

Operating manual

Original operating manual



AVERO Motion

Avero Motion & Avero Motion E

Version 2.7 / E

Subject to technical modifications

2021-04-26

Table of contents

1	Imprint	4
1.1	Acknowledgement	4
1.2	Manufacturer's address	4
1.3	TÜV quality seal	4
2	Introduction.....	5
2.1	Preface	5
2.2	Liability and warranty	5
3	The operating manual.....	6
3.1	Validity	6
3.2	Type plate.....	6
3.3	Description.....	6
3.4	Descriptions of the various models.....	7
4	Safety	8
4.1	Intended and appropriate use.....	8
4.2	Other prescriptions	8
4.3	Safety instructions	8
4.4	List of used safety instructions.....	9
4.5	Warnings	10
5	Transport.....	11
5.1	Unpacking the product.....	11
5.1.1	Removing the cardboard.....	12
5.1.2	Loosening the product from the pallet.....	12
6	Installation	12
6.1	Electrical connection.....	13
6.2	Protective conductor.....	13
6.3	First start-up	14
7	Operating elements and their function.....	15
7.1	11 button control panel AVERO Motion.....	16
7.1.1	The height adjustment.....	17
7.1.2	Reclining adjustment up / down	17
7.1.3	The hand shower (only AVERO Motion)	18
7.1.4	Turn on the handshower (only AVERO Motion E).....	18
7.1.5	Filling and filling height.....	18
7.1.6	The display screens (only AVERO Motion)	19


7.2	Power / Function LED Display (only AVERO Motion)	20
7.3	Optional functions	20
8	Operation	20
8.1	Prior to use	20
8.2	During use	21
8.2.1	Using the AVERO Motion / AVERO Motion E	21
9	Cleaning/Disinfection	26
9.1	Cleaning the bath tub	26
9.2	Disinfecting the bath tub	26
9.3	Sterilising the bath tub	26
10	Checks/tests	27
11	Waste disposal	28
11.1	Disposal of the packaging material	28
11.2	Disposal of the product	28
12	Troubleshooting help/After-sales service	29
13	Appendix	31
13.1	Technical data	31
13.2	Dimensions AVERO Motion Tilt and Reclining Bath Tubs	32
13.3	Wiring Diagram	33
13.3.1	Connection at the side	33
13.3.2	Connection at the rear	34
13.3.3	Connection at the floor	35
13.4	Declaration of Conformity	36
13.5	Accessories	37
13.6	Spare parts / Consumables	37
13.7	Assembly Instructions	38
13.7.1	Changing the handheld shower	38
13.7.2	Changing the shower hose	38
13.7.3	Changing the handheld shower holder	39
13.7.4	Changing the disinfectant shower head	39
13.7.5	Changing the disinfectant hose	40
13.7.6	Changing the eccentric screw fittings (drainage and overflow)	40
13.8	Electromagnetic Compatibility	41
13.9	Journal	45

1 Imprint

1.1 Acknowledgement

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

1.2 Manufacturer's address

	<p>BEKA Hospitec GmbH Am Rübenmorgen 3 35582 Wetzlar Phone: +49(0)641-9 22 22-0 Fax: +49(0)641-9 22-22-20 info@beka-hospitec.de</p>
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1.3 TÜV quality seal

	<p>BEKA Hospitec GmbH is certified according to DIN EN ISO 13485 by TÜV SÜD Product Service GmbH. Therefore, the development, manufacturing, quality assurance and service of our entire product range is subject to high quality standards.</p>
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2 Introduction

2.1 Preface

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

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

2.2 Liability and warranty

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

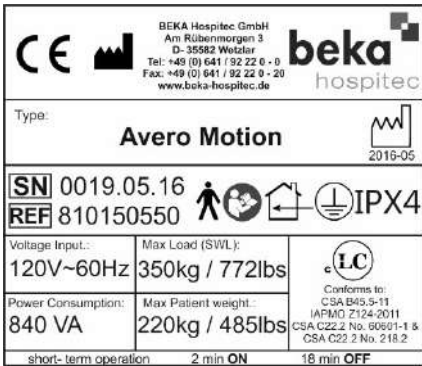
3 The operating manual

3.1 Validity

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

Please read the operating manual and the safety instructions before starting to use the product. Keep the operating manual near the device for future reference.

3.2 Type plate

		<p>This image shows the type plate. The type plate is situated on the side of the operating panel. The serial number (SN) shown here, 0019.05.16, is merely an example. In case of queries, please mention the serial number printed on the type plate of your device.</p> <p><i>Note: Because of legal regulations, it might be required that the article number and the serial number should be computer-readable as well and therefore they might be printed on the type plate in the form of a bar code as well.</i></p>
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3.3 Description

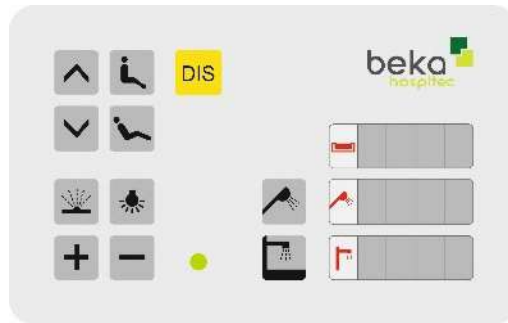
In this manual, the product is called bath tub and (bath) tub.

3.4 Descriptions of the various models

AVERO Motion:

11 button control panel, tub spout and thermostat mixer

Optional with 10 button hand control



AVERO Motion E

Without control panel, with 10 button hand control and attached fitting.



4 Safety

4.1 Intended and appropriate use

The product has been designed for bathing and caring for patients, partially mobile and mobile occupants or patients in need of care in hospitals, nursing homes, facilities for the disabled and private households. The product provides support during the bathing process. The product may only be used for the specified purpose.

NOTE



The product must be used by appropriately trained nurses with adequate knowledge of the care environment, their usual practices and procedures, and in accordance with the guidelines in the instruction manual.

In case of doubt, please consult the attending physician.

4.2 Other prescriptions

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

4.3 Safety instructions

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

4.4 List of used safety instructions



Please observe the accompanying documents/operating manual.



Warning Hazardous Area.



Applied part "Type B" to DIN EN 60601-1.



Special waste, no household waste.

The device and the packaging materials never must be disposed of in the domestic waste stream.



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



Solely intended for indoor use.



Protection class I



Do not put feet on the frame.

IPX4

Protection against the penetration of liquids: Protection against water splashing from all directions.

4.5 Warnings

Note

- The product may only be operated by trained staff.
- Protect the product against direct sunlight and heat.
- The equipment is not authorised for use in potentially explosive atmospheres.
- Never exceed the duty cycle or the maximum load.
- Never cover up, over sticker or change the slots and holes of the device.
- Do not operate or store moisture-sensitive device in the vicinity of the bath tub.
- Please ensure that the power supply is always switched on throughout the treatment.
- The operator must ensure that the area above and below the bath tub is free of obstacles that could obstruct the free upward and downward movement of the bath tub.
- In order to prevent any electromagnetic interference (EMC), the simultaneous use of short-wave or microwave therapy device in the immediate vicinity of the device is strictly forbidden. Mobile telephony could also cause interference.
- Route the mains and the connecting cable so that they cannot be damaged. Damaged mains cables could cause fire or lead to electrocution and must not be used.
- The caregivers must protect their skin and eyes against concentrated disinfecting and cleaning products. Use a face mask to protect yourself against aerosols.
- Check prior to each use that all visible parts are intact. The product must not be used if any parts are damaged. Prior to each use of the device and its accessories, the user must check the functional safety and the good condition of the device and its accessories (visual check, functioning).
- The product must be disinfected after each treatment.
- Supervision of the caregiver is required throughout the treatment.
- Please make sure that your feet are not located beside the bath tub before and during the height adjustment procedure.
- The tub must be used only for its specified intended purpose.
- Check the pressure hoses monthly for leaks, check that the connection is secure and the electrical connection (current and potential compensation) must be checked for cracks in the cable.
- The grid connection must be done by a qualified electrician. The currently valid VDE regulations must be observed.

WARNING

Check the water temperature by hand (without gloves) or with a thermometer before the patient steps in the tub.

CAUTION

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

WARNING:

Any unauthorized repairs, modifications and additions are not permitted for safety reasons and exclude any liability of the manufacturer for resulting damage.

For damages resulting from the use of spare parts or accessories not approved by the manufacturer, any further liability of the manufacturer is excluded.

5 Transport

Transport the bath tub towards the planned place of installation. Use a lift truck or similar for the transport. Put down the bath tub in a safe and stable manner, so that it cannot tilt.

5.1 Unpacking the product

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

NOTE

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

5.1.1 Removing the cardboard

Proceed in the following way to remove the cardboard:

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

5.1.2 Loosening the product from the pallet

The bath tub is on both sides strapped to the pallet.

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

- Unscrew the fixing screws of the straps and the feet of the tub.
- Remove the straps
- Lift the bath tub off the pallet.
- Install the bath tub at the intended location of use.
- Remove the bubble wrap and the stretch film



After all fixations have been removed, you can lift the bath tub from the pallet (2 persons).

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

6 Installation

The bath tub is supplied ready for use. Use the level and the wrench (SW 10) to vertically align the bath tub. The tub legs can be screwed in or out to adjust their height. Please make sure that all legs are in contact with the floor and that the bath tub stands stable.

Prior to the assembly of the footbath, the local connection pipes must be sufficiently flushed before the footbath is connected. To avoid soiling of the pipes and fittings, dirt filters must be installed on site.

NOTE



To connect the bath to the water supply, dirt filters must be used on site. Please contact your plumber to this effect.

The bath tub must be connected through ½" hoses.

The connection for this is on the tub base.



● = Cold water

● = Warm water

Please also note the connection diagram in the appendix.

The connection of the tub must be carried out by a trained specialist.

6.1 Electrical connection

The connection of the bath tub must be executed in accordance with the technical drawings issued by BEKA Hospitec either the guidelines for the set-up and layout of wet areas and the current VDE standards. All supply and drain hoses as well as the electrical cables must be installed so as to avoid the danger of tripping.

The AVERO Motion is connected to the power supply network through a shock-proof protective socket featuring the legally prescribed splash guard (IP class), 230 V AC/50Hz, 3 x 1.5 mm², 1.5 KW, 16 Ampere, fault-current circuit breaker 30 mA, equipotential bonding (in Germany) to DIN VDE 0107. The bath tub must be connected by a qualified and competent professional.

6.2 Protective conductor

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

WARNING



In order to avoid the risk of electroshock, the device only must be connected to a power supply network with protective conductor.

6.3 First start-up

WARNING



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

WARNING



To prevent scalding, the hot/cold water mixer must be set up in accordance with the local water supply prior to the first use.
The settings must be documented.

NOTE



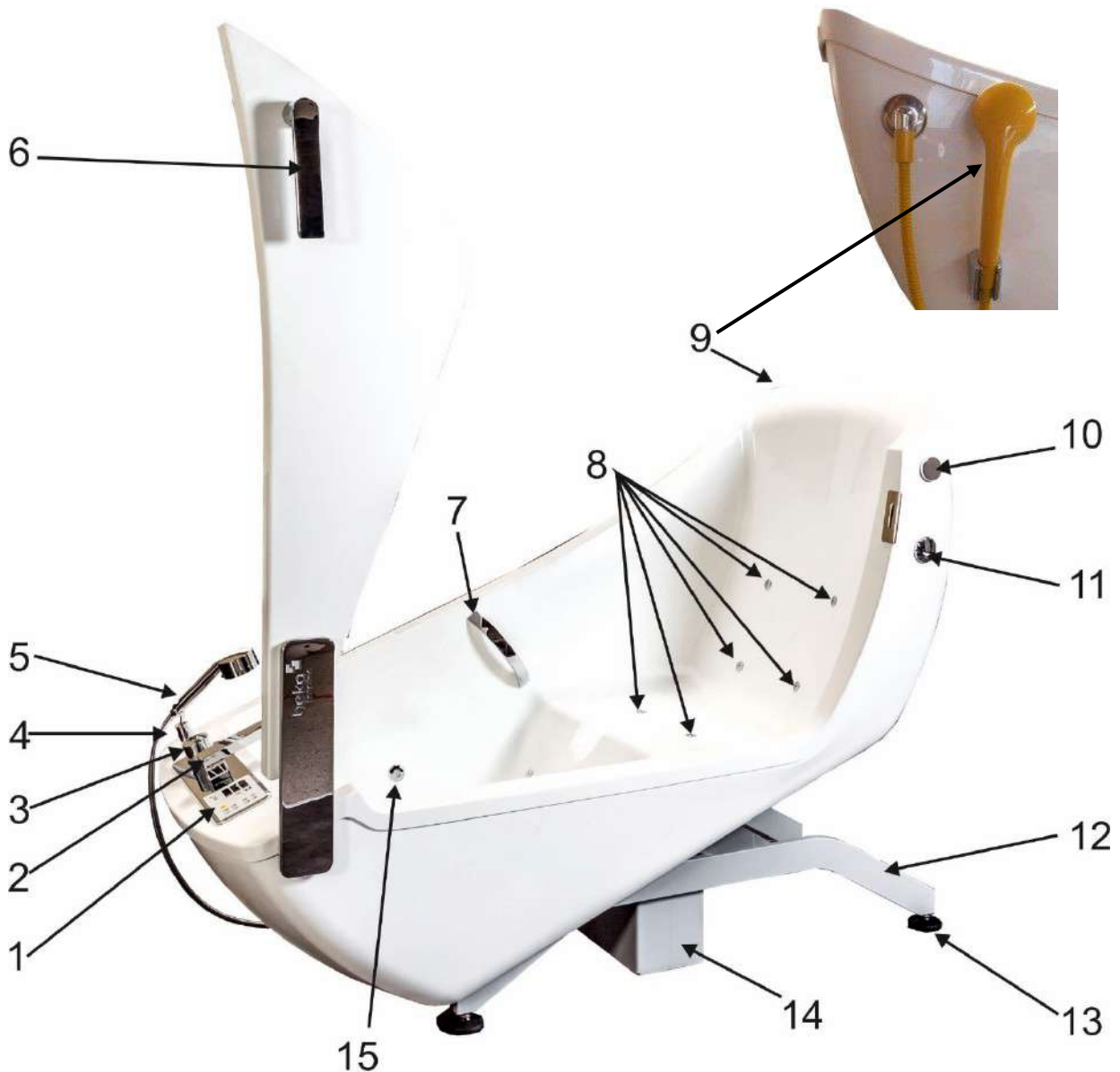
In order to ensure a safe functioning and operation, we recommend a regular maintenance and set-up of the thermostatic mixer. These maintenance works are to be carried out by a qualified technician.
Due to the relocation of the AVERO Motion bath tub to another room either changes to the local water supply, a readjustment of the thermostatic mixer could be required.

CAUTION



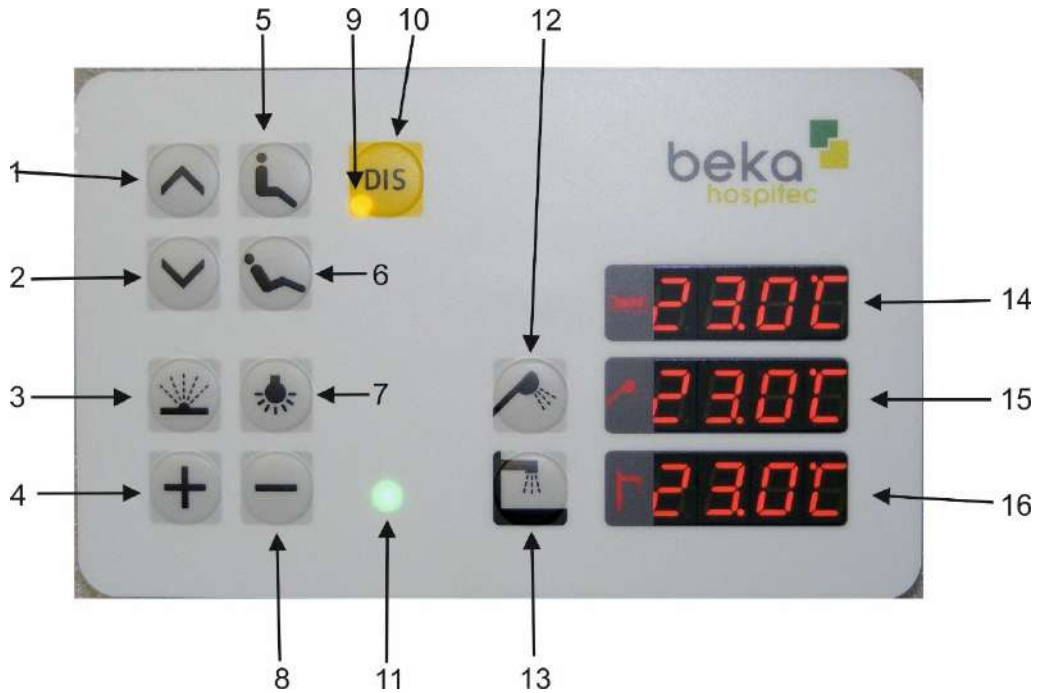
Should your bath tub be equipped with an optional automatic disinfecting unit, the latter must be set prior to the first use.

7 Operating elements and their function

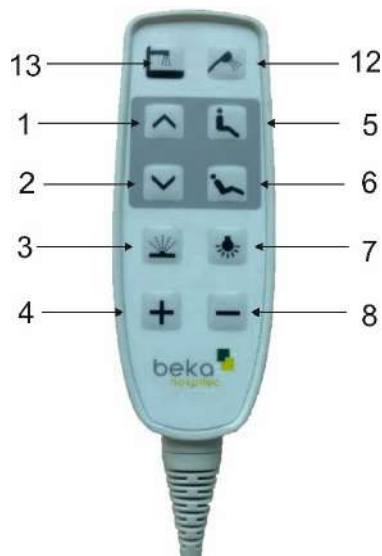


No.	Description	No.	Description
1	Control panel	9	Disinfection handheld showerhead (optional)
2	Water consumption	10	MP3-docking station (optional)
3	Thermostat knob	11	Aroma-system (optional)
4	Ball joint wall bracket	12	Foot stand
5	Handheld shower head + Handheld shower hose	13	Machine base
6	Door handle	14	Disinfectant compartment
7	Hand grip (1x left, 1x right)	15	Color light system (optional)
8	Air spa (optional)	16	

7.1 11 button control panel AVERO Motion



No.	Description	No.	Description
1	Height adjustment button UP	9	Disinfection LED (yellow)
2	Height adjustment button DOWN	10	Disinfection button
3	Air spa system button on/off	11	Power/ Function LED
4	Increase intensity of air spa	12	Handheld showerhead button
5	Reclining adjustment button UP	13	Filling button
6	Reclining adjustment button DOWN	14	Bathwater temperature display
7	Color light system button on/off	15	Handheld showerhead temperature display
8	Reduce intensity of air spa	16	Filling temperature display



The operation of the seat and recliner tub AVERO Motion and AVERO Motion E is the same for both versions.

If equipped with only the 10-key hand-held unit, the temperature displays, the disinfection button and the "hot and cold" warnings are dispensed with.

The scalding protection must first be set mechanically on the thermostatic mixer. Please observe the enclosed operating instructions.

The hand shower of the AVERO Motion E must be activated via the valve.

Only for AVERO Motion



After switching on the supply voltage, the control variant is shown in display 3 (14) for approx. 1.5 seconds. For this keypad "not", for AVERO Motion is displayed.

If the keypad is faulty, "Err" will be displayed. The controller can then no longer be operated. The control panel must be replaced.

After displaying the control variant, the settings for scalding protection are displayed for approx. 1.5 seconds.

The display 3 (14) shows "hot", the display 1 (15) the set temperature of the scalding protection for the hand shower (42 ° C or 45 ° C) and the display 2 (16) the set temperature of scalding protection for the water inlet (42 ° C or 45 ° C).

7.1.1 The height adjustment



-  The buttons "up" and "down" allow the tub height to be individually adjusted. If the "UP" button is activated, the tub moves in an upward motion. If the button
-  "DOWN" is activated, the tub moves in a downward motion. The movement automatically shuts itself off once the selected level has been reached.

Note



The tilt and height adjustment cannot be operated simultaneously.

7.1.2 Reclining adjustment up / down

-  The tub's tilt position can be individually adjusted by using the "Tilt upwards" and "Tilt downwards" buttons. Activating the "Tilt upwards" button moves the patient to the sitting position. Activating the "Tilt downwards" button moves the
-  patient to the lying position.

Note



The tilt and height adjustment cannot be operated simultaneously.

7.1.3 The hand shower (only AVERO Motion)



The handheld showerhead is switched on or off by pressing button (12).

The Handheld shower head is switched off automatically when the temperature of the Handheld showerhead is above 42°C or 45 °C is greater (scald protection, display flashes "HOT").

If the scald protection activates (temperature display flashes "HOT"), the handheld showerhead cannot be turned on using the button (12).

The handheld showerhead can be switched on with the following key combination: Hold and press button (12), press additional keys (3) and (7) together.

The handheld showerhead can always be turned off using the button (12) (also with an active scald protection).

7.1.4 Turn on the handshower (only AVERO Motion E)

Press the button  to start the water flow.

By turning the rotary knob to change over, you can toggle between the bath spout and the hand shower. Your fitting is equipped with an Eco function. The flow rate of the hand shower is limited. To increase the flow rate, press the catch and turn the knob counter-clockwise.

The amount of water is increased.



Changeover bath spout / hand shower


Note: at the hand control unit Motion E the "Hand shower (12)" button has no function

7.1.5 Filling and filling height



If your tub is equipped with the "automatic water stop" option the water supply can be stopped automatically.

There are two fixed fill levels for filling the bath that can be selected.

If the AVERO Motion is in the entry position (tilted) only the tub's foot space will be filled. Press this button. 

After tilting in the bathing position you can fill the tub to the desired bath water level by pressing the button (13).

Stopping filling up to the filling height is achieved by pressing the button (13).

To start filling again, press the button (13) again.

Only for AVERO Motion: The bath filling is automatically switched off when the filling temperature is greater than 42 °C (scald protection, display flashes with "HOT").

If the scald protection activates (temperature display flashes "HOT"), the bath filling cannot be turned on using the button (13).


The tub filling can then be switched on with the following key combinations:


Press down button (13), then also activate buttons (3) and (7) together.

The bath filling can always be turned off using the button (13) (also with an active scald protection).

If your tub is not equipped with the "automatic water stop" option you must turn off the filling of the tub manually.

Note!






Press this button 

If you do not manually turn off the filling of the tub, the water will overflow (Water will keep running).

Manual filling is only permitted under supervision.

7.1.6 The display screens (only AVERO Motion)

On the built-in digital display the following is shown:

-  ➤ Display 1 = Bath water temperature
-  ➤ Display 2 = Hand held water temperature
-  ➤ Display 3 = Filling temperature

It is displayed in 0.5 ° increments. The display can be displayed in ° C or ° F.

If the measured temperature greater than 42 °C up to 45°C, then the appropriate indicate "HOT" alternating with the temperature is displayed.

The temperature is displayed in a range from 2.5 °C (32.5 °F) to 64.0 °C (99.5 °F).

If the temperature is less than 2.5 °C "TLO" will appear.

If the temperature is more than 64.0 °C "T HI" will appear.

7.2 Power / Function LED Display (only AVERO Motion)

The LED display (11) shows you the status of the bathtub.

The following states are displayed:

LED green, permanent	Standby, ready for use
LED blue, flashing (slow)	Water flows! (Water spout or Handheld shower)
LED blue, flashing (fast)	Water flows! Attention, you must switch of the water flow by hand!
LED blue, permanent	Water is in the tub (Disinfection is blocked)
LED flashing blue – green	Waiting for blowing out (only if the bath is equipped with the Air spa system)

Note: there is no LED display for AVERO Motion E!

7.3 Optional functions

If your tub has features like disinfection system, colour light system, sound system and / or aroma and air spa system, please also refer to the enclosed operating manuals.

8 Operation

AVERO Motion's concept is to facilitate bathing or showering, to promote the patient's mobility and provide the opportunity to enjoy a relaxing bath.

It is possible for both mobile and partially mobile patients to step into the tub autonomously by means of the large side-opening door.

Even patients with limited mobility can look forward to autonomous access into a full bath without the use of assistive equipment or the danger of slipping inside the tub.

The base frame is freely accessible, which makes a transfer to the tub either by a NORA raising aid or by means of a CARLO cloth lift possible.

The tub is equipped with an electric height adjustment which can be lowered to an entry height of 49 cm, to make a smooth, autonomous transfer to the tub from a wheelchair.

8.1 Prior to use


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


8.2 During use

8.2.1 Using the AVERO Motion / AVERO Motion E


Using the  button, set the AVERO Motion to the entry position.

If necessary, guide the tub down to the bottom entry height level. Press this button

 and hold the button down until the motion automatically switches off automatically.

Fill the foot space of the AVERO Motion by pressing the button .

If your tub is equipped with the optional “**automatic water stop**” function, the filling will automatically stop when it reaches the fill level.

If your tub does not have this option, interrupt the filling process by pressing the  Button again

Make sure to only fill the foot space so that you can open the tub door!

Note!



Check the water temperature by hand (without gloves) or with a thermometer before the patient steps in the tub.

Open the door to the AVERO Motion.

To open the door, unlock the door lock by turning the lever in a downward motion!



Once you have opened the door lock, you can open the door by raising it.



When the patient is seated in the tub, or you have placed the patient in tub, close the door.

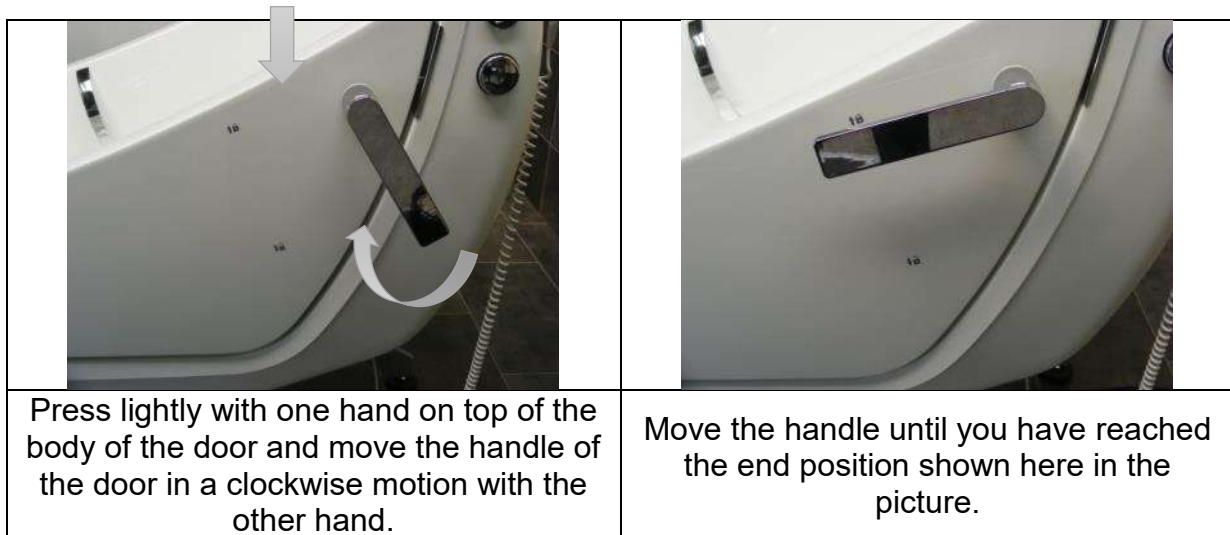
To lock the door, pull it down to the tub body.

WARNING



Ensure that none of the patient's body parts are between the door and the tub body. These parts could get caught and injure the patient.

<p>Pull the door to up to approx. 15 cm in front of the lock and check the position of the locking lever.</p> <p>If the door handle is not in this position, bring it to the required position.</p>	<p>The picture shows the handle and lock in the wrong position.</p> <p>The lock is completely extended, thus preventing the AVERO Motion door from properly closing.</p> <p>Warning: Risk of injury!</p>	<p>The picture shows the door in the end position; the door can now be locked with the handle.</p>




Note:




These points can be omitted when placing the patient into the tub with the help of the lift system.

Tilt the tub by pressing the  button until the motor shuts itself off.

To refill the tub, press the control button  .

When the water has reached the selected level, filling will automatically stop.

(This feature is only included with the “automatic water stop” option).

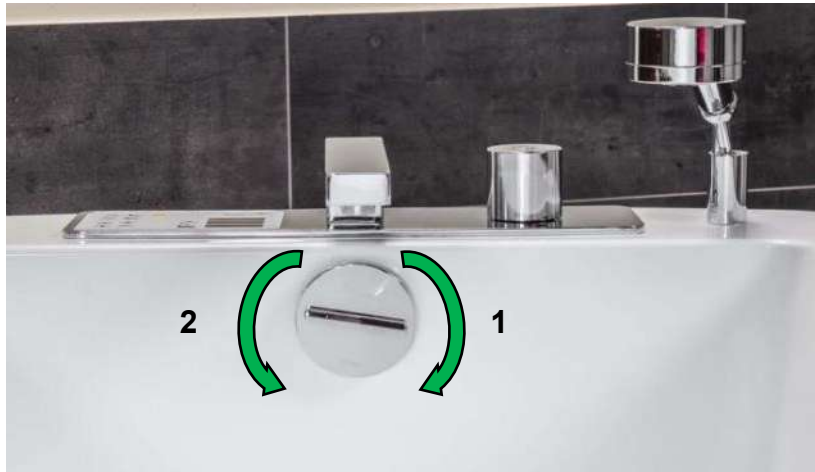
If your tub is not equipped with this option, interrupt the filling process by pressing the  button again when the selected fill level has been reached

Note!




Check water temperature with your Hand (without gloves) or with a thermometer!

When the bath is finished, turn the rotary knob eccentric cam (overflow) in order to drain the water.



The picture shows the direction of movement for opening (1) and closing (2) the rotary knob cam (overflow).

At this point you can already start to dry the patient while he sits comfortably in the tub.

In order to ease the patient out of the tub tilt the tub by pressing the  button until the motor shuts itself off.

If necessary, guide the tub down to the bottom entry height level. Press this button



and hold the button down until the travel movement is automatically switched off.

Note!



Open the door only when there is no water in the tub.

Open the AVERO Motion door.

To open the door, unlock the door lock by turning the lever in a downward motion.



Once you have opened the door lock, you can open the door by raising it.



Help the patient out of the tub, or use a lift system to ease the patient out of the tub.

Note!



Make sure that the tub is always disinfected and rinsed before using it for the next patient.

Please make use of the integrated disinfection (option), with which your AVERO Motion Movement is additionally equipped. The AVERO Motion bath tub is free standing on three sides and requires only little space.

9 Cleaning/Disinfection

CAUTION



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

CAUTION



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

Strictly respect and observe the manufacturer's instructions for the used disinfectant.

9.1 Cleaning the bath tub

Clean the AVERO Motion with a soft, lint-free cloth, moistened with soapy water or a standard plastic cleaner. Please do not use abrasives to clean the bath tub!

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

Please remember that all warranty claims regarding surface damage will not be accepted, if aggressive cleaning agents are anyhow used.

9.2 Disinfecting the bath tub

You must carefully disinfect and rinse your bath tub after each use to avoid the risk of transmission and infection. For the manual disinfection of the surface, an isopropyl alcohol solution or a customary disinfection aerosol (spray) can be used. The tub body of the AVERO Motion bath tub is in glass-fibre reinforced plastic and can be disinfected with a surface disinfectant (not aggressive).

If your bath tub features an integrated disinfecting system, you can disinfect your tub with the (yellow) disinfecting hand shower. Please observe that a disinfecting system can **only** be used to disinfect, not for cleaning purposes.

NOTE



The nozzles of the air spa must be disinfected after each use!

9.3 Sterilising the bath tub

The AVERO Motion bath tub is **not** suitable for sterilization.


10 Checks/tests

In order to ensure a safe use of our AVERO Motion bath tub and the protection of the users and the patients, BEKA Hospitec prescribes an annual safety check.


The execution of the safety checks and maintenance must be documented and proven on request. Please use your inventory register to this effect.

We recommend a simultaneous maintenance of the device in order to conserve its full value.

The checks may only be carried out by appropriately trained and qualified personnel. Failure to do so may result in injury or a non-safe product.

	<p>NOTE</p> <p>In accordance with the UVV (accident prevention) regulations of the German employer's liability insurance association on stationary equipment which is used in special locations or installations, an annual check to the DGUV (German Statutory Accident Insurance Association) Prescription 3 (BGV A3) must be carried out on the AVERO Motion bath tub .</p>
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This check is only prescribed for Germany. In other countries, other requirements might be applicable.

	<p>WARNING</p> <p>Do not conduct any cleaning, maintenance or test activities when the bath tub is in use. This could cause danger to the user and the patient.</p>
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measures to be conduct	Before each application / daily	weekly	monthly	yearly
Check the level of the disinfectant. (If available)	X			
Clean and disinfect the tub.	X			
Check the tub for function.		X		
Conduct a visual inspection of all components, power cables, hoses and connections.		X		
Check the water inlet and clean it if necessary.			X	
We recommend regular maintenance, a safety check and a check to DGUV prescription 3.				X

We recommend to replace **biennial** the batteries of optional emergency drain function.

11 Waste disposal

11.1 Disposal of the packaging material

Please recycle the packaging materials of the product in accordance with the locally applicable regulations and laws. The metal parts as well as the plastic and electronic components must be recycled in accordance with the WEEE.

11.2 Disposal of the product

The expected service life of the bath tub is approx. 8 years. At the end of the product's lifetime, contact your BEKA dealer, who will recycle the product in accordance with the locally applicable regulations and laws.

For an environmentally-sound disposal, the company BEKA Hospitec GmbH will provide more information in its capacity of manufacturer.


Please clean and disinfect the product prior to its disposal as well.

12 Troubleshooting help/After-sales service

Problems with the bath tub	Remedy
The height adjustment of the bath tub is not working.	a) Check if the mains voltage is present. b) Check if the control unit is damaged c) Check if the connecting cable is damaged
The bath tub remains in the top end position.	Check if the mains voltage is present.
The hoisting motor does not run	Check if the mains voltage is present.
The drive is switched off during the lifting procedure.	The maximum load is exceeded (max. patient weight).
Mains LED and temperature indications do not lit.	Check if the fuse and the fault-current circuit breaker are activated.
Mains voltage fails.	a) Check fuse. b) Check the cables for damages.
No water.	a) Check the shut-off valves of the cold and hot water. b) Check the filter situated in the water inlet.
The automatic filling is not working.	Disconnect the bath tub from the power supply. Perform restart. If no result is obtained, contact the service/after-sales service.
Only hot or cold water flows out of the faucet.	a) Check if the hot and cold-water connection are reversed (locally, tub). Check the filter as well as the inlet and outlet faucet for clogging.
Too low a water flow rate.	a) Check the filter as well as the inlet and outlet faucet for clogging. b) Check that the flow rate is sufficient for the supply conditions. Check if the connecting hoses are bent.
The faucet leaks water.	Check if the seals are damaged, replace seals if necessary.
Too high a filling speed.	Water pressure too high (install a pressure reducer on site).
The water flows away during the bathing process.	a) Check water plug and if necessary readjust the screw of the water plug. b) Check the seal for soiling and damages.
The bathing water does not flow away.	a) Check water plug and if necessary readjust the screw of the water plug. b) Check the seal for soiling and damages.

Disinfection does not work.	a) Check the injector. b) Check the disinfection storage tank. c) Check the hose of the disinfectant.
The air spa system is not working.	a) Check if the mains voltage is present.
The air spa system fails during operation.	a) The air spa system has been used for over 15 minutes. Let the air spa system cool down. b) Overheating due to too high an ambient temperature. Let the air spa system cool down.
The sound system is not working.	a) Check whether the USB-stick is correctly inserted. The USB-stick might be defect. Insert a new USB-stick.
The colour light therapy is not working.	a) Main board defect. Inform the after-sales service. b) Projector defect. Inform the after-sales service.
The bath tub produces unusual noises.	Inform the after-sales service.
The bath tub shows signs of damage.	Inform the after-sales service.

When your bath tub does not function properly and you cannot eliminate the error by means of the remedies listed in paragraph 12 please contact the after-sales services of your dealer either the manufacturer.

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

13.1 Technical data

Measurements and weight

- Length of entry position:	176,0 cm
- Length of reclining position:	190,8 cm
- Width:	86,0 cm
- Tub width (interior):	62 cm (above) / 68 cm (below)
Height with open door:	192,0 cm
Lifting height:	20,0 cm
- Height of reclining position:	81,0 – 101,0 / 98,5 – 118,5 cm (Front / behind)
-:Height of entry position	44,0 – 64,0 / 131,0 – 151,0 cm (Front / behind)
- Entry height:	49 - 69 cm
- Tilting angle:	23°
- Weight without packaging:	ca. 160 kg
- Pre-fill capacity:	98 l
- Fill weight (without patient)	ca. 270 l
- Tub drainage (liter per minute)	75 l
- Water consumption/patient:	185 l
- Patient weight:	max. 220 kg
SWL (safe load)	350 kg (patient and water)

Electrical data

Rated voltage:	230 V, 50 Hz or 120V, 60Hz
Max. power consumption:	840 VA

Operation

- Temperature range:	10° C to 40° C
- Relative humidity:	30% to 95%, non- condensing
- Atmospheric Pressure:	800 – 1060 hPa

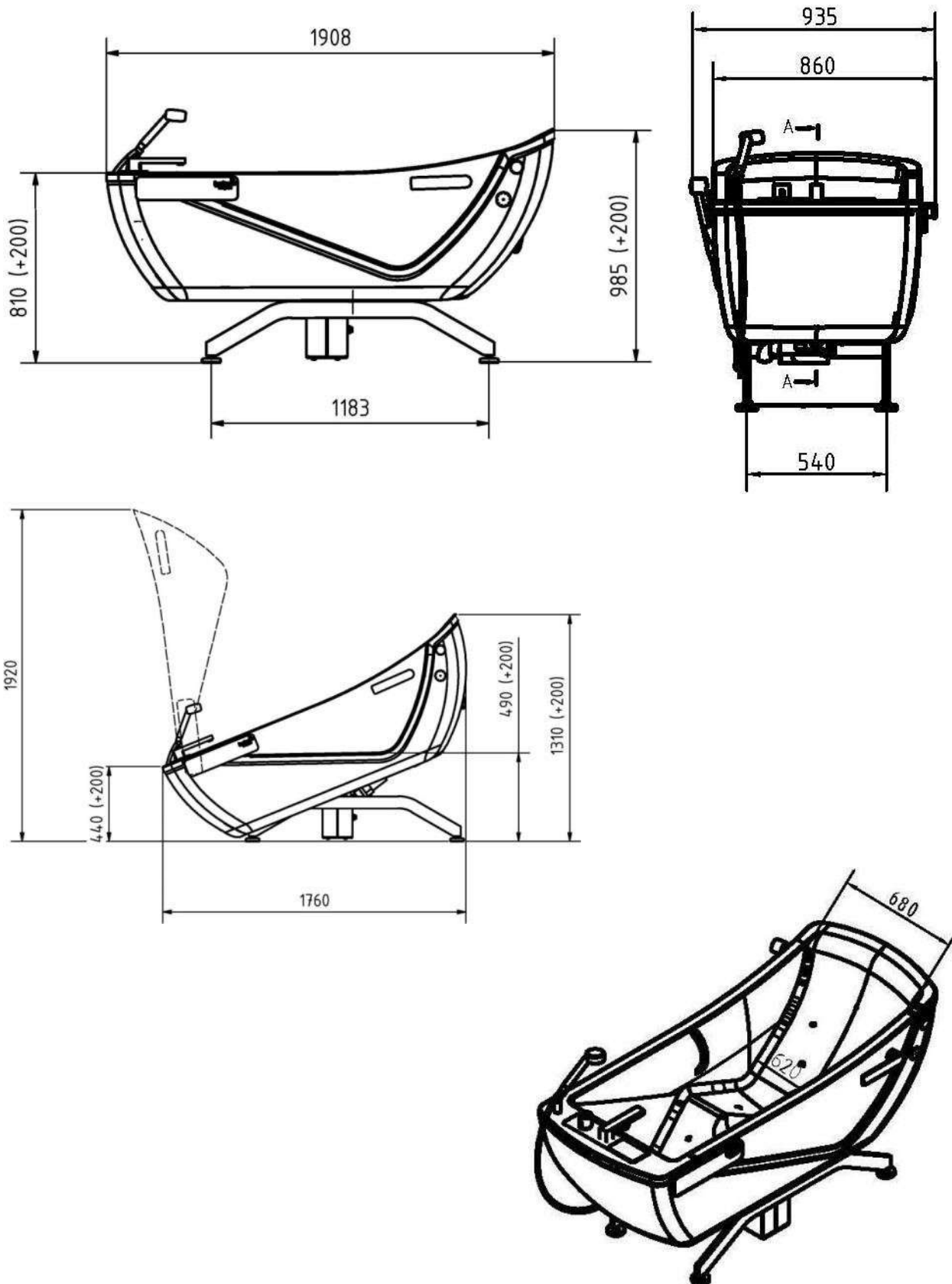
Storage and transport

- Temperature range:	-20° C to 70° C
- Relative humidity:	10% to 80%, non- condensing
- Atmospheric Pressure:	500 – 1100 hPa

Batteries for Emergency Drainage:

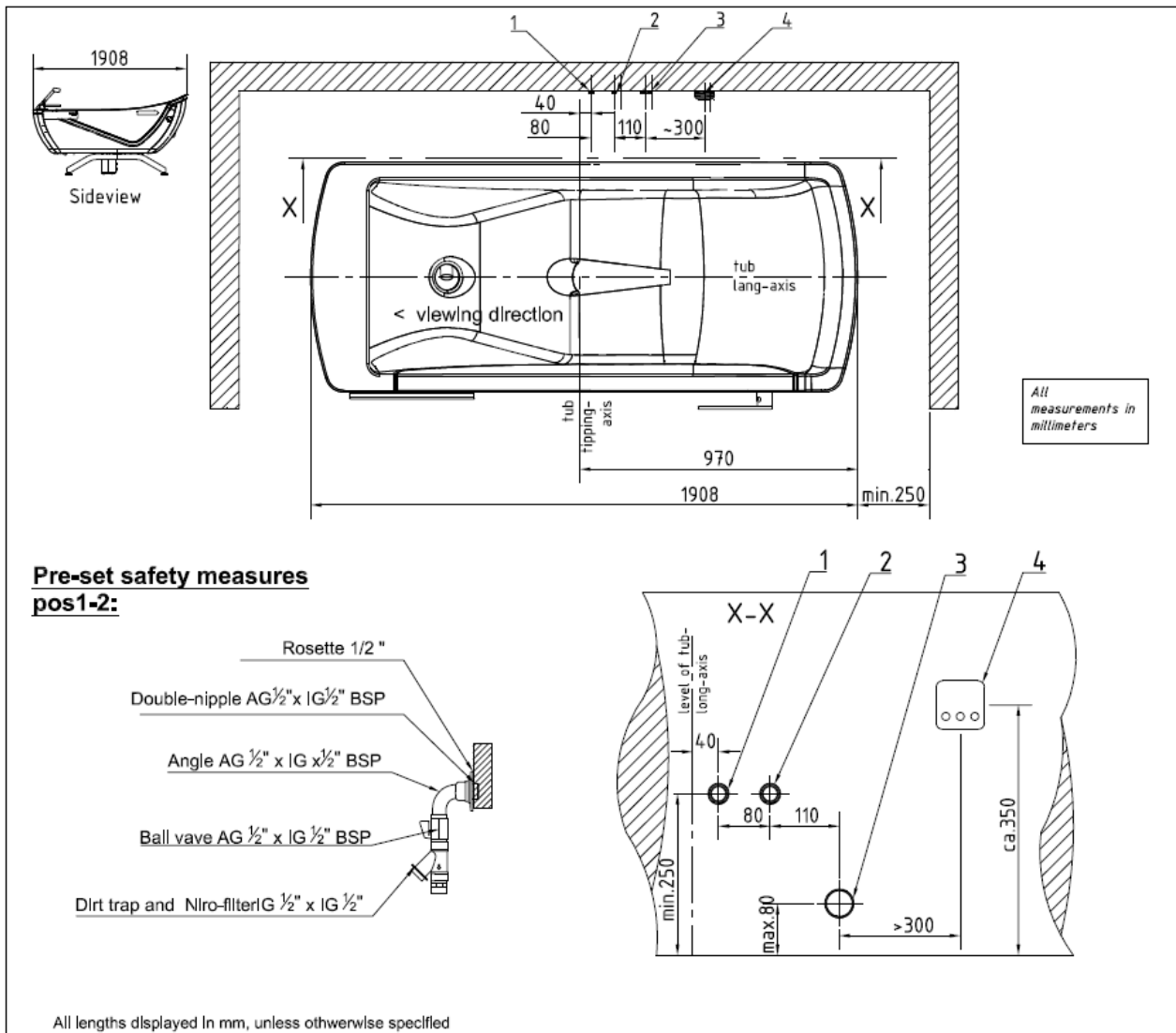
Battery type:	Sealed lead acid battery
Battery voltage	24 Volt DC
Battery capacity:	1.2 Ah

13.2 Dimensions AVERO Motion Tilt and Reclining Bath Tubs



13.3 Wiring Diagram

13.3.1 Connection at the side



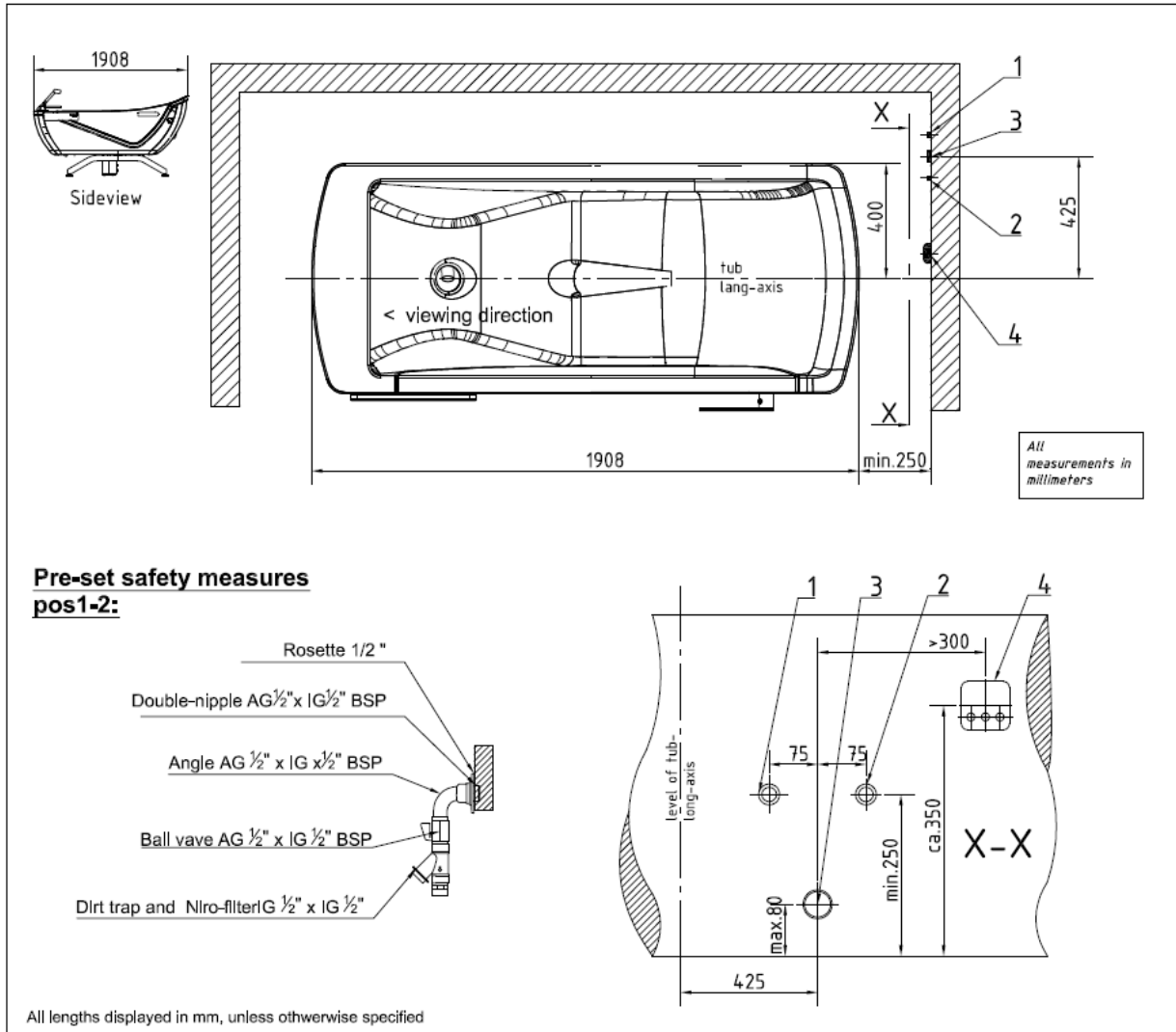
-> Pre-set safety measures!

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

-> Building side connections - Sanitary - Electric

- ① Warm water connection 1/2", female threading tile-even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ② Cold water connection 1/2", female threading tile even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ③ Wall drain DN 50, (min. drain capacity 1 l/s.)
- ④ Junction-box (IP X7 when in zone 1), 230 V/50 Hz, 1,5 mm² fuse protection 16 A. Position according to local codes and standards.
- ⑤ Equalize electrical potential according to local codes and standards.

13.3.2 Connection at the rear



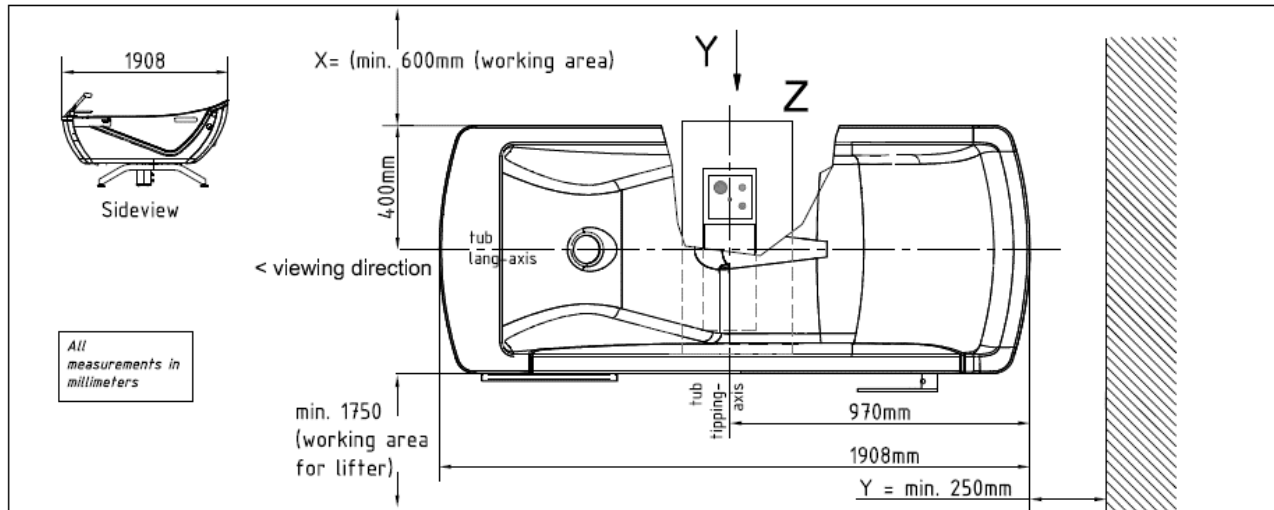
-> Pre-set safety measures!

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

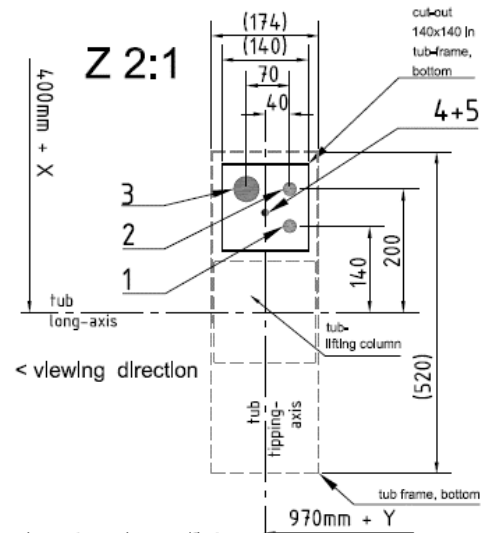
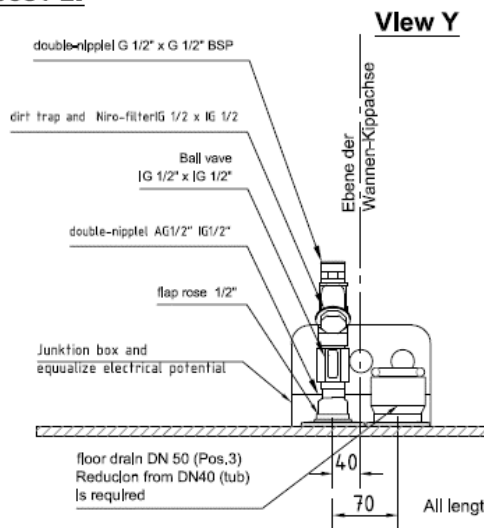
-> Building side connections - Sanitary - Electric

- ① Warm water connection 1/2", female threading tile-even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ② Cold water connection 1/2", female threading tile even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ③ Wall drain DN 50, (min. drain capacity 1 l/s.)
- ④ Junction-box (IP X7 when in zone 1), 230 V/50 Hz, 1,5 mm² fuse protection 16 A, Position according to local codes and standards.
- ⑤ Equalize electrical potential according to local codes and standards.

13.3.3 Connection at the floor



Pre-set safety measures pos1-2:



-> Pre-set safety measures!

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

-> Building side connections - Sanitary - Electric

- ① Warm water connection 1/2", female threading tile-even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ② Cold water connection 1/2", female threading tile even. Assemble double-nipple, ball valve, dirt trap and rosette (see details illustration Pos.1 and 2).
- ③ Floor drain DN 50, (min. drain capacity 1 l/s.)
- ④ Junction-box (IP X7 when in zone 1), 230 V/50 Hz, 1,5 mm² fuse protection 16 A. Position according to local codes and standards.
- ⑤ Equalize electrical potential according to local codes and standards.

13.4 Declaration of Conformity



EG-Konformitätserklärung / EC-Declaration of Conformity

Der Hersteller / *The manufacturer*

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

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

AVERO Motion Sitz und Liegebadewanne / Seat and reclining tub	Artikel Nr. P/N.	910150550
AVERO Motion E Sitz und Liegebadewanne / Seat and reclining tub	Artikel Nr. P/N.	910150540

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

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

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

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

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

Technische Änderungen vorbehalten / *Technical changes reserved.*

Wetzlar, den 14.07.2017



Robert Deschler
Geschäftsführer

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Geschäftsführung
James Stuart-Smith
Robert Deschler

Commerzbank AG Wetzlar
Konto-Nr.: 482176500
BLZ: 515 400 37
IBAN: DE60615400370482176500
SWIFT-BIC: COBADEFF515

13.5 Accessories

AVERO Motion		AVERO Motion E	
910150560	Automatic water stop	910150561	Automatic water stop
910609550	Bluetooth System Music sound system	910609550	Bluetooth System Music sound system
910150572	Music sound system	910150572	Music sound system
910150570	Air spa	910150571	Air spa
910150579	Aroma system	910150579	Aroma system
910150575	Color light system	910150576	Color light system
910150585	Cleaning system	910150580	Cleaning system
910150586	Second showerhead holder	910150586	Second showerhead holder
910150587	Emergency function in case of power failure	910150587	Emergency function in case of power failure
910150565	Comfort neck cushions	910150565	Comfort neck cushions
910150555	Manual operation		

13.6 Spare parts / Consumables

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

Please note:

You cannot change all parts yourself.

The installation may require the expertise of a trained specialist in electrical / plumbing.

13.7 Assembly Instructions

13.7.1 Changing the handheld shower

Picture 1:
The picture shows the handheld shower with a threaded shower hose.



Picture 2:
Unscrew the union nut from the shower hose.



Picture 3:
The picture shows the unscrewed handheld shower.



Assembly of the handheld shower is done in the reverse order!

13.7.2 Changing the shower hose

Picture 1 und 2:
Pictures 1 and 2 show the shower hose as well as the elbow fitting on the tub.



Picture 3:
Unscrew the shower hose from the elbow fitting on the tub.



Picture 4:
The picture shows the shower hose unscrewed from the elbow fitting.



Assembly of the shower hose is done in the reverse order!

13.7.3 Changing the handheld shower holder

Picture 1:
Tool required:
1 x 2.5 mm Allen wrench



Picture 2:
The picture shows the handheld shower holder with stud bolt.



Picture 3:
Loosen the stud bolt from the handheld shower holder



Picture 4:
The picture shows the stud bolt loosened from the handheld shower holder.



Picture 5:
Now remove the holder from the handheld shower and replace with a new one.



Assembly of the handheld shower holder is done in the reverse order!

13.7.4 Changing the disinfectant shower head

Picture 1:
The picture shows the disinfectant shower head



Picture 2:
Remove the disinfectant shower head from the holder



Picture 3:
Unscrew the unit screw from the disinfectant hose.



Picture 4:
The picture shows the unscrewed disinfectant hose unscrewed from the disinfectant shower head.



Assembly of the handheld disinfectant shower head is done in the reverse order!

13.7.5 Changing the disinfectant hose

Picture 1:
The picture shows the disinfectant hose as well as the elbow fitting on the tub.



Picture 2:
Unscrew the disinfectant hose from the elbow fitting.



Picture 3:
The picture shows the unscrewed disinfectant hose.



Assembly of the disinfectant hose is done in the reverse order!

13.7.6 Changing the eccentric screw fittings (drainage and overflow)

Picture 1:
The picture shows the eccentric cover.



Picture 2:
To loosen the cover, pull it in an upward direction.



Picture 3:
The picture shows the removed cover.



Picture 4:
The rotary actuation must be positioned horizontally (Viega logo must be recognizable) before the drip plug can be loosened.



Picture 5:
Bring the eccentric plugs to an upright position.



Picture 6:
The upward pulling motion allows the removal of the eccentric plugs.



Picture 7:
The picture shows the removed eccentric plugs



Warning:
When fitting the drip plug into its casing, ensure it is correctly locked.

Assembly of the drip plugs is done in the reverse order.

13.8 Electromagnetic Compatibility


Electrical medical equipment is subject to special precautionary measures with regard to EMC and must be installed and operated in accordance with the EMC instructions included in the accompanying documents.

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

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

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

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

Guidance and manufacturer's declaration - electromagnetic immunity (Table 204)			
The AVERO Motion been designed for use in the hereafter listed electromagnetic environments. The customer or the user of the AVERO Motion must ensure that the appliance is used in such environment.			
Immunity testing	IEC 60601-Test level	Compliance level	Electromagnetic environment guidance
Conducted HF IEC 61000-4-6	3 Vrms 150 kHz up to 80 MHz	10 Vrms	Portable and mobile HF communications equipment should be used no closer to any part of the AVERO Motion including cables, than the recommended separation distance calculated in accordance with the equation applicable to the frequency of the transmitter.
Radiation HF IEC 61000-4-3	3 V/m 80 MHz up to 2.5 GHz	3 V/m	<p>Recommended separation distance $d=0.35\sqrt{P}$ $d=1.2\sqrt{P}$ 80 MHz up to 800 MHz $d=2.3\sqrt{P}$ 800 MHz up to 2.5 GHz</p> <p>With P as the rated output of the transmitter in Watt (W) in accordance with the manufacturer's specifications and d as the recommended separation distance in meter (m).</p> <p>The field strength of fixed HF-transmitters as determined by an electromagnetic field survey, ^a – should be less than the COMPLIANCE LEVEL in each frequency range. ^b</p> <p>In the vicinity of equipment marked with the following symbol, interference may occur:</p> 
<p>NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2: This manual could possibly not apply to all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p>^a The field strength of fixed RF transmitters, such as base stations of mobile phones and land mobile radios, amateur radio stations, AM and FM radios as well as radio and television broadcast media cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey is recommended. If the field strength measured in the environment where the AVERO Motion is to be used, exceeds the applicable HF compliance level, special care should be taken that a normal operation of the AVERO Motion 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 Motion.</p> <p>^b 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 Motion (Table 206)

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

Rated output of the transmitter W	Separation distance depending on the transmitting frequency in m		
	150 kHz to 800 MHz $d=0.35\sqrt{P}$	80 MHz to 800 MHz $d=1.2\sqrt{P}$	800 MHz to 2.5 GHz $d=2.3\sqrt{P}$
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 could not apply to all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

13.9 Journal

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

Journal

Device: AVERO Motion / AVERO Motion E

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

Serial number: _____

Date of purchase: _____

Site: _____

Checks and inspection conducted upon the first use:

Date: _____

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

Instructor		Trained person	
Name	Date	Name	Signature

