Operating manual
Original operating manual

NORA Alu

Standing and raising aid

Version 2.13 / E

Subject to technical modifications

2019-08-20

CE

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1 Imprint

1.1 Acknowledgement

Dear customer, we would like to express our sincere thanks for the trust you have placed in us by purchasing this BEKA Hospitec GmbH product. Our products are manufactured and tested according to stringent quality criteria.

1.2 Manufacturer's address

beka hospitec	BEKA Hospitec GmbH Am Rübenmorgen 3 35582 Wetzlar Phone: +49(0)641-9 22 22-0 Fax: +49(0)641-9 22-22-20 info@beka-hospitec.de

1.3 TÜV quality seal

TÜV SÜD DIN EN ISO 13485 tuv-sud.com/ps-cert	BEKA Hospitec GmbH is certified according to DIN EN ISO 13485 by TÜV SÜD Product Service GmbH. Therefore, the development, manufacturing, quality assurance and service of our entire product range is subject to high quality standards.

2 Introduction

2.1 Preface

A correct use of the device is imperatively in order to ensure its proper and safe functioning. Please read the provided operating manual carefully and observe in particular the therein contained safety instructions.

The maintenance, inspection, assembly and installation as well as well as further technical interventions on the product must only be executed by BEKA Hospitec either by specialised companies authorised to this effect by BEKA Hospitec. The operation of the product as well as technical interventions on the product must only be carried out by specially trained personnel.

2.2 Liability and warranty

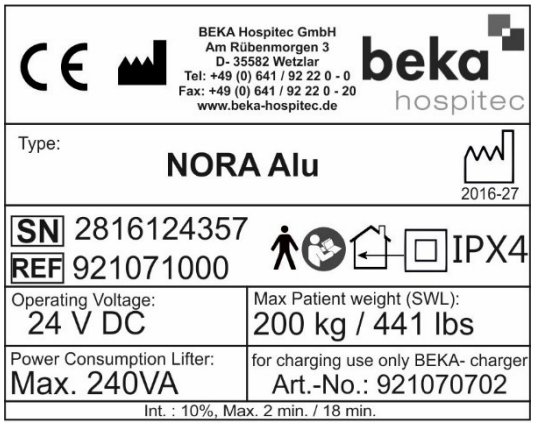
- On the basis of the information contained in this manual, the publisher accepts no liability for damages resulting from improper, incorrect or inappropriate use of the product. The product must only be operated by persons, who are familiar with the manual and the product as well as the national regulations, laws and prescriptions related to work, safety and accident prevention.
- The manufacturer of the product is only responsible for the safety and the reliability of the product, if regular functional tests and checks are conducted. Operate the product only with original accessories, otherwise the manufacturer’s liability will expire.
- In case of technical interventions, such as extensions and fittings to our products, which are not carried out by BEKA Hospitec either by a specialist company authorised by BEKA Hospitec, all warranty rights on the modifications as well as on the device or on the device function, which are related to the modification, shall expire.
- For damages resulting from the use of spare parts and accessories, which are not authorized by the manufacturer, any further liability of the manufacturer shall be excluded.
- Please note that there might be minor differences between the images and explanations contained in this manual and the actually supplied device. Subject to technical modifications and error.
- The product is equipped with “B”-Type applied parts. All exposed, touchable, conductive parts are thereby considered as applied part.

3 Operating manual

3.1 Validity

This operating manual contains information, which is required for the operation and use of the product. In addition to the description of the equipment, the operating manual also includes a number of abstractions and exemplary illustrations. The equipment of the product therefore may differ in part from the descriptions and illustrations. Furthermore, please observe also the manuals with regard to the cleaning and the disinfection as well as the assembly and the disassembly of individual components of the product.
Please read the operating manual and the safety instructions before starting to use the product. Keep the operating manual near the device for future reference.

3.2 Type plate



This image shows the type plate.
The type plate is located at the column support of the NORA Alu.
The shown serial number (**SN**) 2816124357 is just an example. In case of queries, please mention the serial number printed on the type plate of your device.

***Note**: Because of legal regulations, it might be required that the article number and the serial number should be computer-readable as well and therefore they might be printed on the type plate in the form of a bar code as well.*

3.3 Description

In this manual, the product is called NORA, NORA Alu or raising and standing aid.

3.4 Variants of the NORA Alu raising and standing aid

Article number	Description	Note
921071000	NORA Alu incl. wall charger	
921071008	NORA ALU IL (with integrated charger)	Only Canada/USA
921071018	NORA Alu (incl. 2 batteries and wall charger)	Only Canada/USA

4 Safety

4.1 Intended and appropriate use

The NORA Alu has been designed for raising and transferring patients and residents. The patient is raised from a sitting position. The NORA Alu is to be used exclusively for the indoor transport of residents on level floorings.

The NORA Alu is designed for a short-term use and any contact with injured skin must be avoided.

CAUTION:

Before the product is used, adequately qualified nursing staff must assess the physical and mental condition of the patient/resident.

In order to facilitate this, corresponding assessments/routines must and should be used in the daily care processes.

CAUTION:

The patient/resident must have sufficient core stability (capability of sitting autonomously on the edge of the bed is an indicator for a sufficient core stability).

Furthermore, he/she must be able to bear his/her body weight with one leg.

4.2 Other prescriptions

The product meets the current VDE-prescriptions 0100 and 0100-710. However, have a specialist company check the compliance of your electrical installation with the applicable prescriptions prior to operating and using the product. This requirement is only applicable for Germany. In other countries, other requirements might be applicable. Ask a qualified electrician to install the wall charging unit in accordance with the regulations applicable in your country.

4.3 Safety instructions

Please read the following safety instructions prior to using the product. All notes, specifications and warnings mentioned on the device as well as in the present operating manual must be imperatively respected and observed. The manufacturer BEKA Hospitec shall ***not*** accept any liability for any damages, failures or faults caused by improper operation or handling.

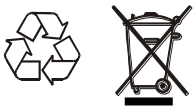
4.4 List of used safety instructions

Please observe the accompanying documents/operating manual.

Warning Hazardous Area.

Applied part “Type B” to DIN EN 60601-1.

Do not push/pull the motor.
Do not push/pull the spreader bar.

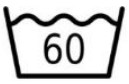


Special waste, no household waste.
The device and the packaging materials never must be disposed of in the domestic waste stream.

CE-label in accordance with the EC-Directive on Medical Devices.

Solely intended for indoor use.

Protection class II.



Washing temperature max. 60 °C.
Normal cycle.

Do not bleach.

Line dry

Do not tumble dry.

Do not iron.

Professional wet cleaning.
Gentle cycle.

4.5 Warnings

Note

- The product may only be used and operated by trained staff.
- Avoid slippery surfaces and thresholds.
- Please ensure that the power supply is always switched on throughout the treatment.
- Do not move the product over sloping or uneven floors.
- Check prior to each use that all visible parts are intact. The product must not be used if any parts are damaged. Prior to each use of the device and its accessories, the user must check their functional safety and good condition (visual check, functioning).
- The product must be disinfected after each treatment.
- Supervision of the caregiver is required throughout the treatment.
- The product is exclusively fit for indoor use.
- Make sure that the sling form and size match the resident’s body.
- Check prior to lifting that all clips or loops are correctly fixed to the spreader bar.
- The product may only be used for the specified purpose.
- Only trained staff is authorized to use slings.
- Please respect and observe the size and weight specifications for each sling.
- Please check before and during the height adjustment procedure that your feet are not located in the area of the castors neither in the resident’s area.
- Do not stand between the standing and raising aid and an obstacle during the transport procedure.
- During the movement of standing and raising aid, the carrier frame must be closed.
- Please make sure that no one grabs in the hazardous areas (bracket, carrier frame) during the adjustment procedure. - Risk of crushing.
- Make sure that the resident is not hurt by the door frame when passing through doors.
- Do not lift the resident higher than is necessary.
- Activate the brakes of the castors of the wheelchair, the healthcare bed, the stretcher, etc. to ensure a safe lifting and positioning of the resident. The brakes of the raising and standing aid must be unbraked (released) during this operation.

- Keep the transport of the resident as short as possible and never leave the resident unattended in the sling.
- Never exceed the duty cycle or the maximum load.
- Make sure that the battery is charged in a well-ventilated room.
- Do not use the product when the battery is charging.
- Please make sure that the patient seizes the handles provided to that effect with both hands.
- Check the applied sling for visual damages prior to using it.
- Never cover up, oversticker or change the slots and holes of the device.
- Please check the proper state and the functional safety of the system prior to use. Never insert foreign bodies in the device.
- Each lifting or transport procedure must be adequately planned in order to ensure an optimal protection for the caregiver and the resident.
- Route the mains connecting cable of the charger so that it cannot be damaged. Damaged mains cables could cause fire or lead to electrocution and must not be used.
- The caregivers must protect their skin and eyes against concentrated disinfecting and cleaning products. Use a face mask to protect yourself against aerosols.

CAUTION 	In case of unusual noises, damages or malfunctions, the product no longer must be used.

NOTE 	Repairs to components of the product are to be carried out only by trained expert personnel. Please contact the after-sales service. The opening the device or other accessories will lead to the expiration of all guarantee, warranty and liability claims.

WARNING: 	Any unauthorized repairs, reconstructions and modifications/alterations are not permitted for safety reasons and shall exclude all liability of the manufacturer for the resulting damages. For damages resulting from the use of spare parts or accessories, which are not authorized by the manufacturer, any further liability of the manufacturer shall be excluded.

CAUTION 	Do not leave the patient/resident unattended at any time, in order to avoid injuries, falls or similar.

CAUTION	This device could contain small parts, which could be inhaled or swallowed, thus representing a chocking/suffocation hazard to small children. Keep children and domestic animals away from the device. The handset represents a strangulation hazard. Please take all precautions to avoid this.

5 Transport

Use a lift truck or similar for the transport.

5.1 Unpacking the product

To remove the packaging materials, you will need a cutter knife.

NOTE	Take care so as to not damage the product when using tools. Do not cut with the cutter in the cardboard.

5.1.1 Removing the cardboard

Proceed in the following way to remove the cardboard:

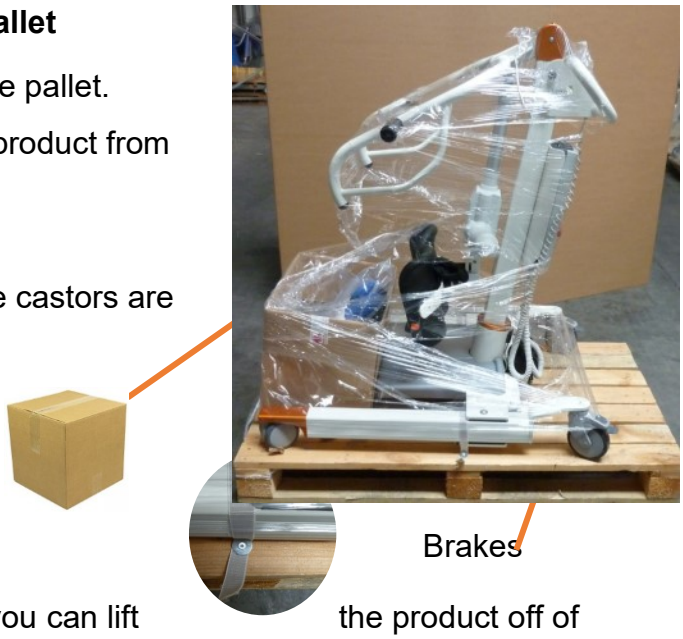
- Cut the strap with the cutter knife
- Remove the strap
- Lift the cardboard up to remove it and put it aside

5.1.2 Loosening the product from the pallet

Both sides of the product are strapped to the pallet.

Proceed in the following way to loosen the product from the pallet:

- Unscrew the fixing screws of the straps
- Remove the straps
- Please make sure that the brakes of the castors are released.



- After all fixations have been removed, you can lift the product off of the pallet.
- Remove the bubble wrap and the stretch film.

The accessories of your product are included in the supplied cardboard box.

6 Installation

The product is supplied ready for use.

6.1 Electrical connection

Before you start using our products, your electrical installation must be checked in accordance with the relevant VDE-regulations 0100 and 0100-710.

This requirement is only applicable in Germany. In other countries, other requirements might be applicable.

Ask a qualified electrician to install the wall charging unit in accordance with the regulations applicable in your country.

The socket must meet the requirements of VDE 0100 and 0100-710.

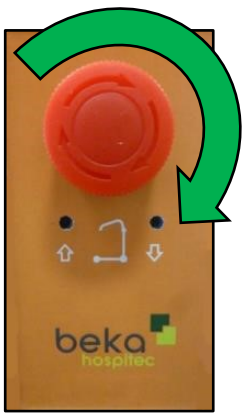
6.2 First start-up

WARNING 	The equipment is to be used exclusively in accordance with the accompanying documents. Only when these conditions are met, the manufacturer considers himself responsible for the impact on the safety, the reliability and the function of the device. In the event of a newly connected product, the technical data must be observed.

NOTE: 	**The battery must be completely charged prior to the first use of the NORA (charging time approx. 4 hours).** **Please check that the emergency stop switch is released prior to moving the spreader bar.**

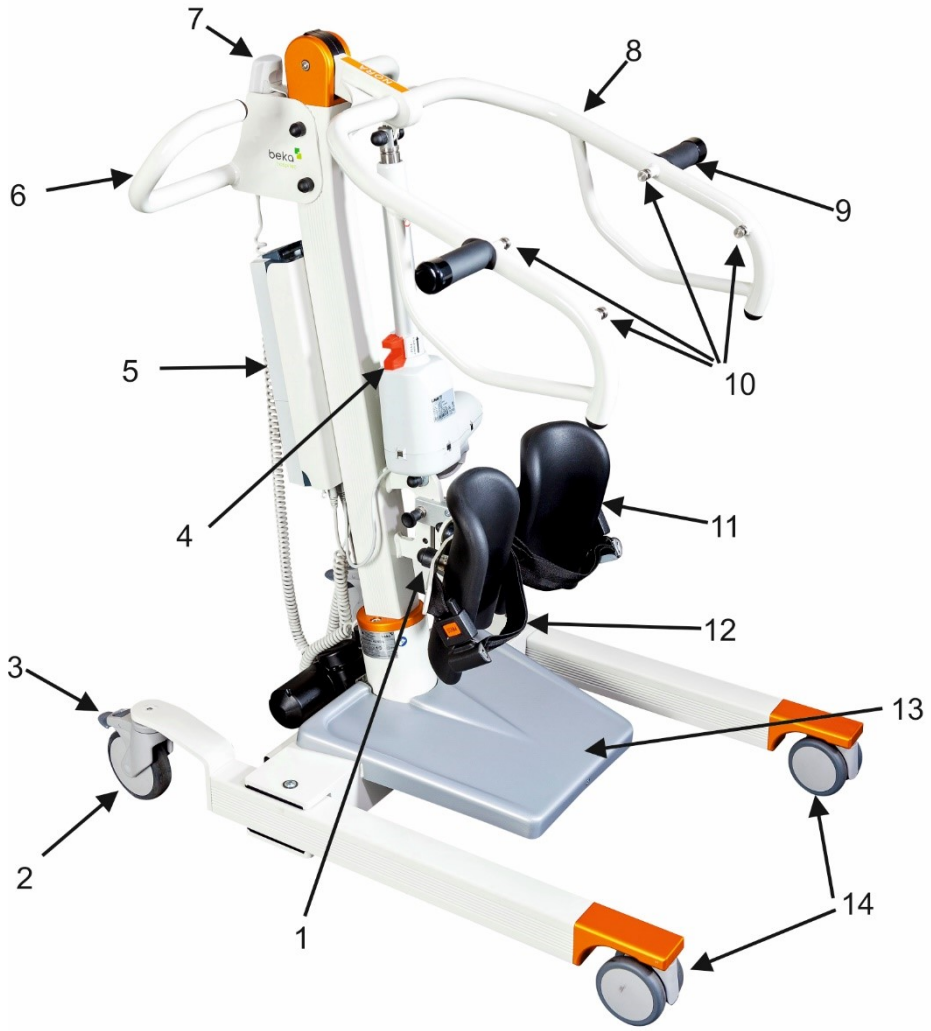
The NORA Alu standing and raising aid is equipped with a 24V-electrical motor. This motor is self-locking and therefore protected against unintentional lowering of the spreader bar in case of malfunction or failure. The battery of the NORA must be completely charged before starting to use the device.

Please check that the emergency stop switch is released (unlatched). To unlatch, turn the emergency stop switch clockwise until it releases.



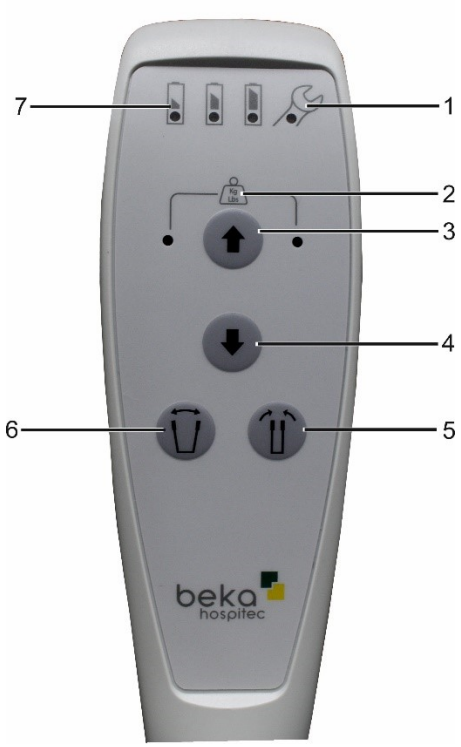
The emergency stop switch is released by turning the button to the right (i.e. clockwise).

7 Operating elements of the NORA



N°	Description	N°	Description
1	Height adjustment of the knee pads	8	Spreader bar
2	Rear castors	9	Handles
3	Parking brake	10	Sling attachment points
4	Emergency lowering system	11	Knee pads
5	Control unit with battery	12	Safety belt for the legs
6	Spreader bar	13	Footplate
7	Handset	14	Front castors

7.1 Handset



N°	Description	N°	Description
1	Service required	5	Closing the carrier frame
2	max. weight reached	6	Spreading the carrier frame
3	“Up” button	7	Battery charge status
4	“Down” button		

7.1.1 Explanation of the LED-indications on the handset

Green LED: battery full, no charging required (100-50%)

Yellow LED: battery requires charging (50-25%)

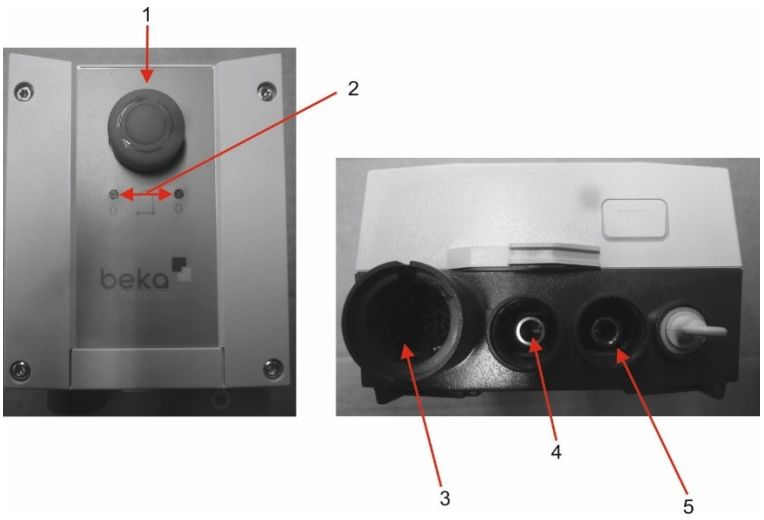
Red LED: battery requires charging (less than 25%)
When you push a button, an audible signal will be emitted.

Service indication (orange LED flashes).
Please have your standing and raising aid checked!

Orange LED, overload, max. weight of 200 kg exceeded

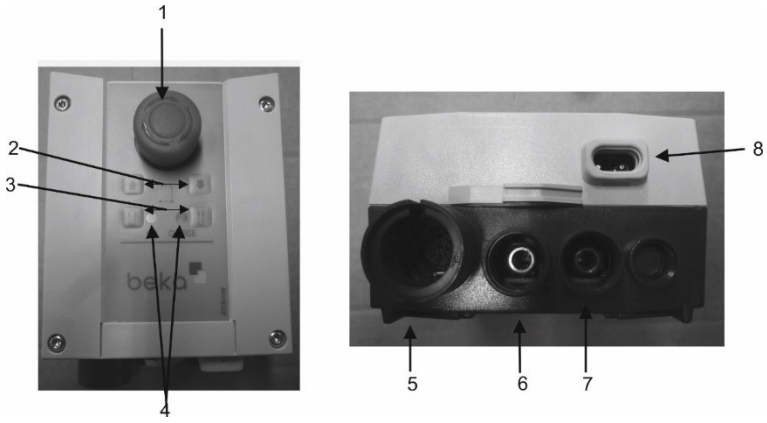
7.2 Connections and functions of the control unit

7.2.1 Control unit



N°	Description	N°	Description
1	Emergency stop switch	3	Handset connection
2	Electrical emergency operation (in case of failure of the handset)	4	Lifting motor connection
		5	Spreading motor connection

7.2.2 Control unit - Canadian version



N°	Description	N°	Description
1	Emergency stop switch	5	Handset connection
2	Electrical emergency lowering (in case of failure of the handset)	6	Lifting motor connection
3	Adjustment of the spreading (in case of failure of the handset)	7	Spreading motor connection
4	Power and charging indicator	8	Charger cable connection

Explanation of the LED-indications

Green LED — The LED is on when the control unit is supplied with voltage through the power cable.

Yellow LED — The LED is on when the battery is charging.

Note: The battery can only be charged if the emergency stop switch is not actuated!

7.3 24V battery unit

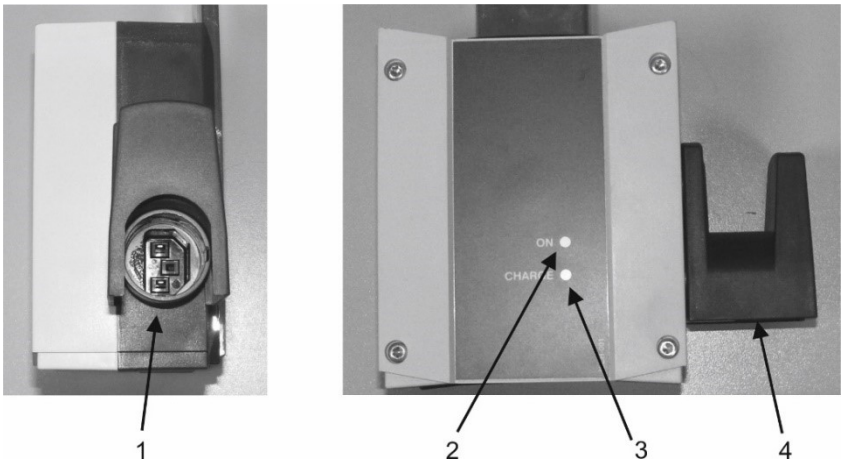
The NORA standing and raising aid is equipped with a 24V-battery.

Please proceed as described in par. 13.7.4 to remove the battery.

7.4 External charger/wall charger

The external charging unit (wall charging unit) is a switch-mode charger and is supplied ready assembled (on a mounting rail). It can be installed on any suitable wall. The required power cable is included in the delivery.

The charging time for the battery units is approx. 4 hours.

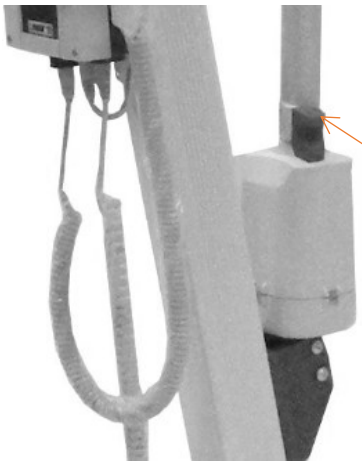


N°	Description	N°	Description
1	Mains input socket	3	Charging indicator (yellow LED)
2	Mains operation indicator (green LED)	4	Cable holder (optionally)

Explanation of the LED-indications

ON	Green LED	The LED is on when the control unit is supplied with voltage through the power cable.
CHARGE	Yellow LED	The LED is on when the battery is charging.

7.5 Manual emergency lowering system



manual emergency lowering system

Activating the emergency lowering system:

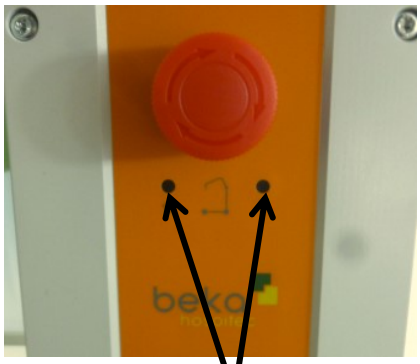
1. Slide the red safety lock upwards in the direction of the arrow (PULL-EMERGENCY label).
2. Now, the motor is lowering slowly (lowering weight approx. 20 kg).
3. The motor stops, when the safety lock is positioned back in its normal position = release the safety lock.

Note:

The emergency lowering mechanism must not be treated with oil, grease or any other lubricant, as this could cause the emergency lowering mechanism to run too smoothly! In case of a failure of the emergency lowering system, a reset at the manufacturer's is required.

7.6 Electrical emergency lowering system

Should your handset be defective or present a malfunction and provided that the battery still has sufficient voltage, you can raise or lower the spreader bar by means of the buttons located on the control unit.

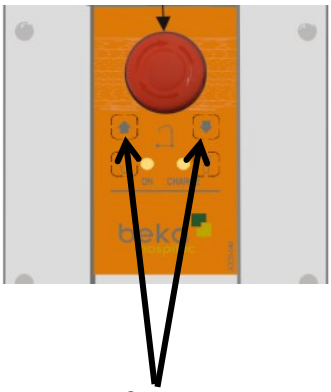


Control unit button

Insert a ballpoint or a similar object into the holes to actuate the buttons. The spreader bar is raised or lowered.

Note:

The buttons of the Canadian version of the control unit are accessible without ballpoint.



Buttons of the control unit (Canadian version)

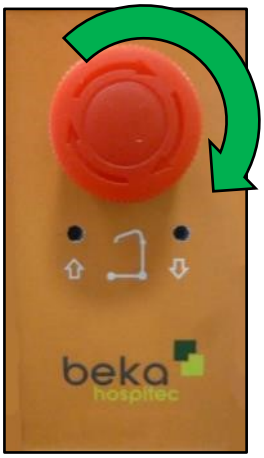
7.7 Emergency stop switch

When the emergency stop switch is pressed, the electrical motors are immediately disconnected from the power supply. The motor stops immediately. The emergency stop switch should be used only in case of immediate danger to the resident or the caregivers.

The emergency stop switch can also be used to reduce discharging of the battery in case of intermediate storage.

By pressing the emergency stop switch, you can lock the Nora standing and raising aid, thus making its unauthorized use more difficult.

Turn the button in the direction of the arrow to unlock.



NOTE:

In the Canadian version of the control unit, the battery can only be charged when the emergency stop switch is not actuated!

7.8 Motor safety measures

The control of the electrical motor is equipped with an overload protection, which is autonomously switched off in case of overload. The motor will only be operational again after a short waiting time. The cooling-off time of the motor can be up to 18 minutes depending on the ambient temperature.

NOTE:

Opening the motor will result in expiration of the warranty.

The intermittent operation of the motor is not a defect, but is only for your own safety.

7.9 Impact and jamming protection (hoist motor)

The electrical motor (hoist motor) features an integrated impact and jamming protection (free wheeling). This feature avoids jamming, pinching and/or crushing dangers when the spreader bar of the NORA standing and raising aid strikes or encounters an obstacle. The motor runs free until the obstacle is removed or the NORA standing and raising aid is removed from the obstacle.

After the obstacle has been removed, the spreader bar could start lowering autonomously. Therefore, you must immediately release the button of the handset as soon as you have noticed that an obstacle has been encountered.

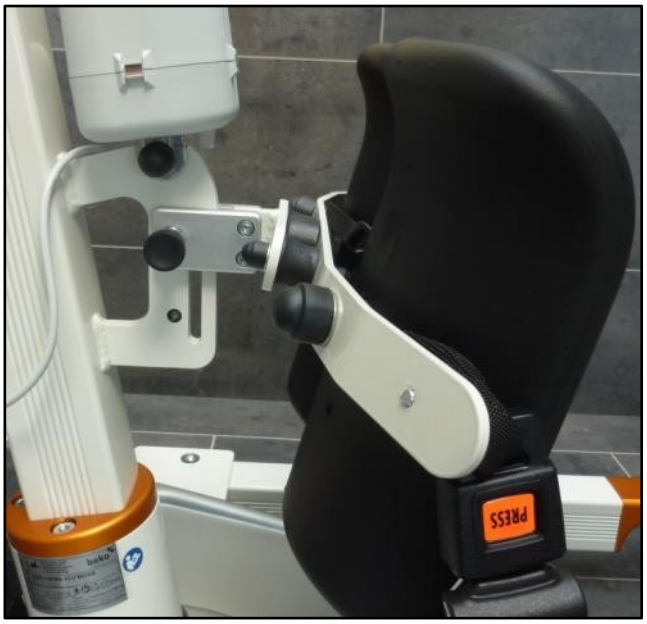
7.10 The spreader bar

Default sling attachment point
Attach sling with **sling clip1**

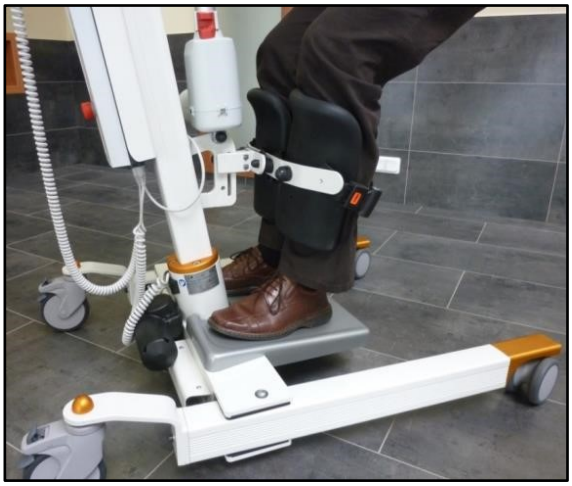
Optional sling attachment point
for patients and residents **shorter than 160** cm

7.11 The knee pads

The integrated, flexible, height-adjustable knee pads of the NORA are individually adaptable to the patient. The leg safety belts (individually adjustable) are equipped with quick-release fasteners (cf. the safety belt in motor vehicles, PRESS to open). When lifting the patient, the leg safety belts must be closed.



Height adjustment



8 Operation

8.1 Sling operating manual

Important note:

The normal service life of BEKA-slings is approx. 36 months from the date of production (marked on the sling). The specified service life is only applicable, when the BEKA-slings are cleaned, maintained and inspected in accordance with the instructions contained in the following documentation.

8.1.1 Prior to use

The slings must be checked before and after each use and, if necessary, be washed in accordance with the manual. This is prescribed in particular to reduce the risk of infections to an absolute minimum, in the event that the same equipment is used for other residents or patients.

CAUTION 	Prior to each use, a thorough check of the sling including the loops and the fastening clips is imperatively required. If the sling or the loops would be frayed, cut-in or damaged, or the clips would be damaged, the sling no longer must be used.

Please make sure that a sling of the correct size is used for the resident.

Prior to lifting the patient or the resident, the situation must be assessed by a qualified employee or a therapist. This also applies to care-dependent persons with limited or reduced shoulder mobility or for patients who are unable to hold themselves with one or both hands.

8.1.2 During use

WARNING 	The use of incompatible (i.e. non-BEKA Hospitec) slings can cause accidents!

Check that the sling attachment points at the standing and raising aid match the sling clips.

Check that the sling is not twisted when attaching the sling. Always check that the sling clips are correctly attached prior to and during the lifting procedure and that they are tensioned while supporting the patient’s weight.

Please take extreme care when using the sling and encourage the patient to hold on tight to the handles of the bow.

8.1.2.1 Safely attaching the clips to the support

Hang up	Pull	Safe √	to remove press together and slide upwards

Always check that the fastening clips are secured and correctly positioned prior to lifting the patient/resident!

8.1.2.2 Safely attaching the slings

Step 1
Carefully lower the spreader bar by pressing the “down” button of the handset, until you can slide the slings over the attachment hooks.

Step 2
Pull the sling over the attachment hook.

Step 3
Make sure that the sling is pulled to the end of the attachment hook (refer to “Final position”)!

Always check that the clips or the slings are secured and located in the right position before your start lifting your patient!

8.1.3 After use

As the washing process is regarded, the slings are classified as accessory of the standing and raising aid and therefore as medical device. The slings may be cleaned and disinfected in accordance with the manufacturer's instructions.

During the washing and drying, no mechanical pressure must be applied, such as dry press, rotary iron. This could damage the sling parts and impair the operation and the safety of the sling or even destroy the sling.

The sling straps and the slings must be checked and, if required, cleaned after each use. The washing temperatures must not exceed the temperature specified on the sling (60 °C). Please use common household detergents only. Do not iron hot. The plastic clips must be checked for possible damages after each wash.

8.2 Raising the patient from a chair or the bed (sitting position)

Please proceed in the following way to raise a patient from a chair or the bed (patient in sitting position):

1. To raise the patient from the bed, set the patient upright in the bed and turn him/her so that the feet touch the ground and the patient has a stable sitting position.
2. Wrap the backside of the sling around the patient and fasten the clip fastener of the belly part. Please make sure to use the correct sling size adjusted to the patient and check that the patient's arms are located outside the sling.
3. Spread the legs of the carrier frame and lower the bow completely.
4. Position the NORA in front of the patient and adjust it so that the patient's legs are resting in the knee pads and form a right angle with the thighs. The patient's feet must be located in the middle of the footplate.
5. Lock the castors of the NORA and engage the parking brakes.
6. Tighten and fasten two leg safety belts.
7. Raise the sling bow to the required height to attach the sling to the sling attachment points of the sling blow.
8. Suspend the sling in the sling attachment points. Please check that the sling is correctly attached (also refer to section 8.1.2.1 Safely suspending the clips in the holder).
9. You can now raise the patient/resident.

10. Please make sure that the patient seizes the handles provided to that effect with both hands during the transfer or transport.
11. The lowering of the NORA is enhanced when the carrier frame is not spread.
12. Disengage the parking brakes prior to the transport.

8.3 Raising the patient from a wheelchair

Please proceed in the following way to raise a patient from a wheelchair:

1. Engage the parking brakes of the wheelchair.
2. Wrap the backside of the sling around the patient and fasten the clip fastener of the belly part. Please make sure to use the correct sling size adjusted to the patient and check that the patient's arms are located outside the sling.
3. Spread the legs of the carrier frame and lower the bow completely.
4. Position the NORA in front of the patient and adjust it so that the patient's legs are resting in the knee pads and form a right angle with the thighs. The patient's feet must be located in the middle of the footplate.
5. Lock the castors of the NORA and engage the parking brakes.
6. Tighten and fasten two leg safety belts.
7. Raise the sling bow to the required height to attach the sling to the sling attachment points of the sling blow.
8. Suspend the sling in the sling attachment points. Please check that the sling is correctly attached (also refer to section 8.1.2.1 Safely suspending the clips in the holder).
9. You can now raise the patient/resident.
10. Please make sure that the patient seizes the handles provided to that effect with both hands during the transfer or transport.
11. The lowering of the NORA is enhanced when the carrier frame is not spread.
12. Disengage the parking brakes prior to the transport.

8.4 Operation of the standing and raising aid

The spreader bar of the NORA standing and raisin aid is raised or lowered by means of the handset, which is included in the delivery. The direction of motion is indicated by symbols. The rear castors have (ease-to-operate) brakes. When lifting a patient/resident, the parking brakes of the castors must be engaged to avoid any uncontrolled movement of the NORA standing and raising aid.

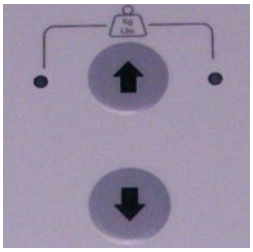
Travel path

When using the NORA standing and raising aid, make sure that the travel path of the sling hoist is not narrowed by obstacles or other elements (e.g. wall racks, etc.).

8.4.1 Explanation of the functions of the handset

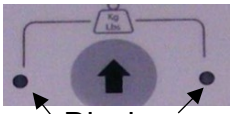
The different functions of the NORA Alu standing and raising aid can be activated by means of the handset.

Raising and lowering the spreader bar



Keep the button  of the handset pressed to raise the spreader bar. The spreader bar is raised. Release the button as soon as the spreader bar has reached the desired position. The upward movement of the spreader bar is stopped.
When the highest possible position is reached, the upward movement is automatically stopped.

Keep the button  of the handset pressed to lower the spreader bar. The spreader bar is lowered. Release the button as soon as the spreader bar has reached the desired position. The downward movement of the spreader bar is stopped.
When the lowest possible position is reached, the downward movement is automatically stopped.



Display
Maximum weight

If the LED-indication “MAX” is displayed, the highest possible load capacity of the NORA standing and raising aid is reached. In such case, lower the patient and use another standing and raising aid with a higher load capacity.

Spreading the carrier frame

Keep the button  of the handset pressed to spread the carrier frame. The chassis of the standing and raising aid is spread. Release the button as soon as the desired spread width is reached. The spreading movement is stopped. When the maximum spreading position is reached, the movement is automatically stopped.

Keep the button  of the handset pressed to close the carrier frame. The chassis of the standing and raisin aid is fold. Release the button as soon as the desired spread width is reached. The spreading movement is stopped. When the minimum spreading position is reached, the movement is automatically stopped.

The spreadable chassis highly increases the stability of the standing and raising aid.

Caution:

The NORA standing and raising aid is exclusively fit for indoor use.

Caution:

Do not move the NORA standing and raising aid over sloping or uneven floors.

Warning:

Make sure that the standing and raising aid is not tilted over 5° when driving over thresholds or similar. The standing and raising aid could fall over!

8.5 Maintenance and care of the 24-Volt battery

The battery and the control box must not be opened by the customer.

Repairs may be carried out only either by BEKA Hospitec or by companies authorized to this effect by BEKA Hospitec. If the battery is discharged, recharge it as soon as possible to extend the lifetime.

Batteries stored in the warehouse/stock must be recharged every 6 months (a possible deep discharge may destroy the battery). The battery's lifetime basically depends on the charge (number of lifting cycles) and the charging state. It can amount up to 5 years. Have defective or worn out batteries, and defective charging units in general, replaced.

9 Cleaning/disinfection

CAUTION 	Make sure that the system is not in operation during the cleaning activities.

CAUTION 	After each treatment, the shower console must be completely disinfected with a disinfectant. In this way, any cross-contamination is avoided.

CAUTION 	Only use the disinfectant after the patient has left the bath tub. Strictly respect and observe the manufacturer's instructions for the used disinfectant. Avoid direct contact with the concentrated product. If necessary, use gloves and safety glasses to protect your skin and eyes.

9.1 Cleaning the standing and raising aid

Clean the NORA standing and raising aid with a soft, lint-free cloth. For thorough cleaning, use a cloth moistened with a mild soap solution. You can use a cloth moistened with an isopropyl alcohol solution for the disinfection.

To avoid damages, **no** aerosol cleaners, sprays, abrasive cleaners or solvents must be used to clean the control unit.

The NORA standing and raising aid can be cleaned with a damp cloth and a normal cleaning agent for plastics. For the disinfection of the surface, an isopropyl alcohol solution or a customary disinfection aerosol (spray) can be used.

9.2 Disinfecting the standing and raising aid

You must carefully disinfect and rinse your standing and raising aid after each use to avoid the risk of transmission and infection. For the manual disinfection of the surface, an isopropyl alcohol solution or a customary disinfection aerosol (spray) can be used.

Grease stains, skin and hair can be removed with a sponge and soap.

Please do not use abrasives to clean the standing and raising aid!

9.3 Sterilising the standing and raising aid

The NORA standing and raising aid is **not** suitable for sterilisation.

10 Checks/tests

In order to ensure a safe use of our product as well as the protection of the users and the patients, BEKA Hospitec prescribes an annual safety check.
The execution of the safety checks and maintenance must be documented and proven on request. Please use your inventory register to this effect.
We recommend a simultaneous maintenance of the device in order to conserve its full value.
The checks may only be conducted by adequately trained and qualified experts. The non-observance of this prescription could lead to injuries and jeopardise the safety of the product.

NOTE 	In accordance with the UVV (accident prevention) regulations of the German employer's liability insurance association on mobile equipment which is used in special locations or installations, the product must be subject to an annual check to the DGUV (German Statutory Accident Insurance Association) Prescription 3 (BGV A3).

This check is only prescribed for Germany. In other countries, other requirements might be applicable.

WARNING 	Do not conduct any cleaning, maintenance or test activities when the product is in use. This could cause danger to the user and the patient.

Clean and disinfect the product **every day**.
Conduct a **weekly** visual inspection of all components, the power cable and the connections. Conduct a functional test as well and clean the castors if necessary.
Conduct **every year** a maintenance, a safety check and a check to DGUV prescription 3.

10.1 Prior to each use

To ensure a safe and failure-free operation, the following checks must be carried out prior to each use:

- Visual check of the standing and raising aid (external damages and wear-and-tear).
- Check that no screws of the standing and raising aid are missing or loose.
- Perform a functional check of the standing and raising aid.
- Check the proper functioning of the spreader bar.
- Check the proper functioning of the handset (up/down, spreading)
- Check the emergency lowering system.
- Check the smooth running of the castors.
- Check the slings for damages.
- Check the state of charge of the battery

11 Waste disposal

11.1 Disposal of the packaging material

The expected service life of the NORA Alu is approx. 8 years. Please recycle the packaging materials of the product in accordance with the locally applicable regulations and laws. The metal parts as well as the plastic and electronic components must be recycled in accordance with the WEEE.

11.2 Disposal of the product

At the end of the product's lifetime, contact your BEKA dealer, who will recycle the product in accordance with the locally applicable regulations and laws.
For an environmentally-sound disposal, the company BEKA Hospitec GmbH will provide more information in its capacity of manufacturer.
Please clean and disinfect the product prior to its disposal as well.

12 Troubleshooting/After-sales service

12.1 Troubleshooting help

Problems with the NORA Alu	Remedy
The travel adjustment and the spreading of the carrier frame of the NORA Alu do not function.	a) Check if the emergency stop switch is released or pressed. b) Check that the cables of the control box are correctly plugged in. c) Check the battery's charging state. d) Remove the battery and check the contacts for damage.
The NORA Alu remains in the top end position.	a) Check if the emergency stop switch is released or pressed. b) Check the battery's charging state. c) Use the electrical emergency lowering feature (see 7.6) to lower the patient/resident. d) Use the mechanical emergency lowering feature (see 7.5) to lower the patient/resident. e) Push the "down" button on the handset and simultaneously press down the bow. Contact the after-sales service.
The carrier frame motor does not run.	a) Check if the emergency stop switch is released or pressed. b) Check that the control box is correctly plugged in. c) Check the battery's charging state (replace with fully charged battery).
Heavy going, sluggish operation of the drive despite fully charged battery.	a) Battery low. **Charge the battery**. b) The maximum load is exceeded (max. patient weight). c) The battery has reached the end of its lifetime. Replace the battery.
The control box emits a "beep" signal when operated.	Battery low. **Charge the battery**.
The handset does not work.	a) Check the connector at the cable of the handset. b) Check the battery's charging state (replace with fully charged battery).
The up and down buttons of the handset do not respond.	a) Check if the emergency stop switch is released or pressed. b) Check the battery's charging state (replace with fully charged battery). c) Check that the cables of the control box are correctly plugged in.
The castors produce loud noises.	Clean or replace the castors

The NORA Alu produces unusual noises.	Inform the after-sales service.
The NORA Alu is damaged.	Inform the after-sales service.
The orange Service LED on the handset flashes.	Safety check required, inform the after-sales service.
Problems with the charging unit	**Remedy**
The charging unit does not work.	a) Remove the battery pack and check the contacts for damage. b) Check the mains plug.
The charging unit is connected to the power outlet, but the operating display is not lit.	a) Check that the charging unit is connected to a power outlet. b) Check that the power outlet is supplied with power. c) Check the power outlet fuse. d) Remove the battery and check for damage.
Problems with the battery	**Remedy**
The battery is placed correctly, but the indicator lights are not lit.	Inform the after-sales service.
The indicator light does not go out after multiple hours of charging.	The battery must be replaced. Inform the after-sales service.
The battery installed in the charging unit indicates that it is fully charged. However, when placed in the NORA Alu, just a few lifting cycles are possible.	The battery must be replaced. Inform the after-sales service.
When the handset is actuated, an acoustic signal is emitted and the indicator light (red) is on.	Check the battery's charging state.

When your product does not function properly and you cannot eliminate the error by means of the remedies listed in paragraph 12, please contact the customer service of your dealer either the manufacturer.

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13 Appendix

13.1 Technical data

Dimensions and weights	
- Length:	102.7 cm
- Width in closed condition (internal dimension):	54.0 cm
- External width of the closed carrier frame:	70.0 cm
- Width in open condition (internal dimension):	89.7 cm
- External width of the spread carrier frame:	104.4 cm
- External width at the handle:	73.0 cm
- Min. height:	116.8 cm
- Max. height:	178.1 cm
- Turning radius:	120 cm
- Weight without packaging:	approx. 51 kg
- Safe Working Load (SWL)**:**	**max. 200 kg (Nora Alu)**
Electrical data	
- Voltage supply of the lift:	24 Volt battery
- Max. energy consumption of the lift:	10 A = 240 VA
- Applied part:	Type B
- Duration of treatment:	10%, 2 min permanent operation / 18 min pause
- Protection class	IPX 4
Ambient conditions	
Operation	
- Temperature range:	10 °C to 40 °C
- Relative humidity:	30% to 75%, non-condensing
- Atmospheric pressure:	800 – 1060 hPa
Storage and transport	
- Temperature range (lift):	- 40 °C to 70 °C
- Temperature range (battery):	- 15 °C to 40 °C
- Relative humidity:	10% to 80%, non-condensing
- Atmospheric pressure:	500 – 1100 hPA

Battery charger:

- Input voltage:	100 V - 240 V~ (AC) / 50 / 60 Hz
- Output voltage:	24 V (DC)
- Power consumption:	I in max. 400 mA
- Fuse:	T1.25 /250V
- Protection class:	IPX5

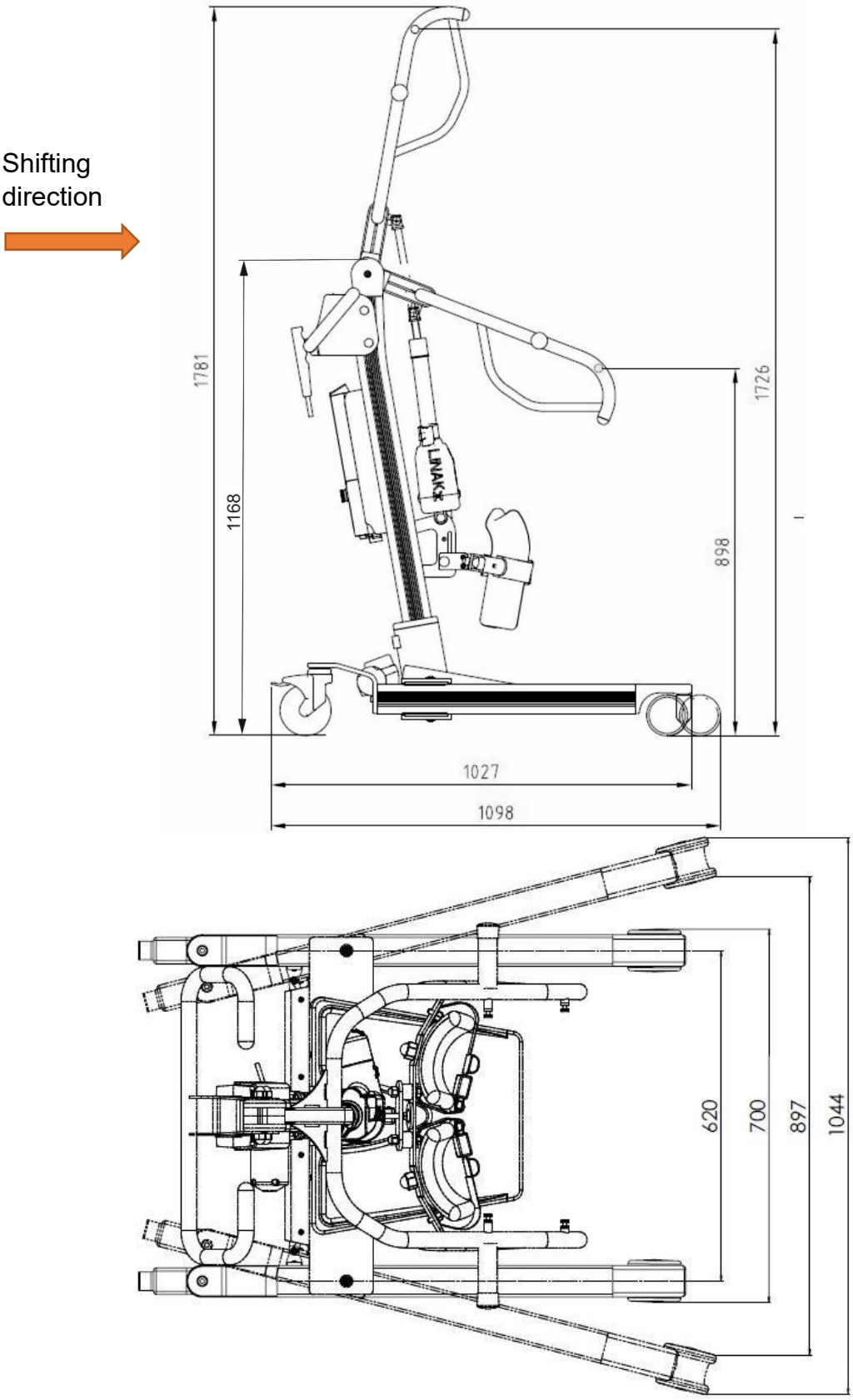
Battery:

- Battery type:	Lead battery
- Output voltage:	24 V (DC)
- Capacity	2.9 Ah
- Output current:	I out max 10 A
- Protection class:	IPX5
- Ambient temperature	

Addition for control with integrated charger:

- Input voltage:	100 V - 240 V~ (AC) / 50 / 60 Hz
- Output voltage:	24 V (DC)
- Power consumption:	I in max. 400 mA
- max. power consumption:	10 Watt
- Fuse:	T1.25 /250V

13.2 Dimensions of the NORA Alu



13.3 Declaration of conformity

EG–Konformitätserklärung / *EC-Declaration of Conformity*

Der Hersteller / *The manufacturer*

BEKA Hospitec GmbH
Am Rübenmorgen 3
D-35582 Wetzlar-Dutenhofen

erklärt in alleiniger Verantwortung gemäß EG-Richtlinie für Medizinprodukte 93/42/EWG Annex VII, dass die folgenden Produkte
declares under sole responsibility according to the EU Medical Device Directive 93/42/EEC, Annex VII that the following products

NORA Classic	Artikel Nr. P/N.	921070000/ 921070008/ 921070018
NORA Alu	Artikel Nr. P/N.	921071000/ 921071008/ 921071018
NORA Eco	Artikel Nr. P/N.	921075000

den grundlegenden Anforderungen entsprechen und die Voraussetzungen für die CE-Kennzeichnung erfüllen.
comply with the essential requirements and fulfill the provisions of CE marking.

Die Bauart der Produkte entspricht Klasse I des Medizinproduktegesetz (MPG), Regel 12.
The products correspond with Class I Medical Device Directive (MDD), Rule 12.

Zur Beurteilung wurden folgende Normen / Richtlinien herangezogen:
The following standards / directives apply:

EG-Richtlinie 93/42/EWG/ Directive 93/42/EEC		**DIN EN ISO 14971:2013**
DIN EN 10535:2007		**DIN EN 60601-1:2013**
DIN EN 12182:2012		**DIN EN 60601-1-2:2016**

Diese Erklärung trifft auf alle Produkte zu, die nach Ausstellung dieser Erklärung produziert wurden, bis sie durch eine andere Erklärung ersetzt wird.
This declaration applies to all CE marked devices manufactured from the date of its issuance on until it is either superseded by another declaration or withdrawn.

Technische Änderungen vorbehalten / *Technical changes reserved.*

Wetzlar, den 01.11.2017

Robert Deschler
Geschäftsführer

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IBAN: DE60515400370482176500
SWIFT-BIC: COBADEFF515

13.4 Accessories of the NORA Alu

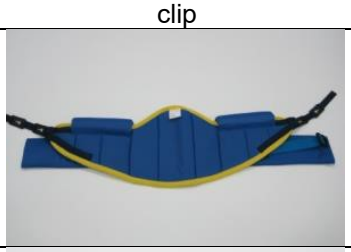
Accessories of the European version

Options/accessories	Description	Art. n°
NORA standing/raising sling	Size S	921070050
NORA standing/raising sling	Size M	921070100
NORA stand-up/raising sling	Size L	921070200
NORA stand-up/raising sling	Size XL	921070300
NORA double knee pads	extra soft	921070400
Spare battery 24V	NORA ALU	921070602
Wall charger	NORA ALU	921070702

Accessories of the Canadian version

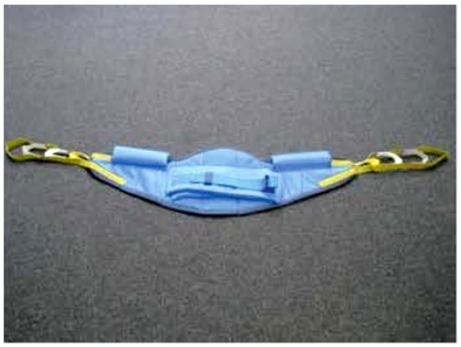
Optional accessories	Description	Art. N°
NORA standing/raising sling	Size S	921070053
NORA standing/raising sling	Size M	921070103
NORA standing/raising sling	Size L	921070203
NORA standing/raising sling	Size XL	921070303
NORA double knee pad	extra soft	921070408
Spare battery 24V	NORA ALU	921070602
External battery charger	NORA ALU	921070702

Guidelines for sling sizes

NORA standing/raising sling with clip / NORA standing/raising sling with clip	Description	Guidelines for sling sizes
  	Nylon material Arm rest and back part with anti-slip coating, with double safety belts for the belly part and additional padded chest strap. Sling attachment point with clip Washable to 60°C	Size: S, M, L, XL Weight: 40 – 60 kg, 55 – 85 kg, 75 – 125 kg, 120 – 160 kg Colour: Red, Yellow, Blue, Blue

Sizing/Colors NORA loop style slings (only Kanada / USA)

Size S (red straps, blue rim)



Size M (yellow straps, blue rim)

Size L (green straps, blue rim)

Size XL (blue straps, blue rim)

13.5 Spare parts/consumables

Spare parts or consumables are available upon request from your BEKA Hospitec dealer or directly from the manufacturer.

Please note:

You cannot exchange and replace all spare parts by yourself.

The assembly requires the knowhow of a qualified expert.

13.6 Mounting instructions

13.6.1 Replacement of the rear castors

Image 1:
Required tools:

1 hexagon screwdriver 8 mm with spherical head

1 Allen wrench 8 mm (shortened length)

Image 2:
Additional parts/tools:

1 rear castor (Order number K0000770)
1 thread-locking fluid (medium tight)

Image 3:
Loosen the screw with the hexagon screwdriver.

Image 4:
Remove the screw by means of the screwdriver.

Image 5:
Prior to screwing a new castor, you must apply thread lock fluid (**medium tight at least 21 Nm**) to the thread of the screw.

Image 6:
Place the new castor in position and retighten the screw.

Caution: the thread lock fluid must dry at least 3 hours before the device can be loaded.

Should you use thread lock fluid from another manufacturer, the drying times specified by this manufacturer must be observed!

Re-assemble in reversed order!

13.6.2 Replacement of the front castors

Image 1:
Required tools:
1 Allen wrench
10 mm

Image 2:
Additional parts/tools:
1 front castor
(Order number K9200350)
1 x thread lock fluid
(medium tight)

Image 3:
Lay the NORA Alu on one side. Make sure that the NORA Alu is not damaged. Loosen and remove the screw of the castor.

Prior to screwing a new castor, you must apply thread lock fluid (**medium tight at least 21 Nm**) to the thread of the screw.

Caution: the thread lock fluid must dry at least 3 hours before the device can be loaded.

Should you use thread lock fluid from another manufacturer, the drying times specified by this manufacturer must be observed!

Re-assemble in reversed order!

13.6.3 Replacing the handle

Image 1:
Required tools:

1 combination wrench 17 mm

1 small flat-head screwdriver

1 ratchet

1 nut 17 mm

Image 2:
Additional material:
1 handle

Image 3:
Loosen and remove the two left-hand cover caps by means of the flat-head screwdriver (displayed in green in the picture).

Image 4:
Loosen and remove the two right-hand cover caps by means of the flat-head screwdriver.

Image 5:
Use the ratchet and the combination wrench to loosen the bottom screw connection of the handle.

Image 6:
Use the ratchet and the combination wrench to loosen the top screw connection of the handle.

Image 7:
Now you can remove the two nuts as well as the washers.

Image 8:
Then remove the two screws and the washers.

Image 9:
Remove the handle.

Re-assemble in reversed order!

13.6.4 Replacing the battery

Image 1:
The image shows the inserted battery.

Image 2:
Unlock the battery by means of the release lever in the battery handle.

Image 3:
Pull the battery up to remove it.

Image 4:
The image shows the removed battery.
When replacing the battery, please check that the release lever engages audibly.

13.6.5 Replacing the handset

Image 1:
<u>Additional material:</u>
1 handset
(Order number K9200700)

Image 2:
Unplug the handset from the control box.

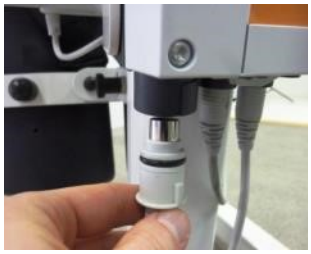


Image 3:
Now you can remove the handset and replace it with a new one.

Please observe the coding nut when placing the connector!

13.6.6 Replacing the control unit with holder for the battery unit

Image 1:
Required tools:

1 screwdriver with bit holder (connection width 25)

1 hexagon socket with T-handle 3 x 150 mm

Image 2:
Additional material:
1 mounting bracket (Order number: K9200400)
1 holder for the battery unit (Order number: T9200450)

Image 3:
Unplug all connectors from the control box.

- Handset
- Lifting motor
- Spreading motor
- if necessary, charging socket.

Image 4:
The image shows the removed connectors.

Image 5:
Remove the battery upwards.

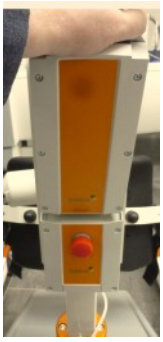


Image 6:
Loosen and remove the screw with the Allen wrench (3 mm).

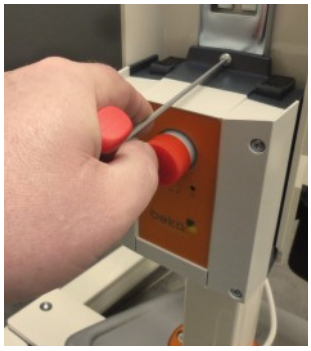


Image 7:
Remove the control box.

Image 8:
Loosen and remove the top and bottom screw of the mounting bracket with the screwdriver (connection width 25)

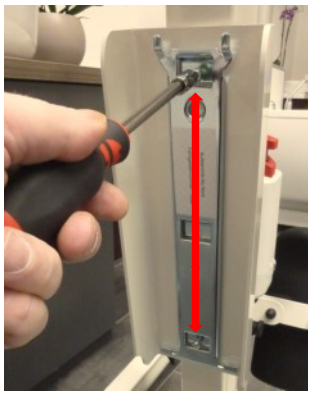


Image 9:
Now you can remove the mounting bracket and the holder plate.

Re-assemble in reversed order!

13.7 Electromagnetic compatibility

Electrical medical equipment is subject to special precautionary measures with regard to EMC and must be installed and operated in accordance with the EMC instructions included in the accompanying documents.
For the devices and systems from BEKA Hospitec GmbH, no special measures must be observed.
Portable and mobile HF-communications equipment can interfere with electrical medical equipment.

Guidance and manufacturer's declaration - electromagnetic immunity (Table 201)		
The product has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the product must ensure that the appliance is used in such environment.		
Emission measurements	**Compliance**	**Electromagnetic environment - guidelines**
High-frequency (HF) emissions to CISPR 11	Group 1	The product uses HF radiation exclusively for internal functions. Therefore, the HF radiation of the device is very low and any interference with adjacent electrical equipment is unlikely.
High-frequency (HF) emissions to CISPR 11	Class B	The product is intended for use in any type of facility including living quarters and those that are directly connected to a public mains network that supplies residential buildings and buildings used for domestic purposes.
Harmonics to IEC 61000-3-2	Class A	
Voltage fluctuations/flicker to IEC 61000-3-3	Compliant	

Guidance and manufacturer's declaration - electromagnetic immunity (Table 202)			
The product has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the product must ensure that the appliance is used in such environment.			
Immunity testing	**IEC 60601- Test level**	**Compliance level**	**Electromagnetic environment guidance**
Discharging of static electricity (ESD) to IEC 61000-4-2	± 6kV contact discharge ± 8kV air discharge	± 6kV contact discharge ± 8kV air discharge	The floor must be in wood, concrete or ceramic tiles. In case of floors in synthetic material, the relevant air humidity must be at least 30%.
Rapid transient interference pulses/burst IEC 61000-4-4	± 2 kV for power supply cables ± 1 kV for input/output cables	± 2 kV for power supply cables not applicable to input/ output cables	The quality of the supply voltage should match that of a typical business or hospital environment.
Overvoltage IEC 61000-4-5	±/1 kV cable against cable ±/2 kV cable against ground connection	±/1 kV cable against cable ±/2 kV cable against ground connection	The quality of the supply voltage should match that of a typical business or hospital environment.
Voltage drops, short interruptions and voltage fluctuations in the power supply input cables IEC 61000-4-11	<5 % U_T (>95 % drop of U_T) for 0.5 period <40 % U_T (>60 % drop of U_T) for 5 periods <70 % U_T (>30 % drop of U_T) for 25 periods <5 % U_T (>95 % drop of U_T) for 5 s	<5 % U_T (>95 % drop of U_T) for 0.5 period <40 % U_T (>60 % drop of U_T) for 5 periods <70 % U_T (>30 % drop of U_T) for 25 periods <5 % U_T (>95 % drop of U_T) for 5s	The quality of the supply voltage should match that of a typical business or hospital environment.
Current frequency (50/60 Hz) Magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical business or hospital environment.
CAUTION U_T is the mains AC voltage before the application of the test level.			

Guidance and manufacturer's declaration - electromagnetic immunity (Table 204)

The product has been designed for use in the hereafter listed electromagnetic environments. The customer or the user of the product must ensure that it is used in such environment.

Immunity testing	**IEC 60601-Test level**	**Compliance level**	**Electromagnetic environment guidance**
Conducted HF IEC 61000-4-6	3 Vrms 150 kHz up to 80 MHz	10 Vrms	Portable and mobile HF communications equipment should be used no closer to any part of the product including cables, than the recommended separation distance calculated in accordance with the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d=0.35\sqrt{P}$
Radiation HF IEC 61000-4-3	3 V/m 80 MHz up to 2.5 GHz	3 V/m	$d=1.2\sqrt{P}$ 80 MHz up to 800 MHz $d=2.3\sqrt{P}$ 800 MHz up to 2.5 GHz With *P* as the rated output of the transmitter in Watt (W) in accordance with the manufacturer's specifications and *d* as the recommended separation distance in meter (m). The field strength of fixed HF-transmitters as determined by an electromagnetic field survey, [a] – should be less than the COMPLIANCE LEVEL in each frequency range. [b] In the vicinity of equipment marked with the following symbol, interference may occur: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: This manual could possibly not apply to all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] The field strength of fixed RF transmitters, such as base stations of mobile phones and land mobile radios, amateur radio stations, AM and FM radios as well as radio and television broadcast media cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey is recommended. If the field strength measured in the environment where the product is to be used, exceeds the applicable HF compliance level, special care should be taken that a normal operation of the product can be guaranteed. In case anomalies are identified, additional measures could be required, such as a different alignment or a change of the location of the product.

[b] In the frequency range from 150 kHz to 80 MHz, the field strength must be less than 10 V/m.

Recommended distance between portable and mobile communications equipment and the product (Table 206)

The product is intended for use in an electromagnetic environment with controlled HF interferences. The customer or the user of the product can avoid electromagnetic interference by respecting and observing the minimum distance between portable and mobile HF telecommunication devices (transmitters) and the product depending on the rated output of the communication device as given below.

Rated output of the transmitter W	**Separation distance depending on the transmitting frequency** in m		
	150 kHz to 800 MHz d=0.35√P	**80 MHz to 800 MHz** d=1.2√P	**800 MHz to 2.5 GHz** d=2.3√P
0.01	0.04	0.12	0.23
0.1	0.11	0.38	0.73
1	0.35	1.2	2.3
10	1.1	3.8	7.3
100	3.5	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be determined using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the specifications given by the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines could not apply to all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

13.8 Journal

According to the Medical Device Directive, you are compelled to keep a journal for this device. You can use this journal as template.

Journal

Device: Nora Alu standing and raising aid

Manufacturer: BEKA Hospitec GmbH, Am Rübenmorgen 3, 35582 Wetzlar

Serial number: _____

Date of purchase: _____

Site: _____

Checks and inspection conducted upon the first use:

_____

Date:_____

Evidence of the training session on the functions and the use of the product

Instructor		**Trained person**	
Name	Date	Name	Signature

Periodic inspection, repair, DGUV-3, safety check, etc.

Type of inspection	Date	Result	Measure	Signature:

BEKA Hospitec GmbH ●Am Rübenmorgen 3 ●35582 Wetzlar Germany● Phone/Fax:+49(0)6 41-9 22 20-0