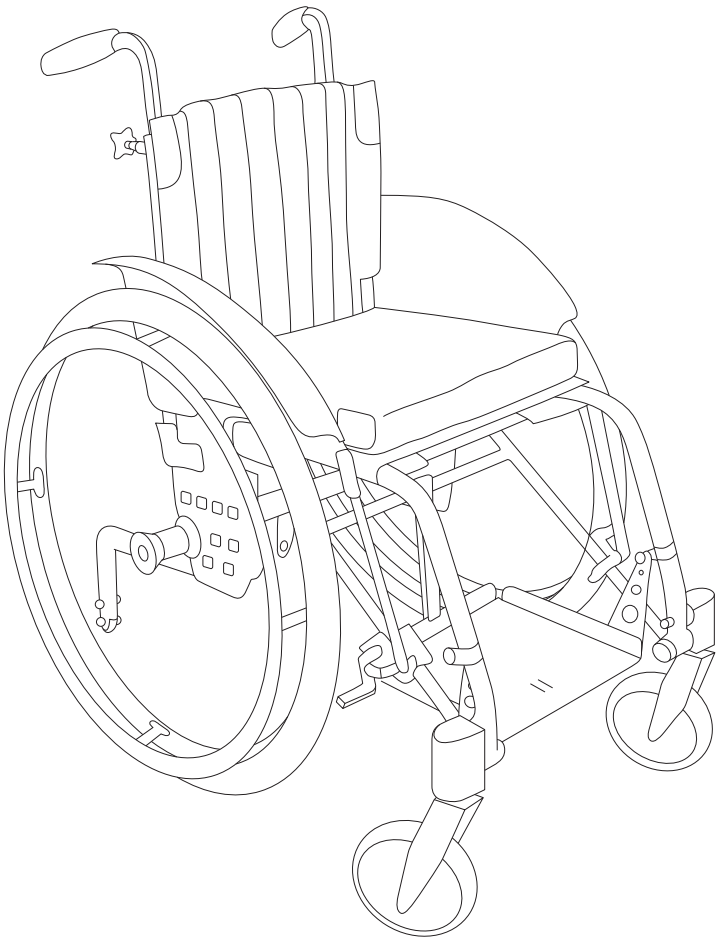
Sting

Manual English

74059J 2014-06-09



Contents

1 General

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

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

(!) provides advice and tips worth considering

Anti-tips 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.

Sting is an active, manual wheelchair with multiple functions for children. It has been tested and approved for a user's weight of 50 kg, and is intended for use both outdoors and indoors. The standard model includes height-adjustable push handles, mudguards and anti-tips. Sting is available in several sizes and can be supplemented and adjusted if needs change. The seat is adjustable in height, angle and depth. The backrest is adjustable in height, angle and shape. The footrest is adjustable in height, angle and depth. A large range of accessories and options are available: Headrest, bow handle, trunk support, tray, various rear wheel sizes, armrest etc. Sting has the best prerequisites to create comfort, functionality and good manoeuvrability.

Testing
Sting (Ser. No. 11D) is tested in accordance with ISO 7176-19 and 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 describe how testing should be carried out and how the test results are to 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.

Seat widths:	from 27.5 cm to 35 cm
Seat depth:	25-35 cm
Max. user weight:	50 kg

Sting is supplied with the rear wheels unmounted.

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. Thereafter the product must be decommissioned.

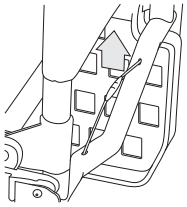
The following methods of surface treatment have been used:
Lacquered surfaces=Polyester powder coating
Non-lacquered aluminium parts=Anodized coating
Non-lacquered steel surfaces=Galvanized

The tool kit contains: 5 Allen keys: 2, 3, 4, 5 and 6 mm
3 spanners: 10, 13 and 8 mm
1 socket spanner: 21/19 mm

2 Handling/Transport

2:1 Folding

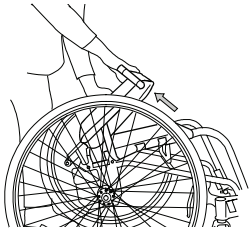
- Remove any armrests or sideguards.
- Remove the rear wheels.
- Fold down the backrest by pulling upwards on the cord.



2:2 Unfolding

- Attach the rear wheels
- Fold up the backrest
- Attach any armrests or sideguards required.

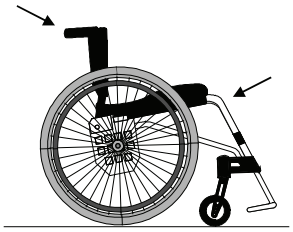
△ When attaching the rear wheels, always check that they are securely mounted. The button in the hub should pop out completely.



2:3 Lifting the wheelchair

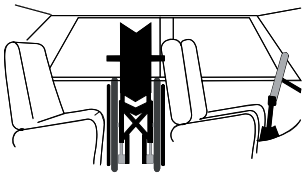
- Lift using the push handles and the front part of the frame.

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



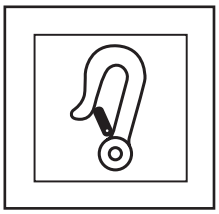
2:4 Transportation in vehicles

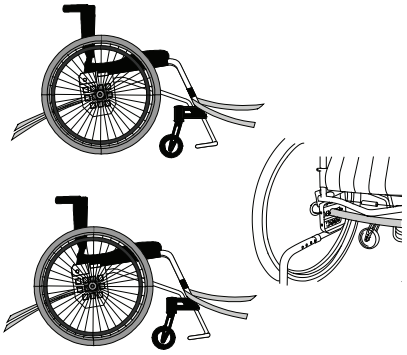
Private car/taxi: The wheelchair should be placed in the car boot. If this is not possible, ensure that the wheelchair is placed safely in a seat, so that it cannot overturn or roll. If possible secure the wheelchair with the car's safety belt.



2:5 Securing

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

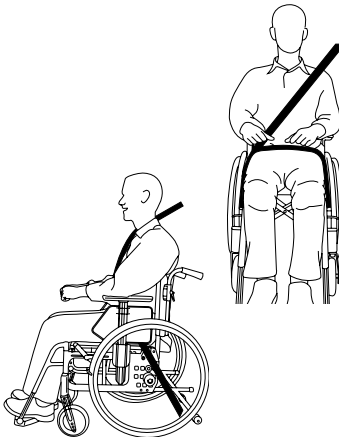




2 Handling/Transport

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.

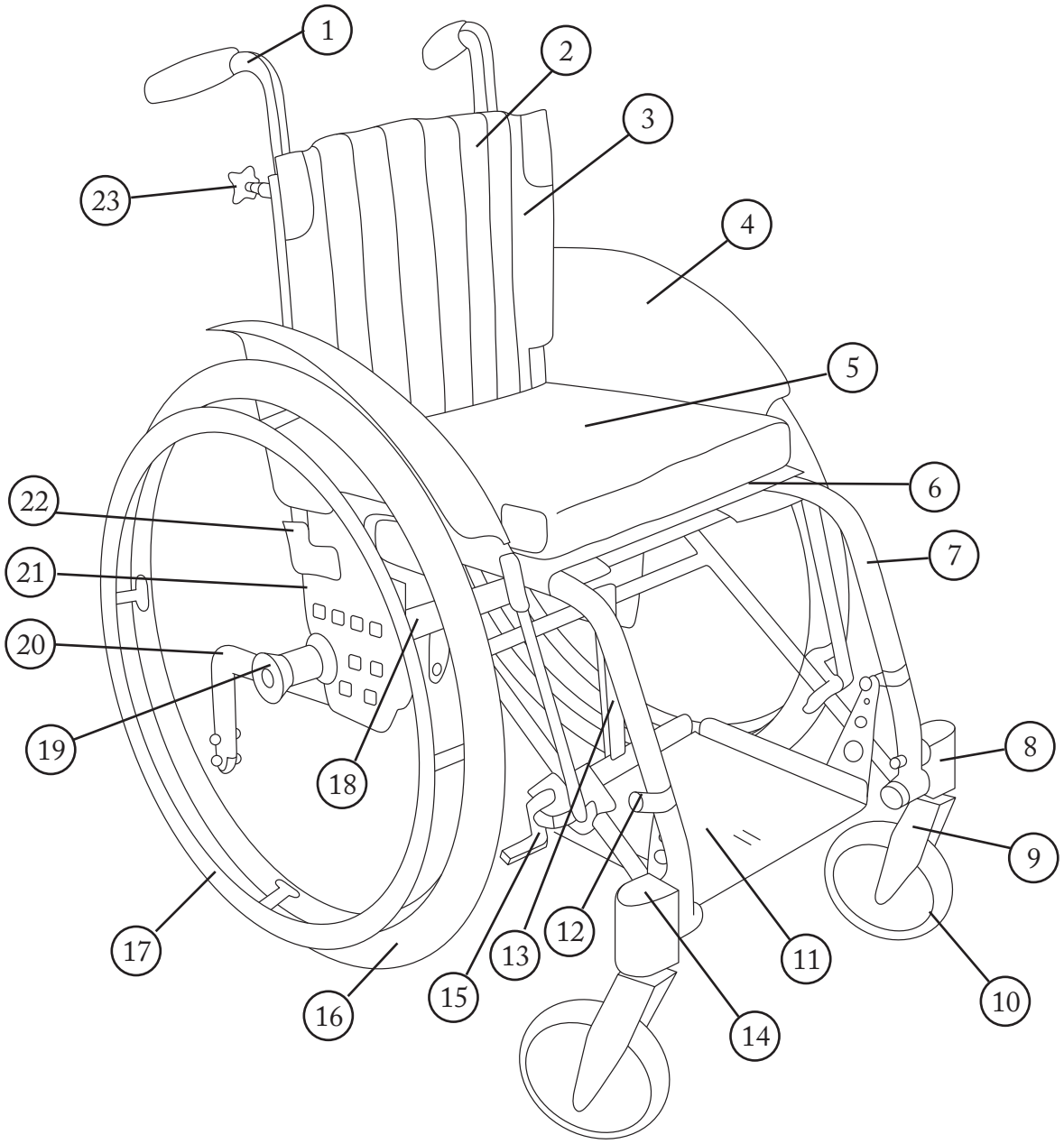
In conjunction with points 2 and 3:
- a 25668 positioning belt should be used
- a correctly adjusted headrest should be used
- the backrest should be level with or above the user's shoulders
- the parking brake should be used
- the anti-tips should be lowered

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, shall be removed and secured/positioned so that they cannot 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 it is used again.

3 Product description Sting

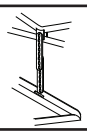


1	Push handles
2	Backrest cover
3	Backrest upholstery
4	Mudguard
5	Seat cushion
6	Seat upholstery
7	Chassis
8	Front fork attachment
9	Front fork, short
10	Castor 5" allround
11	Footrest
12	Footrest attachment
13	Rear mounting, footrest
14	Protective stopper
15	Brake
16	Rear wheel 22"
17	Handrim stainless
18	Rear axle
19	Quick release hub
20	Anti-tips
21	Wheel mounting
22	Backrest angle plate
23	Locking knob, push handles

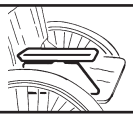
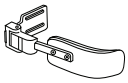
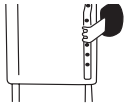
4 Model Sting

Standard model	Alternative model (option)
Seat settable in height and angle Front seat height set at 45 cm 5" allround castors Front fork short with 3 alternative height settings for the castor wheels. Rear seat height 43 cm Seat depth 30 cm (5 cm upholstery tuck-in)	**Seat settable in height and angle** Front seat height 43-52.5 cm 6.5" allround, 6" pneumatic Front fork medium with 3 alternative heights settings for the castor wheels Rear seat height 37-48 cm 25-35 cm
Rear wheels with quick-release hubs 22" high-pressure tyres Handrims: aluminium Camber angle 3°	**Rear wheels with quick-release hubs** 1 x 3/8" low-pressure tyre (with inner tube) 20", 22", 24" 1" high-pressure tyre (with inner tube) 24" Solid tyres 20", 22" and 24" Handrims: stainless, titanium, cellular rubber or plastic coated
Backrest settable in height and angle Backrest height installed at 27 cm Backrest angle set at -3° Adjustable backrest upholstery in velour and plush Push handle, height adjustable	**Backrest settable in height and angle** Backrest height 25, 29, 31, 33 and 35 cm Backrest angle alternatives: 0°, 3°, -5°, -8°, -10° Bow handle, height adjustable
Footrest, settable in height, depth and angle. Rear attachment is a swivelling strap	**Footrest, settable in height, depth and angle.** Rod for fixed positions (see accessories)
Brakes: wheel lock with long handle	
Transparent mudguards	Armrest, sideguard (accessory)
Cushion, grey plush, 35 cm long	
Anti-tip, foldable, settable in height and adjustable in length.	

5 Options

Handrims cellular rubber, titanium, stainless or plastic coated	
Castor wheel alternative model available	
Bow handle height adjustable, detachable	
Rear wheel alternative model available	
Tyre alternative model available	
Fixed attachment length adjustable, for rear fixed installation of footrest	

5 Accessories

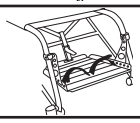
Armrest height adjustable, short, black	
Armrest cover padded or gel., dark grey plush or black Dartex, removable	
Side guard hard, black	
Tray transparent (in combination with armrest)	
Brake lever extension	
Trunk support settable in height and depth, swing-away*	
Trunk support settable in height and depth	

Settable= Adjusted using tools.
Adjustable= Adjusted without tools.

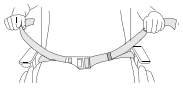
5 Accessories

Headrest with angled rod, adjustable in height, depth and angle.*

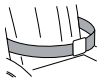
Foot strap



Positioning belt two pieces, with snap-lock, fixing points on the wheelchair frame



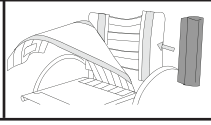
Seat belt with snap lock



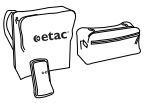
Spoke guard with colour print

Tool kit

Back wedge length 15 and 30 cm, attached with Velcro



Bags
front bag
backpack
mobile holder



Rain cape Proof
Information is available at www.etacbutiken.se

Weather protector Proof
Information is available at www.etacbutiken.se

Leg warmer Proof
Information is available at www.etacbutiken.se

Gloves
Information is available at www.etacbutiken.se

Bags Case Logic
Information is available at www.etacbutiken.se

* = only for the Swedish market

Settable= Adjusted using tools.
Adjustable= Adjusted without tools.

6 Settings seat

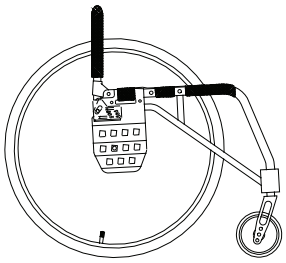
6:1 Front seat height

The front seat height (settable 43-52.5 cm) is dependent on: 5", 6" or 6.5".
Front fork attachment Settable in angle.

Front fork: Short or medium with three alternative height settings for the castor.

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

(!) See also point 13: "Alternative seat heights/angles".

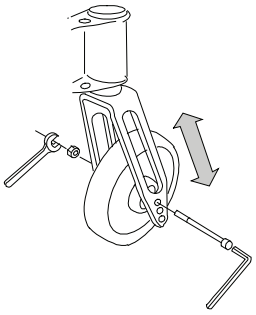


6:2 Castor wheel

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.

(!) Also adjust the angle of the front fork attachment, see point 6:4.

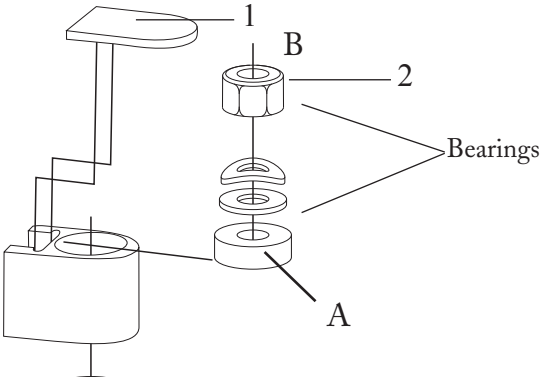


6:3 Changing front fork

Unscrew the protective stopper (1) on the front fork attachment to reach the retaining nut (2). Unscrew the nut and pull out the front fork. Take the washer from around the fork axle 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.

(!) Also adjust the angle of the front fork attachment, see point 6:4.



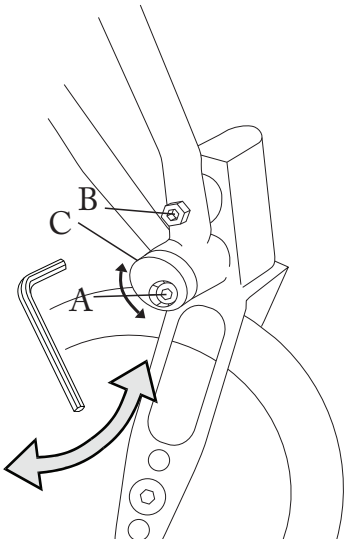
6 Settings seat

6:4 Setting the angle of the front fork attachment

Unscrew the lower screw (A) ½ a turn and the upper screw (B) ¼ of a turn. Insert a small Allen key into the opening (C) at the edge of the casing, and turn it until the attachment is at 90° to the floor. Hold the casing in place with the Allen key while tightening the upper and lower screws.

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

(!) Keep your eye on something vertical, e.g. a doorpost or a table leg when setting the angle. This adjustment must be made when the seat angle has been changed.

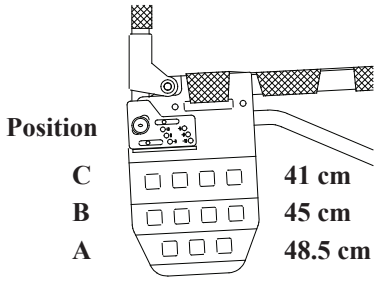


6:5 Rear seat height

The rear seat height is dependent on: The size of the rear wheels: 20", 22" and 24" The position of the rear wheels, 3 alternative heights: A-B-C

Risk of tipping: Always check the position of the anti tips.

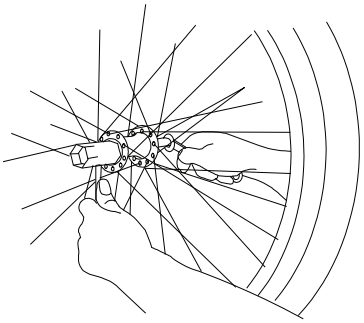
(!) See also point 13: "Alternative seat heights/angles".



6:6 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 completely.



6 Settings seat

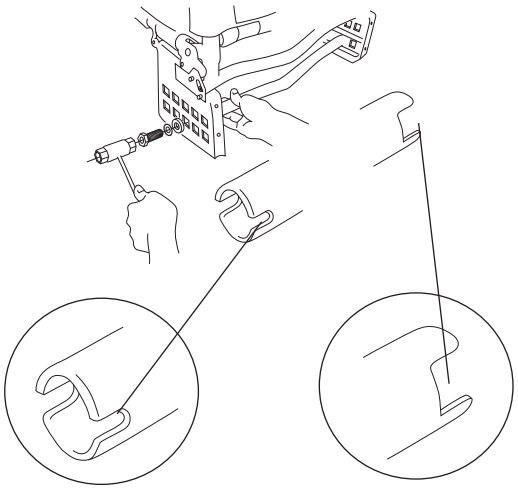
6:7 Height adjustment of the rear wheels

Unscrew the axle sleeves and washers, tilt the rear axle to free it and mount it at the required height. Mount the rear axle with the large bevelling towards the right wheel attachment. At the same time as the rear seat height is being adjusted you should make sure you have set the correct centre of balance. See point 9:8.

Tools: 21 mm socket spanner.

Check that the rear wheels are correctly mounted, see point 6:6. Always check the position of the anti-tips.
Always adjust the brakes after re-positioning the rear wheels.

(!) Also adjust the angle of the front fork attachment.



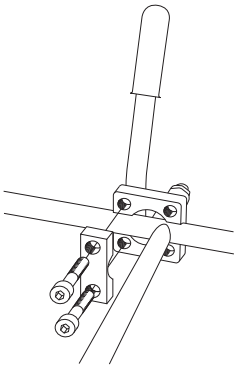
6:8 Adjusting the brakes

The brakes are variably settable along the lower frame tube.

- Loosen the screws a couple of turns and slide the brake so that the brake block is about 20 mm from the tyre when the brake is not applied.
- Test the brakes.

Tools: 5 mm Allen key

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 are available as accessories, see point 10:16.

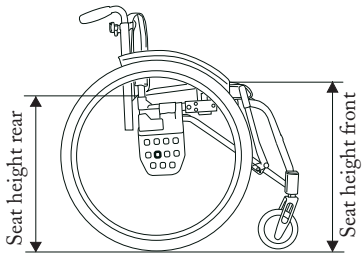
6 Settings seat

6:9 Seat angle

The seat angle is dependent on the difference between the front and the rear seat heights.
The seat angle is settable between 0-10˚ backwards inclination.(0-7 cm)

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

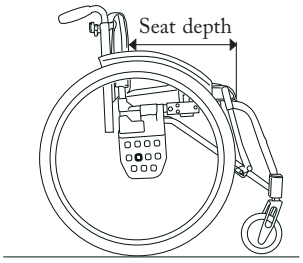
(!) If the seat angle is changed:
- Adjust the angle of the front fork attachments.
- Also check the angle of the backrest.



6:10 Seat depth

The seat depth can be adjusted between 25 and 35 cm by tucking in the front part of the seat upholstery. For increased seat comfort, stretch the front part of the seat by tightening the lacing under the seat, and loosening it at the rear.

(!) The functional seat depth can be up to 3-4 cm longer depending on the settings of the backrest upholstery, see point 7:4.



7 Settings backrest

7:1 Backrest

The backrest is settable in angle and has adjustable upholstery.

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

7:2 Backrest height

The backrest is telescopic and is adjustable between 25-35 cm. Unscrew the lower screw, (A) and loosen the upper screw one turn on both sides. Select the desired height. There are attachment points at 2 cm intervals. Tighten the screws securely.

Tools: 4 mm Allen key;
6 mm Allen key, if required

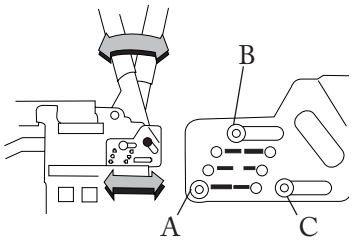
7:3 Backrest angle

The backrest angle has fixed positions at +3° 0° -3° -5° -8° -10°. Remove screw (A) completely, loosen screws (B) one turn. Set the desired angle by inserting screw (A) into the angle indicator required. Tighten the screws again.

Tools: 4 mm Allen key

(!) Fold the backrest down onto the seat whilst adjusting the angle. Allow plenty of room for the backrest cover between the seat and the backrest.

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

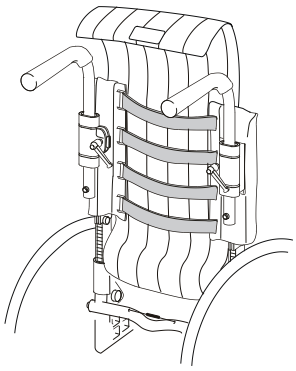


7:4 Backrest upholstery

The contour of the backrest upholstery is individually adjustable by using the four 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 the 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 position of the anti-tips after adjusting the backrest upholstery.



8 Settings: footrests

8:1 Adjusting the footrest in height, angle and depth

Height

- Unscrew the screws on the frame tubes.
  Install the desired height by sliding the footrest attachments up or down along the frame tube.

Tools: 5 mm Allen key

Angle

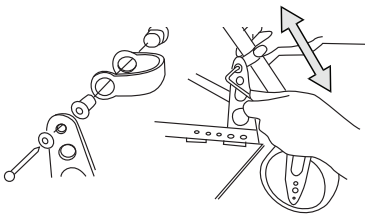
- The angle can be adjusted by raising/lowering the rear attachment strap.

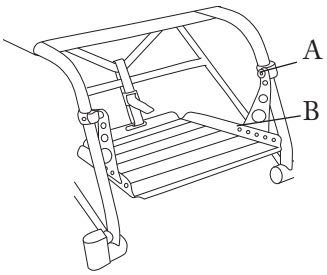
Depth

- The footrest can be moved forwards 4 cm by turning the attachments 1/2 a turn (A) so that the screws are in front of the frame tubes.

The footrest can be moved even further forwards by removing the base plate from its attachments (B) and re-setting it in the desired position. Please note that the footplate will tip forwards more easily when it is moved forwards at (B). The rear attachment strap can be complemented with an attachment rod, (see 8:2).

Tools: 3 mm Allen key and 5 mm Allen key, 8 mm spanner

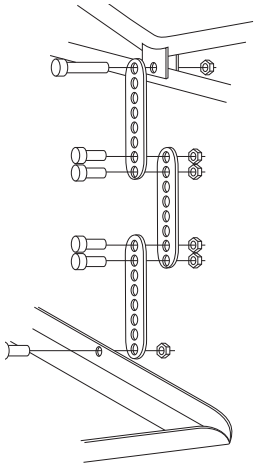




8:2 Fixed rear mounting of the footrest (optional)

A rear fixing rod, adjustable in length, is available as an option for the footrest.

- Adjust the length of the rod.
- Attach the rod as illustrated.



9 Driving technique, settings manoeuvring

9:1 Driving technique

Weight distribution is the decisive factor when it comes to operating conditions. It is in part dependent upon the user's weight, size and seating position and in part upon the position of the rear wheels longitudinally. The more weight that is placed over the rear wheels, the easier the wheelchair is to manoeuvre. The more weight over the castor wheels, the heavier the chair becomes to operate.
The Sting standard model is supplied with a 3° camber angle.
This means that the wheels are a little closer to the seat/backrest on top and are wider apart at floor level. This gives several advantages. The wheelchair:

- turns more easily
- holds a steady course
- has a broader support base

Allows the user to hold his/her arms closer to the body when driving forwards, giving more strength to each push.

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

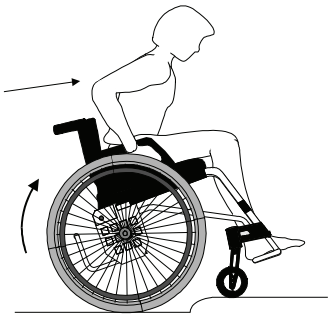
Parking: Increase the overall support base of the wheelchair by reversing for about 10 cm, thereby ensuring the castor wheels swing forwards.

9:2 Driving technique, kerbs and raised thresholds: up

User, driving up forwards:
This technique 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 off the ground to clear the obstacle. 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.



9 Driving technique, settings manoeuvring

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 castors come up on the pavement.
- Lift by the push handles to help the rear wheels up.

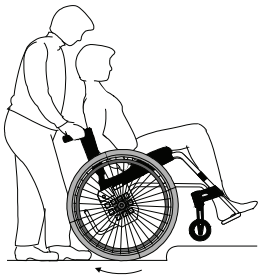
Be sure to turn the anti-tips back to the down position.

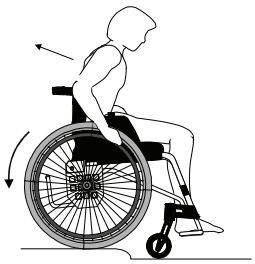
User, driving up backwards:
This technique only works if there is a low kerb/threshold, relative to the installed height of the footrests.
- Ensure that the anti-tips are turned upwards.
- Reverse to the edge of the kerb/threshold. Take a firm hold of the handrims while at the same time leaning forwards.

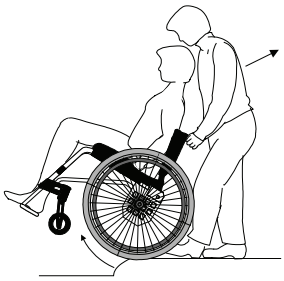
Be sure to turn the anti-tips back to the up position.

Care giver, driving up backwards:
- Reverse the wheelchair up to the kerb/threshold.
- Tilt the wheelchair, if necessary with the help of the tipper bar, so that the castor wheels are in the air.
- Pull the wheelchair up and backwards ensuring that the castor wheels are over the edge before setting down the wheelchair on all 4 wheels.

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







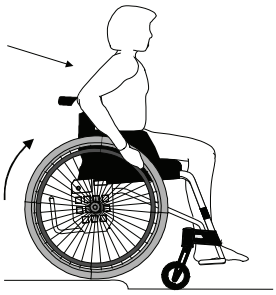
9:3 Driving technique, kerb: down

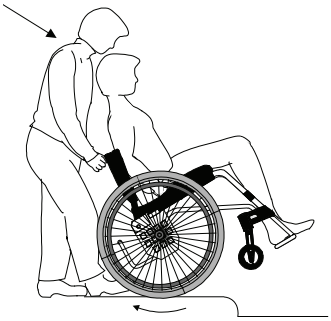
User, driving down forwards:
This technique is recommended only for experienced wheelchair users.
- Ensure that the anti-tips are turned upwards.
- Drive forward to the edge of the kerb.
- Take a firm hold on the handrims and drive "straight out" so that the wheelchair lands on all 4 wheels simultaneously.

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 up, if necessary with help from the tilter, so that the castor wheels are in the air.
- Drive carefully down the kerb and set down the castor wheels onto the ground again.

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





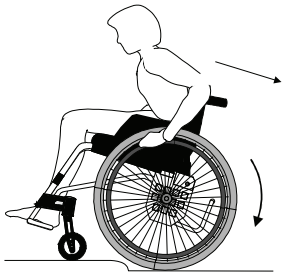
9 Driving technique, settings manoeuvring

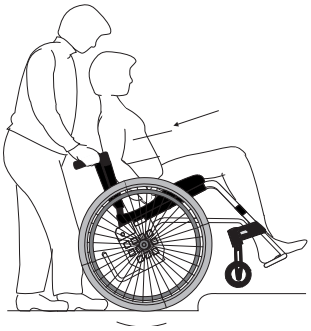
User, driving down backwards:
This technique is not recommended for differences in level of over 10 cm.
- Ensure that the anti-tips are turned upwards.
- Reverse to the edge of the kerb.
- Reverse carefully down while at the same time leaning forwards.

⚠ 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 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.





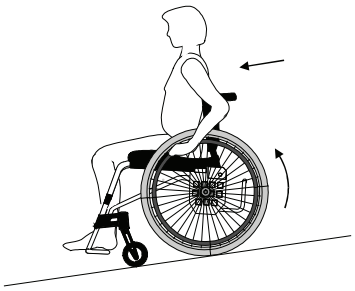
9:4 Driving technique inclined surface

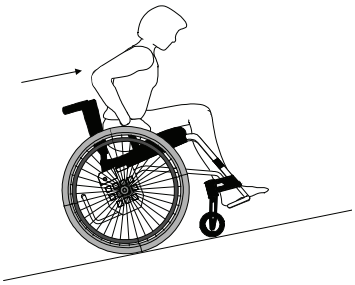
Please read this important advice for driving up or downhill carefully to minimise the risk of tipping.

(!) 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 by means of the brakes!





9 Driving technique, settings manoeuvring

9:5 Driving technique, stairs: up

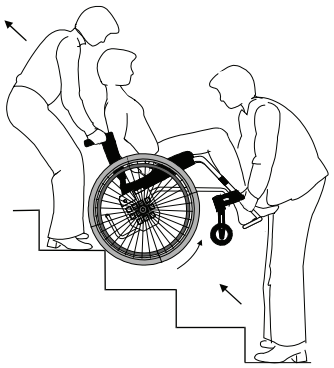
⚠ Always ask for help. Never use an escalator, even if a care giver is available. We always recommend using two carers for this transfer. One who walks behind and holds on to the push handle and one who walks in front and holds on to the frame (or in the legrests if these are lockable).

With care giver, backwards:

- Turn the anti-tips upwards and ensure that the push handles are securely tightened.
- Reverse the wheelchair to the first step.
- Tilt the wheelchair onto its rear wheels.
- Pull the wheelchair slowly upwards, one step at a time, keeping it balanced on its 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 onto 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.



9:6 Driving technique, stairs: down

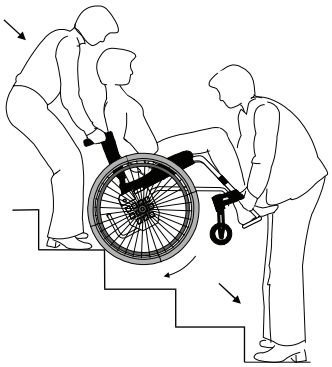
⚠ Always ask for help. Never use an escalator, even if a care giver is available. We always recommend using two carers for this transfer. One who walks behind and holds on to the push handle and one who walks in front and holds on to the frame (or in the legrests if these are lockable).

With care giver, forwards:

- Be sure to turn the anti-tips back to the up position and ensure that the push handles are securely tightened.
- Drive forward to the first step and tilt the wheelchair onto its rear wheels.
- 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.



9 Driving technique, settings manoeuvring

9:7 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:

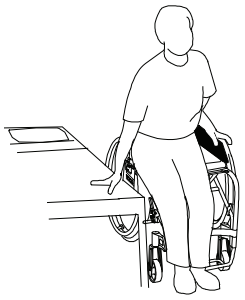
- Reverse the wheelchair 5-10 cm so that the castors are turned fully forwards. The wheelchair should be placed as close to where the transfer is going to take place as possible.
- Apply the brakes, remove the armrest/sideguard on the side where the transfer is to take place.

With or without a care giver, from the front.
Before transferring:

- Reverse the wheelchair 5-10 cm so that the castors are turned forwards. The wheelchair should be positioned close to where the transfer is going to take place.
- Apply the brakes.

△ Never stand on the footrest or the footrests as the chair may tip!

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



9 Driving technique, settings manoeuvring

9:8 Adjusting the centre of balance

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

- Remove the axle shaft and its washers and move the back axle forwards or backwards as per point 6:7.

Also adjust the brakes, see point 6:8.

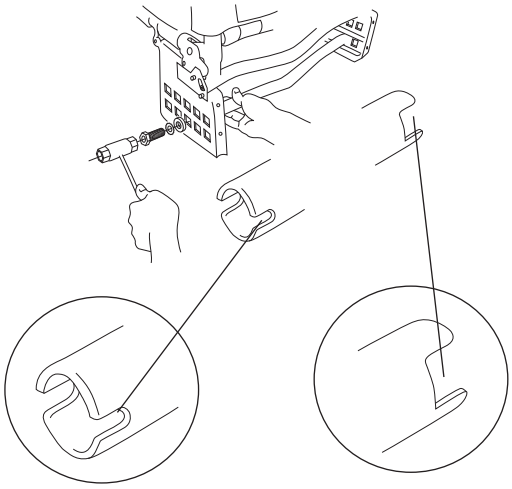
Tools: 21 mm socket spanner

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.

Check carefully that the rear wheels are securely mounted, see point 6:6.



9:9 Handrims

Sting is delivered as standard with aluminium handrims. 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. Stainless, friction-coated, cellular rubber and plastic coated handrims are available as options.

The optional handrims give a better grip, but also increase friction.
It is therefore important to remember that when stopping suddenly, friction burns (e.g. blisters) may occur.

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

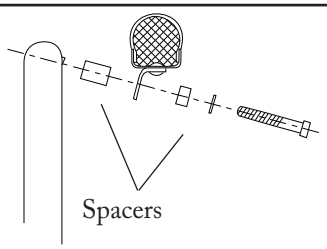
If there is a risk of the user's fingers getting caught in the spokes we recommend spoke guards.

9 Driving technique, settings manoeuvring

9:10 Adjusting the distance of the handrim

The distance between the wheel and the handrim can be adjusted by adding or removing spacers.

Tools: 4 mm Allen key.



9:11 Handrims

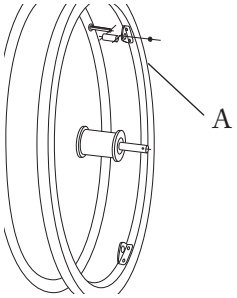
Sting is delivered as standard with aluminium handrims.
To improve your grip on the handrim it may be necessary to adjust the spacing between handrim and wheel.

Stainless, titanium, plastic-coated or expanded cellular rubber handrims are available as options.

9:12 Distance between wheel and handrim

The distance between the wheel and the handrim can be reduced by removing the handrim from the wheel and shortening the plastic spacers (A).

Tools: 10 mm spanner and hacksaw

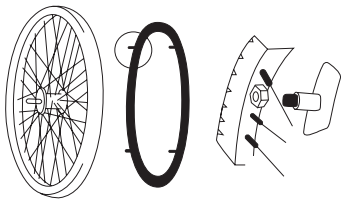


9:13 Mounting of cellular rubber handrims (option)

Cellular rubber handrims are attached directly to the spokes.

- Remove the existing handrim.
- Unscrew the nuts on the cellular rubber handrim.
- Twist the handrim until each of the fasteners is attached to a spoke.
- Tighten the nuts on the rear of the wheel. Be sure not to overtighten them as this may cause the spokes to bend.

Tools: 13 mm spanner



10 Assembly instructions: accessories

Assembly instructions are always provided with accessories when they are delivered from Etac.

Instructions are also available on our website www.etac.com

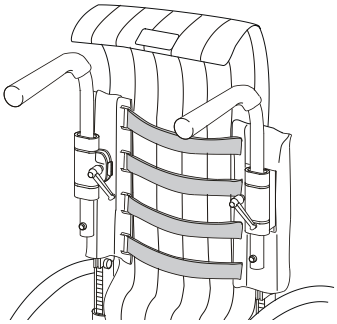
10:1 Height adjustable push handles

The push handles can be set at intervals of 5 cm.

Remove the backrest upholstery, fix the smaller of the fixing lugs to the back tubes. Mount the upper push handle attachment onto the back tubes and replace the upholstery. Fix the attachment tube for the vertically adjustable push handles into the upper attachments. Mount the larger fixing lugs onto the tubes. Secure by means of the screws and nuts. Fix together the two attachment tubes in the middle. Tighten all screws. Loosen the knobs on the attachment tubes and install the required height for the push handles. Tighten the knobs.

Tools: 4 mm, 5 mm, 6 mm Allen key and 10 mm spanner

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.



10:2 Anti-tip

The anti-tip consists of four parts:

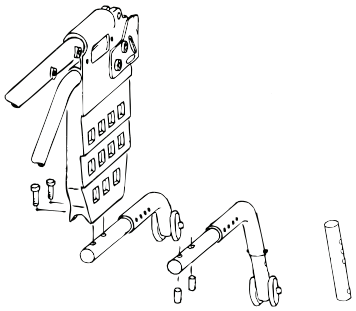
- The attachment bar is mounted under the wheel mount (see illus).
- The anti-tip bar snaps onto the attachment bar at the required length.
- The extension with the stabiliser wheel is fixed to the anti-tip bar by means of a screw and nut at the desired height.

To allow you to negotiate thresholds and the edges of thick carpets, a distance of 3-4 cm from floor level is recommended. A special anti-tip with a shorter anti-tip bar is available for Sting with 20" wheels mounted in position C.

Tools: 4 mm Allen key, 8 mm spanner. 2 x 5 mm Allen keys for affixing to chassis.

(!) The extended extra anti-tip bar is recommended when the rear wheels are mounted in position A.

After adjusting the seat height, centre of balance or backrest angle, the function of the anti-tip should always be checked.

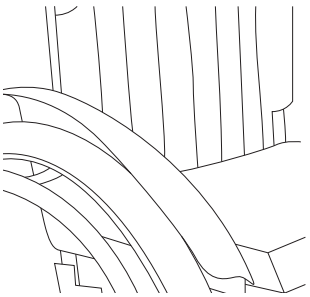


10 Assembly instructions: accessories

10:3 Mudguards

There are 3 different sizes of mudguard depending on the position in which the rear wheel is mounted: A, B or C.
The mudguards are settable so that the centre of balance of the rear wheels may be adjusted in positions 1, 2, 3 or 4:

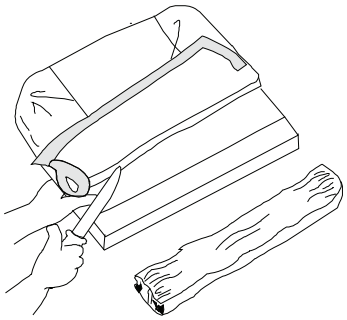
- There are two optional positions for mounting the attachment bar to the mudguard.
- The mudguard can be extended ever further by turning the fastening on the seat frame.



10:4 Seat cushion

The cushion is delivered 35 cm long. It 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.



10 Assembly instructions accessories

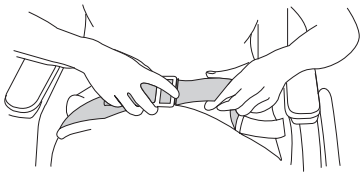
10:5 Seat belt

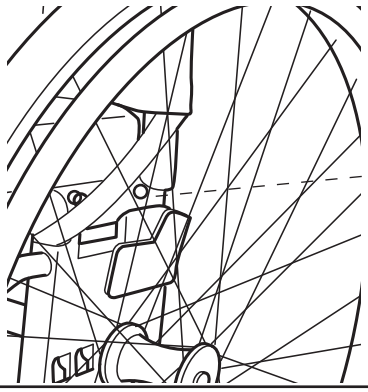
The belt is adjustable in length and has a snap-lock.
Assembly instructions are supplied with the belt.

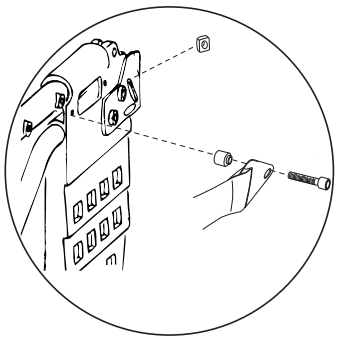
(!) Ensure that the user does not slide forwards in the seat as this can lead to the belt impairing the supply of blood to the hip/waist area.

The belt can be secured in one of the two holes in front of the back joint.

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







10:6 Armrest, detachable, height adjustment

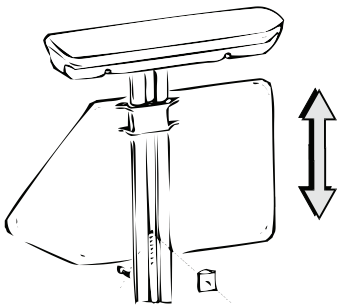
The detachable armrest is available with a short armrest guard. The armrest attachment is settable between 17-24 cm with 1 cm intervals. Detachable padded covers are available as options.

- Fully loosen the screw on the side guard. It secures the locking lug for height adjustment.
- Slide the guard up or down to the desired height.
- Retighten the lug on the sideguard.

Tools: 3 mm Allen key.

(!) The lock lug is used both to set the height of the armrest and secure the side guard: If the height of the side guard is to be moved along with the height of the armrest, an extra locking lug and screw can be ordered.

Never use the armrests to lift the wheelchair.



10:7 Padded cover, armrest

The padded cover or gel cover can be fitted to the detachable armrest as an accessory or can be ordered as an original option. It is made of dark grey plush and is washable.

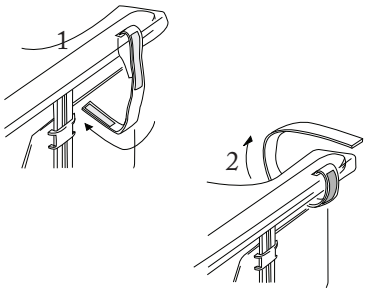
(!) The cover makes the armrest 1.5 -2 cm higher.

10 Assembly instructions accessories

10:8 Mounting the tray

The tray is made of Plexiglas and is shaped to fit around the body. It comes in three sizes and is mounted onto the armrests.

- Wrap the velour strap around the armrest (1) starting at the outside and continuing...
- down...
- and up the inside (2).
- Fasten by means of the Velcro on the tray.



10:9 Trunk support settable in height and depth

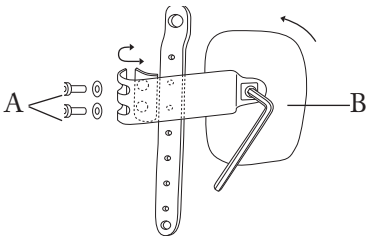
The attachment rod is fixed to the rear of the backrest between the push handle and the height-adjustment screw. If height adjustable push handles are being used, the trunk support should be mounted closest to the backrest with the push handle attachment at the outside. The trunk support is settable in height, angle and depth.

Height: Attach the trunk support to the attachment rod (2 screws A) at the desired height.

Depth: Loosen the screws (A) one turn and twist the trunk support inwards or outwards. Re-tighten the screws.

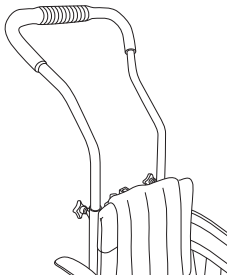
Angle: Loosen the screw (B) which fixes the trunk support, and twist the support to the desired position. Re-tighten the screw.

Tools: 4 mm Allen key



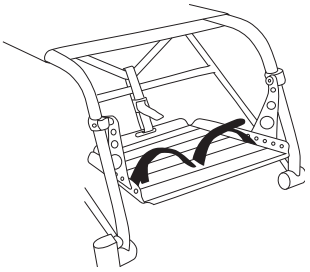
10:10 Bow handle (option)

Remove the push handles from their attachment tubes. Insert the bow handle, install at the desired height and tighten the knobs.



10:11 Foot strap

The footrest can be equipped with a foot strap if the feet need to be held in place.

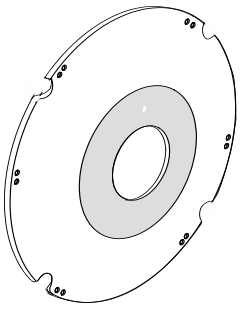


10 Assembly instructions accessories

10:12 Spoke guards

The spoke guards prevent your fingers from becoming entangled in the spokes and also give some protection against splashing.

Assembly instructions are provided with the spoke guards.



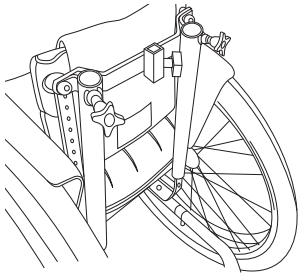
10 Assembly instructions accessories

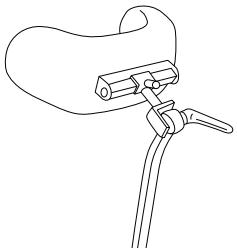
10:14 Headrest mount*

The headrest is adjustable in height, depth and angle. Remove the back tubes by loosening the screws. Affix the headrest mount and replace the push handle tubes. Slide the headrest support into place and fasten at the required height using the screws.

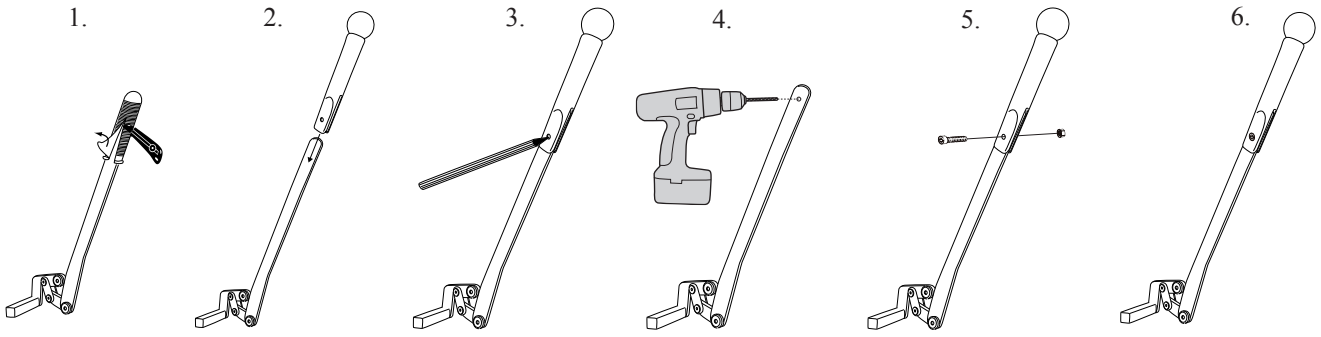
(!) The attachment can be made even longer by turning the headrest support 180°.

Tools: 6 mm Allen key





10:16 Brake lever extension



11 Care and maintenance

Upholstery

The upholstery is made of two-ply polyester or coated fabric.
The seat upholstery is secured by means of strings around the seat frame. The upholstery can easily be removed from the chassis by loosening the strings under the seat.
The backrest upholstery is removed by loosening the cover, and any accessories, and then pulling the upholstery upwards.

Wash seat and backrest upholstery according to the washing instruction.

Rear wheel/castor, front fork attachment

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.

Brakes

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 6:8.

Washing the frame

It is important to keep the wheelchair clean, both for your own comfort and the longevity of the chair. Sting is easy to wash and keep clean. Wash the chair with car shampoo or washing-up liquid. If the chair is particularly dirty a grease remover can be used.

Touch-up paint

Touch-up paint is available for minor scratches and chips in all the frame colours available for Etac wheelchairs.

Miscellaneous

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 Sting 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.

11 Care and maintenance

Fault-finding chart

Problem*	Solution
The wheelchair pulls to the side	- Inflate the tyres -Adjust the angle of the front fork attachment - Check that the front fork attachments are mounted at the same height - Rear wheel mountings are incorrectly fitted - The user is distributing weight unevenly - More strength being used on one side than the other when propelling the chair
The wheelchair feels "heavy" to propel	- Inflate the tyres - Rear wheel mountings are incorrectly fitted - Clean the castor axles from hair and dirt - Too much weight over the castors. Adjust the centre of balance
The wheelchair feels "heavy" to turn	- Inflate the tyres - Check that the front forks are not too tight -Adjust the angle of the front fork attachment - Clean the castor axles from hair and dirt - Too much weight over the castors. Adjust the centre of balance
Brakes not effective	- Inflate the tyres - Adjust the distance between brake and tyre
Rear wheels "loose"	- Ensure that the axle-shaft washer is in place - Adjust the length of the axle shaft
Rear wheels hard to remove/replace	- Clean and lubricate quick release with cycle oil or similar - Adjust the length of the axle shaft
The castors "wobble"	- The front forks are not tight enough - Check that the front fork attachments are mounted at the same height -Adjust the angle of the front fork attachment - Too much weight over the castors. Adjust the centre of balance
The wheelchair feels "awkward"	- Inflate the tyres - Check that screws, nuts and bolts are properly tightened

(!) 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.

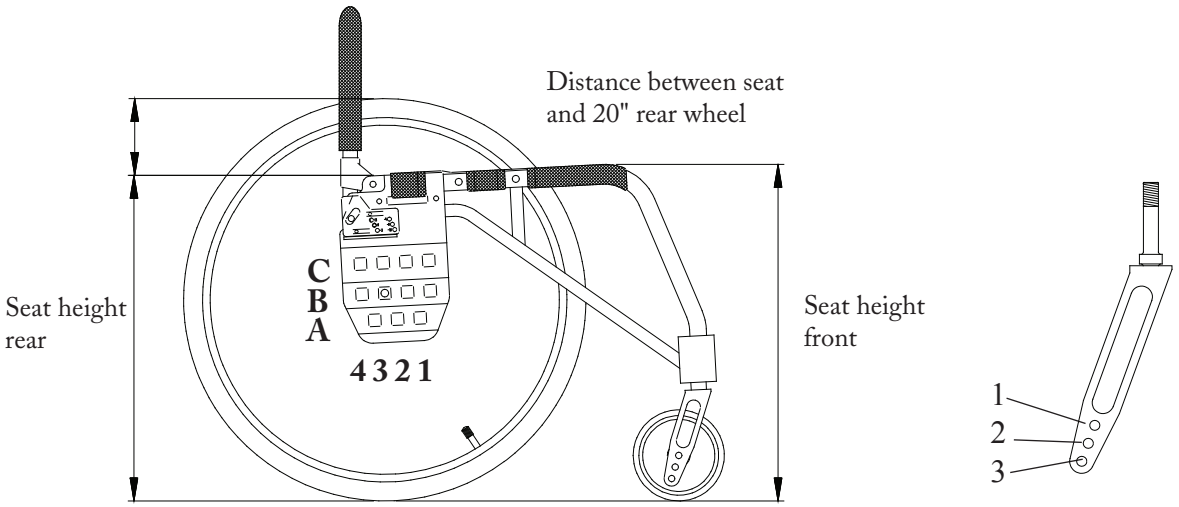
12 Tests and guarantees

Sting	is tested and approved for use indoors and outside and is CE marked. Max. user weight is 50 kg.
The Swedish Institute of Assistive Technology	carries out both functional and technical tests. Testing methods conform to ISO standard 7176.
CE marking:	The product has passed all tests and met all criteria set by European standards for specific product groups. A proof that the product meets national and the EU's MDD (**M**edical **D**evice**D**irective) requirements. Gives customers the chance to choose the right product by comparing test data.
Guarantee:	5 year guarantee against material and manufacturing defects. For terms and conditions, see www.etac.com
Special adaptations	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.
Combining	Sting with another product, not manufactured by Etac: In general neither of the products will retain their CE marking.

13 Alternative seat heights/angles

20" Rear wheel

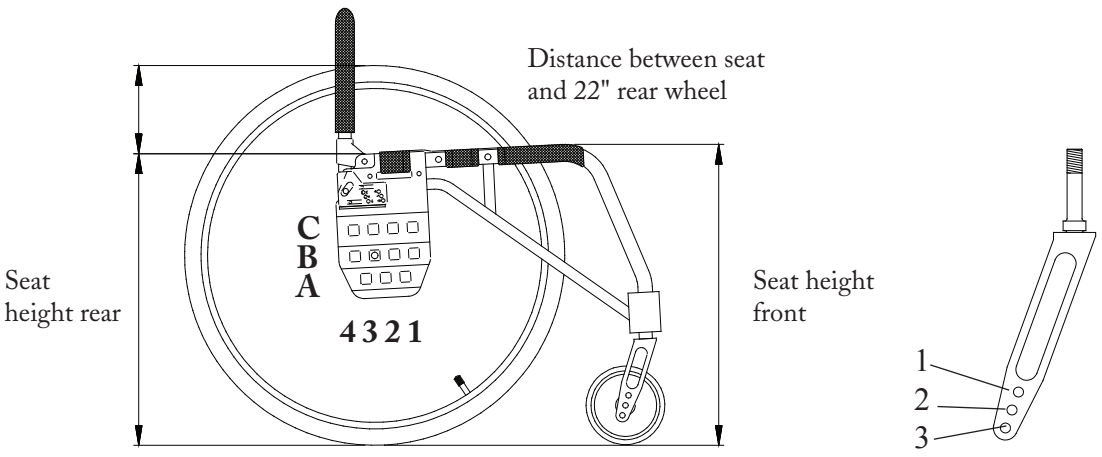
	Seat height rear cm	Seat height front cm	Distance rear wheel -seat cm	Seat angle	5" Castor		6.5" Castor	
					Rear wheel position C-B-A	Fork position 1-2-3	Rear wheel position C-B-A	Fork position 1-2-3
	37	37	15	0°	_	–	_	_
C	37	39	15	3°	_	–	_	_
	37	41	15	6°	_	–	_	_
	41	41	11	0°	_	–	_	_
B	41	43	11	3°	B 1-4	Short-1	_	_
	41	45	11	6°	B 1-4	Short-2	_	_
	44.5	44.5	7	0°	A 1-3	Short-1	_	_
A	44.5	46.5	7	3°	A 1-3	Short-3	A 1-3	Short-2
	44.5	48.5	7	6°	A 1-3	Medium-1	A 1-3	Short-3



13 Alternative seat heights/angles

22" Rear wheel

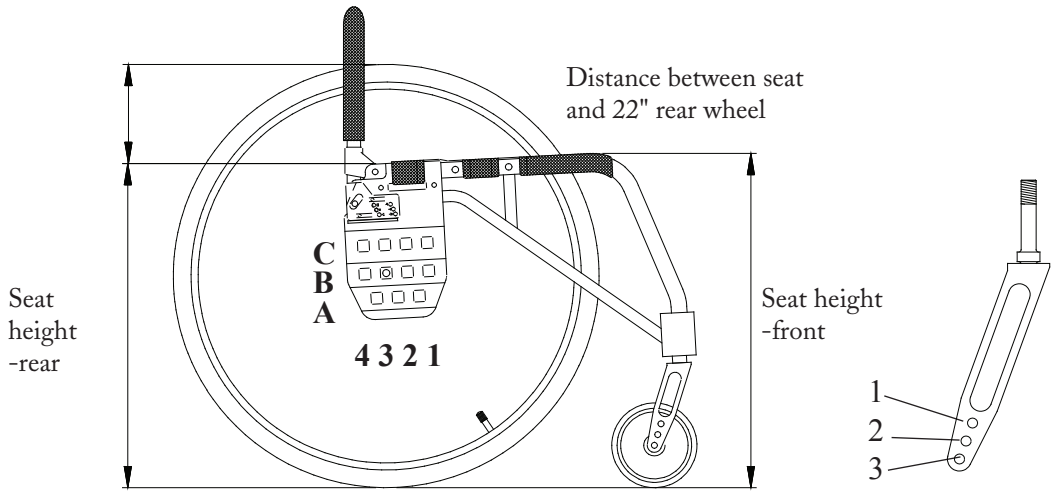
	Seat height rear cm	Seat height front cm	Distance rear wheel -seat cm	Seat angle	5" Castor		6.5" Castor	
					Rear wheel position C-B-A	Fork position 1-2-3	Rear wheel position C-B-A	Fork position 1-2-3
	40	40	17.5	0°	_	_	_	
C	40	42	17.5	3°	_	_	_	
	40	44	17.5	6°	C 1-4	Short-1	_	
	44	44	13.5	0°	B 1-4	Short-1	_	
B	44	46	13.5	3°	B 1-4	Short-2	_	
	44	48	13.5	6°	B 1-4	Medium-1	B 1-4	Short -2
	47.5	47.5	10	0°	A 1-3	Short-3	A 1-3	Short -3
A	47.5	49.5	10	3°	A 1-3	Medium-1	A 1-3	Short -3
	47.5	51.5	10	6°	A 1-3	Medium-3	A 1-3	Medium-2



13 Alternative seat heights/angles

24" Rear wheel

	Seat height rear cm	Seat height rear cm	Distance rear wheel-seat cm	Seat angle	5" Castor		6.5" Castor	
					Rear wheel position C-B-A	Fork position 1-2-3	Rear wheel position C-B-A	Fork position 1-2-3
	41	41	19	0°	C 1-4	–	–	
C	41	43	19	3°	C 1-4	Short-1	–	
	45	45	15	6°	B 1-4	Short-2	–	
	45	45	15	0°	B 1-4	Short-1	–	
B	45	47	15	3°	B 1-4	Short-3	B 2-4	Short -2
	45	49	15	6°	B 1-4	Medium-1	B 3-4	Short -3
	48.5	48,5	11	0°	A 1-3	Medium-1	A 2-3	Short -3
A	48.5	50.5	11	3°	A 1-3	Medium-2	A 2-3	Medium-1
	48.5	52,5	11	6°	A 1-3	Medium-3	A 2-3	Medium-2



14 Weights and dimensions, standard models

Sting							
Seat width 	Item. no. 	Seat depth from backrest 	Seat height front, without cushion 	Seat height rear, without cushion 	Backrest height 	Total width 	Weight without rear wheels 
27.5 cm	13110201-	25-35 cm	43-52.5 cm	37-48 cm	25-35 cm	38 cm	8.3 kg
30 cm	13110202-	25-35 cm	43-52.5 cm	37-48 cm	25-35 cm	40.5 cm	8.4 kg
32.5 cm	13110203-	25-35 cm	43-52.5 cm	37-48 cm	25-35 cm	43 cm	8.5 kg
35 cm	13110204-	25-35 cm	43-52.5 cm	37-48 cm	25-35 cm	45.5 cm	8.6 kg

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

Given measurements can vary +/- 1 cm

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