beka DIFFERENT BY DESIGN

USER MANUAL

Original version



MILO & LEON

Multifunctional shower chair

MILO & LEON

Version 0.2 / English

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MD CE

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1. Imprint

1.1 Acknowledgment

Dear customer, thank you for the trust you have placed in us and for purchasing this BEKA Hospitec GmbH product. Our products are manufactured and tested in accordance with stringent quality standards.

1.2 Manufacturer's address

beka DIFFERENT BY DESIGN	BEKA Hospitec GmbH Am Rübenmorgen 3 35582 Wetzlar Tel.: +49(0)641 922 20-0 Fax: +49(0)641 922 20-20 info@beka-hospitec.de

1.3 TÜV Certification

TÜV SÜD ISO 9001 ISO 13485	BEKA Hospitec GmbH is certified to DIN EN ISO 13485 in the current edition by TÜV SÜD Product Service GmbH. In this way, we set high quality standards for our entire product range in development, production, quality assurance and service.

CAUTION 	Inspect all visible parts for damages prior to each use. If any part is damaged, the product may NOT be used! Prior to each use, the user must check the functional safety and the condition of the appliance and its accessories (visual inspection, functioning). Please check the charge status of the battery as well.

2. Introduction

2.1 Preface

A correct use of the appliance is essential to ensure reliable operation. Please read the provided user manual carefully, and in particular the therein contained safety instructions.

Maintenance, inspection, assembly, installation as well as all other technical modifications or interventions on the product may only be carried out by BEKA Hospitec or specialized companies authorized by BEKA Hospitec. The product may only be operated by trained personnel.

The shower chair is a medical device according to DIN EN 60601-1/ IEC 60601-1 and DIN EN 60601-1-2/ IEC 60601-1-2 as well as the Medical Device Regulation (EU) 2017/745. The product has been designed as a tool for showering residents and patients.

If a serious incident occurs with a patient or user in connection with the use of the product or its accessories, please contact your vendor or the manufacturer. In the European Union, you are required to report serious incidents to the national competent authorities of the Member State concerned. In other regions, other regulations might apply.

2.2 Liability and warranty

In the event of failure to comply with the instructions and information provided in this manual, the manufacturer cannot be held responsible for any damages resulting from improper use of the product. The product may only be operated by persons, who are familiar with the user manual, the product as well as the national laws, regulations and provisions on 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 are carried out. Operating the product with accessories other than original ones may void product warranties and limit liability claims against the manufacturer.

In case of technical interventions on our products, e.g., modifications or additions (fittings), that have not been carried out by BEKA Hospitec or by specialized companies authorized by BEKA Hospitec, any warranty claim for the modifications as well as for the appliance or the appliance functionality related to the modification will be void.

Any further liability on behalf of the manufacturer shall be excluded for damages of any kind resulting from the use of spare parts and accessories that are not approved by the manufacturer.

The actual supplied appliance might show minor deviations compared to the images and explanations contained in this manual, which are development-/design-related. Subject to technical modifications and errors.

The product is equipped with B-type applied parts. All accessible conductive parts are considered as applied part.

3. The user manual

3.1 Applicability

This user manual contains the information required for the operation of the product. In addition to the description of the equipment, this user manual also includes a number of abstractions and exemplary illustrations. The equipment of your product therefore might deviate from the descriptions and illustrations. Please observe the instructions for cleaning, disinfection, disassembly and assembly of the individual parts of the product.

Please read the user manual and the safety instructions carefully before putting the product into operation. Keep the user manual at close hand for future reference.

3.2 Type plate

<table>
<tr>
<td>
</td>
<td>This illustration shows the type plate.
The type plate is located on the inside of the door of the shower chair.
The serial number illustrated here (SN) 0322310046 is merely an example.
In case of questions or when ordering spare parts, please specify the serial number of your appliance indicated on the type plate.

Note: If the article number and the serial number also need to be computer readable for legal reasons, they are printed on the type plate in the form of a barcode as well.</td>
</tr>
</table>

3.3 Designation

In this manual, the product is called MILO, shower chair, multifunctional shower chair, MILO multifunctional shower chair, LEON or LEON multifunctional shower chair.

3.4 Variants

Designation	Article number:
MILO (color: BAROLO)	920124000
MILO (colour: Azur)	920124020
LEON (colour: BAROLO)	920124500
LEON (colour: Azur)	920124520

4. Safety

4.1 Intended use

The product has been developed especially for use in medical technology. It has been designed as a tool for showering patients in hospitals, nursing homes, care centers and facilities for people with disabilities. The patient can be lifted from a sitting position. The shower chair is intended only for the indoor transport of patients on plane and even floor coverings.

The product may only be used for the intended specified purpose. The product is intended for short-term use and may not come into contact with damaged or injured skin. No side effects due to a treatment are known. Despite that, please observe the safety instructions and contraindications.

WARNING 	Patients suffering from ▪ osteoporosis ▪ spinal pain/back pain ▪ osteogenesis imperfecta (brittle bone disease) ▪ mental confusion ▪ epileptic seizures may be treated with the multifunctional shower chair only in consultation with the attending physician.

4.2 Electrical safety

The product meets the latest specifications to the MDR.

Please have your electrical installation checked by a specialized company in accordance with the applicable regulations prior to putting the appliance into operation.

NOTE 	All electrical works are to be carried out by qualified professionals in accordance with the local and national prescriptions.

4.3 Please respect and observe the user manual

Please read the following safety information carefully before putting the appliance into operation. All notes and warnings indicated on the appliance and in this user manual must be imperatively observed at all times. The manufacturer BEKA Hospitec declines all liability for errors or damages caused by improper or inadequate use or operation.

4.4 List of safety instructions and symbols used in this manual

	Follow operating instructions / observe user manual
MD	Medical device
CE	CE-marking to MDR
	Name and address of the manufacturer
	Manufacturing date
	Warning against a hazardous area
	Caution
IPX4	Protection against harmful ingress of water or solids: Protected against splashes of water, splash-proof
	Applied part “type B” to DIN EN 60601-1
	Protection class II
	Intended for indoor use only
	May not be disposed of in household waste. Do not dispose of the treatment system and the packaging materials with normal household waste.
	General recycling symbol
	Atmospheric pressure limits ($_{\text{lowest atmospheric pressure}}$/ $^{\text{highest atmospheric pressure}}$)
	Atmospheric humidity limits ($_{\text{lowest atmospheric humidity}}$/ $^{\text{highest atmospheric humidity}}$)
	Temperature limits ($_{\text{lowest temperature}}$/ $^{\text{highest temperature}}$)

4.5 General warnings and safety instructions



- Protect the appliance against heat and direct solar radiation.
- The appliance is not approved for operation in potentially explosive areas
- The duty-cycle nor the maximum load may be exceeded.
- Please make sure that the battery is charged in a well-ventilated space.
- The product may not be used when the battery is charging.
- Never cover, modify or seal slots and openings of the appliance.
- Please take care to keep your feet out of the area of the castors and the patient before and during the height adjustment.
- Please make sure that nobody reaches into the hazardous areas (frame) during the height adjustment. *Risk of crushing*.
- Please make sure that there is no risk of tilting forward or sideways for the patient during the lifting process.
- Check the applied safety belt for visible damages prior to use.
- Please make sure that the patient is positioned correctly on the shower chair and that the armrests are closed.
- Please make sure that the hair, the arms and legs are kept close to the body and cannot be jammed.
- Inspect all visible parts for damages prior to each use. If any part is damaged, the product may not be used. Prior to each use, the user must check the functional safety and the condition of the appliance and its accessories (visual inspection, functioning).
- The product must be disinfected after each use.
- Avoid slippery floors and thresholds.
- Do not move the multifunctional shower chair over sloping or uneven floors.
- The treatment may only be carried out under supervision.
- Please consider prior to each lift if the assistance of a second caregiver is required.
- Always plan every lift and transfer carefully; this is the only way to ensure an optimal protection and safety for the patient.
- Do no position yourself between the shower chair and an obstacle during the transport.
- Please make sure that the patient seizes the safety handles provided to that effect with both hands.
- Do not lift the patient higher than necessary.
- Lock the castors of the shower chair to guarantee a safe lifting and lowering of the patient. Keep the brakes of the product locked.
- Keep the transport of the patient as short as possible.
- Use the product only with original accessories.

NOTE 	Repairs to parts of the multifunctional shower chair may only be carried out by trained, qualified professionals which are authorized by the manufacturer to do this. Please contact our customer support service for repair requests. Any attempt of the user to open the appliance or accessories thereof will invalidate the warranty as well as all 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. Any further liability on behalf of the manufacturer shall be excluded for damages of any kind resulting from the use of spare parts or accessories that are not approved by the manufacturer.
WARNING 	Never put foreign objects in the appliance. This presents a safety risk and can cause a life-threatening electric shock or damages to the appliance.
CAUTION 	In case of unusual noises, damages or malfunctions, the use of the product must be immediately discontinued.
CAUTION 	The patient/resident may never be left unattended in order to prevent injuries, falls and the like.
CAUTION 	This appliance may contain small parts, which can be inhaled or ingested and therefore present a risk of suffocation for small children. Keep children and pets away from the appliance. The cable remote control presents a risk of strangulation. Please take all required measures to avoid this risk.

5. Transport and storage

In order to ensure a safe transport, storage and operation, please observe the permitted environmental conditions specified in chapter 13.1 Technical description.

Transport the multifunctional shower chair to the intended place of installation. Use a forklift or similar for the transport. Position the multifunctional shower chair in a safe and stable position, so as to avoid tilting.

5.1 Unpacking the product

You need a cutter knife to remove the packaging.

NOTE	
	Make sure not to damage the multifunctional shower chair with the tools used.

Removing the cardboard

Proceed in the following way to remove the cardboard:

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

Loosening the product from the pallet

The multifunctional shower chair is fixed on both sides to the pallet by means of tightening straps.

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

- Unscrew the fixing screws of the tightening straps.
- Remove the tightening straps
- Release the brakes of the castors.
- Remove the bubble wrap and the stretch foil

When all fastenings have been removed, you can lift the multifunctional shower chair off the pallet (2 persons).

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

6. Installation

The multifunctional shower chair is supplied ready for operation.

6.1 Electrical connection

Please have your electrical installation checked in accordance with the applicable VDE-prescriptions 0100 and 0100-710 before you start using your appliance.

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

These prescriptions apply only in Germany. In other countries, other prescriptions may apply.

The multifunctional shower chair lift is equipped with a battery system.

For the socket, a power connection (100-240 V, 50-60 Hz) which is set up in accordance with the VDE-prescriptions, is required. The multifunctional shower chair lift is operated independently of mains power.

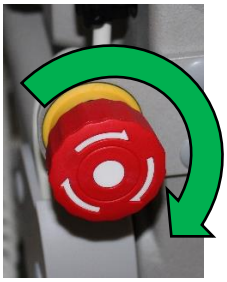
Please have the installation of the socket carried out by a qualified electrician in accordance with the currently applicable regulations in your country. The socket must be wired in accordance with the technical drawings of BEKA Hospitec GmbH and the latest VDE-standards.

6.2 First start-up

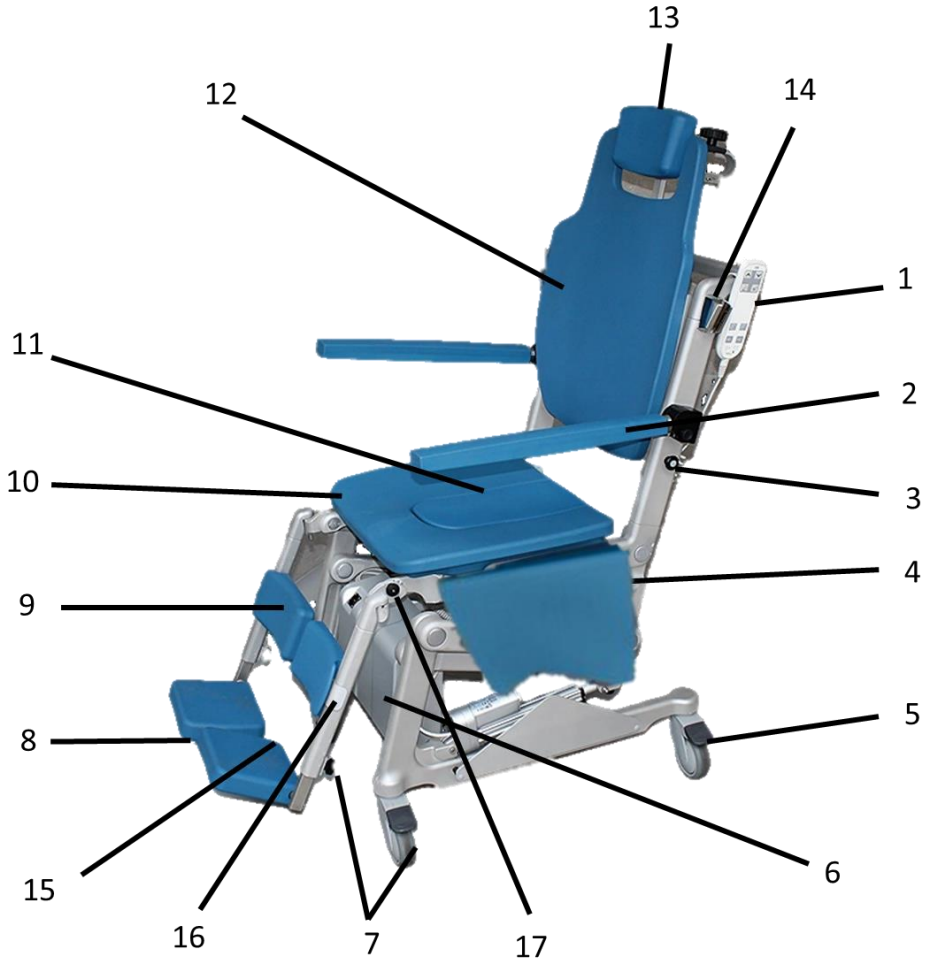
WARNING 	The appliance may only be used in accordance with the accompanying documentation. Only if these conditions are met, the manufacturer considers himself responsible for the impact on the safety, the reliability and the performance of the appliance. If the product is newly connected, the technical data must be observed.
NOTE 	Prior to the first use, the battery must be fully charged. (charging time approx. 6 hours).

The multifunctional shower chair lift is equipped with electrical DC motors. The motors are self-locking, which means that the seat is prevented from lowering or the backrest is prevented from reclining in case of failure. The battery of the shower chair must be fully charged prior to use.

Please make sure that the emergency stop switch is released. To release, please turn the button of the emergency stop switch clockwise (to the right) until it releases.



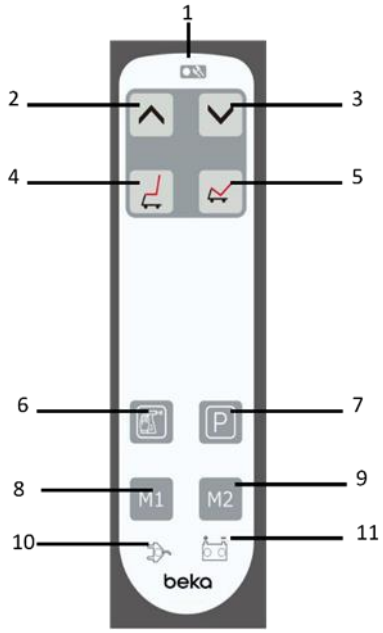
7. Operating elements and their function



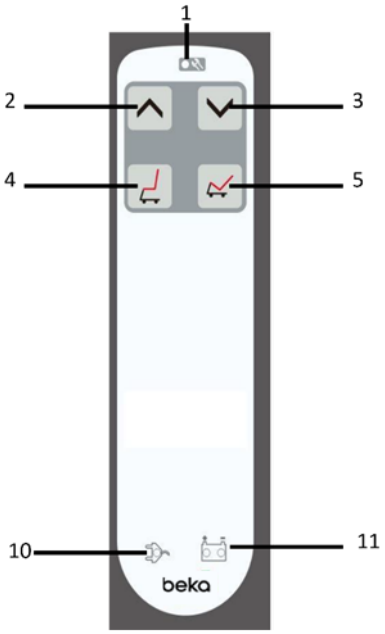
N°	Description	N°	Description
1	Cable remote control	2	Armrest
3	Attachment point*	4	Protection board
5	Rear castors	6	Control box and battery
7	Front castors	8	Footrest
9	Leg rest	10	Seat
11	Hygiene opening	12	Backrest
13	3D headrest	14	Shower head bracket*
15	Footrest magnet	16	Footrest height adjustment
17	Footrest inclination adjustment		

*Option

7.1 Cable remote control



Fully equipped



Basic configuration

N°	Description	N°	Description
1	Symbol “Failure/Maintenance”		
2	Hoist motor up	3	Hoist motor down
4	Seat back to horizontal position	5	Recline seat
6	Clean shower chair*	7	Park shower chair*
8	Memory 1*	9	Memory 2*
10	Symbol “Charge battery”	11	Symbol “Battery operation”

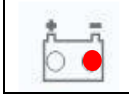
*Option

Functions of the cable remote control

Symbol “Charge battery” 

- If the symbol “Charge battery” is on, the battery needs to be charged.

Symbol “Battery operation” 

	▪ The left green LED lights up permanently, when the battery status is over 25%.
	▪ The right red LED lights up permanently, when the battery status is less than 25%. The battery must be charged.

Symbol “Failure/Maintenance” 

- If the symbol “Failure/Maintenance” is on, please register your shower chair for a check.

7.2 The safety armrests

Both safety armrests can be folded back independently from each other. To fold the safety armrest back, rotate them backwards in the end position as shown on the image below.

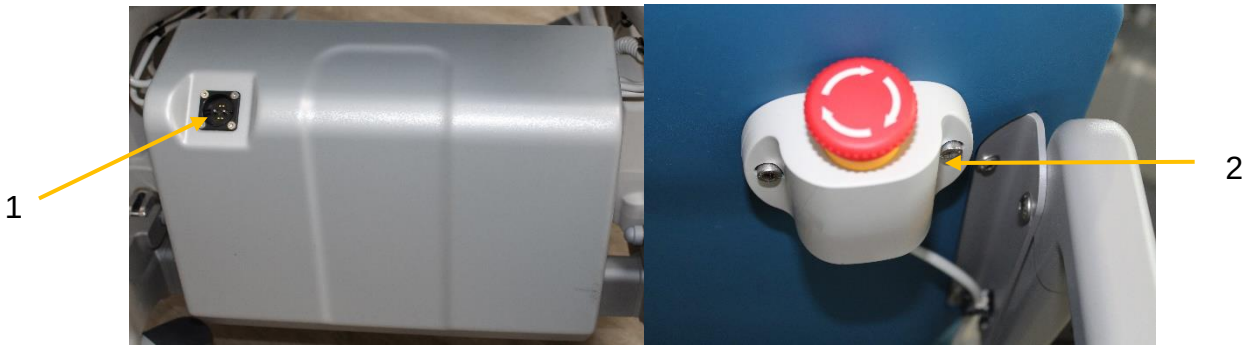


Armrest:
The armrests can be adjusted outward by pulling the knob.

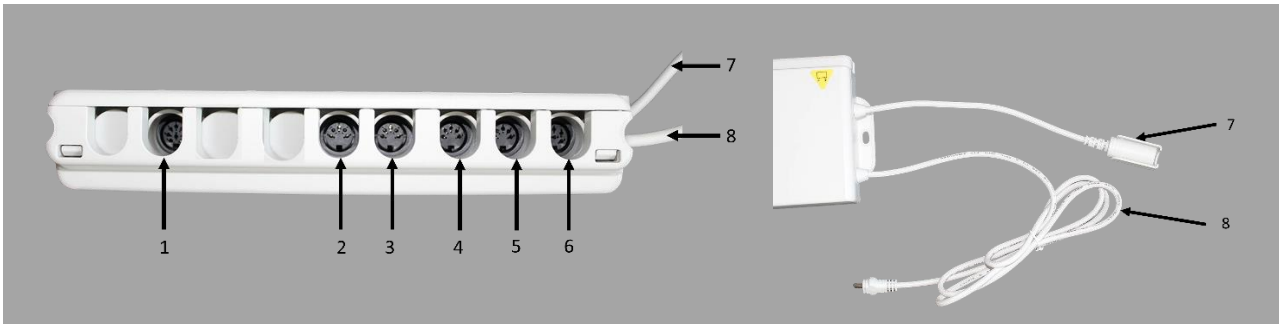


CAUTION	The safety armrests may not be used to support the patient when getting out of the shower chair.

7.3 The control unit



N°	Description	N°	Description
1	Charging interface	2	Emergency stop switch



N°	Description	N°	Description
1	Cable of the cable remote control	2	Motor “recline seat” left
3	Motor “recline seat” right	4	Hoist motor left
5	Hoist motor right	6	Battery cable
7	Emergency function cable	8	Power cord

The emergency stop switch

The motors and the control are switched off when the emergency stop switch is pressed. The motor stops immediately. This function is the so-called emergency stop function.

Turn the emergency stop switch counterclockwise to unlock.

The emergency stop switch can also be used to reduce discharge of the battery in case of a temporary storage.

7.4 Lithium-ion battery

The shower chair is equipped with a lithium-ion battery.

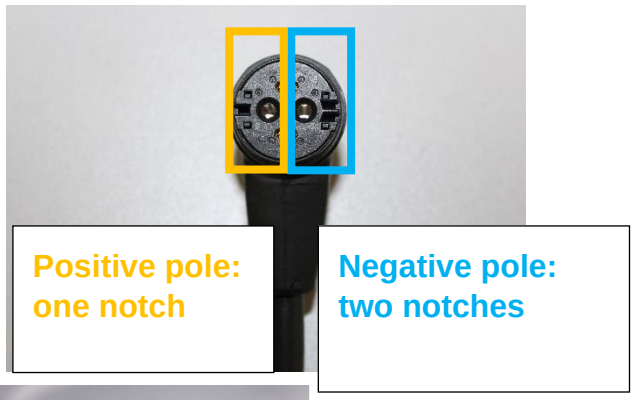
WARNING 	**The batteries contain hazardous substances. The batteries may never be opened nor in any way whatsoever be subject to mechanical modification! Never expose the batteries to open fire or excessive heat! Risk of fire and explosion!** • In case of contact of the liquid leaking from the battery with skin or clothes, wash the affected areas immediately with plenty of water. • In case of contact of the liquid leaking from the battery with the eyes, rinse immediately with plenty of water and seek medical advice. • The vapors emitted by the substances contained in the batteries can cause respiratory irritation. Bring the affected person into fresh air and seek medical advice.



7.5 Charging cable

The required power cable is included in delivery. The charge time for the battery units is approx. 6 hours.







CAUTION 	The connector is magnetic. Make sure that no other metal objects are located on the magnetic connector during the charging process. This can cause short-circuits!
CAUTION 	Make sure that the cable is oriented downwards during the charging process (pointing in the same direction as the arrow on the image). In case of reverse polarity, the positive and negative pole are reversed, which, in extreme cases, can lead to an explosion of the battery unit.

8. Operation

8.1 Prior to use

Please carry out the below listed checks once a day, however at least prior to each use of the multifunctional shower chair in order to ensure a safe and trouble-free operation:

- Visual check of the shower chair system (external damages and wear-and-tear)
- Functional check of the safety armrests
- Functional check of the cable remote control.
- Check the battery status
- Check that the castors can move freely.

8.2 During use

The seat of the multifunctional shower chair is raised and lower by means of the supplied cable remote control. This remote control also controls the reclining function of the shower chair.

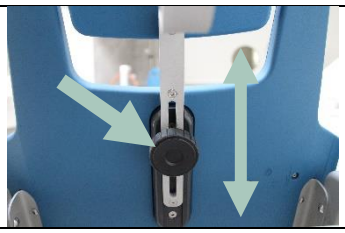
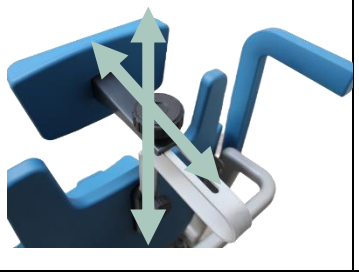
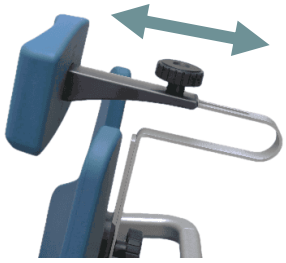
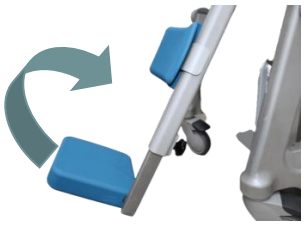
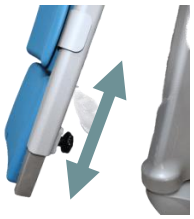
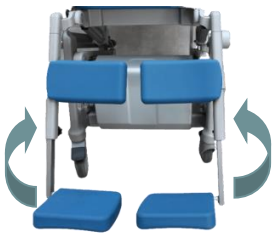
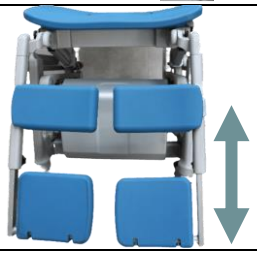
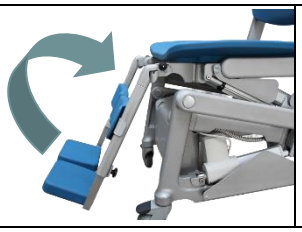
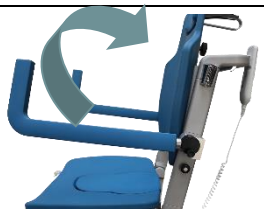
Press the button  to raise the seat.

Press the button  to lower the seat.

Press the button  to return the seat to horizontal position.

Press the button  to recline the seat.

CAUTION 	When lowering the patient, first raise the backrest and then use the reclining function to return the chair to horizontal position. 

3D headrest: The horizontal and vertical position of the headrest can be set by means of two buttons.			
			
Folding up and height adjustment To this effect, open the adjustment screws. Guide the footrest with both hands.			
			
Leg and footrest: The leg and footrests can be adjusted outward by pulling the knob.			
Armrest: The armrests can be adjusted outward by pulling the knob.			

Optional functions

By keeping the button  pressed, the hoist motor moves up, thus reclining the seat and the backrest

By keeping the button  pressed, the backrest returns to the upright position, the seat returns to horizontal position and the hoist motor moves down.

By keeping the button  or  pressed, the seat and the backrest are moved to the customer-specific shower chair position

Setting the Memory buttons :

1. Please set the shower chair to the desired height.
2. To that effect, press both buttons ( and ) simultaneously.
3. When you click next time on the  button, the shower chair is automatically positioned in this position.

Setting the Memory buttons :

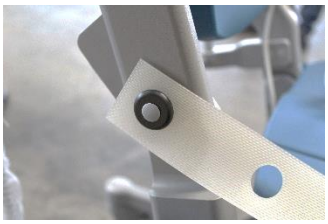
1. Please set the shower chair to the desired height.
2. To that effect, press both buttons ( and ) simultaneously.
3. When you click next time on the  button, the shower chair is automatically positionned in this position.

Safety belt

The attachment point is located to the side of the shower chair. Here, you can apply the safety belt.



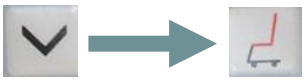




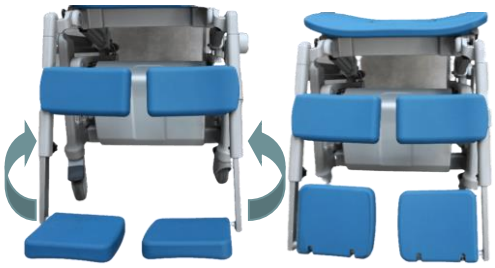
The castors feature brakes. When transferring a patient, please make sure to lock the brakes of the castors in order to avoid uncontrolled movements of the multifunctional shower chair.

CAUTION 	When using the multifunctional shower chair, make sure that the travel path of the multifunctional shower chair is not narrowed by obstacles or other elements (e.g., wall racks, etc.). Please also observe the maximum height dimension.

Proceed in the following way to allow a patient to get on the shower chair autonomously:



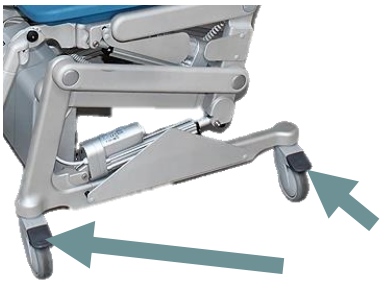
Lower the shower chair to the lowest position and position the cushion horizontally.



Fold the footrests up to allow the patient to take place on the chair.



Check whether the footrests need to be folded away (comfort footrests)



Lock all 4 brakes.



Fold the armrests back

Bring the patient to the shower chair.

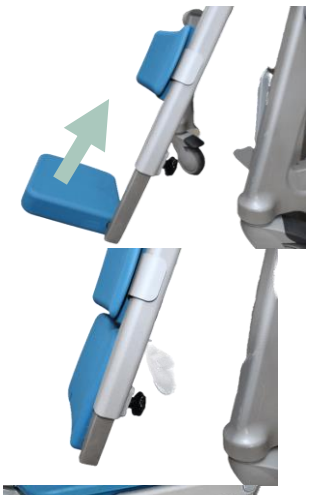
Direction of travel



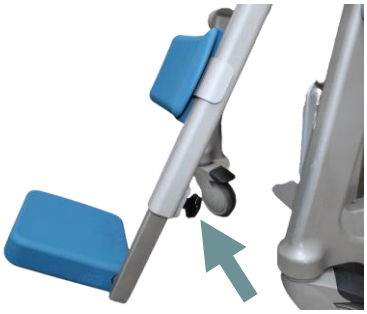
You can transport the patient.

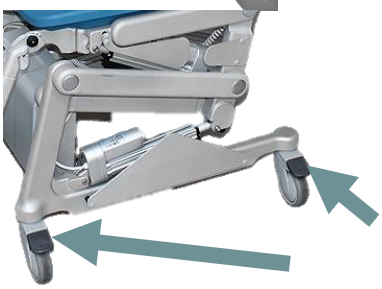
When transporting the patient, mind the correct direction of the seat!

Proceed in the following way to install a patient on the shower chair using the NORA stand-up and raising aid:



Position the height-adjustable footrests as high as possible. To this effect, open the adjustment screws.





Lock all 4 brakes.



Drive the NORA with the patient on it to the shower chair and lower the patient onto the shower chair.



Fold the lateral armrest down

Remove the sling of the NORA stand-up and raising aid from the patient (make sure that the patient is sitting safely and comfortably)

Unbuckle the sling of the NORA stand-up and raising aid and put the NORA aside

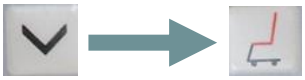
Direction of travel



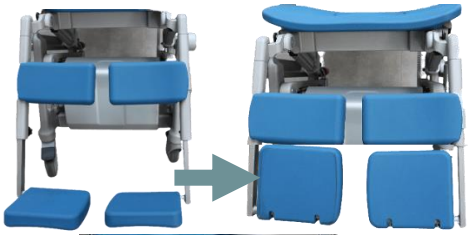
You can transport the patient.

When transporting the patient, mind the correct direction of the seat!

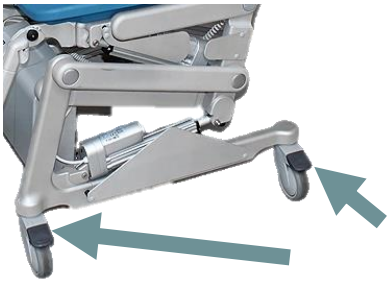
Proceed in the following way to install a patient on the shower chair using the CARLO lift



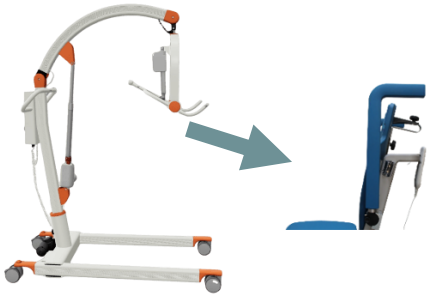
Lower the shower chair to the lowest position and position the cushion horizontally.



Make sure that the leg rest does not collide with the frame of the Carlo lift. If necessary, loosen the adjustment screw of the height adjustment of the leg rest. Slide it upwards and retighten the adjustment screw.



Lock all 4 brakes.



Now drive the Carlo lift to the shower chair and lower the patient onto the seat of the shower chair.



Fold the armrests backward and make sure that the patient is sitting safely and comfortably.

Unbuckle the sling of the Carlo lift and put the Carlo aside.

You can transport the patient.

When transporting the patient, mind the correct direction of the seat!



9. Cleaning/disinfection

9.1 Cleaning the multifunctional shower chair

Clean the multifunctional shower chair with a soft, lint-free cloth. For a thorough cleaning, use a cloth moistened with soapy water. Clean the product **every day** and **prior to each use**.

To avoid damages, no scouring agents must be used to clean the control unit and the remote control.

NOTE 	Make sure that the system is not in operation during the cleaning process.
WARNING 	After each treatment, the multifunctional shower chair must be fully disinfected with a disinfectant. This way, cross-contamination is avoided.
CAUTION 	The use of disinfectant is only allowed, when there is no patient on the multifunctional shower chair. Strictly follow the instructions provided by the manufacturer of the disinfectant used. Avoid direct contact with the concentrated product. Wear gloves and safety glasses to protect your skin and eyes, if necessary.

9.2 Disinfecting the multifunctional shower chair

With respect to the risk of transmission and infection, you must disinfect your multifunctional shower chair **every day** and **prior to each use**.

The multifunctional shower chair is wipe-disinfectable with the following products:

- Alcohol 70% (e.g., Mikrozid AF liquid)
- Aldehyde (e.g., Antiseptica kombi)
- Oxygen releasing agents (e.g., Perform or Descogen liquid)

9.3 Sterilizing the multifunctional shower chair

The multifunctional shower chair is **not** suitable for sterilization.

10. Checks/inspections

In order to ensure a safe use of our multifunctional shower chair as well as the protection of users and patients/residents, we recommend an annual safety check.

We recommend a simultaneous maintenance in order to keep the appliance in good condition.

The execution of the safety check and the maintenance activities must be documented and the proof thereof must be presented upon request. Please use your inventory register to this effect.

The checks and inspections may be carried out only by adequately trained and qualified professionals. Non-observance may result in injuries or an unsafe product.

NOTE 	*The multifunctional shower chair is a mobile device used in special facilities rooms and work areas (DIN VDE 0100 Group 700) for which the DGUV prescription 3 (BGV A3) check must be carried out annually in accordance with the accident prevention regulations UVV of the employer's liability insurance association.*

This DGUV check is only prescribed for Germany. In other countries, other prescriptions may apply.

WARNING 	*Do not carry out any cleaning, maintenance or inspection activities when the multifunctional shower chair is in use. Such activities may result in dangers for the user and the patient/resident.*

10.1 Maintenance of the lithium-ion battery

The battery nor the controller may be opened by the customer.

Repairs may be carried out only by BEKA Hospitec or by companies authorized by BEKA Hospitec to do so. Please recharge discharged batteries as soon as possible to increase their service life. Batteries must be recharged every 6 months (a possible deep discharge can destroy the battery). The battery's service life is essentially determined by the factors load (number of hoisting cycles) and the charge level. The service life can be up to 5 years. Please have damaged or worn-off batteries replaced as a rule.

11. Waste disposal

11.1 Disposal of the packaging material

Please recycle the packaging material supplied with the product in accordance with the locally applicable prescriptions and regulations.

11.2 Disposal of the product

At the end of the multifunctional shower chair's service life, please contact your BEKA vendor, who will recycle the product in accordance with the locally applicable prescriptions and regulations.

More information about an environmentally compliant disposal is available from the manufacturer BEKA Hospitec GmbH.

Please clean and disinfect the multifunctional shower chair prior to its disposal.

12. Troubleshooting/customer care service

12.1 Troubleshooting

Problem with the shower chair	Remedy
The travel adjustment of the shower chair does not work.	a) Check if the emergency stop switch is released/actuated. b) Check the charging state of the battery.
Remote control is flashing	Contact the service department/customer care service.
The shower chair remains idle in the top end position.	a) Check if the emergency stop switch is released/actuated. b) Check the charging state of the battery.
The drive stops during the lifting operation.	a) Battery low. **Charging/replacing the battery** b) The maximum load is exceeded (max. patient weight)
The drive stops during lowering.	c) Battery low. **Charging/replacing the battery** d) There is an obstacle below the seat. Raise the seat and remove the obstacle.
The cable remote control does not work.	a) Check the connector of the chassis. The connector is located behind the cover plate. b) Check battery charging status (replace by a fully-charged battery).
The castors produce hard noises.	clean the castors. Replace if necessary.
The multifunctional shower chair produces unusual noises.	Contact the service department/customer care service.
The multifunctional shower chair is damaged	Contact the service department/customer care service.
Symbol “Failure/Maintenance” is lit	An annual check/inspection is required.
One armrest is lower than the other one	The armrest has shifted. Readjust the armrest with a hexagonal key.

Problem with the battery charger	Remedy
Charger does not work.	a) Check mains plug.
The power indicator of the charger is not lit.	a) Check if the charger is plugged into a power socket. b) Check the socket fuse.
The charger is plugged into the power socket but the power indicator is not lit.	a) Check if the wall socket is supplied with power.
Problem with the battery	**Remedy**
The indicator light does not go off after several hours of charging.	The battery must be replaced. Contact the service department/customer care service.
When the cable remote control is operated, a warning signal is emitted and the indicator light is lit.	Check the charging state of the battery.

Please contact the customer care service of your vendor or the manufacturer, if your multifunctional shower chair is not working properly and you are unable to fix the problem by means of the remedies set out in section 12.

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

13. Appendix

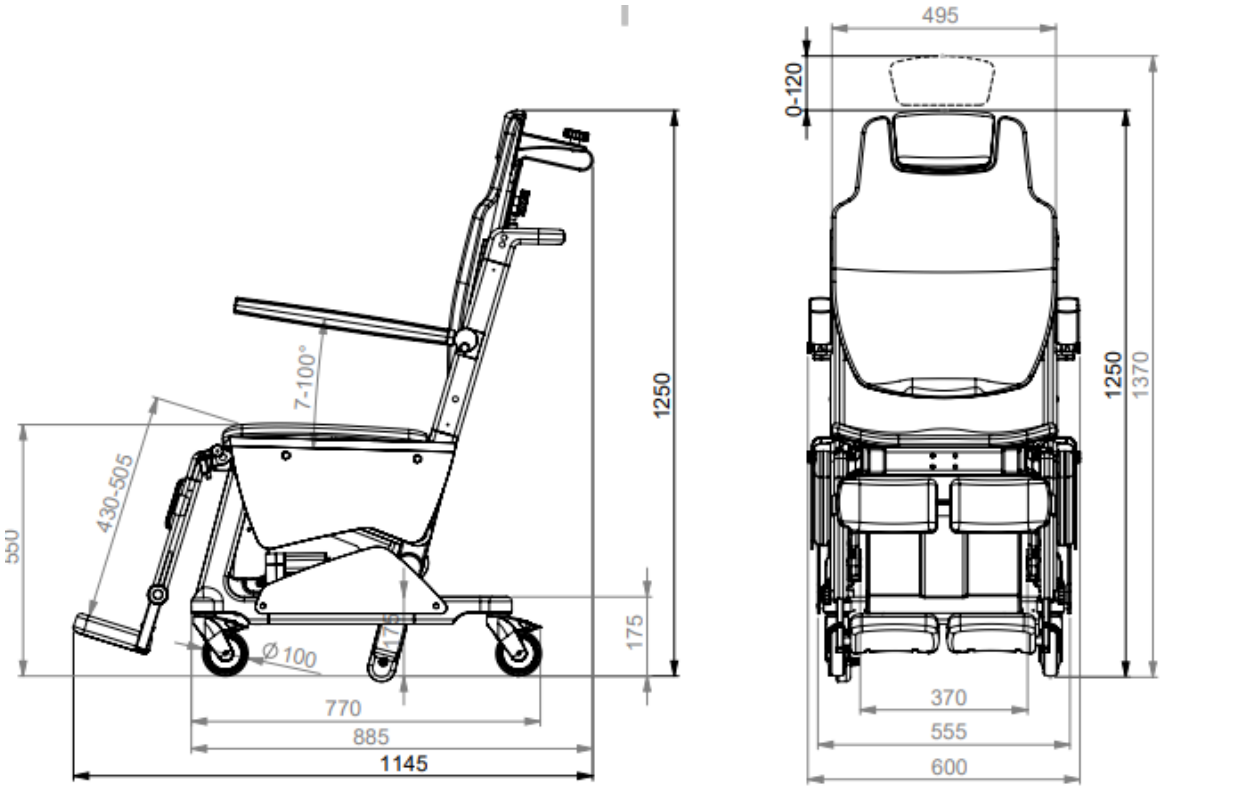
13.1 Technical data

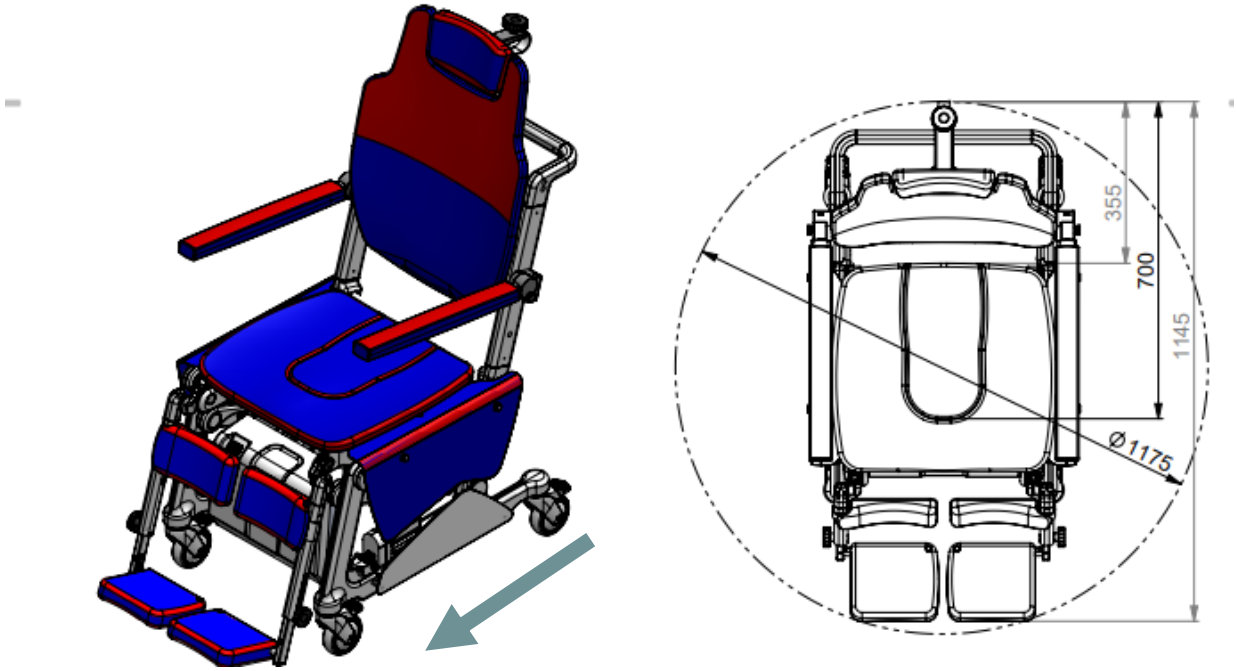
Dimensions and weights	MILO	LEON
Weight	52 kg	76 kg
Min. length, lowest upright position	1145 mm	1145 mm
Max. length, highest reclined position	1560 mm	1565 mm
Overall width	600 mm	655 mm
Min. height backrest, lowest reclined position	1110 mm	1245 mm
Max. height backrest, highest upright position	1560 mm	1465 mm
Min. sitting height	550 mm	560 mm
Max. sitting height	750 mm	780 mm
SWL (safe working load)	150 kg	230 kg
Height adjustment	200 mm	220 mm
Reclining function	25°	25°
Backrest adjustment	---	---
Default width seat and back cushion	495 mm	545 mm
- Noise level	max. 55 dB (A)	---
General technical data		
- Treatment duration:	2 min. continuous operation followed by a pause of 18 min.	
- Operating mode:	Short-term operation	
- Operating voltage:	25 V DC	
Battery part		
- Output	25.55V / max. 12A	
- Battery capacity	2.6 Ah	
Power supply unit		
- Protection class:	Class II	
- Applied part:	Type B	
- Voltage input:	100 V - 240 V~ (AC) / 50 / 60 Hz	
- Voltage output:	36 V (DC)	
- Power consumption:	I in max. 10 Amp. / I out max. 1 Amp.	

Ambient conditions	
Operation	
- Temperature range:	10° C to 40° C
- Relative atmospheric humidity:	30% to 75%, non-condensing
- Atmospheric pressure:	80 – 106 kPa
Storage and transport	
- Temperature range (shower chair):	-10° C to 50° C
- Temperature range (battery):	-10° C to 40° C
- Relative atmospheric humidity:	10% to 80%, non-condensing
- Atmospheric pressure:	70 – 106 kPa

13.2 Construction drawing

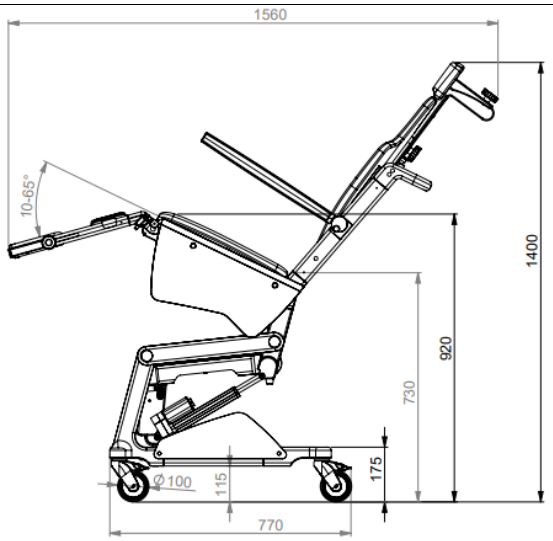
13.2.1 MILO



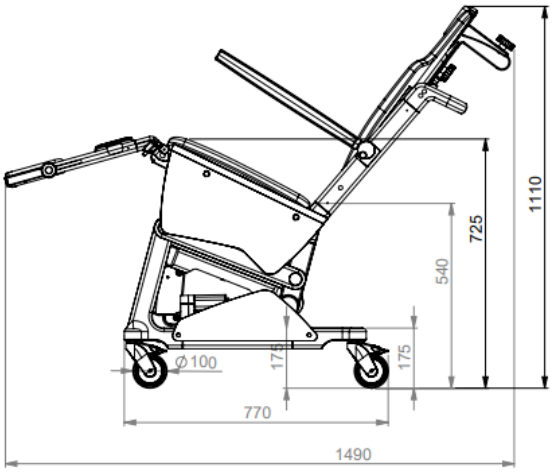


Direction of travel

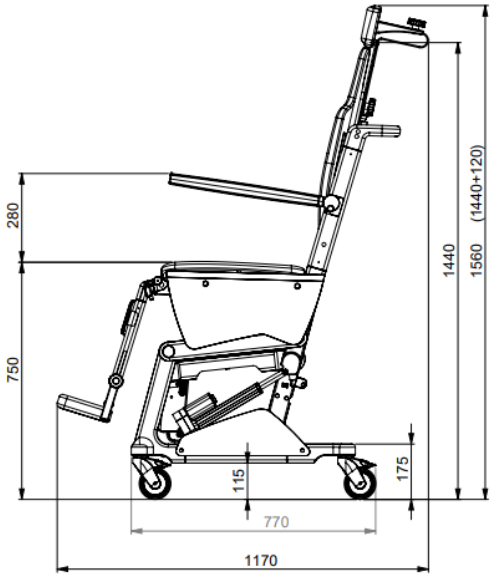
Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom
Leg rests: bottom



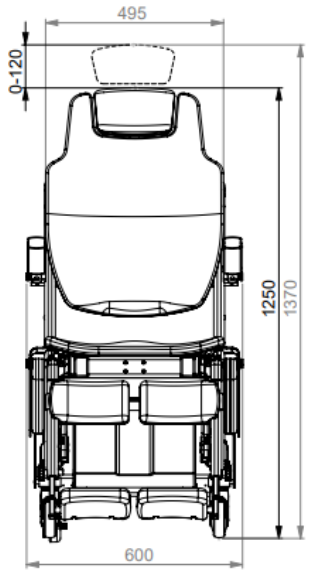
Shown: Lowest lift position
Seat not tilted
Armrest: bottom
Headrest: bottom
Leg rests: bottom



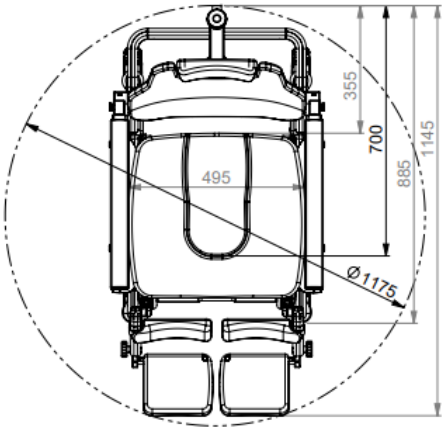
Shown: lowest lift position
Seat maximally reclined
Armrest: bottom
Headrest: bottom
Leg rests: Middle position



Shown: Highest lift position
Seat not reclined
Armrest: bottom
Headrest: top
Leg rests: Lowest position

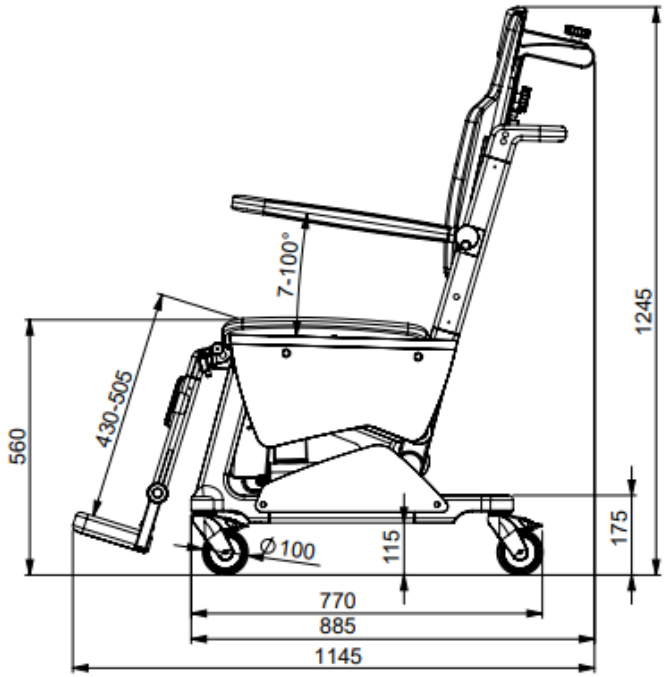


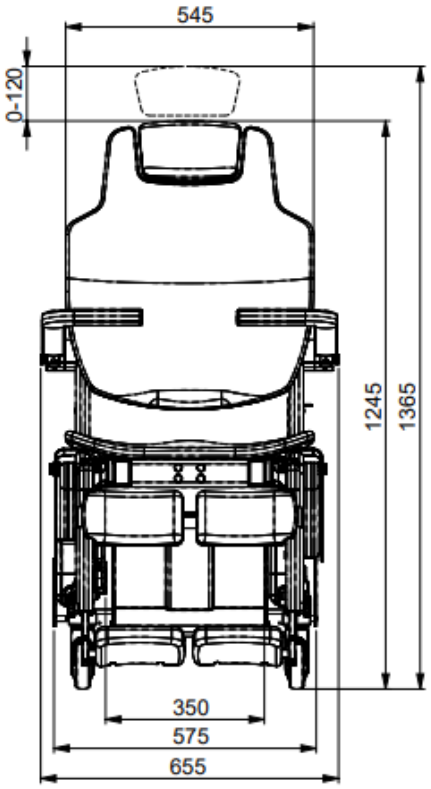
Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom/top
Leg rests: bottom

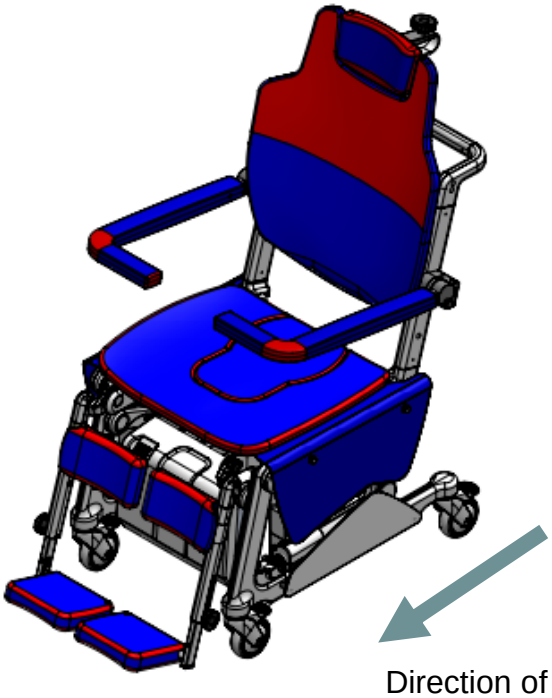


Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom
Leg rests: bottom

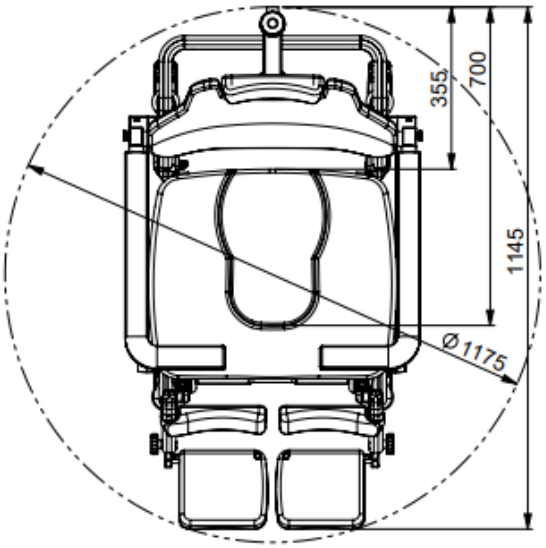
13.2.1 LEON



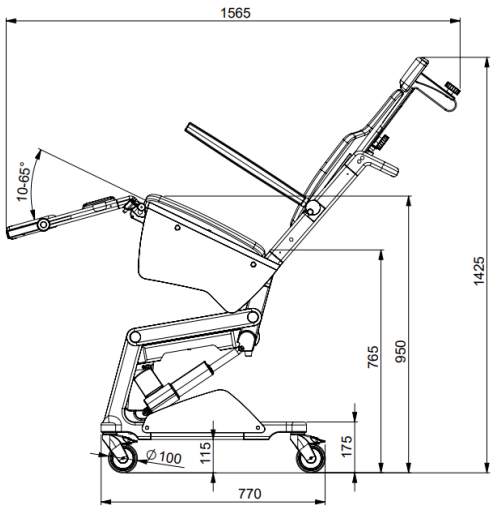




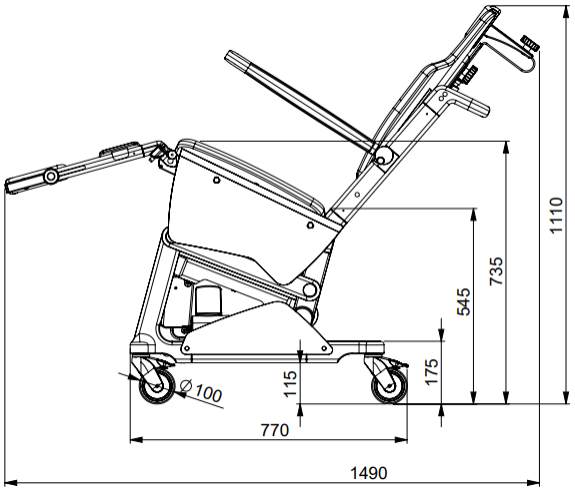
Direction of travel



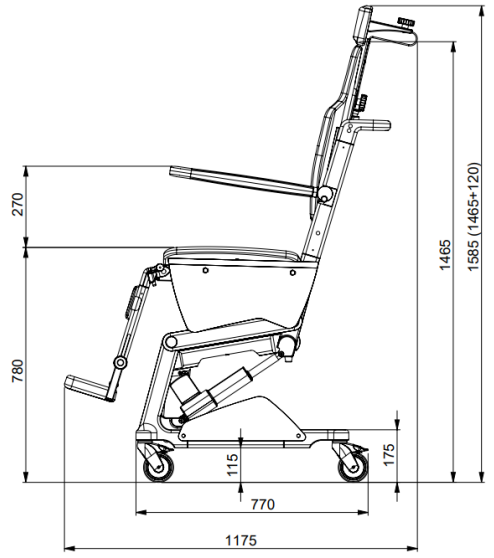
Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom
Leg rests: bottom



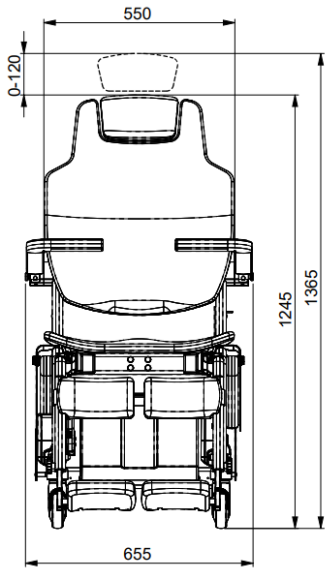
Shown: Highest lift position
Seat maximally reclined
Armrest: bottom
Headrest: top
Leg rests: Middle position



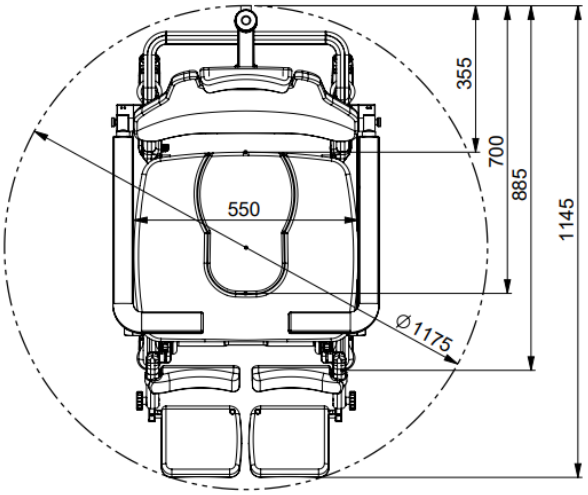
Shown: lowest lift position
Seat maximally reclined
Armrest: bottom
Headrest: bottom
Leg rests: Middle position



Shown: Highest lift position
Seat not reclined
Armrest: bottom
Headrest: top
Leg rests: Lowest position



Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom/top
Leg rests: bottom



Shown: Lowest lift position
Seat not reclined
Armrest: bottom
Headrest: bottom
Leg rests: bottom

13.3 Wiring and mounting diagram

Please observe the specifications set out in chapter 6 Installation.

13.4 Declaration of conformity

beka DIFFERENT BY DESIGN

CE

EU–Konformitätserklärung / *EU-Declaration of Conformity*

Der Hersteller / *The manufacturer*

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

SRN: DE-MF-000013895

erklärt in alleiniger Verantwortung gemäß Verordnung (EU) Medizinprodukte 2017/745 des Europäischen Parlaments und des Rates vom 5. April 2017 über Medizinprodukte MDR, Kapitel V, Abschnitt 2, Artikel 52, Unterabsatz 7, dass die folgenden

BEKA Duschstühle und deren Zubehöre

declares under sole responsibility according to the Regulation (EU) Medical Devices 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices MDR, Chapter V, Section 2, Article 52, subparagraph 7, that the following

BEKA Shower chair and their accessories

Basis-UDI-DI: 426068189121BP

Produkt / Product	**Artikel Nr. / P/N.**
Milo	920124000, 920124020
Leon	920124500, 920124520
James	920125000, 920125020

den grundlegenden Sicherheits- und Leistungsanforderungen entsprechen und die Voraussetzungen für die CE-Kennzeichnung erfüllen

comply with the general safety and performance requirements and fulfill the provisions of CE marking

Die Produkte & deren Zubehöre entsprechen Klasse I, Verordnung (EU) Medizinprodukte 2017/745, Anhang VIII, Kapitel III, Regel 1&13

The products & their accessories correspond with Class I, Regulation (EU) Medical Devices 2017/745, Annex VIII, Chapter III, Rule 1&13

Produktrealisierung und Prüfung gemäß den folgenden Normen und Richtlinien:

Testing according to the following standards and directives:

Verordnung (EU) „Medizinprodukte" 2017/745 Regulation (EU) "Medical Devices" 2017/745, MDR	DIN EN 60601-1:2006 + Cor.:2010 + A1:2013 * IEC 60601-1:2005 + Cor.:2006 + Cor.:2007 + A1:2012
DIN EN 12182:2012 / EN 12182:2012	DIN EN 60601-1-2:2016 / IEC 60601-1-2:2014
DIN EN ISO 12100:2011 & Berichtigung 1:2013 / ISO 12100:2010	ANSI/AAMI ES60601-1:2005/(R)2012 * CAN/CSA-C22.2 NO. 60601-1:14 *
DIN EN ISO 13857:2020 / ISO 13857:2019	DIN EN ISO 13854:2020 / ISO 13854:2019
DIN EN 60601-1-6:2021 / IEC 60601-1-6:2010 + A1:2013 + A2:2020	DIN EN 62366-1:2021 / IEC 62366-1:2015 + COR1:2016 + A1:2020
RoHS Richtlinie / Directive 2011/65/EU & 2015/863/EU REACH Verordnung / Regulation EU 1907/2006	DIN EN ISO 10535:2007 / ISO 10535:2006 * DIN EN ISO 3758:2012
Richtlinie / Directive 2006/42/EG Richtlinie / Directive 2012/19/EU - WEEE:2012-07-04	DIN EN ISO 14971:2020 / ISO 14971:2019
EN ISO 15223-1:2022-02	ISO 20417:2021-04
DIN EN ISO 13485:2021-12	

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*

*: TÜV SÜD Certificate for Canada and USA for specific article numbers

Wetzlar, den 15.05.2023

Robert Deschler
Geschäftsführer / Managing Director

BEKA Hospitec GmbH
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D-35582 Wetzlar-Dutenhofen
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James Stuart-Smith
Robert Deschler

Commerzbank AG Wetzlar
Konto-Nr.: 482176500
BLZ: 515 400 37
IBAN: DE60515400370482176500
SWIFT-BIC: COBADEFF515

Seite 1 von 1

13.5 Accessories/spare parts

Multifunctional shower chair	Article number
MILO (colour: BAROLO)	920124000
MILO (colour: Azur)	920124020
LEON (colour: BAROLO)	920124500
LEON (colour: Azur)	920124520

Options/accessories	Article number
Supplement for individually adjustable Comfort leg and footrest BAROLO	920120060
Supplement for foldable safety armrests BAROLO	920120020
Supplement for seat and back cushion in XL-version, color BAROLO (Only for MILO)	920120140
Supplement for two Memory buttons for the free choice of two shower positions and additionally two function buttons respectively for a parking and cleaning position	920120090
Supplement for bedpan holder	920120030
Supplement for shower head bracket	920120040
Safety belt	920120070

13.6 Mounting instructions

13.6.1 Replacement of the castors

Image 1:
Required tools:
1 hexagonal key 10 mm



Image 2:
Loosen the screw with the hexagonal key



Image 3:
Loosen the castor from the frame.



Re-assemble in reversed order!

13.6.2 Cable remote control replacement

Image 1:
Required tools:
1 hexagonal key 10 mm



Image 2:
The enclosures of the control and battery units are fixed with four lateral hexagonal screws.



Image 3:
Unscrew both top hexagonal screws.



Image 4:
Unscrew both top hexagonal screws.

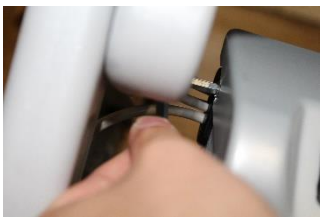


Image 5:
Pull the enclosure down.

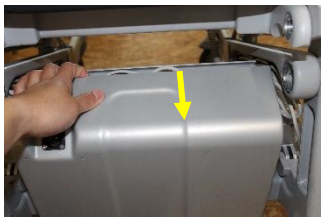


Image 6:
Disconnect the cable remote control.



Image 7:
Exchange the cable remote control and plug the connector into the new one.



Image 8:
Close the enclosure.

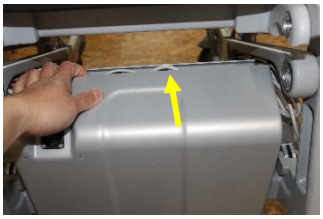


Image 9:
Retighten the left and right screw.



13.6.3 Battery replacement

Image 1:
Required tools:
1 hexagonal key 10 mm



Image 2:
Required tools:
8.0x hexagonal key 50



Image 3:
Unscrew both top hexagonal screws.



Image 4:
Unscrew both top hexagonal screws.

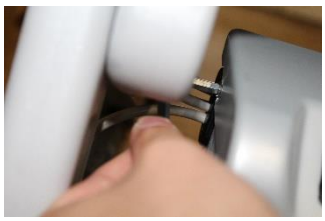


Image 5:
The image shows the installed battery.



Image 6:
Release the battery by means of the release lever located in the battery handle.



Image 7:
Unscrew the screws and remove the battery unit.



Image 8:
The image shows the opened control box without the battery.



When re-installing the battery, make sure that the release lever audibly locks into place.

13.6.4 Control replacement

Image 1:
Required tools:
1 hexagonal key 4 mm



Image 2:
Disconnect the cable of battery from the control.



Image 3:
Disconnect the cable of battery from the battery unit.



Image 4:
Remove the battery unit.



Image 5:
Disconnect the cable of the emergency function from the control.



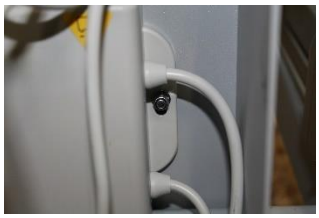
Image 6:
Disconnect the cable of the cable remote control from the control.



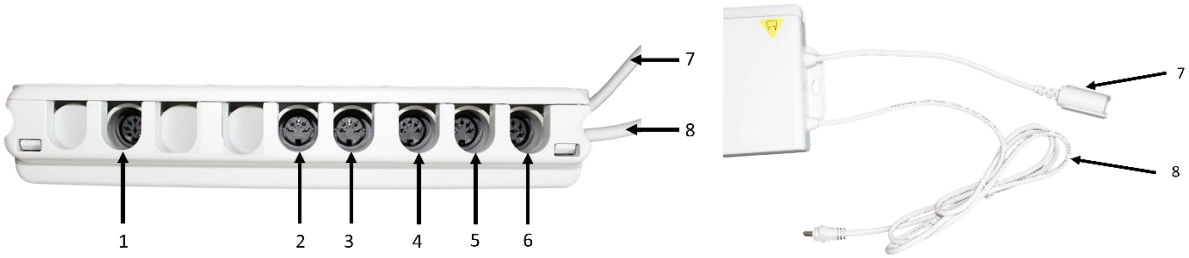
Image 7:
Disconnect all cables of the motors from the control.



Image 8:
Unscrew the screw.



You can remove the control. Re-assemble in reversed order!



N°	Description	N°	Description
1	Cable of the cable remote control	2	Motor “recline seat” left
3	Motor “recline seat” right	4	Hoist motor left
5	Hoist motor right	6	Battery cable
7	Emergency function cable	8	Power cord

When assembling the control, please make sure to assign the motor cable and the cable remote control cable in the following way.

The cable of the cable remote control must click in place.

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 documentation.

For the devices and systems from BEKA Hospitec GmbH, no special measures must be observed.

Portable and mobile HF-communications equipment might interfere with electrical medical equipment.

Guidelines and manufacturer's declaration - electromagnetic immunity (Table 201)		
The shower chair has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the shower chair must ensure that the appliance is used in such environment.		
Emission measurements	**Compliance**	**Electromagnetic environment - guidelines**
High-frequency (HG) emissions to CISPR 11	Group 1	The shower chair uses HF radiation for internal functions only. Therefore, the HF radiation of the appliance is very low and any interference with adjacent electrical equipment is unlikely to occur.
High-frequency (HG) emissions to CISPR 11	Class B	The shower chair 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 dips/flicker to IEC 61000-3-3	Compliant	

Guidelines and manufacturer's declaration - electromagnetic immunity (Table 202)			
The shower chair has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the shower chair must ensure that the appliance is used in such environment.			
Immunity testing	**IEC 60601- Test level**	**Compliance level**	**Electromagnetic environment guidelines**
Electrostatic discharge (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 lines ± 1 kV for Input/output cables	± 2 kV for power lines 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 line to line ±/2 kV line to earth	±/1 kV line to line ±/2 kV line to earth	The quality of the supply voltage should match that of a typical business or hospital environment.
Voltage dips, short interruptions and voltage variations in the power supply input cables and IEC 61000-4-11	<5 % U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5 % U_T (>95% dip in U_T) for 5 seconds	<5 % U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5 % U_T (>95% dip in U_T) for 5 seconds	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 test level is applied.			

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

The shower chair has been designed for use in the hereafter listed electromagnetic environment. The customer or the user of the shower chair must ensure that the appliance is used in such environment.

Immunity testing	**IEC 60601-Test level**	**Compliance level**	**Electromagnetic environment guidelines**
Conducted HF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	10 Vrms	Portable and mobile HF communications equipment should be used no closer to any part of the shower chair including cables, than the recommended separation distance calculated in accordance with the equation applicable to the frequency of the transmitter.
Radiation HF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	**Recommended separation distance** $d=0.35\sqrt{P}$ $d=1.2\sqrt{P}$ 80 MHz to 800 MHz $d=2.3\sqrt{P}$ 800 MHz to 2.5 GHz Where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* the recommended separation distance in meters (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] Interference may occur in the vicinity of equipment marked with the following symbol: 

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

NOTE 2: This manual might 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 shower chair is to be used, exceeds the applicable HF compliance level, special care should be taken that a normal operation of the shower chair 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 shower chair.

[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 shower chair (Table 206)

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

Output power rating of the transmitter	**Separation distance depending on the transmitting frequency** in m		
W	**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 might not apply to all situations. The dispersion of electromagnetic waves is affected by absorption and reflection from structures, objects and persons.

13.8 Inventory register

In accordance with the Medical Device Operator Ordinance, you are required to keep an inventory register for this appliance. You can use this inventory register as template.

Inventory register

Appliance: Multifunctional shower chair MILO
Multifunctional shower chair LEON

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

Serial number: _____

Date of purchase: _____

Installation site: _____

Checks and inspections carried out upon the first use:

_____

Date:_____

Evidence of the training in the functions and the use of the shower chair

Instructor		**Trained person**	
Name	Date	Name	Signature

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

Type of inspection	Date	Result	Measure(s) taken	Signature:

Your notes:

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D – 35582 Wetzlar-Dutenhofen

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Website: www.beka-hospitec.com

