

GK Magic 1000

version 37.7 U



User manual
02/2018

CE

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Congratulations on your decision to purchase a GK Bathtub. You have acquired an Austrian quality product which will considerably ease the strain involved in patient care.

Due to their advanced ergonomic design, GK Bathtubs are simple and straightforward to use. In spite of that, we would ask you to study the instructions carefully before operating the bathtub. The detailed information contained in this manual will facilitate your practical work.

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■ Intended use

Bathing system for bathing patients with restricted mobility in care institutes and hospital wards. It is operated by healthcare professionals. The possible height adjustment provides an ergonomic working environment for the personnel and helps keeping their spines healthy.

■ For your safety

- Ensure that this bathing system is operated and maintained only by trained personnel.
- Always check the water temperature with your bare hand (also when using the shower) before bringing the water in contact with the patient.
- Ensure that each client is assessed for its ambulatory capability, ensuring the client's safety when entering and exiting the bathing system (utilize handgrips, correct entry height, correct client transferring device, etc.).
- Never leave the patient unattended inside the bathtub.
- Ensure that the equipment is thoroughly cleaned after every use.
- When using disinfection, protect your skin and eyes. Heed all instructions on the disinfectant's container and material safety data sheet.
- Always make sure that the device is supplied with power. It may only be interrupted in emergency situations.
- Ensure that there are no objects right next to the tub to ensure a safe up and down movement. Disregarding this instruction can cause bad injuries or damage the device.
- Don't place any objects on top of the device, since due to movement or vibrations, they can fall off - also into the tub.
- Adjustments and repairs must be carried out by authorized and appropriately qualified persons only.

Caution:



The safety rules and instructions in this operating manual must be observed in order to ensure safe and proper use of the equipment. All claims under guarantee become void if these requirements are not met.

■ Components



- | | |
|--------------------------------------|----------------------|
| 1. Disinfection | 7. Fill in spout |
| 2. Lid | 8. Overflow |
| 3. Shower | 9. Hydromassage jets |
| 4. Control panel | 10. Drain |
| 5. Mixer | 11. Grab handle |
| 6. Shampoo & Bath additive dispenser | |

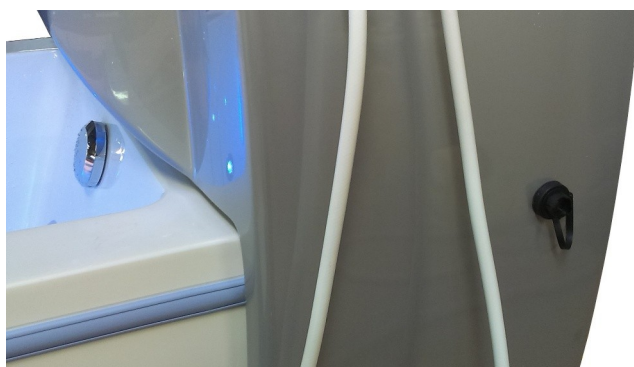


- Flowmeter with concentration table

- Box for care and disinfection liquids

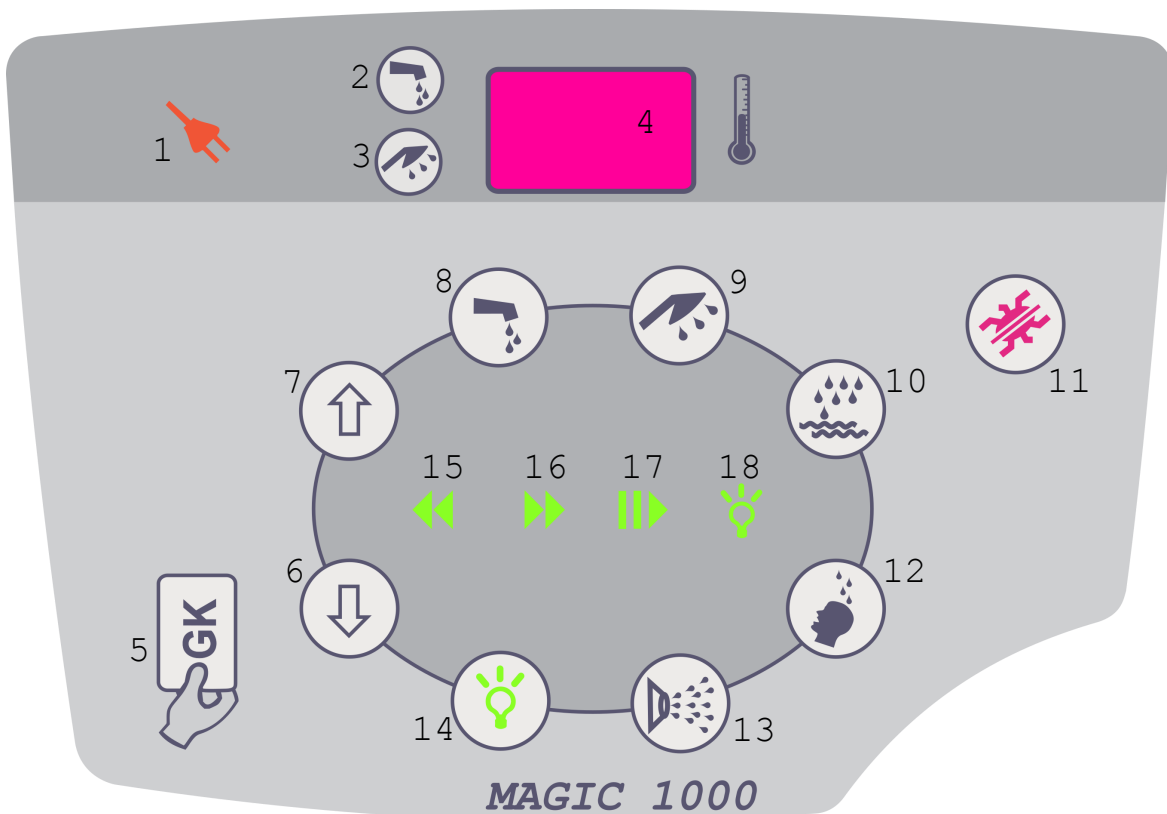


- Hydromassage jet



- USB port

■ Control panel overview



- | | |
|---|------------------------------|
| 1. Symbol Missing power supply | 15. Button Back |
| 2. Symbol Tub fill temperature | 16. Button Next |
| 3. Symbol Shower temperature | 17. Button Play/Pause |
| 4. Display Tub fill & Shower temp. | 18. Button Lights |
| 5. Sensor Activation card | |
| 6. Button Down | |
| 7. Button Up | |
| 8. Button Tub fill | |
| 9. Button Shower | |
| 10. Button Bath additive | |
| 11. Button Disinfection | |
| 12. Button Shampoo | |
| 13. Button Hydromassage/Ultrasound | |
| 14. Button Underwater light | |

■ Functions

How the control panel works

Generally we can say that a lit button signals the availability of the corresponding function (with the exception of Sound & Vision - for details see the corresponding chapter). When you press the button you activate its function and the light starts flashing. To stop the function, just press the button again. When there is no backlight behind the button, then the function is not available at the moment (for instance: disinfection is not available when the tub is full).

Standby mode

If the tub is empty and for 10 minutes no function is activated (or in case that the main switch of the bathtub has been switched on), then the bathtub goes into standby mode. In this mode all functions are deactivated (with the exception of Sound & Vision, which gets "frozen" in the state which it is in at that moment) and locked. Only the sensor "ACTIVATION CARD" is illuminated with a green backlight.

The standby mode a) prevents unauthorized use of the bathtub and b) helps to save energy since due to the deactivation of almost all functions the bathtub uses less electricity.

In order to return to normal mode, please, use the activation card (see next subchapter).

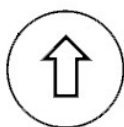
Activation card



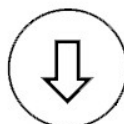
To use the tub again when in standby mode, gently swipe the magnetic activation card over the green backlit sensor "ACTIVATION CARD". After 1-2 seconds the device should return back to normal mode.

Note: Optionally you can also reactivate the bathtub without the activation card. This option can be set in program mode. If it has been turned on, then you can reactivate the bathtub by pressing any button. (In case that the function behind the pressed button is available, it will also get activated immediately, e.g. raising and lowering.) This means that with this option turned on, the standby mode only helps to save energy but does not prevent unauthorized use of the bathtub.

Raising and lowering the tub



The "UP" and "DOWN" buttons are used to raise or lower the tub. The movement continues until the button is released again. In the upper and lower end positions the tub stops automatically. In the event of power failure the bathtub can only be lowered, which is powered by the emergency battery. The movement is a bit slower in this case than usual. Additionally the symbol "MISSING POWER SUPPLY" is illuminated.



Opening & Closing the drain



In order to close the drain, ensure that the drain plug is in place. Then turn the chromed overflow clockwise. In order to open it, turn the overflow counter-clockwise. (It is not necessary to remove the drain plug.)

Filling the tub



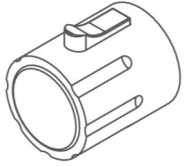
When you press the button "TUB FILL" the tub starts filling. The button starts flashing and the symbol "TUB FILL TEMPERATURE" lights up. The water now flows into the bathtub until the maximum filling level has been reached or the button is pressed a second time. When the bathtub is filled to the maximum level, then the button will be darkened and disabled until the recognized filling level drops again under the maximum. In case you want to add more water after automatic deactivation, you can do so by means of the hand shower.

Shower



The shower can be used at any time (except during certain parts of the disinfection procedure). To do so, simply take the white hand shower from its holder and press the button "SHOWER". The button starts flashing and the symbol "SHOWER TEMPERATURE" lights up. Press and hold the trigger on the hand shower's handle to begin showering. When you press the button "SHOWER" again, the shower is deactivated.

Setting the temperature



You can set the temperature for tub fill and shower continuously. To do that, turn the knob of the mixing valve to the desired position. The used temperature will be shown in the temperature display.

Note: For safety reasons the temperature is mechanically limited to 38 °C (standard mixer). To override this security appliance, press the button on the knob. Thus it is possible to turn the knob further and set a higher temperature.

Caution: *When setting the temperature to a value above 38 °C, set it back to 38 °C or lower as soon as possible! In the meantime, while the temperature is overridden, use extreme caution with the hot water.*



Temperature display tub fill & shower



This display shows the current tub fill respectively shower temperature when they are in use. If the tub fill is active, the symbol "TUB FILL TEMPERATURE" is illuminated additionally to the flashing button "TUB FILL". If the shower is active, the symbol "SHOWER TEMPERATURE" is illuminated additionally to the flashing button "SHOWER". If tub fill and the shower are active at the same time, both will have the same temperature since there is only one mixing valve. If none of these two functions are active, then the display remains empty.

Caution: *Always check the water temperature with your bare hand (also when using the shower) before bringing the water in contact with the patient.*



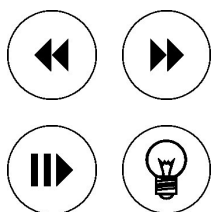
Note: The symbols next to the temperature display only serve as status indicators. You cannot activate any functions with these.

Underwater light



The underwater light, if installed (being an alternative to the "Vision" function), can be used at any time. By pressing the illuminated button the underwater light is switched on and the button starts flashing. The underwater light slowly changes between 7 colours. (It cannot be fixed to one colour.) By pressing the button again the underwater light is switched off.

Sound & Vision



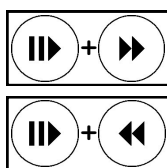
The optional feature „Sound & Vision“ can playback music files which are stored on a USB stick on speakers build into the tub body. Furthermore, by means of LEDs on different sides it can suffuse the water with light in various colours.

If this feature is installed in your GK bathtub, then the buttons “PLAY/PAUSE” and “LIGHTS” will flash slowly in a rhythm of 3-4 seconds (ready mode).

Sound

First of all ensure that a USB stick with readable music files (mp2, mp3, wma) is inserted into the USB port (on the side of the console). When pressing the button “PLAY/PAUSE” all the recognized music files will be played back, sorted by name (and the button starts to flash faster, about 1x/second). Furthermore, the buttons “NEXT” and “BACK” are enabled and illuminated continuously. When pressing these buttons the player switches to the next or previous (press 2x) track. After playing the last track playback continues again with the first track.

By pressing the button “PLAY/PAUSE” during playback, it is paused (and the button starts to shine continuously). When pressing it again, the playback continues. In case the pause exceeds 30 seconds, the player resets itself to ready mode automatically. Thereafter, a further playback would again start at the very beginning. (In case the USB stick gets pulled during playback or if it was not in the port at the start of playback (the button still flashes about 1x/second), then this “empty playback” must be “paused” before (re-)starting a real playback.

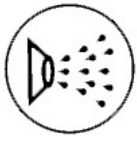


The volume can be adjusted through the button “PLAY/PAUSE” in combination with “NEXT” and “BACK”. By pressing the buttons “PLAY/PAUSE” and “NEXT” together the volume is raised. By pressing the buttons “PLAY/PAUSE” and “BACK” together the volume is lowered.

Vision

When pressing the button “LIGHTS”, the LED lights are switched to “slow continuous colour change” mode (and the button starts to flash faster, about 1x/second). - When pressing the button “LIGHTS” again, the colour currently visible in that moment is fixed (and the button starts to shine continuously).- Pressing the button a third time will switch back to ready mode and the LED lights off.

Ultrasound



On the GK Magic 2000 bathtub there is only one button "HYDROMASSAGE/ULTRASOUND" for both of these functions, since only one of these functions can be installed in the tub at a time.

The ultrasound cleaning treatment is available only when the tub is full. The button will be enabled and lights up. Press the button to start the ultrasound cleaning treatment. Press the button again to stop it. It can be turned on and off until the overall treatment time of 20 minutes (for each bathing cycle) is exhausted. Thereafter the illumination of the button stops and it can not be used until the next bathing cycle.

Note: The ultrasound transducer is audible. The closer any body parts are to the transducer plate the louder the side noise becomes. This is a normal side effect of the ultrasound cleaning treatment.

Caution: *Do not apply the ultrasound cleaning treatment to pregnant women.*



While using the ultrasound cleaning treatment make sure that the head of the patient stays above the water at all times and the he/she is situated with his/her feet towards the tub's drain.

Also the patient's feet should not touch the ultrasound transducer plate over a longer period of time while the function is active. Touching it for a few seconds is no problem, though.

Ultrasound cleaning FAQ:**What is ultrasound?**

Ultrasound in effect consists of sound waves in a high frequency in a non audible range for human ears (over 20 KHz). Of course these permeate, just like "normal" sound waves, also water and solid bodies.

Ultrasound is applied in diverse areas in different frequencies and with varying intensity. For the examination of pregnant women, for example, frequencies of 3.5 to 7.5 MHz but only very low intensities of 3 to 100 mW/cm² are used. For an ultrasound therapy with a warming effect frequencies of 750 KHz to 2 MHz and intensities of 100 mW to 3 W/cm² are used.

In our case of the gentle body cleaning underneath the water frequencies of 25 to 30 KHz and low intensities of about 100 mW/cm² are used.

How is ultrasound generated in the bathtub?

At the foot end of the bathtub there is a metal plate. Behind it is the ultrasound transducer. The ultrasound waves are generated there and spread out through the bathing water.

What effect does ultrasound have regarding body cleaning?

Because of the ultrasound millions of tiny gas bubbles are created in the water which collapse again very quickly (cavitation). At the surface of the patient's body the energy, which is released when the gas bubbles collapse, abrades dirt and loose skin particles in a gentle manner.

This cleaning process takes effect at all those areas, where the skin is touched by the water.

What are the benefits of ultrasound cleaning versus manual cleaning (potentially with hydromassage)?

1) The cleaning with ultrasound in general is more thorough. 2) It is also more gentle to the skin since no scrubbing need to take place. 3) It means less work for the caretaker. 4) The privacy of the patient can be respected a little bit more. 5) The metal plate of the ultrasound transducer can be cleaned more easily than any hydromassage jets. 6) Besides the patient's body also the submerged surfaces of the tub itself and of any additional equipment (e.g. lifts) are automatically cleaned as well. This makes the scheduled cleaning of these items a bit easier.

Are there any persons which may not be exposed to the ultrasound cleaning function?

In general (with the exception of pregnant women) the ultrasound cleaning function may be used on all persons which are also allowed to take a bath. In case you are not sure, ask a medical doctor if the application of the ultrasound cleaning (at 25 to 30 KHz and about 100 mW/cm²) is safe for the patient's health condition. (Also see the following questions.)

May the ultrasound cleaning function be used on pregnant women?

For safety's sake pregnant women may not be exposed to the ultrasound cleaning function. (Should it still happen unintentionally, then there normally is no harm to be expected, since the intensity used is low at 100 mW/cm². Still, one should not take unnecessary risks regarding the life of others.)

May the ultrasound cleaning function be applied to people with pacemakers?

We have no information about any disruption of a pacemaker's functionality because of ultrasound or an ultrasound transducer.

May the ultrasound cleaning function be applied to persons with implants or other metal objects in or on their body?

Implants or other metal objects are no problem.

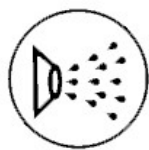
For how long at a time may the ultrasound cleaning function be applied to a person?

The ultrasound used would not have any negative effects for the body, regardless of the duration of exposure to it. Still, for the sake of usefulness and practicality the ultrasound cleaning function has a build-in time limit.

Should any bath additives be used during the application of the ultrasound cleaning?

Bathing oils should be avoided, since these have a negative impact on the effectiveness of the ultrasound cleaning. However, shampoo may be used.

Hydromassage



The hydromassage therapy, if installed, is available only when the tub is filled with water. In this case, the button is enabled and illuminated. By pressing the button the hydromassage jets are activated. Pressing the button again deactivates them. The hydromassage jets can be turned on and off until the overall treatment time of 20 minutes (for each bathing cycle) is exhausted. Thereafter the illumination of the button stops and it can not be used until the next bathing cycle.

Caution:



Contrary to some of our other bathtub models, when a massage hose coupling is installed, then also the jet containing the coupling will be activated immediately (without delay) upon activation of the whole function.

Shampoo & Bath additive



Both of these products, if installed, can be added at any time. By pressing one of the buttons "SHAMPOO" or "BATH ADDITIVE" the selected dispenser pump starts running as long as you hold the button.

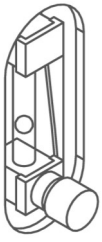


Note:

The tube for the shampoo has a red marking on its suction end - the tube for the bath additive a blue marking at the alike spot.

If there is no liquid coming out of the system, make sure that both boxes are full. After installing a new box it might take a while to get all the air out of the tubes. You possibly have to use the function for a longer period of time.

Disinfection



Flowmeter

The flowmeter is used to adjust the mixture ratio between water and disinfectant. It is located at the back of the console. It can only be calibrated during a disinfection cycle while the disinfectant solution is flowing. The table next to it should help you to find the right value. Always follow the instructions of the disinfectant manufacturer. The Flowmeter must be calibrated after each connection of water tubes and after changes in water pressure and after changing the disinfectant's composition. During use of the tub, pay attention not to accidentally alter its setting.



Disinfection procedure

In order to be able to start the disinfection procedure 1) there must be disinfectant inside its container and 2) the tub must be almost empty. If both requirements are met, then the disinfection button lights up.

Note:

If the disinfection container should be empty the disinfection button is flashing fast (~4x/sec.).

To start the disinfection procedure take the **red** hand shower from its holder and press the **disinfection** button. The button is flashing now. Spray all internal tub surfaces with the disinfectant solution.

Caution:



Protect your skin and eyes from the disinfectant solution. Follow all the instructions of the disinfectant manufacturer.

Thereafter press the button again and put the hand shower back into its holder.

After the necessary contact time (according to the disinfectant's manufacturer's specifications) the tub must be rinsed thoroughly. To do so, take the **white** hand shower from its holder and press the **shower** button. Rinse all internal tub surfaces thoroughly.

When you deactivate the shower any hydromassage jets are activated briefly in order to remove the disinfectant solution from them. Ensure that no disinfectant solution residues are left behind inside the tub.

Note:

For safety reasons the disinfection procedure - once started - cannot simply be aborted.

During the whole disinfection procedure most other functions are disabled, especially the tub fill.

Note: If the disinfectant runs out while spraying, the whole procedure **must** be restarted after replacing its container. Since the procedure cannot simply be aborted and the tub fill being disabled, therefore - once the disinfection procedure has been started - you cannot fill the tub again without enough disinfectant. However, the disinfection procedure can be skipped altogether.

■ The bathing cycle

- Insert the drain plug into the drain. Close it.
- Adjust the tub shorter according to the body length of the patient and put the pillow into the right position. (When using a stretcher lifter then this point does not apply.)
- To fill the bathtub, press the button "TUB FILL" and select a pleasant fill temperature for the patient.

Caution: *Always check the water temperature with your bare hand (also when using the shower) before bringing the water in contact with the patient.*



- To add bath additive to the water (if installed available) press the button "BATH ADDITIVE" for as long as you want to add more.
- Once as the water has reached the desired level, stop the water flow if necessary. Now help the patient into the bathtub or lower the bathing lift into the water and adjust the bathtub to a comfortable working height.

Caution: *Never leave the patient unattended inside the bathtub.*



- If you want to use the shower at any time during the bathing cycle, simply pick up the white hand shower from its holder and press the button "SHOWER". To start showering press the trigger on the hand shower.
- To dispense shampoo (if installed) press the button "SHAMPOO" for as long as you want more, while keeping your hand under the shampoo dispenser.
- If so desired by the patient, activate any available therapy treatment.

- To finish, turn the chromed overflow knob in counter clockwise direction, in order to open the drain. Lower the bathtub and help the patient out of the water or remove the bathing lift from the tub.
- Before you start a new bathing cycle you should thoroughly clean the bathtub.

■ Care & Cleaning

Always clean the plastic parts wet or damp but never dry.

Any product used to clean or disinfect your GK bath must be free from any abrasive, alcohol & corrosive ingredients. Never use any kind of customary glass cleansers, solvents (e.g. acetone) or similar detergents or dilutions. Never use harsh or pointed utensils, e.g. rough clothes, scrubbing sponges, scouring pads or any tools. If you are in any doubt about your usual cleaning products please contact your GK representative before use.

Caution: *Any damage caused by unapproved / unsuitable products will not be covered by the manufacturer's warranty.*



Dark grey and transparent plastic parts:

The dark grey and transparent plastic parts may only be cleaned with a maximum of lukewarm water and, if needed, a mild dishwashing soap. We especially recommend our special plastics intensive cleanser (details on request). For these parts of the tub **only use very fine textured chamois leather or a microfiber cloth.**

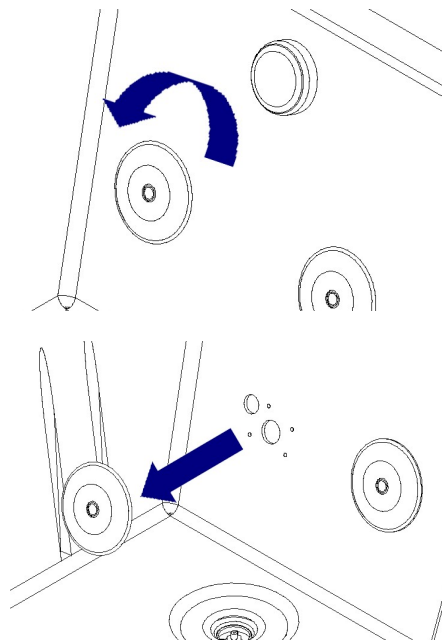
For the best care for these parts we recommend our special anti-static plastics care product (details on request).

Remaining tub body parts:

For the other mostly white parts, after use always rinse the bath tub thoroughly with the shower hose. Any dirt which adheres to the bathtub surfaces must be removed with a soft sponge or cloth and, if necessary, customary detergents (besides the above mentioned restrictions).

We recommend using our approved shampoo and bath additive products with your GK bath. Other products may cause more persistent dirt being harder to clean.

We also recommend for you to polish the white bath tub body once a month with car polish cream. This will give the bathtub a smooth, water repellent surface and will make routine cleaning considerably easier - it will also enhance the appearance of your GK bath.



From time to time the hydromassage jet covers should be removed and be cleaned together with the inlet and outlet apertures separately.

To do so, unscrew the jet covers in counter-clockwise direction off of the tub surface (see pictures). Now clean the covers, the inlet aperture and the outlet aperture thoroughly with a suitable cleaning cloth.

Note: Do not use excessive force when re-assembling the jet cover.

If you have any questions, please, contact your GK representative.

■ Troubleshooting

Tub fill doesn't work even though the function is active and the light is flashing.

Check all the sieves and valves for dirt. If the problem still exists, then the electronic has to be checked. Contact your GK representative.

The temperature regulation doesn't work properly.

The thermostatic mixer is adjusted at 3 bar water pressure at both supplies. If you have different water pressure it may be necessary to do a readjustment. If the water pressure is about right, possibly the cartridge is defective and has to be changed.

Very little water runs into the tub.

If the hot and cold water supply pressure deviate too much from each other, then the mixing valve cannot work properly.

Disinfection doesn't work and the button is flashing very fast (about 4x/sec.).

The disinfectant container is empty. Replace it with a full disinfection container.

Disinfection doesn't work and the button is flashing very fast (about 4x/sec.) even though the container is full.

The disinfection sensor is defective and has to be replaced.

All the functions are disabled except the "UP" and "DOWN" buttons. Probably the tub is still in the disinfection cycle. Finish the procedure properly.

No shampoo or bath additive is dispensed even though the button is flashing when it is pressed.

If the corresponding box is not empty, then there probably is air in the tubes. Press the corresponding button for a longer time.

The hydromassage/ultrasound button doesn't light up (with hydro-massage/ultrasound being installed) even though there is more than enough water in the tub.

The fill level sensor is defective and has to be changed.

The tub fill does not stop automatically.

The fill level sensor is defective and has to be changed.

All the functions are disabled except the "DOWN" button and the symbol "MISSING POWER SUPPLY" is lit.

No power supply detected. Try to solve this problem as soon as possible since otherwise the emergency battery will be completely emptied.

■ Maintenance

- Clean the bathtub after each bath (see chapter "Care & Cleaning").
- Regularly (at your own discretion) monitor the fill level of the disinfectant container (if installed).
- Regularly (at your own discretion) monitor the fill level of the shampoo and bath additive containers (if installed).
- Once a month, check the sieves in the hand showers and clean them if necessary.
- Once a month, check the proper condition of the shower hose and, if installed, of the disinfection shower hose, as well as of any externally visible connections.
- Once a month, check the bathtub for any cracks or other damages.

Caution: *Should you notice any damage to the bathtub either during maintenance or at any other time, then the bathtub may not be used any further from that point onward, until the damage has been assessed and, if necessary, repaired.*



■ Service

At least **once a year** a service or safety inspection in accordance with Medical Device Directive (MDD) is mandatory.

- Remember that GK service is unmatched in quality and also with regards to warranty issues. GK will only consider itself liable for safety-related matters if repairs, modifications, etc. are exclusively carried out by our service team or by agents authorized by us.

In the event of problems occurring, clear and detailed information about symptoms, type and serial number (see "Identification plate") will help us to respond promptly.

■ Standards & Regulations

The bathtub complies with the essential requirements pursuant to Appendix I of the Medical Device Directive 93/42/EEC.

In accordance with the classification regulations pursuant to Appendix IX of the Medical Device Directive 93/42/EEC, the bathtub is a Class I medical device.



ISO 9001

Our production is subject to a quality management system according to ISO 9001.



CE mark

The CE mark has been affixed as proof of its compliance with the legal requirements of Appendix I of the Medical Device Directive 93/42/EEC.

■ Transport, Storage, Recycling

Operating conditions

Max ambient temperature:	40 °C
Max relative humidity:	80 % not condensed at 20 °C
Atmospheric pressure range:	500 hPa to 1060 hPa

Transport and Storage

Ambient temperature range:	-20 °C to 60 °C
Relative humidity range:	80 % not condensed at 20 °C
Atmospheric pressure range:	500 hPa to 1060 hPa


Recycling

Package:	Wood and corrugated cardboard, recyclable
Product:	Electric, steel and plastic parts shall be separated and recycled

■ Technical data

- Bathtub **GK Magic 1000**:

- Voltage: AC 230 V / AC 115 V
- Frequency: 50 Hz / 60 Hz
- Power consumption: 360 VA
- Fuses: 10 A time-delay
12.5 A time-delay

- Protection class: I
- Degree of protection: IPX4
- Protection type: Type B 

- Lifting weight: 400 kg
- Lifting height: 400 mm

- Maximum length: 2240 mm
- Maximum width: 930 mm
- Maximum height: 1250-1650 mm

- Time of guarantee: 2 years
(besides wear parts)

- Classification according to MDD 93/42/EEC: **Class I**

■ Identification plate



This plate give you some information's about the Product, for instance type, production date, serial number, ...



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