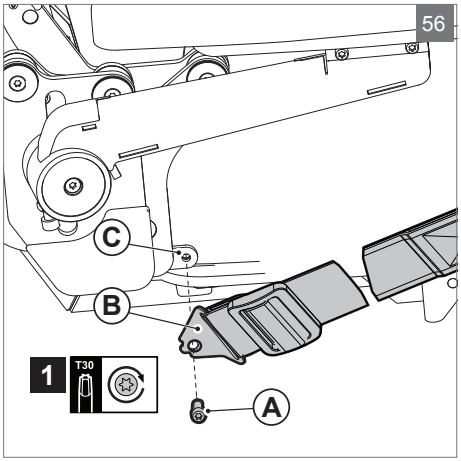


A/a. Adjustment of cushion angle
B/b. Fine adjustment of width



5.15 Attaching the lap strap

Attaching to the seating frame
1. Tighten (A) through (B) into (C).

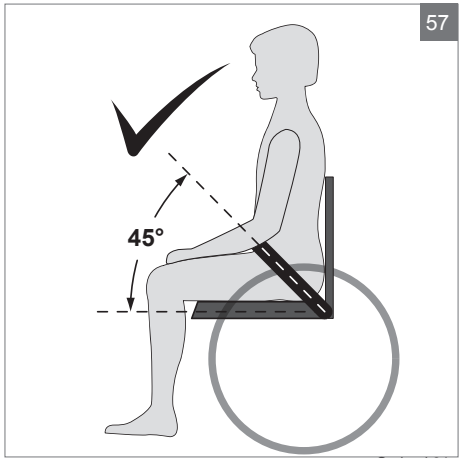


⚠ **Warning!**
Ensure that the lap strap is adjusted to the wheelchair user. The strap must fit snugly across the hips at an angle of approximately 45°.

Ensure that the strap is clean at all times and that the locking mechanism is working properly. The strap and the locking mechanism can be cleaned using a damp cloth.

If the strap is positioned above the hips and across the soft part of the user's belly, then this can result in seating posture being incorrect and the user slumping in the seat.

Never use the lap strap as a seatbelt when using transport.



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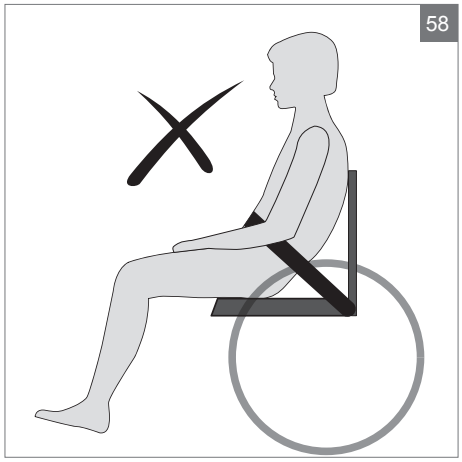
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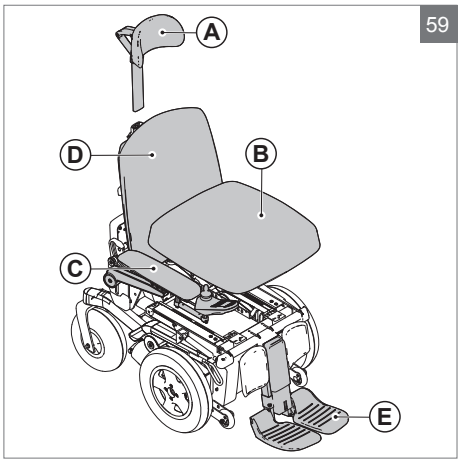
6 Transport

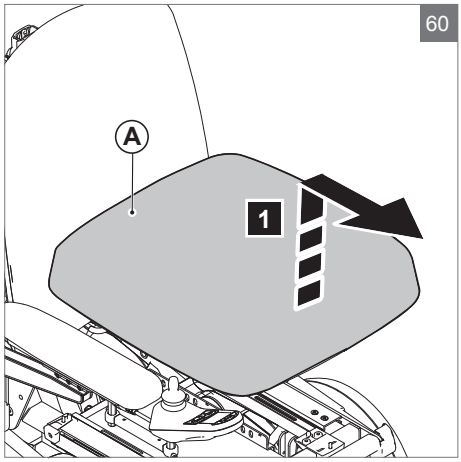
6.4 Reducing the seating system in size for transportation purposes

A. Removing the headrest, see 4.3 ‘Options/ accessories (1,3 kg)
B. Removing the seat cushion (2,5 kg)
C. Flip up the armrest
D. Folding the backrest fully forward
E. Removing the legrest or fold up footplates

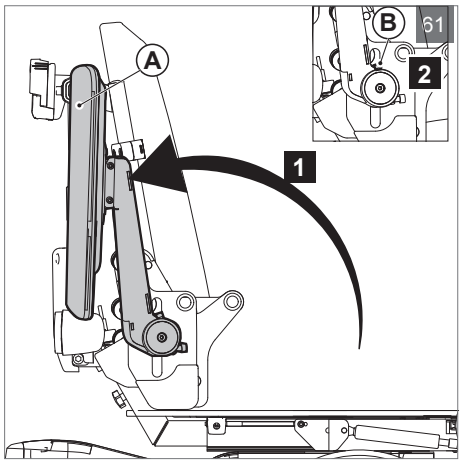
> ⚠ **Warning!**
> The wheelchair can be reduced in size for transportation without a passenger. Any components of the seating system that can be detached easily should be removed. Store away such components safely so that they can not cause injury or damage, or become damaged themselves.



Removing the seat cushion
1. Pull (A) upwards and forwards.



Flip up the armrest
1. Flip up the armrest (A)
2. Lock the armrest (B)

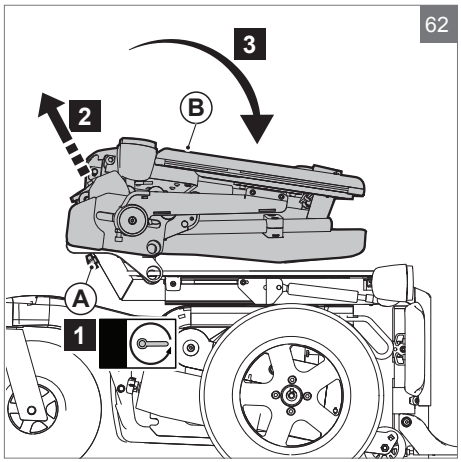


Folding the backrest fully forward
1. Loosen the knobs (A) at the lower back.
2. Lift the backrest 60° up (B)

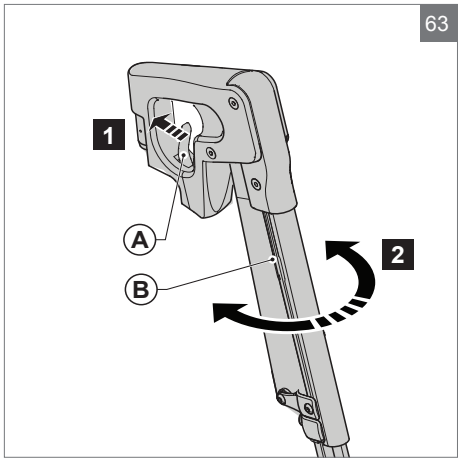
Note!
The backrest is heavy.

⚠ **Warning!**
Watch squeezing your fingers while lifting the backrest

3. Fold (B) fully forward.



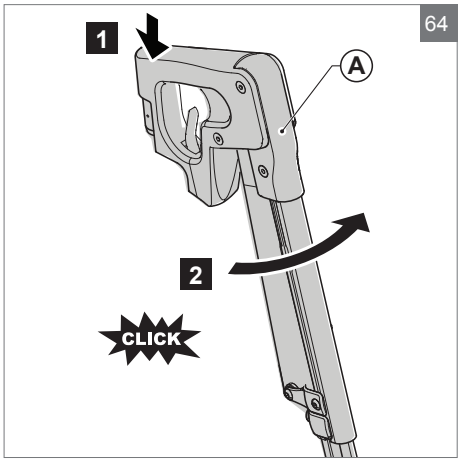
Removing the standard legrest
1. Push (A) to the rear.
2. Swing (B) to the side.
3. Remove (B).



6.5 Setting up the seating system following transportation

Positioning the standard legrest
1. Place the legrest (A) in the bracket.
2. Swing the legrest inwards.

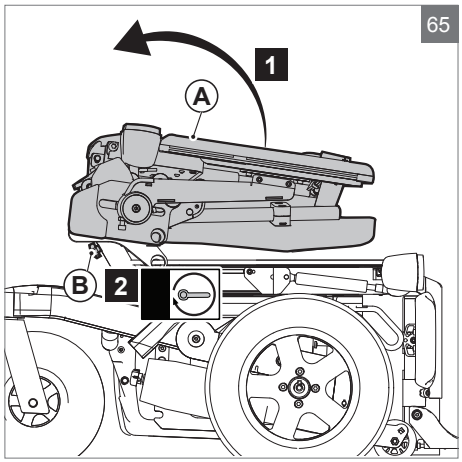
⚠ **Caution!**
You should hear a click when replacing the legrest. This indicates that the legrest has locked into place.



Positioning the backrest for use

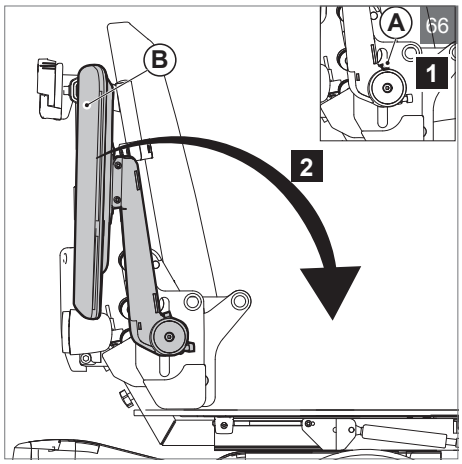
1. Lift (A) upwards and backwards.Due to its weight the backrest will fall into place.
2. Tighten the star knobs (B).

> ⚠ **Warning!**
> Watch squeezing your fingers while lifting the back.



Positioning the armrest

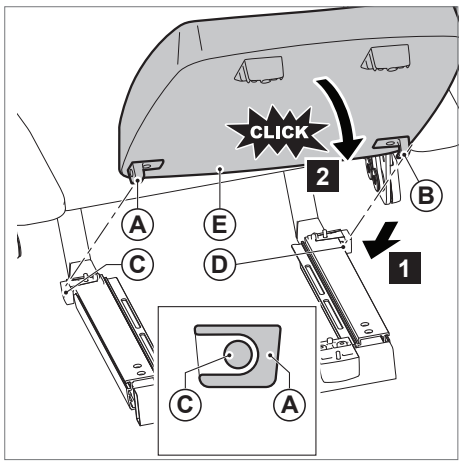
1. Unlock the armrest (A)
2. Flip down the armrest (B)



Positioning the seat cushion

1. Slide (A) and (B) over (C) and (D)
2. Push (E) downwards.

> ⚠ **Caution!**
> Ensure that (C) and (D) at the back of the seat hook under the bolt heads.



7 Maintenance

It is recommended that you have your wheelchair serviced by your dealer once a year or, in the case of intensive use, once every six months.

7.1 Cleaning the upholstery

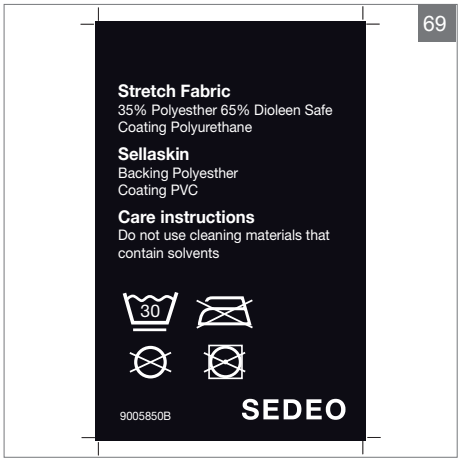
Clean the upholstery using a damp cloth and household soap. Then rub dry using a soft, dry cloth.

PU parts
Clean the armrests, side cushions etc. using a damp cloth and household soap. Then dry the parts using a soft cloth.

Armrest cushion upholstery
Covers are removable and washable.

Seat and backrest cushion upholstery
Covers are removable and washable. Follow the washing instructions on the covers:
For the incontinence cover see figure 68.
For the comfort cover see figure 69.

> ⚠ **Warning!**
> Do not use organic solvents such as thinner, benzine or white spirit.
>
> Do not chemically clean the upholstery. Do not iron or spin-dry the upholstery.



8 Troubleshooting

If there is a problem with your seating system, contact you dealer.

9 Technical specifications

9.1 CE declaration and requirements

CE The product is in conformity with the provisions of the Medical Devices Directive and carries the CE mark.

The product also meets the following requirements and standards. This has been verified by independent test organizations.

3. EN 12183 (2009) Manual wheelchairs or EN 12184 (2009) Electrically powered wheelchairs.
4. ISO 7176-8 Requirements for impact, static and fatigue strength.
5. ISO 7176-9 Climatic tests for electric wheelchairs and scooters.
6. ISO 7176-16 Requirements for resistance to ignition of upholstered parts.
7. ISO 7176-19 Crash test.
8. EN-ISO 10993-5 (1999-11) Biological evaluation of medical devices.
9. EN 1021 1,2 Assessment of the ignitability of upholstered furniture. Ignition source: smouldering cigarete/match flame equivalent.

9.2 Technical information

Description	Values	Unit
Seating system		
User weight	160 (25.2)	kg (st.)
Seat width	380 - 600 (15 - 23.6)	mm (inch)
Seat depth	440 - 600 (15.7 - 23.6)	mm (inch)
Point of gravity	95 (3.7)	mm (inch)
Backrest		
Backrest height	480 - 670 (18.9 - 26.4)	mm (inch)
Backrest recline	90 - 135	°
Armrest		
Armrest pad width	-40 till +20 (-1.6 till +0.8)	mm (inch)
Armrest pad height from seat frame	240 - 360 (9.4 - 14.2)	mm (inch)
Armrest pad depth controller bracket side	95 (3.7)	mm (inch)
Armrest pad depth non controller bracket side	140 (5.5)	mm (inch)
Side support		
Side cushion height	100 (3.9)	mm (inch)
Central legrest		
Lower leg length (with compressed seat cushion)	330 - 495 (13 - 19.5)	mm (inch)
Knee angle*	30 - 110	°
Ankle angle	+20 till -40	°
Central calf support height (option)	120 (4.7)	mm (inch)

Description	Values	Unit
Electrically elevating central legrest		
Lower leg length (with compressed seat cushion)	365 - 530 (14.4 - 20.9)	mm (inch)
Knee angle*	10 - 86	°
Maximum length compensation	180 (7.1)	mm (inch)
Ankle angle	+20 till -20	°
Calf support height	90 (3.5)	mm (inch)
Width calf supports	350 - 430 (13.8 - 16.9)	mm (inch)
Standard legrest (set)		
Lower leg length (with compressed seat cushion)	340 - 510 (13.4 - 20.1)	mm (inch)
Knee angle*	70	°
Ankle angle	0 - 180	°
Elevating and electrical elevating legrest (set)		
Lower leg length (with compressed seat cushion)	340 - 530 (13.4 - 20.9)	mm (inch)
Knee angle*	10 - 80	°
Ankle angle	0 - 180	°
Calf support height	120 (4.7)	mm (inch)
Headrest		
Headrest height (memory)	170 (6.7)	mm (inch)
Headrest depth	180 (7.1)	mm (inch)
Headrest vertical angle	-45 - 45	°
Headrest width standard headrest (option)	-20 - 20 (-0.8 - 0.8)	mm (inch)
Headrest width width adjustable headrest (option)	-110 - 110 (-4.3 - 4.3)	mm (inch)
Controller bracket		
Controller bracket height	60 (2.4)	mm (inch)
Controller bracket depth	35 (1.4)	mm (inch)
Controller bracket swing away		
Controller bracket height	50 (2)	mm (inch)
Controller bracket depth	35 (1.4)	mm (inch)
Controller position angle	0 - 45	°
Hemiplegia		
Hemiplegia armrest angle (option)	0 - 45	°
Abduction support		
Abduction support height	60 - 120 (2.4 - 4.7)	mm (inch)
Abduction support depth	60 - 110 (2.4 - 4.3)	mm (inch)
Thoracic support		
Thoracic support width	-60 - 0 (-2.4 - 0)	mm (inch)
Thoracic support height	200 - 400 (7.9 - 15.7)	mm (inch)
Thoracic support depth	20 - 70 (0.8 - 2.8)	mm (inch)

* = 0 ° legs straight ahead and 90 ° = legs in a right angle down

10 Warranty

The provisions of warranty and liability applicable to the seating system are identical to those incorporated in the wheelchair manual. (📖 Wheelchair)

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