

CE

Operating Instructions



Lifting Bathtub LENA

Dear Customer

We like to thank you for your confidence in our Lift as well as your choice in buying a Horcher GmbH LENA Lift Bathtub.

Please read this manual carefully and familiarize yourself with the instructions mentioned in this manual.

The „LENA “ – Patient Bathtub Lift helps achieving greater mobility especially in private homes, hospitals and in Senior Citizens homes.

We are sure that you have in your possession now a Bathtub Lift with the highest standard available.

It is truly our pleasure “helping you to achieve greater mobility” and independence in your daily living activities.

For a convenient access in to the Bathtub, with this Bathtub LIFT you have the option to raise or lower the patient to the right working height.

Safety Instructions

Please acknowledge the following safety instruction carefully!

- ! Before utilizing the Bathtub Lena please familiarize yourself with the operating instructions. It is essential that every user has knowledge of the operating instructions before utilizing the Lena Bathtub.
- ! Do not operate the LENA Bathtub if you notice any kind of defect.
- ! Only authorized and experienced personal from the Horcher GmbH are allowed to repair the LENA Bathtub.
- ! Utilizing the bathtub other then described or using unauthorized assessories is prohibited.
- ! Not following one or more of the above mentioned instruction will void any Warranties and Guarantees through the Horcher GmbH.
- ! Don't use any kind of coarse scouring powder!! This will damage or scrape the surface on the bathtub.
- ! Never use a dry cloth to remove the dust always use a damp cloth.
- ! The max. permissible body weight is 175 KG. Extending the max weight continuously can result in damaging the motor. Should the patient exiced the max body weight we can install a motor with a higher lifting capacity.
- ! With a body weight of 130 kg in the empty LENA Bathtub we can ensure that a stable setting is assured. If the patient weights more, then there is no stability and the bathtub could tilt.
- ! Do not lower or raise the Lena Bathtub if the patient is not seated safely and correctly.

Table of contents

1	Where will the Bathtub „Lena“ utilized ?	5
2	Installation plan	6
3	Installation instructions	6
4	Using the Bathtub Lena	7
	4.1 Thermostat	
	4.2 Temperatur limiter	
	4.3 Divider	
	Standard Equipment	
5	Care and cleaning the Bathtub	18
6	Plastic repair	18
7	Service & Warranty	19
8	Technical Data	20
9	Directions	21
10	Technical Information GFK	22
11	Installation	23
12	Equipment Data	25-33

1 Where the LENA Bathtub Lift can be utilized ?

Since 1986 we the Horcher GmbH have developed a variety of Lift Systems, such as mobile patient Lifts and ceiling Lifts. In 1992 we extended our Lift System and added the LENA Bathtub Lift. During that time we have developed a very high technical standard for efficiency and reliability. Since that time we have equipt a lot of families, professionals in private residences, hospitals, senior citizens homes and rehabilitation areas with our Lift systems.

Please read this instruction booklet carefully and become familiar with the operating and technical instructions as well. It is essential that you aquire the knowledge of handling the LENA Bathtub.

2 Assembly Instructions:

2.1 Included in the delivery package.

The LENA bathtub Lift is delivered to you fully assembled from the manufacturer. The only installation and connection that have to be done is to hook up the cold and warm water supply and the electrical wiring which should only be done through authorized personal or from the Horcher GmbH.

2.2 Transportation

During the transportation through a forwarding agent please assure that the LENA Bathtub is not in danger of being damaged from rough handling, sharp corners from other merchandise, and so on. The LENA Bathtub should only be covered with soft materials such as blankets and papers. Do not trop any hard parts in the bathtub this might cause damage to the surface.

2.3 Installation

The body of the bathtub and the control panel are made out of fiber glass and the lining is of powder coated aluminum.

The motor sits in strong steel construction which runs smoothly in a ball bearing profile.

The linar actuator has a synchronizing mechanism with an isolated coating and is maintenance free.

Included material for the installation of the Lena

Four adjustable integrated legs

Water connection: Heat resisting high pressure hose each ½" for warm and cold water, (for LENA 230 = ¾")

Water drainage: The floor drainage must have a DN 75 diameter with an odor trap.

Water pressure: 2 - 6 Bar

Water supply: with a built in thermostat and separate filling valve for the bathtub and the shower to ensure patient safety.

3 Assembly instruction

Please acknowledge the technical drawings and information.

- a) The four anti skid adjustable legs can be turned to the height you need should the floor be uneven. Please level the bathtub by applying the level to the rim of the bathtub and adjust any difference.
- b) Warm- and cold water connections.
On the back side of the bathtub you will find two ½" water hoses with attached valve nut for the connection to the water outlet in the wall.

Warm water connection = left / red

Cold water connection = right / blue

Connect the two ½" flexible hoses from the bathtub to your wall connection.

It is recommended that you install a shut off valve between your house outlet and the bathtub connection.

Important: Connect and shorten the spiral hose so as they can not bend.

Please make certain that the hose is not in the way when the bathtub is being lifted or lowered, and that the hose to the drain cannot be disconnected.

- c) About 4 weeks after the installation you have to check and fasten the nuts again. Further more a yearly inspection is recommended. Also the nuts should be checked at least once every month to make sure that they are tight.

A test run can be started now that everything is installed and connected. In the area where the bathtub is installed make sure all the hoses are connected properly and they can move with out any interruption.

4 Using the Lena Bathtub Lift

4.1 Thermostat

The manufacturer has equipped the thermos with a safety lock and preset the thermostat to 38°C water temperature. Should the actual water temperature vary from the preset temperature then a correction is necessary.

Correcting the temperature gage

- 1- Open the outlet and turn the scale to 38°C let the water run (see temperature gage)
- 2- Loosen screw from the cover plate and turn temperature scale till it shows 38° C.
- 3- Now replace the cover plate and tighten screw .

!!! Attention!!! If the temperature setting is changing this can cause delays in the registration of the temperature gauge. Please check the water temperature after changing the setting and make sure the water has the right temperature so that the patient does not get scald or hurt in any way.

4.2 Temperature setting

Die Temperature setting is limited through a safety lock which is set to 38° C . If a higher setting is required this can be done by pushing the red safety button.

Thermostat

The temperature range is limited to 38°C by the safety lock. If a higher temperature is desired, the safety lock can be exceeded by pushing the button.

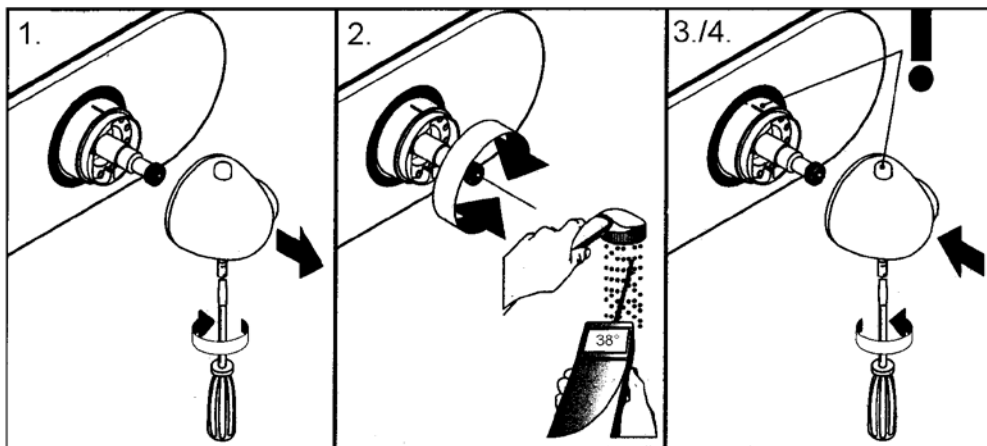
The maximum temperature is limited to 43°C by an additional safety installation.

A correction at the thermostat will be required if the temperature measured at the bathtub inlet differs from the temperature set at the thermostat.

Correction of the 38°C setting must be performed as follows:

At first, open the bathtub inlet by pressing the button. 

1. Loosen the knurled screw, draw back the handle.
2. Set the water temperature at the bathtub inlet to 38°C by turning the thermostat spindle. For this purpose, use the temperature display at the bathtub or a suited external temperature measuring device.
After setting, let the water run for a few minutes and re-measure the temperature at the bathtub inlet for reasons of control. If the water temperature remains constant, continue with step 3.
3. Attach the handle with its 38°C position identically with the marking on the thermostat.
4. Tighten the knurled screw.



4.3 Bathtub divider



This insert for the Lift Bathtub Lena is optimum and very helpful to accommodate to the different sizes of the patient.

Standard equipment LENA 100

- electrical lifting and lowering operation with a stroke of 400 mm
- push buttons for reasons of operation of the lifting and lowering function
- thermostat fitting with scald protection, chromed
- patient shower with safety spiral hose and hand shower
- moulded armrests
- handles
- adjustable footrest / bathtub divider for body length compensation
- 230 VAC direct connection via splash-proof direct connection box **provided by the customer** with protection via a **FI switch with max. 30 mA**.
- standard colour traffic white according to RAL 9016, special colours upon request

Standard equipment LENA 170 / 200 / 230

- electrical lifting and lowering operation with a stroke of 400 mm
- control panel with 3 4-digit LED seven segment display for operating the bathtub function
- 3 integrated temperature sensors for reasons of monitoring of the inlet and bathtub temperature
- capacitive water level sensors for reasons of control of the automatic filling heights
- complete pipe system in 5-layer composite tube Uponor (*DVGW* [German association for gas and water] tested)
- installation – thermostat battery, chromed
- bathtub inlet, controlled via servo solenoid valve
- installation – hand valve, chromed for patient shower
- patient shower with safety spiral hose and hand shower
- moulded armrests
- handles
- adjustable footrest / bathtub for body length compensation
- 230 VAC direct connection via splash-proof direct connection box **provided by the customer** with protection via a **FI switch with max. 30 mA**.
- standard colour traffic white according to RAL 9016, special colours upon request

Up / down function LENA 100

Lifting and lowering the bathtub is selected with two push buttons at the desk area of the bathtub.

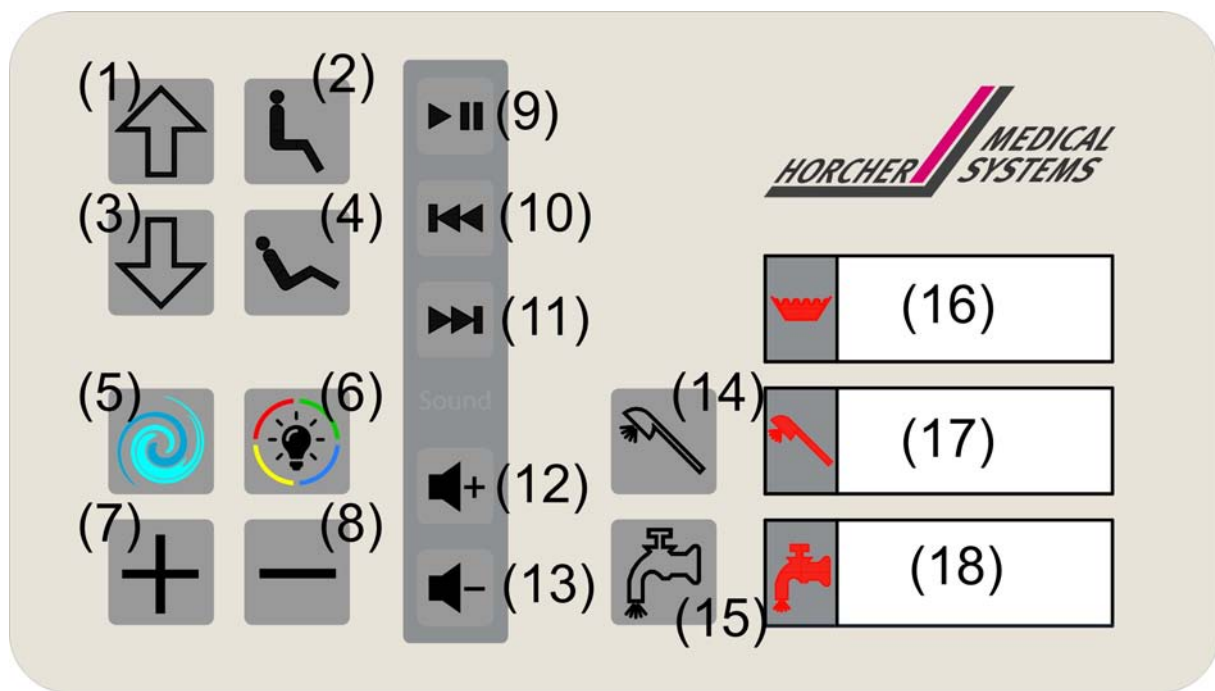


Lift bathtub press and hold down push button **UP**

Lower bathtub press and hold down push button **DOWN**

As soon as you release the buttons, the bathtub will remain in the reached position. After each use it is useful to lower the lifting bathtub completely.

Control and control panel LENA 170 / 200 / 230



The control is intended to operate a whirl system with fan or pump, LED colour light headlight(s), automatic bathtub filling (1 - 2 filling heights) and hand shower. Furthermore, one or two hoist / tilt motors can be controlled. An external sound system can be controlled via a serial interface.

The water level of the bathtub is monitored via capacitive water level sensors. The automatic filling and the afterblow function are controlled via these sensors (only when fan is activated). The inlet and bathtub temperature is controlled via up to 3 temperature sensors.

The colour light headlights can be switched independent from the water level.

The individual functions can be switched via the control panel. The functions are shown via 3 - 4 digit LED seven segment displays.

After a net reset the control option "LENA" is shown in the display 1 water temperature bathtub **(16)** for approx. 1.5 seconds.

Description functions 15-button control panel LENA 170 / 200 / 230

(1) + (3) Height adjustment up / down

The height of the bathtub can be individually adjusted via the buttons “up” and “down”. If the button “UP” is pressed, the bathtub will be lifted. If the button “DOWN” is pressed, the bathtub will be lowered. When reaching a final position, the height adjustment will be automatically switched off.

As soon as you release the buttons, the bathtub will remain in the reached position. After each use it is useful to lower the lifting bathtub completely.

(2) + (4) Tilt adjustment up / down

This function is not available for the version LENA.

(5) Button whirl system

The whirl system (pump) can be switched on and / or off via the button **(5)**. The pump can only be switched on, if the “sensor probe 1” is covered with water. The pump will be switched off automatically 30 seconds after the last keystroke and when the “sensor filling height 1” (LENA) indicates that there is no water in the bathtub (sensor is no longer covered).

(7+8) Buttons +/-

This function is not available for the version LENA.

(6) Button colour light therapy (optional)

In order to switch on the colour light therapy, press button **(6)**. The RGB headlights are flashing (1 - 2 pieces). The other available colours can be selected by pressing the button **(6)** again. The colour sequence is as follows: red – yellow – green – blue – automatic colour change.

It is possible to stop the automatic colour change by pressing the button **(6)** again. When the button **(6)** is pressed again, the colour change will restart. In order to switch off the colour light therapy, press button **(6)** for at least 3 seconds.

(9) Sound function play / stop (optionally: external sound system must be connected)

Button **(9)** can be used to start or stop and / or continue the playback of audio signals (music, sounds, noises). For the audio playback, a USB stick with audio material (MP3 files) must be plugged into the docking station of the sound system. The sound system needs some time to recognise the USB stick after plugging it into the docking station (net reset, change of the USB stick)

(10) Sound function title back (optionally: external sound system must be connected)

The button **(10)** can be used to skip to the beginning of the current title (song, sound, noise) or to the previous title (press **(10)** twice). For the audio playback, a USB stick

with audio material (MP3 files) must be plugged into the docking station of the sound system.

(11) Sound function title forward (optionally: external sound system must be connected)

The button **(11)** can be used to skip to the next title (song, sound, noise). For the audio playback, a USB stick with audio material (MP3 files) must be plugged into the docking station of the sound system.

(12) Sound function increase volume (optionally: external sound system must be connected)

The button **(12)** can be used to increase the volume of the audio playback. For the audio playback, a USB stick with audio material (MP3 files) must be plugged into the docking station of the sound system.

(13) Sound function reduce volume (optionally: external sound system must be connected)

The button **(13)** can be used to reduce the volume of the audio playback. For the audio playback, a USB stick with audio material (MP3 files) must be plugged into the docking station of the sound system.

(14) Button hand shower

The hand shower can be switched on and / or off via the button **(14)**. The conditions and the water temperature of the hand shower are shown in the display water temperature hand shower **(17)**.

Temperature water	Hand shower active	Display water temperature hand shower (17)
< 38°C	no	Display temperature
< 38°C	Yes	Display temperature alternating with "FILL"
38°C – 41.5°C	No	Display temperature flashes
38°C – 41.5°C	Yes	Display temperature (flashes) alternating with "FILL"
42°C – 43.5°C	No	Display temperature alternating with "hot".
42°C – 43.5°C	Yes	Display temperature alternating with "hot" and "FILL"
From 44°C	Hand shower is switched off automatically.	Display temperature alternating with "hot".

A pulsating warning signal can be heard, when the water temperature of the hand shower reaches 42°C. The hand shower will be switched off automatically (scald pro

tection), if the water temperature of the hand shower reaches 44°C (scald protection, *Setting of the standard switch-off temperature, see 4.3 Basic settings*).

If the scald protection is active, the hand shower can no longer be readily switched on with the button **(14)**. For this purpose, the thermal disinfection must be activated. It is described below.

Temporary adjustment of the switch-off temperature of the scald protection:

If the button **(14)** is permanently pressed for more than 7 seconds, the temperature display of the hand shower will start to flash and the current switch-off temperature for the scald protection will be shown (normal 44°C). The buttons **(7+8)** can now be used to adjust the current switch-off temperature of the scald protection (from 35°C to 44°C and / or 46°C, depending on the selection of the basic setting). The setting possibility will be terminated after 5 seconds without keystroke or by pressing the button **(14)**.

The current temperature value of the hand shower will be displayed again. The adjusted switch-off temperature will be saved for the following operating sequences. The changed value of the scald protection also affects the temperature display of the hand shower **(17)**. The values are shifted according to the adjusted switch-off temperature.

After a net reset, the switch-off temperature will be automatically set to the value of the basic setting (44°C and / or 46°C).

(15) Button filling

The tub filling can be switched on or off via the button **(15)**. By pressing the button **(15)** "FILL" appears in the display. For bathtubs with "AutoFill", it is possible to automatically fill up to level 1 "FH1" using button **(15)**. If the button **(15)** is pressed (filling is off), the automatic filling starts to level 1. Another keystroke terminates the automatic filling. The automatic filling will be terminated if the corresponding filling height has been reached:

Filling height 1 = "sensor filling height 1" covered

If the filling height 1 has already been reached, it can only be filled manually. The automatic filling is equipped with a safety timer. If the selected filling height is not reached after a period of 30 minutes, the automatic filling will be terminated.

The conditions and the water temperature of the automatic filling are shown in the display water temperature hand shower **(18)**.

Temperature	Automatic filling	Display water temperature inlet (18)
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water	active	
< 38°C	no	Display temperature
< 38°C	Yes (filling height 1)	Display temperature alternating with “FH1” or “FILL”
38°C – 41.5°C	No	Display temperature flashes
38°C – 41.5°C	Yes (filling height 1)	Display temperature (flashes) alternating with “FH1” or “FILL”
42°C – 43.5°C	No	Display temperature alternating with “hot”.
42°C – 43.5°C	Yes (filling height 1)	Display temperature alternating with “hot” and “FH1” or “FILL”
From 44°C	Filling is switched off automatically.	Display temperature alternating with “hot”.

A pulsating warning signal can be heard, if the water temperature of the bathtub **(16)** or the inlet **(18)** reaches 42°C. The automatic filling will be switched off (scald protection) if the water temperature of the bathtub **(16)** or the inlet **(18)** reaches 44°C (scald protection, *Setting of the standard switch-off temperature, see 4.3 Basic settings*).

If the scald protection is active, the automatic filling can no longer be readily switched on with the button **(15)**. For this purpose, the thermal disinfection must be activated. It is described below.

Temporary adjustment of the switch-off temperature of the scald protection:

If the button **(15)** is permanently pressed for more than 7 seconds, the water temperature display of the inlet **(18)** will start to flash and the current switch-off temperature for the scald protection will be shown (normal 44°C). The buttons **(7+8)** can now be used to adjust the current switch-off temperature of the scald protection (from 35°C to 44°C and / or 46°C, depending on the selection of the basic setting). The setting possibility will be terminated after 5 seconds without keystroke or by pressing the button **(15)**. The current water temperature of the inlet will be displayed again.

The adjusted switch-off temperature will be saved for the following operating sequences. The changed switch-off value of the scald protection also affects the water temperature display of the inlet **(18)**. The values are shifted according to the adjusted switch-off temperature.

After a net reset, the switch-off temperature will be automatically set to the value of the basic setting (44°C and / or 46°C).

(7) + (8) + (15) Key combinations thermal disinfection

The control disposes of a thermal disinfection in order to allow for the flashing of the fittings with hot water of more than 44°C.

If the buttons **(7)**, **(8)** and **(15)** are pressed together (please press 7 and 8 at first), the switch-off of the magnetic valves (temperature control, scald protection) must be deactivated for max. 10 minutes. This means that the hand shower and the automatic filling (inlet) can be activated and remain active, even if the water temperature is more than 44°C.

The thermal disinfection will be terminated either automatically after 10 minutes, at any time by switching off the hand shower or the automatic filling or by simultaneously pressing the buttons **(7)**, **(8)** and **(15)**. During the thermal disinfection, the text DESi will be shown alternating with the temperature (and possibly “hot”) in the display of the water temperature of the bathtub **(16)**.

The displays of the water temperature of the hand shower **(17)** / the inlet **(18)** correspondingly show “FILL” and / or “FH1” alternating with the temperature (and possibly “hot”).

(7) + (8) + (1) Lock / unlock key combinations keyboard

The key functions of the control panel can be locked. For this purpose, the buttons **(7)**, **(8)** and **(1)** must be pressed together.

If the key functions of the control panel are locked, no function can be switched on. However, if a function is still active, it can be deactivated despite locked key combination and confirmation of the corresponding button.

If a button is pressed after locking, the text “Loc” will be shown for a period of approx. 3 seconds in the display of the water temperature of the hand shower **(17)**.

The locking of the key functions can be terminated by confirming the same key combination.

(16) Water temperature bathtub

The temperature can be displayed in °C or °F. The display has steps of 0.5° (in the case of °F display the temperature will be displayed in 1°F steps from 100°F).

If the measured temperature exceeds 42°C and / or 44°C (scald protection, *Setting of the standard temperature, see 4.3 Basic settings*), the corresponding display will show “hot” alternating with the temperature.

The temperature will be shown in the range of 3°C (37.5°F) to 64.0°C (147°F). If the temperature falls below than 3°C (37.5°F), “tLo” will be shown. If the temperature exceeds 64.0°C (147°F), “thi” will be shown (or in the case of cable break of the temperature sensor).

Text displays:

- Text “Clr” alternating with the temperature: the manual / automatic blow-dry active.
- Text “DESi” alternating with the temperature: the thermal disinfection is active.

(17) Water temperature hand shower

The temperature can be displayed in °C or °F. The display has steps of 0.5° (in the case of °F display the temperature will be displayed in 1°F steps from 100°F).

If the measured temperature exceeds 42°C and / or 44°C (scald protection, *Setting of the standard temperature, see 4.3 Basic settings*), the corresponding display will show “hot” alternating with the temperature.

The temperature will be shown in the range of 3°C (37.5°F) to 64.0°C (147°F). If the temperature falls below than 3°C (37.5°F), “tLo” will be shown. If the temperature exceeds 64.0°C (147°F), “thi” will be shown (or in the case of cable break of the temperature sensor).

Text displays:

- Text “Loc” for approx. 3 seconds: Key functions are locked.
- Text “FILL” alternating with the temperature. The hand shower is active.

(18) Water temperature inlet automatic filling filling height 1/2

The temperature can be displayed in °C or °F. The display has steps of 0.5° (in the case of °F display the temperature will be displayed in 1°F steps from 100°F).

If the measured temperature exceeds 42°C and / or 44°C (scald protection, *Setting of the standard temperature, see 4.3 Basic settings*), the corresponding display will show “hot” alternating with the temperature.

The temperature will be shown in the range of 3°C (37.5°F) to 64.0°C (147°F). If the temperature falls below than 3°C (37.5°F), “tLo” will be shown. If the temperature exceeds 64.0°C (147°F), “thi” will be shown (or in the case of cable break of the temperature sensor).

Text displays:

- Text “FH1” alternating with the temperature. The automatic filling to filling height 1 is active.
- Text “FILL” alternating with the temperature. The manual filling is active.

5 Cleaning the LENA Bathtub

After each use please clean the Bathtub LENA with a non scouring oil dissolving detergent.

The acrylic surface is dirt resistant so it is easy to clean. Please use a soft cloth or sponge to clean the surface of the Bathtub. **!! Never ever use scouring powder !!** This will damage the acrylic surface.

Important: When using bath oil such as chamomile oil or other types of colored oil's it is important that you empty and clean the Bathtub right away, otherwise a layer of oil and color will build up and will be hard to remove.

Due to hard water a calcium build up can happen. To remove the calcium deposit just use regular household vinegar. However do not use, I repeat do not use the calcium remover for electrical appliances. You will damage the acrylic surface.

Use a wet sponge or cloth if the Bathtub should be dusty.

6 Repairing the glass fiber

Scratches in the glass fiber Bathtub?

Should you by any chance have scratched the acrylic surface of the Bathtub due to the wrong cleaning agent then this can be easily remedied.

The damaged area has to be sanded down with water resistant abrasive paper in the following order. Start with the granulate 240, 320, 400 and then use the 600 grain to wet sand the area. Sand the area down until it is smooth to the touch or until you see it is evenly sanded. Now take a soft cloth or cotton and apply a clear car polish (without wax) to the smoothed area, polish as long as needed to cover the damaged area until you have a high shine.

7 Service- Warranty and maintenance information

Service and warranty information

All mechanical components of the Horcher model "LENA" have a warranty of 24 months. Within the framework of this warranty, we replaced parts for free which have become defective due to manufacturing or material defects or repair them.

Within the framework of the guarantee we provide free replacement with reservation of the possibility of repair.

This shall not apply if the defect of the device must be traced back to improper treatment and / or neglect of the intended purpose and the rules of conduct described in these operating instructions.

We do not pay for damages and failures resulting from natural wear or during transport.

Maintenance and periodic monitoring

- The device must be inspected every 12 months.
- These inspections must be performed by a suited and properly qualified person who is familiar with the construction, use and care of the device. The scope of these inspections is recorded in the provided check lists.
- Repairs and overhauls of the Horcher bathtub systems may only be performed by suited and properly qualified persons.
- The company Horcher GmbH offers corresponding trainings.
- If you have any questions about these topics, please visit our website or contact our service on the service hotline +49 (0) 61 87 / 92 04-50.

8 Technical data:

Art-Nr. 300 LENA 100	Art-Nr. 300-2 LENA 170	Art-Nr. 300-1 LENA 200	Art-Nr. 300-4 LENA 230	Dimensions:
2000 x 780 mm	1700 x 800 mm	2000 x 800 mm	2300 x 1000 mm	Outside L / W
1600 x 585 / 650 mm	1285 x 585 / 650 mm	1600 x 585 / 650 mm	1850 x 700 mm	Inside L / W
690 - 1090 mm	690 - 1090 mm	690 - 1090 mm	700 - 1100 mm	Lift
160 litres	130 litres	160 litres	240 litres	Water Volume
Prim. 230V/AC Sec. 24 V/DC	Prim. 230V/AC Sec. 24 V/DC	Prim. 230V/AC Sec. 24 V/DC	Prim. 230V/AC Sec. 24 V/DC	Voltage:
54 dB	54 dB	54 dB	54 dB	Noise level
400 - 1100 W	400 - 1450 W	400 - 1450 W	400 - 1450 W	Amperage
IPX6	IP66	IP66	IP66	Control Box: Degree of protection
120 - 125 kg	105 - 120 kg	125 - 148 kg	155 - 178 kg	Weight:
175 kg	175 kg	175 kg	175 kg	Max. patient weight:

9 Detailed assembly

Detailed equipment list for the Lena Bathtub Lift:

- 1 Complete hose system in 5-layers compound hose UNICOR
- 1 Set chrome fittings after DIN 4109
- 1 Special – water inlet
- 1 Patient – shower head ½“ with safety spiral hose and hand shower
- 1 Digital -Thermometer to control the water temperature for the water inlet
- 2 Formed arm rest
- 2 Plastic hand hold
- 1 Divider for the different length of patients
 - 1 Plug for 220 V the main electrical supply, FI-safety switch fuse is needed.

Color: Standard color white RAL 9010, special color by request.

Additional equipment (optional) :

Art-No. H300-101 Disinfecting-unit intern

Build in the Lift Bathtub LENA is a stop valve and a measuring device for the disinfecting. Completely furnished with canister holder and an extra canister of 5000 ml. disinfecting also included a disinfecting hand shower (red handle) and fixture.

Disinfection facility (option)

consisting of:

- an integrated storage compartment with lockable lid and sight glass for reasons of control of the disinfectant level, for reasons of inclusion of a corresponding canister with a capacity of up to 5 litres of disinfectant.
- a fixed inductor for 3% treatment of the disinfectant with adjustment to the recommended disinfectant CLEANISEPT.
- a disinfectant hand shower (red) with shut-off valve and bracket.

Functional description

A 5-l canister with disinfectant can be securely stored in the storage space at the back of the lift bathtub by removing the intended lid. Insert the PVC hose with strainer located there into the opened canister and ensure that the strainer reaches until the bottom of the canister.

An inductor with a fixed mixing ratio of 3% prepares the disinfection solution when using the disinfection shower.

Before the beginning of a disinfection process the disinfectant level should be checked at the sight glass.

10 Technical Information

Material comparison: Glass fiber strengthen plastic (GFK) - ACRYL

Acrylic is a type of the old plexi glass and in today's use has been practically superseded.

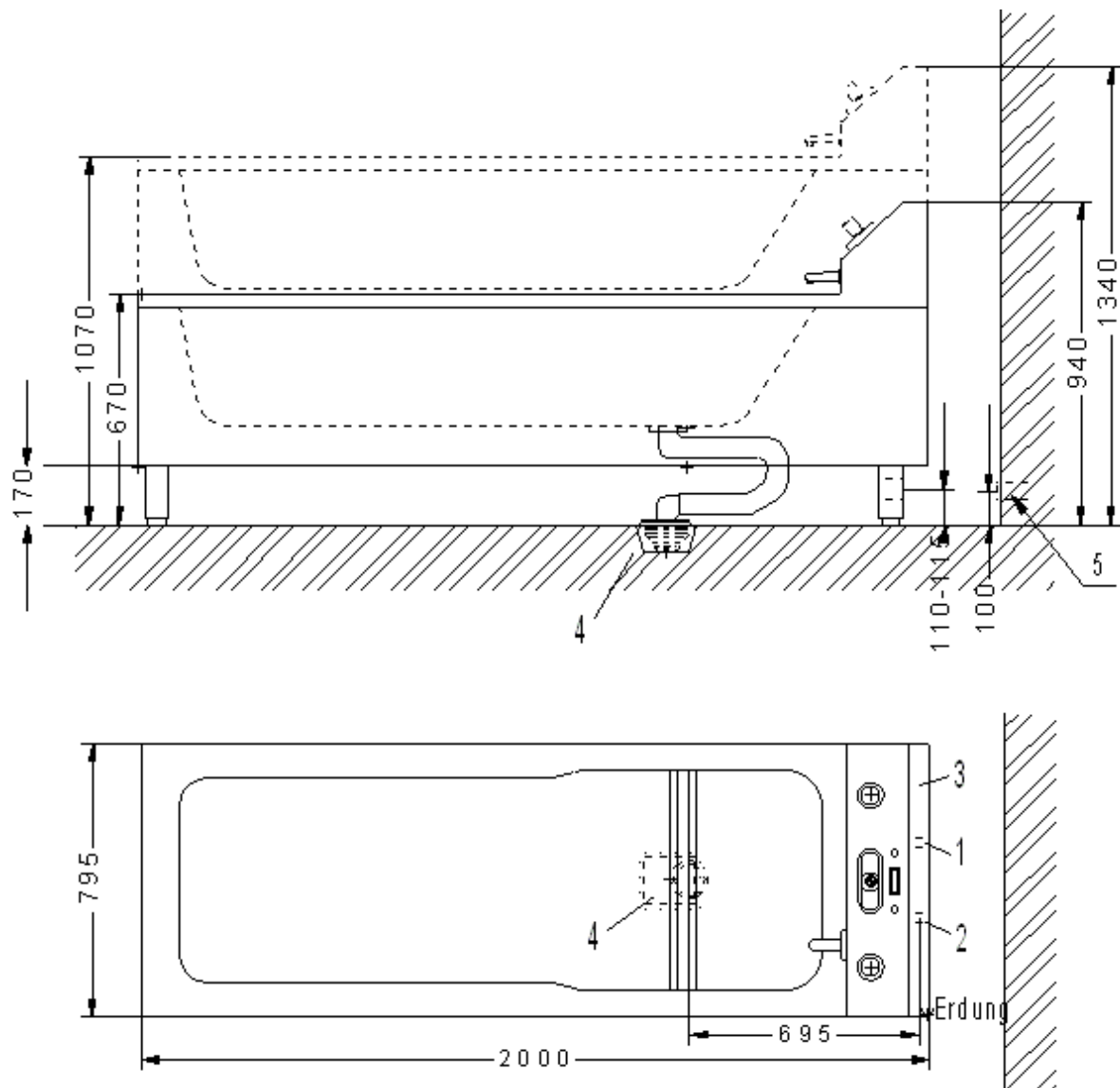
With this new way of the construction for acrylic Bathtub the manufacturer takes the acrylic sheet which gets heated up in the oven when it is hot enough then the sheet will be sucked in the form through vacuum and brought into the form that is needed to form the bathtub. The rim is about 6-8mm thick and the plate is reduced on the bottom to about 0,2-0,5 mm. The form can not be used in this way. That's why the fiber glass (synthetic plastic material) is applied to the outside of the tub. Since the regular acrylic is not water vapor resistant but the new GFK (synthetic plastic material with polyester resin) is.

Please be careful don't drop any hard parts in to the bathtub as for instance the drain outlet or any other parts that you need to install the bathtub. The surface could get damaged or very fine laceration could also damage the acrylic layer. The Acrylic is homogen and hard and not a flexible material and colored thoroughly. If applying to much pressure to the material when tighten a screw or the faucet this might cause fine laceration to the surface which can then be mended by sanding the top layer and applying synthetic resin.

GFK is a glass fiber strengthened polyester resin. Using the passive form and applying in layers the glass fiber and then the polyester resin until the desired thickness has been reached. The color layers are relatively thin and the surface has not been sealed with the GELCOAT coating. The damage can be repaired and made unvisable with a coat of the color and the resin. The GFK (synthetic plastic material with the polyester resin) is the most used modern material now days and has emitted the BAKELIT and the ACRYL in the technical areas.

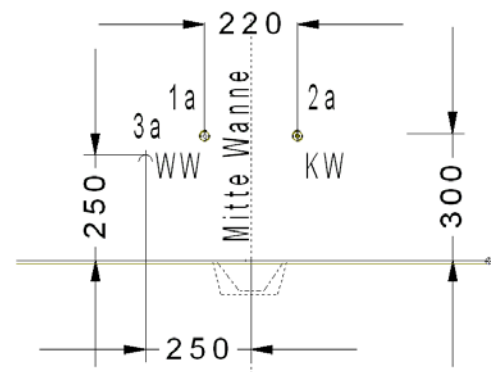
Due to the strengthening of the glass fiber quality and the elastic of the material. This material can be used in almost any area such as modern Air planes puffers on cars even on some race cars. The regular ACRYL would not withstand the requirements which are in demand now day's. All the discussion and argumentation are done in a despair from the manufacturer in the industry or their suppliers to sell the regular glass fiber. On both the GFK as on the glass fiber the damage can be easily remedied. But with the GFK is easier done then with the glass fiber and hardly noticeable. With the GFK you have a more elastic fiber which is harder to damage not even with a hammer. The chassis of a car are also not colored thoroughly but you can repair them easily and without any great expenditure.

11 Installation of the Bathtub Lift LENA



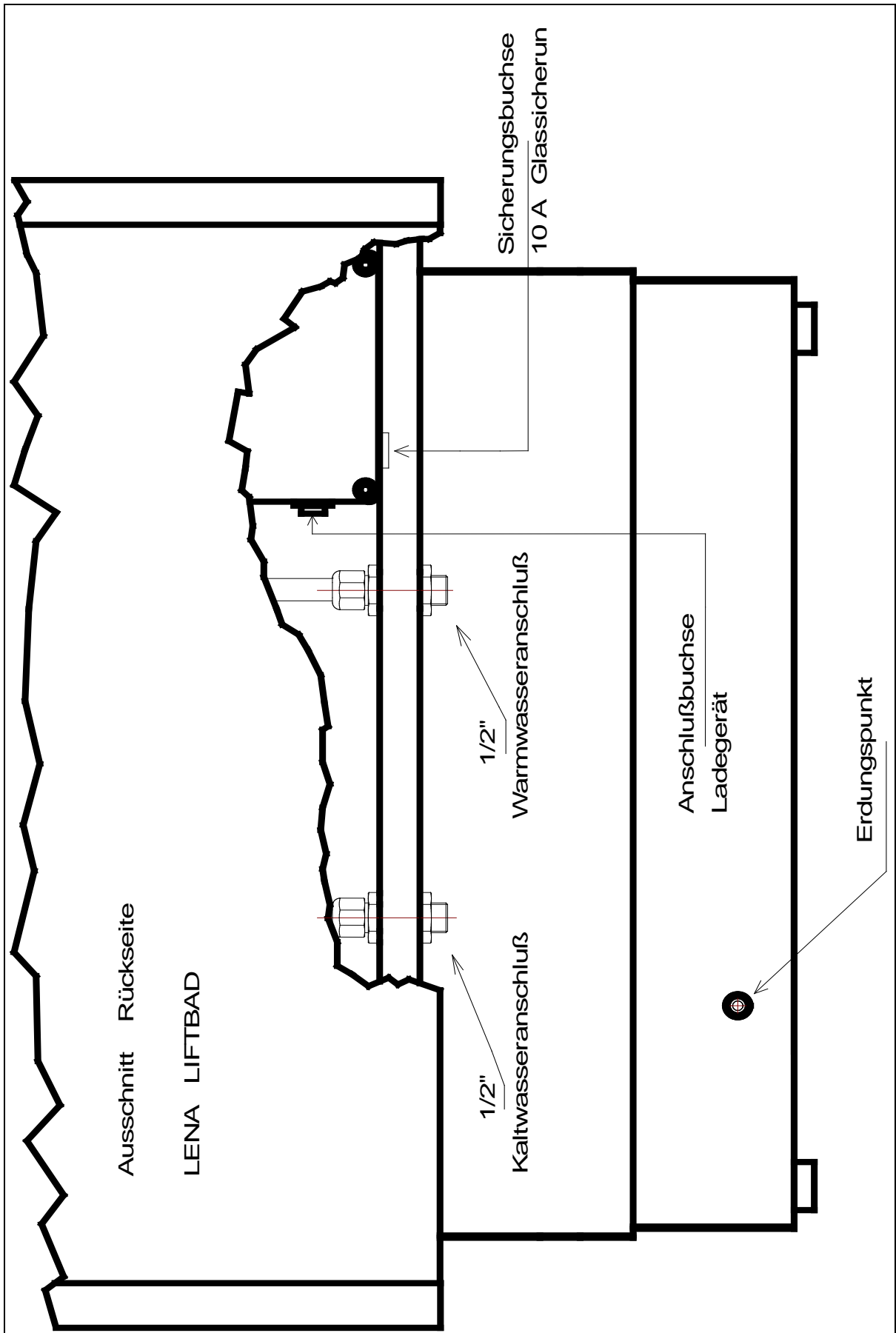
Instruction for the installation of the bathtub

- 1 – Cold water hose 1/2" floor level (1a. wall level)
(3/4" LENA 230)
- 2 – warm water hose 1/2" floor level (2a. wall level)
3 (3/4" LENA 230)
- 4 – electrical supply with floor or wall hock up (3a. 3-phase
electrical junction box) 220V, 50Hz, 0,25kW, 1 A, cable length
1,5m, 1,5 qmm
- 4 – Drainage 50 (odor lock in the bathtub)
- 5 – Drainage behind the bathtub wall HT 50
(odor lock in the bathtub)



Safety measurements

- Cut off cock for cold and warm water
- Cut off switch
- Fault-voltage protective switch max. 30mA
- Electric installation DIN IEC/VDE



Medical Product LENA



Inventory-No. _____

Product _____

Type _____

Serial No. _____

Manufacturer / Importer _____

Supplier _____

Date of Installation _____

Location _____

A Inventory-No. _____

Functional Test

on: _____

through: _____

Instruction

Responsible _____

Date	Manufacturer / Supplier	Name of the per- son responsible for Instructions	Signature

B

Inventory-No. _____

Users

Datet	Trainer	Trainee	Signature

D

Inventory-No. _____

Maintenance Service

(Maintenance / Inspection / Repair)

Date	Preformed through Person / Firm	Short description of Maintenance

E

Inventory-No. _____

Repairs

Date	Technician	Description of repairs <input type="checkbox"/>

F

Inventory-No. _____

Reports of incidents to the authorities and manufacturers

Date of the report	Description of the reported Incident

G Inventory-No. _____

Essential Addresses:

A) Inform the person responsible in case of problems.

Name: _____

Telephone: _____

Emergency No.: _____

Technical Service
of the manufacturer /
supplier:

Horcher GmbH
- Service und Maintenance -
Philipp-Reis-Strasse 3
D- 61130 Nidderau

Telephone: +49 (0) 61 87 / 9204 - 50

Fax: +49 (0) 61 87 / 9204 - 21

B) Operating Manual to be found:

Name:

Location:

Telephone:

Emergency No.:

C) Accidents with personal injury:

Name: Mr. Stefan Horcher
Safety officer for medical products
Horcher GmbH
Philipp-Reis-Strasse 3
D- 61130 Nidderau

Telephone: +49 (0) 61 87 / 9204 - 0

Fax: +49 (0) 61 87 / 9204 - 15

Inventory List

Type:	
Serial No:	
Year of purchase:	
Manufacturer:	Horcher GmbH Phillip-Reis-Straße 3 61130 Nidderau Germany
Factory Id No:	
Side of location:	
Prescribed period for the technical safety controls: (see label on the product)	