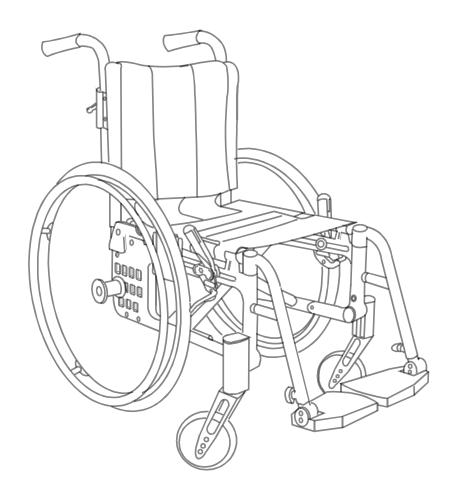




74137 - 24-01-08 - Version 13



Etac Cross









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1. General

Thank you for choosing an Etac product. In order to avoid damage during assembly, handling and use, it is important to read this manual and save it for future reference. You can also find it at www.etac.com. You can select your language via the "International" and "Local websites" link. Here you will also find other product documentation, such as prescriber information, pre purchase guide, and reconditioning instructions.

In this manual the User is the person sitting in the chair. The Care giver is the person helping the user.



To avoid damage or injury during handling and use, this manual should always accompany the device.

Device description

Cross (hereafter also referred to as "the device" or "the product") is a manual wheelchair with cross-folded frame. It is adaptive and configurable through adjustable settings, options and accessories.

Intended purpose

Cross is an assistive device intended for the alleviation of or compensation for a physical impairment due to an injury or disability. The device is designed for mobility. The device is designed for hand and/or foot propulsion and/or to be pushed and steered by an assistant.

Intended user group

The user group for the device is based on the individual's functional ability and not on a specific diagnosis, health condition or age. The device is intended for individuals with a height of 146 cm or more, or a mass of 40 kg or more.

Secondary users of the device are attendants providing assistance and clinicians/technicians who set up the device.

Intended environment

The device is intended for indoor and outdoor use on levelled ground and accessible terrain. It is not to be exposed to salt water. The device has fixation points for transport in motor vehicle.

Intended application

The device is intended for short-term and long-term use. The device is intended to use with a seat cushion. The device is intended for use with intact skin only. The device is intended for refurbish and reuse.

Expected service life

The expected service life of the device is 10 years. Preventive maintaince is recommended. Lack of maintenance may reduce the expected service life of the device. For full information on the expected service life, see www.etac.com.

Indications

Indication for use is disability, including, but not limited to, an impaired ability to ambulate.

Contraindications

There are no known contraindications.

Warnings

Warnings describing a risk element for a specific action or setting of the device can be found in the relevant section.



A defective device must not be used



Bright sunlight can heat up parts of the wheelchair and cause burns



After adjusting seat height, centre of balance, back support angle or back support upholstery, the anti-tips function must always be checked.



This device can be adjusted beyond safe use. The prescription of the device must be done by medical personnel and tested by a specialist.

Declaration of conformity

The device conforms with MDR (EU) 2017/745. The device is tested and conforms with EN 12183.

Pre-purchase information

Pre-purchase information can be found at www.etac.com.

Adverse event

In case of an adverse event occurred in relation to use of the device, it should be reported to your local dealer and the national competent authority in a timely manner. The local dealer will forward information to the manufacturer.

Customization

Actions outside the instructions and settings in the manual will invalidate the CE marking according to MDR 2017/745 and void the warranty.

Combinations

Risk-managed combinations between Etac devices and devices from other suppliers are presented in the combination list on www.etac.com.

Miscellaneous

Etac regularly improves its products. We therefore reserve the right to modify the products without prior notice. The dimensions given on drawings or other material are solely for guidance. We are not responsible for printing errors or incomplete information.

Tools



Allen key 3, 4, 5, 6 mm



Socket spanner 8, 10, 13, 24 mm

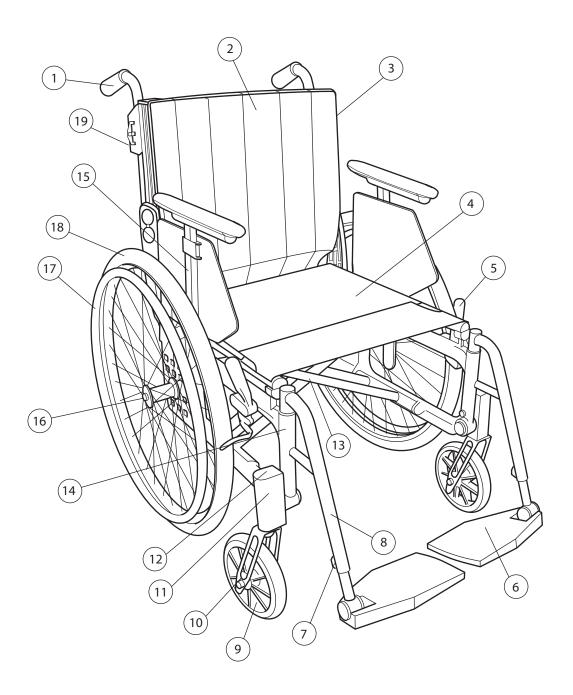


Socket wrench 19 mm

In the centre spread of this manual you will find a removable section that contains user information.



2. Description



- 1. Push handles
- 2. Back support cover
- 3. Back support upholstery
- 4. Seat upholstery
- 5. User brake
- 6. Foot support
- 7. Locking knob, foot support
- 8. Leg support
- 9. Castor wheel
- 10. Front fork
- 11. Front fork attachment

- 12. Cover
- 13. Cross frame
- 14. Side frame
- 15. Arm support
- 16. Quick release hub
- 17. Handrim
- 18. Rear wheel
- 19. Push handle attachment

In the section "The chair's possibilities" you can see all the adaptions possible on the wheelchair. Variations may occur in different markets, e.g. as regards back support models. For more information, see www.etac.com or contact our customer service.

More so called "odd combinations" are available, for example rear wheels and castor wheels. Please, contact our customer service for more information.

		Front	38-51	cm
Seat height	Seat height rear	Rear	38-50) cm
Cook outle		Max forward angle: 2 cm lo	wer front than	back (3°)
Seat angle		Max backward angle: 6 cm	higher front th	an back (9°)
		5" massive (with Cross XL max user weight 135 kg)		
Castor wheel		6,5" massive		
Front fork		Short (three alternative whe	eel height positi	ions). Thickness of 3 or 4
FIGUR TOLK		Medium (three alternative wheel height positions). Thickness of 3 or 4 mm		
		20"		
D l l		22"		
Rear wheel		24"		
		24" Carbon (not in combination with drum brakes)		
		Aluminium		
		Stainless steel		
Handrims		Plastic coated		
		Cellular rubber (not in comb	oination with d	rum brakes)
		Titanium (not in combinatio	n with drum b	rakes)
Cambanan		2°		
Camber angle		0°		
		Black fabric		
Seat		hard seat		
Jeat		ECS: A fixed seat/back supp cushions, detachable	ort system with	n anatomically shaped
Back support 3A			3A	3A high
(one eccentric washer)		Height	32-45 cm	38-51 cm
Back support 3A high		Back support angle	-5° - +20°	-5° - +20°
(one eccentric washer)		Lumbar angle		-16° - +16°

Control	Seat depth	Short frame 36-42 cm (triang	36-42 cm (triangular 36-49 cm)	
Seat depth		Long frame 42-48 cm (triangular 42-55 cm)		
Back support		Height 30-45 cm	Standard	
mod. 2		Angle -5° - +15°	Widened	
Seat depth back support mod. 2	80000 0000 0000	Short frame 36-42 cm. Long frame 42-48 cm. Functional: Short frame 42-48 cm. Long frame 48-54 cm.		
Back support upholstery	Adjustable upholstery			
		Standard		
Back support cover		Comfort		
		Tidy, water-repellent, wipeable		
Push handles/		Height adjustable at intervals of 2 cm.	Push handles	
Bow handle		Detachable.	Bow handle	
Fixed push handles		Right/left fits back support 3/	Д	
Fixed back sup- port with fixed push handles, 2B		Height, low back 35-40 Height, high back 42,5-47.5 Angle -5° - +15°		
Leg supports, detachable swing-away		Normal knee angle		
		Narrow angle (only together with 5" castor)		
3vviiig-avvay	भ्या भ्या भ्या	Narrow angle, short		

		Normal knee angle
Leg supports lockable,		Narrow angle
	B#[]	Narrow angle, short
Lanamanta	Son Son	Elevating with foldable calf support from 40 cm seat width
Leg supports Angle		Elevating with attachment and padded foldable calf support.
adjustable		Elevating with flip-up attachment and calf support.
		Plaster leg support
Leg supports other		Amputee leg support
ottlei		Amputee weight
Arm support		Short 25 cm
Анн зирроге		Long 35 cm
		Std Max length: 51 cm. Min length: 33 cm.
		Extended attachment tubes +10 cm
		Shorter attachment tubes -8 cm
Foot support		One-piece foot support
		One-piece foot support complete for 35-37,5 seat width, adjustable in angle, settable height and depth
		Low widened
Front fork attachment	+ 6 cm	Standard
		widened 6 cm
		Angled handle
Brakes		Extended handle
		Single hand brake (standard or angled handle)

Drum brako		Brake handle 75 mm grip	
Drum brake		Brake handle 100 mm grip	
Single hand drive			For right or left side. Telescoping axle, easy to remove when folding. (Not in combination with drum brakes)
Frame colour	01 = Black	92 = White	93 = Dark blue

4. Accessories

Assembly instructions are always provided with accessories when they are supplied by Etac. Instructions are also available on our website, www.etac.com

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

Arm support	height-adjustable 25 cm long, solid top, black	
Arm support	height-adjustable 38 cm long, solid top, black	
Arm support cover	detachable, 25 or 38 cm long padded or gel, dark grey plush or black Dartex	
Arm support cushion Hemi	swing-away for mounting on long arm supports	
Arm support locking Kit	A locked arm support is not detachable but its height can be adjusted freely.	
Arm support foldable	height adjustable or fixed height (not with telescopic anti-tips. Use anti-tips for Etac Cross Active, item no 25177)	
Side guard	black	
Mudguard	right and left	
Thigh support		

4. Accessories

Thigh support	With soft cushion	
Widening kit	to extend handrims, brake and arm supports 5 mm on each side	
Tray	transparent, fits onto long arm support	
Hemi tray	transparent, width 35-50 cm. Can be fitted onto short or long arm supports.	
Anti-slip device	for the Hemi tray	
Tray Hemi/Communication	tip up right/left	
Seat extension	To be used together with triangular back	
Seat cushion	dark grey plush and black velour, 56 cm, cut according to seat depth set, washable	
Seat cushion Tidy	water-repellent, wipeable	
Comfort wedge	for the cushion, evens out the front part of the seat	98
Cover for calf support	on angle adjustable leg support model 3, black Dartex	
Calf strap	detachable, black nylon, adjustable in length	
Padding	for calf strap	
Calf support	Plush. To be mounted/adjusted with velcro	
Heel straps	black nylon, adjustable length	
Foot support, padding	For foot support with depth 13 cm	
root support, padding	For solid, angle adjustable foot support	

4. Accessories

Extended foot support	fits onto the existing foot support, from seat width 40-55 cm	
Positioning belt	two pieces, with snap-lock, fixing points on the wheelchair frame	
Seat belt	with snap lock	
Head support	Adjustable in height, depth and angle.	
теши зиррот	With side support. Adjustable in height, depth and angle. Hygiene cover	
Head support attachment	Cross back 3A, mod 4	
Head support attachment	To be mounted on bow handle	
Cross brace	Cross back 3A. With snap lock	
Cross brace	Cross back 2. With snap lock	
Back wedge	Three different sizes, attached with Velcro. Provides support and contour. The wedges can also be combined with other accessories and cut to desired size. Several wedges can also be put together.	
Back wedge	length 15 and 30 cm, attached with Velcro	
Side cushion	Provides gentle lateral support. Used when the trunk support is too stabilising. (Combined with arm support and, if necessary, side stop)	
Side stop	Straight or angled. Combined with wedge or side support cushion. Creates a more distinct stop and holds the wedge or side support cushion in place.	
Trunk support	Settable in height, depth and width. Detachable	
Trunk support	Swing-aside and detachable. Settable in height, depth and width	
Trunk support	Cross back 3A, PUR or Dartex	

4. Accessories

Trunk support	Cross back 3A, swing-aside, medium or large cushion	
Anti-tips	telescopic, foldable, settable height, adjustable length and angle (not with foldable arm supports)	
Anti-tips	telescopic, foldable, settable height, adjustable length	
Cane holder	two parts, one of which is an elasticated section that is fastened around the cane	
Drip stand	Bracket and stand	
Spoke guard	with grey or yellow print	(6)
Tetra quickrelease adapter	for persons with reduced hand function	
Tool kit		೨

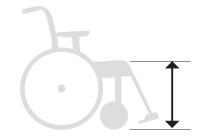
Front seat height

The front seat height may be adjusted by:

- -Using the front fork attachment, adjustable in height and angle.
- -Changing the position of the castor wheel.
- -Changing the front fork.
- -Changing the castor



Tipping risk! Always check the anti-tip function after adjustments!



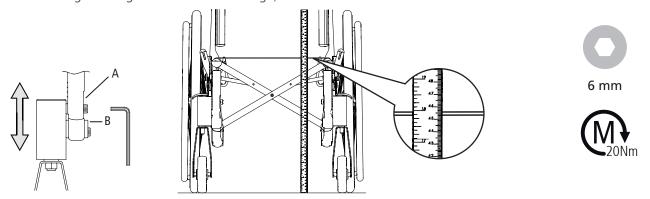
Adjusting the front seat height by using the front fork attachment

Loosen the screws (A and B). Set the desired seat height by measuring from the floor to the seat upholstery and tighten the screws on one front fork mounting. Use the position markings as a reference for adjusting the height on the other side. Tighten the other mounting. Check and adjust so that the mountings are perpendicular. (See section 'Angle setting of front fork mounting'.) Fine-

tune the height of the front fork mountings so that both wheels are flush with the floor.



Tipping risk! Always check the anti-tip function after adjustments!

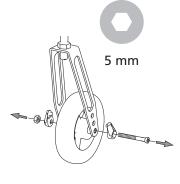


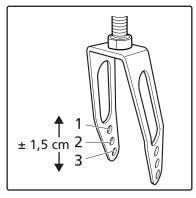
Adjusting the front seat height by changing the position of the castor wheel

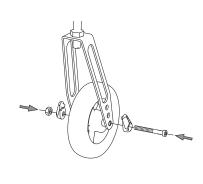
See also section "Front seat height table".



Tipping risk! Always check the anti-tip function after adjustments!







Adjusting the front seat height by changing the castor wheel/front fork

See sections "Adjusting the front seat height by changing the position of the castor wheel" and "Front seat height table".



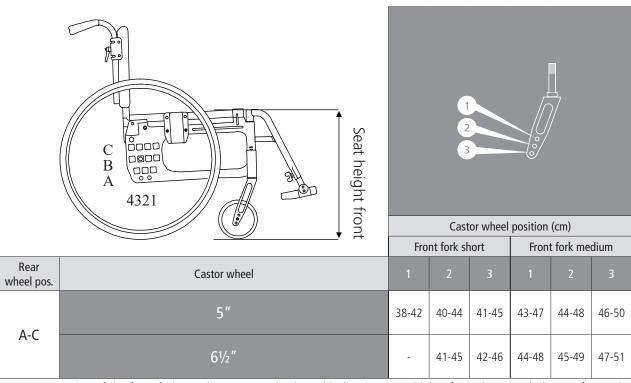


19 mm

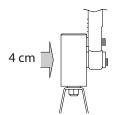


Tipping risk! Always check the anti-tip function after adjustments!

Front seat height table



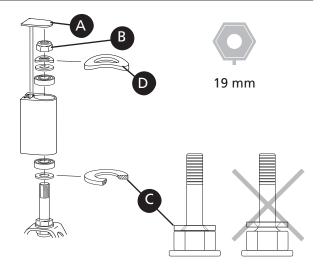
For correct setting of the front fork attachment: Max. backward inclination 6 cm higher front than rear (9°), max. forward inclination 2 cm lower front than rear (3°).



Front fork attachment is infinitely settable 4 cm in height.

Mounting front fork

- Pull out the cover plug (A) and unscrew the retaining nut (B). Pull out the front fork and put the bevelled washer (C) and the bearing on the new fork.
- Mount the washers and bearings in the front fork attachment as illustrated. Washer (C) is mounted with the bevelled side towards the front fork. Washer (D) on top under the retaining nut.
- 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".
- Mount the cover plug.



Setting the angle of the front fork attachment

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

Unscrew the lower attachment screw (A) about 2 turns so that the shaft (C) moves freely inside the sleeve.

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

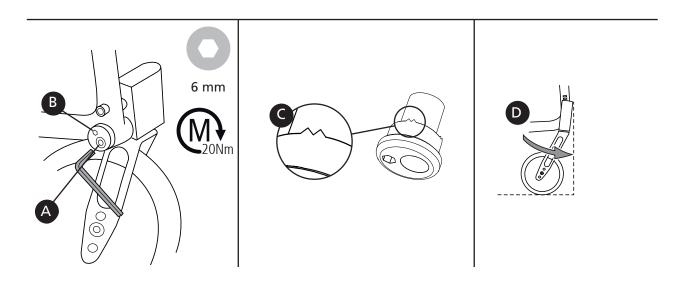
(D). Hold the shaft in place while the lower attachment screw is tightened.



Tipping risk! Always check the anti-tip function after adjustments!



Keep your eye on something vertical, e.g. a door frame or table leg, while setting the angle.



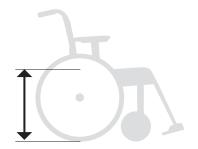
Rear seat height

Rear seat height can be adjusted by:

- -Changing the position of the rear wheel in the frame.
- -Changing the position of the rear wheel in the camber washer.
- -Changing the rear wheel.



Tipping risk! Always check the anti-tip function after adjustments!

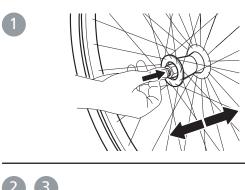


Adjusting rear seat height by changing rear wheel position or rear wheel size

- 1. Remove the rear wheel.
- 2. Unscrew the nut.
- 3. Reassemble in desired position (see table in section "Rear seat height table").

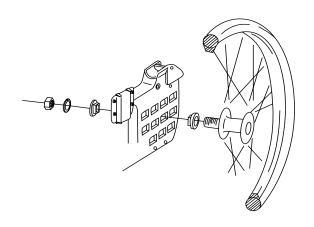


Tipping risk! Always check the anti-tip function after adjustments!











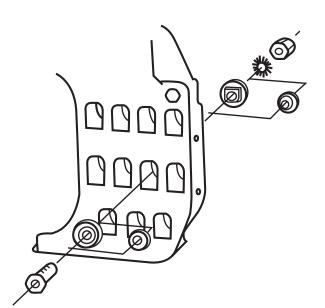
24 mm

Changing the camber angle

The camber angle can be changed by replacing the washers between the hub sleeve and the nut.



When assembling, always make sure that the quick-release button in the hub springs out properly. Test by pulling the wheel.





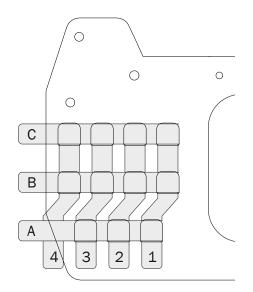
24 mn



17 mm

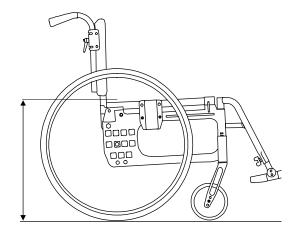
Rear seat height table

Rear wheel position, height

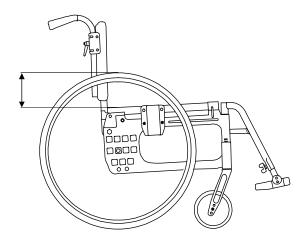


	Wheel	Seat hgt	Distance
Pγ	20"	47 cm	5 cm
Position A	22"	49 cm	7,5 cm
Pos	24"	50 cm	10 cm
n B	20"	42 cm	9,5 cm
Position	22"	44 cm	12,0 cm
Pos	24"	45 cm	14,5 cm
υC	20"	38 cm	14 cm
Position	22"	42 cm	9,5 cm
Pos	24"	41 cm	19 cm

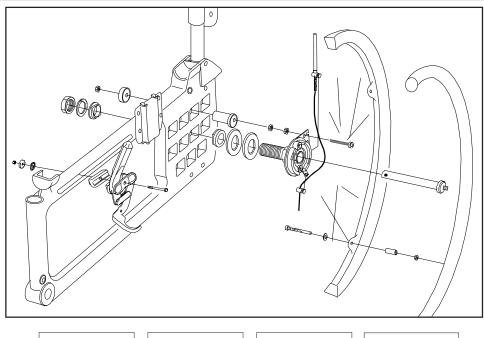
Seat height, rear

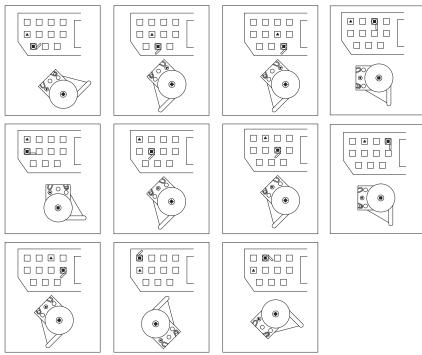


Distance wheel-seat



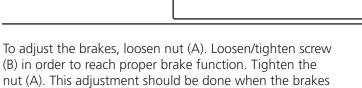
Drum brake

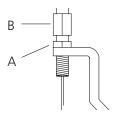




The brake arm is reversible.

are not working properly.





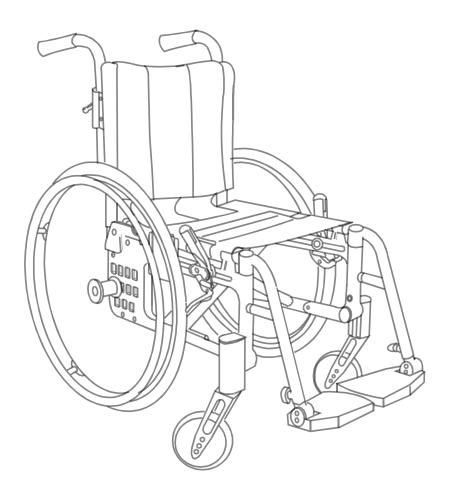


74137.13 24-01-08



This part of the manual (User manual) should be torn out and at all times follow the wheelchair. This as it contains important user information.





Etac Cross

Symbols and warnings

Symbols

These symbols appear in the user manual.



Warning, precaution or limitation



Useful advice and tips



Material for recycling

These symbols appear on labels.









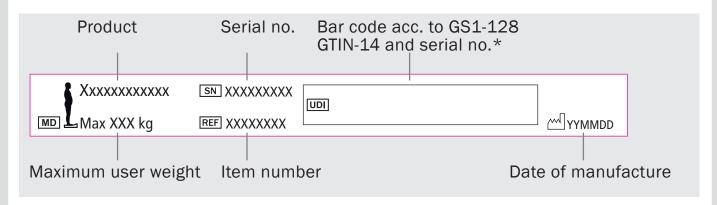
Anchoring. Fixing points Removable part, do not Risk of tipping: Always for the clamping system lift! for transport in motor vehicles.

have the anti-tips down when in motion

Pinch point hazard

Product label

Article information



Transportation in vehicles

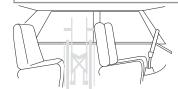
Etac's wheelchairs are tested in accordance with ISO 7176-19 (see "Tests and guarantees" section in the manual).

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.



- If possible, the wheelchair should be placed in the boot.
- If the wheelchair is placed in the back seat, make sure it can not overturn or roll. If possible secure the wheelchair with the car's safety belt.



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.

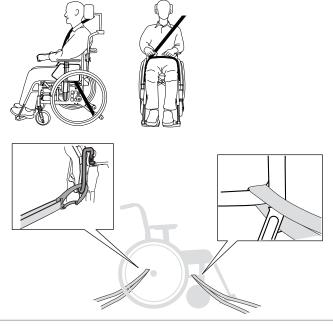


This is the way the wheelchair is tested and approved according to ISO 7176-19:

- Clamping device UNWIN_WWR/ATF/K/R according to ISO 10542
- Three point strap 907523, Klippan Safety AB.
- Parking brakes activated
- Anti-tip guards activated
- Head support bracket 3A and head support.
- Cross bar (Cross XL)
- Rear wheels with handrims.
- 25° 300mm 25° 40° 40° 40° 45° 45°
- 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.

Securing

- Securement points rear must be used.
- Restraining device must not be put through the wheels or around the back tubes.
- Accessories that can be detached without tools must be removed and clamped
- If head support is mounted other than with head support bracket 3A, cross bar must be used.
- Cross XL must have cross bar regardless of which way the head support is mounted.





- Parking brakes activated.
- Anti-tip guards activated.
- Head support.
- Positioning belt should be used.
- Accessories that can be detached without tools must be removed and clamped.

Handling

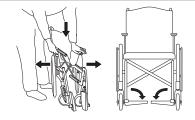


Unfolding

- Push down on one side of the seat frame, using the whole of the flat of the hand.
- Lower the foot supports.



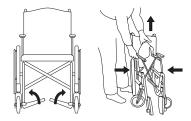
Do not hold the seat frame tube while unfolding as there is a risk of pinching your fingers.





Folding

- If a bow handle and/or cross brace is mounted they should be removed.
- Flip up the foot supports.
- Lift up the seat.

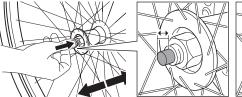




Rear wheel with quick release



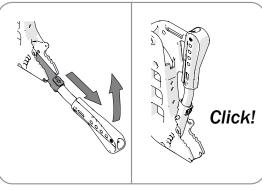
When assembling, always make sure that the quick-release button in the hub springs out properly. Test by pulling the wheel.

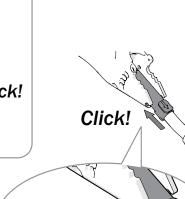




Anti-tips

• The anti-tips can be flipped up.

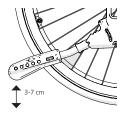




Click!

• Ensure the locking function works properly when activating the anti-tip.

 After any adjustments on your wheelchair, always ensure that you check the function of the anti-tips.
 If necessary to adjust, please contact your dealer or your Technical Aids Centre.



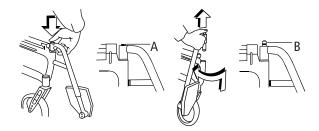
Leg support

The leg supports can be removed/swung to the side if needed. Lockable leg supports by pushing the red button (A).

To fasten the lockable leg supports press down on the red button (A), put the leg support into place and release the button. The leg support is now locked (B).



Before lifting the wheelchair, check that the leg supports are locked.



Push handles/bow handle, height adjustable

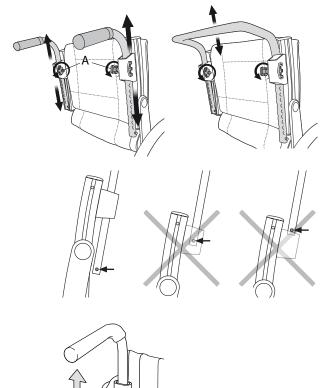
Loosen the knobs (A). Set desired height. Ensure that the push handles are locked in the correct position, tighten the knobs.



Make sure the knobs/locking handles are properly tightened/locked and that the safety buttons have popped out below the brackets.

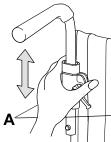


The bow handle must be removed before the chair can be folded.

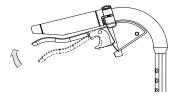


Back support mod. 2

Loosen the knob (A) and press the red plastic washer. Then as above.

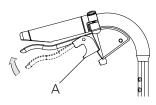


Cross drum brake (service brake)



 Brake while in motion by pulling the brake lever upwards.

Cross drum brake (parking brake)



- Activate the parking brake by pulling the brake lever upwards and pressing in button A.
- Release by pulling the lever upwards.

Settings seat comfort

Seat comfort

Good seating comfort depends on the needs and possibilities available to each individual. The following general guidelines here show what to consider when settings are made.

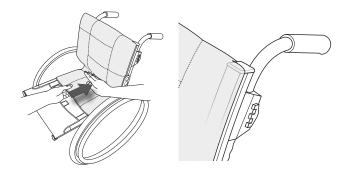
Select a seat cushion with care. Aside from comfort, it has an impact on stability and thereby freedom of movement. Seat cushions also have different pressure distribution

qualities.

The back support setting is a combination of angles, height and shape. This is why the angle settings and height for the back support may need to be adjusted when the back support cover is being adjusted.

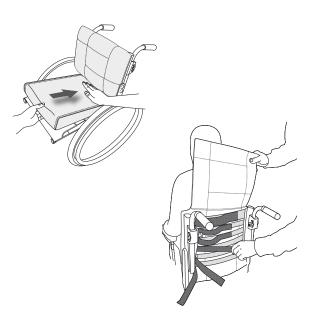
Back support cover

- Loosen all back straps, but make sure that the Velcro is still stuck together.
- Place the back support cover so that it covers the upper edge of the back rails and forms a crease between the seat and the back support allowing the user to properly sit in on the seat.



Seat cushion

- Make sure that the correct seat depth is set.
- Position the cushion as far back on the seat so that the rounded corners end up between the back rails.
- Measure a suitable seat cushion length and cut it according to supplied instructions.
- A more contoured seat cushion can be obtained by using a comfort wedge which is placed in the cushion cover's pocket under the seat cushion.



Back support upholstery

The back support upholstery is adjusted with the user sitting in the wheelchair.

- Make sure the user is sitting as far back in the seat as possible.
- Support the pelvis by tightening the strap found just below the lumbar region.
- Then adjust the upper strap to provide the user with upper body support and balance.
- The other straps are adjusted to provide space for the user's posterior and follow the back's natural curvature.



Tipping risk! Always check the anti-tip function after adjustments!



Do not overtighten the upper straps as this can prevent the cross-brace from unfolding properly, i.e. the seatframe tubes do not sit flush in the sideframes.

Back support angle

The back support angle may need to be adjusted when adjusting the shape of the back support upholstery. Contact your dealer or your Technical Aids Centre.

Settings seat comfort

Foot supports

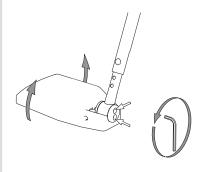
Adjust the height until you are sure that your feet are supported and your thighs are resting on the cushion.

For outdoor use the foot supports should be raised 4-5 cm above the ground.



Adjusting the angle

Adjust the foot support angle, so the ankles are at 90°.

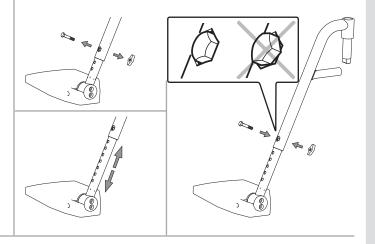




5 mn

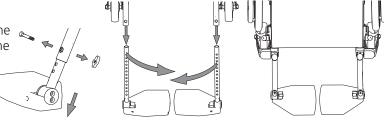
Adjusting the height

Loosen the knob and pull out the screw. Set the height. Assemble the screw and knob and tighten firmly.



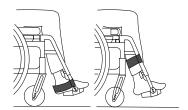
Changing the depth of the foot supports

Adjust the depth of the foot supports by switching the right and left foot support. Do not forget to adjust the angle.



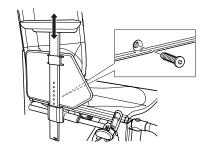
Calf/heel strap

• Adjust the length so that your insteps rest on the foot supports.



Arm support (adjusting)

- Loosen the screw on the inside of the arm support plate.
- Set the required height and tighten the screw.
- The high position of the arm supports, supports and relieves pressure on the back better than a lower position.





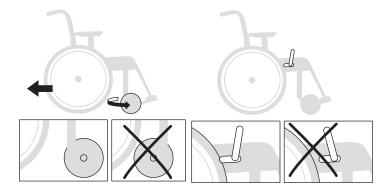
3 mm

Driving technique, maneuvering



Parking

Turn the castor wheels forwards and activate the brakes.

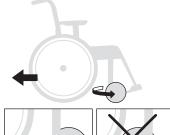


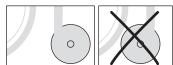
Transferring into/out of the wheelchair

Turn the castor wheels forwards, activate the brakes, flip up the foot supports and twist the leg supports to one side.



Tipping risk! Never stand on the foot plates.

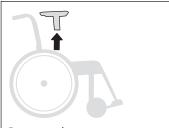




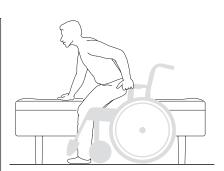




Sideways



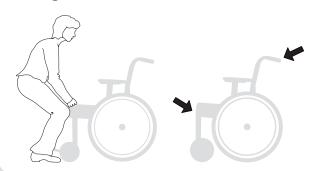
Remove the arm support on the side where transfer is to take place.



From the front



Lifting the wheelchair



Lift the wheelchair by the push handles and the front upper part of the frame or by lockable leg supports. Remove or swing non-lockable leg supports (fixed, elevated, amputee) in under the seat.

Before lifting in the push handles, make sure the knobs/ locking handles are properly tightened/locked and that the safety buttons have popped out below the brackets.



Check that the leg supports are locked before lifting.

(1)

The following figures show principles for propelling techniques and how to overcome obstacles like steps and curbs.



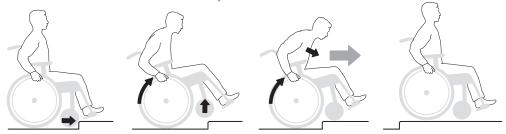
Tipping risk! Activate the anti-tip guards afterwards.



User, up forwards

This technique is recommended only for experienced wheelchair users.

– Ensure that the anti-tips are deactivated.





User, up backwards

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

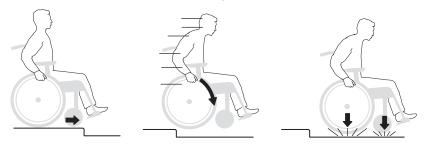




User, down forwards

This technique is recommended only for experienced wheelchair users.

– Ensure that the anti-tips are deactivated.





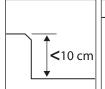
User, down backwards

This technique is recommended only for experienced wheelchair users.

– Ensure that the anti-tips are deactivated.





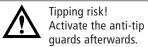






Care giver, up forwards

– Ensure that the anti-tips are deactivated.

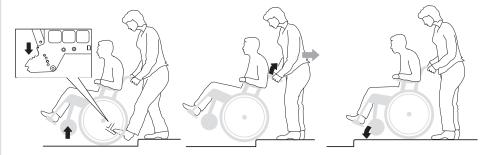






Care giver, up backwards

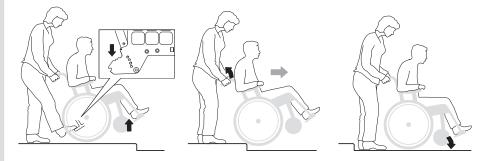
– Ensure that the anti-tips are deactivated.





Care giver, down forwards

– Ensure that the anti-tips are deactivated.





Care giver, down backwards

– Ensure that the anti-tips are deactivated.



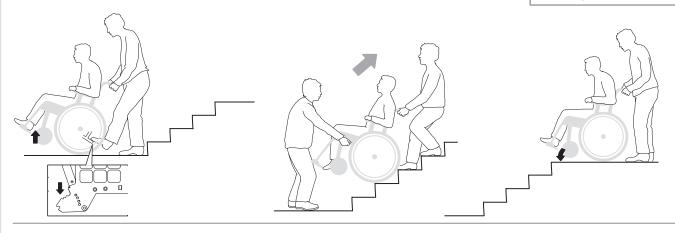


Stairs, up

 Ensure that the anti-tips are deactivated. Never use an escalator, even if a care giver is available.
 Ensure that height adjustable push handles are tightened. 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 leg supports if these are lockable).



Tipping risk! Activate the anti-tip guards afterwards.

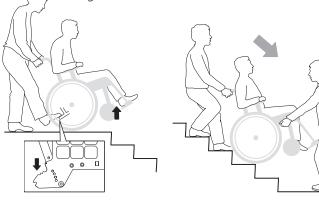


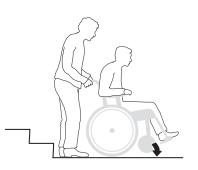


Stairs, down

– Ensure that the anti-tips are deactivated. Never use an escalator, even if a care giver is available. Ensure that height adjustable push handles are tightened.

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 leg supports if these are lockable).







Ascending/descending hills

Control your speed using the handrims, not the brakes!

Avoid turning round in the middle of a hill. Always drive as straight up/down as possible. If uncertain, ask for assistance.

Uphill

Lean forwards to correct your centre of balance.



Downhill

Lean backwards to correct your centre of balance.



Maintenance

Rear wheels: Clean quick release axles as required.

Tyre pressure: Check the tyre pressure (once/month).

Castors: Clean castor wheel axles as required.

Chassis: Clean the chassis with non-abrasive detergent, pH value 5-9 or with 70 % disinfectant solution. Rinse and dry.

Upholstery: Wash, see labels on each item.

If necessary, lubricate moving parts/joints with cycle oil or similar.

In the event of problems, contact your dealer or Technical Aids Centre.

Troubleshooting guide		
The wheelchair is pulling diagonally	 Inflate the tyres Check and adjust the angle of the front fork attachments Check that the front fork attachments are set at the same height The user's weight is not evenly distributed in the wheelchair 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 fork attachments are not too tight Check and adjust the angle of the front fork attachments Clean the castor axles from dirt Too much weight over the castors. Adjust the centre of balance 	
Brakes not effective	Inflate the tyresAdjust the distance between brake and tyre	
Rear wheels "loose"	Adjust the length of the axle shaft	
Rear wheels hard to remove/re- place	Clean and lubricate quick release with cycle oil or similar Adjust the length of the axle shaft	
The castor wheels "wobble"	 The front forks are not tight enough Check and adjust the height and angle of the front fork attachments Too much weight over the castors. Adjust the centre of balance 	
The wheelchair is hard to fold/ unfold	The upholstery is too tight Clean and lubricate the cross-brace under the seat	
The wheelchair feels "awkward"	Inflate the tyresCheck that screws, nuts and bolts are properly tightened	

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Seat angle

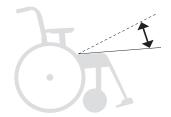
The seat angle is dependent on the difference between the front and the rear seat heights.



Tipping risk! Always check the anti-tip function after adjustments!

If the seat angle is changed:

- Adjust the angle of the front fork attachment.
- Check the back support angle.



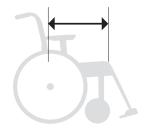
Seat depth

The seat depth can be adjusted by lifting the front seat upholstery and sliding it backwards or forwards.

With Cross back support 3A triangular, the seat depth can be further adjusted by means of the lumbar angle (see the section "Adjusting seat depth using lumbar angle, triangular back").



Tipping risk! Always check the anti-tip function after adjustments!



Seat comfort

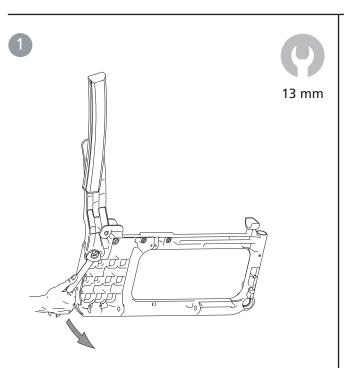
After adjusting seat height, seat angle, seat depth and back support angle, the back support upholstery must be adjusted to optimize the seat comfort. See the "Settings seat comfort" section in the User manual.

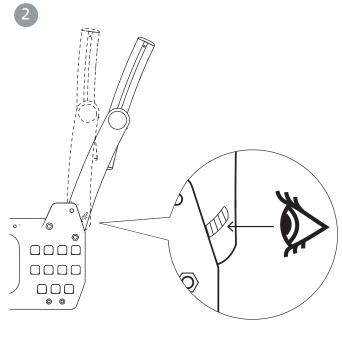
Adjusting back support angle

- 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.

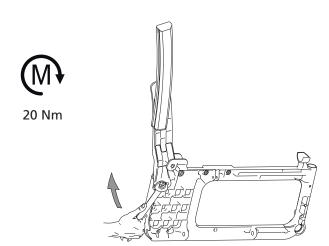


Tipping risk! Always check the anti-tip function after adjustments!









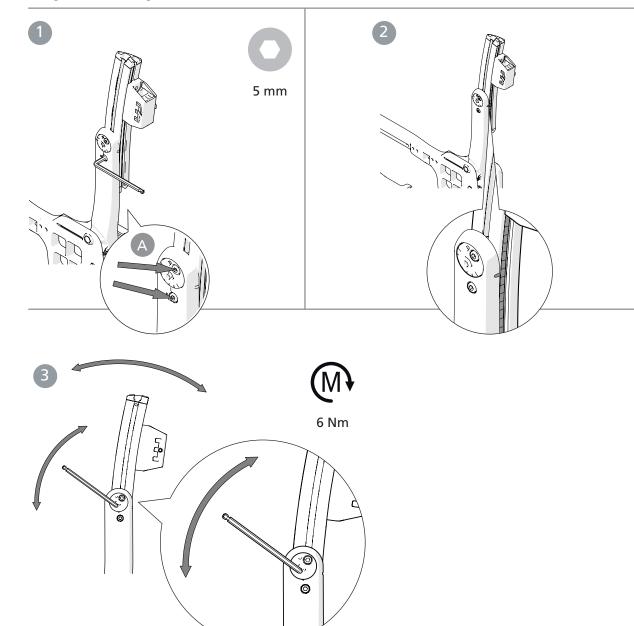
Adjusting the back support height and lumbar angle (one eccentric shaft)

- 1. Loosen the locking screws (A) max. 1 turn.
- 2. Adjust the back support height using the graduation and the marking on the lower back rod. Tighten the locking screws max. 1/2 turn.
- 3. Place the Allen key in the 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.





Tipping risk! Always check the anti-tip function after adjustments!



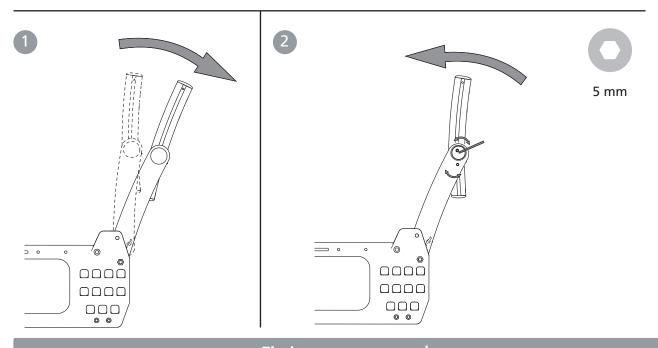
Adjusting seat depth using lumbar angle

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

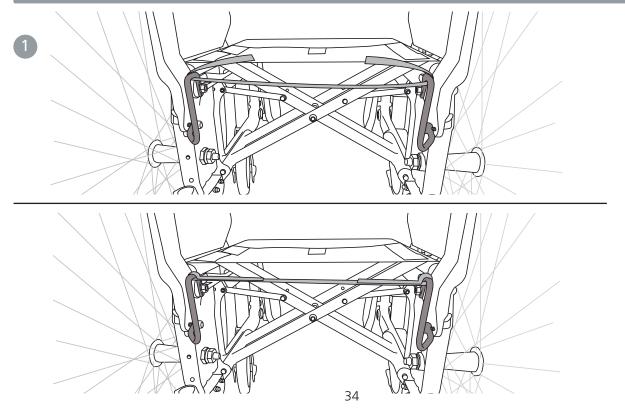
- 1. Adjust the back support angle.
- 2. Adjust the lumbar angle to the required back support angle using the eccentric shaft.
- 3. If necessary fit seat extender (accessory).



Tipping risk! Always check the anti-tip function after adjustments!



Fitting seat extender



Adjusting the back support height and lumbar angle (two eccentric shafts)

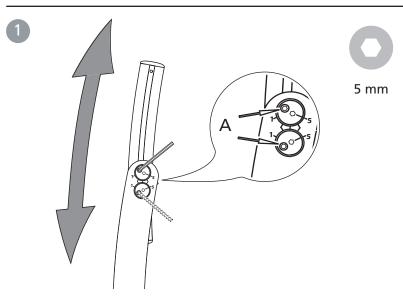
- 1. Loosen the locking screws (A) max. 1 turn.
- 2. Adjust the back support height using the graduation and the marking on the lower back rod. Tighten the locking screws max. 1/2 turn.
- 3. Place the Allen key in the selected (upper recommended) eccentric shaft's locking screw and loosen it 1/2 turn. Move the Allen key to the eccentric shaft's key handle and set the required lumbar angle.
- 4. Tighten the locking screws with 6 Nm.

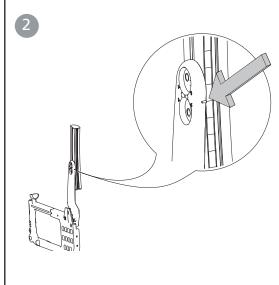


We recommend that you start adjusting the lumbar angle with the upper eccentric shaft. If a larger angle is required, adjust the lower eccentric shaft as well.

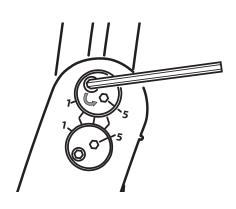


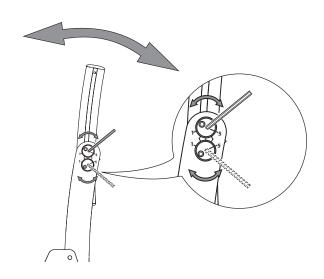
Tipping risk! Always check the anti-tip function after adjustments!











Adjusting seat depth using lumbar angle (two eccentric shafts)

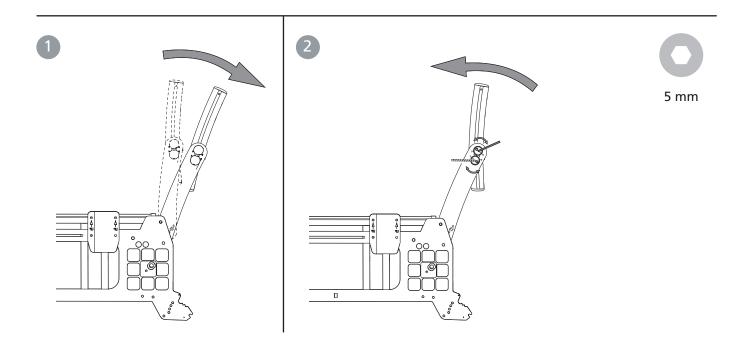
An extended seat depth is achieved by opening the back support angle (hip) and then the lumbar angle.

- 1. Adjust the back support angle (see also *illustration 1-3* on page 32).
- 2. Adjust the lumbar angle to the required back support angle using the eccentric shafts as in *point 4-5 on page 34*.

3. If necessary fit seat extender (accessory)..



Tipping risk! Always check the anti-tip function after adjustments!



7. Settings back support mod. 2

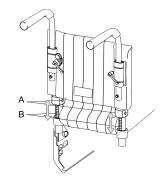
Setting back support height

The back support height is continuously settable (See "The chairs possibilities").

Loosen the screws (A) 2-3 turns to set the height of the back support. Ensure that both sides are at the same height by checking against the ruler (B) on the back of the back tube. Tighten the screws securely.



Tipping risk! Always check the anti-tip function after adjustments!





5 mm

Adjusting back support angle

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

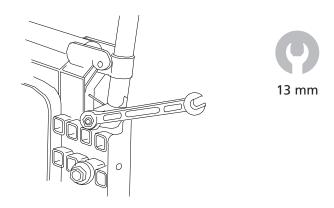
- Loosen the nut on one of the back tubes, set the desired angle and tighten the nut firmly again.
- Repeat the procedure on the other side.



Check that the angle is the same on both sides by comparing the distance between the back tube and the arm support plate.



Tipping risk! Always check the anti-tip function after adjustments!



Adjusting back support upholstery

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

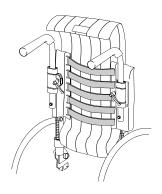
- Allow the cover plenty of room between seat and back support, so that it is possible to "sit in" against the back support.
- Loosen all the straps and ensure that the user is sitting as far back in the seat as possible.
- Tighten the straps in such a way that they follow the contours of the user's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



Do not overtighten the upper straps as this can prevent the cross-brace from unfolding properly, i.e. the seatframe tubes do not sit flush in the sideframes.



Tipping risk! Always check the anti-tip function after adjustments!



8. Settings back support mod. 2B

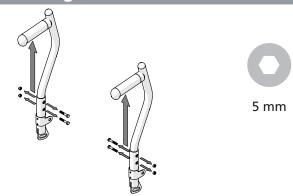
Setting back support height

The back support height is settable (See "The chairs possibilities")

Loosen the screws to set the height of the back support. Tighten the screws.



Tipping risk! Always check the anti-tip function after adjustments!



Adjusting back support angle

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

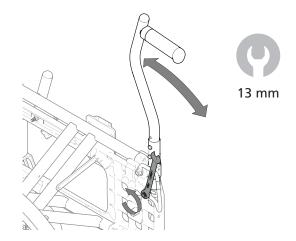
- Loosen the nut on one of the back tubes, set the desired angle and tighten the nut firmly again.
- Repeat the procedure on the other side.



Check that the angle is the same on both sides by comparing the distance between the back tube and the arm support plate.



Tipping risk! Always check the anti-tip function after adjustments!



Adjusting back support upholstery

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

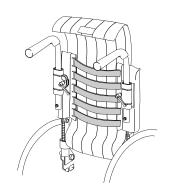
- Allow the cover plenty of room between seat and back support, so that it is possible to "sit in" against the back support.
- Loosen all the straps and ensure that the user is sitting as far back in the seat as possible.
- Tighten the straps in such a way that they follow the contours of the user's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



Do not overtighten the upper straps as this can prevent the cross-brace from unfolding properly, i.e. the seatframe tubes do not sit flush in the sideframes.



Tipping risk! Always check the anti-tip function after adjustments!



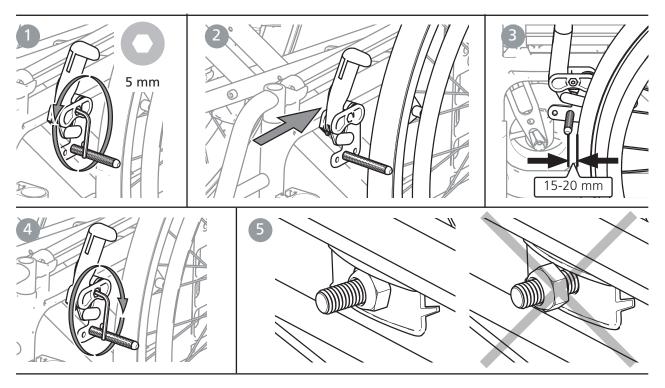
Brake, adjustment

The brakes are infinitely settable.

- 1. Loosen the screw a couple of turns.
- 2. Set the brake in correct position.
- 3. The brake block should be 15-20 mm from the tyre when the brake is not applied.
- 4. Ensure that the brake is straight in the groove and tighten the screw. Test the brakes.
- 5. Ensure the nut locks on the inside.

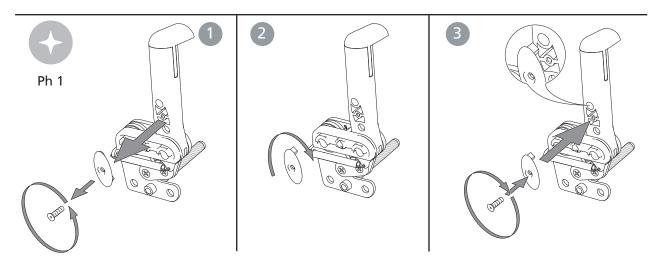


The braking effect is dependent on the air pressure in the tyres. The brakes are parking brakes and should not be applied during use.

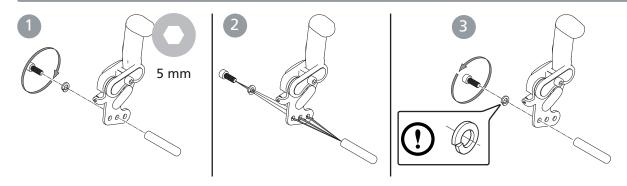


If the rear wheel is positioned in one of the forward settings it is possible for a leg support, when swung to the side, to unlock an applied brake. To avoid this the brake handle should be adjusted so that you attain a "neutral" position. In this way the brake will unlock first when the handle is pushed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

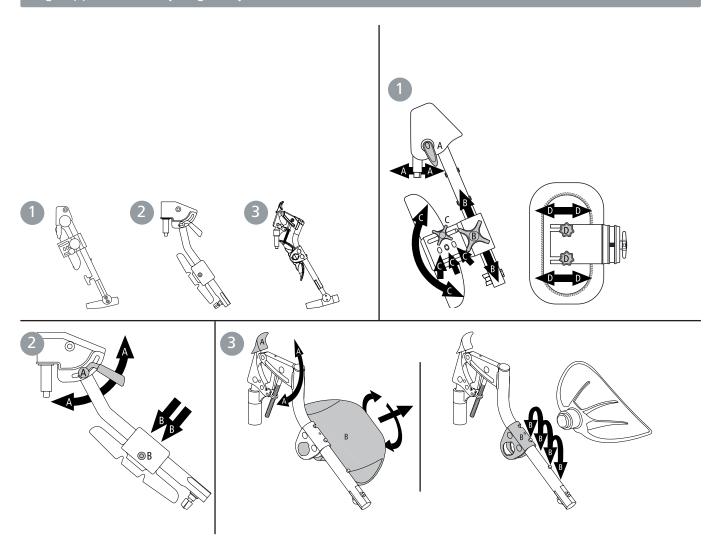
- 1. Loosen the screw on the inside of the brake handle.
- 2. Remove the oval plate, turn it 180° (the pin on the plate's inside must sit in the upper hole).
- 3. Tighten it again.



Adjusting the brake block

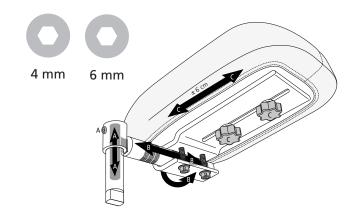


Leg support, infinitely angle adjustable



Amputee leg support

Never sit on the amputee leg support.

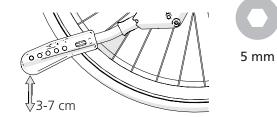


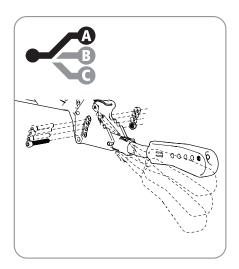
Anti-tips

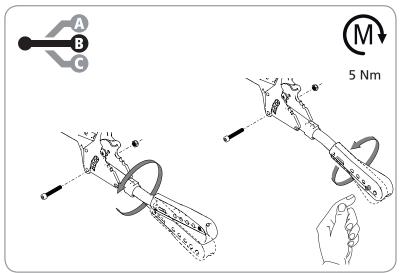
The anti-tips are settable in height and angle and adjustable in length.

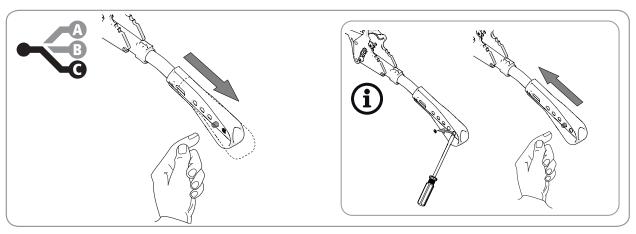


Tipping risk! Always check the anti-tip function after adjustments!







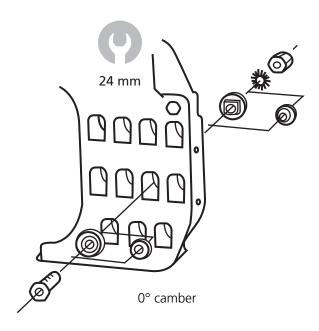


Changing the camber angle

The camber angle can be changed by changing the washers that are mounted between the hub sleeve and the nut. See section "Adjusting rear seat height by changing rear wheel position or rear wheel size".



When assembling, always make sure that the quick-release button in the hub springs out properly. Test by pulling the wheel.



2° camber

Adjusting the centre of balance

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

- Move the axle shaft/rear wheels forwards/backwards.



24 mm

When the position of the rear wheels is moved forwards the wheelchair becomes more manoeuvrable, but the tendency to tip backwards increases. See section "Adjusting rear seat height by changing rear wheel position or rear wheel size".

The brakes must also be adjusted, see section "Brake,

adjustment".



The centre of balance is also altered when the seat and/ or back support angle is adjusted.



Tipping risk! Always check the anti-tip function after adjustments!



When assembling, always make sure that the quick-release button in the hub springs out properly. Test by pulling the wheel.

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.

Cellular rubber/ plastic coated handrims increases the friction

Violent braking can cause mild friction burns (e.g. blisters).

Be careful when passing through narrow passages so you

don't scratch your fingers.

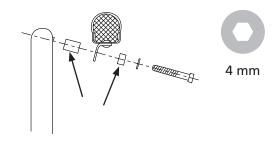


Fingers may be pinched if get between the spokes. Spoke protection is available as a means to prevent pinching.

Adjusting the distance of the handrim

Aluminium, stainless, plastic-coated and cellular rubber handrims for 24", 22" and 20" rear wheel.

The distance between the wheel and the handrim can be adjusted by moving or exchanging the two spacers.

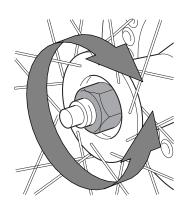


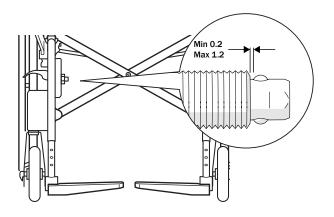
Drive wheels with quick-release axle

The distance between the hub sleeve and the locking balls can be adjusted by adjusting the nut on the outside of the hub. The distance between the hub sleeve and the locking balls should be 0.2 to 1.2 mm.



When assembling, always make sure that the quick-release button in the hub springs out properly. Test by pulling the wheel.





10. Accessories - adjusting, handling

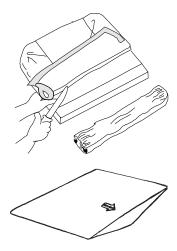
Assembly instructions are always provided with accessories when they are delivered from Etac.Instructions are also available on our website www.etac.com.

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.



Arm support, detachable, height adjustable

The arm support attachment can be fitted in 2 different heights. In position 1 the height of the arm support is settable between 18 and 26 cm, and in position 2 (standard) between 24 and 31 cm, with 1 cm intervals.







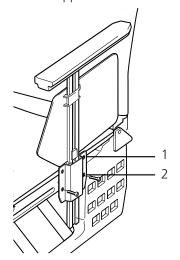
10 mm 5 mm

The lock lug is used both to set the height of the arm support 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 arm support can be fitted on the left side and vice versa.

Never use the arm supports to lift the wheelchair.



10. Accessories - adjusting, handling

Arm support, flip-up, height adjustable

The flip-up arm support comes in two varieties, height adjustable 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 arm support according to the assembly instructions supplied.

The arm support 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 arm support bracket to the frame.
- Slide the arm support up or down to the desired height.
- Tighten the screws again.

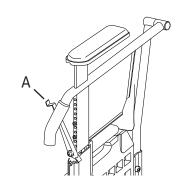
Never use the arm supports to lift the wheelchair.



These arm supports cannot be combined with cane holder or with 24" 22" or 20" rear wheels in position C.



For anti-tip limitations, refer to the information in the Accessory section.





3 mm

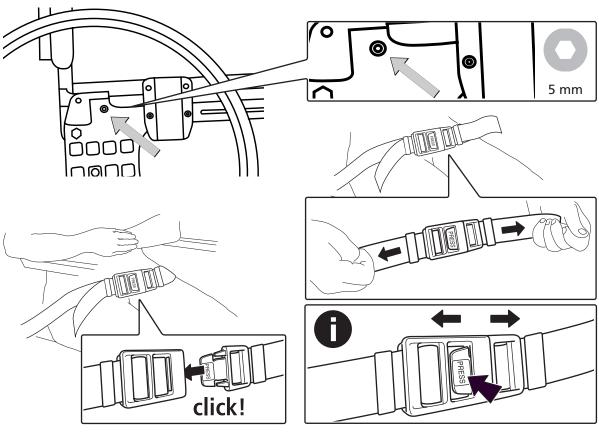
Positioning belt

The positioning belt is in two parts, is adjustable in length and has a snap-lock. It is mounted in the holes just in front of the back support joint, above the wheel mounts. Assembly instructions are supplied with the belt.

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



10. Accessories - adjusting, handling

Head support

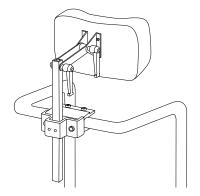
The head support is mounted onto the bow handle (accessory) or onto a separate head support attachment. The head support is adjustable in height, depth and angle, and is detachable.



Before the head support is adjusted, ensure that the user has a good, secure sitting posture.



The center of balance might be altered when the user leans against the head support.

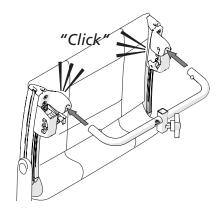


Head support attachment

The head support attachment is used to fit the head support.



Do not lift the wheelchair by the head support mount.

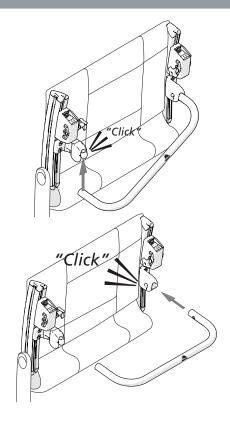


Cross brace

The cross bar is used when the back chassis needs to be reinforced.



Do not lift the wheelchair by the cross bar.



11. Technical data

	Type of chair	Item no Cross	Total width	Seat depth from back support tube**	Weight with rear wheel	Max user weight
	3				KG	max kg
	35 cm short	13120101	56,0 cm	36-42 cm	15,2 kg	125 kg
	35 cm long	13120102	56,0	42-48	15,4 kg	125 kg
	37,5 cm short	13120103	58,5	36-42	15,3 kg	125 kg
	37,5 cm long	13120104	58,5	42-48	15,5 kg	125 kg
	40 cm short	13120105	61,0	36-42	15,4 kg	125 kg
	40 cm long	13120106	61,0	42-48	15,6 kg	125 kg
	42,5 cm short	13120107	63,5	36-42	15,5 kg	125 kg
Cross	42,5 cm long	13120108	63,5	42-48	15,7 kg	125 kg
C1033	45 cm short	13120109	66,0	36-42	15,6 kg	125 kg
	45 cm long	13120110	66,0	42-48	15,8 kg	125 kg
	47,5 cm short	13120113	68,5	36-42	15,7 kg	125 kg
	47,5 cm long	13120114	68,5	42-48	15,9 kg	125 kg
	50 cm short	13120111	71,0	36-42	15,8 kg	125 kg
	50 cm long	13120112	71,0	42-48	16,0 kg	125 kg
	52,5 cm kort	13120115	73,5	36-42	15,9 kg	125 kg
	52,5 cm lång	13120116	73,5	42-48	16,1 kg	125 kg

Seat height rear	Seat height front	Back support height*	Transport width	Total height	Total length	Leg support length	Length when folded	Leg support angle	Rear wheel size
				DI	A		5	5	<u>Q</u> V
38-50 cm	38-51 cm	32-45 cm	32 cm	74-128 cm	102-122 cm	26-64 cm	76-92 cm	108°-114°	46,5-48,5 cm

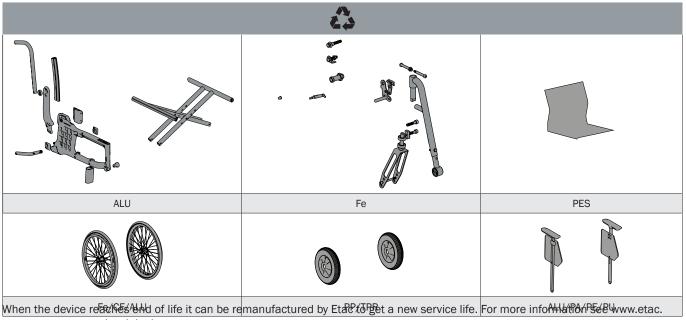
^{*} Applies to Cross back support 3A. For Cross back support 3A high applies 38-51 cm.

Cross

Weights and dimensions given are for a chair with 24" rear wheels with quick-release hubs, high pressure tyre, aluminium handrims, leg supports, foot supports, brakes, arm supports, 6 1/2" castors with medium forks. The measurements given may vary by \pm 2%.







^{**} With triangular back + max 7 cm

^{***} With solid tyre and stainless steel handrim, +1,3 kg

12. Service and maintenance

Upholstery

The upholstery is made of two-ply polyester. The seat upholstery is fastened lengthways to the seat frame, and can easily be removed from the frame by unscrewing the end caps.

The back support upholstery is removed by loosening

the screws of the end caps and then pulling the upholstery upwards.

Wash seat and back support upholstery according to the washing instructions on the product.

Rear wheel/castor wheel, 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.

Handrim: If a handrim should be damaged in

such a way that it could lead to injury, it

should be replaced.

Front fork attachments:

To achieve the best operating conditions, the attachments should be installed at 90°. Check also that the front forks are correctly tightened. See section

"Mounting front fork".

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 "Brake, adjustment".

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 ensure that it is easy to wash and dry. Clean the frame with a nonabrasive cleaning agent with a pH level between 5 and 9, or with a 70% disinfectant solution. Rinse and dry.

Touch-up paint

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

Miscellaneous

If there is a fault in your wheelchair you should contact your dealer or Technical Aids Centre. 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.



A defective device must not be used



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