

User Manual

for

AVERO Premium Plus Lifting Tub



Dear Customer,

We thank you for the confidence you have placed in us by purchasing this BEKA Hospitec Ltd. product. Our products are manufactured and tested under strict quality controls. Proper use of the unit is essential for safe operation. Therefore, thoroughly familiarize yourself with the contents of this user manual before operating the unit. Please note the safety instructions in particular!



Slight deviations of the actual delivered units from the pictures shown here are possible. If you have questions or want more information about your device, please call us or fax us. Our staff will be happy to help.



Beka Hospitec Ltd. has been certified by TÜV SÜD Product Service Ltd. in accordance with DIN EN ISO 9001 and DIN EN ISO 13485.

With this, we set a high standard of quality in development, manufacturing, quality assurance and service for our entire product range.

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1. Foreword

Dear Customer,

Please note the following points:

1. Please read the instruction manual carefully.
2. Use the device only for its intended use.
3. Only trained personnel are permitted to operate the device.
4. Electrical installations may only be carried out by specialist companies, according to the currently valid VDE regulations.
5. Maintenance and safety checks must be carried out by BEKA Hospitec or by specialist companies authorized by BEKA Hospitec.
6. Assembly, extensions, modifications or repairs must be performed by BEKA Hospitec or by specialist companies authorized by BEKA Hospitec.

In case of technical interventions, such as additions or modifications to our equipment, which are not carried out by the BEKA Hospitec or by BEKA Hospitec authorized specialist companies, the warranty is voided for the changes as well as for the device or for device functions which are related to the change.

Liability and warranty

The manufacturer of the unit is only responsible for the safety and reliability of the device, if:

- a. the installation is carried out by authorized persons
- b. the space in question complies with the current VDE regulations

and it was observed that:

- c. it will be used only for the purposes intended
- d. regular function tests are performed

Manufacturer Address:



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Am Rübenmorgen 3 • 35582 Wetzlar
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Fax: +49(0)641-9 22 20 - 20
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www.beka-hospitec.de

2. Signs and symbols used

	Consult accompanying documents / user manual
	Warning of potential danger
	Upgrades prohibited, Feet should not be placed on the base frame.
	Application Part "Type B" according to DIN EN60601-1
	Not household waste Do not put the treatment system and the packaging materials in the household trash.
	CE marking according to the EC Directive concerning medical devices
	can only be used indoors
	Protection class I
IPX4	Protection against penetration of liquids: Protection against splashing water on all sides

Type label

		BEKA Hospitec GmbH Am Rübenmorgen 3 DE - 35582 Wetzlar-Dutenhofen Tel 0049-641-92220-0 Fax 0049-641-92220-20	
Typ: Hubbadewanne Avero Premium Plus 190			
SN 0001.05.15			
REF 810143501			IPX4
Voltage Input.: 120 V - 60Hz	Safe Working Load (SWL): 300 kg / 661 lbs		Conforms to: CSA B45.5-11 IAPMO Z124-2011
Power Input.: 840 VA	Max Patient weight.: 220 kg / 485 lbs		
short-term operating 2 min ON 18 min OFF			

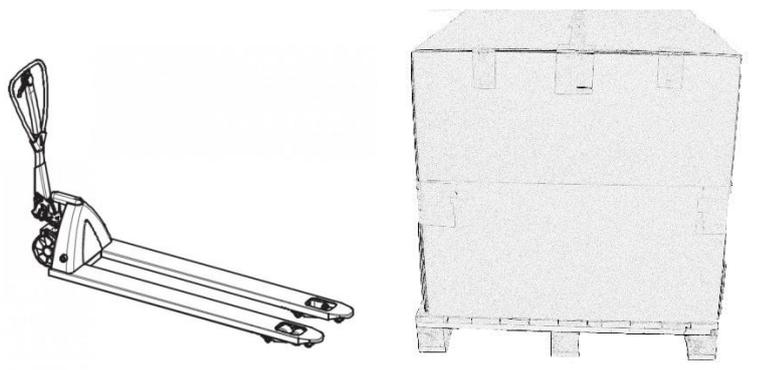
Picture 4

This figure shows the type label.
The type label is located on the side panel.
The serial number shown here (SN) 0001.05.15 is only an example. For further inquiries, please always indicate the serial number located on your unit's type label.

Note: For legal reasons, the item number and serial number may be required to be computer-readable and are therefore additionally applied as a bar-code on the type label.

3. Unpacking and assembly

Transport the lifting tub into the vicinity of the intended installation site.



Use a pallet or similar for transporting.
Arrange the tub, so that it is secure and cannot tip.

Tools Required

To remove the packaging you need:

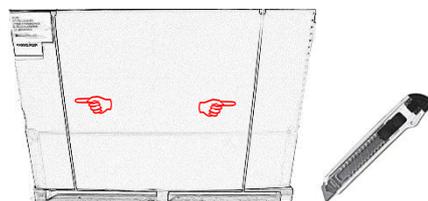
Sharp-
bladed cutter



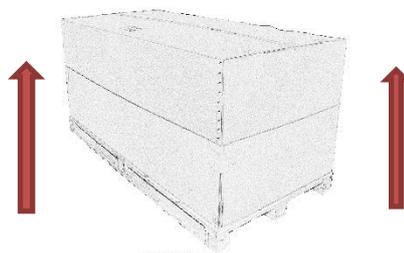
Remove the cardboard

Cut the straps with the cutter and remove them.

Note: Do not cut into the box, as the surface of the tub may be damaged!



Lift the box up and off and set the box aside.

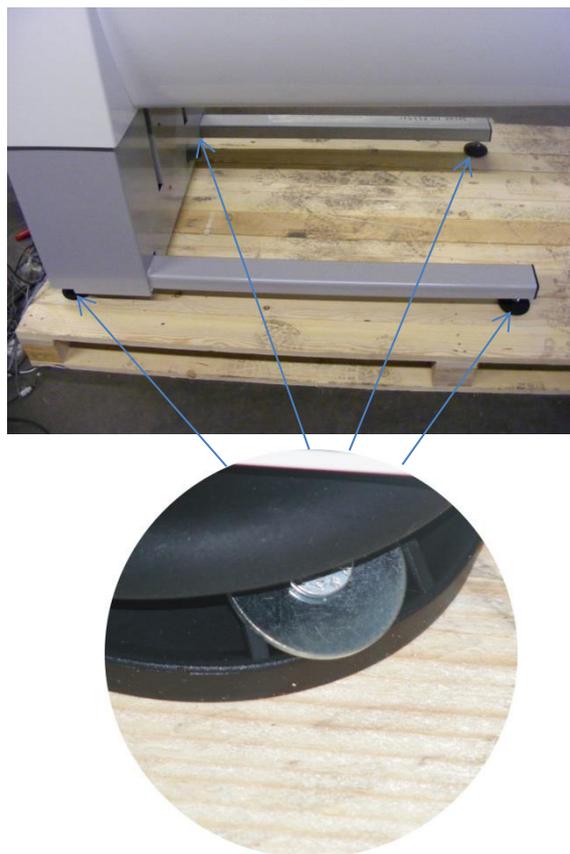


Loosen from the pallet

AVERO Premium Plus

The tub is mounted on the pallet through the foot by means of a screw.

Unscrew this screw using a cordless screwdriver and a matching bit, and put them aside with the washer. Repeat this on all 4 feet.



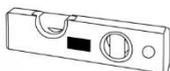
After all fasteners are released, you can remove the lifting tub from the pallet and position it in the intended place of use.

Remove the bubble wrap and stretch film. Make sure that you do not damage the surface of the tub through the use of tools.

Installation on site

Tools Required:

Spirit level



Adjustable wrench SW 10



With the spirit level and the wrench (SW 10) align the tub so that it is perpendicular. The bath feet can be adjusted in height by screwing or unscrewing. Make sure that all feet touch the ground and the tub has a firm footing.

4. Installation

Dear Customer,

- Please check your electrical installation according to the applicable VDE regulations 0100 and 0750, or check with the applicable regulations in your country before operating our equipment.
- As the operator of this system, you need to have the functionality of the fault current circuit breaker checked regularly. Please ask your electrician.
- These checks are necessary for the safety of your patients and for your own safety.
- This device is not approved for operation in potentially explosive atmospheres.
- Maintenance of the unit must be carried out only by us or by a party expressly authorized by us, otherwise the warranty shall lapse.
- The connection of the AVERO Premium Plus must be done in accordance with the technical drawings of BEKA Hospitec and the guidelines for the establishment of wet areas and the current standards in force in your country.
- All inlet and outlet hoses and electrical cables must be arranged so that there is no risk of tripping.
- Before installing the tub, the power cables must be adequately rinsed.
- **Before commissioning the thermostatic mixer must be set by a suitable person.**

4.1 Note before initial operation

WARNING:



The device may only be used in accordance with the accompanying documents. Only under these conditions is the manufacturer considered responsible for the safety effects, reliability and performance of the device.

If the AVERO Premium Plus lifting tub is newly connected, the technical specifications must be observed.

WARNING:



To prevent scalding, the hot / cold water mixer tap must be set to the on-site water supply parameters prior to first use.

Note:



In order to ensure safe functioning and safe operation, we recommend regular maintenance and adjustment of the thermostat mixer. Setting up the AVERO Premium Plus tub in another space or changes to the local water supply may require readjustment of the thermostatic mixer.

4.2 Electrical system

Connection to the power grid:

When connecting the device to an electric power grid / AC Power supply / AC outlet the particular national specifications must be observed (e.g. in Germany DIN VDE 0100-710).

The connection of the AVERO Premium Plus via a junction box with legally required splash protection (IP class), 230V AC / 50Hz, 3x1.5 mm², 1.5 KW, 16 amps, earth leakage circuit breaker 30 mA, potential equalization (in Germany) according to DIN VDE 0107.

Please note that the connection must be performed by a qualified electrician.

Protective conductor:

When using protection class I devices, the quality of the protective conductor of the installation is important. The specified stipulations that have been specified in many countries by national authorities are to be observed.

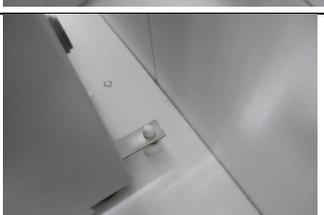
WARNING:



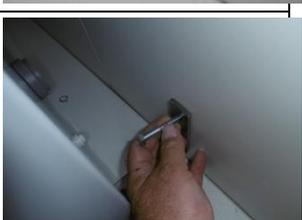
To avoid the risk of electric shock, this unit must be connected to a supply network with a ground wire.

4.3 AVERO Premium Plus 175, Floor installation

In order to avoid tilting of the tub, the tub has to be additionally secured.
Note they refer to the following pictures:

<p>Illustration 1:</p>		<p>Illustration 2:</p>	
<p>Illustration 3:</p>		<p>Illustration 4:</p>	
<p>Illustration 5:</p>		<p>Illustration 6:</p>	
<p>Illustration 7:</p>		<p>Illustration 8:</p>	
<p>Illustration 9:</p>		<p>Illustration 10:</p>	
<p>Illustration 11:</p>		<p>Illustration 12:</p>	
<p>Illustration 13:</p>		<p>Illustration 14:</p>	
<p>Components 15:</p>		<p>Tools 16:</p>	

4.4 AVERO Premium Plus 175, Wall installation

<p>Illustration 1:</p>		<p>Illustration 2:</p>	
<p>Illustration 3:</p>		<p>Illustration 4:</p>	
<p>Illustration 5:</p>		<p>Illustration 6:</p>	
<p>Illustration 7:</p>		<p>Illustration 8:</p>	
<p>Illustration 9:</p>		<p>Illustration 10:</p>	
<p>Illustration 11:</p>		<p>Illustration 12:</p>	
<p>Illustration 13:</p>		<p>Illustration 14:</p>	
<p>Illustration 15:</p>		<p>Illustration 16:</p>	

<p>Illustration 17:</p>		<p>Components 18:</p>	
<p>Tools 18:</p>			

4.5 Adjusting the thermostat mixer (scald protection)

Figure 1:

Tools you need:
 1 x screwdriver flat,
 0,6 x 3,5 mm,
 1 Screwdriver Cross-
 hatch,
 1 x thermometer



Figure 2:

Turn the knob to the left until it stops (Snap button not pressed)



Figure 3:

Use the screwdriver to remove the cap



Figure 4:

Unscrew the cross screw from the rotary actuator and pull it forwards.



Figure 5:

Open a solenoid valve to check the water temperature (In the pictures shown handbrake).



Figure 6:

Check the outlet temperature with the external thermometer!



Figure 7:

Adjust the water to the desired maximum discharge temperature.



Figure 8:

The picture shows the desired maximum temperature, which must agree with the manually measured temperature.



Figure 9:

Slide the knob to the maximum position.



Figure 10:

Switch off the solenoid valve.



Figure 11:

Install the rotary knob with the cross bolt



Figure 12:

Reinsert the cover.



Figure 13:

Switch on a solenoid valve (hand shower or water spout) to check the setting again.

**Figure 14:**

Check the outlet temperature with the external thermometer! The process is now complete.

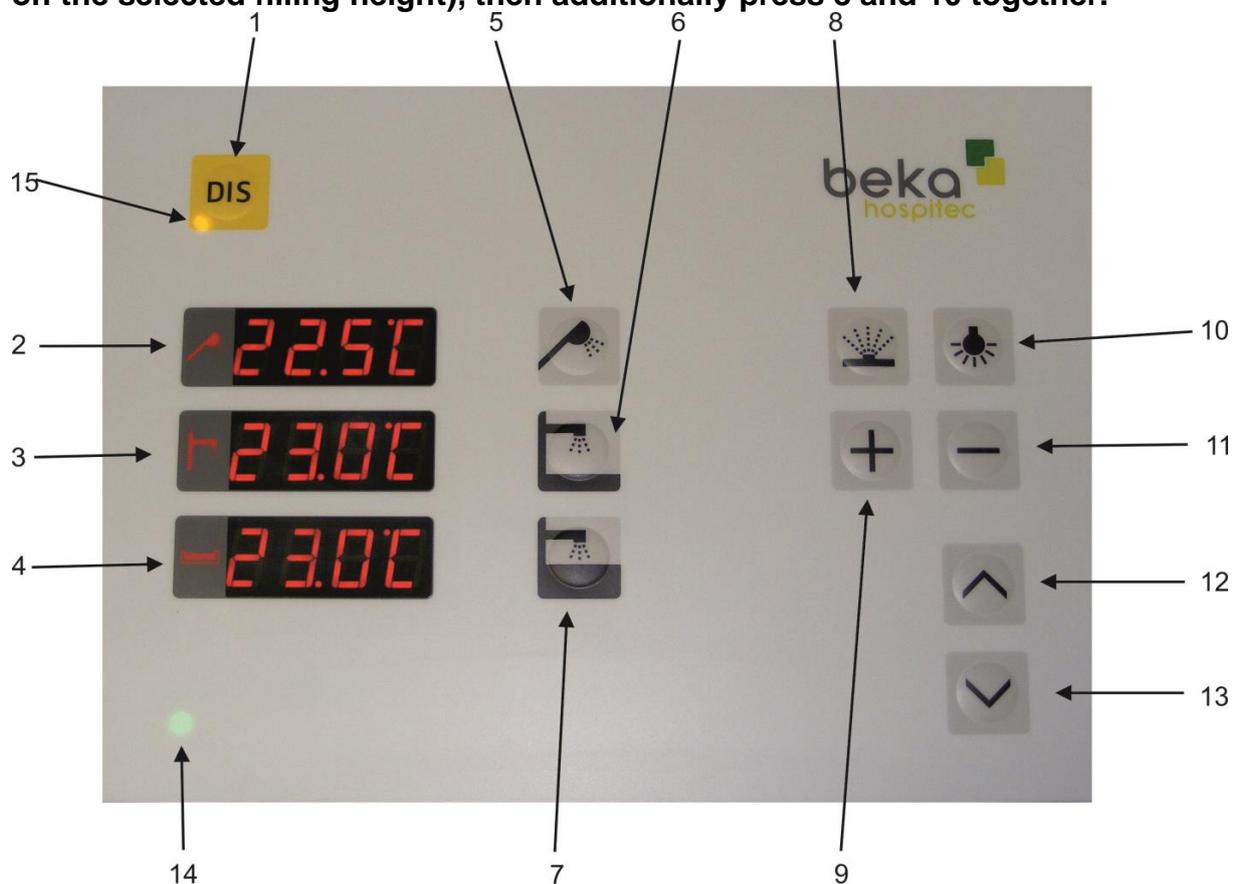


If the temperature is set at 42 ° C (anti-scalding), the corresponding display "HOT" alternates with the temperature and the water flow is switched off.

The handshower can then be switched on again with the following key combination to continue with the setting:

Hold down key 5 and then press 8 and 10 together.

Should the setting go over the tank filling, please press key 6 or 7 (depending on the selected filling height), then additionally press 8 and 10 together.



4.6 Thermal rinse and subsequent adjustment of the outlet temperature

Note: Follow the steps carefully. If not, the disinfecting device may be blocked. You can only remove this blocking by disconnecting from the mains voltage!

Figure 1:

Tools you need:
 1 x screwdriver flat,
 0,6 x 3,5 mm,
 1 Screwdriver Cross-hatch,
 1 x thermometer



Figure 2:

Turn the knob to the left until it stops (Snap button not pressed)



Figure 3:

Use the screwdriver to remove the cap



Figure 4:

Unscrew the cross screw from the rotary actuator and pull it forwards.



Figure 5:

Open the solenoid valve of the hand shower



Figure 6:

Turn the knurled knob to the left to increase the temperature



Figure 7:

If the temperature exceeds 42 ° C, the control switches off for safety reasons. The display shows "hot" alternating with the temperature.



Figure 8:

Press and hold button 5, than press the buttons 8 and 10 together

This bridges the protection circuit and allows you to set a higher temperature.



Figure 9:

Adjust the required temperature for thermal rinsing by turning the knurled knob. Check the temperature with the thermometer



knurled knob



Perform the thermal rinse of the hand shower according to the valid laws of your country. Observe the temperature setting and the time.

Do not turn off the water flow after completion of the thermal rinse. Continue with figure 10 of this manual!

Figure 10:

Turn off the solenoid valve of the hand shower. Press button 5, 1 time!

**Figure 11:**

Activate the thermal flushing for the water inlet.

Press and hold button 6, then press the buttons 8 and 10 together



Perform the thermal rinse of the water spout according to the valid laws of your country. Observe the temperature setting and the time.

Do not turn off the water flow after completion of the thermal rinse. Continue with figure 12 of this manual!

Figure 12:

Adjust the water temperature below 42 ° C. Observe the display on the control panel

**Figure 13:**

The picture shows the temperature below 42 ° C

**Figure 14:**

Switch off the magnetic valve for the water inlet. Press button 6 2 times!



Press the button for the first time to switch off the "overtemperature" mode.

With the second actuation switch off the solenoid valve for the water inlet.

Switch on the water supply via hand shower or via the water inlet

Figure 15:
Adjust the water to the desired maximum discharge temperature. Measure the temperature with the thermometer

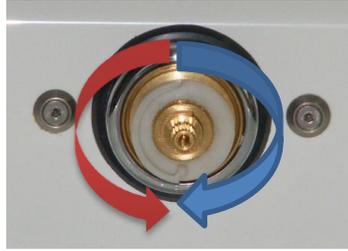


Figure 16:
The picture shows the desired maximum temperature, which must agree with the manually measured temperature.



Figure 17:
Slide the knob to the maximum position.



Figure 18:
Switch off the solenoid valve.



Figure 19:
Install the rotary knob with the cross bolt



Figure 20:
Reinsert the cover.



Figure 21:
Switch on a solenoid valve (hand shower or water spout) to check the setting again.



Figure 22:
Check the outlet temperature with the external thermometer!
The process is now complete.



5. Operating the AVERO Premium Plus Lifting Tub

Application areas

The AVERO Premium Plus lifting tub is used for bathing and care of dependent persons.

Duration of use

The duration of the AVERO Premium Plus lifting tub application unit is set at a maximum of 30 minutes.

Note

Side effects from usages are not known.
Note the contraindications in Section 5.4

Typical indications

For bathing and care of dependent patients in hospitals, nursing homes, facilities for the disabled and private households.

Contraindications

WARNING:



Patients with:

- Heart disease / arrhythmias
 - Tumors in the application area
 - Leukemia
 - Bacterial infection
 - Rheumatism in the advanced stages
- may only be treated with the lifting tub after consultation with their attending physician.

WARNING:



Patients with active implants such as infusion or insulin pumps as well as patients with febrile conditions or inflammatory skin diseases may not be treated with the AVERO Premium Plus lifting tub. There should be a warning that is highly visible in the entrance area of the treatment room.

Please also observe the safety instructions in the following section.

6. Safety Information



Please read the following safety instructions before starting the AVERO Premium Plus lifting tub. All instructions and warnings on the product and in this manual must be followed carefully.

For any errors or damages caused by improper operation or handling, the BEKA Hospitec GmbH manufacturer accepts no liability.

• User Manual



Read the instruction manual and the safety instructions before using this device. Keep the manual in the vicinity of the device for later use.

- The product must be used and operated by trained personnel.
- Check before each use that all parts are intact if parts are damaged, the tank must not be used.
- Before each use, the water temperature must be checked.
- After each use, the product must be disinfected properly.
- Make sure that your feet are next to the tub before and during the height adjustment.
- The operator must ensure that there is nothing in the area above and below the tub, which could impede the free upward and downward movement of the tub.
- Do not position yourself between the tub and an obstacle you during use.
- The tub must be used only for its specified intended purpose.
- Make sure that the power supply is always turned on during use.
- The user must be satisfied prior to each use of the device about reliability and the proper condition of the device (e.g. visual inspection, a function of temperature setting, etc.).
- 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.
- This device is not approved for operation in potentially explosive atmospheres.
- Use must be carried out under supervision.
- Caregivers must protect their skin and eyes from concentrated disinfectants and detergents.

The maintenance instructions for the disinfectant used are to be observed.

- **Adjustable tub shortener**

The tub shortener must be inserted into the guides opposite.

- **Power connection**

The grid connection must be done by a qualified electrician. The currently valid VDE regulations must be observed.

- **EMI**

To prevent electromagnetic interference (EMI) the simultaneous use of short wave or microwave therapy devices in the immediate vicinity is not permitted. Mobile radio can also cause interference.

- **Ventilation**

Never cover or change slots and openings on the unit.

- **Cable management**

 Route the power and connection cable so that it cannot be damaged. A damaged power cord may cause fire or a life-threatening electric shock and may not be used.

- **Customer service**

If the device is defective and none of the measures described in section 13 help, disconnect the device from the power supply and contact the customer service of your BEKA distributor or manufacturer:



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www.beka-hospitec.de

ATTENTION:

 Do not operate or store any devices that can be affected by moisture near the lifting tub AVERO Premium Plus.

- **Repairs**

Repair of parts of the AVERO Premium Plus lifting tub may only be performed by trained personnel. Contact your service representative.

Opening the device or accessories will invalidate the warranty and any and all liability.

- **Duty of Care**

Convince yourself of the proper condition and operational reliability of the system before use. Never insert a foreign object into the unit. This poses a security risk and can result in a risk of electric shock or damage to the machine.

- **Technical Safety Checks**

The manufacturer prescribes a "Technical Safety Check" on the AVERO Premium Plus lifting tub in intervals of **12 months**. This should be carried out in conjunction with maintenance.

The intervals are defined in Section 13 .

- **Accessories**

Operate the AVERO Premium Plus lifting tub only with original accessories.

	<p>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.</p>
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- **Applied Part**



The lifting tubs from the AVERO family are designed with type "B" application components. This especially applies to the tub body, the handles and the operating keypad as application parts.

7. AVERO Premium Plus Lifting Tub Operating Elements

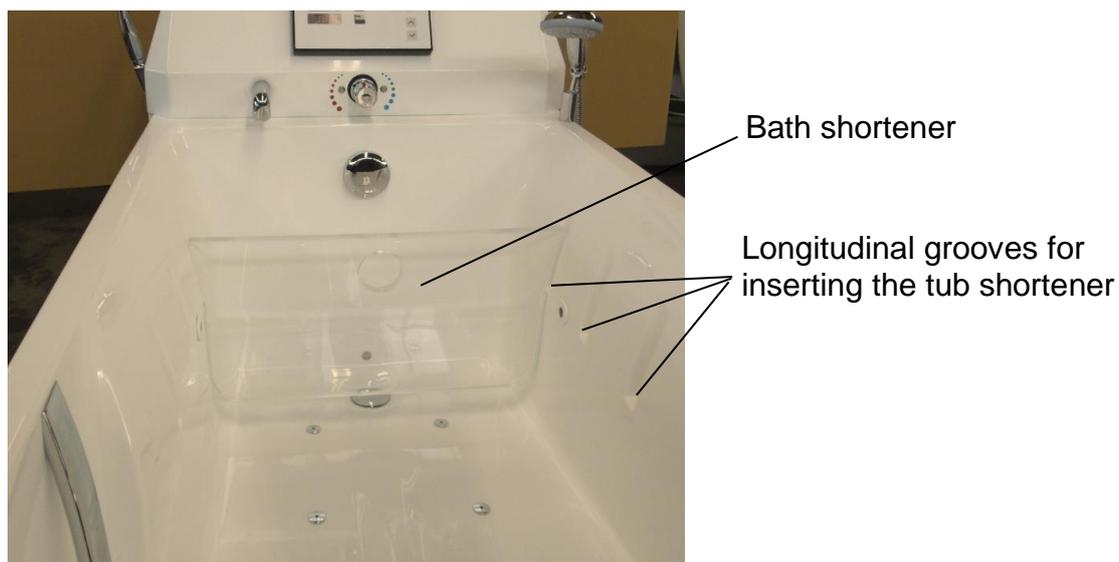
7.1 Operating elements



Picture 1

No.	Description	No.	Description
1	Tub handle	6	Aromatherapy
2	Bath shortener	7	USB port for music-sound system (MP3)
3	Eccentric rotary operation	8	Handheld showerhead
4	Bath spout	9	Thermostatic mixer with scald protection
5	Control panel with tub functions	10	Adjustable bath feet for leveling control

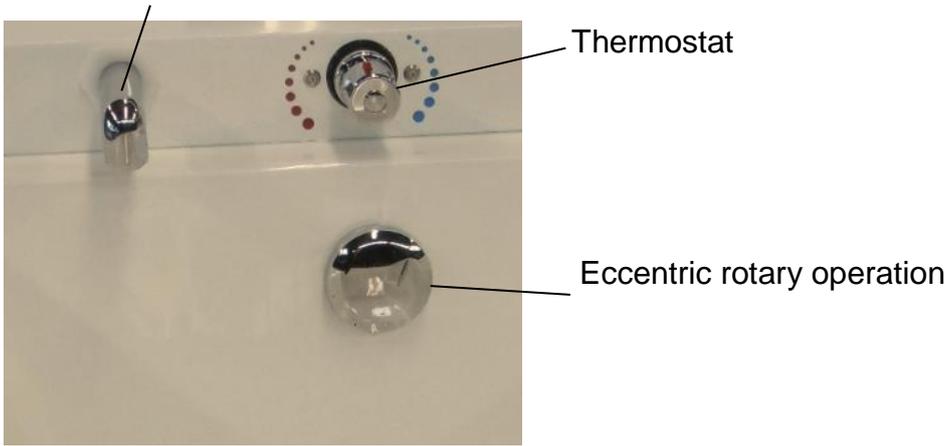
7.2 Tub interior



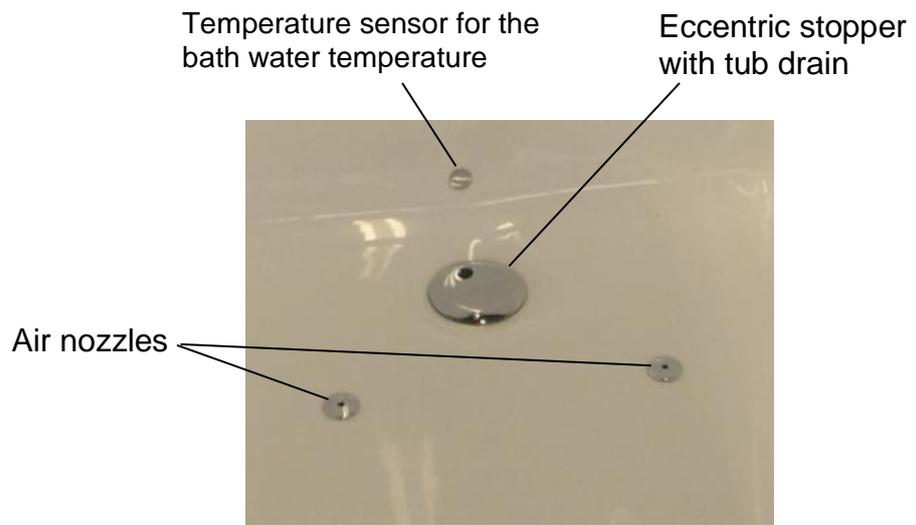
Picture 3

Figure shows the tub interior of the Avero Premium Plus

Bath spout

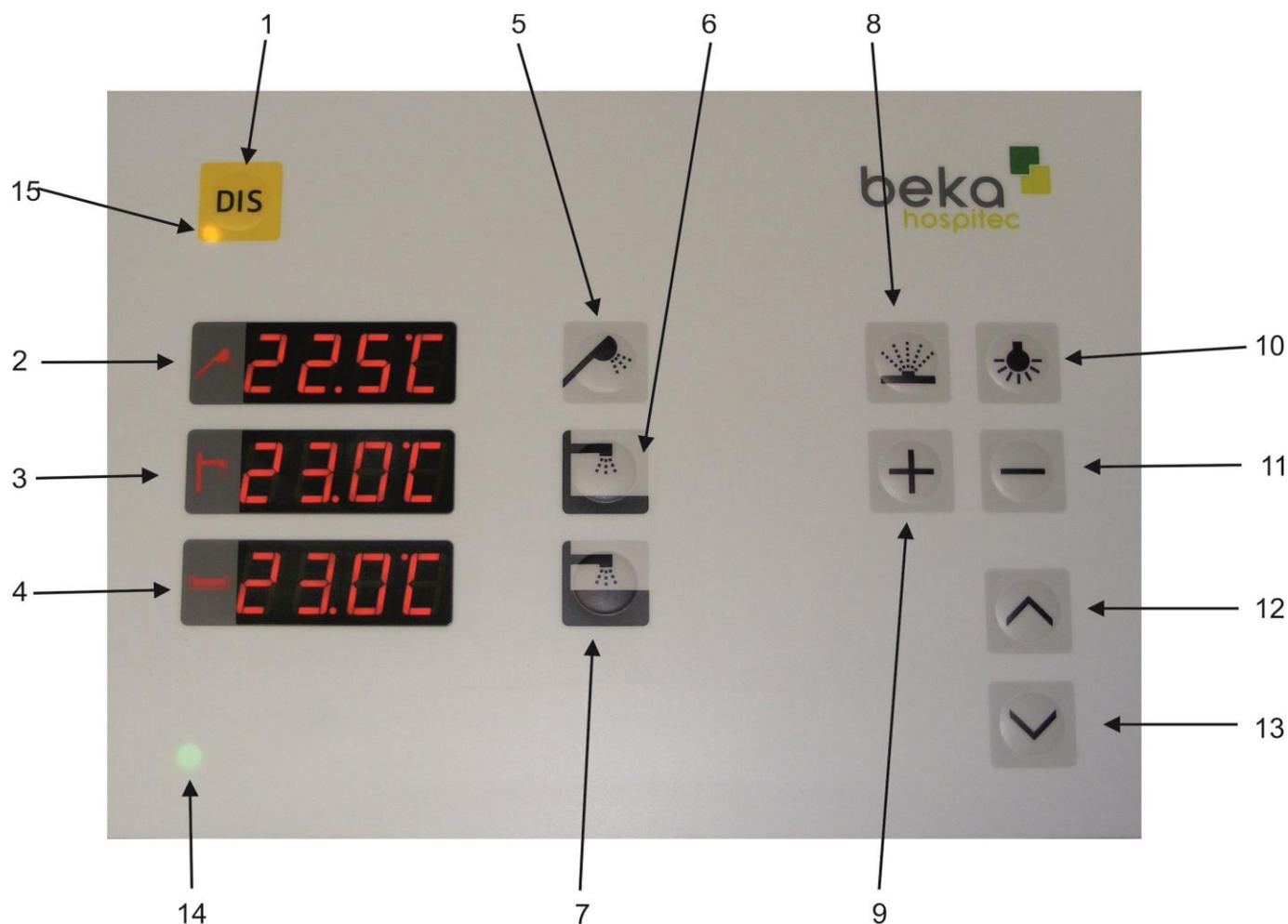


Picture 4



Picture 5

7.3 10 button control panel



1	Button disinfection	9	Jet button +
2	Handheld showerhead temperature display	10	Color light therapy system button
3	Filling temperature display	11	Jet button -
4	Bathwater temperature display	12	Height adjustment button UP
5	Handheld showerhead button	13	Height adjustment button DOWN
6	Filling (filling height 1) button	14	Power / Function LED
7	Filling (filling height 2) button	15	Disinfection LED
8	Air spa system button		

8. Operating the AVERO Premium Plus Lifting Tub

The AVERO Premium Plus lifting tub is an ergonomic care tub made of GRP material with a fully enclosed exterior finish.

The lifting tub is free on three sides and requires little space.

The height adjustment is freely adjustable between 660-1060 mm via a control panel.

The tub inner body is ergonomically shaped and with the integrated armrests and the molded back that provides a secure yet comfortable ergonomics.

Integrated security handles provide the patient assistance for getting in and out.

In the inner body, devices for a tub shortener have been integrated.

9. Using the AVERO Premium Plus Lifting Tub



- (6) To fill the AVERO Premium Plus lifting tub press the key "6 or 7" on the control panel. If your tub is equipped with the optional **"automatic water stop"** function, the filling will automatically stop when it reaches the fill level.
- (7)

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

Note!



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

Wheelchair patients can easily be lifted with mobile lift systems or ceiling-lifters into the AVERO Premium Plus lifting tub.

The spacious opening below the tub allows direct access to virtually every lift system.



- (12) To move the tub to the desired height in order so that application to the patient can be performed without fatigue and comfortably, press one of the buttons (up / down) on the control panel to adjust the height.
- (13)

If the "tub up" button is pressed, the tub moves upwards. If the "tub down" button is pressed, the tub moves downwards. Upon reaching the minimum and maximum height the motor switches off automatically.

Depending on the size and the patient's wishes, water can be added to cover his body up to his shoulders.

If the bath is complete, turn the eccentric button (overflow) to drain the water.

You can start to dry the patient while he is still sitting comfortably in the bathtub.

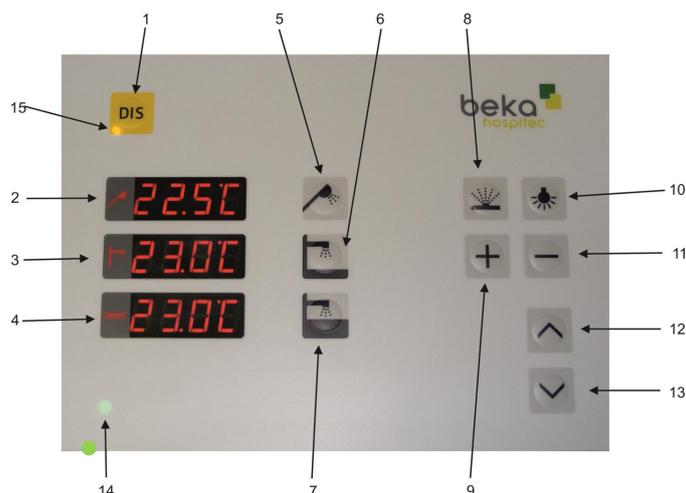
Then help your patient out of the bathtub or use a lift system to lift him out of the tub.

Note!



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

10. Advanced Lifting Tub Functions



10.1 Button disinfection (1)

The disinfection button turns the optionally disinfection device on and off.

To activate the disinfection, press the button.

The Disinfection LED (15) will signal with a permanently yellow light, that the disinfection is activated.

Press the disinfection button again to turn it off.

The disinfection device can be turned on only when the tub is emptied and all other functions are turned off. This applies to, for example, the fan, dry-out light, handheld showerhead and filling features.

A disinfection procedure must last for at least 15 seconds otherwise the system starts from a faulty operation.

The disinfection can be activated manually by pressing the DIS key (1) or end automatically after 5 minutes. The reaction time/exposure time starts after this.

The Disinfection LED (15) starts flashing yellow to signal that the reaction time/exposure time is in progress.

The exposure lasts for 5 or 10 minutes depending on the setting.

After the exposure time, the Disinfection LED (9) stops flashing.

All subsequent functions are released again.

The exposure time can only be modified by your technician.

To cancel the exposure times (locking of other functions) press the disinfection button for 5 seconds.

The height adjustment feature of the tub is not affected by locking and is still in function.

10.2 Display (2) / Display (3) / Display (4)

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

- Display (2) = Handheld showerhead temperature
- Display (3) = Filling temperature
- Display (4) = Bath water temperature



The display is shown in 0.5 °C increments.

If the measured temperature greater than 42 °C (scald protection), then the appropriate display "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 "TLO" will appear.

10.3 Handheld showerhead button (5)



The Handheld showerhead is switched on or off by pressing button (5).

The Handheld showerhead is switched off automatically when the temperature of the Handheld showerhead 42 °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 (5).

The handheld showerhead can be switched on or off with the following key combination: Hold and press button (5), press additional keys (8) and (10) together.

The handheld showerhead can always be turned off using the button (5) (also with an active scald protection).

10.4 Fill level 1 button (6) + fill level 2 button (7) (option)



(6)

There are 2 fixed fill levels for filling the bath that can be selected.

Pressing the button (6) begins filling the tub up to the defined Fill level 1.



(7)

Pressing the button (7) begins filling the tub up to the defined Fill level 2 (max. automatic fill level).

Stopping filling both levels (Fill level 1 and 2) is achieved by pressing the previously selected fill level.

To start filling again, press the corresponding button again. The function is disabled when the chosen filling level has been reached.

After reaching fill level 1 or 2 (depending on the selection), it is no longer possible to fill the tank automatically.

In this case, you can fill the tub further manually by pressing the appropriate button (6) or (7). Filling starts for 10 seconds per touch of a button.

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 (7).

The bath filling can then be switched on or off with the following key combinations: Press and hold button (6) or (7), press additional keys (8) and (10) together.

The bath filling can always be turned off using the button (6) or (7) (also with an active scald protection).

10.5 Air spa system button (8)

(8)  The fan can be switched on and off with the "**air spa system**" button (8).

After turning on, the fan runs with "soft start" up to medium intensity.

With button   the power of the fan can be adjusted accordingly.

The controller also has an interval function for the fan. The interval function is activated by simultaneously pressing the "+ intensity" and "intensity -" button.

By pressing the air spa system  button again the interval function is turned off.

The fan is switched off automatically 30 minutes after the last keystroke or when the water sensor reports to the fan that no water is in the tub (sensor no longer covered).

If the water sensor is covered with water for at least 1 minute, the automatic subsequent fan starts after 3 minutes.

The automatic fan takes 30 seconds and can be canceled with the "**air spa system**" button. The fan can also be started manually. When the water sensor reports that the pan is empty, then press the "**air spa system**" button to start the fan and also stop it again. The subsequent fan lasts 30 seconds.

Besides its relaxing effect the air spa system also has a healing function.

Thousands of air bubbles massage the skin and open the pores.

This massage improves blood circulation to your cells.

The air spa system reduces the muscle pain associated with arthritis and significantly improves the patient's well-being.

10.6 Color light therapy button



To activate the color light therapy, press button (10).

The RGB- headlamp lights

The other available colors can be selected by pressing the button (10).

The color sequence is as follows: red - yellow - green - blue - automatic color change.

It is possible to stop the automatic color changing by pressing the button (10). Press the button (10) again to start the color change again.

To turn off the color light therapy, press the button (10) for min. 3 seconds.

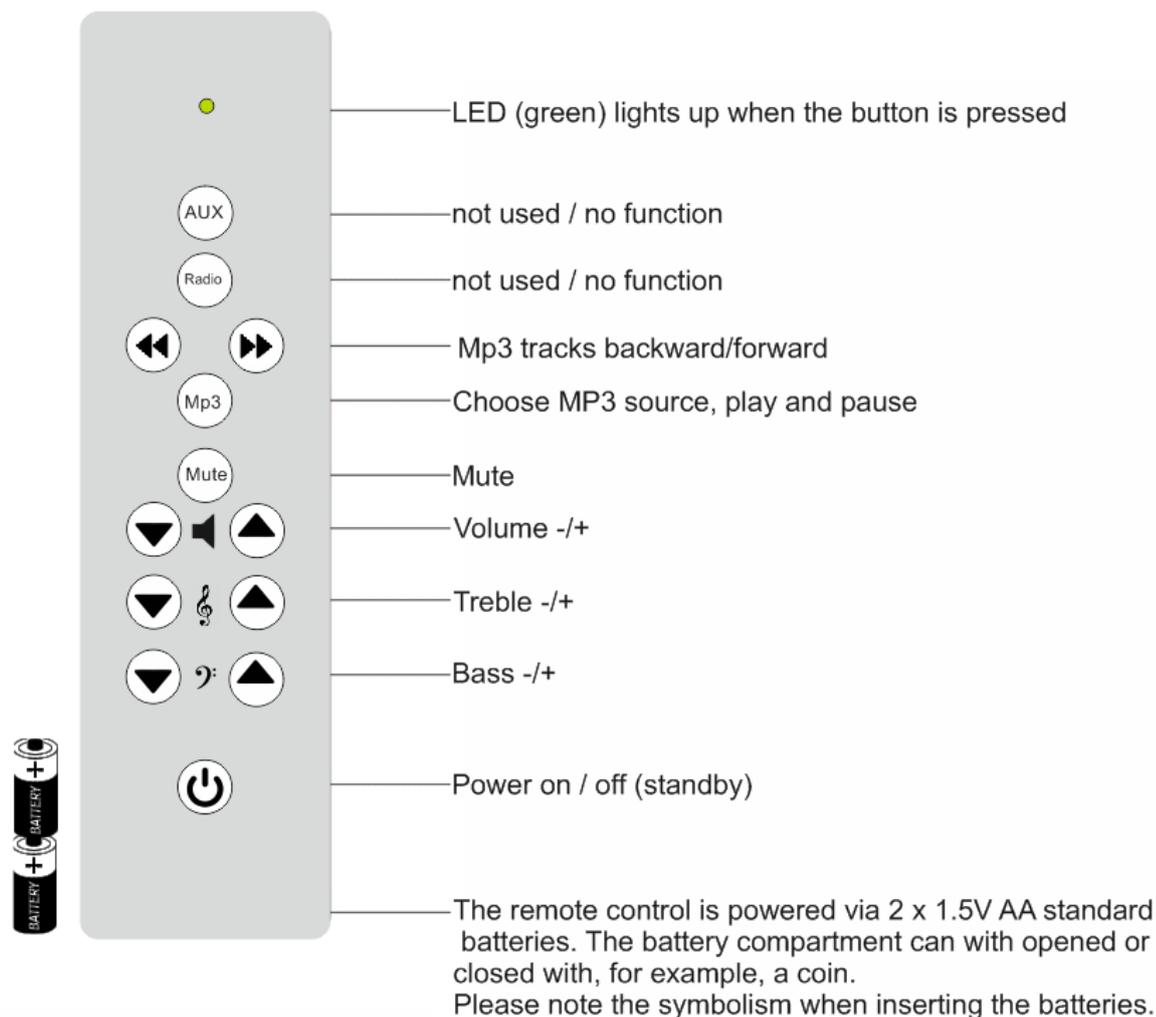
10.7 Power / Function LED Display (14)

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	Additional fill enabled. The filling process must be terminated manually. Otherwise, the tub could overflow
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)

10.8 Music - Sound system



Music sound system

The music sound system is operated via the included remote control. The USB stick is plugged into the MP3 docking station. Remove the cover to insert the USB flash drive. The cover of the docking station must be closed again after plugging the USB flash drive. The music files will be automatically detected.

Turn on the music sound system via the power button . Start playback via the MP3 source button . Using the buttons you can jump back and forth between titles. To switch playback to mute, press the button. Silent mode (Mute) can be exited by pressing the or by pressing the button.

Setting of the music sound system volume and tone controls are done via the buttons for volume audio output level, for the treble and for adjusting the bass.

The music sound system should be turned off via the button when you leave the tub.

10.9 Emergency drain function during power failure (option)

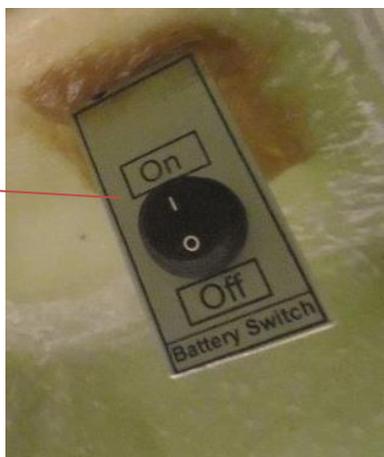
If you have integrated the “**emergency drain**” option on your tub, the tub is supplied with an internal battery in the case of a power failure. The batteries only supply power to the control panel, the hand control panel and motor for lifting and lowering the tub. All other functions (i.e. air spa, light therapy etc.) will shut down in the case of a power failure.

Note:



The emergency drain function is deactivated to protect the internal battery from exhaustive discharge upon delivery of the AVERO Premium Plus.
To use the “emergency” drain option, the switch must be turned to “ON”.

The switch for activating the emergency drain function is located under the removable inspection cover for refilling the disinfectant.



Note:



The battery capacity is designed so that you can move the tub once to the lower position.
This feature allows you to help the patient out of the tub safely even during a power failure.
If the battery capacity is exhausted none of the processes will function, even if there is no power failure.

In a normal state the internal batteries will be at a conservation level again held by an intelligent charging circuit.



In case of a power failure “Accu” will appear on the control panel and the temperature indicators will switch off. Add-on modules such as air spa, light therapy etc. will automatically switch off.

Move the tub to the lowest position and help the patient out of the tub, or use a lift system to lift the patient out of the tub.

Note!

Ensure the power is restored and the tub is operational before assisting a new patient into the tub.
The optional emergency lowering feature is only designed for a single usage.

When the tub has regained sufficient voltage the controller will revert to a normal state. All displays will be switched to their normal state and the internal batteries will be reloaded to their intelligent charging circuits.

Note!

The internal batteries are charged by means of a loading and unloading process.
This process limits their service life.
We recommend you replace your batteries every 2 years.
Contact your service technician for assistance.

10.10 Aroma-therapy-system (option)

An integrated aroma therapy system allows the application of various flavors, who, together with the warm air of the air jet whirl system and the bathing water, offer a wonderful experience for the senses of your resident.

An easy operation and a maintenance-free system are self-evident.

This option is only possible in combination with the air-jet-whirl system.

Filling the Aroma-therapy-system

You can find the Aroma-therapy-system on the door side of the AVERO Motion.



Open the screw connection by turning it counterclockwise



Remove the lid



Fill the flavors into the aromatic therapy tray



Close the screw connection by turning clockwise



Note: The Aroma-therapy-system only works with the lid closed!

Durability: The shelf life is dependent on how often and how long the application lasts. Usually this is 3 months.

Nevertheless, one should regularly check whether the indicated flavors are still sufficient.

CAUTION: Do not pour liquids into the Aroma-therapy-system.

Only fragrance carriers made of wood or the fragrance bags available from Beka Hospitec GmbH are permitted.

11. Cleaning / Disinfection

Cleaning the AVERO Premium Plus Lifting Tub

- Clean the AVERO Premium Plus lifting tub with a soft, lint-free cloth.
- Use a cloth dampened with soapy water for thorough cleaning.
- For disinfection, a cloth moistened with an isopropyl alcohol solution can be used.
- To avoid damage, **do not use** aerosol cleaners, sprays, abrasives or solvents to clean the control panel.

Attention:



Make sure that the system is not in operation during cleaning!

Warning:



After each use, complete disinfection of the AVERO Premium Plus with a disinfectant must be performed in order to avoid cross-contamination.

The AVERO Premium Plus lifting tub can be cleaned while damp with a standard plastic cleaner.

To disinfect the surface, use an isopropyl alcohol solution or an industry-standard disinfectant aerosol (spray).

The tub body of the lifting tub AVERO Premium Plus consists of fiber glass, reinforced plastic and is to be disinfected with surface disinfectant (not aggressively).

If aggressive cleaning agents are still used, all warranty claims regarding the surface damage are lost.

Disinfecting the AVERO Premium Plus Lifting Tub

With regard to the transfer risks, we recommend that carefully you disinfect and rinse your bath between each use.

The disinfection of the tub is carried out manually with the disinfection handheld showerhead (yellow).

Please note that you can only disinfect with a disinfectant system, not clean.

To remove grease stains, skin debris and hair, use a sponge and soap.

Never use abrasives to clean the tub!

Attention:

Please make use of a disinfectant only after the patient has left the bath. Follow the manufacturer instructions strictly for the disinfectant used. Avoid direct contact with the concentrated product. Where appropriate, protect the skin and eyes with gloves and goggles.

Note:

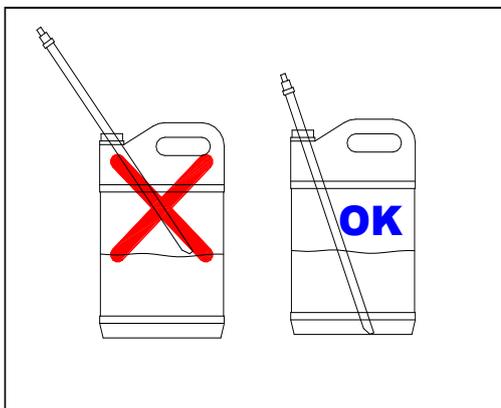
To ensure that no water remains in the nozzles of the air spa, the fan will continue to run for about 30 seconds.

Please do not interrupt this "dry cycle" and wait until the fan shuts off automatically!



1. The container with the disinfectant can be accessed via the inspection cover on the back side of the AVERO Premium Plus lifting tub. When refilling and replacing the container make sure that the hose reaches the bottom of the container.

2. Take the disinfection handheld showerhead (yellow hose) and hold it so that the disinfecting solution sprays into the tub. Press **button 1** to start the disinfection. Use care when spraying the inside of the tub. Let the disinfectant set for long enough. (see manufacturer recommendations). Then rinse the tub thoroughly with clean water (with the patient handheld showerhead).



3. Regularly check (min. once a week) if there is still enough disinfectant in the container. If necessary, change the container. Make sure that the hose reaches the bottom of the container.

Sterilization

The AVERO Premium Plus lifting tub is not suitable for sterilization.

Contact for technical information

Please always contact the medical adviser of your distributor or the manufacturer with technical information and for questions concerning the application.



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12. Waste disposal

Disposing of packaging waste

The expected useful service life of the lifting tub is approximately 10 years.

Please dispose of all packaging materials came with the AVERO Premium Plus lifting tub according to local regulations and laws for recycling.

The metal parts and plastic and electronic components should be recycled or disposed of in accordance with statutory regulations.

Disposal of product

Consult BEKA-contractors at the end of the product life of your AVERO Premium Plus lifting tub to dispose according to local regulations and laws.

The manufacturing company, BEKA Hospitec Ltd. issued further information for environmentally friendly disposal.

Please clean and disinfect before disposing the AVERO Premium Plus lifting tub.

13. Applicable test procedures & controls

For safe use of our lifting tub and protection for users and patients, we, BEKA Hospitec, prescribe an annual safety check.

At the same time, maintenance of the appliance should be carried out.

The implementation of safety checks and maintenance must be documented and provided on request. For this, use your inventory.

The checks may be carried out only by the manufacturer or by personnel authorized by the manufacturer.

Attention:



In accordance with UVV regulations of the professional association (0100 Group 700 DIN VDE) for stationary equipment in operating facilities, rooms and special installations "DGUV Rule 3 (BGV A3) test on the AVERO Premium Plus lifting tub is performed annually.

This DGUV test only is required for Germany.

In other countries other rules may apply.

Daily / before each use:	Clean, disinfect.
Weekly tests:	Conduct a visual inspection of all components, as well as hoses, pipes and connections, and a function test.
Monthly tests:	Check the filter in the water supply and clean if necessary.
Annual tests:	STK, maintenance, DGUV provision 3.

Attention:



Do not perform any cleaning, maintenance or inspection activities by when the tub is in use. This may create a hazard for the user and the patient.

For questions about the tests and to receive a competent contact person for carrying out the tests, contact your BEKA Hospitec distributors or directly contact BEKA Hospitec Ltd.



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14. Troubleshooting and customer service

Help Troubleshooting

Error that occurred	Remedy
The height adjustment of the lifting tub is not working.	<ul style="list-style-type: none"> a) Check if the power is connected. b) Check connections between the controller and operating unit. c) Check control panel for damage. d) Check cables for damage.
The lifting tub remains in the upper-raised position.	Check if the power is connected.
The lift motor is not functioning.	Check if the power is connected.
The drive shuts down during lifting.	The maximum load is exceeded (max. patient weight).
Power LED and temperature indicators are off.	Check if the power is connected.
The mains voltage fails.	<ul style="list-style-type: none"> a) Check the fuse. b) Check cables for damage.
No water.	<ul style="list-style-type: none"> a) Check the stop valves for the cold and hot water. b) Check filters in the water inlet.
Autofill not working.	Tub power switched off. Performing a restart. If this does not achieve the desired result, inform customer service.
Only hot or cold water is running from the fixture.	<ul style="list-style-type: none"> a) Check whether hot and cold water are reversed (building-side, bath). b) Check filters, inlet and outlet fittings for blockage.
Water flow rate too low.	<ul style="list-style-type: none"> a) Check filters, inlet and outlet fittings for blockage. b) Check that the flow rate is sufficient for the supply conditions. c) Check the connection hoses for kinks.
Water is leaking from the tap.	Check whether seals are damaged, replace any seals.
The bath water is running during the bathing process.	<ul style="list-style-type: none"> a) Check water stops and if necessary, adjust the screw on the water stops again. b) Check gasket for dirt and damage.
The bath water does not turn off.	<ul style="list-style-type: none"> a) Check water stops and if necessary, adjust the screw on the water stops again. b) Check gasket for dirt and damage.
Disinfection does not work.	<ul style="list-style-type: none"> a) Check Flowmeter (possibly closed). b) Check disinfectant container. c) Check the disinfectant hose.

The air spa system does not work.	Check if the power is connected.
The air spa system fails during operation.	a) The air spa system was used more than 15 minutes. Let cool. b) Overheating due to high ambient temperature. Let cool.
The sound system does not work.	a) Check if the USB stick is inserted correctly. b) The USB flash drive is possibly defective. Insert a new USB stick. c) The remote control batteries need to be replaced.
The color light therapy does not work.	a) Mainboard defective. Inform customer service. b) Headlamp defective. Inform customer service.
Unusual noises when lifting the tub.	Inform customer service.
Damage to the lifting tub.	Inform customer service.

Customer service

Please contact the customer service of your distributor or the manufacturer if your AVERO Premium Plus lifting tub does not work properly and you cannot rectify the fault with the remedies under Section 14.



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15. Appendix

15.1 Technical data

Measurements and weight

- Length 190:	223.0 cm
- Width 190:	82.0 cm
- Length 170:	208.0 cm
- Width 170:	82.0 cm
Internal width above 190/170:	72.0 cm
Internal width below 190/170:	57.5 cm
- Height 190/170:	96 – 136 cm
- Lifting height min. 190/170:	66.0 cm
- Lifting height max. 190/170:	106.0 cm
- Weight without water 190:	approx. 250 kg
- Weight without water 170:	approx. 230 kg
- Capacity 190 (without patient):	approx. 220 l
- Capacity 170 (without patient):	approx. 190 l
- Patient weight	max. 220 kg / 485 lbs
- SWL (Safe load):	300 kg / 661 lbs (Patient and Water)
- Applied Part:	Typ B
- Protection class:	I

Noise level:

Lifting / lowering without load	60 dBA
Air spa	82 dBA

Button operation:

Button pressing force	5 N
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Electrical data

Rated voltage:	230V, 50 Hz or 120 V, 60 Hz
Power consumption:	840 VA

Controller

- Protection class:	II
- Applied Part:	Type B
- Operating mode:	Continuous operation
- Power supply:	120 V~ (AC) / 50/60 Hz
Power consumption:	1.0 Amp.

Electric motor characteristic data

- Power supply:	24 Volt (DC)
- Frequency:	50/60 Hz
Power consumption:	6 Amp.
- Operation time max .:	2 min on and 18 min off
- Protection type:	IP X4

Operating element

- Accuracy of the display:	+/- 1 °C
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Environmental conditions**Operation**

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

Storage and transport

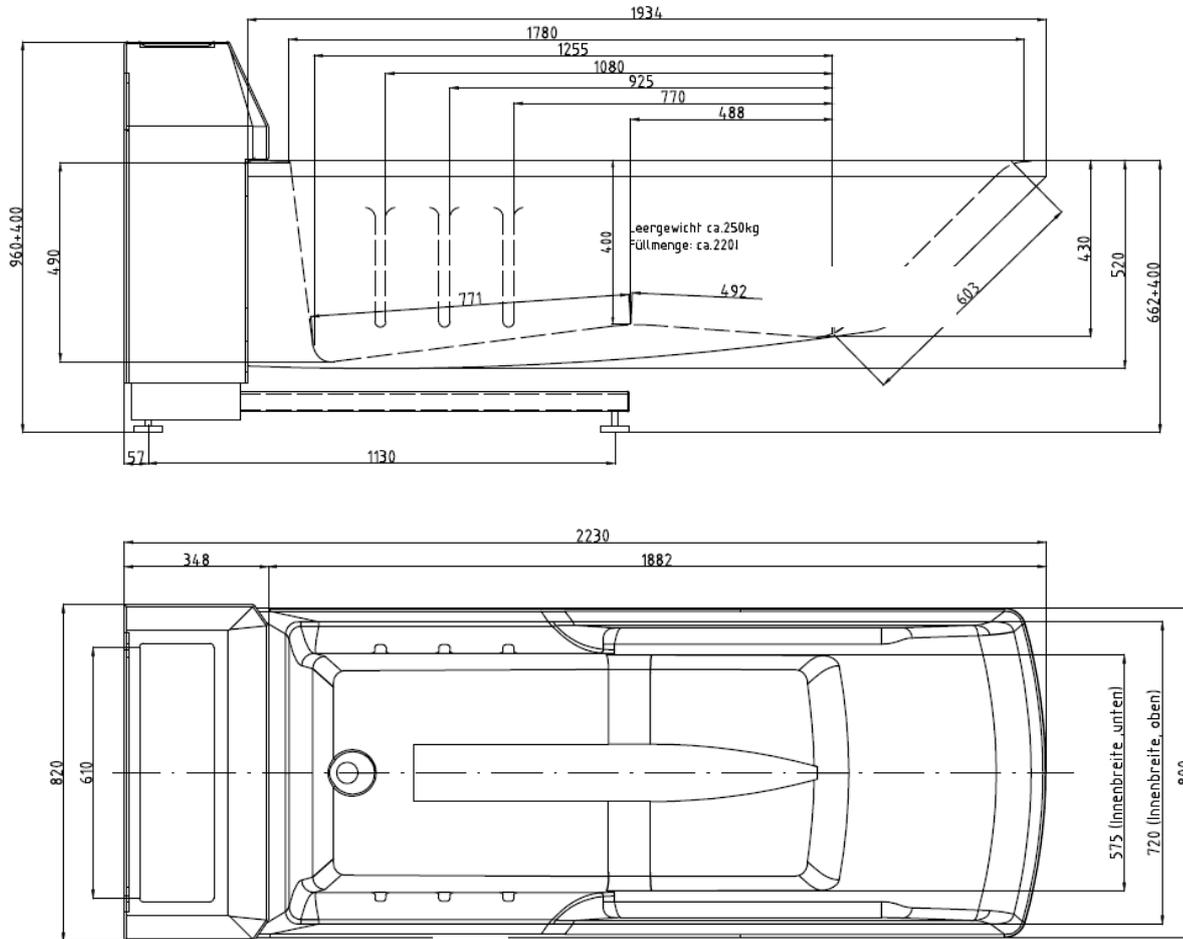
- Temperature range:	-20° C to 70° C
- Relative humidity:	10% to 80%, non-condensing
- Atmospheric Pressure:	800 hPa

Manufacturer

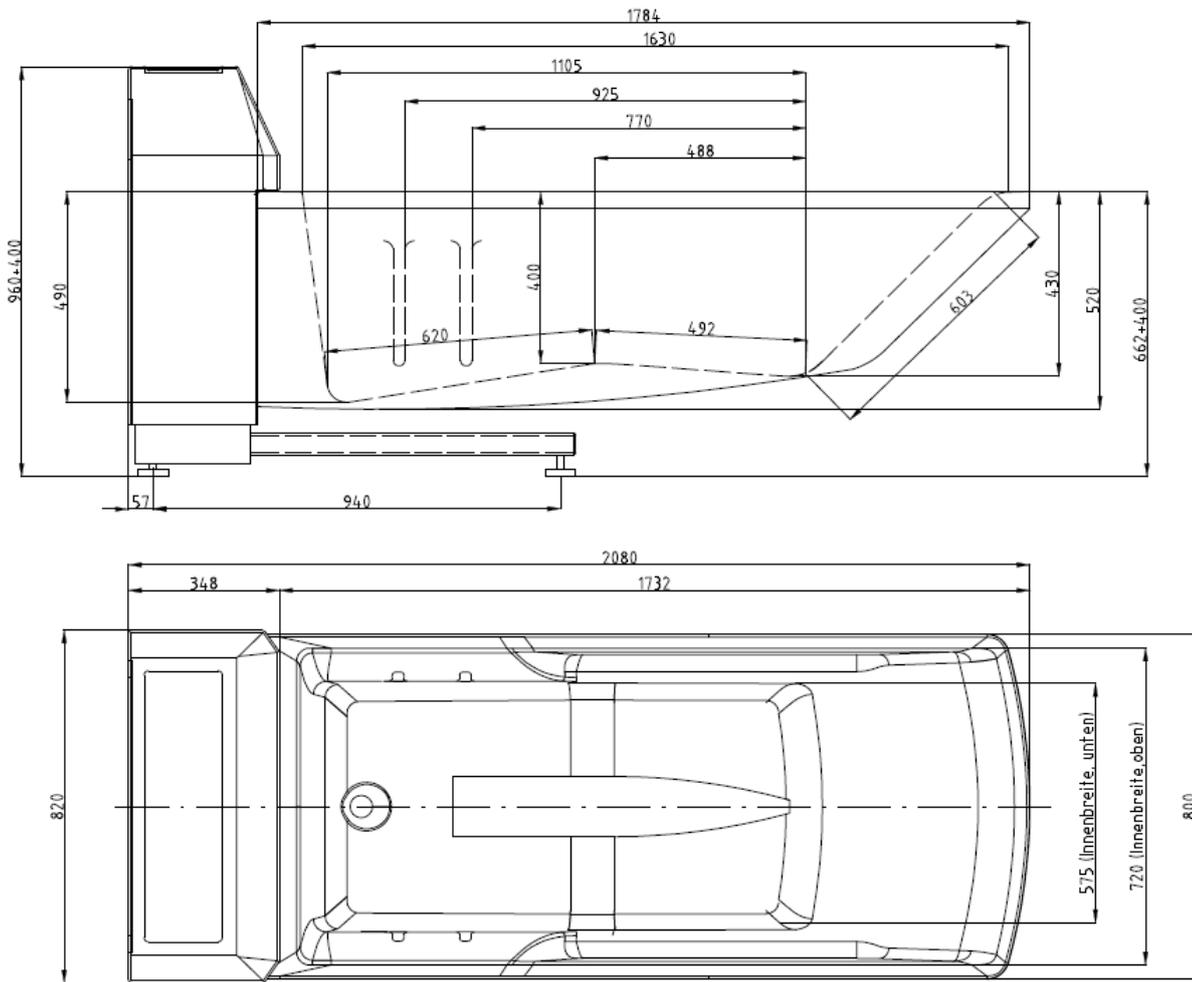
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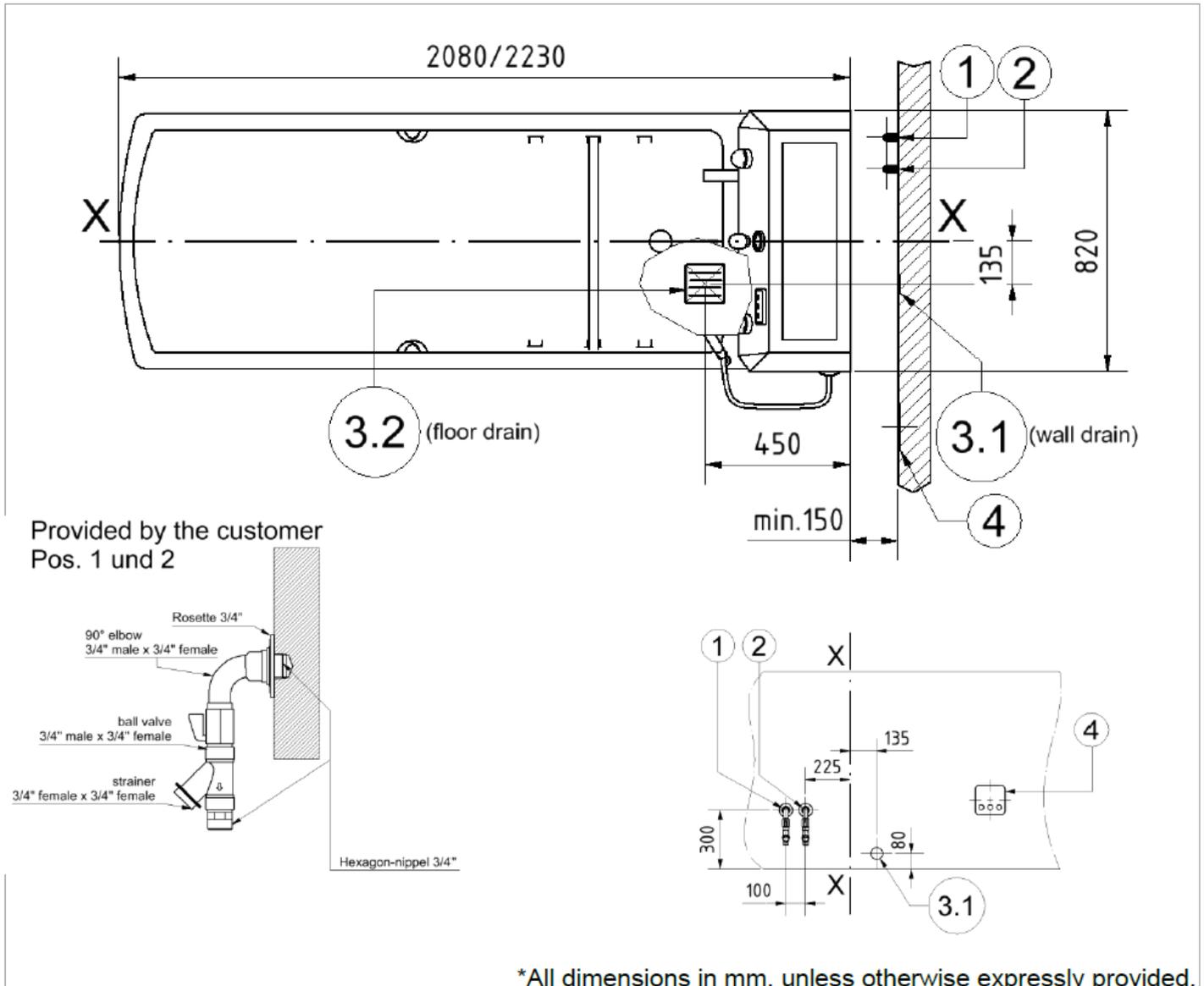
15.2 Dimensions AVERO Premium Plus 190



15.3 Dimensions AVERO Premium Plus 170



15.4 Installation plan AVERO Premium



*All dimensions in mm, unless otherwise expressly provided.

➔ 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.

➔ Pre-installed connections - Sanitary - Electric

- ① Warm-water connection $\frac{3}{4}$ ", set female threading tile-even.
Assemble hexagon-nipple, elbow 90°, ball valve, strainer and rosette (see details illustration Pos.1 und 2).
- ② Cold-water connection $\frac{3}{4}$ ", set female threading tile-even.
Assemble hexagon-nipple, elbow 90°, ball valve, strainer and rosette (Details illustration Pos.1 und 2).
- ③ Option 3.1: Wall drain DN 50, tile-even.
- ③ Option 3.2: Floor drain, minimum flow rate needed 1 l/s.
- ④ Junction-box (min. IP X5), 230 V/50 Hz, or 110V/60Hz
1, 5 mm², fuse protection 16 A.
Position according to local codes and standards.

15.5 Declaration of Conformity



EG-Konformitätserklärung / EC-Declaration of conformity

Der Hersteller / *The manufacturer*

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

erklären in alleiniger Verantwortung gemäß EG-Richtlinie für Medizinprodukte 93/42/EWG Annex VII,
 dass die folgenden Produkte:
declares under our sole responsibility according to the EG directive for Medical Devices 93/42/EEC, Annex VII that the following products:

Hubbadewanne AVERO Premium Plus 190 / Lifting tub AVERO Premium Plus 190	Artikel Nr. P/N.	810 143 501 910 143 700
Hubbadewanne AVERO Premium Plus 175 / Lifting tub AVERO Premium Plus 175	Artikel Nr. P/N.	810 142 501 910 142 700

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

Die Bauart des Produktes entspricht Klasse I des Medizinproduktegesetzes (MPG), Regel 12
The product corresponds with Class I Medical Device Directive (MDD), Rule 12

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

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

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 issuance until it is either superseded by another declaration or withdrawn.

Technische Änderungen vorbehalten / Technical Changes reserved.

Wetzlar, den 22.05.2017

Robert Deschler
Geschäftsführer

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 BLZ: 515 400 37
 IBAN: DE60515400370482176500
 SWIFT-BIC: COBADEFF515

15.6 AVERO Premium Plus Optional extras / Accessories

Article No ..	Description
910131100	Bath shortener
910131203	Cleaning system
910131300	Automatic water stop
910131403	Music sound system
910131503	Air spa system
910131603	Air spa system
910609150	Aroma-Therapy
K9103300	Nina showerhead
K9100361	Shower hose L = 2.3m
K9100951	Disinfectant showerhead (yellow)
K9100351	Shower hoses for disinfectant (yellow) L = 2.0m
K9100710	Electric motor for AVERO Premium Plus
K0904010	Radio remote control for sound system

15.7 Spare Parts / Consumables

Spare parts and consumables is 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.

15.8 Electromagnetic compatibility

Electrical medical equipment needs to be installed with special precautions taken regarding EMC and must be installed and put into operation according to EMC information contained in the accompanying documents.

No special measures must be taken for devices and systems of BEKA Hospitec Ltd.

Portable and mobile RF communications equipment can affect electrical medical equipment.

Guidelines and manufacturer declaration - electromagnetic immunity		
The AVERO Premium Plus is intended for use in the ELECTROMAGNETIC ENVIRONMENT specified below. The customer or user of the AVERO Premium Plus should ensure that it is used in such an environment.		
Release measurements	Agreement	Electromagnetic environment - guidelines
High-frequency (RF) emissions according to CISPR 11	Group 1	The AVERO Premium Plus uses RF energy for its internal functions only. Therefore, the RF radiation of the device is very low and it is unlikely that nearby electrical devices will be disturbed.
High-frequency (RF) emissions according to CISPR 11	Class B	The AVERO Premium Plus is intended for use in all facilities including residential areas and the like that are directly connected to a public power supply that also supplies buildings used for domestic purposes.
Harmonics according to IEC 61000-3-2	Class A	
Voltage fluctuations / flickers according to IEC 61000-3-3	complies	

Guidelines and manufacturer declaration - electromagnetic immunity			
The AVERO Premium Plus is intended for use in the ELECTROMAGNETIC ENVIRONMENT specified below. The customer or user of AVERO Premium Plus should ensure that it is used in such an environment.			
Interference immunity tests	IEC 60601- test level	Consistency level	Electromagnetic Environment Guidelines
Static discharge Electricity (ESD) according to IEC 61000-4-2	± 6kV Contact discharge ± 8kV Air discharge	± 6kV Contact discharge ± 8kV Air discharge	The floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relevant humidity should be at least 30%.
Fast transient interference pulses / Burst IEC 61000-4-4	± 2 kV for Power supply lines ± 1 kV for Input / output lines	± 2 kV for Power supply lines Not applicable for input / output lines	The quality of the power supply should be that of a typical commercial or hospital environment.
Overload IEC 61000-4-5	± / to 1 kV line opposite line ± / to 2 kV line opposite ground	± / to 1 kV line opposite line ± / to 2 kV line opposite ground	The quality of the power supply should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage fluctuations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0.5 period 40 % U_T (>60 % dip in U_T) for 5 periods 70 % U_T (>30 % dip in U_T) for 25 periods <5 % U_T (>95 % dip in U_T) for 5 s	<5 % U_T (>95 % dip in U_T) for 0.5 period 40 % U_T (60 % dip in U_T) for 5 periods 70 % U_T (30 % dip in U_T) for 25 periods <5 % U_T (>95 % dip in U_T) for 5 s	The quality of the power supply should be that of a typical commercial or hospital environment.
Power Frequency (50/60 Hz) Magnetic field IEC 61000-4-8	3 A/m	3 A/m	Magnetic fields at mains frequency should have the typical values that are found in a business or hospital environment.
ATTENTION U_T is the ac mains voltage prior to application of the test level.			

Recommended distance between portable and mobile communications systems and the AVERO Premium Plus.

The AVERO Premium Plus is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or user of the AVERO Premium Plus can prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the AVERO Premium Plus depending on the output of the communication device as indicated below.

Rated power of the device W	Safe distance depending on transmission 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 whose maximum rated power is not specified in the table above, the recommended separation distance d can be determined in meters (m) using the equation for the respective distance, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: 80 MHz and 800 MHz is the valid separation distance for the higher frequency range.

NOTE 2: The guidelines may not be applicable in all cases. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

