

Zen Spa Pro by Mark Sadler

# aquatica®

Installation Manual

Proper preparation of the premises and systems will ensure a safe and rapid installation of the spa. For this reason we advise you to read this manual carefully and to carefully follow all the information contained herein.

The Aquatica team is always available for any information or request for assistance that may be required during preparation.



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## SAFETY INSTRUCTIONS

# **1** SAFETY INSTRUCTIONS

Read this guide carefully before installing the appliance, and conserve this booklet with care for any future consultation of users. If you do not understanding something, contact the manufacturer for an explanation.

Installation must be carried out by qualified personnel in compliance with local regulations and national provisions regarding civil and industrial systems. Before making electrical and plumbing connections to the equipment, the installer must receive the declaration of conformity of the building's systems from the user. Without such document, the Manufacturer cannot be held responsible for damage to the systems or premises where the minipool will be installed.

Comply with regulations, instructions and measurements on the "Preinstallation technical sheet".

Unauthorised actions, tampering or modifications that do not follow the information provided in this manual can cause damages, injuries or fatal accidents and null and void the warranty.

During the installation of the minipool, do not place objects inside it, even temporarily: they may fall down the drain.

When installing the minipool, always use personal protective equipment (e.g., gloves, safety shoes, etc.)

During the installation of the minipool, do not place objects inside it, even temporarily: they may fall down the drain.

## Ecological notes

Given their potential danger, the packaging materials must be kept out of reach of children and animals, and correctly disposed of in compliance with local regulations.

Aquatica invites you to protect the environment by disposing of the material in recycling bins.



#### EXPLANATION OF PICTOGRAMS



Danger! Situation presenting immediate danger, or a hazardous situation that could cause injury or death.

More info: helps the installer understand a topic better



The pictogram refers to text in another document



Ecological notes for respecting the environment

# PRELIMINARY OPERATIONS

## PREPARATIONS AND CHOICE OF POSITION



The pre-installation sheet supplied at the time of purchase provides all the information necessary for а correct preparation installation of the environments.

Before installing the minipool, check that everything has been prepared. Find below a quick checklist, for complete information always refer to the preinstallation sheet.

Check that:

- •A platform or a recess (in the case of recessed installations) of reinforced concrete, with a minimum thickness of 10 cm. has been created. perfectly flat and suitable for supporting the weight of the minipool and the people within.
- •Ø15 cm vents have been installed to ensure proper ventilation of the technical compartment
- •Drainage grating around the perimeter has been installed to help preserve the equipment and the structure (even for indoor installations).
- •Non-slip flooring has been installed in the area around the minipool.
- •For a recessed installation, a technical inspection port measuring at least 50 cm wide has been prepared on all sides of the minipool.
- •The connections to the water supply and electrical grid have been made in compliance with current regulations in force in the country of installation.
- •A drain, a gate valve (to shut off the supply water) and drain valves have been installed (to empty the minipool at the end of the season).
- •A water softener has been installed (upstream of the minipool) if the water has a high degree of hardness.
- •For outdoor recessed versions, the walls have been insulated to protect against the cold.



## A More information

## OUTDOOR INSTALLATION

Preparations: in cold areas, to avoid possible damage due to freezing, it is recommended to provide valves for the total drainage of the pipes, to be positioned at their lowest point.

To run the pipes and electric cables from the main electrical panel to the minipool underaround ducts must be used and adequately protected against freezing by using insulation. It is also recommended to add drainage points in them to prevent standing water.

Choice of position: take into account the proximity of trees or hedges, and note that debris (e.g., leaves) can cause damage to the equipment over time that is not covered by maintenance warranty and make more expensive and frequent. It is also recommended to always install flooring around the minipool, possibly anti-slip.

## INDOOR INSTALLATION

Preparations: in the area used to access the minipool it is recommended to install anti-slip flooring. The evaporation of water in the minipool in the presence of high internal temperatures can generate very high levels of humidity in the environment. To avoid this problem, provide good natural or forced ventilation in the installation environment and, if necessary, a dehumidification system. Damage caused by this phenomenon is not covered by the manufacturer warranty.

Choice of position: Always take into account the size of the minipool: narrow passages, doors and steps can be an obstacle to its transport to the desired place.

## CHECKING MINIPOOL INTEGRITY



After having removed the minipool from the packing, check its integrity.

Check:

- That there is no visible structural damage.
- That there are no cracks in the surface of the minipool or in the outer covering (cracks due to incorrect transport or support are not covered by the warranty).
- The correct position of the sleeves and pipes.
- That any ties are not loosened.

If you notice any anomalies, do not proceed with the installation but rather promptly contact the Manufacturer.

## TRANSPORT AND POSITION

# **3** TRANSPORT AND POSITION

### MOVING

To move the minipool to the place of installation a suitable lifting device (e.g., pallet jack) is required. As an alternative, provide for the availability of eight people.

If the installation is indoor, before moving the minipool make sure that it can easily pass through the doors and hallways to reach the desired place of installation.

Movement must be carried out using personal protective equipment (e.g., gloves, safety shoes, etc.) and taking all the necessary safety precautions for those involved and to not damage the minipool.



During transport, lift the minipool by holding it exclusively by the edge and NEVER by holding the plumbing lines or operational parts (e.g., pumps, etc.).

During movement, the surrounding area must be kept free of persons not involved in the operation, animals or objects (e.g., packaging, etc.) that could get in the way.



## POSITIONING

## **TEMPORARY POSITIONING**

The installation of the minipool should be immediately upon receipt.

In any case, once unpacked, if it is necessary to temporarily place it on a surface awaiting the installation, it will be necessary to place level concrete slabs having a minimum thickness of 5 cm under the entire bottom of the minipool.

Since the temporary base may shift, it is recommended to leave the minipool in that position for the shortest possible time.

# POSITIONING IN THE PLANNED LOCATION

In case of installation above ground (freestanding), place the minipool in the installation environment (outdoor or indoor) and verify its perfect flatness, essential for proper operation.

For a recessed installation , lower the minipool into the prepared space.

If it was not possible to provide a technical inspection port on all sides of the minipool, a pneumatic lift is available (OPTIONAL - to be requested from the Manufacturer) in order to simplify future maintenance operations. It is recommended to provide a removable inspection hatch "A" positioned on the side where the minipool components are situated. After positioning the minipool in its prepared space and after having connected the lift, test it.

Do not leave the empty minipool in DIRECT SUNLIGHT.The surface temperature could rise above 80°C resulting in serious damage, including cavitation and the deformation of the surface and components. Damage caused by direct exposure to sunlight is not covered by the warranty. In such conditions place a cover (fixed or mobile) to protect the minipool.



Optional lift with removable inspection hatch "A" positioned on the side where the components of the minipool are situated



## PRELIMINARY OPERATIONS

# **4** PRELIMINARY OPERATIONS

## PREPARATION OF THE SAND FILTER

The minipools have an empty filter and so it has to be filled.

## HOW TO FILL THE SAND FILTER

To fill the filter use the sand supplied and follow the instructions provided on the following page. If the sand has to be replaced it must be similar to the kind supplied (for food use). If necessary contact the Manufacturer for more details.

When filling is complete, reposition the filter in its compartment and check that the connections are correct and that there are no leaks.

LEGEND FIGURE 1 ON THE NEXT PAGE:

A) incoming waterB) outgoing waterC) drain

## More information

## WHAT IS THE SAND FILTER?

The sand filter is an effective minipool filter connected to the recirculation pump's feed line. It consists of a large container that is two-thirds filled with quartz sand. It retains the dirt and the suspended particles present in the water.

## PRELIMINARY OPERATIONS





## QUALIFICATIONS OF THE INSTALLER

Before installation it is recommended to carefully read the safety warnings at the beginning of this manual and to always operate in perfect physical and mental condition.

The installer, qualified and authorised by the Manufacturer, must carry out the operations based on his or her professional qualifications. Any activities for which he or she is not qualified (e.g., plumbing or electrical connections) must be performed by specific and qualified professionals so as not to risk their own safety and that of others who interact with the equipment.

## CONNECTIONS REQUIRED

To be used, the minipool requires only two connections:

- plumbing connections (incoming and outgoing water)
- electrical connection (power supply)
- electrical and plumbing connection to an exchanger (optional - if present) - see following page.

The following pages will provide detailed explanations of how to perform these preparations.



EXAMPLES OF OUTDOOR/INDOOR MINIPOOL INSTALLATION.

## INSTALLATION

## CONNECTION TO AN OPTIONAL EXTERNAL EXCHANGER (NOT SUPPLIED)



## PLUMBING CONNECTIONS

All water connection operations must be performed after making sure that the minipool's water supply valve is CLOSED.

The connection must be made bv an experienced, qualified plumber.

It is recommended to use ONLY tap water. If this is not possible refer to the "more information" section to the side.

The plumbing connection must be:

• Dedicated exclusively to the minipool (it is not possible to connect other equipment to the same connection).

• Made with hoses and connectors that are new and never used.

## CHARACTERISTICS OF THE WATER SUPPLY

The optimal values for the water supply are as follows:

• Hardness between 7°f and 14°F (fresh water) -200 to 400 mg/l (ppm).

• Total alkalinity (TA) between 80 and 125 mg/l (8-12.5°F).

- pH between 7.4 and 7.8.
- minimum inlet pressure: 150,000 Pa (1.5 bar)
- minimum inlet pressure: 300,000 Pa (3 bar)
- Water suitable for human consumption.

Make sure that during the pre-installation all the characteristics of the water supply have been met (see "Pre-Installation Sheet" on p. 9).

## More information

#### TAP WATER AND WELL WATER

To ensure maximum hygiene and durability of the minipool it is essential to pay close attention to the quality of the water that will be used to fll it. It is important that the water used be drinkable. It is always advisable not to use well water because it may be very hard, rich in metals like iron and manganese, and have bacterial loads. Tap water is recommended. In the case of very hard or ferrous water it is always recommended to install softening and iron removal systems upstream. The company cannot be held responsible for issues related to the use of non-drinkable water or lack of installation of such systems. The plumber is responsible for choosing the type of components to be used and the verifcation of compliance with the purity and potability parameters of the water supply.



## Q More information

#### WATER HARDNESS

Water hardness (TH) is determined by the total content of calcium and magnesium present in the water, coming from their soluble salts.

Water classifcation:

- .....up to 7°f From 7°f to 14°f From 14°f to 22°f From 22°f to 32°f
- = Very soft water = Soft water
- = Slightly hard water
  - = Fairly hard water
- From 32°f to 54°f = Hard water

.....more than  $54^{\circ}f$  = Very hard water  $(1^{\circ}f = 10 \text{ mg calcium carbonate per litre of water}).$ 

#### WATER ALKALINITY

Alkalinity (CAT) represents the concentration of bicarbonate ions present in the water. It is expressed as mg/L of calcium carbonate or in French degrees (°F). Ideal values of alkalinity range between 80 mg/L and 125 mg/L (8°F-12.5°F). Values outside of this range can more easily cause variations of the pH. Instead, alkalinity within the range noted makes it possible to "buffer" the pH value, resulting in fewer abrupt variations.

#### WATER PH

#### What is pH?

The pH is a chemical parameter that gives an idea of the acidity or basicity of the water. It can assume values between 0 and 14. By defnition water is considered neutral if its pH is equal to 7. It is acidic if the pH is lower than 7 and basic if the pH is greater than 7. Disinfectants have an ideal pH at which they are most effective. In the case of heated water treated with bromine products it is recommended to keep the pH value in the range from 7.4 to 7.8 using chemical correctors as needed if the pH is higher or lower to bring the the pH value back to the recommended interval.



## EXAMPLE OF PRE-INSTALLATION PLUMBING FOR A MINIPOOL

Connection to the minipool using the 1/2 inch female hose provided.

If the minipool is installed outdoors provide an adequate thermal insulation of the pipes. It is the plumber's responsibility to choose the type of materials to be used. Connect the drain of the floor minipool. The plumber is responsible for the choice and type of materials to be used and the verification of compliance with anti-pollution standards.



\* The images are purely indicative: the model and type must be chosen by the plumber based on the characteristics of the water and the current system.

## ELECTRICAL CONNECTIONS

The Aquatica minipools are built in compliance with European laws (EN 60 335-2-60) and are tested during production to ensure the safety of the installer and user.

#### The connection must be made by an experienced, qualified electrician.

All electrical connections must be made only after disconnecting the electricity in the work area.

The electrical connection must be:

• Performed in a fixed and permanent manner , without intermediate splices, in accordance with regulations of the country of installation.

- Sufficient for the current absorbed by the bathtub (see technical specifications).
- Provided with a functioning ground as per current regulations .

• Protected against splashing water , then placed in a dedicated room, closed and sheltered from the weather.

• Controlled by a multi-pole switch with a contact gap of at least 3 mm and a breaking capacity equal to 60A (or in any case adequate for the absorption of the bathtub).

• Controlled by a differential switch no larger than 30mA.

The control unit's power supply cable must be of the H05 type with three wires (single-phase 220V) or five wires (three-phase 380V) whose gauges are adequate for the absorption of the minipool (see "Pre-installation sheet"). Its size depends on the absorbed current and the distance of the minipool from the main electrical cabinet. In addition, if the minipool is installed outdoors, the power cord from the main electrical panel to the minipool must pass through an underground duct, without splices and adequately protected against freezing.



The Manufacturer is not responsible for connections made in a way that does not comply with local codes, the specifications in this manual or tampering with any electrical component of the minipool.



## INSTALLATION

## SAFETY ZONE

Local regulations prohibit any electrical installation (plug sockets, switches, lamps, etc.) in the area surrounding the minipool for a distance of at least 60 cm and a height of 230 cm.



## TESTING AFTER INSTALLATION

MAKE SURE THAT	$\checkmark$
The minipool is level and stable.	
The sand filter is filled and properly connected to the pipes.	
The water connections have been made properly in accordance with local and national codes and that they can guarantee a perfect seal (verification to be carried out after filling the minipool).	
Electrical connections are made correctly in accordance with local and national codes and that the cables are not damaged, crushed or abnormally bent.	
The minipool's drainage valves are closed.	
The water supply gate valve has been opened.	
Tools, documents or other items were not left under the minipool or in the recess.	

# 6 FIRST RUN

## FILLING THE MINIPOOL

Perform a preliminary cleaning of the minipool using a bit of water and a mild detergent.

Do not use cloths or cleaners that are abrasive, aggressive or that contain solvents because they could irreparably damage the surface of the minipool.

Do not start any operation until the minipool has been completely filled, otherwise the minipool could be damaged.

Before filling, once again check the quality of the water supply. This is very important for the wellbeing of the users and for the long life of the minipool.



information see chapter For more "Characteristics of the water supply" on page 13.

### AUTOMATIC FILLING USING THE **KEYPAD**

Once the pool is powered, the display will show the word "aquatica" and after a few seconds the display will show the current ambient temperature, and the various symbols on the keypad will be illuminated with white light.

Press the  $\overline{\delta}$  key on the keypad to activate filling: filling in progress is indicated by the blue icon.

First the compensation tank is filled, and then -

More information

MAINTAINING THE WATER LEVEL IN MINIPOOL

maximum sensor (SL2) and a minimum sensor (SL2 = 0). (SL1) continuously monitor the water level inside • m activates automatic filling until conditions the compensation tank.

detect water

water

detect water

SL2 (maximum sensor) = 1, the sensor detects • The minimum sensor detects water (SL1 = 1, water

#### once the water has reached the maximum level inside the tank - the bathtub is filled through a recirculation pump, passing through the sand filter and the heater.

This cycle will be repeated many times until both the compensation tank and bathtub are filled. At this stage and until filling is completed, no other functions of the minipool - except chromatherapy will be available.

During the filling phase, if the times for reaching the minimum (90 min) and maximum (60 min) levels in the overflow tank are not met, alarms "AL1" (minimum level) and "AL2 "(maximum level) will be triggered, stopping all operation. In this case, you will have to disconnect the power and restore it after about 30 seconds using the product's main power switch and check the reason for this anomaly (leaky pipes, obstructed supply valves, insufficient pressure).

During the use of the minipool the system automatically maintains the water level flush with the edge of the bathtub.



Automatic filling using the keypad pressing the key activates the automatic filling of the minipool, controlled by two level sensors.

If the lack of water is minimal (e.g., evaporation or THE a person gets out):

• The minimum sensor still detects water (SL1 = 1).

When the minipool is completely filled a • The maximum sensor does not detect water

are restored and for a maximum of 60 minutes. If SL1 (minimum sensor) = 0, the sensor does NOT the lack of water is <u>considerable</u> (e.g., two or more people get out of the minipool):

SL1 (minimum sensor) = 1, the sensor detects • Both the minimum and maximum sensors do not detect water (SL1 = 0, SL2 = 0).

SL2 (maximum sensor) = 0, the sensor does NOT • m The recirculation pump moves the water from the compensation tank to the minipool.

SL2 = 0).

• activates automatic filling until conditions are restored and for a maximum of 60 minutes.

### **FIRST RUN**

With the bathtub full, recirculation active and ozone active, start in sequence all the functions of the bathtub in the presence of the owner to verify proper operation:

#### (1) BLOWER

The minipool can be equipped with: <u>A single blower motor</u> (standard) activates the nozzles on the bottom.

A second motor (optional)

activates the nozzles on the seat.

If there is only one blower motor, pressing the (1) key starts the bottom nozzle operation (default duration 20 minutes).

## The blower function on the bottom cannot be started if the whirlpool is running.

If there are two blower motors (optional), pressing the (1) key will activate the function, alternating the two zones (bottom nozzles + seat nozzles) with an interval of 30 seconds and always for a maximum duration of 20 minutes.

## The blower function on the seat can be started even if the whirlpool is running.

When the key is pressed again, the blower function stops, the key returns to white and the temperature is shown again on the display.

#### (2) LYMPHODRAINING CHAISE LONGUE WHIRLPOOL (OPTIONAL)

The function can only be activated if the whirlpool jets are present in the seat on the command side. Press the (2) key to start the function (default duration 20 minutes), press it again to stop it.

## (3) PERIMETER WHIRLPOOL (BACK AND LEGS)

Pressing the (3) will activate the whirlpool function in the two perimeter slots present in the minipool (default duration 20 minutes). Press the key again to stop the function. The first time it is recommended to leave the whirlpool in operation for at least 2-3 minutes to expel the air that may be present in the plumbing system.

#### (4) WATER TEMPERATURE ADJUSTMENT

When one of the two keys  $\bigcirc$  or  $\bigcirc$  is pressed once, the display shows the current setting (default 35°C) and the two keys are illuminated with a strong blue light. From the second press on, the displayed value is increased or decreased by one degree at a time depending



on the key pressed (range from 15°C to 40°C). After six seconds of inactivity with the keys or if another key is pressed, the adjustment function will end and the two keys will return to white, memorising the new setting.

The function will activate the heater (flashing degree character) with the objective of heating and maintaining the water temperature at the set value (+/-  $0.5^{\circ}$ C).

#### (5) CHROMATHERAPY

Pressing the light key (5) activates a <u>sequence</u> of <u>16</u> colours that vary in an automatic sequence (default duration two hours): *The light key* (5) *and the* (+) *and* (-) *keys turn blue* 

# and the display shows the symbol for six seconds.

During this time you can press the (+) or (-) key to manually select a color that you want to remain fixed the light ey will remain blue, while the and keys will turn white again: at this time it is no longer possible to change colour.

#### 6 "OK"

If pressed for more than three seconds you access a submenu page where other system functions are available (empty, manual backwash, keypad lock, SILENCE mode).

When accessing special functions, the "KEYPAD LOCK" icon is always lit by default. To scroll through the various functions, press the "+" and "-" keys. When the icon of the desired function lights up, press the "OK" key to activate it.

After six seconds of inactivity the display exits the submenu and returns to showing the water temperature.

#### (7) KEYPAD LOCK

Activation of this function will not allow the temperature set point to be changed, while the whirlpool, blower and chromatherapy functions will remain active.

To activate it:

- A Press the "OK" key (6) for at least three seconds.
- (B) This provides access to a submenu page.
- C The icon "KEYPAD LOCK"(9) is illuminated, press the "OK" ke(6) to activate it.

When the function is activated, the display will show the word "LOCK" for six seconds and then return to showing the water temperature.

To disable the function, press the "OK" key again for three seconds and then press the "KEYPAD LOCK" key (7) again.

#### (8) EMPTY

The emptying of the minipool can be activated at any time.

To activate it:

- (A) Press the "OK" key (6) for at least three seconds.
- (B) This provides access to a submenu page.
- C Use the + and keys until the "EMPTY" (8) icon is illuminated and press the "OK" key (6) to activate it.

The display shows the icon throughout the entire emptying operation.

Emptying lasts 120 minutes and for the entire duration the bathtub needs to be powered to allow it to completely drain all residual water from the tank pipes and flter. During emptying, the blower is automatically activated to drain the airpool system pipes.

During emptying of the minipool, the only enabled function is chromatherapy.

To stop the emptying test, disconnect the power supply to the bathtub for about 30 seconds.



#### (9) MANUAL BACKWASHING

In Aquatica minipools the backwashing is automatic, running automatically every 48 hours of use of the minipool, but can be forced manually:

- (A) Press the "OK" key (6) for at least three seconds.
- (B) This provides access to a submenu page.
- C Use the (+)and (-) keys until the "BACKWASH" (9) icon is illuminated and press the "OK" key (6) to activate it.

### FIRST RUN

#### (10) SILENCE MODE (SILENT HOURS)

This function provides access to a page where the hours of the day can be specifed during which the control enters SILENCE operating mode (silent hours), when all the automatic activations of the pumps and/or blowers are inhibited and only the antifreeze safety function remains active.

More precisely:

- If an automatic function is active when the SILENCE function is engaged, it is deactivated immediately (except for antifreeze).
- If a user function (whirlpool or blower) is active when the SILENCE function starts, the SILENCE function remains suspended and will become active 10 minutes after the user function has been switched off.
- If a user function is activated by the user while the SILENCE function is active, the latter is suspended (and heating and filtering is re-enabled) and will be reactivated 10 minutes after the last user function has been switched off.
- If the temperature set point is changed during the SILENCE function, the new value will become valid at the end of the function.
- The CHROMATHERAPY function (5) is not affected by the SILENCE function.
- The maximum duration of the SILENCE function is 20 hours (even non-consecutive) in order to maintain the water temperature at the set value and to ensure fltering.

How to set the SILENCE function:

- (A) Press the "OK" (6) key for at least three seconds.
- (B) This provides access to a submenu page.
- C Use the <sup>(+)</sup> and <sup>(-)</sup> keys until the "SILENCE" <sup>(1)</sup> icon is illuminated and press the "OK" key <sup>(6)</sup> to activate it.
- (D) With the + or key move to the hour boxes.
- E Press the "OK" key to enable the "SILENCE" mode schedule:

White box: silence mode disabled

Grey box: silence mode enabled (recirculation inactive)



#### EXAMPLE

Silent hours highlighted in the table: silent mode activated from midnight to 7 am and from 3 pm to 4 pm

DISABLE (white boxes): silence mode disabled ENABLE (dark boxes): silence mode enabled (recirculation inactive)

After six seconds during which no key is touched the confguration is memorised and the water temperature is displayed again.

## PARTIAL MINIPOOL EMPTY TEST

The minipool can be drained at any time, without people inside the minipool. Perform a brief test to verify that the water is correctly drained.

To activate emptying:

 $(\mathbf{A})$  Press the "OK" key for at least three seconds.

(B)This provides access to a submenu page.

 $(\widehat{C})$  Press the "EMPTY" (7) key.

During emptying of the bathtub, the only enabled function is chromatherapy. To stop the drain test, press the "EMPTY" key again.

Once the test is finished, refill by pressing the key



If any alarms appear during initial startup, read the instructions provided in the following table. If the solution is not possible, immediately contact the Manufacturer to request technical support. In the meantime, do not try to repair or use the minipool but rather disconnect it from the electricity and water supplies.

ALARMS NOTIFICATIONS	Screen displayed	DESCRIPTION OF THE PROBLEM POSSIBLE SOLUTIONS
HI-43 Temperature alarm (notification)		<b>Problem description:</b> if the water temperature in the minipool exceeds 42°C all the functions are deactivated, the display shows the "HI" message alternating with the temperature value. Solutions: the alarm and the system will automatically reset when the temperature drops. If the alarm does not reset contact the Manufacturer.
Er Temperature sensor alarm (alarm)	Er Port	<b>Problem description:</b> a temperature sensor measures the water temperature inside the minipool, activating the heater when necessary. The allowed water temperatures range from 5°C to 45°C. Values outside the range cause the blocking of all functions and the permanent activation of the alarm message. Solutions: the alarm will reset automatically once the temperature returns to allowed values (5° to 45°). The message is also displayed if the temperature sensor malfunctions. Solutions: make sure that the water temperature is not outside of the permitted values, try to disconnect the power supply to the bathtub and switch it on again after 30 seconds. If the problem persists, verify that the connection with the control unit is correct and has not been tampered with. Otherwise contact the Manufacturer.
FLO No flow alarm (notification)	₣ <u></u> ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽	Problem description: the notifcation protects the heater and the recirculation pump from running in the event of potential danger. It is activated when the recirculation pump is running, the flow switch does not detect flow for at least fve seconds. The display shows the message "FLO" alternating with the temperature, the heater is disabled and the recirculation pump remains active for a maximum of fve minutes, after which an automatic backwash of the sand flter is initiated. Solutions: the notifcation will automatically reset when flow is restored, otherwise a new alarm will be triggered (see FL alarm).
FLC No flow alarm (alarm)	FLE <sup>c</sup> = + <sup>c</sup> <sub>2</sub> « -	<b>Problem description:</b> the alarm is activated if the flow sensor malfunctions. The system disables the heater even if the recirculation pump remains active. Solutions: try to disconnect the power supply to the tub and switch it on again after 30 seconds. If the problem persists, verify that the connection with the control unit is correct and has not been tampered with. Otherwise contact the Manufacturer.
Fl Clogged filter alarm (alarm)	┍╴┍ ┍╴┍ ┍╴┍ ┍	<b>Problem description:</b> the alarm occurs when, after a flter backwash, lack of flow continues for more than 5 minutes (see "FLO" notifcation). The system stops, all functions are disabled and the display shows the fxed "FL" alarm. Solutions: The alarm resets only by switching off the minipool and turning it back on after about 30 seconds. The main causes of what has been described are attributable to:

ALARMS	Screen displayed	DESCRIPTION OF THE PROBLEM
NOTIFICATIONS		POSSIBLE SOLUTIONS
		<ol> <li>Damage to the circulation pump. Once the minipool restarts, verify that the circulation pump functions correctly. Try to perform a manual backwash of the flter (see page 20);</li> <li>Excessive dirtiness of the sand in the flter due to an incorrect treatment of water in the minipool (see the section on water treatment on page 13). In this second case, empty the minipool, disassemble the flter and check the sand. Depending on the problem found when the flter was opened use suitable products to wash the sand. Finally, replace the sand (see page 8).</li> </ol>
LI Water level alarm <i>(notification)</i>		<b>Problem description:</b> the notification is activated if the water level inside the compensation tank is below the minimum for more than three seconds. The display will show the message "LL" alternating with the temperature, the functions remain enabled, the system will start flling the minipool to restore the level (see the section on flling the minipool on page 17). The notification is activated when a number of people leave the bathtub at the same time (the system automatically restores the level by activat ing the fll function).
FER Water level sensors alarm (alarm)	FEr <sup>cuuu</sup> +	<b>Problem description:</b> the alarm is activated if there is a malfunction of the level sensors, especially when the system detects the maximum level but not the minimum level. <i>Solutions: try to reset the system by switching off the bathtub for about 30 seconds. If the alarm does not reset contact the Manufacturer.</i>
Al1 Water fill timeout alarm (alarm)		<ul> <li>Problem description: the alarm is activated when filing is in progress, if the minimum level is not reached within 90 minutes from the start of the filing.</li> <li>Solutions: The alarm resets only by switching off the minipool and turning it back on after about 30 seconds. The main causes of what has been described are attributable to: <ol> <li>Water supply closed or blocked (make sure the valves are open and the solenoid valves are not dirty).</li> </ol> </li> <li>Water supply with low pressure (make sure that the minipool's supply pressure is between 1.5 and 3 bar).</li> <li>Leaks in the bathtub's pipes (make sure that there are no leaks in the bathtub).</li> <li>If the minipool does not reactivate after checking these possible problems (after having reset the control unit by disconnecting and reconnecting the power supply), contact the Manufacturer to request assistance.</li> </ul>
Al2 Water level timeout alarm (alarm)		<ul> <li>Problem description: the alarm is activated when the maximum level is not reached within 30 minutes from the minimum to the maximum sensor both during the flling phase and during the recovery of the water level in the tank.</li> <li>Solutions: The alarm resets only by switching off the minipool and turning it back on after about 30 seconds. The main causes of what has been described are attributable to: <ul> <li>Water supply closed or blocked (make sure the valves are open and the solenoid valves are not dirty).</li> </ul> </li> <li>Water supply with low pressure (make sure that the minipool's supply pressure is between 1.5 and 3 bar).</li> </ul>

ALARMS	Screen displayed	DESCRIPTION OF THE PROBLEM
NOTIFICATIONS		<ul> <li>3 Leaks in the bathtub's pipes (make sure that there are no leaks in the bathtub).</li> <li>4 Check that there are no water leaks in the drain of the minipool (make sure that there is no dirt in the drain valves).</li> </ul>
AI3 Emptying timeout alarm (alarm)		<ul> <li>Problem description: when the minipool is being emptied, if the minimum level is not reached within 120 min the system stops, the display shows the fxed message "Al3".</li> <li>Solutions: <ol> <li>make sure that the drain is not obstructed and that the drain valves open correctly.</li> <li>Try switching off the minipool and then on again after about 30 seconds. If the alarm does not reset contact the Manufacturer.</li> </ol> </li> </ul>

# **8** TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Low water flow	The sand of the sand flter is very dirty or the water supply is excessively hard and has clogged the sand flter. For more information see chapter "Characteristics of the water supply" on page 13.	Replace the sand as indicated, following the instructions on granularity. Check the water hardness. If it is greater than 14°f install a softener upstream.
Sand inside the minipool	It is normal for there to be a minimum amount of sand inside the minipool during the frst hours of use of the sand flter. After the frst cleaning of the bottom the problem should no longer exist.	Cleaning the bottom with a minipool cleaner. Make sure you have used sand with granularity from 0.5 to 1 mm suitable for this type of use.
Water leaks	Some component is probably not fully tightened or the seals are worn.	Check the tightness or replace the seals.
The water of the minipool does not become clear	Most likely the flter sand needs to be changed or the pH of the water supply is incorrect and so algae grows. For more information see chapter "Characteristics of the water supply" on page 13.	Check the condition of the sand and replace if necessary. Use anti-algae products and disinfectants. Remember that the sand flter does NOT block metal oxides that may over time damage components of the minipool.



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Do not leave the empty minipool in DIRECT SUNLIGHT. The surface temperature could rise above 80°C resulting in serious damage, including cavitation and the deformation of the surface and components (damage caused by direct exposure to sunlight is not covered by the warranty).

Under these conditions or when not used, advise the owner to use a fixed or mobile cover to protect the minipool (we recommend the optional Aquatica covers).

In addition to preserving the surfaces, the cover will keep the water hot and protected against falling leaves and other outdoor debris.

The cover is especially useful if the minipool is installed outdoors. In this case it might be useful to anchor it with lashing straps in order to prevent the wind from moving it or blowing it off.



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