

Corpus 3G

Seat system for electric wheelchair



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Introduction

The Service Manual is intended for technical personnel who maintain and repair power wheelchairs. It is important that anyone who performs maintenance and repairs described in this manual reads and understands the content of this manual so that the work is performed professionally. Always state the chassis number when contacting Permobil to ensure that the correct information is provided.

Technical Support

In the event of technical problems, you should contact your dealer, or Permobil Inc. USA at 800-736-0925.

Spare parts

Spare parts must be ordered through your dealer.

Warranties

Contact your dealer or Permobil Inc. USA for information about the warranties for this chair.

Maintenance

See the information in the Owner's Manual.

Adjustment

Adjusting the seat depth

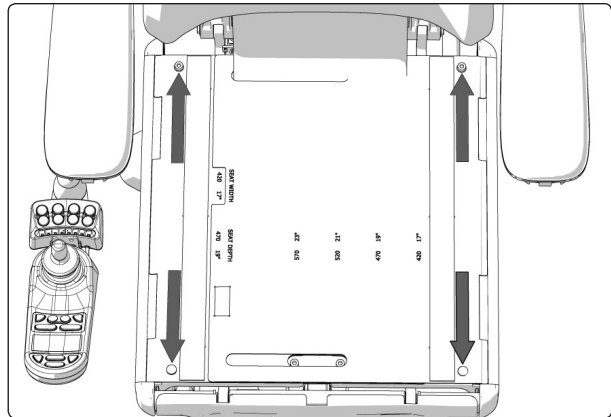
The seat depth can be adjusted to suit different users. There are nine fixed levels, each 25 mm apart.

Adjustment of the seat depth is performed by mounting the front section of the Seat frame incl. Leg rest and the rear section of the seat frame incl. Back rest into desired positions according to the table on 7 and 8. When the seat depth is adjusted it may be necessary to replace cushions, seat plates and UniTrack rails for ones of the appropriate length. The mounting position for the seat on the seat lift/fixed seat column may also need adjusting. See 37.

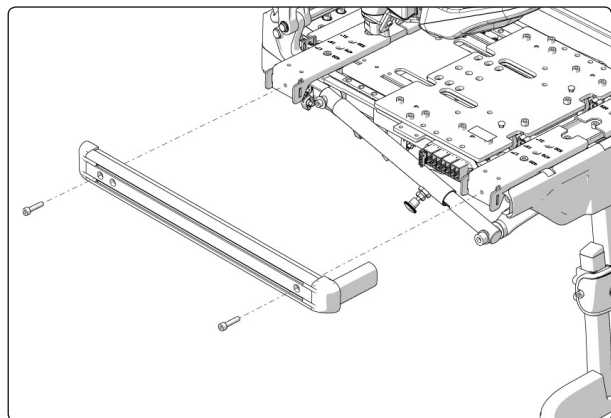
1. Remove the seat cushion by lifting it straight up. It is attached by means of Velcro on the rear of the cushion.
2. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.
3. Remove the UniTrack rails which are each held in place by two screws. See the illustration.

For this task the following tools are necessary:

- 1 Allen key 5 mm



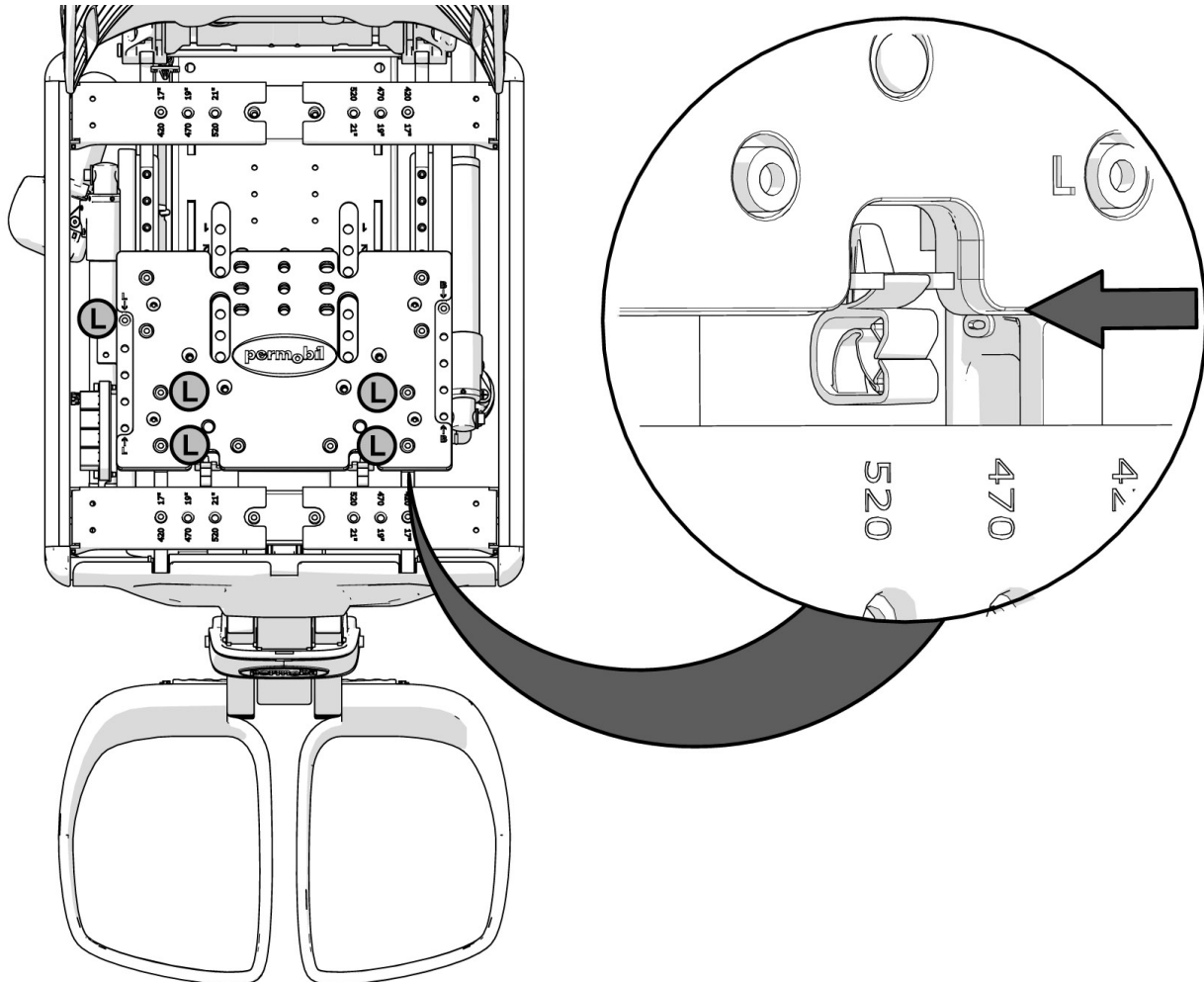
The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.



The UniTrack rails are fixed in place with two screws each.

Adjustment of the front section of the Seat frame (Leg rest position)

4. Remove the five screws marked (L) securing the Seat frames front section, see fig below.
5. Adjust the seat depth by moving the front section of the seat frame to the required position. The rails with which the seat depth is adjusted are marked with the settings for each potential position. The scale is marked with "millimeters" on one side and "inches" on the other.
6. Secure it at the required setting by remounting the five screws.

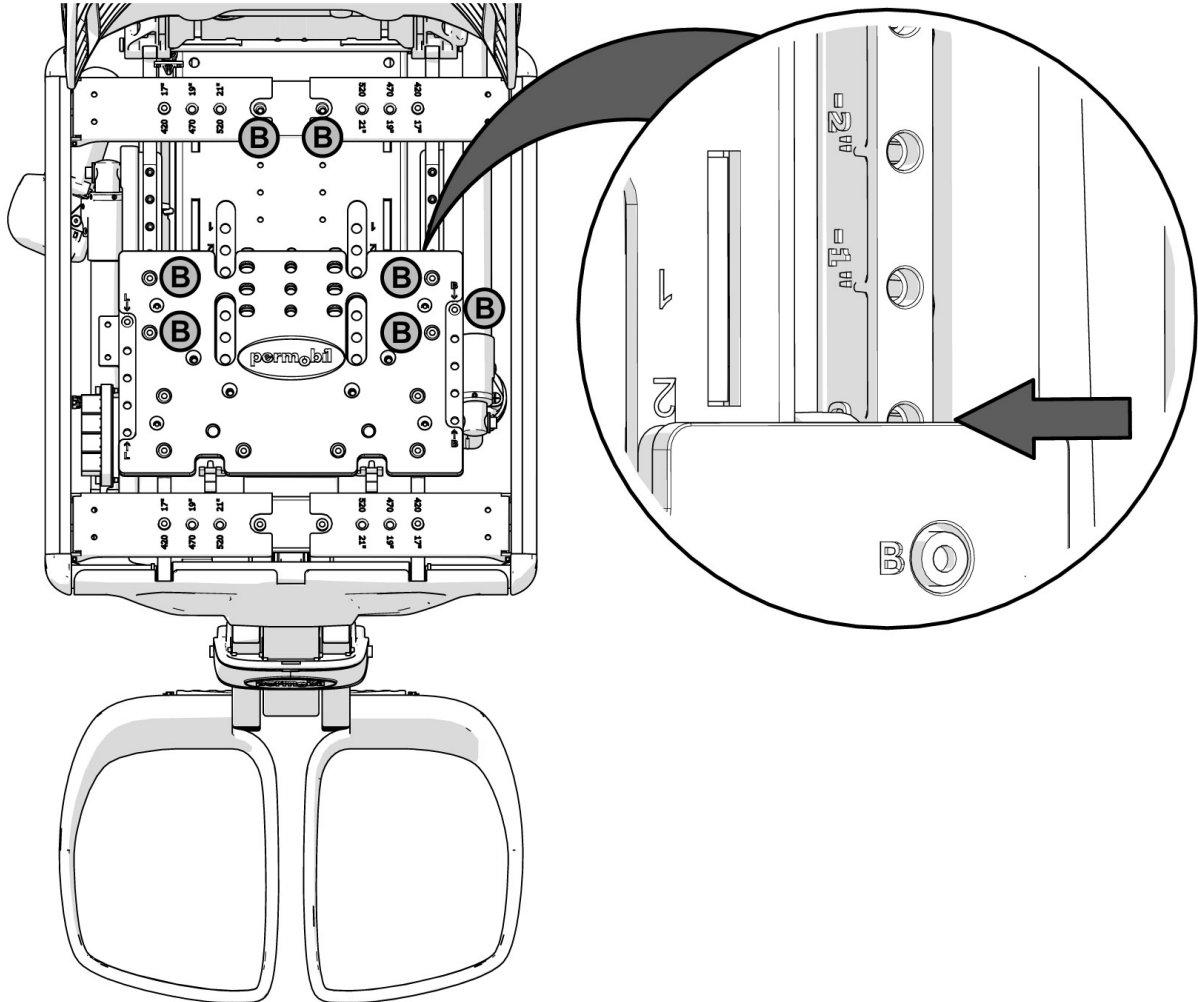


The position of the front part of the Seat frame (Leg rest position) is fixed by five screws marked with the letter L.

Seat depth	Back rest position		Leg rest position	
	M300/M400	Other Models	M300/M400	Other Models
370 mm. / 15"	N/A	-100 mm. / -4"	N/A	0
395 mm. / 16"	-100 mm. / -4"	-75 mm. / -3"	+25 mm. / +1"	0
420 mm. / 17"	-75 mm. / -3"	-50 mm. / -2"	+25 mm. / +1"	0
445 mm. / 18"	-50 mm. / -2"	-25 mm. / -1"	+25 mm. / +1"	0
470 mm. / 19"	-25 mm. / -1"	0	+25 mm. / +1"	0
495 mm. / 20"	0	0	+25 mm. / +1"	+25 mm. / +1"
520 mm. / 21"	0	0	+50 mm. / +2"	+50 mm. / +2"
545 mm. / 22"	0	0	+75 mm. / +3"	+75 mm. / +3"
570 mm. / 23"	0	0	+100 mm. / +4"	+100 mm. / +4"

Adjustment of the rear section of the Seat frame (Back rest position).

7. Remove the seven screws marked (B) securing the Seat frames rear section, see fig. below.
8. Adjust the seat depth by moving the rear section of the seat frame to the required position. The rails with which the seat depth is adjusted are marked with the settings for each potential position. The scale is marked with "millimeters" on one side and "inches" on the other.
9. Secure it at the required setting by remounting the five screws.

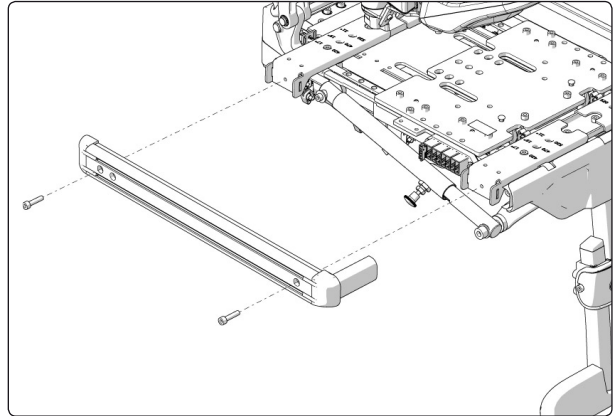


The position of the rear section of the Seat frame (Back rest Position) is fixed by five screws marked with the letter L.

Seat depth	Back rest position		Leg rest position	
	M300/M400	Other Models	M300/M400	Other Models
370 mm. / 15"	N/A	-100 mm. / -4"	N/A	0
395 mm. / 16"	-100 mm. / -4"	-75 mm. / -3"	+25 mm. / +1"	0
420 mm. / 17"	-75 mm. / -3"	-50 mm. / -2"	+25 mm. / +1"	0
445 mm. / 18"	-50 mm. / -2"	-25 mm. / -1"	+25 mm. / +1"	0
470 mm. / 19"	-25 mm. / -1"	0	+25 mm. / +1"	0
495 mm. / 20"	0	0	+25 mm. / +1"	+25 mm. / +1"
520 mm. / 21"	0	0	+50 mm. / +2"	+50 mm. / +2"
545 mm. / 22"	0	0	+75 mm. / +3"	+75 mm. / +3"
570 mm. / 23"	0	0	+100 mm. / +4"	+100 mm. / +4"

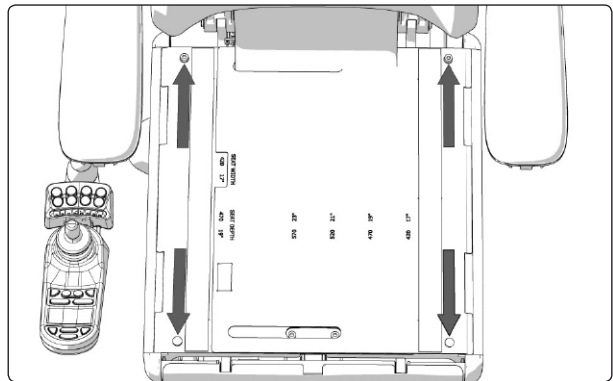
10. Mount UniTrack rails of a suitable length for the seat depth setting. See the table on 43. The rails are each held in place by two screws. See the illustration. Use a torque wrench to tighten the screws.

Tightening torque 9.8 Nm.



The UniTrack rails are fixed in place with two screws each.

11. Mount seat plates of a suitable length for the seat depth setting. See the table on 43. The plates are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration.
12. Fit a cushion of a suitable length/width for this setting. See the table on 43. Secure the cushion in place using the Velcro on the back of the cushion.



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

⚠ WARNING!

The seat's mounting position on the seat lift/fixed seat column may need to be changed following adjustment of seat depth. Failure to do this correctly may impair the driving properties of the wheelchair, leading to an increased risk of personal injury and damage to property, including damage to the wheelchair. See 37 for further information.

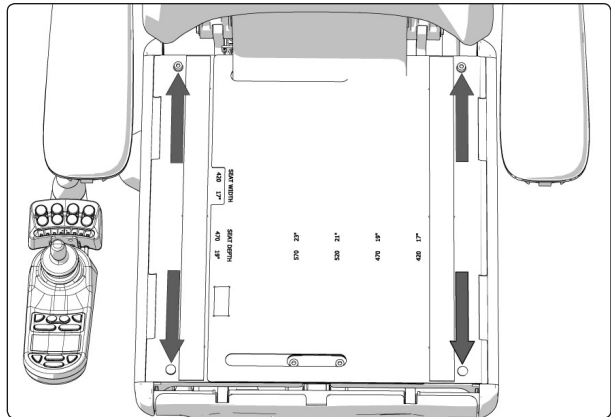
Adjusting the seat width

The seat width can be adjusted to give the user optimal comfort. There are three fixed levels, each 25 mm apart.

1. Remove the seat cushion by lifting it straight up. It is attached by means of Velcro on the rear of the cushion.
2. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.

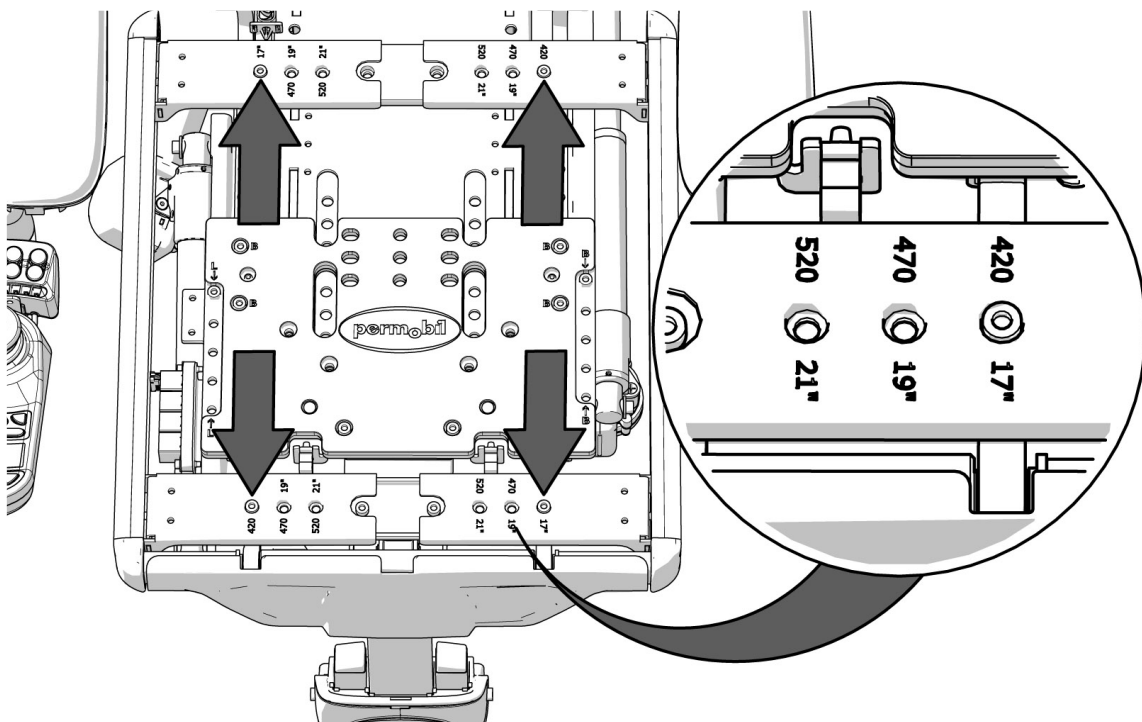
For this task the following tools are necessary:

- 1 Allen key 5 mm



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

3. Remove the four screws securing the seat width adjustment unit. See the illustration below.
4. Adjust the seat width by moving the right or left section of the seat frame to the required position. The rails with which the seat width is adjusted are marked with the settings for each potential position. The scale is marked with "millimeters" and "inches".
5. Secure it at the required setting by replacing the four screws.
7. Remount the seat plates using two screws at the back edge and two quick-mount clamps at the front. See the illustration.
8. Fit a cushion of a suitable length/width for this setting. See the table on 43. Secure the cushion in place using the Velcro on the back of the cushion.



The seat width is fixed using four screws.

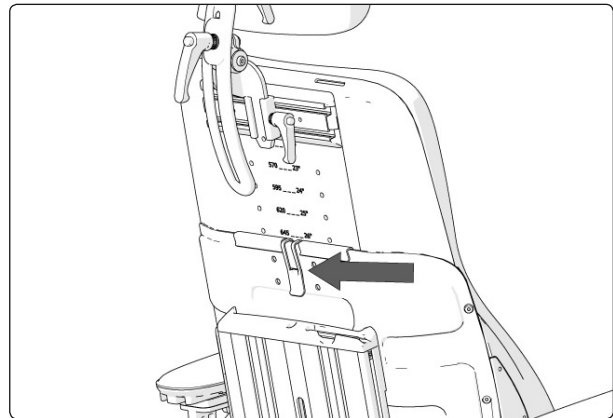
Adjusting the backrest height

The backrest height can be adjusted to give the user optimal comfort. Adjustment is possible by moving the locking mechanism on the upper section of the backrest between six fixed stages 25 mm apart.

1. Remove the backrest cushion by pulling it straight forwards. It is attached by means of Velcro on the rear of the cushion.
2. For access to the locking mechanism, set the backrest angle to its most upright position. Remove the upper section of the backrest by carefully opening the locking mechanism catch outwards while also pulling the upper section of the backrest straight up. See the illustration.

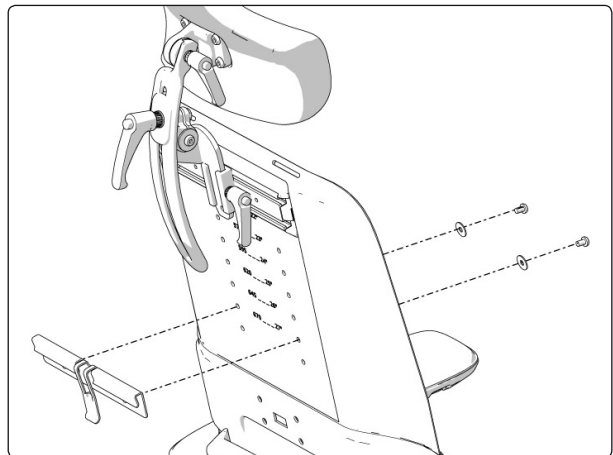
For this task the following tools are necessary:

- 1 Allen key 3 mm



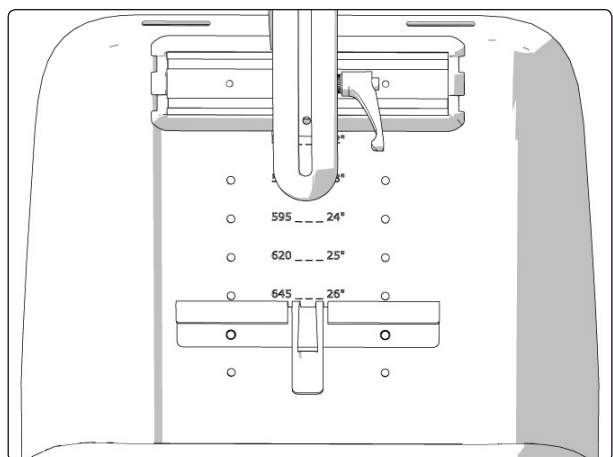
The upper section of the backrest is secured with a locking mechanism.

3. Remove the two screws holding the backrest locking mechanism in place. See the illustration.
4. Adjust the height of the backrest by sliding the upper section upwards/downwards to the required position. The upper backrest plate is marked with the settings for each potential position. The scale is marked with "millimeters" and "inches".



The locking mechanism is held in place by two screws.

5. Lift up the upper section of the backrest enough that the locking mechanism can be mounted with its top edge in line with the required height on the backrest scale. See the illustration. Mount the locking mechanism using the two screws.
6. Slide the upper section of the backrest down until secured in position by the locking mechanism. See the illustration above.
7. Fit a cushion of a suitable height/width for this setting. See the table on 43. Secure the cushion in place using the Velcro on the back of the cushion.



The backrest locking mechanism mounted for backrest height 645 mm (26 inches).

Adjusting the armrest height

The height of the armrest can be adjusted to provide the user with optimal comfort.

For this task the following tools are necessary:

1 Allen key 5 mm

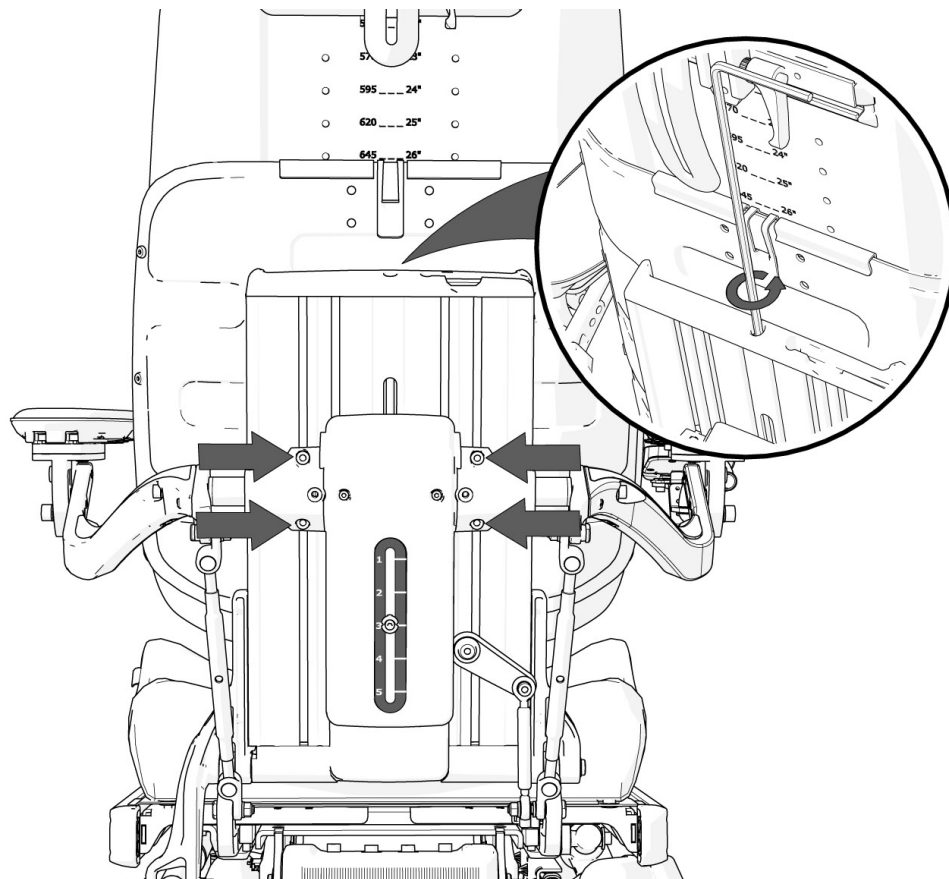


1. Undo the four screws holding the armrest at its current height. See the illustration below.

⚠ WARNING!

Do not subject the armrests to load when adjusting them. Risk of crushing.

2. Adjust to the required position using the adjustment screw on the rear of the backrest. See the illustration below.
3. Secure the armrest at the preferred height by tightening the four screws on the rear of the backrest. See the illustration below.



The armrest height is fixed using four screws. To perform this height adjustment, use the adjustment screw in the center of the backrest.

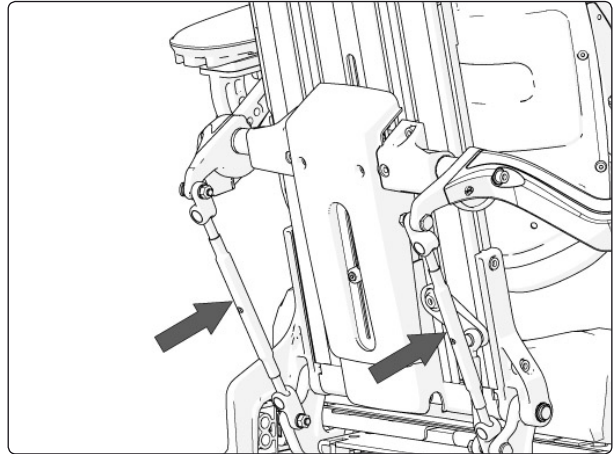
Adjusting the armrest angle

The angle of the armrest can be easily adjusted to provide the user with optimal comfort.

1. Adjust the armrest angle by turning the adjustment bars. See the illustration.

⚠ WARNING!

Do not subject the armrests to load when adjusting them. Risk of crushing.



Adjust the armrest angle by turning the adjustment bars

Individual adjustment of armrest height/angle

⚠ WARNING!

Do not subject the armrests to load when adjusting them. Risk of crushing.
This type of adjustment is only performed in special cases. It may have negative effects on the movement of the armrest when raising/lowering the backrest.

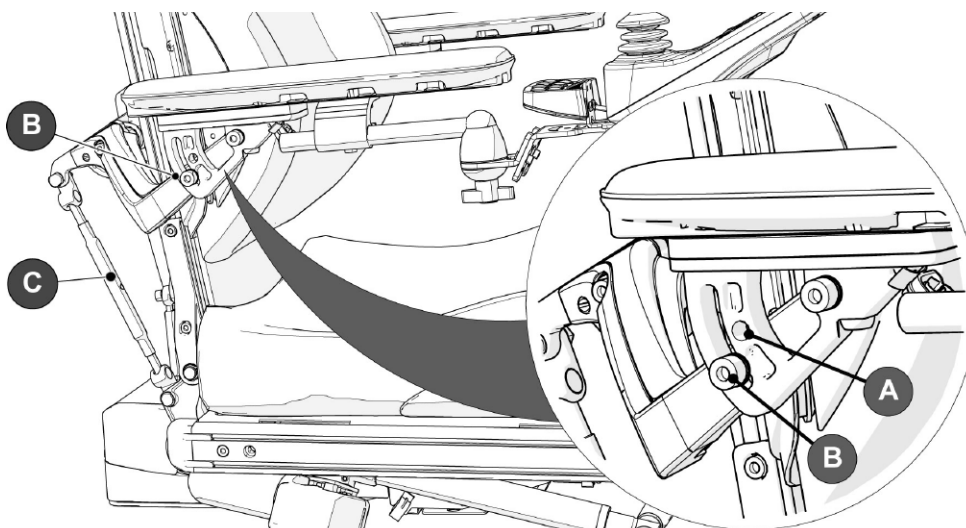
For this task the following tools are necessary:

- 1 Allen key 5 mm



The height/angle of the armrest is normally adjusted as described on s 32-33. If specifically required, the armrests can be adjusted individually for users who want the left and right armrest at different heights and/or angles. This adjustment is only performed in special cases. It may have negative effects on the movement of the armrest when raising/lowering the backrest.

1. Adjust the armrest height by turning the adjustment bars (C). See the illustration.
2. The angle of the armrest is secured using a screw (B). Move the screw from a fixed position (A) to a flexible position (B). See the illustration below.
3. Adjust the armrest to the required angle and secure by tightening the screw (B). See the illustration below.



Individual adjustment of the armrest height and angle

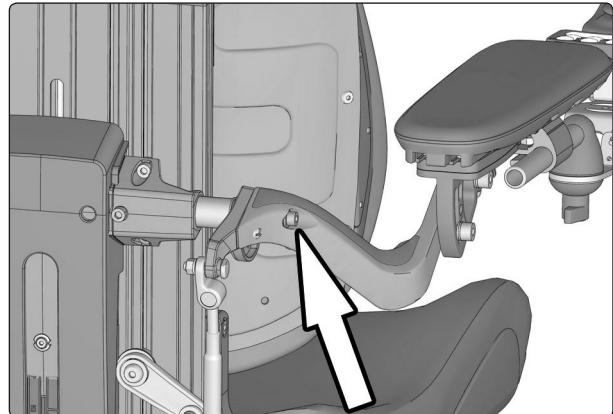
Adjusting the armrest width

The distance between the armrests can be adjusted to give the user optimal comfort.

1. Loosen the screw for armrest width adjustment approximately 3 turns. See the illustration.
2. Push in/pull out the armrest shaft to the desired position.
3. Secure it at the required setting by retightening the screw.

For this task the following tools are necessary:

- 1 Allen key 5 mm



The armrest width is fixed using one screw.

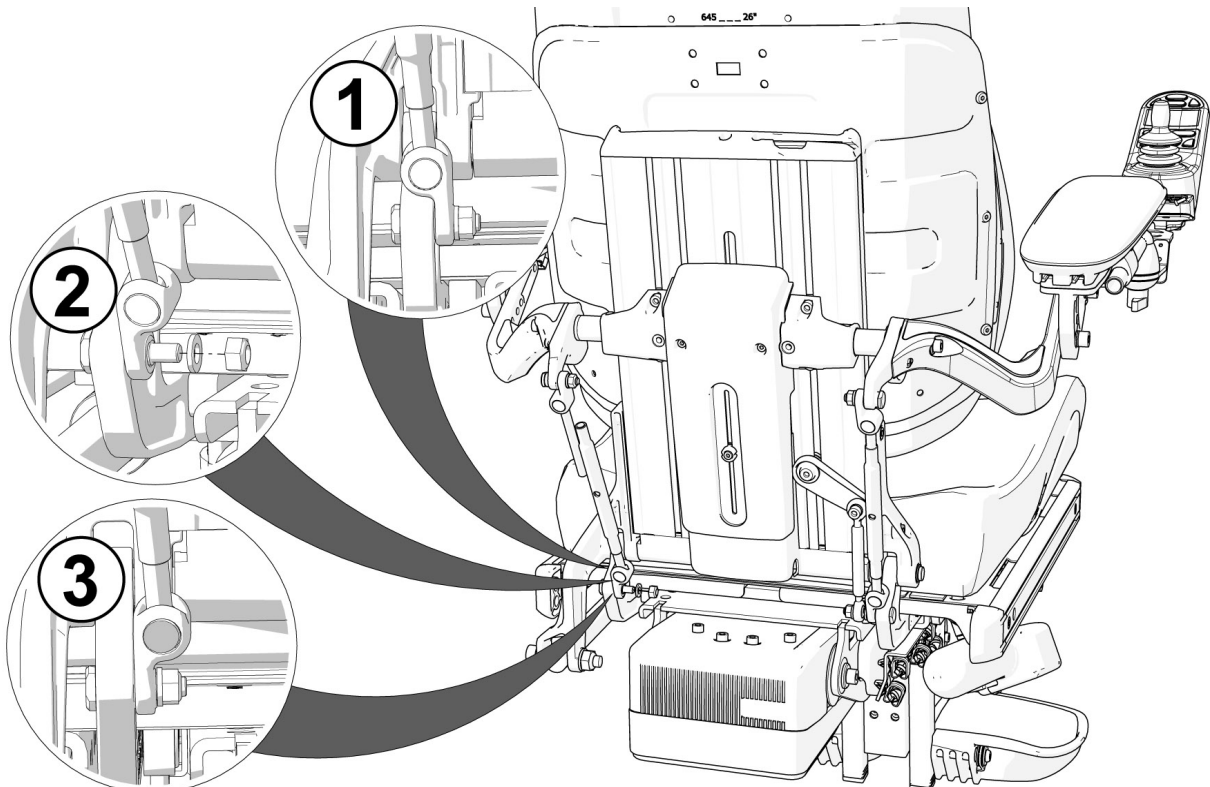
Turn the adjustment bar bracket

With the armrests set both wide and low, the adjustment bar for the left armrest angle can touch the rear actuator bracket for the backrest angle. If this is the case, turn the adjustment bar bracket.

1. Remove the lower bracket of the adjustment bar, which is secured with a screw, washer and nut. See the illustration (1).
2. Turn the bracket 180° so the adjustment bar is closer to the center of the seat. See the illustration (2).
3. Refit the lower bracket of the adjustment bar in its new position using the screw, washer and nut. See the illustration (3).

For this task the following tools are necessary:

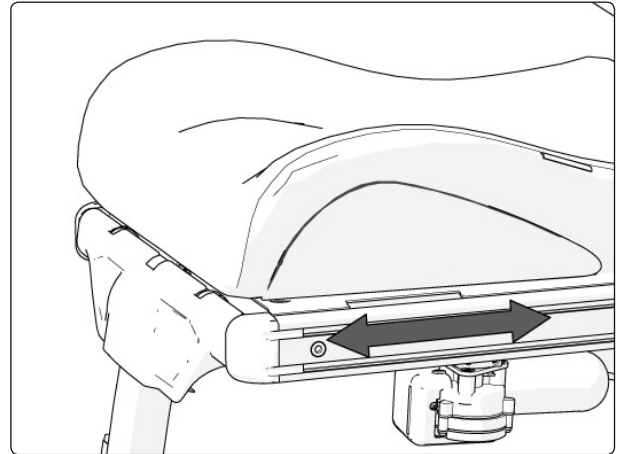
- 1 Combination wrench 10 mm.



Turn the bracket 180° so the adjustment bar is closer to the center of the seat.

Adjusting the thigh support

The position of the thigh support can be adjusted forwards or backwards to give the user optimal comfort. Slide the thigh support forwards or backwards to the desired position.



The position of the thigh support can be adjusted

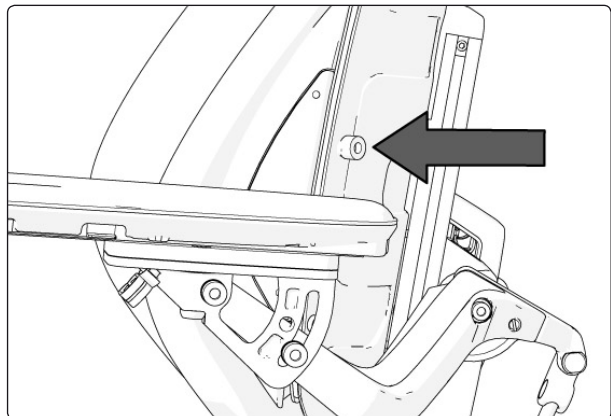
Adjusting the trunk support height

The height of the trunk support can be adjusted to give the user optimal comfort.

1. Loosen the screw for trunk support height adjustment approximately 2 turns. See the illustration.
2. Slide the trunk support up/down to the desired position.
3. Secure it at the required setting by retightening the screw.

For this task the following tools are necessary:

- 1 Allen key 5 mm



The trunk support height is fixed using one screw.

Repairs

Replacing a UniTrack rail

UniTrack rails are available in five different lengths that are used depending on the seat depth selected. See the table on 43.

Removal

1. Remove the two screws that hold the rail in place. See the illustration.

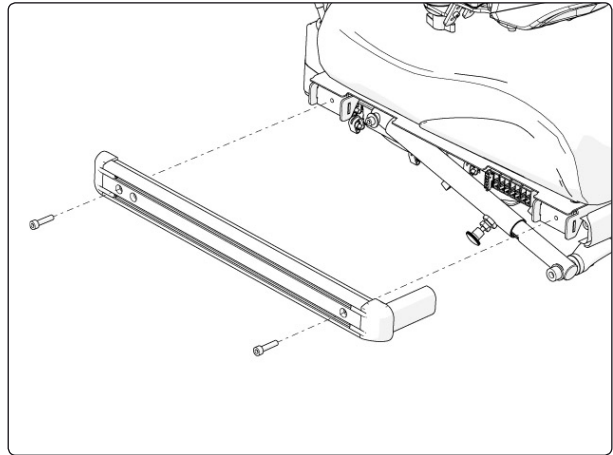
Mounting

1. Mount the UniTrack rail using two screws. See the illustration. Use a torque wrench to tighten the screws.

Tightening torque 9.8 Nm.

For this task the following tools are necessary:

- 1 Allen key 5 mm



The UniTrack rail is held in place by two screws.

Replacing seat plates

Seat plates are available in five different lengths that are used depending on the seat depth selected. See the table on 43.

Removal

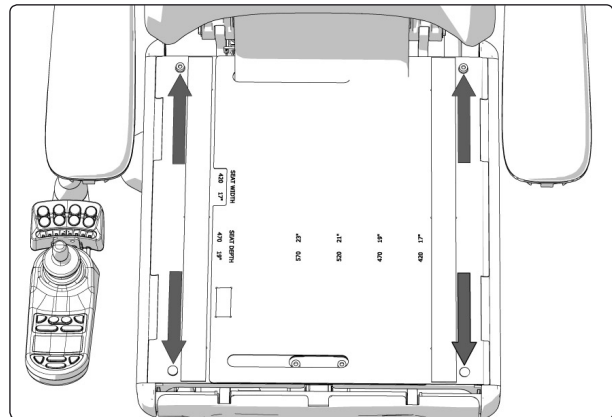
1. Remove the seat cushion by lifting it straight up. It is attached by means of Velcro on the rear of the cushion.
2. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.

Mounting

1. Mount the seat plates by first mounting them with the quick-mount clamps at the front and then the screws at the back. Fit the quick-mount clamps by pushing them straight into the holes.
2. Fit the seat cushion by pressing it against the seat plate in the desired position to ensure good contact for the Velcro on its underside.

For this task the following tools are necessary:

- 1 Allen key 3 mm



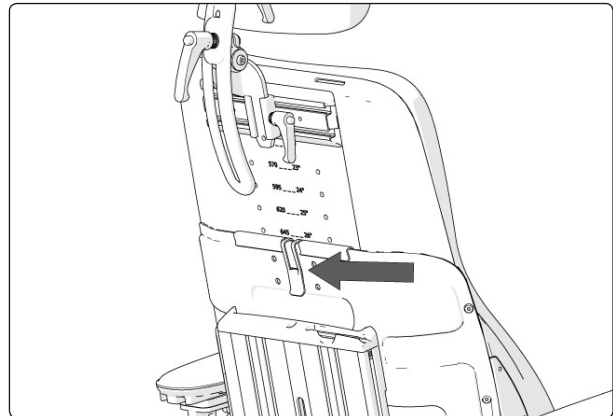
The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

Replacing backrest plates

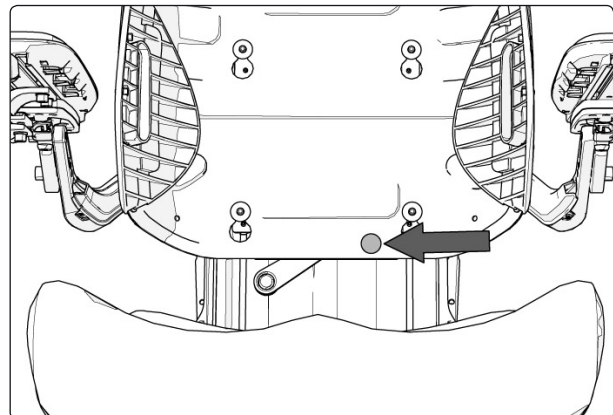
Backrest plates are available in three different widths to fit most users. If you change the size of the backrest plates you will also have to change the cushion to one that is a suitable size. See the table on 43.

Removal

1. Remove the backrest cushion by pulling it straight forwards. It is attached by means of Velcro on the rear of the cushion.
2. Remove the backrest upper plate. For access to the locking mechanism, set the backrest angle to its most upright position. Remove the upper section of the backrest by carefully opening the locking mechanism catch outwards while also pulling the upper section of the backrest straight up. See the illustration.
3. Remove the knob securing the position of the lower backrest plate. See the illustration.

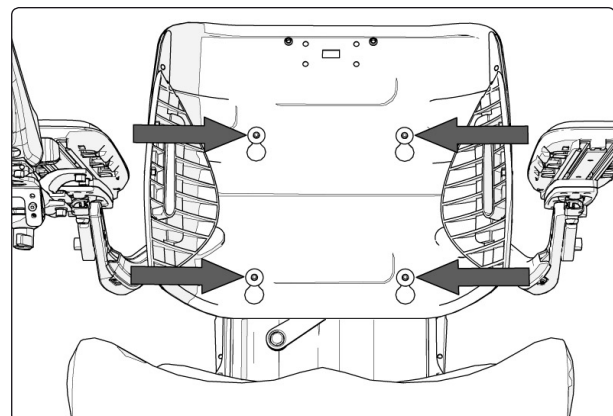


The upper section of the backrest is secured with a locking mechanism.



The lower backrest plate is secured by means of a knob

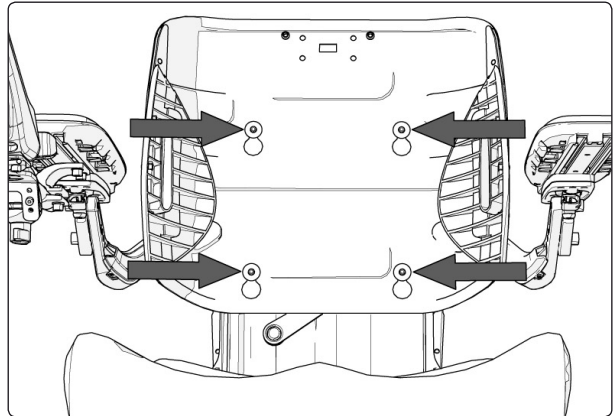
4. Remove the backrest by pulling the backrest plate straight up so it can be removed from the four locking devices. See the illustration.



The lower backrest plate is secured by means of four locking devices

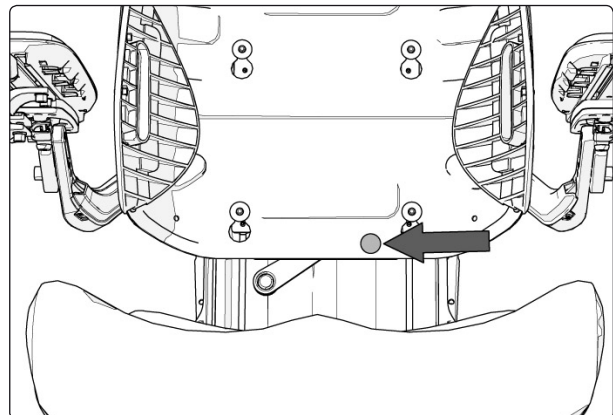
Mounting

1. Mount the lower backrest plate by lining up the four "keyholes" on the locking devices and then sliding the plate straight down.



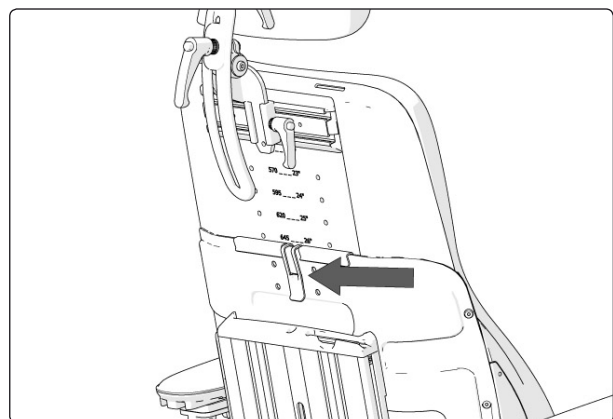
The lower backrest plate is secured by means of four locking devices

2. Secure the position of the plate by fitting the knob. See the illustration.



The lower backrest plate is secured by means of a knob

3. Mount the upper backrest plate by sliding it down into the lower plate's grooves. The height of the backrest may need to be adjusted. This is described on 11.
4. Fit the backrest cushion by pressing it against the plate in the desired position to ensure good contact for the Velcro on its underside. The lower section of the cushion is fastened to the seat plate by means of Velcro.



The upper section of the backrest is secured with a locking mechanism.

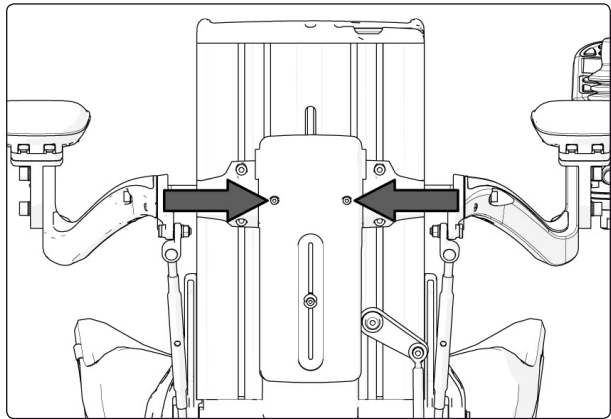
Replacing the armrest height adjustment mechanism

Removal

1. Remove the backrest plates. For a detailed description, see 18.
2. Loosen the two screws holding the plastic cover to the back of the backrest. Twist the plastic cover downwards. See the illustration.

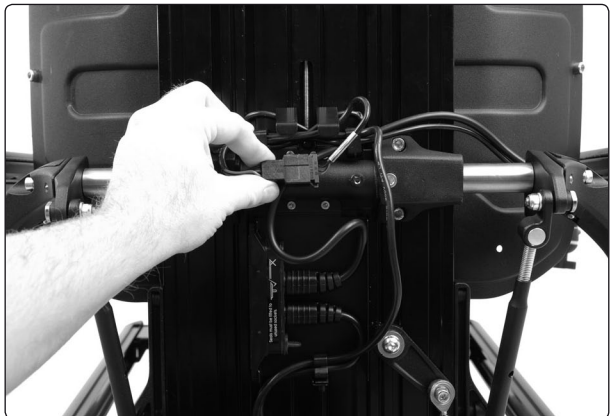
For this task the following tools are necessary:

- 1 Allen key 3 mm
- 1 Allen key 5 mm



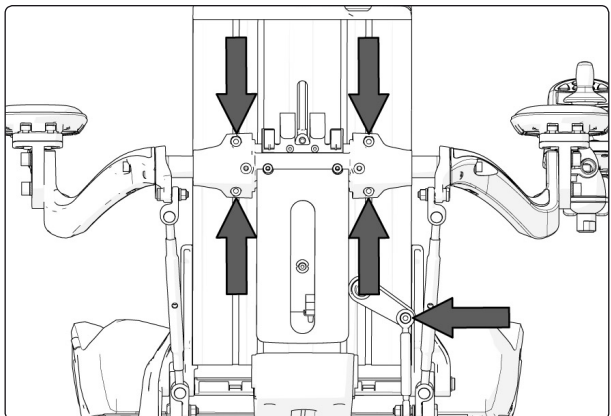
The plastic cover is fixed using two screws.

3. Remove the BUS contacts from the contact block and divide the cabling for the ICS switchbox at the contacts on the cabling.



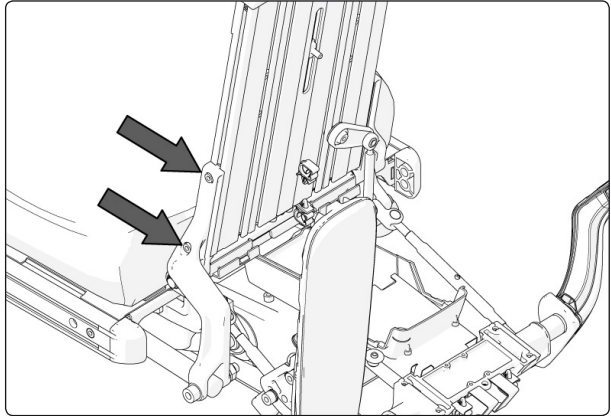
1. The contact on the ICS switchbox cabling is above the contact block. 2. The BUS contacts are mounted on the contact block.

4. Remove the four screws that hold the armrests in place. See the illustration. Then carefully move the armrests downwards or backwards.
5. Remove the joint for the backrest slide function, which is held in place by one screw. See the illustration.



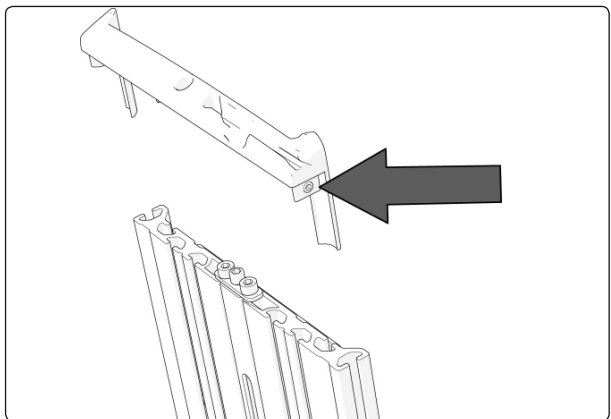
The armrests are held in place by four screws. The joint for the backrest slide function is held in place by one screw

6. Remove the backrest profile, which is secured using two screws on the left and right. See the illustration. Remove by undoing the screws and pulling the backrest profile straight up.

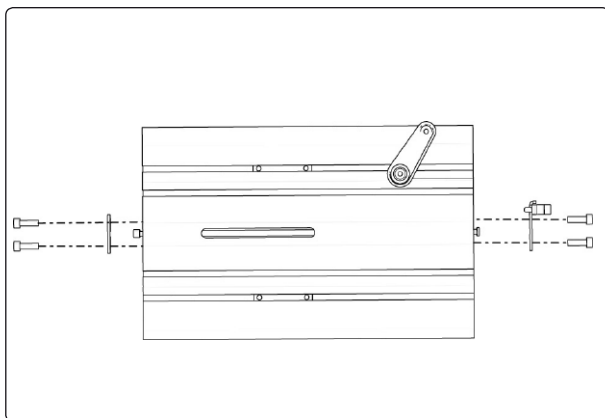


The backrest profile is secured using two screws on the left and right

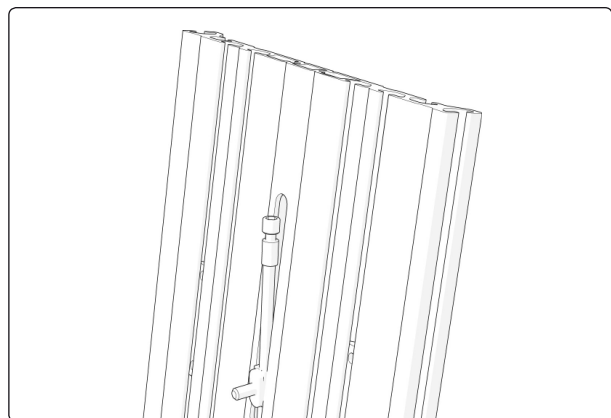
7. Loosen the screws on the left and right side of the backrest profile and then remove its end cover by sliding it straight out.
8. Remove the adjustment bar brackets, which are each held in place by two screws. See the illustration at bottom left.
9. Screw the adjustment bar down far enough to be able to prise it up out of the groove on the backrest profile. See the illustration at bottom right.



The end cover of the backrest profile is secured using one screw on the left side and one on the right



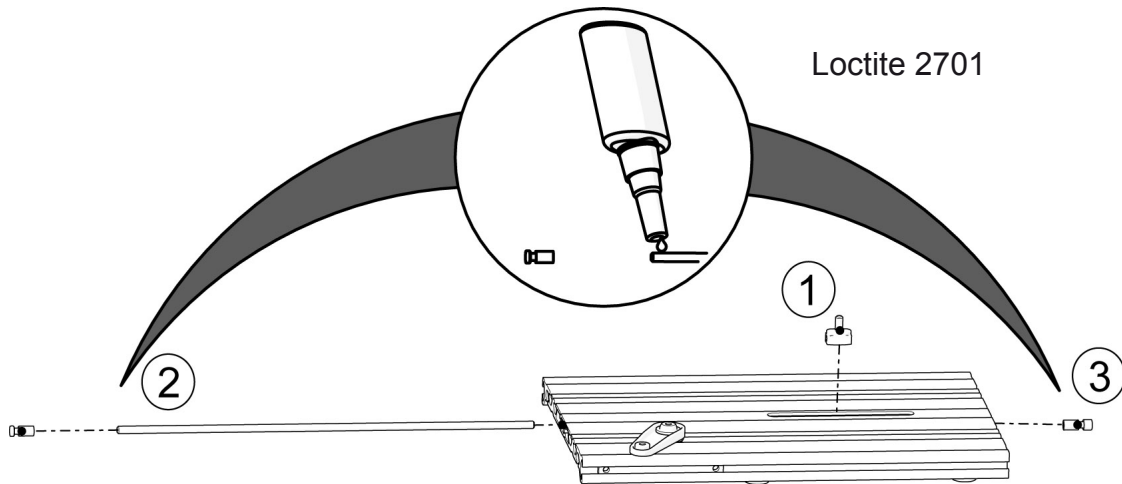
The adjustment bar brackets are each held in place by two screws



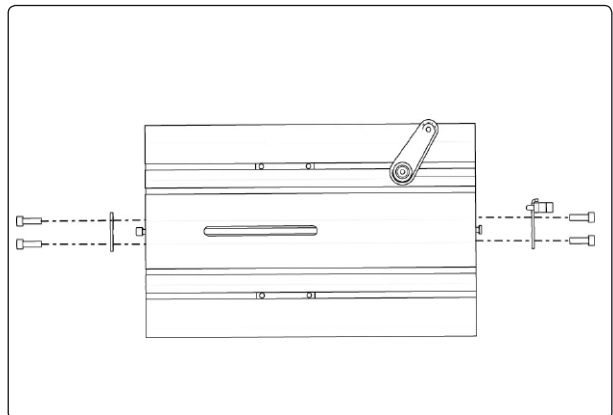
Screw the adjustment bar down far enough to be able to prise it up out of the groove on the backrest profile

Mounting

1. Push the threaded rod into the backrest profile and at the same time screw on the driver (1). See the illustration below.
2. Apply threadlocker (Loctite 2701) to the ends of the threaded rod and fit the two end pieces (2 & 3) onto the threaded rod. See the illustration below.

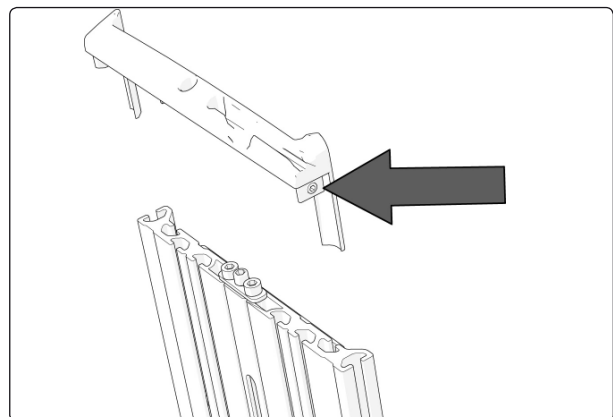


3. Mount the adjustment bar brackets, which are each held in place by two screws. See the illustration.



The adjustment bar brackets are each held in place by two screws

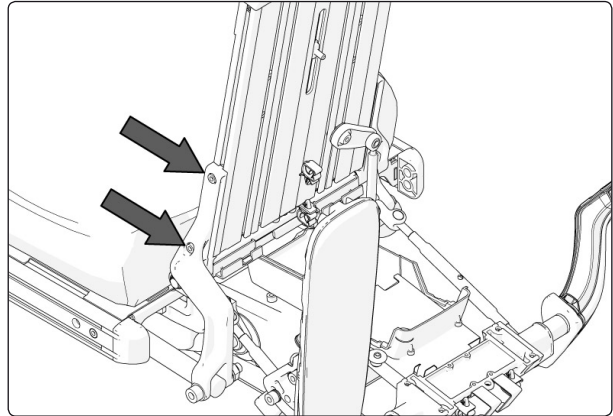
4. Remount the end cover of the backrest profile by pushing it straight into the end of the profile. Secure the cover by tightening the screws on the left and right. See the illustration.



The end cover of the backrest profile is secured using one screw on the left side and one on the right

5. Remount the backrest profile by fitting the bracket into the profile groove on the left and right sides. Slide the profile downwards until the stop on the bracket is touching the end of the backrest profile on both the left side and the right. Secure the backrest profile by tightening the two screws on the left and right. See the illustration. Tighten the screws using a torque wrench.

Tightening torque 9.8 Nm.



The backrest profile is secured using two screws on the left and right

6. Mount the armrests using the four screws. See the illustration. Tighten the screws using a torque wrench.

Tightening torque 9.8 Nm.

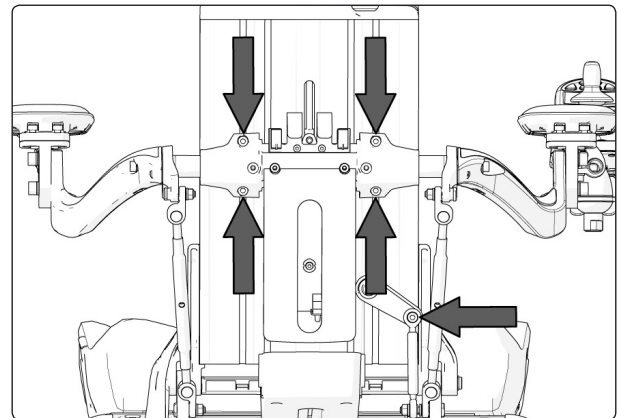
7. Mount the joint for the backrest slide function using the screw supplied. See the illustration. Tighten the screw using a torque wrench.

Tightening torque 9.8 Nm.

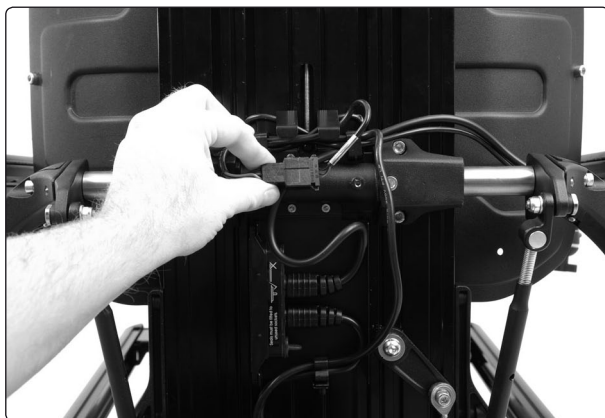
8. Mount the BUS contacts on the contact block and mount the cabling for the ICS switchbox at the contact on the cabling. See the illustration at bottom left.

9. Remount the plastic cover on the back of the backrest using the two screws supplied. See the illustration at bottom right.

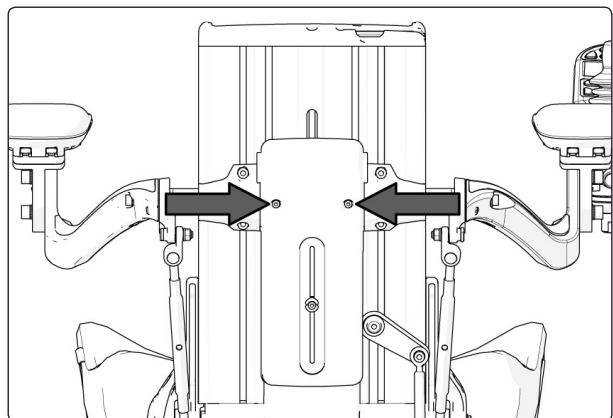
10. Remount the backrest plates. For a detailed description, see 19.



The armrests are held in place by four screws. The joint for the backrest slide function is held in place by one screw



1. The contact on the ICS switchbox cabling is above the contact block. 2. The BUS contacts are mounted on the contact block.



The plastic cover is attached using two screws

Replacing the manual legrest adjustment unit

Removal

1. Switch off the main power switch on the control panel.
2. Remove the UniTrack rail from the right side of the seat. See 16 for further information.
3. Remove the lock nut from the front bracket of the adjustment unit. See the illustration below.
4. Remove the manual adjustment unit, which is held in place by two screws. See the illustration below.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm

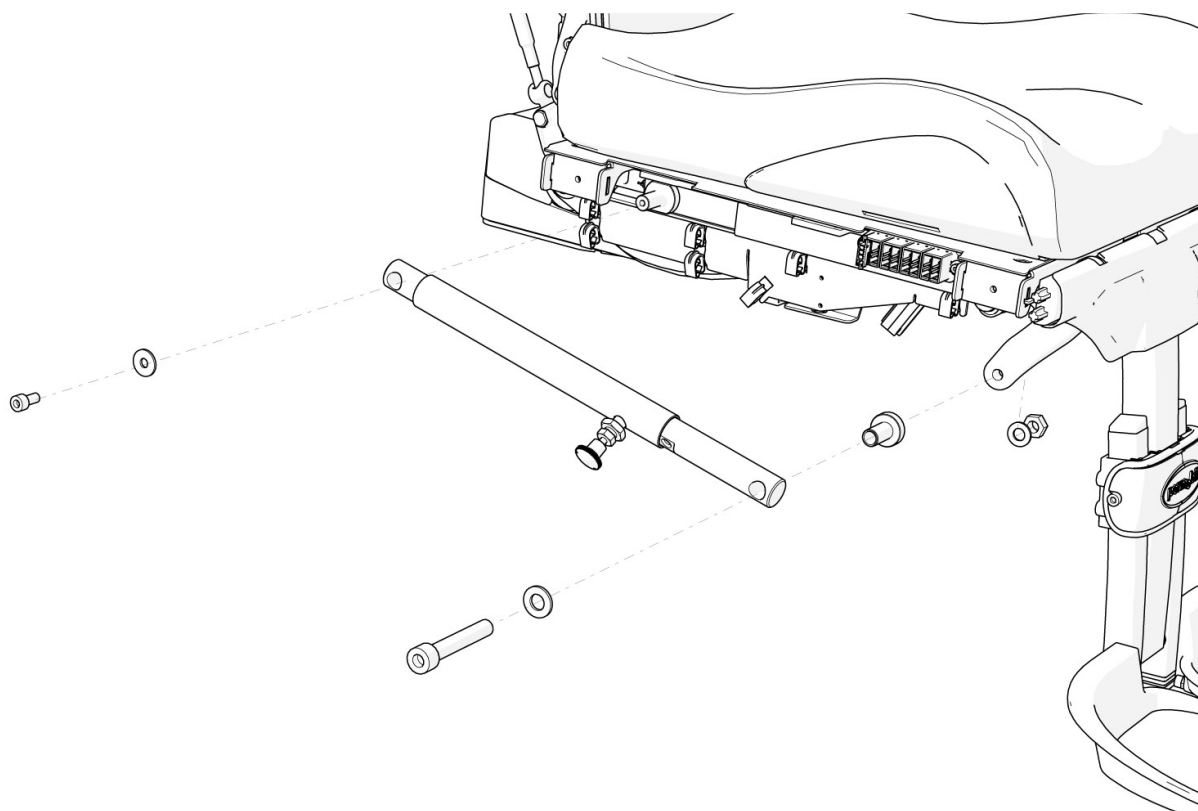


⚠ WARNING!

Do not subject the legrest to load during mounting or removal. Risk of crushing.

Mounting

1. Fit the rear fixing screw (M6x12) and washer for the manual adjustment unit. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 9.8 Nm.**
2. Fit the front fixing screw (M10x60), spacer and washer for the manual adjustment unit. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 35 Nm.**
3. Fit the lock nut and washer on the front bracket of the adjustment unit. See the illustration below.
4. Mount the UniTrack rail on the right side of the seat. See 16 for further information.



The manual legrest adjustment unit is held in place by two screws

Replacing the manual backrest adjustment unit

Removal

1. Switch off the main power switch on the control panel.
2. Remove the UniTrack rail from the left side of the seat. See 16 for further information.
3. Remove the lock nut from the rear bracket of the adjustment unit. See the illustration below.
4. Hold the backrest in a steady grip as you remove the manual adjustment unit. The adjustment unit is held in place by two screws. See the illustration below. Once the first screw has been removed the backrest can be angled forward to rest on the seat cushion.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm

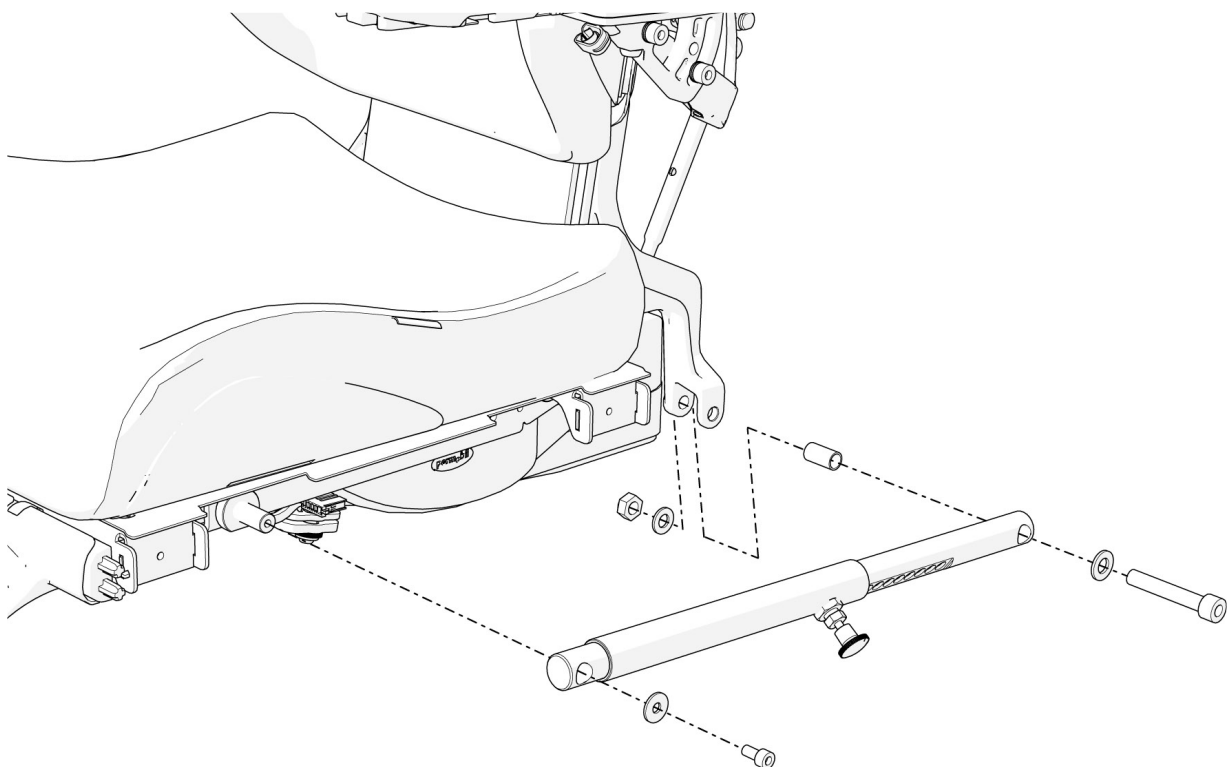


⚠ WARNING!

Do not subject the backrest to load during mounting or removal. Risk of crushing.

Mounting

1. Mount the front fixing screw (M6x12) and washer for the manual adjustment unit. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 9.8 Nm.**
2. Fit the rear fixing screw (M10x60), spacer, washers and nut for the manual adjustment unit. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 35 Nm.**
3. Mount the UniTrack rail on the left side of the seat. See 16 for further information.



The manual backrest adjustment unit is held in place by two screws

Replacing the legrest actuator

Removal

1. Switch off the main power switch on the control panel.
2. Remove the UniTrack rail from the right side of the seat. See 16 for further information.
3. Remove the actuator contact from the contact block above the actuator. See the illustration. Remove the contact by pulling it straight out. Loosen the actuator cabling from its fixing points. Remember how the cabling is positioned; this helps when you come to re-attach it.
4. Remove the lock nut from the front bracket of the actuator. See the illustration below.
5. Remove the actuator, which is held in place by two screws. See the illustration below.

Mounting

1. Fit the rear fixing screw (M6x12) and washer for the actuator. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 9.8 Nm.**
2. Fit the front fixing screw (M10x60), spacer and washer for the actuator. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 35 Nm.**
3. Fit the lock nut and washer on the front bracket of the actuator. See the illustration below.
4. Secure the cabling for the actuator in its fixing points. Consider the arrangement of the cables carefully and make sure there is no risk of them getting trapped or otherwise damaged.
Connect the actuator contact to the contact block on the right side of the seat. See the illustration above. Fit the contact by pushing it straight in at any point.
5. Mount the UniTrack rail on the right side of the seat. See page 16 for further information.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm

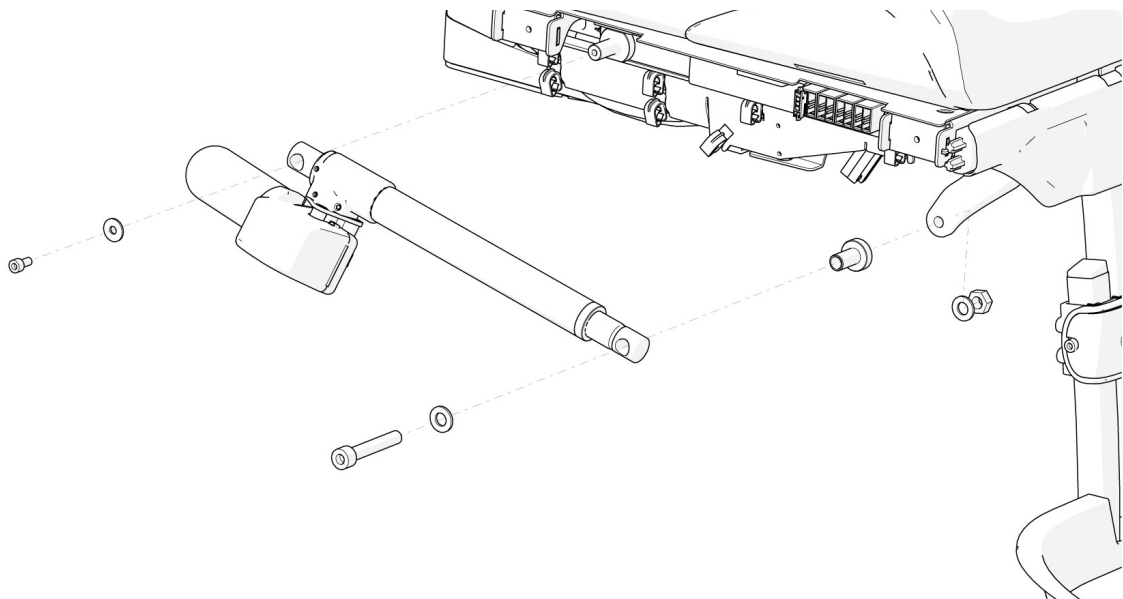


⚠ WARNING!

Do not subject the legrest to load during mounting or removal. Risk of crushing.



The actuator cabling is connected to the contact block on the right side of the seat



The legrest actuator is held in place by two screws

Replacing the backrest actuator

Removal

1. Switch off the main power switch on the control panel.
2. Remove the UniTrack rail from both sides of the seat. See 16 for further information.
3. Remove the seat plates. See 17 for further information.
4. Remove the actuator contact from the contact block on the right side of the seat. See the illustration. Remove the contact by pulling it straight out. Loosen the actuator cabling from its fixing points. Remember how the cabling is positioned; this helps when you come to re-attach it.
5. Remove the lock nut from the rear bracket of the actuator. See the illustration below.
6. Hold the backrest in a steady grip as you remove the actuator. It is held in place by two screws. See the illustration below. Once the first screw has been removed the backrest can be angled forward to rest on the seat cushion.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm



⚠ WARNING!

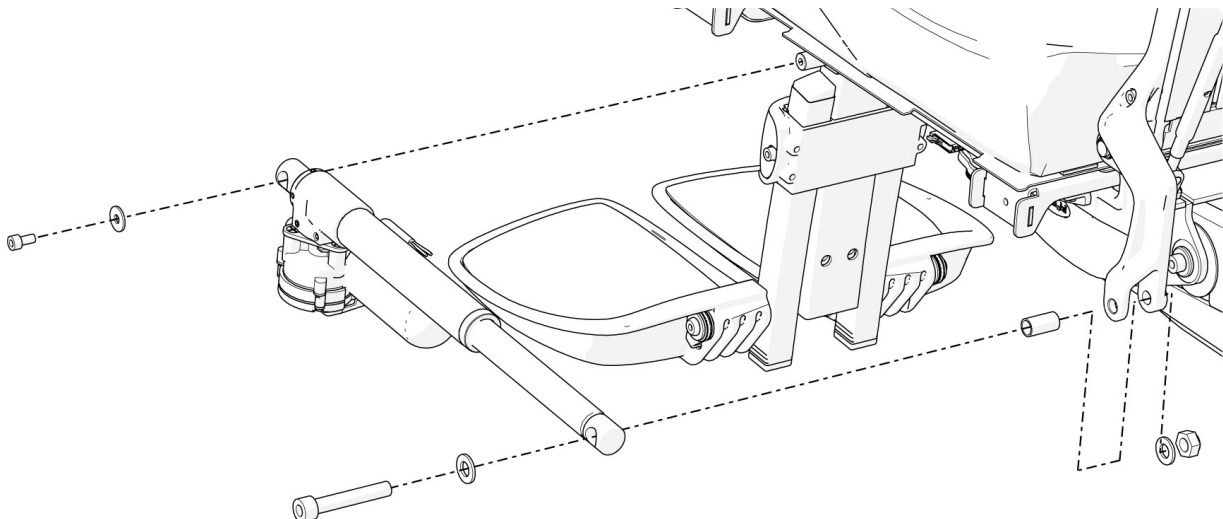
Do not subject the legrest to load during mounting or removal. Risk of crushing.



The actuator cabling is connected to the contact block on the right side of the seat

Mounting

1. Fit the front fixing screw (M6x12) and washer for the actuator. Tighten the screw using a torque wrench. **Tightening torque 9.8 Nm.**
 2. Fit the rear fixing screw (M10x60), spacer, washer and nut for the actuator. Tighten the screw using a torque wrench. **Tightening torque 35 Nm.**
 4. Secure the cabling for the actuator in its fixing points. Consider the arrangement of the cables carefully and make sure there is no risk of them getting trapped or otherwise damaged.
- Connect the actuator contact to the contact block on the right side of the seat. See the illustration above. Fit the contact by pushing it straight in at any point.
5. Mount the UniTrack rail on both sides of the seat. See page 16 for further information.



The backrest actuator is held in place by two screws

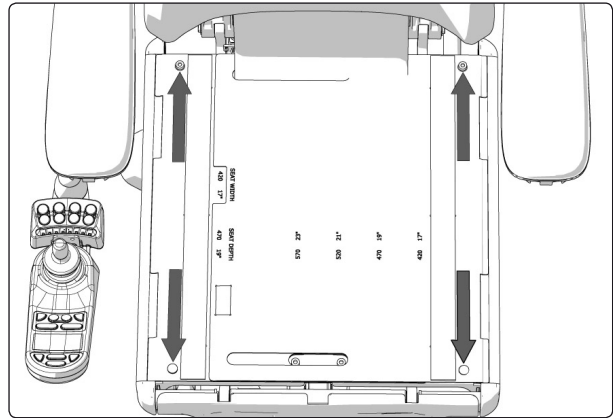
Replacing the seat angle mechanism

Removal

1. Switch off the main power switch on the control panel.
2. Remove the seat cushion by lifting it straight up. It is attached by means of Velcro on the rear of the cushion.
3. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.

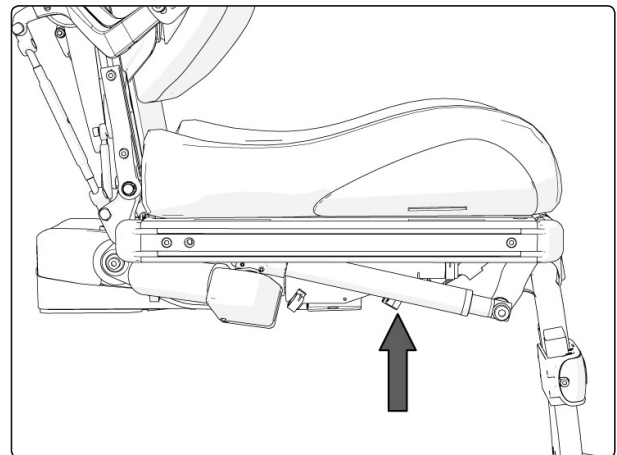
For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

4. Divide the cabling for the seat angle mechanism at the contact on the cabling. The contact is at the front right corner of the seat angle mechanism, next to the other cabling. See the illustration.

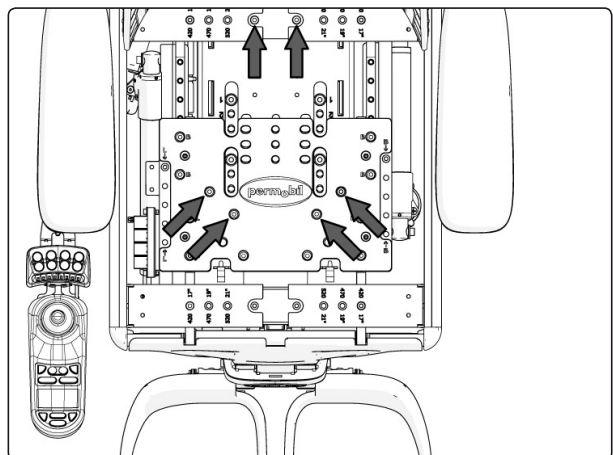


The connector is on the cabling at the front right corner of the seat angle mechanism, next to the rest of the cabling

5. Remove the six screws that hold the seat in place. Have someone help you by holding the seat while you remove the screws, and then helping you lift the seat and lay it next to the chassis. Be careful with the cabling.

⚠ WARNING!

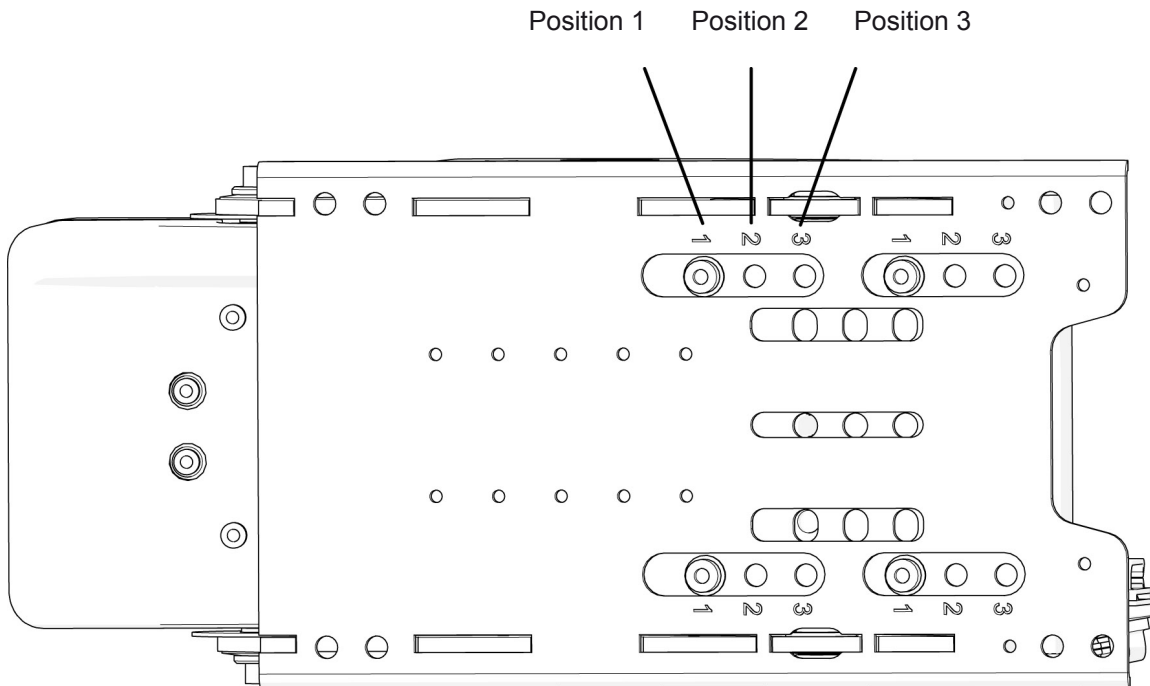
The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.



The seat is held in place by six screws.

6. Remove the four screws that hold the seat angle mechanism in place. See the illustration below. The seat angle mechanism can be mounted in three different positions, depending on the chassis the seat is mounted on and the depth of the seat. Note the position the seat angle mechanism is mounted in for future reference.

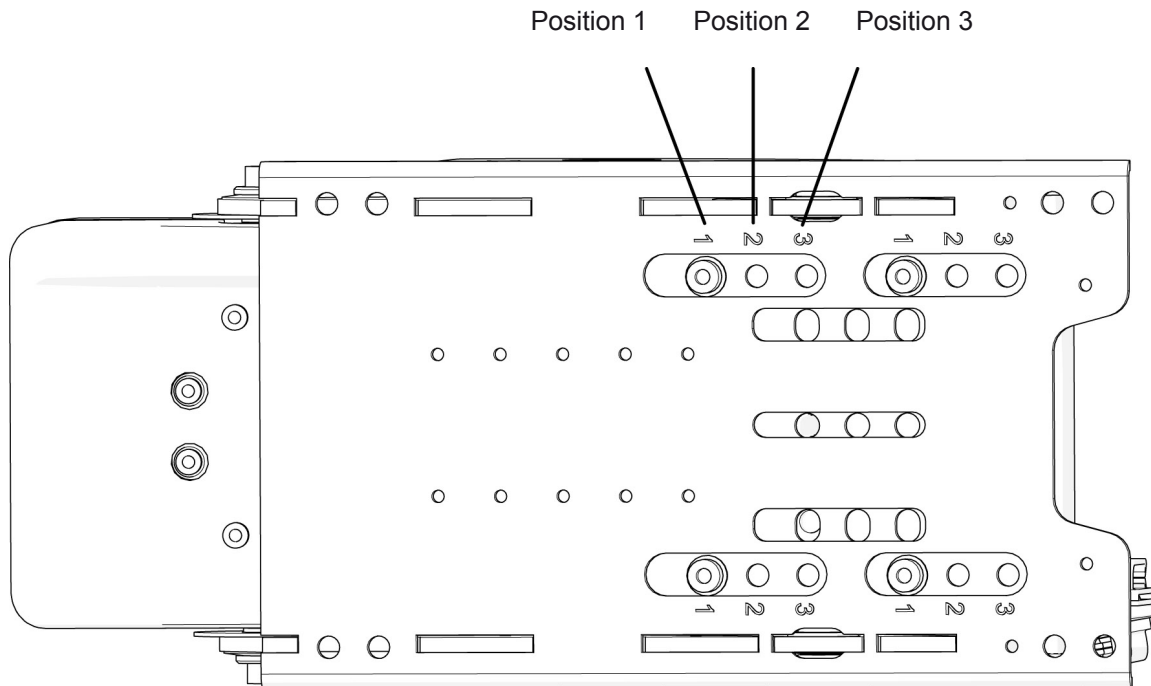
Lift the seat angle mechanism off the seat lift/seat column.



The seat angle mechanism is held in place by four screws

Mounting

1. Mount the seat angle mechanism using the four screws. See the illustration. It can be mounted in three different positions, depending on which chassis it is being mounted on and the depth of the seat. See the table below. Use a torque wrench to tighten the screws. **Tightening torque 24 Nm.**



The seat angle mechanism is held in place by four screws

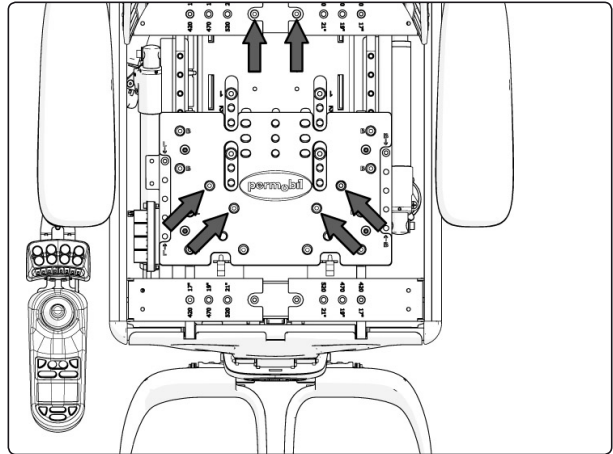
Seat depth	Mounting position							
	C300	C300S	C350	M300	M400	C400	C500	C500S
370 mm./15"	1	2	1	1	1	1	1	3
395 mm./16"	1	2	1	1	1	1	1	3
420 mm./17"	1	2	1	1	1	1	1	3
445 mm./18"	1	2	1	1	1	1	1	3
470 mm./19"	1	2	1	1	1	1	1	3
495 mm./20"	1	2	1	1	1	1	1	3
520 mm./21"	2	3	1	1	1	2	2	3
545 mm./22"	3	3	2	2	2	3	3	3
570 mm./23"	3	3	3	3	3	3	3	3

The mounting position for the seat angle mechanism depends on the chassis model and the seat depth setting. The table shows mounting positions for standard model wheelchairs; accessories such as height-adjustable footplates or a respirator shelf may affect the mounting position. Contact Permobil in case of doubt.

- Mount the seat using the six screws. Have someone help you lift the seat and then hold it in place while the screws are inserted. Use a torque wrench to tighten the screws. **Tightening torque 9.8 Nm.**

⚠ WARNING!

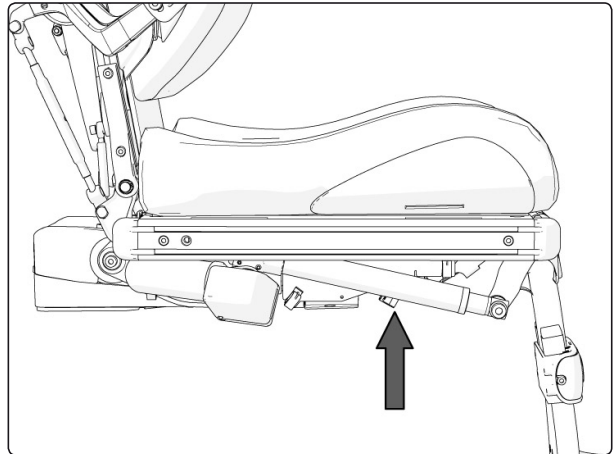
The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.



The seat is held in place by six screws.

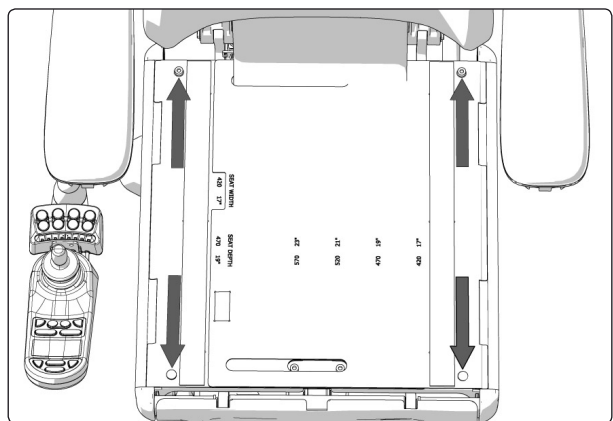
- Connect the cabling for the seat angle mechanism to the wheelchair's ICS Master Module. If the cabling for the ICS Master Module is already there, connect it to the contact that is at the front right corner of the seat angle mechanism, next to the other cabling. See the illustration.

When mounting new cabling for the ICS Master Module, mount it together with the rest of the cabling running down to the wheelchair chassis and there connect it to the ICS Master Module. For further information on the ICS Master Module, see the chassis service manual.



The connector is on the cabling at the front right corner of the seat angle mechanism, next to the rest of the cabling

- Mount the seat plates by first mounting them with the quick-mount clamps at the front and then the screws at the back. Fit the quick-mount clamps by pushing them straight into the holes.



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

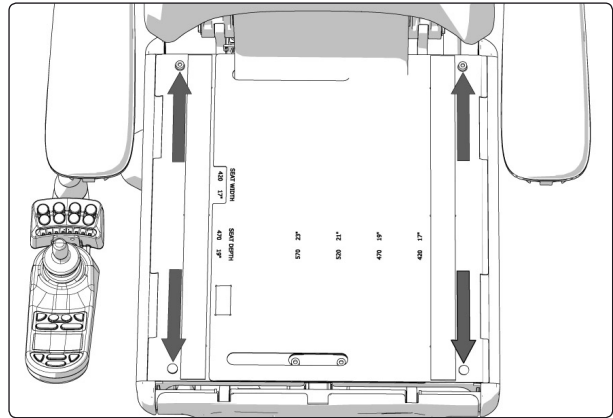
Replacing the fixed seat mounting plate

Removal

1. Switch off the main power switch on the control panel.
2. Remove the seat cushion by lifting it straight up. It is attached by means of Velcro on the rear of the cushion.
3. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm

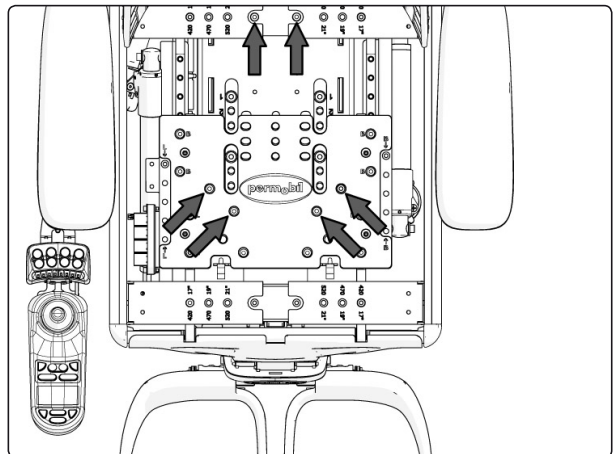


The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

4. Remove the six screws that hold the seat in place. Have someone help you by holding the seat while you remove the screws, and then helping you lift the seat and lay it next to the chassis. Be careful with the cabling.

⚠ WARNING!

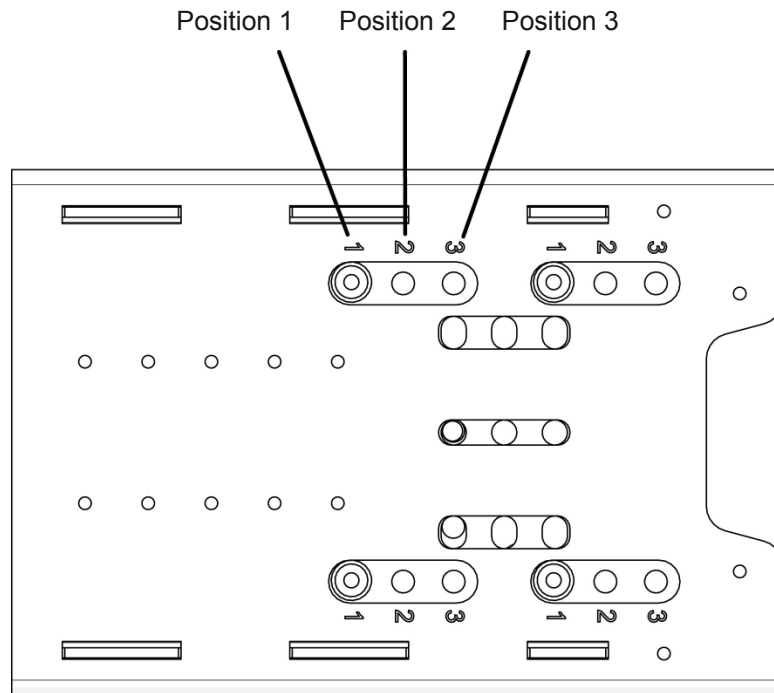
The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.



The seat is held in place by six screws.

- Remove the four screws that hold the seat mounting plate in place. See the illustration below. The seat mounting plate can be mounted in three different positions, depending on the chassis the seat is mounted on and the depth of the seat. Note the position the seat mounting plate is mounted in for future reference.

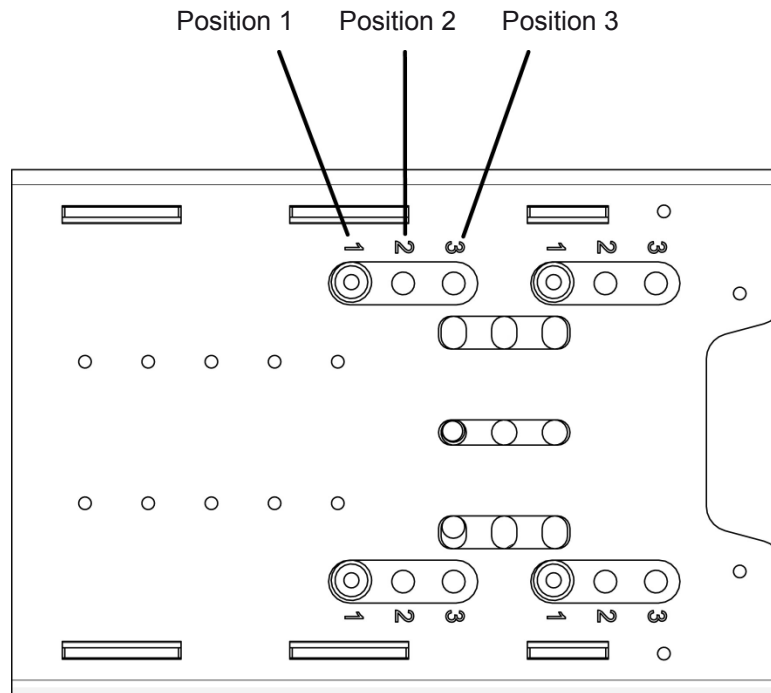
Lift the seat mounting plate off the seat lift/seat column.



The seat mounting plate is held in place by four screws

Mounting

1. Mount the seat mounting plate using the four screws. See the illustration. It can be mounted in three different positions, depending on which chassis it is being mounted on and the depth of the seat. See the table below. Use a torque wrench to tighten the screws. **Tightening torque 24 Nm.**



The seat mounting plate is held in place by four screws

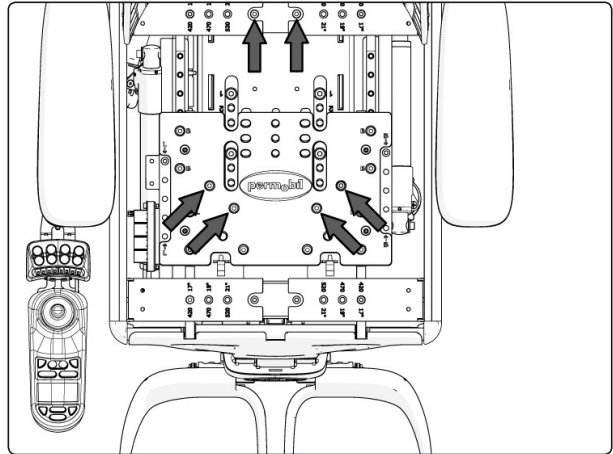
Seat depth	Mounting position							
	C300	C300S	C350	M300	M400	C400	C500	C500S
370 mm./15"	1	2	1	1	1	1	1	3
395 mm./16"	1	2	1	1	1	1	1	3
420 mm./17"	1	2	1	1	1	1	1	3
445 mm./18"	1	2	1	1	1	1	1	3
470 mm./19"	1	2	1	1	1	1	1	3
495 mm./20"	1	2	1	1	1	1	1	3
520 mm./21"	2	3	1	1	1	2	2	3
545 mm./22"	3	3	2	2	2	3	3	3
570 mm./23"	3	3	3	3	3	3	3	3

The mounting position for the seat mounting plate depends on the chassis model and the seat depth setting. The table shows mounting positions for standard model wheelchairs; accessories such as height-adjustable footplates or a respirator shelf may affect the mounting position. Contact Permobil in case of doubt.

2. Mount the seat using the six screws. Have someone help you lift the seat and then hold it in place while the screws are inserted. Use a torque wrench to tighten the screws. **Tightening torque 9.8 Nm.**

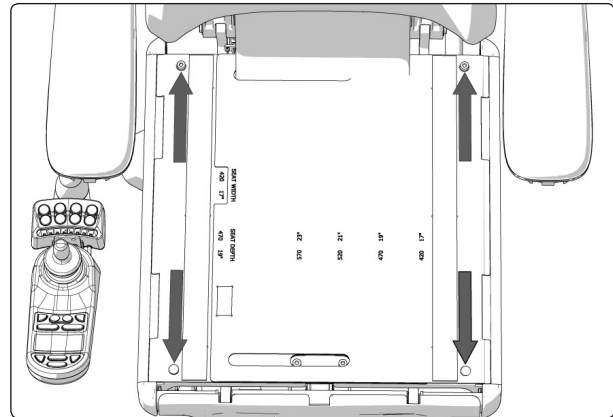
⚠ WARNING!

The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.



The seat is held in place by six screws.

3. Mount the seat plates by first mounting them with the quick-mount clamps at the front and then the screws at the back. Fit the quick-mount clamps by pushing them straight into the holes.



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

Replacing the adapter plate

Between the seat lift and the seat angle mechanism or the fixed seat mounting plate there is an adapter plate. As standard there is a completely flat adapter plate mounted. If preferred this can be replaced by an angled adapter plate that makes it possible to incline the seat 5° forward.

Removal

1. Remove the seat plates, which are held in place by two screws at the back edge and two quick-mount clamps at the front. See the illustration. First remove the screws, then use your hand to carefully push the seat plate from below to release the quick-mount clamps at the front.
2. Remove the four screws that hold the seat angle mechanism or seat mounting plate in place. Either of these can be mounted in three different positions, depending on the seat depth setting as well as which chassis it is mounted on. Note the position it is mounted in for future reference.

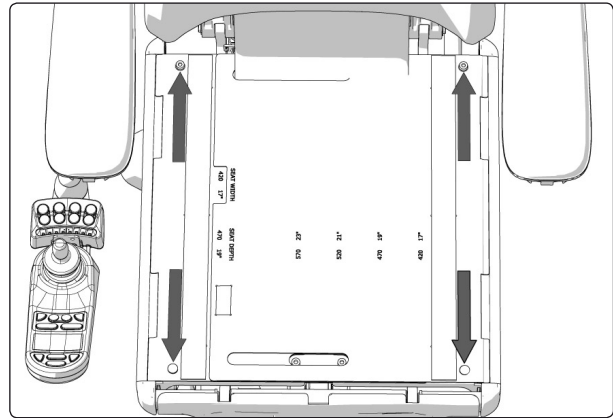
Have someone help you by holding the seat while you remove the screws, and then helping you lift the seat and lay it next to the chassis. Be careful with the seat cabling.

⚠ WARNING!

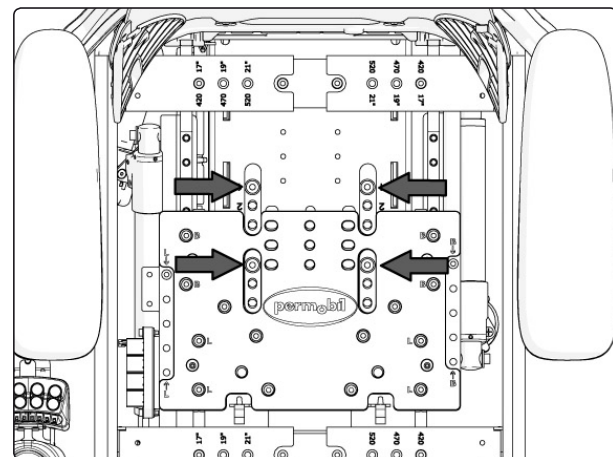
The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.

For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm

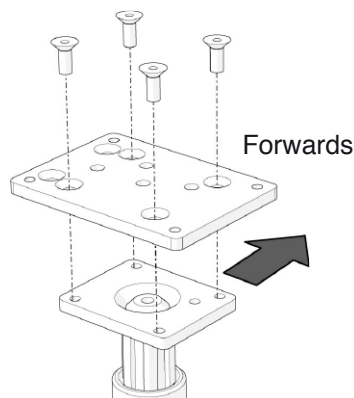


The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

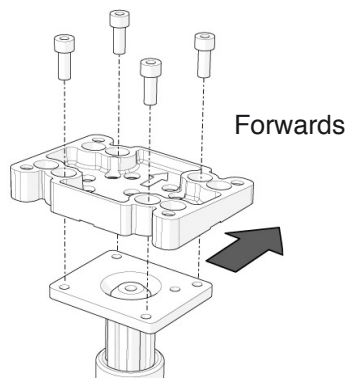


The seat angle mechanism or seat mounting plate is held in place by four screws

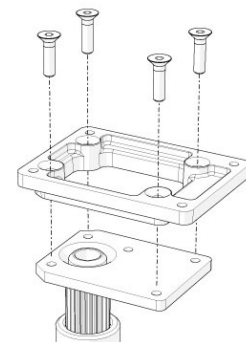
3. Remove the existing adapter plate, which is held in place by four screws. See the illustration below.



Adapter plate standard
(C400, C500)



Adapter plate -5°
(All chassis)



Adapter plate standard
(C300, C350)

Mounting

1. Mount the preferred adapter plate using the four screws supplied. See the illustration on the previous . Make sure you have the plate turned the right way when mounting it. Use a torque wrench to tighten the screws.

Adapter plate standard

Tightening torque: 24 Nm.

Adapter plate -5°

Tightening torque: 33 Nm.

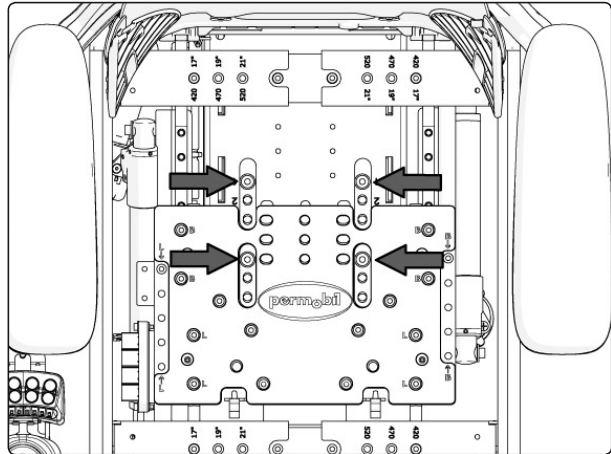
2. Mount the seat including seat angle mechanism/seat mounting plate using the four screws. It can be mounted in three different positions, depending on the seat depth setting as well as which chassis it is mounted on. See the table below. Have someone help you by holding on to the seat while you fit the screws. Use a torque wrench to tighten the screws.

Tightening torque 24 Nm.

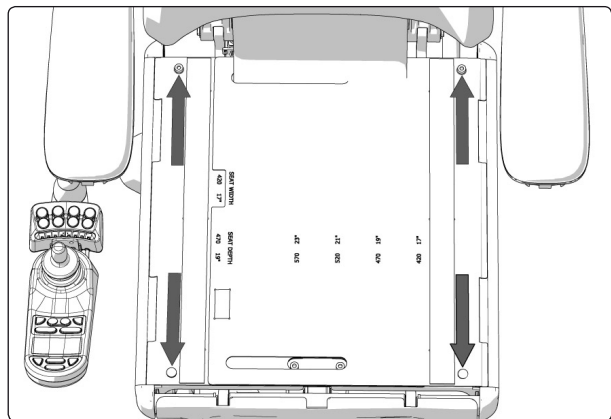
3. Mount the seat plates by first mounting them with the quick-mount clamps at the front and then the screws at the back. Fit the quick-mount clamps by pushing them straight into the holes.

⚠ WARNING!

The seat is heavy. This work should therefore always be performed by two people. Be careful with the cabling.



The seat angle mechanism or seat mounting plate is held in place by four screws



The seat plates are held in place by two screws at the back edge and two quick-mount clamps at the front.

Seat depth	Mounting position							
	C300	C300S	C350	M300	M400	C400	C500	C500S
370 mm./15"	1	2	1	1	1	1	1	3
395 mm./16"	1	2	1	1	1	1	1	3
420 mm./17"	1	2	1	1	1	1	1	3
445 mm./18"	1	2	1	1	1	1	1	3
470 mm./19"	1	2	1	1	1	1	1	3
495 mm./20"	1	2	1	1	1	1	1	3
520 mm./21"	2	3	1	1	1	2	2	3
545 mm./22"	3	3	2	2	2	3	3	3
570 mm./23"	3	3	3	3	3	3	3	3

The mounting position for the seat mounting plate/seat angle mechanism depends on the chassis model and the seat depth setting. The table shows mounting positions for standard model wheelchairs; accessories such as height-adjustable footplates or a respirator shelf may affect the mounting position. Contact Permobil in case of doubt.

Replacing a legrest

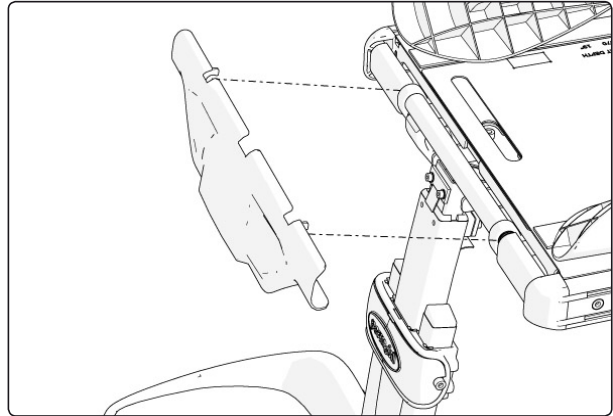
For this task the following tools are necessary:

- 1 Allen key 5 mm
- 1 Allen key 8 mm



⚠ WARNING!

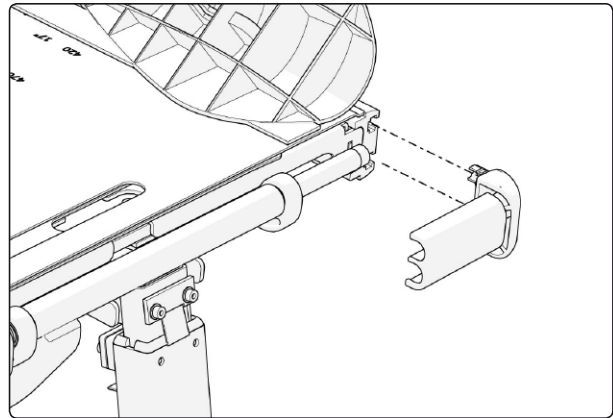
Do not subject the legrest to load during mounting or removal. Risk of crushing.



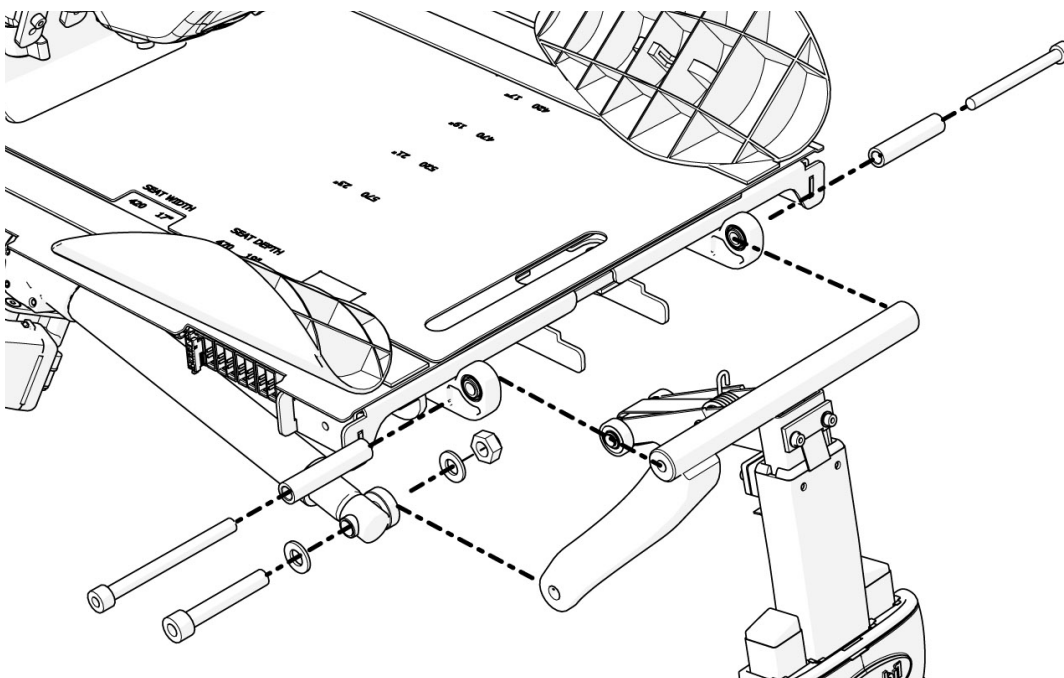
Remove the legrest's top cover by carefully pulling it straight out

Removal

1. Switch off the main power switch on the control panel.
2. Remove the legrest's top cover by carefully pulling it straight out. See the illustration.
3. Remove the front ends of the UniTrack rails. See the illustration.
4. Remove the front bracket of the manual adjustment unit/actuator. See the illustration below. Start with the lock nut and the washer on the inside of the bracket, then remove the screw and washer.
5. Remove the legrest, which is held in place by two screws and spacers. See the illustration below.



Remove the front ends of the UniTrack rails



The legrest is held in place by two screws and spacers.

The front bracket of the actuator is held in place by a screw and lock nut.

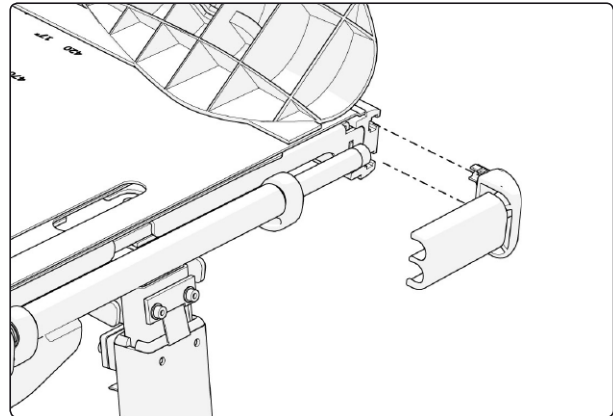
Mounting

1. Mount the legrest using the two screws and spacers. See the illustration on the previous . Use a torque wrench to tighten the screws.
Tightening torque 24 Nm.

2. Mount the front bracket of the manual adjustment unit/actuator. See the illustration on the previous . Start with the screw and washer. Tighten the screw using a torque wrench.
Tightening torque 47 Nm.

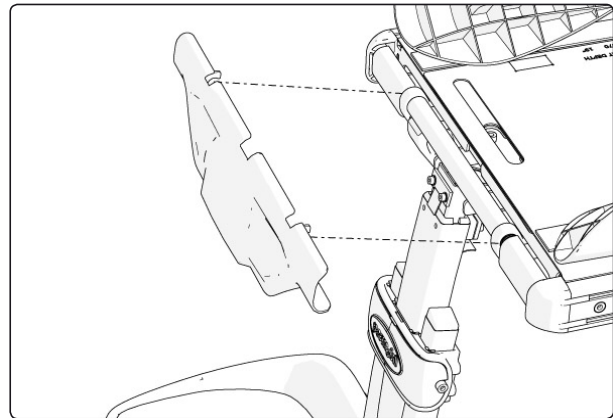
Then fit the lock nut and washer on the inside of the bracket.

3. Mount the front ends of the UniTrack rails. See the illustration.



Remove the front ends of the UniTrack rails

4. Mount the legrest's top cover by carefully pressing its bracket into place on the legrest's fixing screws/spacers. See the illustration.



Mount the legrest's top cover by carefully pressing its bracket into place on the legrest's fixing screws/spacers

Replacing a legrest strap

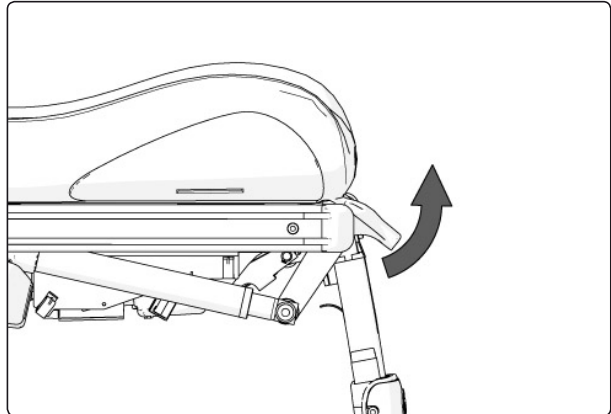
For this task the following tools are necessary:

- 1 Allen key 3 mm
- 1 Steel ruler



⚠ WARNING!

Do not subject the legrest to load during mounting or removal. Risk of crushing.



Lift up the legrest's top cover

Removal

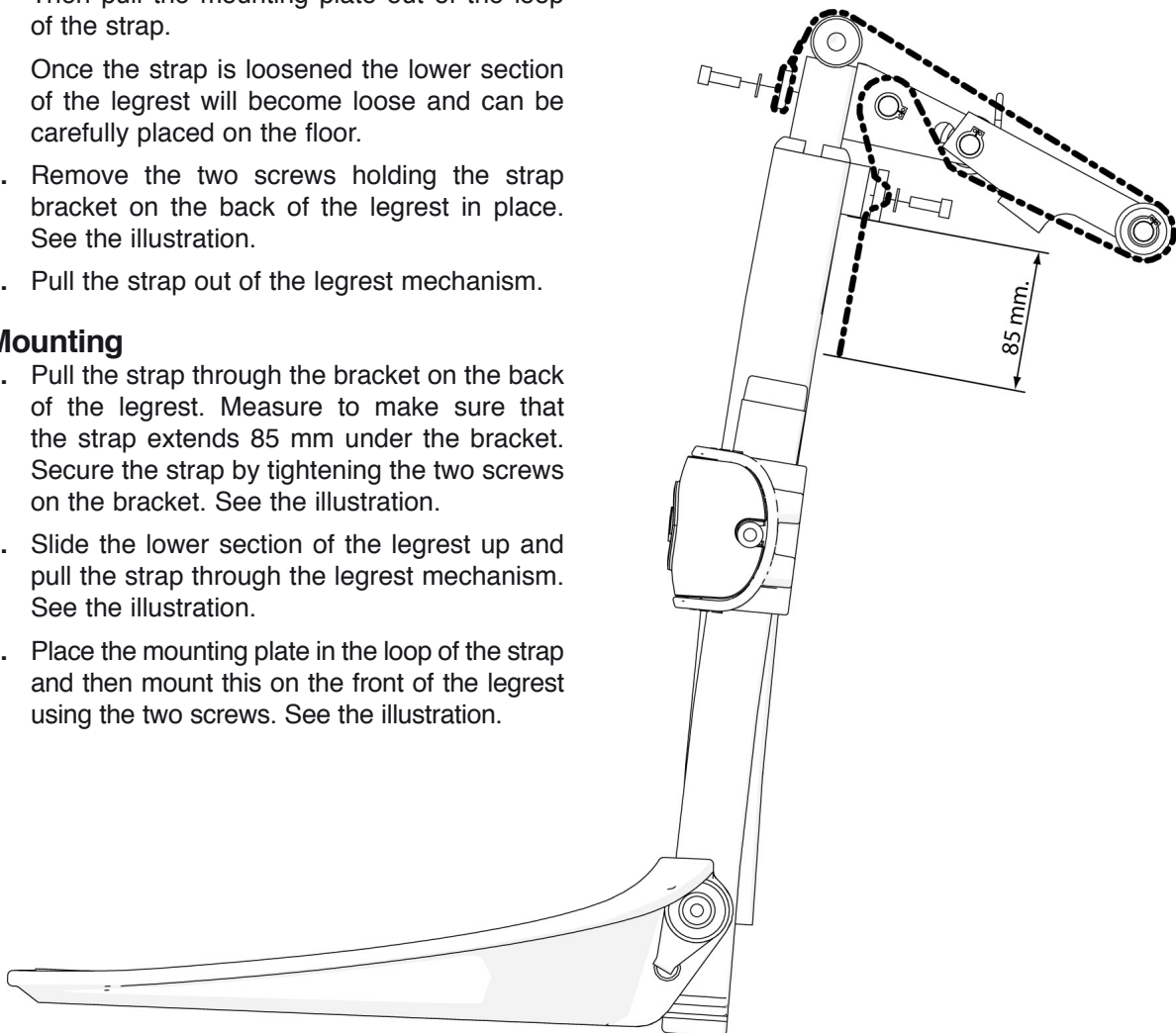
1. Switch off the main power switch on the control panel.
2. Lift up the legrest's top cover. See the illustration.
3. Remove one end of the legrest strap by carefully raising the lower section of the legrest slightly and at the same time removing the two screws on the front of the legrest. Then pull the mounting plate out of the loop of the strap.

Once the strap is loosened the lower section of the legrest will become loose and can be carefully placed on the floor.

4. Remove the two screws holding the strap bracket on the back of the legrest in place. See the illustration.
5. Pull the strap out of the legrest mechanism.

Mounting

1. Pull the strap through the bracket on the back of the legrest. Measure to make sure that the strap extends 85 mm under the bracket. Secure the strap by tightening the two screws on the bracket. See the illustration.
2. Slide the lower section of the legrest up and pull the strap through the legrest mechanism. See the illustration.
3. Place the mounting plate in the loop of the strap and then mount this on the front of the legrest using the two screws. See the illustration.



Strap mounting on the legrest

Replacing the legrest slide bushings

For this task the following tools are necessary:

- 1 Allen key 3 mm



⚠ WARNING!

Do not subject the legrest to load during mounting or removal. Risk of crushing.

Removal

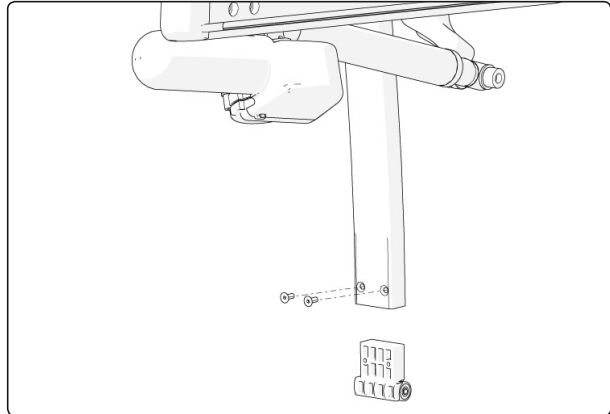
1. Set the angle of the legrest to its outermost position.
2. Switch off the main power switch on the control panel.
3. Remove one end of the legrest strap by carefully raising the lower section of the legrest slightly and at the same time removing the two screws on the front of the legrest. Pull the mounting plate out of the loop of the strap. See the illustration below.

Once the strap is loosened the lower section of the legrest will become loose and can be carefully pulled downwards/forwards until the lower section of the legrest is completely loose.

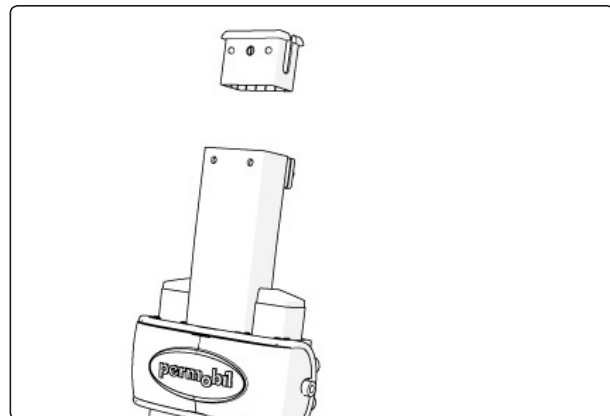
4. Remove the slide bushing in the upper section of the legrest, which is attached using two screws. See the illustration above.
5. Remove the slide bushing in the lower section of the legrest, and at the same time use a suitable tool to press in the locking tabs on the bushing, located in the hole immediately below the top edge of the legrest. See the illustration.

Mounting

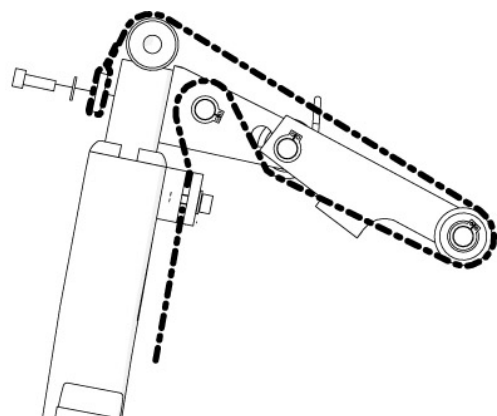
1. Fit the slide bushing in the lower section of the legrest, making sure the locking tabs on the bushing are securely fixed in the hole in the legrest. See the illustration.
2. Fit the slide bushing in the upper section of the legrest using the two screws. See the illustration above.
3. Slide the upper and lower sections of the legrest together, and pull the legrest strap through the legrest mechanism. See the illustration.
4. Place the mounting plate in the loop of the strap and then mount this on the front of the legrest using the two screws. See the illustration.



The slide bushing in the upper section of the legrest is attached using two screws.



Slide bushing in the lower section of the legrest



Strap mounting on the legrest

Replacing the footplate

Removal

1. Switch off the main power switch on the control panel.
2. Remove the screw holding the footplate in place. See the illustration below.
3. Remove the footplate friction brake by taking the parts off the shaft. See the illustration below.
4. Remove the footplate by taking it off the shaft. See the illustration below.

Mounting

1. Mount the footplate by sliding it onto the shaft. See the illustration below.
2. Mount the footplate friction brake by sliding the parts onto the shaft. Make sure that the metal butt is positioned in the intended hole in the footplate. See the illustration to the right.
3. Fit the screw that holds the footplate in place. See the illustration below. Tighten the screw using a torque wrench. **Tightening torque 33 Nm.**

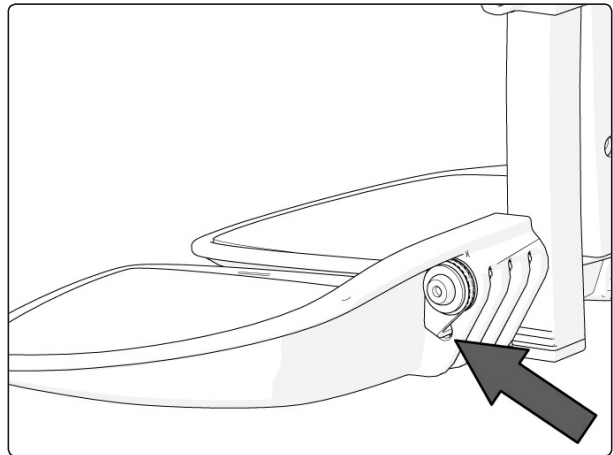
For this task the following tools are necessary:

- 1 Allen key 5 mm

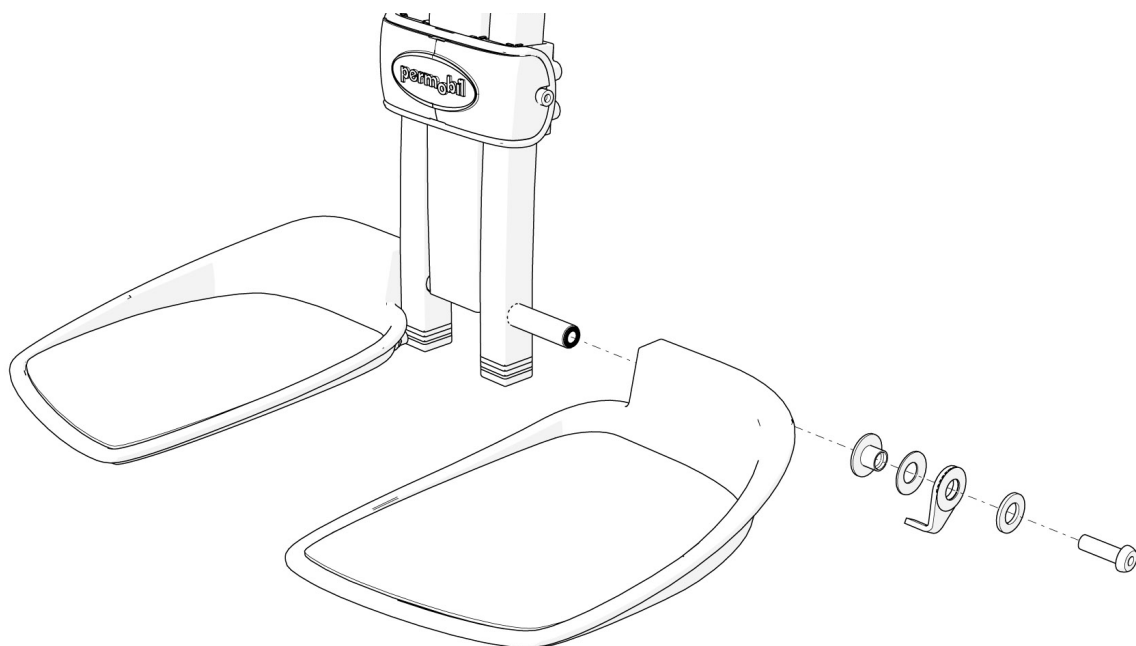


⚠ WARNING!

Do not subject the footplate to load during mounting or removal. Risk of crushing.



The friction brake's metal butt is in place in the intended hole in the footplate



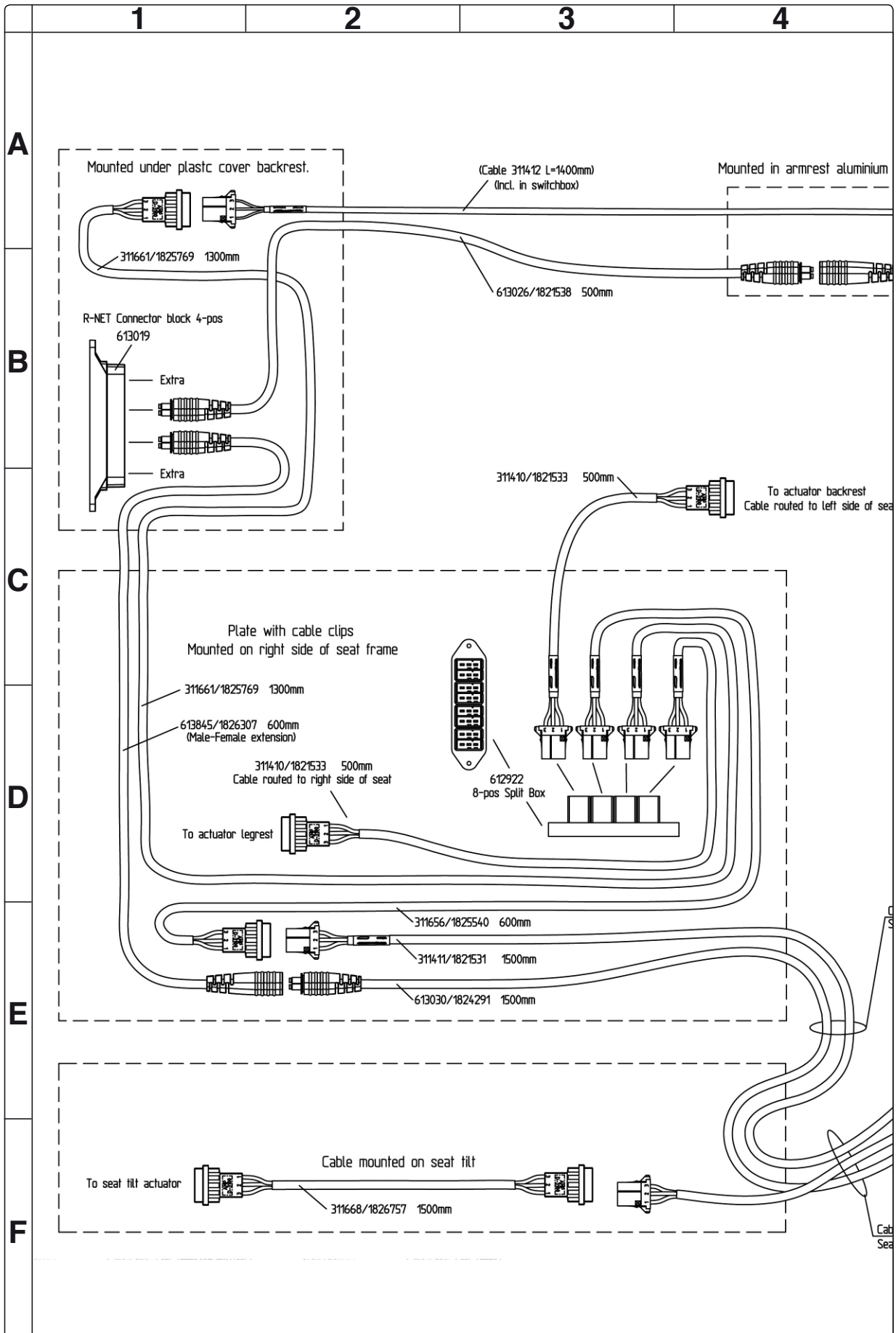
The footplate and its friction brake

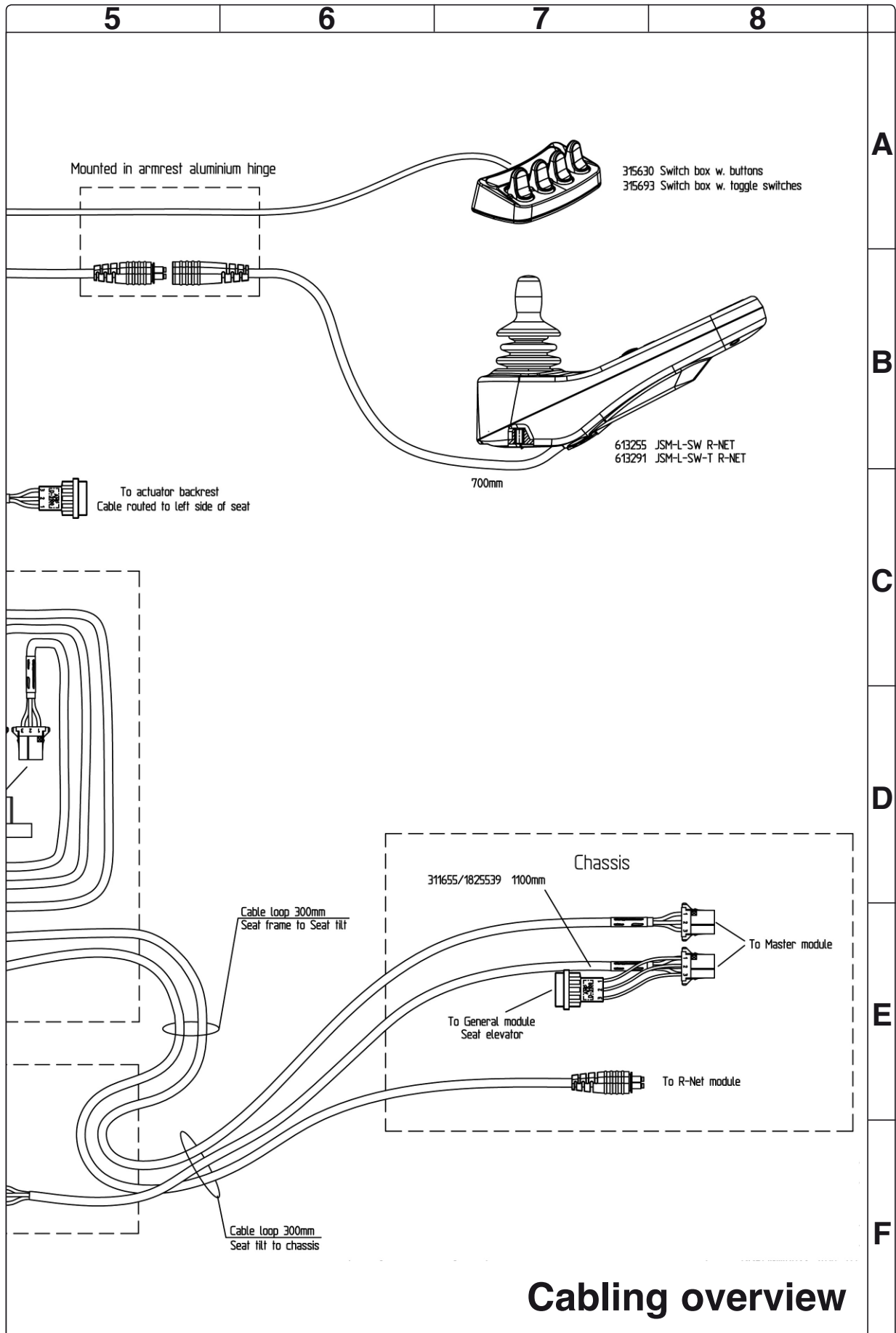
Recommended seat cushions, seat plates and UniTrack rails

Seat depth (mm.)	Seat width (mm.)	Cushion (Length)	Cushion (Width)	Seat plate (Length)	UniTrack rail (Length)
370	420/470/520	420 mm.	= Sitsbredd	370 mm.	370 mm.
395	420/470/520	420 mm.	= Sitsbredd		420 mm.
420	420/470/520	420 mm.	= Sitsbredd	420 mm.	470 mm.
445	420/470/520	420 mm.	= Sitsbredd		470 mm.
470	420/470/520	470 mm.	= Sitsbredd	470 mm.	520 mm.
495	420/470/520	470 mm.	= Sitsbredd		520 mm.
520	420/470/520	520 mm.	= Sitsbredd	520 mm.	570 mm.
545	420/470/520	520 mm.	= Sitsbredd		570 mm.
570	420/470/520	520 mm.	= Sitsbredd	570 mm.	

Recommended backrest cushions

Backrest width	Backrest height	Cushion (Width)	Cushion (Height)
360 mm.	Low, height not adjustable	360 mm.	480 mm.
	545 mm.		545-595 mm.
	570 mm.		
	595 mm.		620-670 mm.
	620 mm.		
	645 mm.		
	670 mm.		
410 mm.	Low, height not adjustable	410 mm.	480 mm.
	545 mm.		545-595 mm.
	570 mm.		
	595 mm.		620-670 mm.
	620 mm.		
	645 mm.		
	670 mm.		
460 mm.	Low, height not adjustable	460 mm.	480 mm.
	545 mm.		545-595 mm.
	570 mm.		
	595 mm.		620-670 mm.
	620 mm.		
	645 mm.		
	670 mm.		





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