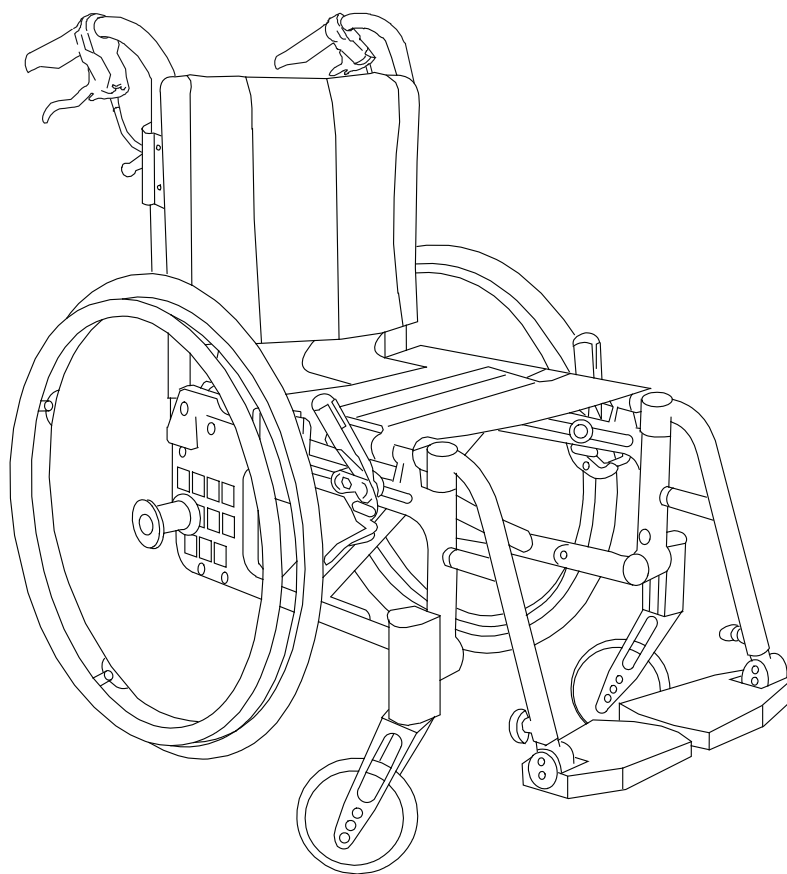


# Cross with drum brake

etac®

Manual English

78501K 2015-11-06



CE

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# 1 General

**The manual must be read thoroughly to avoid damage when handling and using the Cross chair.**



is a warning triangle to indicate that special care should be taken.

(!) provides advice and tips worth considering

Anti-tips available as an accessory. At the correct setting they will prevent the wheelchair from tipping backwards. We recommend all users to use the anti-tip devices, unless you are an experienced user with absolute control over your wheelchair.

Cross is a manual, cross-folded, allround wheelchair with multiple functions and is intended for use both outdoors and indoors. The seat is adjustable in height, angle and depth. The backrest is adjustable in height, angle and shape. The footrests are adjustable in height, angle and depth. Cross can be supplemented and adjusted if needs change. A large range of options and accessories are available: Various types of backrest and legrest, fixing points for transport in mobility service buses, anti-tips, and various types of handrims and brakes etc. Cross has the best prerequisites to create comfort, functionality and good manoeuvrability.

## Crash test

Etac's wheelchairs are tested in accordance with ISO 7176-19 and ISO 10542. These ISO standards specify requirements for the design of the wheelchair's restraint points, how the wheelchair and the user are secured in the vehicle, and also describe how tests should be carried out and how the test results should be interpreted. Etac's wheelchairs are crash tested at the Technical Research Institute of Sweden. The tests were carried out with normal settings on the wheelchairs (see manual for the respective wheelchair) and with an UNWIN\_WWR/ATF/K/R restraining device and an UNWIN\_WWR/HD/ATF/K/R 3-point belt.

The cross-folded wheelchairs Cross, Twin and Transit were supplemented with securing points.

Seat widths: From 35 cm to 55 cm

Max. user weight: 125 kg

**Service life:** The product is tested and fulfils the demands stated in EN 12183. The main product's durability and lifetime is at least five years when used in accordance with intended use, the safety instructions, the reconditioning manual and instructions for use in the user manual. The main product consists of the chassis for seat and back support. Additional parts/accessories are handled in accordance with the manual and reconditioning manual. The actual lifetime can vary, depending on how much and how intensively the product is being used, but a maximum of 10 years. If the product is intended for use after the service life period specified by Etac, it is the responsibility of the product owner to ensure product functionality in accordance with the manual and reconditioning instructions. If this cannot be ensured then the product should be taken out of use.

The following methods of surface treatment have been used:

Lacquered surfaces=Polyester powder coating

Non-lacquered aluminium parts=Anodized coating

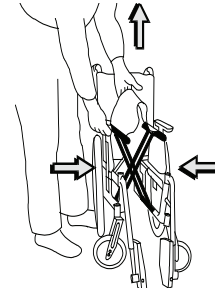
Non-lacquered steel surfaces=Galvanized

The tool kit contains: 5 Allen keys: 6, 5, 5, 4 and 3 mm  
3 Ring spanners: 13, 10 and 8 mm  
1 Socket spanner: 24/19 mm  
1 Phillips screwdriver


## 2 Handling/Transport

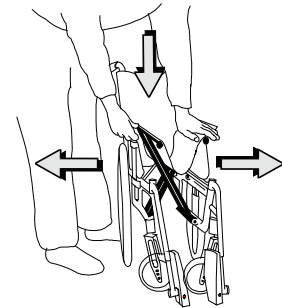
### 2:1 Folding

- If a bow handle and/or cross brace is mounted they should be removed.
- Flip up the footrests.
- Lift up the seat, see illustration.



### 2:2 Unfolding


- Press down on one side of the seat frame tube using the whole of the flat of the hand; see illustration.  Do not hold the seat frame tube while unfolding as there is a risk of fingers being crushed.

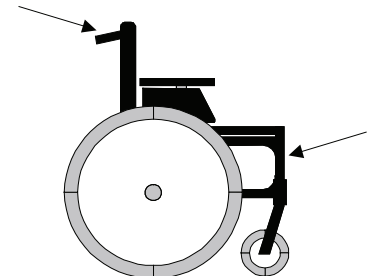


### 2:3 Lifting the wheelchair

Wheelchair without lockable legrests:

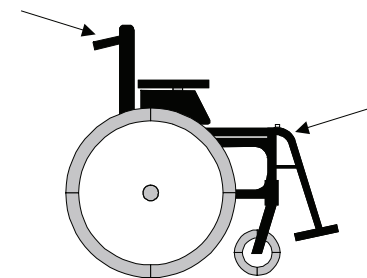
- Flip up the footrests and swing the legrests in under the seat, or remove them completely.
- Lift by holding the push handles and the front part of the frame by the legrest mounting point.

 Before lifting, ensure that the height adjustable push handles are securely fastened.



Wheelchair with lockable legrests:

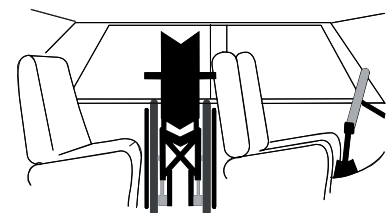
- Lift using the push handles and legrests.



### 2:4 Transportation in vehicles

*Private car/taxi:* The wheelchair should be placed in the car boot. If this is not possible, ensure that the wheelchair is placed safely in the back seat, so that it is not able to

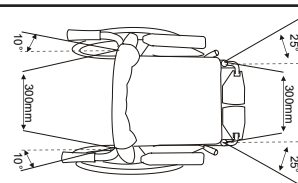
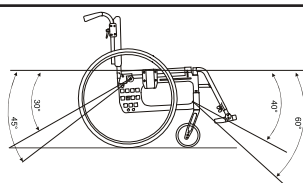
roll or overturn. If possible the wheelchair should be secured using a safety-belt.



## 2 Handling/Transport

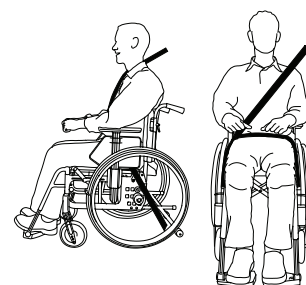
### 2:5 Securing

The wheelchair must be secured as follows. The straps must not be passed through the wheels or around the back tubes.



### 2:6 Seat belt

If the wheelchair is used as a seat for travel, Etac recommends that the user wears the 3-point belt that is fitted in the vehicle. It is important that the 3-point belt is fitted correctly, as in the illustrations:



### 2:7 Recommendations

Etac recommends in the following order:

- 1) The user transfers to a seat in the vehicle and uses the vehicle's 3-point belt while travelling. The wheelchair is then placed in the boot or safely in the back seat so that it cannot overturn or roll.
- 2) The wheelchair is secured facing forwards in the vehicle as per this manual, the user uses a separate 3-point belt that is secured in the vehicle. This is the way in which the wheelchair is tested and approved according to the ISO-standard for crash testing of wheelchairs in vehicles.

3) According to directive 2001/85/EC, appendix VII, point 3.8.3. there are specially marked wheelchair locations in vehicles that permit transport with a wheelchair facing in the opposite direction of travel. If this means of travel is used, the user/carer must be aware while travelling, prepared for sudden movements and have the capacity to maintain a safe sitting position throughout the entire journey. The user's disabilities must not be of such an extent that he/she is not able to hold onto the handles fitted in the vehicle when there are changes of speed or direction.

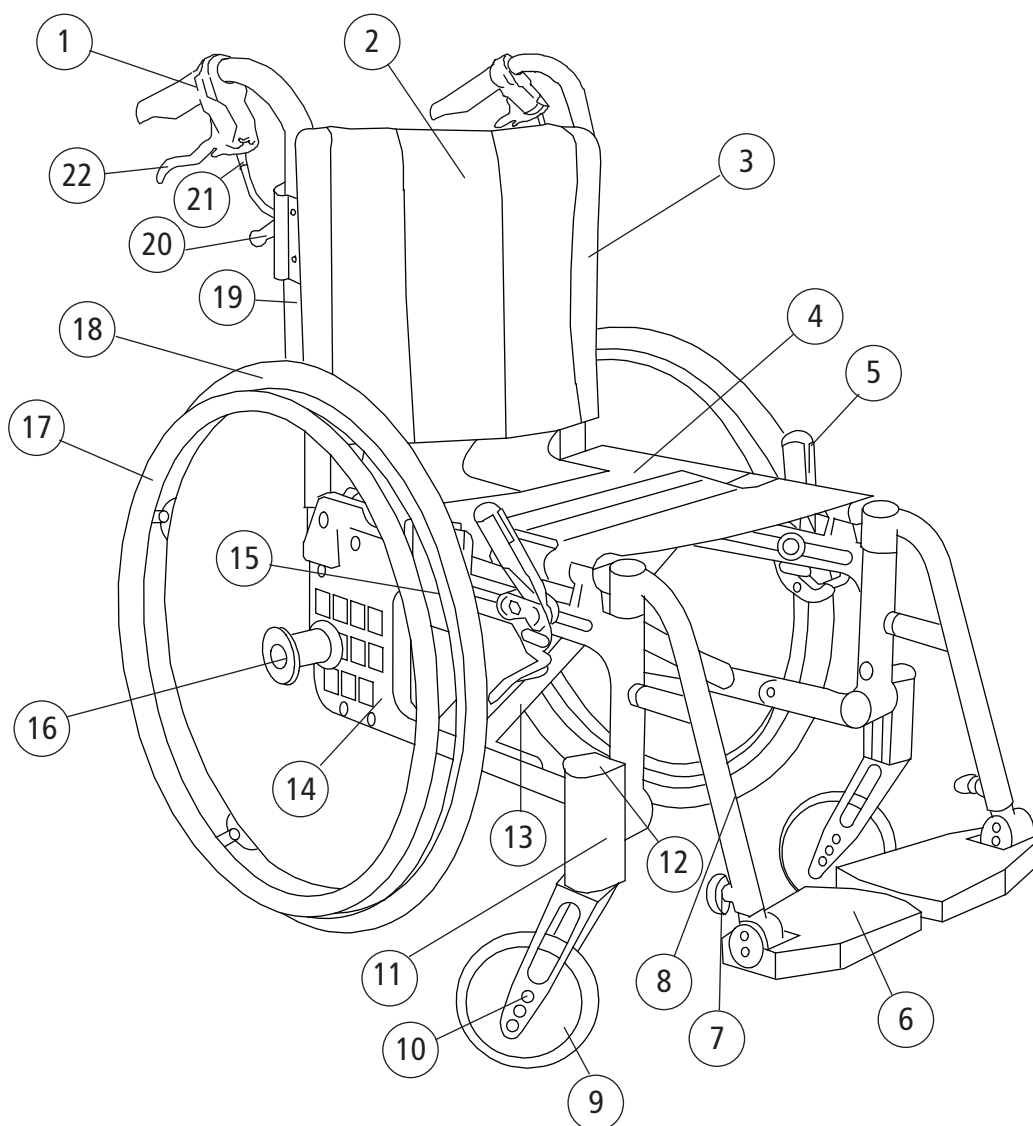
In conjunction with points 2 and 3:

- a positioning belt should be used
- a correctly adjusted headrest should be used
- the backrest should be level with or above the user's shoulders
- the parking brake should be used
- the anti-tips should be lowered

### 2:8 Warning

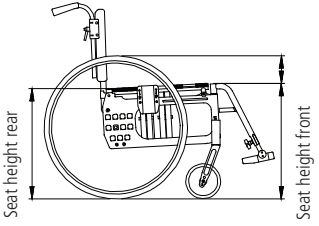
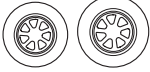
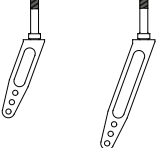




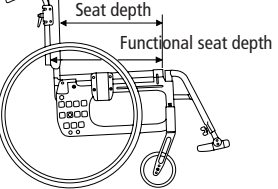
- The wheelchair's positioning belt is not sufficient to prevent the user from being thrown out of the wheelchair in the event of sudden braking.
- The restraining device must not be passed through the wheels or around the back tubes.
- Options/accessories that can be removed without tools, such as trays, must be removed and secured so that they do not fly around inside the vehicle in the event of a collision.
- If the wheelchair has been involved in a collision in a motor vehicle, it should be inspected at a Technical Aids Centre or by Etac before being used again.

### 3 Product description Cross with drum brake

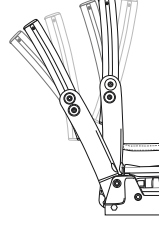
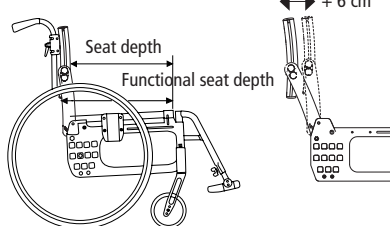
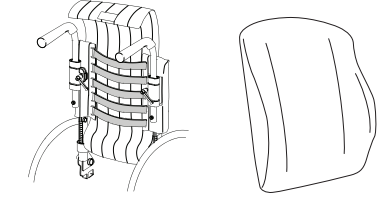
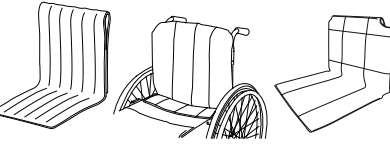
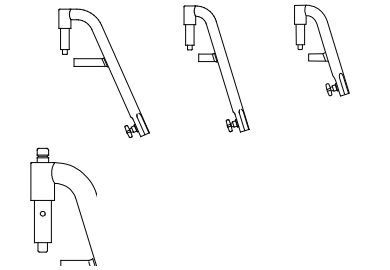
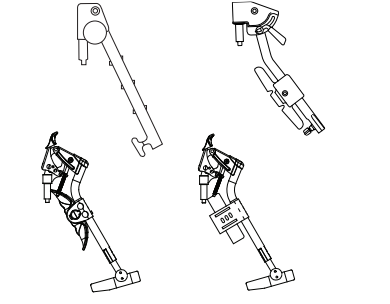


- |    |                       |    |                            |
|----|-----------------------|----|----------------------------|
| 1  | Push handles          | 12 | Protective stopper         |
| 2  | Backrest cover        | 13 | Cross                      |
| 3  | Backrest upholstery   | 14 | Side frame                 |
| 4  | Seat upholstery       | 15 | Armrest attachment         |
| 5  | Brake                 | 16 | Hub with brake             |
| 6  | Footrest              | 17 | Handrim                    |
| 7  | Knob footrest lock    | 18 | Rear wheel                 |
| 8  | Legrest               | 19 | Back tube                  |
| 9  | Castor wheel          | 20 | Locking knob, push handles |
| 10 | Front fork            | 21 | Brake cable                |
| 11 | Front fork attachment | 22 | Brake handle               |

## 4 The chairs possibilities

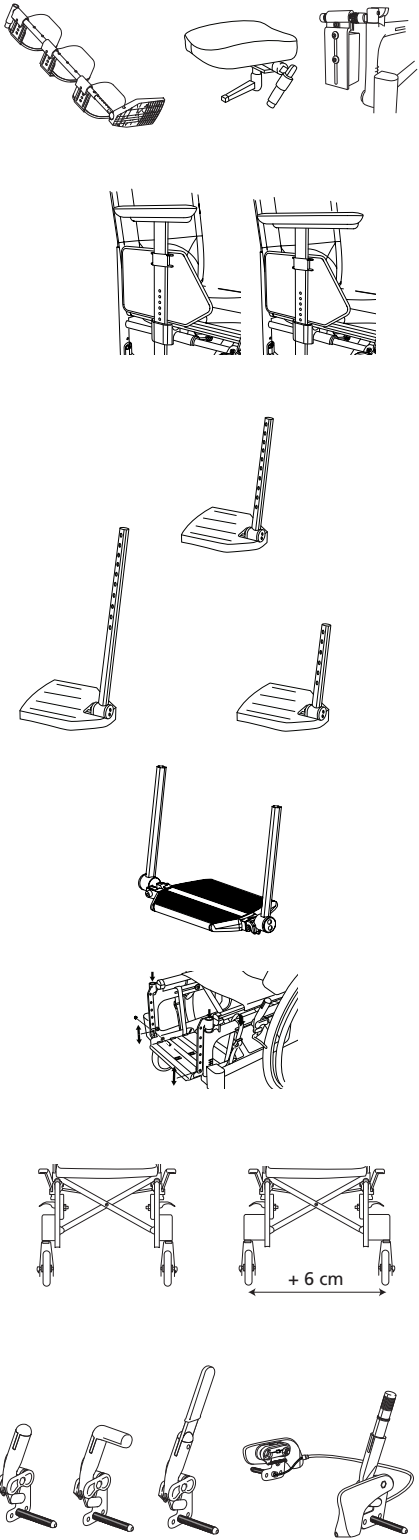
|                                    |   |   |               |                       |          |   |            |      |          |            |   |
|------------------------------------|---|---|---------------|-----------------------|----------|---|------------|------|----------|------------|---|
| <b>Seat height</b>                 | <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>Rear</u></td> <td style="border: none; text-align: center;"><u>Front</u></td> </tr> <tr> <td style="border: none;">40-50 cm</td> <td style="border: none;">38-51 cm</td> </tr> </table>  | <u>Rear</u>   | <u>Front</u>  | 40-50 cm              | 38-51 cm |  |            |      |          |            |   |
| <u>Rear</u>                        | <u>Front</u>  |   |               |                       |          |   |            |      |          |            |   |
| 40-50 cm                           | 38-51 cm  |   |               |                       |          |   |            |      |          |            |   |
| <b>Seat angle</b>                  | <p>Max forward angle: 2 cm lower front than back.<br/>         Max backward angle: 6 cm higher front than back.</p>   |   |               |                       |          |   |            |      |          |            |   |
| <b>Castor wheel</b>                | 5" massive/ 6,5" massive  |    |               |                       |          |   |            |      |          |            |   |
| <b>Front fork</b>                  | Short/medium, with 3 alternative height positions for the castor wheel  |   |               |                       |          |   |            |      |          |            |   |
| <b>Rear wheel</b>                  | 22" or 24"<br>High-pressure 1"<br>Solid<br><br>Camber angle 2° or 0°  |  |               |                       |          |   |            |      |          |            |   |
| <b>Handrims</b>                    | Stainless, plastic coated or aluminium  |  |               |                       |          |   |            |      |          |            |   |
| <b>Seat</b>                        | Black fabric/hard seat/ECS<br>(ECS, a fixed seat/backrest system with anatomically shaped cushions, detachable)   |  |               |                       |          |   |            |      |          |            |   |
| <b>Backrest<br/>Cross back 2</b>   | <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>Type</u></td> <td style="border: none;"><u>Height</u></td> <td style="border: none;"><u>Backrest angle</u></td> </tr> <tr> <td style="border: none;">standard</td> <td style="border: none;">30-45 cm</td> <td style="border: none;">-5° - +15°</td> </tr> <tr> <td style="border: none;">high</td> <td style="border: none;">38-55 cm</td> <td style="border: none;">-5° - +15°</td> </tr> </table> | <u>Type</u>   | <u>Height</u> | <u>Backrest angle</u> | standard | 30-45 cm  | -5° - +15° | high | 38-55 cm | -5° - +15° |  |
| <u>Type</u>                        | <u>Height</u>   | <u>Backrest angle</u>   |               |                       |          |   |            |      |          |            |   |
| standard                           | 30-45 cm  | -5° - +15°  |               |                       |          |   |            |      |          |            |   |
| high                               | 38-55 cm  | -5° - +15°  |               |                       |          |   |            |      |          |            |   |
| <b>Seat depth<br/>(functional)</b> | Short frame 36-42 cm. Long frame 42-48 cm.<br>Short frame 42-48 cm. Long frame 48-54 cm.  |  |               |                       |          |   |            |      |          |            |   |

## 4 The chairs possibilities



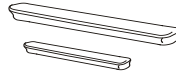
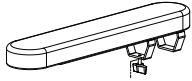
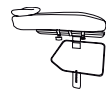
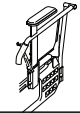

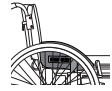
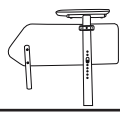
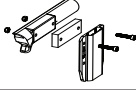

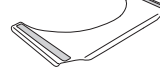

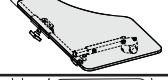
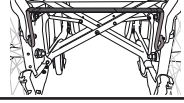

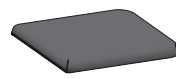
|  |  |  |
|--|--|--|
| <b>Ryggrest Cross-back 3A</b>                    | <p><u>Type</u>                      <u>Height</u>                      <u>Backrest angle</u></p> <p>Monoangular      32-45 cm                      -5° - +20°</p> <p>Biangular            32-45 cm                      -5° - +20°</p> <p>Triangular            32-45 cm                      -5° - +20°</p> |   |
| <b>Seat dept (functional)</b>                    | <p><u>Lumbal angle</u></p> <p>Monoangular      +10° (fixed)</p> <p>Biangular            ±6° (at 10° back angle)</p> <p>Triangular           ±12° (at 10° back angle)</p> <p>Short frame 36-42 cm. Long frame 42-48 cm.<br/>Short frame 42-48 cm. Long frame 48-54 cm.<br/>Triangular +0 to 6 cm.</p>         |    |
| <b>Backrest upholstery</b>                       | Adjustable plush upholstery/ECS  |   |
| <b>Backrest cover</b>                            | Standard/Comfort/Tidy  |  |
| <b>Legrests, detachable, adjustable sideways</b> | <p>Standard knee angle/narrow/narrow short</p> <p>Lockable, standard knee angle/narrow/narrow short</p>  |  |
| <b>Angle adjustable</b>                          | <p>Mod 1 with calf support adjustable in height, depth, angle and sideways (also available with flip-up calf support).</p> <p>Mod 2 with calf support adjustable in angle, height and sideways.</p> <p>Mod 3 with foldable calf support from 40 cm seat width.</p> <p>With attachment and calf support</p>   |  |



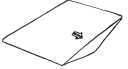


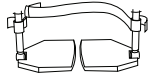








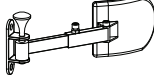
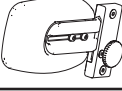
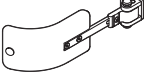
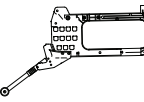
## 4 The chairs possibilities

|  |   |  |
|--|---|--|
|  | <p>Plaster legrest/ amputee legrest/<br/>amputee weight</p> <p><b>Armrest</b>      short 25 cm/long 35 cm</p> <p><b>Footrest</b>      Std      Max length: 51 cm.<br/>                         Min length: 33 cm.</p> <p>                         Extended attachment tubes +10 cm<br/>                         Shorter attachment tubes -8 cm</p> <p>                         One-piece footrest</p> <p>                         One-piece footrest complete for 35-37,5 seat<br/>                         width, adjustable in angle, settable height and<br/>                         depth</p> <p><b>Front fork<br/>attachment</b>      Standard/widened 6 cm<br/>                         Adjustable 4 cm in height</p> <p><b>Brakes</b>            Standard/Single hand brake, both alternatives<br/>                         with standard, angled or extended handle.</p> |  <p>The right column contains technical line drawings of various wheelchair accessories. At the top, there are three drawings of legrests: one with a footplate, one with a footplate and a footrest, and one with a footplate and a footrest. Below these are two drawings of armrests, one with a standard height and one with an extended height. The middle section shows four drawings of footrests: two with adjustable height tubes (one with an extended tube and one with a shorter tube) and two one-piece footrests. Below these are two drawings of front fork attachments, one standard and one widened by 6 cm. At the bottom, there are four drawings of different brake mechanisms, including standard hand brakes and single hand brakes with various handle designs.</p> |
|--|---|--|

## 5 Accessories

|   |   |
|---|---|
| Armrest height-adjustable 25 cm long, solid top, black  |    |
| Armrest height-adjustable 38 cm long, solid top, black  |    |
| Armrest cover detachable, 25 or 38 cm long padded or gel, dark grey plush or black Dartex       |    |
| Armrest cushion wide and soft, 8x40 cm, fits onto armrest                                       |    |
| Armrest cushion Hemi swing-away for mounting on long armrests                                   |    |
| Armrest foldable height adjustable or fixed height  |    |
| Side guard black  |   |
| Mudguard right and left   |  |
| Thigh support   |  |
| Widening kit to extend handrims, brake and armrests 10 mm on each side                          |  |
| Tray transparent, fits onto long armrest  |  |
| Hemi tray transparent, width 35-50 cm, Can be fitted onto short or long armrests.               |  |
| Anti-slip device for the Hemi tray  |  |
| Tray Hemi tip up right / left   |  |
| Bracket for seat extension  |  |
| Seat cushion dark grey plush and black velour, 56 cm, cut according to seat depth set, washable |  |
| Seat cushion Tidy, water repellent, wipe clean  |  |

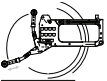



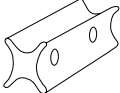
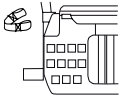


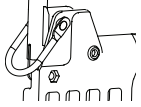




## 5 Accessories

|   |   |
|---|---|
| Comfort wedge for the cushion, evens out the front part of the seat                                 |    |
| Seat and backrest cushions ECS in PE or memory foam, cover in dark-grey plush or black Dartex       |    |
| Cover for calf support on angle adjustable legrest model 3, black Dartex                            |    |
| Calf strap detachable, black nylon, adjustable in length  |    |
| Padding for calf strap  |    |
| Heel straps black nylon, adjustable length  |    |
| Extended footrest fits onto the existing footrest, from seat width 40-55 cm                         |   |
| Positioning belt two pieces, with snap-lock, fixing points on the wheelchair frame                  |  |
| Seat belt with snap lock  |  |
| Headrest mounts on bow handle, adjustable in height, depth and angle<br>Available in several models |  |
| Cross brace with snap lock  |  |
| Back wedge length 15 and 30 cm, attached with Velcro  |  |
| Trunk support settable in depth and angle, black Dartex, foldable, incl. attachment                 |  |
| Trunk support Cross back 3A, PUR or Dartex  |  |
| Trunk support Cross back 3A, swing-aside, medium or large cushion                                   |  |
| Anti-tips foldable, height settable   |  |

Settable= Adjusted using tools.

Adjustable= Adjusted without tools.

## 5 Accessories

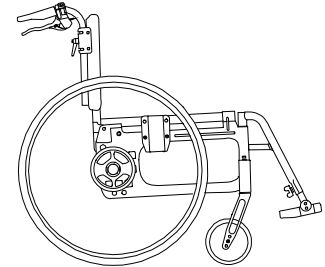
|   |   |
|---|---|
| <p>Anti-tips telescopic, foldable, settable height, adjustable length and angle</p>                             |    |
| <p>Anti-tips with tilter, foldable, height settable</p>   |    |
| <p>Anti-tips Aluminium, foldable, settable in height and adjustable in length, detachable</p>                   |    |
| <p>Tilter (not for low seat height 22" in position C)</p>   |    |
| <p>Adapter for combination of anti-tip/tilter</p>   |    |
| <p>Cane holder two parts, one of which is an elasticated section that is fastened around the cane.</p>          |   |
| <p>Spoke guard with grey or yellow print</p>  |  |
| <p>Tetra quick release adapter for persons with reduced hand function</p>                                       |  |
| <p>Transport attachment when mounted in C4 position only with 0° camber + spacer 20232</p>                      |  |
| <p>Tool kit</p>   |  |
| <p>Bags</p>   |  |
| <p>Gloves Information is available at <a href="http://www.etacbutiken.com">www.etacbutiken.com</a></p>          |  |
| <p>Bags Case Logic Information is available at <a href="http://www.etacbutiken.com">www.etacbutiken.com</a></p> |  |
|   |   |

## 6 Settings seat

### 6:1 Front seat height

The front seat height (settable 38-51 cm) is dependent on:  
Castor wheel: 5", 6", 6,5".  
Front fork: Short and medium with three alternative height positions for the castor wheel.  
Castor wheel attachment: Settable in height and angle.

(!) See also point 15:  
"Alternative seat heights/angles".



### 6:2 Castor wheel

The height may be adjusted by changing the castor wheel itself or by changing its position in the fork. Unscrew the castor wheel and place it at the desired height in the front fork



Tools: 5 mm Allen key and 10 mm U-spanner.



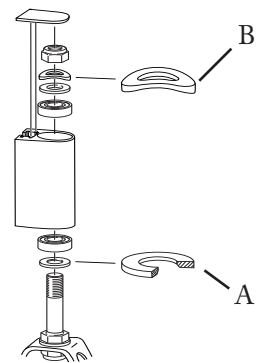
### 6:3 Changing front fork

Pull out the plug attachment on the front fork attachment to reach the retaining nut. Unscrew the nut and pull out the front fork. Take the washer and ball bearings and put it on the new fork (the bevelled side (A) towards the fork). Insert the new fork into the attachment. It is also important to ensure that the washers in the attachment (under the retaining nut) are placed in the right order, with the spring washer (B) on top. Tighten the retaining nut until it cannot be turned

any more. Loosen it 1/2-1 turn. The spring washer then has the correct tension. It reduces the risk of the castor starting to "wobble".



Tools: 19 mm socket spanner.



### 6:4 Height adjustment of the castor wheel attachment

The height of the front fork can be adjusted 4 cm up or down by loosening the two attachment screws (A and B) 1-2 turns. See position marking (C) to obtain equal height on both sides. Check and adjust the angle of the attachment and tighten the screws.

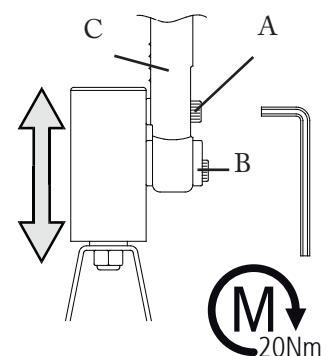


Risk of tipping: Always check the positioning of the anti-tips.

(!) Also adjust the angle setting of the front fork attachment, see point 6:5.



Tools: 6 mm Allen key (a spirit level might be useful).



## 6 Settings seat

### 6:5 Setting the angle of the front fork attachment

The correct angle setting is important for the wheelchair's manoeuvrability.

Loosen the lower attachment screw (A) 2 turns so that the tag (C) moves freely inside the shaft. Insert the Allen key in the hole (B) and turn until the attachment is 90° to the floor.

Always start from a position that enables the wheel to move forward in the rotation (D). (Hold the shaft in place while the lower attachment screw is tightened.)

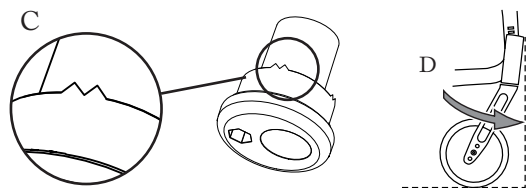
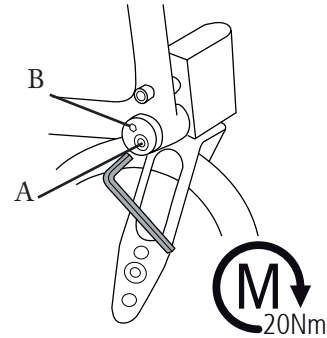


Tools: 6 mm Allen key  
(a spirit level may be useful).

(!) Keep your eye on something vertical, e.g. a doorpost or a table leg when setting the angle.



Risk of tipping: Always check the setting of the anti-tips.



### 6:6 Rear seat height

The rear seat height is dependent on:

The size of the rear wheels 24" or 22"

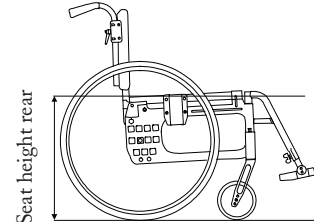
The height setting of the rear wheel

3 alternative height positions: A-B-C



Risk of tipping: Always check the setting of the anti-tips.

(!) See also point 15: "Alternative seat heights/angles".

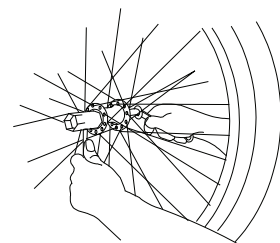


### 6:7 Rear wheel with quick release hubs

The shaft axle is movable and can also be adjusted in length. Turn the nut on the axle inwards/outwards while at the same time holding the axle with an adjustable spanner.



When attaching the rear wheels, always check that they are securely mounted. The button in the hub should pop out to the original position.



## 6 Settings seat

### 6:8 Height adjustment of the rear wheels

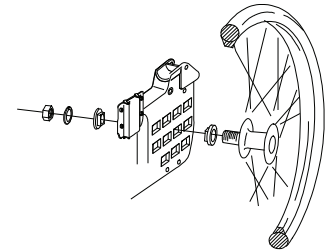
Loosen the hub sleeve, washers and nuts and reassemble it at the desired height. At the same time you should also test for correct balance, see point 10:8.



Tools: 24 mm socket spanner.



- Check that the rear wheels are correctly mounted, see point 6:7.
- Always check the position of the anti-tips.
- The brakes must always be adjusted if you change the position of the rear wheels.



(!) Also adjust the front fork attachments' angle setting.

### 6:9 Seat angle

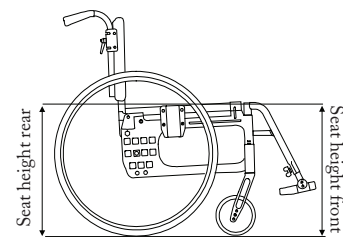
The seat angle is dependent on the difference between the front and the rear seat heights. The seat can also be set forwards.

Max. forward angle: 2 cm lower front than back.  
Max. backward angle: 6 cm higher front than back.



Bear in mind the risk of tipping, always adjust the setting of the the anti-tips.

- (!) If the seat angle is changed:
- Adjust the angle of the front fork attachments.
  - Also check the angle of the backrest.

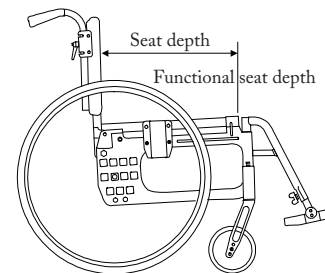


### 6:10 Seat depth with adjustable seat upholstery

The seat depth can be adjusted (Also see "The chairs possibilities") by lifting the front seat upholstery and sliding it backwards or forwards.

With Cross backrest 3A triangular, the seat depth can be further adjusted by means of the lumbar angle (see the settings section for Cross backrest 3A).

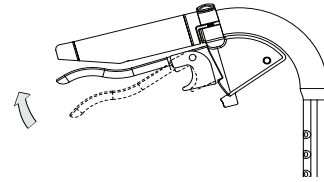
- (!) The functional seat depth is dependent on the setting of the back upholstery. It can be upto 6 cm longer than stated seat depth measured from the seat tube.



# 7 Brake settings

## 7:1 Service brake

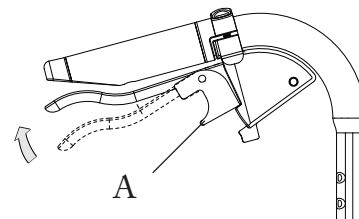
To operate the drum brake pull brake handle upwards (see illustration).



## 7:2 Parking brake

To operate the parking brake pull brake handle upwards (see picture). Hold the handle in braked position

and press button (A) down. The chair is now braked. Pull the handle upwards to release the parking brake.

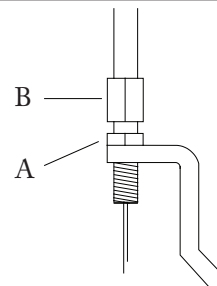


## 7:3 Adjusting the brakes (drum brake)

When adjusting the brake loosen nut (A) and adjust the brake by moving (B) up/down. When the brake has a reasonable effect tighten nut (A). This adjustment is recommended when the brake is not functioning satisfactorily.



Tools: 8 mm spanner



## 7:4 Adjusting the brakes

The brakes are infinitely settable.

- Loosen the nut (A) a couple of turns and slide the brake until the brake block is about 15-20 mm from the tyre when the brake is not applied.
- Ensure that the brake is straight in the groove and tighten the nut appr. 5 Nm. Test the brakes.



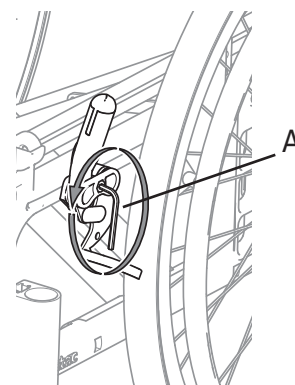
Tools: 5 mm Allen key.



Tools: Phillips screwdriver.



The braking effect is dependent on the air pressure in the tyres. The brakes are parking brakes and should not be applied during use.



Brake lever extensions and angled brake handles are available as accessories.

If the rear wheel is positioned in one of the forward settings it is possible for a legrest, when swung to the side, to unlock an applied brake. To avoid this the brake handle should be adjusted so that you attain a "neutral" position. In this way the brake will unlock first when the handle is pushed close to the rear wheel.



## 8 Settings backrest mod. 2

### 8:1 Backrest

The backrest is settable in height and angle and has adjustable backrest upholstery.



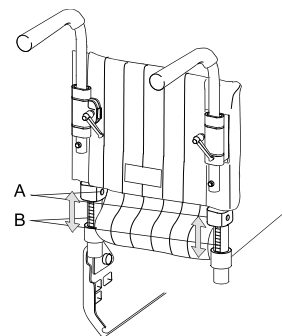
Risk of tipping: Always check the position of the anti-tips after adjusting the backrest.

### 8:2 Backrest height

The backrest height is infinitely settable (See "The chairs possibilities"). Undo the screws (A) 2-3 turns to set the height of the backrest. Make sure that both sides have the same height by checking against the ruler (B) on the rear of the back tube. Tighten the screws securely.



Tools: Allen key 5 mm.



### 8:3 Backrest angle

The backrest angle is infinitely variable (See "The chairs possibilities"). The angle is adjusted using the nut on the inside of the rear wheel attachments.



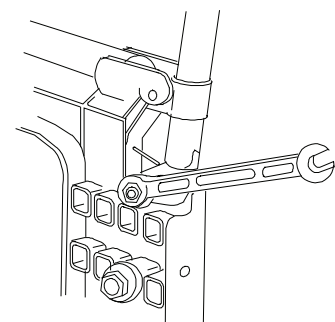
Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest angle.

- Loosen the nut on one of the back tubes, set the desired angle and tighten the nut firmly again.
- Repeat the procedure on the other side.



Tools: 13 mm ring spanner.

- (!) Check that the angle is the same on both sides by comparing the distance between the back tube and the armrest guard.



## 8 Settings backrest mod. 2

### 8:4 Backrest upholstery

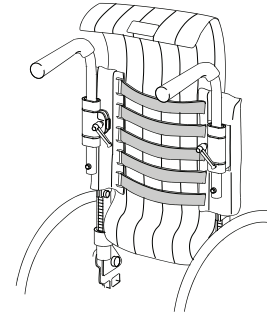
The contour of the backrest upholstery is individually adjustable by using the five Velcro straps and the backrest cover.

- Allow the cover plenty of room between seat and backrest, so that it is possible to "sit in" against the backrest.
- Loosen all straps and ensure that the user is sitting as far back in the seat as possible. Tighten the straps so that they follow the contours of the back and give support to the lumbar region.



Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.

- (!) Do not over-tighten the upper Velcro straps as this can prevent the cross-brace from unfolding properly, i.e. the back tubes do not sit flush in the side-frames.



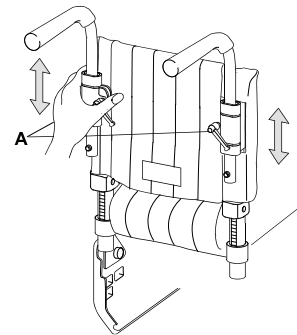
### 8:5 Height adjustable push handles

The push handles can be set at intervals of 2 cm.

- Loosen the knob (A) and press the plastic washer. Install desired height.
- Ensure that the push handles are locked in the correct position. Tighten the knob again.



Ensure that the knobs are properly tightened. This is especially important if you intend to lift the wheelchair whilst the user is sitting in it.




## 9 Settings backrest 3A


### 9:1 Adjusting back support angle, mono- bi- and triangular back

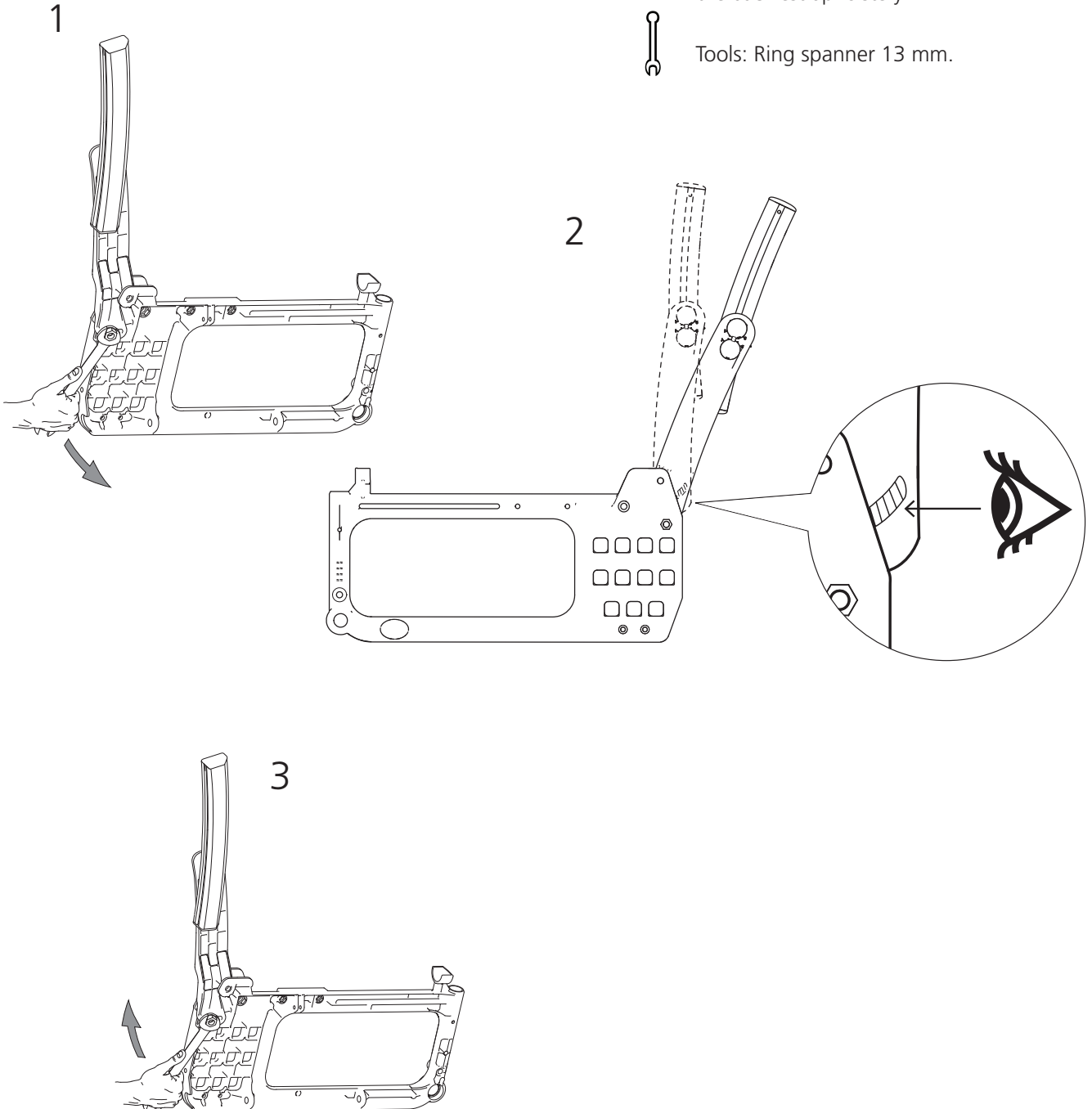
1. Loosen the nut.

2. Adjust the back support angle. Use the position markings to obtain the same back support angle on the right and left sides respectively.

3. Tighten the nut.

 Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.

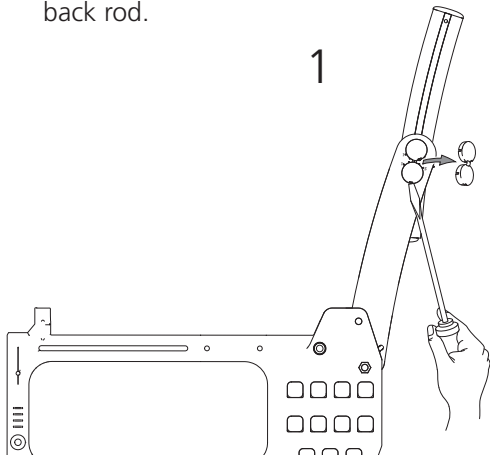
 Tools: Ring spanner 13 mm.



## 9 Settings backrest 3A, monoangular back

### 9:2 Adjusting back support height

1. Remove the protective cover.
2. Loosen the locking screws max. 1 turn.
- 3-4. Adjust the back support height using the graduation and marking on the lower back rod.



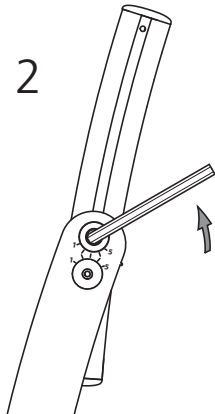
5. Tighten the locking screws.
6. Fit the protective cover.



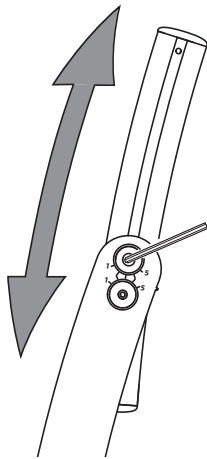
Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.



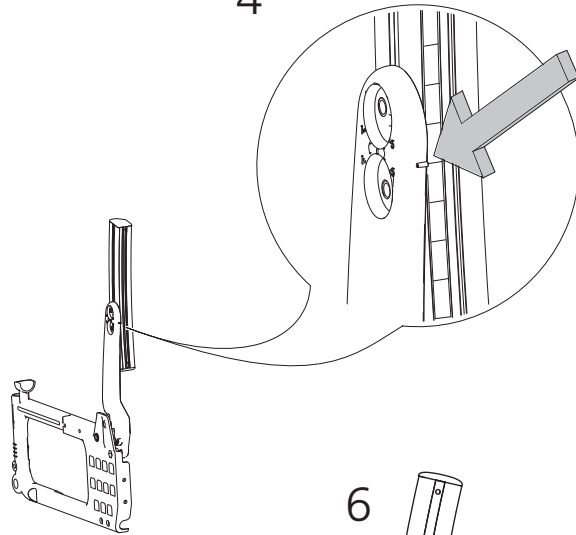
Tools: Allen key 5 NV.



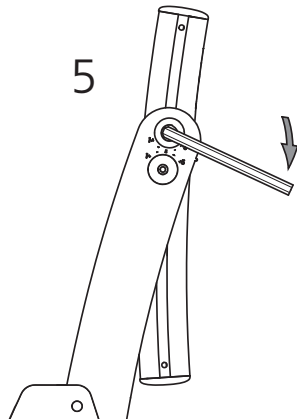
3



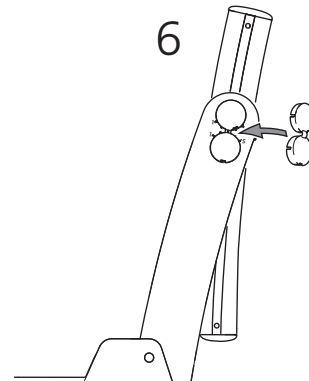
4



5



6



## 9 Settings backrest 3A, biangular back

### 9:3 Adjusting back support height and lumbar angle

1-2. Remove the protective cover and loosen the locking screw (A) max. 1 turn (see also illustration 1 on page 20).

3. Adjust the back support height using the graduation and the marking on the lower back rod.

4. Move the Allen key to the eccentric shaft's key handle (B).

5-6. Install desired lumbar angle.

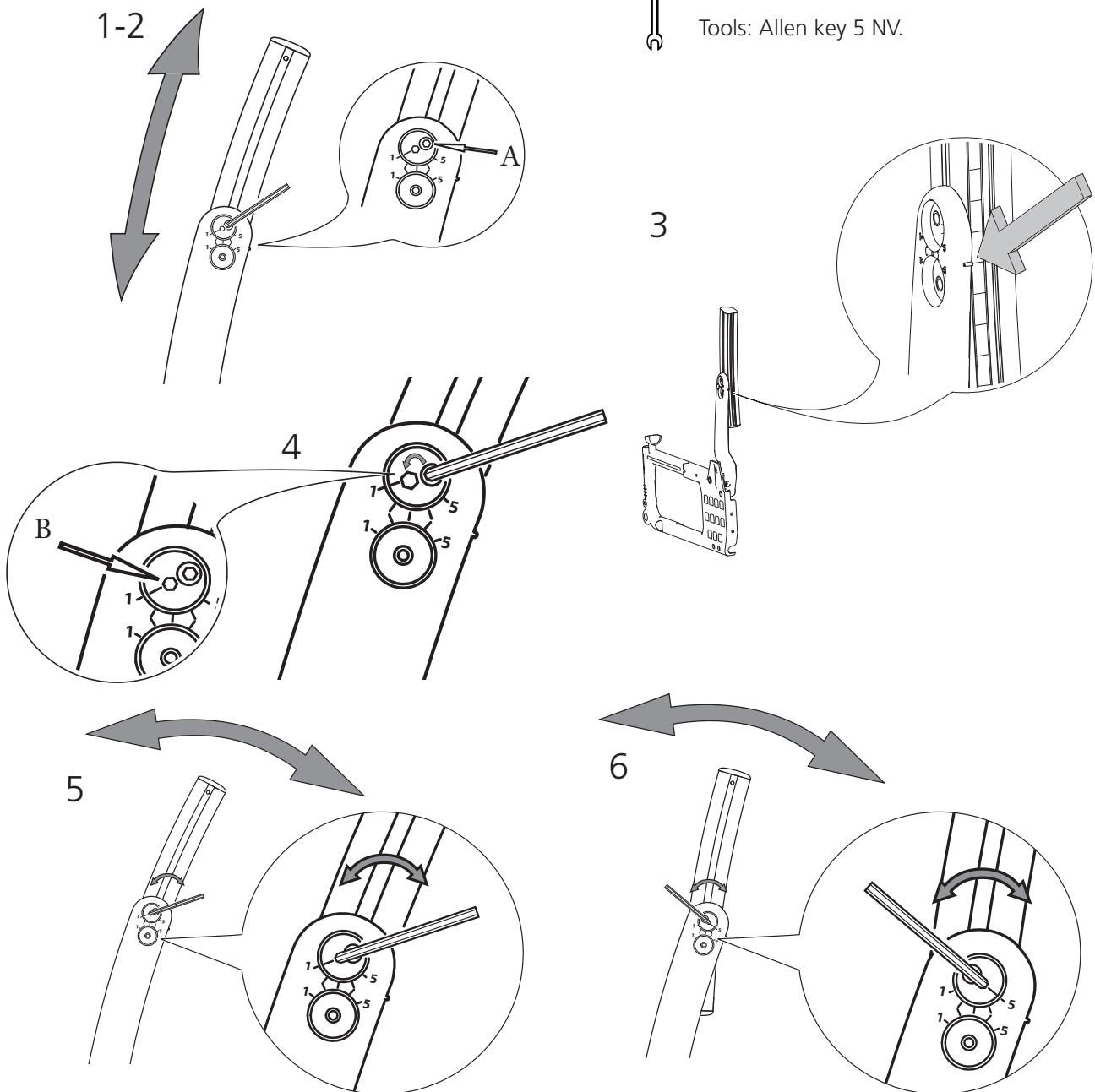
7. Tighten the locking screw and fit the protective cover as in illustration 5-6 on page 20.



Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.



Tools: Allen key 5 NV.



## 9 Settings backrest 3A, triangular back

### 9:4 Adjusting back support height and lumbar angle

1-2. Remove the protective cover and loosen the locking screws (A) max. 1 turn (see also illustration 1-2 on page 20).

3. Adjust the back support height using the graduation and the marking on the lower back rod. Tighten the locking screws max. 1/2 turn.

4. Place the Allen key in the selected eccentric shaft's locking screw and loosen it 1/2 turn. Move the Allen key to the eccentric shaft's key handle and set the required lumbar angle.

5. Tighten the locking screws and fit the protective cover as in illustration 5-6 on page 20.

! We recommend that you start adjusting the lumbar angle with the upper eccentric shaft. If a larger angle is required, adjust the lower eccentric shaft as well.

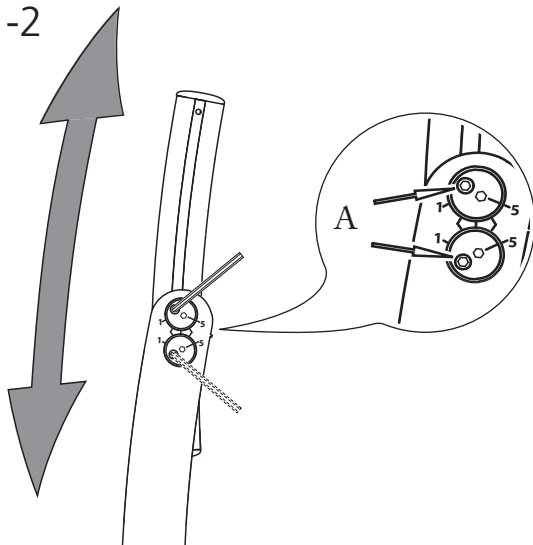


Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.

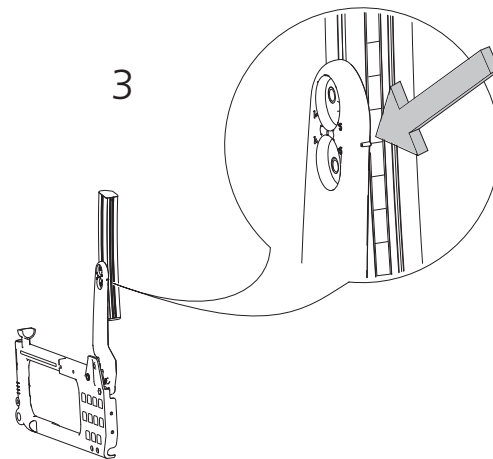


Tools: Allen key 5 NV.

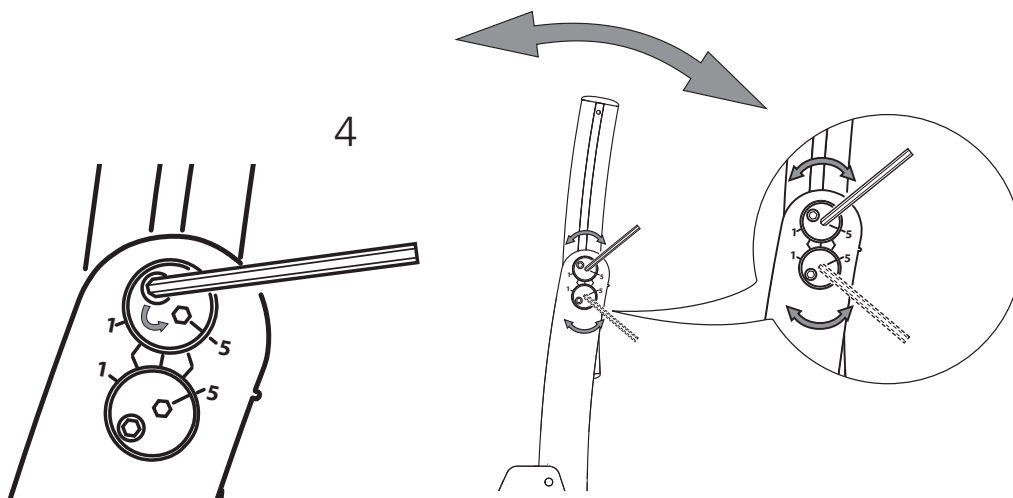
1-2



3



4



## 9 Settings backrest 3A, triangular back

### 9:5 Adjusting seat depth by means of lumbar angle

An extended seat depth is achieved by opening the back support angle (hip) and then the lumbar angle.

1. Adjust the back support angle (see also illustration 1-3 on page 20).

2. Adjust the lumbar angle to the required back support angle using the eccentric shafts as in point 4-5 on page 22.

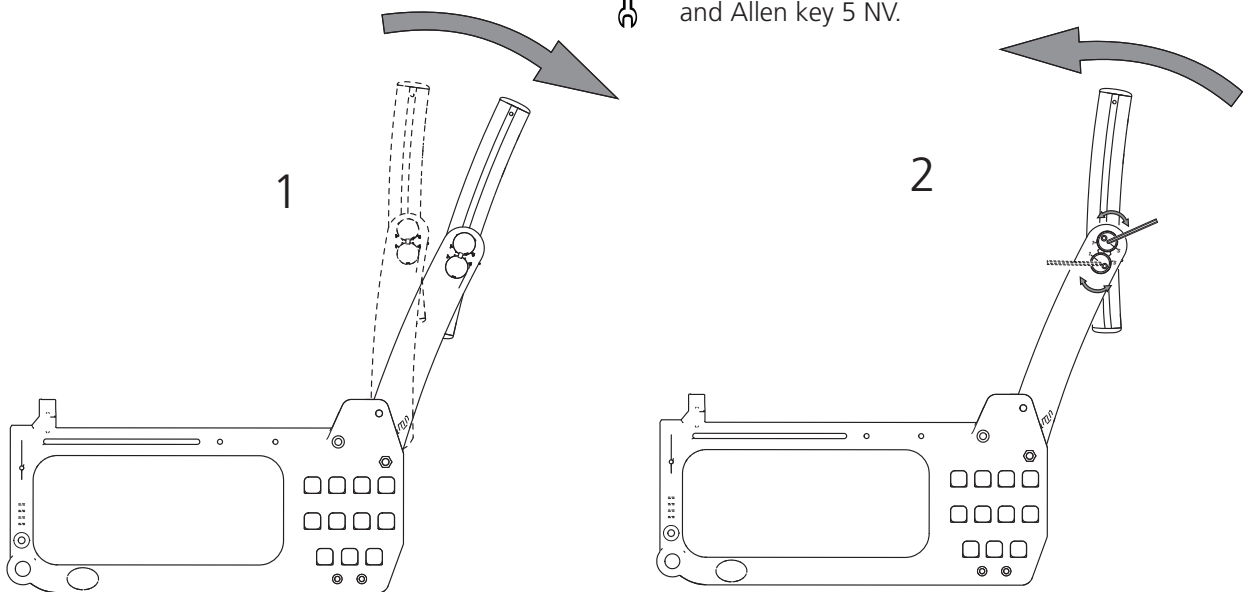
3. If necessary fit seat extender (accessory).



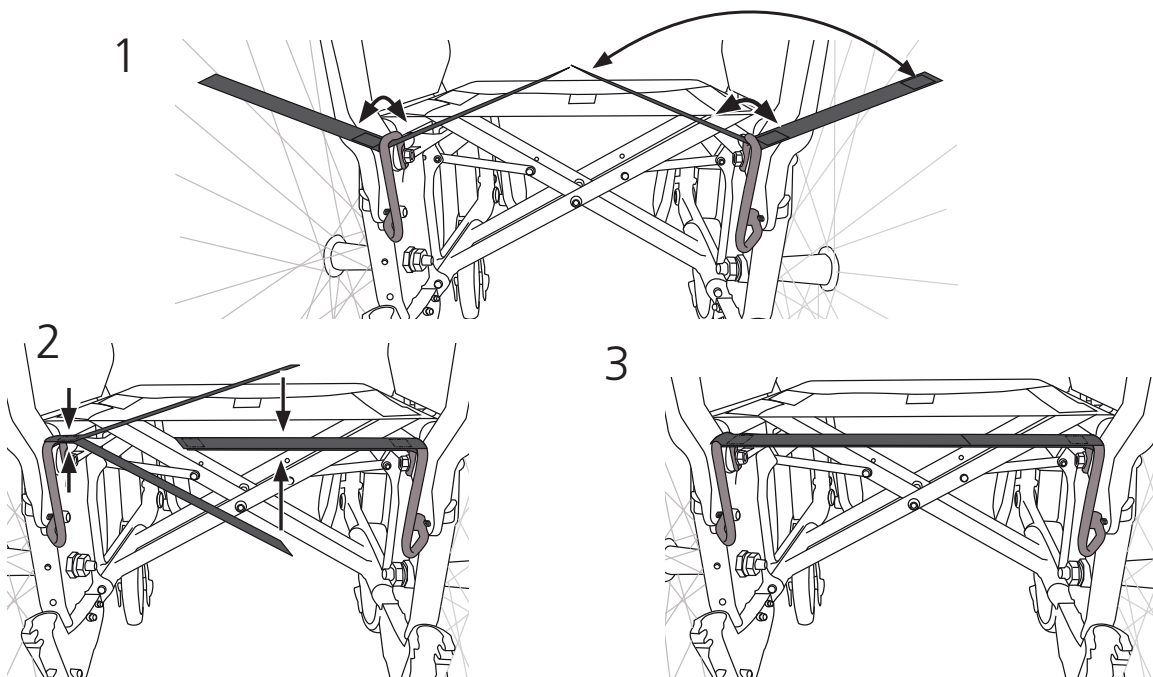
Risk of tipping: Always check the positioning of the anti-tips after adjusting the backrest upholstery.



Tools: Ring spanner 13 mm and Allen key 5 NV.



### 9:6 Fitting seat extender



# 10 Settings: legrests

## 10:1 Legrests with fixed or adjustable angle

**Fixed:** The legrests are detachable and can be swung to the side or under the seat. They are available in two different knee angles: standard and narrow.

The narrow legrest is also available 8 cm shorter. All 3 variants can be obtained as lockable.

**Adjustable:** In addition there are several types of variable, angle-adjusted legrests with calf supports. Amputee legrests and amputee weight are also available as alternatives to legrests.



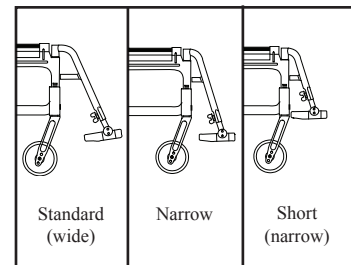
Never stand on the footrests as you may tip the chair! Never carry a wheelchair by legrests other than lockable.

## 10:2 Legrest with fixed knee angle (wide or narrow)

With narrow knee angle the feet are 5 cm closer to the seat than with the standard angle. The narrow legrests are a good alternative when the seat depth is shortened, but they can only be used with 5" castor wheels. For a raised footrest, the narrow footrest is also available in a shortened version, (combined with footrest with shortened attachment bar).



When lifting a wheelchair without lockable legrests: Swing the legrests under the seat or remove them completely and lift using the frame (lower or upper tubes).



The narrow legrest limits the choice of castors.

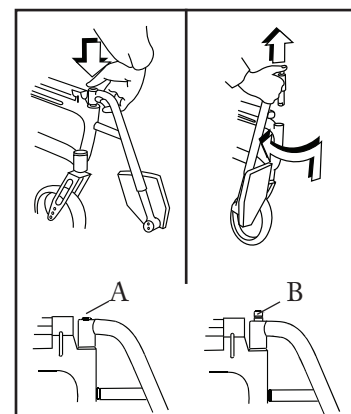
## 10:3 Lockable legrests (option)

Cross can be supplied with lockable legrests. The legrests are detachable and can be swung to the side or under the seat.



Before lifting the wheelchair check that the legrests are locked.

- To remove the legrests, press down on the red button (A) and lift.
- To install the legrests, press down on the red button (A), put the legrest into place and release the button. The legrest is now locked (B).





## 10 Settings: legrests

### 10:4 Continuously angle-adjustable legrest (option)

There are three types of angle adjustable legrest.

Mod.1: With or without plush-covered calf plate which is adjustable in height, depth and angle. The calf plate can also be mounted as a knee stop.

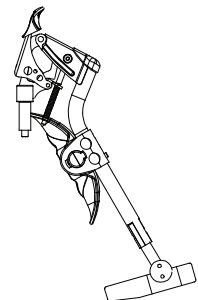
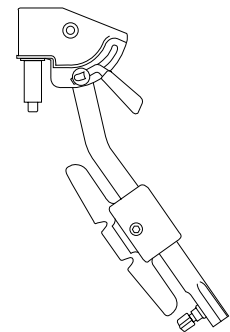
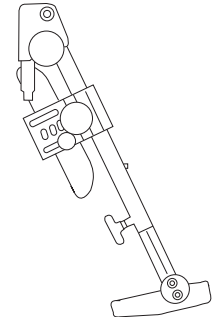
- (!) See assembly instructions supplied for mounting the calf support.

Mod.2: With foldable calf support which is adjustable in angle, height and sideways. Calf support in polyurethane.

Mod. 3: With polyamide or plush calf support that is hinged and angle-adjustable. The calf support can be fitted at 2 different heights on the legrest tube. With seat width 35 and 37,5 calf support can only be used on one side.



Never stand on the footrests as you may tip the chair! When lifting a wheelchair, remove the legrests and lift using the frame (lower or upper tubes).



### 10:5 Amputee legrest (option)

The amputee legrest is settable in height. It can also be adjusted forwards, sideways and in angle. It can be used both on the left and right side of the chair.

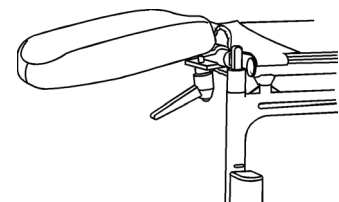
- Angle and sideways: loosen the lever under the plate.
- Forwards/backwards: loosen the knobs under the plate.
- Height: use the Allen key provided.



Tools: 4 mm Allen key (provided with the amputee legrest).



Never sit or stand on the amputee leg support. When lifting the wheelchair, remove the amputee leg support, swing the other legrest in under the seat (or remove it) and lift using the frame (lower or upper part).



# 10 Settings: legrests

## 10:6 Height of the footrests

Cross is supplied with flip-up footrests, adjustable in height, angle and depth.

### Height

Loosen the locking handle (A) on the legrest fully. Remove the screw (B).

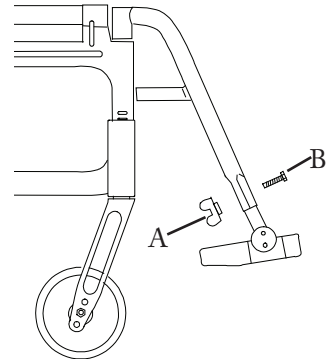
Set the height. Replace the screw and handle. Tighten securely.

Max. length: 51 cm  
Min. length: 33 cm

- To make the footrests lower than standard there are footrests with 10 cm longer attachment tubes.

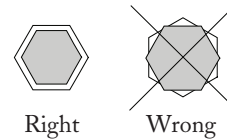


For outdoor use the footrests should be 4-5 cm above the ground. Never stand on the footrests as there is a risk of tipping!



- (!) To make the footrests higher than standard there are also short/narrow legrests with footrests with 8 cm shorter attachment tubes.

Make sure the screw-head locks in the hexagon hole.



## 10:7 Angle and depth of the footrests

The footrests can also be adjusted in angle and depth.

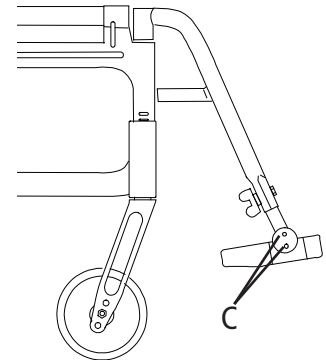
- (!) If the depth is altered, the angle must be adjusted.

**Angle** Loosen the screws (C) slightly. Set the footrest at the desired position and retighten the screws.



Tools: 5 mm Allen key.

**Depth** The sides of the footrests have different lengths. By changing the left side for the right they will extend further forwards.



# 11 Driving technique, manoeuvring

## 11:1 General

Parking: Increase the overall support base of the wheelchair by reversing for about 10 cm, thereby ensuring the castor wheels swing forwards.

If the user is left alone in the wheelchair, ensure that the brakes are applied and that the anti-tip is swung down.

## 11:2 Driving technique, kerbs and raised thresholds: up

*User, driving up forwards:*

This method is recommended only for experienced wheelchair users.

- Ensure that the anti-tips are turned upwards.
- Drive forward to the edge of the kerb/threshold.
- Balance the wheelchair on its rear wheels so that the castor wheels lift high enough to come up on the pavement. Take a firm hold of the handrims while at the same time leaning forwards with your upper body.



Be sure to turn the anti-tips back to the down position.

*Care giver, driving up forwards:*

- Ensure that the anti-tips are turned upwards.
- Tilt the wheelchair, if necessary with help from the tilter, so that the castor wheels come up on the pavement.
- Lift by the push handles to help the rear wheels up.



Be sure to turn the anti-tips back to the down position.

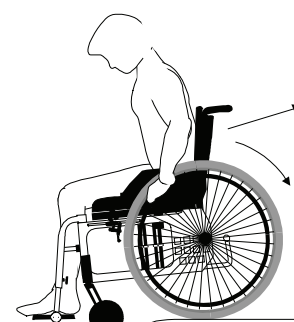
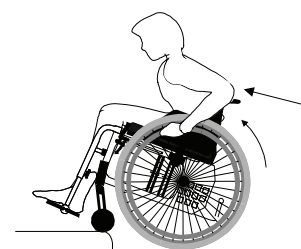
*User, driving up backwards:*

This technique only works if there is a low kerb/threshold, relative to the installed height of the foot-rests.

- Ensure that the anti-tips are turned upwards.
- Reverse to the edge of the kerb/threshold.
- Take a firm hold of the handrims while at the same time leaning forwards.



Be sure to turn the anti-tips back to the down position.



## 11 Driving technique, manoeuvring

### Care giver, driving up backwards:

- Reverse the chair to the edge of the kerb/threshold.
- Tilt the wheelchair up, if necessary with help from the tilter, so that the castor wheels are in the air.

- Pull the wheelchair up and backwards ensuring that the castor wheels have cleared the edge before setting down the wheelchair onto all four wheels.



Be sure to turn the anti-tips back to the down position.



### 11:3 Driving technique, kerb: down

#### User, driving down forwards:

This method is recommended only for experienced wheelchair users.

- Ensure that the anti-tips are turned upwards.
- Drive forward to the edge of the kerb.
- Take a firm hold on the handrims and drive "straight out" so that the wheelchair lands on all four wheels simultaneously.



Be sure to turn the anti-tips back to the down position.

#### Care giver, driving down forwards:

- Ensure that the anti-tips are turned upwards.
- Tilt the wheelchair, if necessary with the help of the tilter, so that the castor wheels are in the air.
- Drive carefully down the kerb, and set down the castors on the ground again.



Be sure to turn the anti-tips back to the down position.

#### User, driving down backwards:

This technique is not recommended for differences in level of over 10 cm.

- Ensure that the anti-tips are turned upwards.
- Reverse to the edge of the kerb.
- Reverse carefully down while at the same time leaning forwards.



There is a greater risk of tipping during this manoeuvre.

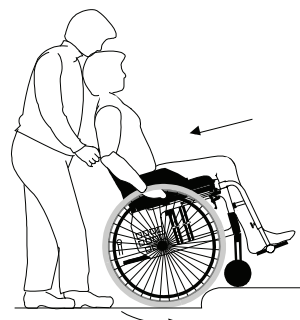
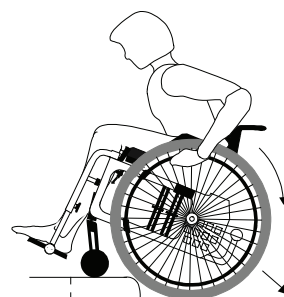
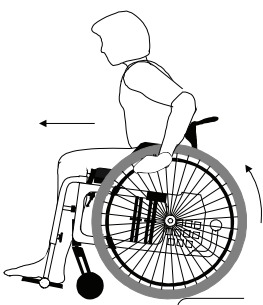
Be sure to turn the anti-tips back to the down position.

#### Care giver, driving down backwards:

- Ensure that the anti-tips are turned upwards.
- Reverse the wheelchair up to the edge of the kerb.
- Drive carefully down the kerb, and reverse the wheelchair on the rear wheels until the castors have cleared the obstacle.
- Set down the wheelchair once again on all four wheels.



Be sure to turn the anti-tips back to the down position.



# 11 Driving technique, manoeuvring

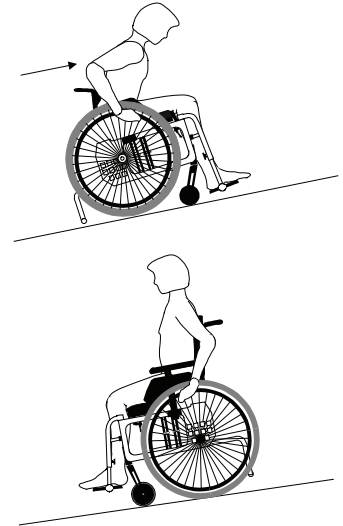
## 11:4 Driving technique, inclined surface

The following constitutes important advice for driving up or downhill to avoid the risk of tipping.

- (!) Avoid turning round in the middle of a hill. Always drive as straight up/down as possible. It is better to ask for help than to take a risk on your own.

Uphill driving: Lean forwards to correct your centre of balance.

Downhill driving: Lean against the backrest to correct your centre of balance. Control your speed using the handrims, not the brakes!



## 11:5 Driving technique, stairs: up



Always ask for help. Never travel on an escalator, even if there are care givers available. We always recommend using two carers for this transfer. One who walks behind and holds on to the push handle and one who walks in front and holds on to the frame (or in the legrests if these are lockable).

*With care giver, backwards:*

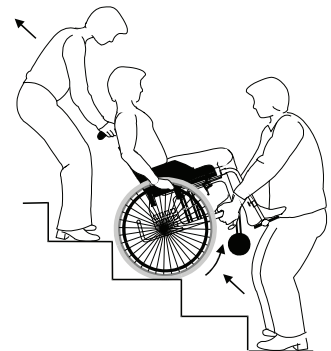
- Turn the anti-tips upwards and ensure that height adjustable push handles are securely tightened.
- Reverse the wheelchair to the first step.
- Tilt the chair onto its rear wheels, if necessary using the tilter to help.
- Pull the wheelchair slowly upwards, one step at a time, keeping it balanced on the rear wheels at all times.

- When the last step has been cleared, continue backwards so that the castor wheels are over the ground before setting down the wheelchair on all four wheels.



Be sure to turn the anti-tips back to the down position after completed transfer.

- (!) The care givers should remember to use the strength in their legs and to keep their backs as straight as possible while lifting.



# 11 Driving technique, manoeuvring

## 11:6 Driving technique, stairs: down



Always ask for help.  
Never use an escalator, even if a care giver is available.  
We always recommend using two carers for this transfer. One who walks behind and holds on to the push handle and one who walks in front and holds on to the frame (or in the legrests if these are lockable).

*With care giver, forwards:*

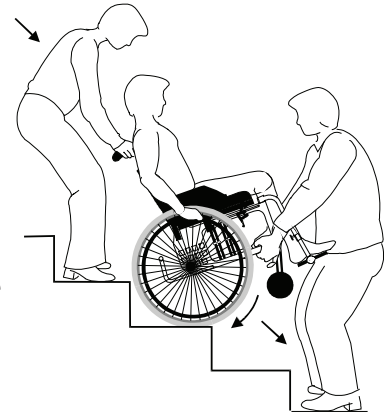
- Be sure to turn the anti-tips back to the up position and ensure that height adjustable push handles are securely tightened.
- Drive forward to the first step and tilt the wheelchair onto its rear wheels if necessary with help from the tilter.

- Descend carefully one step at a time, keeping the wheelchair balanced on its rear wheels at all times.
- After clearing the last step, "set down" the wheelchair once again on all four wheels.



Be sure to turn the anti-tips back to the down position after completed transfer.

- (!) The care givers should remember to use the strength in their legs and to keep their backs as straight as possible while lifting.



## 11:7 Driving technique, transferring into/out of the wheelchair

The technique for transferring a user should be practised with trained personnel. All that is provided here is some important advice to consider in conjunction with transferring a user into or out of the wheelchair.

*With or without a care giver, sideways.*

Before transferring:

- Increase the overall support base of the wheelchair by reversing for about 10 cm, thereby ensuring the castor wheels swing forwards. The wheelchair should be placed as close to where the transfer is going to take place as possible.
- Apply the brakes, remove or swing up armrest/side guard and legrest on the side you intend to move across.

*With or without a care giver, from the front.*

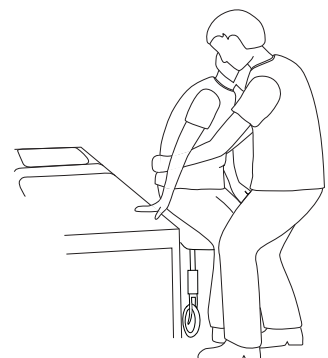
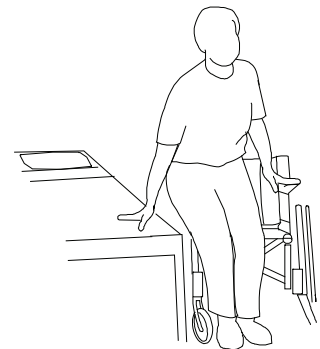
Before transferring:

- Increase the overall support base of the wheelchair by reversing for about 10 cm, thereby ensuring the castor wheels swing forwards. The wheelchair should be placed as close to where the transfer is going to take place as possible.
- Apply the brakes, remove the armrest/side guard and swing the legrest in under the seat on the side you intend to move across.



Never stand on the footrests as you may tip the chair.

- (!) The care givers should remember to use the strength in their legs and to keep their backs as straight as possible while lifting.



# 11 Driving technique, manoeuvring

## 11:8 Adjusting the centre of balance

The centre of balance can be adjusted by changing the position of the rear wheels.

- Move the axle shafts/rear wheels forwards or backwards according to point 6:8



The brakes must also be adjusted, see point 7:4



Tools: 24 mm socket spanner (10 mm spanner)

When the position of the rear wheels is moved forwards the wheelchair becomes much more manoeuvrable, but the tendency to tip backwards increases.

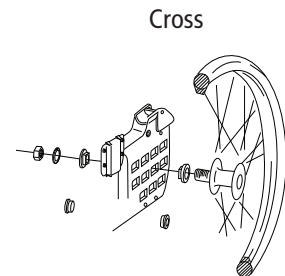
- (!) The centre of balance is also altered when the seat and/or backrest angle is adjusted.



We recommend the use of anti-tips.



Ensure that rear wheels with quick release hubs are mounted securely.



## 11:9 Handrims

Cross is delivered with aluminium or stainless steel handrims as standard. The way in which the user is able to grip the handrims is influenced by the handrim's material and its distance from the wheel. Plastic coated handrims are available as an option.



Cellular rubber/plastic coated handrims increases the friction. Violent braking can cause mild friction burns (e.g. blisters).



Be aware that when passing through narrow spaces there is a risk of getting your fingers caught. There is also a risk of fingers getting caught in the spokes.



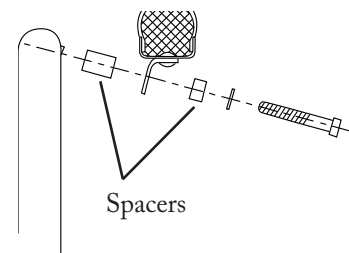
If there is a risk of the user's fingers getting caught in the spokes we recommend the use of spoke guards.

## 11:10 Adjusting the distance of the handrim

Aluminium, stainless and plastic-coated handrims for 24" and 22" rear wheel: The distance between the wheel and the handrim can be adjusted by adding or removing spacers.



Tools: 4 mm Allen key.



## 12 Assembly instructions accessories

Assembly instructions are provided with all accessories when they are supplied by Etac.

Instructions are also available on our website. [www.etac.com](http://www.etac.com)

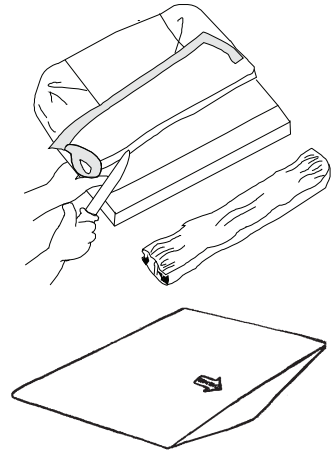
### 12:1 Seat cushion and comfort wedge

The cushion is cut to the required depth at the front or back edge. When measuring the length, ensure that the cushion is properly positioned between the back tubes with the rounded corners to the rear.



The cushion is a standard model and is not suitable for users with sitting sores.

A comfort wedge is a useful accessory for the seat cushion. It evens out the front edge of the seat, giving even greater seat comfort. Place the comfort wedge in the cushion-cover's inside pocket, under the cushion. The arrow on the comfort wedge should be on the top-side pointing forwards.



### 12:2 Armrest, detachable, height adjustment

The detachable armrest comes in two versions, with short or long armrest guard. The armrest attachment can be fitted in 2 different heights. In position 1 the height of the armrest is settable between 19 and 26 cm, and in position 2 (standard) between 24 and 31 cm, with 1 cm intervals.



Tools: 10 mm spanner, 5 mm Allen key.

The lock lug is used both to set the height of the armrest and secure the side guard:

- Loosen the screw that fastens the lock lug.
- Slide the guard up or down to the desired height.

- Refasten the lug on the side guard.

If necessary the right armrest can be fitted on the left side and vice-versa.

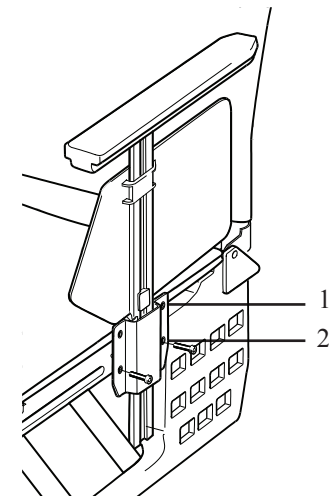


Tools: 3 mm Allen key.



Never use the armrests to lift the wheelchair.

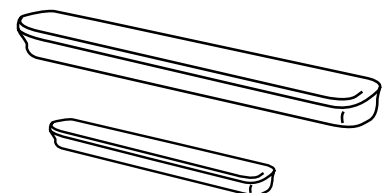
(!) With 24" low pressure or solid tyres in pos. C1, the armrest's side-guard does not cover the front edge of the rear wheel.



### 12:3 Padded cover, armrest

The detachable armrests can be supplemented with a padded or gel cover. The covers are manufactured in dark grey plush, or alternatively black Dartex, and they are washable.

(!) The padded cover makes the armrest 1.5-2 cm higher.





## 12 Assembly instructions accessories

### 12:4 Armrest, flip-up, height adjustment

The flip-up armrest comes in two varieties, height settable and fixed. It is mounted onto the wheelchair's frame and can be flipped upwards/backwards by pressing the red lever (A) inwards.

Mount the armrest according to the assembly instructions supplied.

The armrest height is settable between 22 and 30 cm with 1 cm intervals.

- Push the red lever to one side and loosen the screws that fix the armrest bracket to the frame.
- Slide the armrest up or down to the desired height.
- Tighten the screws again.

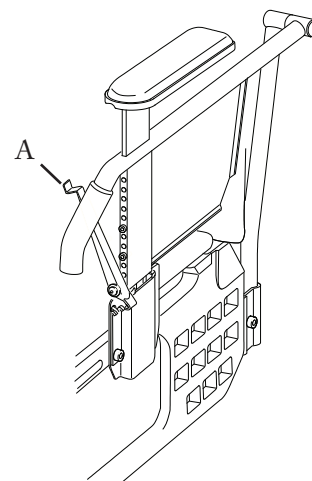


Tools: 3 mm  
Allen key.



Never use the armrests to lift the wheelchair.

- (!) These armrests cannot be combined with a cane holder or with 24" or 22" rear wheel in position C.



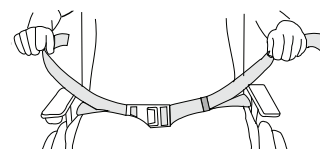
### 12:5 Positioning belt

The positioning belt is in two parts, is adjustable in length and has a snap-lock. It can be mounted either in the backrest joint (A) or in the holes just in front of the backrest joint (B), above the wheel mounts. Assembly instructions are supplied with the belt.

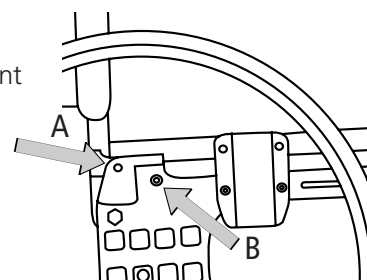
- (!) Ensure that the user does not slide forwards in the seat as this can lead to the belt impairing the supply of blood to the hip/waist area.



The belt is to be used only for positioning in the wheelchair. It must not be used as a substitute for a safety belt in a car.



We recommend the front position (B). It counteracts sliding forward more effectively.



## 12 Assembly instructions accessories

### 12:6 Anti-tip, mounting

The anti-tip consists of two parts:

- The attachment bar is mounted under the wheel mount (see illustration).
- The anti-tip bar is mounted at the desired height (see illustration).

To allow you to negotiate thresholds and the edges of thick carpets, a distance of 3-7 cm from the floor to the stabiliser wheel is recommended.

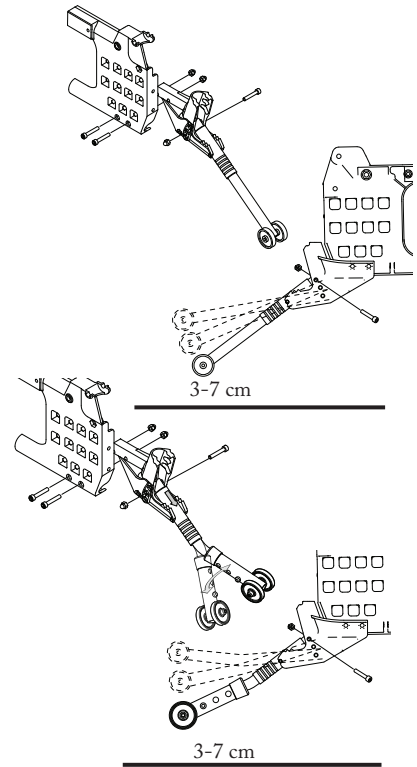


Tools: 5 mm Allen key



After adjusting the seat height, centre of balance or backrest angle, always ensure that you check the function of the anti-tip.

Telescopic anti-tips can be adjusted in length and angle by pressing in the snap-lock pin.



## 13 Care and maintenance

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### Upholstery

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The upholstery is made of two-ply polyester. The seat upholstery is fastened lengthways to the seat frame. The upholstery can easily be removed from the frame by unscrewing the end caps. The backrest upholstery is removed by loosening the screws of the push handle attachments and then pulling the upholstery upwards. Wash seat and backrest upholstery according to the washing instructions on the product.

---

### Rear wheel/castor, front fork attachment

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**Tyre/inner tube:** Check the tyre pressure (see side of tyre) at least once a month, also check the tread.

**Spokes:** Loose spokes can lead to wheel wobble. Consult a cycle dealer or your Technical Aids Centre if it is necessary to adjust the spokes.

**Wheel axles:** Clean the wheel axles from hair and dirt as necessary.

**Ball bearings:** Require no maintenance.

**Handrims:** If a handrim should be damaged in such a way that it could lead to injury, it should be replaced.

**Front fork attachment:** To achieve the best operating conditions, the attachments should be installed at the correct angle. Check also that the front forks are tightened according to instructions, see point 6:4.

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### Brakes

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The braking effect is dependent on the air pressure in the tyres. Encrusted dirt can have a negative effect on the brake mechanism. Check the functioning of the brakes once a month.

In the event of adjustments, see point 7:4.

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### Washing the frame

---

It is important to keep the wheelchair clean, both for your own comfort and the longevity of the chair. It is equipped with drainage holes which ensures that it is easy to wash and dry.

Clean the frame with a non-abrasive cleaning agent with a pH level between 5 and 9, or with a 70% disinfectant solution. Rinse and dry.

---

### Touch-up paint

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Touch-up paint is available for minor scratches and chips in all the frame colours available for Cross wheel chairs.

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### Miscellaneous

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If there is a fault in your wheelchair you should contact your dealer or Technical Aids Centre. Defective wheelchairs should not be used. If your chair needs reconditioning or repair, only original parts from Etac or components with equal quality, as specified in Cross diagrams, should be used. Etac will not be held responsible for damage or injury caused by use of non-original parts.

**(!) When necessary, lubricate moving parts/joints with bicycle oil or similar.**

## 13 Care and maintenance

### Fault-finding chart

| Problem*                                      | Solution   |
|---|--|
| <b>The wheelchair pulls to the side</b>       | <ul style="list-style-type: none"> <li>- Inflate the tyres</li> <li>- Adjust the front fork attachment's angular setting</li> <li>- Check that the front fork attachments are mounted at the same height</li> <li>- Rear wheel mountings are incorrectly fitted</li> <li>- The user is distributing weight unevenly</li> </ul> |
| <b>The wheelchair feels "heavy" to propel</b> | <ul style="list-style-type: none"> <li>- Inflate the tyres</li> <li>- Rear wheel mountings are incorrectly fitted</li> <li>- Clean the castor axles from hair and dirt</li> <li>- Too much weight over the castors. Adjust the centre of balance</li> </ul>  |
| <b>The wheelchair feels "heavy" to turn</b>   | <ul style="list-style-type: none"> <li>- Inflate the tyres</li> <li>- Check that the front forks are not too tight</li> <li>- Adjust the front fork attachment's angular setting</li> <li>- Clean the castor axles from dirt</li> <li>- Too much weight over the castors. Adjust the centre of balance</li> </ul>              |
| <b>Brakes not effective</b>                   | <ul style="list-style-type: none"> <li>- Inflate the tyres</li> <li>- Adjust the distance between brake and tyre</li> </ul>  |
| <b>Rear wheels "loose"</b>                    | <ul style="list-style-type: none"> <li>- Adjust the length of the axle shaft</li> </ul>  |
| <b>Rear wheels hard to remove/replace</b>     | <ul style="list-style-type: none"> <li>- Clean and lubricate quick release with cycle oil or similar</li> <li>- Adjust the length of the axle shaft</li> </ul>   |
| <b>The castors "wobble"</b>                   | <ul style="list-style-type: none"> <li>- The front forks are not tight enough</li> <li>- Check that the front fork attachments are mounted at the same height</li> <li>- Adjust the front fork attachment's angular setting</li> <li>- Too much weight over the castors. Adjust the centre of balance</li> </ul>               |
| <b>The wheelchair is hard to fold/unfold</b>  | <ul style="list-style-type: none"> <li>- The upholstery is too tight</li> <li>- Clean and lubricate the cross-brace under the seat</li> </ul>  |
| <b>The wheelchair feels "awkward"</b>         | <ul style="list-style-type: none"> <li>- Inflate the tyres</li> <li>- Check that screws, nuts and bolts are properly tightened</li> </ul>  |

(!) When necessary, lubricate moving parts/joints with bicycle oil or similar.

\* The user may experience several of these problems if the wheelchair is incorrectly adjusted or is being incorrectly used.

## 14 Tests and guarantees

|  |  |
|--|--|
| <b>Cross</b>   | is tested and approved for use indoors and outside and is CE marked. Max. user weight is 125 kg.   |
| <b>The Swedish Institute of Assistive Technology</b> | carries out both functional and technical tests. Testing methods conform to ISO standard 7176.   |
| <b>CE marking:</b>                                   | <p>The product has passed all tests and met all criteria set by European standards for specific product groups.</p> <p>A proof that the product meets national and EU MDD (Medical Device Directive) requirements.</p> <p>Gives customers the chance to choose the right product by comparing test data.</p>   |
| <b>Guarantee:</b>                                    | 5 year guarantee against material and manufacturing defects. For terms and conditions, see <a href="http://www.etac.com">www.etac.com</a>  |
| <b>Special adaptations</b>                           | comprise everything that falls outside the instructions and settings in this Manual. Wheelchairs specially adapted by customers are not eligible for Etac's CE marking. Etac's guarantee no longer applies. If in the least doubt about the validity of adjustments, please contact Etac for advice.   |
| <b>Combining</b>                                     | Cross with another product, not manufactured by Etac: In general neither of the products will retain their CE marking. Etac has contracts with certain companies whose products are approved in combination with Cross, including seat systems and motors. These can be combined and still retain their CE certificates from the manufacturer. Please contact Etac for up-to-date information. |

# 15 Alternative seat heights/angles

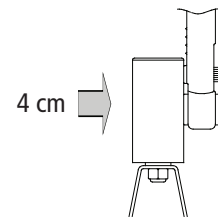
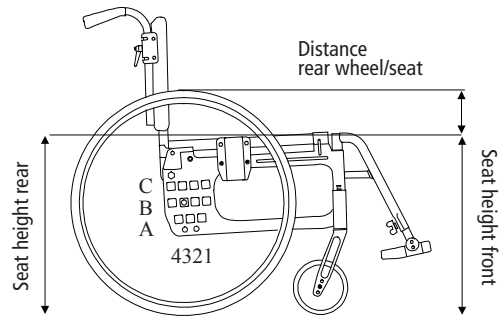
**Rear seat height table** (measurements given can vary +/- 2 % depending on tyre type and seat angle)

### Cross

|            | Rear wheel in pos. | Seat height rear<br>Seat angle 3° | Distance<br>rear wheel-seat |
|------------|--------------------|-----------------------------------|-----------------------------|
| <b>24"</b> | A 1-3              | 50 cm                             | 10 cm                       |
|            | B 1-4              | 45 cm                             | 14.5 cm                     |
|            | C 1-4              | 41 cm                             | 19 cm                       |

### Cross

|            | Rear wheel in pos. | Seat height rear<br>Seat angle 3° | Distance<br>rear wheel-seat |
|------------|--------------------|-----------------------------------|-----------------------------|
| <b>22"</b> | A 1-3              | 49 cm                             | 7.5 cm                      |
|            | B 1-4              | 44 cm                             | 12 cm                       |
|            | C 1-4              | 40 cm                             | 16.5 cm                     |












Front fork attachment is infinitely settable 4 cm in height.

### Front seat height table

|                   |          | Castor wheel |          |
|-------------------|----------|--------------|----------|
| Fork              | Position | 5"           | 6½"      |
| <b>Short</b><br>  | S1       | 38-42 cm     | -        |
|                   | S2       | 40-44 cm     | 41-45 cm |
|                   | S3       | 41-45 cm     | 42-46 cm |
| <b>Medium</b><br> | M1       | 43-47 cm     | 44-48 cm |
|                   | M2       | 44-48 cm     | 45-49 cm |
|                   | M3       | 46-50 cm     | 47-51 cm |

For correct installation of front fork attachment: Max. backward inclination 6 cm (9°), max. forward inclination 2 cm (3°).

## 16 Weights and dimensions, standard models

| Cross with drum brake   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| Type of chair   | Art. no.  | Seat depth from back tubes**  | Seat height front   | Seat height rear  | Backrest height***  | Total width   | Transport width   | Weight with rear wheel  |
|  |  |  |  |  |  |  |  |  |
| 35 cm short   | 13120601  | 36-42 cm  | 38-51 cm  | 40-50 cm  | 32-45 cm  | 57.0 cm   | *22/32 cm   | 17,4 kg   |
| 35 cm long  | 13120602  | 42-48   | 38-51   | 40-50   | 32-45   | 57.0  | *22/32  | 17,6  |
| 37.5 cm short   | 13120603  | 36-42   | 38-51   | 40-50   | 32-45   | 59.5  | *22/32  | 17,5  |
| 37.5 cm long  | 13120604  | 42-48   | 38-51   | 40-50   | 32-45   | 59.5  | *22/32  | 17,7  |
| 40 cm short   | 13120605  | 36-42   | 38-51   | 40-50   | 32-45   | 62.0  | *22/32  | 17,6  |
| 40 cm long  | 13120606  | 42-48   | 38-51   | 40-50   | 32-45   | 62.0  | *22/32  | 17,8  |
| 42.5 cm short   | 13120607  | 36-42   | 38-51   | 40-50   | 32-45   | 64.5  | *22/32  | 17,7  |
| 42.5 cm long  | 13120608  | 42-48   | 38-51   | 40-50   | 32-45   | 64.5  | *22/32  | 17,9  |
| 45 cm short   | 13120609  | 36-42   | 38-51   | 40-50   | 32-45   | 67.0  | *22/32  | 17,8  |
| 45 cm long  | 13120610  | 42-48   | 38-51   | 40-50   | 32-45   | 67.0  | *22/32  | 18,0  |
| 47.5 short  | 13120613  | 36-42   | 38-51   | 40-50   | 32-45   | 69.5  | *22/32  | 17,9  |
| 47.5 long   | 13120614  | 42-48   | 38-51   | 40-50   | 32-45   | 69.5  | *22/32  | 18,1  |
| 50 cm short   | 13120611  | 36-42   | 38-51   | 40-50   | 32-45   | 72.0  | *22/32  | 18,0  |
| 50 cm long  | 13120612  | 42-48   | 38-51   | 40-50   | 32-45   | 72.0  | *22/32  | 18,2  |

**Choice of frame colours:** 01 = black, 02 = red, 22 = grey texture, 30 = blue texture, 31 = steel blue, 32 = olive-green, 33 = sea green texture, 34 = plum texture, 53 = grey blaster.

Cross: Weights and dimensions given are for a chair with 24" rear wheels with quick-release hubs, aluminium handrims, legrests, footrests, brakes, armrests, 6 1/2" castors with medium forks. The measurements given can vary  $\pm 2\%$ .

\*Without rear wheels

\*\* Cross backrest 3A Triangular 36-48 (short frame) and 42-56 cm (long frame)

\*\*\* Applies to Cross backrest 3A (For Cross backrest mod. 2 applies 30-45 cm)

Etac Sverige AB  
Box 203  
334 24 Anderstorp  
Sweden

Tel 0371-58 73 00  
Fax 0371-58 73 90  
info@etac.se  
www.etac.se

Etac GmbH  
Bahnhofstraße 131,  
45770 Marl,  
Germany

Tel 02365-98710  
Fax 02365-986115  
info@etac.de  
www.etac.de

Etac AB (export)  
Box 203  
334 24 Anderstorp  
Sweden

Tel 46 371-58 73 30  
Fax 46 371-58 73 90  
info@etac.se  
www.etac.com

Etac Holland BV  
Fluorietweg 16a,  
1812RR Alkmaar,  
Nederland

Tel +31 72 547 04 39  
Fax +31 72 547 13 05  
info.holland@etac.com  
www.etac.com

Etac AS  
Pb 249,  
1501 Moss,  
Norway

Tel 815 69 469  
Fax 69 27 09 11  
hovedkontor.norge@etac.com  
www.etac.no

Etac UK Limited  
29 Murrell Green Business Park  
London Road, Hook, Hampshire  
RG27 9GR, United Kingdom

Tel 01256 767 181  
Fax 01256 768 887  
info@etacuk.com  
www.etac.com

Etac A/S  
Egeskovvej 12  
8700 Horsens  
Denmark

Tel 79 68 58 33  
Fax 75 68 58 40  
info@etac.dk  
www.etac.dk

R82 UK Limited.  
Unit D4A, Coombswood Business  
Park East  
Coombswood Way, Halesowen  
West Midlands B62 8BH  
United Kingdom

Tel 0121 561 2222  
Fax 0121 559 5437  
enquiries@etac.uk.r82.com  
www.etac.com

Snug Seat, Inc.  
12801 E. Independence Boulevard  
P.O. Box 1739  
Matthews, NC 28106, USA

Tel 800 336 7684  
Fax 704 882 0751  
Information@snugseat.com  
www.etac.com



Etac Supply Center AB  
Långgatan 12  
SE-334 24 Anderstorp

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