Netti® 4U FAMILY

Netti® 4U CED
Netti® 4U CED S
Netti® 4U CED XL

Instructions for Use



CE This product conforms to 2017/745/EU for medical products.

IFU0002 EN 2026-10

inspire joy of life

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1. INTRODUCTION



Netti 4U CED, CEDS and CED XL are comfort wheelchairs meant for both indoor and outdoor use. They are tested to DIN EN 12183. The tests were carried out by a German accredited test laboratory.

In Alu Rehab we believe that wheelchairs should be chosen based on a thorough assessment focusing on the needs of the user and demands from the environment. Therefore, it is important to know about the possibilities and restrictions of the wheelchair. Netti 4U CED, CEDS and CED XL are wheelchairs designed for users with the need for comfort and relief. The combination between the seating system and the ergonomical solutions in the frame construction, offers many possibilities for adaptation and adjustments.

The wheelchairs are constructed for indoor and outdoor use, and offers the possibility to vary the sitting position from activity to rest using tilt and recline functions.

Netti 4U CED is available in 3 versions:

Max user weight: 160 kg:

Netti 4U CEDS with short seat depth
Netti 4U CED with standard seat depths.
Netti 4U CED XL with seat widths 550 & 600 mm.

When mounting accessories such as power kit, external seating systems etc., the weight of the accessories must be subtracted from the max user weight.

Specifications varies between countries.

1.1 AREAS OF USE / INDICATIONS FOR NETTI 4U CED / CEDS / CED XL

Netti 4U CED, CEDS and CED XL are multifunction wheelchairs for partially or fully immobile youth and grown up persons with physical and / or mental disabilities. These disabilities may have multiple causes. Netti 4U CED, CEDS and CED XL have an adjustable seat and back angle, thus facilitating for the user change of position, mobilisation or posture correction (stabilisation), wherever the following functional impediments with their multiple possible causes are present:

- limited or lacking mobility
- limited or lacking muscle power
- limited movement range
- lacking or limited trunk and body stability
- hemiplegia
- rheumatic-type disorders
- craniocerebral injuries
- amputations
- other neurological or geriatric disorders.

1.2 CONTRAINDICATIONS

Netti 4U CED, CEDS and CED XL are not suited for persons with a strongly enhanced muscular spasticity. In this case we recommend the Netti Dynamic System, which offers a frame construction that follows the movement pattern of the user. Ignoring this advice could in unfavorable circumstances lead to the deformation or fracture of metal parts in the area of the back tube, the leg support or the arm support.

1.3 QUALITY AND DURABILITY

The Netti 4U CED wheelchairs are tested at an accredited German test institute following the European standard EN 12183.

As manufacturer, Alu Rehab A.S evaluates the test to be equal to 5 – 6 years of normal use of the chair. The disability of the user, the toughness of use as well as the level of maintenance done, foremost decides the durability of the wheelchair. Thus, the durability will vary depending on these three factors. With adequate maintenance, the lifetime of the wheelchair can be expected to exceed the 5 year warranty period by many years.

1.4 THE ENVIRONMENT AND WASTE DISPOSAL

Alu Rehab and its suppliers wish to protect the environment.



This means:

- That we avoid using environmentally harmful substances and processes to the greatest extent possible.
- That Alu Rehab's products are ensured a long service life and a high degree of flexibility – to benefit the environment and economy.
- That all packaging can be recycled.
- That the wheelchair was designed to be separated into its component materials – to make recycling easier.

Contact your local recycling agent to get correct information how to handle in your area.

Netti 4U CED, CEDS and CED XL are designed for temperature range from –10°C to +40°C.

1.5 INFORMATION FOR RE-USE

All products from Alu Rehab are designed to give years of maintenance-free service. All products can be adapted for re-use by an authorised dealer. In order to guarantee performance and safety, Alu Rehab recommends the following tests prior to any re-use.

Please examine the following components for function, integrity etc. and replace parts as necessary:

- Wheels (tyre tread)
- Wheelchair frame
- Front castors and quick release
- Hubs
- Brake function
- Directional stability of wheels
- Bearings: test for wear and lubrication
- Cushions
- Leg supports
- Arm supports
- Recline / tilt function
- Push bar / handles
- Anti-tip

Please also note the content of chapter 10.2 Cleaning and washing instructions.

For hygienic reasons: please replace the head support for a new user.

ANTI-TIP

Correctly fitted, the anti-tip will secure the chair from tipping backwards. We strongly recommend use of the anti-tips.

A refurbishment manual for Netti Wheelchairs can be downloaded at my-netti.com

A recycling manual for Netti Wheelchairs can be downloaded at my-netti.com

Latest Instructions for Use updates, product safety notes, addresses and other product information like recalls etc. will be published on our web page.

1.6 ABOUT THIS MANUAL

In order to avoid damages while using the Netti 4U CED, CEDS or CED XL wheelchair, please read this manual carefully before starting to use the chair.

Symbol of forbidden actions.
No warranty can be claimed whenever these actions are implemented.

Symbol of warning.
Whenever this symbol is used, caution has to be taken.

Symbol for important information.

Symbol for useful tips.

Symbol for tools.

7° Symbol for parking brake safe slope.

Max. 160 kg Symbol for max user weight.

MD Medical Device

Manufacturer - Name and address

Date of manufacturing

SN Serial number

Read user instruction

Please note that this manual is updated according to the year and date stated on each page.

Instrcution for Use on web my-netti.com

For enhanced readability (advantageous for users with visibility challenges) please find our Instructions for Use on our web page:
my-netti.com – Instructions for Use – Instructions for Use Netti 4U CED.

1.7 VITAL MEASURES

Netti 4U CED, CEDS and CED XL are comfort wheelchairs designed for both outdoor and indoor use. Min. dimensions in the table refer to seat width 350 mm. Max. dimension refers to seat width 600 mm.

Specifications varies between countries.

TOTAL WEIGHT: 29 KG
(450 mm width chair)

SEAT WIDTH:



CEDS: **350, 400, 430 mm**
CED: **350, 400, 430, 450, 500 mm**
CED XL: **550 and 600 mm**

SEAT DEPTH:
(From backrest cushion to front of seat plate)



CED / CED XL: 425, 450, 475, 500 mm
CEDS: **375, 400, 430 mm**

SEAT HEIGHT:
(From floor to top seat plate using 24" main wheels in upper hole position)



***465 mm**

* By changing position of main wheels, it is possible to achieve seat height of 500 mm.

BACKREST HEIGHT:



***500 mm**

* Using backrest extender gives backrest height of 600 mm.

Specification	min.	max.
Overall length with leg support	1160 mm	1160 mm
Overall length without leg support	960 mm	960 mm
Overall width	530 mm	780 mm
Height without head rest	1100 mm	1100 mm
Folded length	610 mm	645 mm
Folded width ex wheels	530 mm	780 mm
Folded height ex wheels	570 mm	–
Total mass	28,0 kg	32,0 kg
Mass heaviest part-frame	18,0 kg	–
Static stability uphill	0	28°
Seat plane angle	–5°	20°
Effective seat depth	425 mm 375 mm	500 mm 500 mm
Effective seat width	330 mm 330 mm	580 mm 480 mm
Seat surface height at front	465 mm	500 mm
Backrest angle	90°	135°
Backrest height – with Netti Seating System	480 mm	–
Foot plate to seat distance	280 mm	560 mm
Leg to seat surface angle	98°	176°
Arm support to seat distance	265 mm	365 mm
Front location of arm support structure	265 mm	355 mm
Push rim diameter	535 mm	535 mm
Horizontal axle location	70 mm	100 mm
Parking brake safe slope	0°	7°
Minimum turning radius	R860 mm	–

Model with 24" main wheels.
Measured without cushions.

Netti 4U CED and Netti 4U CEDS are similar chairs except for the shorter seat depth on Netti 4U CEDS.

2. QUICK REFERENCE

The content of this page is a summary of the whole manual. It gives you a brief introduction to the use and care of the Netti 4U CED, CEDS and CEDS XL wheelchairs.

The quick reference is not a replacement for the manual, only reminder / check list.

- Unpack the wheelchair (Chapter 6.1).
- Mount the main wheels (Chapter 6.2).
- Mount the front castors (Chapter 6.3).
- Put the backrest back, and mount the recline as strut to the backrest using the locking bolt. (Chapter 6.5).
- Mount the leg supports (Chapter 6.11).
- Mount the head support (Chapter 6.12).
- Set anti-tip in active position (Chapter 6.6).
- Mount accessory (See chapter 5 for more information. Mounting descriptions will accompany the accessory.).

ADJUST THE WHEELCHAIR TO THE USER:

Adjust seat depth and eventually the wheelchair balance, leg support height, arm support height, head support height and depth.
For more information about adapting the wheelchair to the user please see:
my-netti.com knowledge centre.

Announcements to product safety and eventually product recalls will be published on our home page my-netti.com.

For troubleshooting, see chapter 11.
For mounting and adjustments see chapter 6.

For visually impaired people, manuals and catalogues can be downloaded at my-netti.com.

Product configuration may vary between different countries. Illustrations may differ from the delivered product.

If in doubt – contact your dealer!

Drive carefully!

Always used the anti-tips, they are for the safety of the user.

The brakes must always be used when leaving the user in the backwards tilted position.

Be sure to lock all handles properly.

Never stand on the foot plates due to risk of tipping forwards.

Never lift the wheelchair by the leg supports, arm supports or head support.

Watch out for pinching danger when folding and unfolding, tilting, reclining and all other adjustment movements.

Be aware that friction against push-rims can create a warm surface.

Surface temperature of metal parts in frame structure might increase when exposed to direct sunlight.

Salt water can increase risk of corrosion. Further precautions related to environmental conditions not needed.

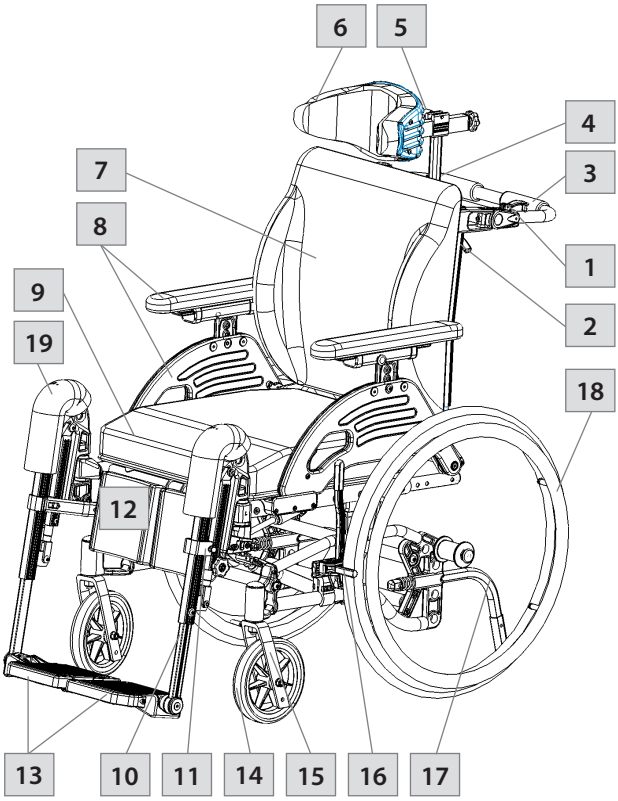
If electrical functions are mounted:
Charge the battery daily.

If the chair has pneumatic tires: Make sure to check tyre pressure every week and inflate to keep 24" at 45 PSI, and 7" at 36 PSI

3. DESCRIPTION

Standard version*

1. Lock for push bow
2. Release handle
3. Push bow
4. Head support bracket
5 Angle and depth adjustment for head support
6. Head support
7. Backrest
8. Arm support with pad
9. Seat cushion
10. Angle adjustable leg support
11. Calf support bracket
12. Calf support
13. Foot plate
14. Front castors
15. Front fork
16. Brakes
17. Anti-tip
18. Main wheel
19. Knee upholstery



If any of these parts are missing, please contact your dealer.

Product configuration may vary between different countries.

Netti 4U CED, CEDS and CED XL are similar chairs except for different seat widths and the shorter seat depth on Netti 4U CEDS.

4. FEATURES OF NETTI 4U CED / CEDS / CED XL

STANDARD

SEAT
- Pressure distributive cushion Netti Uno
- Tilt –5° to +20°
- Adjustable seat depth 425 – 500 mm

WHEELS
- 16 x 1 3/4" drum brake puncture proof main wheels
- 7" Puncture proof front castors with quick release axle

Standard main wheels may vary between countries.

PUSH BOW
- Angle adjustable push bow

BRAKES – User Brakes

ANTI-TIP – Upwards swingable

BACKREST
- Netti Uno Back with 3D cover
- Height: 500 mm
- Angle: 92° to 137°

LEG SUPPORT
- Angle adjustable leg support
- Height and angle adjustable foot plates.
- Removable

ARM SUPPORT
- Height and depth adjustable
- Revolvable

HEAD SUPPORT
- A – Height, depth and angle adjustable
- Removable

ACCESSORIES

BELTS
- Hip belts (See chapter 5)

SEAT
- Pressure distributive cushions
- Hip belts (See chapter 5)

WHEELS
- Puncture proof PU wheels 12"x1 3/4", 16"x1 3/4" and 24x1 3/8" with drum brake (See chapter 5)
- 24x1" standard puncture proof main wheels
- Push rim: Aluminium on 24" wheels
- 7" x 145 mm Puncture proof Flexel front castors with quick release axle

PUSH HANDLE
- Height and angle adjustable push handle

BRAKES – Drum brakes

BACKREST
- Backrest extender
- Different backrest cushions
- Lumbar support and wedge (See chapter 5)

LEG SUPPORT
- Universal leg support
- Amputation support
- Upholstery for leg supports

ARM SUPPORT
- Hemi cushions (See chapter 5)

HEAD SUPPORT
- Different head support models (See chapter 5)

5. ACCESSORIES

The anytime updated complete accessory and spare part catalogue can be downloaded from our home page my-netti.com order forms, Netti 4U CED.

FRAME

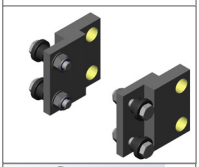
ANTI-TIP
With tramp pedal.



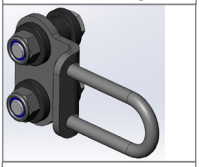
BRAKE EXTENDER
long 310 mm.



FRAME EXTENDER
Increases distance between main wheels and front castors. Reduces tipping risk.



BRACKET
For fixing wheelchair in a car.

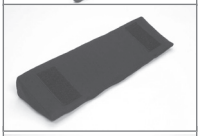


BACK

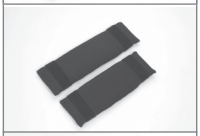
BACKREST CUSHIONS
Several models.
Please contact your dealer.



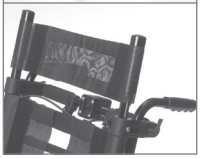
WEDGE
Increases side support.



LUMBAR SUPPORT
Increases lumbar curvature.



BACKREST EXTENDER
120 mm extender. To be used together with 600 mm backrest cushion. Watch out that the chair does not become unstable when the back is reclined



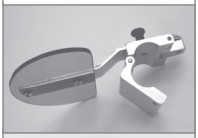
SIDE SUPPORT CORRECTION.
Meant for correction of bad postures in the upper trunk.



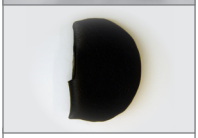
PAD
For side support



SIDE SUPPORT STABLE
Meant for users with decreased stability of the upper trunk. For optimal function use together with Stable cushion.



PAD
For side support Stable



SEAT

SEAT CUSHIONS
Many to choose from.
Please contact your dealer.



PELVIC STABILIZER



ABDUCTION BLOCK
The block reduces abduction.

Small:	80 mm width
Medium:	110 mm width
Large:	140 mm width



BELTS AND HARNESSES
Several models: Hip belts with or without upholstery and with plastic lock or car lock (Chapter 5.1 for mounting).

HEAD SUPPORTS
Support C – Large.
Support A – Side support
Support B – Small
Support D – Pressure distribution
Support E – Side support adjustable
Support F – With cheek support





HYGIENE COVER
Protects the core of the head support.



HEAD CUSHION COMFORT
Cushion with Kospoflex filling to pull onto head rest.



ARM SUPPORT

HEMI ARM SUPPORT
An accommodating support for hemiplegic users.



LEG SUPPORT

ANGLE ADJUSTABLE



UNIVERSAL
Adjustable in fixed positions between 33° to 105° using an adjustment wheel.



FOOT BOARD UPHOLSTERY



ANKLE HUGGERS

UPHOLSTERY FOR CALF SUPPORT BRACKET
Reduces pressure.



CALF PAD HINGED
The user does not have to lift the leg when mounting or dismounting the foot supports.



FOOT BOARD WITH LOCK
The foot support can be swung to the side like standard foot supports.



FOOT BOX
Upholstered. Grandis foot box when used as seat in a car.



WHEELS

MAIN WHEELS
12", 16" and 24" with drum brake



FRONT CASTORS
6" and 7" – 175 x 45 Flexel

SPOKE PROTECTORS
For 20", 22" and 24". Transparent



TRAYS etc.

2 tray models:
Swingable and lockable



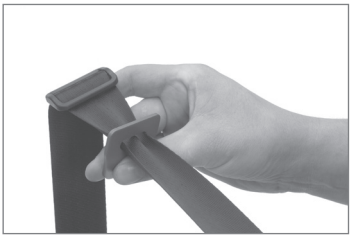
UPHOLSTERY FOR TRAY
Offers a soft base for the arm resting on the tray.



TOOL SET

5.1 MOUNTING OF HIP BELT

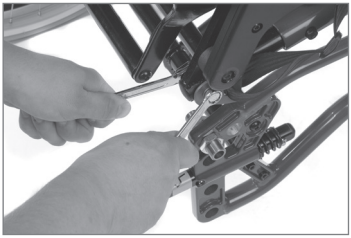
- Pull the belt through the hole in the hip belt bracket.



- Thread the belt back through the belt clamp.



- Fix the hip belt bracket to the backrest hinge in the rearmost hole, using the enclosed screws and nut.



2 pcs 13 mm open-end spanner.

5.2 MOUNTING OF H-BELT BAR

- See separate mounting description MD0074 for Harness adapter kits.
- Fix the push handles in correct position and lock firmly. Then fix the bar at the right position / height. The height should be level with the shoulders of the user.





- Thread the belt through the rolls and lock the belt by pulling the belt through the belt clamp. Adjust to the requested length of belt.



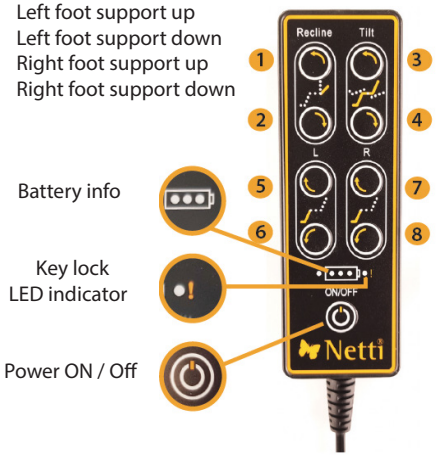
5.3 ELECTRICAL COMPONENTS

Netti III EL is a wheelchair equipped with electrical operation of tilt, recline and leg supports. The chair may be equipped with one or several electrical functions. They are operated with a hand control. A separate Instrcutions for Use for Netti III EL is available.

Electrical components are mounted by Alu Rehab or certified personnel.

Hand control functions:

1. Recline forward
2. Recline back
3. Tilt back
4. Tilt forward
5. Left foot support up
6. Left foot support down
7. Right foot support up
8. Right foot support down



A holder for hand control can be mounted as accessory.

Weight of components:

Control box:	1900 gram
Tilt actuator:	1650 gram
Recline actuator:	1610 gram
Foot support actuator:	984 gram (each)
Hand control:	240 gram
Cable for charger:	20 gram

Total weight all inclusive: 7388 gram

In the Netti III EL Instrcutions for Use maintenance, charging and handling is described.

5.4 NETTI DYNAMIC SYSTEM KIT

INTENDED USE

Netti Dynamic System is an advanced mobility aid for users affected by dystonia. It is for users with extensive movement patterns resulting in strong spasms and contractions of the user's musculoskeletal apparatus causing joint dislocations, involuntary movements, sliding, loss of function and also challenging the strength of the wheelchair.

Netti Dynamic System kit is ordered and installed by Alu Rehab.



THE KIT CONTAINS:

- Netti Dynamic Leg supports
- Netti Dynamic seat plate
- Netti Dynamic chair back gas spring
- Netti Dynamic head support
- Frame extender
- Pelvic stabilizer - hip-belt
- Shoe shells

The patented Netti Dynamic System accommodates the user's extension movements letting the wheelchair work in synergy with the user's movements. When accommodating the involuntary extensions pattern, muscle tone and frequency of involuntary movements could be reduced. The wheelchair is dynamic and will follow the user's movements of both upper and lower body.



NETTI DYNAMIC SYSTEM
allows for Open Kinetic Chain movements (OK-C):

- Foot movements
- Leg movements
- Hip movements
- Back movements
- Head movements

IMPORTANT BENEFITS

- The wheelchair adapts to the movements of the user.
- The user will have less discomfort during spasm as the wheelchair supports the movement.
- After a spasm the user returns to the original sitting position securing a good position and pressure distribution.
- It prevents unintentional change of position.
- It prevents the user from sliding forward in the chair and thereby getting a bad sitting position and inadequate distribution of pressure.
- Extends the lifetime of the wheelchair.

THE NETTI DYNAMIC SYSTEM CONCEPT:

What is Netti Dynamic Seating?
Netti Dynamic System is a tilt and recline wheelchair which allows controlled Open Kinetic Chain (OK-C) movements of the user. Static comfort wheelchairs can be accommodated to support the user's distal segments. The controlled OK-C movement has an extra impact: The distal segments can move, with a moderate resistance.

OK-C helps to gain control of the proximal segments, especially when the user cannot inhibit muscle movements due to their medical condition.

Netti Dynamic System is a modular system that can be customized and adjusted according to the user's need.
Typically Netti Dynamic System or its components may be used for wheelchair users with involuntary movements.

Before using Netti Dynamic System (NDS) or any of its components, a seating assessment should be carried out by a trained professional.

⚠ The therapist's adaptations and settings of the dynamic system must not be changed by unskilled people**.**

ASSESSMENT OF DYNAMIC BACK SUPPORT GAS SPRING FORCES, SUITING USER STRENGTH AND MOVEMENT PATTERNS.

An assessment of the user is needed to find the right power of the gas spring.

Correct solution: The back gsa cylinder gives full support on a full, open kinetic chain movement during the user's extension pattern. When the user starts to relax, the gas spring move the back support to its original position.

Main factors to be considered by a trained professional:

- The user's weight, width and height
- The character and strength of the body part extensions and movement patterns
- Goals and improvement regarding the user's "Activity daily life" and health condition.

The user's movement pattern and muscle tone may also change over time. It is relevant to assess and monitor the fitting of the wheelchair and the power of gas springs according to the development of the user's movement pattern and muscle tone over time. If the gas spring is too strong, the user will not be able to make an extension. It will be a "closed kinetic chain", or a static position for the user.

If the gas spring is too weak, the user will not be lifted back to his/hers original seating position after an extension of the upper body part.

CHAIR BACK HEIGHT

The chair back can be extended by mounting a back extension.

NETTI DYNAMIC HEAD SUPPORT

The Netti Dynamic System is equipped with a dynamic head support. The head support follows the extension movement of the neck.

The depth of the head support should be adjusted to barely touch the back of the user's head when sitting relaxed.

MOUNTING, POSITIONING AND ADJUSTMENTS OF PELVIC SUPPORTS AND SUPPORTIVE HARNESSES

Netti Dynamic System can be equipped with several different types of pelvic stabilizer and supportive harnesses each type developed to give the user the best stabilization support depending on the conditions:

- Pelvic stabilizer – (included in Netti Dynamic System)
- Upper body harnesses
- Ankle huggers
- Shoe shells
- Pelvic stabilizer, mounted to the seat plate, helps the user to keep his position on the seat even under full spastic extension.

⚠ Always use pelvic stabilizer / hip belt when upper body harness is used.

See separate Mounting Description for upper body harnesses.

Detailed descriptions are found in separate Instrcutions for Use for

- IFU0143 EN Netti Dynamic System.

Both are available at our homepage: **my-netti.com** or at your dealer.

6. ASSEMBLING AND ADJUSTMENT

For information about adapting the wheelchair to the user, please see: my-netti.com Knowledge center.

Tools needed are described under each chapter. Accessories described in chapter 5 is a presentation of options and will be delivered with separate mounting descriptions.



6.1 Unpacking

1. Unpack all the parts, and check that everything is there according to the packing list.
2. Mount the main wheels (Chapter 6.2).
3. Mount the front castors (Chapter 6.3).
4. Check and adjust the seat depth (Chap. 6.7).
5. Mount the backrest (Chapter 6.5).
6. Mount the seat cushion (Chapter 6.9).
7. Mount the leg supports (Chapter 6.10).
8. Mount the head support (Chapter 6.11).
9. Mount any accessories (Chapter 5).

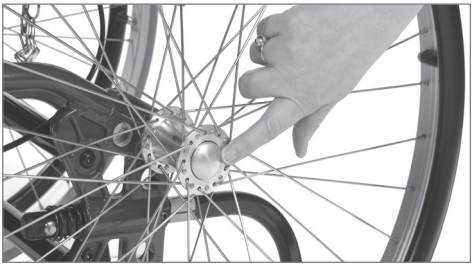
Weight of components (450 mm chair width):

Main wheels:	1,9 kg each
Anti-tip:	0,1 kg each
Front castors:	0,8 kg each
Leg support angle adj.:	2 kg each
Netti Seat cushion:	App. 1 kg
Head support A:	1,0 kg
Head support C:	0,9 kg

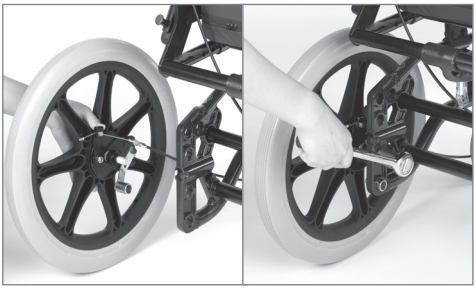
6.2 MAIN WHEEL

To mount a 24" main wheel, the hub bushing must be moved to correct hole in the main wheel bracket.

- To mount the main wheel, remove the quick release bolt from the hub bushing.
- Lead it through the center of the main wheel and into the hub bushing while pressing the knob in center.
- Insert the quick release bolt through the centre of the main wheel and into the hub bushing while pressing the knob in centre.



12" & 16" main wheels with drum brake are installed by your dealer.



To check that the 24" main wheel is properly attached to the hub, remove the finger from the central knob and pull at the main wheel.

If the drive wheel does not lock, see troubleshooting and adjust.
If it still does not lock, do not use the wheelchair but contact your dealer.

6.3 FRONT CASTORS

Are equipped with quick release axle.

To remove:

- Press the release button on top of the front fork bearing house – located under the silicon cap.



To mount:

- Lead the quick release axle into the bearing house. Pull the fork slightly to ensure that the fork is fully locked.



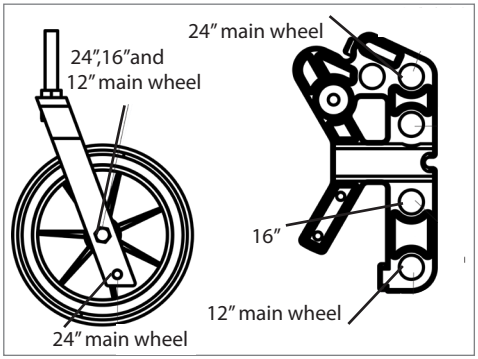
Sand and sea water (salt used for gritting in the winter) can damage the bearings of the main wheels and front castors. Clean the wheelchair thoroughly after exposure.

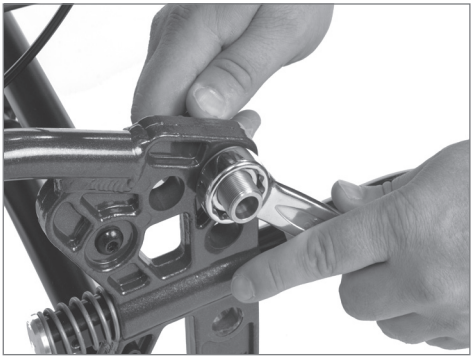
6.4 SEAT HEIGHT ADJUSTMENT

The seat height at the rear depends on:

- Size of main wheel.
- Position of main wheel.
- Using 24" main wheels in the upper hole, the seat height is 465 mm from the floor to the seating plate. Using 24" main wheels in the next lower position, the height will measure 500 mm to the seating plate.

Main wheels and front castors should be mounted according to the positions described below.





If it is required to change position of the main wheels or to change to a different size of main wheels, unfix the hub bushing including washer and nut. Remove the hub bushing and mount it in the required position.

2 pcs 24 mm open-end spanners.

Make sure that the nut on inside of frame totally wreathes the wheel bushing.

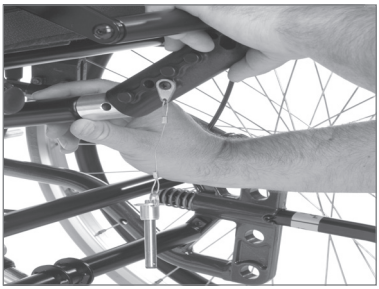
When the seat height is changed ensure that the front castors are placed so that the lower frame tube is parallel with the ground.

Check the position of the anti-tip and re-adjust the brakes after mounting the main wheels or changing the main wheel position.

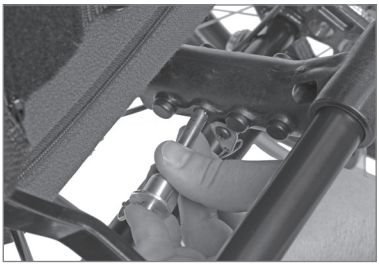
6.5 BACKREST

To mount the gas spring, lift the push bow with one hand, and lead the gas spring locking head into the plastic bracket with the other.

- If the gas spring seems to be too long it must be compressed. Press the horizontal lower back tube towards the end of the gas spring while you pull the handle for the back recline. The gas spring will be compressed and fit into the plastic bracket.
- Check that the hole in the locking head is parallell with the open holes in the plastic bracket.



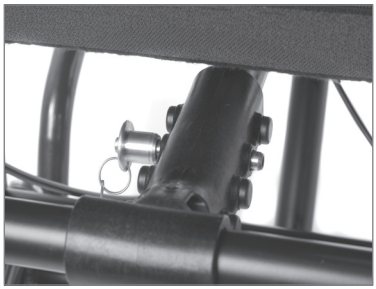
- Lock the backrest by pushing the locking bolt through the plastic bracket and gas spring locking head.



To check that the backrest is locked, grip the push bow and press the backrest forward. If the backrest falls forward – repeat the locking procedure or contact your local dealer.

SEAT DEPTH

- The wheelchair is set to a standard seat depth, and the plastic bracket has 4 holes of which three are temporarily blocked with plastic plugs.

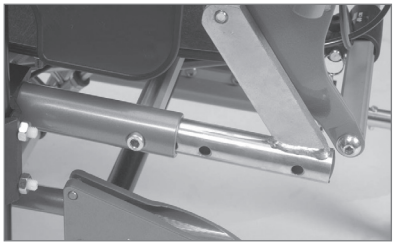


- The backrest hinge has 4 holes. The hole positions are in accordance with the holes in the plastic bracket. If the locking head of the gas spring is mounted in the inner hole of the plastic bracket, the backrest hinge should also be mounted in the inner hole etc.



6.6 SEAT DEPTH ADJUSTMENT AT THE REAR

- If the seat depth should be adjusted at the rear, release the locking bolt from the plastic bracket.
- Find the required position for the locking head in the plastic bracket, and remove the plastic plug from this hole.
- Lock the backrest by pushing the locking bolt through the plastic bracket and the gas spring locking head.
- After changing the hole position in the plastic bracket, the hole position in the backrest hinge must be changed into the parallel / corresponding position.



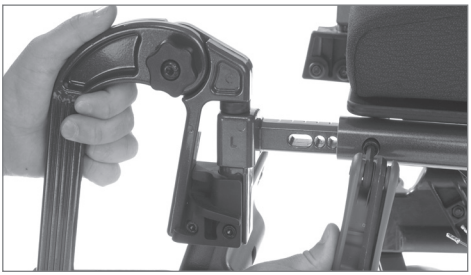
Check that the hole in the backrest hinge and the plastic bracket are mounted in parallel position.

6 mm Allen-key.

6.7 SEAT DEPTH ADJUSTMENT IN FRONT

It is possible to adjust the seat depth with up to 100 mm in front to get the knee pivot point aligned with leg support pivot point. Do the following.

- Screw out the screws in the adjustment piece.
- Place the adjustment piece in the wanted position.
- Replace and tighten the screws.



6 mm Allen-key.

If the user has spastic tendencies the adjustment piece should not be pulled out more than 50 mm.

6.8 ANTI-TIPS

The anti-tips should be mounted according to the mounting description which is enclosed with the chair upon arrival.

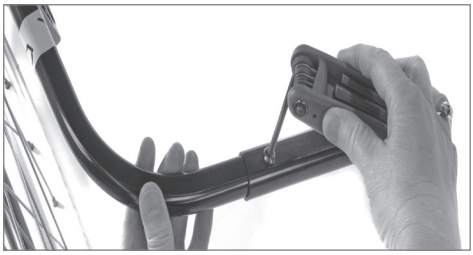
- Use of the anti-tip.
- Pull the anti-tip out.
- Turn it up or down 180°.
- Lock it in position.



ADJUSTING THE HEIGHT OF THE ANTI-TIPS

The anti-tip can be adjusted in two fixed positions. The short position is for 12" & 16" main wheels and 24" in upper position. The long position is for 24" main wheels in lower position.

- Unfix the screw in the adjustable extension piece as shown in picture below.
- This extension piece has two holes. Place it in the required position and tighten the screw.

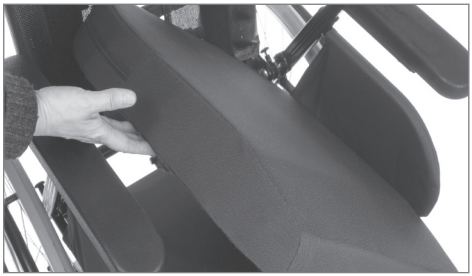


5 mm Allen-key.

The anti-tip should always be used for the safety of the user.

6.9 SEAT CUSHION

The seat cushion is fixed on the wheelchair with Velcro.



It is very important to place the cushion in the wheelchair before use.

The cushion cover is washable and reusable.

6.10 BACKREST CUSHION*

Backrest cushions are fixed and adjusted onto the wheelchair using the Velcro.

Backrest cushions are attached with a Velcro system.



It is imperative to correctly set-up the cushion in order to ensure good seating comfort.

The seat and backrest cushion covers are washable and thereby reusable. Follow the instruction on the cushions for correct maintanance and washing of the cushions.

ADJUSTING THE VELCRO BACK

- Loosen the straps and place the backrest cushion so that the user gets room for the bottom and the integrated lumbar support in correct position.
- Tighten the straps so that they follow the curvature of the spine and gives a little extra support at the top of the sacrum.

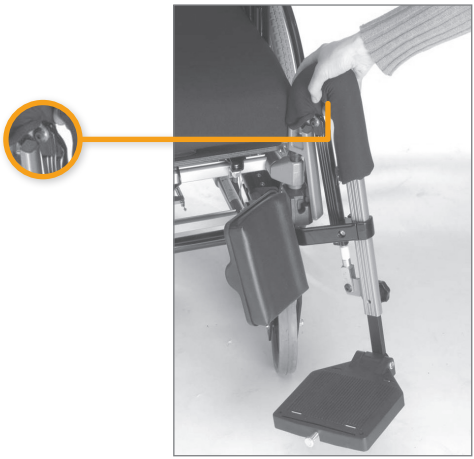
6.11 LEG SUPPORTS

Netti 4U CED is delivered with manual Angle Adjustable leg support.
Universal leg support can be ordered instead, shown to the right.



MOUNTING OF LEG SUPPORT

- Mount the leg support by holding onto the top hinge point of the leg support.
- Hold it in an angle of app. 20° outwards.
- Put the leg support bolt into the leg support black plastic lock.
- Swing it in and push down.

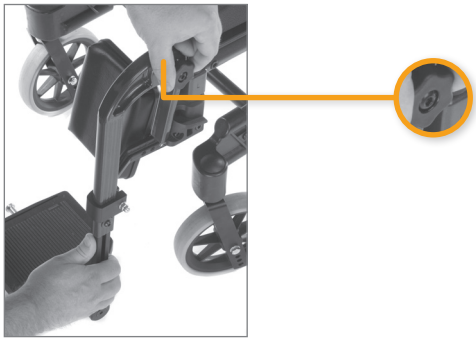


UNIVERSAL LEG SUPPORT

The Universal leg support is fixed with the possibility of angle adjustment. It is swingable and removable. The foot plates are foldable and can be angled in fixed positions. They are delivered with height and depth adjustable calf support.

Adjusting the angle – Universal leg support

- The angle of the leg support can be adjusted using the star wheel in centre of the hinge point.
- Loosening this star wheel enables you to adjust the leg support to the required angle.
- Fix the angle by tightening the star wheel.

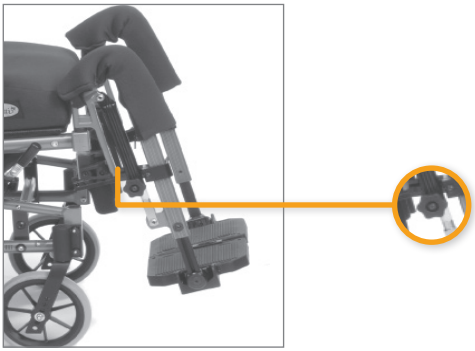


ANGLE ADJUSTABLE LEG SUPPORT

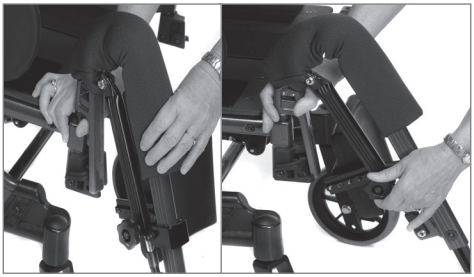
The angle adjustable leg support is freely adjustable in angle. It is swingable and removeable.
The foot plates are foldable and can be angled in fixed positions. They are delivered with height and depth adjustable calf support.

Adjusting the angle – Angle adjustable leg support

- The angle of the leg support can be adjusted using the star wheel.
- Loosening this star wheel enables you to adjust the leg support to the required angle.
- Fix the angle by tightening the star wheel.



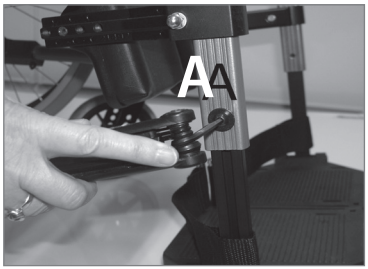
Squeeze hazard.
When adjusting leg supports angle, do not put the fingers in the adjusting mechanism between the moving parts.



Adjusting the length of the leg support

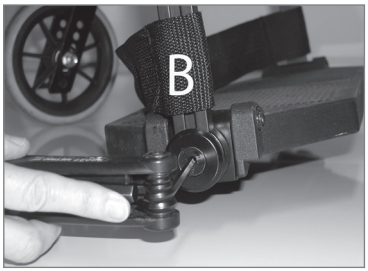
- Losen the screw (A ill. next page) to make the adjustment tube move.

Adjust the leg support in required position and fix the screw properly.
In some markets a star wheel is used instead of the adjustment screw.



Adjusting the angle of the footplate:

- The foot plates angle can be adjusted.
- Losen the screw (B) and adjust the foot plate to the required angle. Fix the screw properly.



5 mm Allen-key.

Locking and releasing the foot plates:

- The foot plates come with a locking mechanism which makes the plates stronger.
- To lock the foot plates pull the plastic lock on the right foot plate and place the lock over the bolt on the left foot plate.
- To release the foot plate, pull the plastic lock and lift the right foot plate up.



For outdoor use, there should be a clearance of 40 – 50 mm between the foot plate and the ground.

While making the adjustment there must be no load on the foot plates.

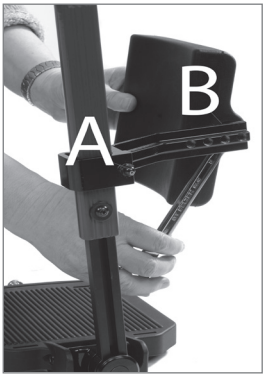
Removing the leg support:

- Pull the plastic lock on the foot plate rearwards, so that the pin is released, and the foot plate can be folded up.
- Release the leg support by pulling it slightly straight up.
- Swing the leg support outwards.
- Lift and remove the leg support.



ADJUSTING THE CALF SUPPORT

The calf support is height and depth adjustable. To adjust height unfix the nut on the outside of the calf support bracket, find the required height and fix the nut again (Ill. A).



10 mm open-end spanner.

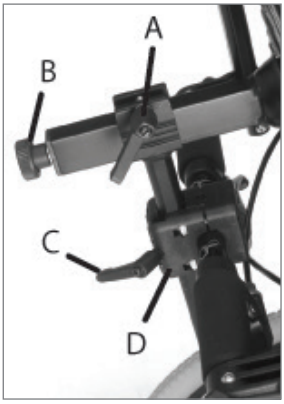
To adjust in depth, the calf pad is removed from the bracket by using an open-end spanner between the pad and the bracket. Find the required position and refix it (Ill. B).

13 mm open-end spanner.

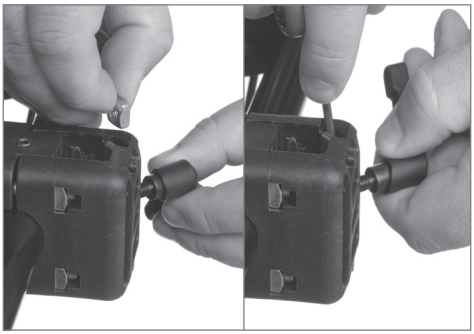
Never stand on the foot plates due to the risk of tipping forward.

Never lift the wheelchair by the leg supports.

6.12 HEAD SUPPORT



A – Lever for depth adjustment
B – Wheel for angle adjustment
C – Lever for height adjustment
D – Head support bracket



- Place the squared nut in the slot of the head support bracket as shown above.
- Place the head support in the head support bracket.
- The height and the depth of the head support is set to the required positions and tightened.
- The head support bracket is fixed by tightening the four screws two by two diagonally so the bracket is fixed with the same strength divided on the four screws.



Adjusting the head support in depth:
- Release the locking lever on top of the vertical bar (A).
- Adjust the head support and fix it in required position.

Adjusting the head support in height:
- Release the locking lever on the head support adapter (C).
- Adjust the head support and fix it in required position.

Adjusting the head support in angle:
- Release the adjustment wheel at the rear of the horizontal bar (B).
- Adjust the head support and fix it in required position.

Adjusting the head support sideways:
- The head support adapter can be moved both to the right and left, giving the possibility to accomodate special needs for head support.
- Untighten the four screws holding the adapter together.
- Move the adapter to the required position and fix the adapter by tightening the screws diagonally.

Remember to release the levers when adjusting the head support.

If the head support stand does not fit the bracket perfectly the bracket is probably fixed too tight or unevenly.

After fitting the head support fix it properly by tightening the little set screw in the centre on top of the head support bracket using an Allen-key.

If the head support seems to short in height, it can be turned 180° by releasing the adjustment wheel at the rear of the horizontal bar (B).

6.13 ARM SUPPORT



- The arm support can be swung backwards.



- Press the red handle to release the arm support for to swing it backwards.



Adjusting the depth of the arm support:
- Press the red knob for to adjust the depth of the arm support.



Adjusting the height of the arm support:
- Untighten the screw on the arm support using a 4 mm Allen-key.
- Raise or lower stem.
- Tighten the screw.



Be aware of the arm support lock (A) when locking arm support.

When side support is mounted on the wheelchair, it will not be possible to revolve this arm support.

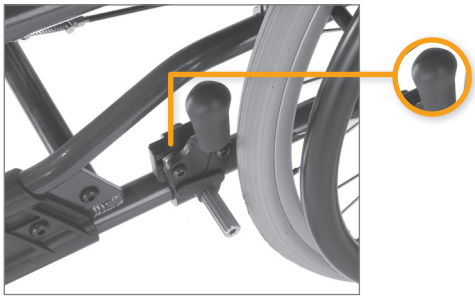
Be aware of potential squeeze hazard between arm support and top frame tube when locking arm support.

6.14 ADJUSTING THE PARKING BRAKES

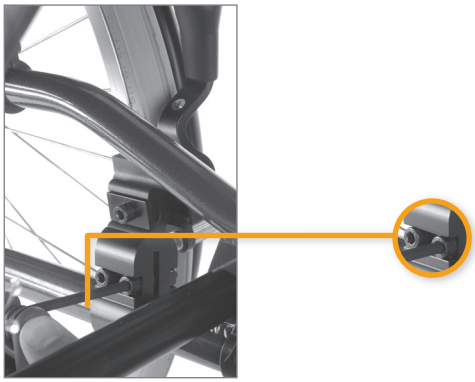
- The brakes are freely adjustable along the frame tube.
- To activate the brake, push the handle forwards.



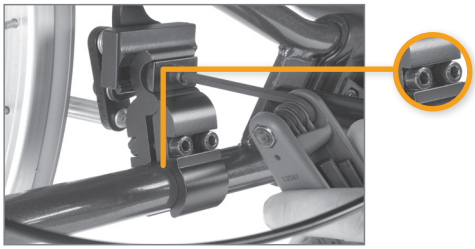
- To release the brake, pull the handle rearwards.



- To reposition the brake, loosen the two screws on the inside of the brake clamp.
- Adjust the brake position and tighten the screws.



- For fine adjustment, loosen the upper screw on the inside of the brakes.
- Adjust the brake position and tighten the screw.



5 mm Allen-key.

Check that the brakes are correctly adjusted by activating the brakes and be sure that the wheelchair does not move.

The brakes are constructred as parking brakes and shall not be used as driving brakes.

Be aware of potential squeeze hazard between brake and tyre.

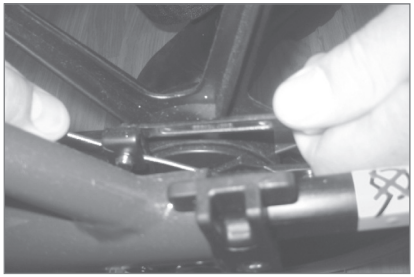
DRUM BRAKE

If the wheelchair is mounted with 12" or 16" main wheels, these will be equipped with drum brakes. 22" and 24" wheels can also have drum brakes.

If the brake does not brake properly:
To adjust the wire on one or both sides, adjust the foot screw 2 – 4 rounds out. Then recheck the brakes.



If the wire is too loose:
- Adjust the foot screw all the way in.
- Tighten the wire by loosening the wire clamp before pulling the wire further through it.
- Tighten the wire clamp, and adjust the foot screw out again.



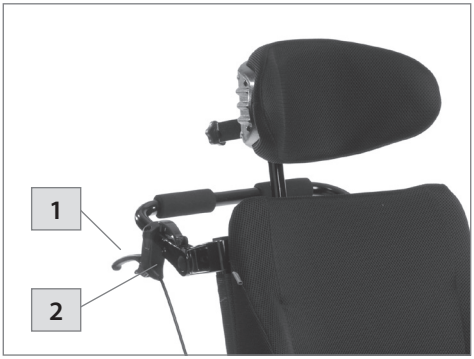
1 pc 10mm open-end spanner.

To ensure the correct functions of the wire, these must never be taut.

Never leave the user alone in the wheelchair without activating the parking brakes.

OPERATING AND APPLYING THE BRAKE

The wheelbase in drum brake is fitted with hand operated hub brakes to allow regulation of speed on hills and whilst travelling along. These are located on the push handles.



- To apply the hub brakes, pull the brake levers **(1)** evenly and smoothly towards the push bow and bring the wheelbase to a stop.
- For locking the drum brake in parking position, press the lever **(1)** against the push bow and push the lever **(2)** away from you wedging the park brake lever.
- Make sure both parking brakes are locked.
- The parking brake will be released when you press the lever **(1)** against the push bow. It is locked with a spring and this will in this way be released.

6.15 PUSH BOW

The push bow is angle adjustable.

- Open the handle for to change the angle of the push bow.
- Lock the handle after placing the push bow in the required position.



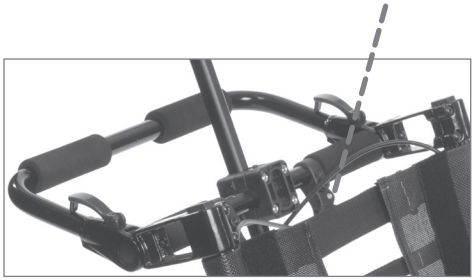
Never lift the wheelchair by the push bow.

- Always hold on to the crossbar when lifting the wheelchair.

7. SEAT ANGLE / TILT AND BACK ANGLE / RECLINE

7.1 SEAT ANGLE

The seat angle is regulated using the release handle mounted on the push bar.
The seat unit can be tilted from –5° to +20°.



If you adjust the seat tilt below 0°, there there is an increased risk for the user slipping forwards out of the chair.
Alu Rehab recommends the use of a hip belt to prevent falling out of the chair.

7.2 BACKREST ANGLE

The backrest angle is regulated using the release handle mounted on the push bar. The angle can be regulated from 92° to 137° backwards.

To ensure correct function of the wires, these must never be taut.

The seat and backrest angle must not be adjusted without using the anti-tips.

The release handles has each on of the following label:



Tilt



Recline

Risk for tipping! Check the position of the anti-tips.

When chair back extension is mounted, the tipping risk increases. If necessary it should be improved by moving the main wheels further back. Always use anti-tippers when recline and tilt functions are being activated.

7.3 KEY WORDS REGARDING TILT AND RECLINE

OF STATIC COMFORT WHEELCHAIRS, AND COMMON FEATURES OF DYNAMIC WHEELCHAIRS

Tilt and recline are the basic benefits of a comfort wheelchair. It allows for varying seating positions during the time in the wheelchair.

We have reviewed the clinical evidences regarding tilt and recline, and found there are several studies or best practice guidelines suggesting that the tilt and recline sequence is important to reduce shear and sliding:

FIRST TILT – THEN RECLINE AFTERWARDS.

When bringing the client upright again, the sequence should be recline first then tilt. It would seem that the most shear would be induced when going upright from a recline and tilted position.

7.4 DECREASE THE POSSIBILITY OF SLIDING, SHEAR AND PRESSURE SORES:

Only use the tilt angle to achieve variation of the seating position for the user. It is common knowledge that recline should not be adjusted after the back angle is accommodated to the user's best seating position.

The muscle tone of the neck and back should be as low as possible for the user to prevent sliding, and a change of the recline angle from the original position will interrupt and destroy the correct body position, and cause an increased muscle tone in the neck.

If the recline function is used during a transfer situation or other situations, it is very important that the recline angle is adjusted back to the correct, original position when the user is back to a normal seating position.
Wrong usage of recline causes an increased possibility of sliding, and this means an increased danger of shear (vertical and horizontal forces) and pressure sores.

ASSURE THAT THE USER IS SAFE WHEN THE TILT OR RECLINE FEATURES ARE GOING TO BE ADJUSTED:

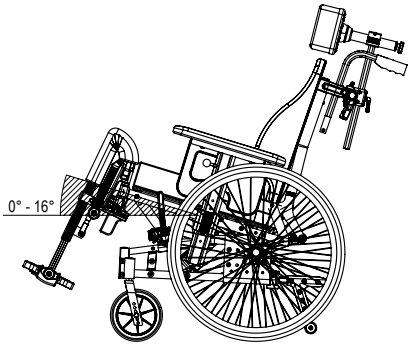
The tilt and recline functions of all Netti comfort wheelchair models is a «one hand operation», including the dynamic wheelchair models. This is a great benefit for the user. The caregiver is able to establish eye contact with the user when the tilt or recline function is going to be used. The caregiver is also able to communicate with the user before the tilt or recline function is used. The user will feel more safe when he / she is aware that the tilt or recline function is going to be used.

7.5 OPERATING TILT HANDLE: TILTING THE SEATING UNIT

Press the left handle on the push bar and put pressure to the push bar to tilt the seating unit with one of your hands, while you have eye contact with the user and put the other hand on the arm support.

The correct relative angle between the body parts remain the same when the seating unit is tilted.

Wherever you let the handle loose, the seating unit will stay in this position. To bring the seating unit up, press the handle and the tilt gas spring will assist you lifting the seating unit up.

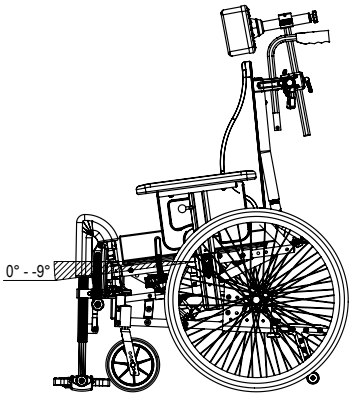


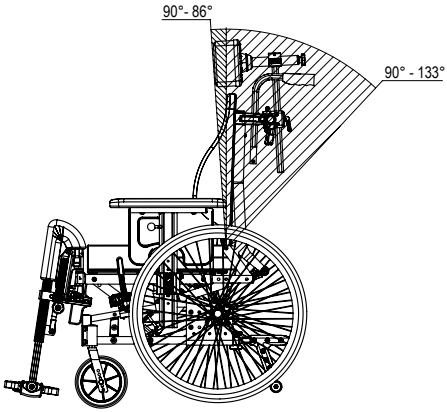
7.6 OPERATING RECLINE HANDLE: RECLINING THE BACK

A backward tilted seat unit gives a steeper seating angle in relation to the surface, and prevent sliding of the wheelchair user.

A forward tilted seat unit brings the user in a positon where activities – for instance by a table or by standing up from the wheelchair, are supported.

Press the right handle and put pressure to the push bar to recline the back with one of your hands, while you have eye contact with the user and put the other hand on the arm or leg support.
Wherever you let the handle loose, the chair back will stay fixed and locked.





The tilt handle and the tilt sign is on the push bar – shown on the previous page.

⚠ Do not leave the user alone in the wheelchair when it is tilted forwards.

8. MANOEUVRING

8.1 GENERAL TECHNIQUES

MANOEUVERING AND CHAIR BALANCE:

The weight and balance of the chair influences the maneuvering qualities of the wheelchair. The weight, size and sitting position of the user are influencing factors. The position of the wheels will in addition influence the manoeuvering qualities. The more weight placed over the main wheels, the easier it is to manoeuver. If heavy weight is placed over the front castors, the chair will be heavy to manoeuver. See page 18 – seat depth adjustment – for balancing the chair.

Step approach:
Always approach the step in slow motion preventing the front castors to hit the step with force. The user could fall out of the chair by the impact. The front castors could be damaged.

Driving down steps / sidewalks
Be cautious that you do not drive down steps higher than 30 mm. The leg supports may hit the ground first. Thereby you may lose steering control and the leg supports may brake.

Driving on soft, rough or slippery ground: can make safe manoeuvring more difficult as the wheels may loose traction and it is difficult to control the wheelchair.

Parking:
Increase the footprint and the support of the wheelchair by moving the chair about 100 mm rearwards making the front castors turn forward.

Companion:
If the user is left alone in the wheelchair, always lock the brakes and check that the anti-tips are turned down.

8.2 DRIVING TECHNIQUES – STEP UP –

Companions, drive up a step forwards:
- Check that the anti-tip is turned up.
- Angle the wheelchair backwards.
- Balance the chair on the mainwheels and push it forward until the front castors are on the step.
- Lift the push handles while pushing the chair onto the step.

Turn the anti-tip downwards.

Users, drive up a step backwards:
This technique is only useful if the step is very low. It also depends on the clearance between the foot plates and the ground.
- Check that the anti-tip is turned up.
- Drive the chair backwards towards the step.
- Make a firm grip on the push rims and move the body forward while pulling.

Turn the anti-tip downwards.

Companions, drive up a step backwards:
- Check that the anti-tip is turned up.
- Pull the chair backwards next to the step.
- Angle the wheelchair backwards, moving the front castors slightly up in the air.
- Pull the wheelchair up the step and go backwards long enough to put down the front castors on the step.

Turn the anti-tip downwards.

8.3 DRIVING TECHNIQUES – STEP DOWN –

Companions, drive down a step forwards:

- Check that the anti-tip is turned up.
- Angle the wheelchair backwards, moving the front castors slightly up in the air.
- Drive carefully down the step and angle the wheelchair forward putting the front castors back on the ground.

Turn the anti-tip downwards.

Companions, drive down a step backwards:

- Check that the anti-tip is turned up.
- Move the wheelchair backwards to the step.
- Drive carefully down the step and move the wheelchair backwards on the main wheel until the front castors have come away from the step.
- Put the front castors down on the ground.

Turn the anti-tip downwards.

8.4 DRIVING TECHNIQUES – SLOPE –

Important advise for driving down and uphill avoiding the risk of tipping.

Avoid turning the wheelchair in the middle of a slope.

Always drive as straight as possible.

It is better to ask for assistance than taking risks.



Driving uphill:
Move the upper part of the body forwards in order to maintain the balance of the chair.

Driving downhill:
Move the upper part of the body backwards to maintain balance of the chair. Control the speed of the chair by clutching the push rims. Do not use the brakes.

8.5 DRIVING TECHNIQUES – UP STAIRS –

Always ask for assistance.

Never use escalators, even if assisted by a companion.

With assistance, backwards.

- Check that the anti-tip is turned up.
- Pull the wheelchair backwards to the first step of the stairs.
- Angle the wheelchair backwards on the main wheels.
- Pull the wheelchair slowly up the stair, one step at the time keeping the balance on the main wheel.
- Reaching the top of the stair, pull the wheelchair backwards far enough to put the front castors safely down on the floor.

Turn the anti-tip downwards.

If two companions are present, one person can assist lifting in the front of the frame.

Do not lift the whelchair holding on to the leg suports.

Do not lift the wheelchair holding on to the arm supports.

The companions should use the strength in their legs carrying the chair, avoiding unnecessary stress on the back.

8.6 DRIVING TECHNIQUES – DOWN STAIRS –

Never use escalators, even if assisted by a companion.

With assistance, forwards:

- Check that the anti-tip is turned up.
- Drive the wheelchair forward to the first step of the stair.
- Angle the wheelchair backwards on the main wheels.
- Have a firm grip on the push bow, and keep the balance on the main wheel taking one step at the time.
- Reaching the bottom of the stair, put the front castors safely down on the floor.

Turn the anti-tip downwards.

If two companions are present, one person can assist lifting in the front of the frame.

Do not lift the whelchair holding on to the leg suports.

Do not lift the wheelchair holding on to the arm supports.

8.7 TRANSFER

Techniques for transfering to / from the wheelchair should be practiced well with the persons involved. Here, we give some important advices for preparation of the chair:

With or without companion – sideways.
Before transfer:
- The wheelchair should be placed as close as possible to the destination of the transfer.
- Pull the wheelchair backwards 50 – 100 mm in order to make the front castors turn forward.
- Lock the brakes.
- Remove leg support and arm support on the side of the transfer.
- Tilt chair to horizontal position.

With or without companion – forwards.
Before transfer:
- The wheelchair should be placed as close as possible to the destination of the transfer.
- Pull the wheelchair backwards 50 – 100 mm in order to make the front castors turn forward.
- Lock the brakes.
- Tilt chair forward.

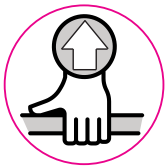


Using a hoist.
Before transfer to chair:
- Tilt the chair back.
- Remove the head support.
- Remove the leg supports.
- Open the backrest angle slightly.
- Replace the components when transfer is finished.



Never stand on the foot plates due to the risk of tipping forwards.

8.8 LIFTING THE WHEELCHAIR



The wheelchair should be lifted by the frame, and push bow only.

Lifting points are marked with this sign.

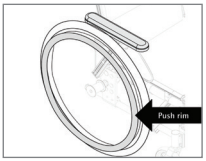


Never lift the wheelchair by the leg supports or by the arm support

Do not lift the wheelchair with a user in it.

8.9 PUSH RIM

Netti 4U CED, CEDS and CED XL are delivered with aluminium push rims as standard. The material and distance to the main wheel influences the ability of the user to grip. Contact your dealer to get information about alternative push rims that fit your chair



Alternative push rims may give a better grip, but the friction may increase.

When using the hands to stop the chair, the risk for burning of the hands increases.

A squeezing and trapping hazard of the fingers may occur when passing through narrow passages and if the fingers come between the spokes. To avoid this risk, we recommend spoke protectors as accessory.

If you want / need to change push rims or increase / decrease the distance between the push rims and the wheel, please contact your dealer.

9. TRANSPORT

TRANSPORT IN CAR

Whenever possible, transfer to a car seat with vehicle safety belts when you are travelling with a car. Secure the wheelchair or store it in the cargo area of the car.



Netti 4U CED has been successfully crash tested in a forward facing orientation with both pelvic and shoulder belts, according to the requirements of ISO 7176-19 and is approved to be used as a seat in a vehicle.

Netti 4U CED is tested with a combined wheelchair and occupant restraint system W120/DISR from Unwin Safety Systems. For further information: BraunAbility Europe. https://www.braunability.eu/wtors

Always use approved wheelchair and occupant restraint system (ISO 10542) for fixing the wheelchair in the vehicle. Use a 4-point strap-type tiedowns to secure the wheelchair in the vehicle

The rating for the wheelchair`s accommodation of vehicle anchored belt restraints is rated A = good.

REMOVE ACCESSORIES

Before using the Netti 4U CED as a seat in a car, be sure to remove and secure all auxiliary parts and accessories (e.g. trays and abduction block) that may fall off the chair in case of an accident and secure them safely elsewhere.

Please study the Instructions for Use IFU0131 – How to use a Netti wheelchair as seat in a car, where even more details are available.

Netti 4U CED has been crash tested without any power assistant device etc. If, at a later point of time a power kit, stair climber etc. is mounted, you need to check if your power assistant device is crash tested and approved for wheelchairs being used as seat in a car. If not, the assistant device must be dismounted and secured elsewhere, when the wheelchair is used as a seat in a car.

Netti 4U CED seat width 350-600 mm is approved for user weight up to 160 kg when used as a seat in a vehicle.

SECURING THE WHEELCHAIR

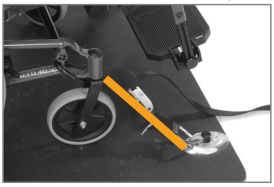
Raise the chair to an upright seat position with max 10 degree tilt and 10 degree recline. Swing the push bow up and fix it behind the head support.

For fixing the wheelchair in the vehicle only the designated securement points should be used.

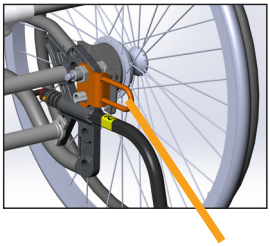


The chair is marked with stickers showing the wheelchair securement points.

In front: Use hook or strap attachment.



In the rear:
Hook on strap or a hook/carbine hook into the car fixing loops (orange illustrated) on the frame.



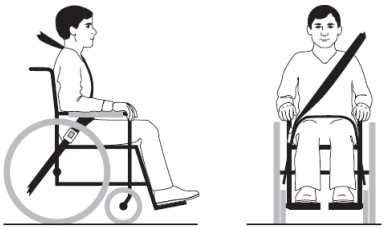
The angle of the straps should be close to 45°

SECURING THE USER

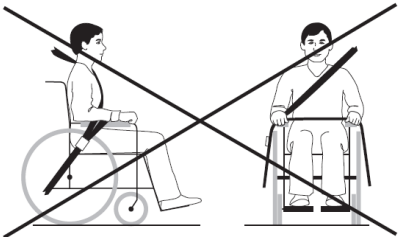
Always use 3-point car occupant restraint belts.

Always use both pelvic and shoulder restraints to reduce the possibility of head and chest impact with vehicle components.
Watch out that the belt is not twisted and the release buckle will not get in contact with the chair in case of a crash.

Make sure the car safety pelvic-belt lay tightly across or in front of the pelvis - the angle between pelvic belt and the horizontal between 30 - 75 degree, the steeper angle the better. The shoulder belt must lay close to the body of the user and not across arm supports, wheels etc. See illustration



The corrective harnesses used in the wheelchair are not safety belts.



The shoulder belt must not lay across arm supports, wheels etc. See illustration

If the user is 1.85 m or longer, the back extension kit and a 500 mm vertial bar for the head support must be mounted when Netti 4U CED is used as a seat in a car.

If a Netti head support is mounted correctly it is very stable but does not replace the need for an external neck support mounted in the car.

Always use Netti cushions or other tested and approved foam wheelchair cushions when Netti 4U CED wheelchair is used as seat in a car.

Never use the wheelchair as a seat in a car if it has been involved in an accident with impact, before the chair has been inspected and approved for this by the manufacturer's representative.

Netti 4U CED with seat width 500 mm and more, may exceed the max width of 700 mm specified in PRM-TSI and have influence on the possibility for train transport.

Alterations or substitutions should not be made to the wheelchair securement points or to structural and frame parts or components without consulting the wheelchair manufacturer.

The wheelchair mass ex cushions is between 33 and 36 kg depending on wheelchair size and configuration.

9.2 FOLDING FOR TRANSPORT

- When the wheelchair is unoccupied, fold it as described below. Put the wheelchair in the trunk or back seat. When placed in the back seat, secure all parts and the frame using safety belts.
- Remonve the cushions.
- Remove the head support (Chapt. 6.10).
- Turn the anti-tips upwards (Chapt. 6.7).
- Remove the arm supports (Chapt. 6.11).
- Remove the leg supports (Chapt. 6.9).
- Pull out the locking bolt for the backrest, and place the backrest forward in the seat (Chapt. 6.5).
- Remove the main wheels (Chapt. 6.2).
- Remove the front castors (Chapt. 6.3).

9.3 TRANSPORT IN AIRPLANE

Netti 4U CED, CEDS and CED XL wheelchairs may be transported in airplane without any restrictions. Netti 4U CED, CEDS and CED XL wheelchairs are equipped with 2 gas springs. These are however not classified as dangerous goods.
Contrary to general dangerous goods instruction UN3164, the IATA-DGR (special regulation A114) rules that the goods that contain gas and are determined to function as shock absorbers (including energy-absorbing devices or pneumatic springs) are NOT subject to the transport instructions i.e. they are indemnified from the following requirements:

a) Each article has a gas volume which does not exceed 1,6 l and a charge pressure not exceeding 250 bar, where the product of the capacity expressed in liters and charge pressure expressed in bars doesn't not exceed 80.
b) Each article has a minimum burst pressure of 4 times the charge pressure at +20 degree Celsius for products not exceeding 0,5 l gas space capacity.
c) Each article is made of material that will not fragment.
d) Each article was manufactured in accordance to quality standard which is approved by the responsible national authority.
e) It is proven and shown that the article relives its pressure by means of a fire degradable seal or other pressure relief device such that the article will not fragment and the article does not rocket.

9.4 TRAVELLING ON PUBLIC TRANSPORT

The wheelchair should be put in a special area for wheelchairs. The wheelchair should face opposite the direction of travel. The back of the wheelchair must be located against a fixed object such as a row of seats or a partition. Make sure the user can easily reach any hand rails or handles. Use belts and harnesses in the chair to hold the user. Use safety belts if available to secure the user in the vehicle.

Netti 4U CED, CEDS and CED XL with seat width 500 mm, exceed the max width of 700 mm specified in PRM-TSI and have influence on the possibility for train transport and other public transport.

EMERGENCY ESCAPE ROUTES:
Netti CED, CEDS and CED XL with seat width 500 mm have an overall width exceeding 700 mm and may have difficulties passing emergency escape routes.

Please be aware that wider wheelchairs have wider turning radius and reduced manoeuvrability in vehicles. Smaller wheelchairs generally provide greater ease of vehicle access and manoeuvrability to a forward facing position.

10. MAINTENANCE

10.1 MAINTENANCE INSTRUCTIONS

You as a user of the wheelchair (and your attendants and family) are responsible for the everyday maintenance of the chair. Clean it regularly. Do the maintenance to assure safe and long time reliable functions and hygienic appearance.

Frequency	Weekly	Monthly
Check defects / damages e. g. breakage / missing parts	X	
Washing of wheelchair		X
Washing of cushions		X
Check anti-tip function		X
Check brake adjustment		X
Check tyre wear		X
Oiling of bearings with bicycle oil		X
Grease vertical leg support profiles with white vaseline	X	

10.2 CLEANING AND WASHING

1. Remove cushions before washing the wheelchair.
2. Clean the frame using water and a rag.
3. We recommend using soft soap.
4. Rinse the wheelchair well using clean water to remove all the soap.
5. Use methylate spirit to remove any dirt left.
6. Clean cushions and covers according to instructions printed on cushions.

NETTI CUSHION CLEANING PROCEDURES

CORE	
Washing	Hand wash 40° C
Disinfection	Virkon S
Drying	Squeeze
	Air dry standing edgewise
OUTER COVER	
Washing	Machine wash 70° C
Drying	Tumble dry max. 80° C

DISINFECTION OF THE WHEELCHAIR

Remove cushions.
See separate washing instruction above:
Wipe disinfection: use a soft rag wetted with hydrogen peroxide and wipe the whole chair clean.
Hydrogen peroxide recommended:
NU-CIDEX "Johnsen and Johnsen".

Check / re-adjust screws and nuts at regular intervals.

Sand and sea water (salt used for gritting in the winter) can damage the bearings of the front castors and main wheels.
Clean the wheelchair thoroughly after use.

* As a rule of thumb, use oil on movable parts and all bearings. Alu Rehab recommends use of ordinary bicycle oil.

10.3 LONG TERM STORING

If the wheelchair is stored for longer time – (longer than 4 months) no special actions are needed. We recommend that the chair is cleaned before storing. Before it being used again, complete the above maintenance instructions.

SPARE PARTS

The Netti chairs are built of modules. Alu Rehab carries stock of all parts and is ready to supply these on short notice. Necessary instructions for mounting will follow the parts.
Parts to be handled by user are defined in spare part catalogues that can be downloaded at **my-netti.com**.
These parts can, if needed, also be removed and sent to manufacturer / distributor upon request.

Parts related to wheelchair frame construction must be handled by manufacturer or authorized service facility.

If defects or damages occur, please contact your dealer.

Original paint for repair of scratched, can be ordered from Alu Rehab.

11. TROUBLESHOOTING

Symptom	Reason / Action	Reference in manual
The wheelchair is going askew	• The main wheel hubs might be incorrectly mounted. • The front castors may not stand vertical to the ground or in the same height. • One of the brakes might be too tight. • The user is sitting very askew in the chair. • The user might be stronger on one side than the other.	**6.2** **6.3** **6.14**
The wheelchair is heavy to manoeuvre	• The main wheel hubs might be incorrectly mounted. • Clean the front castors and forks for dirt. • Too much weight over the front castors.	**6.2** **6.3**
The wheelchair is hard to turn	• Check that the front castors are not fixed too hard. • Clean the front castors and forks for dirt. • Check, that the front castors are placed in correct position. • Too much weight over the front castors, adjust the balance of the chair.	**6.3** **6.3** **6.3**
The main wheels are difficult to take off and put on	• Clean and grease the quick release. • Adjust hub bushing further out from the frame.	**6.2** **6.2**
The brakes are not functioning well	• Adjust the brake. • Check the distance between wheels and brakes.	**6.14**
The front castors wobble and the chair is shaky	• The front forks are not properly fixed. • Adjust the front fork angle. • Too much load over the front castors will provoke wobbling, adjust the balance of the chair. • Tighten all screws.	**6.3**

Please contact your dealer for information about authorized service facilities that can give support if solution is not reached in this form.

When in need of spare parts, please contact your dealer.

When making changes affecting frame construction, contact dealer / manufacturer for confirmation.

12. TESTS & WARRANTY

12.1 TESTS

Netti 4U CED, CEDS and CED XL are tested and have been approved for usage both indoors and outdoors. The chairs are CE marked.

Netti 4U CED, CEDS and CED XL:
Maximum user weight: 160 kg

Netti 4U CED, CEDS and CED XL have been tested by a German accredited test institute according to DIN EN 12183.

Netti 4U CED is crash tested at TASS Netherlands and evaluated according to ISO 7176-19 with Netti Seating System. Netti 4U CED, CEDS and CED XL are approved for 160 kg user weight when being used as a seat in a vehicle.

12.2 WARRANTY

Alu Rehab is providing you with a 5-year warranty on all frame components and on the cross-tube assembly. There is a 2-year warranty on all other Netti components except batteries. For batteries a 6 month warranty is provided.

Alu Rehab is not responsible for any damage resulting from inappropriate or unprofessional installation and / or repairs, neglect, wear from changes in wheelchair assemblies or instructions not approved by Alu Rehab or by use of spare parts delivered or produced by third parties. In such cases, this warranty shall be considered null and void.

This warranty is only valid when the user use, maintain and handle the wheelchair as described in the user manual.

12.3 CLAIM

If a product has developed a fault during the warranty period as result of a defect in design or manufacturing, you may forward a warranty claim.

- Claims are to be forwarded as soon as a defect is discovered and not later than 2 weeks after the defect is discovered.
- Claims are to be addressed to the sales agent of the wheelchair. Please note that sales documentation has to be filled in and signed correctly with serial number and eventually NeC number in order to document time and place of the purchase of the wheelchair.
- The sales agent and Alu Rehab are to decide whether a defect is covered by the warranty. The claimer will be informed about the decision as soon as possible.
- If the claim is accepted, the sales agent and Alu Rehab representative are to decide if the product will be repaired, replaced or the customer is entitled to a reduced price.
- If a warranty claim is judged to be invalid – after careful inspection of the defect (defect due to wrong use and / or lack of required maintenance) you are free to decide if you want to have the defect product repaired (if possible) at your expense, or if you want to purchase a new product.

Normal wear, incorrect use or incorrect handling is not a reason for claims.

12.4 NETTI CUSTOMIZED / INDIVIDUAL ADAPTATIONS

Netti customized / individual adaptations are defined as all adjustments that are not included in this manual. Individual adaptations made by Alu Rehab are labelled with a unique NeC number for identification.

Wheelchairs that are especially adjusted /adapted by the customer cannot keep the CE mark given by Alu Rehab AS Norway.
If the adjustments are performed by other than Alu Rehab approved dealers, the warranty given by Alu Rehab AS Norway will not be valid.

If there are any uncertainty about special fitting and adaptations, please contact Alu Rehab A.S.

If you have different needs than what our standard wheelchair program can cover, please take contact with customer service for eventually special adjustments or individual solutions.

12.5 COMBINATIONS WITH OTHER PRODUCTS

Combinations of Netti 4U CED, CEDS and CED XL and other products not manufactured by Alu Rehab AS; generally, in these cases, the CE mark of all the products involved will not be valid.
However, Alu Rehab AS has made agreements with some manufacturers about some combinations. By these combinations the CE mark and guarantees are valid.

For further information, please contact your dealer or Alu Rehab AS Norway directly.

PRODUCT RESPONSIBILITY

Netti 4U CED, CEDS and CED XL with different configurations of Netti equipment have been tested / risk evaluated by Alu Rehab.
Any alterations or substitutions must not be made to the wheelchair securement points or to structural and frame parts without consulting the wheelchair manufacturer Alu Rehab.

Substitutions or alterations of components from third part suppliers to Netti 4U CED, CEDS and CED XL requires the risk evaluation and acceptance of the product responsibility and safety for use of the wheelchair from the manufacturer that is performing the substitution or alteration.

12.6 SERVICE AND REPAIR

Information about service and repair services in your area, please contact your local dealer.

A unique identification number / serial number is found on the bottom frame on left side of the chair.

A spare part catalogue for the wheelchair can be obtained through your local dealer or downloaded at my-netti.com

A refurbisment manual for the wheelchair can be obtained through your local dealer or downloaded at my-netti.com

Information about product safety and eventually recalls are found on our home page my-netti.com

A recycling manual for the wheelchair can be obtained through your local dealer or downloaded at my-netti.com

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

13. MEASUREMENTS & WEIGHT

Seat width*	Seat depth** CED	Seat depth** CEDS	Backrest height ***	Total width	Transport width	Weight
350 mm	425 – 500 mm	375 – 450 mm	480 (600) mm	530 mm	460 mm	28,0 kg
400 mm	425 – 500 mm	375 – 450 mm	480 (600) mm	580 mm	510 mm	28,5 kg
430 mm	425 – 500 mm	375 – 450 mm	480 (600) mm	610 mm	530 mm	29,0 kg
450 mm	425 – 500 mm	375 – 450 mm	480 (600) mm	630 mm	540 mm	29,0 kg
500 mm	425 – 500 mm	375 – 450 mm	480 (600) mm	680 mm	610 mm	29,5 kg
550 mm	425 – 500 mm		480 (600) mm	730 mm	680 mm	31,5 kg
600 mm	425 – 500 mm		480 (600) mm	780 mm	710 mm	32,0 kg

* Measured between skirt guards.

** Measured from front of seat plate to backrest hinge without cushion
Using standard Uno backrest cushion subract app. 30 mm.
Seat depth adjustable by 25 mm per step. 500 mm is standard seat depth.

*** Measured from the seat plate to the top of Netti Seating System back cushion.

The weight is including main wheels, front castors, leg supports and arm supports.
No cushions.

Wheelchairs with seat width of 550 mm and 600 mm are Netti 4U CED XL model.

Max user weight is 160 kg for CED, CEDS and CED XL.
When mounting accessories such as power kit etc., the weight of the accessories must be subtracted from the max user weight.

Max user weight is 160 kg when Netti 4U CED, CEDS and CED XL are being used as a seat in avehicle.

Recommended inflation pressure using air tyres is: 40 – 45 PSI.

Luggage loaded on to the wheelchair must not exceed 10 kg. The luggage must not be placed in a manner that reduce the stability of the chair.

Netti®
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