

# USER MANUAL

Original version



## AVERO Comfort

Height-adjustable bathtub

AVERO Comfort

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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

|                                                                                   |                                                                                                                                                        |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>BEKA Hospitec GmbH<br/>Am Rübenmorgen 3<br/>35582 Wetzlar<br/>Tel.: +49(0)641-9 22 20-0<br/>Fax: +49(0)641-9 22-20-20<br/>info@beka-hospitec.de</p> |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|

## 1.3 TÜV Certification

|                                                                                    |                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>BEKA Hospitec GmbH is certified to DIN EN ISO 13485 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.</p> |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                           |                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CAUTION</b></p>  | <p>Inspect all visible parts for damages prior to each use. If any part is damaged, the product may <u>NOT</u> 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).</p> |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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. Only appropriately qualified personnel may operate the product and carry out technical interventions on the product.

### 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

|                                                                                                                                                                                                                                                                                                                             |                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|   BEKA Hospitec GmbH<br>Am Rübenmorgen 3<br>D- 35582 Wetzlar<br>Tel: +49 (0) 641 / 92 22 0 - 0<br>Fax: +49 (0) 641 / 92 22 0 - 20<br>www.beka-hospitec.de |                                                                                   |  |
| Typ: <b>AVERO Comfort</b>  2017-13                                                                                                                                                                                                         |                                                                                   |                                                                                   |
| <b>SN</b> 1559.13.17<br><b>REF</b> 910609000                                                                                                                                                                                                                                                                                |  |                                                                                   |
| Voltage Input:<br><b>230 V ~ 50Hz</b>                                                                                                                                                                                                                                                                                       | Max Load:<br><b>400 kg / 881 lbs</b>                                              |                                                                                   |
| Power Consumption:<br><b>1035 VA</b>                                                                                                                                                                                                                                                                                        | Max Patient weight:<br><b>250 kg / 551 lbs</b>                                    |                                                                                   |
| short-term operation    2 min <b>ON</b> 18 min <b>OFF</b>                                                                                                                                                                                                                                                                   |                                                                                   |                                                                                   |

This illustration shows the type plate. The type plate is located on the control panel side. The serial number illustrated here (SN) 1559.13.17 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.*

### 3.3 Designation

In this manual, the product is also called height-adjustable bathtub, bathtub, tub and appliance.

## 4 Safety

### 4.1 Intended use

The product is designed for bathing and providing care to patients in hospitals, health care facilities and nursing homes. The product may only be used for the intended specified purpose.

|                                                                                                      |                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE</b></p>  | <p>The AVERO Comfort height-adjustable bathtub must be used by qualified nursing staff with adequate knowledge of the care environment, its usual procedures and practices and in accordance with the instructions of the user manual.<br/>In case of doubt, please consult with the attending physician.</p> |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 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. Please have the installation of the appliance carried out by a qualified electrician in accordance with the currently applicable regulations in your country.

|                                                                                                        |                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE</b></p>  | <p>All plumbing and electrical works are to be carried out by qualified professionals in accordance with the local and national prescriptions.</p> |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

### 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



Medical device



CE-marking to MDR



Name and address of the manufacturer



Manufacturing date



Warning against a hazardous area



Caution



Protection against harmful ingress of water or solids: Protected against splashes of water, splash-proof



Applied part "type B" to DIN EN 60601-1



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 (lowest atmospheric pressure/ highest atmospheric pressure)



Atmospheric humidity limits (lowest atmospheric humidity/ highest atmospheric humidity)



Temperature limits (lowest temperature/ highest temperature)



The feet must not be placed on the base frame/tub legs.

## 4.5 General warnings and safety instructions



### General

- The product may solely be used for the purpose mentioned in chapter 4.1 Intended use.
- The product may only be installed, set up and maintained by persons authorized by the manufacturer who meet the requirements set out in §2 section 2 of the German Medical Device Operator Ordinance (MPBetreibV).
- The company reserves the right to make changes to the appliance without prior notice.
- When using the product, please observe all prescriptions of the Medical Device Legislation Implementing Act (the German *Medizinprodukterechts-Durchführungsgesetzes, MPDG*) and any relevant issued statutory orders pursuant to this, as well as the health and safety regulations, the accident prevention regulations and the generally acknowledged regulations of technology. If the product is used outside Germany, please respect and observe the applicable national legislations and regulations.
- This product is a medical device according to the Ordinance on Medical Devices (EU) 2017/745 and DIN EN 60601-1. The Medical Device Operator Ordinance is binding for users in Germany. In other countries, the relevant national legislation is applicable. The insulation paths used in the appliance meet the requirements of the standard: DIN EN 60601-1 (IEC 60601-1) Medical electrical equipment – Part 1: General requirements for basic safety and essential performance.

### Operational environment

- The product is not protected against the effect of higher mechanical forces and has only limited protection against the ingress of spray water in the enclosure, the motor, the control unit and the batteries.
- The appliance is not approved for operation in potentially explosive areas nor in atmospheres with combustible mixtures or with an increased oxygen content.
- Please make sure that the electrical installation of the room or the area, in which the appliance is connected to the electricity grid, is state-of-the-art.
- The mains connection must be carried out by a qualified electrician. The latest applicable VDE-regulations must be observed at all times. Outside Germany, the relevant local regulations must be observed.
- Electromagnetic or other interferences between the medical device and other appliances cannot be excluded. In case of a risk of mutual interferences, you must disconnect the appliance from the mains by activating the circuit breaker located in the room (to be installed by the operator). The medical device is not suitable for use in the vicinity of short-wave, micro-wave or high-frequency therapy or diagnostic appliances, neither near Hf-communication devices (radio devices) and their accessories. For more information on the electromagnetic compatibility EMC, please refer to chapter 13.7.
- Do not operate or store devices that might be affected by humidity in the vicinity of the bathtub.
- Protect the appliance against heat and direct solar radiation.

### Functional safety

- The product may only be used or operated by trained personnel.

- During the treatment/use, supervision is required at all times. The patient must not bathe alone! The patient must not be left unattended!
- The patient must not be the user/operator!
- The user/operator must check the functional safety and the proper condition of the appliance and its accessories (visual check, functional test, etc.) before each use of the appliance. In case of damages or malfunctions, the bathtub may no longer be used. Risk of injury!
- Please use this medical device only with original accessories according to chapter 13.5.
- The duty-cycle nor the maximum load of the lifting unit must be exceeded (refer to 13.1 Technical description).
- The user/operator must ensure that the area below and above the tub is free from objects and/or obstacles likely to prevent the free upward and downward movement of the tub.
- Particular care must be taken to ensure that the feet or other body parts of caregivers, patients or third parties are not located under the tub or on the base frame/tub legs during the height adjustment or the tilting of the tub. There is a risk of crushing or squeezing of body parts.
- Suffocation risk: The appliance may contain small parts that can be ingested. Please make sure to keep children and pets away from the appliance.
- Strangulation risk: Please make sure that no body parts of the patient are caught or entangled in the cable of the cable remote control.
- Do not use other electrical devices in the vicinity of the tub in order to avoid the risk of electrical shocks.
- Depending on the equipment of your appliance, it might include batteries containing hazardous substances. To avoid hazardous situations, such as fire and explosion, as well as spills of these hazardous substances, the batteries may neither be opened nor in any way whatsoever be subject to mechanical modification (crushing, disassembling, shocks, etc.)! Never expose the batteries to open fire or temperatures of over 60 °C!
- Route the power and the connecting cable so as to avoid damages. Damaged power cables may cause fire or a life-threatening electrical shock and may no longer be used.
- Please make sure that the power supply is always switched when the appliance is in use.
- Never cover, modify or seal slots and openings of the appliance.
- The enclosure of the medical device must not be opened! The appliance does not contain any parts to be maintained by the user.
- Never attempt to repair or alter the appliance yourself! The proper functioning and the safety of the appliance might be compromised. Furthermore, your right to claim under guarantee is also invalidated! Repairs may only be carried out by trained, qualified professionals which are authorized by the manufacturer to do this. Please contact our customer support service or the customer support service of your vendor.
- The product must be disinfected after each use.
- Cleaning and disinfection are only allowed when the patient has left the room!
- The nursing staff must protect its skin and eyes against concentrated disinfectants and detergents. A face mask must be used as protection against aerosols.

## Maintenance

- In order to ensure a safe and risk-free operation, the appliance requires an annual inspection, technical safety check and maintenance by persons authorized by the manufacturer who meet the requirements of the Medical Device Operator Ordinance ! For more information, please refer to chapter 10. In case of doubt, please contact your vendor or the manufacturer.
- Installation, maintenance, repair and inspection activities are only allowed when the patient has left the room!
- The temperature setting of the thermostat, in particular in conjunction with thermal flushing, and the thermal flushing itself, may only be carried out by authorized service technicians. Please observe that the faucet or the water inlet as well as the other tub parts can become very hot during the flushing. Caution, risk of scalding!
- The product includes removable parts. Please refer to chapter 7 for the correct identification of the parts to avoid the risk of confusions and malfunctions.
- The product includes non-removable parts. When required, these may only be replaced by service technicians authorized by the manufacturer to that effect. Observe the assembly instructions set out in chapter 13.6.
- Check every month the pressure hoses for leaks and damages, the connections for proper fastening and tightness and the cables of the electrical connection (power and equipotential bonding) for cracks.
- Repairs to parts of the AVERO Comfort height-adjustable bathtub 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.

## Environmental protection/waste disposal

- BEKA Hospitec GmbH is aware of its responsibility towards the environment. The medical device may not be disposed of in household waste!
- In accordance with the WEEE directive, all appliances and accessories that we, as a manufacturer, have placed on the market, may be returned to us for the purpose of their proper disposal. Do not hesitate to contact us concerning this matter when required and please inform your customer in case of a resale.

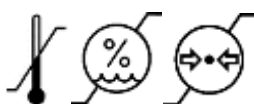


## Instructions for operating appliance combinations

- When the appliance is used in combination with a patient transfer aid, please take care that the patient's body nor any of his/her body parts are trapped, crushed or caught in pinch points! Ensure the stability of the transfer aid in order to avoid tipping over during the transfer of the patient!

|                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING</b></p>  | <p>Prior to each use, the water temperature must be checked by hand (without wearing gloves) either with a thermometer.</p>                                                                                                                                                                                                                                                            |
| <p><b>CAUTION</b></p>  | <p>In case of unusual noises, damages or malfunctions, the use of the product must be immediately discontinued.</p>                                                                                                                                                                                                                                                                    |
| <p><b>NOTE</b></p>     | <p>Repairs to parts of the AVERO Comfort height-adjustable bathtub may only be carried out by qualified professionals which are authorized by the manufacturer to do this. Please contact our customer support service for repair requests.<br/>Any attempt of the user to open the appliance or accessories thereof will invalidate the warranty as well as all liability claims.</p> |

## 5 Transport and storage



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

Transport the height-adjustable bathtub to the intended place of installation. Use a forklift or similar for the transport.

Install the tub in a stable position so that it cannot tilt.

### 5.1 Unpacking the product

You need a cutter knife to remove the packaging.

|                                                                                                      |                                                                                                                       |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE</b></p>  | <p>Make sure not to damage the tub with the tools used.<br/>Avoid cutting in the cardboard with the cutter knife.</p> |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|

#### 5.1.1 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.

#### 5.1.2 Loosening the product from the pallet

The tub 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:**

- Cut the tightening straps to loosen the tub from the pallet
- Remove the tightening straps
- Lift the tub off the pallet
- Install the tub at the intended location of use
- Remove the bubble wrap and the stretch foil
- 

**When all fastenings have been removed, you can lift the care tub off the pallet (2 persons).**

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



## 6 Installation

The tub is supplied ready for operation. Use the level and the spanner (SW 10) to align the tub vertically (rail plumb). You can turn the screws of the tub legs as required to adjust the height. Make sure that all feet are placed flat on the floor and that the tub has a stable and solid position.

Prior to the assembly of the tub, the on-site lines must be sufficiently flushed before they are connected to the height-adjustable bathtub. To avoid soiling of the lines and faucets, dirt filters must be installed on site.

The tub is connected through ½ inch hoses. Observe the enclosed wiring diagram to connect the tub. The tub must be wired and connected by a qualified professional.

|                                                                                                     |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CAUTION</b><br> | <p>To connect the tub to the water supply network, dirt filters have to be installed on site. Please contact your installation technician to that effect.</p> |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 6.1 Electrical connection

The bathtub must be wired in accordance with the technical drawings of BEKA Hospitec or the instructions for the design of wet areas as well as the latest VDE-standards. All supply and drain hoses as well as the electrical lines must be laid so that they cannot cause tripping.

The AVERO Comfort is connected through a junction box with legally prescribed splash guard (IP class), 120 V AC/60Hz, AWG 12, 1.5 KW, 15 Ampere, earth leakage circuit breaker 30 mA, equipotential bonding (in Germany) to DIN VDE 0107. **The connection may be carried out only by a qualified electrician.**

### 6.2 Protective conductor

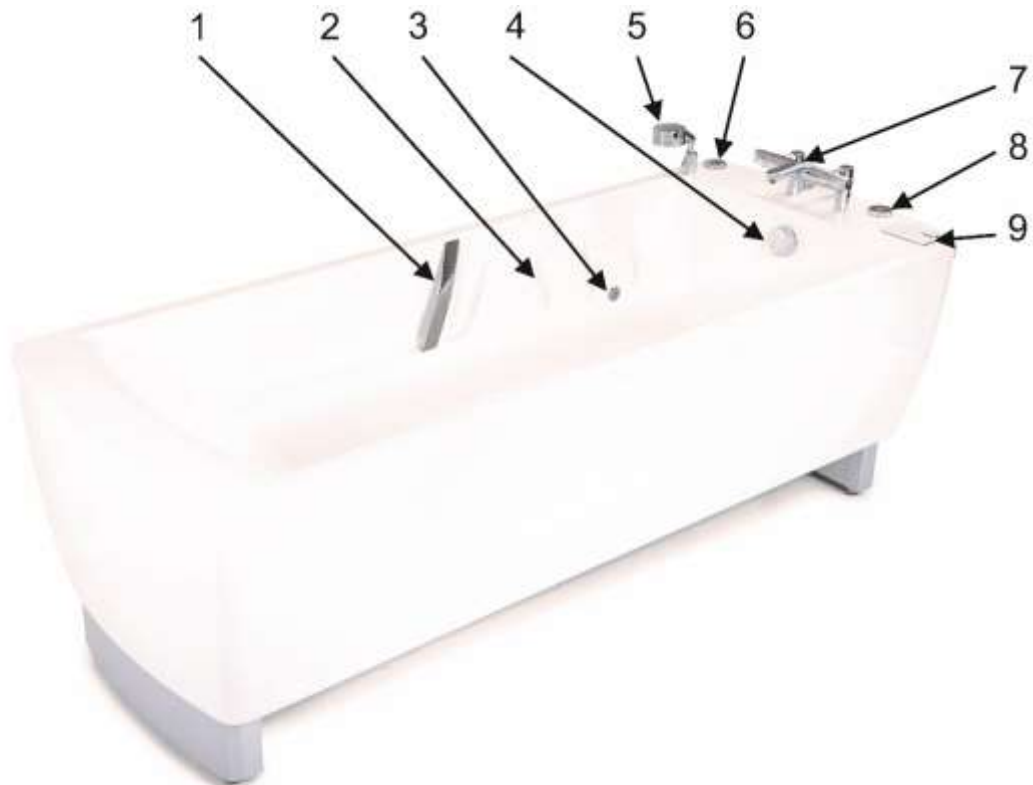
When protection class I appliances are used, the quality of the protective conductor of the installation is important. Please note that in many countries, regulations and prescriptions have been specified in this respect by the national authorities.

|                                                                                                       |                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WARNING</b><br> | <p>To avoid the risk of an electrical shock, this appliance may be connected only to a supply network equipped with a protective conductor.</p> |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|

## 6.3 First start-up

|                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING</b></p>  | <p>The appliance may only be used in accordance with the accompanying documentation.<br/>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.<br/>If the AVERO Comfort height-adjustable bathtub is newly connected, the technical data must be observed.</p>   |
| <p><b>WARNING</b></p>  | <p>In order to prevent scalding, the hot/cold water mixing tap must be adapted to the local water supply prior to the first start-up.<br/>Please observe the enclosed user manual!<br/>The setting must be documented.</p>                                                                                                                                                      |
| <p><b>NOTE</b></p>    | <p>In order to ensure a safe functioning and operation, we recommend a regular maintenance and setting of the thermostatic mixer. This maintenance must be carried out by a qualified technician.<br/>If the AVERO Comfort tub is relocated to another room or in the event of changes to the local water supply, a readjustment of the thermostatic mixer may be required.</p> |

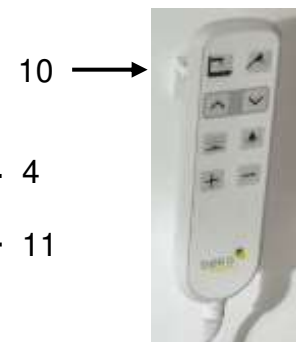
## 7 Operating elements and their function



| N° | Description                                          | N° | Description                                   |
|----|------------------------------------------------------|----|-----------------------------------------------|
| 1  | Handles                                              | 7  | Bath faucet/thermostatic mixer                |
| 2  | Longitudinal grooves for inserting the tub shortener | 8  | USB-interface for the sound system (optional) |
| 3  | Colored light system (optional)                      | 9  | Control panel                                 |
| 4  | Tappet (drain and overflow)                          | 10 | Cable remote control                          |
| 5  | Hand shower                                          | 11 | Tub shortener (optional, removable)           |
| 6  | Aroma system (optional)                              |    |                                               |

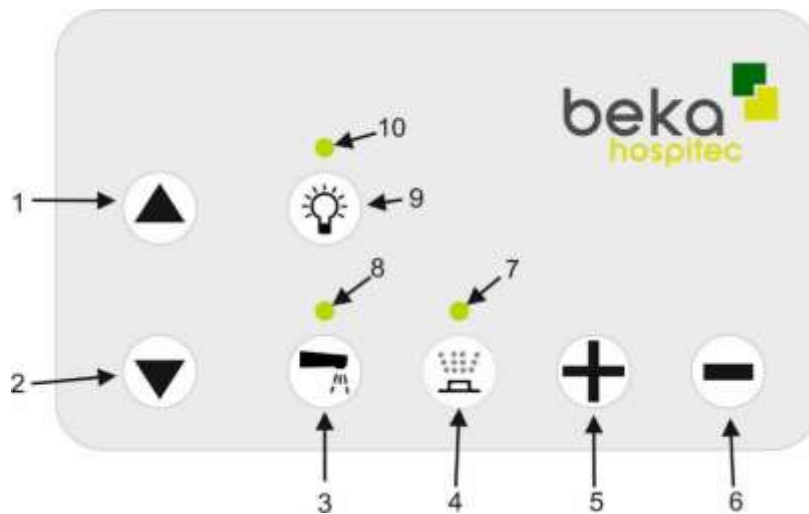
**Inside view of the tub body with tub shortener**

**Cable remote control**



## 7.1 Control panel for controlling the tub functions (optional)

### 7.1.1 Control panel (7 buttons)



| N° | Description                                  | N° | Description                                  |
|----|----------------------------------------------|----|----------------------------------------------|
| 1  | Button "Height adjustment Up"                | 6  | Button "Decrease air-spa system intensity" * |
| 2  | Button "Height adjustment Down"              | 7  | LED-indication air-spa system *              |
| 3  | Button "Tub filling"                         | 8  | Mains/function LED                           |
| 4  | Button "Air-spa system" *                    | 9  | Button "Colored light system" *              |
| 5  | Button "Increase air-spa system intensity" * | 10 | LED-indication colored light system *        |

\* Optional function

### 7.1.2 Mains/function LED (only in case of optional control panel)

The LED displays the status of the tub.

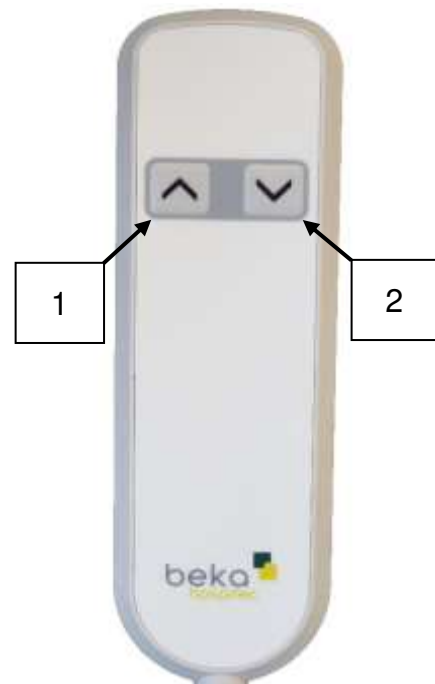
The following states are displayed:

|                                      |                                                                                                                                                                                                                |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LED permanently green                | Standby, ready for operation                                                                                                                                                                                   |
| LED slowly flashing blue             | The water is flowing! (tub filling or hand shower)                                                                                                                                                             |
| LED quickly flashing blue (optional) | The water is flowing (additional filling or hand shower)<br>The filling must be stopped manually, otherwise the tub could overflow (only if your tub is equipped with the <i>Automatic water stop</i> option). |
| LED permanently blue (optional)      | The water filling height is reached. (optionally available with the " <i>Automatic water stop</i> " option)                                                                                                    |
| LED flashes blue - green (optional)  | Waiting for the purging of the air nozzles (only if your tub is equipped with the <i>Air-spa system</i> )                                                                                                      |

## 7.2 Cable remote control for controlling the tub functions

### 7.2.1 Cable remote control (2 buttons)

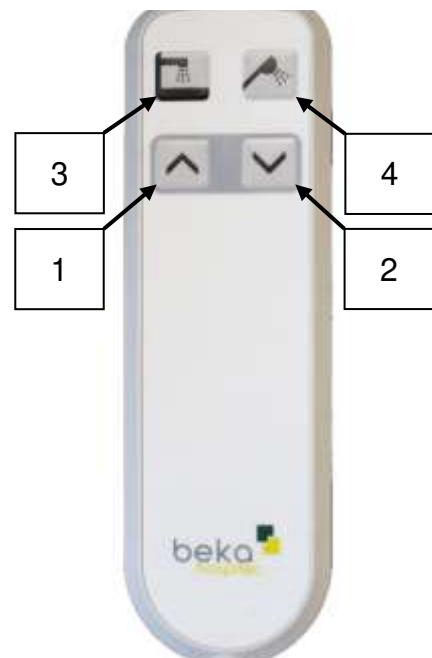
| N° | Description button function       |
|----|-----------------------------------|
| 1  | Button "Height adjustment Up" *   |
| 2  | Button "Height adjustment Down" * |



\* When the end points are reached, the travel motion is switched off automatically.

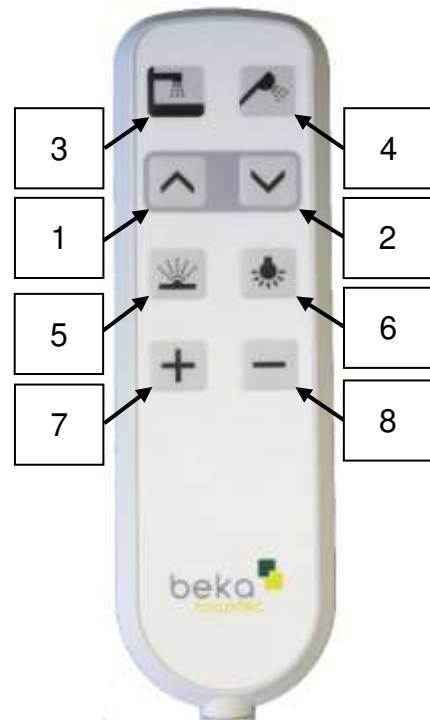
### 7.2.2 Cable remote control (4 buttons)

| N° | Description button function       |
|----|-----------------------------------|
| 1  | Button "Height adjustment Up" *   |
| 2  | Button "Height adjustment Down" * |
| 3  | Button "Tub filling"              |
| 4  | Button "Hand shower"              |



### 7.2.3 Cable remote control (8 buttons)

| N° | Description button function                         |
|----|-----------------------------------------------------|
| 1  | Button "Height adjustment Up" *                     |
| 2  | Button "Height adjustment Down" *                   |
| 3  | Button "Tub filling"                                |
| 4  | Button "Hand shower"                                |
| 5  | Button "Air-spa system" (option)                    |
| 6  | Button "Colored light system" (option)              |
| 7  | Button "Increase air-spa system intensity" (option) |
| 8  | Button "Decrease air-spa system intensity" (option) |



\* When the end points are reached, the travel motion is switched off automatically.

## 7.3 Thermostatic mixer/faucet/hand shower

### NOTE



For the setting and the operation of the thermostatic mixer/faucet as well as for performing the thermal flushing, the enclosed user manual of your thermostatic mixer/faucet must be observed.



Switching between tub filling/hand shower



Hand

By turning the rotary button, you can switch between tub filling and the hand shower.

Your thermostatic mixer/faucet is equipped with an interlock (eco-stop function). This interlock limits the flow rate of the thermostatic mixer/faucet to save water.

To increase the flow rate, press the catch and turn the rotary button counterclockwise. The water volume is increased.

### CAUTION



When your tub is equipped with the “Automatic water stop” function, please make sure that the rotary button is set to tub filling, otherwise the water could overflow.

### 7.3.1 Tub filling (button 3)



If your tub features the **“Automatic water stop”** option, the water supply is automatically stopped when the filling level is reached.

Press the “Tub filling” button to fill the tub. When the filling level is reached, the water supply is automatically switched off.

Press the “Tub filling” button once more to continue filling the tub.

The water supply is restarted. Please observe that in this case, the water supply must be switched off manually, to prevent the tub from overflowing.

You can stop the water supply at all times by pressing the button again!

#### CAUTION



If your tub does not feature the “Automatic water stop” option, the tub filling must be switched off manually.

To that effect, press the button



If you do not switch off the tub filling manually, the water can overflow.

The manual tub filling may only be carried out under supervision.

## 7.4 Other/optional elements and functions

If your tub is equipped with functions, such as the colored-light system, the music sound system, aroma and air-spa system and/or the emergency function in case of power failure, please observe the enclosed user manuals as well.

### Emergency function in case of power failure

The “Emergency function in case of power failure” option allows for a one-time lowering of the tub, to enable the patient leaving the tub comfortably despite the power failure. For this function, led batteries are integrated in the product.

|                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING</b></p>  | <p>The optionally available batteries contain hazardous substances. The batteries may never be opened nor in any way whatsoever be subject to mechanical modification !</p> <p>Never expose the batteries to open fire or temperatures of over 60 °C! Risk of fire and explosion!</p> <ul style="list-style-type: none"> <li>• In case of contact of the liquid leaking from the battery with skin or clothes, wash the affected areas immediately with plenty of water.</li> <li>• In case of contact of the liquid leaking from the battery with the eyes, rinse immediately with plenty of water and seek medical advice.</li> <li>• 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.</li> </ul> |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Sensor-operated lock-out function of the tub (option)

The lock-out function has been designed to avoid inadvertent operation of the tub, e.g., by residents or patients suffering from dementia. In the option equipment, the AVERO Comfort is equipped with a sensor switch located at the lower tub side. The position of the sensor switch is marked by the symbol shown below.

The proximity switch is activated, when you place the palm of your hand on the sensor symbol shown below. This way, all operating functions of the AVERO Comfort are locked/disabled.



Identification of the  
sensor switch

Place your hand again on the sensor symbol to deactivate the lock-out function. The lock-out function is deactivated.

### Key-operated lock-out function of the tub (option)



#### WARNING



As soon as the thermal flushing has been carried out, the key must be removed from the service switch and stored in a safe place.

By unlocking the service switch for the thermal legionella flushing, the in-house technicians can switch off the scalding warning to enable a thermal flushing. After the thermal flushing has been carried out, the key switch must be deactivated again and the key must be removed and stored in a safe place.

Please observe the enclosed user manual of the thermostatic mixer and the hygiene guidelines of your institution as well.

### Function of the multifunctional nursing and shower stretcher (option)

The multi-functional nursing and shower stretcher cannot be retrofitted, it has to be ordered in combination with an adapted AVERO Comfort bath.



The multifunctional nursing and shower stretcher is opened/unfolded as shown on the image. The multifunctional nursing and shower stretcher is closed/folded up in the reverse order of opening/unfolding.

## 8 Operation

### 8.1 Description of the AVERO Comfort height-adjustable bathtub

The AVERO Comfort height-adjustable bathtub is an ergonomically shaped care bath tub in GFK material (plastic reinforced by glass fibers) without surface-mounted operating panel and with a completely closed outer casing. Drive is by means of two synchronously controlled lifting columns.

The height can be freely adjusted between 680 - 1,080 mm through a control panel.

The tub is freely accessible from two sides and is suitable for use in combination with patient lifts. The ergonomically shaped tub inner body with integrated armrests and molded back part provides for an optimal safety and comfort.

Integrated safety handles enable the patients or residents getting in and out of the bathtub more easily. The tub inner body features mounting fixtures for a tub shortener.

### 8.2 Prior to use

Please check the proper state and the functional safety of the system prior to use.

### 8.3 During use

#### 8.3.1 Filling the tub

If your tub is equipped with a thermostatic mixer for manual filling, turn the tub filling/hand shower button counterclockwise to the tub symbol to open the inlet valve. Close the inlet valve when the water in the tub has reached the desired level.

Turn the tub filling/hand shower button clockwise to the hand shower symbol to use the hand shower. Your faucet is equipped with an eco-function. The flowrate of the hand shower is limited. To increase the flow rate, press the catch and turn the rotary button counterclockwise. The water volume is increased.

#### Filling through the control panel

Open the inlet valve at the tub faucet.

Press the  button to start the filling.

If the optional function "**automatic water stop**" is included in your tub, the filling is automatically switched off when the filling height is reached.

If this option is not available on your tub, you must interrupt the filling by pressing the  button again.

|                                                                                                       |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Note!</b></p>  | <p>Before the patient gets into the tub, the water temperature must be checked by hand (without wearing gloves) either with a thermometer.</p> |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                         |                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING</b></p>  | <p>When the appliance is used in combination with a patient transfer aid, please take care that the patient's body nor any of his/her body parts are trapped, crushed or caught in pinch points! Ensure the stability of the transfer aid in order to avoid tipping over during the transfer of the patient!</p> |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                         |                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CAUTION</b></p>  | <p>Please make sure that the feet or other body parts of caregivers, patients or third parties are not located under the tub or on the tub legs during the height adjustment.</p> |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

To enable the patient to get into the tub more easily, you can move the tub to the lowest position by pressing the  button.

Install the patient in the tub.

If necessary, use a mobile lift system or an overhead lift system to that effect.

After the patient is installed in the tub, press the  button to move the tub to a comfortable and ergonomic working height.

When the bathing is finished, turn the eccentric tappet rotary button (overflow) to let the water run out of the tub.



The image shows the motion direction to open and close the eccentric tappet rotary button (overflow).

You can already start towel drying the patient, while he/she still sits comfortably in the tub.

Help the patient to get out of the tub or use a lift system to hoist the patient out of the tub.

|                                                                                                         |                                                                                                               |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <p><b>Note!</b></p>  | <p>Please make sure that the tub is always disinfected and rinsed before it is used for the next patient.</p> |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

## 9 Cleaning/disinfection

|                                                                                                         |                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>CAUTION</b></p>  | <p>Make sure that the system is not in operation during the cleaning process.</p>                                                                                                                                                                 |
| <p><b>CAUTION</b></p>  | <p>After each treatment, a full disinfection of the tub must be carried out by means of a disinfectant. This way, cross-contamination is avoided.<br/>Strictly follow the instructions provided by the manufacturer of the disinfectant used.</p> |

### 9.1 Cleaning the height-adjustable bathtub

Clean the AVERO Comfort height-adjustable bathtub using a soft, lint-free cloth, moistened with soapy water or a standard plastic cleaner. Do not clean the bathtub with abrasives!

To avoid damages, **no** aerosol cleaners, sprays, scouring agents or solvents must be used to clean the control panel.

Should you use aggressive cleaners, all warranty claims related to surface damages will be void.

### 9.2 Disinfecting the height-adjustable bathtub

With respect to the risk of transmission and infection, we recommend to disinfect and rinse the bathtub carefully after each use. For the manual disinfection of the surface, an isopropyl alcohol solution or a customary disinfecting aerosol (spray) can be used. The tub body of the AVERO Comfort height-adjustable bathtub is made of glass-fiber reinforced plastic and can be disinfected with a (non-aggressive) surface disinfectant.

### 9.3 Sterilizing the height-adjustable bathtub

The AVERO Comfort height-adjustable bathtub is **not** suitable for sterilization.

## 10 Maintenance, safety check and inspection

In order to ensure a safe use of our AVERO Comfort height-adjustable bathtub as well as the protection of users and patients, we, BEKA Hospitec, recommend an annual safety check. This check includes, amongst other things, a visual check for external damages (enclosure, mains connections, readability of labels and stickers, soiling, etc.) as well as the availability and completeness of the documentation.

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

Inspections, maintenance and checks may be carried out only by trained, qualified professionals authorized by the manufacturer who meet the requirements of the MPBetreibV (Medical Device Operator Ordinance). If the product is used outside Germany, please respect and observe the applicable national legislations and regulations. Non-observance may result in injuries or an unsafe product.

In case of doubt, please contact your vendor or the manufacturer.

|                                                                                                       |                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE</b></p>  | <p>The AVERO Comfort height-adjustable bathtub is a stationary device used in special facilities, rooms and work areas (DIN VDE 0100 Group 700), for which the DGUV prescription 3 (DGUV V3) check must be carried out annually in accordance with the accident prevention regulations (UVV) of the employer's liability insurance association.</p> |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

|                                                                                                           |                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING</b></p>  | <p>Do not carry out any cleaning, maintenance or inspection activities when the bathtub is in use. Such activities may result in dangers for the user and the patient. Installation, maintenance, repair and inspection activities may be carried out when the patient has left the room.</p> |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Measures to be taken                                                                              | Prior to each use/daily | weekly | monthly | annually |
|---------------------------------------------------------------------------------------------------|-------------------------|--------|---------|----------|
| Cleaning and disinfection of the height-adjustable bathtub                                        | X                       |        |         |          |
| Functional check of the height-adjustable bathtub                                                 |                         | X      |         |          |
| Visual check of all components, power cables, hoses and connections.                              |                         | X      |         |          |
| Water inlet check and cleaning as required.                                                       |                         |        | X       |          |
| We recommend a regular maintenance, safety check and inspection according to DGUV prescription 3. |                         |        |         | X        |

## **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. 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**

The expected service life of the height-adjustable bathtub is approx. 8 years. At the end of the product'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 your product prior to its disposal.

## 12 Troubleshooting/Customer support service

| Problem with the bathtub                                | Remedy                                                                                                                                                                                  |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The height adjustment of the bathtub does not work.     | a) Check if mains power is supplied.<br>b) Check the operating unit for damages.<br>c) Check the connecting cable for damages.                                                          |
| The bathtub remains idle in the top end position.       | Check if mains power is supplied.                                                                                                                                                       |
| The drive is switched off during the lifting operation. | The maximum load is exceeded ( <b>max. patient weight</b> )                                                                                                                             |
| Mains LED is not lit.                                   | Check if the fuse and the earth leakage circuit breaker are switched on.                                                                                                                |
| Mains voltage failure.                                  | a) Check the main fuse.<br>b) Check the cables for damages.                                                                                                                             |
| No water flowing.                                       | a) Check the shut-off valves of the cold and hot water.<br>b) Check the filters in the water inlet.                                                                                     |
| Automatic filling does not work.                        | Disconnect the tub from the supply network and perform a restart. If this should not lead to the desired result, please contact the service department/customer support.                |
| Only hot or cold water flows from the faucet.           | a) Check if the hot and cold water connection are inverted (locally, tub).<br>b) Check the filters and the inlet and outlet fittings for clogging.                                      |
| Water flowrate too low.                                 | a) Check the filters and the inlet and outlet fittings for clogging.<br>b) Check if the flowrate is sufficient for the supply conditions.<br>c) Check if the connecting hoses are bent. |
| The faucet leaks water.                                 | Check the seals for damage, if necessary, replace the seals.                                                                                                                            |
| The filling speed is too high.                          | The water pressure is too high (install a local pressure reducer).                                                                                                                      |
| The tub water flows away during the bathing process.    | a) Check the water plug and readjust the screw of the water plug if necessary.<br>b) Check the seal for soil, dirt and damage.                                                          |
| The tub water does not drain out.                       | a) Check the water plug and readjust the screw of the water plug if necessary.<br>b) Check the seal for soil, dirt and damage.                                                          |
| The air-spa system does not work.                       | a) Check if mains power is supplied.                                                                                                                                                    |

|                                                       |                                                                                                                                                                              |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The air-spa system fails during operation.            | a) The air-spa system has been used for more than 15 minutes. <b>Allow it to cool down.</b><br>b) Overheating due to high ambient temperature. <b>Allow it to cool down.</b> |
| The sound system does not work.                       | a) Check if the USB-stick is correctly plugged in.<br>b) The USB-stick might be defective. Plug in a new USB-stick.                                                          |
| The colored light system does not work.               | a) Mainboard defective. Contact the service department/customer care service.<br>b) Spotlights defective. Contact the service department/customer care service.              |
| The tub produces unusual noises.                      | Contact the service department/customer care service.                                                                                                                        |
| The height-adjustable bathtub shows signs of damages. | Contact the service department/customer care service.                                                                                                                        |

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

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

## 13 Appendix

### 13.1 Technical data

#### Dimensions and weights

|                                     |                                                  |
|-------------------------------------|--------------------------------------------------|
| - Length:                           | 210.0 cm                                         |
| - Width:                            | 80.0 cm                                          |
| - Inner tub dimensions (L / W / D): | 177.0 cm x 57.5 cm / 72.0 cm x 40.0 cm / 42.0 cm |
| - Min. lifting height:              | 68.0 cm                                          |
| - Max. lifting height:              | 108.0 cm                                         |
| - Weight without water:             | approx. 110 kg                                   |
| - Fill volume (without patient):    | approx. 270 l                                    |
| - Patient weight:                   | max. 250 kg                                      |
| - SWL (safe working load):          | 400 kg (patient and water)                       |
| - Applied part:                     | Type B                                           |
| - Protection class:                 | I                                                |

#### Electrical data

|                    |                         |
|--------------------|-------------------------|
| Power connection:  | 120 V, 60 Hz            |
| Power consumption: | Max. 4.5 Amp. (1035 VA) |

#### Ambient conditions

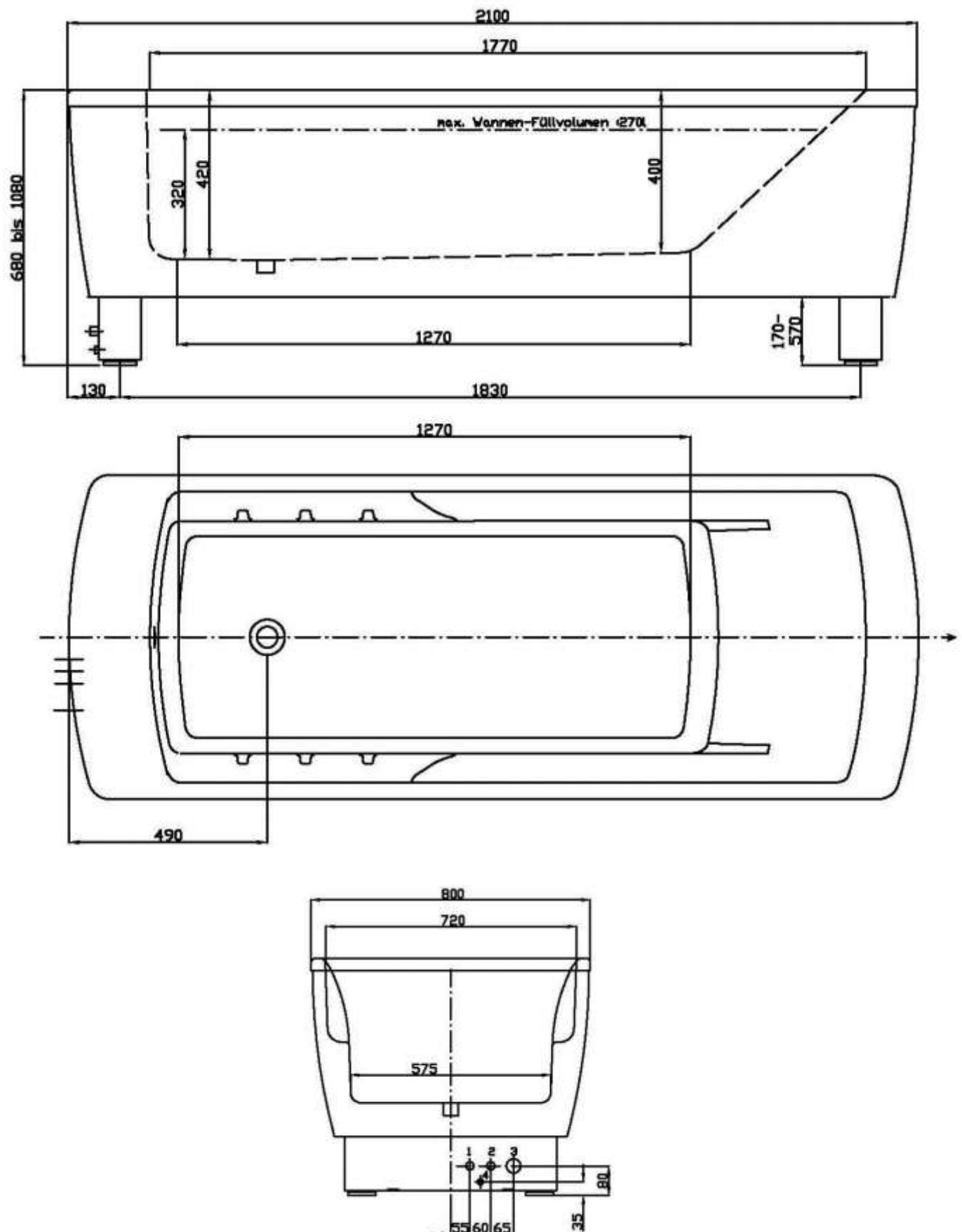
##### Operation

|                                  |                                 |
|----------------------------------|---------------------------------|
| - Max. duty cycle:               | 2 min. on and 18 min. off       |
| - Temperature range:             | 10° C to 35° C / 50 °F to 95 °F |
| - Relative atmospheric humidity: | 30% to 95%, non-condensing      |
| - Atmospheric pressure:          | 80 – 106 kPa                    |

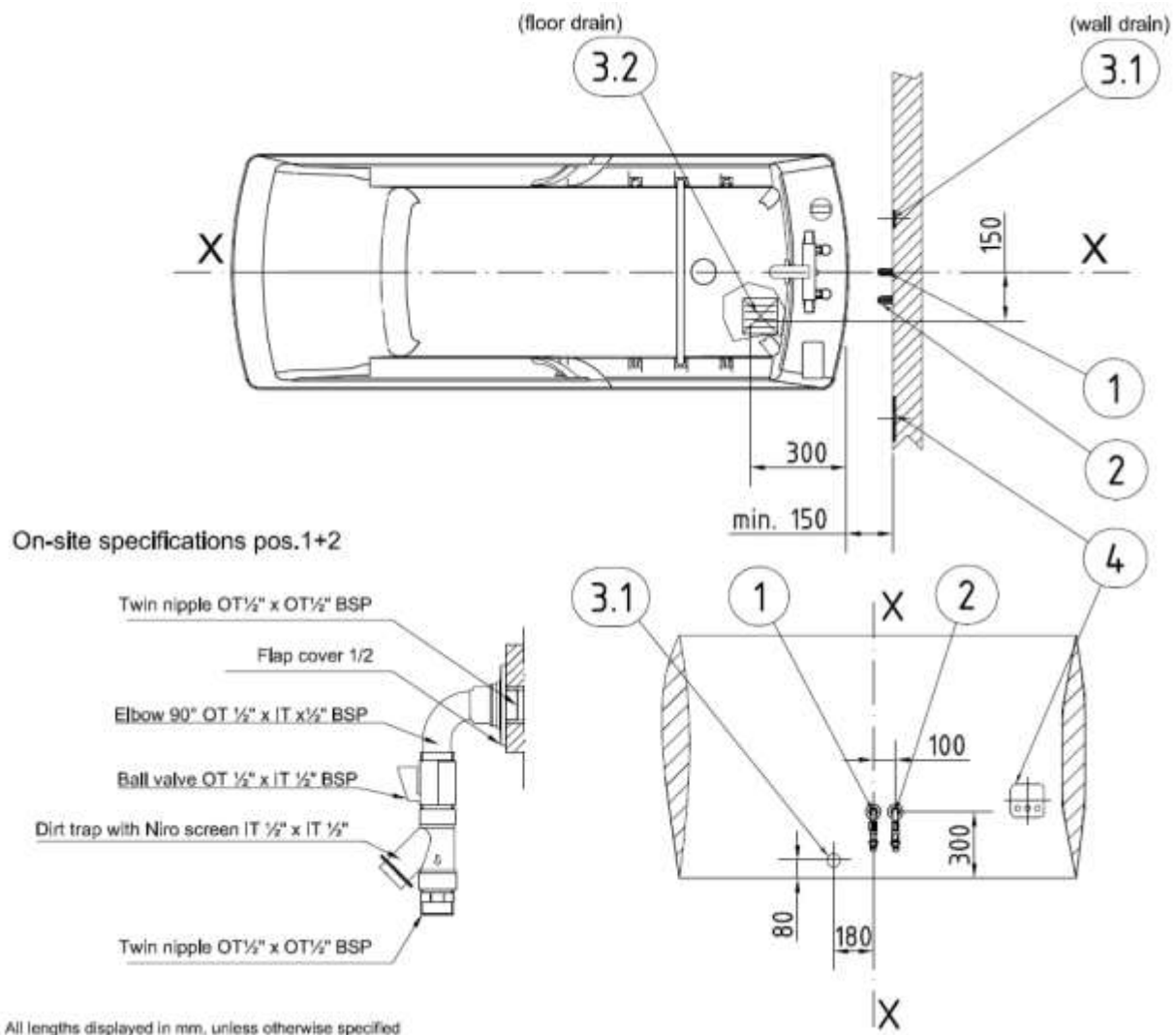
#### Storage and transport

|                                  |                                   |
|----------------------------------|-----------------------------------|
| - Temperature range:             | -20° C to 70° C / -4 °F to 158 °F |
| - Relative atmospheric humidity: | 10% to 80%, non-condensing        |
| - Atmospheric pressure:          | 50 – 110 kPa                      |

## 13.2 AVERO Comfort height-adjustable bathtub dimensions



## 13.3 Wiring diagram



### ➔ Pre-Set safety measure!

Close valves for cold and warm water.  
Please comply with local rules and regulations for electrical systems in wet and humid rooms.

All drainage, water and electrical installation work should be carried out by qualified personnel, in accordance with local and national regulations.

### ➔ On-site connections – sanitary - electrical

- ① Warm water connection 1/2 inch, internal thread flush with plate. Twin nipple, ball valve, elbow, dirt trap and flap cover (see illustration Pos. 1 and Pos. 2 for details).
- ② Cold water connection 1/2 inch, internal thread flush with plate Twin nipple, ball valve, elbow, dirt trap and flap cover (see illustration Pos. 1 and Pos. 2 for details).
- ③ Option 3.1: Wall drain DN 50, tile-even
- ③ Option 3.2: Floor drain, min. flow rate needed 1 l/s.
- ④ Junction box (min. IP X5), 120 V/60 Hz, AWG 12, Fuse Protection 15 A.  
Positioned according to local codes and standards.

## 13.4 Accessories

| Article n° | Description                                 |
|------------|---------------------------------------------|
| 910609200  | Tub shortener                               |
| 910609300  | Automatic water stop                        |
| 910609500  | Music sound system                          |
| 910609550  | Bluetooth sound system                      |
| 910609400  | Air-spa system                              |
| 910609600  | Colored light system                        |
| 910609150  | Aroma system                                |
| 910609250  | Emergency function in case of power failure |
| 910609100  | Change of view direction                    |
| K9103300   | Hand shower                                 |
| K9100363   | Shower hose L = 2.3 m                       |

### 13.4.1 Spare parts/consumables

Spare parts and consumables are available upon request from your BEKA Hospitec vendor either directly from the manufacturer.

**Please observe:**

You cannot replace all spare parts yourself.

For the assembly, the expert knowledge of a qualified electrician/plumber might be required.

# 13.5 Declaration of conformity

## 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 Pflegebadewannen und deren Zubehör

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 Care Bathtubs and their accessories

Basis-UDI-DI: 426068189122BR

| Produkt / Product                                         | Artikel Nr. / P/N.                                                                                                                                                                                   |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AVERO Motion / AVERO Motion E                             | 810150550, 810150550C, 910150550, 710150550, 910150552, 910150553, 810150540, 910150540, 910150542, 710150540                                                                                        |
| AVERO Premium Plus 175 / 190<br>AVERO Premium Plus VA 190 | 810142501, 810143501, 910142700BE, 910143700BE, 910142700, 910143700, 710142700, 710143700, 910143700V2A                                                                                             |
| AVERO Comfort / AVERO Comfort Fix                         | 910609000, 910609001, 910609002, 910609011, 910609012, 910609030, 910609040, 910305000, 910305030, 910305040, 910306000, 910306030, 910306040, 710609000                                             |
| AVERO VIVA / AVERO VIVA plus                              | 910208500, 910208600                                                                                                                                                                                 |
| COMPACT / COMPACT plus / COMPACT Solo                     | 910443000, 910443100, 910443200, 910443300, 910444000, 910444100, 910444200, 910444300, 910440000, 910440100, 910440200, 910440300, 910441000, 910441100, 910441200, 910441300, 910442000, 910442100 |
| INVITA / INVITA Basic                                     | 910150800, 910150860, 910150700, 910150730                                                                                                                                                           |

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

Produktrealisierung und Prüfung gemäß den folgenden Normen und Richtlinien:

*Testing according to the following standards and directives:*

|                                                              |                                                                  |
|--------------------------------------------------------------|------------------------------------------------------------------|
| Verordnung (EU) „Medizinprodukte“ 2017/745                   | DIN EN 60601-1:2006 + Cor.:2010 + A1:2013 *                      |
| Regulation (EU) „Medical Devices“ 2017/745, MDR              | IEC 60601-1:2005 + Cor.:2006 + Cor.:2007 + A1:2012 *             |
|                                                              | UL 60601-1:2003 * / UL60601-1 (Ed.1):2006 *                      |
| DIN EN 12182:2012 / EN 12182:2012                            | ANSI/AAMI ES60601-1:2005/(R)2012 *                               |
| DIN EN ISO 10535:2007 / ISO 10535:2006 *                     | CAN/CSA-C22.2 No. 60601-1:14 * / CSA-C22.2 No. 218.2-15 *        |
| DIN EN ISO 12100:2011 & Berichtigung 1:2013 / ISO 12100:2010 | DIN EN 60601-1-2:2016 / IEC 60601-1-2:2014                       |
| CSA-B45.5-11 / IAPMO Z124-2011 *                             | DIN EN 60601-1-6:2021 / IEC 60601-1-6:2010 + A1:2013 + A2:2020 * |
| DIN EN 1717:2011 / EN 1717:2011                              | DIN EN 62366-1:2021 / IEC 62366-1:2015 + COR1:2016 + A1:2020 *   |
| DIN 1988-100:2011 / DVGW code of practice - Part 100         |                                                                  |
| RoHS Richtlinie / Directive 2011/65/EU & 2015/863/EU         | DIN EN ISO 14971:2020 / ISO 14971:2019                           |
| REACH Verordnung / Regulation EU 1907/2006                   |                                                                  |
| Richtlinie / Directive 2012/19/EU - WEEE:2012-07-04          | DIN EN ISO 10993-1:2021 / ISO 10993-1:2018                       |
| 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, Lab Test &amp; EMC Testhaus Certificate for specific article numbers

Wetzlar, den 15.05.2023

  
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Geschäftsführer / Managing Director

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SWIFT-BIC: COBADEFF515

Seite 1 von 1

## 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 Zubehöre für Pflegebadewannen

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 Accessories for Care Bathtubs

Basis-UDI-DI: 426068189122BR

| Zubehör / Accessories                                | Artikel Nr. / P/N.                                                                                                                                                 | Zubehör / Accessories                                              | Artikel Nr. / P/N.                                                                                                      |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Ablauf / Drain adjustment                            | 910150582                                                                                                                                                          | Legionellenspülung / Thermal disinfection                          | 910145150                                                                                                               |
| Aromasystem / Aroma system                           | 810150579, 910150579, 910609150                                                                                                                                    | Montagekit / Installation kit                                      | 910609010, 910131900, 910143100, 910150850, 910445000                                                                   |
| Bedienfolie / Foil panel                             | 910609670, 910609660, 910609675, 910609665                                                                                                                         | Nackenkissen / Neck cushion                                        | 910210000, 810150565                                                                                                    |
| Blickrichtungsänderung / Changing view into the room | 910609100                                                                                                                                                          | Notfunktion / Emergency function                                   | 810150587, 910150587, 910609250                                                                                         |
| Desinfektionssystem / Disinfection system            | 810131200, 810150580, 810150585, 810328001, 910131200, 910144700, 910150580, 910150585, 910329001                                                                  | Paneele / Panel                                                    | 910434200, 910434150, 910434140, 910434190, 910434180, 910434130, 910434120, 910434170, 910434160, 910434110, 910434100 |
| Einbaurahmen / Mounting frame                        | 910150595                                                                                                                                                          | Soundsystem / Soundsystem                                          | 910131400, 910150572, 910434270, 910609500, 810131400, 810150572, 910434273, 910609550                                  |
| Einstiegsstreppe / Entry stairs                      | 090303100, 090303000, 090302000                                                                                                                                    | Sperrfunktion Desinfektion / Disinfection blocking function        | 810328100, 910144710                                                                                                    |
| Fahrgewagen / Trolley                                | 910434310                                                                                                                                                          | Temperaturanzeige / Temperature display                            | 910146000, 910144720, 810146100                                                                                         |
| Farblichtsyste / Color-light system                  | 810150575, 810150576, 910131600, 910150575, 910150576, 910609600, 910434280, 810131600                                                                             | Thermostat / Thermostat                                            | 910145120, 910151300                                                                                                    |
| Gantrysystem / Gantry system                         | 910434000                                                                                                                                                          | Toilettensitz / Commode seat                                       | 910434081, 910434082                                                                                                    |
| Haltegriff / Safety grab bar                         | 910303000                                                                                                                                                          | Verbrühschutz / Scalding protection                                | 910144730, 810145350                                                                                                    |
| Handbrause / Hand shower                             | 910150586, 810328200, 910144740                                                                                                                                    | Wannenfarbe RAL / Charge for additional tub color according to RAL | 910131700, 910145800, 910145900, 910609700                                                                              |
| Hebevorrichtung / Lifting device                     | 910604000                                                                                                                                                          | Wannenverkürzer / Tub shortener                                    | 090304000, 810609200, 910145501, 910609210, 910609200                                                                   |
| Heizung / Heater                                     | 090318250V2A                                                                                                                                                       | Wasseranschluss / Water connection                                 | 910150594, 910150598, 910150597, 910150597P1, 910150597P2, 910150599, 910150596                                         |
| Kabelfernbedienung / Hand control                    | 810150555, 910150555                                                                                                                                               | Wasserstopp / Water filling                                        | 910131300, 910150560, 910150561, 910609300, 810131300, 810150560, 810150561, 910434275                                  |
| Kopfstütze / Head support                            | 090306000, 090306100                                                                                                                                               | Set Wasserstopp und Handbrause / Set Water filling and hand shower | 910604300, 910604400                                                                                                    |
| Luftperibadsystem / Air Spa system                   | 81045310, 810131500, 810150570, 810150571, 910131500, 910434060, 910131550, 910150570, 910150571, 910150830, 910609400, 090734010, 090734000, 090733110, 090733000 |                                                                    |                                                                                                                         |

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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 Zubehör 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<br>Regulation (EU) "Medical Devices" 2017/745, MDR      | DIN EN 60601-1:2006 + Cor.:2010 + A1:2013 *<br>IEC 60601-1:2005 + Cor.:2006 + Cor.:2007 + A1:2012 *<br>UL 60601-1:2003 * / UL60601-1 (Ed.1):2006 * |
| DIN EN 12182:2012 / EN 12182:2012<br>DIN EN ISO 10535:2007 / ISO 10535:2006 *                      | ANSI/AAMI AES60601-1:2005/(R)2012 *<br>CAN/CSA-C22.2 No. 60601-1:14 * / CSA-C22.2 No. 218.2-15 *                                                   |
| DIN EN ISO 12100:2011 & Berichtigung 1:2013 / ISO 12100:2010                                       | DIN EN 60601-1-2:2016 / IEC 60601-1-2:2014                                                                                                         |
| CSA-B45.5-11 / IAPMO Z124-2011 *                                                                   | DIN EN 60601-1-6:2021 / IEC 60601-1-6:2010 + A1:2013 + A2:2020 *                                                                                   |
| DIN EN 1717:2011 / EN 1717:2011<br>DIN 1988-100:2011 / DVGW code of practice - Part 100            | DIN EN 62366-1:2021 / IEC 62366-1:2015 + COR1:2016 + A1:2020 *                                                                                     |
| RoHS Richtlinie / Directive 2011/65/EU & 2015/863/EU<br>REACH Verordnung / Regulation EU 1907/2006 | DIN EN ISO 14971:2020 / ISO 14971:2019                                                                                                             |
| Richtlinie / Directive 2012/19/EU - WEEE:2012-07-04                                                | DIN EN ISO 10993-1:2021 / ISO 10993-1:2018                                                                                                         |
| 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 16.05.2023

  
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## 13.6 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.

| <b>Guidelines and manufacturer's declaration - electromagnetic immunity (Table 201)</b>                                                                                                                     |                      |                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The AVERO Comfort has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the AVERO Comfort must ensure that the appliance is used in such environment. |                      |                                                                                                                                                                                                                                   |
| <b>Emission measurements</b>                                                                                                                                                                                | <b>Compatibility</b> | <b>Electromagnetic environment - guidelines</b>                                                                                                                                                                                   |
| High-frequency (HG) emissions to CISPR 11                                                                                                                                                                   | Group 1              | AVERO Comfort 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              | AVERO Comfort 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            |                                                                                                                                                                                                                                   |

| <b>Guidelines and manufacturer's declaration - electromagnetic immunity (Table 202)</b>                                                                                                                     |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| The AVERO Comfort has been designed for use in the hereafter listed ELECTROMAGNETIC ENVIRONMENTS. The customer or the user of the AVERO Comfort must ensure that the appliance is used in such environment. |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |                                                                                                                                                |
| <b>Immunity testing</b>                                                                                                                                                                                     | <b>IEC 60601- Test level</b>                                                                                                                                                                                                          | <b>Compliance level</b>                                                                                                                                                                                                               | <b>Electromagnetic environment guidelines</b>                                                                                                  |
| Electrostatic discharge (ESD) to<br><br>IEC 61000-4-2                                                                                                                                                       | $\pm 6\text{ kV}$ contact discharge<br>$\pm 8\text{ kV}$ air discharge                                                                                                                                                                | $\pm 6\text{ kV}$ contact discharge<br>$\pm 8\text{ kV}$ 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<br><br>IEC 61000-4-4                                                                                                                                              | $\pm 2\text{ kV}$ for power lines<br><br>$\pm 1\text{ kV}$ for input/output cables                                                                                                                                                    | $\pm 2\text{ kV}$ for power lines<br><br>Not applicable to input/output cables                                                                                                                                                        | The quality of the supply voltage should match that of a typical business or hospital environment.                                             |
| Overvoltage<br>IEC 61000-4-5                                                                                                                                                                                | $\pm 1\text{ kV}$ line to line<br><br>$\pm 2\text{ kV}$ line to earth                                                                                                                                                                 | $\pm 1\text{ kV}$ line to line<br><br>$\pm 2\text{ kV}$ 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<br><br><br><br>IEC 61000-4-11                                                                                     | $<5\% U_T$<br>( $>95\%$ dip in $U_T$ ) for 0.5 cycle<br><br>$40\% U_T$<br>( $60\%$ dip in $U_T$ ) for 5 cycles<br><br>$70\% U_T$<br>( $30\%$ dip in $U_T$ ) for 25 cycles<br><br>$<5\% U_T$<br>( $>95\%$ dip in $U_T$ ) for 5 seconds | $<5\% U_T$<br>( $>95\%$ dip in $U_T$ ) for 0.5 cycle<br><br>$40\% U_T$<br>( $60\%$ dip in $U_T$ ) for 5 cycles<br><br>$70\% U_T$<br>( $30\%$ dip in $U_T$ ) for 25 cycles<br><br>$<5\% U_T$<br>( $>95\%$ 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)<br>Magnetic field<br>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.        |
| <b>CAUTION <math>U_T</math> is the mains AC voltage before the test level is applied.</b>                                                                                                                   |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |                                                                                                                                                |

| Guidelines and manufacturer's declaration - electromagnetic immunity (Table 204)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The AVERO Comfort has been designed for use in the hereafter listed electromagnetic environment. The customer or the user of the AVERO Comfort must ensure that the appliance is used in such environment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Immunity testing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | IEC 60601-Test level           | Compliance level | Electromagnetic environment guidelines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Conducted HF<br>IEC 61000-4-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3 Vrms<br>150 kHz to<br>80 MHz | 10 Vrms          | Portable and mobile HF communications equipment should be used no closer to any part of the AVERO Comfort including cables, than the recommended separation distance calculated in accordance with the equation applicable to the frequency of the transmitter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Radiation HF<br>IEC 61000-4-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3 V/m<br>80 MHz to<br>2.5 GHz  | 3 V/m            | <p><b>Recommended separation distance</b><br/> <math>d=0.35\sqrt{P}</math><br/> <math>d=1.2\sqrt{P}</math> 80 MHz to 800 MHz<br/> <math>d=2.3\sqrt{P}</math> 800 MHz to 2.5 GHz</p> <p>Where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> the recommended separation distance in meters (m).</p> <p>The field strength of fixed HF-transmitters as determined by an electromagnetic field survey, <sup>a</sup> – should be less than the COMPLIANCE LEVEL in each frequency range. <sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p>  |
| <p><b>NOTE 1:</b> At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p><b>NOTE 2:</b> This manual might not apply to all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p><sup>a</sup> 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 AVERO Comfort is to be used, exceeds the applicable HF compliance level, special care should be taken that a normal operation of the AVERO Comfort 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 AVERO Comfort.</p> <p><sup>b</sup> In the frequency range from 150 kHz to 80 MHz, the field strength must be less than 10 V/m.</p> |                                |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### Recommended distance between portable and mobile communications equipment and the AVERO Comfort (Table 206)

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

| Output power rating<br>of the transmitter<br><br>W | Separation distance depending on the transmitting frequency<br>in m |                                      |                                          |
|----------------------------------------------------|---------------------------------------------------------------------|--------------------------------------|------------------------------------------|
|                                                    | 150 kHz to 800 MHz<br>$d=0.35\sqrt{P}$                              | 80 MHz to 800 MHz<br>$d=1.2\sqrt{P}$ | 800 MHz to<br>2.5 GHz<br>$d=2.3\sqrt{P}$ |
| 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.

## 13.7 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: AVERO Comfort

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 product!*

| Instructor |      | Trained person |           |
|------------|------|----------------|-----------|
| Name       | Date | Name           | Signature |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |
|            |      |                |           |

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

[illegible]



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